

# Proposed Biennial Budget

*Fiscal Years 2016 - 2017*

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***District Overview***  
***Water System Budget***  
***Wastewater System Budget***



***East Bay Municipal Utility District***  
***Oakland, California***



# ***FY2016 and FY2017***

## **Proposed Biennial Budget**

***Volume 1      District Overview***  
***Water System Budget***  
***Wastewater System Budget***

***Volume 2      Supplemental Material:***  
***Capital Project Summaries***

***Presented to the Board of Directors***  
***March 24, 2015***

***East Bay Municipal Utility District***

**EAST BAY MUNICIPAL UTILITY DISTRICT  
BIENNIAL BUDGET FY16 – FY17  
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# East Bay Municipal Utility District

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### SUPPLEMENTAL VOLUME

Capital Project Summaries

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March 19, 2015

Honorable Members of the Board of Directors:

I am pleased to present the recommended budget for Fiscal Years 2016 and 2017. The proposed budget firmly focuses on investments that will best position EBMUD to deliver the high quality services and environmental protections for future generations that we proudly provide today. It continues investments in the infrastructure necessary to deliver water and treat waste streams. It acknowledges that we have made very limited investments in information technology over the past decade and that smart investments in those systems will make our data safer from cyber threats, our workers more productive, our purchasing decisions more cost-effective, our analytical assessments more robust and our facilities safer and more efficient. The budget also sets a new course for drought response by establishing both a new drought rate structure and a new drought response contingency fund that will be implemented based on the severity of drought. These investments in infrastructure, information technology and drought management, coupled with up-to-date adjustments to revenue estimates and changes that reflect both new cost of service data and a proposal to sunset the seismic improvement program charge, will ensure a stronger, more stable long-term financial future for EBMUD.

The budget controls overall spending and the FY16-17 proposed rate increases and customer bill impacts (excluding drought surcharges) are consistent with the five-year budget projections in the last biennial budget. The average single family residential bill for water increases \$3.57/month in FY16 and \$3.66/month in FY17. The average single family residential bill for wastewater treatment, which is collected on the water bill, decreases \$0.24/month in FY16 and increases \$0.92/month in FY17. Bill impacts for a range of use levels and customer classes are presented in the attachment to this message. The anticipated bill impacts assume average water use without the 12 percent conservation that our customers achieved in calendar 2014 compared to calendar 2013, and they do not assume customer achievement of a drought conservation target in FY16-17; customers who conserve will see smaller increases on their bills. The recommended rate increases for FY16 are 8 percent for the water system and 5 percent for the wastewater system, and for FY17 are 7 percent for the water system and 5 percent for the wastewater system. With the proposed increases, EBMUD rates will remain similar to rates for comparable northern California water agencies.

The budget adopted two years ago aimed at ensuring continued delivery of high quality water and wastewater services and securing long-term organizational and financial sustainability. It allocated significant resources to investing in aging infrastructure, enhancing maintenance practices and improving customer service. With the resources from that budget, our employees advanced each of the Board's strategic plan focus areas. We invested in preventative maintenance, began planning for the ambitious long-term goal of quadrupling the rate of distribution pipeline replacement, completed master plans for several major infrastructure asset classes, upgraded our Customer Information System software, successfully delivered supplemental dry year water supplies into the service area for the first time, progressed on renewing the Camanche Permit, signed a wet weather consent decree, conducted a year-long series of public workshops on long-term financial stability, addressed cost of service and drought surcharges, refinanced and restructured the debt portfolio for significant long-term debt service savings, and completed a comprehensive organizational values assessment to address the organizational challenges presented by the retirement eligibility of 50 percent of the workforce. The proposed FY16-17 budget builds on these successes.

## **GENERAL MANAGER'S RECOMMENDED BUDGET HIGHLIGHTS**

### ***Make Sustained Reinvestments in Aging Physical Infrastructure***

EBMUD operates and maintains a vast network of physical infrastructure to deliver services to customers. Reaching from the Sierra Nevada foothills to San Francisco Bay, this network has an estimated replacement cost exceeding \$14.4 billion. Maintaining high-quality service requires ongoing reinvestment in reservoirs, aqueducts, pump stations, distribution pipelines, sewer interceptors, treatment plants, power stations and buildings. EBMUD is in an era requiring continuing increases in infrastructure funding, and as we conduct condition assessments we learn more about the need for sustained additional funding. The budget recommendations were developed after analyzing a portfolio of capital investments and determining the highest priority projects based on safety, regulatory compliance, reliability and cost-effectiveness.

This recommended budget reflects another significant increase in capital investments to replace aging assets. From 2016 to 2020, infrastructure investments will grow about six percent annually, from \$263 million to \$336 million. The two-year Capital Improvement Program (CIP) cash flow for both Water and Wastewater is \$536 million, a 20 percent increase over the prior two-year budget. The five-year CIP cash flow for both Water and Wastewater is \$1.544 billion, a 30 percent increase over the prior budget. Overall, 50 additional positions are being funded to advance infrastructure replacement efforts.

A significant share of these funds are earmarked for increasing the annual replacement rate of water distribution pipeline from the projected 10 miles per year in the FY14-15 budget to 15 miles per year over the next five years. Key short-term objectives include replacing high-priority asbestos-cement (AC) pipe segments and determining effective and efficient ways to achieve program goals. This budget assumes 27 new and 9 existing staff positions will support distribution pipeline replacement work, including 2 pipeline crews, 1 paving crew, additional plumbers and 7 engineering-related positions.

Wastewater program infrastructure initiatives in this budget focus on implementing the wet weather consent decree, improving odor control at the main wastewater treatment plant and expanding the resource recovery program. As required under the consent decree, nearly \$10 million will be invested in EBMUD wastewater infrastructure and approximately \$8 million will be spent to address others' infrastructure issues: helping find regional inflow and infiltration sources in local sewer systems and monitoring customer repairs to private sewer laterals. To control plant odors, \$14 million in capital investments will be made. In FY16, staff will be working to complete agreements with the City of Oakland on accepting food waste as part of the resource recovery program. If successful, investments are planned in pre-processing and dedicated digesters.

### ***Invest in Critical Information Technology Infrastructure***

District infrastructure includes more than concrete and steel. Following the global recession EBMUD contained costs by deferring information technology (IT) investments. While effective in the short



term, this strategy is not sustainable. Much of our IT infrastructure is beyond its useful life and we are experiencing decreased reliability in several key systems. The investments in upgrading our customer information system are paying dividends but other enterprise systems (materials management, financial information and human resources) are decades old. Their outdated business processes hamper efficiency, their repairs are increasingly expensive, and their vulnerability to cyber threats is a growing concern. High profile breaches worldwide highlight the critical importance of investing in IT security. In addition to IT infrastructure, the budget also reflects that IT service costs are rising. For several years market forces favored customers, but now vendor fees are reflecting the improved economy via higher software licensing and other IT service costs.

The recommended budget reflects all these dynamics, but also reflects careful consideration of costs. The senior management team spent hundreds of hours over the past year specifying service levels by department and establishing District-wide priorities for IT services. They narrowed a list of more than 200 cost-effective projects to a priority list of 23 projects for the next two years. Server infrastructure replacement and maintenance was identified as an investment priority. This budget establishes an equipment replacement fund for server infrastructure and dedicates \$4.4 million over the two years to seed the fund to upgrade the server fleet. Three positions are funded to address the significant backlog in server maintenance. The District recently completed a third-party vulnerability assessment of the District's control system network and the budget proposes 3 additional positions to address the most important findings. Finally, the budget contains additional funding of \$4.2 million and \$5.0 million for software licenses and communications services for FY16 and FY17, respectively.

#### ***Manage Impacts of Extended Drought***

The state is experiencing a fourth year of below average precipitation. Wisely, the District has invested heavily in water conservation, supply diversification and the development of infrastructure to take supplemental dry year supplies. The Board's progressive drought response calls for increased conservation and the purchase of supplemental water. Drought's financial impact is significant and includes the direct cost of purchasing and treating supplemental water, more expensive overall water system operations, reduced revenues from hydroelectric generation, investments in drought-related customer outreach and the impact of reduced revenues from water sales. After an extensive public development and vetting process, the Board adopted a staged system to serve as a framework for drought surcharges. This is the first General Manager's budget to contain drought-related appropriations and a system of drought surcharges that may be used in this or future droughts.

***Additional Drought-Related Costs***—For the first time, the District's biennial budget includes a drought contingency appropriation. The two-year \$126.3 million appropriation includes funding for purchasing, treating and delivering supplemental supplies and preparing and delivering additional customer outreach. Funds assume the hire of more than a dozen limited-term employees to respond to water waste reports, perform water use surveys, answer customer calls and perform high bill inspections during a Stage 3 or Stage 4 drought. The contingency approach enables staff to work with the Board to tailor the drought response to the specific circumstances of that year.

*Drought Surcharges*— Adopted at a conceptual level in December 2014, the staged system includes rates to recover a portion of estimated drought costs and acknowledgement of customer efforts to encourage water use efficiency. The system includes three elements: 1) a staged system of increasing drought surcharges on volume, 2) supersaver recognition, and 3) an excessive use penalty. The first element applies to all customer classes, excluding recycled water customers. The second and third elements apply only to single family residential customers. Proposed drought surcharges on volume use of up to 8 percent, 20 percent and 25 percent would be levied for drought Stages 2, 3 and 4, respectively. In Stages 3 and 4, single family residential customers who reduce consumption to levels set by the Board would be recognized for their efforts. In Stage 3, those customers who use above 60 units/month would be subject to an excessive use penalty of \$2/unit for water. In Stage 4, the \$2/unit penalty would apply to water use above 45 units/month.

#### ***Provide for Long-Term Financial Stability***

Over the past year the Board conducted 10 public workshops covering topics related to long-term financial stability. This work included the evaluation of capital financing and reserve policies, the review of drought financial management issues, the development of the staged system of drought surcharges described above, the acceptance of findings and recommendations from two cost of service studies, and the review of long-term forecasts of rates and charges. The workshop findings, input and direction form the basis of this recommended budget and rate and charge adjustments.

The budget is based on prudent assumptions for water sales and meeting financial metrics (CIP cash funding, debt service coverage) consistent with the Board's adopted policies and the District's existing credit ratings. Reflecting calls for customer conservation, the base budget assumes reduced billed consumption. Prior budget estimates of billed water consumption for FY15, FY16 and FY17 were 166 MGD, 169 MGD and 172 MGD, respectively. The proposed budget estimates 151 MGD for both FY16 and FY17, a drop of 11 percent and 12 percent, respectively. For a sense of perspective this volume is 25 percent below the peak consumption level of just over 200 MGD in 2007.

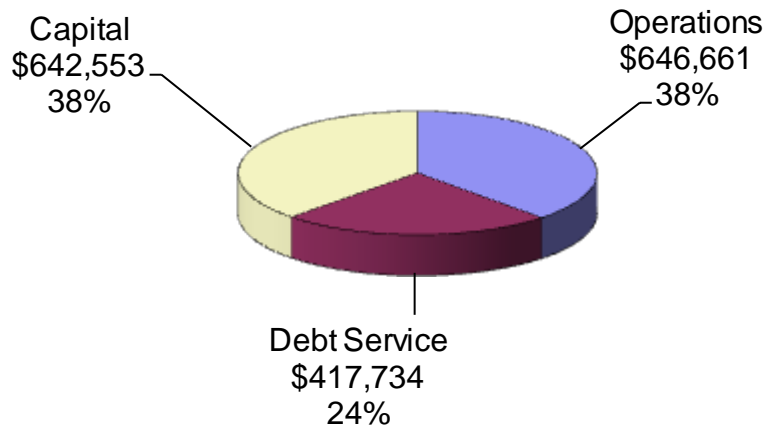
#### **RECOMMENDED BUDGET OVERVIEW**

The charts on the following page summarize the General Manager's proposed budget for FY16-17. The District-wide total requested appropriation is \$1.83 billion. Of that amount, \$1.71 billion is for water system and wastewater system operations, debt service and capital appropriations. The remaining \$126.3 million is for drought contingency. Throughout this document, the proposed drought contingency is excluded in year-over-year comparative analyses.

The proposed Water and Wastewater System budget is \$1.71 billion, a 17 percent increase over the previous two-year adopted budget that includes appropriations for operations (38 percent), debt service (24 percent), and the capital budget (38 percent) for both the water and wastewater enterprises.

<b>COMPARISON OF FY15, FY16, AND FY17 BUDGETS</b>					
(\$ Thousands)					
	FY15 Amended Budget	FY16 Proposed Budget	% Change FY16 v. FY15	FY17 Proposed Budget	% Change FY17 v. FY16
<b>Water System</b>					
Operations	247,517	248,264	0.3%	262,232	5.6%
Debt Service	163,213	169,894	4.1%	180,191	6.1%
Capital Appropriation	<u>185,022</u>	<u>249,042</u>	34.6%	<u>290,392</u>	16.6%
Total	595,752	667,200	12.0%	732,815	9.8%
<b>Wastewater System</b>					
Operations	63,358	65,448	3.3%	70,717	8.1%
Debt Service	34,307	33,693	-1.8%	33,956	0.8%
Capital Appropriation	<u>46,814</u>	<u>70,536</u>	50.7%	<u>32,583</u>	-53.8%
Total	144,479	169,677	17.4%	137,256	-19.1%
<b>District</b>					
Operations	310,875	313,712	0.9%	332,949	6.1%
Debt Service	197,520	203,587	3.1%	214,147	5.2%
Capital Appropriation	<u>231,836</u>	<u>319,578</u>	37.8%	<u>322,975</u>	1.1%
<b>District-wide Total</b>	<b>740,231</b>	<b>836,877</b>	<b>13.1%</b>	<b>870,071</b>	<b>4.0%</b>
<b>Drought Contingency</b>		<u>64,206</u>		<u>62,078</u>	
<b>Grand Total</b>	<b>740,231</b>	<b>901,083</b>		<b>932,149</b>	

**District Water and Wastewater Budgets  
FY16 and FY17**  
(\$ Thousands)



Water System The total two-year budget is \$1.4 billion. In FY16, the budget is \$667.2 million, or \$71.4 million (12.0 percent) greater than the FY15 amended budget. In FY17, the total budget is \$732.8 million, or \$65.6 million or 9.8 percent greater than FY16. In both fiscal years, more than half of the proposed budget increase is related to the capital improvement program.

Of the increase in FY16, \$0.7 million is due to increased operations costs, \$6.7 million to debt service, and \$64.0 million to capital appropriation. As detailed in Chapter 2, an additional 72 positions are funded in FY16. The FY16 operating budget impact of these additions is mitigated by several factors. Most new positions are funded in the capital budget and total labor costs reflect a reduction in fringe benefits costs and an increased vacancy rate due to projected retirements. The operations non-labor budget increase of \$4.0 million is driven by anticipated increases in costs to buy chemicals, operate our fleet, replace telecommunications equipment and computer hardware and software and make disbursements to outside agencies. These rising expenses are partially offset by an anticipated reduction in energy usage due to the lower water sales volume projected and a decrease in fees/licenses. Debt service in FY16 will increase \$6.7 million due to the debt restructuring in the FY14-15 budget and the issuance of new bonds for the capital improvement program, mitigated by debt service savings from debt refinancing. The FY16 capital appropriation increase of \$64.0 million will fund work such as: increasing the number of pipeline miles replaced; rehabilitating aqueducts, treatment plants, pumping plants and other infrastructure; rehabilitating reservoirs; and replacing critical technology infrastructure such as financial and work management systems.

The FY17 \$65.6 million increase reflects \$14.0 million for operations, \$10.3 million for debt service and \$41.3 million for the capital appropriation. Of the FY17 operations budget total increase, \$11.4 million is attributable to labor costs and \$2.6 million is driven by non-labor expenses. The total labor budget increase is primarily due to scheduled salary step increases, a cost of living adjustment, and projected increases in both the employer pension contribution rate and health care costs. The higher non-labor cost of \$2.6 million is primarily due to fleet vehicle expenses, Board election fees, and other operating costs such as energy, chemicals, telecommunications, laboratory services, spoils/sludge disposal and property insurance. Debt service will increase \$10.3 million due to the issuance of new bonds to fund the capital plan. The \$41.3 million increase in capital appropriation will fund pipeline replacements and the rehabilitation of reservoirs and reservoir towers.

Wastewater System The total two-year budget is \$306.9 million. In FY16, the budget is \$169.7 million, or \$25.2 million (17.4 percent) greater than the FY15 amended budget. In FY17, the total budget is \$137.3 million, or \$32.4 million or 19.1 percent less than FY16.

The total FY16 budget increase of \$25.2 million is attributable to \$2.1 million for operations, a decrease of \$0.6 million in debt service and a \$23.7 million increase in the capital appropriation. As detailed in Chapter 2, an additional 9 positions are funded in FY16. Similar to the Water System, the impact is mitigated by offsetting factors. The operations non-labor budget will increase \$1.4 million to account for contract work to support infiltration and inflow investigations in community sewer

systems, and carbon for the power generation station gas conditioning system. Debt service expenses in FY16 will be \$0.6 million less than the prior fiscal year due to recent refinancing. A \$23.7 million increase in the capital appropriation will fund improvements to the infrastructure at the main wastewater treatment plant, and the rehabilitation of various sewer interceptors.

The total FY17 budget is \$32.4 million or 19.1 percent lower compared to FY16. Of this decrease, the operations budget will increase \$5.3 million, debt service will increase \$0.3 million, but the capital appropriation will decrease \$38.0 million. The operations budget includes an increase of \$2.0 million for labor and \$3.3 million for non-labor expenses. The total labor budget increase is driven by scheduled step increases, a cost of living adjustment, projected increases in both the employer pension contribution rate and health care costs and the funding of an inspector position. Total non-labor costs will increase primarily due to work to support inflow and infiltration investigations in community sewer systems, chemical costs for increased food waste processing and odor control, and increased sludge hauling costs. Debt service will increase slightly by \$0.3 million driven by the issuance of new bonds. The \$38.0 million decrease in the capital appropriation is the result of large multi-year capital projects being fully appropriated in FY16.

#### **Five-Year Capital Improvement Program Budget**

The FY16-20 combined Water and Wastewater System Capital Improvement Program (CIP) includes \$1.78 billion of appropriations. Of this total, the Board of Directors will be asked to approve the first two-years or \$643 million.

The following discussion focuses on the CIP cash flows as they establish the fiscal years' project spending and are a significant component of the proposed rates. The FY16-20 combined Water and Wastewater System CIP planned cash flow spending will increase by 30 percent over the five year span, from \$263 million in FY16 to \$336 million in FY20.

Water System Top Programs. EBMUD is continuing its focus on investments in infrastructure rehabilitation, repair and replacement. The following table shows the major Water System capital programs and the projected cash flow spending. The largest program spending over the next five years is for Pipelines, Regulators and Appurtenances which includes \$63 million for expanded investments in the annual rate of infrastructure replacement, in a pilot study to research ways to make the pipeline work process more efficient, and in creating a long-term plan to increase the replacement rate to 40 miles per year. The Raw Water Aqueduct Improvements program is the second largest area of spending and includes \$83 million for the Mokelumne Aqueduct Relining project, which replaces the deteriorated cement lining that protects the steel pipeline from corrosion. The Water Recycling program includes \$69 million for the expansion of the North Richmond Water Recycling Plant by 1 MGD. The plant serves the Chevron refinery in Richmond. Construction is planned to begin in FY18 and the cost of this expansion will be borne by Chevron through reimbursements paid to the District.

<b>Water System Major Capital Programs</b> <b>Five-Year CIP</b> (\$ Millions)	
Programs	FY16-FY20 Cash Flow
Pipelines, Regulators and Appurtenances	429
Raw Water Aqueduct Improvements	153
Water Recycling	141
Pressure Zone Improvements	135
Reservoir Rehabilitation	100
Water Treatment and Transmission	92
Pumping Plant Rehabilitation	75

Wastewater System Top Projects. The following table shows the continued focus on maintaining our strong record of complying with permit requirements at the main wastewater treatment plant. In addition to ongoing sewer interceptor rehabilitation work, \$14 million will be spent to expand the Resource Recovery program such as construction of new facilities to support food waste processing. The Odor Control Improvement project has a planned cash flow of \$19 million over the next five years to improve the air quality in communities along the collection system and at the main wastewater treatment plant. One such upgrade includes installing an odor monitoring system to improve real-time control and reduce off-site odor potential.

<b>Wastewater System Major Capital Projects</b> <b>Five-Year CIP</b> (\$ Millions)	
Projects	FY16-FY20 Cash Flow
3 <sup>rd</sup> Street Sewer Interceptor Rehabilitation	32
Odor Control Improvements	19
Treatment Plant Infrastructure	19
Concrete Rehabilitation	15
Resource Recovery	14
Digester Upgrades	12
Wood Street Sewer Interceptor Rehabilitation	12

## CUSTOMER BILL IMPACTS

No increase in costs for essential services is welcome. But as a community, our quality of life depends on reliable, environmentally-sound water and wastewater services. As part of continuing efforts to enhance transparency, a new feature of this message is an attachment with additional detail on bill impacts of the proposed charges. In this message, a summary of bill impacts for the average single family residential user is shown. The attachment provides detailed information for a wider range of use levels than has been presented in the past.

Bill Impacts Excluding Drought Surcharges. Customer bill impacts for FY16 reflect the findings and recommendations of recent cost of service studies that allocate costs among customer classes based on usage characteristics. State law requires basing rates and charges on cost of service.

- An average single family residential customer uses 10 centum cubic feet (CCF)/month or 246 gallons per day (gpd), not accounting for drought cutbacks in use. This customer's monthly water charges would increase \$3.57 in FY16 and an additional \$3.66 in FY17.
- An average single family residential customer discharges 6 CCF/month to the sewer system. This customer's wastewater treatment charges collected on the water bill would decrease slightly by \$0.24 in FY16 and increase by \$0.92 in FY17.
- An average single family residential customer receiving both EBMUD water and wastewater treatment services would see a combined monthly increase of \$3.33 in FY16 and an additional \$4.58 in FY17.
- Beginning in FY16 the wastewater wet weather fee, collected on the property tax bill, will be based on a customer's property size. For most single family residential (SFR) customers the annual wastewater wet weather fee will increase slightly by \$0.28 in FY16 and by an additional \$4.48 in FY17. For single family residential customers with the largest properties, over 10,000 square feet, the annual increase over FY15 would be \$230.66 in FY16 and an additional \$16.00 in FY17.

Bill Impacts Including Drought Surcharges. Given current drought conditions, it is likely that a drought surcharge on volume use will be effective in FY16. Customers who cut water use in response to requests for conservation will see lower increases on their bills than presented below.

- In Stage 2, the average 10 CCF/month single family customer who does not cut back their water use would pay a drought surcharge of \$2.54 per month. Including the proposed base rate increase, this would bring the total increase to \$6.11 per month over their current bill (12.6 percent increase) for FY16 starting in July 2015. In FY17 the Stage 2 drought surcharge for this user increases from \$2.54 per month to \$2.74 per month.
- In Stage 3, the average 10 CCF/month single family customer who does not cut back their water use would pay a drought surcharge of \$6.50 per month. Including the proposed base rate increase, this would bring the total increase to \$10.07 per month over their current bill (20.7 percent increase) for FY16 starting in July 2015. In FY17 the Stage 3 drought surcharge for this user increases from \$6.50 per month to \$6.99 per month.
- In Stage 4, the average 10 CCF/month single family customer who does not cut back their water use would pay a drought surcharge of \$8.08 per month. Including the proposed base rate increase, this would bring the total increase to \$11.65 per month over their current bill (24.0 percent increase) for FY16 starting in July 2015. In FY17 the Stage 4 drought surcharge for this user increases from \$8.08 per month to \$8.74 per month.

## USING THE BUDGET DOCUMENT

EBMUD's FY 16-17 biennial budget is comprised of two volumes. This volume contains all of the key biennial budget information for both the Water and Wastewater Systems, including a District overview, detailed operating and capital budgets, and a five-year financial forecast. The supplemental volume provides summaries for all projects in the Capital Improvement Program. Since 1996, the District's budget documents have consistently received the Government Finance Officers Association's coveted Distinguished Budget Presentation Award.



## CONCLUSION

The proposed FY16 and FY17 budget continues our commitment to providing high quality, reliable water and wastewater services for our customers. We will closely monitor our costs and continue to look for opportunities to maximize efficiency and productivity. We will also look for ways to restructure the workload, leveraging technology, as employees retire or leave the District. With the ongoing support of the Board and the staff of the District, I am confident that we will meet our challenges well into the future.

In closing, I want to thank the staff who worked so diligently to develop the budget recommendations and in particular to acknowledge their work in preparing the budget document. Their collective efforts have enabled us to develop a budget that serves as an effective policy document, a financial plan, an operations guide and an information resource that explains to ratepayers the benefits of necessary rate increases.

Respectfully submitted,

A handwritten signature in blue ink that reads "Alexander R. Coate".

ALEXANDER R. COATE  
General Manager

ARC:ELS

Attachment



In order to enhance transparency, we are providing this attachment to the Budget Message. The tables contain additional detail on bill impacts of the proposed changes to rates and charges, addressing three categories of proposed rate changes: water charge bill impacts, wastewater charge bill impacts, and drought surcharge impacts. The tables present FY16-17 water and wastewater service costs. To better demonstrate the full impacts of proposed rate changes, they cover a range of customer classes and use levels.

#### Water Charge Bill: Monthly Impacts

Two tables are presented in this section: **Single Family Residential Water Charges on Water Bill** and **Multi-Family Residential and Non-Residential Water Charges on Water Bill**.

The table entitled **Single Family Residential Water Charges on Water Bill** addresses a broad cross-section of single family residential users which represent the majority of District accounts. The impact of proposed rate increases is illustrated for users ranging from 4 CCF (25<sup>th</sup> percentile) to 30 CCF (95<sup>th</sup> percentile) per month. The impact is also provided for both the median single family user of 7 CCF and the historical average 10 CCF single family residential user. The tables present monthly impacts for ease of use, although residential single family customers receive bills covering two month periods.

**Multi-Family Residential and Non-Residential Water Charges on Water Bill** demonstrates the impact on proposed rate increases for two multi-family residential users: one with 4 units at 25 CCF monthly use, and one with 5+ units at 50 CCF monthly use. Information is also included for sample commercial users at 50 CCF/month and industrial users at 500 CCF/month.

#### Wastewater Treatment Charge Bill: Monthly Impacts and Wastewater Wet Weather Facilities Charge: Annual Impacts

The District's wastewater customers' charges appear in two separate places, their water bill and their property tax bill. The two tables presented in this section, **Wastewater Charges on Water Bill** and **Wet Weather Facilities Charge on Property Tax Bill**, address each of these bills.

Wastewater charges are based on volume, but are capped at the charge levied on a discharge of 9 CCF/month. The table entitled **Wastewater Charges on Water Bill** shows bill impacts for both an average single family residential user discharging 6 CCF/month and a single family residential user discharging at the maximum, capped amount. In addition, impacts are shown for two multi-family residential users: one with 4 units at 25 CCF/month, and one with 5+ units at 50 CCF/month. Information is also included for sample commercial users at 50 CCF/month and industrial users at 500 CCF/month.

The table entitled **Wet Weather Facilities Charge on Property Tax Bill** shows updated wet weather facilities charges. This table illustrates the change to a charge based on property size.

### Drought Surcharge: Monthly Impacts

The District's proposed drought surcharges are new. These surcharges on volume are proposed in a staged system reflecting the severity of the drought: Stage 1 is the least and Stage 4 the most severe. The drought surcharges vary with each stage. The three tables in this section represent the full impact of the drought surcharge on various levels of residential use. The three tables presented are **Stage 2, Stage 3, and Stage 4 - Single Family Residential Water Charges and Drought Surcharges on Water Bill**.

There is no surcharge imposed at Stage 1; the tables illustrate the drought surcharge bill impacts at drought Stages 2, 3 and 4. The impact of proposed rate increases is illustrated for users ranging from 4 CCF (25<sup>th</sup> percentile) to 30 CCF (95<sup>th</sup> percentile) per month. The impact is also provided for both the median single family user of 7 CCF and the historical average 10 CCF single family residential user. As with the water charge tables, these tables present monthly impacts for ease of use, although residential single family customers receive bills covering two month periods. The drought surcharge impacts are shown for users who do not cut their water use in response to District requests for conservation. To date, District customers have conserved 12 percent over 2013 use levels, so the current average use and thus the corresponding charge would be below the levels set forth in the tables.

### Water Charge Bill: Monthly Impacts

<b>Single Family Residential Water Charges on Water Bill</b>								
	<b>Single Family Residential Use (CCF)</b>	<b>FY15 Bill</b>	<b>FY16 Bill</b>	<b>Increase from FY15</b>	<b>Percent Change</b>	<b>FY17 Bill</b>	<b>Increase from FY16</b>	<b>Percent Change</b>
25 <sup>th</sup> Percentile	4	\$29.07	\$31.14	\$2.07	7.1%	\$33.33	\$2.19	7.0%
50 <sup>th</sup> Percentile (median use)	7	\$37.80	\$39.99	\$2.19	5.8%	\$42.81	\$2.82	7.1%
75 <sup>th</sup> Percentile	12	\$55.80	\$60.29	\$4.49	8.0%	\$64.51	\$4.22	7.0%
95 <sup>th</sup> Percentile	30	\$132.08	\$151.57	\$19.49	14.8%	\$162.23	\$10.66	7.0%
Average Single Family Residential Use*	10	\$48.60	\$52.17	\$3.57	7.3%	\$55.83	\$3.66	7.0%

\*10 CCF/month represents historical average single-family residential use. In response to calls for conservation, District customers have conserved 12 percent over 2013 use levels to date so the average use is currently below 10 units per month.

<b>Multi-Family Residential and Non-Residential Water Charges on Water Bill</b>									
	<b>Meter (Inches)</b>	<b>Use (CCF)</b>	<b>FY15 Bill</b>	<b>FY16 Bill</b>	<b>Increase from FY15</b>	<b>Percent Change</b>	<b>FY17 Bill</b>	<b>Increase from FY16</b>	<b>Percent Change</b>
Multi-Family Residential 4 units	1	25	\$125.54	\$133.45	\$7.91	6.3%	\$142.74	\$9.29	7.0%
Multi-Family Residential 5+ units	1	50	\$217.54	\$237.70	\$20.16	9.3%	\$254.24	\$16.54	7.0%
Commercial	1	50	\$225.08	\$236.70	\$11.62	5.2%	\$253.24	\$16.54	7.0%
Industrial	2	500	\$2,046.68	\$2,158.48	\$111.80	5.5%	\$2,309.32	\$150.84	7.0%

### Wastewater Treatment Charge Bill: Monthly Impacts

<b>Wastewater Charges on Water Bill</b>									
	<b>Meter (Inches)</b>	<b>Use (CCF)</b>	<b>FY15 Bill</b>	<b>FY16 Bill</b>	<b>Increase from FY15</b>	<b>Percent Change</b>	<b>FY17 Bill</b>	<b>Increase from FY16</b>	<b>Percent Change</b>
Single Family Residential	5/8	6	\$19.25	\$19.01	-\$0.24	-1.3%	\$19.93	\$0.92	4.8%
Single Family Residential	5/8	9	\$21.61	\$22.13	\$0.52	2.4%	\$23.20	\$1.07	4.8%
Multi-Family Residential 4 units	1	25	\$56.41	\$61.21	\$4.81	8.5%	\$64.16	\$2.95	4.8%
Multi-Family Residential 5+ units	1	50	\$101.13	\$124.29	\$23.16	22.9%	\$130.55	\$6.26	5%
Commercial	1	50	\$105.61	\$128.77	\$23.16	21.9%	\$135.03	\$6.26	4.9%
Industrial	2	500	\$6557.61	\$6915.77	\$358.16	5.5%	\$7261.03	\$345.26	5.0%

### Wastewater Wet Weather Facilities Charge: Annual Impacts

<b>Wet Weather Facilities Charge on Property Tax Bill</b>							
	<b>FY15</b>	<b>FY16 Small Lot 0-5,000 sq ft</b>	<b>FY16 Med Lot 5,001 – 10,000 sq ft</b>	<b>FY16 Large Lot &gt;10,000 sq ft</b>	<b>FY17 Small Lot 0-5,000 sq ft</b>	<b>FY17 Med Lot 5,001 – 10,000 sq ft</b>	<b>FY17 Large Lot &gt;10,000 sq ft</b>
Single Family Residential	\$89.34	\$89.62	\$140.00	\$320.00	\$94.10	\$147.00	\$336.00
Multi-Family Residential 2 units	\$178.68						
Multi-Family Residential 4 units	\$357.36						
Multi-Family Residential 5+ units	\$446.70						
Commercial	\$134.00						
Industrial	\$134.00						
Parcels with Multiple Accounts	\$223 to \$670 +						

### Drought Surcharge: Monthly Impacts

Stage 2 - Single Family Residential Water Charges and Drought Surcharges on Water Bill									Impact of Surcharge	
	Single Family Residential Use (CCF)	FY15 Bill	FY16 Bill *	Increase from FY15	Percent Change	FY17 Bill *	Increase from FY16	Percent Change	FY16	FY17
25 <sup>th</sup> Percentile	4	\$29.07	\$32.06	\$2.99	10.3%	\$34.33	\$2.27	7.1%	\$0.92	\$1.00
50 <sup>th</sup> Percentile (median use)	7	\$37.80	\$41.60	\$3.80	10.1%	\$44.56	\$2.96	7.1%	\$1.61	\$1.75
75 <sup>th</sup> Percentile	12	\$55.80	\$63.45	\$7.65	13.7%	\$67.91	\$4.46	7.0%	\$3.16	\$3.40
95 <sup>th</sup> Percentile	30	\$132.08	\$161.57	\$29.49	22.3%	\$172.97	\$11.40	7.1%	\$10.00	\$10.74
Average Single Family Residential Use**	10	\$48.60	\$54.71	\$6.11	12.6%	\$58.57	\$3.86	7.1%	\$2.54	\$2.74

\*Bills reflect both base rate increase and drought surcharge

\*\*10 CCF/month represents historical average single-family residential use. In response to calls for conservation, District customers have conserved 12 percent over 2013 use levels to date so the average use is currently below 10 units per month.

Stage 3 - Single Family Residential Water Charges and Drought Surcharges on Water Bill									Impact of Surcharge	
	Single Family Residential Use (CCF)	FY15 Bill	FY16 Bill *	Increase from FY15	Percent Change	FY17 Bill *	Increase from FY16	Percent Change	FY16	FY17
25 <sup>th</sup> Percentile	4	\$29.07	\$33.50	\$4.43	15.2%	\$35.85	\$2.35	7.0%	\$2.36	\$2.52
50 <sup>th</sup> Percentile (median use)	7	\$37.80	\$44.12	\$6.32	16.7%	\$47.22	\$3.10	7.0%	\$4.13	\$4.41
75 <sup>th</sup> Percentile	12	\$55.80	\$68.37	\$12.57	22.5%	\$73.22	\$4.85	7.1%	\$8.08	\$8.71
95 <sup>th</sup> Percentile	30	\$132.08	\$177.23	\$45.15	34.2%	\$190.06	\$12.83	7.2%	\$25.66	\$27.83
Average Single Family Residential Use**	10	\$48.60	\$58.67	\$10.07	20.7%	\$62.82	\$4.15	7.1%	\$6.50	\$6.99

\*Bills reflect both base rate increase and drought surcharge

\*\*10 CCF/month represents historical average single-family residential use. In response to calls for conservation, District customers have conserved 12 percent over 2013 use levels to date so the average use is currently below 10 units per month.

Stage 4 - Single Family Residential Water Charges and Drought Surcharges on Water Bill									Impact of Surcharge	
	Single Family Residential Use (CCF)	FY15 Bill	FY16 Bill *	Increase from FY15	Percent Change	FY17 Bill *	Increase from FY16	Percent Change	FY16	FY17
25 <sup>th</sup> Percentile	4	\$29.07	\$34.06	\$4.99	17.2%	\$36.49	\$2.43	7.1%	\$2.92	\$3.16
50 <sup>th</sup> Percentile (median use)	7	\$37.80	\$45.10	\$7.30	19.3%	\$48.34	\$3.24	7.2%	\$5.11	\$5.53
75 <sup>th</sup> Percentile	12	\$55.80	\$70.35	\$14.55	26.1%	\$75.39	\$5.04	7.2%	\$10.06	\$10.88
95 <sup>th</sup> Percentile	30	\$132.08	\$183.79	\$51.71	39.2%	\$196.99	\$13.20	7.2%	\$32.22	\$34.76
Average Single Family Residential Use**	10	\$48.60	\$60.25	\$11.65	24.0%	\$64.57	\$4.32	7.2%	\$8.08	\$8.74

\*Bills reflect both base rate increase and drought surcharge

\*\*10 CCF/month represents historical average single-family residential use. In response to calls for conservation, District customers have conserved 12 percent over 2013 use levels to date so the average use is currently below 10 units per month.

## INTRODUCTION: DISTRICT OVERVIEW

The East Bay Municipal Utility District (EBMUD) supplies water and provides wastewater treatment for parts of Alameda and Contra Costa counties in California. It is a publicly owned utility formed under the Municipal Utility District (MUD) Act passed by the state legislature in 1921. The Act permits the formation of multi-purpose government agencies to provide needed public services on a regional basis. In 1923, voters in the eastern San Francisco Bay Area created EBMUD to provide water service.



The mission of the District is

*“To manage the natural resources with which the District is entrusted; to provide reliable, high quality water and wastewater services at fair and reasonable rates for the people of the East Bay; and to preserve and protect the environment for future generations.”*

Ninety percent of the water used by EBMUD comes from melted snow within the 627-square mile protected watershed of the Mokelumne River located on the western slope of the Sierra Nevada. Raw or untreated water from Pardee Reservoir is transported more than 90 miles west via three parallel aqueducts to East Bay water treatment plants or terminal reservoirs, and from there to 170 local reservoirs and 4,200 miles of distribution pipeline. To protect EBMUD's customers from the potential devastation of a severe drought, the District created the Freeport Regional Water Project to convey up to 100 million gallons per day of supplemental Sacramento River water. The first water deliveries were in 2014.

The MUD Act was amended in 1941 to enable the formation of special districts. In 1944, voters in six of the East Bay cities served by EBMUD elected to form the EBMUD Special District No. 1 to treat wastewater before being released into San Francisco Bay. Wastewater treatment began in 1951. In 1971, the Stege Sanitary District was annexed to the Special District No. 1. In addition to providing wastewater treatment, laboratory services operate 365 days a year to constantly monitor water quality for drinking water and wastewater systems. The Water System and Wastewater Systems are legally distinct entities managed by the same Board of Directors.

EBMUD supports one of the largest and most comprehensive water conservation programs in California. Also, water recycling programs have been initiated to reduce demand on drinking water; more than ten million gallons a day of recycled water is provided for industrial uses, golf courses, and landscaping needs. Eighty thousand megawatt-hours are generated at Pardee and Camanche powerhouses, and fifty-five thousand megawatt-hours of renewable energy are generated at the wastewater treatment plant annually, in total enough to power 20,000 homes for a year.

For a complete history of the East Bay Municipal Utility District, please visit the history page at <http://www.ebmud.com/about/history>.

# COMMUNITY

## Service Area Description

In the 90 years since local residents voted to form a municipal utility district the East Bay has grown dramatically. Since 1929, when EBMUD first delivered water from the Sierra Mountains to the East Bay, the population served has grown from approximately 0.5 million to 1.3 million. Today the service area includes many of the region's large employers. The District's vitality is inseparable from the \$535 billion Bay Area regional economy and essential to the economic health of California and the nation. The Bay Area has the highest gross domestic product (GDP) per capita in the United States. The District's infrastructure is diverse and extensive, with a replacement cost conservatively estimated at \$14.4 billion.

The EBMUD water service area includes a large part of urban and suburban development in Alameda and Contra Costa Counties. The service area includes 20 cities and 15 unincorporated communities located on the eastern shore of San Francisco Bay (the "East Bay"). It is a 332-square mile area extending from Crockett in the north to San Lorenzo in the south, and eastward from San Francisco Bay through the Oakland-Berkeley hills to Walnut Creek and south through the San Ramon Valley.

The wastewater service area is an 88-square mile area along the east shore of the bay extending from Richmond in the north to Oakland in the south.

### EBMUD SERVICE AREA – WATER and WASTEWATER SYSTEMS





## Population

Approximately 1.3 million people are served by the EBMUD water system, 650,000 of whom are also served by the wastewater system. The San Francisco Bay Area leads the state as the fastest growing region. Alameda County is the second fastest growing county in the State. Oakland is the eighth largest city in the State. The following table includes population data for the largest cities in the District's service area.

### Population Trends \*

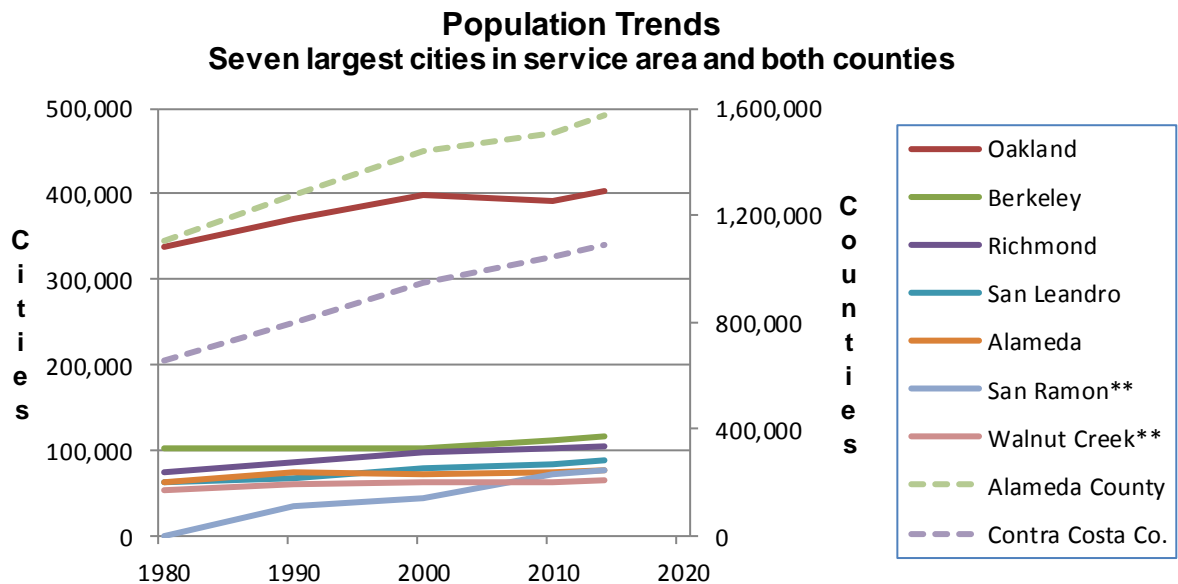
Seven Largest Cities in Service Area  
Alameda and Contra Costa Counties, and California

City/County	1980	1990	2000	2010	2014
Oakland	339,300	371,100	399,500	390,757	404,355
Berkeley	103,300	102,700	102,700	112,621	117,372
Richmond	74,300	86,600	99,200	103,661	106,138
San Leandro	64,200	68,100	79,500	84,977	87,691
Alameda	63,900	75,900	72,300	73,835	75,988
San Ramon**	***	35,300	44,800	72,148	77,270
Walnut Creek**		60,600	64,300	64,140	66,183
Alameda County	1,105,380	1,274,700	1,443,700	1,509,240	1,573,254
Contra Costa Co.	657,250	797,600	948,800	1,047,948	1,087,088
California	23,669,000	29,558,000	33,872,000	37,223,900	38,340,074

\* California Department of Finance, Demographic Research Unit. Population Estimates for California Cities – Released April 30, 2014.

\*\* EBMUD does not serve all of San Ramon or Walnut Creek, but total population is shown for each.

\*\*\* San Ramon was unincorporated at the time, data not available.



\*\* Total Population shown even though EBMUD does not serve the entire community.

# WATER AND WASTEWATER SYSTEMS

## Water Supply

This section provides a description of how EBMUD delivers water from the Sierra Nevada foothills to the Bay Area and how the wastewater plant treats municipal wastewater daily. In the 90 years of history, the population has grown and the system has expanded to meet increasing needs.

Ensuring a reliable high quality water supply for today and the future is one of the District's highest priorities. Significant capital investments have been made to ensure a reliable water supply, such as securing supplemental water supplies from Sacramento County to expanding recycled water supply programs.



One of the most important factors in water quality is the source: the purer the source the better the water. Ninety percent of EBMUD's water comes from the 627-square mile watershed of the Mokelumne River located on the western slope of the Sierra Nevada. This area is mostly national forest, EBMUD-owned lands and other undeveloped lands little affected by human activity. The Mokelumne watershed collects snowmelt which flows into Pardee Reservoir near the town of Valley Springs.

Three large aqueducts carry this water more than 90 miles from Pardee Reservoir to the East Bay and protect it from pesticides, agricultural and urban runoff, municipal sewage and industrial discharges. When water demand is high or during times of operational need, EBMUD also draws water from protected local watersheds.

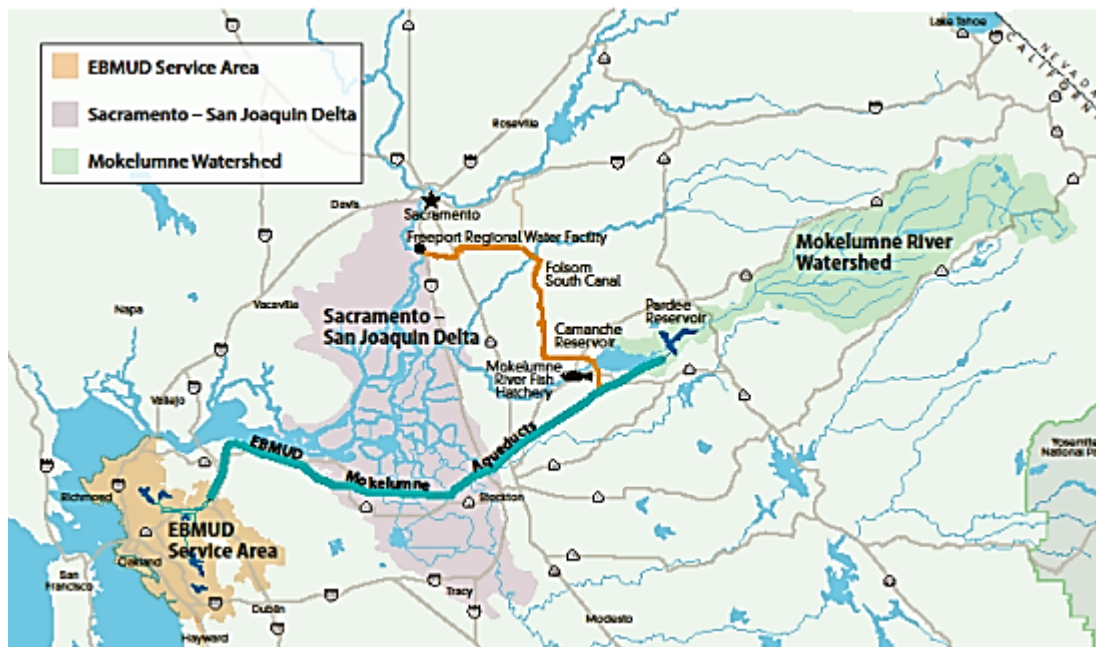
Before water reaches the tap, EBMUD takes many steps to ensure its quality. This includes carefully managing watershed lands and reservoirs, treating the water, maintaining that water quality through a complex system of distribution pipes, pumping plants and reservoirs, testing water samples in our lab and in the field, and addressing consumer concerns. These efforts ensure that all customers receive high-quality drinking water that meets or surpasses all state and federal regulatory requirements.





Every five years EBMUD updates its Urban Water Management Plan to ensure a reliable water supply for the next generation. This includes making the best use of limited supplies through water conservation and recycling and developing long-term projects to augment the water supply.

This map shows how the water travels from the Mokelumne River watershed into Pardee Reservoir, across the Central Valley in EBMUD's Mokelumne Aqueducts, and to the EBMUD Service Area.



Some of the water used by customers is discharged into the sewer system and makes its way to the Wastewater Treatment Plant for treatment, and finally to the San Francisco Bay. The wastewater treatment process is described next.

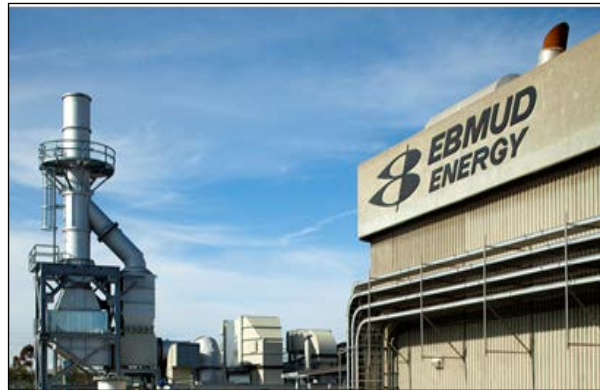
## Wastewater Treatment

EBMUD's wastewater treatment plant provides service for 650,000 people along the eastern shore of San Francisco Bay, and treats approximately 63 million gallons of municipal wastewater per day. Wastewater is collected from homes and businesses through privately owned sewer laterals that feed into a network of city sewers. EBMUD's sewer interceptors (large



pipes) and pump stations carry the wastewater to its treatment plant in Oakland. Stormwater is collected through a separate community-owned system. The plant treats sewage to meet stringent state and federal standards before recycling it or releasing it to the Bay. Prior to its existence, raw sewage was discharged directly into the Bay. EBMUD partners with residents and businesses to help them keep contaminants out of the sewer system.

EBMUD has been recycling, reusing, and producing renewable energy at its wastewater plant since the mid-1980s. EBMUD's plant transforms sewage and other organic wastes into green energy, nutrient-rich soil conditioner and recycled water. In addition, EBMUD produces more than enough renewable energy to meet all onsite power demands.



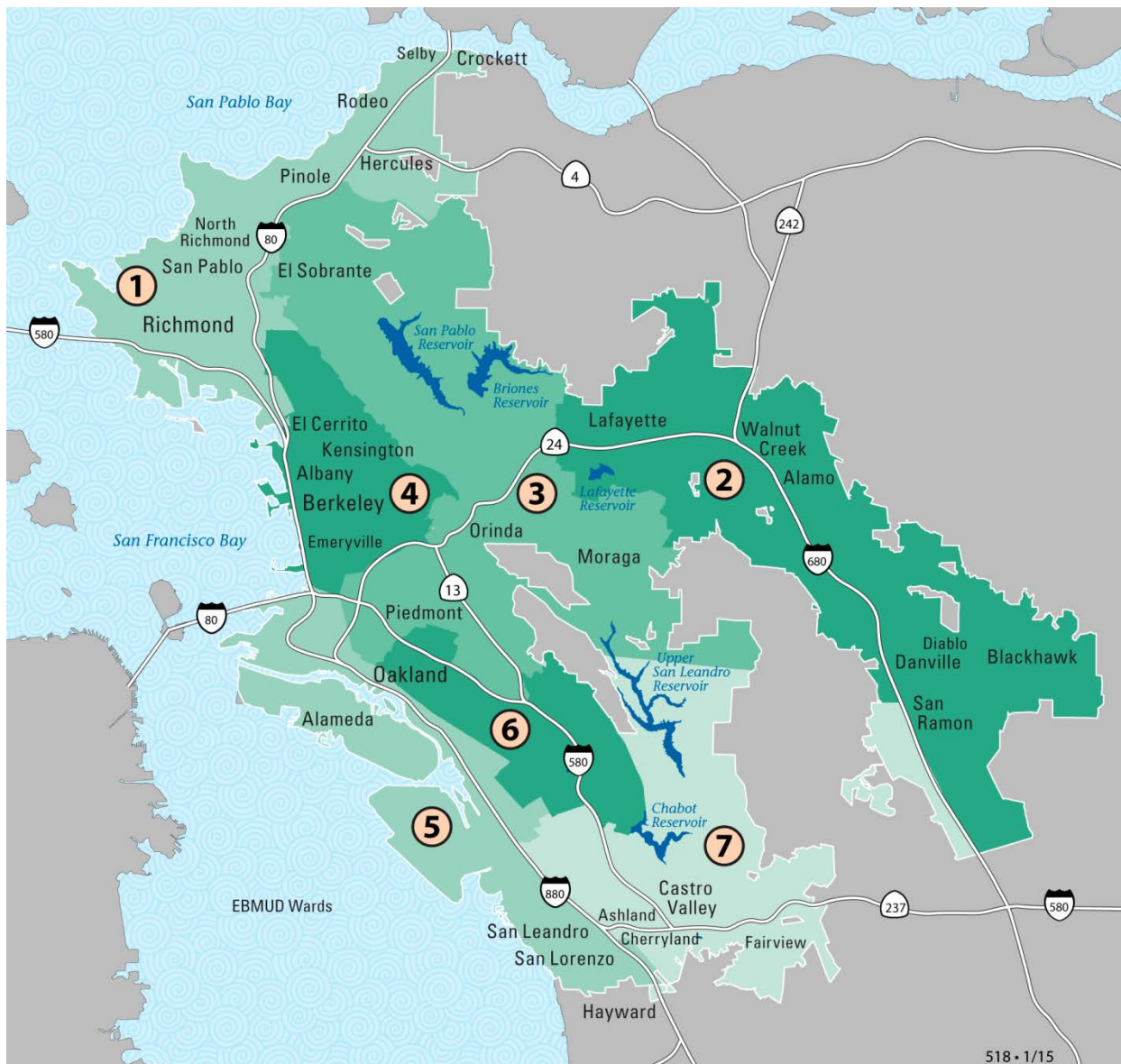


# DISTRICT ORGANIZATION

## EBMUD BOARD OF DIRECTORS

EBMUD has a seven-member elected Board of Directors who determine overall policies, which are then implemented under the direction of the General Manager. The Board of Directors believe that EBMUD has a public responsibility to preserve the region's resources and set industry standards for the way water and wastewater utilities conduct themselves.

Directors are publicly elected for four-year terms from seven wards within the service area, with one Director representing each ward. The following map shows the areas included in each ward.



The current Board of Directors is shown below. More information on the Board of Directors can be found at: [www.ebmud.com/about/board-directors/your-board-members](http://www.ebmud.com/about/board-directors/your-board-members).

**WARD 1**      Director: **Lesa R. McIntosh**      **Term expires 12/31/2016**

CONTRA COSTA COUNTY: Cities of Crockett, Hercules, Rodeo, and San Pablo; portions of Richmond and Pinole; and communities of North Richmond and Selby.

**WARD 2**      Director: **John A. Coleman**      **Term expires 12/31/2018**

CONTRA COSTA COUNTY: Cities of Alamo, Lafayette, Walnut Creek, Town of Danville; portions of San Ramon and Pleasant Hill and communities of Blackhawk and Diablo.

**WARD 3**      Director: **Marguerite Young**      **Term expires 12/31/2018**

ALAMEDA COUNTY: City of Piedmont, and a substantial portion of Oakland.  
CONTRA COSTA COUNTY: Cities of Orinda and El Sobrante; Town of Moraga, and portions of Pinole and Richmond.

**WARD 4**      Director: **Andy Katz**      **Term expires 12/31/2018**

ALAMEDA COUNTY: Cities of Albany, Berkeley, and Emeryville; and a portion of Oakland.  
CONTRA COSTA COUNTY: Cities of El Cerrito and Kensington.

**WARD 5**      Director: **Doug Linney**      **Term expires 12/31/2016**

ALAMEDA COUNTY: Cities of Alameda and San Lorenzo; West Oakland and Oakland Airport Area, and a portion of San Leandro.

**WARD 6**      Director: **William B. Patterson - Vice-President**      **Term expires 12/31/2016**

ALAMEDA COUNTY: Portions of Oakland (East Oakland and south of Park Boulevard/5<sup>th</sup> Avenue) to the San Leandro City boundary.

**WARD 7**      Director: **Frank Mellon - President**      **Term expires 12/31/2018**

ALAMEDA COUNTY: Castro Valley; portions of San Leandro and Hayward; communities of Cherryland and Fairview.  
CONTRA COSTA COUNTY: Portion of San Ramon.

Board meetings are open to the public and are held twice monthly on the 2nd and 4th Tuesday of each month. The Board may also meet at other times as needed. The Board is committed to developing policy through an open, public process, guided by the EBMUD Mission Statement.

## EBMUD MANAGEMENT

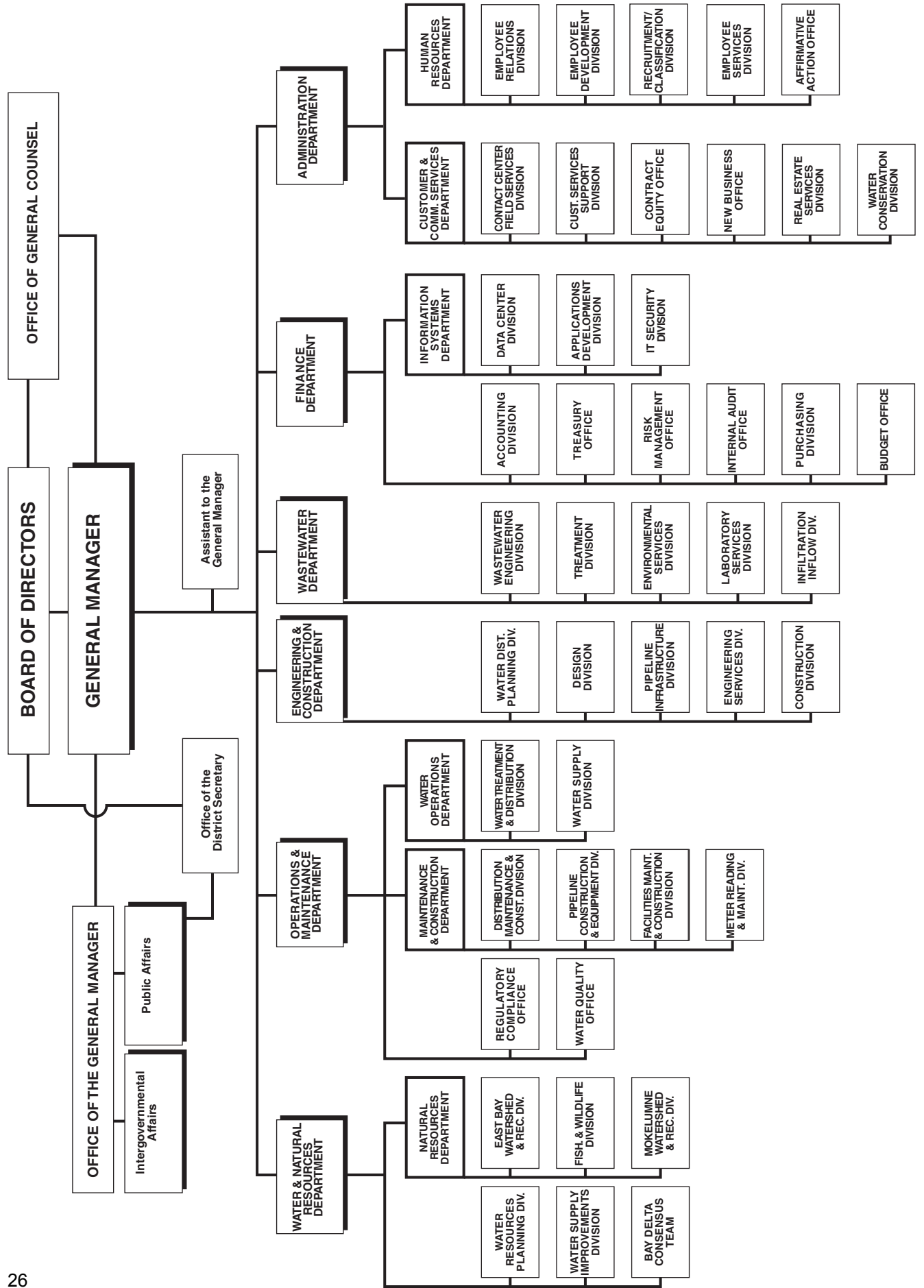
The General Manager and General Counsel are appointed by and report directly to the Board of Directors.

Alexander R. Coate	General Manager
Craig S. Spencer	General Counsel

The Senior Management Team listed below is responsible for managing the operations of the District.

Clifford C. Chan	Manager of Maintenance and Construction
Marlaigne K. Dumaine	Special Assistant to the General Manager – Governmental Affairs
Cheryl A. Farr	Special Assistant to the General Manager – Communications
Sherri A. Hong	Manager of Customer and Community Services
Bennett K. Horenstein	Director of Wastewater
Nicholas J. Irias	Manager of Information Systems
Xavier J. Irias	Director of Engineering and Construction
Lynelle M. Lewis	Secretary of the District
Eric L. Sandler	Director of Finance
Richard G. Sykes	Director of Water and Natural Resources
Delores A. Turner	Manager of Human Resources
Michael J. Wallis	Director of Operations and Maintenance
Eileen M. White	Manager of Operations and Maintenance
Vacant	Director of Administration
Vacant	Manager of Natural Resources

The chart on the following page provides an overview of the organization and shows the relationships between different departments and divisions within the District. It can also be found at <http://www.ebmud.com/about/management>.





## WORKFORCE

EBMUD employs approximately 1,800 people. Most are represented by the American Federation of State, County and Municipal Employees, Locals 444 and 2019; the International Federation of Professional and Technical Engineers, Local 21; and the International Union of Operating Engineers, Local 39. The majority of employees work in the East Bay, but employees also work in the Central Valley and Mokelumne watershed area.

EBMUD is an equal employment opportunity (EEO) employer, and a proud leader in taking legal, proactive steps that support a diverse, inclusive workforce. From Board adopted policies that ensure equal employment opportunities for all persons regardless of race, and based on job related merit, the District uses inclusive and creative recruitment, professional development and placement methods to enhance the District's efforts to achieve a workforce composition reflective of the labor market in the communities we serve.



## EBMUD OFFICES



Administration Building  
375 Eleventh Street, Oakland, 94607

Wastewater Treatment Plant  
2020 Wake Ave, Oakland, 94607



## STRATEGIC PLAN SUMMARY

This section provides a summary of the District's Strategic Plan. The District's first Strategic Plan was adopted in May 2004. The senior management team identified the critical issues facing the District in the future and determined how best to address them. The result was a plan that outlined the goals, strategies, objectives, and key performance indicators (KPIs) that would help the District carry out its mission. The plan is adopted every two years.

### Introduction

The District's current Strategic Plan was adopted by the Board of Directors in July 2014. It is a blueprint for how EBMUD will respond to future challenges and changing priorities. It confirms the District's mission and values as a public utility dedicated to high quality service and preservation of the precious resources with which the District is entrusted for future generations. The plan incorporates the principles of sustainability and effective use of resources to minimize the District's environmental footprint. The Strategic Plan includes the following elements:

- **Goals** are the important outcomes to achieve;
- **Strategies** are the direction or course to take to reach those goals;
- **Objectives** reflect what needs to be accomplished in the near term; and
- **Key Performance Indicators** measure how well the District is doing in achieving its goals.

### Strategic Plan Goals

The District has established a comprehensive set of goals integrating sustainability principles.

- **Long Term Water Supply**  
Ensure a reliable high-quality water supply for the future.
- **Water Quality and Environmental Protection**  
Meet or surpass environmental and public health standards and protect public trust values.
- **Long-Term Infrastructure Investment**  
Maintain and improve the District's infrastructure in a cost-effective manner to ensure sustainable delivery of reliable, high-quality service now and in the future, addressing environmental, social, and financial concerns.
- **Long-Term Financial Stability**  
Manage the District's finances to meet funding needs and maintain reasonable water and wastewater rates.
- **Customer Service**  
Understand and be responsive to customer expectations for service.
- **Workforce Planning and Development**  
Create an environment that attracts, retains, and engages a high performing diverse workforce in support of the District's mission.

## Key Performance Indicators

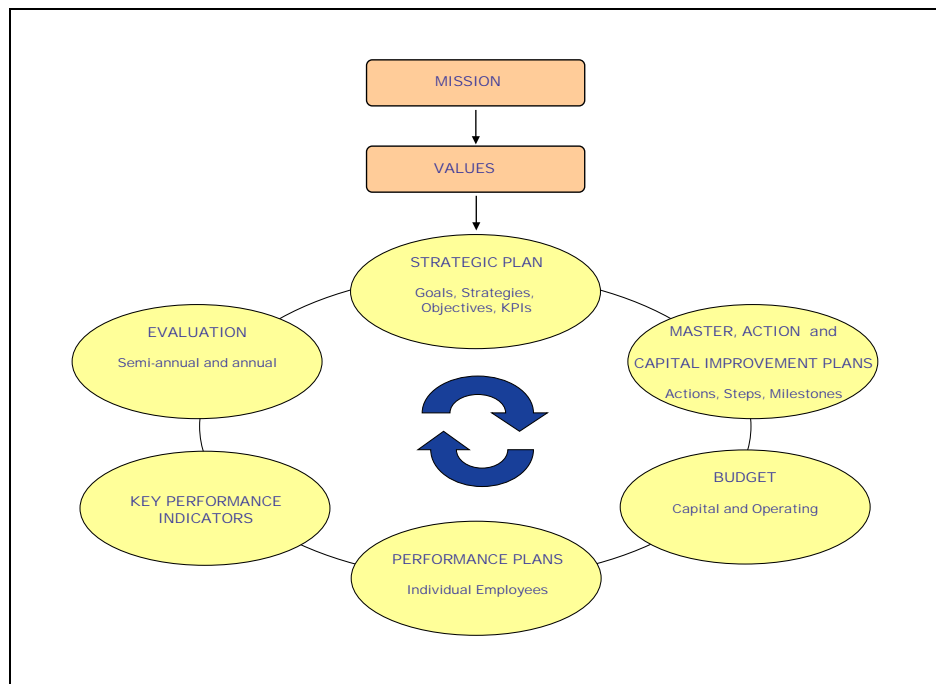
The current plan includes 56 KPIs that are appropriate, measurable, comprehensive, and reflect the various strategies contained within the six Strategic Plan goals. KPIs measure performance against targets and enable the District to evaluate its progress in meeting the Strategic Plan goals. Included in the July 2014 Strategic Plan is a description of each indicator, actual performance in FY13, as well as performance targets for FY14 and FY15. Performance against these targets is measured annually and presented to the Board of Directors. The latest KPI report, completed in September 2014, includes information on targets met and not met in FY14.

## Implementing the Plan

The Strategic Plan provides the overall direction on how to achieve future success. It does not, however, describe all the specific actions needed to achieve those objectives. These actions are spelled out in a series of master plans, action plans, and the Capital Improvement Plan.

These plans are developed to guide budget preparation. By developing plans that are tied to the Strategic Plan and utilizing these plans to guide our budget priorities, the District can ensure that it focuses its resources on the highest priorities for the District.

Individual employee performance plans prepared on an annual basis reflect the priorities and provide the employee a clear understanding of how his/her work relates to the District as a whole.



Strategic Plan 2014 strategies, objectives, and Key Performance Indicators are contained in the appendix to this volume.

For a complete copy of the 2014 Strategic Plan, go to [www.ebmud.com/about/mission](http://www.ebmud.com/about/mission).

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# CHAPTER 1: FINANCIAL ORGANIZATION AND BUDGET PROCESS

This chapter describes the District's financial structure, financial organization, and budget development process. It provides a comprehensive financial overview, including the parameters under which the budget is created.

## FINANCIAL ORGANIZATION

### Fund Structure and Descriptions

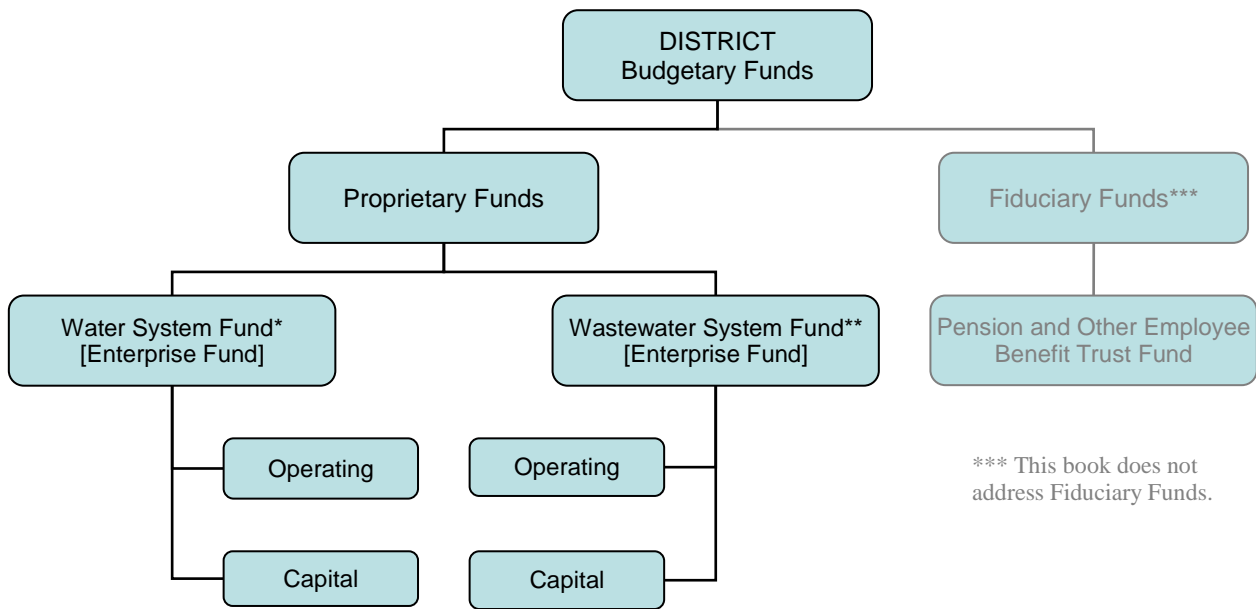
As illustrated in the graphic on the following page, the District's financial structure is composed of proprietary and fiduciary funds [see glossary for definitions of terms]. The proprietary funds include two legally distinct and financially independent enterprise funds: the Water System and the Wastewater System. The two separate funds preserve the unique expenditure and revenue distinction between the two entities. When services are provided by one system for the benefit of the other, the appropriate fund is billed and cash transfers are made to the other.

- The Water System is engaged in the collection, transmission, and distribution of water to communities within Alameda and Contra Costa counties of California. In addition, the Water System provides administrative, financial, and other support services to the Wastewater System. These costs are charged to the Wastewater System. The Water System consists of fourteen staffed departments.
- The Wastewater System is engaged in the interception and treatment of wastewater from residences and industries in the California communities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and the Stege Sanitary District. The Wastewater System consists of one staffed department.

Both systems are proprietary, enterprise funds. Enterprise funds are used to account for operations that are financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the expense of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges. Both funds are appropriated, and both funds encompass operating and capital programs.

The Water System performs many support functions for the Wastewater System. These functions include but are not limited to financial services such as accounting, human resources services such as recruitment, information technology, customer services, legal services, and general oversight and governance. The Wastewater System pays the Water System directly for these services through a joint administrative and general annual expense.

Both systems are governed by the same elected Board of Directors, and share policies and procedures. Throughout this book, the District refers to the East Bay Municipal Utility District and is understood to encompass both the Water and Wastewater Funds.



**\*Departments**

Operations and Maintenance Support  
 Maintenance & Construction  
 Water Operations  
 Water Resources  
 Natural Resources  
 Engineering & Construction  
 Office of the General Manager  
 Finance  
 Information Systems  
 Customer & Community Services  
 Human Resources  
 Office of the General Counsel  
 Water Recycling Program  
 Administration

**\*\*Department**

Wastewater

These funds are organized according to the Uniform System of Accounts for Water Utilities, as established by the California Public Utilities Commission, and adhere to the Government Finance Officers Association (GFOA) requirements for enterprise funds.

In addition to the District's proprietary funds, the District maintains a fiduciary fund used to account for resources held for the benefit of parties outside the government. The District's fiduciary fund consists of the Pension and Other Employee Benefit Trust fund, which is maintained to account for assets held by the Employee's Retirement System in a trustee capacity for vested and retired employees.

## Financial Reporting

The District prepares its financial reports in conformity with generally accepted accounting principles (GAAP) used in the United States of America. At the conclusion of each fiscal year the Finance Department prepares the Comprehensive Annual Financial Report (CAFR) in compliance with principles and standards for financial reporting set forth by the Governmental Accounting Standards Board (GASB), and the guidelines recommended by the Government Finance Officers Association (GFOA) of the United States and Canada. An application has been submitted to GFOA for the Certificate of Achievement for Excellence in Financial Reporting application for the Comprehensive Annual Financial Report for the fiscal year ending June 30, 2014. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of a state and local government financial report. To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR that satisfies both generally accepted accounting principles and applicable legal requirements. This would be the tenth consecutive year that EBMUD has received this award.

## Budgetary and Accounting Basis

The basis of budgeting and accounting refers to the method of recognition of revenue and expenses in financial and budgetary reporting.

EBMUD's budgets are prepared on a modified cash flow basis which projects the District's cash inflows and outflows over the course of a fiscal year (July 1 through June 30) excluding physical and intangible assets such as depreciation. Revenues are recognized as they are received and accounted for while obligations for expenditures are recognized when a commitment is made through an encumbered purchase order or actual expense.

EBMUD's accounts and transactions are tracked on an accrual basis, which is the basis of accounting under governmental GAAP. Under this method, all assets and liabilities associated with operations are included on the balance sheet; and revenues are recorded when earned and expenses are recorded at the time commitments are incurred.

Depreciation and amortization are handled differently in budgetary reporting and in account reporting. In budgetary reporting, depreciation and amortization are excluded, and the repayment of the principal on debt as expenses is included. In account reporting, depreciation and amortization are included, and the repayment of the principal on debt as expenses is excluded.

This table illustrates the differences between the budget and accounting basis described above.

	<b>BUDGETS</b> <b>Modified Cash Flow basis</b>	<b>ACCOUNTING</b> <b>Accrual basis</b>
<b>Revenue</b>	Recognized when received and accounted for	Recorded when earned
<b>Obligations</b>	Recognized when a commitment is made through encumbrance or expense	Recorded at the time commitments are incurred
<b>Depreciation and amortization</b>	Excluded	Included
<b>Repayment of principal on debt</b>	Included	Excluded

## Financial Planning

The District prepares a biennial strategic plan and annual financial forecasts that provide the basis for developing the budget. Long-term financial stability is a goal in the District's Strategic Plan, which includes managing the District's finances to support its needs and maintain reasonable water and wastewater rates.

Revenue requirements over a five-year planning horizon are evaluated to determine the level of rate adjustments required for the upcoming budget years. To the extent possible, increases in water and wastewater rates are adjusted to avoid large fluctuations.

## Financial Policies

The District establishes policies and resolutions to comply with the stipulations set forth in the MUD Act. The majority of District policies are reviewed biannually; some policies, such as the Investment Policy shown below, are reviewed annually. The adoption date changes only if revisions are made to the policy. The policies described below set forth key objectives for long-range financial planning and control.

The following policies are included in the appendices as a reference:

Policy 4.02	Cash Reserves and Debt Management	Adopted July 2005
Policy 4.04	Financial Planning and Budgetary Control	Adopted April 2009
Policy 4.07	Investment Policy	Adopted March 2013
Policy 4.13	Establishing Water Rates	Adopted April 2012

**Policy 4.02: Cash Reserves and Debt Management**, identifies specific financial metric targets.

The District strives to maintain operating reserves at a level sufficient to meet working capital and unanticipated needs by:

- Maintaining working capital reserves of at least three months operating and maintenance expenses.
- Maintaining self-insurance reserves at 1.25 times the expected annual expenditures.
- Maintaining workers' compensation reserves equal to the estimated future liability for workers' compensation claims.
- Maintaining contingency and rate stabilization reserves:
  - For Water System – 20 percent of projected annual water volume sales.
  - For Wastewater System – 5 percent of projected annual operating and maintenance expenses.

The District strives to maintain a balance between current funding sources and debt financing over each five-year planning horizon by:

- Maintaining an annual revenue bond debt coverage ratio of at least 1.6 times coverage.
- Limiting the use of debt financing to no more than 65 percent of the total capital program over each five-year planning period.
- Limiting the use of commercial paper/variable rate debt to 25 percent of outstanding long-term debt.



**Policy 4.04: Financial Planning and Budgetary Control**, provides for the efficient use of District resources through financial planning and cost control; keeping total annual expenditures to the level of total annual revenue; periodic status reports on revenues, expenditures, and investments, and establishes the authority of the General Manager to transfer up to 5 percent of each fiscal years' budget between the capital and operating budgets within each System Funds, provided that the total budget for each System fund remains unchanged.

**Policy 4.07: Investment Policy**, establishes four criteria for selecting investments: safety, liquidity, yield, and diversity. A range of maturities provides a high rate of return while providing adequate security and liquidity to pay demands when due.

**Policy 4.13: Establishing Water Rates**, sets forth the rate methodology, rate design, and rate distribution that provide adequate revenues while keeping rates affordable, encouraging conservation and efficient use of water, and reflecting the cost of providing service to customers. Rates should provide sufficient revenue to support a safe, reliable, and sufficient water supply over the long term.

The rate methodology used is a cost-of-service methodology recommended by the American Water Works Association (AWWA). Rate design considers the impact on conservation and water supply enhancement such as incentive pricing for water, recycled water, and drought rates during periods of limited availability. Rate design is also consistent with the Memorandum of Understanding (MOU) Regarding Urban Water Conservation of the California Urban Water Conservation Council (CUWCC); CA Assembly Bill AB1712 declaring water conservation as an important component of rate structure design; CA Senate Bill SBx7-7 which calls for reductions in urban per capita water use; and Article X, section 2 of the California Constitution which requires the beneficial use of water resources.

## **THE BUDGET PROCESS**

During the budget process, the District makes decisions on the efficient use of its resources using its Strategic Plan for guidance. A financial plan and biennial budget is established for the Water and the Wastewater Systems that includes the operating and capital programs and sets levels of related operating, capital and debt service expenditures that may be made during the budget period.

The budget is developed to reflect the costs necessary to provide customers with safe and reliable water and wastewater service over the long term while keeping rate increases as low as possible. The budget not only allocates resources, but is also used to develop rates and charges that provide adequate revenues to meet the District's needs, and encourages the efficient use of water.

Decisions on allocating resources and addressing budget needs do not end when the Board adopts the budget. Throughout the year departments are responsible for implementing the budget and monitoring budget performance, responding to unforeseen or emergency circumstances, and participating in long-range financial planning.

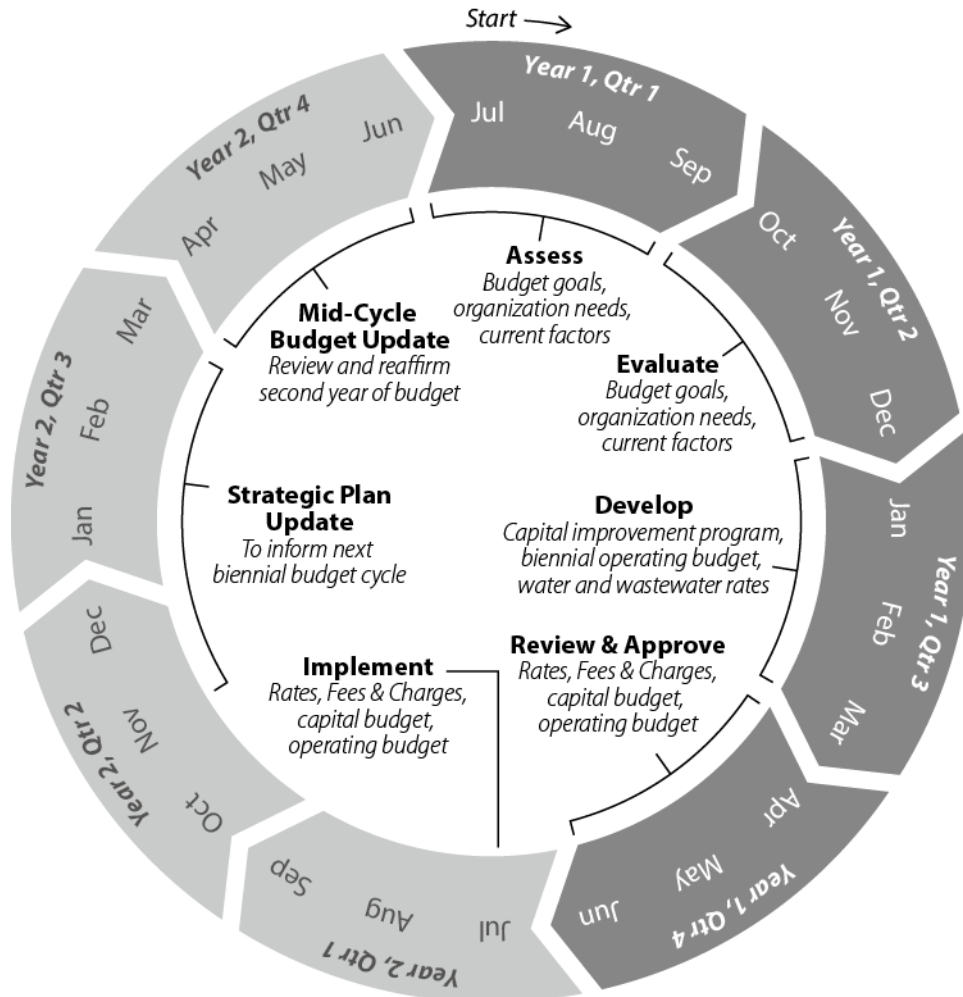
The District received the GFOA's Distinguished Budget Presentation Award for its FY14-15 biennial budget document dated June 11, 2013. This is the thirteenth consecutive budget document for which EBMUD has received the GFOA award. For the second time, the California Society of Municipal Finance Officers (CSMFO) has presented the Excellence in Budgeting Award to the District. To qualify for these awards, the budget document had to meet stringent guidelines and program criteria. Independent reviewers rated the documents and recommended these awards for the District.

### **Balanced Budget**

The District budget is balanced when operating revenues are equal to or greater than operating expenditures including debt service (i.e., budgeted expenditures shall not exceed budgeted revenues), and ending fund balances meet minimum policy levels. EBMUD establishes its budget on the principle of overall revenue neutrality, as outlined in the American Water Works Association (AWWA) Manual M-1 Principles of Water Rates, Fees and Charges recommendations for government-owned utilities. The District's rates and charges are set to ensure that revenues are sufficient to recover the total cash needs in a given fiscal year.

## Budget Development Calendar

The District has a biennial budget process which is represented in the graphic below and described more fully in the following text.



**Assess:** **Budget goals, organization needs, and current factors**

July Strategic Plan adopted  
August Budget guidelines and assumptions prepared  
September Capital budget development starts

**Evaluate:** **Budget goals, organization needs, and current factors**

October Operating budget development starts  
November Review of capital budget requests begins  
December Review of operating budget requests begins

**Develop:                                      Biennial operating budget, capital improvement program, water and wastewater rates**

January / February    Operating budget and capital improvement program recommendations developed by Senior Management with input from Board of Directors. Water and Wastewater rates to fund budget needs proposed.

March                      Documents prepared to present proposed budget and rates to the Board and the public.

General Manager presents the proposed operating and capital budgets, and proposed rates, fees and charges to the Board at a budget workshop.

**Review and Approve: Rates, Fees & Charges, capital budget, operating budget**

April                      A second budget workshop occurs if needed to address any direction given by the Board to the staff based upon the outcome of the first budget workshop.

California Proposition 218 notices are distributed to property owners.

May                        General Manager's recommendations on the proposed rates, charges, and fees are filed with the Board of Directors.

June                        Public hearing on rates.

Board adopts operating and capital budgets, and rates, fees and charges.

**Implement:                                      Adopted Rates, Fees & Charges, capital and operating budgets**

July                        Adopted rates and budget implementation begins  
Budget document, and rates and charges documents, published.

**Strategic Plan Update**

This plan provides the District with overall direction on how to achieve future success, sets priorities for the biennial budget, and aligns operating and capital budgets with those priorities.

**Mid-cycle Budget Update**

The Board of Directors approves the budget covering a two-year period. The Board reviews and reaffirms the second year of the two-year budget prior to the start of a new fiscal year in July. A Mid-cycle Budget Update provides a budget status and projected changes to revenues, expenditures and staffing.

**Annual and Semi-Annual Budget Performance Reports**

At the mid-point and conclusion of each fiscal year, the Board of Directors is provided with a comparative analysis of expenditures to budget.

## **Budget Responsibilities**

Budget decisions are made through a process that involves the Board of Directors, District staff and the public. The responsibilities for financial management planning and budget control are as follows:

### **Departmental Responsibilities**

- Prepare capital improvement program and biennial budget requests.
- Monitor financial performance and take prompt corrective action, as needed.
- Monitor key performance indicators and take corrective action, as appropriate.
- Promptly inform the General Manager when unforeseen circumstances indicate that budget amounts may be exceeded or that expected revenues may be less than planned.

### **Finance Department Responsibilities**

#### Treasury Office

- Recommend procedures for revenue collection, payment of approved demands, reporting and other actions associated with the prudent management of the District's financial resources.
- Provide for the issuance of debt to fund the capital improvement program.
- Prepare financial projections, schedules of rates and charges, tax rate proposals and other financial materials.

#### Accounting Division

- Produce monthly expenditure and revenue reports.
- Prepare and present information on financial trends to facilitate evaluation of the District's financial position and identify conditions requiring management attention.
- Prepare periodic reports on the status of expenditures, revenues, investments and actions taken to ensure the financial stability of the District.

#### Budget Office

- Support the development of the Strategic Plan that includes projections of short range and long range financial needs, and recommend methods for meeting those needs.
- Prepare the District's proposed biennial operating and capital improvement program budgets.
- Prepare budget performance reports on a monthly, quarterly, semi-annual and annual basis.
- Prepare the mid-cycle budget update.
- Develop procedures and controls to monitor and assure compliance with the budget.
- Assist departments throughout the year with their budgets and financial issues.

### **General Manager Responsibilities**

- Review and present to the Board of Directors long range plans, budgets and revisions, schedules of rates and charges, payments of financial demands and other financial transactions, as necessary.

- Authorize budget transfers up to 5 percent of the fiscal years' budget between the operating and capital budgets in each of the Water and Wastewater System's budgets, provided that the total budget for each of the two systems remains unchanged.
- Authorize the allocation of budgeted funds from contingency.
- Implement emergency financial procedures within approved limits, when necessary.

## **Budgetary Controls**

Automated District-wide budgetary controls track spending to the amounts set in the budget. Budgetary controls function differently for operating and capital budget expenditures.

For the operating budget, each department is controlled within expenditure category: personnel costs, contract services, and operations and maintenance. Departments are not allowed to exceed their authorized operating budget for the fiscal year.

For the capital budget, each capital project is controlled based on its appropriation. A project may not exceed its total appropriation. Unlike the operating budget, which expires on June 30 of each year, capital appropriations are multi-year and will last the life of the project.

## **Budget Adjustments**

Adjustments to the operating budget are reallocations of funds between organizational units, categories, and/or line items, which allow departments to have financial flexibility within established budgetary controls. Budget adjustments to the capital budget are reallocations of funds within or between projects. Approval from the affected department(s) and the Budget Office is required for all budget adjustments.

General Manager approval is required for the reallocation of funds from contingency, and the reallocation of funds between the operating and capital budgets in both the Water and Wastewater Systems. Approval from the Board of Directors is required for increases to the total budget of the Water or Wastewater System.

## **Capital Improvement Program Preparation**

The Capital Improvement Program (CIP) communicates the capital priorities of the District for the next five years. As part of the District's goal to expand the capital budget planning horizon to ten years, future capital needs have been estimated for a second five-year period. These future year estimates enable the District to more accurately identify and prioritize its infrastructure needs and plan for future infrastructure investments. Given the uncertainty of plans for capital improvements, this budget document focuses on the first five years of the CIP.

## **CIP Budget Preparation**

The CIP is prepared as part of the District's biennial budget process. The responsibilities for preparing and managing the CIP are shared among District staff as follows:

### **Project Management**

Project managers work together to meet the requirements of the biennial CIP budget process, and to implement a specific program or project. During the budget process the project managers update project appropriations and cash flows, and modify project descriptions and justifications to identify recent and anticipated major accomplishments. Managers also work together to identify the most effective ways to schedule, staff, and coordinate projects.

The steps used to budget for the CIP are:

- Identify the required appropriation and estimated cash flow for each project;
- Propose and justify new capital projects needed to carry out the goals of the District;
- Justify additional appropriation requests and identify how resources will be allocated to accomplish the work; and
- Include direct costs (without overhead), contingency and an inflation factor in the recommended appropriations and cash flows for projects.

### **Capital Steering Committee (CSC)**

The CSC consists of Department Directors and Managers responsible for the overall management of the CIP during the budget preparation process and throughout the year.

Responsibilities include:

- Serve as an advisory group to the General Manager and the Budget Office;
- Review projects for opportunities to combine programs and projects, streamline costs, and determine the necessity for proposed new projects;
- Confirm the adequacy of District resources to complete proposed projects;
- Scrutinize proposed project cash flow amounts;
- Establish priorities and finalize the list of individual projects to be presented to the General Manager and Board of Directors based on available resources and project justification;
- Review the status of the CIP regularly;
- Work with project management staff to resolve administrative issues; and
- Authorize necessary changes to project scope, schedule and budget that are within staff's administrative authority.

## **Budget Office**

The office is responsible for the overall management of the budget process which includes:

- Manage the CIP budget preparation and planning process;
- Provide staff support to the CSC;
- Ensure that the decisions of the CSC and General Manager are reflected in the budget;
- Determine types and levels of funding necessary for the CIP and ensure availability of funds; and
- Report to the General Manager and CSC the status of capital project appropriations and cash flow spending. Report CSC recommendations regarding adjustments to the CIP that require either General Manager or Board approval.



## CHAPTER 2: DISTRICT BUDGET SUMMARY

The District budget summary provides an overview of the District-wide biennial budget. Subsequent chapters describe the budgets for each of the two distinct funds: water and wastewater. This chapter includes the appropriations that are approved by the Board of Directors, a summary of operational priorities, and discussions of the following topics:

- operating expenses including staffed and non-staffed departments,
- debt service,
- labor, benefits, and staffing,
- capital expenses,
- the sources of the funds that support those expenses, and
- fund summaries.

### BUDGET APPROPRIATIONS

The FY16-17 District-wide total recommended appropriation is \$1.83 billion. Of that amount, \$1.71 billion is for water system and wastewater system operations, debt service, and capital appropriations. In addition, the Board is appropriating an additional \$126.3 million for drought contingency.

The FY16 budget of \$836.9 million is comprised of \$313.7 million or 38 percent for operations expense, \$203.6 million or 24 percent for debt service and \$319.6 million or 38 percent for capital appropriation. The FY17 budget of \$870.1 million is comprised of \$332.9 million or 38 percent for operations expense, \$214.1 million or 25 percent for debt service and \$323.0 million or 37 percent for capital appropriation. The drought contingency appropriation is \$64.2 million in FY16, and in \$62.1 million in FY17. Please see the Water System chapter for more details.

The following table shows the major components of this budget and the total appropriation approved by the Board of Directors for this biennial budget.

<b>FY16-17 APPROPRIATIONS</b>							
(\$ Thousands)							
	<b>FY16</b>			<b>FY17</b>			<b>FY16-17</b>
	Water	Wastewater	Total	Water	Wastewater	Total	<b>Grand Total</b>
Operations	248,264	65,448	313,712	262,232	70,717	332,949	<b>646,661</b>
Debt Service	169,894	33,693	203,587	180,191	33,956	214,147	<b>417,734</b>
Capital Appropriation	<u>249,042</u>	<u>70,536</u>	<u>319,578</u>	<u>290,392</u>	<u>32,583</u>	<u>322,975</u>	<b>642,553</b>
<b>Total</b>	<b>667,200</b>	<b>169,677</b>	<b>836,877</b>	<b>732,815</b>	<b>137,256</b>	<b>870,071</b>	<b>1,706,948</b>
Drought Contingency	<u>64,206</u>	-	<u>64,206</u>	<u>62,078</u>	-	<u>62,078</u>	<b>126,284</b>
<b>Grand Total</b>	<b>731,406</b>	<b>169,677</b>	<b>901,083</b>	<b>794,893</b>	<b>137,256</b>	<b>932,149</b>	<b>1,833,232</b>

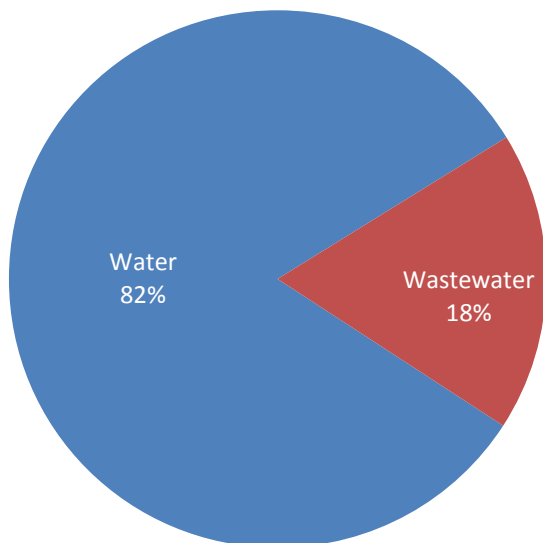
## USE OF FUNDS

The District's uses of funds are divided into three major groups in both the Water System and Wastewater System:

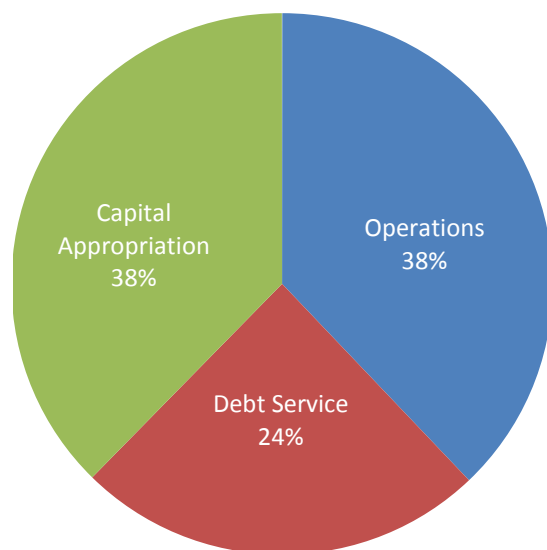
- Operations and maintenance of the District, including the annual cost of providing all water and wastewater services, labor and benefits,
- Debt Service on previously issued bonds to pay for the investments in infrastructure in the capital improvement program, and
- Capital Appropriation, which is for long-term projects to upgrade aging infrastructure, prepare for earthquakes, protect natural resources, and ensure a future water supply, and, like operating expenses, includes equipment and salaries.

The following charts characterize the combined FY16-17 budget in two aspects. First, the chart on the left compares the size of the Water System budget to the Wastewater System budget. The Water System budget is 4.5 times greater than the Wastewater System. The second chart depicts the three separate components of the budget (i.e., operations, debt service and capital appropriation). Financing, or debt service, is only incurred to support the capital program. The total capital and debt service appropriation when combined represent 62 percent of the budget that is dedicated to capital investment activities. The charts do not include the drought contingency included in the FY16-17 Appropriations.

**Budget by Enterprise**



**Budget by Component**



The next section describes the uses of funds for Operations, Debt Service, and Capital programs.

## OPERATIONS

As shown in the “FY16-17 Appropriations” table at the beginning of this chapter, the budget is categorized into three components (i.e., Operations, Debt Service and Capital Appropriation). This section will address the operations budget component which is 38 percent of the total District-wide budget.

The operations portion of each fund (i.e., Water or Wastewater) budget is categorized into various departments. The majority of these departments are referred to as *staffed departments* indicating employees are assigned to work in these areas. The staffed departments’ budgets fund the day-to-day operations of the District and include funding for labor, benefits, outside contract services and other non-labor expenses such as electricity, chemicals, fuel, computer hardware, self-insured liability claims, workers compensation claims, etc. A detailed description of each staffed department is included in the corresponding Water or Wastewater System chapter of this document.

A small number of departments do not have personnel assigned to them. These departments are referred to as *non-staffed departments*. The impact on the budget by each of these departments varies:

**Contingency** - Funds budgeted each fiscal year to primarily cover projected labor-related expenses such as the employee cost of living adjustment which is based upon each year’s February CPI-W (Consumer Price Index for Urban Wage Earners and Clerical Workers) in the San Francisco-Oakland-San Jose area. The index is published in March of each year.

**Intradistrict** - Certain internal service accounts, or clearing accounts, are included in balance sheets to assure that internal expenses are not counted twice within the operations budget. Examples of these accounts include warehouse stores loading overhead and fleet vehicle expenses.

**Administration of Capital** - The administration of capital represents those costs that are not directly attributable to specific capital projects but are more generalized indirect support of the Capital Improvement Program (CIP). The administration of capital in the operations budget will decrease operating expenses by a like amount and reallocate the costs to the capital budget.

While contingency adds costs to the staffed departments, intradistrict and administration of capital subtracts costs at the Water System and Wastewater System Fund level as shown in the following table.

## FY16-17 BUDGET

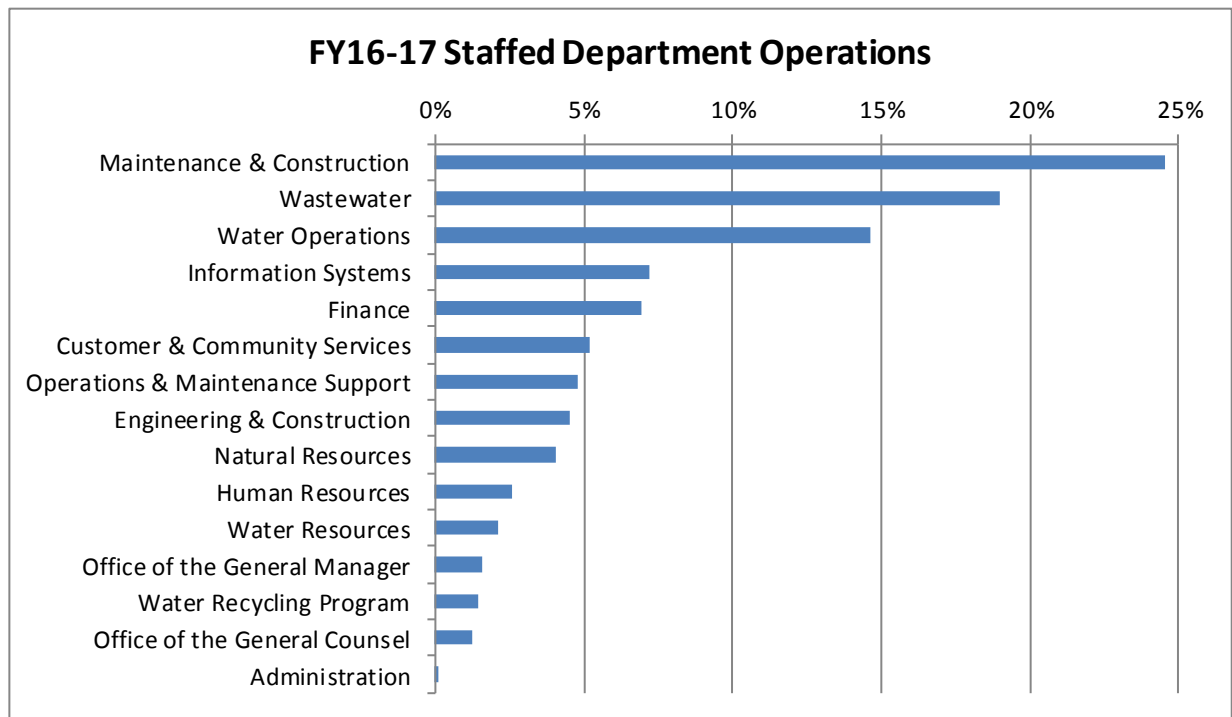
The table below illustrates each staffed and non-staffed department's portion of District-wide operations of \$313.7 million in FY16 and \$332.9 million in FY17, ordered by size within each system (Water and Wastewater). The totals can be compared to the operations appropriation at the start of this chapter, excluding the drought budget.

<b>FY16-17 DEPARTMENT OPERATIONS</b>		
(\$ Thousands)		
<b>Water Departments</b>	<b>FY16</b>	<b>FY17</b>
Maintenance & Construction	88,391	90,074
Water Operations	52,538	53,989
Information Systems	25,793	26,392
Finance	25,039	25,302
Customer & Community Services	18,666	19,083
Operations & Maintenance Support	17,321	17,726
Engineering & Construction	16,270	16,578
Natural Resources	14,632	14,895
Human Resources	9,377	9,452
Water Resources	7,482	7,768
Office of the General Manager	5,554	6,037
Water Recycling Program	5,162	5,262
Office of the General Counsel	4,489	4,515
Administration	356	356
<b>Subtotal Water Staffed Departments</b>	<b>291,071</b>	<b>297,429</b>
Contingency	8,793	16,503
Intradistrict	(11,600)	(11,700)
Administration of Capital	(40,000)	(40,000)
<b>Total Water Operations</b>	<b>248,264</b>	<b>262,232</b>
<b>Wastewater Departments</b>		
Wastewater	66,884	70,944
<b>Subtotal Wastewater Staffed Departments</b>	<b>66,884</b>	<b>70,944</b>
Contingency	1,564	2,773
Administration of Capital	(3,000)	(3,000)
<b>Total Wastewater Operations</b>	<b>65,448</b>	<b>70,717</b>
<b>District Total</b>		
<b>Total District Operations</b>	<b>313,712</b>	<b>332,949</b>

Totals may not foot due to rounding.

## Staffed Departments

The chart below shows the share of the total operations budget of each staffed department. Maintenance and Construction is the largest staffed department and is responsible for services such as water distribution pipelines including installation of new services, repairing leaks, replacing meters, fleet operations and maintaining the water treatment infrastructure and other facilities located throughout the District. A detailed description of each department's services is shown in the Water and Wastewater System chapters.



## **DEBT SERVICE**

As shown in the “FY16-17 Appropriations” table at the beginning of this chapter, the budget is categorized into three components (i.e., Operations, Debt Service and Capital Appropriation). This section will address the debt service component which is 24 percent of the total District-wide budget.

Capital expenditures can either be funded through debt financing or on a “pay-as-you-go” basis. Debt financing is generally more suited to large capital projects with long useful lives. If the capital expenditure is significant, debt financing is usually a better option since large capital expenditures can be difficult to accommodate on a “pay-as-you-go” basis without spiking rates. Debt financing also achieves a measure of intergenerational equity in that future ratepayers will participate in the financing of the capital projects over their useful life. The “pay-as-you-go” option is also referred to as revenue funded capital. It is a source of funding the District utilizes to reduce its reliance on debt, and is funded from current year revenues.

The District’s policy is that over any five-year planning period no more than 65 percent of the capital improvement program (CIP) will be funded from debt. The prior biennial budget as well as this budget supports additional “pay-as-you-go” funding to reduce the debt-financed portion of the CIP. Although debt service payments are considered to be part of the operations budget, debt proceeds are used to finance capital investment activities.

### **FY16-17 DEBT SERVICE**

Debt service will be \$203.6 million in FY16 and \$214.1 million in FY17. Total outstanding debt on the Water System is projected to be \$2.51 billion as of June 30, 2015. Total outstanding debt on the Wastewater System is projected to be \$424 million as of June 30, 2015.

The Water System budget assumes issuance of \$101.2 million in new revenue bonds in FY16, and \$108.9 million in FY17. The Wastewater System budget assumes issuance of approximately \$2.0 million of new revenue bonds in FY16 and \$22.1 million in FY17.

## **CAPITAL EXPENDITURES**

As shown in the “FY16-17 Appropriations” table at the beginning of this chapter, the budget is categorized into three components (i.e, Operations, Debt Service and Capital Appropriations). This section addresses the capital appropriation budget component which is 38 percent of the total District-wide budget. The capital appropriation funds the District’s Capital Improvement Program (CIP). The CIP is a set of projects approved by the Board of Directors that define the capital priorities of the District for the next five years.

## **APPROPRIATIONS**

Appropriations are the amounts approved by the Board of Directors to be spent on capital projects. The Board adopts the appropriations for only the first two years of the five-year CIP. The remaining years are for planning purposes only and are subject to revision. Once authorized by the Board, appropriations permit the District to incur obligations for capital projects. Appropriations may be expended over multiple years, and any unspent appropriations automatically carry forward to the next fiscal year. Appropriations vary from year-to-year depending upon the funding needs for the projected work.

Administration of capital expenses are included in the appropriation, and are the share of those costs associated with support activities that benefit capital improvement work, such as work performed in support departments such as Finance, Human Resources, and Information Systems. These costs are not directly attributable to specific capital projects, but rather support the CIP as a whole, and are deducted from the operating budget and included in the CIP budget.

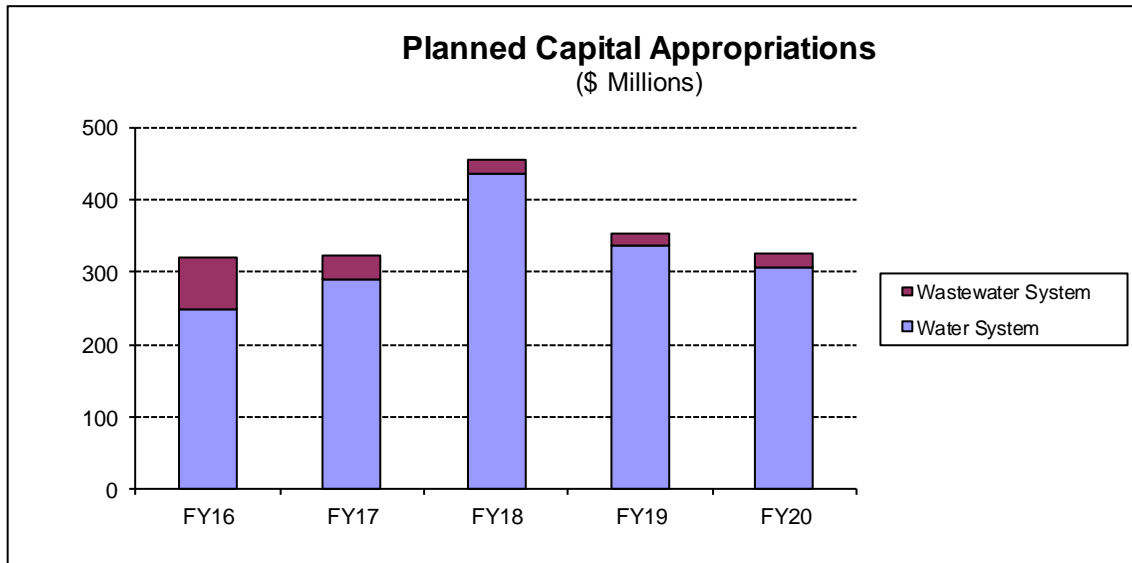
## **FY16-17 CAPITAL APPROPRIATION**

The FY16 capital appropriation, including administration of capital expenses, is \$249.0 million for the Water System and \$70.6 million for the Wastewater System, for a total of \$319.6 million. In FY17, the capital appropriation is \$290.4 million for the Water System and \$32.6 million for the Wastewater System, for a total of \$323.0 million. As in previous years, significant effort has been made to keep the cost of the CIP reasonable, while making necessary improvements and additions to meet the needs of our customers. This CIP is reflective of the need to continue to replace and rehabilitate existing system infrastructure. These key programs and projects are discussed in Chapters 3 and 4 for the Water System and Wastewater System, respectively. In addition, a full description of each project can be found in the supplemental volume to this budget document.

The following table presents the planned appropriations for the five-year CIP by fund, plus administration of capital expenses. The total planned FY16-20 appropriation is \$1.78 billion, which includes \$1.62 billion for the Water System and \$159.6 million for the Wastewater System.

<b>Capital Improvement Program Appropriations within Fund</b> (\$ Millions)						
	FY16	FY17	FY18	FY19	FY20	Total
Water CIP	209.0	250.4	394.4	293.1	262.6	1,409.5
Administration of Capital	<u>40.0</u>	<u>40.0</u>	<u>41.2</u>	<u>42.4</u>	<u>43.7</u>	<u>207.3</u>
<b>Water Total</b>	<b>249.0</b>	<b>290.4</b>	<b>435.6</b>	<b>335.5</b>	<b>306.3</b>	<b>1,616.8</b>
Wastewater CIP	67.6	29.6	15.9	14.9	16.0	144.0
Administration of Capital	<u>3.0</u>	<u>3.0</u>	<u>3.1</u>	<u>3.2</u>	<u>3.3</u>	<u>15.6</u>
<b>Wastewater Total</b>	<b>70.6</b>	<b>32.6</b>	<b>19.0</b>	<b>18.1</b>	<b>19.3</b>	<b>159.6</b>
<b>District Total</b>	<b>319.6</b>	<b>323.0</b>	<b>454.6</b>	<b>353.6</b>	<b>325.6</b>	<b>1,776.4</b>

The relationship between the Water System and Wastewater System five-year planned appropriations can also be seen in the following chart:



The most significant change over the five year period is the planned increase in the Water System appropriations by \$144 million between FY17 and FY18. Funds will be needed for the replacement of the cement lining in the Mokelumne Aqueducts to protect the steel pipelines from corrosion, and for the expansion of the North Richmond Water Recycling Plant by one million gallons per day which provides recycled water to the Chevron refinery cooling towers. It is anticipated that the cost of the expansion will be borne by Chevron through reimbursements paid to the District, with no impact on water rates.

Wastewater appropriations are reduced by \$38 million between FY16 and FY17 as a number of large projects with spending over several years will be fully appropriated in FY16. Projects include the Wood Street sewer interceptor rehabilitation, pump station Q improvements, resource recovery, and odor control improvements.



## CAPITAL CASH FLOW

Cash flow is the amount projected to be spent each fiscal year on projects in the CIP. The cash flow varies each year as projects progress from one phase of the work to another, such as from planning to design and then construction. Cash flow includes spending on contracts, equipment and supplies, and District labor. Capital labor is budgeted by departments for the time personnel will spend working on capital projects. When appropriate, an inflation factor is included when calculating a project's cash flows, based in part on Engineering News Record indices.

Administration of capital expenses are allocated to the capital program for costs not directly attributable to specific capital projects, but indirectly support the CIP. Therefore, the administration of capital is not allocated to each individual project's cash flow, but is applied to the CIP as a whole.

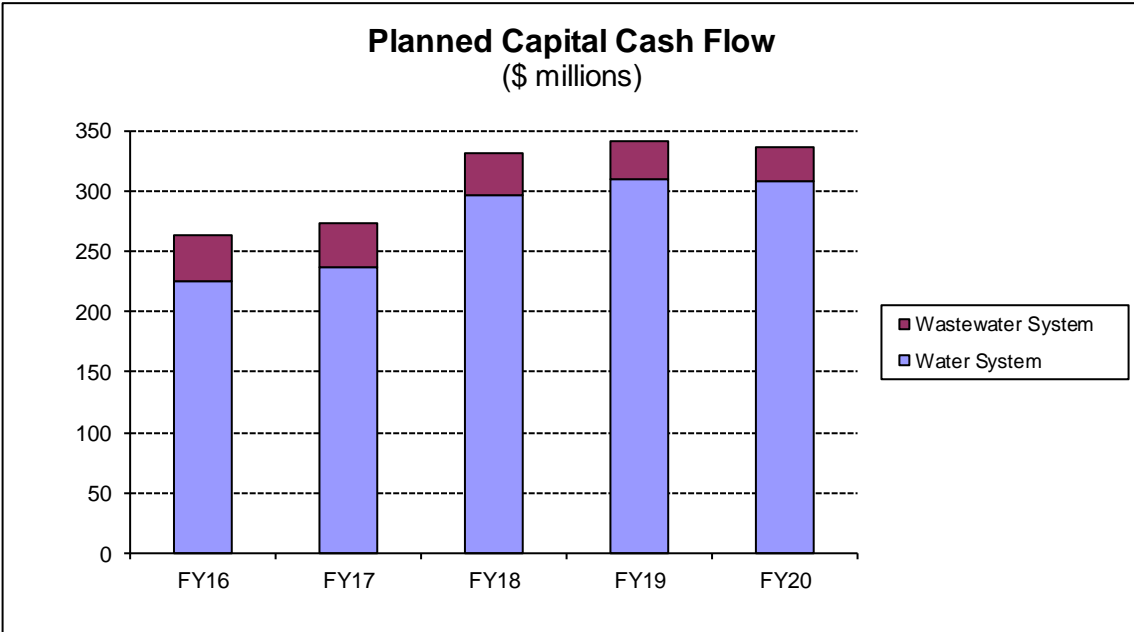
### FY16-17 CAPITAL CASH FLOW

The FY16 capital cash flow, including administration of capital expenses is \$224.5 million for the Water System and \$39.0 million for the Wastewater System, for a total of \$263.4 million. In FY17, the capital cash flow is \$236.1 million for the Water System and \$36.7 million for the Wastewater System, for a total of \$272.9 million. The five-year planned cash flows can be seen in this chart:

<b>Capital Improvement Program Planned Cash Flow within Fund</b> (\$ Millions)						
	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>Total</b>
Water	184.5	196.1	254.7	267.8	265.2	1,168.3
Administration of Capital	<u>40.0</u>	<u>40.0</u>	<u>41.2</u>	<u>42.4</u>	<u>43.7</u>	<u>207.3</u>
<b>Water Total</b>	<b>224.5</b>	<b>236.1</b>	<b>295.9</b>	<b>310.3</b>	<b>308.9</b>	<b>1,375.6</b>
Wastewater	36.0	33.7	32.0	27.6	23.6	153.0
Administration of Capital	<u>3.0</u>	<u>3.0</u>	<u>3.1</u>	<u>3.2</u>	<u>3.3</u>	<u>15.6</u>
<b>Wastewater Total</b>	<b>39.0</b>	<b>36.7</b>	<b>35.1</b>	<b>30.8</b>	<b>26.9</b>	<b>168.5</b>
<b>District Total</b>	<b>263.4</b>	<b>272.9</b>	<b>331.0</b>	<b>341.1</b>	<b>335.8</b>	<b>1,544.2</b>

Totals may not foot due to rounding.

The relationship between the Water System and Wastewater System five-year planned cash flows can also be seen in the following chart:



The most significant change over the five-year period is the planned increase in the Water System cash flow by approximately \$58.6 million between FY17 and FY18 as work is scheduled to commence to replace the cement lining in the Mokelumne Aqueducts to protect the steel pipelines, and expansion of the North Richmond Water Recycling Plant which provides recycled water to the Chevron refinery cooling towers. It is anticipated that the cost of the expansion will be borne by Chevron through reimbursements paid to the District.

In addition, the new “10 to 40” program will be initiated which includes development of a short-term program to replace an additional 5 miles per year of deteriorating water distribution pipelines; a pilot study researching methods and improvements to make the pipeline work process more efficient; and creation of a long-term plan to increase the replacement rate up to 40 miles per year.

## Budget Allocated by Services Provided

The following table provides a summary of the FY16-17 appropriations grouped by services provided by the District. In addition to providing water and wastewater services, significant funds are used for making capital improvements and repaying bonds used to fund previous capital work. Fifty percent of the combined operations and debt service budgets will be spent on water and wastewater service.

Amounts shown below will not necessarily match the amounts shown in the department budget sections later in this volume. This chart excludes drought contingency.

(\$ Millions)	FY16	FY17
<b>Water service</b> Storage, treatment and delivery of high-quality water to 1.3 million customers; day-to-day maintenance of water supply and distribution systems; planning and engineering for future water supply; recycled water; and meter reading.	\$192.7	\$201.8
<b>Infrastructure improvements and supplemental water supply</b> Repayment of bonds that have been sold to pay for long-term investments in infrastructure, supplemental water supply and resource recovery.	\$203.6	\$214.1
<b>Wastewater service</b> Operation and engineering at wastewater treatment plant, laboratory and wet weather facilities that serve more than 650,000 customers; educational outreach to residences, businesses and communities for industrial discharge, source control and private sewer programs, and overhead.	\$65.5	\$70.7
<b>Support services</b> Human resources, finance, information technology and other internal support services and overhead.	\$23.4	\$26.8
<b>Customer service</b> Water conservation programs, public information, school outreach, billing services, call center and additional services to customers.	\$17.1	\$18.0
<b>Natural resource management and protection</b> Environmentally sound management of nearly 56,000 acres of watershed lands, operation of public recreation facilities and fisheries programs.	\$15.0	\$15.7
Total capital improvement budget	\$319.6	\$323.0
<b>Total budget</b>	<b>\$836.9</b>	<b>\$870.1</b>

## **DROUGHT CONTINGENCY**

At the time of this budget creation, the District and the State are experiencing a prolonged drought. In an effort to plan for the potential of a continued prolonged drought during FY16-17, the budget includes a drought contingency to cover various additional drought-related labor and non-labor costs. The recovery of the drought contingency costs would be realized when the drought rates are in effect. Therefore, the drought contingency is not part of the normal water rates. These funds will only be utilized if needed. A detailed description of the drought contingency budget is located in the Water System chapter.

## **STAFFING**

The District maintains a staffing plan that relates specifically to positions *authorized* by the Board of Directors. The *Staffing Plan* includes the job titles, positions and appointment types that have been authorized by the Board of Directors to carry out District functions. The *Staffing Plan* balances departmental efforts to allocate human resources effectively. Departments look for opportunities to restructure the workload as employees retire or leave the District and continue to evaluate staffing plans based on operational need. Proposed staffing changes that require Board action are supported with a *Position Resolution* document.

The *Staffing Plan* and the *Position Resolution* do not address whether a position is *funded* in a particular fiscal year. Decisions regarding funding positions are made during the biennial budget process. This budget document includes references to *authorized* positions and *funded (or budgeted)* positions.

The District utilizes different position appointment types to meet its range of staffing needs. The appointment types include regular civil service, non-civil service, limited-term, temporary construction, intermittent, part-time and temporary. Positions are created by the Board of Directors.

Staffing is shown by number of positions and by number of full-time equivalents (FTE). Depending upon the appointment type, the FTE value will be different. Regular, non-civil service, Limited-Term and Temporary Construction appointment types are full-time and equivalent to 1.0 FTE. Intermittent appointment types are equivalent to 0.75 FTE. Part-time and temporary appointment types count as 0.5 FTE.

## **APPOINTMENT TYPES**

The majority of the District's workforce is regular civil service or full-time positions.

Limited-term positions are intended to augment regular District staff to accomplish extra work or other operational programs or activities of a limited duration for a maximum of 4 years.

Temporary construction positions are also of a limited and specified duration typically associated with public works projects and facilities.

Intermittent positions represent the smallest number of positions of the appointment types. These positions typically work 30 hours per week, instead of 40 hours per week for full-time positions.

Part-time positions are normally restricted to 832 hours per year. Temporary positions are limited to 6 month duration, and are full-time during that duration.

## FY16-17 BUDGET

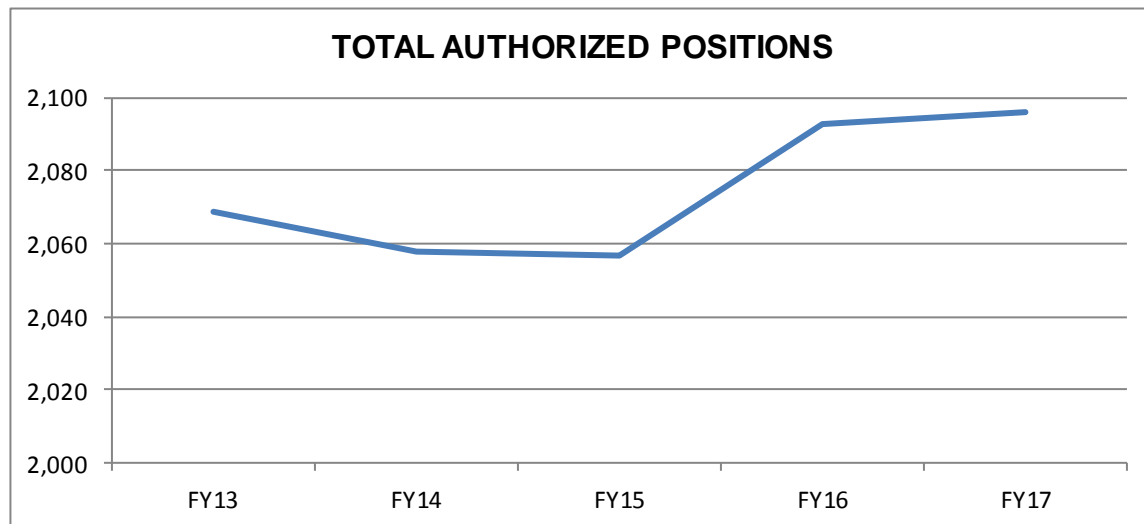
The District FY16-17 budget provides for funding both for additional authorized positions and for existing unfunded positions, compared to FY15. These investments in staff will enable the District to address the key priority areas mentioned earlier such as the 10-to-40 project in the Pipeline Infrastructure Renewal program, Technology Infrastructure, critical Wastewater programs and drought program support. The majority of the staffing changes occur in the first year of the biennial budget.

The following pages show the District-wide authorized positions, greater detail by FTE, and positions funded in the FY16-17 biennial budget.

### Authorized Positions

In FY16, the total number of recommended authorized positions is 2,093, or 36 more than the prior fiscal year. In FY17, an additional 3 positions are recommended to bring the total to 2,096. The following chart and graph show the number of *authorized positions* in the *Staffing Plan* for fiscal years FY13 through FY17. Staffing for FY13 through FY15 represents adopted annual staffing as amended by mid-year Board actions, inter-departmental transfers, and changes made under the General Manager's authority.

DISTRICT STAFFING NUMBER OF AUTHORIZED POSITIONS FY13-17					
	FY13	FY14	FY15	FY16	FY17
AUTHORIZED POSITIONS	Amended	Amended	Amended		
Full Time / Regular	1,942	1,943	1,943	1,988	1,991
Limited Term / Temporary Construction	48	37	36	25	25
Intermittent	4	4	4	4	4
Temporary / Part-Time	<u>75</u>	<u>74</u>	<u>74</u>	<u>76</u>	<u>76</u>
<b>TOTAL AUTHORIZED POSITIONS</b>	<b>2,069</b>	<b>2,058</b>	<b>2,057</b>	<b>2,093</b>	<b>2,096</b>
Position Change From Previous FY	0	-11	-1	36	3



## Authorized Positions Detail by FTE

The number of District-wide *authorized* full-time equivalents is increasing 35.0 in FY16 and 3.0 in FY17 in comparison to the prior fiscal year, respectively. The total number of FTEs is 1 less than the total proposed *authorized* positions of 36 due to the appointment type of 2 proposed *part-time* gardener positions which count as 0.5 FTE each. The net total increases are derived through the addition of 52.0 FTEs combined with the deletion of 17.0 FTEs. In FY17, 3.0 FTEs will be added. These staffing changes are attributable to each specific enterprise system and will amend the authorized number of positions and FTEs as shown below.

### Water System

A net total of 38.0 FTEs added in FY16. This total is derived through the addition of 50.0 FTEs and the deletion of 12.0 FTEs.

The 50.0 FTEs are comprised of:

- *10-to-40 project* – 27.0 FTEs added. This initiative requires a total staffing support of 36.0 FTEs. To fill the remaining staffing requirement, the budget funds 9.0 FTEs currently unfunded
- *Infrastructure Investment* – 7.0 FTEs added to support the capital improvement program
- *Technology Infrastructure* – 3.0 FTEs added to support the increasing need to address cyber-security, replace the aging financial system and system maintenance requirements
- *Customer support* – 2.0 FTEs added primarily for customer service
- *Water treatment operations* – 1.0 FTE added due to the nature of the work
- *Drought Program* – 10.0 FTEs, funded in the Drought Contingency budget, added to support advanced drought-related actions

The 12.0 deleted FTEs are:

- *Workload efficiencies* – 5.0 FTEs that supported ongoing functions
- *Infrastructure* – 7.0 FTEs (Temporary Construction) supporting infrastructure projects that were replaced with regular positions

A net total of 3.0 additional FTEs added in FY17, as follows:

- *Technology Infrastructure* – 1.0 FTE that supports technology infrastructure and cyber-security
- *Drought Program* – 2.0 FTEs, funded in the Drought Contingency budget, added to support advanced drought-related actions

## **Wastewater System**

A net total of 3.0 FTEs deleted in FY16. This total is derived through the addition of 2.0 FTEs and the deletion of 5.0 FTEs.

The 2.0 added FTEs are comprised of:

- *Inflow and Infiltration* – 1.0 FTE added to support the inspection work
- *Workload efficiencies* – 1.0 FTE or two *part-time* positions to utilize resources consistent with the seasonal nature of the grounds maintenance work

The 5.0 deleted FTEs are:

- *Workload efficiencies* – 1.0 FTE that is no longer needed
- *Completed projects* – 4.0 FTEs that supported projects that are now complete or no longer require the additional support

There are no staffing changes for the Wastewater System in FY17.



## Funded Positions

This recommended budget increases the number of *funded* positions by 81 over the two-year period from 1,854 in FY15 to 1,935 in FY16 and FY17. As highlighted in the tables below, this recommended budget provides *funding* for 81 additional positions compared to the prior budget. This includes funding for the new *authorized* positions discussed above plus funding for existing positions that were not funded in the previous budget.

TOTAL FUNDED POSITIONS			
	FY15	FY16	FY17
Water	1,589	1,661	1,660
Wastewater	265	274	275
<b>District-wide</b>	<b>1,854</b>	<b>1,935</b>	<b>1,935</b>

The 81 additional funded positions will support the following priorities:

ADDITIONAL FUNDED POSITIONS BY PRIORITY		
Priority	FY16	FY17
Infrastructure Replacement	50	-
Technology Infrastructure	12	-
Operations / Regulatory Compliance	11	-
Customer Support	8	-
<b>Total</b>	<b>81</b>	<b>0</b>

Of the 81 additional funded positions, 72 are in the Water System and 9 are in the Wastewater System.

Drought program positions *authorized* by the Board in FY16 and FY17 are funded in the drought contingency, and therefore not represented in the two *funded* position tables above.

## LABOR AND BENEFITS

This section provides a description of the District-wide labor and benefit costs for both the Water and Wastewater Systems. Labor includes all compensation such as wages, salaries, cost of living adjustments, and overtime. Benefits include payments to cover the employer costs associated with retirement, health care, Social Security, and other programs such as disability and unemployment insurance. The District does not pay for any of the employee share of retirement contributions.

### FY16-17 BUDGET

#### Overall Labor

The table below summarizes the District-wide budget for labor and benefits from FY15 to FY17. The table also includes the actual costs for FY14. Of the District-wide total labor and benefits two-year budget, the Water System represents 85 percent and the Wastewater System is 15 percent.

<b>Operating &amp; Capital Labor and Benefits Itemized (\$ Millions)</b>						
	<b>FY14 Actual</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY16 vs FY15</b>	<b>FY17 Proposed Budget</b>	<b>FY17 vs FY16</b>
<b>Water</b>						
Labor	\$ 149.2	\$ 159.5	\$ 168.2	5.4%	\$ 176.3	4.8%
Benefits	\$ 100.0	\$ 109.1	\$ 108.4	-0.7%	\$ 115.7	6.7%
<b>Wastewater</b>						
Labor	\$ 26.6	\$ 29.4	\$ 30.0	1.8%	\$ 31.3	4.4%
Benefits	\$ 17.6	\$ 19.4	\$ 18.7	-3.6%	\$ 19.8	6.1%
<b>District-wide</b>						
Labor	\$ 175.8	\$ 188.9	\$ 198.2	4.9%	\$ 207.6	4.8%
Benefits	\$ 117.6	\$ 128.5	\$ 127.1	-1.1%	\$ 135.5	6.6%
<b>Grand Total</b>	<b>\$ 293.4</b>	<b>\$ 317.4</b>	<b>\$ 325.3</b>	<b>2.5%</b>	<b>\$ 343.1</b>	<b>5.5%</b>

Includes cost of living adjustment.

Total labor and benefits are projected to be \$325.3 million in FY16, an increase of \$7.9 million or 2.5 percent, and \$343.1 million in FY17, an increase of \$17.8 million, or 5.5 percent in comparison with the prior fiscal years, respectively. Of the increase in FY16, labor costs will increase \$9.3 million, but are offset by a lower benefits budget of \$1.4 million. In FY17, an increase of \$9.4 million is attributable to labor costs and \$8.4 million to benefits.

A number of changes in the labor and benefits budget results in complex drivers that impact the budget. The increases in labor and benefits are driven by funding 81 additional positions primarily in the Water System to support capital-related projects compared to the prior biennial budget, and funding negotiated employee cost of living increases. These increases are offset by savings such as the time required to fill positions, and a lower benefit rate in the first year with a projected increase in the second year as described below.

The benefits budget comprises several drivers as mentioned earlier, the largest is the employer pension contribution followed by the health care expense. Benefit costs in FY16 are \$1.4 million lower compared to the prior fiscal year primarily due to a decrease in the employer pension

contribution rate as explained below. In FY17, benefit costs are anticipated to increase \$8.4 million due to projected increase in the employer pension contribution rate, cost of living adjustment and an anticipated increase in health care cost.

The FY16–17 budget builds upon past efforts to contain labor and benefit costs. The benefit cost increases are slower than previously projected. In 2012, pursuant to State legislation referred to as the California Public Employees' Pension Reform Act (PEPRA), the Board of Directors implemented a significant reform of the District's Employee Retirement System. With the implementation of PEPRA, new employees receive a significantly reduced pension benefit and fund a greater share of that benefit themselves. In addition, an escalating scale of employee's share of retirement contributions was implemented with labor unions for existing represented employees and the compensation plan for unrepresented employees.

The following table shows the different employer pension contribution rates since fiscal year 2014. New employees that qualify under the PEPRA plan are part of the 2013 Plan and all other employees participate in the 1955/1980 plan. The FY16 contribution rate is lower than the prior year due to strong market returns on investments plus the increased employee contribution rate as mentioned earlier. The actual FY17 rate will not be available until it is calculated by the actuary and adopted by the Retirement Board in Winter 2016.

<b>Employer Pension Contributions</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
1955/1980 Plan	38.36%	38.61%	37.71%
2013 Plan	31.13%	32.24%	30.92%

In its continuing pursuit of cost containment, in addition to offering employees traditional health care plans, in calendar year 2015, the District implemented the option of a consumer-driven health plan (CDHP) paired with a health savings account (HSA). The premium rates are lower for a consumer-driven health plan than a traditional plan. The annual costs of the CDHP and HSA are anticipated to range up to four percent lower than current medical premium plan costs depending upon the health plan. The health benefit assumption utilized for this budget represents a cost increase range of 5 to 8 percent for FY16 and the same additional increase for FY17.

## Operations and Capital

Depending upon the work being performed, labor and benefit costs are allocated to either operations or capital. The majority of these personnel costs are charged to the operations budget. Typical duties performed by employees that charge to the operations budget include pipeline system maintenance, meter maintenance, electrical / structural / mechanical maintenance, customer contact center support, managing watershed properties, and to water and wastewater treatment plant operations. Duties of employees that typically charge the capital budget include pipeline replacements, significant treatment plant upgrades or wastewater plant improvements.

As shown in the table below, labor and benefits are allocated between the operating and capital budgets. Of the total two-year budget, 75 percent of the District's labor and benefits budget is attributable to operations. The remaining portion, 25 percent, is attributable to the capital improvement program.

<b>Labor and Benefits</b> (\$ Millions)						
	<b>FY14 Actual</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY16 vs FY15</b>	<b>FY17 Proposed Budget</b>	<b>FY17 vs FY16</b>
<b>Water</b>						
Operations	\$ 184.8	\$ 203.0	\$ 205.1	1.0%	\$ 216.5	5.6%
Capital	\$ 64.4	\$ 65.6	\$ 71.5	9.0%	\$ 75.5	5.5%
<b>Wastewater</b>						
Operations	\$ 36.5	\$ 39.0	\$ 39.4	1.0%	\$ 41.4	5.1%
Capital	\$ 7.7	\$ 9.8	\$ 9.3	-5.5%	\$ 9.7	4.8%
<b>District-wide</b>						
Operations	\$ 221.3	\$ 242.0	\$ 244.5	1.0%	\$ 257.9	5.5%
Capital	\$ 72.1	\$ 75.4	\$ 80.8	7.1%	\$ 85.2	5.4%
<b>Grand Total</b>	<b>\$ 293.4</b>	<b>\$ 317.4</b>	<b>\$ 325.3</b>	<b>2.5%</b>	<b>\$ 343.1</b>	<b>5.5%</b>

Includes cost of living adjustment.

Excludes the Administration of Capital overhead allocated from Operations to Capital.

The District-wide total operations labor and benefits budget will increase \$2.5 million, or 1 percent in FY16 and the capital budget will increase \$5.4 million, or 7.1 percent. The largest change is the Water System FY16 capital labor and benefits increase of \$5.9 million, or 9 percent which represents a significant shift compared to the prior budget, and is driven by funding 72 additional positions primarily to support various capital-related initiatives such as 10-to-40, Infrastructure Replacement and Technology Infrastructure in the Water System. The Wastewater System FY16 capital labor and benefits is 5.5 percent less than the prior fiscal year which reflects an increase in capital-related work of which more will be performed via contracts (e.g. initial consent decree implementation). In FY17, the District-wide operations budget will increase \$13.4 million, or 5.5 percent and capital will increase \$4.4 million, or 5.4 percent primarily due to projected increases for the employer pension contribution rate, cost of living adjustment, scheduled salary step changes, and an anticipated increase in health care cost.

## SOURCES OF FUNDS

Operating expenses are funded by a group of revenues approved by the Board of Directors. Capital expenses are funded primarily by bond proceeds, which results in annual debt service payments, and rate revenue. The complete discussion of the types of operating and capital funding sources is included in the subsequent chapters on the Water System and the Wastewater System.

A summary table below displays the amounts to be collected from revenue sources and also shows the amounts that are expected to be received from the issuance of debt to fund a portion of the capital program for the Water and Wastewater Systems.

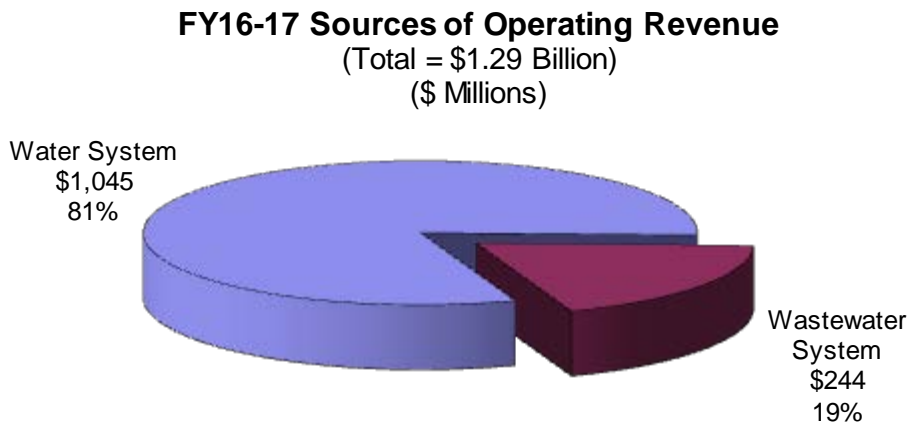
<b>TOTAL SOURCES OF FY16-17 FUNDS</b>					
(\$ Millions)					
<b>WATER SYSTEM</b>			<b>WASTEWATER SYSTEM</b>		
	<b>FY16</b>	<b>FY17</b>		<b>FY16</b>	<b>FY17</b>
<b>Total Operating Revenues</b>	505.2	539.5	<b>Total Operating Revenues</b>	119.3	124.5
Less Revenue Funded Capital	-99.6	-100.5	Less Revenue Funded Capital	-37.0	-14.6
<b>Total Capital Funding Sources</b>	224.5	236.1	<b>Total Capital Funding Sources</b>	39.0	36.7
<b>Total Water Fund Sources</b>	<b>630.1</b>	<b>675.1</b>	<b>Total Wastewater Fund Sources</b>	<b>121.3</b>	<b>146.6</b>
<b>Total District Source of Funds:</b>					
	<b>FY16:</b>	<b>\$751.4</b>			
	<b>FY17:</b>	<b>\$821.7</b>			

## OPERATING REVENUE

The principal source of operating revenues is water sales and wastewater treatment charges. The budget includes rate increases for the Water System of 8.0 percent in FY16 and an additional 7.0 percent in FY17, and rate increases for the Wastewater System of 5.0 percent in FY16 and an additional 5.0 percent in FY17.

Water System and Wastewater System operating revenues totaling \$624.5 million are needed during FY16. Of this amount, \$505.2 million is for the Water System and \$119.3 million is for the Wastewater System.

Water System and Wastewater System operating revenues totaling \$664.0 million are needed for FY17. Of this amount, \$539.5 million is for the Water System and \$124.5 million is for the Wastewater System.



## CAPITAL FUNDING SOURCES

Funding for the projects in the CIP is drawn from multiple sources including bonds, commercial paper, grants, reimbursements from other agencies, and current reserves and revenues. In accordance with the District's financial policies, the maximum percentage of capital funded from debt is 65 percent. As a result, a substantial portion of capital expenditures are funded on a pay-as-you-go basis which uses current and accumulated revenues rather than debt.

The FY16 and FY17 CIP will be funded with bond proceeds, water and wastewater revenues, reimbursements, and grants.

To fund the CIP, it is anticipated that the District will issue \$101.2 million in FY16 and \$108.9 million in FY17 in new revenue bonds for the Water System, combined with revenue funded capital of \$99.6 million in FY16 and \$100.5 million in FY17. Additional proceeds from grants and loans and reimbursements will make up the rest of the capital funding for the Water System.

For the Wastewater System, \$2.0 million in FY16 and \$22.1 million in FY17 in new revenue bonds, combined with \$37.0 million in FY16 and \$14.6 million in FY17 of revenue funded capital will be used to fund the CIP.

## WATER AND WASTEWATER SYSTEM FUND SUMMARIES

The following tables summarize the fund balance, projected revenues and expenditures for the Water System and the Wastewater System. The tables include the information presented earlier in this chapter on the sources of funds and the uses of funds for operations, debt, and capital expenses. Please refer to the chapters entitled Water System and Wastewater System for detailed fund summaries.

<b>Water System Fund Summary</b> <b>Operating and Capital Budgets</b> (\$ Millions)						
	FY16			FY17		
	Operating	Capital	Fund Balance	Operating	Capital	Fund Balance
<b>Fund Balance at Beginning of FY (Projected)</b>	<b>331.6</b>	<b>0.0</b>	<b>331.6</b>	<b>319.0</b>	<b>0.0</b>	<b>319.0</b>
<b>Sources of Funds</b>						
Operating Revenues	505.2		505.2	539.5		539.5
Capital Sources		124.9	124.9	0.0	135.6	135.6
Revenue Funded Capital	<u>-99.6</u>	<u>99.6</u>	<u>0.0</u>	<u>-100.5</u>	<u>100.5</u>	<u>0.0</u>
<b>Total Funds</b>	<b>405.6</b>	<b>224.5</b>	<b>630.1</b>	<b>439.0</b>	<b>236.1</b>	<b>675.1</b>
<b>Use of Funds</b>						
Operations	248.3		248.3	262.2		262.2
Debt Service	169.9		169.9	180.2		180.2
Capital Cash Flow (includes Admin of Capital)		<u>224.5</u>	<u>224.5</u>		<u>236.1</u>	<u>236.1</u>
<b>Total Expenditures</b>	<b>418.2</b>	<b>224.5</b>	<b>642.7</b>	<b>442.4</b>	<b>236.1</b>	<b>678.5</b>
<b>Ending Balance *</b>	<b>319.0</b>	<b>0.0</b>	<b>319.0</b>	<b>315.6</b>	<b>0.0</b>	<b>315.6</b>

\* Includes reserves for working capital, self-insurance, worker's compensation, contingency and rate stabilization, and for capital projects

**Wastewater System Fund Summary**  
**Operating and Capital Budgets**  
(\$ Millions)

	FY16			FY17		
	Operating	Capital	Fund Balance	Operating	Capital	Fund Balance
<b>Fund Balance at Beginning of FY (Projected)</b>	<b>87.9</b>	<b>0.0</b>	<b>87.9</b>	<b>71.1</b>	<b>0.0</b>	<b>71.1</b>
<b>Sources of Funds</b>						
Operating Revenues	119.3		119.3	124.5		124.5
Capital Sources	0.0	2.0	2.0	0.0	22.1	22.1
Revenue Funded Capital	<u>-37.0</u>	<u>37.0</u>	<u>0.0</u>	<u>-14.6</u>	<u>14.6</u>	<u>0.0</u>
<b>Total Funds</b>	<b>82.3</b>	<b>39.0</b>	<b>121.3</b>	<b>109.9</b>	<b>36.7</b>	<b>146.6</b>
<b>Use of Funds</b>						
Operations	65.4		65.4	70.7		70.7
Debt Service	33.7		33.7	34.0		34.0
Capital Cash Flow (Includes Admin of Capital)		<u>39.0</u>	<u>39.0</u>		<u>36.7</u>	<u>36.7</u>
<b>Total Expenditures</b>	<b>99.1</b>	<b>39.0</b>	<b>138.1</b>	<b>104.7</b>	<b>36.7</b>	<b>141.4</b>
<b>Ending Balance *</b>	<b>71.1</b>	<b>0.0</b>	<b>71.1</b>	<b>76.3</b>	<b>0.0</b>	<b>76.3</b>

\* Includes reserves for working capital, self-insurance, worker's compensation, contingency and rate stabilization, and for capital projects



## CHAPTER 3: WATER SYSTEM

This chapter provides a detailed description of the Water System sources of funds, uses of funds, department operations budgets including staffing, capital expenditures and a Five-Year Financial Forecast.

The Water System Fund is an enterprise fund consisting of an operating and a capital budget. The function of the Water System is the collection, transmission, and distribution of water to communities within Alameda and Contra Costa counties. In addition, the Water System provides administrative, financial, and other support services to the Wastewater System. These costs are charged to the Wastewater System.

### INTRODUCTION

This chapter is organized into the following sections:

Pages 69 - 156      A detailed description of the FY16-17 budget including sources of revenues and uses of funds for operations, debt financing, and capital programs. This section also includes detailed department budgets.

Pages 157 - 163      A five-year-forecast of the Water System projected revenues and expenditures for operations, debt financing, and capital programs.

### FY16-17 BUDGET

The following are key projections and assumptions utilized in the FY16 and FY17 budget.

WATER SYSTEM FUND – KEY ASSUMPTIONS		
	FY16	FY17
Projected Sales Volume (mgd)	151.0	151.0
% Rate Increase	8.0%	7.0%
Average monthly single family residential bill (\$) based on 10 ccf/month	\$52.17	\$55.83

### FUND SUMMARY

The fund summary illustrates the beginning and ending fund balances as well as revenues, expenditures, and other financing sources/uses. The following table shows the fund balance, and projected revenues and expenditures for the Water System for FY16 and FY17. The table is an expansion of the Water System Fund Summary table presented at the end of Chapter 2.

**Water System Fund Summary**  
**Operating and Capital Budgets**  
(\$ Millions)

	FY16			FY17		
	Operating	Capital	Fund Balance	Operating	Capital	Fund Balance
<b>Fund Balance at Beginning of FY (Projected)</b>	<b>331.6</b>	<b>0.0</b>	<b>331.6</b>	<b>319.0</b>	<b>0.0</b>	<b>319.0</b>
<b>Sources of Funds</b>						
<b>Operating Revenues</b>						
Water Charges	422.8		422.8	453.0		453.0
Property Taxes	24.5		24.5	25.1		25.1
Power Sales	3.5		3.5	3.5		3.5
Interest Income	1.7		1.7	3.3		3.3
SCC Revenue	24.6		24.6	26.0		26.0
Reimbursements	10.9		10.9	11.2		11.2
All Other Revenue	<u>17.2</u>		<u>17.2</u>	<u>17.4</u>		<u>17.4</u>
<b>Operating Revenues</b>	<b>505.2</b>		<b>505.2</b>	<b>539.5</b>		<b>539.5</b>
<b>Capital Funding Sources</b>						
Commercial Paper Issues		0.0	0.0		0.0	0.0
New Bond Proceeds		101.2	101.2		108.9	108.9
Grants and Loans Proceeds		2.5	2.5		1.8	1.8
Reimbursements		<u>21.2</u>	<u>21.2</u>		<u>24.9</u>	<u>24.9</u>
<b>Capital Sources</b>		<b>124.9</b>	<b>124.9</b>		<b>135.6</b>	<b>135.6</b>
Revenue Funded Capital	<u>-99.6</u>	<u>99.6</u>	<u>0.0</u>	<u>-100.5</u>	<u>100.5</u>	<u>0.0</u>
<b>Total Funds</b>	<b>405.6</b>	<b>224.5</b>	<b>630.1</b>	<b>439.0</b>	<b>236.1</b>	<b>675.1</b>
<b>Use of Funds</b>						
Operations	248.3		248.3	262.2		262.2
Debt Service	169.9		169.9	180.2		180.2
Capital Cash Flow (includes Admin of Capital)		<u>224.5</u>	<u>224.5</u>		<u>236.1</u>	<u>236.1</u>
<b>Total Expenditures</b>	<b>418.2</b>	<b>224.5</b>	<b>642.7</b>	<b>442.4</b>	<b>236.1</b>	<b>678.5</b>
<b>Ending Balance *</b>	<b>319.0</b>	<b>0.0</b>	<b>319.0</b>	<b>315.6</b>	<b>0.0</b>	<b>315.6</b>

\* Includes reserves for working capital, self-insurance, worker's compensation, contingency and rate stabilization, and for capital projects

## FY 2016 AND FY 2017 BUDGET

### SOURCES OF FUNDS

Operating expenses are funded by a group of revenue sources approved by the Board of Directors. Capital expenses are funded primarily by a combination of bond issues, which results in annual debt service payments, and operating revenue.

The table below displays the amounts to be collected from revenue sources and shows the amounts that are expected to be received to fund the capital program for the Water System.

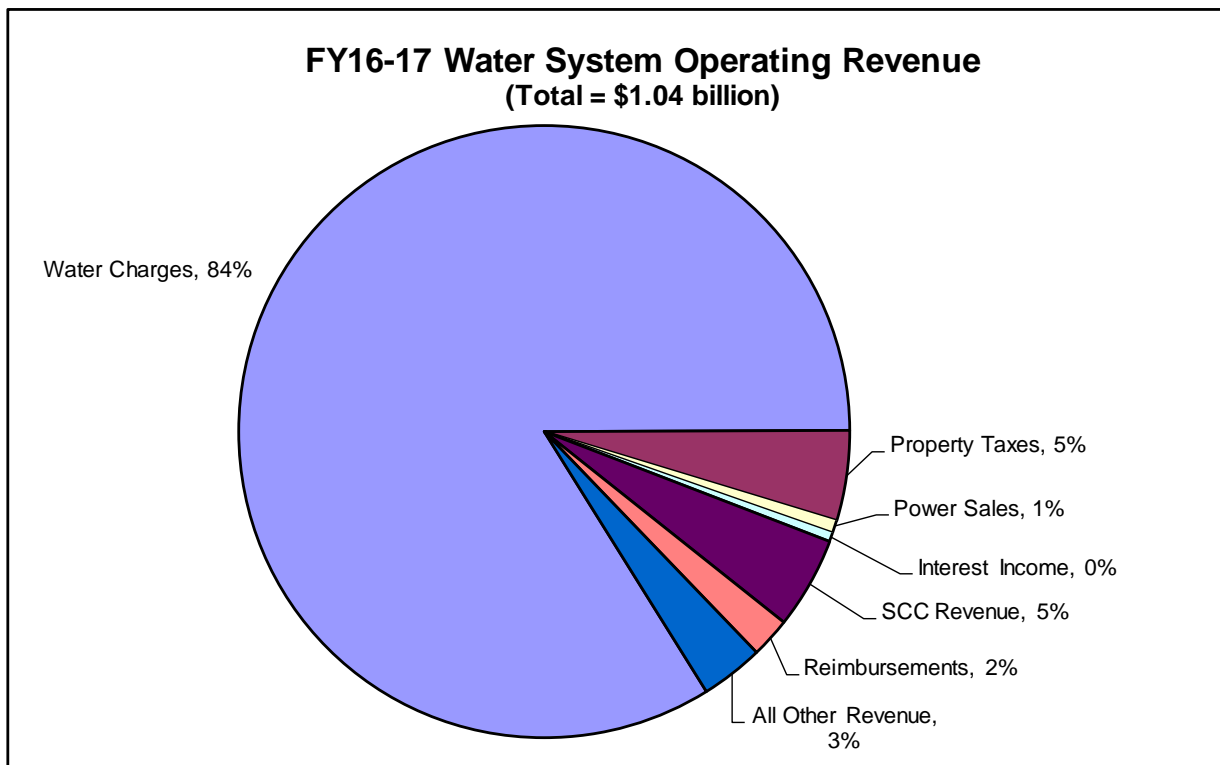
<b>WATER SYSTEM SOURCES OF FUNDS</b>				
(\$ Millions)				
	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY17 Proposed Budget</b>
<b>Operating Revenues:</b>				
Water Charges	367.0	391.8	422.8	453.0
Seismic Surcharges	22.6	24.6	0.0	0.0
Property Taxes	25.5	23.8	24.5	25.1
Power Sales	1.3	5.7	3.5	3.5
Interest Income	1.5	4.0	1.7	3.3
SCC Revenue	20.5	23.3	24.6	26.0
Reimbursements	10.9	10.5	10.9	11.2
All Other Revenue	<u>24.0</u>	<u>16.5</u>	<u>17.2</u>	<u>17.4</u>
<b>Total Operating Revenues</b>	<b>473.3</b>	<b>500.2</b>	<b>505.2</b>	<b>539.5</b>
Revenue Funded Capital	-81.0	-85.6	-99.6	-100.5
<b>Capital Funding Sources:</b>				
Revenue Funded Capital	81.0	85.6	99.6	100.5
Commercial Paper Issues	0.0	0.0	0.0	0.0
New Bond Proceeds	84.1	0.0	101.2	108.9
Grants and Loans Proceeds	0.0	0.9	2.5	1.8
Reimbursements	<u>24.5</u>	<u>15.5</u>	<u>21.2</u>	<u>24.9</u>
<b>Total Capital Funding Sources</b>	<b>189.6</b>	<b>102.0</b>	<b>224.5</b>	<b>236.1</b>
<b>Total Water Sources</b>	<b>581.9</b>	<b>516.6</b>	<b>630.1</b>	<b>675.1</b>

## Operating Revenue

Water System operating revenues for FY16 are projected to increase overall by \$5.0 million, or 1 percent compared to the amount budgeted for FY15 for a total of \$505.2 million. Reduced customer demand in FY16 due to voluntary reductions has resulted in less consumption than budgeted in FY15. The 8 percent increase in water rates will increase water charges and seismic surcharge revenue by \$6.4 million over the FY15 budgeted revenue. There is no seismic surcharge revenue in FY16 and FY17. The source descriptions section further details the changes to seismic surcharges. The FY16 property tax revenues are projected to be \$0.7 million or 2.9 percent more than the FY15 budgeted amount.

In FY17, Water System revenues are projected to increase by \$34.3 million, or 6.8 percent for a total of \$539.5 million. This increase is comprised primarily of \$30.2 million from water charges from a 7 percent water rate increase, and \$1.6 million in slightly higher interest income.

The figure below illustrates the various sources of revenue and the relative percentage each contributes to the total. Water charges revenue is the largest source of revenue for EBMUD comprising 84 percent of FY16-17 total revenues.



The following pages provide more detail on each of the revenue categories.

## SOURCE DESCRIPTIONS

### Operating Revenue

The following are descriptions of the eight sources of operating revenue, including information about the projected revenues for FY16-17.

#### Water Charges

Water charges consist of a monthly service charge, a volume charge for the amount of water used and an elevation charge for those customers located at higher elevations that require pumping and additional storage facilities. The overall water charges will increase by 8 percent in FY16 and an additional 7 percent in FY17.

FY16 Revenue (\$ Millions)			FY17 Revenue (\$ Millions)		
	Amount	% of Total		Amount	% of Total
Monthly Service Charge	117.5	27.8	Monthly Service Charge	126.1	27.8
Volume Charge	282.7	66.9	Volume Charge	302.8	66.8
Elevation Charge	22.6	5.3	Elevation Charge	24.1	5.3
<b>Total</b>	<b>422.8</b>	<b>100.0</b>	<b>Total</b>	<b>453.0</b>	<b>100.0</b>

FY16 water charges are projected to increase by \$6.4 million, for a total of \$422.8 million, or 1.5 percent over the FY15 budgeted revenue of \$416.4 million (water revenue and seismic surcharge revenue), due to reduced customer demand and the 8 percent rate increase. FY17 water charges are projected to increase by \$30.2 million, for a total of \$453.0 million, or 7.1 percent over the FY16 projected water charges revenue.

#### Seismic Surcharge

The Seismic Improvement Program (SIP) surcharge was implemented in 1994 to fund the District's SIP. The objective of the program was to ensure that water service would be available after a seismic event to meet fire safety needs and to provide continued service to residential, commercial and industrial customers. The charge was anticipated to be in place through February 2025, but as a result of lower than expected construction costs, lower than expected financing costs, and higher revenues than anticipated, by the end of fiscal year 2015 the District will have collected sufficient funds from the SIP surcharge to cover project costs. Accordingly, fiscal year 2015 will be the last year that the District levies the seismic surcharge. No seismic surcharge revenues are being budgeted for FY16 or FY17.

#### Property Taxes

The District receives a portion of the 1 percent county tax levy on properties within District boundaries. The percentage of the county levy received varies, depending on the number of other agencies participating in the distribution. The District share averages 1.25 percent of the total monies collected. For FY16, property tax revenue of \$24.5 million is based upon FY14 actual property tax receipts reduced to reflect both one-time property tax revenues from the dissolution of redevelopment agencies within the District's boundaries and for the portion of property tax revenues which fund the District's low income customer assistance program. Revenues for FY17 are \$25.1 million or a 2.4 percent increase over FY16.

**Power Sales**

The District operates power generation facilities at the Pardee and Camanche Dams. For FY16 and FY17, projected as years of normal precipitation but starting with low reservoir levels from recent drought conditions, the District expects to earn approximately \$3.5 million for each year, primarily from sales of power to other agencies.

**Interest Income**

The District places funds not needed for current expenditures in short-term investments in accordance with the District's investment policy and may include money market funds, commercial paper, medium term corporate notes, bankers' acceptances and short-term U.S. Government securities. Interest earned on these funds in FY16 is projected to be \$1.7 million, a \$2.3 million decrease from FY15 due to significantly lower interest rates than assumed for the FY15 budget. For FY17 interest income is projected to be \$3.3 million, a \$1.6 million increase from FY16 due to slightly higher projected interest rates. Interest rates are assumed to be ½ percent in FY16 and 1 percent in FY17.

**SCC Revenue**

System Capacity Charges (SCC) are collections from customers requesting new water service. The charges are designed to recover costs of facilities necessary to serve new customers. These costs include distribution facilities, treatment facilities, facilities that serve the system as a whole such as Pardee and Camanche Reservoirs, terminal storage reservoirs, administrative facilities, and a portion of the costs of supplemental water supply. The purpose of the SCC is to assure that existing customers do not bear the cost of customer growth and that new customers pay for their appropriate share of the existing water system facilities. Funds collected from the SCC are held either in dedicated reserves or accounted for as a capital contribution from developers. Funds held in the dedicated reserve account are used to pay the debt service for the bonds issued to build supplemental water supply projects.

SCC revenue for FY16 is projected at \$24.6 million which is a \$1.3 million increase from the amount budgeted for FY15. This increase is based on an assumption that the number of new applicants will continue to grow from the FY15 levels. FY17 SCC revenue is projected at \$26.0 million, a \$1.4 million increase from FY16.

**Reimbursements**

The Water System receives reimbursement for services provided to other agencies. The Wastewater System reimburses the Water System for administrative costs, space rental in the Administration building and for providing billing and collection services. The Water System also receives reimbursements from several cities for providing billing and collection services for the cities' sewer charges. Total reimbursements for FY16 and FY17 are projected at \$10.9 million and \$11.2 million respectively. FY16 is set at the FY14 actuals; FY17 assumes a 3% inflation rate.

**All Other Revenue**

Included in this category are receipts from property sales, rental of District properties, fees for use of District recreational lands and facilities, insurance and property damage reimbursements, sales of surplus District equipment and vehicles, sales of District publications, reimbursements from the US Treasury under the Build America Bond program, reimbursement of operating expenses from start up of the Richmond Advanced Recycled Expansion (RARE) project and other miscellaneous revenues. All other revenues are projected at \$17.2 million for FY16 and \$17.4 million for FY17. FY16 is set at the FY14 actuals less one-time sales; FY17 assumes a 3% increase in revenue from RARE and a 2% increase in revenue from recreation fees.

## **Capital Funding**

The following are descriptions of the five sources of capital funding. The FY16 and FY17 capital improvement program will be funded with bond proceeds, water revenues, reimbursements, and grants. It is anticipated that the District will issue \$210 million in new revenue bonds in FY16 and FY17, combined with revenue and reserve funded capital of \$99.6 million in FY16 and \$100.5 million in FY17.

Please refer to the section on debt service and financing for additional details on debt funding of capital projects.

### **New Bond Issues**

The District has the ability to issue long-term bonds to fund its capital program. The proceeds of the bond sales can be used to pay for capital expenses over several years. The repayment of the bonds is generally over 30 years and is paid from water rate revenues.

### **Commercial Paper Issues**

In addition to issuing long-term bonds to fund its capital program, the District has used short-term borrowing in the form of commercial paper to raise revenues for capital expenses. The term of commercial paper can be up to 270 days. The repayment of commercial paper is paid from water rate revenues.

### **Grants and Loans Proceeds**

The District pursues federal and state grants and low-interest loans to fund some of its capital projects when they meet the conditions of the grant and loan programs.

### **Reimbursements**

Some of the capital projects in the Water System are done at the request of other agencies, and the District is reimbursed for its expenses. An example would be the relocation of a water main at the request of a city or state agency. Also, work to expand the distribution system to meet new connections that is not covered by the System Capacity Charge is paid directly by the applicants.

### **Revenue Funded Capital**

Annual capital expenses that are not paid from debt funding, grants, loans or reimbursements are paid from operating revenues, either from current year revenues or from reserves.

## USE OF FUNDS

The Water System has three types of expenditures:

**Operations**, or the annual costs of providing all water services

**Debt service**, or the repayment of bonds for making capital investments in the water system

**Capital cash flow**, or the annual costs of the Capital Improvement Program for long-term projects to upgrade aging infrastructure, make seismic improvements, protect natural resources, provide high quality water and ensure a future water supply.

The following table shows the breakdown of expenses for operations, debt service, and capital programs.

<b>USE OF FUNDS</b> (\$ Millions)				
	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY17 Proposed Budget</b>
Operations	226.7	247.5	248.3	262.2
Debt Service	142.3	163.2	169.9	180.2
Capital Cash Flow (includes Admin of Capital)	<u>189.6</u>	<u>195.9</u>	<u>224.5</u>	<u>236.1</u>
<b>Total Expenditures</b>	<b>558.6</b>	<b>606.6</b>	<b>642.7</b>	<b>678.5</b>



## OPERATIONS

This section contains charts and tables which explain the major components of the Water System operations budget. Typical operations expenditures include, but are not limited to, labor, benefits, chemicals, energy, fleet vehicle costs, computer hardware and software.

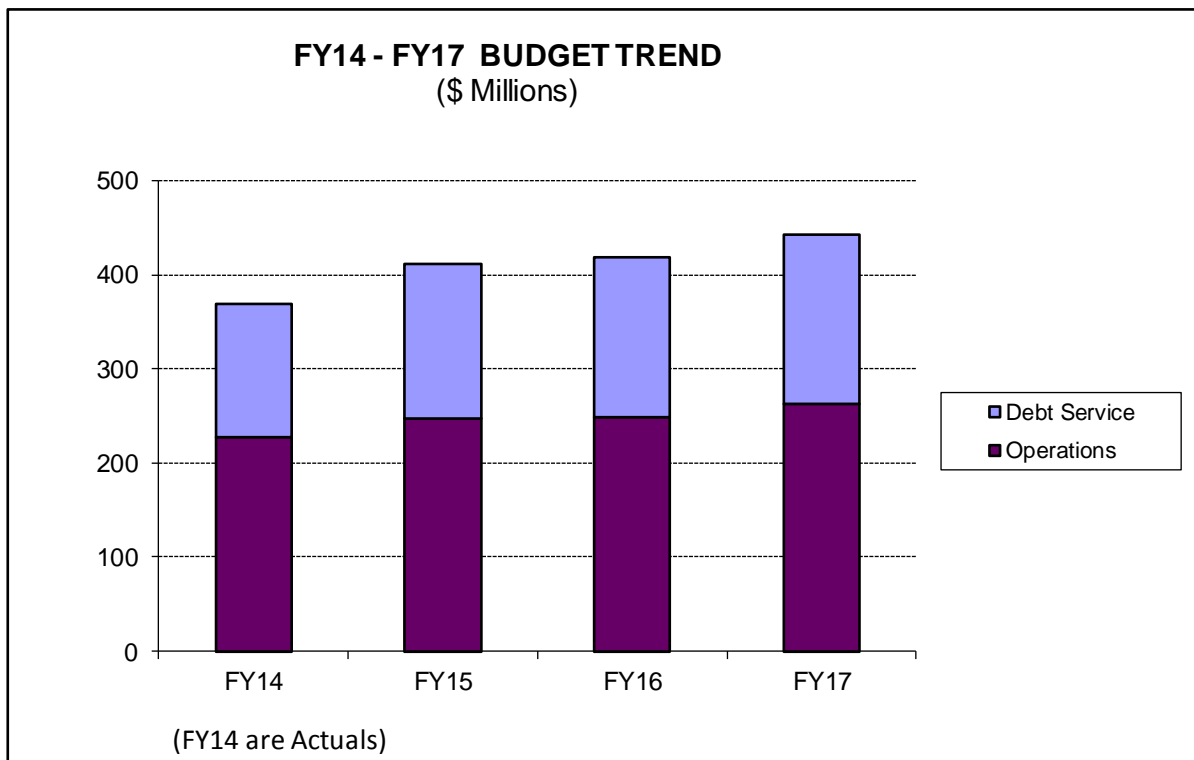
The operations budget is also shown by department. The details of each staffed department include a discussion of services provided, significant budget changes, staffing and proposed position changes.

### FY16-17 Budget

The chart below details the operations and debt service budget for FY16-17.

(\$ Millions)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Operations	226.7	247.5	248.3	0.3%	262.2	5.6%
Debt Service	<u>142.3</u>	<u>163.2</u>	<u>169.9</u>	4.1%	<u>180.2</u>	6.1%
<b>Total</b>	<b>369.0</b>	<b>410.7</b>	<b>418.2</b>	1.8%	<b>442.4</b>	5.8%

The operations and debt service budget is increasing in FY16 by \$7.5 million or 1.8 percent over the FY15 amended budget and in FY17 by \$24.2 million or 5.8 percent compared to FY16.



## DEPARTMENT OPERATIONS BUDGETS

The operations portion of the Water System budget is divided into various departments. The majority of these departments are referred to as staffed departments indicating employees are assigned to work in these areas. The staffed department budget funds the day-to-day operations of the District, and include funding for labor, benefits, outside contract services and other non-labor expenses such as electricity, chemicals, fuel, computer hardware, self-insured liability claims, and workers compensation claims. A detailed description of each staffed department is included later in this chapter.

A small number of departments do not have personnel assigned to them and are referred to as non-staffed departments. The impact on the budget by each of these departments varies:

**Contingency** - Funds budgeted each fiscal year to primarily cover projected labor-related expenses such as the employee cost of living adjustment which is based upon each year's February CPI-W (Consumer Price Index for Urban Wage Earners and Clerical Workers) in the San Francisco-Oakland-San Jose area. The index is published in March of each year.

**Intradistrict** - Certain internal service accounts, or clearing accounts, are included in balance sheets to assure that internal expenses are not counted twice within the operations budget. Examples of these accounts include warehouse stores loading overhead and fleet vehicle expenses.

**Administration of Capital** - The administration of capital represents those costs that are not directly attributable to specific capital projects but are more generalized indirect support of the Capital Improvement Program (CIP). The administration of capital in the operations budget will decrease operating expenses by a like amount and reallocate the costs to the capital budget.

The following table presents the total FY16-17 Water System operations budget by department.

<b>Operations Budget by Department</b> (\$ Thousands)						
<b>DEPARTMENTS</b>	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>% change vs FY15</b>	<b>FY17 Proposed Budget</b>	<b>% change vs FY16</b>
Operations & Maintenance Support	16,827	17,076	17,321	1.4%	17,726	2.3%
Maintenance & Construction	82,741	87,771	88,391	0.7%	90,074	1.9%
Water Operations	54,319	53,720	52,538	-2.2%	53,989	2.8%
Water Resources	6,370	7,656	7,482	-2.3%	7,768	3.8%
Natural Resources	13,859	14,570	14,632	0.4%	14,895	1.8%
Engineering & Construction	14,283	16,528	16,270	-1.6%	16,578	1.9%
Office of the General Manager	5,103	5,877	5,554	-5.5%	6,037	8.7%
Finance	22,018	25,389	25,039	-1.4%	25,302	1.1%
Information Systems	23,492	23,184	25,793	11.3%	26,392	2.3%
Customer & Community Services	17,959	19,120	18,666	-2.4%	19,083	2.2%
Human Resources	8,568	9,742	9,377	-3.7%	9,452	0.8%
Office of the General Counsel	4,815	4,872	4,489	-7.9%	4,515	0.6%
Water Recycling Program	4,960	4,831	5,162	6.9%	5,262	1.9%
Administration	609	587	356	-39.3%	356	0.0%
<b>Subtotal Staffed Departments</b>	<b>275,922</b>	<b>290,923</b>	<b>291,071</b>	<b>0.1%</b>	<b>297,429</b>	<b>2.2%</b>
Contingency	1,316	2,863	8,793		16,503	
Intradistrict	(11,702)	(11,270)	(11,600)	2.9%	(11,700)	0.9%
<b>Net Department Expense</b>	<b>265,536</b>	<b>282,516</b>	<b>288,264</b>	<b>2.0%</b>	<b>302,232</b>	<b>4.8%</b>
Less: Administration of Capital	(38,762)	(35,000)	(40,000)	14.3%	(40,000)	0.0%
<b>Subtotal Operations Expenses</b>	<b>226,775</b>	<b>247,516</b>	<b>248,264</b>	<b>0.3%</b>	<b>262,232</b>	<b>5.6%</b>
Plus: Debt Service	142,256	163,213	169,894	4.1%	180,191	6.1%
<b>TOTAL BUDGET</b>	<b>369,031</b>	<b>410,729</b>	<b>418,158</b>	<b>1.8%</b>	<b>442,423</b>	<b>5.8%</b>

The FY15 amended staffed department budgets include a cost of living adjustment.  
Totals may not foot due to rounding.

The FY15 amended budget includes a carry forward of approximately \$0.6 million from FY14 which is within the total two-year appropriations approved by the Board.

## Department Operations Budget Highlights

The Water System is comprised of fourteen staffed departments that perform all aspects of Water System operations and provide support functions to the Water System and the Wastewater system. As mentioned in Chapter 2, the Water System total budget is 4.5 times greater than the Wastewater System. This section details the various departments including the labor and non-labor budgets, department goals and staffing.

### FY16-17 BUDGET

#### Labor and Benefits

Labor and benefits are allocated between staffed departments and contingency for cost of living adjustments. Cost of living adjustments are not shown in the staffed department's FY16-17 labor and benefits budget since it is based on the CPI-W index and the amount is not known until the index is published annually. Once the index is published, and if funds are needed, contingency would be transferred to departments. The details of each department's labor and benefits budget is shown later in this chapter.

The below table is a summary of Water System operations department's labor and benefits, which excludes the Administration of Capital overhead allocated from Operations to Capital.

<b>Total Staffed Departments Labor and Benefits Itemized (\$ Thousands)</b>						
<b>Category</b>	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY16 vs FY15</b>	<b>FY17 Proposed Budget</b>	<b>FY17 vs FY16</b>
Labor	147,859	157,046	160,673	2.3%	162,805	1.3%
Benefits	<u>100,038</u>	<u>108,591</u>	<u>104,655</u>	-3.6%	<u>108,006</u>	3.2%
Total Labor and Benefits	247,897	265,637	265,329	-0.1%	270,811	2.1%
Less: Capital Labor and Benefits	<u>(64,409)</u>	<u>(65,493)</u>	<u>(69,053)</u>	5.4%	<u>(70,790)</u>	2.5%
<b>Operating Labor &amp; Benefits</b>	<b>183,488</b>	<b>200,143</b>	<b>196,276</b>	<b>-1.9%</b>	<b>200,021</b>	<b>1.9%</b>

In FY16, labor increases \$3.6 million and benefits decrease \$3.9 million compared to the prior fiscal year. Operating labor and benefits decreased by \$3.9 million in FY16.

These changes are attributable to:

- Funding 72 additional positions primarily to support capital-related projects, and
- Offsets such as a projected savings to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected, overall lower salaries in comparison to the prior biennial budget due to the significant number of new employees with salaries lower than the employees they replaced, and lower benefit rates than the prior biennial budget.

In FY17, total labor increased \$2.1 million and benefits \$3.4 million compared to FY16. Operating labor and benefits increased \$3.7 million in FY17. These changes are attributable to:

- Projected increase in the employer pension contribution rate, and an anticipated increase in health care cost, and salary step increases, and

- Offsets such as a projected savings to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected, and overall lower salaries in comparison to the prior biennial budget due to the significant number of new employees with salaries lower than the employees they replaced.

## **Non-labor**

In FY16, staffed department costs increased \$4.0 million or 4.4 percent compared to the prior fiscal year. The major drivers accounting for the increase compared to FY15 include:

- Computer hardware and equipment increased \$1.7 million to fund the systematic replacement of computer hardware,
- Chemicals increased \$1.2 million primarily to cover cost increases and adding lime upcountry to raise the pH level,
- Vehicle use charges increased \$0.6 million as the cost of operating, maintaining and replacing vehicles and equipment is increasing after several years of deferred replacements,
- Telephone expense increased \$0.6 million due to an increase in the use of cellular and wireless equipment,
- Computer software increased \$0.5 million as cost for existing software maintenance is increasing and for new software for GIS and project management,
- Disbursements to outside agencies for a \$0.4 million payment related to the federal Central Valley Project water contract,
- Additional increases of approximately \$1.5 million for specialized outside services, small tools, vehicle/equipment parts and materials, pipe, metal, and treatment, and charges from the Wastewater System total,
- Fees and licenses decreased \$0.3 million as there will be no Board election fees in FY16, and
- Energy decreased \$2.2 million due to a lower volume of water sales projected and a corresponding reduction in water distribution pumping.

In FY17, staffed department costs increased \$2.6 million or 2.7 percent compared to FY16. The major cost drivers accounting for the increase compared to FY17 include:

- Vehicle use charges increased \$0.7 million as the cost of operating, maintaining and replacing vehicles and equipment is increasing after several years of deferred replacements,
- Fees and licenses increased \$0.5 million for Board election fees,
- Energy increased \$0.5 million as water sales are expected to stabilize and the cost of energy is assumed to increase, and
- Additional increases for costs such as chemicals, telephones, District laboratory services, spoils/sludge disposal, property insurance, and other miscellaneous accounts totaling approximately \$0.9 million.

## Department Operations by Budget Category

The chart below depicts the Water System staffed departments operations by category. It does not include capitalized labor, however, capitalized labor by department is shown later in this chapter.

<b>FY16-17 DEPARTMENT OPERATIONS BY CATEGORIES</b>								
(\$ Thousands)								
	<b>FY16</b>				<b>FY17</b>			
<b>Department</b>	<b>Labor</b>	<b>Contract Services</b>	<b>All Other</b>	<b>Total Budget</b>	<b>Labor</b>	<b>Contract Services</b>	<b>All Other</b>	<b>Total Budget</b>
Operations & Maintenance	9,293	3,182	4,846	<b>17,321</b>	9,449	3,218	5,059	<b>17,726</b>
Maintenance & Construction	63,486	2,382	22,523	<b>88,391</b>	64,705	2,409	22,960	<b>90,074</b>
Water Operations	29,164	891	22,483	<b>52,538</b>	29,882	892	23,215	<b>53,989</b>
Water Resources	5,857	161	1,465	<b>7,482</b>	6,138	116	1,514	<b>7,768</b>
Natural Resources	8,822	2,821	2,989	<b>14,632</b>	8,962	2,870	3,063	<b>14,895</b>
Engineering & Construction	15,205	123	942	<b>16,270</b>	15,477	125	976	<b>16,578</b>
Office of General Manager	4,747	241	565	<b>5,554</b>	4,827	145	1,065	<b>6,037</b>
Finance	14,379	1,329	9,330	<b>25,039</b>	14,547	1,336	9,419	<b>25,302</b>
Information Systems	17,308	968	7,517	<b>25,793</b>	17,641	994	7,757	<b>26,392</b>
Customer & Community Svcs	15,443	265	2,959	<b>18,666</b>	15,751	327	3,005	<b>19,083</b>
Human Resources	7,451	1,273	653	<b>9,377</b>	7,487	1,276	690	<b>9,452</b>
Office of General Counsel	3,503	750	235	<b>4,489</b>	3,529	750	236	<b>4,515</b>
Water Recycling Program	1,616	52	3,494	<b>5,162</b>	1,627	52	3,583	<b>5,262</b>
Administration	0	0	356	<b>356</b>	0	0	356	<b>356</b>
<b>TOTAL</b>	<b>196,276</b>	<b>14,438</b>	<b>80,358</b>	<b>291,071</b>	<b>200,021</b>	<b>14,509</b>	<b>82,900</b>	<b>297,429</b>

Totals may not foot due to rounding.

## Staffed Department Descriptions

The next section describes each of the staffed departments and includes the following topics:

Overview provides an overall statement about the key responsibilities of the department that places it within the larger mission of the District as a whole.

Description of Services Provided describes the responsibilities of the department, broken down by unit (division) or by function, including services required to meet regulatory or legal requirements.

FY16-17 Goals highlights the highest priority tasks or projects related to the budget, and places these in the context of the overall District Strategic Plan.

Department Budget Summary is a reference table that shows the Department's operating budget expenditures by category (Labor and Benefits, Contract Services, All Other Costs). It also includes capital labor for the Department to give a more complete picture of departmental expenses.

Budget Highlights shows changes in cost relative to the previous fiscal year and describes reasons for those changes. This section focuses on the significant budget changes regardless of whether they are operational priorities for the department.

Staffing Summary is a reference table that includes both the total head count for the department by appointment type (full-time, part-time, etc), and the Full-Time Equivalency (FTE) based on the number of positions of each appointment type.

Position Changes is a section included only for departments that have position changes that require Board approval. It includes a table that enumerates position changes, followed by a brief description of the changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

The following guide lists each department by name, the divisions within each department, and includes the page number to locate each department in this chapter.

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## **OPERATIONS AND MAINTENANCE SUPPORT DEPARTMENT**

### **OVERVIEW**

The Operations and Maintenance Support Department is responsible for managing and improving the water system infrastructure, processes and assets, and providing District-wide support and leadership in regulatory compliance, emergency preparedness and facility security.

### **DESCRIPTION OF SERVICES PROVIDED**

The department contains the Water Quality program and Asset Management program, which develops and maintains work management systems for field operations and staff. It also contains the Regulatory Compliance Office, which provides security services, environmental compliance guidance and assistance, emergency preparedness support and workplace health and safety support to the entire District, and is also responsible for physical plant engineering services.

### **FY16-17 GOALS**

The department has primary responsibility for leading the Water Quality and Environmental Protection Strategic Plan goal. Key department goals include:

- Supporting national efforts to identify N-Nitrosodimethylamine (NDMA) precursors in source, treated, and distributed water,
- Developing effective asbestos cement distribution pipe management strategies,
- Completing the upgrade of all required vehicle diesel emissions control devices, and
- Supporting the accelerated pipeline infrastructure renewal capital program.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	9,389	9,670	9,688	0.2%	9,849	1.7%
Less: Capital Labor and Benefits	(647)	(277)	(395)	42.3%	(401)	1.5%
Operating Labor and Benefits	8,742	9,392	9,293	-1.1%	9,449	1.7%
Contract Services	3,000	3,111	3,182	2.3%	3,218	1.1%
All Other Costs	5,085	4,572	4,846	6.0%	5,059	4.4%
<b>Operating Total</b>	<b>16,827</b>	<b>17,076</b>	<b>17,321</b>	<b>1.4%</b>	<b>17,726</b>	<b>2.3%</b>

## BUDGET HIGHLIGHTS

The department's operating budget is increasing in FY16 by \$0.2 million or 1.4 percent compared to FY15, and in FY17 is increasing by approximately \$0.4 million or 2.3 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits costs are essentially flat compared to FY15, while operating labor and benefits are decreasing \$0.1 million primarily due to a lower fringe benefit rate and a higher offset to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected. All other costs are increasing by \$0.3 million or 6.0 percent mainly due to an increase in the cost of District laboratory services (\$0.2 million) and costs associated with hazardous waste management and disposal (\$0.1 million).

### FY17

Total labor and benefits costs are increasing by \$0.2 million or 1.7 percent compared to FY16, primarily due to a projected increase in the fringe benefit rate. All other costs are increasing by \$0.2 million or 4.4 percent due to an increase in the cost of laboratory services.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	53.0	50.0	50.0	0.0	50.0	0.0
Limited Term / Temp Const	14.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	2.0	0.0	0.0	0.0	0.0	0.0
<b>Total Positions</b>	<b>69.0</b>	<b>50.0</b>	<b>50.0</b>	<b>0.0</b>	<b>50.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>68.0</b>	<b>50.0</b>	<b>50.0</b>	<b>0.0</b>	<b>50.0</b>	<b>0.0</b>

## **MAINTENANCE AND CONSTRUCTION DEPARTMENT**

### **OVERVIEW**

The Maintenance and Construction Department is responsible for maintaining the local water system infrastructure and facilities, performing preventative and corrective maintenance, replacing and rehabilitating the District's infrastructure and maintaining all vehicles and heavy equipment.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of four divisions. Distribution Maintenance and Construction installs new services and pipelines and supports the maintenance, replacement, and installation of the water distribution system by repairing leaks, and replacing pipeline appurtenances. Facilities Maintenance and Construction provides support for the water treatment and distribution infrastructure and other facilities located throughout the Water System. Pipeline Construction and Equipment installs replacement pipelines, provides District-wide construction support, and is responsible for vehicle and equipment maintenance and replacement. Meter Reading and Maintenance is responsible for the maintenance, repair, and reading of meters, and backflow prevention.

### **FY16-17 GOALS**

The department has a key role in the Long Term Infrastructure Investment Strategic Plan goal. Key department goals include:

- Increasing the miles of distribution pipe replaced by staffing two new pipeline replacement crews, and
- Meeting Key Performance Indicators for critical meter repair backlog, exercising water system valves, and recording asset maintenance activities for analysis.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	88,136	95,009	95,869	0.9%	97,856	2.1%
Less: Capital Labor and Benefits	(29,352)	(30,567)	(32,383)	5.9%	(33,150)	2.4%
Operating Labor and Benefits	58,784	64,442	63,486	-1.5%	64,705	1.9%
Contract Services	2,429	2,245	2,382	6.1%	2,409	1.1%
All Other Costs	21,528	21,085	22,523	6.8%	22,960	1.9%
<b>Operating Total</b>	<b>82,741</b>	<b>87,771</b>	<b>88,391</b>	<b>0.7%</b>	<b>90,074</b>	<b>1.9%</b>

## BUDGET HIGHLIGHTS

The department's operating budget is increasing in FY16 by \$0.6 million or 0.7 percent compared to FY15, and in FY17 is increasing by approximately \$1.7 million or 1.9 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits costs are increasing by \$0.9 million or 1 percent compared to FY15 primarily due to funding positions to support the 10-to-40 Pipeline Infrastructure Renewal capital program. Operating labor and benefits are decreasing \$0.1 million primarily due to a lower fringe benefit rate and a higher offset to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected. Contract services are increasing by \$0.1 million to meet the District's Key Performance Indicator of less than 30 day turnaround for concrete work during peak workload periods. All other costs are increasing by \$1.4 million primarily related to the cost of operating and maintaining the District's fleet of vehicles and equipment.

### FY17

Total labor and benefits costs are increasing by \$2.0 million compared to the prior year primarily due to step increases and an increase in the fringe benefit rate. All other costs are increasing by \$0.4 million related to the District's vehicle and equipment fleet operating expenses.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

<b>Position Type</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY16 vs FY15</b>	<b>FY17</b>	<b>FY17 vs FY16</b>
Full Time	659.0	661.0	680.0	19.0	680.0	0.0
Limited Term / Temp Const	1.0	15.0	15.0	0.0	15.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	11.0	13.0	13.0	0.0	13.0	0.0
<b>Total Positions</b>	<b>671.0</b>	<b>689.0</b>	<b>708.0</b>	<b>19.0</b>	<b>708.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>665.5</b>	<b>682.5</b>	<b>701.5</b>	<b>19.0</b>	<b>701.5</b>	<b>0.0</b>

## POSITION CHANGES

The table on the following page summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Delete	(TC) Pipeline Welder III / II / I		(143,868)	(1.0)	Workload Efficiencies
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		General Pipe Supervisor	188,678	1.0	10-to-40
2016	Add		General Pipe Supervisor	188,678	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Water Distribution Plumber I (TC)	112,300	1.0	10-to-40
2016	Add		Heavy Equipment Operator	140,284	1.0	10-to-40
2016	Add		Heavy Equipment Operator	140,284	1.0	10-to-40
2016	Add		Heavy Equipment Operator	140,284	1.0	10-to-40
2016	Add		Heavy Equipment Operator	140,284	1.0	10-to-40
2016	Add		Heavy Equipment Operator	140,284	1.0	10-to-40
2016	Add		Heavy Equipment Operator	140,284	1.0	10-to-40
2016	Add		Administrative Clerk	106,954	1.0	10-to-40
2016	Flex	Senior Admin Clerk	Sr. Admin Clerk / Admin Clerk (Reg / LT)	0	0.0	10-to-40
<b>FY16 TOTAL</b>				<b>2,417,443</b>	<b>19.0</b>	

In FY16, the department is deleting one Temporary Construction position that was no longer needed for project support; the remaining position changes support the 10-to-40 in the Pipeline Infrastructure Renewal capital program.

## **WATER OPERATIONS DEPARTMENT**

### **OVERVIEW**

The Water Operations Department is responsible for operation of the water treatment and distribution facilities and the operation of the water supply systems.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of two divisions. The Water Supply Division is responsible for operating and maintaining Pardee and Camanche Reservoirs, raw water aqueducts, pumping plants, hydropower facilities, local reservoirs, and the Folsom South Canal Connection system, in compliance with all water rights, contractual requirements, and environmental regulations, and maintenance of the recreation areas. The Water Treatment and Distribution Division is responsible for the operation of the potable water treatment and distribution facilities, the Supervisory Control and Data Acquisition System, the investigation of water quality, pressure and flow inquiries, and implementing a comprehensive energy management program.

### **FY16-17 GOALS**

The department has a key role in implementing the Water Quality and Environmental Protection Strategic Plan goal. Key department goals include:

- Operating the water system to meet multiple objectives including municipal water supply, stream flow regulation, environmental protection, flood control, and releases for downstream water rights holders,
- Managing Freeport operations and supplemental supply evaluations and recommendations; managing chemical, energy, and sludge disposal costs,
- Leading the District's energy strategy,
- Implementing OP/NET system improvements, and
- Implementing and maintaining cyber security for the industrial control systems and centralized security systems.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	29,224	30,690	30,487	-0.7%	31,251	2.5%
Less: Capital Labor and Benefits	(1,753)	(1,372)	(1,323)	-3.6%	(1,369)	3.5%
Operating Labor and Benefits	27,471	29,319	29,164	-0.5%	29,882	2.5%
Contract Services	705	830	891	7.3%	892	0.1%
All Other Costs	26,143	23,571	22,483	-4.6%	23,215	3.3%
<b>Operating Total</b>	<b>54,319</b>	<b>53,720</b>	<b>52,538</b>	<b>-2.2%</b>	<b>53,989</b>	<b>2.8%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing by \$1.2 million or 2.2 percent compared to FY15, and in FY17 is increasing by approximately \$1.4 million or 2.8 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits costs are decreasing by \$0.2 million or 1 percent compared to FY15, primarily for operating labor due to a lower fringe benefit rate and a higher offset to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected. All other costs are decreasing by \$1.1 million or 4.6 percent as energy costs for distribution of water are decreasing due to a lower volume of projected water sales compared to FY15, even as the costs of energy and chemicals utilized for water treatment continue to rise.

### FY17

Total labor and benefits are increasing by \$0.7 million or 2.5 percent million primarily in operating labor due to an additional position to support technology infrastructure, and an increase in the fringe benefit rate. All other costs are increasing \$0.7 million or 3.3 percent as the unit cost of energy and chemicals increases compared to the prior year.



## STAFFING SUMMARY

The chart below shows the staffing of the department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	194.0	194.0	195.0	1.0	196.0	1.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	5.0	5.0	5.0	0.0	5.0	0.0
<b>Total Positions</b>	<b>199.0</b>	<b>199.0</b>	<b>200.0</b>	<b>1.0</b>	<b>201.0</b>	<b>1.0</b>
<b>Total FTE</b>	<b>196.5</b>	<b>196.5</b>	<b>197.5</b>	<b>1.0</b>	<b>198.5</b>	<b>1.0</b>

## POSITION CHANGES

The table below summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Delete	Water System Inspector II		(147,432)	(1.0)	Workload efficiencies
2016	Add		Treatment Plant Specialist	147,432	1.0	Consistent with the nature of the work
2016	Add		Associate Electrical Engineer / Associate Control System Engineer	208,340	1.0	Cyber-security for Industrial Control Systems
<b>FY16 TOTAL</b>				<b>208,340</b>	<b>1.0</b>	
2017	Add		Associate Electrical Engineer / Associate Control System Engineer	209,871	1.0	Cyber-security for Industrial Control Systems
<b>FY17 TOTAL</b>				<b>209,871</b>	<b>1.0</b>	

In FY16, the department is replacing a vacant Water System Inspector II with a Treatment Plant Specialist, needed for more effectively running the treatment plant operations. The department is adding one engineer position in each of FY16 and FY17 for cyber-security related to information technology systems for water distribution.

## **WATER RESOURCES DEPARTMENT**

### **OVERVIEW**

The Water Resources Department develops and administers the plans, policies and programs necessary to protect existing District water resources, develops additional water supplies to meet future needs, and assures the availability of adequate physical facilities to meet those needs.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of the Bay Delta Section, the Water Resources Planning and the Water Supply Improvements sections. The Bay-Delta Section provides the District's technical and policy evaluation and advocacy efforts related to the State and Federal plans to restore the San Francisco Bay-Delta ecosystem. Water Resources Planning administers the District's licenses, permits and agreements for current water supplies, conducts water resource analyses to support operations and long-range planning, and prepares reports and implements plans needed to comply with state and federal regulations related to water supply management. Water Supply Improvements plans and implements supplemental supply and recycling projects needed to meet current and future needs.

### **FY16-17 GOALS**

The department has primary responsibility for the Long Term Water Supply Strategic Plan goal. Key department goals include:

- Continuing collaborative partnerships for ensuring dry year water supply with emphasis on a long-term water transfer agreement with Placer County Water Agency and development of a Groundwater Banking Demonstration project with San Joaquin County,
- Reducing demand on Mokelumne River and East Bay water supplies through expansion of recycled water service along the I-80 corridor, San Ramon Valley, Richmond and the Chevron Refinery,
- Completing an update of the Urban Water Management Plan, and
- Participating in development of the Bay Delta Conservation Plan to ensure that EBMUD's stewardship, water supply and financial interests are protected.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	7,013	7,736	7,266	-6.1%	7,384	1.6%
Less: Capital Labor and Benefits	(1,741)	(1,486)	(1,410)	-5.2%	(1,247)	-11.6%
Operating Labor and Benefits	5,272	6,250	5,857	-6.3%	6,138	4.8%
Contract Services	376	474	161	-66.0%	116	-28.0%
All Other Costs	723	932	1,465	57.1%	1,514	3.4%
<b>Operating Total</b>	<b>6,370</b>	<b>7,656</b>	<b>7,482</b>	<b>-2.3%</b>	<b>7,768</b>	<b>3.8%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing approximately \$0.2 million or 2.3 percent compared to FY15 and will increase approximately \$0.3 million in FY17 or 3.8 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits costs are approximately \$0.5 million less than FY15 primarily due to a lower fringe benefit rate. Contract services costs are decreasing \$0.3 million in FY16 primarily due to the completion of work associated with the District's effort to protect future water rights. All other costs will increase approximately \$0.5 million primarily for the District's share of the federal Central Valley Project expenses.

### FY17

Total labor and benefits costs are increasing due to benefit rate escalation costs and scheduled step increases. All other costs will increase \$0.05 million primarily due to expenses associated with the District's share of payments to the joint Dublin San Ramon Services District/EBMUD Recycled Water Authority (DERWA) for recycled water use.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	39.0	38.0	38.0	0.0	38.0	0.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Positions</b>	<b>39.0</b>	<b>38.0</b>	<b>38.0</b>	<b>0.0</b>	<b>38.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>39.0</b>	<b>38.0</b>	<b>38.0</b>	<b>0.0</b>	<b>38.0</b>	<b>0.0</b>

## **NATURAL RESOURCES DEPARTMENT**

### **OVERVIEW**

The Natural Resources Department develops and implements plans, policies and programs necessary to manage nearly 50,000 acres of watershed lands and related facilities, and develops and implements programs for water quality and environmental protection and public recreation on these lands, and the reservoirs, rivers and streams within them.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of the East Bay Watershed and Recreation Division, the Mokelumne Watershed and Recreation Division, and the Fisheries and Wildlife Division. Both Watershed and Recreation divisions, East Bay and Mokelumne, manage and protect the local and upcountry watershed lands owned by EBMUD, including overseeing environmental, recreation, and public education programs. The Fisheries and Wildlife Division develops and maintains the scientific information necessary to manage and protect wildlife and fisheries on EBMUD-owned lands and the Lower Mokelumne River fishery, conducts monitoring to comply with water right agreements, provides biological support for capital projects, and responds to service area incidents.

### **FY16-17 GOALS**

The department has a key role in the Water Quality and Environmental Protection Strategic Plan goals. Key department goals include:

- Implementing the water quality protection, environmental stewardship and recreation programs consistent with the East Bay and Mokelumne Watershed Master Plans,
- Updating the East Bay Watershed Master Plan,
- Continuing to build on the successful fishery program for the Mokelumne River including expansion of the science programs on outmigration survival, juvenile barging and hatchery genetics management,
- Providing support for Chabot Dam Seismic Upgrade Project,
- Assisting in protocol development for the new National Pollutant Discharge Elimination System permit for drinking water discharges, and
- Establishing the Oursan Ridge Conservation Bank.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	8,583	9,150	8,822	-3.6%	8,962	1.6%
Less: Capital Labor and Benefits	(108)	(63)	0	-100.0%	0	0.0%
Operating Labor and Benefits	8,475	9,088	8,822	-2.9%	8,962	1.6%
Contract Services	2,642	2,719	2,821	3.7%	2,870	1.7%
All Other Costs	2,742	2,763	2,989	8.2%	3,063	2.5%
<b>Operating Total</b>	<b>13,859</b>	<b>14,570</b>	<b>14,632</b>	<b>0.4%</b>	<b>14,895</b>	<b>1.8%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is increasing \$0.06 million or 0.4 percent compared to FY15 and increasing approximately \$0.3 million or 1.8 percent in FY17 compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits are approximately \$0.3 million less than FY15 primarily due to a lower fringe benefit rate. Contract services costs will increase \$0.1 million in FY16 primarily for costs associated with a Joint Settlement Agreement requirement to mark and tag a proportion of hatchery fish production as part of a state-wide effort; compliance with the Native American Graves and Repatriation Act requirements as ancient burial sites have been exposed at Camanche Reservoir as a result of the drought; and professional services for range health assessment at the Mokelumne watershed. All other costs will increase \$0.2 million primarily due to the hatchery operations agreement with the California Department of Fish and Game, increase in vehicle usage costs, and costs for acoustic tags used for assessing fish pathways and survival being shifted to the operating budget from the capital budget.

### FY17

Total labor and benefits costs are increasing \$0.1 million due to benefit rate escalation costs and scheduled step increases. Contract services cost will increase \$0.05 million due to anticipated increases for watershed security contracts. All other costs will increase approximately \$0.07 million due to increase in vehicle usage cost.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

<b>Position Type</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY16 vs FY15</b>	<b>FY17</b>	<b>FY17 vs FY16</b>
Full Time	67.0	67.0	67.0	0.0	67.0	0.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	5.0	5.0	5.0	0.0	5.0	0.0
<b>Total Positions</b>	<b>72.0</b>	<b>72.0</b>	<b>72.0</b>	<b>0.0</b>	<b>72.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>69.5</b>	<b>69.5</b>	<b>69.5</b>	<b>0.0</b>	<b>69.5</b>	<b>0.0</b>

## **ENGINEERING AND CONSTRUCTION DEPARTMENT**

### **OVERVIEW**

The Engineering and Construction Department is responsible for developing plans, policies and programs that assure the availability of adequate physical facilities to meet future water service needs. These responsibilities include capital program implementation, including infrastructure management, system expansions, and facility improvements. The department provides technical leadership and innovation in engineering, construction, research and development, and operational efficiency improvements.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of: Water Distribution Planning, Design, Construction, Pipeline Infrastructure, and Engineering Services. Services include planning, design, and construction management and inspection of water system capital projects. Support services include cost estimating, contract specifications preparation, bid and award management, surveying, mapping, graphic design, hydraulic modeling, geotechnical engineering, materials testing, engineering records storage and engineering support to other departments.

### **FY16-17 GOALS**

The department is primarily responsible for leading the Long Term Infrastructure Investment Strategic Plan goal. Key department goals in FY16-17 include:

- Developing and maintaining coordinated master plans,
- Implementing the capital improvement program based on priorities identified in the plans, and
- Supporting the ramp-up of planned pipeline infrastructure renewals.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	42,035	44,761	45,106	0.8%	45,933	1.8%
Less: Capital Labor and Benefits	(28,685)	(29,153)	(29,900)	2.6%	(30,456)	1.9%
Operating Labor and Benefits	13,350	15,608	15,205	-2.6%	15,477	1.8%
Contract Services	127	83	123	48.5%	125	0.9%
All Other Costs	806	837	942	12.5%	976	3.7%
<b>Operating Total</b>	<b>14,283</b>	<b>16,528</b>	<b>16,270</b>	<b>-1.6%</b>	<b>16,578</b>	<b>1.9%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing by \$0.3 million or 1.6 percent compared to FY15, and in FY17 is increasing by approximately \$0.3 million or 1.9 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor (operating and capital) is increasing \$0.3 million due to additional staff associated with the 10-to-40 program of the Pipeline Infrastructure Renewal capital project. Additionally, the department took a higher percentage of salary savings compared to FY15. Contract services is increasing mainly due to technical training needs for new hires and engineering issues consultation (\$0.03 million). All other costs are increasing in furniture (\$0.03 million), and equipment (\$0.02 million) to provide for additional staff. The fees for California Department of Safety of Dams are increasing \$0.03 million.

### FY17

Total labor (operating and capital) is increasing \$0.8 million primarily due to benefit rate escalation costs and scheduled step increases. The fees for California Department of Safety of Dams are increasing \$0.03 million.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	241.0	242.0	255.0	13.0	255.0	0.0
Limited Term / Temp Const	8.0	7.0	0.0	(7.0)	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	3.0	3.0	3.0	0.0	3.0	0.0
<b>Total Positions</b>	<b>252.0</b>	<b>252.0</b>	<b>258.0</b>	<b>6.0</b>	<b>258.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>250.5</b>	<b>250.5</b>	<b>256.5</b>	<b>6.0</b>	<b>256.5</b>	<b>0.0</b>



## POSITION CHANGES

The table below summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Delete	Admin Clerk		(106,954)	(1.0)	Workload Efficiencies
2016	Delete	(TC) Associate Civil Engineer		(208,340)	(1.0)	Mok Aqd Interconnection
2016	Add		Associate Civil Engineer	208,340	1.0	Large Diameter Pipeline & Aqd Replacement
2016	Delete	(TC) Associate Civil Engineer		(208,340)	(1.0)	Mok Aqd Interconnection
2016	Add		Jr / Asst Engineer	188,678	1.0	Pumping Plant Upgrades
2016	Delete	(TC) Associate Civil Engineer		(208,340)	(1.0)	Dam Safety Program
2016	Add		Associate Civil Engineer	208,340	1.0	Dam Safety Program
2016	Delete	(TC) Sr Constr Inspector / TC Asst Eng / TC Constr Inspec		(188,678)	(1.0)	Baseline Need
2016	Add		Jr Engineer / Sr. Const. Inspector / Asst Engineer	188,678	1.0	Baseline Need
2016	Delete	(TC) Senior Const. Inspector / Assistant Eng		(188,678)	(1.0)	Baseline Need
2016	Add		Jr Engineer / Sr. Const. Inspector / Asst Engineer	188,678	1.0	Baseline Need
2016	Delete	(TC) Const. Inspector / Assistant Engineer / Sr. Const. Inspector		(188,678)	(1.0)	Baseline Need
2016	Add		Jr Engineer / Sr. Const. Inspector / Asst Engineer	188,678	1.0	Baseline Need
2016	Delete	(TC) Survey Tech. I / II / Jr / Asst Engineer / Const. Inspector / Sr. Const. Inspector / Chief of Party		(188,678)	(1.0)	Baseline Need
2016	Add		Jr Engineer / Sr. Const. Inspector / Asst Engineer	188,678	1.0	Baseline Need

(continued next page)

<b>FY</b>	<b>Action</b>	<b>From Classification(s)</b>	<b>To Classification(s)</b>	<b>Change in Cost</b>	<b>Change in FTE</b>	<b>Project/Program</b>
2016	Add		Associate Civil Engineer	208,340	1.0	10-to-40
2016	Add		Sr Pipeline Designer	184,082	1.0	10-to-40
2016	Add		Sr Admin Clerk	124,024	1.0	10-to-40
2016	Add		Construction Inspector	166,789	1.0	10-to-40
2016	Add		Associate Civil / Mech / Elec Engineer	208,340	1.0	10-to-40
2016	Add		Sr Const. Inspector	184,082	1.0	10-to-40
2016	Add		Construction Inspector	166,789	1.0	10-to-40
<b>FY16 TOTAL</b>				<b>1,115,830</b>	<b>6.0</b>	

The 10-to-40 program of the Pipeline Infrastructure Renewal project consists of 7 new positions. Due to the significant increase in capital related baseline work over the next several years, 7 regular positions are being added and 7 temporary construction positions are being deleted for a net impact of 0 FTEs. One vacant regular Administrative Clerk is being deleted due to workload efficiencies.

## **OFFICE OF THE GENERAL MANAGER**

### **OVERVIEW**

The Office of the General Manager manages the overall operations of the District and implements the policies and priority programs of the elected Board of Directors with an emphasis on effectively communicating with all stakeholders and advancing EBMUD's policy objectives with the state legislature and congress.

### **DESCRIPTION OF SERVICES PROVIDED**

The department includes the Office of the General Manager, Inter-Governmental Affairs, Public Affairs and the Office of the Secretary. The Office of the General Manager provides several District-wide functions including: legislative and intergovernmental agency advocacy; public and community education and outreach; support to the Board of Directors and District-wide records management, including managing responses to public records requests.

### **FY16-17 GOALS**

The department supports all six Strategic Plan goals. Key department goals include:

- Meeting the challenges of drought by communicating with the public about Board policy proposals and decisions and by educating customers on ways to achieve their conservation goals,
- Educating stakeholders on the need for a generational investment in infrastructure and on other District priorities as expressed through the District's strategic plan goals and objectives, and
- Supporting EBMUD's water and wastewater program goals through legislative efforts to advance EBMUD's policy objectives and acquire state and federal funding and to proactively influence legislation through active outreach and customer education.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	4,302	4,638	4,747	2.4%	4,827	1.7%
Less: Capital Labor and Benefits	(1)	0	0	0.0%	0	0.0%
Operating Labor and Benefits	4,300	4,638	4,747	2.4%	4,827	1.7%
Contract Services	243	170	241	42.3%	145	-39.9%
All Other Costs	560	1,070	565	-47.1%	1,065	88.4%
<b>Operating Total</b>	<b>5,103</b>	<b>5,877</b>	<b>5,554</b>	<b>-5.5%</b>	<b>6,037</b>	<b>8.7%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing approximately \$0.3 million or 5.5 percent compared to FY15. In FY17, the budget will increase approximately \$0.5 million or 8.7 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits are increasing \$0.1 million due to scheduled step increases. Contract services costs will increase \$0.07 million due to the District-wide customer survey which occurs in the first year of the biennial budget. All other costs will decrease \$0.5 million compared to FY15 primarily due to Board election fees charged by the counties to participate in the ballot process which occurs in the second year of the biennial budget.

### FY17

Total labor and benefits will increase approximately \$0.1 million due to the fringe benefit rate escalation and scheduled step increases. Contract services costs will decrease \$0.1 million due to the District-wide customer survey expense which occurred in the prior fiscal period. All other costs will increase \$0.5 million due to the Board election fees mentioned above which occur in the second year of the budget.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	26.0	26.0	25.0	(1.0)	25.0	0.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	1.0	1.0	1.0	0.0	1.0	0.0
<b>Total Positions</b>	<b>27.0</b>	<b>27.0</b>	<b>26.0</b>	<b>(1.0)</b>	<b>26.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>26.5</b>	<b>26.5</b>	<b>25.5</b>	<b>(1.0)</b>	<b>25.5</b>	<b>0.0</b>

## POSITION CHANGES

The table below summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Delete	Administrative Clerk		(106,954)	(1.0)	Workload Efficiencies
<b>FY16 TOTAL</b>				<b>(106,954)</b>	<b>(1.0)</b>	

In FY16, the department is deleting one position due to workload efficiencies.

## **FINANCE DEPARTMENT**

### **OVERVIEW**

The Finance Department is responsible for providing proactive and strategic management of the finances and ensuring the long-term financial stability of the District. These responsibilities include managing the finances to meet funding needs, ensuring adequate internal financial controls, timely and accurate financial reporting, efficiently managing the budget, implementing reasonable rates and charges, optimizing investment of cash funds, maintaining good standing in the credit markets, and actively engaging with external stakeholders to promote fiscal transparency and accountability.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of the following groups: Accounting, Budget Office, Internal Audit, Treasury Operations, Purchasing, and Risk Management. It provides a range of financial services including accounts payable and payroll, quarterly and annual financial reporting, biennial budget management, grant administration, strategic planning coordination, debt management, credit rating agency and investor relations, rates and charges, investment of funds, procurement and supply chain management, liability and workers compensation claim management, insurance procurement, and internal controls. The Department also staffs the District's Employee Retirement System with respect to investment and liability management.

### **FY16-17 GOALS**

The department is primarily responsible for leading the Long-Term Financial Stability Strategic Plan goal. Key department goals include:

- Developing a long-range financing plan,
- Increasing fiscal transparency and accountability in financial reporting, and
- Replacing aging financial information management systems.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	13,426	14,788	14,814	0.2%	15,457	4.3%
Less: Capital Labor and Benefits	(163)	0	(434)	0.0%	(910)	109.4%
Operating Labor and Benefits	13,264	14,788	14,379	-2.8%	14,547	1.2%
Contract Services	1,200	1,350	1,329	-1.5%	1,336	0.5%
All Other Costs	7,554	9,252	9,330	0.8%	9,419	1.0%
<b>Operating Total</b>	<b>22,018</b>	<b>25,390</b>	<b>25,039</b>	<b>-1.4%</b>	<b>25,302</b>	<b>1.1%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing by approximately \$0.3 million or 1.4 percent compared to FY15, and in FY17 is increasing by approximately \$0.3 million or 1.1 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefit costs (operating and capital) are increasing approximately \$0.03 million. This is primarily due to staff time being allocated to capital related activities such as the replacement of financial and procurement systems. Additionally, all other costs increased \$0.08 million for property insurance premiums based on anticipated rate increases.

### FY17

Total labor and benefit costs (operating and capital) are increasing approximately \$0.6 million primarily due to funding capital related positions for a full year and an escalation in the benefit rate costs. Similar to FY16, all other costs will increase \$0.09 million due to anticipated insurance premiums.

## STAFFING SUMMARY

The chart below shows the staffing of the department. The addition of one full time position in FY16 reflects the return of a loaned position to the originating department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	95.0	96.0	97.0	1.0	97.0	0.0
Limited Term / Temp Const	1.0	1.0	1.0	0.0	1.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	1.0	1.0	1.0	0.0	1.0	0.0
<b>Total Positions</b>	<b>97.0</b>	<b>98.0</b>	<b>99.0</b>	<b>1.0</b>	<b>99.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>96.5</b>	<b>97.5</b>	<b>98.5</b>	<b>1.0</b>	<b>98.5</b>	<b>0.0</b>

## POSITION CHANGES

The table below summarizes the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Flex Staff	Mgmt Analyst I / II	Mgmt Analyst I / II / Information Systems Administrator (Reg/LT)	18,183	0.0	FIS Project
2016	Flex Staff	Mgmt Analyst I / II	Mgmt Analyst I / II (Reg/LT)	0	0.0	FIS Project
2016	Flex Staff	Stores Supervisor	Stores Supervisor (Reg/LT)	0	0.0	MMIS Project
2016	Flex Staff	Purchasing Contract Supervisor	Purchasing Contract Supervisor (Reg/LT)	0	0.0	MMIS Project
2016	Flex Staff	Admin Clerk	Admin Clerk / Information Systems Support Analyst I / II (Reg/LT)	72,693	0.0	MMIS Project
<b>FY16 TOTAL</b>				<b>90,877</b>	<b>0.0</b>	

Five existing positions are being temporarily reallocated to the Materials Management Information System (MMIS) and Financial Information System (FIS) replacement capital projects scheduled to begin in FY16. These systems are critical financial and procurement related efforts supporting the entire District. These positions are required to support short-term implementation and streamline business processes that will change as a result of the new computer system.



## **INFORMATION SYSTEMS DEPARTMENT**

### **OVERVIEW**

The Information Systems Department is responsible for planning, deploying, operating and maintaining information technology and services in support of District functions. These responsibilities include providing security and recoverability for business systems and data critical to the operations of the District.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of: the Data Center, Applications Development, and Information Technology Security. Together, these divisions support the lifecycle of the District's technology and communication needs including initial planning, acquisition, development, deployment, and ongoing maintenance. Areas supported include: remote access, network connectivity, telephone, radio, and microwave communications; application development and integration for a wide range of business functions; risk identification in the computing and network environments; guidance to ensure District systems and data are properly secured and available; and planning to ensure business continuity of District computing resources.

### **FY16-17 GOALS**

The department has a key role in the Long Term Financial Stability Strategic Plan goal. Key department goals for FY16-17 will include:

- Completing technology projects to improve Contact Center telephones and web-based customer self-service,
- Augmenting Business Continuity capabilities which are available at the District's Disaster Recovery site in Sacramento,
- Implementing revised schedule for updating computers and equipment, and
- Implementing a new Materials Management Information System and Financial Information System.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	16,659	17,784	18,060	1.5%	18,395	1.9%
Less: Capital Labor and Benefits	(194)	(401)	(752)	87.3%	(754)	0.3%
Operating Labor and Benefits	16,465	17,383	17,308	-0.4%	17,641	1.9%
Contract Services	589	681	968	42.1%	994	2.7%
All Other Costs	6,438	5,119	7,517	46.8%	7,757	3.2%
<b>Operating Total</b>	<b>23,492</b>	<b>23,184</b>	<b>25,793</b>	<b>11.3%</b>	<b>26,392</b>	<b>2.3%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is increasing by \$2.6 million or 11.3 percent compared to FY15, and in FY17 is increasing by \$0.6 million or 2.3 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor (operating and capital) is increasing approximately \$0.3 million primarily to fund additional positions to support Technology Infrastructure capital work. The increase in total labor is partially offset by a decrease in the fringe benefit rate costs. All other costs are increasing approximately \$2.4 million for computer hardware (\$1.6 million), computer software (\$0.4 million), and telephone expense (\$0.5 million). Computer hardware is increasing to systematically fund equipment on a planned replacement schedule. Computer software will increase \$0.4 million due to new database, GIS, and other software, and an increase in software maintenance costs. Telephone expense will increase \$0.5 million due to an increase in data circuit capacity, and increased use of cell phones, tablets and the data plans and airtime fees associated with this technology.

### FY17

Total labor (operating and capital) is increasing approximately \$0.3 million due to benefit rate escalation costs and scheduled step increases. All other costs are increasing \$0.2 million for telephone expenses due to projected increases in expenses for cell phones and tablets and their associated data plans and airtime fees.

## STAFFING SUMMARY

The chart below shows the staffing of the department. The addition of one of the full time positions in FY16 reflects the return of a loaned position to the originating department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	90.0	89.0	91.0	2.0	91.0	0.0
Limited Term / Temp Const	2.0	2.0	2.0	0.0	2.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Positions</b>	<b>92.0</b>	<b>91.0</b>	<b>93.0</b>	<b>2.0</b>	<b>93.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>92.0</b>	<b>91.0</b>	<b>93.0</b>	<b>2.0</b>	<b>93.0</b>	<b>0.0</b>

## POSITION CHANGES

The table below summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Delete	Computer Operations Supervisor		(175,253)	(1.0)	Workload Efficiencies
2016	Add		Senior Systems Programmer	203,197	1.0	Servers Security
2016	Add		Senior Systems Programmer	203,197	1.0	Control Systems Security
<b>FY16 TOTAL</b>				<b>231,140</b>	<b>1.0</b>	

The department is adding two Senior Systems Programmers to support critical technology infrastructure related work. A vacant Computer Operations Supervisor position is being deleted due to workload efficiencies.

## **CUSTOMER AND COMMUNITY SERVICES DEPARTMENT**

### **OVERVIEW**

The Customer and Community Service Department provides high quality, responsive customer service through the use of efficient business practices, technology, and value added programs and services to District customers and stakeholders guided by fairness, consistency, efficiency, and high standards of professionalism and fiscal responsibility.

### **DESCRIPTION OF SERVICES**

The department's operations include the Customer Contact Center, Field Services, Customer Services Support, New Business, Water Conservation, Real Estate Services, and Contract Equity. These organizations serve as the direct interface to customers and internal and external stakeholders to support billing, payment, and service inquiries; field operation requests; customer programs and services; Customer Information System administration, maintenance, systems integration and support; water conservation assistance; new service and development requests; property management and land/easement acquisitions; mail distribution and payment processing; and promote contract equity for District contracting opportunities.

### **FY16-17 GOALS**

The department is primarily responsible for the Customer Service Strategic Plan goal. Key department goals include:

- Implementing a new consolidated customer payment interface and improving customer online self-service capabilities,
- Upgrading the telephone system including an interactive voice response system and recording and monitoring applications to improve the customer experience.
- Managing drought related activities and promoting water conservation,
- Researching and exploring options for potential water budget based allocations and bill redesign,
- Piloting and expanding Automated Metering Infrastructure technology and water loss initiatives, and
- Promoting contract equity opportunities.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	16,575	17,692	17,887	1.1%	18,238	2.0%
Less: Capital Labor and Benefits	(1,678)	(2,174)	(2,444)	12.5%	(2,487)	1.7%
Operating Labor and Benefits	14,897	15,518	15,443	-0.5%	15,751	2.0%
Contract Services	249	476	265	-44.4%	327	23.6%
All Other Costs	2,637	3,126	2,959	-5.3%	3,005	1.6%
<b>Operating Total</b>	<b>17,783</b>	<b>19,120</b>	<b>18,666</b>	<b>-2.4%</b>	<b>19,083</b>	<b>2.2%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing approximately \$0.5 million or 2.4 percent compared to FY15. In FY17, the budget is increasing \$0.2 million or 2.2 percent. Although the department will add drought related positions in FY16 and FY17, their labor and benefits budget is included in the drought contingency. Funds would be transferred to the department if these positions are filled.

### FY16

Total labor and benefits are increasing \$0.2 million. Total operating labor and benefits decreased by \$0.8 million due to a lower fringe benefit rate. Capital labor and benefits increased \$0.3 primarily due to new positions funded to support increased capital project workload for the implementation of the Water Conservation Master Plan and automated meter reading infrastructure. Contract services are decreasing \$0.2 million primarily due to completion of start-up costs for electronic bill payment and presentment. All other costs decreased approximately \$0.2 million primarily for mailing Proposition 218 notices regarding potential rate increases which occurs in the second year of the biennial budget, this decrease was partially offset by an increase in property taxes and assessments.

### FY17

Operating labor and benefits costs will increase \$0.3 million primarily due to benefit rate escalation costs and scheduled salary step increases. Contract services are increasing \$0.06 million primarily due to services for web enhancements. All other costs are increasing \$0.05 million primarily due to anticipated increases in property taxes and assessments, vehicle use charges and postage costs.

## STAFFING SUMMARY

The chart below shows the staffing of the department. The total position changes do not match the position type chart because the position type chart reflects the return of three positions loaned from other departments.

<b>Position Type</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY16 vs FY15</b>	<b>FY17</b>	<b>FY17 vs FY16</b>
Full Time	124.0	125.0	134.0	9.0	136.0	2.0
Limited Term / Temp Const	2.0	2.0	2.0	0.0	2.0	0.0
Intermittent	4.0	4.0	4.0	0.0	4.0	0.0
Temporary / Part-Time	27.0	27.0	27.0	0.0	27.0	0.0
<b>Total Positions</b>	<b>157.0</b>	<b>158.0</b>	<b>167.0</b>	<b>9.0</b>	<b>169.0</b>	<b>2.0</b>
<b>Total FTE</b>	<b>142.5</b>	<b>143.5</b>	<b>152.5</b>	<b>9.0</b>	<b>154.5</b>	<b>2.0</b>

## POSITION CHANGES

The table below summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Add		Associate Civil Eng (LT)	208,340	1.0	Automated Meter Reading Infrastructure
2016	Add		New Business Representative I/II (Reg/LT)	147,432	1.0	Needed during strong economic times
2016	Add		Water Conservation Technician (LT)	130,301	1.0	Drought
2016	Add		Water Conservation Technician (LT)	130,301	1.0	Drought
2016	Add		Admin Clerk (LT)	106,954	1.0	Drought
2016	Add		Customer Service Rep I (LT)	92,233	1.0	Drought
2016	Add		Customer Service Rep I (LT)	92,233	1.0	Drought
2016	Add		Customer Service Rep I (LT)	92,233	1.0	Drought
2016	Add		Customer Service Rep I (LT)	92,233	1.0	Drought
2016	Add		Customer Service Rep I (LT)	92,233	1.0	Drought
2016	Add		Customer Service Rep I (LT)	92,233	1.0	Drought
2016	Add		Field Service Rep I (LT)	118,091	1.0	Drought
<b>FY16 TOTAL</b>				<b>1,394,818</b>	<b>12.0</b>	
2017	Add		Water Conservation Rep (LT)	156,042	1.0	Drought
2017	Add		Water Conservation Technician (LT)	131,259	1.0	Drought
<b>FY17 TOTAL</b>				<b>287,300</b>	<b>2.0</b>	

In FY16, the department is adding one position for program management of automated meter reading infrastructure, one position for support needed in the New Business Office during strong economic times and ten positions to be filled if needed for advanced drought actions. In FY17, the department is adding two positions to be filled if needed for advanced drought actions.

## **HUMAN RESOURCES DEPARTMENT**

### **OVERVIEW**

The Human Resources Department recruits, develops, and retains a diverse, well-qualified and professional workforce that reflects the values of EBMUD, supports the District's core mission, and leads the organization in positive employee relations, talent management, succession planning and employee engagement.

### **DESCRIPTION OF SERVICES PROVIDED**

The department consists of the Office of Diversity and Inclusion, Employee Relations, Employee Services, Recruitment and Classification, and Employee and Organizational Development. These divisions administer the District's retirement system, deferred compensation programs and employee benefits; provide guidance to effectively resolve grievances as well as facilitating labor contract negotiations; implement training and development opportunities to support leadership and managerial skill enhancement; develop a performance recognition program that acknowledges employee contributions toward meeting Districts goals; steward a "grow our own" strategy to address skills shortages by developing employees to meet workforce demands; and recruit and onboard a highly qualified, diverse applicant pool.

### **FY16-17 GOALS**

The department is primarily responsible for leading the Workforce Planning and Development Strategic Plan goal. Key department goals include:

- Implementing workforce development plans to identify future employees to fill anticipated vacancies resulting from retirements,
- Developing a communications strategy to enhance the labor relations negotiations process during the 2017 bargaining process, and
- Implementing a health care strategy that provides a competitive benefit package while recognizing the looming increase in forecasted health care costs.



## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	7,272	7,972	7,463	-6.4%	7,504	0.5%
Less: Capital Labor and Benefits	(82)	0	(12)	0.0%	(17)	41.7%
Operating Labor and Benefits	7,189	7,972	7,451	-6.5%	7,487	0.5%
Contract Services	816	1,029	1,273	23.6%	1,276	0.2%
All Other Costs	562	740	653	-11.8%	690	5.5%
<b>Operating Total</b>	<b>8,568</b>	<b>9,742</b>	<b>9,377</b>	<b>-3.7%</b>	<b>9,452</b>	<b>0.8%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing approximately \$0.4 million or 3.7 percent compared to FY15. In FY17, the operating budget will increase approximately \$0.07 million or 0.8 percent. Significant budget changes include:

### FY16

Total labor and benefits are decreasing approximately \$0.5 million due to fewer funded positions, overall lower salaries in comparison to FY15 attributable to new employees with salaries lower than the employees they replaced and lower fringe benefit rate costs. Contract services costs are increasing approximately \$0.2 million to provide enhanced benefits administration support through web based programs and to cover the District's negotiated share of Deferred Compensation Plan administrative fees.

### FY17

Total labor and benefits costs are slightly increasing due to the fringe benefit rate escalation and scheduled step increases.

## STAFFING SUMMARY

The chart below shows the staffing of the department. The addition of three positions in FY16 reflects the return of loaned positions to the originating department. These positions are unfunded in both FY16 and FY17.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	48.0	47.0	50.0	3.0	50.0	0.0
Limited Term / Temp Const	2.0	2.0	2.0	0.0	2.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	16.0	16.0	16.0	0.0	16.0	0.0
<b>Total Positions</b>	<b>66.0</b>	<b>65.0</b>	<b>68.0</b>	<b>3.0</b>	<b>68.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>58.0</b>	<b>57.0</b>	<b>60.0</b>	<b>3.0</b>	<b>60.0</b>	<b>0.0</b>

## **OFFICE OF THE GENERAL COUNSEL**

### **OVERVIEW**

The Office of the General Counsel provides the legal advice and assistance necessary to implement the District's mission, policies, and programs in a manner consistent with the law and to take charge of litigation and other legal matters in which the District is a party or in which it is legally interested.

### **DESCRIPTION OF SERVICES PROVIDED**

The department provides legal assistance and litigation support to the Board, General Manager and staff in such areas as: resources law; municipal and public law; environmental law; public works contracting; construction and real estate law; personnel, benefits, retirement and labor law; risk management and insurance; public finance and governmental law; tort law; and rates, regulations, and public policy matters.

### **FY16-17 GOALS**

Key department goals include:

- Providing the District, its officers, and its employees with competent, responsible, and effective representation in all proceedings in which the District is a party or has an interest and obtain the best results possible given the facts and law applicable to the specific case,
- Assuring that all documents with legal significance that are presented to the Office of the General Counsel for review or are originally prepared by the Office accomplish the purpose for which they are intended, protect the District from legal risk to the full extent administrative staff considers appropriate for the transaction, and are written in clear and understandable language in an appropriate legal form,
- Providing accurate, clear, and practical oral legal advice that is responsible to the questions and facts presented,
- Providing accurate, clear, and practical written legal memoranda and opinions that are thoroughly researched, timely, and in an appropriately professional form,
- Providing forceful and persuasive advocacy on behalf of the District in nonjudicial settings when requested to do so,
- Assuring that all legal services provided to the District are cost-effective, responsive to the directions of the Board, and professionally competent, and
- Adhering to the highest standards of professional conduct and legal ethics including those standards set forth in the Rule of Professional Conduct.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	3,303	3,900	3,503	-10.2%	3,529	0.7%
Less: Capital Labor and Benefits	<u>0</u>	<u>0</u>	<u>0</u>	0.0%	<u>0</u>	0.0%
Operating Labor and Benefits	3,303	3,900	3,503	-10.2%	3,529	0.7%
Contract Services	1,389	750	750	0.0%	750	0.0%
All Other Costs	<u>124</u>	<u>221</u>	<u>235</u>	6.4%	<u>236</u>	0.2%
<b>Operating Total</b>	<b>4,816</b>	<b>4,872</b>	<b>4,489</b>	<b>-7.9%</b>	<b>4,515</b>	<b>0.6%</b>

## BUDGET HIGHLIGHTS

The department's operating budget in FY16 is decreasing approximately \$0.4 million or 7.9 percent compared to FY15 and will increase approximately \$0.03 million in FY17 or 0.6 percent compared to the prior fiscal year. Significant budget changes include:

### FY16

Total labor and benefits are decreasing \$0.4 million in FY16 primarily due to one less funded position compared to FY15.

### FY17

Total labor and benefits are increasing approximately \$0.03 million due to the fringe benefit rate escalation and scheduled step increases.

## STAFFING SUMMARY

The chart below shows the staffing of the department. The reduction of one position in FY16 reflects the return of a loaned position to the originating department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	16.0	17.0	16.0	(1.0)	16.0	0.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	2.0	2.0	2.0	0.0	2.0	0.0
<b>Total Positions</b>	<b>18.0</b>	<b>19.0</b>	<b>18.0</b>	<b>(1.0)</b>	<b>18.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>17.0</b>	<b>18.0</b>	<b>17.0</b>	<b>(1.0)</b>	<b>17.0</b>	<b>0.0</b>

## **WATER RECYCLING PROGRAM**

### **OVERVIEW**

The Water Recycling Department develops and implements projects that provide recycled water for appropriate uses by the District and its customers to reduce the demand on high quality drinking water supplies.

### **DESCRIPTION OF SERVICES PROVIDED**

The department operates and maintains the North Richmond Water Reclamation Plant and the Richmond Advance Recycled Expansion (RARE) facility that provide recycled water for use in the Chevron refinery and the East Bayshore Recycled Water treatment facility that provides recycled water to customers for primarily irrigation applications. Unlike other Water System Departments, this program is budgeted in the Water System but managed by the Wastewater Department.

### **FY16-17 GOALS**

The department supports the Long-Term Water Supply Strategic Plan goal. Key department goals include:

- Continuing to operate and maintain the three recycled water treatment facilities (RARE, North Richmond, East Bayshore) to meet regulatory standards for recycled water and maximize the production from these three facilities,
- Maintaining contractual obligations with Chevron, and
- Continuing to offset the use of drinking water for nonpotable applications as part of the District's water recycling goal.

## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	1,742	1,622	1,616	-0.3%	1,627	0.6%
Less: Capital Labor and Benefits	(4)	0	0	0.0%	0	0.0%
Operating Labor and Benefits	1,738	1,622	1,616	-0.3%	1,627	0.6%
Contract Services	19	21	52	143.5%	52	0.1%
All Other Costs	3,203	3,188	3,494	9.6%	3,583	2.6%
<b>Operating Total</b>	<b>4,960</b>	<b>4,831</b>	<b>5,162</b>	<b>6.9%</b>	<b>5,262</b>	<b>1.9%</b>

## BUDGET HIGHLIGHTS

The Water Recycling Program operating budget reflects an increase of approximately \$0.3 million in FY16 or 6.9 percent higher than FY15. In FY17, the operating budget increased approximately 1.9 percent or \$0.1 million. Significant budget changes include:

### FY16

Operating labor costs are increasing approximately \$0.04 million primarily due to an increase in overtime for additional wastewater treatment plant operator coverage necessitated by new regulations. Benefits costs are decreasing approximately \$0.05 million due to a lower fringe benefit rate. Contract services are increasing \$0.03 million primarily due to a new contract required to provide training for microfiltration and reverse osmosis systems. All other costs are increasing approximately \$0.3 million primarily due to increased chemical costs (\$0.1 million) as a result of higher application rates and unit costs; and charges by wastewater staff who maintain the recycling facilities are anticipated to increase (\$0.2 million) because of the need for repair work.

### FY17

Personnel operating costs are increasing approximately \$0.01 million due to fringe benefit escalation costs. All other costs increases of \$0.1 million are primarily due to chemical and energy costs increases and charges by wastewater maintenance staff.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

Position Type	FY14	FY15	FY16	FY16 vs FY15	FY17	FY17 vs FY16
Full Time	8.0	8.0	8.0	0.0	8.0	0.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Positions</b>	<b>8.0</b>	<b>8.0</b>	<b>8.0</b>	<b>0.0</b>	<b>8.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>8.0</b>	<b>8.0</b>	<b>8.0</b>	<b>0.0</b>	<b>8.0</b>	<b>0.0</b>

## ADMINISTRATION DEPARTMENT

### OVERVIEW

The Administration Department is currently unstaffed and the functions of the department have been distributed to the Customer and Community Services Department and the Human Resources Department.

### DESCRIPTION OF SERVICES PROVIDED

The department has the budget for District memberships in professional and trade organizations.

### FY16-17 GOALS

The department does not have any Strategic Plan goals in FY16-17.

### DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

<b>Category</b> (\$ Thousands)	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY16 vs FY15</b>	<b>FY17 Proposed Budget</b>	<b>FY17 vs FY16</b>
Total Labor and Benefits	239	224	0	-100.0%	0	0.0%
Less: Capital Labor and Benefits	0	0	0	0.0%	0	0.0%
Operating Labor and Benefits	239	224	0	-100.0%	0	0.0%
Contract Services	0	0	0	0.0%	0	0.0%
All Other Costs	370	358	356	-0.4%	356	0.0%
<b>Operating Total</b>	<b>609</b>	<b>582</b>	<b>356</b>	<b>-38.7%</b>	<b>356</b>	<b>0.0%</b>

### BUDGET HIGHLIGHTS

#### FY16

The department has no personnel costs in FY16-17 as compared to FY14-15 due to staff retirements and transferring services to other departments.

#### FY17

The District membership budget remains flat.

## STAFFING SUMMARY

The chart below shows the staffing of the department.

<b>Position Type</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY16 vs FY15</b>	<b>FY17</b>	<b>FY17 vs FY16</b>
Full Time	2.0	2.0	2.0	0.0	2.0	0.0
Limited Term / Temp Const	0.0	0.0	0.0	0.0	0.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Positions</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>

## STAFFING

The chart below provides the full-time equivalency (FTE) by department and compares the changes from year-to-year. Depending upon the appointment type, the FTE value will be different. Regular, non-civil-service, Limited-Term and Temporary Construction appointment types are full-time and equivalent to 1.0 FTE; intermittent appointment types are equivalent to 0.75 FTE; part-time and temporary appointment types count as 0.5 FTE.

<b>FY16-17 STAFFING BY DEPARMENT</b>					
Positions by Full-Time Equivalent (FTE)					
<b>Department</b>	<b>FY15 Amended</b>	<b>FY16 Proposed</b>	<b>FTE Change</b>	<b>FY17 Proposed</b>	<b>FTE Change</b>
Operations & Maintenance Support	50.0	50.0	0.0	50.0	0.0
Maintenance & Construction	682.5	701.5	19.0	701.5	0.0
Water Operations	196.5	197.5	1.0	198.5	1.0
Water Resources	38.0	38.0	0.0	38.0	0.0
Natural Resources	69.5	69.5	0.0	69.5	0.0
Engineering & Construction	250.5	256.5	6.0	256.5	0.0
Office of the General Manager	26.5	25.5	(1.0)	25.5	0.0
Finance	97.5	98.5	1.0	98.5	0.0
Information Systems	91.0	93.0	2.0	93.0	0.0
Customer & Community Services	143.5	152.5	9.0	154.5	2.0
Human Resources	57.0	60.0	3.0	60.0	0.0
Office of the General Counsel	18.0	17.0	(1.0)	17.0	0.0
Water Recycling Program	8.0	8.0	0.0	8.0	0.0
Administration	2.0	2.0	0.0	2.0	0.0
<b>WATER SYSTEM TOTAL</b>	<b>1,730.5</b>	<b>1,769.5</b>	<b>39.0</b>	<b>1,772.5</b>	<b>3.0</b>

A total of 39.0 FTEs are shown as the Water System change from FY15. Chapter 2 shows 38.0 FTEs added to the Water System. One additional FTE, previously loaned to the Wastewater System, is being transferred back to the Water System in FY16.

For a more detailed description of position changes, please see the see the specific department section in this chapter or the Staffing section in the District Summary chapter of this book.



## Bargaining Unit Changes

The following tables show the net change in bargaining unit status of authorized positions (not FTEs) represented by AFSCME Local 2019, AFSCME Local 444, IFPTE Local 21, and IUOE Local 39; or included in Management/Confidential, non-represented groups, and civil service exempt positions. The charts reflect all Board approved staffing changes for FY16 and FY17.

<b>FY 16 vs. FY 15 Net Change in Bargaining Unit Status</b>							
<b>Department</b>	<b>Local 2019</b>	<b>Local 444</b>	<b>Local 21</b>	<b>Local 39</b>	<b>MGMT / Confidential</b>	<b>Non-Rep</b>	<b>Civil Service Exempt</b>
Operations & Maintenance Support							
Maintenance & Construction		16	2				
Water Operations		1					
Water Resources							
Natural Resources							
Engineering & Construction	7						
Office of the General Manager	-1						
Finance							
Information Systems	2		-1				
Customer & Community Services	12						
Human Resources							
Office of the General Counsel							
Water Recycling Program							
Administration							
<b>Total Net Change</b>	<b>20</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>FY 17 vs. FY 16 Net Change in Bargaining Unit Status</b>							
<b>Department</b>	<b>Local 2019</b>	<b>Local 444</b>	<b>Local 21</b>	<b>Local 39</b>	<b>MGMT / Confidential</b>	<b>Non-Rep</b>	<b>Civil Service Exempt</b>
Operations & Maintenance Support							
Maintenance & Construction							
Water Operations	1						
Water Resources							
Natural Resources							
Engineering & Construction							
Office of the General Manager							
Finance							
Information Systems							
Customer & Community Services	2						
Human Resources							
Office of the General Counsel							
Water Recycling Program							
Administration							
<b>Total Net Change</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## **DEBT SERVICE AND FINANCING**

This section describes the Water System's current and projected debt obligations, current credit ratings, and adherence to the District's debt financing policies.

The District incurs debt to finance projects or purchase, repair or replace assets which will have useful lives equal to or greater than the related debt. Issuance of revenue supported debt is authorized by the District's Board of Directors, subject to a referendum process. Individual revenue bond issues are authorized by the District's Board of Directors.

The annual debt principal and interest payments are charged to the operating budget. However, debt is only issued to finance capital investment activities.

### **Outstanding Debt**

The Water System has total long-term debt outstanding of \$2.51 billion as of June 30, 2015. The District's debt issues are summarized below and discussed in detail thereafter.

<b>OUTSTANDING DEBT</b> (\$ Thousands) <b>Projection as of June 30, 2015</b>				
<b>Issue</b>	<b>Date of Issue</b>	<b>Last Maturity</b>	<b>Amount Issued</b>	<b>Debt Outstanding</b>
<b>LONG-TERM DEBT</b>				
<b>Revenue Bonds:</b>				
Series 2007B	5/23/2007	6/1/2019	54,790	24,940
Series 2008A	3/20/2008	6/1/2038	322,525	105,250
Series 2010A	2/3/2010	6/1/2031	192,830	185,700
Series 2010B (Build America Bonds)	2/23/2010	6/1/2040	400,000	400,000
Series 2012A	10/10/2012	6/1/2037	191,750	191,750
Series 2012B	11/13/2012	6/1/2026	358,620	312,250
Series 2013A	3/5/2013	6/1/2021	48,670	40,015
Series 2014A	6/11/2014	6/1/2035	128,315	128,315
Series 2014B	6/11/2014	6/1/2030	242,730	242,100
Series 2014C	6/26/2014	6/1/2044	75,000	75,000
Series 2015A	3/3/2015	6/1/2037	429,360	429,360
<b>Total Revenue Bonds</b>	-	-	<b>\$2,444,590</b>	<b>\$2,134,680</b>
<b>General Obligations Bonds</b>	-	-	<b>\$0</b>	<b>\$0</b>
<b>Loans:</b>				
State Loans (Parity)	1/1/2003	1/1/2023	2,188	13,932
State Loans (Parity)	5/22/2008	4/1/2028	20,100	1,120
<b>Total Loans</b>			<b>\$22,288</b>	<b>\$15,052</b>
<b>Total Long-Term Debt</b>			<b>\$2,466,878</b>	<b>\$2,149,732</b>
<b>SHORT-TERM DEBT</b>				
<b>Extendable Commercial Paper</b>	Various	Various	<b>N/A</b>	<b>\$359,800</b>
<b>TOTAL OUTSTANDING DEBT</b>				<b>\$2,509,532</b>

In FY15, the District refunded debt to take advantage of low market interest rates, generating substantial savings and decreasing its interest rate swap exposure. The District issued Water Revenue Bond Series 2015A that refunded for debt service savings all of the outstanding Series 2005A, 2007A, 2009A-1 and 2009A-2 bonds. This issue generated net present value savings of \$65 million over the 22 year life of the bonds. The refunding lowers debt service costs by approximately \$3 million per year in FY16 and FY17. Portions of the proceeds of the Series 2015A bonds were also used to terminate the interest rate swaps associated with the Series 2009A-1 and A-2 bonds.

The District intends to issue approximately \$90 million of new revenue bond debt during the remainder of FY15. The budget assumes issuance of \$101 million in new revenue bonds in FY16, and \$109 million in FY17.

## Debt Service

The total Water System outstanding debt of \$2.51 billion projected as of June 30, 2015 will cost the District \$1.84 billion in interest payments over the next 29 years, as detailed in the chart below. This does not include debt expected to be issued before the end of FY15.

Interest payments on synthetic fixed rate debt were calculated at their associated swap rates plus a spread (if applicable). Interest rates on extendable commercial paper (ECP) were calculated initially at 1 percent in FY16, then increased to 2 percent in FY17 and thereafter.

<b>Projected Debt Service on Outstanding Debt</b>			
<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Debt Service</b>
2016	49,258,291	109,944,304	159,202,595
2017	52,858,355	111,364,590	164,222,945
2018	59,114,024	108,858,771	167,972,795
2019	61,560,313	106,250,482	167,810,795
2020	64,307,237	103,320,059	167,627,295
2021	67,139,811	100,233,935	167,373,745
2022	69,968,050	97,126,345	167,094,395
2023	70,901,972	93,797,473	164,699,445
2024	72,076,592	90,371,553	162,448,145
2025	74,966,189	86,930,697	161,896,885
2026	76,353,697	83,332,588	159,686,285
2027	73,211,866	79,568,869	152,780,735
2028	76,770,711	75,944,025	152,714,736
2029	79,240,000	72,138,988	151,378,988
2030	84,350,000	68,216,688	152,566,688
2031	89,720,000	64,008,688	153,728,688
2032	94,020,000	59,742,761	153,762,761
2033	98,525,000	55,269,938	153,794,938
2034	102,975,000	50,857,535	153,832,535
2035	107,635,000	46,241,825	153,876,825
2036	118,885,000	41,123,533	160,008,533
2037	124,070,000	35,067,295	159,137,295
2038	133,215,000	28,561,948	161,776,948
2039	138,150,000	21,143,851	159,293,851
2040	35,460,000	13,028,920	48,488,920
2041	17,400,000	10,946,000	28,346,000
2042	18,270,000	10,076,000	28,346,000
2043	19,185,000	9,162,500	28,347,500
2044	20,145,000	8,203,250	28,348,250
<b>Total</b>	<b>2,149,732,108</b>	<b>1,840,833,411</b>	<b>3,990,565,518</b>

Includes \$0 required principal amortization for extendible commercial paper and does not include the Federal Build America Bonds interest subsidy.

The difference in the debt service from the budgeted amount results from two factors. First, the figures in the table above include only debt service on currently outstanding bonds while budgeted debt service includes interest and principal on new bonds expected to be issued in FY15, FY16, and FY17 to fund the capital improvement program. Second, budgeted figures include additional costs associated with the debt portfolio including liquidity fees, re-marketing fees, basis spread, and debt service administration.

## Debt Ratings

Credit risk is the risk that the issuer of an investment, such as a revenue bond, will not fulfill its obligation to the holder of the investment. Credit ratings are assigned to bonds by nationally recognized statistical credit rating organizations based on published methodologies. The ratings reflect the organizations' opinions about the issuer's ability and willingness to meet its financial obligations. All investment grade ratings presume the obligation will be paid, in full and on time, currently and in the future.

Strong credit ratings provide tangible benefits to ratepayers in the form of reduced debt service cost. A strong credit rating provides better access to capital markets, lower interest rates, better terms on debt, and access to a greater variety of debt products. Prudent financial management policies have contributed to the District's strong ratings shown in the tables below.

As of January 1, 2015, ratings on the Water System's debt were as follows:

<b>Water System Debt Ratings</b>			
<b>Debt by Type</b>	<b>Ratings by</b>		
	<b>Standard &amp; Poor's</b>	<b>Moody's Investors Service</b>	<b>Fitch</b>
Fixed Rate Revenue Bonds	AAA	Aa1	AA+
Variable Rate Revenue Bonds			
Long-term Underlying Rating	AAA	Aa1	AA+
Short-term Rating	A-1+	VMIG-1	F1+
Extendable Commercial Paper	A-1+	P-1	F1+

## **Debt Management Policy and Debt Service Coverage**

The District is subject to legal debt limits prescribed in the Municipal Utility District (MUD) Act. The MUD Act describes three types of legal limitations: general debt limits, revenue bond limits, and short term borrowing limits.

The District's general debt indebtedness cannot exceed the ordinary annual income and revenue of the District without a two-thirds approval of the voters. However, revenue bonds are not included in general debt limits.

The District is authorized to issue revenue bonds with the approval of a resolution from the Board of Directors, subject to a 60-day referendum period. The resolution specifies the maximum principal amount of bonds that may be issued pursuant to the authorization. The District's Board of Directors also approves individual Series of Revenue Bonds issued under the broader authorization.

The MUD Act authorizes the District to issue short-term indebtedness without an election of the voters. The amount of short-term borrowing cannot exceed the lesser of 1) the annual average total revenue of the three preceding years or 2) twenty-five percent of the District's total outstanding bonds. This provision is substantially the same as the District's internal policy discussed below.

The District has also established its own policy regarding debt management (Policy 4.02: Cash Reserves and Debt Management – see Appendix). The purpose of the debt policy is to maintain a balance between current funding sources and debt financing over each five-year plan horizon in order to retain the District's financing flexibility and achieve the lowest cost of financing.

The District's debt management policy is to:

- a) maintain an annual revenue bond debt service coverage ratio of at least 1.6 times coverage;
- b) limit debt-funded capital to no more than 65 percent of the total capital program over each five-year planning period; and
- c) limit commercial paper / variable rate debt to 25 percent of outstanding long-term debt.

### **Debt Service Coverage Ratio**

The debt service coverage policy ensures that the District has sufficient annual operating revenues to pay its operating expenses and meet its debt service obligations on its revenue bonds and other parity debt. The revenue bond debt service coverage ratio is defined as the District's net operating revenue (current year's operating revenue less the current year's operating expenses) divided by the current year's debt service on all revenue bonds and other parity debt. In FY16 and FY17, the projected debt coverage ratios are 1.60 and 1.63 respectively.

### Debt-Funded Capital

The percentage of the capital program that is funded by debt over the five year period FY16-20 will be 47 percent, which is lower than the financial policy maximum target of 65 percent.

<b>Projected Debt Percentage of Funding</b>		
(\$ Millions)		
	<b><u>FY16</u></b>	<b><u>FY17</u></b>
<b>Expenditures:</b>		
Capital Cash Flow (discounted)	184.5	196.1
Administration of Capital	<u>40.0</u>	<u>40.0</u>
<b>Total expenditures</b>	<b>224.5</b>	<b>236.1</b>
<b>Project Funding:</b>		
New Bond Funded	101.2	109.0
Prior Bond Funded	0.0	0.0
Grants and Loans Funded	2.5	1.8
Reimbursements Funded	21.2	24.8
Revenue Funded Capital	<u>99.6</u>	<u>100.5</u>
<b>Total resources</b>	<b>224.5</b>	<b>236.1</b>
<b>Debt percentage of funding</b>	<b>45.1%</b>	<b>46.2%</b>

### Commercial Paper and Variable Rate Debt Ratio

The District has authorized a short-term extendable commercial paper (ECP) borrowing program consistent with the MUD Act and the District's debt management policy. Under this program, the District may issue commercial paper notes at prevailing interest rates for periods of not more than 120 days from the date of issuance with the option by the District to extend the maturity for another 150 days. The program is not supported by any liquidity or revolving credit agreement. The Water System ECP are secured by a pledge of the Water System's net revenues, subordinate to the respective System's revenue bonds.

On June 30, 2015, \$359.8 million of Water System ECP is projected to be outstanding under the program. Water System ECP will comprise less than 17 percent of the \$2.15 billion in outstanding long-term bonds.

Water System outstanding variable rate debt projected as of June 30, 2015 will be approximately \$105.2 million. Since the beginning of FY14, the District has converted over \$340 million of its variable rate debt into fixed rate debt by paying off existing interest rate swap contracts and replacing the underlying variable rate bonds with fixed rate bonds. Going forward, the District expects to finance its construction program through a combination of fixed-rate debt and ECP.



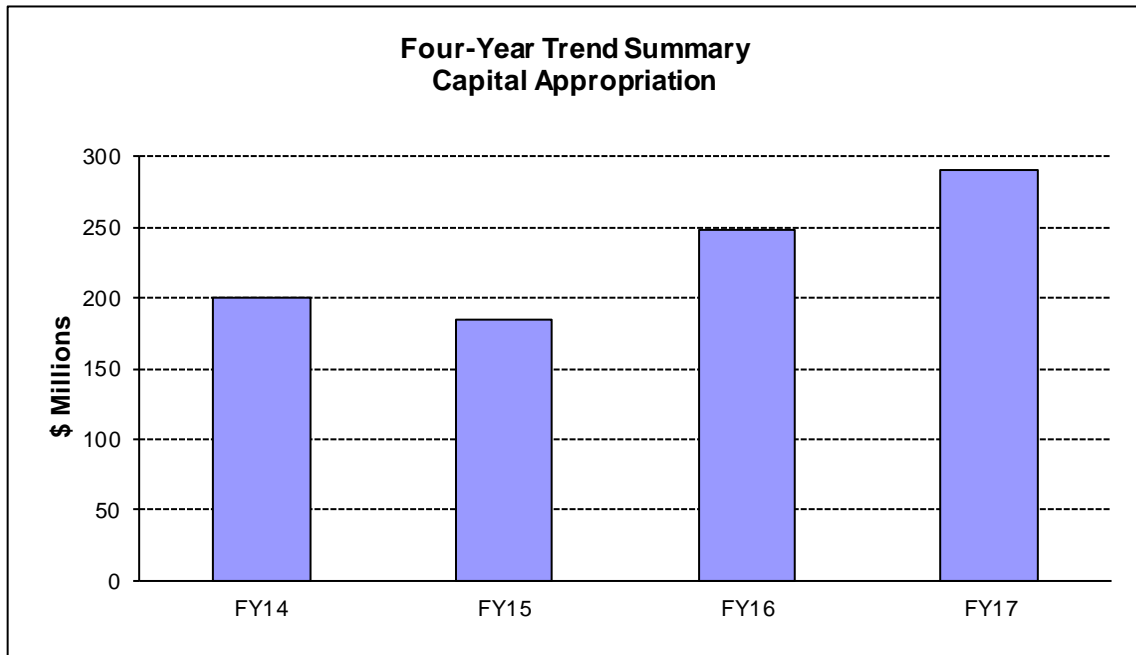
## CAPITAL EXPENDITURES

The CIP consists of projects that typically result in the construction of new facilities, or the modification, rehabilitation or upgrade of existing facilities. Project costs include all expenditures required to study, plan, design, purchase, construct, or upgrade new or existing facilities. In addition, projects can include large equipment purchases and the creation or replacement of computer technology systems infrastructure.

### Capital Appropriations

Capital appropriations represent the amounts approved by the Board to be spent on projects in the Capital Improvement Program. Since these appropriations are often spent over multiple years, the amounts appropriated for each fiscal year will vary depending upon project scope and timing, and the amount of unspent appropriation a project may have.

The Water System's FY16 appropriation totals \$249.0 million, which represents an increase of \$64.0 million from FY15. This year's appropriation request reflects the District's continued commitment to capital improvements that focus on maintaining and improving the infrastructure, especially pipelines and reservoirs. In FY17, the appropriation is increasing by \$41.4 million to \$290.4 million.



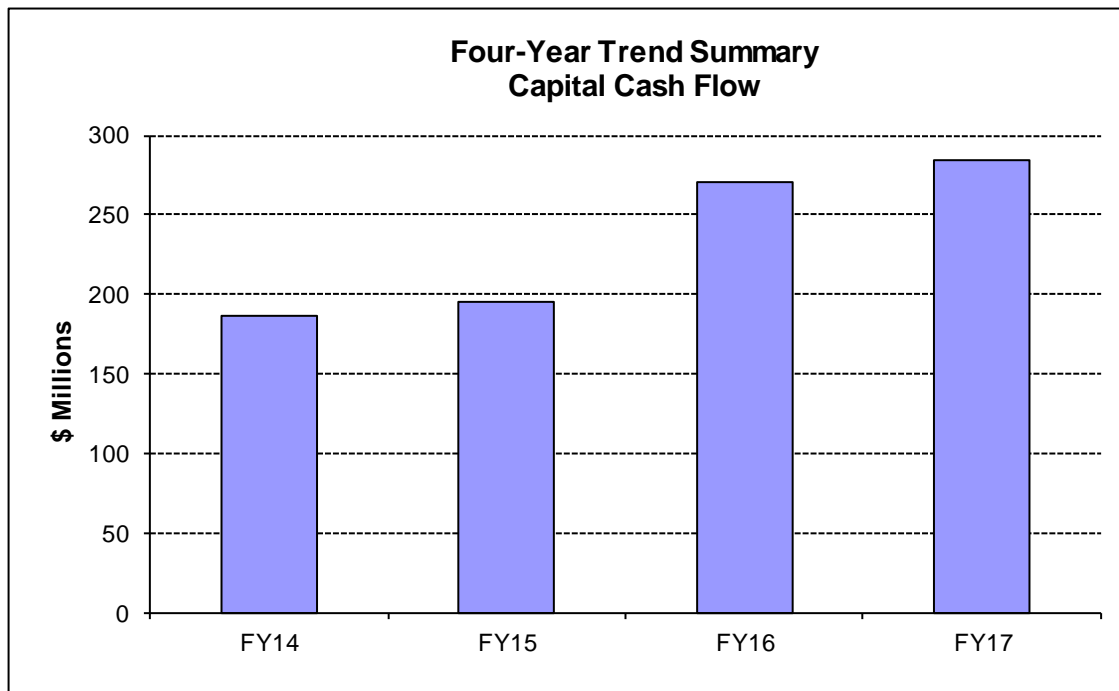
Capital Appropriation					
(\$ Millions)					
	FY14	FY15	FY16	FY16	FY17
	Adopted	Adopted	Proposed	vs FY15	Proposed
	Budget	Budget	Budget	% Change	Budget
<b>Capital Appropriation*</b>	<b>200.8</b>	<b>185.0</b>	<b>249.0</b>	<b>34.6%</b>	<b>290.4</b>
					<b>16.6%</b>

\*with Administration of Capital

## Capital Cash Flow

Capital cash flows represent the amounts projected to be spent each fiscal year on projects in the Capital Improvement Program. The amount of cash flow each year varies as projects progress from one phase to another, such as from planning to design and then construction, and as projects are completed and new ones started.

The Water System's FY16 cash flow totals \$224.5 million, which represents an increase of \$28.6 million from FY15. The increase is primarily for additional pipeline replacements and relocations, and reservoir rehabilitation work. In FY17, the cash flow is increasing by \$11.6 million to \$236.1 million primarily for increases in spending for pipelines, and to rehabilitate reservoirs and reservoir towers.



Capital Cash Flow (\$ Millions)						
	FY14 Adopted Budget	FY15 Adopted Budget	FY16 Proposed Budget	FY16 vs FY15 %Change	FY17 Proposed Budget	FY17 vs FY16 %Change
<b>Capital Cash Flow*</b>	186.1	195.9	224.5	14.6%	236.1	5.2%

\*with Administration of Capital

## Capital Labor

The following chart shows the capital labor and benefits budget by department for capital work.

<b>Capital Labor By Department</b> (\$ Thousands)						
<b>DEPARTMENTS</b>	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>Budget % Change</b>	<b>FY17 Proposed Budget</b>	<b>Budget % Change</b>
Operations & Maintenance Support	647	277	395	42.3%	401	1.5%
Maintenance & Construction	29,352	30,567	32,383	5.9%	33,150	2.4%
Water Operations	1,753	1,372	1,323	-3.6%	1,369	3.5%
Water Resources	1,741	1,486	1,410	-5.2%	1,247	-11.6%
Natural Resources	108	63	0	-100.0%	0	0.0%
Engineering & Construction	28,685	29,153	29,900	2.6%	30,456	1.9%
Office of the General Manager	1	0	0	0.0%	0	0.0%
Finance	163	0	434	0.0%	910	109.4%
Information Systems	194	401	752	87.3%	754	0.3%
Customer & Community Services	1,678	2,174	2,444	12.5%	2,487	1.7%
Human Resources	82	0	12	0.0%	17	41.7%
Office of the General Counsel	0	0	0	0.0%	0	0.0%
Water Recycling Program	4	0	0	0.0%	0	0.0%
Administration	0	0	0	0.0%	0	0.0%
<b>Departments Total</b>	<b>64,409</b>	<b>65,493</b>	<b>69,053</b>	<b>5.4%</b>	<b>70,790</b>	<b>2.5%</b>

The Water System capital labor budget is increasing \$3.6 million in FY16 and \$1.7 million in FY17 compared to the prior fiscal year to reflect the funding associated with additional positions supporting capital related work. The total labor increase in FY16 is offset due to a lower fringe benefit rate compared to FY15. In FY17, total capital labor increase is attributed to scheduled salary step changes and an increase in the fringe benefit rate.

## Capital Program Highlights

The FY16-20 Water System Capital Improvement Program (CIP) requires \$1.41 billion in project appropriations. This represents an approximate increase of \$500 million or 54 percent from the FY14-18 CIP and is primarily due to increased appropriation needs of the Maintaining Infrastructure strategy for increasing the miles of deteriorated water distribution pipelines that are replaced each year, and the Water Supply strategy for replacing the deteriorated lining in the Mokelumne Aqueducts.

In accordance with the District's ten-year capital budget planning horizon, approximately \$2.1 billion has been tentatively identified for FY21-25. Key aspects of this future work are discussed in the program and project summaries below. These future year estimates will be revised as studies are completed, as priorities are redefined, and as new needs emerge. Therefore, the focus of the capital budget is on the first five years of the CIP.

The majority of the FY16-20 appropriations are comprised within three strategies: Maintaining Infrastructure at 44 percent; Water Supply at 26 percent; and Extensions and Improvements at 17 percent. All Water System strategies are summarized below, with select programs and projects discussed in more detail.

<b>FY14-18 vs. FY16-20 Appropriation</b> <b>Capital Improvement Program by Strategy</b> (\$ Thousands)					
Strategy	Appropriation		Change		% of FY16-20
	FY14-18	FY16-20	\$	%	
Emergency Preparedness*	0	0	0	0%	0%
Extensions & Improvements	225,688	237,302	11,614	5%	17%
Facilities, Services & Equipment	41,113	64,024	22,911	56%	5%
Maintaining Infrastructure	443,135	615,707	172,572	39%	44%
Regulatory Compliance	42,003	62,707	20,704	49%	4%
Resource Management	10,796	4,813	-5,983	-55%	0%
Water Quality	24,064	48,627	24,563	102%	3%
Water Supply	105,525	362,139	256,614	243%	26%
Non-Program Specific	22,317	14,200	-8,117	-36%	1%
<b>Water Sub-total</b>	<b>914,641</b>	<b>1,409,519</b>	<b>494,878</b>	<b>54%</b>	<b>100%</b>
Administration of Capital	175,000	207,345	32,345	18%	
<b>Water Total</b>	<b>1,089,641</b>	<b>1,616,864</b>	<b>527,223</b>	<b>48%</b>	

\*No new appropriation is required as prior appropriations will be used.

The FY16-20 CIP requires \$1.38 billion in projected cash flow spending. This represents a \$339 million increase or 33 percent from the FY16-18 CIP and is primarily due to increased spending under the Maintaining Infrastructure strategy for increasing the miles of deteriorated water distribution pipelines that are replaced each year, the Water Supply strategy for replacing the deteriorated lining in the Mokelumne Aqueducts, and the Extensions & Improvements strategy for pressure zone and water treatment plant improvements.

All water system strategies are summarized below, with select programs and projects discussed in more detail.

<b>FY14-18 vs. FY16-20 Cash Flows</b> <b>Capital Improvement Program by Strategy</b> (\$ Thousands)					
Strategy	Cash Flows		Change		% of FY16-20
	FY14-18	FY16-20	\$	%	
Emergency Preparedness	872	1,268	396	0%	0%
Extensions & Improvements	166,474	208,605	42,130	25%	18%
Facilities, Services & Equipment	40,989	60,568	19,579	48%	5%
Maintaining Infrastructure	451,774	514,023	62,250	14%	44%
Regulatory Compliance	61,097	73,329	12,232	20%	6%
Resource Management	10,778	7,306	-3,473	-32%	1%
Water Quality	27,390	39,625	12,235	45%	3%
Water Supply	101,867	263,559	161,692	159%	23%
Non-Program Specific	0	0	0	0%	0%
<b>Water Sub-total</b>	<b>861,241</b>	<b>1,168,282</b>	<b>307,042</b>	<b>36%</b>	<b>100%</b>
Administration of Capital	175,000	207,345	32,345	18%	
<b>Water Total</b>	<b>1,036,241</b>	<b>1,375,627</b>	<b>339,387</b>	<b>33%</b>	

## EMERGENCY PREPAREDNESS STRATEGY

This strategy furthers the District's objectives to maintain and improve the infrastructure to ensure delivery of reliable, high quality service now and in the future. In 1994, the Seismic Improvement Program (SIP) was adopted to take a comprehensive approach to mitigate earthquake risk to the water system. The program included in this strategy is:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Seismic Improvement Program	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### Seismic Improvement Program

The objective of this program is to strengthen and upgrade the water treatment and distribution system to ensure post-earthquake water service. The program included upgrades to more than 250 critical facilities throughout the District including reservoirs, pipelines, pumping plants, water treatment plants, etc. The program also included the Southern Loop Pipeline which connects the water systems between San Ramon and Castro Valley to provide operational redundancy, and improvements to the Claremont Tunnel which crosses the Hayward Fault. While the program has been substantially completed, seismic work continues to strengthen and protect the water system, mostly as part of other programs.

A small amount of work will be done under SIP, but no new appropriations are needed. Work in FY16-17 includes installation of an isolation valve at Argyle No.1 Reservoir in El Sobrante. During FY15-17, four 1-million gallon per day diesel-powered portable pumps will be procured, along with piping and appurtenances needed to support both planned and emergency water distribution operations. These new pumps will move water within the Central Pressure Zone (PZ) located between Albany and Hayward, and from the Central PZ to the Aqueduct and Upper San Leandro PZs.

## EXTENSIONS & IMPROVEMENTS TO THE SYSTEM STRATEGY

This strategy furthers the District's objectives to improve the infrastructure to ensure reliable, high quality service, and update and enhance the District's system modeling capabilities. The majority of work under this strategy focuses on making improvements to various components of pressure zones such as pipelines, reservoirs, pumping plants and water treatment plants to improve system reliability for existing customers, and to provide service to new customers. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Mapping Program	1,468	1,558	1,608	1,656	1,701	7,991
OP/NET Program	1,336	1,300	2,909	2,712	3,108	11,365
Pressure Zone Improvements Program	4,934	20,292	43,370	68,621	4,013	141,230
Walnut Creek - San Ramon Valley In- Zone Improvements Program	0	3,174	0	0	0	3,174
Water Treatment and Transmission Improvements Program	1,197	23,604	32,396	16,345	0	73,542
<b>Total</b>	<b>8,935</b>	<b>49,928</b>	<b>80,283</b>	<b>89,334</b>	<b>8,822</b>	<b>237,302</b>

### Pressure Zone Improvements Program

The Pressure Zone Improvements Program addresses issues with the District's 123 pressure zones. It includes studying individual pressure zones and compiling the studies into the Distribution System Master Plan. Improvements include upgrading or replacing reservoirs, pumping plants and transmission systems to increase storage capacity and improve water quality. The following pressure zone work is planned:

- Almond/Fire Trail in Castro Valley – replace the 6.6 million gallon (MG) open-cut Almond Reservoir with two smaller tanks and demolish the 3.1 MG Cull Creek Reservoir in FY17-21;
- Central Oakland Hills Cascade in Oakland – complete the rehabilitation of the 39<sup>th</sup> Avenue/Redwood Pumping Plant (PP) in FY16, and replace the 39<sup>th</sup> Avenue Reservoir in FY19-21;
- Leland in Lafayette/Walnut Creek – replace the existing reservoir with two 8 MG concrete reservoirs in FY18-22;
- Maloney in El Sobrante/Pinole/Crockett – increase the capacity of the Maloney Pumping PP in FY16-19, make improvements to the Crockett PP and construct new transmission piping in FY21-24, begin planning for a new Selby Reservoir in FY24;
- Summit in Berkeley – replace the 37 MG open-cut Summit Reservoir and associated Woods and Shasta PP in FY15-17, construct Lawrence Reservoir in FY19-22; and
- West of Hills Transmission Improvements – includes over twenty projects including improvements at three water treatment plants, two pumping plants, five water storage reservoirs, and approximately 120,000 feet of transmission pipelines. To increase transmission capacity to the Wildcat Aqueduct, new pipeline will be constructed in Berkeley in FY16-19 and El Cerrito in FY19-21; to increase transmission capacity in the South 30 Aqueduct, new pipeline will be constructed in Oakland in FY19-21; to increase transmission capacity in the Sequoia Aqueduct, new pipeline will be constructed in Oakland in FY19-23; a new Fontaine PP in Oakland will be constructed in FY17-20; to allow the Genoa Rate Control Station in Oakland to operate at the required higher flow rates, new pipeline will be constructed in FY21-24; and to increase transmission capacity associated with North Reservoir in Richmond, new pipeline will be constructed in FY21-25.

**Water Treatment and Transmission Improvements Program**

The Water Treatment and Transmission Improvements Program (WTTIP) calls for new and upgraded facilities to meet current and projected water demands.

The program includes distribution improvements in the Lafayette, Orinda, Moraga and western Walnut Creek area including: a new 3.2 MGD Happy Valley Pumping Plant in Orinda in FY15-19; a new 1.5 MGD Sunnyside Pumping Plant in Lafayette in FY15-19; a new 2 MG Ardith Reservoir and Donald Pumping Plant in Orinda in FY16-18; constructing a new 3 MGD Withers PP in Lafayette in FY18-21; upgrades to the Fay Hill PP in Moraga and replacing the 2.5 MG open cut Fay Hill Reservoir with two smaller 0.75 MG tanks in FY17-19; and replacing or relining the 11.5 MG Moraga Reservoir in FY21-24.

The program also includes new facilities and upgrades to the Water Treatment Plants (WTPs) including: convert the existing air feed ozone generator to a liquid oxygen feed system at Sobrante WTP in El Sobrante and Upper San Leandro WTP in Oakland in FY15-18, and at both facilities take backwash water from the filters to a new filter-to-waste equalization basin to recycles it back to the head of the plant in FY17-21; a below-grade chlorine contact basin at the Sobrante WTP in FY20-22; and rebuilding the filters at the Walnut Creek WTP in FY18-20.

WTTIP is projected to be one of the District's most significant future programs with extensive improvements to be made at the Lafayette and Orinda WTPs.



## **FACILITIES, SERVICES & EQUIPMENT STRATEGY**

This strategy furthers the District's objectives to ensure the security of the water supply and the water system; to evaluate facilities and implement corrective maintenance programs; to implement changes in technology; and to maintain a safe, well equipped workplace. Work associated with this strategy includes making security improvements at various facilities, implementing new computer systems and replacing vehicles and equipment as needed. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Area Service Center/Building Program	2,453	1,362	1,998	3,502	6,083	15,398
Communications Program	3,200	2,500	1,200	0	0	6,900
Security Program	1,041	1,880	375	2,625	3,646	9,567
Vehicle/Equipment Program	8,850	7,475	5,030	5,030	5,775	32,160
<b>Total</b>	<b>15,544</b>	<b>13,217</b>	<b>8,603</b>	<b>11,157</b>	<b>15,504</b>	<b>64,025</b>

### **Area Service Center/Building Program**

The Area Service Center/Building Program is comprised of various projects that improve and upgrade District buildings such as service centers and administrative buildings. In FY16-20, the focus will be on the Oakland Administration Building.

FY15-17 work includes replacement of the Fire Alarm System; upgrades to the boilers for greater energy efficiencies; and upgrades to elevator controls. Energy efficiency projects include lighting retrofit and window film installation to be completed in FY19; and replacement of the cooling tower and chiller systems in FY19-20. Future work includes power feed and distribution improvements; security improvements; replacement of audio-visual equipment in the board room; and repairs to terraces and roofs.

### **Communications Program**

The Communications Program is comprised of projects that replace and upgrade computer and communication systems. The Materials Management Information System (MMIS) that is used for purchasing and accounting purposes is over 25 years old and will be replaced in FY16-18, along with the PeopleSoft Financial Information System (FIS). The two systems share data and must be integrated. Various modules of the PeopleSoft Human Resources Information System (HRIS) will be replaced in FY16-19. Replacement of various work management systems including general work orders, and concrete and paving orders will take place in FY17-20.

### **Vehicles & Equipment Program**

The Vehicle Replacements Project is ongoing and involves the periodic replacement of vehicles and construction equipment as needed. In FY16-20, the program also includes upgrading the District's fuel facilities by installing new fuel dispensers and enhanced vapor recovery equipment for the above ground storage tanks, and retrofitting or replacing diesel engines in vehicles and equipment such as portable pumps and generators to meet new air quality regulations.

## MAINTAINING THE INFRASTRUCTURE STRATEGY

This strategy furthers the District's objectives to maintain and improve the infrastructure in a cost effective manner to ensure sustainable delivery of reliable, high quality water service now and in the future. The majority of work under this strategy focuses on pipeline projects to improve system reliability for existing customers and to provide service to new customers. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Corrosion Program	770	310	2,258	2,489	1,866	7,693
Electrical Hazard Prevention Program	363	287	223	146	0	1,019
Pipelines/Appurtenances Program	12,653	12,950	13,352	13,955	14,364	67,274
Pipelines/Regulators Program	51,664	61,284	97,512	81,988	81,820	374,268
Polybutylene Lateral Replacement Program	0	5,889	5,511	5,384	3,319	20,103
Pumping Plant Rehabilitation Program	3,512	12,395	11,156	20,482	3,466	51,011
Reservoir Rehabilitation Program	25,593	20,643	13,489	20,376	14,237	94,338
<b>Total</b>	<b>94,555</b>	<b>113,758</b>	<b>143,501</b>	<b>144,820</b>	<b>119,072</b>	<b>615,706</b>

### Pipelines/Appurtenances Program

This program maintains efficient pipeline operations by replacing appurtenances such as valves, hydrants and meters at the end of their useful life. The New Service Installations Project installs services for new customers, and replaces old services at the end of their useful life. Services include taps on the main, laterals, and meter sets. Housing trends have reduced the need for installations at new developments. The number of new and replacement service installations in FY14-15 totaled 940 per year. In FY16-17, a similar number of installations are planned. In FY18-20, the number is expected to increase to about 1,040 per year.

### Pipelines/Regulators Program

Pipelines/Regulators is an ongoing program to meet the pipeline replacement and expansion needs of the distribution system. This program has the largest budget over the next five years.

Pipeline Infrastructure Renewals is an ongoing project to replace deteriorating water distribution pipelines, identified primarily through the evaluation of maintenance histories. In FY14-15, pipeline replacements totaled 10 to 10.5 miles per year. FY16-20 work includes construction of 10 miles of pipeline replacements per year. In addition, the new "10 to 40" program will be initiated which includes development of a short-term program to replace an additional 5 miles per year; a pilot study researching methods and improvements to make the pipeline work process more efficient; and creation of a long-term plan to increase the replacement rate up to 40 miles per year.

Pipeline System Extensions is an ongoing project to serve new customers. The workload is estimated from projections of land development activity and trends in water service estimates in the New Business Office. Historically, the District averaged 12 miles of system extensions per year. However, demand has been reduced due to the economic downturn. In FY14-15, roughly 5 miles per year were installed. In FY16-17, roughly 6 miles per year is anticipated, increasing to 8 miles in FY18-20.

Large Diameter Pipelines is an ongoing project to replace the large transmission pipes that form the backbone of the distribution system, and to conduct condition assessments. FY16-20 work includes replacement pipeline at MacArthur/Davenport, Grand Avenue and International Boulevard in Oakland; Dingee in Berkeley; Alameda estuary crossing; Mario Way and Judy Lane in Lafayette; and Summit Pressure Zone (PZ) in Berkeley.

### **Pumping Plant Rehabilitation Program**

The Distribution Pumping Plant Infrastructure Rehabilitation Plan was updated in 2014 and identifies the 47 highest priority facilities for rehabilitation or replacement. In FY16-20, work under the Pumping Plant Rehabilitation Program includes planning, design and construction at 28 pumping plant facilities, and the continuation of arc flash mitigation efforts.

### **Reservoir Rehabilitation Program**

This program maintains the integrity of the distribution reservoirs and includes the rehabilitation, replacement and demolition of the District's steel and concrete reservoirs. The Reservoir Rehabilitation and Maintenance Project maintains and extends the service lives of the steel and reinforced concrete distribution tanks by replacing coating systems; installing and/or repairing cathodic protection systems; repairing or replacing roof systems; and performing structural upgrades. In FY16-20, the program will focus on rehabilitating three to four steel reservoirs each year. In addition, three concrete reservoirs will be rehabilitated in FY16-17, Carisbrook and Montclair in Oakland, and San Ramon reservoir.

The Open Cut Reservoir Rehabilitation Project develops outage plans and rehabilitates the 19 open-cut reservoirs in the distribution system. Projects address structural integrity, worker safety, operational reliability, regulatory requirements and water quality issues. The 50 million gallon (MG) South Reservoir in Castro Valley will be demolished and replaced with a 9 MG concrete reservoir. The reservoir was removed from service in 2008 in response to roof leakage and construction of the new reservoir is scheduled for FY17-18. The San Pablo Clearwell is a 5.4-MG lined and roofed reservoir located in Kensington and will be replaced with two 2.7-MG concrete tanks in FY16-19. Seneca Reservoir, a 30 MG gallon open-cut reservoir located on approximately 20 acres near Highway 580 in Oakland is no longer in operation and will be removed in FY18. Beyond FY20, rehabilitation projects are planned for Central Reservoir in Oakland and North Reservoir in Richmond.

## REGULATORY COMPLIANCE STRATEGY

This strategy furthers the District's objectives to operate and maintain facilities to meet all air, land and water discharge requirements; implement preventative and corrective maintenance programs; and improve the infrastructure to ensure delivery of reliable, high quality service now and in the future. The work under this strategy focuses on dam safety improvements and modifications to reservoir towers. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Dam Safety Program	21,835	11,415	2,920	450	1,175	37,795
Penn Mine Program	252	581	86	88	72	1,079
Remediation Program	675	3,000	0	2,130	1,650	7,455
Trench Spoils Program	0	847	13,815	843	873	16,378
<b>Total</b>	<b>22,762</b>	<b>15,843</b>	<b>16,821</b>	<b>3,511</b>	<b>3,770</b>	<b>62,707</b>

### Dam Safety Program

This program upgrades dams, reservoir outlet towers, clearwells and spillways to meet flood and earthquake safety requirements. The Dam Seismic Upgrades Project includes safety evaluations and dam freeboard increases to improve seismic safety. Evaluations and/or safety reviews are planned for Dunsmuir Reservoir in Oakland, Moraga Reservoir, Leland Reservoir in Lafayette, and Sobrante Clearwell.

Seismic upgrade of Chabot Dam in San Leandro includes upgrades to the downstream slope and the dam crest to prevent slope instability and cracking during the maximum credible earthquake on the Hayward Fault, and improvements to the outlet tower. The work will take place in FY15-17. The Camanche Dam seismic improvements are dependent on California Division of Safety of Dams (DSOD) review and approval, but is planned to begin in FY17.

The Reservoir Tower Modifications Project provides for the seismic retrofit of reservoir towers. Upgrades to the Upper San Leandro Tower will take place in 15-17. Modifications to the Briones Reservoir Tower in Orinda are scheduled for FY16-19. Lafayette Reservoir Tower work consists of gate valve improvements as the seismic performance of the tower has been determined to be adequate. The Pardee Reservoir outlet tower was evaluated in FY13 and seepage from Pardee Tunnel is expected to be addressed in FY21.

### Trench Spoils Program

Trench spoils material is generated from pipeline installation and repairs throughout the service area. The excavated trench spoils are temporarily stockpiled at three District-owned disposal sites for future reuse or disposal: Miller Road in Castro Valley, Briones in Orinda and Amador in San Ramon. The project includes site management and maintenance, periodic removal of trench spoils from the sites, and evaluation of potential spoils reduction and disposal alternatives. Off-haul of trench spoils will take place at the Miller Road site in FY16, and the Briones site in FY19-20. Spoils disposal is anticipated to increase by 50 percent starting in FY17 as the District embarks on a pilot program to increase the amount of pipeline installed.

## RESOURCE MANAGEMENT STRATEGY

This strategy furthers the District's objectives to manage the Mokelumne and East Bay watersheds to ensure a high quality water supply; protect natural resources; provide public access and recreational opportunities compatible with water quality and natural resource protection; and prepare plans to protect natural resources and ensure drinking water quality. Work under this strategy focuses on making improvements to recreational facilities at Camanche, Pardee and East Bay Reservoirs, and updating habitat and watershed management plans. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Recreation Areas Program	135	100	400	0	0	635
Watershed Recreation Program	1,435	943	663	582	555	4,178
<b>Total</b>	<b>1,570</b>	<b>1,043</b>	<b>1,063</b>	<b>582</b>	<b>555</b>	<b>4,813</b>

### Recreation Areas Program

The Camanche Recreation Area Upgrades Project provides campground and road improvements. Improvements at campgrounds include site drainage and storm water management; new parking spurs; rehabilitation of roads with recycled asphalt; new signage and striping for traffic control; and new picnic tables and fire rings. Construction of the South Shore campground improvements and day use roads will be completed in FY16.

In FY15-16, dilapidated portions of the Pardee marina and rental docks will be replaced. In FY16, the above ground fuel tank at Camanche South Shore will be upgraded or replaced. In FY17, at Camanche North Shore road repairs will be addressed, and the piping and delivery equipment will be replaced between the fuel tanks and floating fuel dock. In FY18-19, the general store building at Camanche South Shore will be replaced, and the Pardee Recreation Area coffee shop will be replaced in FY19-20.

### Watershed Recreation Program

This program provides for purchasing, protecting and enhancing the District's watershed lands including trails and recreation facilities in support of visitors, water quality and the environment.

In FY16-20, recreation projects at the San Pablo and Lafayette Recreation Areas include parking lot and trail staging area improvements; visitor center, cafe and retail upgrades; marina improvements and new docks; water and sewer system upgrades; and repaving roadways. Watershed projects include habitat restoration and hazardous tree removal; annual replacement of old fire pumps; boundary fence upgrade and replacement; infrastructure upgrades at the Orinda Watershed Headquarters; and Division of Safety of Dams required upgrades at Upper San Leandro and San Pablo Reservoirs.

## WATER QUALITY STRATEGY

This strategy furthers the District's objectives to operate and maintain facilities to surpass federal and state drinking water regulations, and to make system improvements that meet or surpass regulatory requirements. The majority of work under this strategy focuses on making improvements to reservoirs and water treatment plants to improve water quality. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Water Quality Improvement Program	20	20	-	0	0	40
Water Treatment Upgrade Program	12,752	3,406	20,782	5,327	6,320	48,587
<b>Total</b>	<b>12,772</b>	<b>3,426</b>	<b>20,782</b>	<b>5,327</b>	<b>6,320</b>	<b>48,627</b>

### Water Treatment Upgrade Program

The Treatment Plant Upgrades Project addresses the need to rehabilitate and modernize the water treatment plants (WTPs).

In FY16-20, work is planned at six WTPs. Work at Lafayette includes the replacement of equipment such as the ammonia tank, backwash transfer pumps, filter valves, etc.; and the rehabilitation of the equalization basin and service water mains. Work at Orinda includes the replacement of all 20 filter underdrains and control systems; sodium hypochlorite room upgrades; chemical building ventilation; and plant emergency power. Work at San Pablo includes plant startup work and installation of a plug for the raw water tower. Work at Sobrante includes repair of sludge piping and reclaim roofs and filter underdrains; a new oxygenation system in San Pablo Reservoir; and control system and permanganate feed system upgrades. Work at Upper San Leandro (USL) includes sludge thickening; raw water line valve replacement; west portal site improvements; controls systems upgrade; and clearwell roof replacement. Work at Walnut Creek includes sludge thickening and sedimentation basin chemical feed improvements.

Work in FY21-25 includes control system and reclaim improvements at Lafayette WTP; filter underdrain repairs and stop logs at Sobrante WTP; stop log installation and a new flocculator stage at USL WTP; and construction of a new pretreatment process at the Walnut Creek and Orinda WTPs.

## WATER SUPPLY STRATEGY

This strategy furthers the District's objectives to ensure a reliable, high quality water supply for the future; to preserve current entitlements and augment the District's water supply; and through conservation and recycling reduce the demand for potable water. The immediate focus of this strategy is on maintaining the raw water aqueducts and water recycling projects. The programs included in this strategy are:

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Aqueduct Program	34,522	44,435	41,872	8,736	99,808	229,373
Supply Reservoirs Program	1,839	443	762	899	418	4,361
Water Conservation Program	3,485	3,796	3,655	3,727	3,833	18,496
Water Recycling Program	11,958	404	74,085	21,988	1,474	109,909
Water Supply Management Program	0	0	0	0	0	0
<b>Total</b>	<b>51,804</b>	<b>49,078</b>	<b>120,374</b>	<b>35,350</b>	<b>105,533</b>	<b>362,139</b>

### Aqueduct Program

This program consists of evaluating and improving the raw water aqueduct system to meet operational requirements. Work to recoat portions of the ten miles of above-ground pipe of the Mokelumne Aqueducts Nos. 2 and 3 was completed in FY15. In FY16-21, various portions of Aqueduct No.1 will be recoated. The program also includes replacing the deteriorated cement lining in the Mokelumne Aqueducts that protects the steel pipeline from corrosion. In FY16-17, work includes comprehensive inspection of the Aqueducts Nos. 2 and 3 to determine the extent of the lining failures, and then initiate the planning and design of projects to replace the lining. In FY18-24, work includes relining the aqueducts in stages.

Under the Raw Water Studies and Improvements Project work in FY16-17 includes continuing retrofits of the temperature anchors on the Mokelumne Aqueducts, and inspections of the Lafayette No. 2 Aqueduct and Pardee Tunnel. Work on the Delta Tunnel Project will include geotechnical investigations and reassessment of the seismic vulnerability of the Mokelumne Aqueducts in the Delta to guide future improvements. In FY18-20, work includes continuing retrofit of the temperature anchors on Mokelumne Aqueduct No. 1 and the isolation bearings on Aqueduct No. 3. Beyond FY20, planned work includes continuing the temperature anchor and isolation bearing retrofits; additional planning/design for the Delta Tunnel; installing river bypass turnouts on Mokelumne Aqueduct No. 3; and installing a liner in Lafayette Aqueduct No. 1.

### Water Conservation Program

The District adopted an updated Urban Water Management Plan in 2010 to reduce potable water demand to achieve an additional 39 million gallons per day (MGD) in water savings from conservation programs and natural replacement by the year 2040. This is in addition to the 23 MGD of estimated conservation achieved through 2009. Customers have continued to achieve substantial water savings through their drought response including participation in District conservation incentives, water use and leak detection surveys and education programs. Water savings remained higher than long-term annual averages due to ongoing demand reductions from the drought, and heightened interest in water efficient technologies and practices.

In recognition of the anticipated ongoing drought conditions, in addition to the baseline conservation programs, a number of WCMP strategies will be accelerated over the next several years including: expanded indoor and outdoor rebates; water saving device distribution; landscape irrigation water budgets; Home Water Reports for residential customers; water loss



control programs; advanced metering infrastructure; and WaterSmart Business Certification. A key priority will be to update and finalize per capita water use calculations and targets.

### **Water Recycling Program**

In 2009, the District adopted the revised Water Supply Management Program (WSMP) to help guide decisions for providing a reliable, high quality water supply and meet growing demand through the year 2040. The WSMP 2040 includes recycled water as a key element to offset demand for potable water. The Water Recycling Program includes projects to provide a total of 11 million gallons per day (MGD) of recycled water by the year 2040.

The East Bayshore Project will ultimately supply up to 2.5 MGD of recycled water to portions of Alameda, Albany, Berkeley, Emeryville and Oakland for irrigation, industrial, commercial and environmental uses. The remainder of the first phase of the project (I-80 pipeline, distribution pipelines in Berkeley and Albany, and customer retrofits) is expected to continue through FY26. The second phase of the project to provide an estimated 1.2 MGD of recycled water to Alameda will be implemented in FY18-27.

The San Ramon Valley Recycled Water Program is a joint program with the Dublin San Ramon Services District to supply 2.4 MGD of recycled water to portions of San Ramon, Danville, Blackhawk and surrounding areas. Portions of the project to extend recycled water service to northern San Ramon/Bishop Ranch, and work in Danville and Blackhawk began in FY11 with federal funding. Expansion of the tertiary treatment facilities from 9.7 MGD to 16.5 MGD is expected by FY20 as the distribution system is expanded and additional customers connected.

The Richmond Advanced Recycled Expansion (RARE) Water Project could be expanded incrementally by an additional 0.5 MGD in FY17, and an additional 1.0 MGD in FY20-22. Expansion of the North Richmond Water Recycling Plant (NRWRP) by an additional 1 MGD is expected by FY20 pending supply availability. The plant serves the Chevron refinery in Richmond. The expansion study was completed in FY15 and construction is to begin in FY18. It is anticipated that the cost of these expansions will be borne by Chevron through reimbursements paid to the District.

Planning studies have been conducted with the Diablo Country Club to evaluate a potential satellite treatment plant. Diablo Country Club is interested in funding a pilot plant in FY17, and Moraga Country Club is interested in constructing a plant by FY18.

Long-term water recycling projects that may take place beyond FY20 include expansion of the San Leandro project to expand recycled water delivery by an additional 0.5 MGD, and the ConocoPhillips High-Purity Recycled Water Project that could provide 3.7 MGD of recycled water for boiler and cooling tower applications.

### **Water Supply Management Program**

Supplemental water supply efforts will be pursued to meet dry year needs that include water transfers, Mokelumne regional projects, ground water banking, and regional desalination. In FY16-20, the District will continue to work with the Placer County Water Agency to complete environmental reviews needed to implement a long-term water transfer project and, if needed, obtain dry year water through temporary water transfers. Engineering is expected to be completed on the groundwater banking demonstration project, and preliminary planning will continue for other supplemental supply efforts.



## NON-PROGRAM SPECIFIC STRATEGY

This strategy furthers the District's objective to maintain a strong financial position to meet short and long-term needs. The contingency program focuses on making funds available for unanticipated needs, and for projects that are seeking grants to pay for a majority of the project's cost.

Appropriations (\$ Thousands)						
Programs	FY16	FY17	FY18	FY19	FY20	Total
Contingency Program	1,100	4,100	3,000	3,000	3,000	14,200
<b>Total</b>	<b>1,100</b>	<b>4,100</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>	<b>14,200</b>

### Contingency Program

The Contingency Project provides funding for unanticipated needs which arise before the next budget preparation cycle, such as replacement or repairs to facilities and equipment as a result of failures or safety deficiencies, and new projects or the acceleration of planned projects requiring funding before the next budget cycle. Funds may also be set aside for projects where grants are being sought in the event that the grant application is successful. Most grants require the District to fund the project and then apply for reimbursement of allowable costs. Funding for possible grant supported projects include advanced metering infrastructure (AMI) fixed network collectors to provide customers with the information they need to effectively manage their own water use with consumption information and leak detection; and water conservation rebates.

## **Capital Appropriation Summary**

This section provides a summary of the five-year appropriation for the Water System projects listed in the Capital Improvement Program, sorted by strategy and program. When the CIP is presented to the Board of Directors, the Board approves the overall five-year plan, but adopts just the first two years of the plan. The remaining three years are for planning purposes only and are subject to revision.

### **Department Abbreviations**

The abbreviation for the Lead Department responsible for each capital project is as follows:

ADM	–	Administration Department
CUS	–	Customer and Community Services Department
ENG	–	Engineering Department
FIN	–	Finance Department
ISD	–	Information Systems Department
MCD	–	Maintenance & Construction Department
NRD	–	Natural Resources Department
OSD	–	Operations & Maintenance Support Department
WOD	–	Water Operations Department
WRD	–	Water Resources Department
WRP	–	Water Recycling Program

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
EMERGENCY PREPAREDNESS								
Seismic Improvement								
Reservoir Upgrades SIP	ENG	74,062	0	0	0	0	0	0
Transmission System SIP	ENG	7,667	0	0	0	0	0	0
Seismic Improvement Total		81,729	0	0	0	0	0	0
EMERGENCY PREPAREDNESS TOTAL		81,729	0	0	0	0	0	0

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
EXTENSIONS AND IMPROVEMENTS								
Mapping								
CAD/CAM Mapping, Documentation	ENG	29,888	1,468	1,558	1,608	1,656	1,701	7,990
Mapping Total		29,888	1,468	1,558	1,608	1,656	1,701	7,990
OP/NET								
OP/NET System	WOD	23,121	1,336	1,300	2,909	2,712	3,108	11,365
OP/NET Total		23,121	1,336	1,300	2,909	2,712	3,108	11,365
Pressure Zone Improvements								
Almond/Fire Trail PZI	ENG	11,234	44	582	0	0	0	626
Cent Oakland Hills Cascade PZI	ENG	25,816	0	230	235	13,009	0	13,474
Colorados Pressure Zone Imprv	ENG	155	50	750	0	2,594	3,470	6,864
Distribution System Upgrades	ENG	5,725	0	202	530	536	543	1,811
Enterprise Hyd WQ & Op Modl	ENG	500	20	0	0	0	0	20
Leland Pressure Zone Impr	ENG	7,181	940	0	25,024	0	0	25,964
Maloney PZ Improvements	ENG	24,551	2,930	0	0	0	0	2,930
Pressure Zone Planning Program	ENG	2,684	0	0	22	0	0	22
Purdue PZI	ENG	5,000	0	1,856	0	0	0	1,856
So Oakland Hills Cascades PZI	ENG	221	134	2,056	0	0	0	2,190
Summit Pressure Zone Improve	ENG	40,259	0	0	0	14,300	0	14,300
USL Pressure Zone Impr	ENG	672	0	0	0	0	0	0
Water Demand Projection Update	ENG	300	0	250	0	0	0	250
West of Hills Transmission	ENG	36,932	816	14,366	17,559	38,182	0	70,923
Pressure Zone Improvements Total		161,231	4,934	20,292	43,370	68,621	4,013	141,230
WC-SRV In Zone Improvements								
Diablo PZ Improvements	ENG	10,381	0	3,174	0	0	0	3,174
WC-SRV In Zone Improvements Total		10,381	0	3,174	0	0	0	3,174
Water Trmt and Trans Impr								
Tice Pumping Plant	ENG	1,339	0	11,550	0	0	0	11,550
WTTIP Distribution Improvs	ENG	40,246	997	5,309	5,825	750	0	12,881
WTTIP WTP Improvements	ENG	38,431	200	6,745	26,571	15,595	0	49,111
Water Trmt and Trans Impr Total		80,017	1,197	23,604	32,396	16,345	0	73,542
EXTENSIONS AND IMPROVEMENTS TOTAL		304,637	8,935	49,928	80,283	89,334	8,822	237,302

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
FACILITIES, SERVC AND EQUIP								
Area Service Center/Bldg Prog								
Adm Bldg Modifications	ENG	19,294	495	887	1,774	1,927	2,000	7,083
Buildings Assessment & Improve	ENG	3,747	831	0	60	1,402	3,900	6,193
East Area Service Center	ENG	9,440	0	0	0	0	0	0
Meter Test Facility	MCD	0	750	0	0	0	0	750
Minor Facility Improvements	OSD	2,647	377	475	164	173	183	1,371
Area Service Center/Bldg Prog Total		35,129	2,453	1,362	1,998	3,502	6,083	15,397
Communications								
Data & Telecom Infrastructure	ISD	3,173	300	0	0	0	0	300
FIS Replacement	ISD	0	200	2,300	0	0	0	2,500
HRIS Replacement	ISD	500	2,700	0	0	0	0	2,700
MMIS Replacement	ISD	4,000	0	0	0	0	0	0
Work Mgmt Systems Replacement	ISD	0	0	200	1,200	0	0	1,400
Communications Total		7,673	3,200	2,500	1,200	0	0	6,900
Security								
VA Security System Imprmts	OSD	22,511	1,041	1,880	375	2,625	3,646	9,567
Security Total		22,511	1,041	1,880	375	2,625	3,646	9,567
Vehicle/Equipment								
Veh & Hvy Equip Additions, W/tr	MCD	12,057	915	547	0	0	0	1,462
Vehicle Replacements	MCD	74,749	5,000	5,000	5,000	5,000	5,000	25,000
Diesel Engine Retrofit	OSD	10,635	1,695	1,898	0	0	745	4,338
Fueling Facility Upgrades	OSD	5,100	1,240	30	30	30	30	1,360
Vehicle/Equipment Total		102,541	8,850	7,475	5,030	5,030	5,775	32,160
FACILITIES, SERVC AND EQUIP TOTAL		167,853	15,544	13,217	8,603	11,157	15,504	64,024

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
MAINTAINING INFRASTRUCTURE								
Corrosion								
Aqueduct Cathodic Protection	ENG	3,022	60	310	435	670	0	1,475
Dist Sys Corrosion Protection	ENG	8,593	0	0	1,078	1,099	1,121	3,298
Trans Main Cathodic Protection	ENG	1,841	710	0	745	720	745	2,920
Corrosion Total		13,456	770	310	2,258	2,489	1,866	7,693
Electrical Hazard Prevent Pgm								
Electrical Hazard Prevention	ENG	1,743	363	287	223	146	0	1,019
Electrical Hazard Prevent Pgm Total		1,743	363	287	223	146	0	1,019
Pipelines/Appurtenances								
Hydrants Installed by DF	ENG	17,350	1,200	1,200	1,200	1,400	1,500	6,500
New Service Installations	ENG	154,310	8,500	8,700	9,000	9,300	9,500	45,000
Meter Replacements	MCD	32,268	1,853	1,917	1,985	2,054	2,126	9,935
Pipeline Appurtenances	MCD	10,726	1,100	1,133	1,167	1,201	1,238	5,839
Pipelines/Appurtenances Total		214,654	12,653	12,950	13,352	13,955	14,364	67,274
Pipelines/Regulators								
Large Diameter Pipelines	ENG	86,828	0	0	33,000	19,678	16,197	68,875
Pipeline Infrastruct Renewals	ENG	195,453	33,321	42,662	43,925	45,177	46,496	211,581
Pipeline Relocations	ENG	36,148	8,085	6,600	6,050	5,583	5,647	31,965
Pipeline System Extensions	ENG	124,968	6,308	6,497	8,966	9,281	9,604	40,656
Pipeline System Improvements	ENG	35,357	0	0	1,136	1,169	3,676	5,981
Rate Control Station Rehab	ENG	6,042	100	2,755	4,435	1,100	100	8,490
Regulator Rehabilitation	ENG	15,794	3,850	2,770	0	0	100	6,720
Pipelines/Regulators Total		500,590	51,664	61,284	97,512	81,988	81,820	374,268
Polybutylene Lateral Replcmt								
Srvcl Latl Repl Polybutylene	ENG	180,877	0	5,889	5,511	5,384	3,319	20,103
Polybutylene Lateral Replcmt Total		180,877	0	5,889	5,511	5,384	3,319	20,103
Pumping Plant Rehabilitation								
Pumping Plant Rehabilitation	ENG	83,602	3,512	9,953	8,637	17,862	760	40,724
Small Capital Improvements	MCD	8,088	0	2,442	2,520	2,620	2,706	10,288
Pumping Plant Rehabilitation Total		91,690	3,512	12,395	11,156	20,482	3,466	51,012
Reservoir Rehab Program								
Open Cut Reservoir Rehab	ENG	41,107	12,100	153	4,125	0	0	16,378
Reservoir Rehab/Maintenance	ENG	96,886	13,493	20,490	9,364	20,376	14,237	77,960
Reservoir Access Roads	WOD	2,889	0	0	0	0	0	0
Reservoir Rehab Program Total		140,882	25,593	20,643	13,489	20,376	14,237	94,338
MAINTAINING INFRASTRUCTURE TOTAL		1,143,892	94,555	113,759	143,501	144,820	119,073	615,707

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
NON-PROGRAM SPECIFIC								
Non-Program Specific								
Contingency Project Water	FIN	49,020	1,100	4,100	3,000	3,000	3,000	14,200
Non-Program Specific Total		49,020	1,100	4,100	3,000	3,000	3,000	14,200
NON-PROGRAM SPECIFIC TOTAL		49,020	1,100	4,100	3,000	3,000	3,000	14,200
REGULATORY COMPLIANCE								
Dam Safety								
Dam Operational Upgrades	ENG	6,212	220	0	2,000	150	1,000	3,370
Dam Seismic Upgrades	ENG	28,291	150	11,400	0	0	0	11,550
Dam Surveillance Improvements	ENG	6,958	180	15	920	300	175	1,590
Reservoir Tower Modifications	ENG	14,197	21,285	0	0	0	0	21,285
San Pablo Dam Seismic Mods	ENG	82,588	0	0	0	0	0	0
Dam Safety Total		138,246	21,835	11,415	2,920	450	1,175	37,795
Penn Mine								
Penn Mine Remediation	OSD	17,388	252	581	86	88	72	1,079
Penn Mine Total		17,388	252	581	86	88	72	1,079
Remediation								
Upcountry WW Trmt Imprvmts	OSD	20,278	675	3,000	0	2,130	1,650	7,455
Remediation Total		20,278	675	3,000	0	2,130	1,650	7,455
Trench Spoils								
Trench Spoils Disposal Sites	ENG	16,648	0	847	13,815	843	873	16,378
Trench Spoils Total		16,648	0	847	13,815	843	873	16,378
REGULATORY COMPLIANCE TOTAL		192,561	22,762	15,842	16,821	3,511	3,770	62,707

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	

<b>RESOURCE MANAGEMENT</b>								
<b>Recreation Areas</b>								
Camanche Rec Area Upgrades	ENG	6,041	135	0	0	0	0	135
Pardee/Cam Rec Areas Impr Plan	NRD	7,069	0	100	400	0	0	500
<b>Recreation Areas Total</b>		<b>13,110</b>	<b>135</b>	<b>100</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>635</b>
<b>Watershed Recreation</b>								
East Bay Watershed Rec Projs	NRD	9,232	820	375	310	285	200	1,990
F&W Projects and Mok Hatchery	NRD	3,113	115	443	178	197	180	1,113
Mokelumne Watershed Rec HQ	NRD	4,260	400	0	0	0	0	400
Mokelumne Watershed Rec Projs	NRD	4,588	100	125	175	100	175	675
Pinole Valley Miti. Bank Plan	NRD	1,055	0	0	0	0	0	0
<b>Watershed Recreation Total</b>		<b>22,248</b>	<b>1,435</b>	<b>943</b>	<b>663</b>	<b>582</b>	<b>555</b>	<b>4,178</b>
<b>RESOURCE MANAGEMENT TOTAL</b>		<b>35,358</b>	<b>1,570</b>	<b>1,043</b>	<b>1,063</b>	<b>582</b>	<b>555</b>	<b>4,813</b>

<b>WATER QUALITY</b>								
<b>Water Quality Improvement</b>								
Distrib Sys Wtr Quality Imprv	WOD	14,855	20	20	0	0	0	40
<b>Water Quality Improvement Total</b>		<b>14,855</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>
<b>Water Treatment Upgrade</b>								
Treatment Plant Upgrades	ENG	59,026	12,385	3,022	20,377	4,900	5,869	46,553
Minor WTP Capital Work	WOD	2,859	367	384	405	427	451	2,034
<b>Water Treatment Upgrade Total</b>		<b>61,885</b>	<b>12,752</b>	<b>3,406</b>	<b>20,782</b>	<b>5,327</b>	<b>6,320</b>	<b>48,587</b>
<b>WATER QUALITY TOTAL</b>		<b>76,740</b>	<b>12,772</b>	<b>3,426</b>	<b>20,782</b>	<b>5,327</b>	<b>6,320</b>	<b>48,627</b>



Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (IN 000's)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
WATER SUPPLY								
Aqueduct Program								
Mok Aqu No 2 & 3 Relining Proj	ENG	7,200	29,199	32,748	26,758	0	28,281	116,986
Mokelumne Aqueduct Recoating	ENG	37,915	500	4,900	0	0	0	5,400
Raw Water Studies and Improves	ENG	44,681	4,036	6,137	14,143	7,650	70,645	102,611
Raw Wtr Aq O&M Imprvmnts	WOD	40,095	787	650	971	1,086	882	4,376
Aqueduct Program Total		129,891	34,522	44,435	41,872	8,736	99,808	229,373
Supply Reservoirs								
Cam So Shore WTP Replacement	WOD	4,434	0	0	0	0	0	0
Enhanced Power Revenue	WOD	9,588	0	0	0	0	0	0
Pardee Ctr Cap Maint & Imprvmt	WOD	1,351	100	103	106	109	112	530
Powerhouse Improvements	WOD	7,765	1,682	0	450	500	0	2,632
Rec Area Cap Maint & Imprvmt	WOD	3,136	0	250	155	260	268	933
Wtr Supply Monitoring System	WOD	1,610	57	90	51	30	38	266
Supply Reservoirs Total		27,883	1,839	443	762	899	418	4,361
Water Conservation								
Water Conservation Project	CUS	56,351	3,485	3,796	3,655	3,727	3,833	18,496
Water Conservation Total		56,351	3,485	3,796	3,655	3,727	3,833	18,496
Water Recycling								
East Bayshore	WRD	55,408	0	0	2,419	1,147	621	4,187
RARE Water Project	WRD	58,991	5,645	166	872	20,575	180	27,438
SRV Recycled Water Program	WRD	69,171	0	0	5,000	0	0	5,000
Water Recycling WSPM	WRD	13,351	2,722	25	67	25	417	3,256
No Richmond Recy Wtr Fac Impr	WRP	9,054	3,591	213	65,727	241	256	70,028
Water Recycling Total		205,975	11,958	404	74,085	21,988	1,474	109,909
Water Supply Mgmt Program								
Folsom South Canal Connection	ENG	253,710	0	0	0	0	0	0
Addl Supplemental Supply Projs	WRD	103,157	0	0	0	0	0	0
Bayside Groundwater Project	WRD	58,164	0	0	0	0	0	0
Freeport Regional Wtr Project	WRD	251,140	0	0	0	0	0	0
Water Supply Mgmt Program Total		666,171	0	0	0	0	0	0
WATER SUPPLY TOTAL		1,086,271	51,804	49,078	120,374	35,350	105,533	362,139

APPROPRIATIONS SUMMARY (IN 000'S)						
Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	5 YR TOTAL
3,138,061	209,042	250,392	394,427	293,080	262,578	1,409,518

## FY16-17 DROUGHT CONTINGENCY

At the time of this budget development, the District's service area, as well as the State, is experiencing a multi-year drought. In an effort to provide a contingency plan in the event the drought continues into FY16-17, this budget includes funding to address the specific drought-related expenditures that would arise if dry conditions persist. The recovery of drought contingency expenditures would be achieved through the implementation of drought rates approved by the Board of Directors. Therefore, the drought contingency funding has been excluded from establishing the proposed 'normal' rates and charges for FY16-17.

The inclusion of the drought contingency in this budget provides the District the authorization to spend up to the full appropriation shown below, if needed. Any additional appropriation above the drought contingency amount would require Board consideration and approval.

The total appropriation is \$64.2 million in FY16 and \$62.1 million for FY17. As shown in the below table, the primary drivers for the drought contingency is the cost associated with the purchase and treatment of supplemental water, and additional costs associated with increased system operations associated with terminal reservoir treatment.

<b>FY16-17 Drought-Related Appropriations</b> (\$ Millions)		
<b>Description</b>	<b>FY16</b>	<b>FY17</b>
Water purchase, treatment and delivery	55.8	55.8
Additional treatment costs at terminal reservoirs	6.1	3.0
Labor and benefits for limited-term positions	1.3	1.7
Various non-labor expenses such as public outreach workshops, development of education materials, additional postage for drought-related materials, customer home water reports	1.0	1.5
<b>Total Appropriation</b>	<b>64.2</b>	<b>62.1</b>

Additional capital appropriations of \$0.6 million in FY16 and FY17 have been included in the Water System capital contingency to account for a higher level of conservation rebates that may occur.

# **FIVE-YEAR FINANCIAL FORECAST**

## **SUMMARY**

The five-year financial forecast presents the estimated impact of operations, debt service requirements and reserve balances on rate projections over the five-year period.

This forecast is built upon:

- Adopted District financial policies
- Capital investments in the FY14-FY18 Capital Improvement Program

This forecast identifies a series of rate increases for the Water System based on estimated increases in operating and capital expenditures to maintain current service levels, meet mandated program requirements, and fund increased debt service due to capital expenditures.

Revenues are forecast to increase by 7.8 percent annually over the five-year period to cover the increases in operating expenses and debt service, and maintain a minimum of 1.6 times coverage on revenue bond debt service. Forecasted operating expenses are expected to grow by an average of approximately 5.0 percent per year during the five-year period, while debt service grows by an average of 7.6 percent per year.

The key factors driving the need for increased Water System revenues are:

- Inflation
- Increasing labor and benefits costs
- Impact of drought on customer demand and revenue
- Increasing capital program.

For all five years, the cash reserves exceed the cash reserve targets. Reserves in excess of those needed to meet financial reserve targets are available to pay for a portion of the capital program expenses.

Capital cash flow spending, including the administration of capital, is projected at \$1.38 billion over the five-year period. Major programs or projects to be undertaken during this period include the: Pipelines, Regulators and Appurtenances programs (\$429 million); Raw Water Aqueduct Improvements (\$153 million); Pressure Zone Improvements program (\$135 million); Water Recycling (\$141 million); Reservoir Rehabilitation program (\$100 million); Water Treatment and Transmission (\$92 million); and the Pumping Plant Rehabilitation program (\$75 million).

The projected average percentage of capital funded from debt will be 47.2 percent over the five-year period, lower than the financial policy target maximum of 65 percent. In FY16 and FY17, the debt coverage ratio is projected to be 1.60 and 1.63, respectively, and for all five years the ratio meets or exceeds the targeted coverage rate of 1.6.

## OPERATING BUDGET

The following table shows the financial forecast for the Water System operating budget based on projected operations and maintenance expenses and debt service requirements.

<b>WATER SYSTEM FUND – OPERATING BUDGET</b> <b>FIVE-YEAR FINANCIAL FORECAST</b> (\$ Millions)							
	Actual FY14	Budget FY15	Forecast				
			FY16	FY17	FY18	FY19	FY20
<b>Beginning Balance</b>	-	-	<b>331.6</b>	<b>319.0</b>	<b>315.6</b>	<b>325.8</b>	<b>329.4</b>
Water Charges	367.0	391.8	422.8	453.0	483.5	519.5	549.0
Seismic Surcharges	22.6	24.6	0.0	0.0	0.0	0.0	0.0
Property Taxes	25.5	23.8	24.5	25.1	25.7	26.4	27.0
Power Sales	1.3	5.7	3.5	3.5	5.7	5.7	5.7
Interest Income	1.5	4.0	1.7	3.3	5.1	5.2	5.3
SCC Revenue	20.5	23.3	24.6	26.0	27.4	29.0	30.6
Reimbursements	10.9	10.5	10.9	11.2	11.6	11.9	12.3
All Other Revenue	24.0	16.5	17.2	17.4	17.5	17.7	17.9
<b>Operating Revenues Total</b>	<b>473.3</b>	<b>500.2</b>	<b>505.2</b>	<b>539.5</b>	<b>576.5</b>	<b>615.4</b>	<b>647.8</b>
Revenue Funded Capital	81.0	85.6	99.6	100.5	97.2	118.0	123.9
Operations	226.7	246.9	248.3	262.2	273.0	283.0	293.6
Debt service	142.3	163.2	169.9	180.2	196.1	210.8	219.8
<b>Expenses Total</b>	<b>450.0</b>	<b>495.7</b>	<b>517.8</b>	<b>542.9</b>	<b>566.3</b>	<b>611.8</b>	<b>637.3</b>
<b>Ending Balance</b>	-	-	<b>319.0</b>	<b>315.6</b>	<b>325.8</b>	<b>329.4</b>	<b>339.9</b>
Policy Reserves	-	-	149.3	152.8	155.5	158.0	160.6

The following table shows the key assumptions used to create the revenue forecast.

<b>WATER SYSTEM FUND – KEY ASSUMPTIONS</b> <b>FIVE-YEAR FINANCIAL FORECAST</b>							
	Actual FY14	Budget FY15	Forecast				
			FY16	FY17	FY18	FY19	FY20
Projected Sales Volume (mgd)	167.5	166.0	151.0	151.0	154.0	157.0	160.0
% Rate Increase	9.75%	9.5%	8.0%	7.0%	5.0%	5.0%	4.0%
Debt Service Coverage	1.66	1.67	1.60	1.63	1.64	1.66	1.69
Average monthly single family residential bill (\$) based on 10 ccf/month	\$44.41	\$48.60	\$52.17	\$55.83	\$58.62	\$61.55	\$64.01

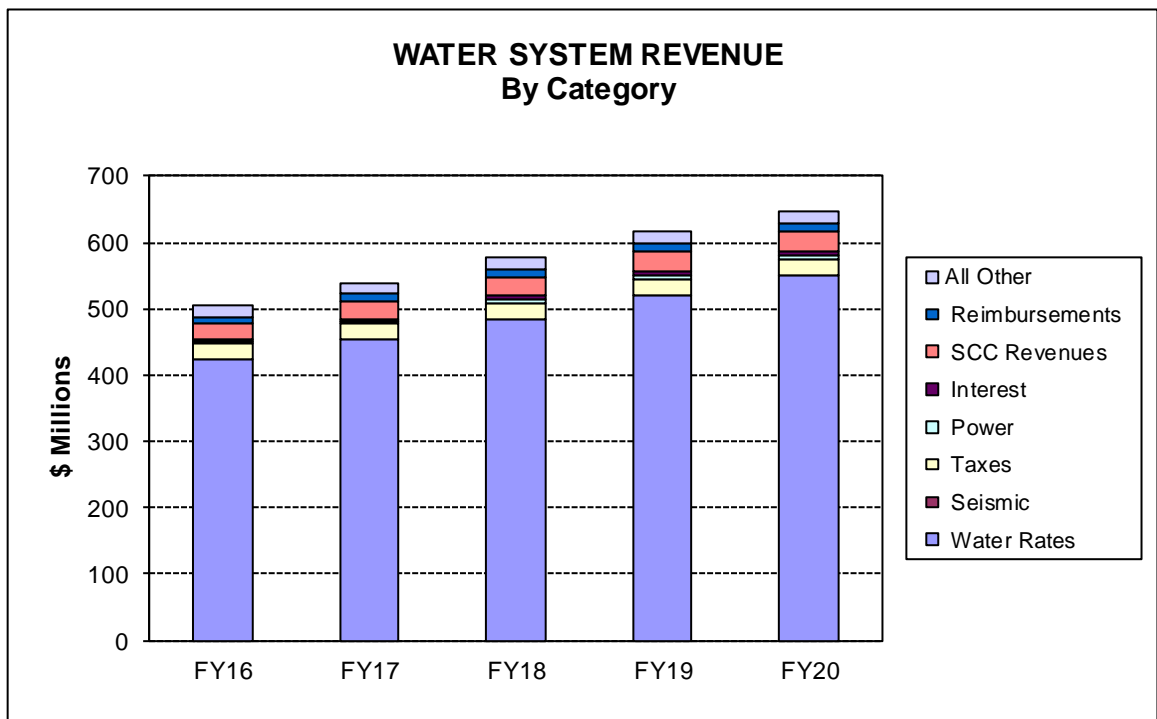
## Five Year Projection of Revenues

The key factors driving the need for increased Water System revenues are: inflation, increasing labor costs, the impact of the drought on water demand, and an increase in funding the capital program from revenue rather than debt. Water System revenues will be used to pay for an increasing amount of capital expenditures on a pay-as-you-go basis.

Projected annual operating revenues are expected to increase from \$505.2 million in FY16 to \$647.8 million by FY20, an increase of \$142.6 million or 28 percent. The increase in revenue over the five-year period is to cover increased costs in operations and maintenance costs, debt service requirements, and revenue funding for capital projects.

The major components of the increase in operating revenue during the five-year period are revenue from water charges which is projected to increase from \$422.8 million in FY16 to \$549.0 million in FY20 based on water rate increases; interest rate increases as they recover from historic lows; and increased SCC revenues from \$24.6 million in FY16 to \$30.6 million in FY20 due to slight increases in new connections and in the charge.

The following charts show projected Water System operating revenues by category for the next five years.



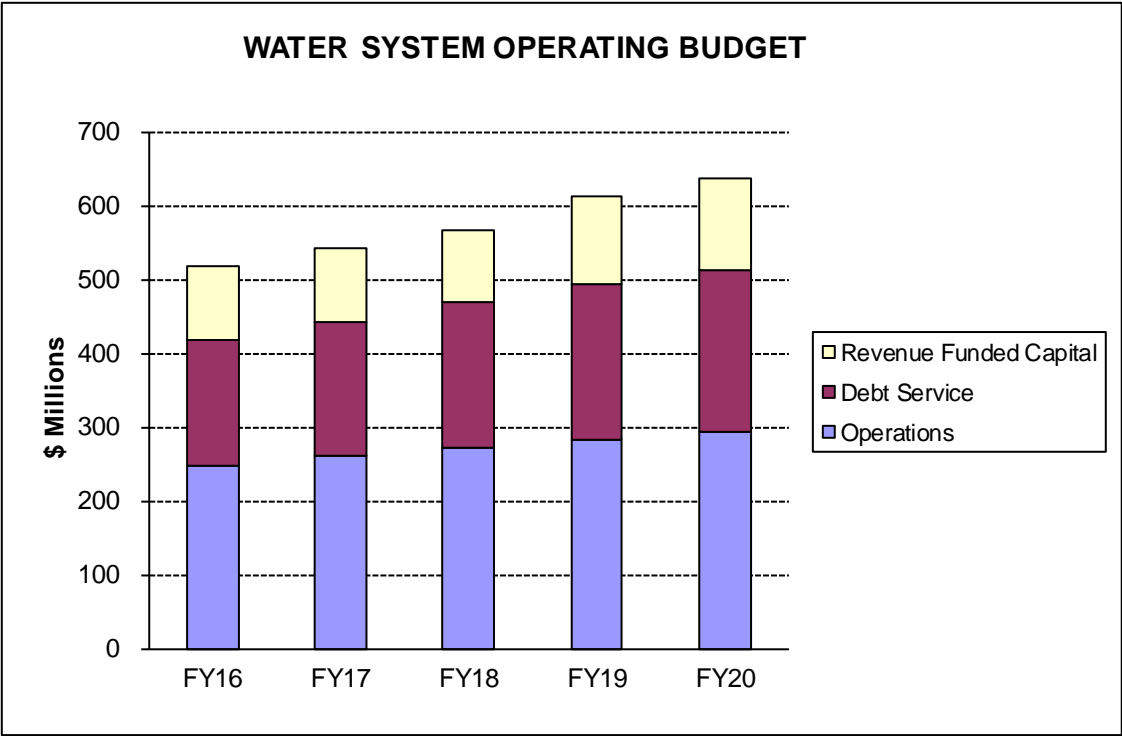
# Five Year Projection of Operating Budget

The Water System operations expenses are projected to increase from \$248.3 million in FY16 to \$293.6 million in FY20, an increase of 18 percent per year.

Debt service requirements are expected to increase from \$169.9 million in FY16 to \$219.8 million by FY20, an increase of 29 percent. This increase is the result of \$649 million of new debt that will be issued to finance the Water System Capital Improvement Program.

The District uses its rate revenue to cash fund a portion of its annual capital improvement expenses. The amount of revenue funded capital will increase from \$99.6 million in FY16 to \$123.9 million in FY20, an increase of 24 percent.

This chart summarizes projected Water System expenditures by category for the next five years.



## Five Year Projection of Reserves

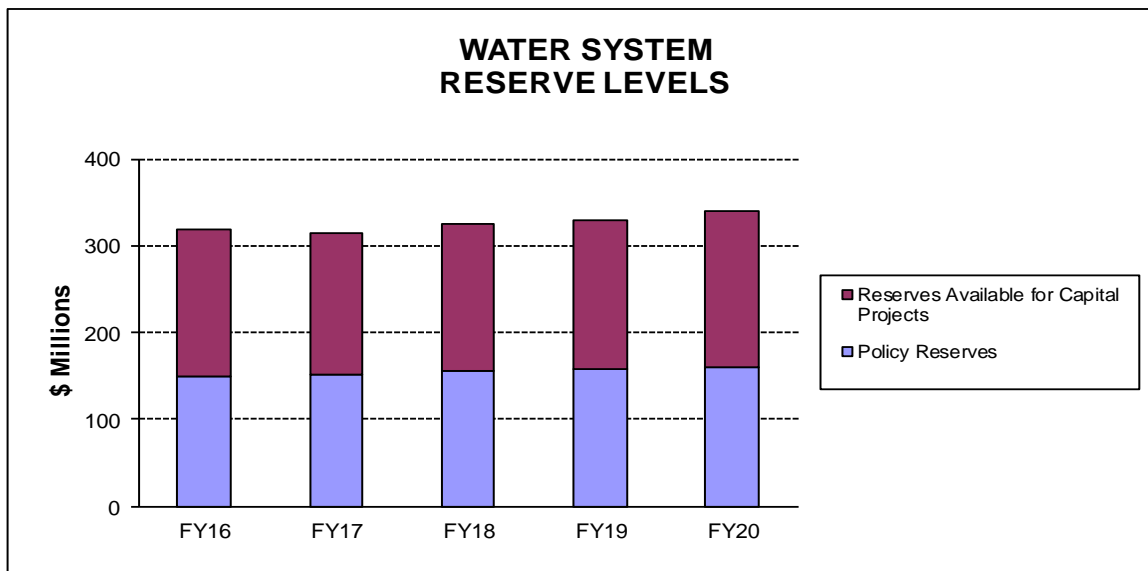
The operating reserves consist of:

- Working capital reserves equal to three months operating and maintenance expenses
- Self insurance reserves at 1.25 times the expected annual expenditures
- Workers' compensation reserves of \$3.2 million in FY16 and \$3.2 million in FY17
- Contingency/rate stabilization reserve of a minimum of 20 percent of projected annual water volume revenues

The table below shows the changes to reserve components over the five-year period. Reserve balances meet or exceed the policy reserv levels for the entire period.

<b>WATER SYSTEM RESERVE COMPONENTS</b> (\$ Millions)					
	Forecast				
	FY16	FY17	FY18	FY19	FY20
<b>Projected Operating Budget Reserves</b>	<b>319.0</b>	<b>315.6</b>	<b>325.8</b>	<b>329.4</b>	<b>339.9</b>
<b>Policy Reserves</b>					
Working Capital	62.1	65.6	68.3	70.8	73.4
Self Insurance Reserve	5.0	5.0	5.0	5.0	5.0
Workers' Compensation Reserves	3.2	3.2	3.2	3.2	3.2
Contingency and Rate Stabilization	<u>79.0</u>	<u>79.0</u>	<u>79.0</u>	<u>79.0</u>	<u>79.0</u>
<b>Total Policy Reserves</b>	<b>149.3</b>	<b>152.8</b>	<b>155.5</b>	<b>158.0</b>	<b>160.6</b>
<b>Reserves Available for Capital Projects</b>	<b>169.7</b>	<b>162.8</b>	<b>170.3</b>	<b>171.4</b>	<b>179.3</b>

The following chart shows Water System reserve levels projected at the end of each of the next five years. Ending reserve levels are projected to be constant over the five-year period.



## **CAPITAL INVESTMENTS AND FINANCING**

The Five-Year Capital Improvement Program (CIP) outlines Water System capital investment plans, the estimated cost of these investments, and the sources of funds. Appropriations reflect the amount that is authorized and budgeted over a multi-year period for each program. Cash flows are the amounts estimated to be spent on each program in a given year. The five-year program for the Water System includes \$1.62 billion in capital project appropriations, including administration of capital expenses, and \$1.38 billion in projected cash flow spending.

The focus of the CIP is the five-year period from FY16-20. Capital needs have been estimated for a second five-year period from FY21-25, but given the long-term nature of these capital improvement plans, by necessity they are preliminary estimates only and will be revised as studies are completed, priorities are redefined, and as new needs emerge. Therefore, the budget focuses on the first five years of the CIP.

The largest portion of the capital resources is being directed to maintaining the District's infrastructure. In the FY16-20 CIP, 50 percent of the Water System's project appropriations will be for work in this program area to implement preventative and corrective maintenance programs, and to maintain and improve the infrastructure. The majority of this work will focus on pipeline projects to improve system reliability. Another 25 percent of the appropriations will be directed towards making improvements to various components of pressure zones such as reservoirs, pumping plants and water treatment plants to improve system reliability for existing customers, and to provide service to any new customers within the service area.

Funding for these projects is drawn from the proceeds of revenue bond issues, commercial paper, grants, reimbursements from developers and other agencies, and current reserves and revenues.

For the FY16-20 CIP, an increasing amount of capital expenditures will be funded on a pay-as-you-go basis in accordance with the District's financial policies. Over the five-year period, the percentage of capital funded from debt will average 47 percent, which is less than the target maximum of 65 percent contained in the District's debt policy, and debt service will grow by an average of 6.6 percent per year. Water System total outstanding debt will increase by \$369 million during the period. Total debt outstanding at the end of the five-year period will total \$3.07 billion.

In FY16 and FY17, the debt coverage ratio will be 1.60 and 1.63, respectively, and for all five years the ratio meets or exceeds the targeted coverage rate of 1.60.



The following table shows the cash flow spending on capital improvements anticipated for the next five years, along with the financial resources anticipated to fund the capital program.

<b>WATER SYSTEM FUND - CAPITAL BUDGET</b> <b>FIVE-YEAR FINANCIAL FORECAST</b> (\$ Millions)						
	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>Totals</u>
<b>Beginning Balance</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-</b>
<b>Resources:</b>						
Commercial Paper Issues	0.0	0.0	0.0	0.0	0.0	0.0
New Bond Proceeds	101.2	108.9	155.3	146.6	136.7	648.7
Grants and Loans Proceeds	2.5	1.9	3.2	5.8	4.1	17.5
Reimbursements	21.2	24.8	40.2	39.8	44.2	170.2
Revenue Funded Capital	<u>99.6</u>	<u>100.5</u>	<u>97.2</u>	<u>118.0</u>	<u>123.9</u>	<u>539.2</u>
<b>Total Resources</b>	<b>224.5</b>	<b>236.1</b>	<b>295.9</b>	<b>310.2</b>	<b>308.9</b>	<b>1,375.6</b>
<b>Expenditures:</b>						
Capital Cash Flow (discounted)	184.5	196.1	254.7	267.8	265.2	1,168.3
Administration of Capital	<u>40.0</u>	<u>40.0</u>	<u>41.2</u>	<u>42.4</u>	<u>43.7</u>	<u>207.3</u>
<b>Total Expenditures</b>	<b>224.5</b>	<b>236.1</b>	<b>295.9</b>	<b>310.2</b>	<b>308.9</b>	<b>1,375.6</b>
<b>Ending Balance</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-</b>
<b>Debt Percentage of Funding</b>	<b>45.1%</b>	<b>46.1%</b>	<b>52.5%</b>	<b>47.3%</b>	<b>44.3%</b>	<b>47.2%</b>

Projected new bond issues, outstanding debt, and debt service are shown in the following table:

<b>DEBT OUTSTANDING AND DEBT SERVICE AT END OF FISCAL YEAR</b> (\$ Millions)					
	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>
Beginning of Year Outstanding Debt	2,702.8	2,756.8	2,815.0	2,912.3	2,998.4
Debt Retired	49.3	52.9	58.0	60.5	63.2
New Bond Issues and Commercial Paper	<u>103.3</u>	<u>111.1</u>	<u>155.3</u>	<u>146.6</u>	<u>136.7</u>
<b>Total Outstanding Debt</b>	<b>2,756.8</b>	<b>2,815.0</b>	<b>2,912.3</b>	<b>2,998.4</b>	<b>3,071.9</b>
Debt Service, Existing Debt	164.2	169.2	174.7	174.5	174.4
Debt Service, New Debt	4.1	8.6	18.9	33.7	42.8
Debt Servicing Costs	<u>1.6</u>	<u>2.4</u>	<u>2.5</u>	<u>2.6</u>	<u>2.6</u>
<b>Total Debt Service</b>	<b>169.9</b>	<b>180.2</b>	<b>196.1</b>	<b>210.8</b>	<b>219.8</b>

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## CHAPTER 4: WASTEWATER SYSTEM

This chapter provides a detailed description of the Wastewater System sources of funds, uses of funds, department operations budgets including staffing, capital expenditures and a Five-Year Financial Forecast.

The Wastewater System Fund is an enterprise fund consisting of an operating and a capital budget. The function of the Wastewater System is the interception and treatment of wastewater from residences and industries in the communities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and the Stege Sanitary District. The Wastewater System receives administrative, financial, and other support services from the Water System.

### INTRODUCTION

This chapter is organized into the following sections:

Pages 167 - 200    A detailed description of the FY16-17 budget including sources of revenues and uses of funds for operations, debt financing, and capital programs. This section also includes a detailed department budget.

Pages 201 - 207    A five-year forecast of the Wastewater System projected revenues and expenditures for operations, debt financing, and capital programs.

### FY16-17 BUDGET

The following are key projections and assumptions that went into the FY16 and FY17 budget.

<b>WASTEWATER SYSTEM FUND – KEY ASSUMPTIONS</b>		
	<b>FY16</b>	<b>FY17</b>
% Rate Increase	5.0%	5.0%
Average monthly single family residential bill (\$) based on 6 ccf/month	\$19.01	\$19.93

### FUND SUMMARY

The fund summary illustrates the beginning and ending fund balances as well as revenues, expenditures, and other financing sources/uses. The following table shows the fund balance, and projected revenues and expenditures for the Wastewater System for FY16 and FY17. The table is an expansion of the Wastewater System Fund Summary table presented at the end of Chapter 2.

**Wastewater System Fund Summary**  
**Operating and Capital Budgets**  
(\$ Millions)

	FY16			FY17		
	Operating	Capital	Fund Balance	Operating	Capital	Fund Balance
<b>Fund Balance at Beginning of FY (Projected)</b>	<b>87.9</b>	<b>0.0</b>	<b>87.9</b>	<b>71.1</b>	<b>0.0</b>	<b>71.1</b>
<b>Sources of Funds</b>						
<b>Operating Revenues</b>						
Treatment Charges	66.9		66.9	70.3		70.3
Resource Recovery	8.0		8.0	8.0		8.0
Wet Weather Facilities Charge	21.8		21.8	22.9		22.9
Property Taxes	4.3		4.3	4.4		4.4
Ad Valorem Bond Levy	4.0		4.0	4.1		4.1
Interest Income	0.4		0.4	0.7		0.7
Laboratory Services	3.9		3.9	4.0		4.0
Reimbursements	1.0		1.0	1.0		1.0
Permit Fees	1.8		1.8	1.8		1.8
Capacity Charge	1.5		1.5	1.6		1.6
All Other Revenue	<u>5.7</u>		<u>5.7</u>	<u>5.7</u>		<u>5.7</u>
<b>Operating Revenues</b>	<b>119.3</b>		<b>119.3</b>	<b>124.5</b>		<b>124.5</b>
<b>Capital Funding Sources</b>						
Commercial Paper Issues		0.0	0.0		0.0	0.0
New Bond Proceeds		2.0	2.0		22.1	22.1
Grants and Loans Proceeds		0.0	0.0		0.0	0.0
Reimbursements		<u>0.0</u>	<u>0.0</u>		<u>0.0</u>	<u>0.0</u>
<b>Capital Sources</b>		<b>2.0</b>	<b>2.0</b>		<b>22.1</b>	<b>22.1</b>
Revenue Funded Capital	-37.0	37.0	0.0	-14.6	14.6	0.0
<b>Total Funds</b>	<b>82.3</b>	<b>39.0</b>	<b>121.3</b>	<b>109.9</b>	<b>36.7</b>	<b>146.6</b>
<b>Use of Funds</b>						
Operations	65.4		65.4	70.7		70.7
Debt Service	33.7		33.7	34.0		34.0
Capital Cash Flow (Includes Admin of Capital)		<u>39.0</u>	<u>39.0</u>		<u>36.7</u>	<u>36.7</u>
<b>Total Expenditures</b>	<b>99.1</b>	<b>39.0</b>	<b>138.1</b>	<b>104.7</b>	<b>36.7</b>	<b>141.4</b>
<b>Ending Balance *</b>	<b>71.1</b>	<b>0.0</b>	<b>71.1</b>	<b>76.3</b>	<b>0.0</b>	<b>76.3</b>

\* Includes reserves for working capital, self-insurance, worker's compensation, contingency and rate stabilization, and for capital projects

## FY 2016 AND FY 2017 BUDGET

### SOURCES OF FUNDS

Operating expenses are funded by a group of revenue sources approved by the Board of Directors. Anticipated capital expenses are funded primarily by a combination of bond issues, which results in annual debt service payments, and operating revenue.

The table below displays the amounts to be collected from revenue sources and shows the amounts that are expected to fund the capital program for the Wastewater System.

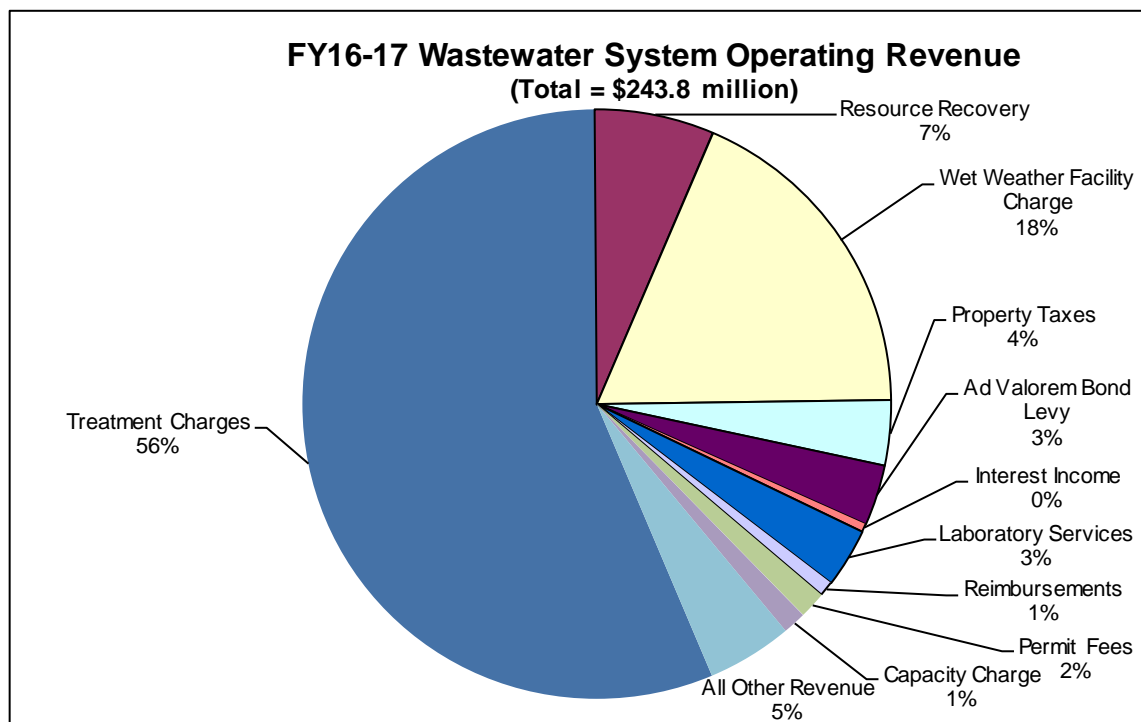
<b>WASTEWATER SYSTEM SOURCES OF FUNDS</b>				
(\$ Millions)				
	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY17 Proposed Budget</b>
<b>Operating Revenues:</b>				
Treatment charges	60.0	66.9	66.9	70.3
Resource Recovery	10.6	6.5	8.0	8.0
Wet Weather Facilities charge	19.4	21.5	21.8	22.9
Property taxes	4.6	4.2	4.3	4.4
Ad Valorem Bond Levy	5.3	4.3	4.0	4.1
Interest income	0.2	0.7	0.4	0.7
Laboratory services	3.9	3.8	3.9	4.0
Reimbursements	1.6	0.9	1.0	1.0
Permit Fees	1.8	1.9	1.8	1.8
Capacity Charge	0.9	1.5	1.5	1.6
All other revenue	<u>6.2</u>	<u>4.6</u>	<u>5.7</u>	<u>5.7</u>
<b>Total Operating Revenues</b>	<b>114.5</b>	<b>116.8</b>	<b>119.3</b>	<b>124.5</b>
Revenue Funded Capital	-25.9	-30.9	-37.0	-14.6
<b>Capital Funding Sources:</b>				
Revenue Funded Capital	25.9	30.9	37.0	14.6
Commercial Paper Issues	0.0	0.0	0.0	0.0
New Bond Proceeds	5.7	0.0	2.0	22.1
Grants and Loans Proceeds	0.0	0.0	0.0	0.0
Reimbursements	<u>1.3</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
<b>Total Capital Funding Sources</b>	<b>32.9</b>	<b>30.9</b>	<b>39.0</b>	<b>36.7</b>
<b>Total Wastewater Sources</b>	<b>121.5</b>	<b>116.8</b>	<b>121.3</b>	<b>146.6</b>

## Operating Revenue

Wastewater System revenues for FY16 are projected to increase overall by \$2.5 million, or 2.1 percent compared to FY15, for a total of \$119.3 million. After a 5 percent rate increase for FY16, the projected wastewater treatment charge will total \$66.9 million the same as budgeted in FY15 due to the drop in water use during the recent drought. Wet weather facility charge revenue in FY16 is projected to increase \$.3 million from the FY15 budgeted amount. Resource recovery revenues are projected to increase \$1.5 million. Interest revenue is decreasing by \$.3 million due to the drop in interest rates, and other revenue is increasing by \$1.1 million due to a \$.6 million increase in expected revenue from energy sales from the Power Generation Station and a \$.5 million increase in private sewer lateral fees.

In FY17, Wastewater System revenues are projected to increase by \$5.2 million, or 4.4 percent for a total of \$124.5 million. This increase is comprised primarily of \$4.5 million from the 5.0 percent rate increases in the wastewater treatment and wet weather facilities charges.

The figure below illustrates the various sources of revenue and the relative percentage each contributes to the total. Wastewater treatment charges revenue is the largest source of revenue comprising 56 percent of FY16-17 total revenues.



The following pages provide more detail on each of the revenue categories.

## **SOURCE DESCRIPTIONS**

### **Operating Revenue**

The following are descriptions of nine of the sources of operating revenue, including information about the projected revenues for FY16-17.

#### **Treatment Charges**

The District provides treatment for discharges collected through city-owned sewers and transported through District interceptors and pump stations to the main Wastewater treatment plant. Treatment charges for all customers are based on the volume and strength of the wastewater discharged plus a service charge, and is collected on the water service bill. The overall rate increase for the various wastewater treatment charges will be 5.0 percent for FY16 and an additional 5.0 percent for FY17. After the 5 percent rate increase for FY16, the projected wastewater treatment charge will total \$66.9 million the same as FY15 due to the drop in water use during the recent drought. For FY17 the projected wastewater treatment charge will be \$70.3 million, an increase of \$3.4 million or 5.1 percent over the FY16 projected treatment revenue.

#### **Resource Recovery**

The District utilizes its excess capacity at the Main Wastewater Treatment Plant with the acceptance of trucked waste. The Resource Recovery Program is projected to generate \$8.0 million in FY16 and FY17, an increase of \$1.5 million or 23 percent compared to the FY15 budget. Since FY10, the Resource Recovery program has collected \$9.0 million per year in each fiscal year.

#### **Wet Weather Facilities Charge**

In June 1987, the Board of Directors established the wet weather facilities charge to pay for the costs associated with the District wet weather facilities. This charge is assessed on a per parcel basis and, while it is not a tax, the charge is collected on the county property tax bill. The charge is projected to generate approximately \$21.8 million in FY16, a 1.4 percent increase over the FY15 budget. As part of the 2015 cost of service study, the basis for the costs of the wet weather program was recalculated reducing projected revenue, then increased 5 percent for FY16 resulting in a net increase of 1.4 percent over FY15. In FY17, the projected revenue is \$22.9 million, a 5 percent increase over the FY16 budget.

#### **Property Taxes**

The District receives a portion of the 1 percent county levy on properties within District boundaries. The percentage of the county levy received varies depending on the number of other agencies participating in the distribution. The District's Wastewater share has averaged 0.5 percent of the total monies collected. For FY16, property tax revenue of \$4.3 million is based upon FY14 actual property tax receipts reduced to reflect both one-time property tax revenues from the dissolution of redevelopment agencies within the District's boundaries and for the portion of property tax revenues which fund the District's low income customer assistance program. Revenues for FY17 are \$4.4 million or \$0.1 million over FY16.

#### **Ad Valorem General Obligation Bond Levy**

The Wastewater System has the authority, approved by a two-thirds majority of the voters, to impose an ad valorem property tax to recover the debt service on its outstanding General Obligation bonds. The amount is approximately \$4.0 million for FY16 and \$4.1 million for FY17.

As of August 2014, the net assessed valuation for property within the Wastewater System is \$83.98 billion. For FY16, the ad valorem property tax rate will be approximately \$0.0068 per \$100 of assessed value, or \$6.80 for every \$100,000 of assessed valuation.

### **Interest Income**

The District places funds not needed for current expenditures in short-term investments, following the same procedures as the Water System. Interest income in FY16 is projected to be \$0.4 million, a decrease of \$0.3 million over the FY15 budgeted amount due to a reduction in the projected interest rates. Interest income in FY17 is projected to be \$0.7 million, an increase of \$0.3 million over FY16 due to slightly higher expected interest rates. Interest rates are assumed to be ½ percent in FY16 and 1 percent in FY17.

### **Laboratory Services**

The Wastewater Laboratory provides testing and analysis services for the Water and Wastewater Systems and several outside agencies. The Water and Wastewater Systems share in the joint costs of operating the lab. Revenues from the Water System and outside agencies are projected to be \$3.9 million for FY16 and \$4.0 million for FY17.

### **Capacity Charges**

In FY14, the District designated the revenues received from the Wastewater Capacity Fees (WCF) as operating revenue for purposes of the budget and the bond indenture. This allows the WCF revenues to be used in the debt coverage ratio calculation for Wastewater. Previously, the WCF revenues were excluded from the operating revenue and debt coverage ratio. Because the WCF is collected from new customers as payment for their share of existing wastewater facilities, these revenues can be classified as being available to pay for debt expenses for capital. This is similar to the treatment of the Water System Capacity Charge revenue. This change in designation of revenues reduces the amount of the wastewater treatment rate increase that is required to meet the debt coverage ratio target. The WCF revenue is projected to be \$1.5 million in FY16 and \$1.6 million in FY17.

### **All Other Revenue**

All other revenue for the Wastewater System is expected to increase in FY16 and FY17 to \$5.7 million, an increase of \$1.1 million or 23.9 percent due to a \$0.6 million increase in the expected revenue from energy sales from the Power Generation Station and a \$0.5 million increased in private sewer lateral fees.



## **Capital Funding**

The following are descriptions of the five sources of capital funding. The FY16-17 capital improvement program will be funded with bond proceeds and wastewater revenue and reserves. The District's financing plan is to issue a total of \$24 million of new debt in FY16 and FY17 combined with revenue and reserve funded capital of \$37 million in FY16 and \$14.6 million in FY17.

Please refer to the section Debt Service and Financing for additional details on debt funding of capital projects.

### **New Bond Issues**

The District has the ability to issue long-term bonds to fund its capital program. The proceeds of the bond sales can be used to pay for capital expenses over several years. The repayment of the bonds is generally over 30 years and is paid from wastewater rate revenues.

### **Commercial Paper Issues**

In addition to issuing long-term bonds to fund its capital program, the District has used short-term borrowing in the form of commercial paper to raise revenues for capital expenses. The term of commercial paper can be up to 270 days. The repayment of commercial paper is paid from wastewater rate revenues.

### **Grants and Loans Proceeds**

The District seeks out federal and state grants and low-interest loans to fund some of its capital projects when they meet the conditions of the grant and loan programs.

### **Reimbursements**

Some of the capital projects in the Wastewater System are done at the request of other agencies, and the District is reimbursed for its expenses. An example would be the relocation of a portion of the sewer interceptor at the request of a city or state agency.

### **Revenue Funded Capital**

Annual capital expenses that are not paid from debt funding, grants, loans or reimbursements must be paid from revenues, either from current year revenues or from reserves.

## USE OF FUNDS

The Wastewater System has three types of expenditures:

**Operations**, or the annual costs of providing all wastewater services

**Debt Service**, or the repayment of bonds for making capital investments in the wastewater system.

**Capital cash flow**, or the annual costs of the Capital Improvement Program for long-term projects to upgrade aging infrastructure and to protect natural resources to provide high quality wastewater services.

The following table shows the breakdown of expenses for operations, debt service, and capital programs.

<b>USE OF FUNDS</b> (\$ Millions)				
	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>FY17 Proposed Budget</b>
Operations	59.7	63.3	65.4	70.7
Debt Service	33.1	34.3	33.7	34.0
Capital Cash Flow (includes Admin of Capital)	<u>32.9</u>	<u>30.8</u>	<u>39.0</u>	<u>36.7</u>
<b>Total Expenditures</b>	<b>125.7</b>	<b>128.4</b>	<b>138.1</b>	<b>141.4</b>

## OPERATIONS

This section contains charts and tables which explain the major components of the Wastewater System operations budget. Typical operations expenditures include, but are not limited to, labor, benefits, chemicals, energy, spoils/sludge disposal, parts and materials and fees and licenses.

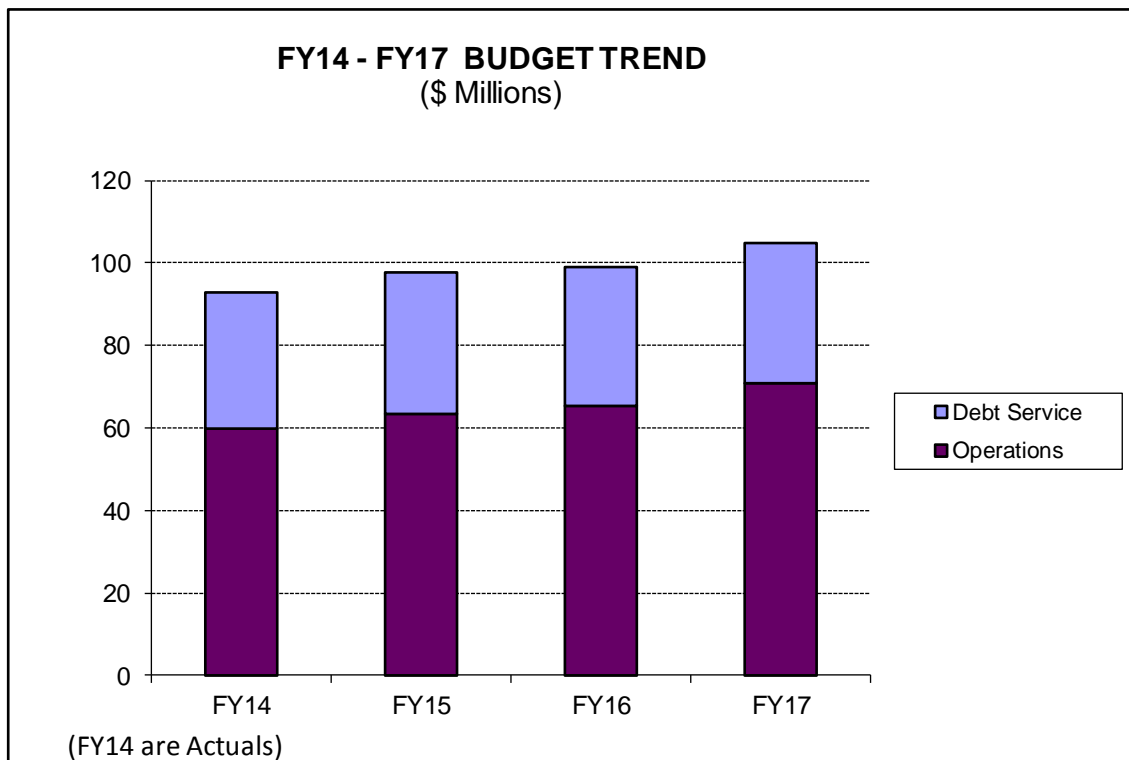
The operations budget is also shown by department. The details of each staffed department include a discussion of services provided, significant budget changes, staffing and proposed position changes.

### FY16-17 Budget

The chart below details the operations and debt service budget for FY16-17.

(\$ Millions)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Operations	59.7	63.3	65.4	3.3%	70.7	8.1%
Debt Service	<u>33.1</u>	<u>34.3</u>	<u>33.7</u>	-1.7%	<u>34.0</u>	0.9%
<b>Total</b>	<b>92.8</b>	<b>97.6</b>	<b>99.1</b>	1.6%	<b>104.7</b>	9.0%

Total operations and debt service budget is increasing in FY16 by \$2.1 million or 3.3 percent over the FY15 amended budget and in FY17 by \$5.3 million or 8.1 percent compared to FY15.



## DEPARTMENT OPERATIONS BUDGET

The operations portion of the Wastewater System budget is divided into various departments. One department is referred to as a staffed department indicating employees are assigned to work in the department. The staffed department budget funds the day-to-day operations of the Wastewater system, and includes funding for labor, benefits, outside contract services and other non-labor expenses such as chemicals, energy, spoils and sludge disposal, parts and materials and fees and licenses. A detailed description of the staffed department is included later in this chapter.

A small number of departments do not have personnel assigned to them and are referred to as non-staffed departments. The impact on the budget by each of these departments varies:

**Contingency-** Funds budgeted each fiscal year to primarily cover projected labor-related expenses such as the employee cost of living adjustment which is based upon each year's February CPI-W (Consumer Price Index for Urban Wage Earners and Clerical Workers) in the San Francisco-Oakland-San Jose area. The index is published in March of each year.

**Administration of Capital** -The administration of capital represents those costs that are not directly attributable to specific capital projects but are more generalized indirect support of the Capital Improvement Program (CIP). The administration of capital in the operations budget will decrease operating expenses by a like amount and reallocate the costs to the capital budget.

The following table presents the total FY16-17 Wastewater Water System Fund operations budget by department.

<b>Operations Budget by Department</b>						
(\$ Thousands)						
<b>DEPARTMENTS</b>	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>% change vs FY15</b>	<b>FY17 Proposed Budget</b>	<b>% change vs FY16</b>
Wastewater Department	62,508	66,174	66,884	1.1%	70,944	6.1%
<b>Subtotal Staffed Departments</b>	<b>62,508</b>	<b>66,174</b>	<b>66,884</b>	<b>1.1%</b>	<b>70,944</b>	<b>6.1%</b>
Contingency	182	484	1,564	223.3%	2,773	77.3%
<b>Net Department Expense</b>	<b>62,690</b>	<b>66,658</b>	<b>68,448</b>	<b>2.7%</b>	<b>73,717</b>	<b>7.7%</b>
Less: Administration of Capital	(3,000)	(3,300)	(3,000)	-9.1%	(3,000)	0.0%
<b>Subtotal Operating Expenses</b>	<b>59,690</b>	<b>63,358</b>	<b>65,448</b>	<b>3.3%</b>	<b>70,717</b>	<b>8.1%</b>
Plus: Debt Service	33,107	34,307	33,693	-1.8%	33,956	0.8%
<b>TOTAL OPERATING BUDGET</b>	<b>92,798</b>	<b>97,665</b>	<b>99,141</b>	<b>1.5%</b>	<b>104,673</b>	<b>5.6%</b>

The FY15 amended staffed department budgets include a cost of living adjustment.

## **Department Operations Budget Highlights**

The Wastewater System is comprised of one staffed department that performs all aspects of wastewater system operations. This section details the department labor and non-labor budget, department goals and staffing.

### **FY16-17 BUDGET**

#### **Labor and Benefits**

Labor and benefits are allocated between the staffed department and contingency for cost of living adjustments. Cost of living adjustments are not shown in the staffed department's FY16-17 labor and benefits budget since it is based on the CPI-W index and the amount is not known until the index is published annually. Once the index is published, and if funds are needed, contingency would be transferred to departments. The details of the department's labor and benefits budget is shown later in this chapter.

In FY16, the department is funding 9 additional positions. The cost of these positions are offset by projected savings to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected, overall lower salaries in comparison to the prior biennial budget due to the significant number of new employees with salaries lower than the employees they replaced, and lower benefit rates than the prior biennial budget.

Unlike the Water System, the Wastewater System has only one staffed department as mentioned earlier. Therefore, the department's labor and benefits is explained in greater detail in the budget highlights later in this chapter.

#### **Non-labor**

The Wastewater staffed department non-labor costs increased \$1.4 million or 5.1 percent in FY16 and \$3.3 million or 11.4 percent in FY17 compared to the prior fiscal year respectively. A detailed explanation of the significant changes is shown in the department budget highlights section later in this chapter.

## Department Operations by Budget Category

The chart below depicts the Wastewater System staffed department operations in a single chart. It does not include capitalized labor, however, capitalized labor by department is shown later in this chapter.

<b>FY16-17 DEPARTMENT OPERATIONS BY CATEGORIES</b>								
(\$ Thousands)								
	<b>FY16</b>				<b>FY17</b>			
<b>Department</b>	<b>Labor</b>	<b>Contract Services</b>	<b>All Other</b>	<b>Total Budget</b>	<b>Labor</b>	<b>Contract Services</b>	<b>All Other</b>	<b>Total Budget</b>
Wastewater	37,866	3,037	25,982	<b>66,884</b>	38,666	3,806	28,472	<b>70,944</b>
<b>TOTAL</b>	<b>37,866</b>	<b>3,037</b>	<b>25,982</b>	<b>66,884</b>	<b>38,666</b>	<b>3,806</b>	<b>28,472</b>	<b>70,944</b>

## Staffed Department Descriptions

The next section describes each of the staffed departments and includes the following topics:

Overview provides an overall statement about the key responsibilities of the department that places it within the larger mission of the District as a whole.

Description of Services Provided describes the responsibilities of the department, broken down by unit (division) or by function, including services required to meet regulatory or legal requirements.

FY16-17 Goals highlights the highest priority tasks or projects related to the budget, and place these in the context of the overall District Strategic Plan.

Department Budget Summary is a reference table that shows the Department's operating budget expenditures by category (Labor and Benefits, Contract Services, All Other Costs). It also includes capital labor for the Department to give a more complete picture of departmental expenses.

Budget Highlights shows changes in cost relative to the previous fiscal year and describes reasons for those changes. This section focuses on the significant budget changes regardless of whether they are operational priorities for the department.

Staffing Summary is a reference table that includes both the total head count for the department by appointment type (full-time, part-time, etc.), and the Full-Time Equivalency (FTE) based on the number of positions of each appointment type.

Position Changes is a section that shows position changes that require Board approval. It includes a table that enumerates position changes, followed by a brief description of the changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

## **WASTEWATER DEPARTMENT**

### **OVERVIEW**

The Wastewater Department operates and maintains District wastewater treatment facilities to comply with environmental and public health requirements. Furthermore, the department strives to protect the environment by reducing or eliminating the discharge of toxic and noxious substances to the air, land and San Francisco Bay. The primary goal is to ensure public health and safety by complying with federal, state and local regulations regarding air, biosolids and water.

### **DESCRIPTION OF SERVICES**

The department operates and maintains the wastewater treatment plant and the three wet weather facilities; maintaining the wastewater system infrastructure including sewer interceptors; monitoring discharges by all wastewater customers; and testing and reporting analytical results on water, wastewater, and hazardous waste samples. There are four divisions in the Wastewater Department: Wastewater Treatment, Wastewater Engineering, Laboratory Services, and Environmental Services.

### **FY16-17 GOALS**

The department has a key role in the Water Quality and Environmental Protection and the Long Term Infrastructure Investment Strategic Plan goals. Key department goals include:

- Successfully implementing the federally mandated Consent Decree to reduce the environmental impact on the San Francisco Bay during wet weather events,
- Expanding the Food Waste Program,
- Maintaining a regional leadership role in the emerging issue of possible nutrient impairment of San Francisco Bay, and
- Continuing to be a good neighbor by refining and investing in technologies that will minimize odors from the wastewater treatment plant.



## DEPARTMENT BUDGET SUMMARY

A comparison of the department's budget is shown in the chart below.

Category (\$ Thousands)	FY14 Actuals	FY15 Amended Budget	FY16 Proposed Budget	FY16 vs FY15	FY17 Proposed Budget	FY17 vs FY16
Total Labor and Benefits	44,002	48,346	46,808	-3.2%	47,769	2.1%
Less: Capital Labor and Benefits	(7,660)	(9,791)	(8,942)	-8.7%	(9,103)	1.8%
Operating Labor and Benefits	36,343	38,555	37,866	-1.8%	38,666	2.1%
Contract Services	1,843	2,236	3,037	35.8%	3,806	25.3%
All Other Costs	24,323	25,383	25,982	2.4%	28,472	9.6%
<b>Operating Total</b>	<b>62,508</b>	<b>66,174</b>	<b>66,884</b>	<b>1.1%</b>	<b>70,944</b>	<b>6.1%</b>

## BUDGET HIGHLIGHTS

The Wastewater Department total operating budget in FY16 is increasing \$0.7 million or 1.1 percent compared to FY15. In FY17, the budget is increasing \$4 million or 6.1 percent.

### FY16

Total labor and benefits costs (operating and capital) are decreasing by \$0.7 million primarily due to a lower fringe benefit rate and a higher offset to account for the time required to fill positions given the considerable number of retirements and vacancies that are expected. Contract services are increasing by \$0.8 million for a contract to support inflow investigations in community sewer systems as required by the consent decree. All other costs are increasing by \$0.6 million primarily due to parts and materials including carbon for the Power Generation Station gas conditioning system.

### FY17

Total labor and benefits costs (operating and capital) are increasing approximately \$0.8 million primarily due to funding of a Sr. Wastewater Control Inspector to provide support for the infiltration and inflow control program and food waste deliveries; and benefit rate escalation and scheduled salary step increases. Contract services are increasing \$0.8 million to support inflow investigations in community sewer systems. All other costs are increasing by \$2.5 million primarily due to chemical costs for increased food waste processing and odor control (\$1.1 million); and increased hauling costs (\$0.9 million) for sludge hauling related to the food waste program, and potential loss of alternate land disposal. In addition, the department's share of reimbursable costs to the Water System will increase by \$0.2 million for services such as billing and collection, finance, human resources, rent, etc.

## STAFFING SUMMARY

The chart below shows the staffing of the department. The total position changes table does not match the position type chart because the position type chart reflects the return of one position loaned in FY16 from the Water System.

<b>Position Type</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY16 vs FY15</b>	<b>FY17</b>	<b>FY17 vs FY16</b>
Full Time	281.0	281.0	280.0	(1.0)	280.0	0.0
Limited Term / Temp Const	7.0	7.0	3.0	(4.0)	3.0	0.0
Intermittent	0.0	0.0	0.0	0.0	0.0	0.0
Temporary / Part-Time	1.0	1.0	3.0	2.0	3.0	0.0
<b>Total Positions</b>	<b>289.0</b>	<b>289.0</b>	<b>286.0</b>	<b>(3.0)</b>	<b>286.0</b>	<b>0.0</b>
<b>Total FTE</b>	<b>288.5</b>	<b>288.5</b>	<b>284.5</b>	<b>(4.0)</b>	<b>284.5</b>	<b>0.0</b>

## POSITION CHANGES

The table below summarizes the position changes, followed by a brief description of the position changes. The change in cost is determined by comparing the annual cost of the salaries and benefits of the current position with the annual cost of the new position at the top salary step.

FY	Action	From Classification(s)	To Classification(s)	Change in Cost	Change in FTE	Project/Program
2016	Delete	Admin Services Supervisor		(142,478)	(1.0)	Workload Efficiencies
2016	Delete	(LT) Assistant Engineer		(186,856)	(1.0)	Resource Recovery
2016	Delete	(TC) Senior Civil Engineer		(239,175)	(1.0)	Richmond Wastewater Service Project
2016	Delete	(TC) Senior Construction Inspector		(227,880)	(1.0)	Digester Upgrade
2016	Delete	(LT) WW Control Representative		(161,168)	(1.0)	Private Sewer Lateral
2016	Add		WW Control Inspector I/II	73,004	1.0	Support Private Sewer Lateral Program.
2016	Add		Gardener I/II (Temp)	57,021	0.5	Utilize resources in a manner consistent with the seasonal nature of the work
2016	Add		Gardener I/II (Temp)	57,021	0.5	Utilize resources in a manner consistent with the seasonal nature of the work
<b>FY16 TOTAL</b>				<b>(770,509)</b>	<b>(3.0)</b>	

In FY16, the department is deleting five positions due to either completion of projects or workload efficiencies. In FY16, the department is adding three positions, one FTE to support the expansion of the regional private sewer lateral program and two part-time positions for seasonal work.

## STAFFING

The chart below provides the full-time equivalent (FTE) and compares the changes from year-to-year. Depending upon the appointment type, the FTE value will be different. Regular, non-civil-service, Limited-Term and Temporary Construction appointment types are full-time and equivalent to 1.0 FTE; intermittent appointment types are equivalent to 0.75 FTE; part-time and temporary appointment types count as 0.5 FTE.

<b>FY16-17 STAFFING BY DEPARMENT</b>					
Positions by Full-Time Equivalent (FTE)					
Department	FY15 Amended	FY16 Proposed	FTE Change	FY17 Proposed	FTE Change
WASTEWATER SYSTEM	288.5	284.5	(4.0)	284.5	0.0

A total of -4.0 FTEs are shown as the Wastewater System change from FY15. Chapter 2 shows -3.0 FTEs deleted from the Wastewater System. One additional FTE, previously borrowed from the Water System, is being transferred back to the originating Water System department in FY16.

For a more detailed description of position changes, please see the specific department section in this chapter or the Staffing section in the District Summary chapter of this book.

## Bargaining Unit Changes

The following tables show the net change in bargaining unit status of authorized positions (not FTEs) represented by AFSCME Local 2019, AFSCME Local 444, IFPTE Local 21, and IUOE Local 39; or included in Management/Confidential, non-represented groups, and civil service exempt positions. The charts reflect all staffing changes for FY16 and FY17.

<b>FY 16 vs. FY 15 Net Change in Bargaining Unit Status</b>							
Department	Local 2019	Local 444	Local 21	Local 39	MGMT / Confidential	Non-Rep	Civil Service Exempt
Wastewater	-2	2	-2				
<b>Total Net Change</b>	<b>-2</b>	<b>2</b>	<b>-2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>FY 17 vs. FY 16 Net Change in Bargaining Unit Status</b>							
Department	Local 2019	Local 444	Local 21	Local 39	MGMT / Confidential	Non-Rep	Civil Service Exempt
Wastewater							
<b>Total Net Change</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## DEBT SERVICE AND FINANCING

This section describes the Wastewater System's current and projected debt obligations, current credit ratings, and adherence to the District's debt financing policies.

The District incurs debt to finance projects or purchase, repair or replace assets which will have useful lives equal to or greater than the related debt. Issuance of revenue supported debt is authorized by the District's Board of Directors, subject to a referendum process. Individual revenue bond issues are authorized by the District's Board of Directors.

The annual debt principal and interest payments are charged to the operating budget. However, debt is only issued to finance capital investment activities.

### Outstanding Debt

The Wastewater System has a total long-term debt outstanding of \$423.9 million as of June 30, 2015. The District's debt issues are summarized below and discussed in detail thereafter.

<b>OUTSTANDING DEBT</b> (\$ Thousands) Projections as of June 30, 2015				
Issue	Date of Issue	Last Maturity	Amount Issued	Debt Outstanding
<b>LONG-TERM DEBT</b>				
<b>Revenue Bonds:</b>				
Series 2007B	5/16/2007	6/1/2026	46,670	29,815
Series 2010A	10/20/2010	6/1/2029	58,095	46,560
Series 2010B (Build America Bonds)	10/20/2010	6/1/2040	150,000	150,000
Series 2012A	10/10/2012	6/1/2037	20,000	20,000
Series 2014A	8/28/2014	6/1/2031	80,425	80,425
Series 2014B	8/28/2014	6/1/2015	2,505	0
Series 2015A1	3/6/2015	6/1/2037	54,805	54,805
Series 2015A2	3/6/2015	6/1/2038	13,565	13,565
Series 2015B	3/6/2015	6/1/2030	2,795	2,795
<b>Total Revenue Bonds</b>	-	-	<b>\$428,860</b>	<b>\$397,965</b>
<b>General Obligations Bonds</b>				
Series G	2/27/2014	4/1/2018	<b>\$14,160</b>	<b>\$10,910</b>
<b>Total Long-Term Debt</b>			<b>\$443,020</b>	<b>\$408,875</b>
<b>SHORT-TERM DEBT</b>				
<b>Extendable Commercial Paper</b>	Various	Various	<b>N/A</b>	<b>\$15,000</b>
<b>TOTAL OUTSTANDING DEBT</b>				<b>\$423,875</b>

In FY15, the District refunded debt to take advantage of low market interest rates, generating substantial savings and eliminating its interest rate swap exposure. The District issued

Wastewater Revenue Bond Series 2015A that refunded for debt service savings of all of the outstanding Series 2007A and 2011A bonds. This issue generated net present value savings of \$7 million over the 23 year life of the bonds. The refunding lowers debt service costs by approximately \$163,000 per year in FY16 and FY17. Portions of the proceeds of the Series 2015A bonds were also used to terminate all interest rate swaps. As a result of this transaction, the Wastewater System has no more synthetic fixed-rate debt or interest rate swaps outstanding.

The budget assumes issuance of approximately \$2 million of debt in FY16 and \$22 million in FY17.

## Debt Service

The total Wastewater System outstanding debt of \$423.9 million projected as of June 30, 2015 will cost the District \$311.8 million in interest payments over the next 25 years, as detailed in the chart below.

Interest rates on extendable commercial paper (ECP) were calculated at 1 percent in FY16, then increased to 2 percent in FY17 and thereafter.

<b>Projected Debt Service on Outstanding Debt</b>			
<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Debt Service</b>
2016	13,000,000	20,259,188	33,259,188
2017	13,655,000	19,871,178	33,526,178
2018	13,790,000	19,261,348	33,051,348
2019	10,675,000	18,742,823	29,417,823
2020	11,185,000	18,240,008	29,425,008
2021	11,665,000	17,739,288	29,404,288
2022	12,220,000	17,160,413	29,380,413
2023	12,790,000	16,553,913	29,343,913
2024	13,360,000	15,949,373	29,309,373
2025	13,980,000	15,285,443	29,265,443
2026	14,625,000	14,590,733	29,215,733
2027	14,285,000	13,862,783	28,147,783
2028	14,300,000	13,151,915	27,451,915
2029	15,030,000	12,440,380	27,470,380
2030	15,750,000	11,694,114	27,444,114
2031	16,305,000	10,907,489	27,212,489
2032	16,795,000	10,089,252	26,884,252
2033	17,620,000	9,246,369	26,866,369
2034	18,505,000	8,355,736	26,860,736
2035	19,410,000	7,423,209	26,833,209
2036	20,360,000	6,445,044	26,805,044
2037	21,345,000	5,418,983	26,763,983
2038	24,365,000	4,343,250	28,708,250
2039	26,250,000	3,087,794	29,337,794
2040	27,610,000	1,729,094	29,339,094
<b>Total</b>	<b>408,875,000</b>	<b>311,849,114</b>	<b>720,724,114</b>

Includes \$0 required principal amortization for extendible commercial paper and does not include the Federal Build America Bonds interest subsidy.

The difference in the debt service from the budgeted amount results from two factors. First, the figures in the table above include only debt service on currently outstanding bonds while budgeted debt service includes interest and principal on new bonds expected to be issued in FY16 and FY17 to fund the capital improvement program. Second, budgeted figures include additional costs associated with the debt portfolio including liquidity fees, re-marketing fees, basis spread, and debt service administration.

## Debt Ratings

Credit risk is the risk that the issuer of an investment, such as a revenue bond, will not fulfill its obligation to the holder of the investment. Credit ratings are assigned to bonds by nationally recognized statistical credit rating organizations based on published methodologies. The ratings reflect the organizations' opinions about the issuer's ability and willingness to meet its financial obligations. All investment grade ratings presume the obligation will be paid, in full and on time, currently and in the future.

Strong credit ratings provide tangible benefits to ratepayers in the form of reduced debt service cost. A strong credit rating provides better access to capital markets, lower interest rates, better terms on debt, and access to a greater variety of debt products. Prudent financial management policies have contributed to the District's strong ratings shown in the tables below.

As of January 1, 2015, ratings on the Wastewater System's debt were as follows:

<b>Wastewater System Debt Ratings</b>			
<b>Debt by Type</b>	<b>Ratings by</b>		
	<b>Standard &amp; Poor's</b>	<b>Moody's Investors Service</b>	<b>Fitch</b>
<b>Wastewater System</b>			
General Obligation Bonds	AAA	Aa1	—
Fixed Rate Revenue Bonds	AAA	Aa2	AA+
Extendable Commercial Paper	A-1+	P-1	F1+



## **Debt Management Policy and Debt Service Coverage**

The District is subject to legal debt limits prescribed in the Municipal Utility District (MUD) Act. The MUD Act describes three types of legal limitations: general debt limits, revenue bond limits, and short term borrowing limits.

The District's general debt indebtedness cannot exceed the ordinary annual income and revenue of the District without a two-thirds approval of the voters. However, revenue bonds are not included in general debt limits.

The District is authorized to issue revenue bonds with the approval of a resolution from the Board of Directors, subject to a 60-day referendum period. The resolution specifies the maximum principal amount of bonds that may be issued pursuant to the authorization. The District's Board of Directors also approves individual Series of Revenue Bonds issued under the broader authorization.

The MUD Act authorizes the District to issue short-term indebtedness without an election of the voters. The amount of short-term borrowing cannot exceed the lesser of 1) the annual average total revenue of the three preceding years or 2) twenty-five percent of the District's total outstanding bonds. This provision is substantially the same as the District's internal policy discussed below.

The District has also established its own policy regarding debt management (Policy 4.02: Cash Reserves and Debt Management – see Appendix). The purpose of the debt policy is to maintain a balance between current funding sources and debt financing over each five-year plan horizon in order to retain the District's financing flexibility and achieve the lowest cost of financing.

The District's debt management policy is to:

- a) maintain an annual revenue bond debt service coverage ratio of at least 1.6 times coverage;
- b) limit debt-funded capital to no more than 65 percent of the total capital program over each five-year planning period; and
- c) limit commercial paper/variable rate debt to 25 percent of outstanding long-term debt.

### **Debt Service Coverage Ratio**

The debt service coverage policy ensures that the District has sufficient annual operating revenues to pay its operating expenses and meet its debt service obligations on its revenue bonds and other parity debt. The revenue bond debt service coverage ratio is defined as the District's net operating revenue (current year's operating revenue less the current year's operating expenses) divided by the current year's debt service on all revenue bonds and other parity debt. In FY16 and FY17, the projected debt coverage ratios are 1.70 and 1.70 respectively.

### Debt-Funded Capital

The percentage of the capital program that is funded by debt over the five-year period FY16-20 will be 31 percent, which is lower than the financial policy maximum target of 65 percent.

<b>Projected Debt Percentage of Funding</b>		
(\$ Millions)		
	<b><u>FY16</u></b>	<b><u>FY17</u></b>
<b>Expenditures:</b>		
Capital Cash Flow (discounted)	36.0	33.7
Administration of Capital	<u>3.0</u>	<u>3.0</u>
<b>Total expenditures</b>	<b>39.0</b>	<b>36.7</b>
<b>Project Funding:</b>		
New Bond Funded	2.0	22.1
Prior Bond Funded	0	0
Grants and Loans Funded	0	0
Reimbursements Funded	0	0
Revenue Funded Capital	<u>37.0</u>	<u>14.6</u>
<b>Total resources</b>	<b>39.0</b>	<b>36.7</b>
<b>Debt percentage of funding</b>	<b>5.1%</b>	<b>60.2%</b>

### Commercial Paper and Variable Rate Debt Ratio

The District has authorized a short-term extendable commercial paper (ECP) borrowing program consistent with the MUD Act and the District's debt management policy. Under this program, the District may issue commercial paper notes at prevailing interest rates for periods of not more than 120 days from the date of issuance with the option by the District to extend the maturity for another 150 days. The program is not supported by any liquidity or revolving credit agreement. The Wastewater System ECP is secured by a pledge of the Wastewater System's net revenues, subordinate to the respective System's revenue bonds.

On June 30, 2015, \$15.0 million of Wastewater ECP is projected to be outstanding under the program. Wastewater System ECP will comprise 3.7 percent of the approximately \$409 million in outstanding long-term bonds at the close of FY15.

The wastewater system has no variable rate debt outstanding.

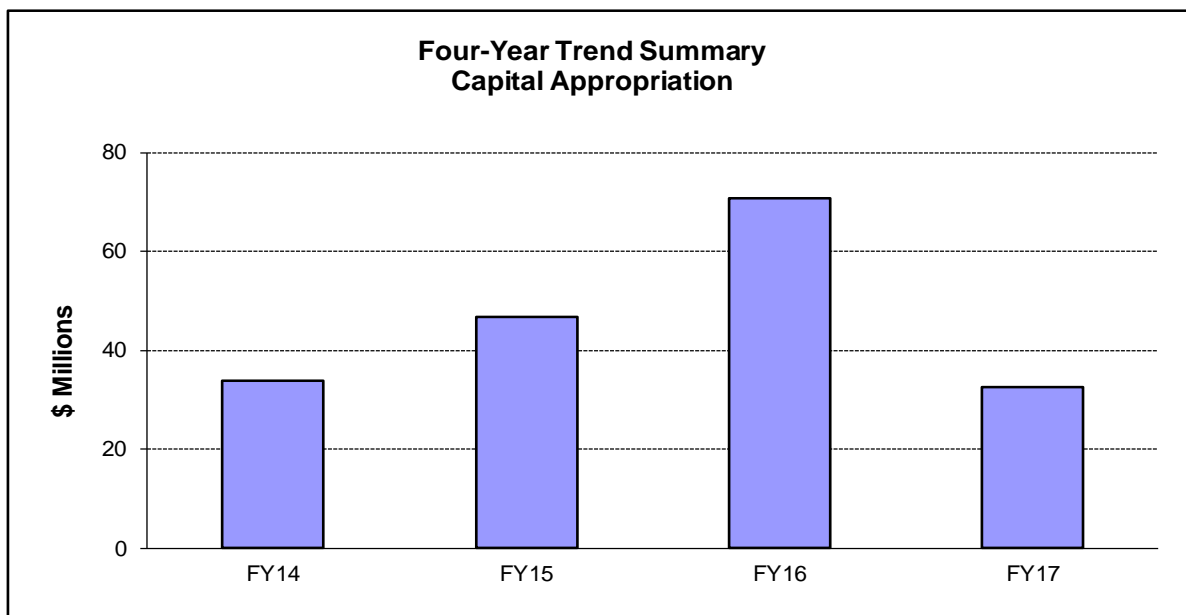
## CAPITAL EXPENDITURES

The CIP consists of projects that typically result in the construction of new facilities, or the modification, rehabilitation or upgrade of existing facilities. Project costs include all expenditures required to study, plan, design, purchase, construct, or upgrade new or existing facilities. In addition, projects can include large equipment purchases and the creation or replacement of computer technology systems infrastructure.

### Capital Appropriations

Capital appropriations represent the amounts approved by the Board to be spent on projects in the Capital Improvement Program. Since these appropriations are often spent over multiple years, the amounts appropriated each year will vary depending upon project scope and timing, and the amount of unspent appropriation in the project.

The Wastewater System's FY16 Capital Improvement Program appropriation totals \$70.6 million, which represents an increase of \$23.8 million from FY15. The FY16 appropriation reflects the District's continued commitment to capital improvements that focus on maintaining and improving the infrastructure at the main wastewater treatment plant, and rehabilitating various sewer interceptors. In FY17, the Capital Improvement Program appropriations are decreasing from FY16 by \$37.9 million to \$32.6 million.



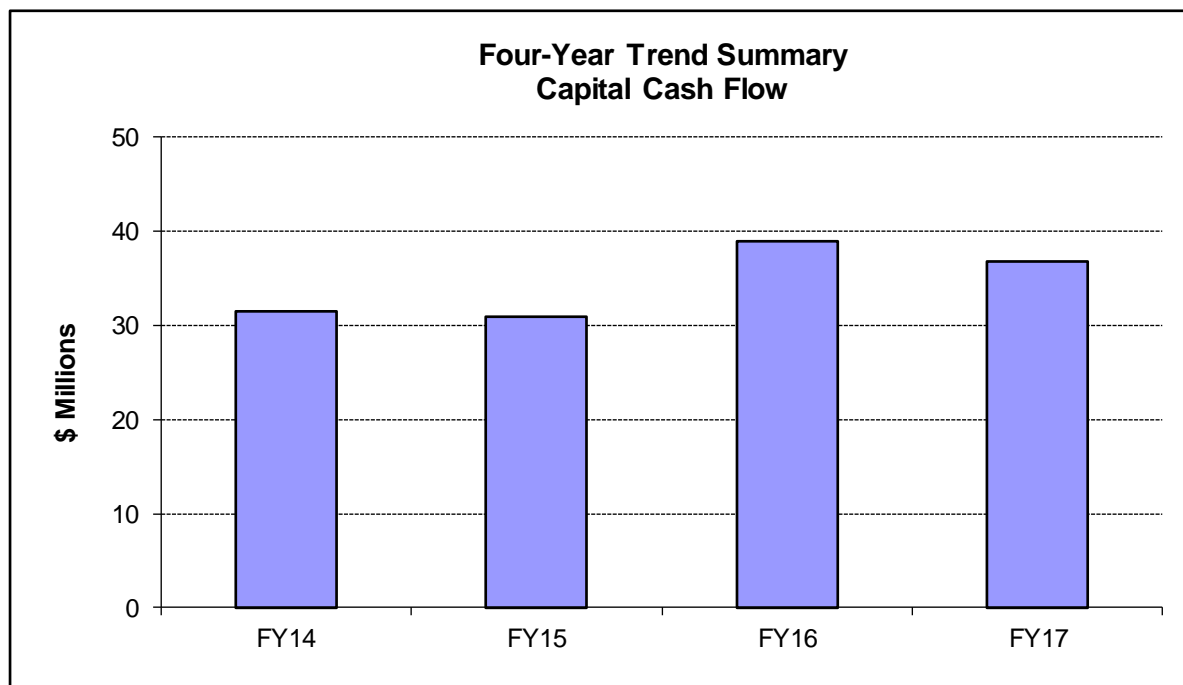
Capital Appropriation (\$ Millions)					
	FY14	FY15	FY16	FY16	FY17
	Adopted	Adopted	Proposed	vs FY15	Proposed
	Budget	Budget	Budget	% Change	Budget
<b>Capital Appropriation*</b>	<b>33.9</b>	<b>46.8</b>	<b>70.6</b>	<b>50.9%</b>	<b>32.6</b>
					<b>-53.8%</b>

\* with Administration of Capital

## Capital Cash Flow

Capital cash flows represent the amounts projected to be spent each fiscal year on projects in the Capital Improvement Program. The amount of cash flow each year varies as projects progress from one phase to another, such as from planning to design and then construction, and as projects are completed and new ones started.

The Wastewater System's FY16 cash flow totals \$39.0 million, which is greater than FY15 by \$8.1 million. Increases in the FY16 cash flow are for reliability improvements to the power generation station facilities; construction of food waste digesters and a dedicated dewatering facility; repair of the primary tank channels; and installation of an odor monitoring system and replacement of the odor control units at the influent pump station. In FY17, the cash flow is decreasing by \$2.3 million to \$36.7 million, primarily as the result of work to rehabilitate the Alameda sewer interceptor being completed.



Capital Cash Flow						
(\$ Millions)						
	FY14 Adopted Budget	FY15 Adopted Budget	FY16 Proposed Budget	FY16 vs FY15 % Change	FY17 Proposed Budget	FY17 vs FY16 % Change
Capital Cash Flow *	31.5	30.9	39.0	26.1%	36.7	-5.7%

\* with Administration of Capital

## Capital Labor

The following chart shows the capital labor and benefits budget for the Wastewater Department for capital related project work.

<b>Capital Labor By Department</b> (\$ Thousands)						
<b>DEPARTMENTS</b>	<b>FY14 Actuals</b>	<b>FY15 Amended Budget</b>	<b>FY16 Proposed Budget</b>	<b>Budget % Change</b>	<b>FY17 Proposed Budget</b>	<b>Budget % Change</b>
Wastewater	7,660	9,791	8,942	-8.7%	9,103	1.8%
<b>Departments Total</b>	<b>7,660</b>	<b>9,791</b>	<b>8,942</b>	<b>-8.7%</b>	<b>9,103</b>	<b>1.8%</b>

The Wastewater Department capital labor budget is decreasing \$0.8 million in FY16 compared to FY15 primarily due to a shift in personnel costs from capital work to the operating budget. In FY17, the capital labor budget will increase approximately \$0.2 million primarily due to benefit rate escalation costs and scheduled step increases.

## Capital Program Highlights

The FY16-20 Wastewater System Capital Improvement Program (CIP) requires \$143.9 million in project appropriations. This represents a \$13.3 million or 8.5 percent decrease from the FY14-18 CIP.

In accordance with the District's ten-year capital budget planning horizon, approximately \$180 million has been tentatively identified for FY21-25. Key aspects of this future work are discussed in the program and project summaries below. These future year estimates will be revised as plans and studies are completed, as priorities are redefined, and as new needs emerge. Therefore, the focus of the capital budget is on the first five years of the CIP.

The Wastewater System appropriations focus on the Maintaining the Infrastructure Strategy which comprises 92 percent of the CIP appropriations. All Wastewater System strategies are summarized below, with select projects discussed in more detail.

<b>FY14-18 vs. FY16-20 Appropriation</b> <b>Capital Improvement Program by Strategy</b> (\$ Thousands)					
Strategy	Appropriation		Change		% of FY16-20
	FY14-18	FY16-20	\$	%	
Maintaining Infrastructure	132,134	132,547	413	0%	92%
Regulatory Compliance	16,508	8,558	-7,950	-48%	6%
Non-Program Specific	8,552	2,800	-5,752	-67%	2%
<b>Wastewater Sub-total</b>	<b>157,194</b>	<b>143,905</b>	<b>-13,289</b>	<b>-8%</b>	<b>100%</b>
Administration of Capital	16,500	15,551	-949	-6%	
<b>Wastewater Total</b>	<b>173,694</b>	<b>159,456</b>	<b>-14,238</b>	<b>-8%</b>	

The FY16-20 CIP requires \$168.5 million in projected cash flow spending. This represents a \$13.6 million increase or 9 percent from the FY14-18 CIP and is primarily due to increased spending under the Maintaining Infrastructure strategy for the 3<sup>rd</sup> Street sewer interceptor rehabilitation, improvements to the power generation station facilities, and new food waste digesters and a dedicated dewatering facility for resource recovery.

All water system strategies are summarized below, with select programs and projects discussed in more detail.

<b>FY14-18 vs. FY16-20 Cash Flows</b> <b>Capital Improvement Program by Strategy</b> (\$ Thousands)					
Strategy	Cash Flow		Change		% of FY16-20
	FY14-18	FY16-20	\$	%	
Maintaining Infrastructure	117,182	143,095	25,914	22%	94%
Regulatory Compliance	21,276	9,886	-11,390	-54%	6%
Non-Program Specific	0	0	0	0%	0%
<b>Wastewater Sub-total</b>	<b>138,458</b>	<b>152,981</b>	<b>14,523</b>	<b>10%</b>	100%
Administration of Capital	16,500	15,551	-949	-6%	
<b>Wastewater Total</b>	<b>154,958</b>	<b>168,532</b>	<b>13,574</b>	<b>9%</b>	

## MAINTAINING THE INFRASTRUCTURE STRATEGY

This strategy furthers the District's objectives to improve, rehabilitate and replace aging infrastructure to ensure the delivery of reliable, high quality service at both the Main Wastewater Treatment Plant (MWWTP) and remote wastewater facilities. The majority of the work focuses on rehabilitating the digesters, sections of the sewer interceptor system, and concrete structures at the MWWTP; implementing odor control improvements; expanding the power generation station; and improving the resource recovery facilities. The program included in this strategy is:

Appropriations (\$ Thousands)						
Program	FY16	FY17	FY19	FY19	FY20	Total
Maintaining the Infrastructure Program	58,678	28,583	14,368	14,869	16,049	132,547
<b>Total</b>	<b>58,678</b>	<b>28,583</b>	<b>14,368</b>	<b>14,869</b>	<b>16,049</b>	<b>132,547</b>

### Maintaining the Infrastructure Program

The Digester Upgrade Project will rehabilitate the digesters which perform a key role in stabilizing wastewater solids prior to disposal. Phase 1 was completed in FY09 and rehabilitated four primary digesters with new covers and mixers, and improvements to the heating and gas management systems. Phase 2 was completed in FY15 and rehabilitated an additional four digesters, and included the construction of a new high-strength trucked in waste receiving station. Phase 3 will include seismic upgrades to three digesters and replace the floating covers with new dual membrane covers. Design is scheduled for FY18-19, with construction in FY20-22. Phase 4 upgrades of three digesters are scheduled for FY20-22. Phase 5 includes construction of two new digesters to accommodate increases in sludge and resource recovery wastes and is scheduled for FY22-25.

The Concrete Rehabilitation Project includes rehabilitating critical concrete structures, channels and gates at the MWWTP as sulfides and other constituents in the wastewater have accelerated corrosion of the concrete. Repair of the Primary Tank Channels is the highest priority and is being conducted in six phases, with the first two phases completed in FY13. In addition to concrete rehabilitation work, butterfly valves and control panels will be replaced. Phases 3 through 6 are scheduled to take place from FY16 through FY22. A condition assessment of the secondary aeration reactor basins was completed in FY11, and repairs will be completed in four phases with the repair of two tanks per year starting in FY21. Rehabilitation of the concrete walls of the secondary clarifiers is scheduled for FY19-20.

The Odor Control Project provides for odor control facilities to improve the air quality in communities along the collection system and at the MWWTP. This project implements improvements that were identified and prioritized in the Odor Control Master Plan. Planned work includes installing an odor monitoring system to improve real-time control and reduce off-site odor potential; replacing the odor control units at the influent pump station in FY16-18; conducting a study of the primary sedimentation basins in FY16, with construction starting in FY17 to cover portions of the primary sedimentation tanks and provide new chemical scrubbers, and, if necessary, cover the remainder of the primary sedimentation tanks after FY20; replacing the wet scrubber system at the solids dewatering building with a chemical scrubber in FY18-19; and replacing the scrubber system at the resource recovery receiving station in FY19-20.

The Treatment Plant Infrastructure Project provides for the cyclical replacement and rehabilitation of various facilities at the MWWTP. Improvements planned for FY16-20 include replacement of large variable frequency drives; replacement of influent screens; repair or



replacement of flow meters; rehabilitation of the ventilation system in the dewatering building; installation of a plant-wide intercom system; upgrades to the laboratory; repairs to the reactor influent piping; rehabilitation of clarifier equipment, upgrade of the security system; replacement of the above-grade drain system for the galleries; and update the MWWTP seismic study.

The Interceptor Rehabilitation program includes several projects to rehabilitate portions of the interceptor system that are approximately 60 years old. In FY14, potential methods for corrosion prevention in the interceptor system were evaluated and existing cathodic protection systems will be rehabilitated in FY18-19. Rehabilitation work on the Alameda Interceptor will be completed in FY16. Construction is underway to rehabilitate the remainder of the 105-inch concrete Wood Street segment of the South Interceptor in Oakland and is scheduled for completion in FY17. Rehabilitation of the 3<sup>rd</sup> Street segment of the South Interceptor is scheduled to take place in FY17-21.

The Power Generation Station Expansion Project expands energy production at the MWWTP from 6.5 to 11 megawatts to make use of increased biogas production due to the Resource Recovery Program. The expansion includes a facility for two 4.5 megawatt turbines. One biogas-powered turbine was installed in FY12. The second turbine is expected to be installed in FY21-23. Reliability improvements to the PGS facility will be made in FY16-19 and include the installation of redundant gas conditioning equipment, replacement of the PGS gas piping, and programming and controls improvements. Also, new flares will be added in two phases. The first phase will be completed in FY16, and the second phase is scheduled for FY21.

The Pump Station Improvements program provides for the upgrade of various pump stations identified in the Pump Station Master Plan Update. Such improvements may include the replacement of mechanical and electrical equipment; sump pumps and flow meters; the addition of programmable logic controllers and software; access improvements; replacement of discharge piping; etc. Work is scheduled to be performed on Pump Station A in Albany in FY17-18, Pump Station M in Alameda in FY18-19, Pump Station C in Alameda in FY18-19, Pump Station L in Oakland in FY19-20, and Pump Station J in Oakland in FY22-23.

The Resource Recovery program was developed to accept a wide variety of solid and liquid wastes delivered by truck to the Main Wastewater Treatment Plant. The five-year plan includes several studies intended to improve operations and expand the program. A nutrient removal study to be completed in FY16 will evaluate the process for removing nitrogen more efficiently. In FY16-17 piping modifications will be made to the feed system for two existing digesters so they may be dedicated for digestion of food waste and other high-strength liquid waste. A dedicated dewatering facility will also be constructed to serve these two digesters. In FY16-18, new facilities to support food waste processing will be constructed including utilities and site improvements for an organics pre-processing facility.

## REGULATORY COMPLIANCE STRATEGY

This strategy furthers the District's objectives to operate and maintain facilities to meet all water discharge, air emission, and land disposal requirements; to ensure protection and stewardship of San Francisco Bay; and implement preventative and corrective maintenance programs. The majority of work under this strategy focuses on modifying an interceptor to manage wet weather flows; and upgrading the monitoring systems, dechlorination facility and Wet Weather facilities. The program included in this strategy is:

Appropriations (\$ Thousands)						
Program	FY16	FY17	FY19	FY19	FY20	Total
Regulatory Compliance Program	7,058	0	1,500	0	0	8,558
<b>Total</b>	<b>7,058</b>	<b>0</b>	<b>1,500</b>	<b>0</b>	<b>0</b>	<b>8,558</b>

### Regulatory Compliance Program

The Infiltration/Inflow Control Project includes work required by the National Pollutant Discharge Elimination System (NPDES) permit, and the 2014 Consent Decree for the District's three wet weather facilities. The work includes implementation of the regional private sewer lateral incentive program; construction of the Urban Runoff Diversion Project to divert dry weather flows for treatment at the Main Wastewater Treatment Plant (MWWTP) in FY16; and an engineering study to evaluate the potential application of Real Time Control systems to improve integration and operation of the interceptor system, wet weather facilities and storage basins, and MWWTP Influent Pump Station in FY18.

The Wet Weather Plant Improvements Project addresses upgrades at the Wet Weather Treatment Facilities (WWF) required to improve operations. Chemical system improvements to the WWFs at Oakport and San Antonio Creek in Oakland were substantially completed in FY15, and instrumentation upgrades at Point Isabel in Richmond are scheduled for FY18.

The North Interceptor Pump Station Q Project (PS Q) involves the design and construction of modifications to a portion of the interceptor system to allow dual operation of PS Q for use as either a gravity relief sewer (north to south flow) or a forcemain (south to north flow). Based on wet weather flow modeling work, discharges from the wet weather facilities may be reduced by operating the PS Q forcemain as a gravity sewer. This work is scheduled for FY16-18.

The Dechlorination Facility Improvements project includes a variety of improvements. In FY16-17, work includes seismic upgrades to the Injector Building, installing a backup Sodium Bisulfite System (SBS) dosing system, and minor modification of the Distributed Control System controls for greater reliability. In FY21-22, work includes automation of the dechlorination process and replacement of the SBS storage tanks.

## NON-PROGRAM SPECIFIC STRATEGY

This strategy furthers the District's objective to maintain a strong financial position to meet short and long-term needs. The contingency program focuses on making funds available for unanticipated needs, and for projects that are seeking grants to pay for a substantial portion of the project's cost.

Appropriations (\$ Thousands)						
Program	FY16	FY17	FY19	FY19	FY20	Total
Contingency Program	1,800	1,000	0	0	0	2,800
<b>Total</b>	<b>1,800</b>	<b>1,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,800</b>

### Contingency Program

The Contingency Project sets aside funds for unanticipated needs which arise before the next budget preparation cycle. Typical examples of such needs include replacement or repairs to facilities and equipment as a result of failures or safety deficiencies, new projects or the acceleration of planned projects requiring funding before the next budget cycle. Funds are also set aside for projects where grants are being sought in the event that the grant application is successful and funding is received. Most grants require the District to fund the project, and then apply for reimbursement of allowable costs. In FY16-17, funds will be placed in contingency for planning, design and construction of improvements to Engineers Road along the southern edge of the MWWTP property, and a new intersection with the realigned Wake Avenue which will be reimbursed by the City of Oakland.

## **Capital Appropriation Summary**

This section provides a summary of the five-year appropriation for the Wastewater System projects listed in the Capital Improvement Program, sorted by strategy and program. When the CIP is presented to the Board of Directors, the Board approves the overall five-year plan, but adopts just the first two years of the plan. The remaining three years are for planning purposes only and are subject to revision.

### **Department Abbreviations**

The abbreviation for the Lead Department responsible for each capital project is as follows:

WAS – Wastewater Department

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (\$ thousands)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
MAINTAINING INFRASTRUCTURE								
WW Infrastructure Program								
3rd St Sewer Interceptor Rehab	WAS	19,102	0	16,898	0	0	0	16,898
Alameda Sewer Intercept Rehab	WAS	6,901	0	0	0	0	0	0
Biosolids Improvements Project	WAS	300	0	0	0	0	0	0
Centrifuge Replacement	WAS	22,403	0	0	0	0	0	0
Concrete Rehab at SD1	WAS	19,569	5,174	200	4,553	150	7,659	17,736
DCS Upgrades	WAS	5,949	2,100	0	0	0	0	2,100
Digester Upgrade	WAS	104,325	7,386	0	0	5,445	50	12,881
Information System Upgrades	WAS	2,210	0	0	0	0	0	0
Interceptor Corrosion Prevent	WAS	7,998	0	0	704	0	0	704
MWWTP Master Plan	WAS	18,268	979	0	0	0	0	979
MWWTP Pwr Dist Sys Upgrade	WAS	13,569	0	0	118	1,553	403	2,074
Motor Control Center Repl	WAS	2,694	0	0	0	0	0	0
North Interceptor Rehab	WAS	0	0	0	0	0	0	0
Odor Control Improvements	WAS	11,599	9,919	0	285	2,445	0	12,649
Outfall Investigation Project	WAS	940	0	0	75	0	0	75
PGS Engine Overhaul	WAS	6,712	250	0	0	0	1,500	1,750
PGS Expansion	WAS	42,036	2,775	4,200	0	0	2,450	9,425
Plant Pipe Replacement	WAS	4,250	0	0	76	300	0	376
Procure Emerg Response Equipmnt	WAS	1,875	0	0	0	0	0	0
Pump Station A Improvements	WAS	0	1,929	0	0	0	0	1,929
Pump Station C Upgrades	WAS	0	1,864	0	0	0	0	1,864
Pump Station J Upgrades	WAS	0	0	0	0	0	0	0
Pump Station L Improvement	WAS	1,490	0	0	0	45	0	45
Pump Station M Imprvmnts	WAS	0	0	0	3,042	0	0	3,042
Resource Recovery Project	WAS	22,288	12,436	0	0	0	0	12,436
Routine Cap Equip Replacement	WAS	21,677	2,400	2,400	2,400	2,400	2,400	12,000
Scum System Improvements	WAS	1,400	0	0	510	0	0	510
So Interceptor Reloc 5th Ave	WAS	210	0	0	0	0	0	0
Treatment Plant Infra Ph 2	WAS	0	677	3,615	720	0	0	5,012
Treatment Plant Infrastructure	WAS	50,392	2,659	1,258	1,655	2,531	1,587	9,690
Vehicle & Equip Additions, WW	WAS	230	105	0	0	0	0	105
WW Energy Management	WAS	2,188	0	12	230	0	0	242
West End Property Development	WAS	1,391	0	0	0	0	0	0
Wood St Sewer Intercept Rehab	WAS	21,014	8,025	0	0	0	0	8,025
WW Infrastructure Program Total		412,979	58,678	28,583	14,368	14,869	16,049	132,547
MAINTAINING INFRASTRUCTURE TOTAL		412,979	58,678	28,583	14,368	14,869	16,049	132,547

Capital Improvement Projects	Dept	Prior Approp	FY16-20 APPROPRIATIONS (\$ thousands)					5 YR TOTAL
			FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	

<b>NON-PROGRAM SPECIFIC</b>								
<b>WW Non-Program Specific</b>								
Contingency Project Wastewater	WAS	15,919	1,800	1,000	0	0	0	2,800
<b>WW Non-Program Specific Total</b>		<b>15,919</b>	<b>1,800</b>	<b>1,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,800</b>
<b>NON-PROGRAM SPECIFIC TOTAL</b>		<b>15,919</b>	<b>1,800</b>	<b>1,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,800</b>

<b>REGULATORY COMPLIANCE</b>								
<b>WW Regulatory Compliance</b>								
Dechlorination Facility Impmts	WAS	2,994	658	0	0	0	0	658
Infiltration/Inflow Contrl Prj	WAS	26,535	0	0	0	0	0	0
NPDES Compliance	WAS	8,594	0	0	50	0	0	50
PS Q FM Dual-Mode Operation	WAS	1,504	6,400	0	0	0	0	6,400
Wet Weather Plant Impmts	WAS	8,022	0	0	1,450	0	0	1,450
<b>WW Regulatory Compliance Total</b>		<b>47,649</b>	<b>7,058</b>	<b>0</b>	<b>1,500</b>	<b>0</b>	<b>0</b>	<b>8,558</b>
<b>REGULATORY COMPLIANCE TOTAL</b>		<b>47,649</b>	<b>7,058</b>	<b>0</b>	<b>1,500</b>	<b>0</b>	<b>0</b>	<b>8,558</b>

APPROPRIATIONS SUMMARY (IN 000'S)						5 YR TOTAL
Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
476,547	67,536	29,583	15,868	14,869	16,049	143,905

## **FIVE-YEAR FINANCIAL FORECAST**

### **SUMMARY**

The five-year financial forecast presents the estimated impact of operations, debt service requirements and reserve balances on rate projections over the five-year period.

This forecast is built upon:

- Adopted District financial policies
- Capital investments in the FY16-FY20 Capital Improvement Program

This forecast identifies a series of rate increases for the Wastewater System based on estimated increases in operating and capital expenditures to maintain current service levels, meet mandated program requirements, and fund increased debt service due to capital expenditures.

Revenues are forecast to increase by 3.7 percent annually over the five-year period to cover the increases in operating expenses and debt service, and maintain a minimum of 1.6 times coverage on revenue bond debt service. Forecasted operating expenses are expected to grow by an average of approximately 4.7 percent per year during the five-year period, and debt service decreases by an average of 0.3 percent per year due to the end of the General Obligation Bond Debt Service in FY19.

The key factors driving the need for increased Wastewater System revenues are:

- Inflation
- Increasing labor and benefits costs

For all five years, the cash reserves exceed the cash reserve targets. Reserves in excess of those needed to meet financial reserve targets are available to pay for a portion of the capital program expenses.

Capital cash flow spending, including administration of capital expenses, is projected at \$168.5 million over the five-year period. Major programs or projects to be undertaken during this period include: 3<sup>rd</sup> Street Sewer Interceptor Rehabilitation (\$32.5 million); Treatment Plant Infrastructure (\$19.1 million); Odor Control Improvements (\$19.1 million); Concrete Rehabilitation (\$14.6 million); and Resource Recovery Project (\$14 million), Digester Upgrades (\$11.8 million).

The projected average percentage of capital funded from debt will be 30.9 percent over the five-year period, lower than the financial policy maximum target of 65 percent. In FY16 and FY17, the debt coverage ratio will be 1.70 and 1.70, respectively, and for FY16 through FY20, the ratio meets or exceeds the targeted coverage rate of 1.6.

## OPERATING BUDGET

The following table shows the financial forecast for the Wastewater System operating budget based on projected operations and maintenance expenses and debt service requirements.

<b>WASTEWATER SYSTEM FUND – OPERATING BUDGET</b> <b>FIVE-YEAR FINANCIAL FORECAST</b> (\$ Millions)							
	Actual FY14	Budget FY15	Forecast				
			FY16	FY17	FY18	FY19	FY20
<b>Beginning Balance</b>	-	-	<b>87.9</b>	<b>71.1</b>	<b>76.3</b>	<b>77.9</b>	<b>80.2</b>
Treatment charges	60.0	66.9	66.9	70.3	74.2	78.4	82.1
Resource Recovery	10.6	6.5	8.0	8.0	8.0	8.0	8.5
Wet Weather Facilities charge	19.4	21.5	21.8	22.9	24.0	25.2	26.3
Property taxes	4.6	4.2	4.3	4.4	4.5	4.6	4.7
Ad Valorem Bond Levy	5.3	4.3	4.0	4.1	3.6	0.0	0.0
Interest income	0.2	0.7	0.4	0.7	1.1	1.2	1.2
Laboratory services	3.9	3.8	3.9	4.0	4.1	4.3	4.4
Reimbursements	1.6	0.9	1.0	1.0	1.1	1.1	1.1
Permit Fees	1.8	1.9	1.8	1.8	1.8	1.8	1.8
Capacity Charge	0.9	1.5	1.5	1.6	1.7	1.8	1.9
All other revenue	6.2	4.6	5.7	5.7	6.1	6.1	6.1
<b>Operating Revenues Total</b>	<b>114.5</b>	<b>116.8</b>	<b>119.3</b>	<b>124.5</b>	<b>130.2</b>	<b>132.5</b>	<b>138.1</b>
Revenue Funded Capital	25.9	30.9	37.0	14.6	19.9	22.0	23.0
Operations	59.7	63.4	65.4	70.7	73.4	75.9	78.6
Debt service	33.1	34.3	33.7	34.0	35.3	32.3	33.3
<b>Expenses Total</b>	<b>118.7</b>	<b>128.6</b>	<b>136.1</b>	<b>119.3</b>	<b>128.6</b>	<b>130.2</b>	<b>134.9</b>
<b>Ending Balance</b>	-	-	<b>71.1</b>	<b>76.3</b>	<b>77.9</b>	<b>80.2</b>	<b>83.4</b>
Policy Reserves	-	-	34.8	38.7	39.6	41.9	43.9

The following table shows the key assumptions used to create the revenue forecast.

<b>WASTEWATER SYSTEM FUND – KEY ASSUMPTIONS</b> <b>FIVE-YEAR FINANCIAL FORECAST</b>							
	Actual FY14	Budget FY15	Forecast				
			FY16	FY17	FY18	FY19	FY20
% Rate Increase	9.0%	8.5%	5.0%	5.0%	5.0%	5.0%	4.0%
Debt Service Coverage	1.60	1.69	1.70	1.70	1.72	1.79	1.83
Average monthly single family residential bill (\$) based on 10 ccf/month	\$17.79	\$19.25	\$19.01	\$19.93	\$20.93	\$21.97	\$22.85

Based on a Cost of Service study conducted in the past year, FY16 will see a slight reduction in the wastewater treatment charge for single family residential (SFR) customers. The study found that an increase in strength, but a decrease in flow results in a net decrease to SFR customer bills and an increase to other customer bills.



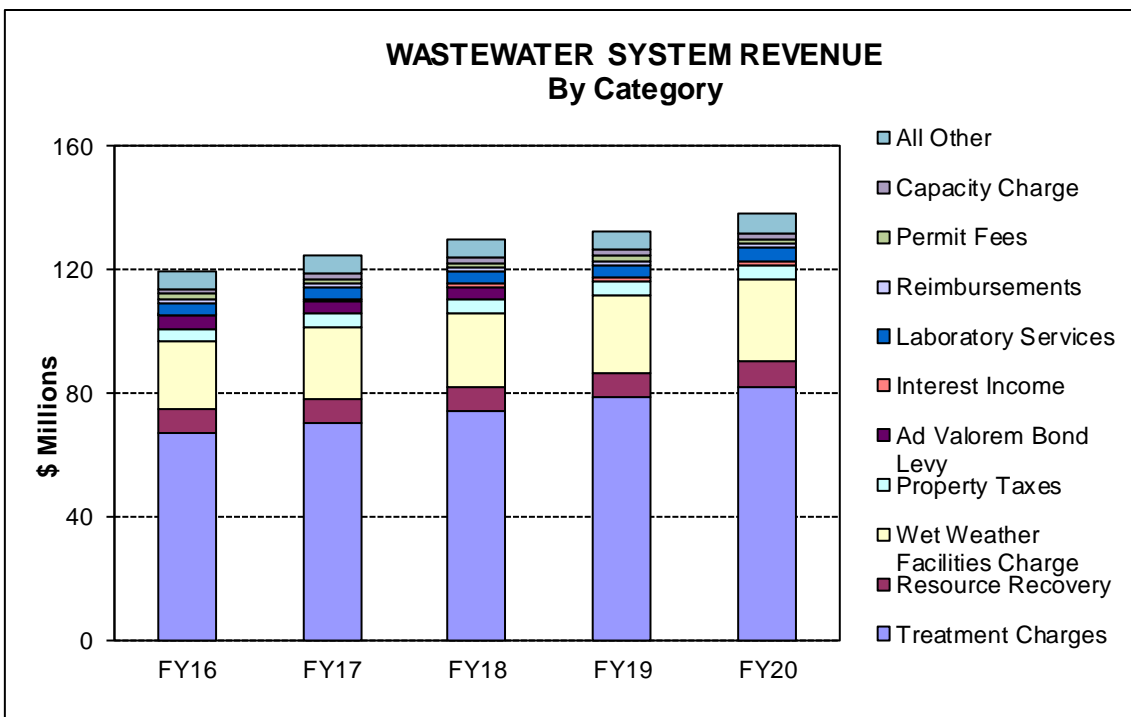
## Five Year Projection of Revenues

The key factors driving the need for increased Wastewater System revenues are: inflation, increasing labor and budget costs, projected reductions in treatment revenue due to the drought, and increasing capital expenditures.

Projected annual operating revenues are expected to increase from \$119.3 million in FY16 to \$138.1 million by FY20, an increase of \$18.8 million or 15.8 percent. The increase in revenue over the five-year period is to cover increased costs in operations and maintenance costs, debt service requirements, and revenue funding for capital projects.

The major components of the increase in operating revenue during the five-year period are wastewater treatment charges which are projected to increase from \$66.9 million in FY16 to \$82.1 million in FY20 and increases in revenue from the wet weather facilities charge from \$21.8 million in FY16 to \$26.3 million in FY20.

The following chart shows projected Wastewater System operating revenues by category for the next five years.



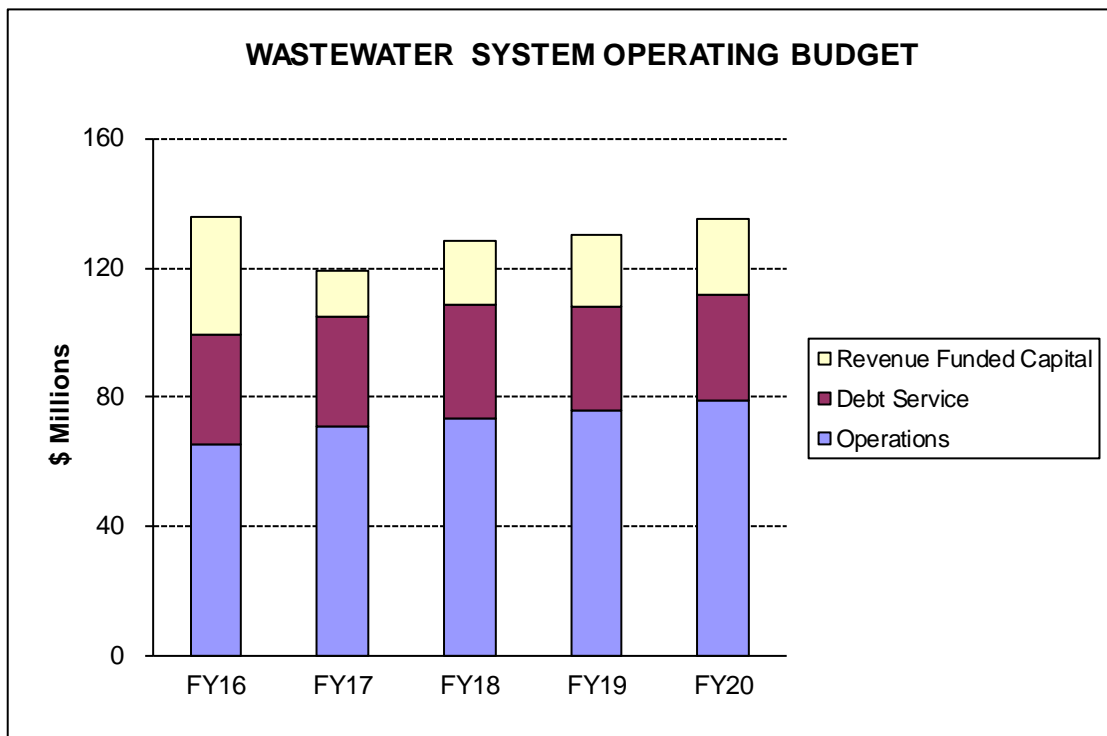
## Five Year Projection of Operating Budget

The Wastewater System operations expenses are projected to increase from \$65.4 million in FY16 to \$78.6 million in FY20, an increase of 4.7 percent per year.

Debt service requirements are expected to decrease from \$33.7 million in FY16 to \$33.3 million by FY20, a 0.3 percent decrease annually because of the retirement of the General Obligation bond in FY19.

The District uses its rate revenue to cash fund a portion of its annual capital improvement expenses. The amount of revenue funded capital will decrease from \$37.0 million in FY16 to \$23.0 million in FY20, a decrease of 38 percent. However, the percentage of debt of funding will be 30.9 percent during the period, well below the policy target maximum of 65 percent.

This chart summarizes projected Wastewater System expenditures by category for the next five years.



## Five Year Projection of Reserves

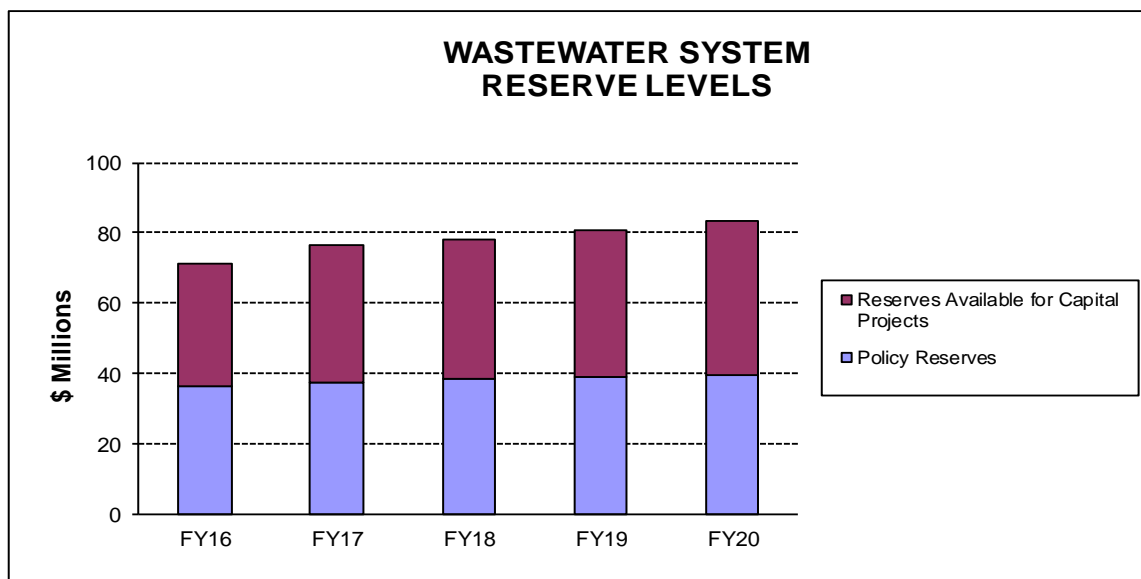
The operating reserves consist of:

- Working capital reserves equal to three months operating and maintenance expenses
- Self insurance reserves at 1.25 times the expected annual expenditures
- Workers' compensation reserves of \$3.2 million in FY16 and \$3.2 million in FY17
- Contingency/rate stabilization reserve of a minimum of 5 percent of operating and maintenance expenses.

The table below shows the changes to reserve components over the five-year period. Reserve balances meet or exceed the policy reserve levels for the entire period.

<b>WASTEWATER SYSTEM RESERVE COMPONENTS</b> (\$ Millions)					
	Forecast				
	FY16	FY17	FY18	FY19	FY20
<b>Projected Operating Budget Reserves</b>	<b>71.1</b>	<b>76.3</b>	<b>77.9</b>	<b>80.2</b>	<b>83.4</b>
<b>Policy Reserves</b>					
Working Capital	16.4	17.7	18.4	19.0	19.7
Self Insurance Reserve	1.7	1.7	1.7	1.7	1.7
Workers' Compensation Reserves	0.6	0.6	0.6	0.6	0.6
Contingency and Rate Stabilization	<u>17.6</u>	<u>17.6</u>	<u>17.6</u>	<u>17.6</u>	<u>17.6</u>
<b>Total Policy Reserves</b>	<b>36.3</b>	<b>37.6</b>	<b>38.3</b>	<b>38.9</b>	<b>39.6</b>
<b>Reserves Available for Capital Projects</b>	<b>34.8</b>	<b>38.7</b>	<b>39.6</b>	<b>41.9</b>	<b>43.9</b>

The following chart shows Wastewater System reserve levels projected at the end of each of the next five years.



## **CAPITAL INVESTMENTS AND FINANCING**

The Five-Year Capital Improvement Program (CIP) outlines the Wastewater System capital investment plan for the next five-year period, the estimated cost of these investments and the sources of funds. Appropriations reflect the amount that is authorized and budgeted over a multi-year period for each program. Cash flows are the amounts estimated to be spent on each program in a given year. The five-year program for the Wastewater System includes \$159.5 million in capital project appropriations, including administration of capital expenses, and \$168.5 million in projected cash flow spending.

The focus of the CIP is the five-year period from FY16-20. Capital needs have been estimated for a second five-year period from FY21-25, but given the long-term nature of these capital improvement plans, by necessity they are preliminary estimates only and will be revised as studies are completed, priorities are redefined, and as new needs emerge. Therefore, the budget focuses on the first five years of the CIP.

The largest portion of the capital resources is being directed to maintaining the District's infrastructure. In the FY16-20 CIP, 92 percent of the Wastewater System's project appropriations will be for work in this program area to implement preventative and corrective maintenance programs, and to maintain and improve the infrastructure. The majority of this work will focus on rehabilitating and making improvements to the infrastructure, concrete facilities at the Main Wastewater Treatment Plant, and various sewer interceptors.

Funding for these projects is drawn from the proceeds of revenue bond issues, commercial paper, grants, and current reserves and revenues.

For the FY16-20 CIP, an increasing amount of capital expenditures will be funded on a pay-as-you-go basis in accordance with the District's financial policies. Over the five-year period, the percentage of capital funded from debt will average 31 percent, which is less than the target maximum of 65 percent contained in the District's debt policy, and debt service will drop by \$0.4 million as the general obligation bonds are paid off by FY19. Wastewater System total outstanding debt will decrease by \$7 million during the period. Total debt outstanding at the end of the five-year period will total \$416 million.

In FY16 and FY17, the debt coverage ratio will be 1.70 and 1.70, respectively, and for FY18 through FY20, the ratio meets or exceeds the targeted coverage rate of 1.60.

The following table shows the cash flow spending on capital improvements anticipated for the next five years, along with the financial resources anticipated to fund the capital program.

<b>WASTEWATER SYSTEM FUND - CAPITAL BUDGET</b> <b>FIVE-YEAR FINANCIAL FORECAST</b> (\$ Millions)						
	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>Totals</u>
<b>Beginning Balance</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-</b>
<b>Resources:</b>						
Commercial Paper Issues	0	0	0	0	0	0
New Bond Proceeds	2.0	22.1	15.2	8.8	3.9	52.0
Grants and Loans Proceeds	0	0	0	0	0	0
Reimbursements	0	0	0	0	0	0
Revenue Funded Capital	<u>37.0</u>	<u>14.6</u>	<u>19.9</u>	<u>22.0</u>	<u>23.0</u>	<u>116.5</u>
<b>Total Resources</b>	<b>39.0</b>	<b>36.7</b>	<b>35.1</b>	<b>30.8</b>	<b>26.9</b>	<b>168.5</b>
<b>Expenditures:</b>						
Capital Cash Flow (discounted)	36.0	33.7	32.0	27.6	23.6	152.9
Administration of Capital	<u>3.0</u>	<u>3.0</u>	<u>3.1</u>	<u>3.2</u>	<u>3.3</u>	<u>15.6</u>
<b>Total Expenditures</b>	<b>39.0</b>	<b>36.7</b>	<b>35.1</b>	<b>30.8</b>	<b>26.9</b>	<b>168.5</b>
<b>Ending Balance</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-</b>
<b>Debt Percentage of Funding</b>	<b>5.1%</b>	<b>60.2%</b>	<b>43.3%</b>	<b>28.6%</b>	<b>14.5%</b>	<b>30.9%</b>

Projected new bond issues, outstanding debt, and debt service are shown in the following table:

<b>DEBT OUTSTANDING AND DEBT SERVICE AT END OF FISCAL YEAR</b> (\$ Millions)					
	<b>Forecast</b>				
	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>
Beginning of Year Outstanding Debt	423.9	412.9	422.7	424.9	423.2
Debt Retired	13.0	13.7	13.8	10.7	11.2
New Bond Issues and Commercial Paper	<u>2.0</u>	<u>23.5</u>	<u>16.0</u>	<u>9.0</u>	<u>4.0</u>
<b>Total Outstanding Debt</b>	<b>412.9</b>	<b>422.7</b>	<b>424.9</b>	<b>423.2</b>	<b>416.0</b>
Debt Service, Existing Debt	33.2	33.5	33.1	29.5	29.4
Debt Service, New Debt	0.1	0.1	1.8	2.4	3.5
Debt Servicing Costs	<u>0.4</u>	<u>0.4</u>	<u>0.4</u>	<u>0.4</u>	<u>0.4</u>
<b>Total Debt Service</b>	<b>33.7</b>	<b>34.0</b>	<b>35.3</b>	<b>32.3</b>	<b>33.3</b>