

Memorandum



CITY OF DALLAS

DATE January 15, 2016

TO Members of the Budget, Finance & Audit Committee: Jennifer S. Gates (Chair), Philip T. Kingston (Vice Chair), Erik Wilson, Rickey D. Callahan, Scott Griggs, Lee M. Kleinman

SUBJECT Dallas Water Utilities: Enterprise Fund Overview

On January 19, 2016 the Budget, Finance and Audit Committee will be briefed on Dallas Water Utilities: Enterprise Fund Overview. The briefing is attached for your review.

Please let me know if you need additional information.

A handwritten signature in black ink, appearing to read 'Mark McDaniel'.

Mark McDaniel
Assistant City Manager

Attachment

c: Honorable Mayor and Members of City Council
A.C. Gonzalez, City Manager
Warren M.S. Ernst, City Attorney
Rosa A. Rios, City Secretary
Craig D. Kinton, City Auditor
Daniel F. Solis, Administrative Judge
Ryan S. Evans, First Assistant City Manager

Jill A. Jordan, P.E., Assistant City Manager
Joey Zapata, Assistant City Manager
Eric D. Campbell, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Sana Syed, Public Information Officer
Elsa Cantu, Assistant to the City Manager

Dallas Water Utilities: Enterprise Fund Overview

Budget, Finance & Audit Committee
January 19, 2016



Purpose

This briefing provides an overview of City of Dallas Water Utilities

Outline

- Background
- Services Provided
- Cost to Deliver Services
- Capital Improvement Program
- Appendix
 - Business Plan Objectives
 - Debt Service
 - Trends
 - Forecast
 - Key Focus Areas

Background

Establishment of City of Dallas Water Utilities – Enterprise Fund

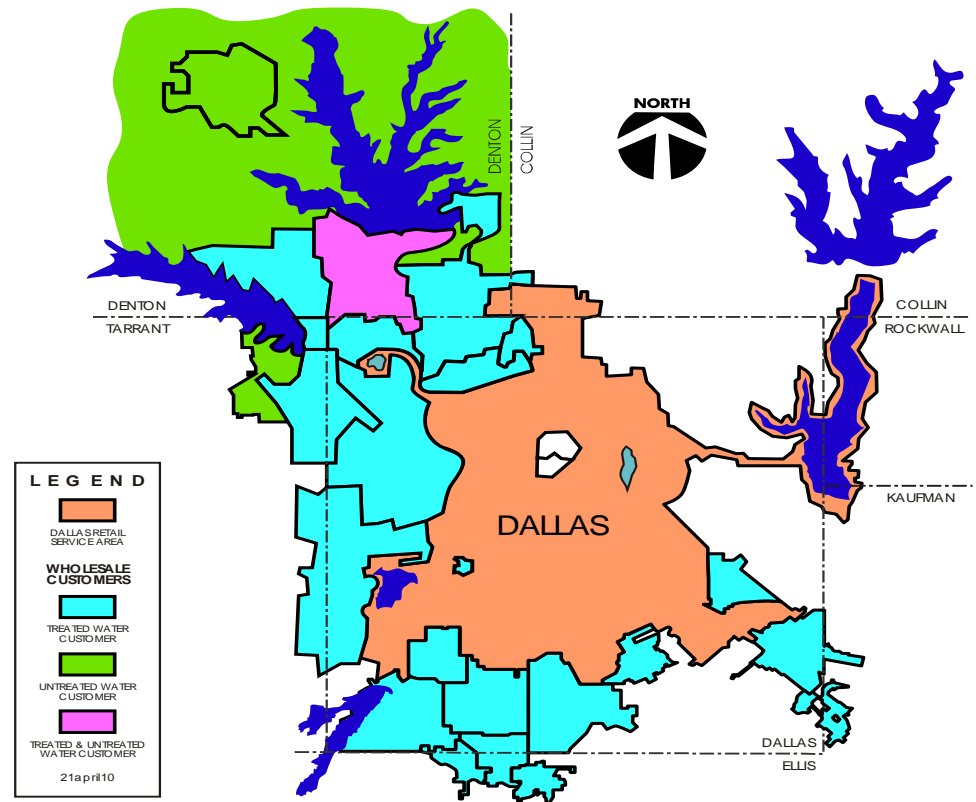
- Water Supply Company was founded in 1881
- Dallas City Charter, Chapter II, Section 34, Powers of the City provides for the right to erect, own, maintain and operate a waterworks and sanitary sewer system, or any part thereof, for the use of the city and its inhabitants, and to regulate such system
- In 1882 Dallas City Council voted that a separate water fund be established and that Water Department funds be separated from the General Fund
- The ordinance established the Department as a non-profit corporation within the City structure, and is still in place today

Dallas Water Utilities Revenues

- The department is owned and operated by the City of Dallas, and is self-supporting through the sale of water and wastewater services
- The Dallas City Charter provides in Chapter XI, Section 14 that all water and wastewater costs shall be paid for from customer services revenues
- DWU's budget is completely funded through the rates charged for water and wastewater services provided to customers. Rates are based on the cost of providing the services

Dallas: A Regional Water Supplier for Over 75 Years

- Under the Texas Constitution and State law, all surface water is owned by the State of Texas
- Dallas' 1959 Long Range Water Supply Plan was updated in 1975, 1989, 2000, 2005 and 2014
 - The 1959 study recommended that Dallas supply water to surrounding cities
- Dallas has been granted extensive water rights by the State in return for its promise to serve a defined area approved by Council and included in the State water plan which includes customer cities

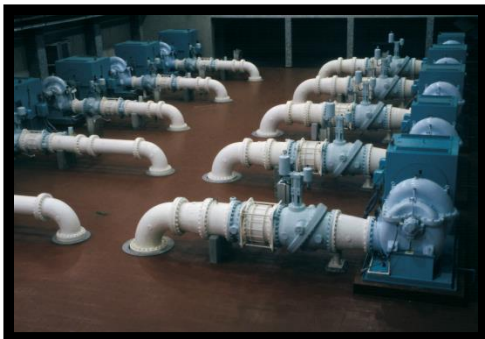


Services Provided

DWU's FY2015-16 Budget Includes the Following Services

- 151.5 BG of water treated and delivered
- 60.0 BG of wastewater treated
- Capital Improvement Program of \$219.3M
- Continuation of plant improvements at Eastside Water Treatment Plant and replacement of aged water and wastewater mains
- Meets all State and Federal water and wastewater quality requirements
- Meets all Financial Management Performance Criteria (FMPC)
 - Based on year end forecast for FY15's revenues and expenses
 - Maximum Year coverage for FY16 is 1.78
 - Maximum Year coverage against Prior Year Revenues is 1.30

Services Provided by Dallas Water Utilities



• Water Production and Delivery

- Provide high quality potable water that meets all State and Federal regulatory requirements
- Provide drinking water and fire protection to over 2.4 million in the City of Dallas, 23 customer cities and DFW Airport
- 24/7 operations and maintenance of:
 - 7 reservoirs, (6 connected)
 - 3 water treatment plants with a combined capacity of 900 MGD
 - 23 pump stations
 - 9 elevated and 12 ground storage tanks
- Maintain approximately 4,925 miles of water mains in the distribution system
- Value of water assets \$3.2 Billion

Services Provided by Dallas Water Utilities



• Wastewater Collection and Treatment

- Provide wastewater collection, transport, treatment and discharge to meet Federal and State regulatory requirements
- Provide wastewater service for over 2.1 million customers in the City of Dallas and 11 wholesale customer cities
- 24/7 operations and maintenance of:
 - Two wastewater treatment plants with a combined capacity of 260 MGD
 - 15 wastewater lift stations
- Maintain approximately 4,017 miles of wastewater mains in the sanitary sewer system
- Value of wastewater assets \$2.0 Billion

Services Provided by Dallas Water Utilities



• Customer Account and Planning Services

- Maintain adequate water supply to meet projected demands
- Provide planning, design and construction of capital projects to assure adequate and appropriate improvements within the water and wastewater systems
- Provide monthly meter reading, billing and account maintenance service for over 300,000 customer accounts
- Ensure accurate accountability of funds and prudent management of the department's financial resources
- In addition to water and wastewater operations, DWU manages Vital Statistics and Special Collections Divisions
- Conducts retail and wholesale cost of service studies and rate development ensuring that the City of Dallas is properly reimbursed for services provided by developing and monitoring the annual operating and capital budgets
- DWU collects revenues totaling \$850 M each year

Cost to Deliver Services

Operating & Capital Budgets

Dallas Water Utilities Budget Focus



- Costs are driven by infrastructure requirements for both renewal and growth
- Continues the focus on maintaining infrastructure and conserving resources through:
 - Water and wastewater systems maintenance/replacement
 - Annual replacement of aged water and wastewater mains
 - Pro-active detection of water system leaks
 - Water conservation efforts
 - Continual evaluation of trends in costs such as power, fuel, and chemicals
 - Implementation of the Integrated Pipeline Project
 - Implementation of master plan and major maintenance recommendations for capital improvements program (CIP)



Water System Efficiencies

- Well-run utilities maintain their infrastructure through proper levels of inspection, repair and replacement
- Three pronged effort to actively manage water distribution system
 - Leak detection
 - Main break and service repairs
 - Main replacement
- Accurate measurement of water delivered
 - Meter testing
 - Meter repair
 - Meter replacement

Major Maintenance Initiatives

- Leak Detection Program
 - System surveyed every 2.5 years by 8 leak detection crews
 - Since FY05 inception
 - Surveyed 27,144 miles of pipeline
 - Located 2,759 unknown leaks
 - Saved an estimated 3.5BG
- Wastewater Mains
 - Increased large wastewater main assessment and replacement program
 - Clean 38.5% of system annually
 - Television inspection of 5.7% of system annually
 - “Cease the Grease” public outreach initiative aimed at reducing Fats, Oil and Grease related Sanitary Sewer Overflows



Water/Wastewater Main Replacement Program

- Dallas Water Utilities has approximately 4,925 miles of water pipelines and 4,017 miles of wastewater mains
- Pipe size, type of pipe material, soil condition, break frequency, regulatory requirements, system overflows, and system demands are used in the replacement process
- Once identified, the pipe segments are prioritized and placed in the pipeline inventory database for replacement
- Annual planned main replacements in FY16 is 75 miles



Meter Maintenance Program



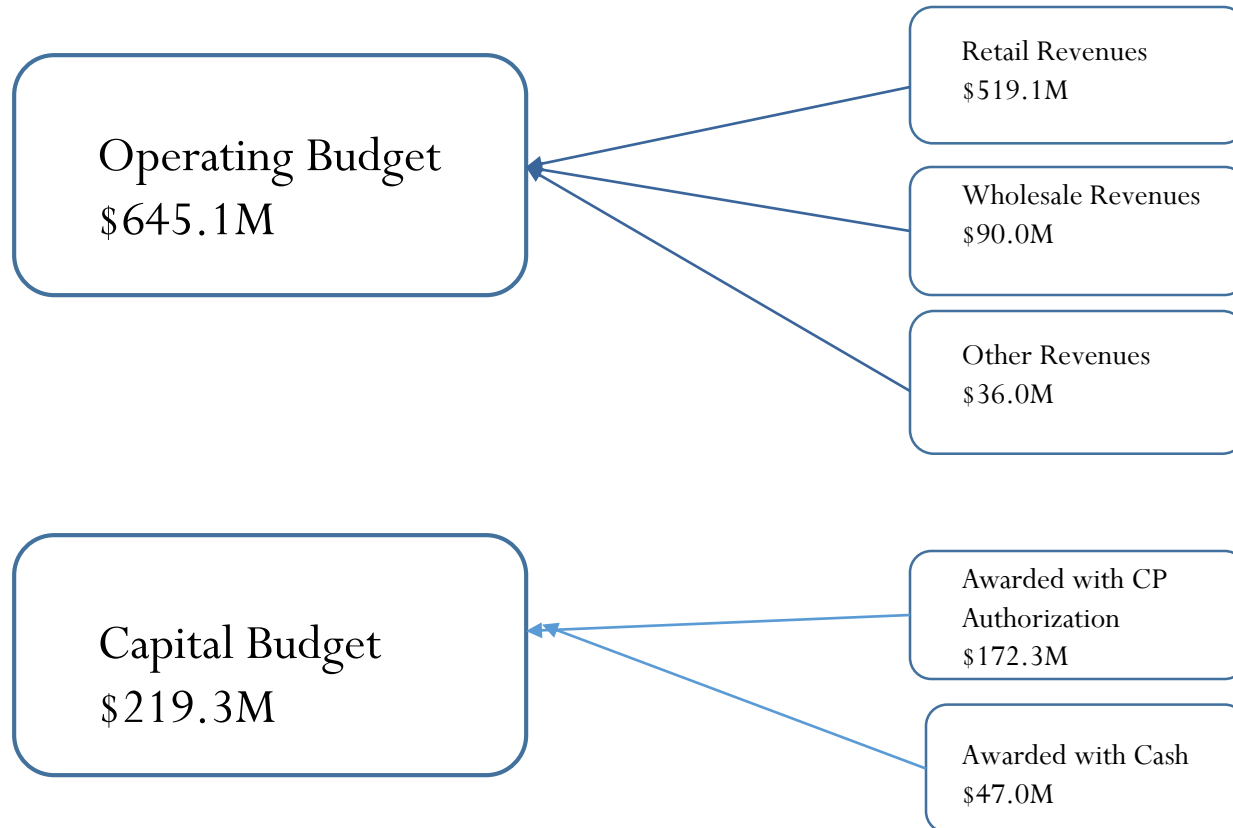
- Meter maintenance program has
 - Eight two-man crews working on large meters
 - 65 employees work on small meters
- FY 2015 Metrics
 - 29,251 total meters exchanged
 - Tested 1,563 large meters
 - Exceeds two-year test goal
- Goal to replace meters every 10 to 15 years
- Three year master agreement awarded by Council on Dec 9, 2015 provides the opportunity to expand advanced meter reading capabilities

Rehabilitation Focus Shows Results

- Goals and Benefits
 - Efficient use of water supply
 - Recovers production capacity and costs
 - Reduced liability and damage to property
 - Improved environmental quality
- Unaccounted For Water was 7.37% for FY14 and 9.35% for FY15 with an industry goal of 10% or less
- Since 2001 DWU has achieved the following:
 - Percent of system older than 50 years has been reduced from 48% to 42%
 - Main breaks per mile has decreased from 0.6 to 0.3
- Sanitary sewer overflows per 100 miles of main are 3.0% compared to the national average of 6.2%

FY16 Budgets and Funding Sources

(in millions)

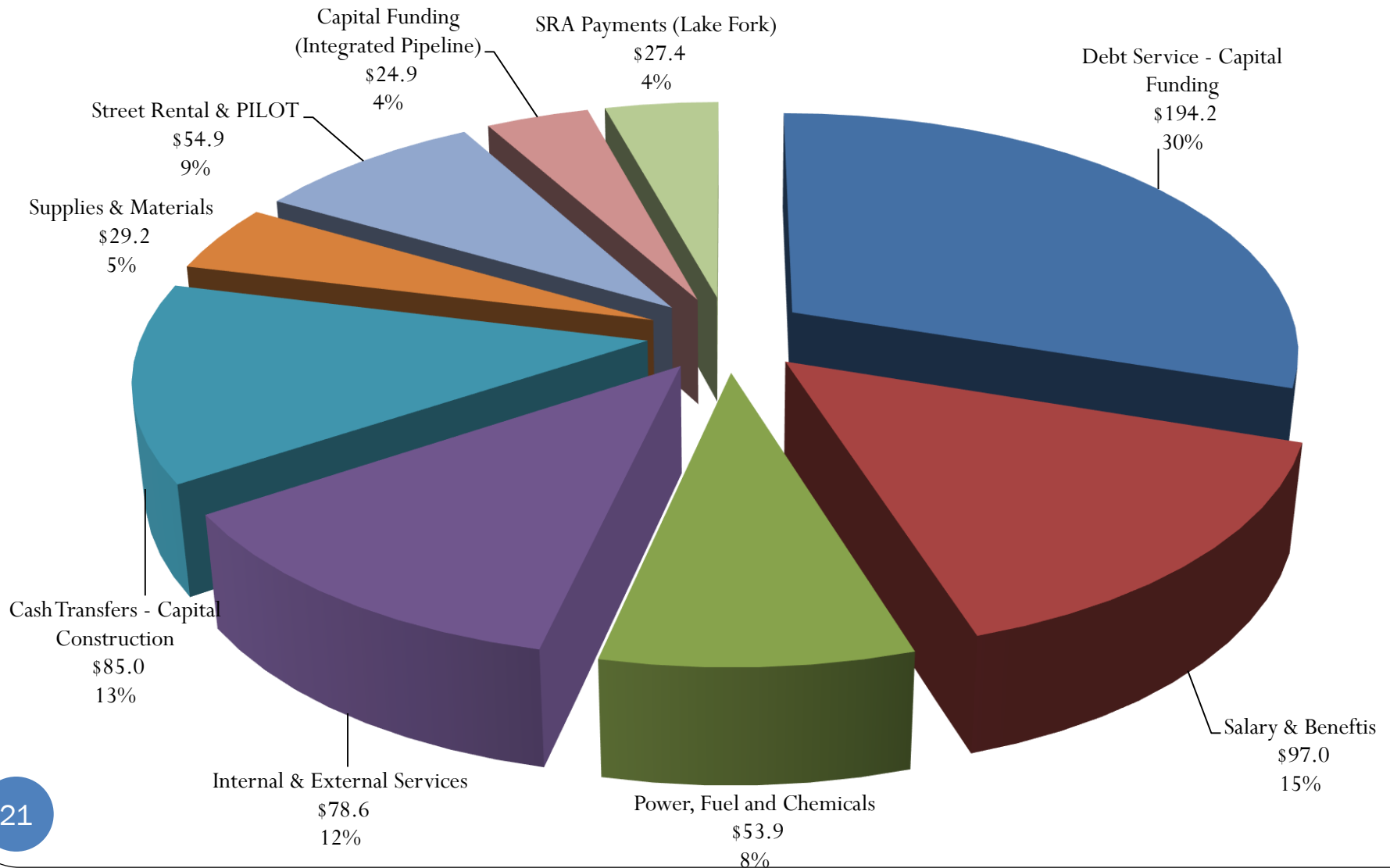


Total Budgets
\$864.4M

Total Funding Sources
\$864.4M

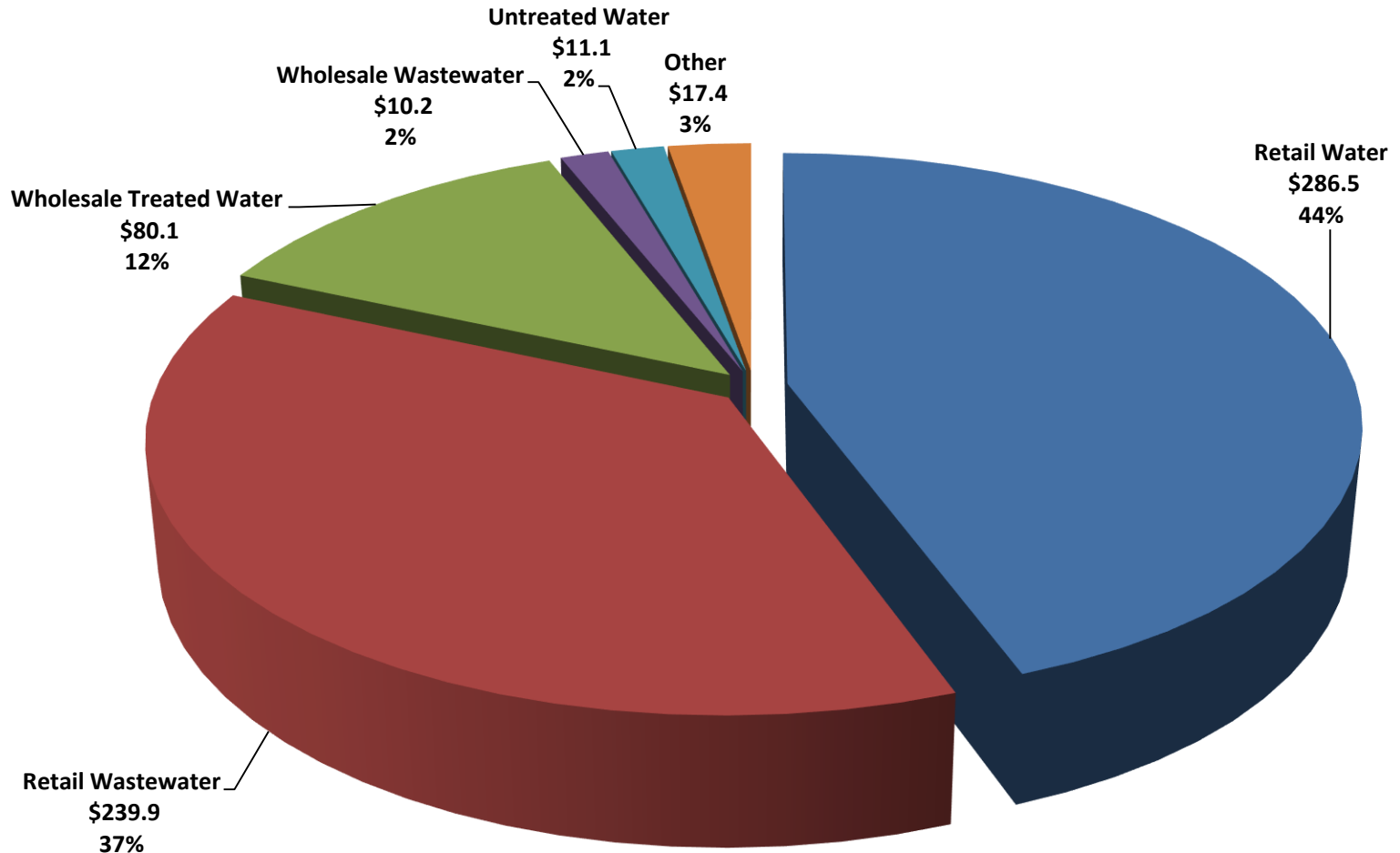
Major Components of FY16 Operating Budget

(in millions)



Sources of FY16 Operating Budget Revenues

(in millions)



Retail – Inside City Customers

Wholesale – Outside City Customers

Other includes late fees, interest income, contributions, etc.

Impact of Proposed FY16 Rate Adjustment to Residential Water and Sewer Bills

Customer Usage in Range	Average Bill at Current Rates	Proposed Average Rates	Proposed Increase	% Increase	Number of Customers Impacted	% of Customers in Range
0 to 4,000 gallons	\$23.75	\$24.83	\$1.08 ^a	4.6%	80,127	33.8%
4,001 to 10,000 gallons	\$53.93	\$56.56	\$2.63 ^b	4.9%	97,782	41.2%
10,001 to 15,000 gallons	\$79.73	\$83.81	\$4.08 ^c	5.1%	27,145	11.4%
Above 15,000 gallons (Includes conservation tier rate)	\$199.29	\$212.03	\$12.74 ^d	6.4%	<u>32,207</u>	<u>13.6%</u>
Total					237,261	100.0%

Data based on January 2014 through December 2014 usage

^a Average water and sewer use: 2,137 gallons

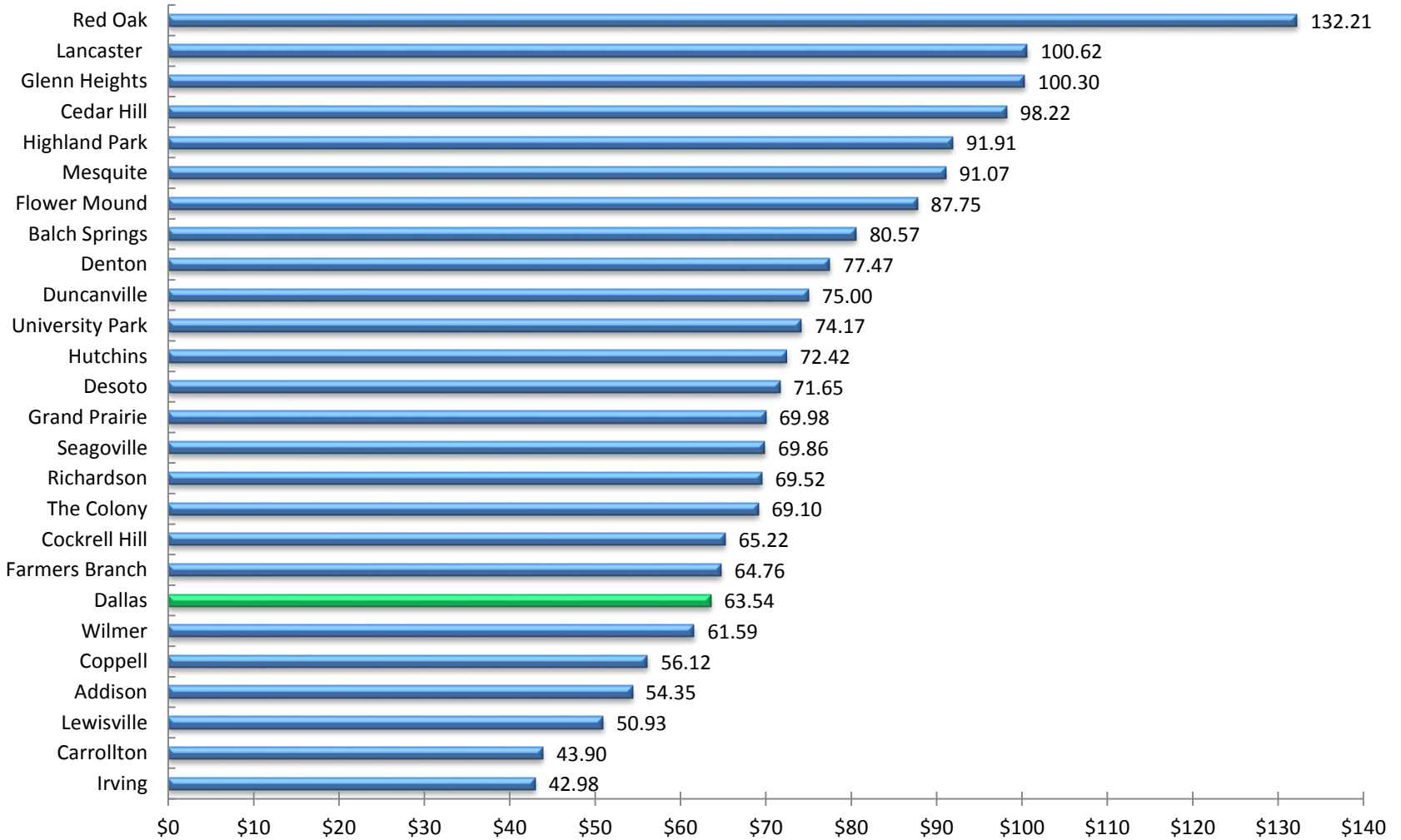
^b Average water use 6,608 gallons and sewer use: 5,500 gallons

^c Average water use 12,275 gallons and sewer use: 5,500 gallons

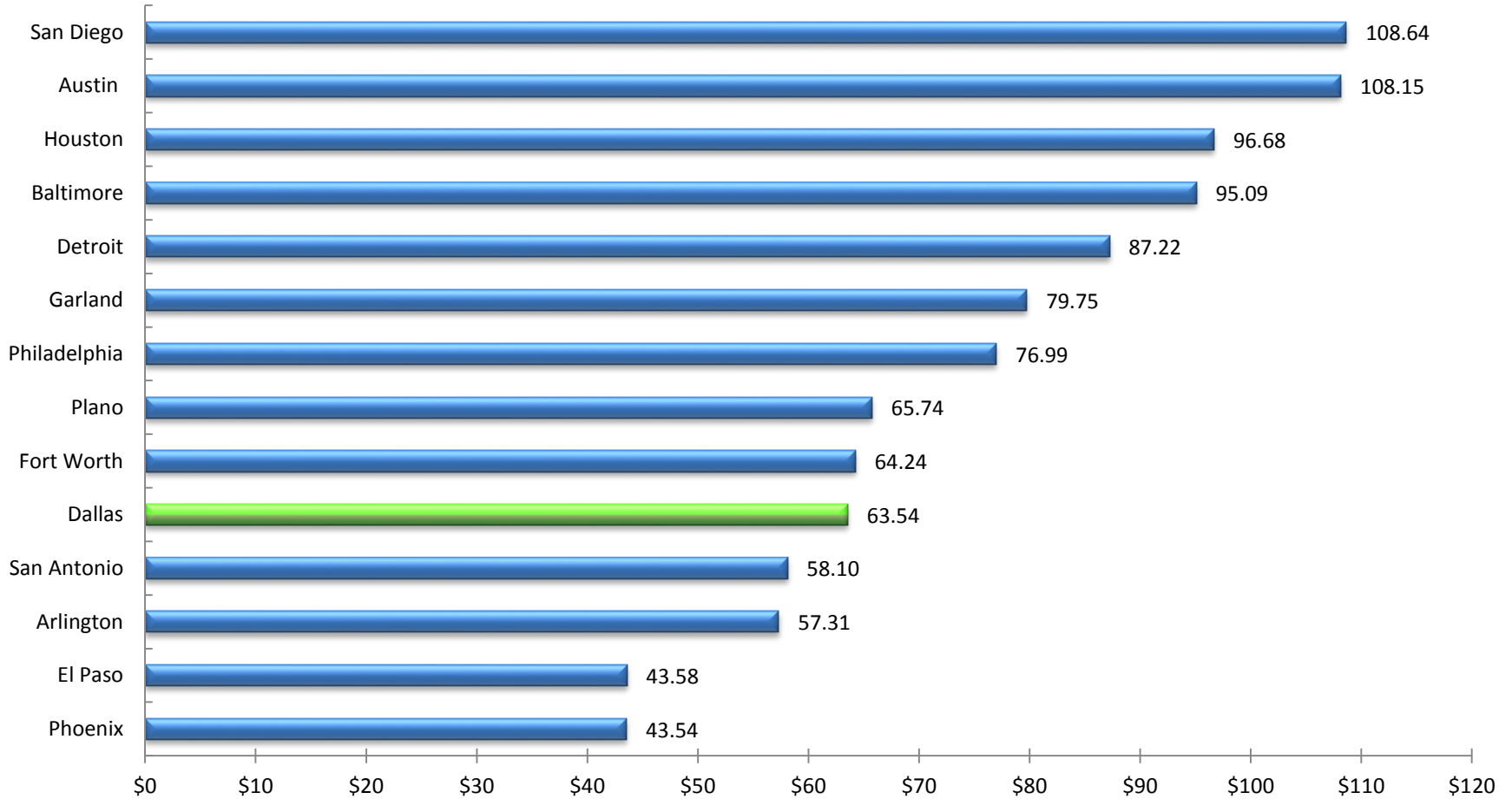
^d Average water use 28,709 gallons and sewer use: 5,500 gallons

While the typical monthly residential water and sewer bill has increased an average of 4.5% a year since FY07, the impact varies by rate tier as shown above.

Average Monthly Water & Wastewater Residential Bills
Dallas Rates Compared to Customer Cities
 (Based on 5/8" Meter; 8300 Gallons/Month; 5,500 Gallons Winter Month Average)



Average Monthly Water & Wastewater Residential Bills
Dallas, Index and Selected Cities
(Based on 5/8" Meter; 8,300 Gallons/Month; 5,500 Gallons Winter Month Average)



Capital Improvement Program

Capital Program Development



- Utilizes 10 year capital improvement program (CIP) supported by system master planning to prioritize and schedule projects
 - 10Year CIP used to facilitate timely, efficient, economical operation of the City's water and wastewater system
 - Enables the Department to focus its efforts so that available resources can provide a safe, dependable water supply which meets demand levels and regulatory requirements
 - Enables the Department to provide advance level wastewater treatment in the most cost effective manner while adhering to all state and Federal regulations
- Council approves Capital Program funding annually as part of the budget process
- Capital Program is typically funded by a combination of cash and debt

FY2015-16 Major Capital Projects

- W & WW Pipeline Replacement and Pump Station Program
 - Renewal of aging assets that are beyond or nearing their life expectancy for improved reliability
 - Improvement projects in support of development and sustainable growth
 - East Side and Elm Fork WTP Improvements
 - Process change at treatment facilities to enhance treated water quality and meet regulatory requirements as it relates to the chemical and biological stability of the treated water
 - Replacement of equipment and chemical feed facilities to realize savings in power and chemical use
 - Renewal of aging infrastructure for improved reliability
 - Central and Southside WWTP Improvements
 - Process improvements to meet regulatory requirements
 - Renewal and/or replacement of aging infrastructure for improved reliability
 - Replacement of equipment and automation improvements to realize savings in power and chemical use
 - CIP includes
 - Rehab and Replacement \$164.4M
 - Growth \$19.9M
 - Regulatory \$35.0M
- \$219.3M

Funding Process for the Capital Budget

- The Water Utilities utilizes cash and short-term financing in the form of commercial paper to fund capital improvement projects
- Once a project is awarded, as invoices are received, commercial paper is actually borrowed or drawn down
 - Awards for projects in one fiscal year will have an expense impact to debt in the next year
- Revenue bond sales occur to retire outstanding commercial paper
- A revenue bond sale of \$125.0M is planned in FY2016 to retire \$125.0M of commercial paper.
 - The budget also includes \$2.6M for commercial paper fees and \$1.0M in commercial paper interest costs

Funding for the Capital Budget

- Commercial Paper (CP)
 - Short term debt
 - Majority of funding for projects with > 30 year life
 - Similar to a line of credit
 - Provides flexibility with funding available as needed for projects up to a pre-established ceiling
 - Two programs available for a total of \$600
- Revenue Bonds
 - Typically issued annually
 - 30 year term
 - Generally used to retire CP borrowed
 - Can be used to award CIP projects
 - Revenue bond sales approved by City Council
- Cash Funding
 - 20% of Capital Program is funded with cash (FMPC)
 - Subject to revenue availability

Summary

A decorative graphic of a water splash in shades of blue, positioned behind the title and extending across the top of the slide.

- City of Dallas Water Utilities is a non-profit enterprise department owned and operated by the City of Dallas
- DWU is a regional provider of water and wastewater services for 2.4 million people in Dallas and 27 nearby communities
- DWU provides planning, design and construction of capital projects to assure adequate and appropriate improvements within the water and wastewater systems to meet future demands and regulatory requirements
- DWU's operating and capital expenses are completely funded through the rates charged for water and wastewater services provided to customers. Rates are based on the cost of providing the services.
- DWU keeps a focus on maintaining infrastructure and conserving resources while planning for the future

APPENDIX

Business Plan Objectives

Debt Service

Trends

Forecast

Key Focus Areas

Business Plan Objectives

Key Objectives for FY2017-2020

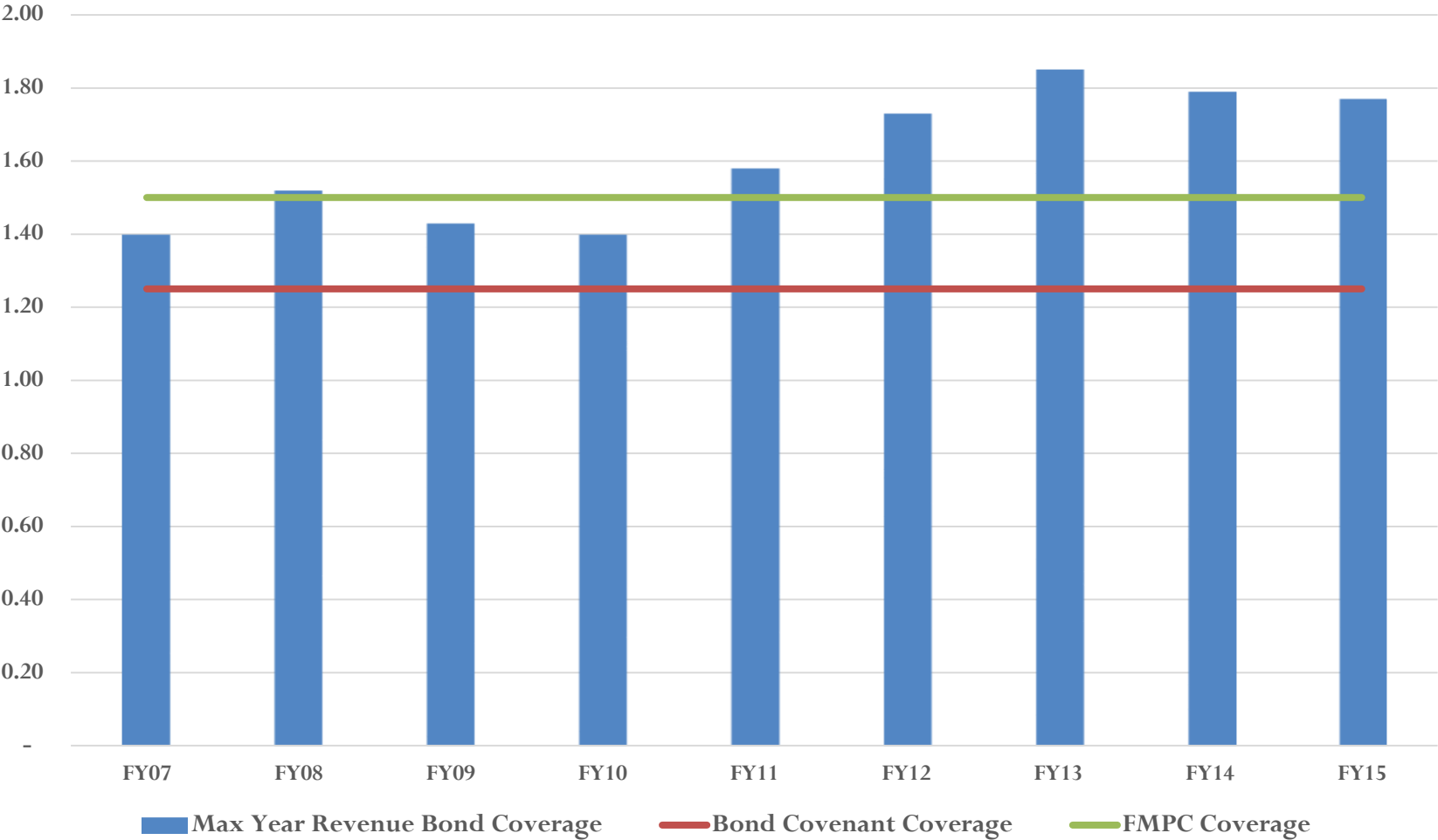
- Continue strategic planning effort throughout DWU
 - Develop implementation plan for the 2014 Long Range Water Supply Plan
 - Review status/progress of Wastewater Collection and Distribution system master plans
 - Continue water conservation efforts by implementation of the Water Conservation Work Plan
- Improve technology tools to support DWU initiatives
 - Develop implementation schedule for the Business Technology Master Plan
 - Develop project plan for DWU work order management system
 - Replace obsolete personal computers (PC Refresh Program)
- Review impact of growth in long term debt
 - Utilize options for state funding of capital projects
- Improve overall revenue recovery versus budget in light of climate variations
 - Evaluate and update rate model
 - Evaluate revenue recovery of fixed versus variable costs
- Reduce time to on board an employee
 - Participate in City wide internal review of hiring process
- Improve the processes associated with meter reading and customer data availability
 - Create project cost benefit of extending the existing Automated Meter Reading (AMR) program

Debt Service

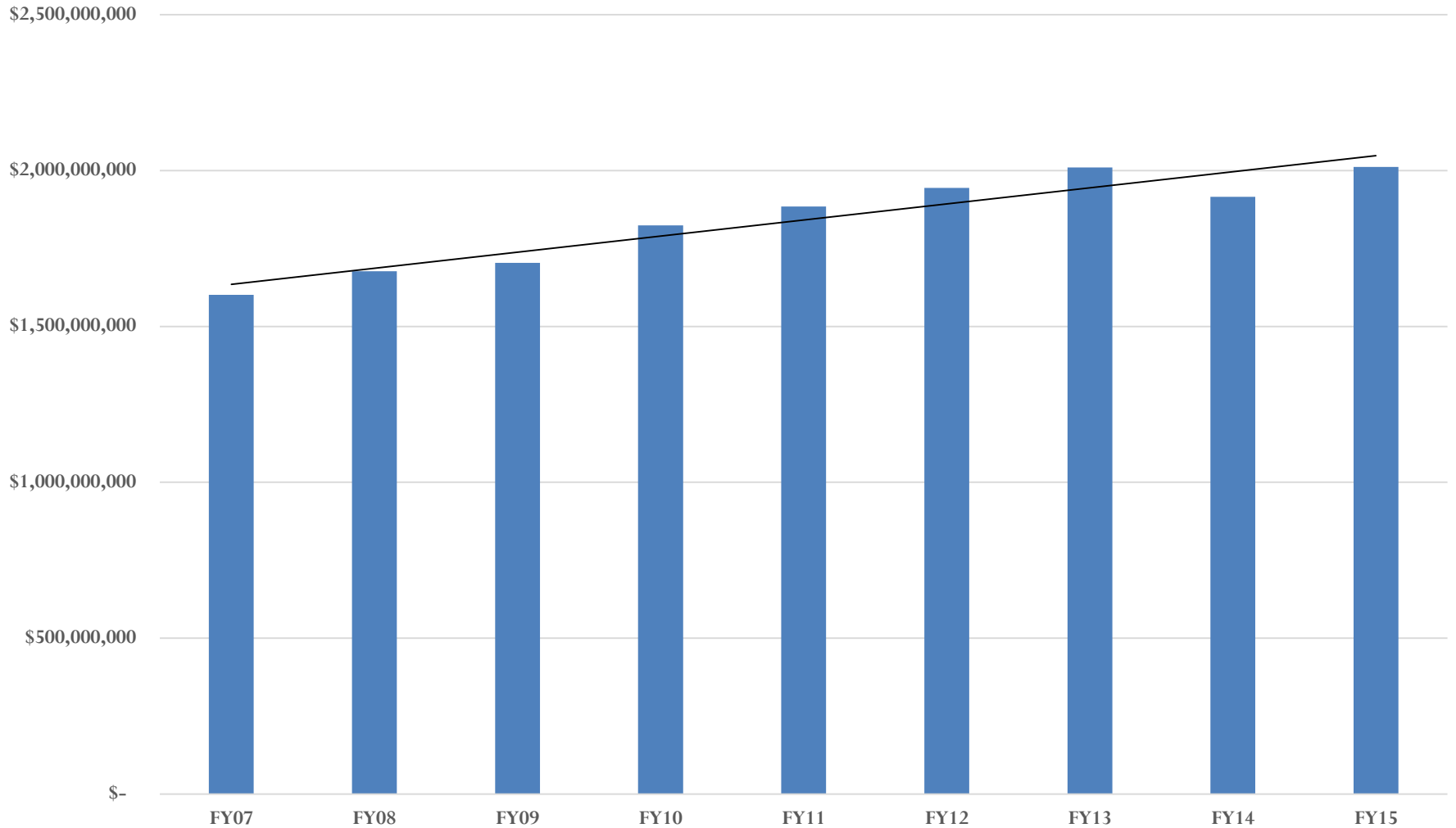
Established Standards for DWU Debt Service

- DWU financial criteria state that net revenues should be 1.5 times maximum annual bond requirements at the end of each fiscal year.
- Revenue bond ordinances require net revenues equal to at least 1.25 times maximum future revenue bond principal and interest requirements
- Commercial Paper coverage requirements state that net revenues should be 1.10 times the maximum future annual principal and interest payments requirements
- DWU has maintained a Aa1 bond rating from Moody's and a AAA bond rating from Standard & Poor's

Historical Debt Service Coverage Ratios



Outstanding Revenue Bond Debt



Average annual increase in outstanding revenue bond debt of 3.2%

Financial Management Performance Criteria

- Current revenues will be sufficient to support current expenditures including debt service and other obligations of the system.
- Long-term debt will be used only for capital expansion, replacement and improvement of plant, not for current expenses.
- Short-term debt, including tax-exempt commercial paper, will be used as authorized for interim financing of projects which will result in capital improvements. The authorization of tax-exempt commercial paper will be limited to 20 percent of the ten-year capital improvement program in effect at the time of commercial paper program authorization. No commercial paper program will be authorized for more than ten years. Outstanding tax-exempt commercial paper will never exceed the amount authorized by Council.
- Contingency reserves will be appropriated at a level sufficient to provide for unanticipated, nonrecurring expenditures.
- Debt financing for capital projects will not exceed the expected useful lives of the assets, and in no case shall the term exceed 30 years.
- An unreserved cash balance will be maintained such that it provides a minimum quick ratio of 1.50 and at least 30 days of budgeted expenditures for operations and maintenance in net working capital.
- Net revenues available for debt service should be at least 1.5 times the maximum annual principal and interest requirements of relevant outstanding revenue bonds at the end of the same fiscal year, and at least 1.3 times maximum-year requirements at all times, measured during a fiscal year using the previous year net revenues available for debt service.

Financial Management Performance Criteria (FMPC) (cont.)

- Current revenues which are more than operating expenses and debt service will be used for capital expenditures and other water and wastewater purposes.
- Funds available from current rates in each fiscal year for system rehabilitation, replacement, and expansion will be appropriated equal to or more than financial statement depreciation expense reasonably expected in the same year.
- Capital financing will be provided through a combination of revenue bonds, current revenues, contributed capital, and short-term debt. An equity to debt ratio of at least 20 percent should be maintained on all capital projects.
- Retail cost of service studies will be performed at least every two years and reviewed annually. Rate adjustments will be recommended when required, but normally, no more frequently than annually.
- Wholesale treated water rates for customer cities and other governmental entities will be determined on the basis of the inter-city agreement of 2010. Wholesale wastewater and untreated water rates will be determined on the basis of contractual agreements with wholesale customers. Rates shall be adjusted annually if cost of service studies indicate a need therefor.
- Funds generated by Dallas Water Utilities will be used solely for the development, operation, and maintenance of the water and wastewater utility system.

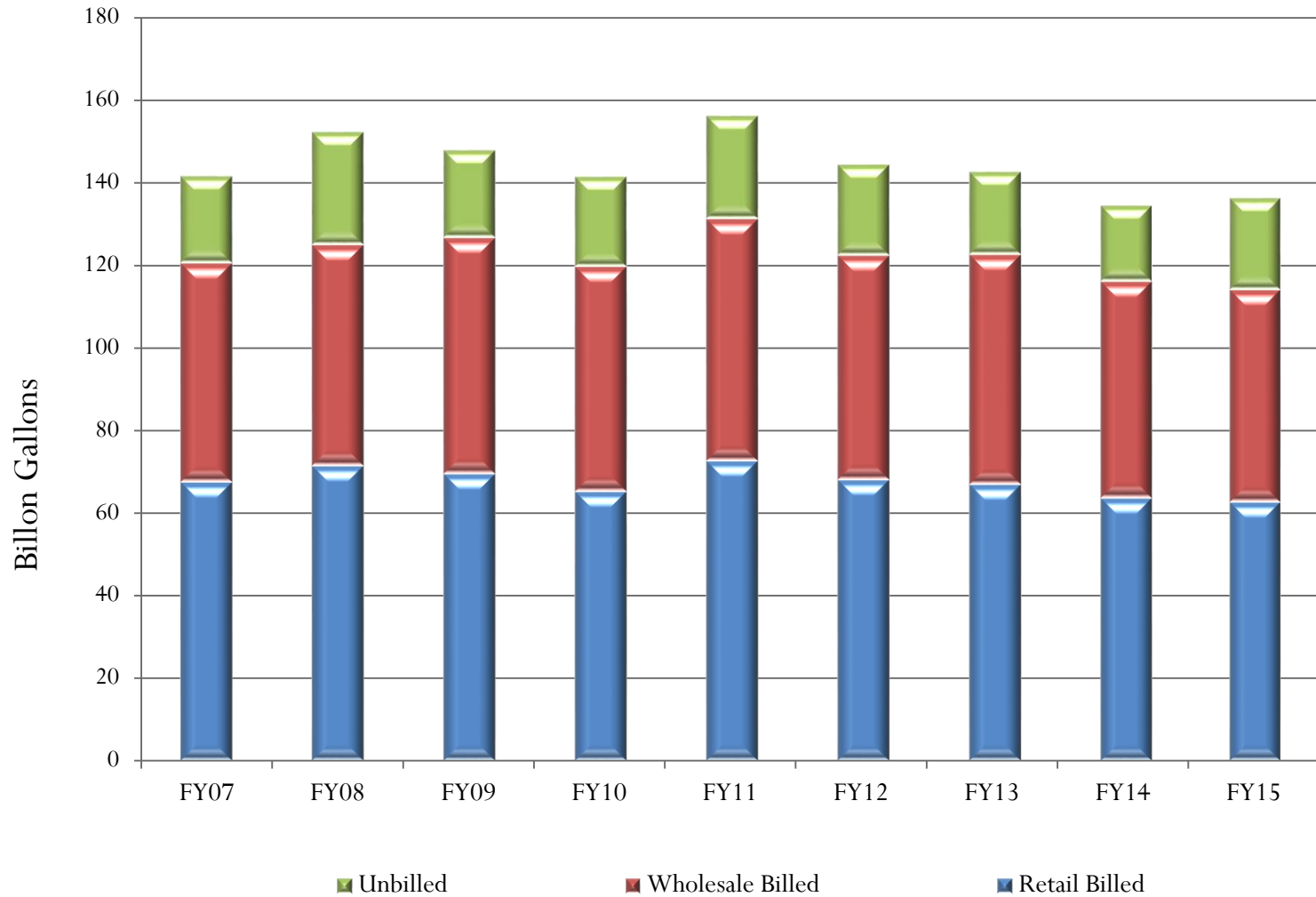
Trends

Comparison of FY07 and FY16 Operating Budgets

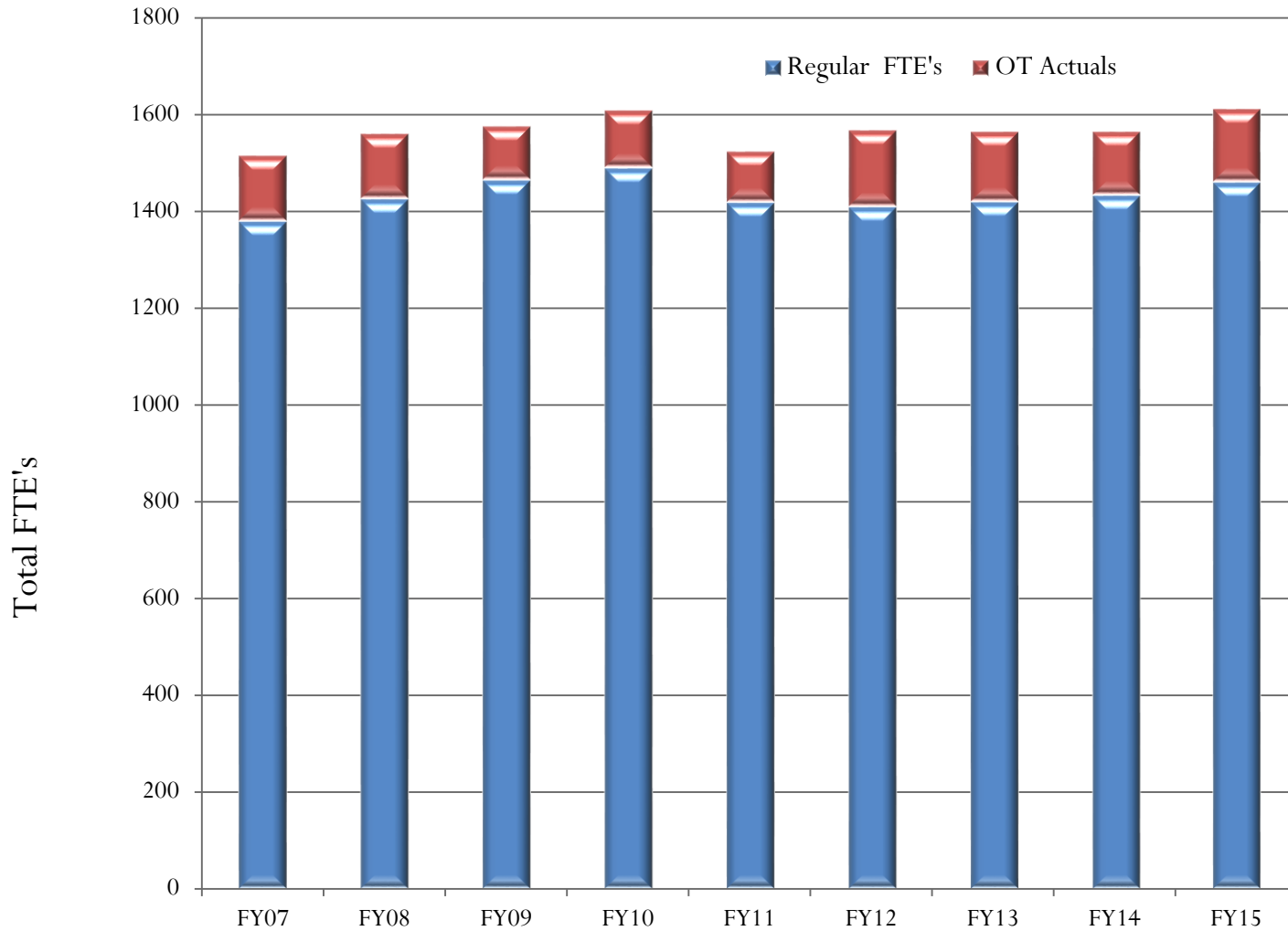
(in million dollars)

	FY07	FY16	Change
Debt Service - Capital Funding	\$173.1	\$194.2	\$21.1
Salaries and Benefits	\$87.7	\$97.0	\$9.4
Power, Chemicals, Fuel, Supplies & Materials	\$86.7	\$83.1	(\$3.6)
Cash Transfers to Capital Construction	\$49.3	\$85.0	\$35.7
Internal & External Services	\$48.4	\$78.6	\$30.3
Street Rental & PILOT	\$18.5	\$54.9	\$36.4
SRA Payments	\$2.1	\$27.4	\$25.3
Integrated Pipeline Project	<u>\$0.0</u>	<u>\$24.9</u>	<u>\$24.9</u>
Total	\$465.6	\$645.1	\$179.5

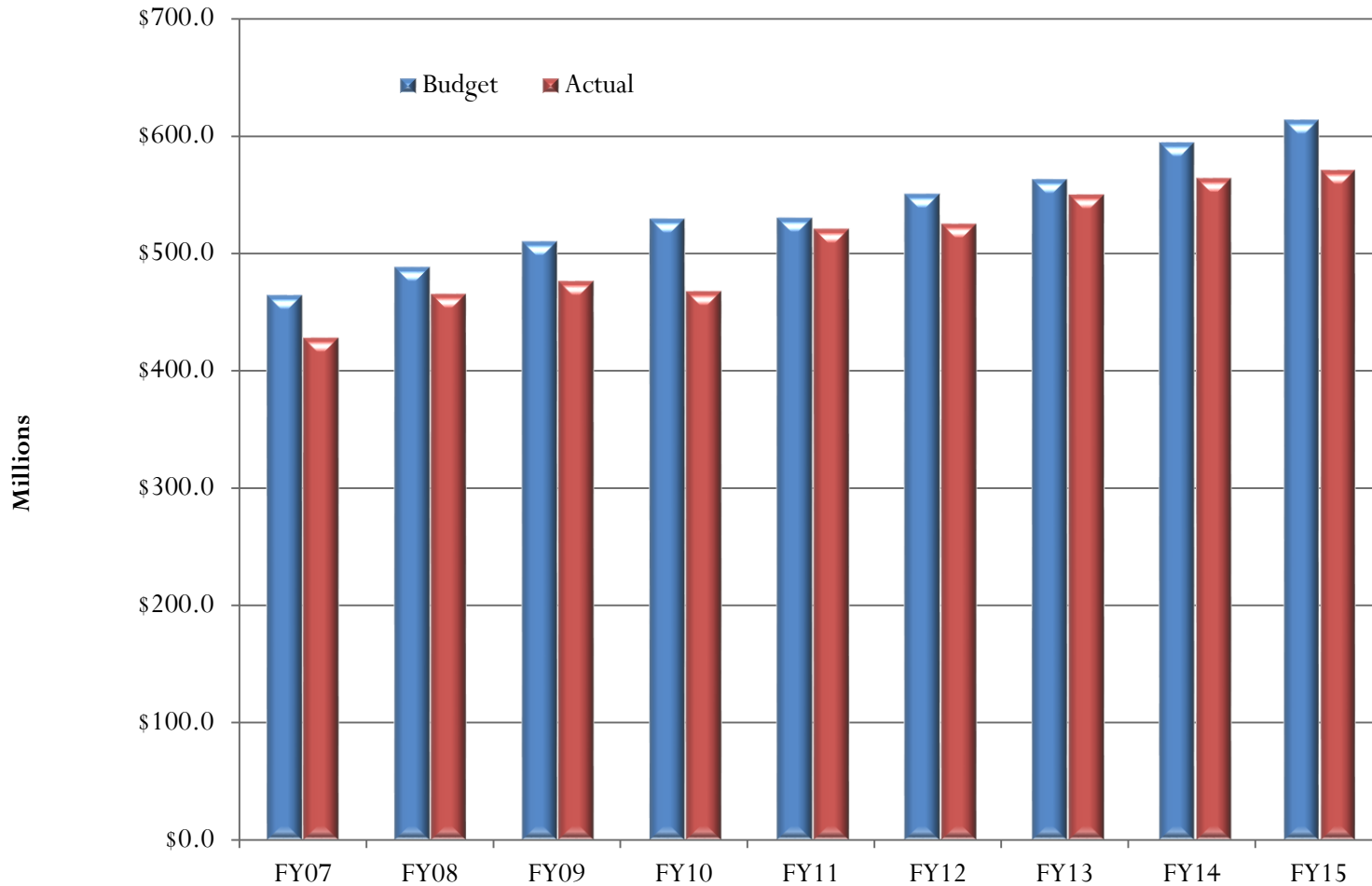
Historical Treated Water Consumption



Historical Regular and Overtime FTEs



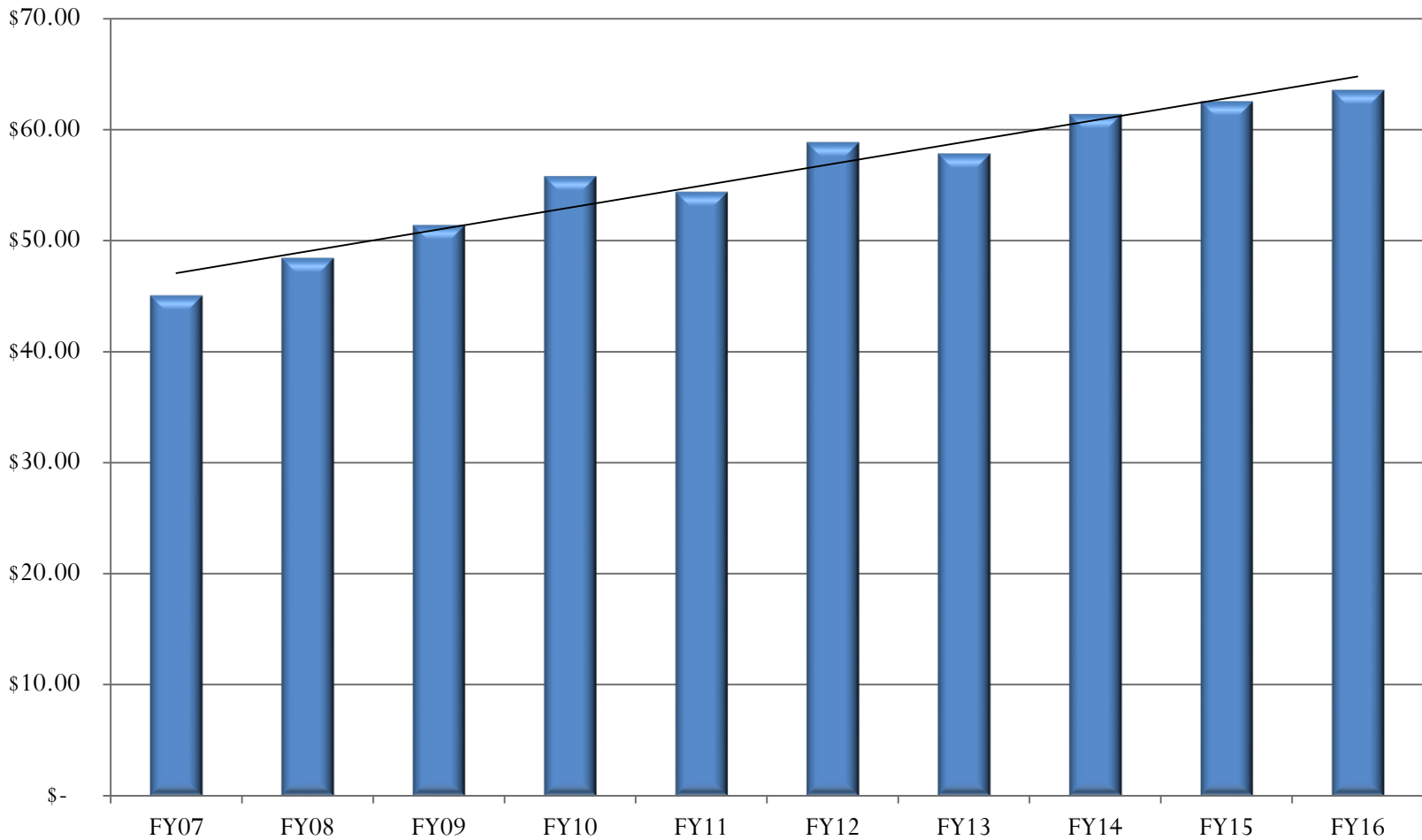
Comparison of Revenues - Budget vs. Actual



On average, actual revenues 5.7% less than budgeted revenues

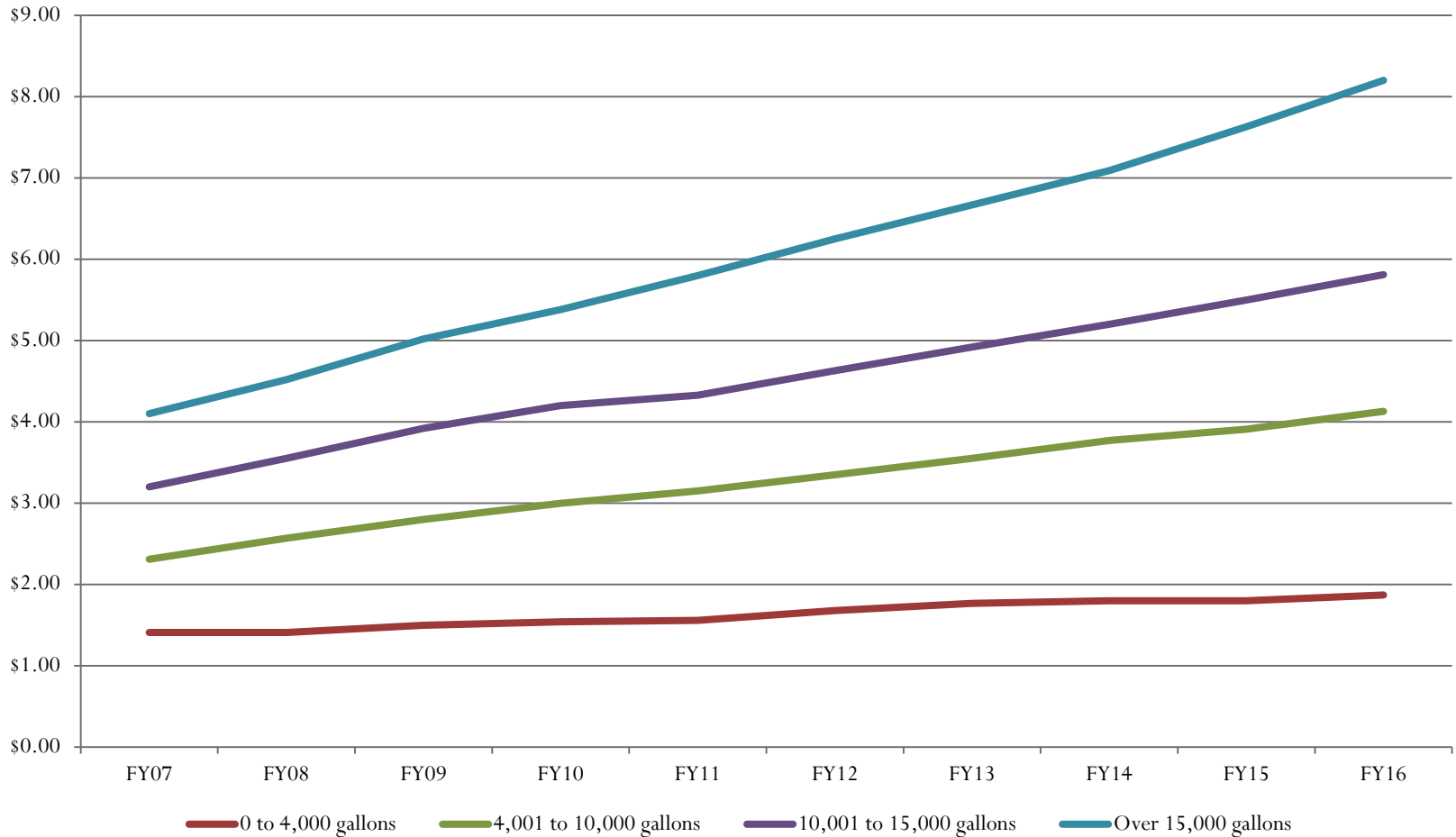
Typical Monthly Water & Sewer Residential Bill

FY2007 -2016



Based on 5/8th inch meter, 8,300 gallons water and Winter Months Average for Sewer.
On average, typical bill has increased 4.5% annually

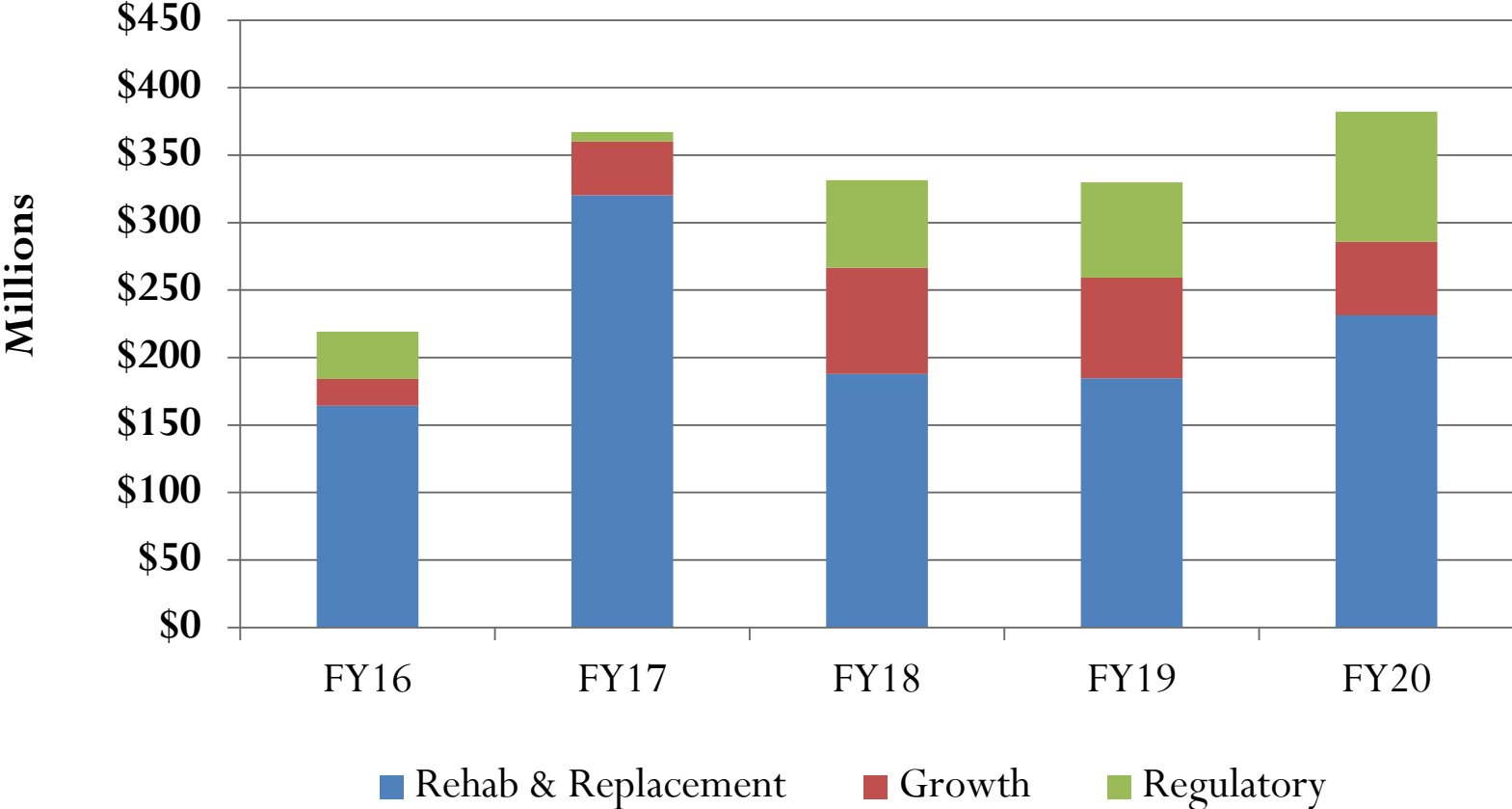
Comparison of Residential Water Rates by Tier



From FY07 to FY16, the 0 to 4,000 gallon rate increased an average of 3.6% a year while the Over 15,000 gallon rate increased an average of 11.1%

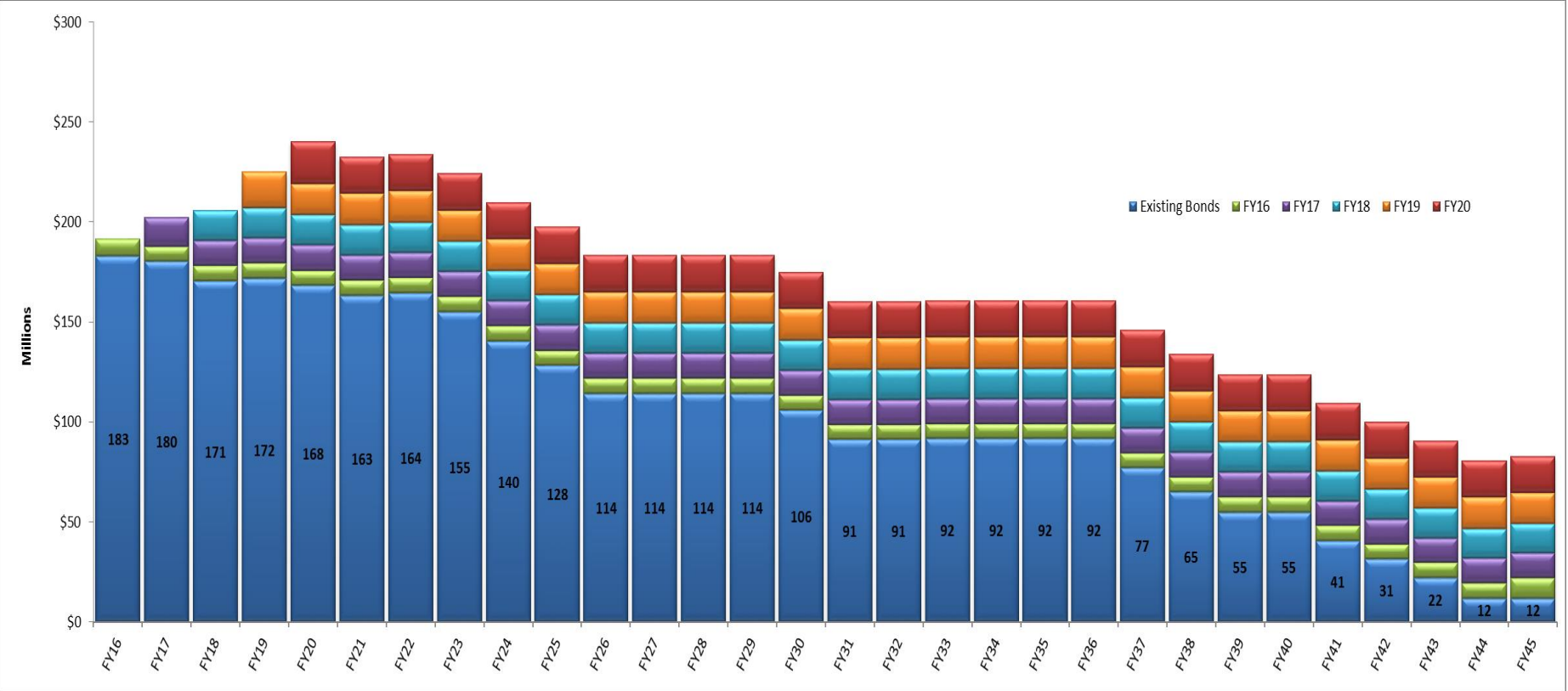
Forecast

Major Components of Projected Capital Budget

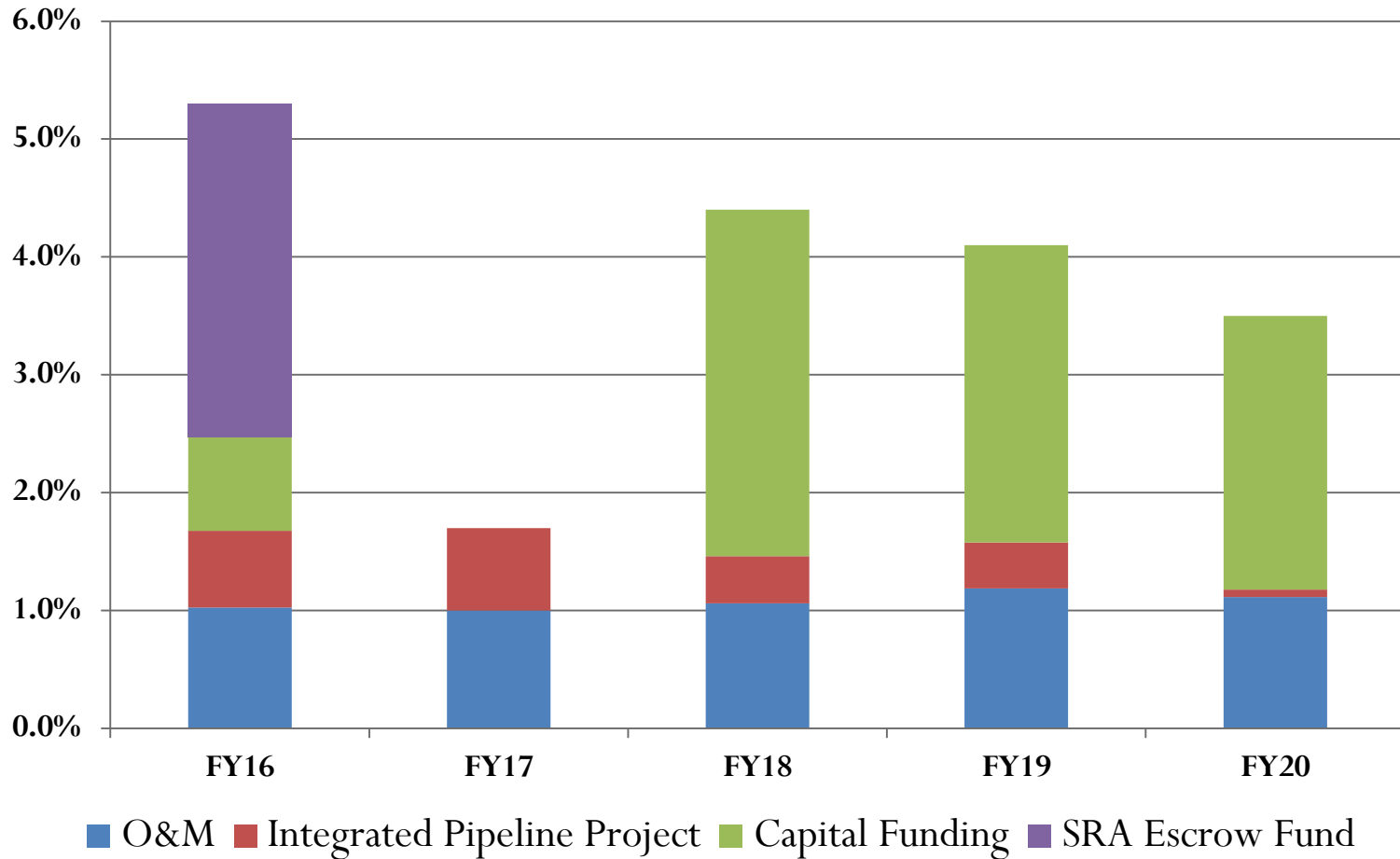


Note: Does not include cost of additional future water supply acquisitions

DWU Current and Proposed Debt Service through Fiscal Year 2020



Major Components of Projected Retail Revenue Increases



Note: Dallas Estimated Share of IPL project is \$832M; with estimated capital savings of \$196M

Wholesale revenues are estimated to increase an average of 4.4% annually

Key Focus Areas

Key Focus Area: Economic Vibrancy

□ Water Production and Delivery

Water Production and Delivery is responsible for the operation and maintenance of the City's potable water system which includes seven raw water impoundments, four raw water pump stations, raw water transmission, seven dams, three purification plants, high service pumping facilities, ground and elevated storage reservoirs and the water distribution system.

□ Water Capital Funding

Water Capital Funding makes the annual principal and interest payments on outstanding revenue bonds, issues revenue bonds to retire outstanding commercial paper, transfers to the general obligation debt fund for annual payments on outstanding equipment notes for Water Utilities replacement fleet, transfers cash from operating revenues to the capital construction fund for capital improvements that can not be funded with debt, and ensures the cash, or “net revenue” requirements, to meet and maintain the City’s Financial Management Performance Criteria (FMPC).

□ Water Utilities Capital Program Management

Capital Program Management is responsible for capital improvement projects from inception through start-up. This includes long-range capital budget planning, development of project scopes of work, negotiation and administration of consultant engineer services, studies, determination and evaluation of alternatives, determination of right-of-way and other special requirements, detailed design plans and specifications, advertisement and award processes, administration and inspection of construction, development of "as-built" mapping, testing and start-up of the improvements.

Key Focus Area: Clean, Healthy Environment

□ **Wastewater Treatment**

Wastewater Treatment utilizes an overall management strategy to better manage wastewater flows generated annually by the citizens of Dallas and 11 customer cities, promote reliable, robust, well managed treatment processes essential to achieve optimization of the treatment facilities, reduce sanitary sewer overflows, and evaluate options for the re-use of DWU's highly treated effluent to augment existing water supplies to meet future water demand.

□ **Water Conservation**

Water Conservation addresses short-term and long-term water shortages, provides environmental protection, reduces drought rationing danger and mitigates the high costs of new water system improvements. The Water Conservation Program serves as an operational tool to achieve efficient use of water through practices and measures that reduce consumption and water losses and increase water recycling.

□ **Wastewater Collection**

Wastewater Collection is responsible for operating, maintaining, and improving the sanitary sewer system (over 4,020 miles of pipe, facilities and associated components) in order to collect and transport wastewater produced by residences and businesses to the treatment plants. Services are available on a twenty-four hour per day, seven days per week basis.

Key Focus Area: E - Gov

□ **Water Utilities Customer Account Services**

Water Utilities Customer Account Services provides customer relations, monthly utility billings for over 300,000 accounts, payment processing, credit and collection services, customer information, and meter associated services for all water, wastewater, sanitation, and storm water customers. This program also provides for customer relations, service inquiries, and billing and revenue collection for the City's 27 wholesale customers. Annual revenues of over \$600 million are received for all utilities.

□ **Water Planning, Financial and Rate Services**

Water Planning, Financial and Rate Services provides technical, financial, and analytical support for long range system capital planning; annual operating budget, cost of service and rate development. This program ensures that the City has water both now and in the future to meet the needs of the citizens of Dallas and customer cities, while maintaining and acquiring water rights as needed. This program is also responsible for development and monitoring of the Department's annual operating budget for departmental revenues and expenditures of over \$600 million, wholesale and retail cost of service studies and rate development.

Key Focus Area: E - Gov

□ DWU General Expense

DWU General Expense includes the following payments to the general fund: street rental based on 6% of the utilities retail revenues; general fund indirect cost reimbursement based on the Water Utilities proportionate share of cost for the general government services such as Office of Financial Services, Procurement and Business Development, City Attorney's Office, City Manager's Office, and use of City owned buildings; PILOT is payment in lieu of taxes; liability and property insurance; Worker's Compensation; and payments to other City departments for services provided.

□ City GIS Services

City GIS Services maintains and delivers information to citizens and staff through Geographic Information System (GIS) technology. Services include but are not limited to the development and maintenance of the internet map describing City services, the data to route emergency response vehicles, information used by the 3-1-1 Customer Service system, data for the Pavement Management Program, and data supporting stormwater permit compliance reporting.

□ Vital Statistics

The Bureau of Vital Statistics registers and issues certified copies of birth and death certificates to qualified applicants in accordance with Texas Department of Health Services; enforces regulations established by the Texas Administrative Code; issues burial transit and cremation permits that allow a body to be transported to another state; and preserves the vital records.