



# APPROVED BUDGETS

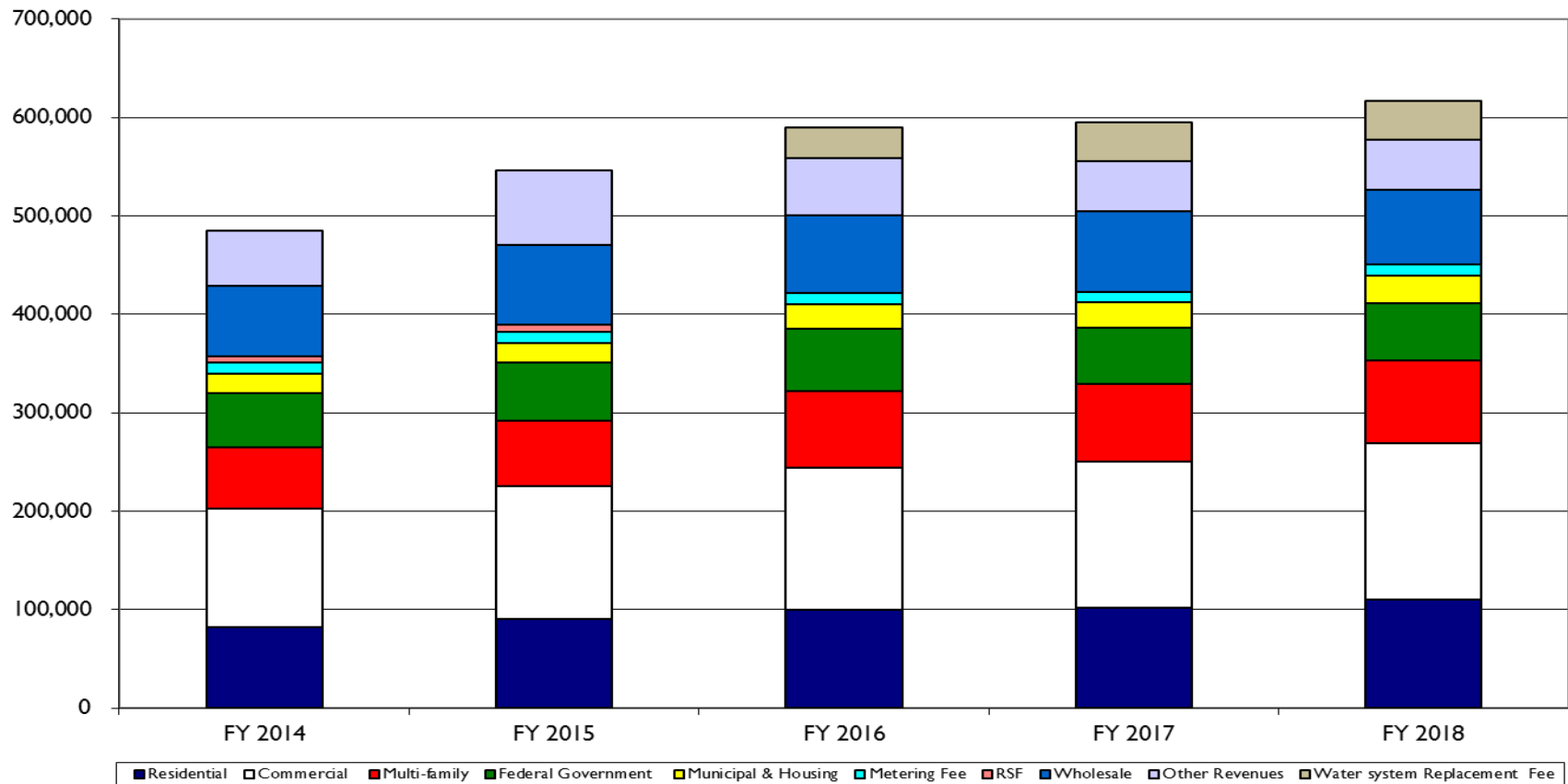


DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

## Section IV RATES AND REVENUES

In order to provide continuous delivery of water and wastewater services, DC Water must ensure a reliable and predictable revenue stream that cover operating and maintenance (O&M) costs and meet or exceed all Board and other financial requirements. DC Water has a diverse customer base and thus receives cash receipts from a variety of sources. This diversity mitigates reliance on any single customer and provides a level of revenue stability.

**Historical & Projected Cash Receipts**  
(\$ 000's)



## Historical and Projected Operating Cash Receipts

(\$ 000's)

	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Revised	FY 2018 Approved
Residential	81,854	90,765	100,032	102,308	109,793
Commercial	120,965	134,724	144,355	147,587	159,147
Multi-family	61,563	66,378	77,566	79,093	84,099
<b>Sub-Total Residential, Commercial and Multi-family</b>	<b>264,383</b>	<b>291,867</b>	<b>321,953</b>	<b>328,988</b>	<b>353,039</b>
Federal Government (1)	55,725	59,171	62,989	57,540	58,494
District Government	12,734	12,894	15,988	17,505	19,066
D.C. Housing Authority	7,100	6,968	8,772	8,372	8,825
Transfer from Rate Stabilization Fund	6,500	7,500	-	-	-
Water System Replacement Fee (WSRF)	-	-	30,287	39,717	39,717
Metering Fee	11,207	11,111	11,479	10,776	10,776
<b>Total Retail</b>	<b>357,648</b>	<b>389,511</b>	<b>451,467</b>	<b>462,898</b>	<b>489,917</b>
IMA Wastewater Charges	63,822	73,889	71,970	72,931	67,895
Potomac Interceptor Wastewater Charges	6,941	7,341	7,814	8,537	8,133
<b>Total Wholesale</b>	<b>70,763</b>	<b>81,230</b>	<b>79,784</b>	<b>81,468</b>	<b>76,028</b>
District Stormwater Revenue (2)	930	899	944	1,000	1,000
Misc. Rev. (e.g. water tap installation, fire hydrant usage, etc.)	30,773	31,169	33,703	26,977	24,036
Washington Aqueduct Debt Service Revenue for Falls Church & Arlington	201	193	193	193	193
Interest Income (including interest on Bond Debt Service Reserve Fund)	560	846	1,253	1,828	2,549
System Availability Fee (SAF)	-	-	-	-	1,925
Transfer from DC PILOT/ROW Fund	-	5,100	-	-	-
DC Contribution of 50% PILOT Fund to DCW	-	15,049	-	-	-
Right-of-Way Fee	-	5,100	5,100	5,100	5,100
PILOT Fee	23,618	16,998	16,885	15,982	16,411
<b>Total Other</b>	<b>56,082</b>	<b>75,354</b>	<b>58,078</b>	<b>51,080</b>	<b>51,214</b>
<b>Total Operating Cash Receipts</b>	<b>484,493</b>	<b>546,095</b>	<b>589,329</b>	<b>595,446</b>	<b>617,159</b>

(1) Historical actuals are presented on revenue basis. Projected amounts shown are billed revenues. Actual Federal receipts are a combination of current year projected revenues and prior year adjustments, which are presented as reserve items. See Section 3 for further explanation.

(2) Reflects District stormwater fee revenue that will fund DC Water's share of District stormwater permit compliance activities, and will not be funded through DC Water's retail rates or other DC Water revenue sources. See Section 3 for further explanation.

## CUSTOMER CATEGORIES AND ACCOUNTS

As of September 30, 2016, DC Water had 127,650 active, metered water and wastewater accounts. In addition, there are 9,443 separate accounts that are billed only for impervious surface. DC Water's customers are classified as retail (residential, multi-family and non-residential) and wholesale customers only. However, within the retail customer class, DC Water tracks receipts and associated consumption at a more detailed level in order to analyze trends and service characteristics. Retail customers' characteristics can be viewed in six groups: residential, multi-family, commercial, federal, DC Municipal and Housing Authority.

FY 2016 revenue receipts are actual as of September 30, 2016.

In FY 2011, a study of the demand characteristics of DC Water customers was undertaken to determine if additional customer classes should be defined for the purpose of cost allocation. Review of 12 months of data (May 2010 to April 2011) revealed, (among other things) that there is a difference in peaking characteristics between many of the customer groups. Generally, the federal customers have the highest peaking factor, with commercial customers having the next highest peaking factor and municipal, residential, multi-family and Housing Authority customers having the lowest peaking factor. Segmentation of water customers is typically done by class-based peak use characteristics with the higher peaking customers allocated more of the system costs (primarily driven by electricity and system capacity costs).

This information helped to inform an analysis of alternative rate structures within the FY 2012 Cost of Service Study (COS). Among the alternatives reviewed, the study reviewed different volumetric rates by customer class/category based on the different demands they place on the system. Differentiation could be based on water peaking characteristics or discharge strength contributions (wastewater). While it was recommended that additional analysis be undertaken in for any further consideration of discharge strength differentiation, management recommended that a new customer class, "Multi-Family", be created to acknowledge the similarity of peaking characteristics with other residential customers, yet provide transparency between single family and multi-family residential units. (Multi-Family residential facilities will continue to be defined as those facilities with 4 or more residential units.) The new Multi-family class has been effective from October 1, 2013. The three customer classes are defined as follows:

- Residential – a single-family dwelling used for domestic purposes; a condominium or apartment unit where each unit is served by a separate service line and is individually metered and the unit is used for domestic purposes; or a multi-family structure of less than four apartment units where all the units are served by a single service line that is master metered

- Multi-Family – a multi-family structure (such as a condominium or apartment dwelling) used for domestic purposes, with four or more units
- Non-residential – all customers not within either the residential or multi-family class

In FY 2015, a COS was conducted by Independent Financial Consultants. These recommendations were incorporated in the FY 2016 rate proposal, and were approved by the Board. These are summarized below:

- New class-based rate structure including Lifeline rate
- Based on similar peaking ratios, District of Columbia Housing Authority (DCHA) category moved to Multi-family class

**Residential, commercial and multi-family receipts are projected to increase in FY 2017 by approximately \$7.0 million, or 2.2 percent, over the FY 2016 level due to:**

- Board-approved volumetric retail rate increase of 5.0 percent, effective October 1, 2016
- Board-approved Clean Rivers Project CRIAC rate change from \$20.30 to \$ 22.24 per ERU in FY 2017 and to \$25.18 per ERU per month in FY 2018
- 1 percent decrease in consumption due to conservation
- In FY 2016, DC Water's collections on its retail receivables was strong, with accounts receivable over 90 days at \$7.7 million as of September 30, 2016. DC Water will continue its aggressive collection efforts
- The customer assistance program reduces projected revenues by approximately \$2.3 million

**Residential and multi-family customers:**

- In FY 2017, residential customers include 106,120 accounts that comprise 17.2 percent of the total operating revenues. Given the large number of individual account holders who are in residential, it is unlikely that any one customer will have a major impact on the DC Water cash receipts.
- Multi-family customers house 4 or more units within one building with a master meter. In FY 2017, there are 8,311 accounts that comprise 13.3 percent of the total operating revenues.

The commercial group of customers includes a number of nationally-recognized universities and regional hospitals, national associations, lobbying firms, major law firms and hotels. This group has 10,510 accounts and will comprise 24.8 percent of the projected FY 2017 operating revenues. In FY 2018, they will comprise 25.8 percent of the fiscal year operating revenue.

FY 2018 projections for Residential, Multi-Family and Commercial customers reflect an increase of \$24.1 million, or 7.3 percent from FY 2017 revised due primarily to proposed retail rate increases of 5.0 percent (water and sewer volumetric rates), and \$2.94 monthly ERU fee for the Clean Rivers IAC. In FY 2017 and onwards, one percent decrease in consumption has been assumed due to conservation.

**The Federal customers' revised FY 2017 receipts are projected to total \$57.5 million; a decrease of \$5.4 million, or 8.7 percent over FY 2016.** The projected federal revenues will be lower by \$5.4 million or 8.7 percent in FY 2017 due to estimated rate and consumption assumptions provided under the federal billing policies. The projected decline in the federal revenues is due to an executive order to federal agencies to reduce water and electricity consumption, coupled with the federal telework and commuting act to reduce footprint in the District, transfer of federal properties and large metering issues at restricted federal properties. In FY 2018, the Federal receipts will increase by \$1.0 million or 1.7 percent to \$ 58.5 million.

Under existing federal billing legislation, federal billings are prepared on an estimated basis eighteen months in advance of the start of the fiscal year (e.g., the FY 2017 billing was prepared in April 2015), and are based on the current consumption estimates and projected rate increases as included in the current ten-year plan. These estimates are then reconciled with actual consumption and rate increases, and an adjustment is made in the subsequent year's billing (e.g., the reconciliation of FY 2017 estimated vs. actual consumption and rate increases will be included in the FY 2020 billing, to be prepared in April 2018.) Federal revenues in the ten-year plan are presented on a revenue basis, net of any adjustments for prior year reconciliations which are accounted for as reserve items. Consistent with this methodology, revised FY 2017 federal revenues reflect the final billing sent to the federal government in April 2015 net of the adjustment for the prior year (FY 2014) reconciliation. The Authority serves many facilities of the federal government as well as the District of Columbia. The largest federal accounts include General Services Administration, U.S. Congress, the Smithsonian Institution, Department of the Navy, National Park Service and the Department of Defense in both DC and VA.

**Municipal & D.C. Housing Authority – FY 2017 receipts from the District of Columbia government and the District of Columbia Housing Authority are projected at \$25.9 million, an increase of \$1.1 million or 4.5 percent over FY 2016.** In FY 2018, receipts from these organizations are projected to total \$27.9 million, an increase of \$2.0 million, or 7.8 percent, mainly due to increases in retail volumetric rates and CRIAC.

- The municipal customer group includes 641 accounts under the authority of the District of Columbia government. This includes offices and facilities for various government agencies and activities such as education, regulatory affairs and general government operations. This group will comprise of 2.9 percent of the FY 2017 operating budget and 3.1 percent of the proposed FY 2018 budget.

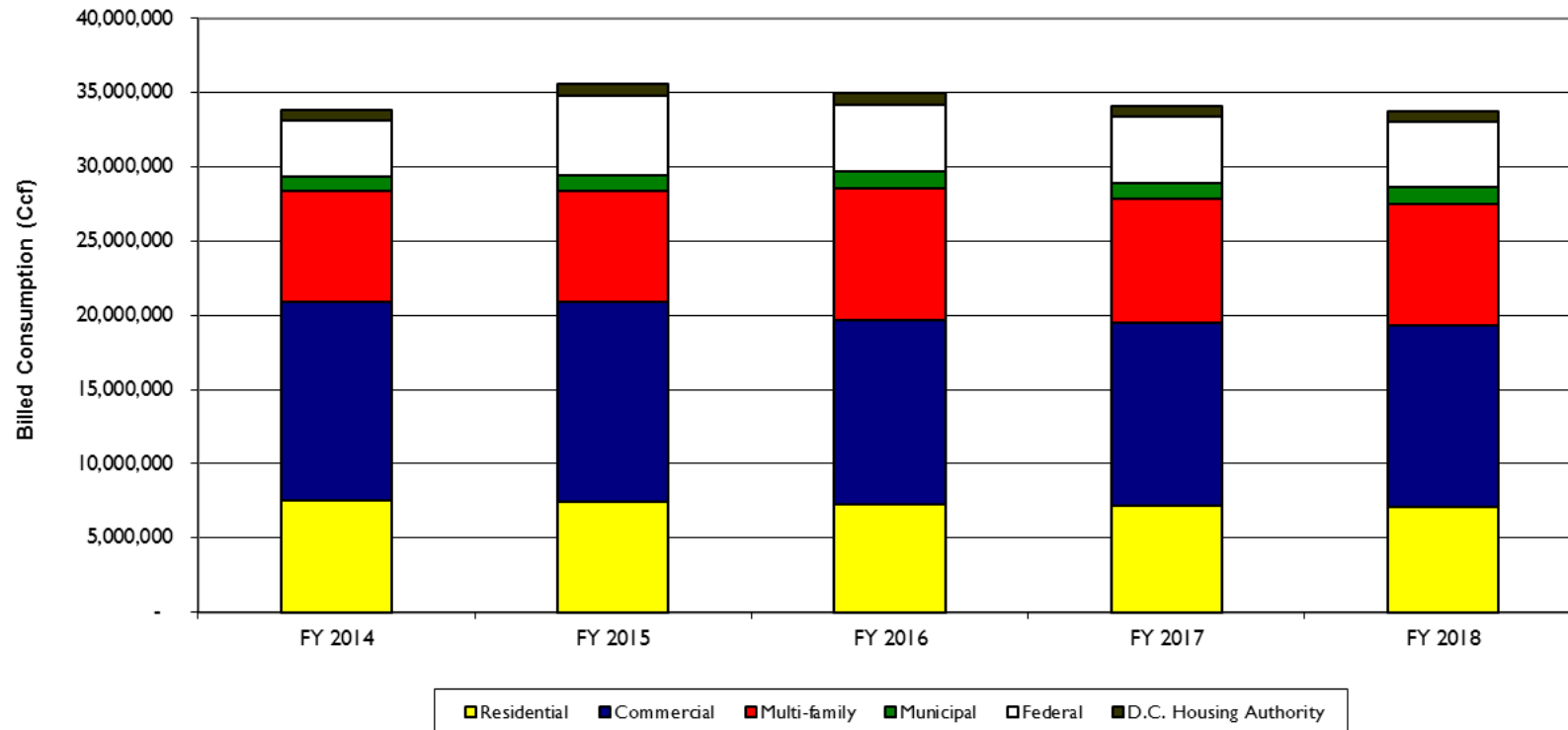
- The D.C. Housing Authority has multiple accounts that include public housing at various facilities throughout the District of Columbia. They have 1,462 accounts. Their annual billings make up only 1.4 percent of the FY 2017 cash receipts and 1.4 percent of the proposed FY 2018 cash receipts.

**Wholesale customer revenue - FY 2017 revenues are projected at \$81.5 million, an increase of \$1.7 million or 2.1 percent over FY 2016.** In FY 2018, wholesale revenues are projected to decrease by \$5.4 million or 6.7 percent to \$76.0 million. DC Water provides wholesale wastewater treatment services to User Jurisdictions at the Blue Plains Plant. The wholesale customers' share of operating costs at Blue Plains are recovered in accordance with the Blue Plains Intermunicipal Agreement of 2012, effective April 3, 2013, (which replaces Blue Plains Intermunicipal Agreement of 1985), the Potomac Interceptor Agreements and the Loudoun County Sanitation Authority Agreement (as discussed in more detail in "THE SYSTEM – The Wastewater System"), and are based on actual costs of operating and maintaining the plant and the collection facilities, prorated to each User Jurisdiction based on its respective actual share of wastewater flows. The User Jurisdiction's share of capital costs is based on each User Jurisdiction's share of capacity allocations in the Plant. Both operating and capital payments are made on a quarterly basis. Capital-related charges are billed quarterly with payments due on the 15th day of the second month following the end of the quarter. The operating and maintenance-related charges are billed annually by mid-October and payments are due on November, February, May and August. Receipts are projected to be 13.7 percent and 12.3 percent of total receipts in FY 2017 and FY 2018 respectively. Following each fiscal year, the Authority prepares a reconciliation that determines the actual costs and each wholesale customer's appropriate share of such costs. Adjustments are then billed or credited to the wholesale customers in the first quarter of the subsequent fiscal year. The wholesale customers include: Washington Suburban Sanitary Commission (WSSC), Loudoun County, VA, Fairfax County, VA and a group of small customers of the Potomac Interceptor (PI). The PI customers are comprised of Dulles International Airport (MWAA), National Park Service, Department of Navy and the Town of Vienna.

## CONSUMPTION

While wholesale customers pay for their proportional share of wastewater services, retail customers are billed based upon metered consumption. Therefore, variations in consumption have a direct impact upon DC Water retail rates. The consumption for DC retail customers declined by 1.7 percent in FY 2016. Given the uncertainty of the current economy as well as the federal government’s goal to close some neighboring federal facilities and implement a number of conservation best practices over the next few years, the revenue projections assume a 1 percent decline in FY 2017 over FY 2016 projection and 1 percent decline in FY 2018 and beyond.

**Historical and Projected Billed Consumption (Ccf)**





## Historical and Projected Billed Consumption (Ccf) <sup>(3)</sup>

	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Projected	FY 2018 Projected
Residential	7,566,045	7,431,013	7,262,184	7,190,000	7,118,000
Commercial (1)	13,336,392	13,507,756	12,440,516	12,316,000	12,193,000
Multi-family	7,439,742	7,437,925	8,889,754	8,300,000	8,217,000
Municipal (2)	1,035,424	1,066,587	1,110,717	1,099,000	1,088,000
Federal	3,706,631	5,319,948	4,493,362	4,448,000	4,404,000
D.C. Housing Authority	<u>776,944</u>	<u>795,696</u>	<u>761,401</u>	<u>754,000</u>	<u>746,000</u>
<b>Total Retail</b>	<b>33,861,178</b>	<b>35,558,925</b>	<b>34,957,934</b>	<b>34,107,000</b>	<b>33,766,000</b>

(1) Reflects consumption at Commercial facilities and selected facilities at Soldiers' Home.

From October 1, 2011, Howard University accounts have been transferred to Commercial and are no longer exempt from paying water.

(2) Reflects consumption at District of Columbia Government facilities and DC Water facilities

(3) Ccf - hundred cubic feet or 748 gallons

## **COST OF SERVICE STUDIES:**

In FY 2010, DC Water's Independent Financial Consultants performed a Cost of Service (COS) Study to include objectives from senior staff on prioritizing DC Water's pricing objectives. One of the objectives noted was the Class-Based Volumetric Differentiation.

In FY 2011, a Customer Segmentation Study was performed to identify classes of customers for the purpose of rate-setting, planning, supply management and cost analysis among others. Typically, this classification is based on: A. general service characteristics and B. demand patterns. Each class is assumed to have somewhat different needs and progressively higher demands than the previous class. Most water utilities typically have three principal classes of customers: A. Residential, B. Commercial and C. Industrial. DC Water has two customer classes: A. Residential and B. Non-Residential.

Furthermore, the FY 2012 Cost of Service Study identified several customer categories that demonstrated a reasonable level of differentiation in terms of peak usage. The customer classes identified included A. Residential, B. Multi-family and C. Non-residential. DC Water added a new class of customer, Multi-family effective October 1, 2014.

In FY 2015, DC Water successfully completed its Cost of Service Study (COS). This study is undertaken every three years to review and certify DC Water's water and wastewater volumetric rates, Clean Rivers Impervious Surface Area Charge (CRIAC) and other DC Water fees and charges to ensure that revenues are sufficient to recover projected revenue requirements, that Board rate setting policies are followed, and that rates are allocated equitably.

DC Water expanded the COS to include alternative rate structure analysis that would more effectively meet DC Water's highest priority pricing objectives:

- Lifeline Rates
- Classed-based Volumetric Rates
- Water System Replacement Fee (WSRF)
- System Availability Fee (SAF)

## Lifeline Rate

The lifeline rate allows for the first 4 Ccf of Single Family Residential (SFR) water use to reflect baseline usage by residential customers without peaking costs. The lifeline water rate provides an economic benefit to low-volume Residential customers, while spreading the cost of peaking to high-volume Residential customers.

## Class-based Rate Structure

The Independent Financial Consultants analyzed rate differentiation based on the peaking demands of each customer class. They also analyzed consumption patterns to better understand how customers use water and how their use of water may inform selection of an optimized rate structure. Based upon the analysis of the peak demand of different customer classes as well as affordability considerations, the Board approved establishing class-based water volumetric rates for Residential, Multi-family and Non-residential customers effective from October 1, 2015 (FY 2016).

Water Volumetric	Class-Based (w/ lifeline)		
	FY 2016	FY 2017	FY 2018
Residential - 0-4 Ccf	\$ 3.08	\$3.23	\$3.39
Residential - >4 Ccf	\$ 3.87	\$4.06	\$4.26
Multi-Family / DC Housing	\$ 3.45	\$3.62	\$3.80
Non-Residential	\$ 3.99	\$4.19	\$4.40

## Water System Replacement Fee (WSRF)

Effective October 1, 2015 (FY 2016), DC Water modified its existing rate structure and implemented a new meter-based Water System Replacement Fee (WSRF) in order to recover the cost of the 1% renewal and replacement program for water service lines. It is anticipated that the new Water System Replacement Fee (WSRF) will generate approximately \$39.7 million per year from fiscal years 2017 through 2026. The fee is based upon meter size and average flow. DC Water’s low income CAP customers receive a 100% credit for this fee.

Meter Size (inches)	Meter Register Type	Monthly Water System Replacement Fee
5/8"	Single Register	\$ 6.30
3/4"	Single Register	\$ 7.39
1"	Single Register	\$ 9.67
1"x1.25"	Single and Multiple Register	\$ 15.40
1.5"	Single Register	\$ 41.35
2"	Single and Multiple Register	\$ 83.75
3"	Single and Multiple Register	\$ 232.13
4"	Single and Multiple Register	\$ 561.02
6"	Single and Multiple Register	\$ 1,292.14
8"	Single Register	\$ 5,785.51
8"x2"	Multiple Register	\$ 1,899.60
8"x4"x1"	Multiple Register	\$ 2,438.35
10"	Single and Multiple Register	\$ 6,679.65
12"	Single and Multiple Register	\$ 6,679.65
16"	Single Register	\$ 6,679.65

## Multi-Year Rates

DC Water moved to a multi-year rate proposal in FY 2016 covering the period FY 2017 and FY 2018. The Board has approved the multi-year rates, which will become effective from October 1, 2016.

The benefits of multi-year rates include:

- Greater revenue certainty
- Increased budget discipline
- Better alignment between revenues and expenditures

## System Availability Fee (SAF)

Many utilities have implemented a fee, assessed to new development (or redevelopment) to recover the investment in available system capacity. On June 17, 2016, DC Water’s Board approved a new System Availability Fee (SAF) to be effective from January 1, 2018. All Residential Customers with meters 1 inch or smaller will use the same set of fees. All Residential Customers with meters larger than 1”, and all Multi-Family and Non-Residential Customers will have SAF based on their meter size.

The System Availability Fee will be assessed for all new buildings, structures or properties under development and properties under redevelopment. For properties under redevelopment, DC Water will determine the net System Availability Fee by determining the property’s proposed capacity requirements and applying a credit for the capacity of accounts being removed from the system. However, if the associated credit for capacity removed is equal to or greater than the future System Availability Fee, the net System Availability Fee shall be zero. Properties under redevelopment shall not receive a credit for accounts that are inactive for more than 12 months.

Effective January 1, 2018, DCRA Construction Permit Applicants and federal facilities shall be assessed a System Availability Fee (SAF) for new water and sewer connections and renovation or redevelopment projects for existing connections to the District’s potable water and sanitary sewer systems based on the SAF meter size in accordance with the following fee schedule and requirements:

- (a) Residential customers shall be charged a System Availability Fee based on the SAF meter size as listed below:

<b>SAF Meter Size (inches)</b>	<b>Water System Availability Fee</b>	<b>Sewer System Availability Fee</b>	<b>Total System Availability Fee</b>
5/8"	\$ 1,135	\$ 2,809	\$ 3,944
3/4"	\$ 1,135	\$ 2,809	\$ 3,944
1"	\$ 1,135	\$ 2,809	\$ 3,944
1"x1.25"	\$ 2,047	\$ 5,066	\$ 7,113
1.5"	\$ 5,491	\$ 13,591	\$ 19,082
2"	\$ 11,125	\$ 27,536	\$ 38,661

- (b) Multi-Family and all Non-Residential customers shall be charged a System Availability Fee based on the SAF meter size as listed below:

<b>SAF Meter Size (inches)</b>	<b>Water System Availability Fee</b>	<b>Sewer System Availability Fee</b>	<b>Total System Availability Fee</b>
1" or smaller	\$ 1,282	\$ 3,173	\$ 4,455
1"x1.25"	\$ 2,047	\$ 5,066	\$ 7,113
1.5"	\$ 5,491	\$ 13,591	\$ 19,082
2"	\$ 11,125	\$ 27,536	\$ 38,661
3"	\$ 32,500	\$ 80,442	\$ 112,942
4"	\$ 83,388	\$ 206,394	\$ 289,782
6"	\$ 229,246	\$ 567,408	\$ 796,654
8"	\$ 229,246	\$ 567,408	\$ 796,654
8"x2"	\$ 229,246	\$ 567,408	\$ 796,654
8"x4"x1"	\$ 229,246	\$ 567,408	\$ 796,654
10"	\$ 229,246	\$ 567,408	\$ 796,654
12"	\$ 229,246	\$ 567,408	\$ 796,654
16"	\$ 229,246	\$ 567,408	\$ 796,654

The following terms are defined:

**Development** – the construction of a premises, building or structure that establishes a new water and/or sewer connection.

**Redevelopment** – the renovation or alteration of a premises, building or structure or reconstruction of a property that increases or decreases the water supply demand or drainage, waste, and vent (DWV) system load. Redevelopment shall not include the up-sizing of a water service or sewer lateral to comply with the D.C. Construction Codes Supplement, provided the water supply demand and DMV system load remain the same.

**System Availability Fee** – A one-time fee assessed to a property owner of any premises, building or structure to recover the cost of system capacity servicing all metered water service and sanitary sewer connections and renovation or redevelopment projects that require an upsized meter service connection to the District’s potable water system. The fee is assessed based on the peak water demand, excluding fire demand, for new meter water service connection and renovation or redevelopment projects that increase the peak water demand and associated SAF meter size for the property.

## **Clean Rivers IAC Credit:**

In FY 2016, DC Water’s Board asked management to evaluate and propose recommendations for expansion of the Customer Assistance Program (CAP) to include fees assessed for the Clean Rivers Impervious Surface Area Charge (CRIAC). The staff evaluated the three options for CRIAC credit: (i) Dollar credit, (ii) ERU credit, and (iii) percent of CRIAC credit (25%, 50%, 75%). Based on the detailed analysis, the management made recommendation to the Board to expand Customer Assistance Program (CAP) to low-income customers to include CRIAC credit in their monthly bills. On December 1, 2016 the Board adopted to expand the Customer Assistance Program for eligible single-family residential accounts and individually metered accounts to include a fifty percent (50%) credit off of the monthly billed Clean Rivers Impervious Area Charge. The CRIAC credit, subject to the final approval of the Board, is anticipated to be implemented in FY 2017.

The Board has approved the following rates and fees to be effective from October 1, 2016:

- Water volumetric rates:
  - Residential customers: “Consumption of 0 – 4 Ccf” - water rate increase of \$0.15 per Ccf, {\$0.20 per 1,000 gallons} from \$3.08 per Ccf to \$3.23 per Ccf, {\$4.32 per 1,000 gallons}
  - Residential customers: “Consumption greater than 4 Ccf” - water rate increase of \$0.19 per Ccf, {\$0.26 per 1,000 gallons} from \$3.87 per Ccf to \$4.06 per Ccf, {\$5.43 per 1,000 gallons}
  - Multi-family customers: water rate increase of \$0.17 per Ccf, {\$0.23 per 1,000 gallons} from \$3.45 per Ccf to \$3.62 per Ccf, {\$4.84 per 1,000 gallons}
  - Non-Residential customers: water rate increase of \$0.20 per Ccf, {\$0.27 per 1,000 gallons} from \$3.99 per Ccf to \$4.19 per Ccf, {\$5.60 per 1,000 gallons}
  
- Sewer rate increase of \$0.27 per Ccf, {\$0.36 per 1,000 gallons} for all classes of customers from \$5.44 per Ccf to \$5.71 per Ccf, {\$7.63 per 1,000 gallons}
  
- Monthly Clean Rivers Impervious Area Charge (CRIAC) increase of \$1.94 from \$20.30 per ERU to \$22.24 per ERU
  
- Clean Rivers Impervious Area Charge (CRIAC) six-tier residential rates structure is shown in the table below:

Tiers	Residential Impervious Area Range	ERU
Tier 1	100 – 600 sq ft	0.6 ERU
Tier 2	700 – 2,000 sq ft	1.0 ERU
Tier 3	2,100 – 3,000 sq ft	2.4 ERU
Tier 4	3,100 – 7,000 sq ft	3.8 ERU
Tier 5	7,100 – 11,000 sq ft	8.6 ERU
Tier 6	11,100 sq ft and more	13.5 ERU

- The Water System Replacement Fee (WSRF) recovers the costs of 1% renewal and replacement program for water service lines. WSRF varies with meter size. There will be no increase in WSRF, which will remain same as in FY 2016. WSRF for 5/8” meter size is \$6.30.
  
- Right-of-Way Fee – This fee recovers the full cost of the Right-of-Way Fee charged to DC Water by the District of Columbia
  - There is no increase in the Right-of-Way Fee, which remains the same at \$0.17 per Ccf, (\$0.23 per 1,000 gallons)



- Payment-in-Lieu of Taxes Fee – This fee recovers the cost of providing municipal services to DC Water by the District of Columbia. On September 4, 2014 the District and the Authority entered into a new Memorandum of Understanding (the “2014 PILOT MOU”) amending the 1998 PILOT MOU. According to the MOU, the Authority shall increase the amount of the PILOT payment by two percent per annum based on the amount of prior year’s annual PILOT payment.
  - Increase of \$0.01 per Ccf in the PILOT fee (\$0.01 per 1,000 gallons) to \$0.48 per Ccf, (\$0.64 per 1,000 gallons)
- These changes increased the typical residential customer’s total monthly bill by \$4.70 or 5.1 percent

The Board has approved the following changes in the rates and fees to be effective from October 1, 2017:

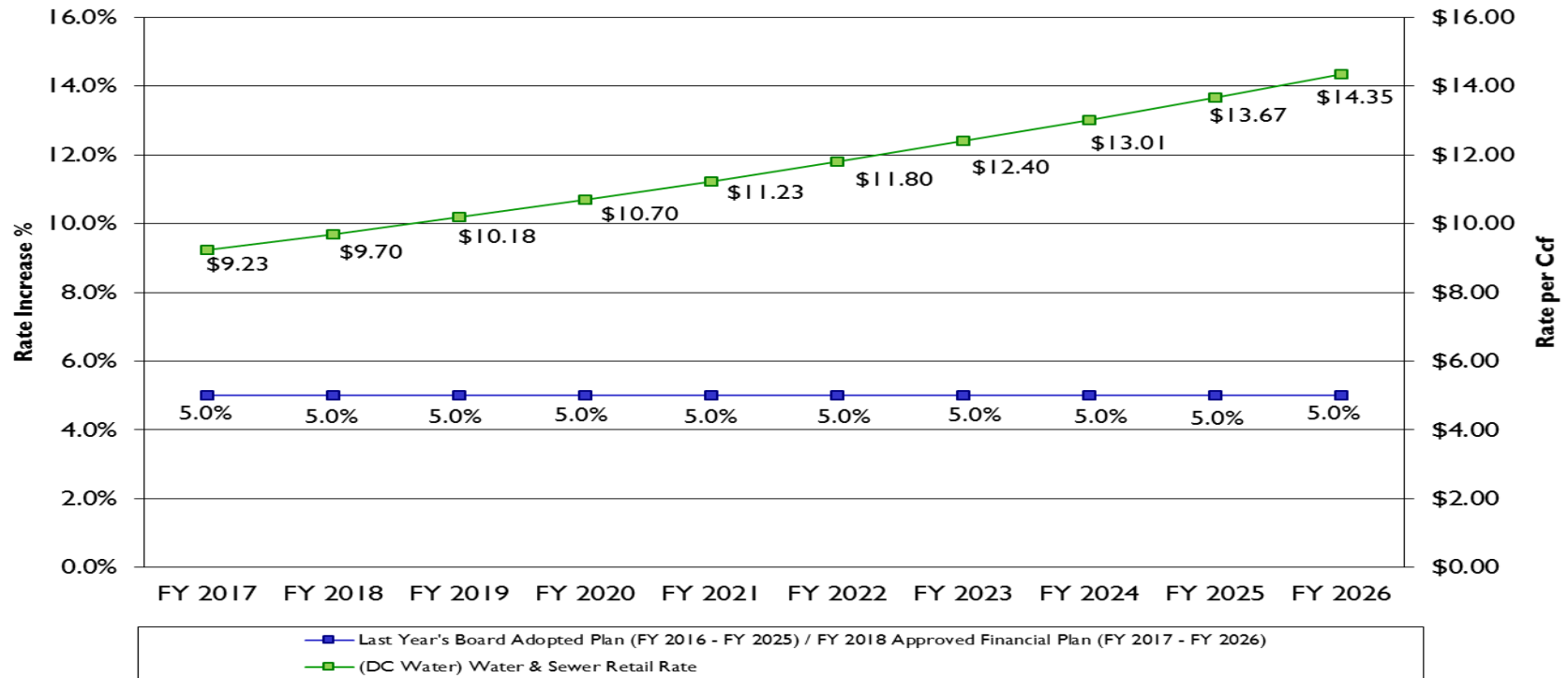
- Water volumetric rates:
  - Residential customers: “Consumption of 0 – 4 Ccf” - water rate increase of \$0.16 per Ccf, {\$0.21 per 1,000 gallons} from \$3.23 per Ccf to \$3.39 per Ccf, {\$4.53 per 1,000 gallons}
  - Residential customers: “Consumption greater than 4 Ccf” - water rate increase of \$0.20 per Ccf, {\$0.27 per 1,000 gallons} from \$4.06 per Ccf to \$4.26 per Ccf, {\$5.70 per 1,000 gallons}
  - Multi-family customers: water rate increase of \$0.18 per Ccf, {\$0.24 per 1,000 gallons} from \$3.62 per Ccf to \$3.80 per Ccf, {\$5.08 per 1,000 gallons}
  - Non-Residential customers: water rate increase of \$0.21 per Ccf, {\$0.28 per 1,000 gallons} from \$4.19 per Ccf to \$4.40 per Ccf, {\$5.88 per 1,000 gallons}
- Sewer rate increase of \$0.29 per Ccf, {\$0.39 per 1,000 gallons} for all classes of customers from \$5.71 per Ccf to \$6.00 per Ccf, {\$8.02 per 1,000 gallons}
- Monthly Clean Rivers Impervious Area Charge (CRIAC) increase of \$2.94 from \$22.24 per ERU to \$25.18 per ERU
- Water System Replacement Fee (WSRF) will remain the same. This fee varies with meter size. The WSRF is to recover the costs of 1% renewal and replacement program for water service lines. WSRF for 5/8” meter size is \$6.30.
- PILOT and Right-of-Way fee – These fees are proposed to increase to recover the full cost of the PILOT and Right-of-Way fees charged to DC Water by the District of Columbia
  - Increase of \$0.01 in the PILOT fee, {\$0.01 per 1,000 gallons} to \$0.49 per Ccf, {\$0.65 per 1,000 gallons}
  - Increase of \$0.01 in the Right-of-Way fee, {\$0.01 per 1,000 gallons} to \$0.18 per Ccf, {\$0.24 per 1,000 gallons}

The ten-year projected water and sewer rate increases under this year’s plan (FY 2017 – FY 2026) total 50.0 percent driven primarily by capital spending for DC Water’s \$3.75 billion capital improvement program.

Primary spending in the ten-year capital plan includes: DC Clean Rivers Project (CSO LTCP), Enhanced Nitrogen Removal Facilities and various on-going water and sewer infrastructure improvements.

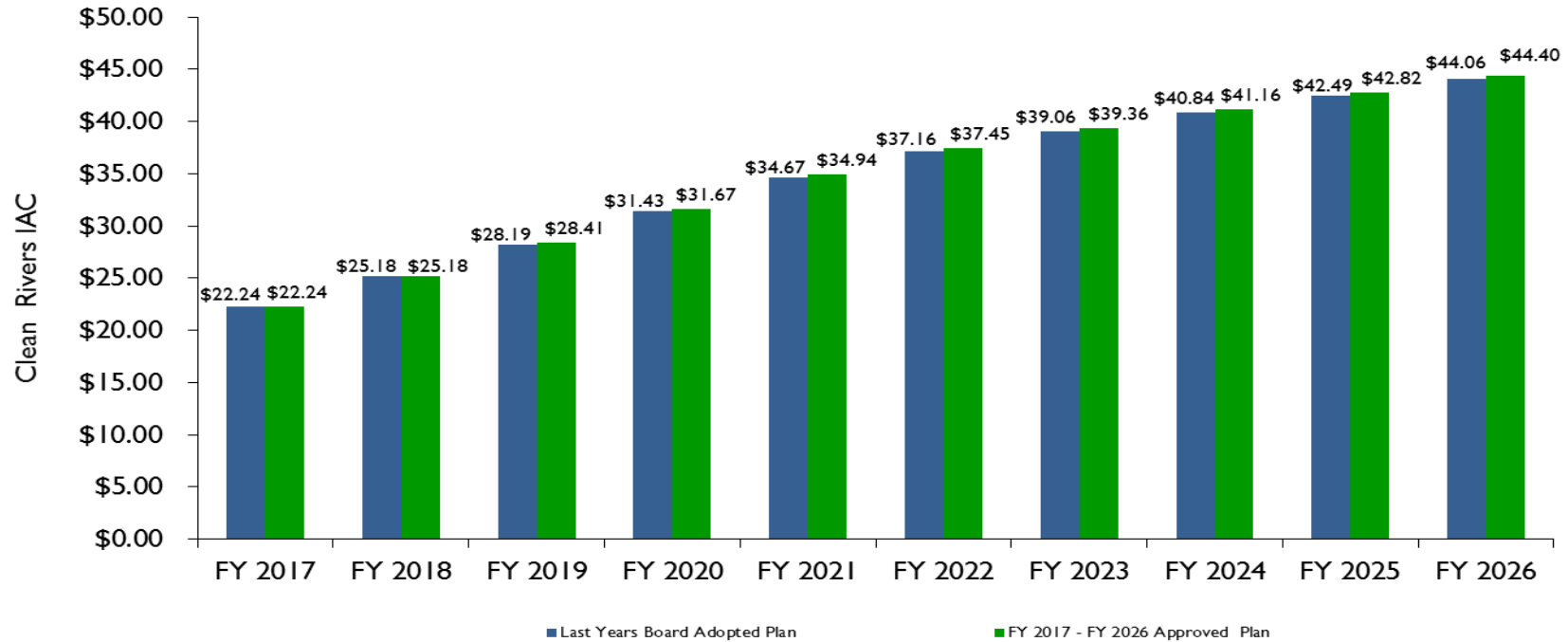
The public outreach and comment process for the multi-year rate proposal for FY 2017 and FY 2018 occurred between April and June 2016. With the approval of the rates by DC Water Board, these changes will increase the typical residential customer’s monthly bill by \$4.70 or 5.1 percent in FY 2017 and by \$5.95 or 6.2 percent in FY 2018 as shown on page IV–23.

## PROJECTED RETAIL WATER & SEWER RATE CHANGES FY 2017 – FY 2026



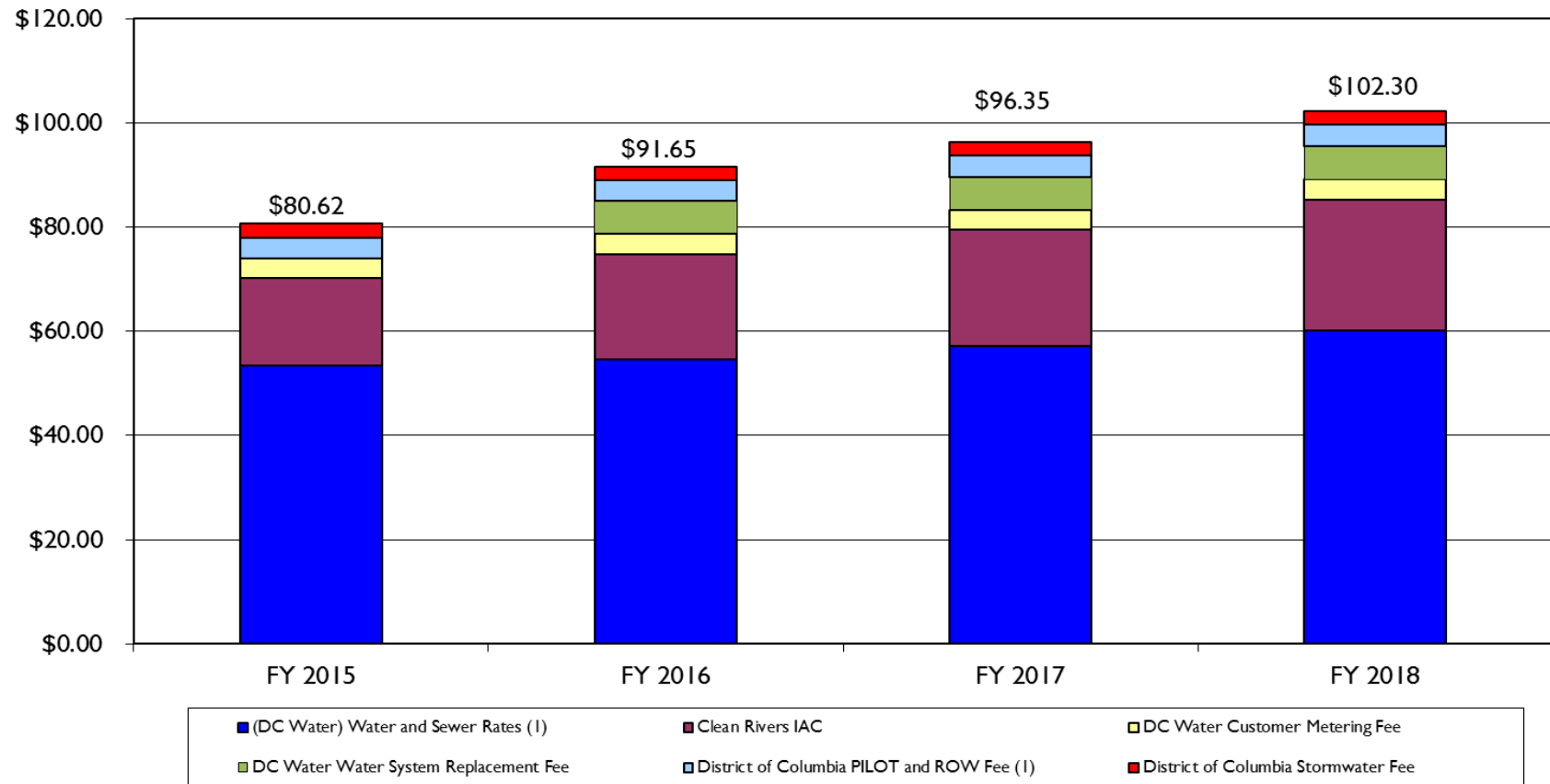
- 1) Rates shown above reflect weighted water and sewer rates for Residential customer category
- 2) In FY 2017 approved water and sewer rate increase of \$0.43 per Ccf, (\$0.57 per 1,000 gallons)  
 — Combined water and sewer rate increases from \$8.80 to \$9.23 per Ccf
- 3) In FY 2018 approved water and sewer rate increase of \$0.47 per Ccf, (\$0.63 per 1,000 gallons)  
 — Combined water and sewer rate increases from \$9.23 to \$9.70 per Ccf
- 4) Rate increases of 5.0 percent for the period FY 2018 to FY 2026

## PROJECTED MONTHLY CLEAN RIVERS IMPERVIOUS SURFACE AREA CHARGE (CRIAC) CHANGES FY 2017 – FY 2026



- The projected charges displayed in the chart above are primarily driven by anticipated debt service costs necessary to support the twenty year \$2.6 billion Clean Rivers Project, which includes the federally mandated CSO-LTCP and the nine-minimum controls program
- The annual Clean Rivers Project costs for the average Tier 2 residential customer (700 – 2,000 sq ft of impervious area) is projected to increase from \$302.16 in FY 2018 to \$532.80 in FY 2026

## AVERAGE RESIDENTIAL CUSTOMER MONTHLY BILL FY 2015 – FY 2018



- I) Assumes average monthly consumption of 6.20 Ccf, or 4,638 gallons  
 – FY 2018 cost per gallon is \$0.01 (water and sewer rates only)

## AVERAGE RESIDENTIAL CUSTOMER MONTHLY BILL FY 2015 – FY 2018

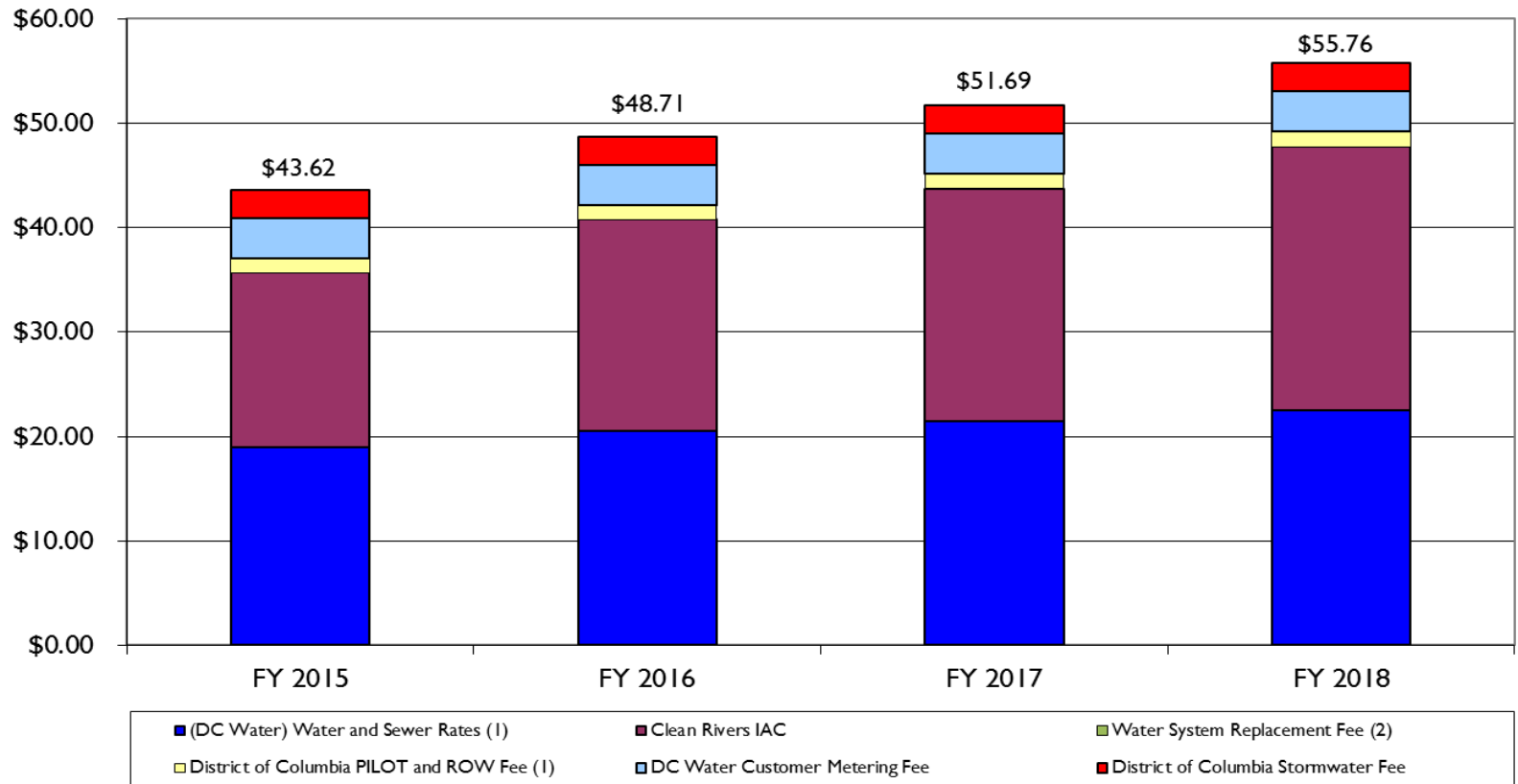
	Units	FY 2015	FY 2016	Approved FY 2017	Approved FY 2018
DC Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$ 53.44	\$ 54.56	\$ 57.25	\$ 60.13
DC Water Clean Rivers IAC	ERU	16.75	20.30	22.24	25.18
DC Water Customer Metering Fee	5/8"	3.86	3.86	3.86	3.86
DC Water Water System Replacement Fee <sup>(3)</sup>	5/8"	-	6.30	6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		<b>\$ 74.05</b>	<b>\$ 85.02</b>	<b>\$ 89.65</b>	<b>\$ 95.47</b>
Increase / Decrease		\$ 8.62	\$ 10.97	\$ 4.63	\$ 5.82
District of Columbia PILOT <sup>(1)</sup>	Ccf	\$ 2.85	\$ 2.91	\$ 2.98	\$ 3.04
District of Columbia Right-of-Way Fee <sup>(1)</sup>	Ccf	1.05	1.05	1.05	1.12
District of Columbia Stormwater Fee <sup>(2)</sup>	ERU	2.67	2.67	2.67	2.67
Subtotal District of Columbia Charges		\$ 6.57	\$ 6.63	\$ 6.70	\$ 6.83
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 80.62</b>	<b>\$ 91.65</b>	<b>\$ 96.35</b>	<b>\$ 102.30</b>
Increase / Decrease Over Prior Year		\$ 8.18	\$ 11.03	\$ 4.70	\$ 5.95
<b>Percent Increase in Total Bill</b>		<b>11.3%</b>	<b>13.7%</b>	<b>5.1%</b>	<b>6.2%</b>

(1) Assumes average monthly consumption of 6.20 Ccf, or (4,638 gallons)

(2) District Department of the Environment stormwater fee of \$2.67 effective November 1, 2010

(3) DC Water "Water System Replacement Fee" of \$6.30 for 5/8" meter size effective October 1, 2015

## AVERAGE CAP CUSTOMER MONTHLY BILL FY 2015 – FY 2018



- Assumes average monthly consumption of 6.20 Ccf, or 4,638 gallons
  - FY 2018 cost per gallon is \$0.01 (water and sewer rates only)
- Assumes 100 percent discount for Water System Replacement Fee (WSRF) to CAP customers, therefore, WSRF is not shown in the above graph

# Recent and Approved Rate & Fee Changes

## AVERAGE CAP CUSTOMER MONTHLY BILL FY 2015 – FY 2018

	Units	FY 2015	FY 2016	Approved FY 2017	Approved FY 2018
DC Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$ 53.44	\$ 54.56	\$ 57.25	\$ 60.13
DC Water Clean Rivers IAC	ERU	16.75	20.30	22.24	25.18
DC Water Customer Metering Fee	5/8"	3.86	3.86	3.86	3.86
DC Water Water System Replacement Fee	5/8"	-	6.30	6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		<b>\$ 74.05</b>	<b>\$ 85.02</b>	<b>\$ 89.65</b>	<b>\$ 95.47</b>
Increase / Decrease		\$ 8.62	\$ 10.97	\$ 4.63	\$ 5.82
District of Columbia PILOT <sup>(1)</sup>	Ccf	\$ 2.85	\$ 2.91	\$ 2.98	\$ 3.04
District of Columbia Right-of-Way Fee <sup>(1)</sup>	Ccf	1.05	1.05	1.05	1.12
District of Columbia Stormwater Fee <sup>(4)</sup>	ERU	2.67	2.67	2.67	2.67
<b>Subtotal District of Columbia Charges</b>		<b>\$ 6.57</b>	<b>\$ 6.63</b>	<b>\$ 6.70</b>	<b>\$ 6.83</b>
<b>Total Amount</b>		<b>\$ 80.62</b>	<b>\$ 91.65</b>	<b>\$ 96.35</b>	<b>\$ 102.30</b>
Less: CAP Discount (4 Ccf per month) <sup>(1), (2)</sup>		\$ (37.00)	\$ (36.64)	\$ (38.36)	\$ (40.24)
Water System Replacement Fee (WSRF) <sup>(3)</sup>		\$ -	\$ (6.30)	\$ (6.30)	\$ (6.30)
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 43.62</b>	<b>\$ 48.71</b>	<b>\$ 51.69</b>	<b>\$ 55.76</b>
Increase / Decrease Over Prior Year		\$ 6.06	\$ 5.09	\$ 2.98	\$ 4.07
<b>CAP Customer Discount as a Percent of Total Bill</b>		<b>-45.9%</b>	<b>-46.9%</b>	<b>-46.4%</b>	<b>-45.5%</b>

(1) Assumes average monthly consumption of 6.20 Ccf, or (4,638 gallons)

(2) Extension of CAP program in FY 2011 to first 4 Ccf of PILOT and ROW

(3) Assumes 100 percent discount for Water System Replacement Fee (WSRF) to CAP customers

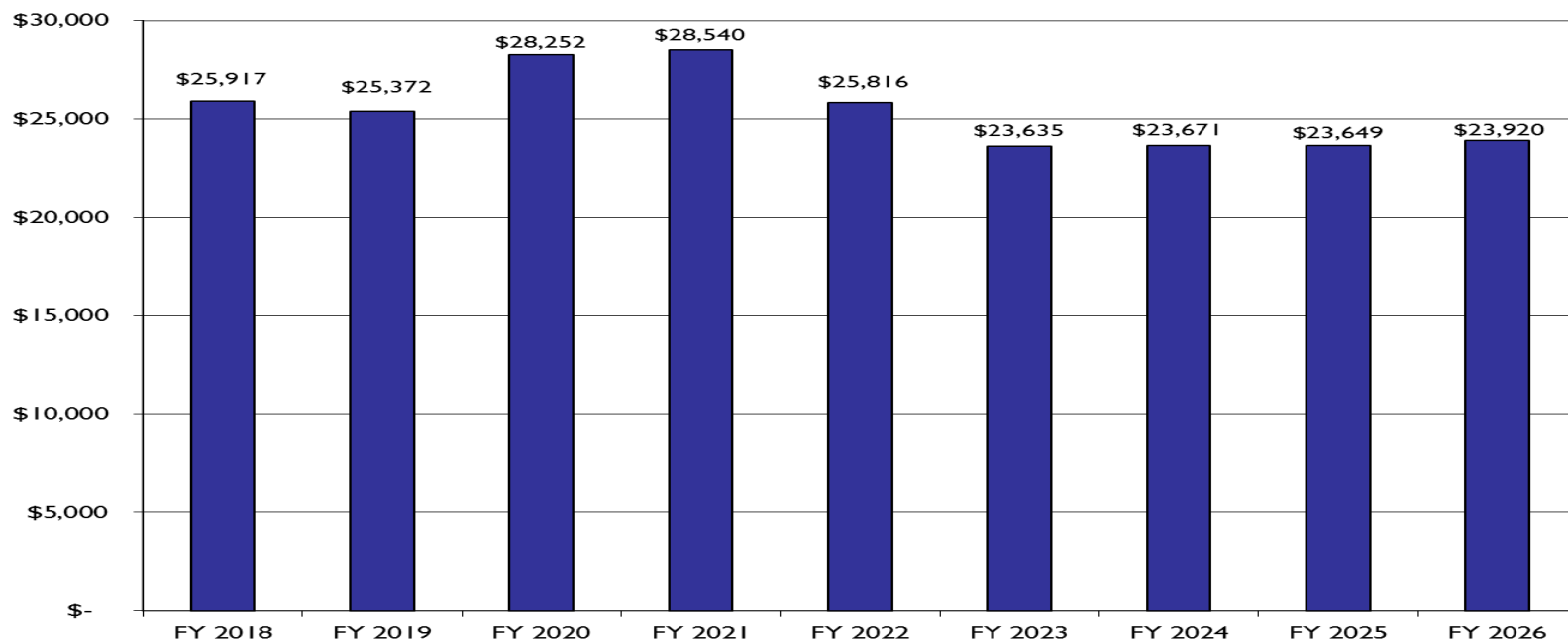
(4) District Department of the Environment stormwater fee of \$2.67 effective November 1, 2010



## FY 2017 – FY 2026 FINANCIAL PLAN

- As shown in the chart below, incremental increases in retail revenues are projected to range from \$23.6 million to \$28.5 million in FY 2018 – FY 2026, due to:
  - Average annual debt service increase of 5.8 percent
  - Average annual O&M increase of 2.8 percent
  - Annual projected Payment-in-Lieu of Taxes (PILOT) and Right-of-Way (ROW) increases due to DC Government increasing costs of providing services to the District
  - This year’s ten-year financial plan reflects anticipated operating cost savings at Blue Plains beginning in FY 2015 due to the implementation of the digester/cambi biosolids management project

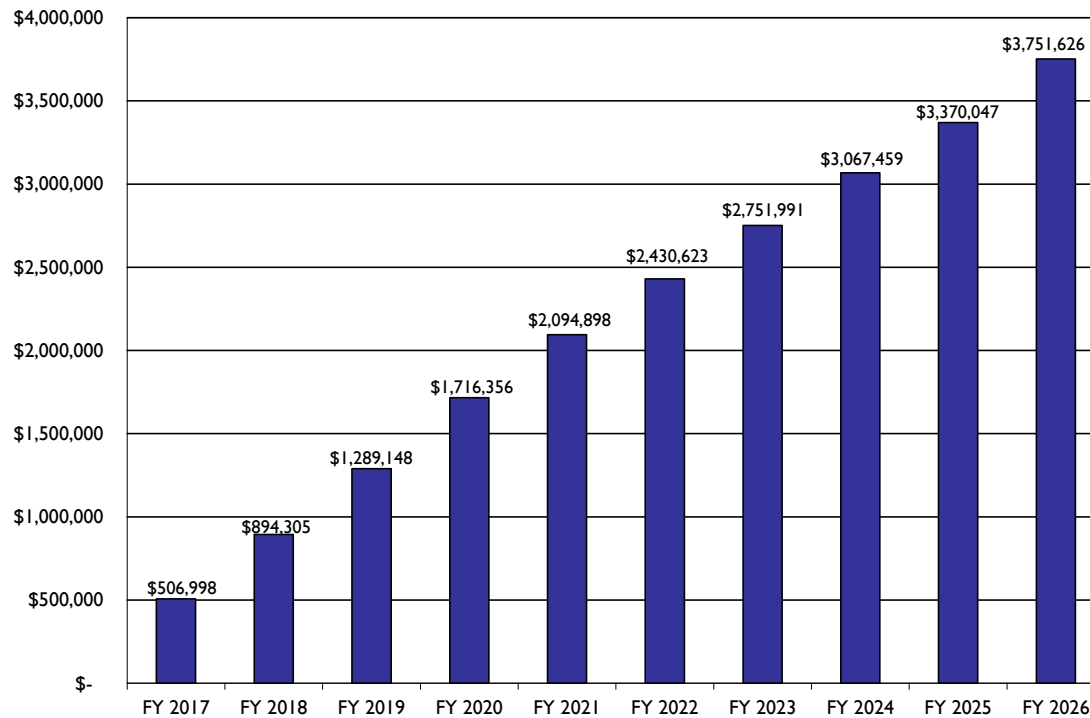
**INCREMENTAL INCREASE IN REVENUES**  
 FY 2018 – FY 2026  
 (\$ 000's)



- These costs would be recovered through:
  - Proposed water and sewer rate increases of 5.0 percent from FY 2018 to FY 2026
  - Proposed Clean Rivers Impervious Surface Area Charge (CRIAC) revenues ranging from \$25.18 to \$44.40 per ERU per month
  - Proposed DC PILOT fee increases of 2 percent in accordance with the current MOU dated September 4, 2014 to recover the amount of PILOT payment obligation to the District of Columbia
  - The ROW fee will remain the same at \$5.1 million per annum in accordance with the current MOU signed on October 2, 2014 to recover the amount of ROW payment obligation to the District of Columbia
  - Utilization of the Board-authorized Rate Stabilization Fund (RSF) to offset retail rate increases

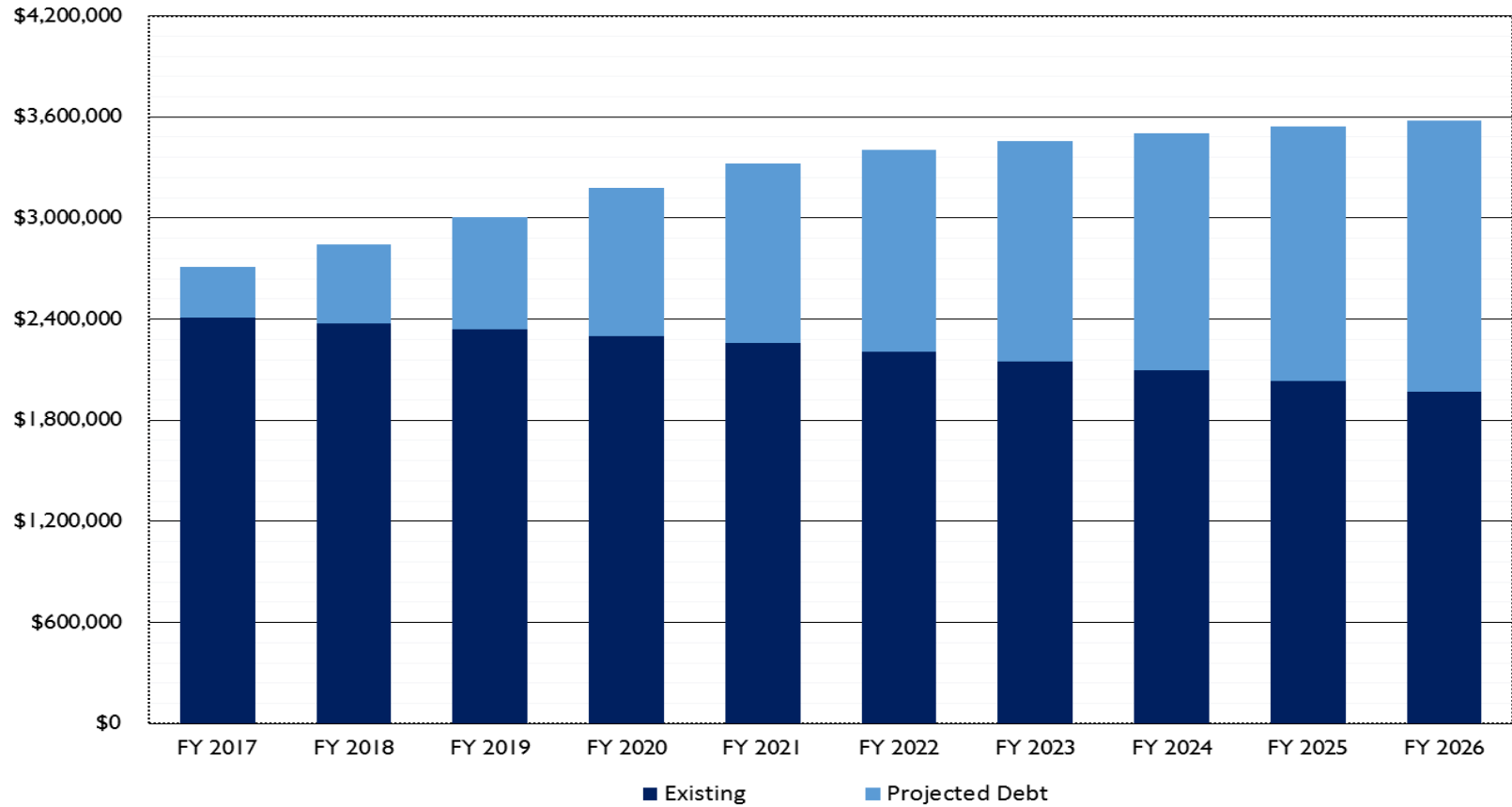
DC Water’s proposed rate increases are primarily required to fund increasing debt service costs from increased capital spending.

**CUMULATIVE CAPITAL SPENDING**  
**FY 2017 – FY 2026**  
**(\$ 000's)**



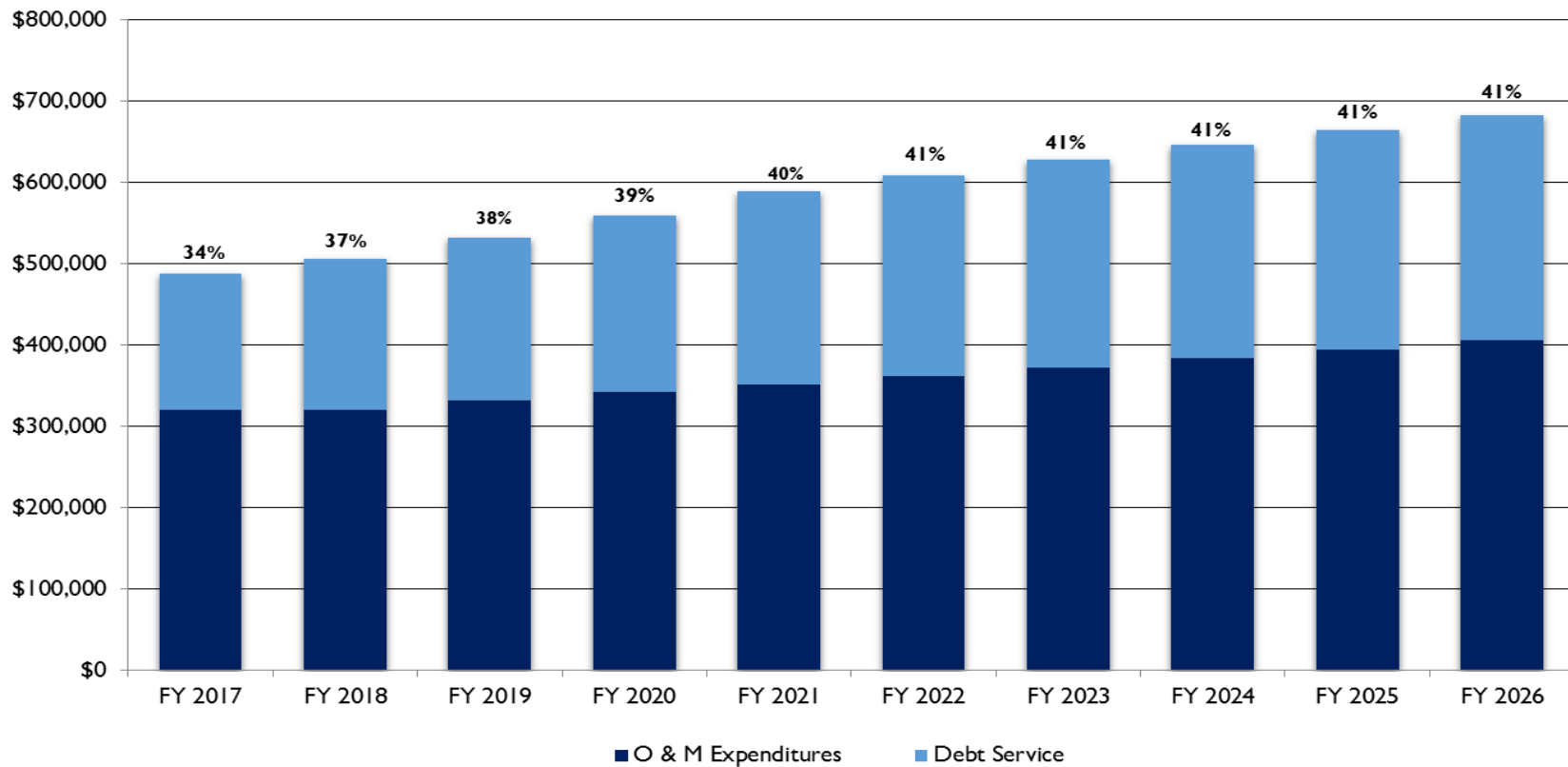
- DC Water’s ten-year capital improvement program totals \$3.75 billion, with annual spending ranging from \$302.6 million to \$507.0 million
- Once completed, the ten-year capital improvement project will double the book value of DC Water’s infrastructure
- The ten-year plan includes disbursements of the Clean Rivers Project (CSO LTCP), totaling nearly \$1.2 billion exclusive of nine minimum controls
- Water and sewer infrastructure continues to drive the ten-year Capital Improvement Plan from FY 2017 through FY 2026

## NEW & EXISTING DEBT OUTSTANDING FY 2017 – FY 2026 (\$ 000's)



- The largest source of funding for DC Water’s capital program is debt
- Over the next ten years, DC Water will issue approximately \$1.5 billion in new debt (which includes the funding of reserves and costs of issuance), increasing total debt outstanding to \$3.58 billion at the end of FY 2026

**DEBT SERVICE AS PERCENT OF TOTAL OPERATING & MAINTENANCE EXPENDITURES**  
**FY 2017 – FY 2026**  
**(\$ 000's)**



## OPERATING & DEBT SERVICE EXPENDITURES FY 2017 – FY 2026

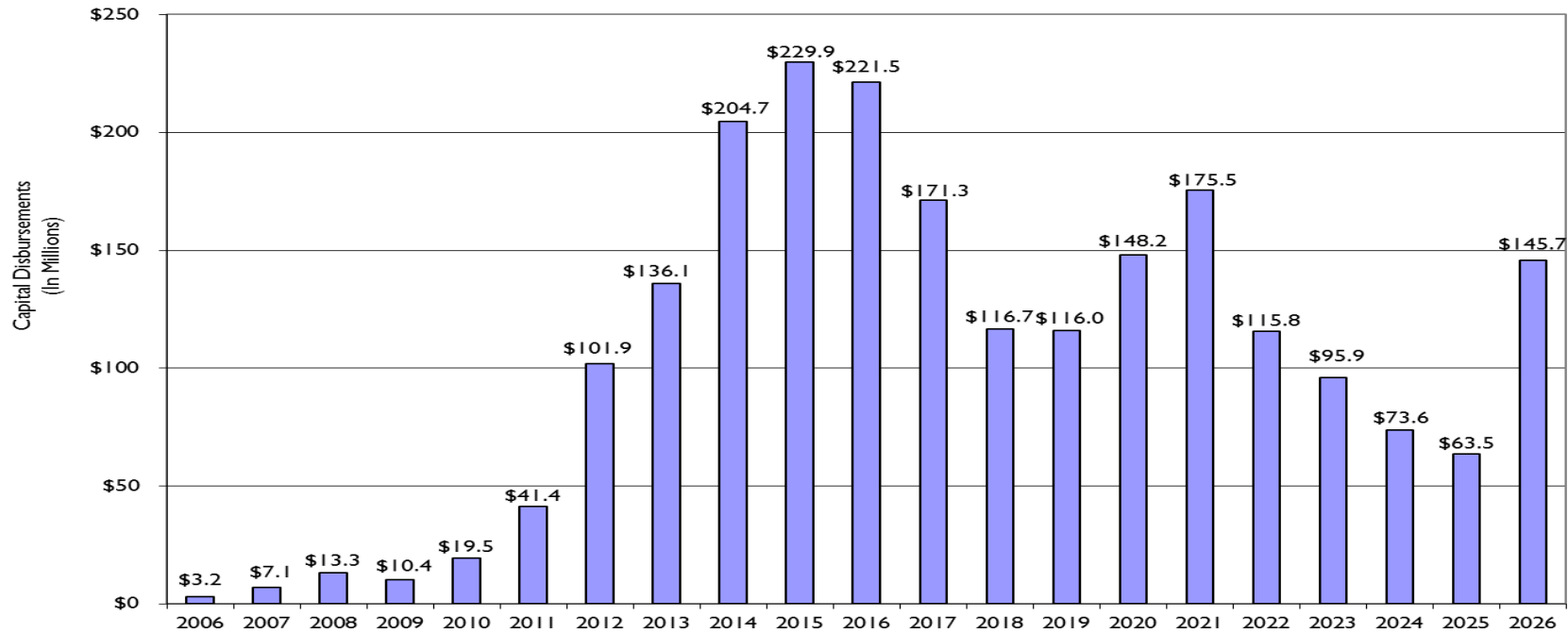
Over the ten-year period, total expenditures increase on average by 3.9 percent annually

### ***DC Water's proposed rate increases are primarily required to fund increasing debt service costs***

- Operations and maintenance expenditures (excluding the payment-in-lieu of taxes and right-of-way fee) increase on average by only 2.8 percent annually
- Debt service expenditures grow at an annual average rate of 5.8 percent
- This year's ten-year financial plan reflects anticipated operating cost savings at Blue Plains due to the implementation of the digester/cambi biosolids management project. Digesters commenced operation in FY 2015

## POTENTIAL IMPACT OF CSO LONG-TERM CONTROL PLAN ON RATES

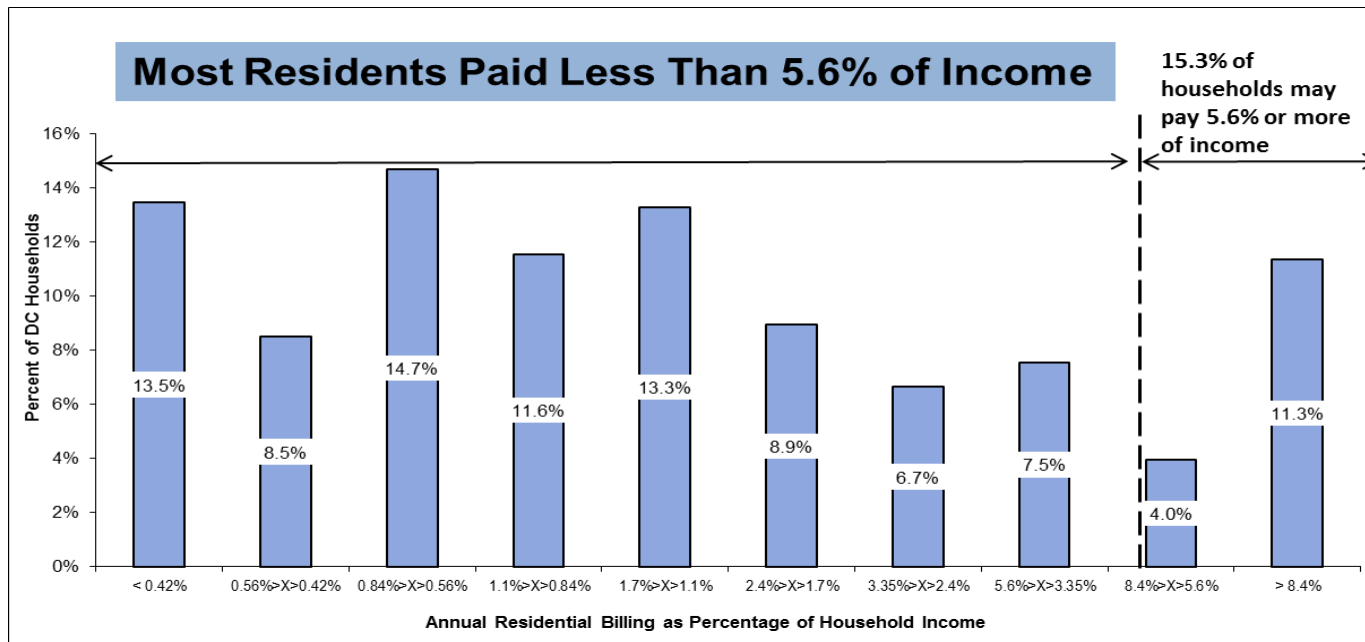
### Clean Rivers CSO LTCP Disbursements by Fiscal Year



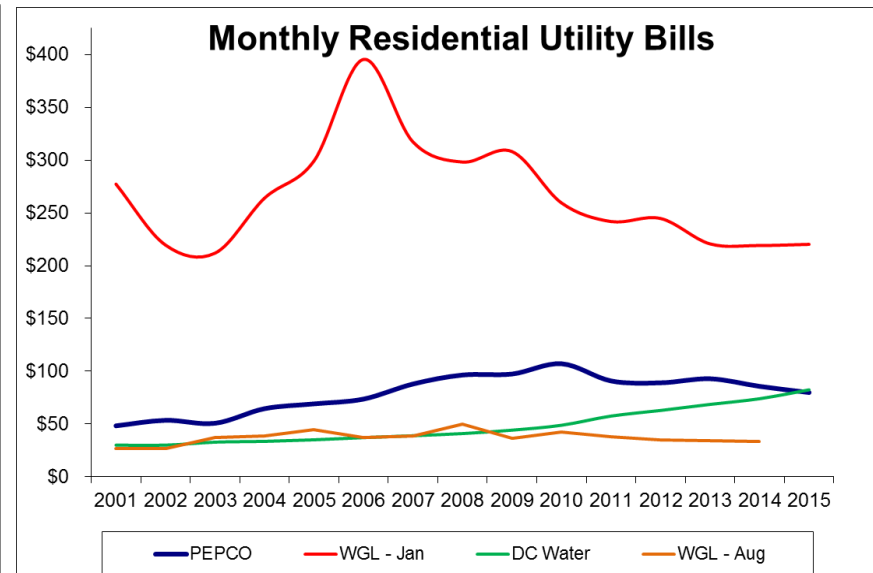
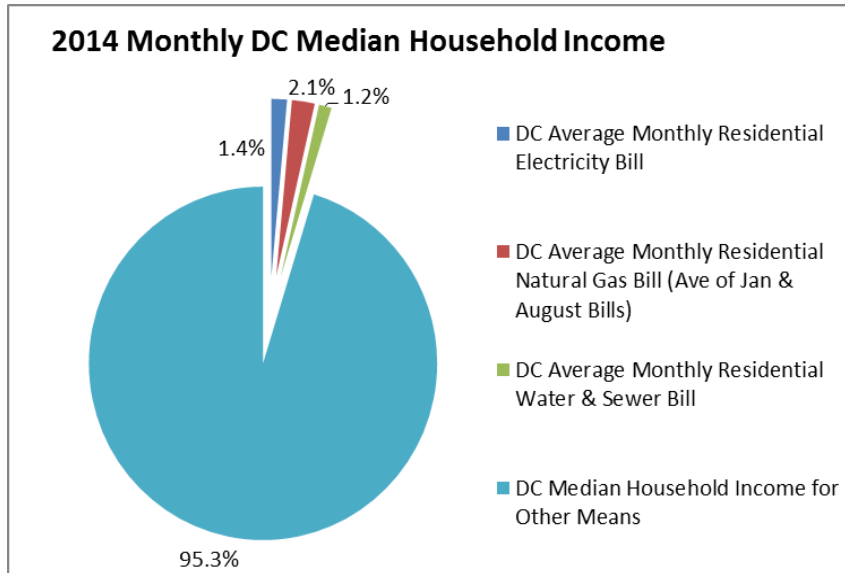
In December 2004, the Board reached an agreement with the federal government on the Clean Rivers Project (CSO-LTCP) and entered into a related consent decree. Actual and projected disbursements by fiscal year for the Clean Rivers Project are shown in the chart above and are the drivers for changes in the Clean Rivers Impervious Area Charge over the ten-year plan. Wholesale customers contribute 7.1 percent to the Clean Rivers Project. To mitigate impacts, DC Water continues to look for federal support for this program. As of September 30, 2016, \$224.8 million has been received through federal appropriations. Lifetime capital costs for the plan (exclusive of the nine – minimum controls program) total approximately \$2.3 billion, and this year’s proposed ten-year plan includes \$1.2 billion of projected Clean Rivers Project disbursements.

## DC WATER CHARGES ARE STILL AFFORDABLE AND COMPETITIVE WITH OTHER MAJOR CITIES

- **Median household income:** The average DC Water charges are less than 5.6% of income for 84.7% of the households in the District of Columbia. US EPA guidelines suggest that charges greater than 4% of median household income are typically viewed as a strain on household budgets (2% water + 2% sewer)
- **Typical DC Water residential bill as a percentage of median household income is lower than average when compared to other utilities of similar size**
- **Customer Assistance Programs are in place to help eligible low income customers with their water/sewer bills**







**Observation:**

- DC Water’s average monthly residential water & sewer bill is about 1.2 percent of the total monthly household income for the median income family, which is lower, compared to the average monthly electricity and natural gas bill and at about the national average for urban populations

**Observation:**

- Average electricity and natural gas are higher than water & sewer bills

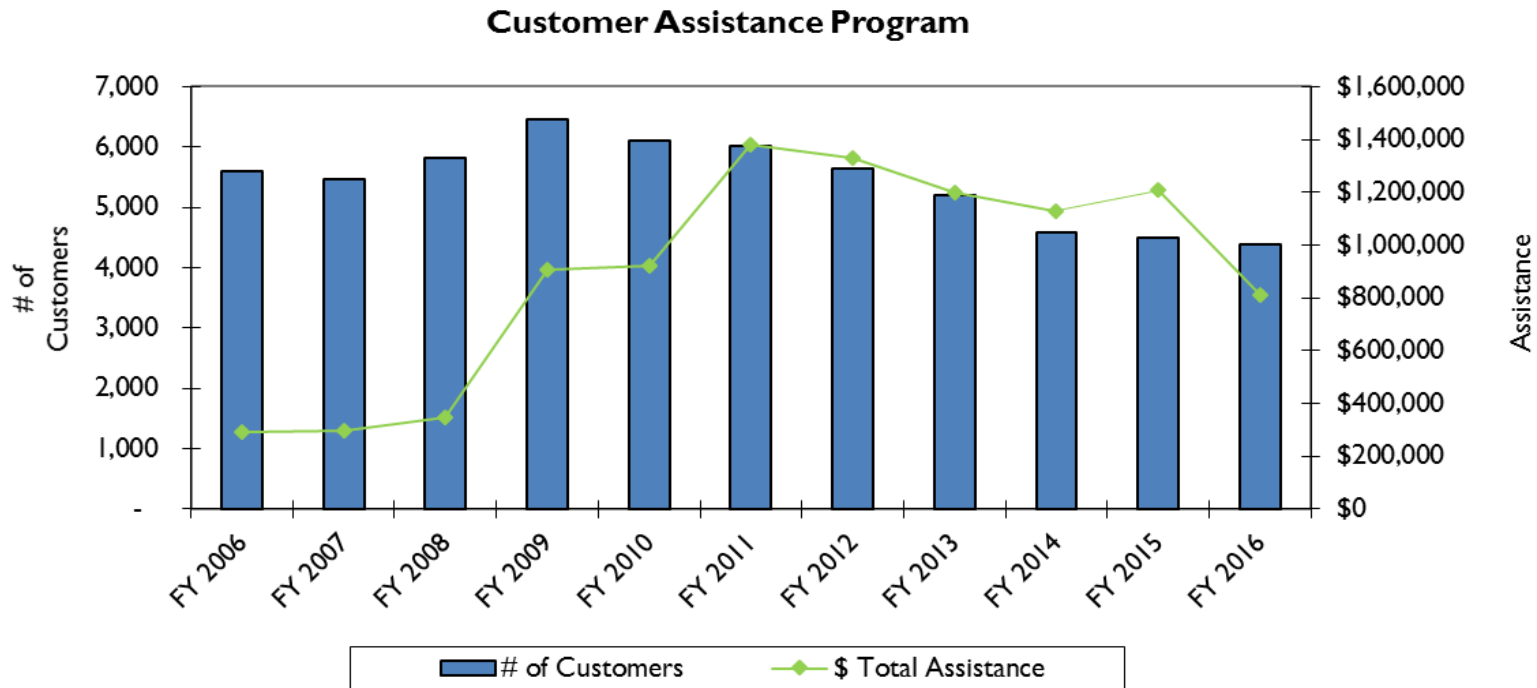
**Assumption:**

- Average DC customer is assumed to use 6.69 Ccf of water, 200 Therms of natural gas and 695 kWh of electricity per month in 2014

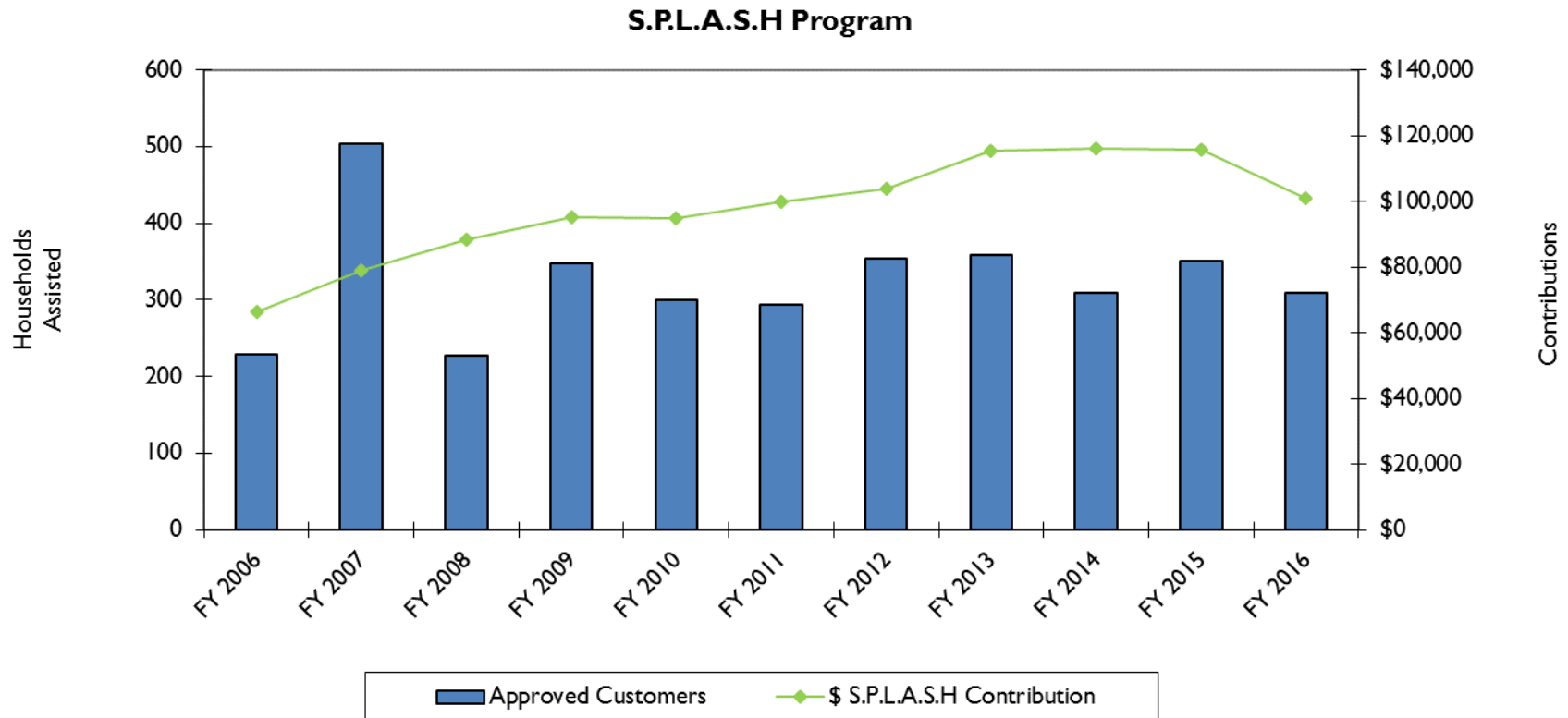
Sources:  
 Electricity and Gas: DC Public Service Commission  
 Water and Sewer: DC Water Assuming 6.69 Ccf, or 5,004 gallons consumption  
 Median HH Income: US Census Bureau, American Community Survey 2013 1-Year Estimates

DC Water sponsors two programs to assist low income customers in paying their water bills:

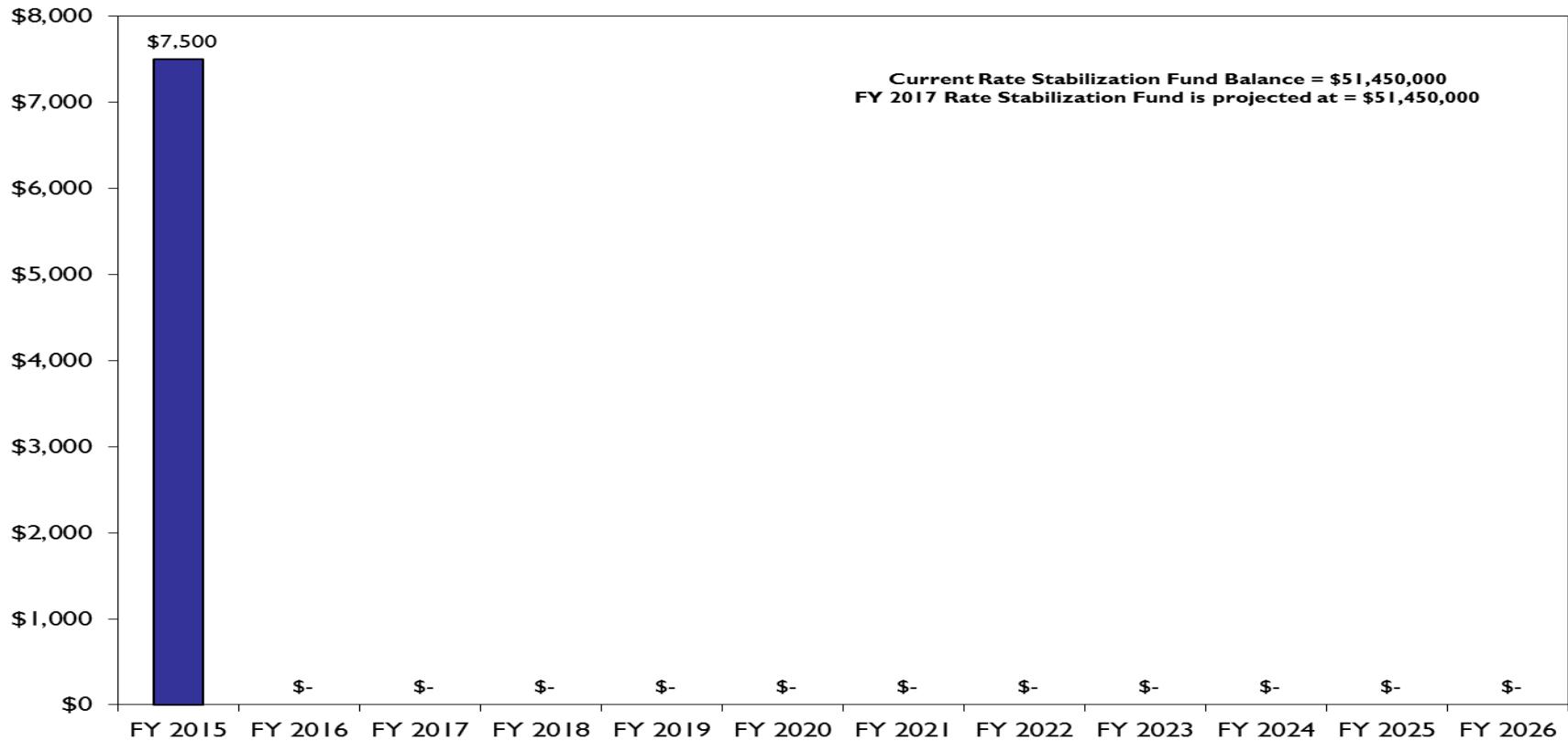
- Customer Assistance Program (“CAP”)**: The Authority implemented the CAP in 2001 providing a discount of 4 Ccf per months of water service for single family residential homeowners that meet income eligibility guidelines. In FY 2004, the Authority expanded the CAP to include tenants who meet the financial eligibility requirements and whose primary residence is separately metered by the Authority. In January 2009, the Authority further expanded the CAP to provide a discount of 4 Ccf per month of sewer services to eligible customers. In FY 2011, the discount was expanded to the first 4 Ccf associated with the PILOT/ROW fee in addition to the current discount provided on water and sewer services. In FY 2016, the CAP discount was expanded to include a 100 percent credit/discount for the Water System Replacement Fee (VSRF). In FY 2016, CAP assisted over 4,379 customers and provided 808,797 in discounts to low-income customers.



- Serving People by Lending a Supporting Hand (“S.P.L.A.S.H”)**: The SPLASH program was implemented in FY 2001. Through the SPLASH program, DC Water offers assistance to families in need so that they can maintain critical water and sewer services until they get back on their feet. The program is administered by the Greater Washington Urban League. Every dollar received by DC Water is distributed to eligible customers. In FY 2016, SPLASH assisted 309 households and provided 101,098 in contributions to low-income customers.



**RATE STABILIZATION FUND USAGE**  
**FY 2017 – FY 2026**  
**(\$ 000's)**



- At the end of FY 2016, DC Water’s rate stabilization fund (RSF) balance was \$51.45 million. No RSF is proposed to be utilized from FY 2017 to FY 2026. RSF will have a balance of \$98.45 million at the end of FY 2026.

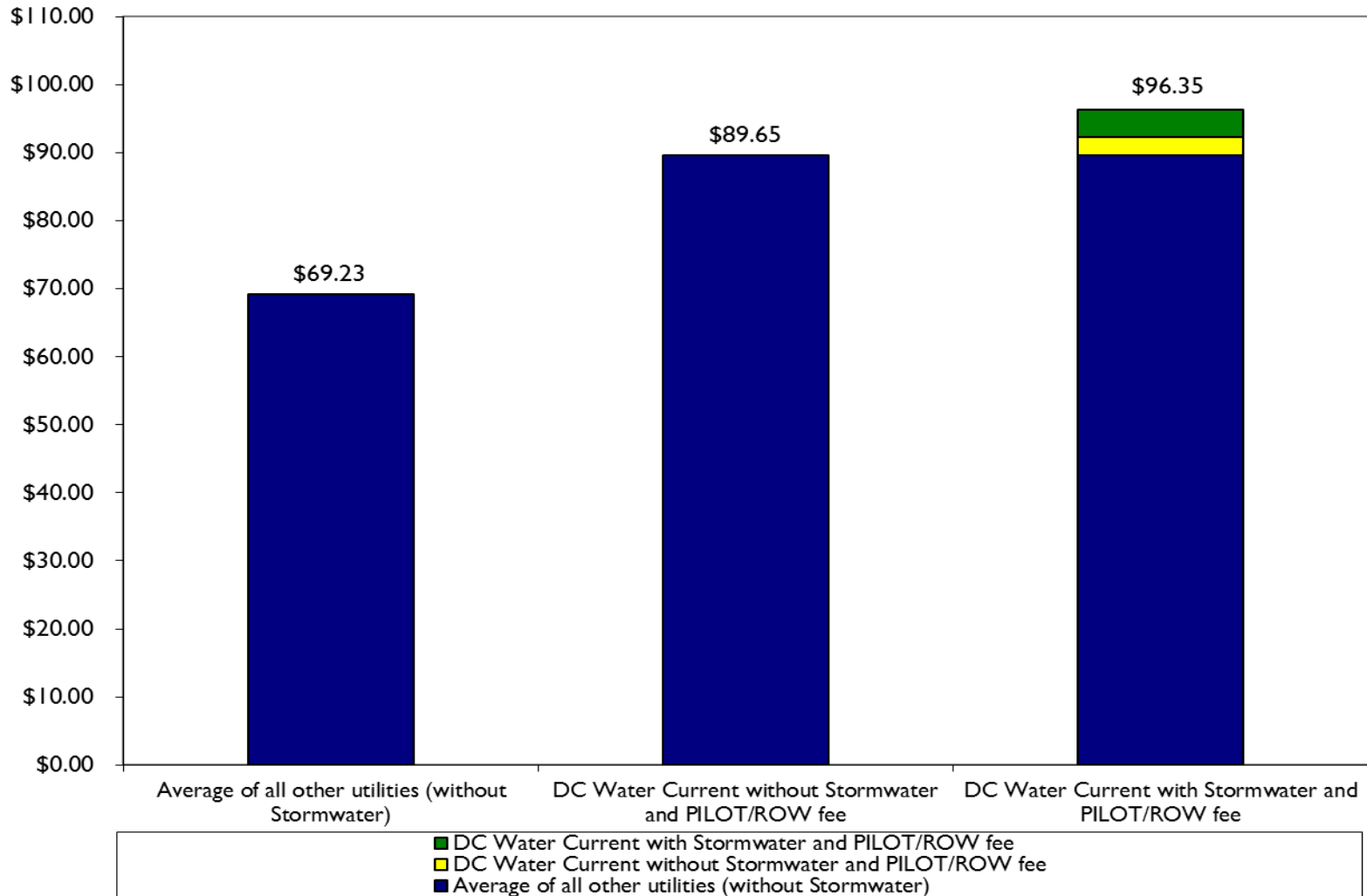
One method of assessing the affordability of residential rates is to calculate the portion of the Median Household Income that would be spent on typical water, wastewater, and stormwater bills and compare the results with the same calculation for other utilities. While no utilities are exactly alike, in the most recent rate survey conducted for DC Water in March 2016, DC Water's charges for a single family residential customer as a percentage of median income, excluding District fees, were below the average of other large and regional water and wastewater utilities.

The following charts provide DC Water combined water, sewer and stormwater charges for single family residential customers compared to: large CSO communities, other similar large jurisdictions and other regional jurisdictions. There are distinct differences between DC Water and other large and regional utilities. Some differences include:

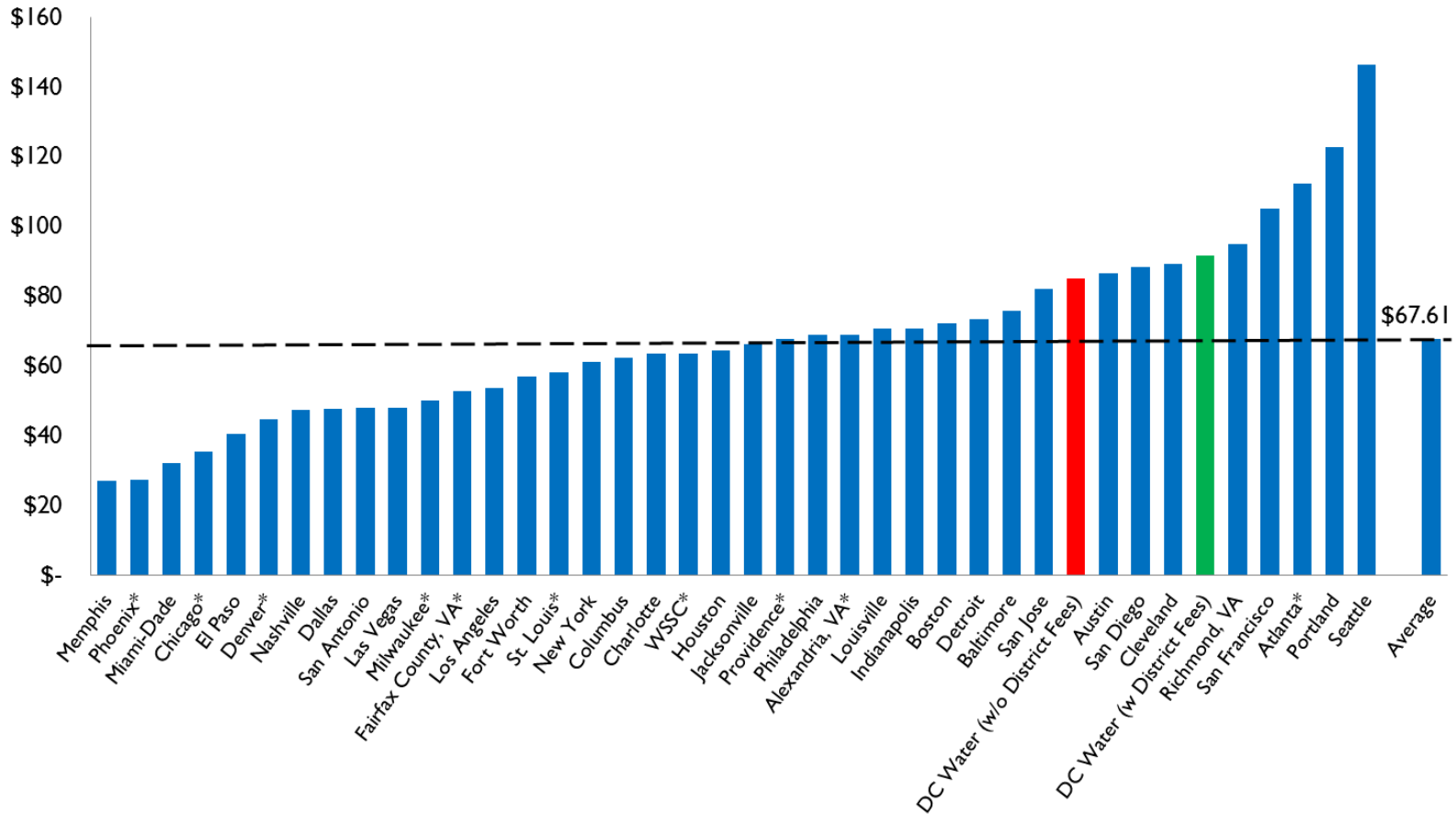
- Different patterns of water use (e.g., suburban jurisdictions can have different demands from urban centers)
- Revenues from taxes that reduce the revenues to be raised from water, sewer and stormwater rates (e.g., WSSC, Alexandria, Arlington, Milwaukee, St. Louis, Atlanta, Chicago, etc.)
- Available undeveloped areas supporting high developer contributions for growth that can again reduce the revenues to be raised from water, sewer and stormwater rates (e.g., Fairfax County)
- Separate sewer systems in certain large jurisdictions and regional jurisdictions (e.g., Dallas)
- Differences in climate that may affect water supply or conservation needs (e.g., Seattle)
- Varying stages of completion of facilities to meet federal mandates (e.g., Atlanta and Boston have completed most of their major investments - the DC Clean Rivers Project is in progress at this time)

## DC WATER'S RETAIL RATES ARE COMPARABLE TO OTHER UTILITIES

*DC Water's Current FY 2017 Monthly Residential Bill  
vs.  
Average Monthly Bill of Other Utilities in Effect Spring 2016*



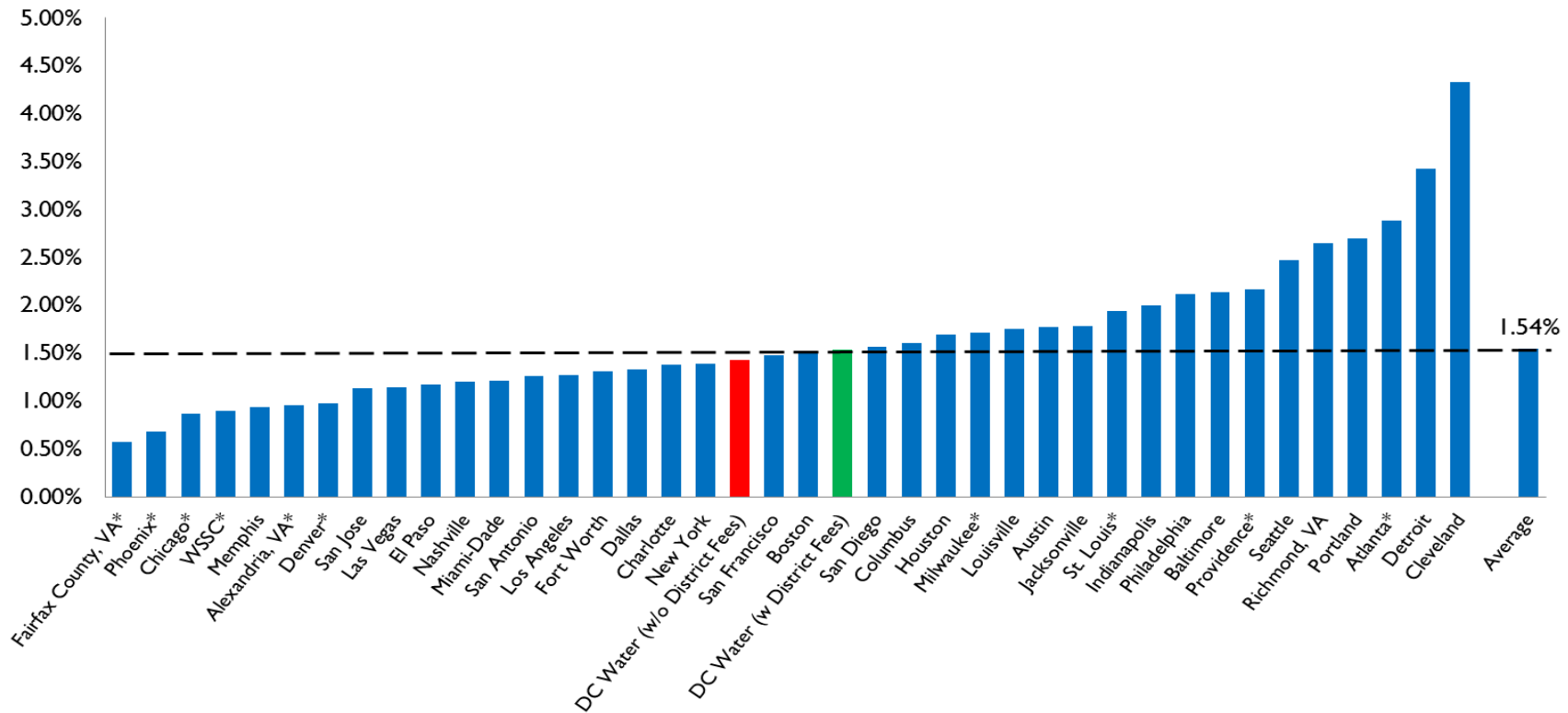
**DC Water Retail Rates Compared to Other Large Utilities  
(Based on Rates in effect Spring 2016)**



- (1) Assumes average residential consumption of 6.20 Ccf, or 4,638 gallons, per month. Ccf = hundred cubic feet, or 748 gallons
- (2) Reflects rates and fees in place as of March 1, 2016. The Authority's rate includes the PILOT/ROW fee totaling \$0.64 per Ccf (effective October 1, 2015) and the DOEE residential stormwater rate of \$2.67 per ERU per month.
- (3) Some cities use property tax revenue or other revenues to pay for part of the cost of water, wastewater, or stormwater services, as indicated by \* in the graph above. In such situations, the user charge will not reflect the full cost of water, wastewater or stormwater services.

In the chart below, DC Water current charges rank at the median for bill comparison purposes for water and wastewater services compared to a select group of large, regional and CSO utilities, but well within US EPA guidance of 4 percent.

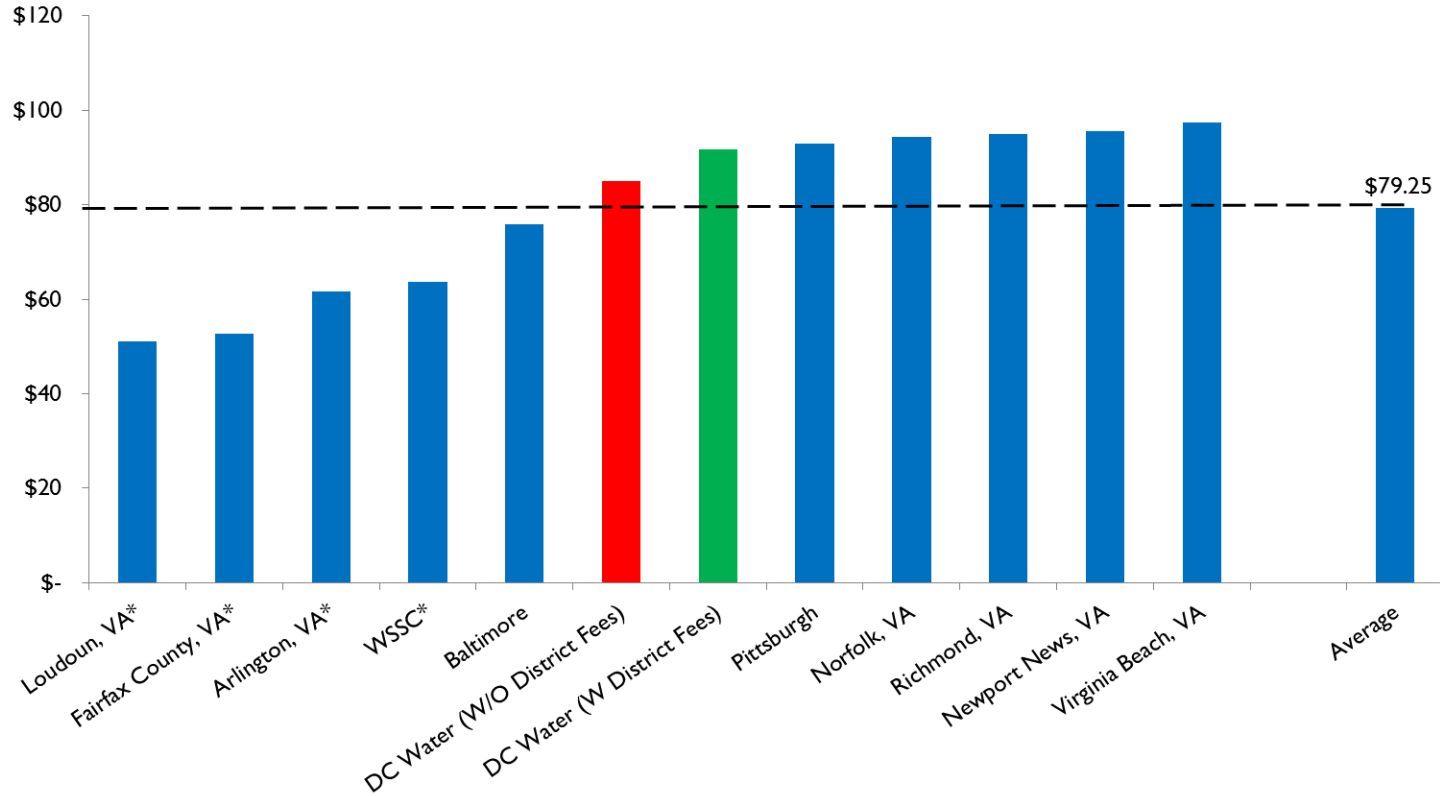
**Single Family Residential (SFR) Monthly Bill as % of Median Household Income - Large National Utilities (Based on Rates in effect Spring 2016)**



- (1) Assumes average residential consumption of 6.20 Ccf, or 4,638 gallons, per month. Ccf = hundred cubic feet, or 748 gallons
- (2) Reflects rates and fees in place as of March 2016. Some cities use property tax revenue or other revenues to pay for part of the cost of water, wastewater, or stormwater services, as indicated by \* in the graph above. In such situations, the user charge will not reflect the full cost of water, wastewater or stormwater services.



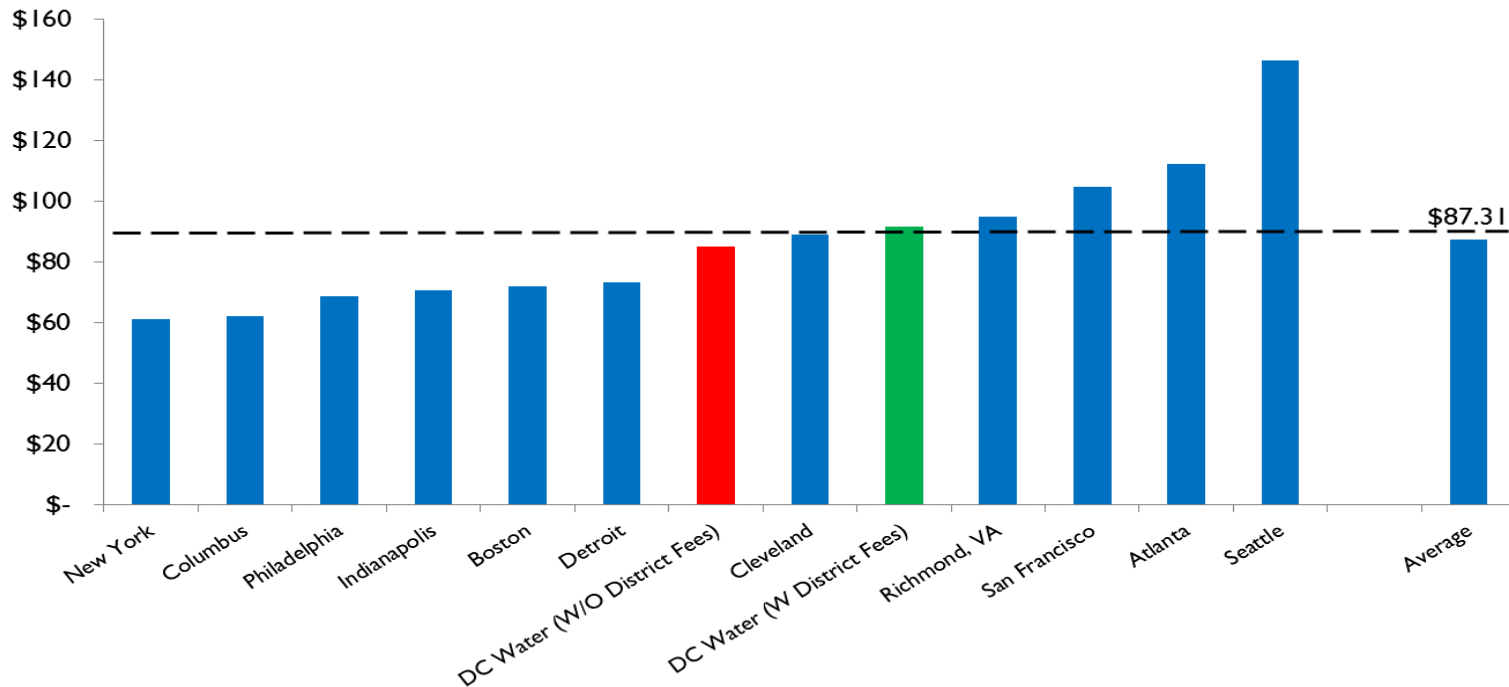
## DC Water Retail Rates Compared to Regional Utilities (Based on Rates in effect Spring 2016)



- (1) Assumes average residential consumption of 6.20 Ccf, or 4,638 gallons, per month. Ccf = hundred cubic feet, or 748 gallons
- (2) Reflects rates and fees in place as of March 2016. Some cities use property tax revenue or other revenues to pay for part of the cost of water, wastewater, or stormwater services, as indicated by \* in the graph above. In such situations, the user charge will not reflect the full cost of water, wastewater or stormwater services.

**DC Water Compared to CSO Communities  
(Based on Rates in effect Spring 2016)**

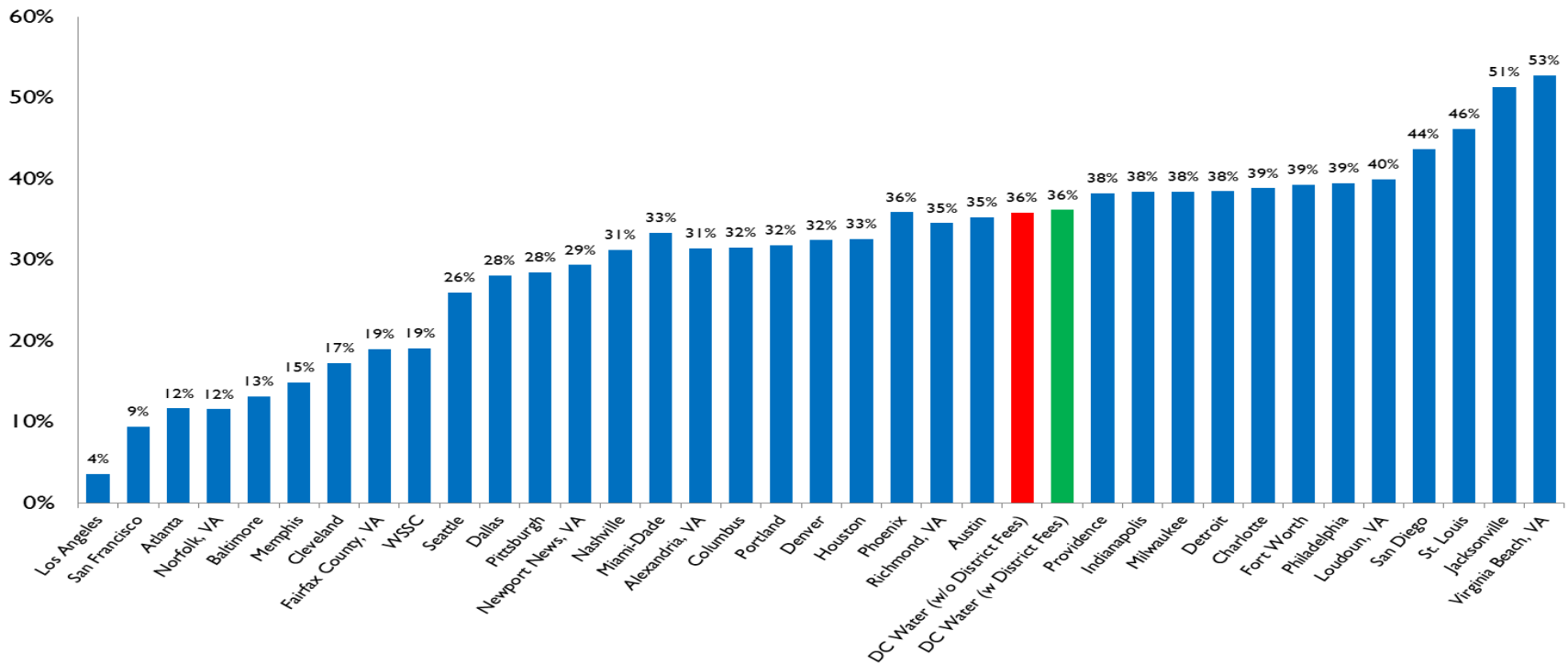
**SFR Monthly Bill Utilities with CSO Programs**



- (1) Assumes average residential consumption of 6.20 Ccf, or 4,638 gallons, per month. Ccf = hundred cubic feet, or 748 gallons.
- (2) Reflects rates and fees in place as of March 1, 2016. The Authority's rate includes the PILOT/ROW fee totaling \$0.64 per Ccf (effective October 1, 2015) and the DDOE residential stormwater rate of \$2.67 per ERU per month.
- (3) Most CSO communities have implemented double digit rate increases to recover CSO-LTCP costs
- (4) Increases do not reflect other available dedicated taxes or state funding potentially available to some agencies
- (5) Chart reflects SFR monthly bill utilities with CSO programs without offsets to user charges

Fixed charges are a small component of the DC Water monthly bill and is less than median for large utilities. This provides the customer more opportunities to impact monthly bills through water conservation.

**Fixed Charge as % of Total Single-Family Residential Bills in Large Cities  
(Based on Rates in effect Spring 2016)**



- (1) User Charges are based upon information provided by the identified cities and standardize assumptions regarding water consumption, wastewater discharge, stormwater drainage area and other factors. Sewer charges include stormwater charges in those cities where separate stormwater fees are assessed. Some cities use property tax revenue or other revenues to pay for the part of the cost of water, wastewater, or stormwater services
- (2) DC Water rate schedule was effective October 1, 2015. Whereas, charges for all cities reflect rate schedules in effect March 2016
- (3) DC Water PILOT and ROW fees are split between variable water charges and variable sewer charges
- (4) DC Water charges include the stormwater charges of the District
- (5) CSO/Stormwater charges may cover the cost of CSO abatement facilities in those cities with combined sewers; such charges can also cover the cost of stormwater-related facilities and services