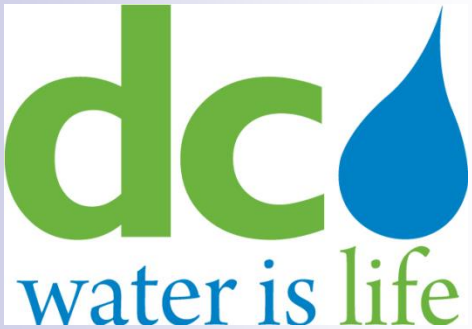
# Independent Review of the Revised Rates for 2020

DC Water Public Hearing

June 12, 2019



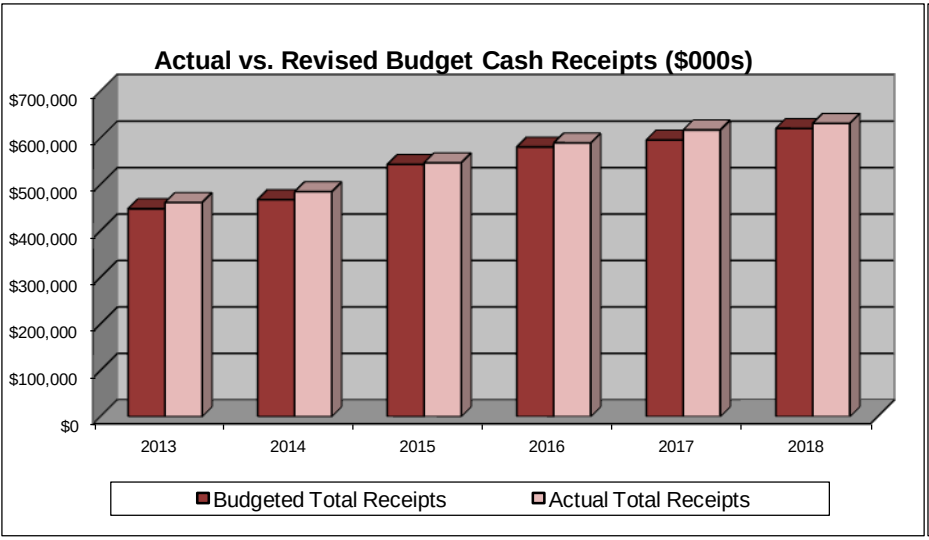

Amawalk Consulting Group LLC

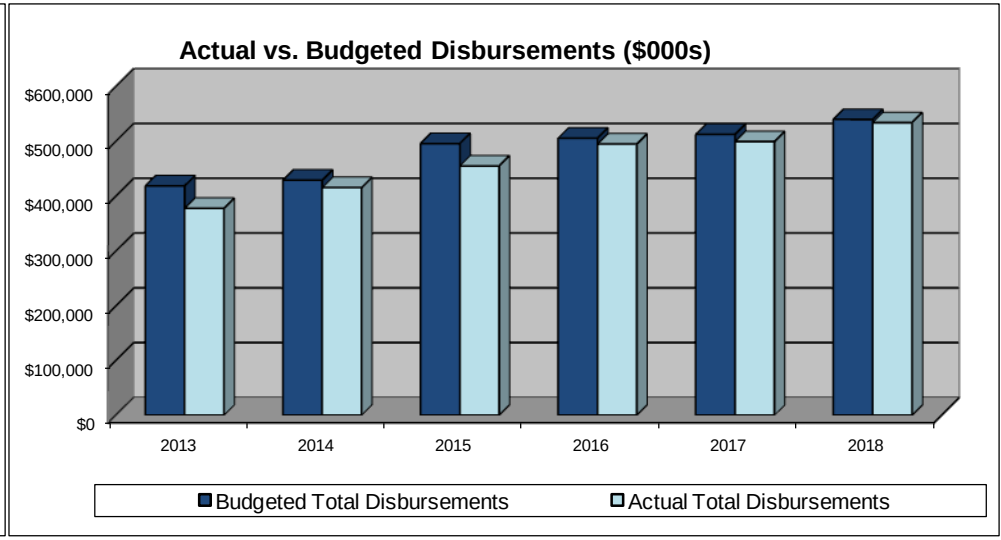
# Outline

- Financial Performance
- Operating Performance
- Why Rates Were Increased in 2020
- Proposed 2020 Rate Revisions
- Industry Comparisons
- Affordability of User Charges
- Conclusions
- Appendix – Supporting Information

# Financial Performance

- From 2013 – 2018: actual cash receipts were > budget each year (averaging 2.3% more); actual expenditures were < budget (averaging 4.3% less). 2018 differences were narrower: receipts were 1.7% above budget and disbursements 1.1% lower.
- YTD 2019 results are in line with budget. No material changes for 2020.
- 2018 combined coverage = 1.86; projected 2019 & 2020 is 1.62 & 1.68




While not a guarantee of future results, this track record offers a degree of comfort that expenditure and revenue estimates, including those for 2020, are prudently developed.

# Operating & Capital Performance

- In compliance with the Consent Orders & all permits.
- The digester facilities & waste-to-energy facilities are yielding multiple benefits – lower expenses, fewer biosolids and a high quality product.
- The ongoing implementation of the new CIS and meter replacement is improving reporting capability and billing accuracy.
- CIP projects are on time and close to budget; change orders and claims continue to be a small % of costs.
- The most recent Independent Engineering Report gave high grades to the facilities and people of DC Water; identified needs are being addressed.
- 10-year CIP, including the addition of $0.95 billion in the last year, incorporates funds for the replacement of pipes and related assets.
- CIP spending in upcoming years is significant, but lower on average than the recent peak years: in 2014-18, average annual capital spending was $573 million; the 2019-28 average is $480 million.

DC Water continues to meet or exceed the Board's operating goals. Strong operating and capital performance helps manage the cost of providing service and mitigates risks.

# Why Rates Were Increased in 2020

- **Increases in capital spending:**
  - Debt service in 2020 as a percent of Operating Revenue will be about 31.2%
  - Cash-financed construction in 2020 increases by $7.2M to $109.6M; the use of cash for construction reduces the need to issue more debt (which has to be paid back) and helps support the strong credit rating of DC Water.
- **Increases in operating expenses:**
  - Total O&M expenses, excluding PILOT/ROW, increase by $9.1 million for 2020 to about 55.1% of total disbursements. DC Water eliminated 63 positions, saving $7.0 million annually.
- **Long-term water use is declining:**
  - Long-term water demand is declining in the District as well as in the Mid-Atlantic & Northeast, the actual decline in 2018 was 0.9%. While usage is higher so far in 2019, the projected decline in 2019, 2020 & future years is 1.0% per year.
- **DC Water receives no subsidies:**
  - Unlike cities such as Atlanta (sales tax) or Milwaukee (property tax), DC Water revenues pay all bills.

These are the same reasons that are driving rates up in other cities.

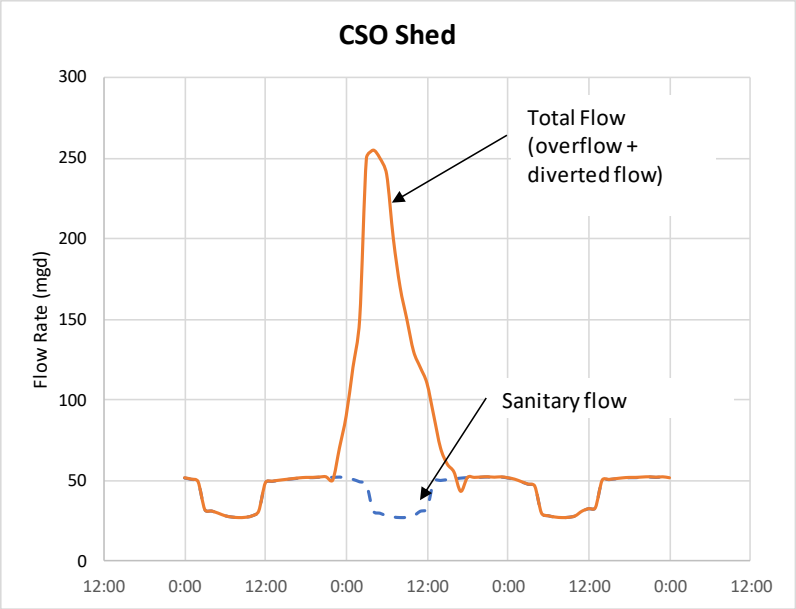
# Proposed 2020 Rate Revisions

| | Units | Approved 2019 | Previously Approved 2020 | Proposed Revised 2020 | Change 2020 vs 2019 $ | Change 2020 vs 2019 % | Change 2020 from Previously Approved $ | Change 2020 from Previously Approved % |
|---|---|---|---|---|---|---|---|---|
| ***DC Water Rates*** | | | | | | | | |
| Water | | | | | | | | |
| Residential 0-4 Ccf (Lifeline) | Ccf | $2.91 | $3.06 | $3.06 | $0.15 | 0.0% | $0.00 | 0.0% |
| Residential > 4 Ccf | Ccf | 3.90 | 4.10 | $4.10 | 0.20 | 0.0 | 0.00 | 0.0 |
| Multi-Family | Ccf | 3.37 | 3.54 | $3.54 | 0.17 | 0.0 | 0.00 | 0.0 |
| Non-Residential | Ccf | 4.05 | 4.25 | $4.25 | 0.20 | 0.0 | 0.00 | 0.0 |
| Sewer (Excluding CRIAC) | Ccf | **7.75** | **8.14** | **8.89** | **1.14** | **14.7** | **0.75** | **9.2** |
| Clean Rivers IAC | ERU | **23.00** | **25.58** | **20.94** | **-2.06** | **-9.0** | **-4.64** | **-18.1** |
| Customer Metering Fee | 5/8" | 3.86 | 3.86 | 3.86 | 0.00 | 0.0 | 0.00 | 0.0 |
| Water System Replacement Fee | 5/8" | 6.30 | 6.30 | 6.30 | 0.00 | 0.0 | 0.00 | 0.0 |
| ***District Rates*** | | | | | | | | |
| PILOT Fee | Ccf | 0.50 | 0.51 | 0.51 | 0.01 | 2.0 | 0.00 | 0.0 |
| Right of Way Fee | Ccf | 0.18 | 0.19 | 0.19 | 0.01 | 5.6 | 0.00 | 0.0 |
| Stormwater Fee | ERU | 2.67 | 2.67 | 2.67 | 0.00 | 0.0 | 0.00 | 0.0 |

- **Management Recommendations:**
  - Make two changes to existing approved rates: increase the sewer rate and decrease the CRIAC rate so that the revenues from each rate better reflect the cost of the service provided. The proposed change is intended to be revenue neutral for DC Water.
  - Phase-in the shift in revenue needs from CRIAC to sewer over three years:
    - 18% shift of revenue needs in 2020, 28% in 2021 and 37% in 2022.
    - The phase-in helps mitigate impacts on customers & customer classes.

Average monthly residential charges for 2020 (6.2Ccf) as revised would be $114.49, compared to $114.48 under the previously approved rates.

# Proposed 2020 Rate Revisions: Technical Basis - LTCP Model Stormwater & Wastewater




Determine dry weather flow (sanitary) from each subshed

↓

Calculate total flow (diverted flow + overflow) during CSO events only

↓

Calculate % wastewater assuming completely mixed

↓

Do this for each CSO and each event in 3 year period and aggregate together

| Parameter | Percent Wastewater |
|---|---|
| Cumulative (Flow-Weighted) | 37.3% |

Source: Presentation on Percent Wastewater in CSO to DC Water Retail Rates Committee on March 26, 2019.

Conclusion: The technical analysis estimated that the % of wastewater in combined sewer overflows is 37.3%. Thus, it is reasonable to assign that portion of LTCP costs to sewer rates; a phasing of the shift is proposed.

# Proposed 2020 Rate Revisions: Financial Basis - Revenue Neutrality

**Projected Sewer & CRIAC Billing Under the Prior Approved Rates**

| | 2019 | 2020 |
|---|---|---|
| **Rates** | | |
| Sewer Rate ($ per Ccf) | 7.75 | 8.14 |
| CRIAC ($/ERU) | 23.00 | 25.58 |
| | | |
| **Billings ($ millions)** | | |
| Sewer | 258.2 | 268.5 |
| CRIAC | 113.2 | 125.9 |
| Total | ***371.4*** | ***394.3*** |

**Projected Sewer & CRIAC Billing Under the Proposed Revisions to Rates**

| | 2020 |
|---|---|
| **Rates** | |
| Sewer Rate - All Classes ($ per Ccf) | 8.89 |
| CRIAC ($/ERU) | 20.94 |
| | |
| **Billings ($ millions)** | |
| Sewer | 293.2 |
| CRIAC | 103.0 |
| Total | ***396.2*** |

Note: The above calculations assume a 1% per year consumption decline in 2019 and 2020 and 410,000 ERUs for CRIAC billings. No changes in the rate of bill collection are assumed.

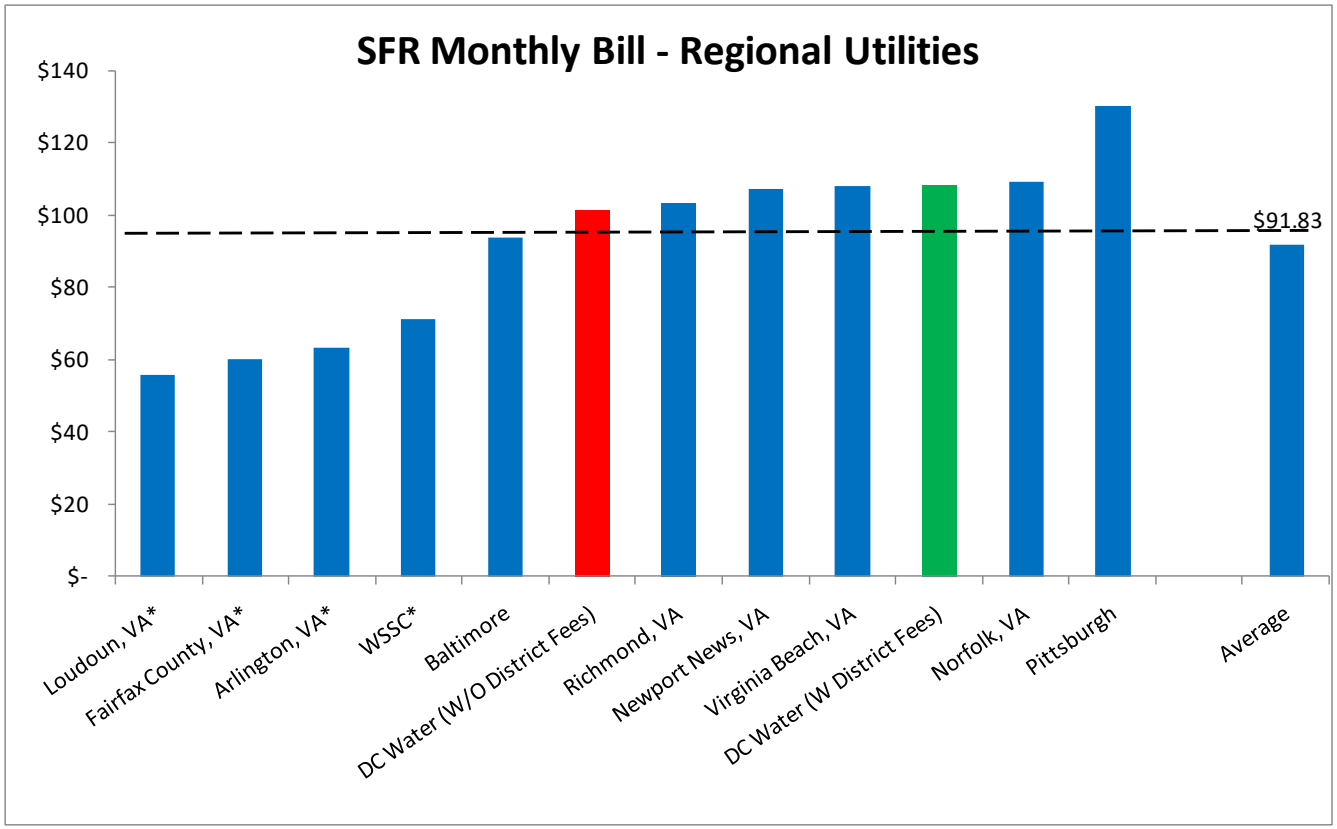
Conclusion: Compared to the adopted rates, the revised sewer rates and CRIAC are expected to be revenue neutral for the Authority.

# Proposed 2020 Rate Revisions: Billing Impacts

| | Ave SFR | Ave SFR in CAP | Ave Multi-Family | Sample Commercial | Sample Cemetery | Sample House of Worship - Low Usage | Sample House of Worship - High Usage |
|---|---|---|---|---|---|---|---|
| Monthly Bill - Approved 2020 Rates ($) | 114 | 48 | 1,373 | 62,315 | 3,314 | 1,887 | 15,812 |
| Monthly Bill - Proposed | 114 | 47 | 1,413 | 65,431 | 2,783 | 1,619 | 15,873 |
| $ Change | 0 | -1 | 40 | 3,116 | -531 | -268 | 60 |
| % Change | 0% | -1% | 3% | 5% | -16% | -14% | 0% |
| | | | | | | | |
| Assumptions: | | | | | | | |
| Consumption (Ccf/month) | 6.2 | 6.2 | 92.6 | 4,478 | 4.0 | 9.42 | 876 |
| Meter Size | 5/8" | 5/8" | 1.5" | 8 x 2" | 5/8" | 2" | 1" & 4" |
| ERU | 1 | 1 | 6.3 | 52.2 | 115.1 | 59.2 | 128.6 |

Conclusion: Average single family residential customers should experience fairly minimal billing changes. Individual customers may see changes in their monthly bills; e.g., customers with high ERUs/low usage may see a reduction in their bills while customers having high usage/low ERUs may see an increase in their bills.

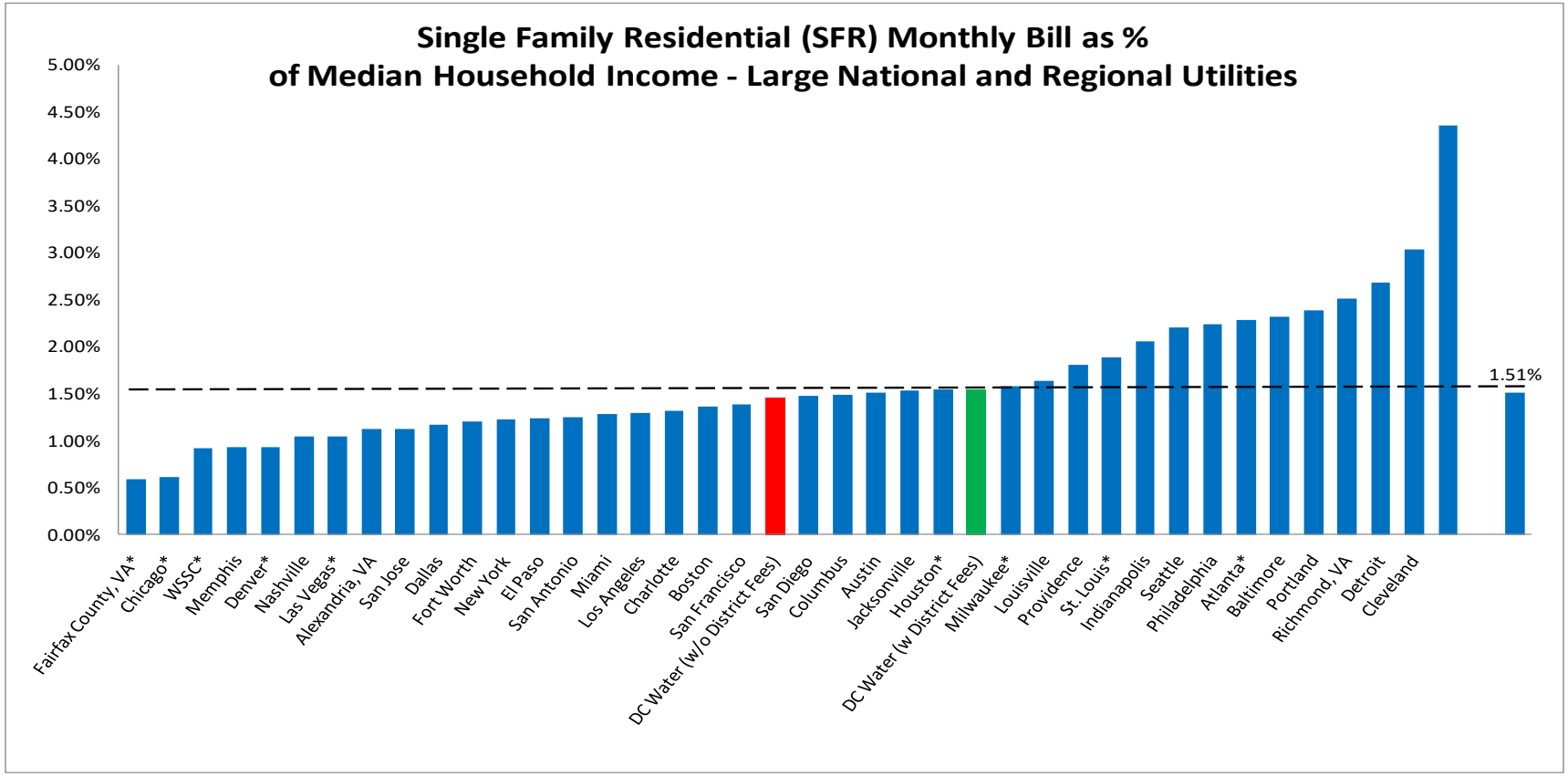
# Comparison: DC Water & Regional Utilities




Note: Reflects rates and fees in place as of November 2018. Some cities utilities 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.

DC Water charges are somewhat higher than the average of the regional utilities that we survey; however, unlike some utilities, DC Water receives no property tax revenue or other subsidies to reduce its user charges.

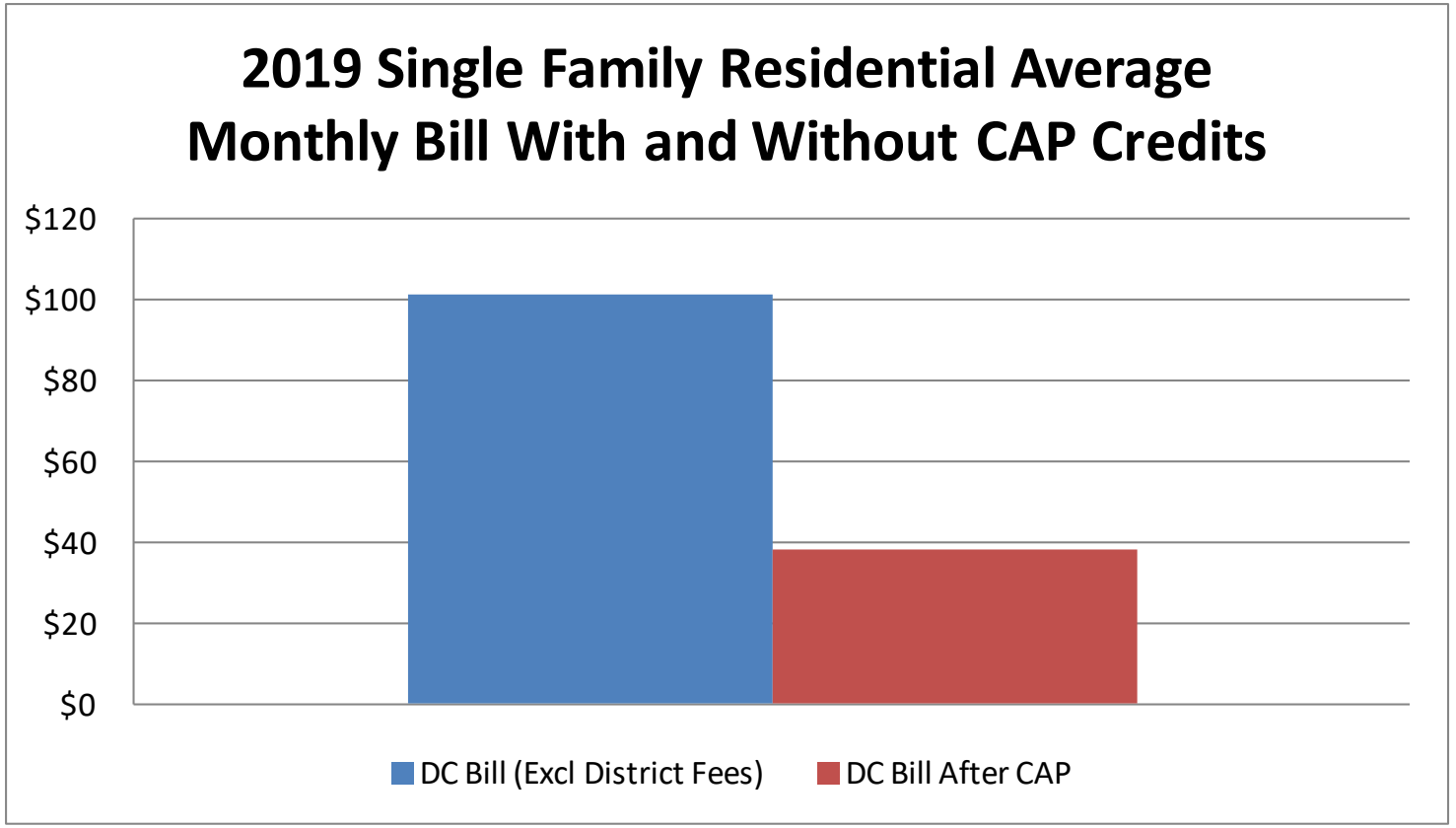
# Comparison: Affordability of User Charges




Note: Reflects rates and fees in place as of November 2018. Some cities utilities 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.

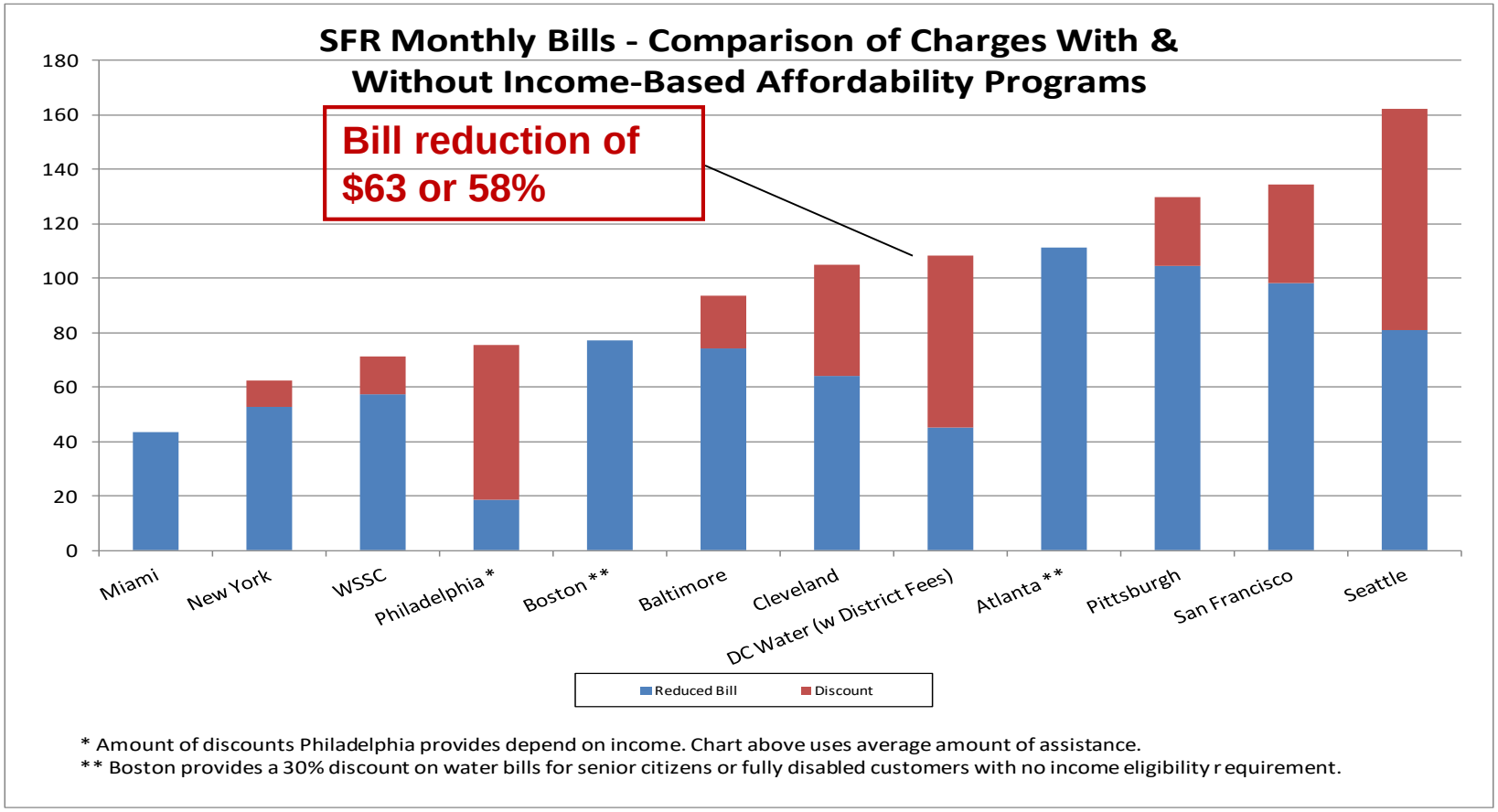
Water, sewer, stormwater, and District charges as a % of median household income (MHI) are affordable at 1.58%, and competitive with peers

# Affordability of User Charges: DC Water Customer Assistance Program (CAP)




Note: After CAP credits, a family of 4 at the 2019 Federal Poverty level spends a little less than 1.8% of income on DC Water bills.

# Affordability of User Rates: DC Water CAP With Peers




Note: Reflects rates and fees in place as of November 2018.

The affordability assistance provided by DC Water is robust compared to other utilities, providing a meaningful impact on a customer bill.

# Affordability of User Charges - Current & New Initiatives

- **Customer Assistance Program (CAP)** – Existing program that uses LIHEAP (Low Income Home Energy Assistance Program) criteria to provide DC Water-funded discounts to residential customers with incomes up to 60% of the State Median Income (SMI)
- **Customer Assistance Program II (CAP2)** – DC Water's proposed expanded program for residential customers who do not qualify for CAP with household income up to 80% Area Median Income (AMI)
- **Customer Assistance Program III (CAP3)** – New District-funded program to provide benefits to DC Water customers with household income greater than 80% and up to 100% AMI who do not qualify for CAP or CAP2
- **CRIAC Nonprofit Relief Program** – New District-funded program to provide CRIAC credits to nonprofit organizations as determined by the District Department of the Environment (DOEE)
- **CRIAC Credits** – DC Water proposal to increase availability to 20%

# Conclusions

- DC Water's proposed revision to 2020 rates have been reasonably developed, reflect the anticipated revenue requirements of the System, adhere to Board policy and are comparable to other utilities.
- If water usage declines at a faster rate than assumed rate, interest rates are higher than expected or unforeseen major expenses are encountered, the actual financial results could differ from current projections. The potential for some underspending in 2019, the availability of the RSF and allowances for cash-financed construction provide flexibility and risk mitigation in such circumstances.
- Affordability is a growing concern in the water and wastewater industry as the cost of providing service continues to increase. DC Water's CAP programs (original, II & III) and SPLASH and its use of a lifeline rate are: 1) in line with industry practices and 2) progressive in providing assistance to low income billpayers. The expansion of CRIAC credits provides a modest incentive for ratepayers to reduce stormwater discharges.

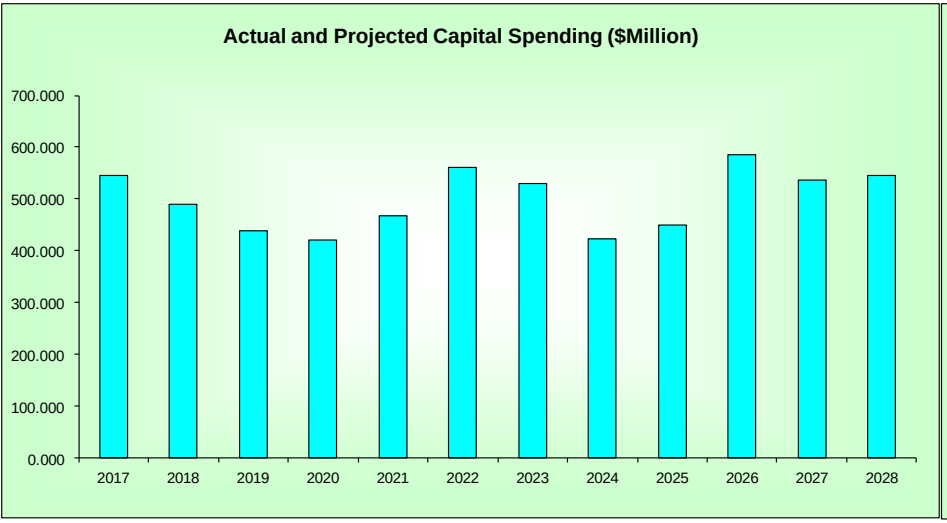
# Appendix – Supporting Information

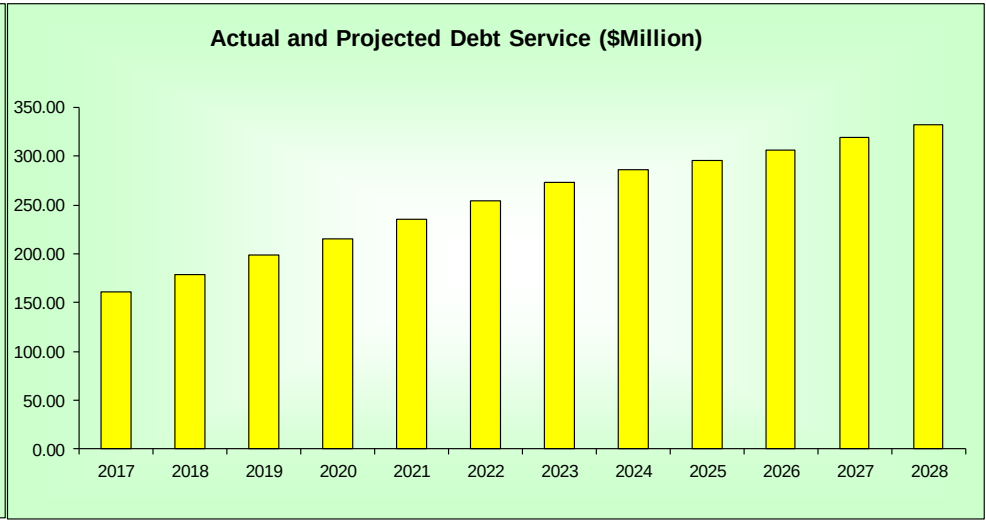
# Water & Wastewater Industry Challenges

- **Increases in capital spending:**
  - Growing regulatory mandates require significant investments; in addition, state-of-good-repair investments are also needed to ensure that the underlying assets (e.g., pipes) provide reliable service.
- **Increases in operating expenses:**
  - Salaries and wages, fringe benefits and pensions.
  - Growing regulatory requirements for stormwater management.
  - Certain costs that previously would be capitalized are now counted as expenses.
- **Long-term water use is declining:**
  - Most revenues are derived from water usage-based charges but long-term water demand is declining in the east coast cities such as New York, Philadelphia, the District & Boston.
- **Affordability of rates and charges:**
  - Charges as a % of median household income (MHI) is a common measure of affordability but a portion of customers may be well below MHI.

# Why Rates Were Increased in 2020 – Capital Investment/Debt Service

- DC Water is investing in its water and sewer infrastructure to ensure that high quality services are provided on a reliable basis. As result of the year-long review and commitment by the Board to continue to address infrastructural challenges, DC Water is increasing capital investments by $0.95 billion starting in 2021 and beyond.
- 26% of planned capital improvements are legally mandated.
- Debt service payments increase by $16.6 million from 2019 to 2020; such payments are an increasing % of total disbursements: 35.2% in 2019 and 36.4% in 2020.



# Why Rates Were Increased in 2020 – O&M Expenses

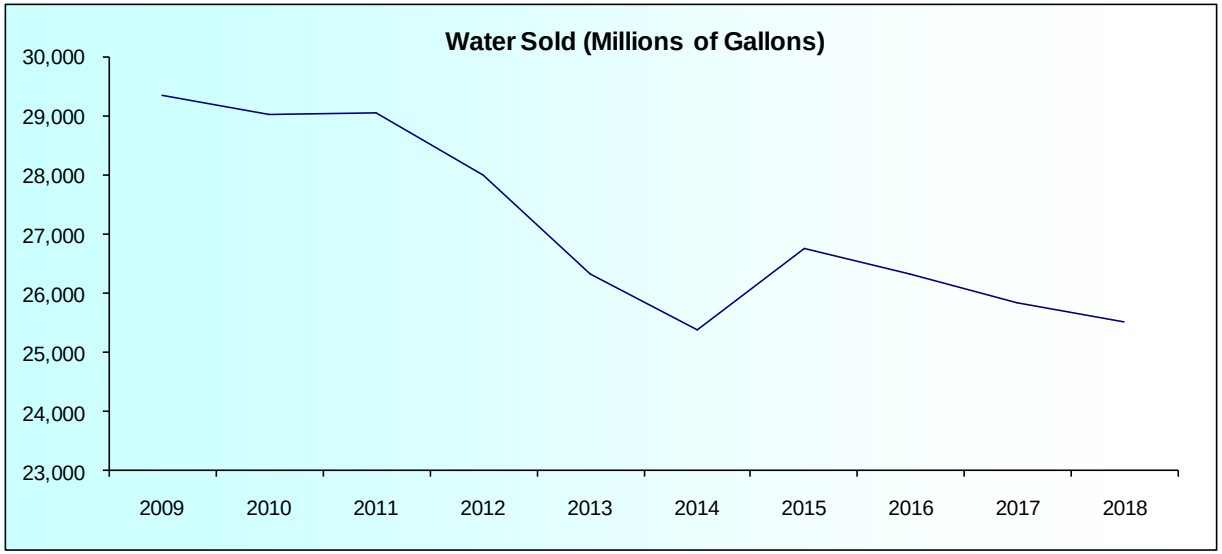
- Total O&M expenses, excluding PILOT/ROW, are expected to increase by $9.1 million in 2020.

- DC Water budgeted $27.0 million in 2019 for cash-financed construction/bond defeasance; this increases to $28.6 million in 2020. The purpose is to avoid debt, enhance coverage and provide cash flow flexibility.

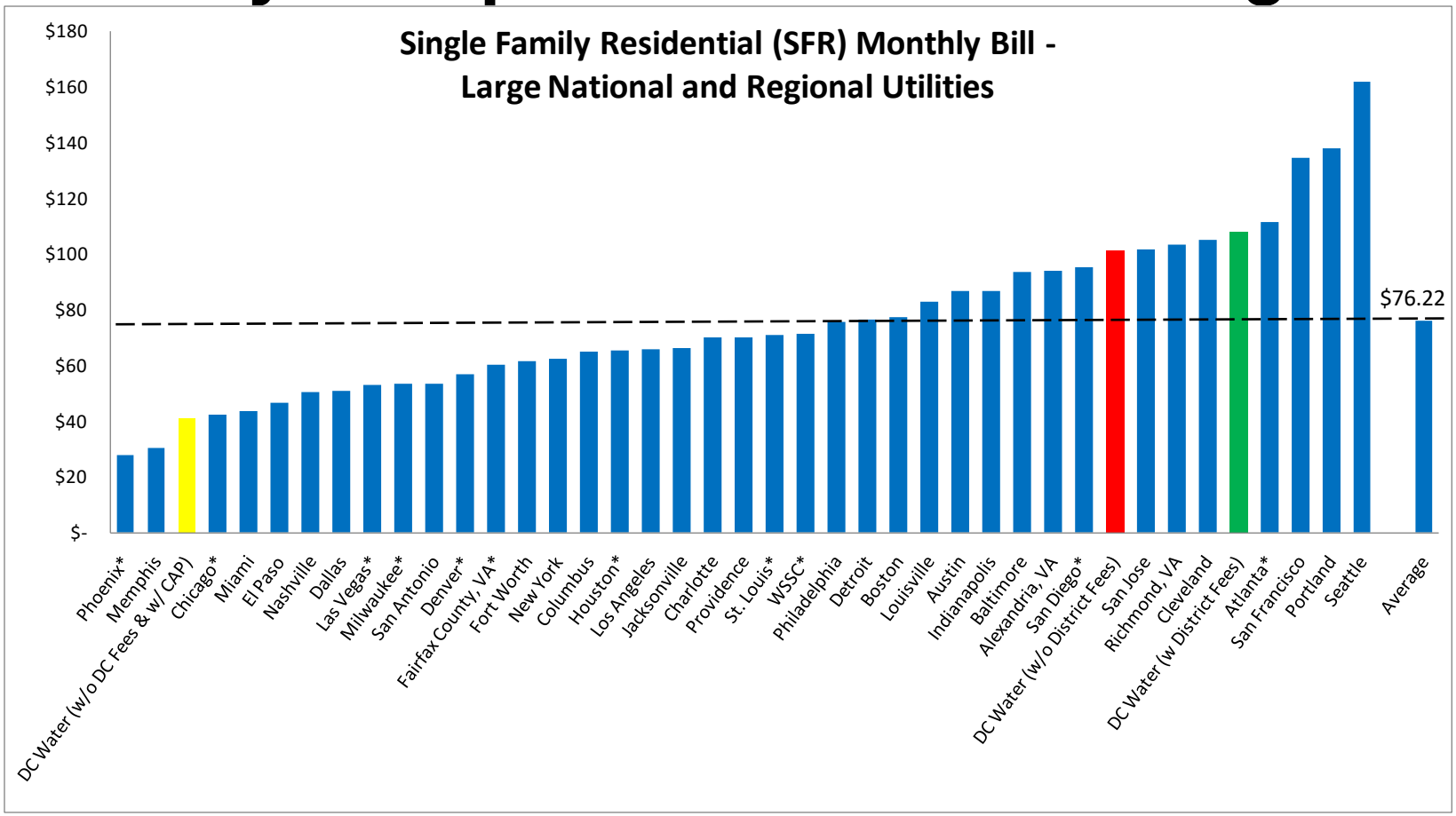
| O&M Expenditure ($ M) | 2019 Projected | 2020 Prior Approved Budget | 2020 Proposed Revised Budget | 2020 Prior Budget vs 2019 | 2020 Proposed Budget vs 2019 |
|---|---|---|---|---|---|
| Personnel Services | 144.4 | 148.7 | 147.9 | 3.0% | 2.5% |
| Contractual Services | 81.7 | 84.1 | 81.9 | 3.0% | 0.3% |
| Water Purchases | 30.5 | 31.4 | 34.9 | 3.0% | 14.4% |
| Chemicals & Supplies | 32.1 | 33.0 | 33.2 | 3.0% | 3.4% |
| Utilities & Rent | 26.9 | 27.7 | 27.0 | 3.0% | 0.1% |
| Small Equipment | 1.2 | 1.3 | 1.0 | 3.0% | -20.2% |
| Total | 316.8 | 326.3 | 325.8 | 3.0% | 2.9% |
| | | | | | |
| PILOT/ROW Fees | 21.7 | 22.0 | 22.0 | 1.5% | 1.5% |
| Debt Service | 198.8 | 214.1 | 215.3 | 7.7% | 8.3% |
| Defeasance D.S./Cash Financed Capital Construction | 27.0 | 28.6 | 28.6 | 5.8% | 5.8% |
| Total Operating Disbursements | 564.3 | 591.0 | 591.8 | 4.7% | 4.9% |

# Why Rates Were Increased in 2020 – Conservation/Declining Demand

- About 58% of total cash receipts in 2020 are expected from consumption-related retail charges.
- Long-term retail water demand is slowly declining.
- Year-to-date 2019 water sales are 2.5% higher than in 2018.
- It is assumed that water usage will decline at the rate of 1.0% per year in 2019 and each year thereafter. New York, Boston & Philadelphia assume annual declines in sales.



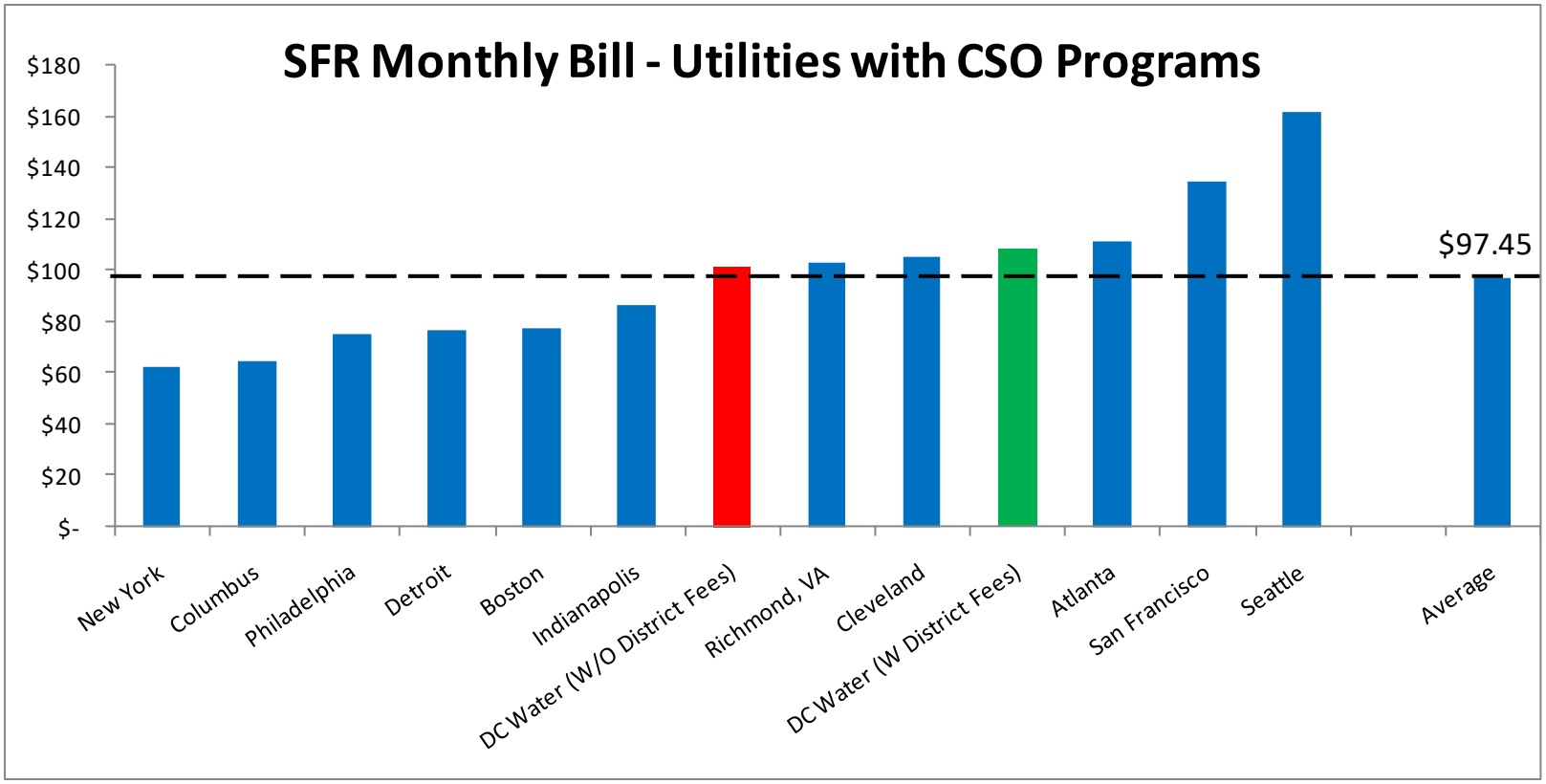
# Industry Comparisons: Rates/Charges




Note: Reflects rates and fees in place as of November 2018. 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 charges, without the benefits of CAP, are higher than the average of the universe of national and regional utilities that we survey each year on behalf of DC Water.

# Industry Comparisons – CSO Utilities




Note: Reflects rates and fees in place as of November 2018.

DC Water charges are comparable to the average of the utilities that we survey that have CSO programs.

# Affordability of User Charges – Existing & New Initiatives

- DC Water is considering extending/expanding programs beyond CAP:

| | CAP | CAP2 | CAP3 | CRIAC Non-Profit |
|---|---|---|---|---|
| | Existing | New | New | New |
| Funding | DC Water | DC Water | District | District |
| Income Eligibility (Households of four persons) | $59,457 | $93,750 | $117,200 | Non-residential customers |
| Water and Sewer | 4 CCFs | 3 CCFs | - | - |
| District Fees | Waived | - | - | - |
| Water System Replacement Fee | Waived | - | - | - |
| CRIAC | 50% discount | 50% discount | 75% discount | 90% discount |
| Monthly Discount | $63.16 | $43.48 | $17.25 | Varies based on the no. of ERUs |

# Comparison – DC Water Proposal to Increase CRIAC Credit Program: 4% to 20%

**CRIAC/Stormwater Discount Program**

| City | State | Max Discount |
|---|---|---|
| Portland | OR | 35% |
| DC Water | DC | 20% |
| Austin | TX | 50% |
| Alexandria | VA | 50% |
| Newport News * | VA | 15% |
| Norfolk | VA | 60% |
| Annapolis | MD | 50% |
| Baltimore * | MD | 45% |
| Philadelphia ** | PA | 80% |
| Montgomery County * | MD | 80% |
| Prince Georges County | MD | 100% |

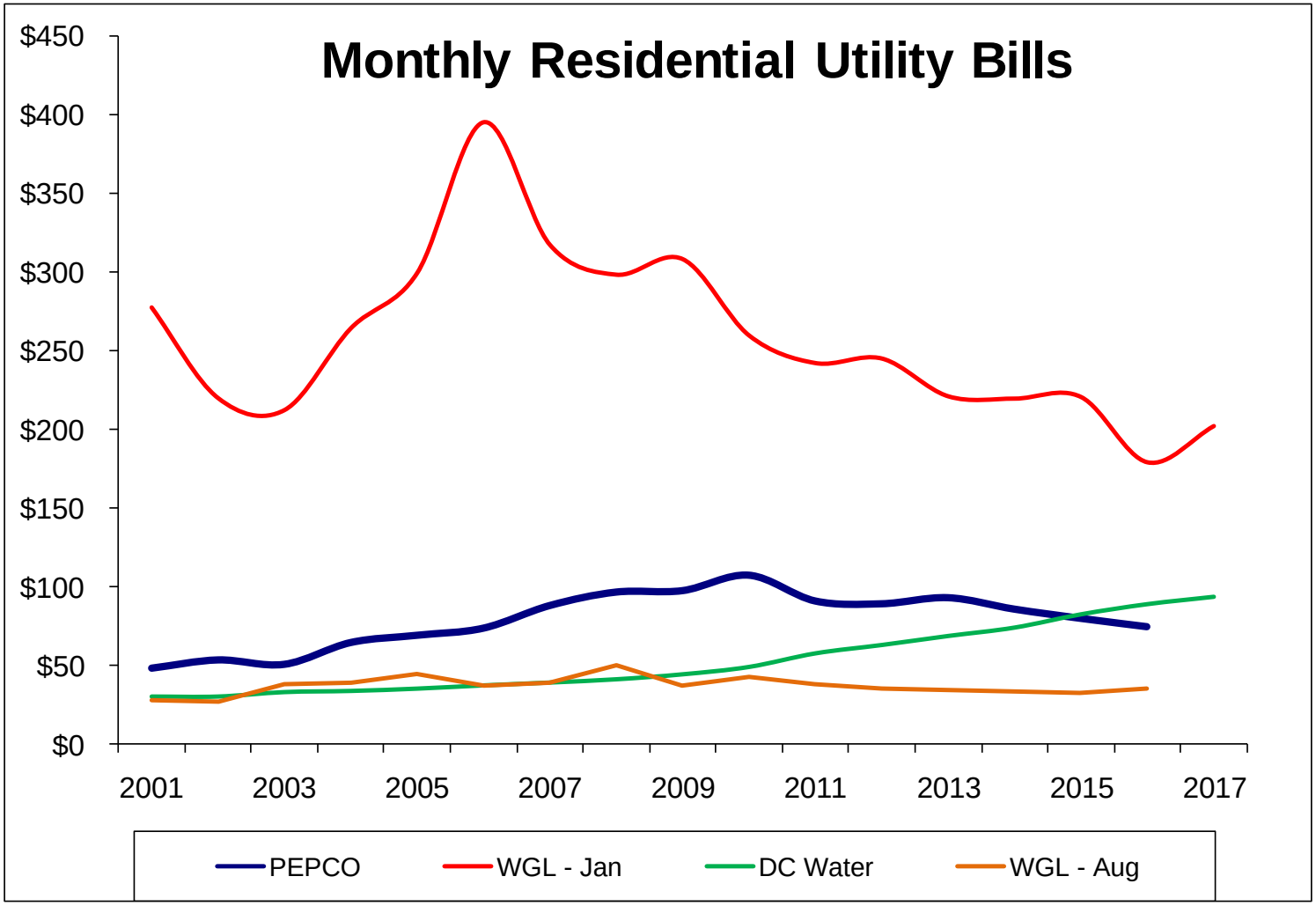
* For residential households; non-residential properties may receive a different % discount

** Only large multi-family and non-residential properties are eligible. 80% maximum credit is assuming no NPDES permit

It is noted that the value of the discount varies with both the credit percentage (the maximums are shown above) as well as the amount of the charge.

Conclusion: DC Water's proposal is in line and somewhat on the lower end of the range with peers in providing impervious area charge credits to customers that reduce their stormwater discharges.

# Comparison – Electricity and Gas Bills




Source: DC Public Service Commission and DC Water