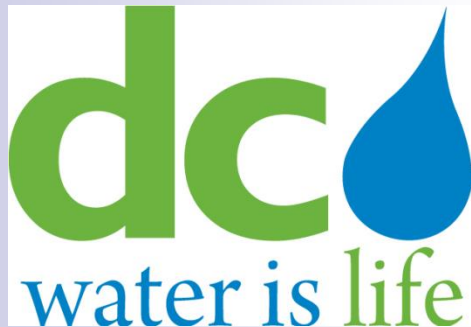


# Independent Review of the Proposed Rates for 2019 – 2020

DC Water Public Hearing

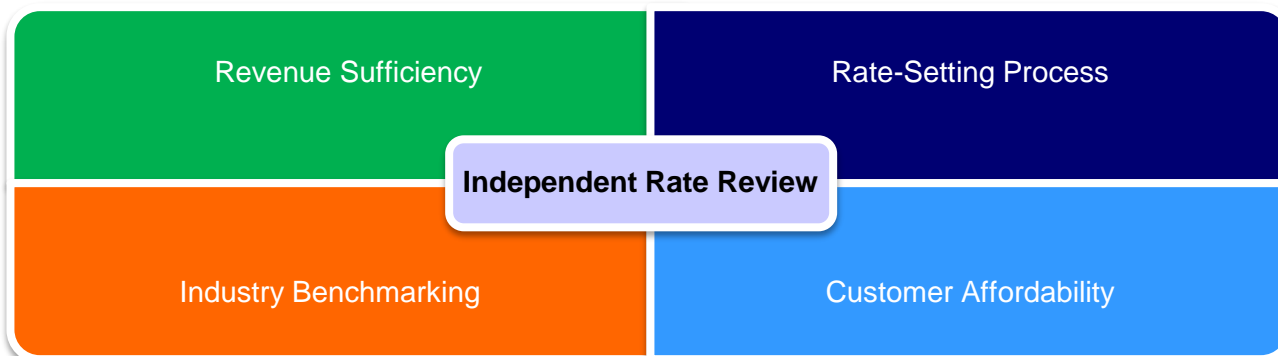
May 9, 2018



**Amawalk**  
Consulting Group LLC

# Outline

- Accomplishments Since the Last Hearing
- Financial Performance
- Operating Performance
- Water & Wastewater Industry Challenges
- Why is a DC Water Rate Increase Necessary?
- Steps DC Water Takes to Minimize Rate Increases
- Summary of 2019 – 2020 Rate Proposal & Financial Plan
- Industry Comparisons
- Affordability of User Charges
- Conclusion
- Appendix



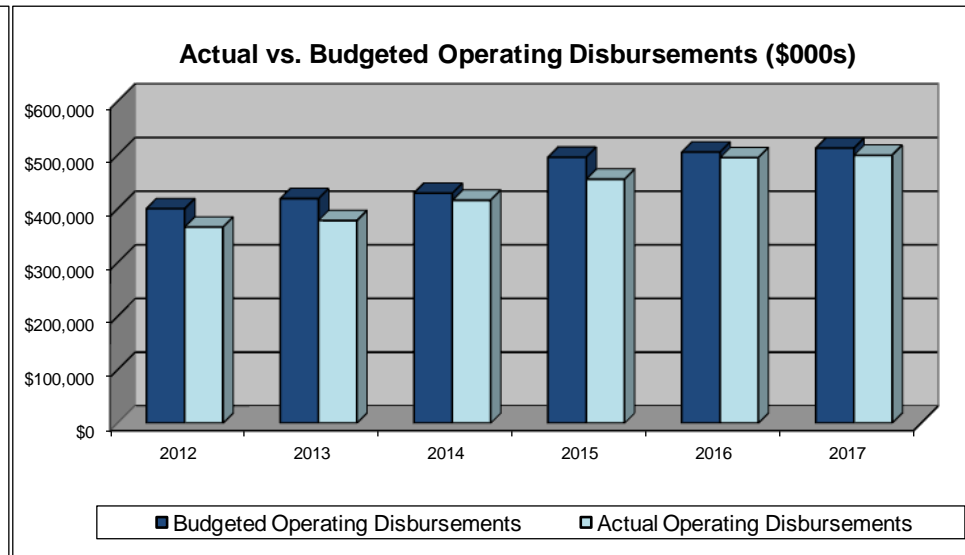
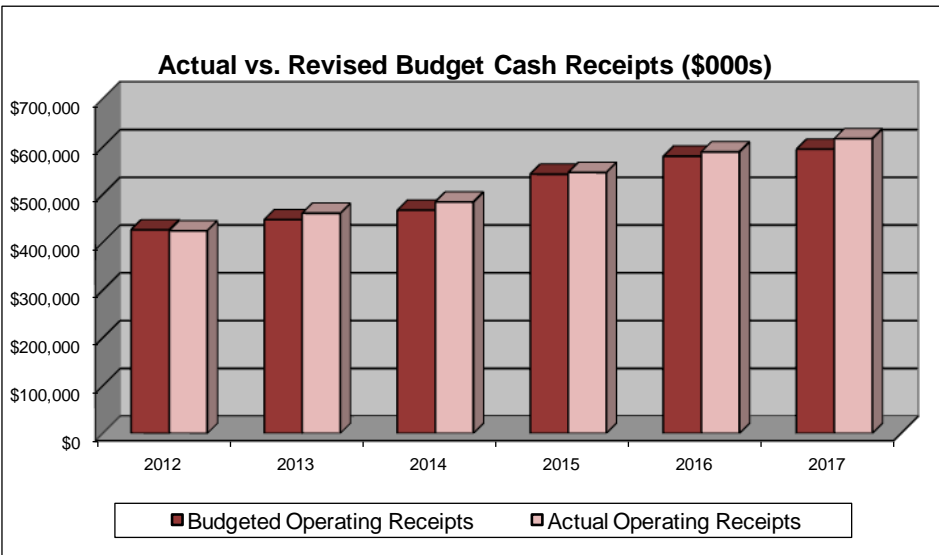
# Accomplishments Since the Last Hearing

- Successfully implemented significant rate structure changes and a two-year rate-setting process:
  - Multi-tiered rates, including lifeline rates for homes with low water consumption
  - Expanded the Customer Assistance Program (CAP) to credit 100% of the Water System Replacement Fee and 50% of the CRIAC
  - Actual results in 2017 and 2018 YTD are good; supporting the 2-year cycle
- Utilized cash and the proceeds of borrowed money at very attractive interest rates to help finance capital improvements:
  - In 2017 and 2018, issued \$300 million and \$300 million of debt, respectively, at interest rates of 4.00-5.00% and 5.00%.
  - Using \$220 million in cash to finance construction over those two years to keep total borrowing at reasonable levels
- Combined coverage achieved in 2017 was 1.76; projected 2018 is 1.64.
- DC Water's high level of performance is recognized by the bond rating agencies: AAA senior lien rating from S&P and Aa1 from Moody's.

DC Water continues to: expand affordability assistance for low income customers and meet or exceed the Board's financial goals.

# Financial Performance

- From 2012 – 2017: actual expenditures have been < budget in each year (averaging 5.6% less); actual cash receipts have been > budget in each year (averaging 2.0% more).
- Year-to-date 2018 results are in line with budget; for all of 2018, it is expected that expenditures & cash receipts will be consistent with budget.



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

# Operating Performance

- In compliance with the Consent Orders & all permits.
- CIP projects are on time and close to budget; change orders and claims continue to be a small % of costs.
- The digester facilities & waste-to-energy facilities are yielding multiple benefits – lower expenses, fewer biosolids and a high quality product.
- The Independent Engineering Report again gave high grades to the facilities and people of DC Water; identified needs are being addressed.
- The ongoing implementation of the new CIS is expected to improve reporting capability and billing accuracy. Limited billing delays during the transition to the new system are currently being resolved.
- 10-year CIP incorporates a replacement cycle for pipe-related assets at an annual average of 1% per year.
- Metered replacement program is ahead of schedule.
- Annual CIP spending is past the peak years: in 2013-17 average annual capital spending was \$587 million; the 2018-22 average is \$432 million.

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

# 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.

## ■ 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 is a DC Water Rate Increase Necessary?

## ■ Increases in capital spending:

- 35.4% of the CIP is legally mandated.
- Increasing CIP emphasis on pipe relining & replacement.
- Debt service will rise to 35.3% of total disbursements in 2019 and 36.2% in 2020, increasing by 8.0% and 7.6% vs. the prior year, respectively.
- Anticipated level of cash-financed construction in 2018-22 lowered the need for borrowing by about \$250 million compared to 2013-17; use of cash-financed construction is generally perceived to be a credit strength by the rating agencies.

## ■ Increases in operating expenses:

- Total O&M expenses, excluding PILOT/ROW, increase by \$18.0 million for 2019 and by \$9.5 million for 2020.

## ■ Water use is declining:

- Long-term water demand is declining in the District; the actual decline in 2017 was 1.7%, the projected declines in 2018, 2019 and 2020 are 1.4%, 1.0%, and 1.0%, respectively.

## ■ DC Water receives no subsidies:

- Unlike cities such as Atlanta (sales tax) or Milwaukee (property tax), DC Water revenues pay all bills.

# Steps DC Water Takes to Minimize Rate Increases

- A. No material change in total staffing levels is anticipated.
- B. Strong financial performance and solid credit ratings optimize the cost of borrowing money; using cash for capital reduces long-term debt.
- C. DC Water effectively manages its capital contract costs:
  - ❑ In 2017 actual bids were just a bit higher than estimates: 1.9% higher for facilities contracts and 6.6% higher for streets contracts.
  - ❑ Change orders and claims payments continue to be a relatively small % of construction
- D. Maintaining a strong rate of bill collection and minimizing accounts receivable so that paying customers do not subsidize delinquent property owners.
- E. Pursuing innovative strategies to increase revenues from sources other than ratepayers – these include marketing the end products of the biosolids digestion facilities, offering DC Water services to other utilities for a fee and implementing a new System Availability Fee.



# Summary of 2019 – 2020 Rate Proposal

|                                | Units | Approved | Proposed | Proposed | Change FY 2019 |        | Change FY 2020 |      |  |
|--------------------------------|-------|----------|----------|----------|----------------|--------|----------------|------|--|
|                                |       | FY 2018  | FY 2019  | FY 2020  | \$             | %      | \$             | %    |  |
| <b>DC Water Rates</b>          |       |          |          |          |                |        |                |      |  |
| Water                          |       |          |          |          |                |        |                |      |  |
| Residential 0-4 Ccf (Lifeline) | Ccf   | \$3.39   | \$2.91   | \$3.06   | -\$0.48        | -14.2% | \$0.15         | 5.2% |  |
| Residential > 4 Ccf            | Ccf   | 4.26     | 3.90     | 4.10     | -0.36          | -8.5   | 0.20           | 5.1  |  |
| Multi-Family                   | Ccf   | 3.80     | 3.37     | 3.54     | -0.43          | -11.3  | 0.17           | 5.0  |  |
| Non-Residential                | Ccf   | 4.40     | 4.05     | 4.25     | -0.35          | -8.0   | 0.20           | 4.9  |  |
| Sewer (Excluding CRIAC)        | Ccf   | 6.00     | 7.75     | 8.14     | 1.75           | 29.2   | 0.39           | 5.0  |  |
| Clean Rivers IAC               | ERU   | 25.18    | 23.00    | 25.58    | -2.18          | -8.7   | 2.58           | 11.2 |  |
| Customer Metering Fee          | 5/8"  | 3.86     | 3.86     | 3.86     | -              | -      | -              | -    |  |
| Water System Replacement Fee   | 5/8"  | 6.30     | 6.30     | 6.30     | -              | -      | -              | -    |  |
| <b>District Rates</b>          |       |          |          |          |                |        |                |      |  |
| PILOT Fee                      | Ccf   | 0.49     | 0.50     | 0.51     | 0.01           | 2.0    | 0.01           | 2.0  |  |
| Right of Way Fee               | Ccf   | 0.18     | 0.18     | 0.19     | -              | -      | 0.01           | 5.5  |  |
| Stormwater Fee                 | ERU   | 2.67     | 2.67     | 2.67     | -              | -      | -              | -    |  |

## ■ The 2018 Management Recommendations, Consistent with the 2018 Cost of Service Study Recommendations:

- Reallocate some revenue needs from water to sewer and from CRIAC to sewer – adjustments all reflect the latest cost of service findings.
- Implement the above rates to raise overall retail revenue by 4.9% in 2019 and 5.9% in 2020.
- WSRF revenue to be used to only reduce water revenue requirements.
- Have the flexibility to use part of year-end balances for RSF deposits.

Average residential customer charges (6.2Ccf) would be \$108.32 for 2019 and \$114.48 for 2020, an increase of \$6.02 per month or 5.9% and \$6.16 per month or 5.7% compared to the prior year, respectively.

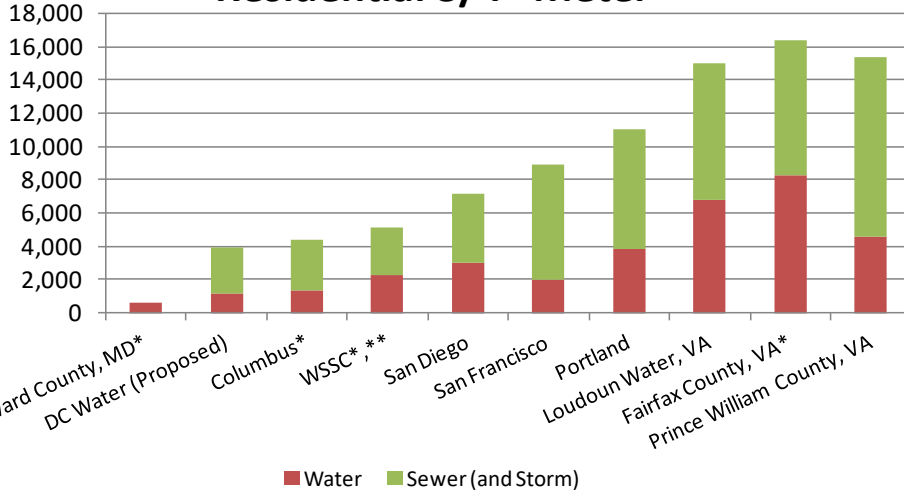
# Rate Proposal and Financial Plan

- The realignment of rates within the current structure is intended to have revenues from each rate better reflect the cost of each service. The realignment is intended to be revenue neutral for the system.
  
- The current financial plan provides a strong ability to manage risks:
  - Strong reserves and Rate Stabilization Fund balances: \$144 million in cash balance and \$61 million in RSF as of March 2018.
  - Amawalk reviewed DC Water's reserve fund policies and practices earlier this year and concluded that projected reserve fund levels are appropriate and consistent with those of highly-rated peer utilities.
  - Compliant with Board financial policies including combined debt service coverage.
  - Annual capital cash needs that decline from the 2014 peak of \$682 million to \$439 million in 2019 and \$420 million in 2020; lower amounts thereafter.
  
- The approved System Availability Fee will be implemented on June 1, 2018, providing an additional source of revenue.

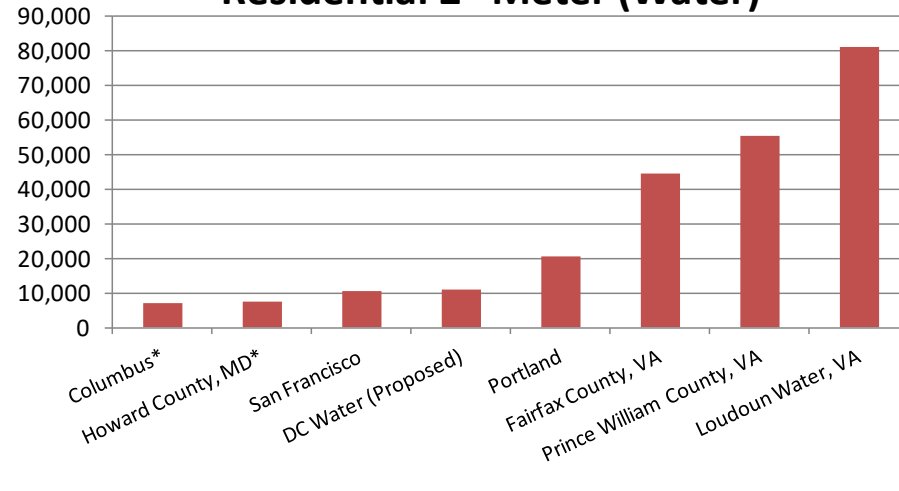
DC Water continues to meet or exceed the Board's financial goals, and expanding efforts to address affordability concerns.

# Industry Comparison – SAF Revenues

## Comparison of Availability Fees - Residential 3/4" Meter



## Comparison of Availability Fees - Non-Residential 2" Meter (Water)

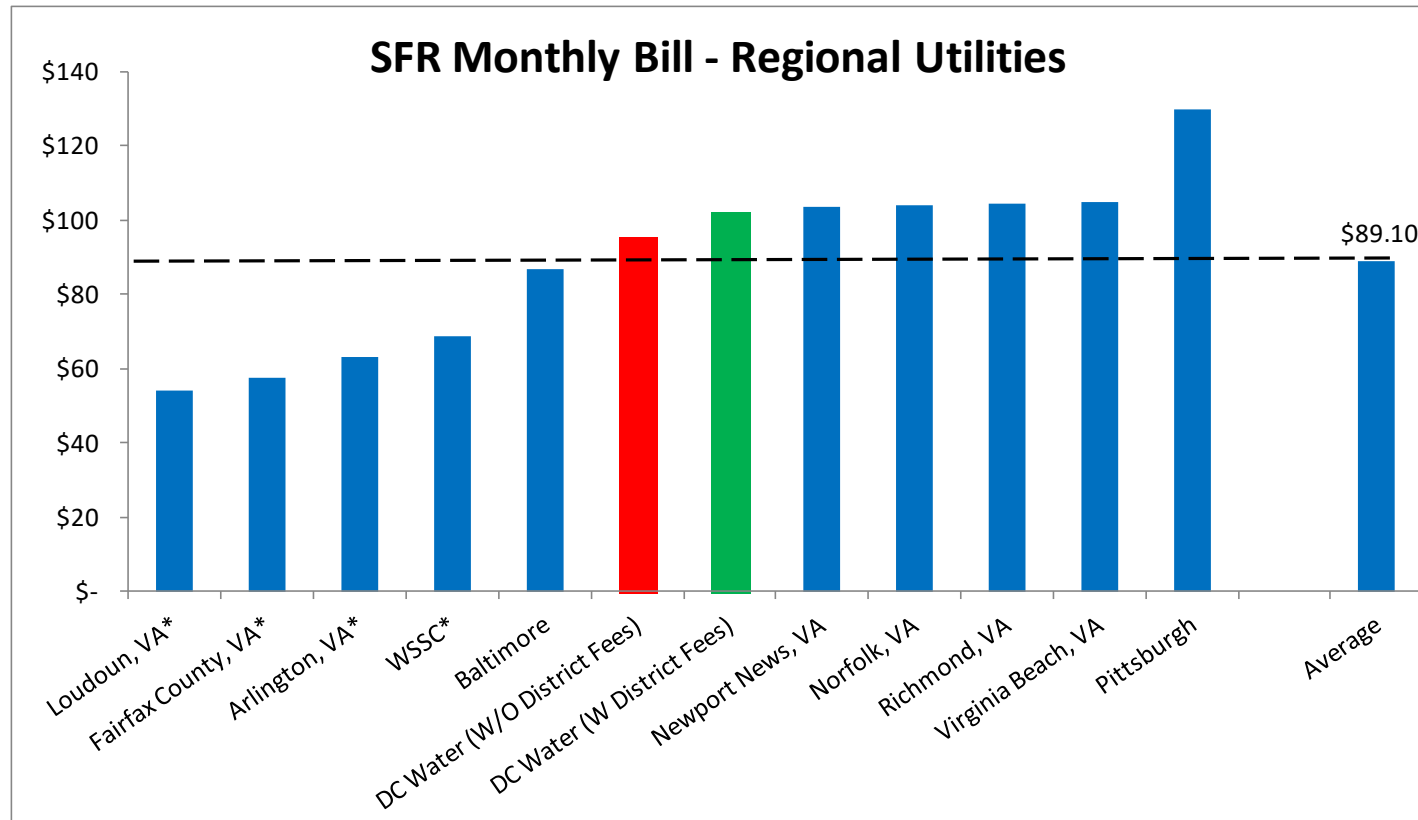


\*Howard County, Columbus, WSSC and Fairfax Public Works also assess Front Foot Benefit Charge not included in the fees above  
 \*\*For WSSC assume housing unit with 3-4 toilets

\*Howard County and Columbus also assess Front Footage Benefit Charge not included in the fees above

**Conclusion: The proposed System Availability Fee is reasonable compared to industry peers. In addition, DC Water has reasonably forecasted a slow ramp-up of cash receipts from this Fee, beginning with \$3.85 million in 2019 and \$5.77 million in 2020.**

# Industry Comparison – Regional Utilities



Note: 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.

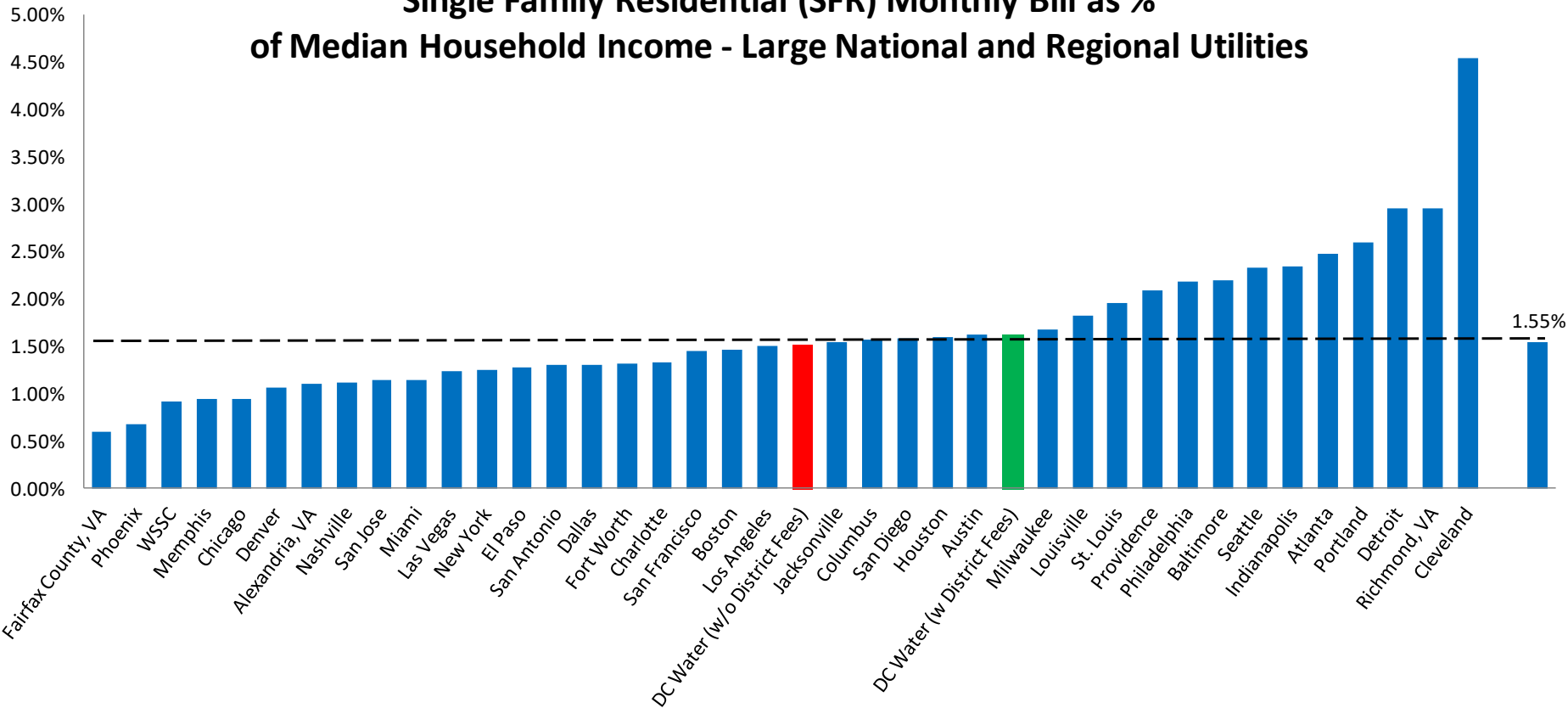
# Industry Comparison – Rate Subsidies

| Municipality       | Type of Support  | Notes                                  |
|--------------------|--|--|
| Phoenix            | Stormwater is part of the City   |  |
| Milwaukee          | Property Tax for capital spending of storm and sewer                   | \$1.73 per \$1000 valuation            |
| Denver             | Property Tax for major storm projects                                  |  |
| Fairfax County, VA | Property Tax   | \$0.03 for stormwater, per \$100 value |
| Houston            | Property Tax to fund street and drainage                               | \$0.118 per \$100 value                |
| St. Louis          | Property Tax to fund stormwater  | \$0.1197 per \$100 assessed value      |
| Alexandria, VA     | Property Tax and General Fund Contribution supporting stormwater       | \$0.005 per \$100 assessed value       |
| Atlanta            | Sales Tax  | 1%                                     |
| Loudoun, VA        | General fund supports Stormwater and some water/wastewater initiatives |  |
| Arlington, VA      | Property Tax for sanitary district                                     | \$0.013 per \$100 of assessed value    |
| Chicago            | Property Tax fund Metropolitan Water Reclamation District              |  |

**Conclusion:** Some municipalities provide funding support, most often to the sewer and stormwater system, which alleviates rate pressure. DC Water receives no subsidies.

# Affordability of User Charges

Single Family Residential (SFR) Monthly Bill as % of Median Household Income - Large National and Regional Utilities

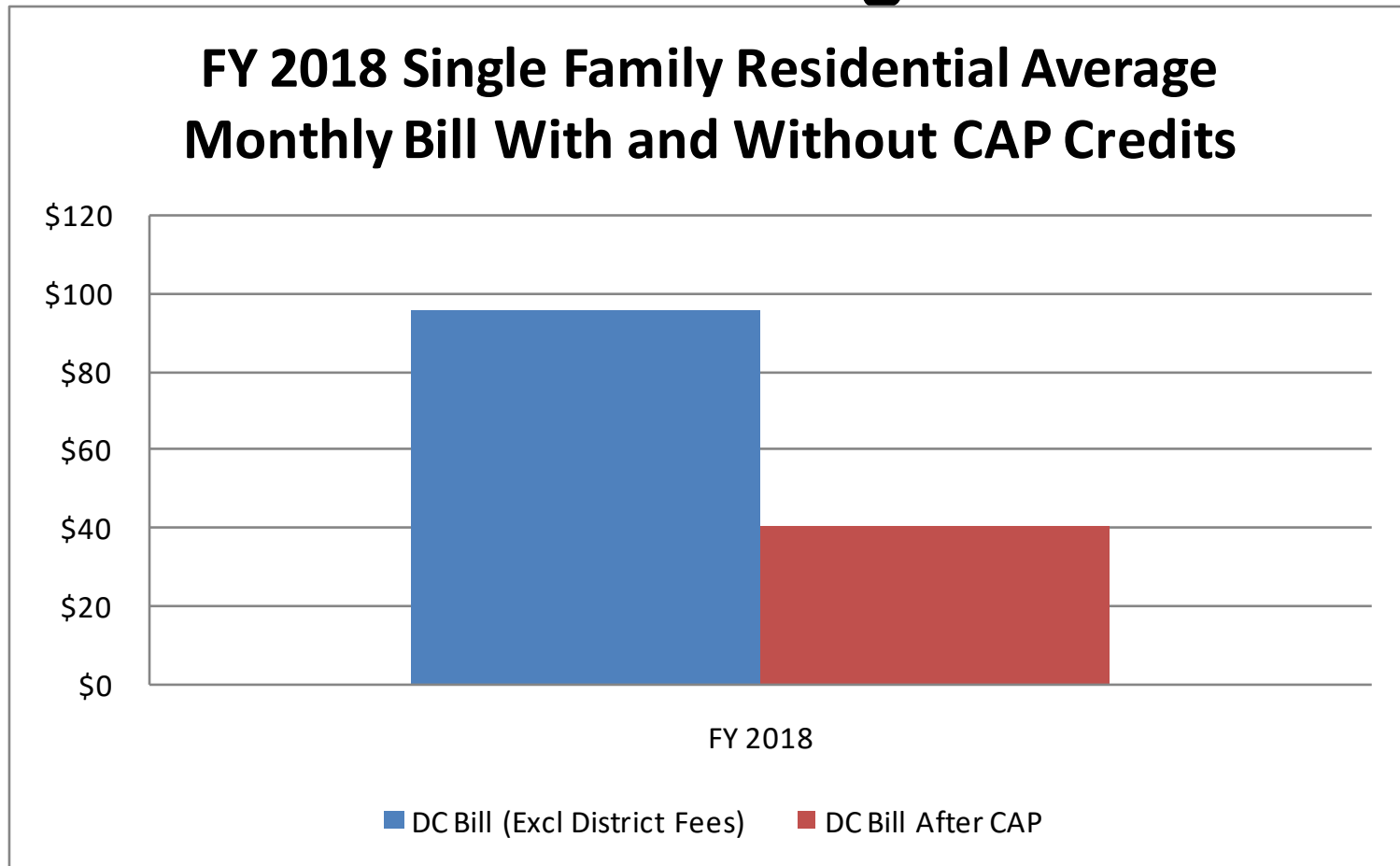


Water, sewer, stormwater, and District charges as a % of median income are affordable at 1.6% of MHI, and competitive with peers

# Affordability of User Charges

- At 1.6% of median household income (MHI), DC Water's charges are competitive with other major cities in terms of affordability. Charges greater than 2% to 4% of MHI are typically viewed as a strain on household budgets.
- Over 77.2% of DC Water households spend less than 4.3% of their household income on water and sewer charges. Of the 22.8% that show charges greater than 4.3%, it is anticipated that many of those households are renters that do not pay a water/sewer bill directly.
- For those households that directly pay a water/sewer bill, DC Water's lifeline rate for the first 4 ccf (\$3.39 per ccf instead of \$4.26 per ccf in the second tier) and the CAP and SPLASH programs help bill-paying customers whose water/sewer bills are a high percentage of their household income.

# Affordability of User Charges – DC Water Customer Assistance Program

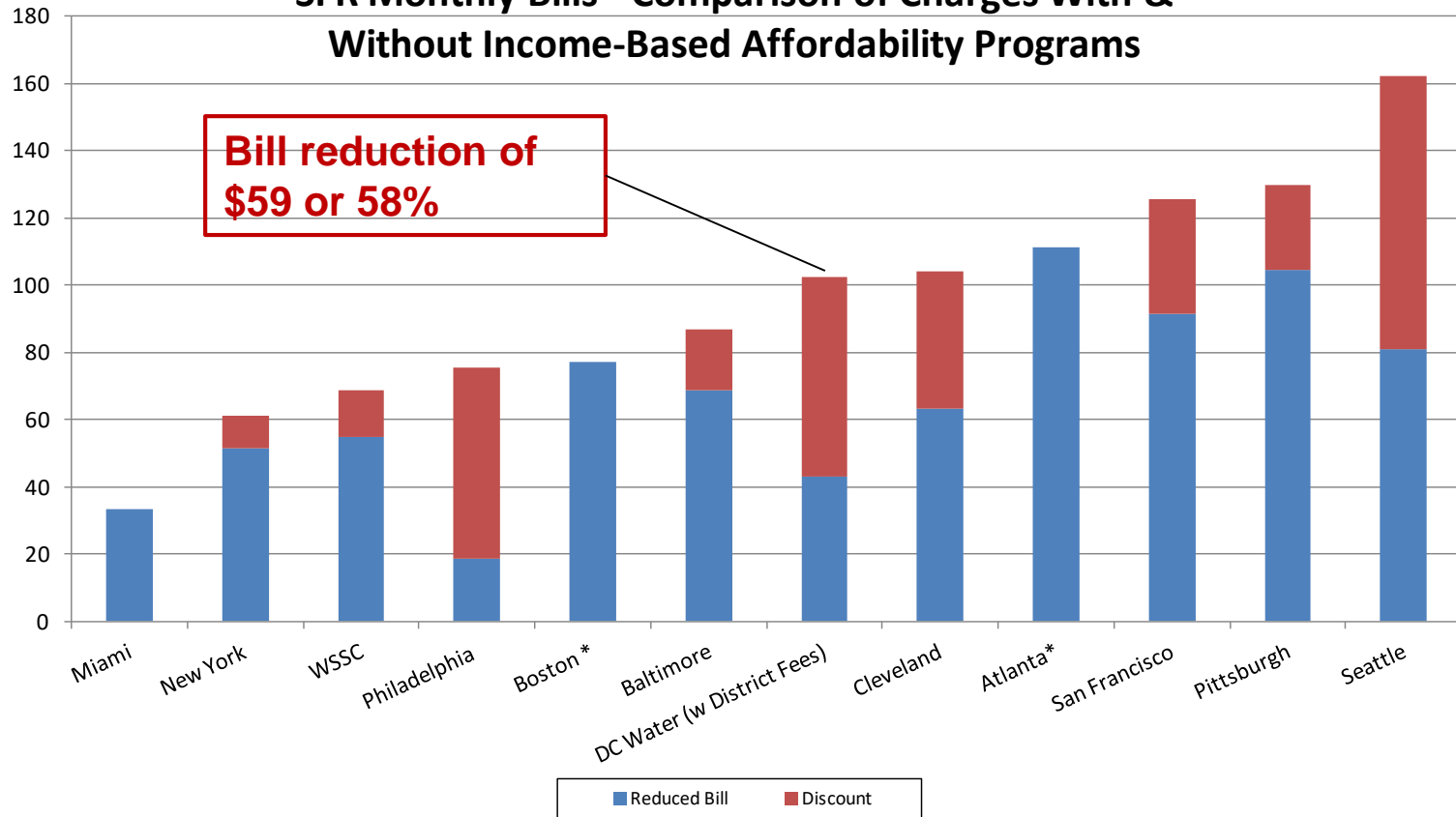


Note: After CAP credits, a family of 4 at the 2017 Federal Poverty level spends a bit over 1.9% of income on DC Water bills.



# Affordability of User Charges

SFR Monthly Bills - Comparison of Charges With & Without Income-Based Affordability Programs



\* Boston provides a 30% discount on water bills for senior citizens or fully disabled customers with no income eligibility requirement. Atlanta provides a 30% discount on bills for seniors citizens who meet income eligibility requirement.

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

# Conclusions

- DC Water's proposed 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 underspending in 2018, 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 and SPLASH programs and its use of a lifeline rate are: 1) in line with industry practices and 2) progressive in providing assistance to low income billpayers.



# Appendix

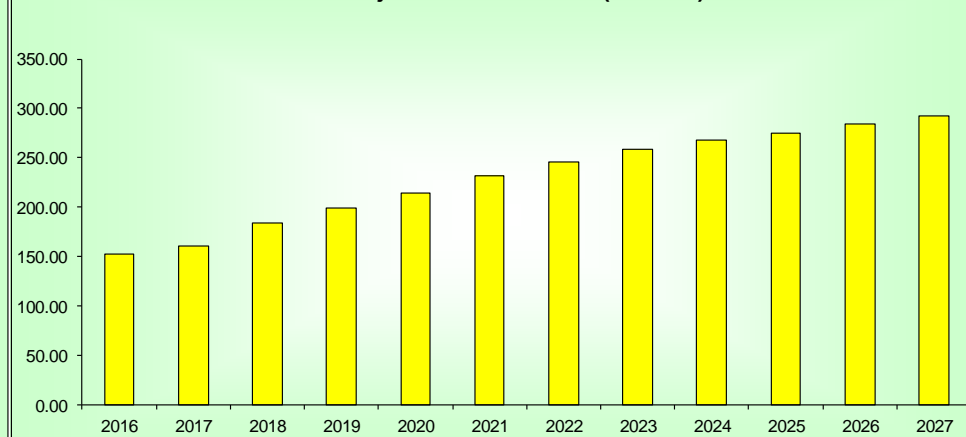
# Why is a Rate Increase Necessary – Capital Investment/Debt Service

- DC Water is investing in its water and sewer infrastructure to ensure that high quality services are provided on a reliable basis.
- 35.4% of planned capital improvements are legally mandated.
- Debt service payments increase by \$14.7 million from 2018 to 2019 and \$15.1 million from 2019 to 2020; such payments are an increasing % of total disbursements: 35.3% in 2019 and 36.2% in 2020.

Actual and Projected Capital Spending (\$Million)



Actual and Projected Debt Service (\$Million)



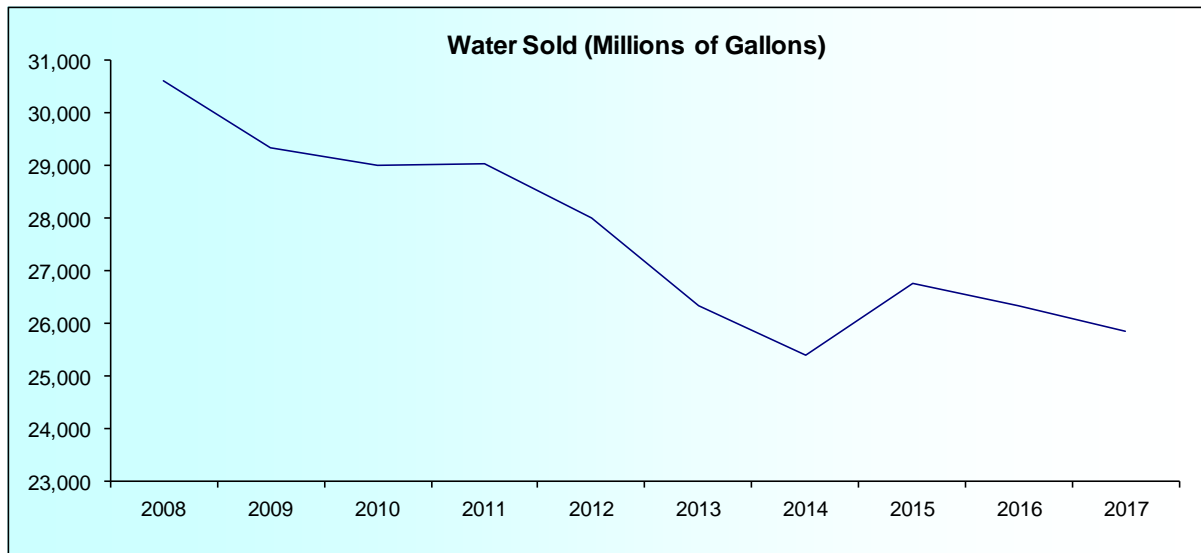
# Why is a Rate Increase Necessary – Expenses

- Total O&M expenses, excluding PILOT/ROW, are expected to increase by \$18.0 million for 2019 and by \$9.5 million for 2020.
- DC Water budgeted \$35.3 million in 2018 for cash-financed construction/bond defeasance, decreasing to \$27.0 million in 2019 and the increasing to \$28.6 million in 2020. The purpose is to potentially reduce debt, enhance coverage and provide cash flow flexibility.

| O&M Expenditure (\$ M)                             | FY 2018 Approved Budget | FY 2019 Approved Budget | FY 2020 Proposed Budget | Change FY 2019 | Change FY 2020 |
|--|-------------------------|-------------------------|-------------------------|----------------|----------------|
| Personnel Services                                 | 128.1                   | 144.4                   | 148.7                   | 12.7%          | 3.0%           |
| Contractual Services                               | 79.4                    | 81.7                    | 84.1                    | 2.9%           | 3.0%           |
| Water Purchases                                    | 30.2                    | 30.5                    | 31.4                    | 1.2%           | 3.0%           |
| Chemicals & Supplies                               | 30.7                    | 32.1                    | 33.0                    | 4.6%           | 3.0%           |
| Utilities & Rent                                   | 29.4                    | 26.9                    | 27.7                    | -8.4%          | 3.0%           |
| Small Equipment                                    | 1.1                     | 1.2                     | 1.3                     | 15.8%          | 3.0%           |
| <b>Total</b>                                       | <b>298.8</b>            | <b>316.8</b>            | <b>326.3</b>            | <b>6.0%</b>    | <b>3.0%</b>    |
| PILOT/ROW Fees                                     | 21.4                    | 21.7                    | 22.0                    | 1.5%           | 1.5%           |
| Debt Service                                       | 184.3                   | 199.0                   | 214.1                   | 8.0%           | 7.6%           |
| Defeasance D.S./Cash Financed Capital Construction | 35.3                    | 27.0                    | 28.6                    | -23.4%         | 5.8%           |
| <b>Total Operating Disbursements</b>               | <b>539.7</b>            | <b>564.5</b>            | <b>591.0</b>            | <b>4.6%</b>    | <b>4.7%</b>    |

# Why is a Rate Increase Necessary – Conservation/Declining Demand

- About 57% of total cash receipts in 2019 and in 2020 are expected from consumption-related retail charges.
- Long-term retail water demand is slowly declining.
- Year-to-date water sales are 8.1% lower than in 2017; most of the decrease is due to delay in billing during the transition to the new CIS.
- It is assumed that water usage will decline at the rate of 1.4% per year in 2018 and 1.0% thereafter. New York, Boston & Philadelphia assume similar annual declines.

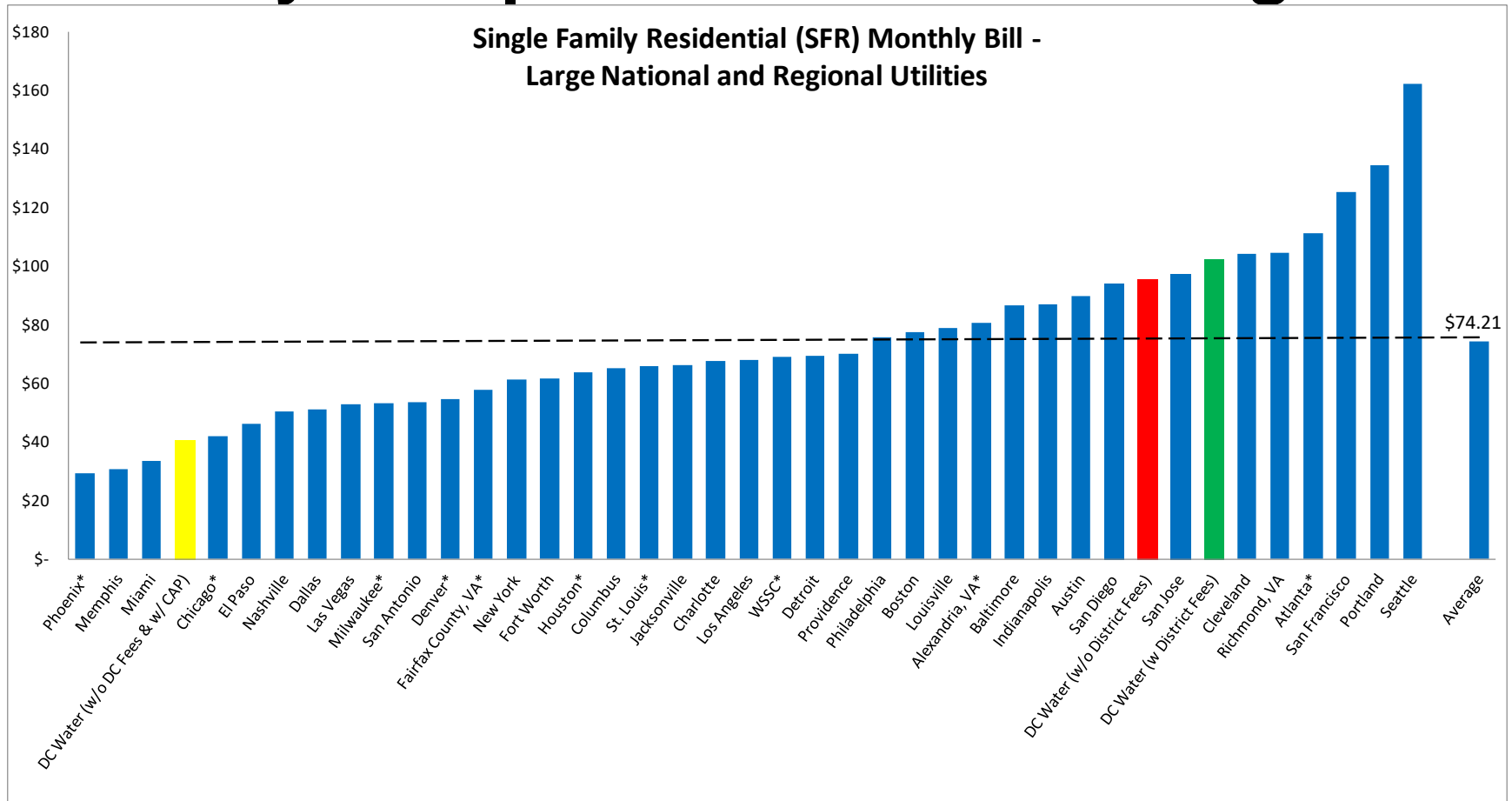


# Industry Comparison - System Availability Fee

| Municipality              | Meter-Based | Fixture-Based | Front Footage-Based | Other |
|---------------------------|-------------|---------------|---------------------|-------|
| Arlington, VA             |             | ✓             |                     |       |
| Fairfax County, VA        | ✓           | ✓             | ✓                   |       |
| Loudoun, VA               | ✓           |               |                     |       |
| WSSC                      |             | ✓             | ✓                   |       |
| DC Water (Proposed)       | ✓           |               |                     |       |
| Howard County, MD         | ✓           |               | ✓                   |       |
| Prince William County, VA | ✓           |               |                     |       |
| Portland, OR              | ✓           | ✓             |                     |       |
| San Francisco             | ✓           |               |                     | ✓     |
| Columbus                  | ✓           |               | ✓                   |       |
| San Diego                 |             | ✓             |                     |       |

Conclusion: The proposed System Availability Fee is commonly used in the industry and in the region; the intent is to recover investment in system capacity.

# Industry Comparisons: Rates/Charges

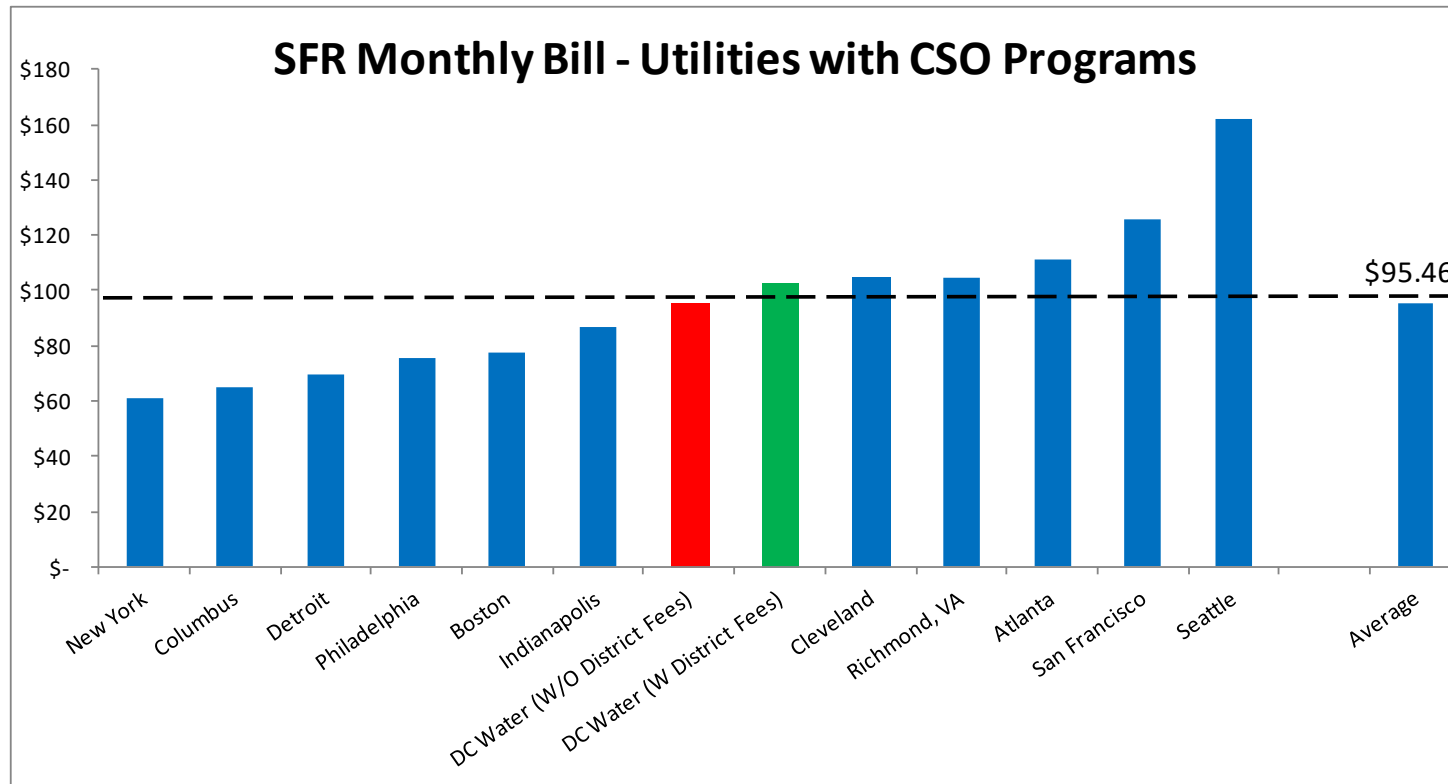


Note: Reflects rates and fees in place as of March 2018. Some cities use property tax revenue or other revenues to pay for part of the cost of water, wastewater, or stormwater services, as indicated by \* in the graph above. In such situations, the user charge will not reflect the full cost of water, 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.**



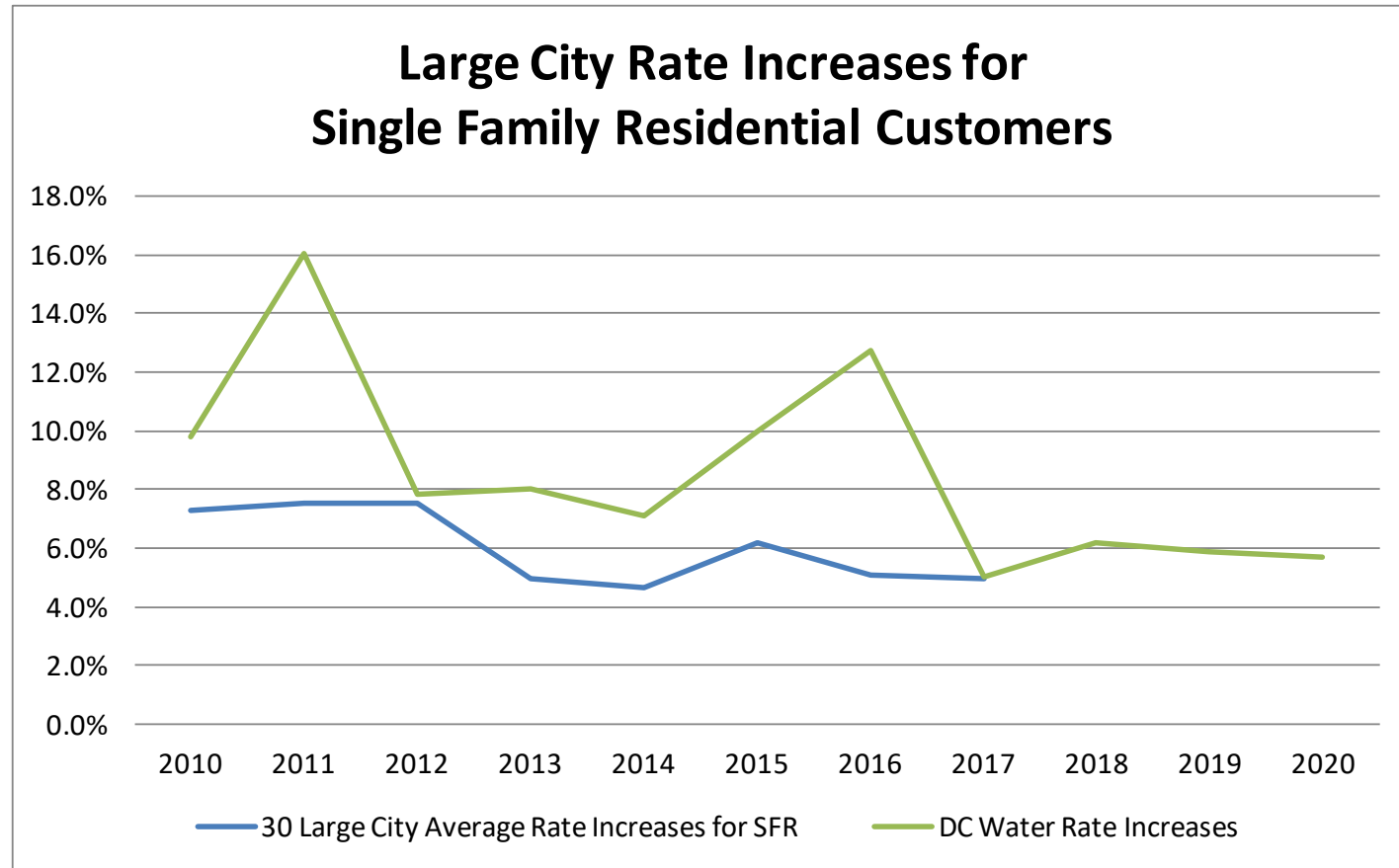
# Industry Comparisons – CSO Utilities



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

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

# Industry Comparisons – Rate Increases



Historical rate increase percentages for DC Water were generally higher than peers in recent years. As the LTCP spending slows down, it is expected that future DC Water rate increase percentages will be similar to peers.

# Industry Comparison – Electricity and Gas

