



# DC Water Approved FY 2020 Budgets

Adopted April 4, 2019 (Fiscal year starts on October 1)

Tommy Wells, Board Chairman   David Gadis, Chief Executive Officer   Matthew T. Brown, Chief Financial Officer



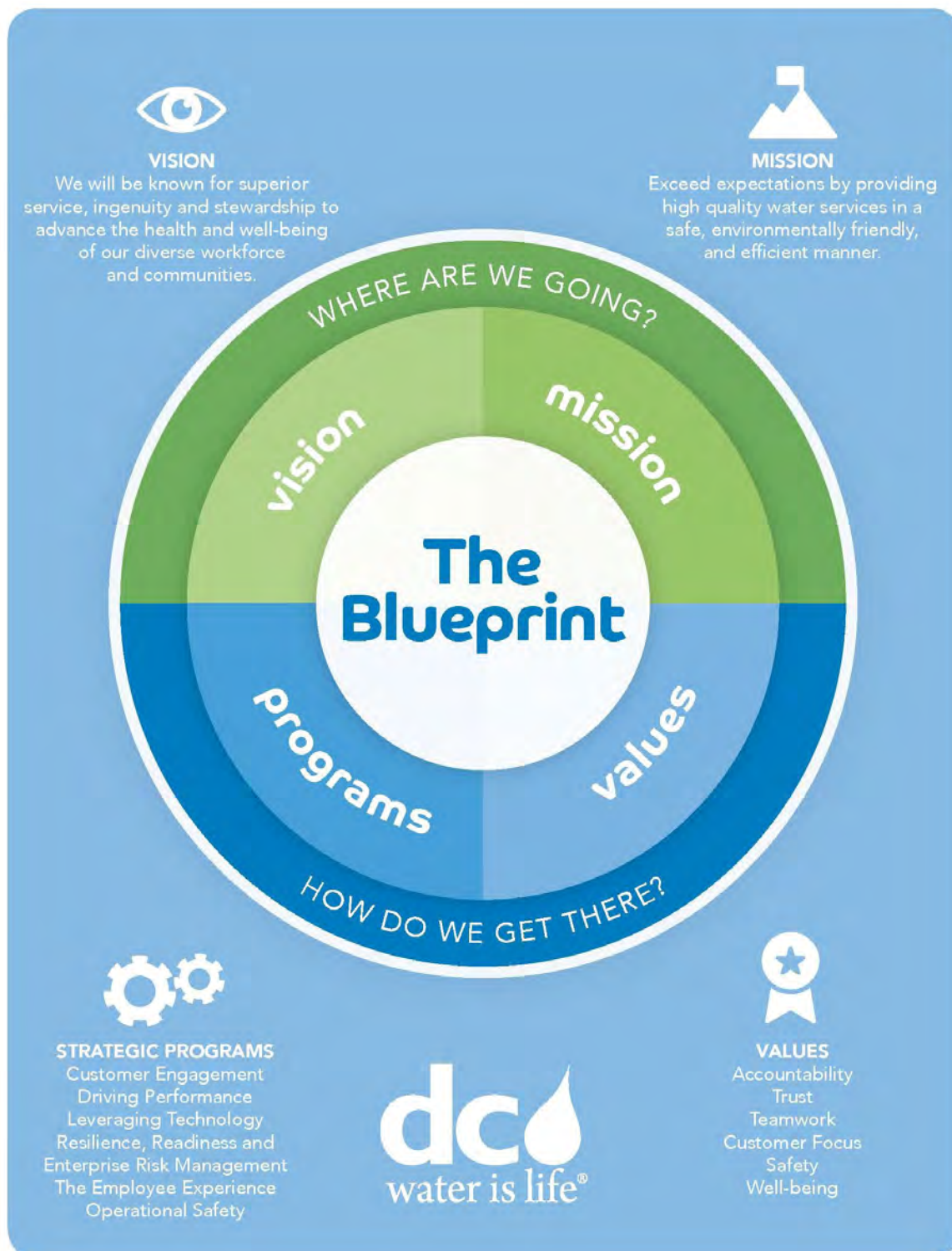
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## Strategic Plan - The Blueprint

The Blueprint guides DC Water in setting priorities, focusing energy and resources, and strengthening operations. The strategic plan adopted by the Board on October 4, 2018 ensures employees and stakeholders are working towards common goals and aiming to accomplish the vision of DC Water.



## VALUES

At DC Water, our values guide our actions, behaviors and decision making.

**Accountability:** We conduct ourselves in a manner that surpasses ordinary standards and take responsibility for our actions and their collective outcomes to our workplace, community and environment at all times.

**Trust:** We strive to achieve the highest standards of professionalism and ethical behavior by always seeking to be open, honest, fair and respectful.

**Teamwork:** We approach all we do in a collaborative way, delivering superior service and outcomes through enthusiasm, helpfulness, positivity, skills, knowledge and a collective commitment to excellence.

**Customer Focus:** We see every engagement with our customers as an opportunity to deliver an exceptional customer experience that improves customer satisfaction and the overall perception of DC Water among the communities we serve.

**Safety:** We are uncompromising in our commitment to the health and safety of our employees, customers, and community. We require individual accountability, expecting all employees to strictly adhere to our safety standards, and actively participate in and support the advancement of our safety practices.

**Well-being:** We recognize DC Water's number one resource is our people. We are committed to seeing that our team thrives physically, mentally and emotionally by endeavoring to create a culture that increases awareness, inspires individual responsibility, promotes healthy choices and encourages work/life balance.

## STRATEGIC PROGRAMS

There are six strategic programs with executive sponsors for each who are responsible for finding resources and selecting the approach to achieving the identified initiatives under each program.

**Customer Engagement:** To deliver an exceptional customer experience and communications plan that enhances the value of our services by listening to and engaging with our customers.

**Driving Performance:** To operate a high-performing utility that delivers exceptional service to our customers.

**Leveraging Technology:** To develop an integrated set of solutions that leverages people, process and technology to improve reliability, increase efficiency, reduce cost, drive innovation and improve the customer experience.

**Resilience, Readiness and Enterprise Risk Management:** To protect and maintain the resources, systems and operations necessary to deliver safe and reliable services to our customers.

**Employee Experience:** To support and engage a workforce that is aligned with our vision to provide superior service to our customers.

**Operational Safety:** To ensure a safe workplace that supports the continuity of operations and services to our customers.

## BOARD OF DIRECTORS

### PRINCIPAL MEMBERS

**Tommy Wells**, Chair, District of Columbia  
**Ellen O. Boardman**, District of Columbia  
**Krystal J. BrumField**, District of Columbia  
**Rachna Butani-Bhatt**, District of Columbia  
**David Franco**, District of Columbia  
**Emile C. Thompson**, District of Columbia  
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**Floyd Holt**, Prince George's County, MD  
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## EXECUTIVE MANAGEMENT TEAM

### EXECUTIVE STAFF

**David Gadis**, CEO and General Manager  
**Mustaafa Dozier, Esq.**, Chief of Staff  
**Matthew T. Brown**, Executive Vice President and Chief Financial Officer, Finance & Procurement  
**Armon Curd**, Executive Vice President, Customer Experience  
**Biju George**, Executive Vice President, Operations & Engineering  
**Wayne Griffith**, Executive Vice President, Performance  
**Alan Heymann**, President, Blue Drop  
**Maureen Holman**, Executive Vice President, Administration  
**Gregory A. Hope**, Interim Executive Vice President, Legal Affairs  
**Keith Lindsey**, Interim Executive Vice President, People and Talent

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**Brent Christ**, Director, Facilities Management  
**Tim Fitzgerald**, Director, Fleet Management  
**Dusti Lowndes**, Director, Emergency Management  
**George Porter**, Director, Occupational Safety & Health

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**Gail Alexander-Reeves**, Special Advisor to the Chief Financial Officer  
**Val Blinkoff**, Manager, Financial Systems and Controls  
**Ivan Boykin**, Director, Finance  
**Syed Khalil**, Director, Rates & Revenues  
**John Madrid**, Controller  
**Lola Oyeyemi**, Director, Budget

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**Craig Fricke**, Director, Engineering and Technical Services  
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**Carlton Ray**, Director, Clean Rivers  
**Brian McDermott**, Director, Permit Operations  
**Aklile Tesfaye**, Vice President, Wastewater Operations  
**Christine DeBarbadillo**, Director, Clean Water and Technology  
**Nicholas Passarelli**, Director, Process Engineering  
**Elkin Hernandez**, Director, Maintenance Services  
**Chris Peot**, Director, Resource Recovery  
**Kendrick St. Louis**, Director, Pumping  
**Jason Hughes**, Senior Director, Water Operations  
**Maureen Schmelling**, Director, Water Quality  
**Dunbar Regis**, Interim Director, Sewer Operations

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**Matt Ries**, Director, Sustainability and Watershed Management  
**Antron Sutton**, Director, Strategic Planning

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**Joseph M. Edwards**, Director, IT Infrastructure  
**Hari Kurup**, Director, Enterprise Applications  
**Carolyn MacKool**, Director, Customer Care



## ACKNOWLEDGEMENTS

***The Office of the Chief Financial Officer would like to extend our appreciation to the Executive Team and Senior Management Staff for their strategic guidance and leadership.***

***In addition, we would like to acknowledge the following staff members from the departments of Finance, Engineering & Technical Services and the Office of Marketing & Communications for their hard work and dedication geared towards the publication of this document.***

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GOVERNMENT FINANCE OFFICERS ASSOCIATION

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Budget Presentation  
Award*

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**District of Columbia Water & Sewer Authority  
District of Columbia**

For the Fiscal Year Beginning

**October 1, 2018**

*Christopher P. Morrell*

Executive Director





## Approved FY 2020 Budgets

### Section I: EXECUTIVE BUDGET SUMMARY



DC Water Headquarters





# Executive Budget Summary

**Approved FY 2020 • Adopted April 4, 2019**  
(Fiscal year starting October 1)

Tommy Wells, Chairman of the Board  
David Gadis, Chief Executive Officer  
Matthew T. Brown, Chief Financial Officer

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY



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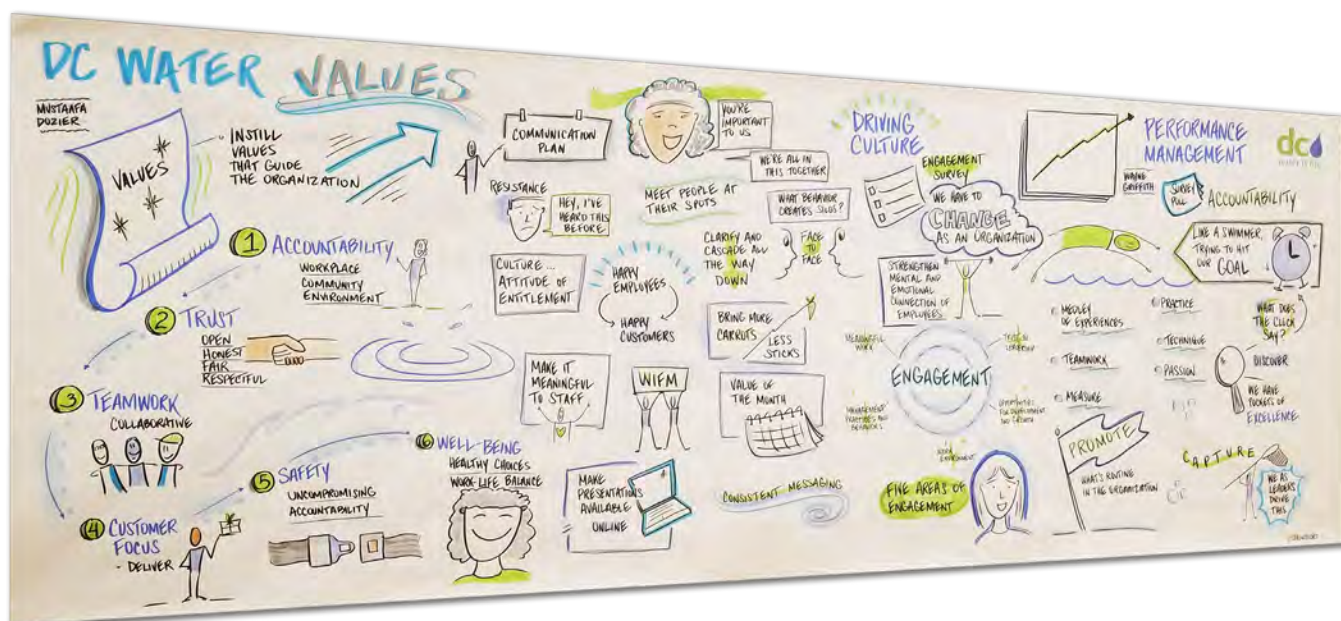




The executive budget summary is a standalone document that provides information about DC Water to our diverse stakeholders. Additional information on the operating and capital budgets can be found in the detailed budget book, which is available online at [dcwater.com](http://dcwater.com).

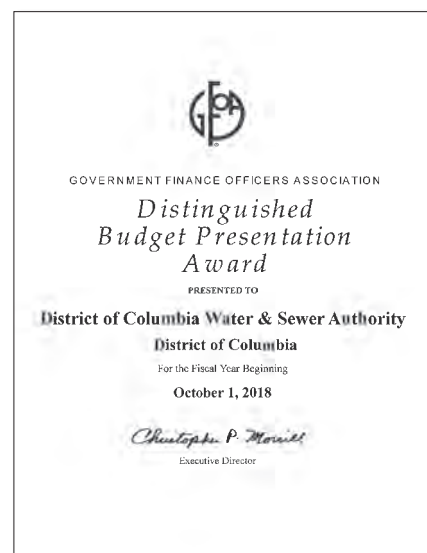
DC Water is an independent authority of the District of Columbia, established under District of Columbia and Federal law and is governed by 11 principal and 11 alternate members of the Board of Directors. DC Water provides drinking water to residents of the District of Columbia, and wastewater treatment services to both residents of the District of Columbia and wholesale customers in Maryland and Virginia.

DC Water's Board of Directors and the Executive Management team continue to work and improve the Authority's operations and processes to be a world class utility. In this effort, a new strategic plan "The Blueprint" was adopted by the Board of Directors in October 2018.



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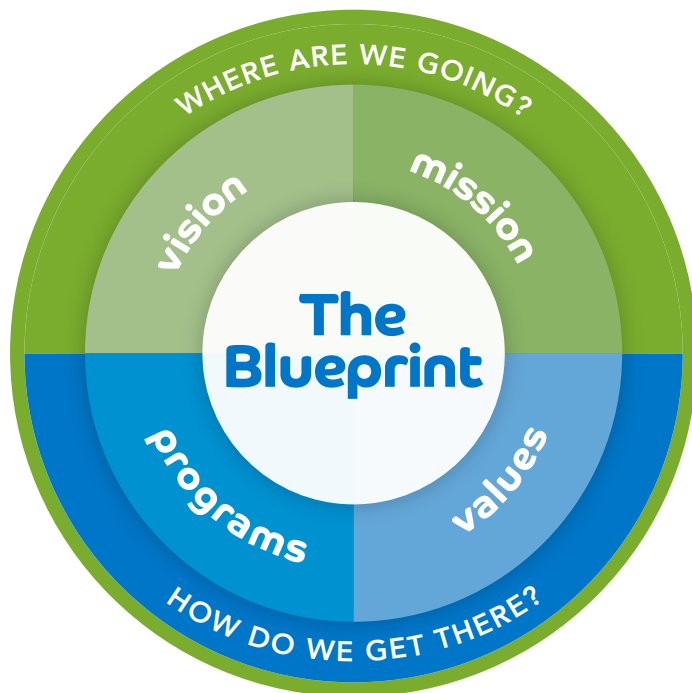
# A New and Better DC Water

## Vision

We will be known for superior service, ingenuity and stewardship to advance the health and well-being of our diverse workforce and communities.

## Mission

Exceed expectations by providing high quality water services in a safe, environmentally friendly, and efficient manner.



- Redefined vision and focus
- Staff-driven with Board input
- Increased Board oversight
- Focused priorities
- Performance-based
- Greater staff engagement
- Connects enterprise interdependencies
- Two-year outlook

## DC Water Board Committees

Audit Committee

DC Retail Water and Sewer Rates Committee

Environmental Quality and Operations Committee

Finance and Budget Committee

Governance Committee

Human Resources and Labor Relations Committee

Strategic Planning Committee





Across the country, water and sewer utilities, especially those with older infrastructure, have faced the challenge of balancing ratepayer affordability with the dire need for capital investments in water and sewer systems.

DC Water ratepayers have been stretched in recent years, as the Authority has undertaken massive—and federally mandated capital projects to protect the environment and benefit the District. Across the country, conversations around infrastructure investments are getting more challenging as budgets get tighter. The Authority's water and sewer infrastructure continues to age faster than the assets can be replaced, thus exceeding their useful life. We cannot delay any further the much-needed capital investments in our wastewater, water and sewer infrastructure so that we can continue to maintain high quality services without disruption due to asset failure.

When I took the helm at DC Water less than a year ago, I wanted to hear from our customers and stakeholders about their challenges and how we can better work together towards equitable solutions. I established a Stakeholder Alliance composed of a diverse group of community members with a shared goal of partnership to best serve our communities. This group has provided perspective, insight and creativity that is helping to frame our priorities and inform solutions.

First on the agenda for the Stakeholder Alliance was to address the Clean Rivers Impervious Area Charge (CRIAC), which recovers the District rate payers' share of the \$2.7 billion mandated Clean Rivers Project. The CRIAC inched up over the first few years but has increased more dramatically for some customers in recent years. It had become overly burdensome for some groups and households, who brought their concerns to our attention.

We listened.

Through cooperation with District of Columbia Mayor Muriel Bowser, Council of the District of Columbia, the District Department of the Environment, and several other groups, we expanded eligibility and created additional financial assistance programs funded through DC Water and the District to specifically address CRIAC. We are not yet done. We continue to seek various alternatives and strategies to help guide how we fund and pay for the Clean Rivers project, similar to other utilities with large consent decree programs.

We are having to make some tough choices. During this year's budget process, we left no stone unturned as we sought better ways to operate our facilities and identify cost savings and new revenues. We will continue to pursue these in order to keep rates as low as possible while maintaining reliable delivery of critical services.

Since my arrival, we have finalized a new Strategic Plan (The Blueprint) with focus on measurable outcomes and reorganized our business units to provide an enhanced customer experience. As we entered the budget process, our emphasis included improving customer engagement, establishing a sustainable budget for efficient operations, and training our workforce. We challenged our staff to lower expenditures and find ways to do more with less.

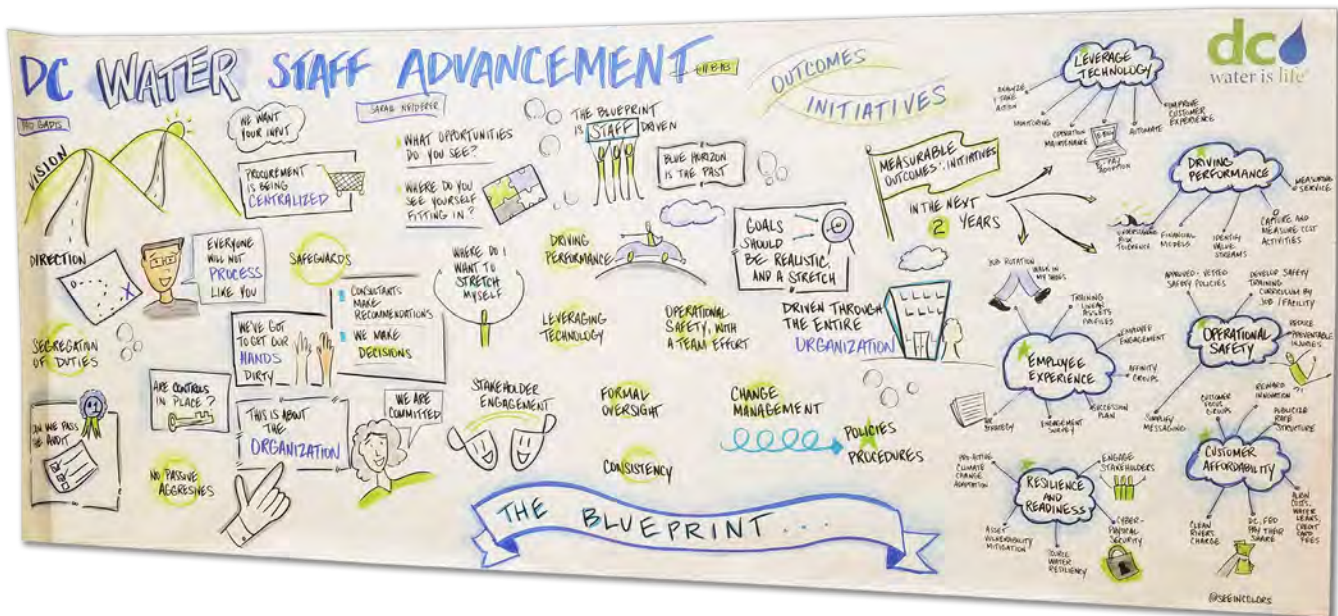
Our goal is to demonstrate to the public that we are running the utility efficiently, and without excessive spending, while prioritizing the many necessary capital projects, and ensuring that all users pay their fair share for services provided. We will also continue to seek creative solutions and ideas from our Stakeholder Alliance, our jurisdictional partners, utility peers, employees and customers to continue to meet the needs of the District and the region.

In closing, I appreciate the warm welcome by the staff, management and Board of DC Water for the collaborative effort undertaken during this budget process. Without a doubt, DC Water is the best utility, not only in North America, but in the world and this is a testament reflective of the commitment of our high performing workforce.

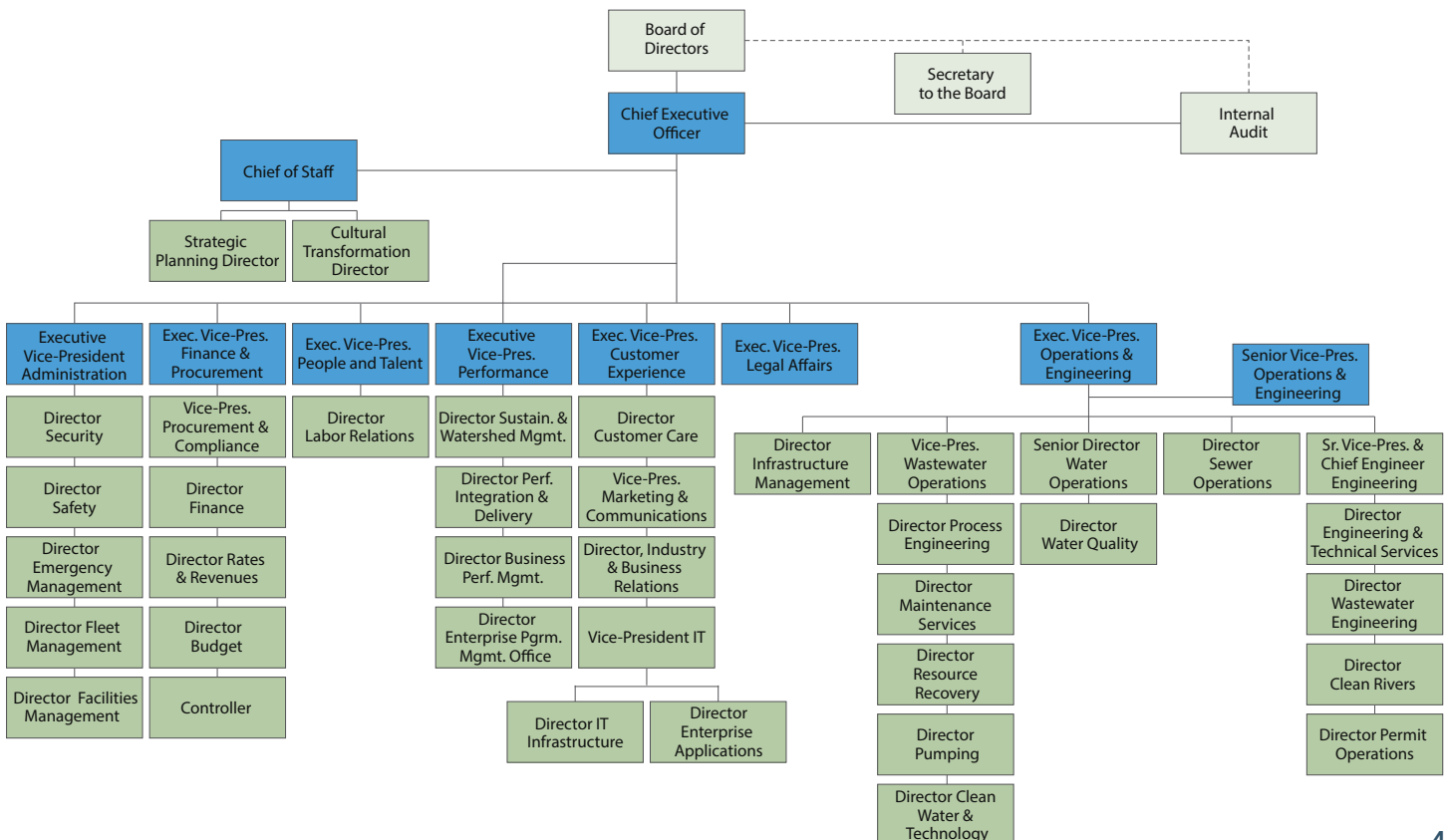
David L. Gadis

**The new structure aims to remove silos and supports enhancing both our culture and operations.**

- Renews our strategic direction to continue to be the best utility in the world
- Enables us to achieve common goals by providing exceptional customer experience and best employee experience
- Fosters a collaborative environment for driving performance and improving employee engagement
- Delivers a unified and more responsive organization



## DC Water Organizational Structure





While the Board of Directors ultimately approves the budget and rates and fees, the budget process at DC Water involves staff at every level of the organization. DC Water's people are the best in the business. They strive every day to deliver water to our customers, and to improve the quality of our waterways. This budget builds a stronger DC Water by:

- Building on efforts that have taken \$27.7 million of cost out of the business including renegotiation of goods and services contracts, reduced hauling and energy costs from the Combined Heat & Power Facilities project, and optimization of usage of chemicals
- Eliminating 63 vacancies, a savings of \$7 million a year
- Increasing our investment in capital infrastructure including small diameter water mains that deliver water to our customers, and renews aging sewer infrastructure
- Shifting a portion of Clean Rivers costs from the Impervious Area Charge to the sewer volumetric rate, bringing more equity to Clean Rivers funding
- Helping to ensure that all users pay their fair share, by appropriately recovering costs from users through revised engineering fees and the new Fats, Oils, and Grease and Backflow Preventer programs.
- Holding rate increases for the average household customer to 5.7 percent, which was approved by the Board a year ago

### Infrastructure Improvements

The Board adopted a ten-year disbursement plan of \$4.96 billion, that increases capital spending by \$0.95 billion. Starting in FY 2021, this Plan increases investments in the Authority's water and sewer infrastructure and funds the federally mandated Clean Rivers Tunneling project.

The capital budget reflects our commitment to replacing one percent of water and sewer infrastructure annually, and undertaking major upgrades and rehabilitation of the stormwater pumping stations and critical facilities at our Blue Plains Advanced Wastewater Treatment Plant for permit compliance.

### Operational Efficiency

The approved operating budget of \$614.5 million represents an increase of \$31.7 million compared to the FY 2019 level, mainly for personnel, chemicals, water purchases and debt service costs. If not for the materialized results from prior years' investments and efforts mentioned above, the budget would be higher by at least \$27.7 million. We have also reduced our reliance on consultants and continue to leverage the use of technology to achieve efficiencies.

### Addressing Equity

Until this year, revenues from District rate payers' share of the \$2.7 billion Clean Rivers program came entirely from the Clean Rivers Impervious Area Charge (CRIAC). That assessment did not take into account a property's sanitary sewage that also adds to the Combined Sewer Overflows (CSOs), only the impervious (water that cannot soak through) surface area on a property.

Starting with this year's budget, our Board revised the rate structure to begin shifting a portion of Clean Rivers costs to the sewer volumetric rate, starting with 18 percent in FY 2020, 28 percent in FY 2021 and 37 percent for FY 2022 and beyond based on the amount of sanitary flow that is captured by the new tunnels. This method will help improve equity and give customers more ability to control their bill based on consumption.

Additionally, we have increased the CRIAC discount, from 4 percent to 20 percent for customers who take steps to manage stormwater on their properties, keeping it from entering the sewer or stormwater systems. This discount, better incentivizes residents to make these upgrades since it provides a better return on their investments.

Moving forward, we will continue to leverage innovation and discipline in creating budgets that best serve our customers, partners and stakeholders, while providing reliable services and responsible environmental stewardship.

Matthew T. Brown



# Budget at a Glance

## Operating Expenditures (\$ Thousands)

Category	FY 2019 Approved	FY 2020 Approved
Authorized Headcount	1,279	1,223
<b>Total Personnel Services</b>	<b>\$ 162,620</b>	<b>\$ 170,680</b>
Chemicals	23,558	25,181
Supplies	8,524	7,977
Utilities	26,915	26,953
Contractual Services	81,679	81,886
Water Purchases	30,520	34,929
Small Equipment	1,240	989
<b>Total Non-Personnel Services</b>	<b>\$ 172,435</b>	<b>\$ 177,914</b>
<b>Total Operations and Maintenance</b>	<b>\$ 335,055</b>	<b>\$ 348,594</b>
Debt Service	199,025	215,340
PILOT & ROW	21,702	22,034
Payment in Lieu of Taxes	16,602	16,934
Right of Way	5,100	5,100
Cash Financed Capital Improvements	26,999	28,556
<b>Total Debt Service/PILOT/ROW/ CFCI</b>	<b>247,726</b>	<b>265,929</b>
<b>Total Operating Expenditure</b>	<b>\$ 582,781</b>	<b>\$ 614,523</b>
Less: PS charged to Capital Projects	(18,259)	(22,748)
<b>Total Net Operating Expenditure</b>	<b>\$ 564,522</b>	<b>\$ 591,775</b>

## Capital Disbursements (\$ Thousands)

Service Areas	FY 2019 Revised	FY 2020 Approved
Non-Process Facilities	\$ 15,309	\$ 36,002
Wastewater Treatment	69,979	66,620
Clean Rivers	187,859	147,208
Combined Sewer	7,491	4,219
Stormwater	4,220	8,571
Sanitary Sewer	44,927	43,646
Water	61,884	71,720
<b>Capital Projects</b>	<b>\$ 391,669</b>	<b>\$ 377,987</b>
Capital Equipment	34,518	26,823
Washington Aqueduct	12,930	15,532
<b>Additional Capital Programs</b>	<b>47,448</b>	<b>42,355</b>
<b>Total CIP</b>	<b>\$ 439,117</b>	<b>\$ 420,342</b>

## Operating Revenues (\$ Thousands)

Category	FY 2019 Revised	FY 2020 Proposed
Residential	\$ 118,531	\$ 124,353
Commercial	164,542	173,826
Multi-family	93,137	100,884
Federal Government	67,054	71,887
Municipal & Housing	27,869	28,110
Water System Replacement Fee (WSRF)	39,717	39,717
Metering Fee	10,776	10,776
Wholesale	82,992	82,539
Other Revenue	61,032	61,887
<b>Total Operating Revenue</b>	<b>\$ 665,650</b>	<b>\$ 693,979</b>

## Capital Revenues (\$ Thousands)

Source	FY 2019 Revised	FY 2020 Proposed
Wholesale Capital Payments	\$ 67,112	\$ 67,321
EPA Grants & CSO Appropriations	18,215	38,990
Interest Income on Bond Proceeds	2,981	3,658
Pay-Go Financing	98,540	103,852
Debt Proceeds	110,000	180,716
System Availability Fee	3,850	5,775
<b>Total Capital Revenue</b>	<b>\$ 300,698</b>	<b>\$ 400,312</b>



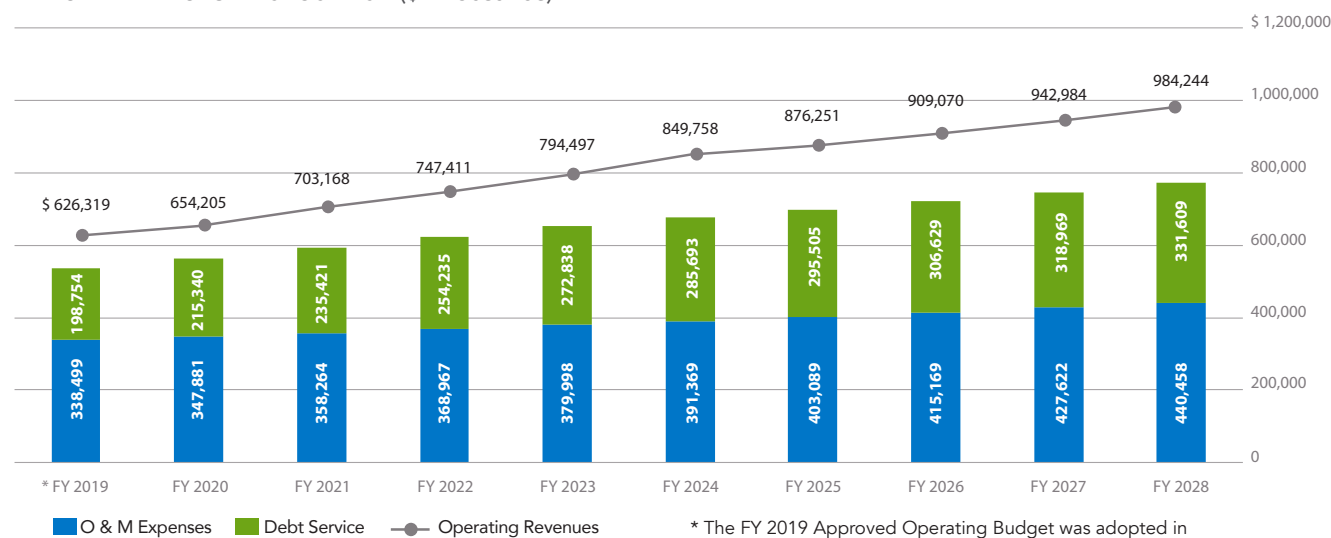
SCADA drill / Anacostia Pumping Station inspection



## Ten-Year Financial Outlook

DC Water's ten-year financial plan provides a strong financial framework to support implementation of the Board strategic plan, policies, priorities and guidance in several key financial areas. This financial plan serves as one of management's key tools to monitor progress in meeting financial goals and to proactively address future financial and operational issues. Given DC Water's substantial borrowing needs over the next ten years, adherence to these Board policies is crucial to cost-effectively access the capital markets and retain our credibility with customers and regulators. The ten-year financial plan encompasses annual projected revenue requirements, operating expenditures, debt service costs, coverage ratios for indenture requirements, and sufficient liquidity to meet all the Authority's financial obligations.

### FY 2019 - FY 2028 Financial Plan (\$ Thousands)



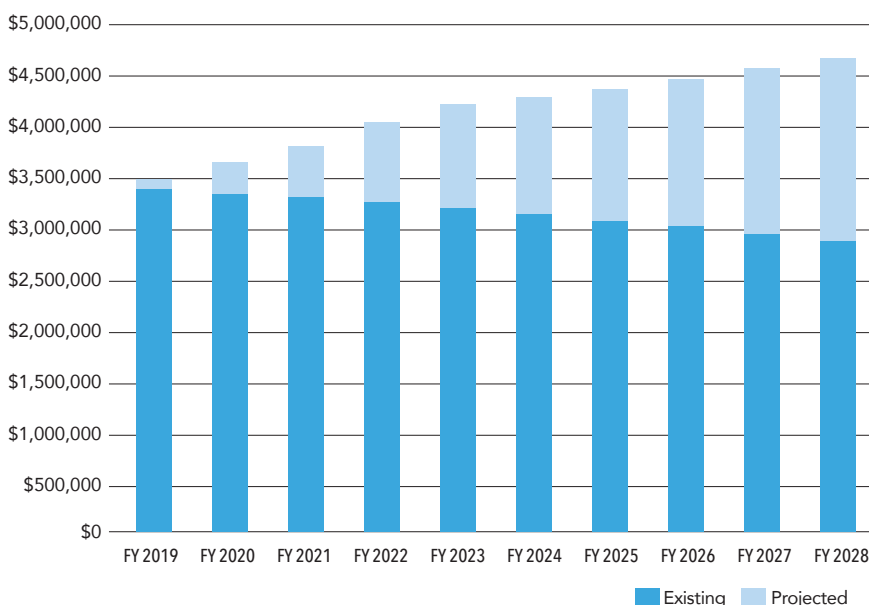
### Debt Management

DC Water continues to maintain strong financial performance and bond ratings. The credit ratings on our senior lien bonds remain at AAA, Aa1, and AA ratings by Standard and Poor's Ratings Services, Moody's Investors Service and Fitch Ratings. These notable results are due to the Authority's solid financing team and strong financial performance, and diligent planning. Additional information for current and future investors is available at [dcwater.com](http://dcwater.com) and [dcwaterbonds.com](http://dcwaterbonds.com).

The Authority uses debt to finance its capital program and plans to issue approximately \$300 million (Series A/B/C) in revenue bonds during FY 2020. This will include fixed rate debt for Clean Rivers capital projects, and both fixed and variable rate debt for Non-Clean Rivers capital projects. DC Water also plans to apply for a

federal loan under the Water Infrastructure and Finance Innovation Act (WIFIA), administered by the Environmental Protection Agency (EPA). The Authority's long term debt, including current maturities, total \$3.5 billion as of the end of FY 2018 and projected to increase over the next ten years mainly to invest in our aging infrastructure.

### FY 2019- FY 2028 Current and Outstanding Debt (\$ Thousands)





# Operating Budget



DC Water Headquarters on the Anacostia River

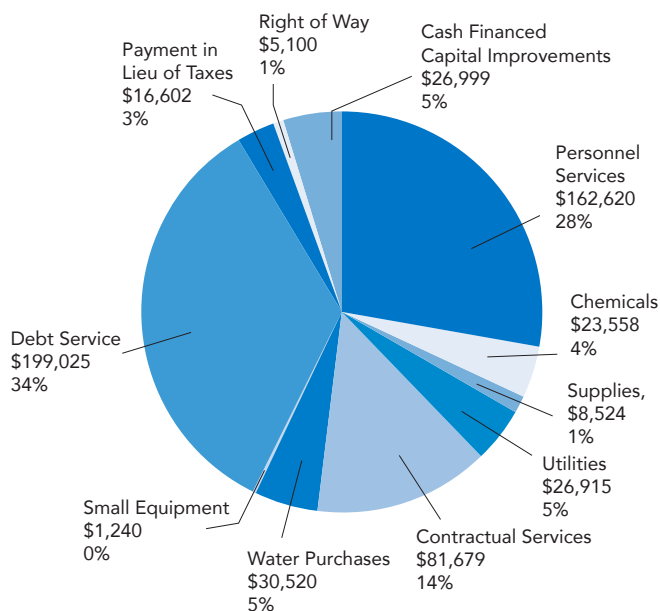
DC Water's annual operating budgets provide the resources necessary to sustain a multi-billion dollar water distribution and sewage collection and treatment system. The Authority continues to deliver clean water, collect and treat the sewage before returning clean water to the local waterways and repair water main and sewer breaks as needed. The budget reflects management's focus on stewardship, accountability and sustainability while maintaining our high level of customer service.

The approved FY 2020 budget totals \$614.5 million, an increase of \$31.7 million or approximately 5.4 percent above the FY 2019 budget. The increase is mainly for the Operations & Maintenance (O&M) costs, and debt service required to finance the Authority's Capital Improvement Program.

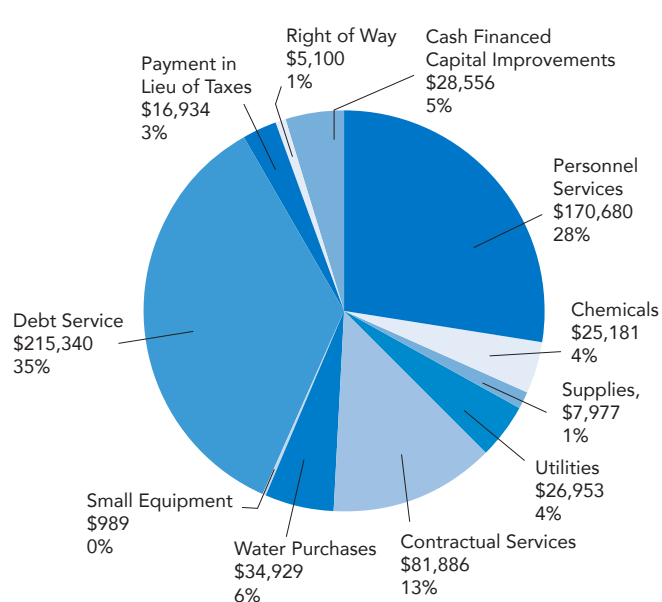
Detailed descriptions of the approved FY 2019 and FY 2020 operating budgets are available online at [dcwater.com](https://dcwater.com)

## Comparative Operating Budgets by Category (\$ Thousands)

### Approved FY 2019 \$582,781



### Approved FY 2020 \$614,523





# Capital Improvement Program (CIP)

DC Water's ten-year Capital Improvement Program (CIP) provides a framework for the development, prioritization, implementation and measurement of the capital projects undertaken. The Board-approved FY 2019 – FY 2028 CIP disbursement budget increased by \$954.7 million over the previous plan. The capital program increases investment in our aging water and sewer infrastructure, and funds major upgrades to the stormwater pump stations and critical wastewater facilities.

The FY 2019 and FY 2020 capital budgets total \$439.1 million and \$420.3 million, respectively (cash disbursement basis), while the ten-year disbursement plan totals \$4.96 billion and lifetime budget is \$12.1 billion (total commitments for active projects prior to, during, and beyond the ten- year window).

Detailed description of major CIP changes and program details can be found in Section V – Capital Improvement Program of the budget book and online at [dcwater.com](http://dcwater.com).

## FY 2019 – FY 2028 Capital Improvement Program (\$ Thousands)

FY 2019 Revised	FY 2020 Approved	Service Area	Ten-Year Disbursement Plan	Total Lifetime Budget
\$15,309	\$36,002	Non Process Facilities	\$138,067	\$212,833
69,979	66,620	Wastewater Treatment	978,738	3,566,060
195,350	151,427	Combined Sewer Overflow	1,341,767	3,033,549
4,220	8,571	Stormwater	68,608	123,574
44,927	43,646	Sanitary Sewer	957,135	2,070,599
61,884	71,720	Water	945,015	2,204,622
<b>\$391,669</b>	<b>\$377,987</b>	<b>Capital Projects</b>	<b>\$4,429,330</b>	<b>\$11,211,236</b>
34,158	26,823	Capital Equipment	340,324	340,324
12,930	15,532	Washington Aqueduct	187,127	187,127
<b>\$47,448</b>	<b>\$42,355</b>	<b>Additional Capital Programs</b>	<b>\$527,450</b>	<b>\$527,450</b>
		Labor		389,258
<b>\$439,117</b>	<b>\$420,342</b>	<b>Total Capital Budgets</b>	<b>\$4,956,780</b>	<b>\$12,127,945</b>

## Measure of Priority (\$ Thousands)

Mandates Agreements, Regulatory standards, Court orders, Issues and Permits requirements, Stipulated Agreements, Etc.			Health and Safety Required to address Public Safety	Board Policy Undertaken as a result of the Board's commitment to outside agencies	Potential Failure Related to Facilities in danger of failing, or critical to meeting permit requirements	High Profile / Good Neighbor Address Public Concern	Good Engineering / High Payback Need to fulfill Mission and upgrade Facilities	Good Engineering / Lower Payback Lower priority projects	Total
FY 2019	\$210,807	48%	\$13,874	\$33,472	\$36,117	\$8,132	\$87,332 20%	\$49,385	<b>\$439,117</b>
FY 2020	150,388	36%	3,821	67,776	42,5600	501	98,520 23%	56,776	<b>420,342</b>
FY 2021	139,790	30%	5,858	72,529	41,437	924	112,534 24%	93,994	<b>467,016</b>
FY 2022	191,411	34%	6,928	53,535	37,742	3,315	149,552 27%	119,241	<b>561,724</b>
FY 2023	151,297	29%	2,099	42,382	72,801	1,281	151,811 29%	108,335	<b>530,006</b>
FY 2024	64,692	15%	5,368	50,055	34,511	558	158,304 37%	109,120	<b>422,607</b>
FY 2025	55,919	12%	12,457	54,634	35,514	1,415	183,675 41%	106,744	<b>450,358</b>
FY 2026	144,295	25%	18,848	48,081	40,102	2,679	162,071 28%	169,379	<b>585,454</b>
FY 2027	97,067	18%	8,604	44,926	31,137	89	152,165 28%	201,677	<b>535,666</b>
FY 2028	83,286	15%	1,511	65,369	33,705	-	167,928 31%	192,690	<b>544,490</b>
<b>TOTAL</b>	<b>\$1,288,951</b>		<b>\$79,366</b>	<b>\$532,760</b>	<b>\$405,626</b>	<b>\$18,893</b>	<b>\$1,423,892</b>	<b>\$1,207,291</b>	<b>\$4,956,780</b>
% of Total	26%		1.6%	10.7%	8.2%	0.4%	28.7%	24.4%	<b>100%</b>



# Operational Impact of Major Capital Investments

DC Water's Capital Improvement Program (CIP) includes operational impacts of significant capital investments on several large projects such as the Biosolids Management Plan (BMP), DC Clean Rivers (DCCR) and Blue Plains Total Nitrogen Program (BTN). Below is a list of pertinent information on current and future operational impacts for these non-routine capital investments.

## Tunnel Dewatering Pump Station

This facility is now operational and dewateres the Anacostia River Tunnel system. The tunnel captures and stores combined sewage, preventing it from overflowing into the Anacostia River.

## Filtrate Treatment Facilities

The project assists in nitrogen removal from the water processed and lowers the use of methanol. This new facility uses six sequencing batch reactors to treat a nitrogen-rich stream from the Final Dewatering Facility's belt filter presses.

## Ongoing and Local Sewer Rehabilitation

Renewal of small diameter sewer infrastructure will reduce emergency repair including overtime and maintenance demands for these neighborhood sewers.

## Water Pumping and Storage

The rehabilitation or upgrades to storage facilities supports changing development patterns, regulatory compliance, additional water pressure to certain areas of the District, and redundant service during unplanned outages.



Clean Rivers Tunnel Dewatering Pump Station



Saint Elizabeth Water Tower



# Operating Revenues, Rates, Fees and Charges

## Operating Revenues

To provide continuous delivery of water and wastewater services, it is vital that DC Water has a consistent revenue stream to cover operating and maintenance (O&M) costs, debt service, and other liquidity requirements. DC Water has a diverse customer base and receives revenues from a variety of sources. Retail rates are charges for water, sewer and other services to DC Water's customers. Wholesale revenues are received from suburban water and sewer authorities for their share of the O&M costs of the Blue Plains Advanced Wastewater Treatment Plant.

DC Water maintains a combination of fixed and variable fees. Fixed fees are charged regardless of water usage, and include the metering fee and the Clean Rivers Impervious Area Charge. Variable fees are based on water usage, and include the water and sewer fees. Every three years DC Water conducts a Cost of Service Study (COS) to help ensure that costs are appropriately allocated. For example, the cost of delivering water to our customers is reflected in the water rate, and the cost of wastewater treatment is part of the sewer rate.

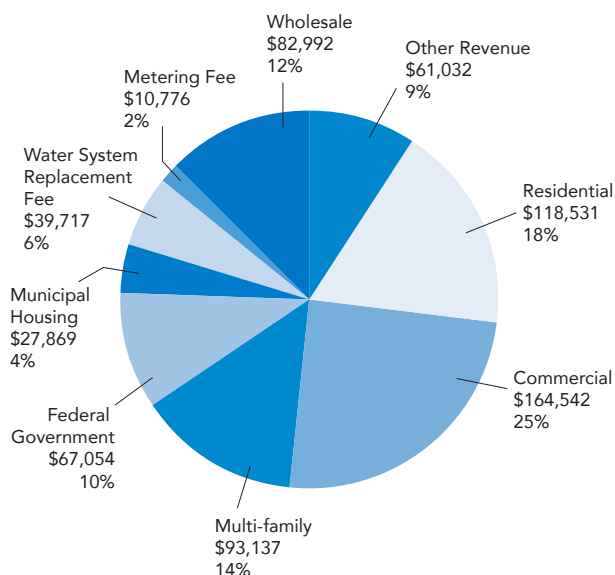
## Multi-Year Rates:

DC Water Board approved its second multi-year rate proposal in FY 2018 covering the period FY 2019 and FY 2020. The FY 2019 rate became effective from October 1, 2018. The benefits of multi-year rates include: greater revenue certainty, increased budget discipline and better alignment between revenues and expenditures.

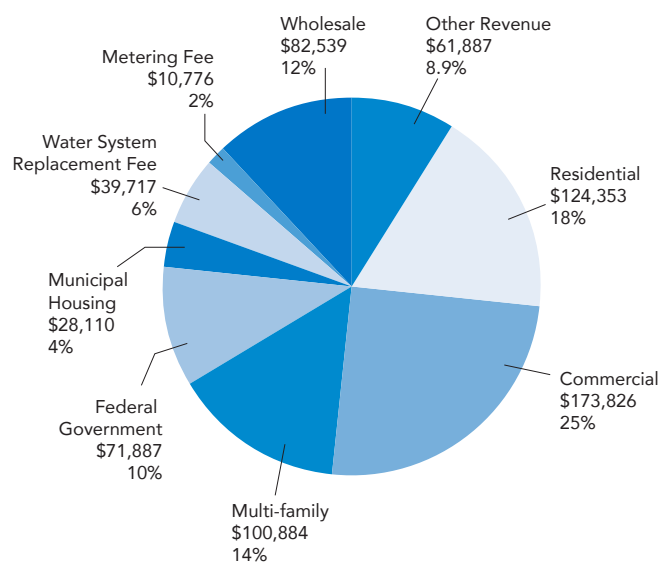
Based on feedback from the new Stakeholder Alliance and discussions with customers about the Clean Rivers Impervious Area Charge (CRIAC) that funds the Clean Rivers Program, there is a proposal for FY 2020 to shift 18 percent of the costs for the Clean Rivers program from the CRIAC to the sewer volumetric rate. This will increase to 28 percent in FY 2021 and 37 percent in FY 2022. This is based on an assessment that, on average, 37 percent of the volume in the new tunnels is from wastewater. With the proposed shift, the overall household charges increase of 5.7 percent is the same as previously forecasted for FY 2020. The FY 2019 revised revenue budget totals \$665.6 million and is projected to increase to \$693.9 million in FY 2020.

## Comparative Operating Revenues by Category (\$ Thousands)

### Revised FY 2019 \$665,650



### Proposed FY 2020 \$693,979



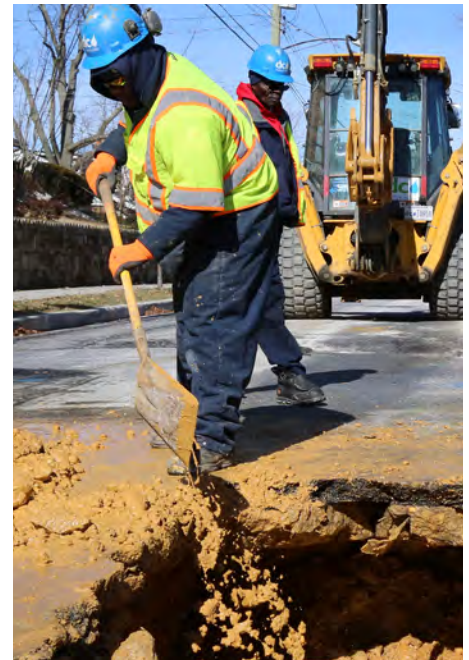


## FY 2019 - FY 2020 Retail Rates and Fees

Description of Fees	Units	FY 2019 Approved	FY 2020 Proposed	Increase/Decrease	
DC Water Retail Rates – Water		\$	\$	\$	%
• Residential 0-4 Ccf (Lifeline) <sup>2</sup>	Ccf	\$2.91	\$3.06	\$0.15	5.2%
• Residential – > 4 Ccf <sup>2</sup>	Ccf	\$3.90	\$4.10	\$0.20	5.1%
• Multi-family / DC Housing <sup>2</sup>	Ccf	\$3.37	\$3.54	\$0.17	5.0%
• Non-Residential	Ccf	\$4.05	\$4.25	\$0.20	4.9%
DC Water Retail Rates – Sewer	Ccf	\$7.75	\$8.89	\$1.14	14.7%
DC Water Clean Rivers IAC	ERU	\$23.00	\$20.94	(\$2.06)	(9.0%)
DC Water Customer Metering Fee	5/8"	\$3.86	\$3.86	\$0.00	0.0%
DC Water System Replacement Fee <sup>1</sup>	5/8"	\$6.30	\$6.30	\$0.00	0.0%
District of Columbia PILOT Fee	Ccf	\$0.50	\$0.51	\$0.01	2.0%
District of Columbia Right-of-Way Fee	Ccf	\$0.18	\$0.19	\$0.01	5.6%
District of Columbia Stormwater Fee	ERU	\$2.67	\$2.67	\$0.00	0.0%

(1)DC Water WSRF of \$6.30 effective October 1, 2015

(2) Proposed Class-Based rates



### Clean Rivers Impervious Area Charge (CRIAC)

The CRIAC is a separate sewer service fee established in FY 2009 to recover the \$2.7 billion cost of implementing the DC Clean Rivers Project (the District's CSO-Long Term Control Program). The proposed monthly CRIAC ranges from \$23.00 per Equivalent Residential Unit (ERU) in FY 2019 to \$29.31 per ERU in FY 2028. From 2009 until 2019, all funds for the Clean Rivers program have come from the Clean Rivers Impervious Area Charge (CRIAC) which is assessed for all customers based on the amount of impervious surface on each property. The ten-year plan assumes no external funding beyond the special Congressional appropriation. DC Water has received \$252.8 million through Federal appropriations as of September 30, 2018.

During FY 2019, the Board approved a proposed change in the way Clean Rivers costs are recovered starting in FY 2020. The proposed plan is to phase-in a CRIAC

shift of 18 percent in FY 2020, 28 percent in FY 2021 and 37 percent in FY 2022 and beyond to sewer volumetric rate based on methodology that allocates the volume of Sanitary Wastewater, Stormwater runoff and CSO in the Clean Rivers Tunnel. Shifting some of the Clean Rivers cost recovery to the volumetric rate gives customers more control over the amount that they pay towards the project. The change is expected to improve equity in the funding for the Clean Rivers program. Small volume customers in every class would generally pay less and average Residential customers would pay about the same. The FY 2020 budget also increases the CRIAC discount from 4 percent to 20 percent for Stormwater Best Management Practices.





## Customer Affordability

DC Water seeks to balance its operating and financial needs with consideration to the financial impact upon its customers. EPA guidelines suggest that fees and charges should be within 4 percent of the median household income to be considered affordable (2 percent for water and 2 percent for sewer). Using the last available census data (2016), DC Water's rates are well under that target and they are comparable with similar water and wastewater utilities.

DC Water, in partnership with the District, supports the following 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 month 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 (WSRF). In FY 2017, the Authority further expanded CAP to include a 50 percent discount for CRIAC. In FY 2018, Management recommended, and the Board approved, expansion of the CAP to low-income customers to include Clean Rivers Impervious Surface Area Charge (CRIAC) credit in their monthly bills. In FY 2018, CAP assisted over 4,324 customers and provided \$1,188,574.48 in discounts to low-income customers.

**CAP 2:** was implemented in December 2018 to expand the CAP program for low-income residential customers with household income up to 80 percent Area Median Income (AMI) who do not qualify for CAP. Eligible customers receive a discount of up to 3Ccf per month for water and sewer and a 50 percent discount for CRIAC.

**CAP 3:** is a new District-funded program that provides benefits to DC Water customers with household income greater than 80 percent and up to 100 percent Area Median Income (AMI) who do not qualify for CAP or CAP2. Eligible customers receive 75 percent discount for CRIAC.

**CRIAC Non-profits Relief Program:** is a new District-funded program to provide up to 90 percent of CRIAC discounts to nonprofit organizations as determined by the District Department of the Environment (DDOE).

## Serving People by Lending a Supporting Hand

**(SPLASH):** 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 2018, SPLASH assisted 212 households and provided \$104,361 in contributions to low-income customers.

## Regional Demographics

DC Water provides water and wastewater services to retail customers in the District and wastewater treatment services on a wholesale basis to portions of Montgomery County and Prince George's County in Maryland and Fairfax and Loudoun Counties in Virginia, serving about 1.6 million people. Despite increasing population and visitors, water consumption is declining through improved fixture efficiency and conservation. Reduced usage is good for the environment but places more strain on the 134,000 retail customers with the responsibility to pay for majority of the operations, maintenance and replacement of the water and sewer infrastructure throughout Washington, DC. Wholesale customers pay a relatively modest portion of the total cost of service.

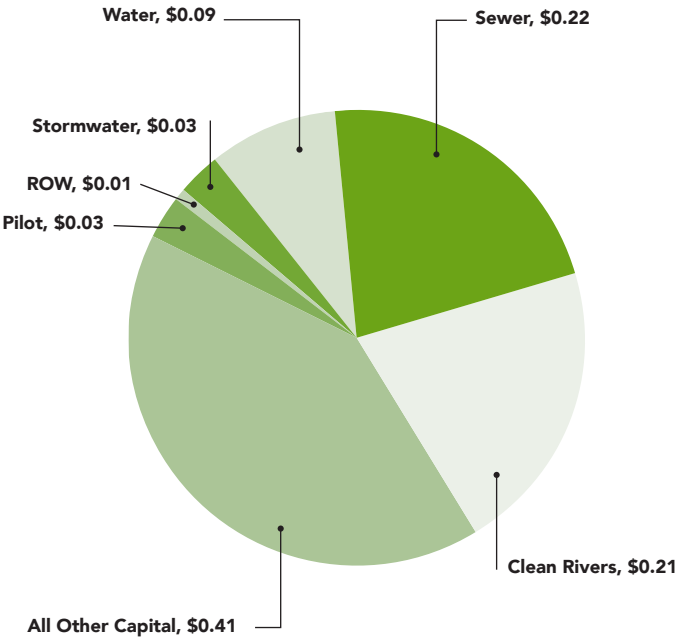
The FY 2020 budget incorporates trends and statistics impacting DC and the region. It also highlights how the diversity of the DC Water revenue stream is helping to address the need for continuous improvement in the water, wastewater and stormwater system.

### FY 2019 - FY 2020 Average Residential Customer Monthly Bill

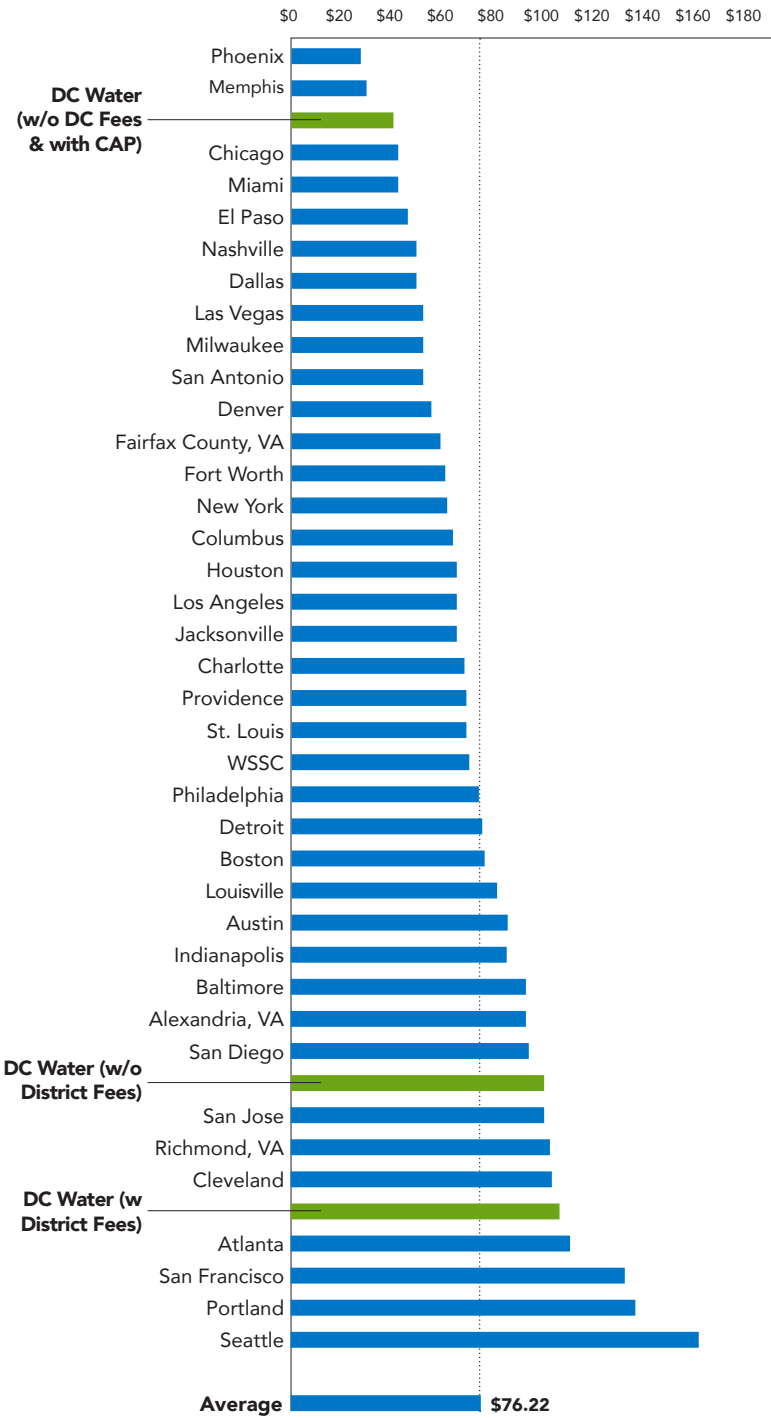
dc	Approved (FY 2019)	Proposed (FY 2020)
DC WATER RATES AND FEES		
Water / Sewer Retail Rates	\$68.27	\$76.38
Clean Rivers IAC	\$23.00	\$20.94
Customer Metering Fee	\$3.86	\$3.86
Water System Replacement Fee	\$6.30	\$6.30
<b>DC Water Subtotal</b>	<b>\$101.43</b>	<b>\$107.48</b>
DISTRICT OF COLUMBIA CHARGES		
PILOT	\$3.10	\$3.16
Right-of-Way Fee	\$1.12	\$1.18
Stormwater Fee	\$2.67	\$2.67
<b>District Subtotal</b>	<b>\$6.89</b>	<b>\$7.01</b>
<b>Total Bill</b> (% Increase)	<b>\$108.32</b> 5.9%	<b>\$114.49</b> 5.7%

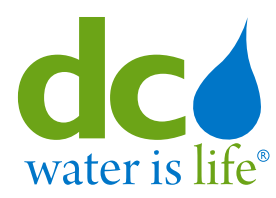
### FY 2020: Where Does Your Money Go?

How does DC Water spend each \$1.00 received from the average residential customer?



### DC Water Retail Rates Compared to other Large Utilities





[dcwater.com](http://dcwater.com)





## Approved FY 2020 Budgets

### Section II: OVERVIEW

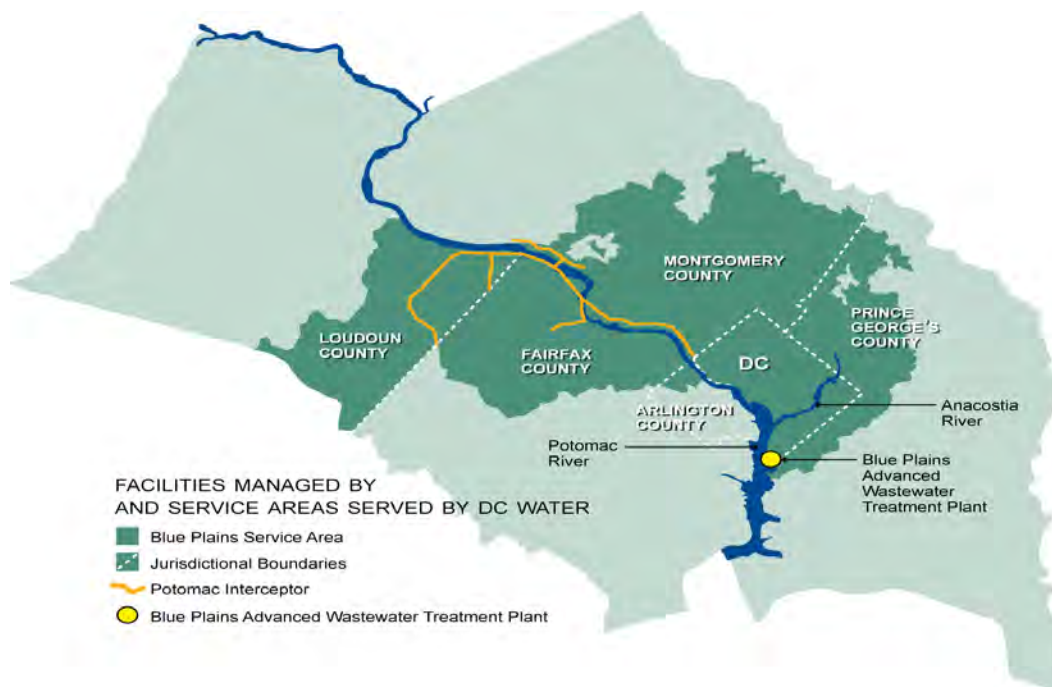


Anacostia River next to DC Water Headquarters

**History:** The District of Columbia Water and Sewer Authority (DCWASA), was created by District law in 1996, with the approval of the United States Congress, as an independent authority of the District Government with a separate legal existence. In 2010, the Authority rebranded and became DC Water. DC Water is the sole water and sewer utility in the District of Columbia.

**Age of Pipes:** The median age of District water main pipes is over 77 years old, with approximately 9 percent of pipes installed in the 1900's and 2 percent dating back to the 1860s before the Civil War.

**Service Area:** Providing approximately 700,000 residents and 21.3 million annual visitors in the District of Columbia with retail water and wastewater (sewer) service, DC Water has a total service area of approximately 725 square miles. In addition, DC Water treats wastewater for approximately 1.6 million people in neighboring jurisdictions, including Montgomery and Prince George's Counties in Maryland and Fairfax and Loudoun Counties in Virginia.



**Drinking Water Quality:** With a strong emphasis on water quality, DC Water maintains an annual flushing program, regulatory and voluntary water quality testing and ongoing system upgrades. DC Water, in partnership with the U.S. Army Corps of Engineer's Washington Aqueduct, ensures a high-quality treatment process for delivering outstanding drinking water throughout the year. DC Water purchases water produced by the Aqueduct and distributes to its customers in the District of Columbia.



**Pumped and Treated Water Storage:** During Fiscal Year 2018, DC Water pumped an average of 94.0 million gallons of water per day. In addition, DC Water stores 61 million gallons of treated water at its eight facilities. The Washington Aqueduct stores an additional 49 million gallons.

**Water Distribution System:** DC Water delivers water through roughly 1,350 miles of interconnected pipes, four pumping stations, five reservoirs, four water tanks, 43,860 valves, and 9,510 fire hydrants.

**Sewer System:** DC Water operates 2,000 miles of combined, separate, and stormwater sewers, 50,000 manholes and 25,000 catch basins, 9 off-site wastewater pumping stations and 16 stormwater pumping stations.

**Blue Plains Advanced Wastewater Treatment Plant (BPAWWTP):** Blue Plains, located at the southernmost tip of the District, is the largest advanced wastewater treatment facility in the world, covering 150 acres along the Potomac River. Recycled water from the Blue Plains Plant, is used in the treatment of wastewater and is not sold for retail use.

**Wastewater Treatment Capacity:** Blue Plains treats an annual average of 290 million gallons per day (MGD) and has a design capacity of 384 MGD, with a peak design capacity to treat more than one billion gallons per day.

**Customer Service:** DC Water communicates valuable customer-related information through bill inserts, monthly newsletters, its website, and social media to include Facebook, YouTube, Flickr, Twitter and Instagram. Using an interactive voice recognition system, DC Water makes information readily available in more than 150 languages.

A 24-hour Emergency Command Center, operates as the centralized communication facility for receiving and responding to a variety of emergency calls from customers and the public.

DC Water's new Customer Information System (CIS) provides an integrated environment that enrolls new customers, generates billings, manages credit and collections, and tracks water consumption. CIS also tracks and manages meters, handles customer inquiries, complaints, and service orders as well as provides call center support.

**Community Service:** Donating its time and resources, DC Water strives to be present at events that align with its mission and allows the Authority to engage with the residents about pertinent projects and services. Employees actively support a variety of charitable projects and community services. DC Water also invests in the community; conducting science laboratory exercises in District high schools and engaging the public through tours of the Blue Plains Plant.



**Community Outreach:** Maintaining an active presence in the community through sharing time and resources is a core value at DC Water. Whether attending meetings and community events throughout the District or inviting the public into its doors at the BPAWWTP and providing hands-on-lessons, field trips and environmental education events to more than 2,000 students in our service area during the school year. DC Water seeks to educate and support its customers as stewards of the environment.

**Employees:** Approximately 1,200 people are employed by DC Water and work at various facilities across the District of Columbia, and providing vital services to our customers.

**Governance:** DC Water's Board of Directors establishes policies and guides the strategic planning process. The Board is composed of 22 members, (11 principals and 11 alternates) representing the District, Montgomery and Prince George's Counties in Maryland and Fairfax County in Virginia. The District members set rates, charges and policies for District services. The entire Board votes and establishes policies for joint-use services. The Chief Executive Officer and General Manager reports to the Board and manages operations and performance of the enterprise. The members of the Board of Directors also serve on various Sub Committees, DC Retail Water & Sewer Rate, Environmental Quality and Operations, Finance and Budget, Governance, Human Resources and Labor Relations, Strategic Planning and Audit.

**Financial Performance:** During fiscal year 2018, DC Water maintained its three bond ratings for senior lien revenue bonds. The ratings from Standard and Poor's Investors Service, Moody's Investors Service, and Fitch Ratings remained as AAA, Aa1, and AA, respectively. DC Water also received its 21st consecutive unqualified audit opinion of its financial statements and 17<sup>th</sup> consecutive Distinguished Budget Presentation Award from the Government Finance Officers Association (GFOA).

## DC Water Financial Information (\$ Millions)

Bond Rating: AAA/Aa1/AA	FY 2019	FY 2020
Revenue (Cash Receipts)	\$ 665.6	\$ 693.9
Operating Budget	\$ 582.8	\$ 614.5
Capital Disbursement Budget	\$ 439.1	\$ 420.3

The chart below highlights DC Water's operating expenditures, capital disbursements, revenues, rates and fees.

Description	Unit of Measure	FY 2019	FY 2020	Increase / (Decrease)
Total Operating Expenditure	\$ in thousands	\$582,781	\$614,523	\$31,742
Capital Disbursements	\$ in thousands	\$439,117	\$420,342	(\$18,775)
Ten-Year CIP (Cash Disbursement)	\$ in billions	\$4.00	\$4.96	\$0.96
Total Operating Revenue	\$ in thousands	\$665,650	\$693,797	\$28,147
Wholesale Operating Revenues	\$ in thousands	\$82,992	\$82,539	(\$453)
Residential 0-4 Ccf ( Lifeline) <sup>2</sup>	Ccf	\$2.91	\$3.06	\$0.15
Residential - > 4 Ccf <sup>2</sup>	Ccf	\$3.90	\$4.10	\$0.20
Multi-family / DC Housing <sup>2</sup>	Ccf	\$3.37	\$3.54	\$0.17
Non-Residential	Ccf	\$4.05	\$4.25	\$0.20
DC Water Retail Rates – Sewer	Ccf	\$7.75	\$8.89	\$1.14
DC Water Clean Rivers IAC	ERU	\$23.00	\$20.94	(\$2.06)
DC Water Customer Metering Fee	5/8"	\$3.86	\$3.86	\$0.00
Water System Replacement Fee <sup>1</sup>	5/8"	\$6.30	\$6.30	\$0.00
PILOT Fee	Ccf	\$0.50	\$0.51	\$0.01
Right of Way Fee	Ccf	\$0.18	\$0.19	\$0.01
Stormwater Fee	ERU	\$2.67	\$2.67	\$0.00

Ccf - hundred cubic feet or 748 gallons

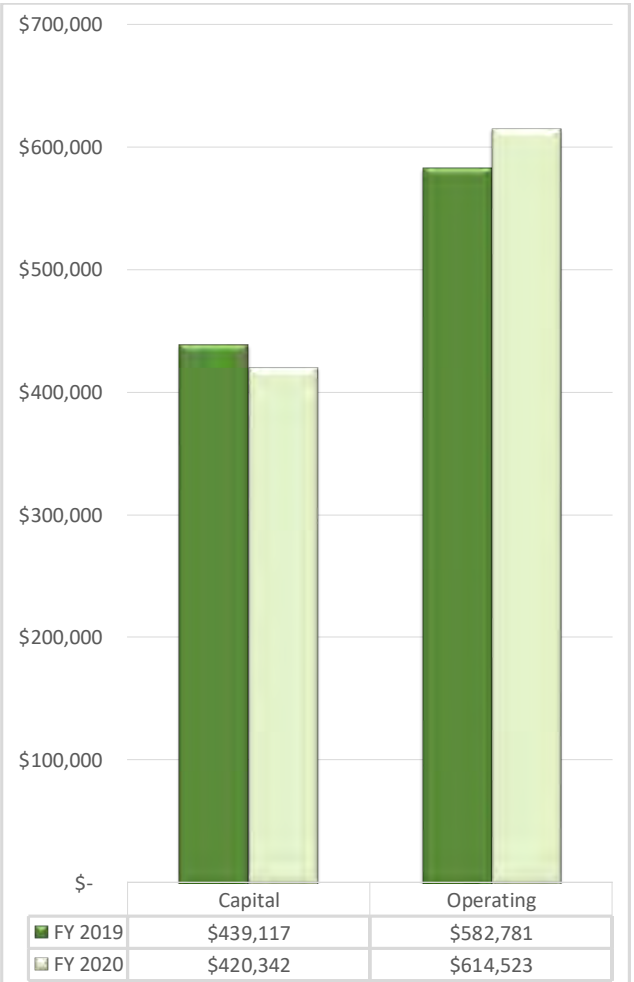
(1) DC WATER WSFR of \$6.30 effective October 1, 2015.

(2) Proposed Class-Based rates

\$ in thousands

## Capital and Operating Budgets Ensure Service Needs and Strategic Objectives are Met

	APPROVED FY 2019	APPROVED FY 2020
<b><u>CAPITAL (Cash Disbursements Basis)*</u></b>		
Wastewater Treatment	\$ 69,979	\$ 66,620
Sanitary Sewer	44,927	43,646
Combined Sewer Overflow	195,350	151,427
Stormwater	4,220	8,571
Water	61,884	71,720
Washington Aqueduct	12,930	15,532
Capital Equipment	34,518	26,823
Non Process Facilities	15,309	36,002
<b>Total Capital</b>	<b>\$439,117</b>	<b>\$ 420,342</b>
<b><u>OPERATING</u></b>		
Personnel Services	\$162,620	\$ 170,680
Contractual Services	81,679	81,886
Water Purchases	30,520	34,929
Chemicals and Supplies	32,092	33,158
Utilities	26,905	26,953
Small Equipment	1,240	989
<b>Total O&amp;M</b>	<b>335,055</b>	<b>348,594</b>
Debt Service	199,025	215,340
Cash Financed Capital Improvements	26,999	28,556
Payment in Lieu of Taxes	16,602	16,934
Right of Way Fees	5,100	5,100
Subtotal Operating	582,781	614,523
Personnel Services charged to Capital Projects	(18,259)	(22,748)
<b>Net Operating</b>	<b>\$564,522</b>	<b>\$ 591,775</b>



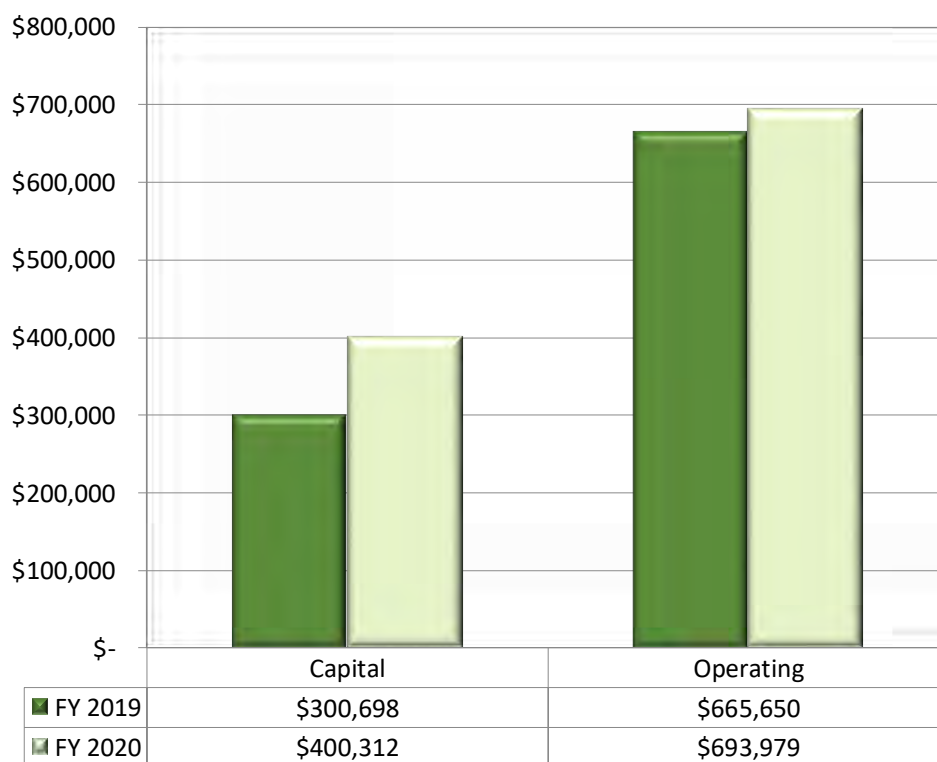
\*Reflect revisions to FY 2019 capital disbursement budget during the FY 2020 cycle. The overall budget remains the same as previously approved by the Board.

\$ in thousands

## Capital and Operating Budgets Ensure Revenue Sufficiency to Maintain Service Levels

	REVISED FY 2019	APPROVED FY 2020
<b>CAPITAL</b>		
Wholesale Capital Payments	\$ 67,112	\$ 67,321
EPA Grants & CSO Appropriations	18,215	38,990
Interest Income on Bond Proceeds	2,981	3,658
Pay-Go-Financing	98,540	103,852
Revenue Bonds/Commercial Paper/EMCP*	110,000	180,716
System Availability Fee	3,850	5,775
<b>Total Capital Revenue</b>	<b>\$ 300,698</b>	<b>\$ 400,312</b>
<b>OPERATING</b>		
Residential	118,531	124,353
Commercial	164,542	173,826
Multi-Family	93,137	100,884
Federal Government	67,054	71,887
Municipal & Housing	27,869	28,110
Water System Replacement Fee (WSRF)	39,717	39,717
Metering Fee	10,776	10,776
Wholesale	82,992	82,539
Other Revenue	61,032	61,887
<b>Total Operating Revenue</b>	<b>\$ 665,650</b>	<b>\$ 693,979</b>

\* Extendable Municipal Commercial Paper





- Water and Sewer volumetric rates are listed below:
  - Residential customers: “Consumption of 0 – 4 Ccf” water rate decrease of \$0.48 per Ccf to \$2.91 per Ccf, {decrease of \$0.64 to \$3.89 per 1,000 gallons}
  - Residential customers: “Consumption greater than 4 Ccf” water rate decrease of \$0.36 per Ccf to \$3.90 per Ccf, {decrease of \$0.49 to \$5.21 per 1,000 gallons}
  - Multi-family customers: water rate decrease of \$0.43 per Ccf to \$3.37 per Ccf, {decrease of \$0.57 to \$4.51 per 1,000 gallons}
  - Non-residential customers: water rate decrease of \$0.35 per Ccf to \$4.05 per Ccf, {decrease of \$0.46 to \$5.42 per 1,000 gallons}
- Sewer rate increase of \$1.75 per Ccf to \$7.75 per Ccf, {increase of \$2.34 to \$10.36 per 1,000 gallons}
- Monthly Clean Rivers Impervious Area Charge decrease of \$2.18 to \$23.00 per ERU to recover the costs of the DC Clean Rivers Project
- Water System Replacement Fee (WSRF) of \$6.30 for 5/8” meter size 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
- PILOT fee increase of \$0.01 per Ccf to \$0.50 per Ccf {increase of \$0.01 to \$0.67 per 1,000 gallons}
- ROW fee remains the same at \$0.18 per Ccf

Ccf is equivalent to hundred cubic feet or 748 gallons

- Water and Sewer volumetric rates are listed below:
  - Residential customers: “Consumption of 0 – 4 Ccf” water rate increase of \$0.15 per Ccf to \$3.06 per Ccf, {increase of \$0.20 to \$4.09 per 1,000 gallons}
  - Residential customers: “Consumption greater than 4 Ccf” water rate increase of \$0.20 per Ccf to \$4.10 per Ccf, {increase of \$0.27 to \$5.48 per 1,000 gallons}
  - Multi-family customers: water rate increase of \$0.17 per Ccf to \$3.54 per Ccf, {increase of \$0.22 to \$4.73 per 1,000 gallons}
  - Non-residential customers: water rate increase of \$0.20 per Ccf to \$4.25 per Ccf, {increase of \$0.26 to \$5.68 per 1,000 gallons}
- Sewer rate increase of \$1.14 per Ccf to \$8.89 per Ccf, {increase of \$1.53 to \$11.89 per 1,000 gallons}
- Monthly Clean Rivers Impervious Area Charge decrease of \$2.06 to \$20.94 per ERU to recover the costs of the DC Clean Rivers Project
- Water System Replacement Fee (WSRF) of \$6.30 for 5/8” meter size 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
- PILOT fee increase of \$0.01 per Ccf to \$0.51 per Ccf {increase of \$0.01 to \$0.68 per 1,000 gallons}
- ROW fee increase of \$0.01 per Ccf to \$0.19 per Ccf {increase of \$0.01 to \$0.25 per 1,000 gallons}

Ccf is equivalent to hundred cubic feet or 748 gallons



# Cash Flow Summary

\$ in thousands

	FY 2018 Actual	FY 2019 Approved	FY 2019 Revised	FY 2020 Approved
<b>OPERATING BUDGET</b>				
<b>Operating Revenue</b>				
Residential, Commercial & Multi-Family	\$ 260,495	\$ 299,927	\$ 295,197	\$ 332,704
Federal	39,552	41,525	41,525	47,940
Municipal	10,979	9,083	9,121	10,052
D.C. Housing Authority	7,137	8,303	8,340	9,235
Groundwater	-	5.00	5.00	5.00
Water System Replacement Fee (WSRF)	40,896	39,717	39,717	39,717
Metering Fee	11,745	10,776	10,776	10,776
Payment in Lieu of Taxes / Right of Way Fee	21,236	21,701	21,701	22,113
Clean Rivers IAC Revenue	127,591	108,945	116,945	99,123
<b>Subtotal Retail</b>	<b>519,630</b>	<b>539,982</b>	<b>543,328</b>	<b>571,666</b>
Wholesale	81,022	79,237	82,992	82,539
Interest Earnings	2,166	2,740	2,740	3,589
Transfer from Rate Stabilization Fund	-	-	6,000	-
Other Operating Rev <sup>(1)</sup>	28,128	27,085	30,167	35,615
<b>Total Operating Revenue<sup>(1)</sup></b>	<b>630,946</b>	<b>649,044</b>	<b>665,227</b>	<b>693,409</b>
<b>Operating Expenditures</b>				
Personnel Services	138,993	144,361	144,361	147,932
Contractual Services	73,404	81,679	81,679	81,886
Chemicals & Supplies	34,679	32,082	32,082	33,158
Utilities & Rent	23,414	26,915	26,915	26,953
Water Purchases	27,665	30,520	30,520	34,929
Small Equipment	606	1,240	1,240	989
<b>Subtotal - Operating Expenditures</b>	<b>298,760</b>	<b>316,796</b>	<b>316,797</b>	<b>325,847</b>
Payment in Lieu of Taxes / Right of Way Fee	21,376	21,702	21,702	22,034
Debt Service	178,399	199,025	198,754	215,340
Cash Financed Capital Improvements/Defeasance	35,260	26,999	26,999	28,556
<b>Total Operating Disbursements</b>	<b>533,794</b>	<b>564,522</b>	<b>564,251</b>	<b>591,776</b>
<b>CAPITAL Disbursements</b> (See Section VI for more details)				
Sources of Capital Funds	599,330	323,793	300,698	400,311
Uses of Capital Funds	489,929	439,118	439,117	420,342
<b>Capital Disbursements Overage / (Shortage)</b>	<b>109,401</b>	<b>(115,325)</b>	<b>(138,419)</b>	<b>(20,031)</b>
<b>CASH RESERVES</b>				
<b>Beginning O&amp;M Reserve Balance (Net of Rate Stabilization Fund)</b>	<b>147,212</b>	<b>140,000</b>	<b>166,796</b>	<b>165,000</b>
Operating Surplus	97,149	84,520	100,974	101,633
Wholesale Customer Refunds/Payments for Prior Years	8,987	(1,500)	(10,982)	(3,448)
Transfer to Rate Stabilization Fund	-	-	-	-
Federal Customer Refund/Payments for Prior Years	(9,019)	(5,821)	(5,821)	1,317
Interest Earned from Bond Reserve	227	424	424	570
Pay-As-You-Go Capital Financing	(77,761)	(73,624)	(75,391)	(81,071)
Project Billing Refunds	-	(4,000)	(11,000)	(4,000)
<b>Ending O&amp;M Reserve Balance (Net of Rate Stabilization Fund)</b>	<b>166,796</b>	<b>140,001</b>	<b>165,000</b>	<b>180,000</b>
<b>Rate Stabilization Fund</b>	<b>\$ 61,450</b>	<b>\$ 61,450</b>	<b>\$ 55,450</b>	<b>\$ 55,450</b>

(1) Does not include interest earned from the debt service reserve fund

In the early history of Washington, DC, water and sewer operated as separate entities. Early incarnations of the agency we now call DC Water included the District of Columbia Water Board (1859—1872) and the District of Columbia Board of Public Works (1872—1932).

Beginning in 1932, the Agency operated as the District of Columbia Department of Sanitary Engineering and constructed the first sewage treatment plant at Blue Plains. The Agency went through another transition to the District of Columbia Department of Environmental Services in 1971, then operated as the Water and Sewer Utility Administration (WASUA) under the Department of Public Works from 1985 to 1996.

The District of Columbia Water and Sewer Authority (DC Water) was created in April 1996 and began operating October 1, 1996 under and pursuant to an act of the Council of the District of Columbia and an act of the United States Congress. Previously, the Water and Sewer Utility Administration, a division of the District's Department of Public Works, performed DC Water's operations. In the aftermath of the District's financial crisis in the 1990s, Congress created an independent utility agency governed by a Board of Directors consisting of eleven principal and eleven alternate members who represent the District of Columbia, Montgomery and Prince George's Counties in Maryland and Fairfax County in Virginia to govern DC Water. The Mayor of the District of Columbia appoints, and the Council confirms, all District Board members, including the Chairperson. In addition, the Mayor appoints the five principal and five alternate members who represent the surrounding jurisdictions based on submissions from those jurisdictions. All members serve four-year terms. The existence of a quorum and an affirmative vote of a majority of the members present, who are permitted to participate in the matter under consideration, is required to approve any Board action; except, that 7 affirmative votes are required for approval of the Authority's budget and 8 affirmative votes are required for the selection or relieving of the CEO/General Manager. All Board members participate in decisions directly affecting the general management of joint-use facilities (such as projects at the Blue Plains Advanced Wastewater Treatment Plant), and only the District of Columbia members participate in decisions for those matters that affect only District ratepayers. Rate setting authority resides solely with the Board of Directors, and is a non-joint use matter.

At its inception, DC Water faced a cash shortage and projected multi-million dollar deficit. The newly established utility was also burdened with a barely functional fleet, poorly maintained infrastructure, an antiquated billing system, and many operating weaknesses. Through the leadership of an active Board of Directors and strong management staff, a line of credit was obtained, municipal bonds were issued and new strategic goals, business processes and technologies were developed. DC Water made tremendous strides in its prudent financial management and cutting-edge technology, customer service improvements, extensive capital investment, environmental stewardship, peer-reviewed research and establishment of an award winning fleet. Our credit rating since 1996 has gone from no credit to AAA. Today, DC Water is one of the best utilities not only in North America but in the world.



Over the years, we have developed strong partnerships with the District government, Congress, suburban jurisdictions, federal regulators and environmental advocates. We are continuing to strengthen our existing partnerships while reaching out to establish new relationships. Our success has been acknowledged through many awards as well as positive financial results and audits over the years. Since 1996, the Authority has met its mission of providing clean drinking water to residents of the District of Columbia and wastewater conveyance and treatment services to both residents of the District of Columbia and wholesale customers in Maryland and Virginia.

At DC Water, we focus all of our technology initiatives on improving both the quality of services we provide to our customers and organizational effectiveness. We were one of the first utilities to automate our meter reading program (AMR) which has been heralded as a best practice in the industry. The automated meters use radio frequency and cell phone technology to send daily water usage information from the meter to DC Water. This tool analyzes daily water consumption and provides monthly and yearly averages on an account so a customer can monitor their own water use. In addition, we developed a powerful application in-house called the High Use Notification Application (HUNA). This tool alerts customers of unusually high amounts of water delivered to their meter so they can check for leaks and avoid a high bill. In FY 2018 we issued 36 thousand alerts to over 16 thousand customers.

## **Basis of Accounting**

DC Water is a single enterprise fund and maintains accounting records using the modified accrual basis of accounting in accordance with Generally Accepted Accounting Principles (GAAP). Under this basis of accounting, revenues are recorded when earned, and expenses are recorded when incurred. DC Water's expenditure budget is prepared on a comparable basis to GAAP, with the exception of debt service (including principal and interest) that is budgeted in full when due. Depreciation and interest expense are recorded as expenses for financial statement purposes. (Depreciation is not budgeted.)

## **Annual Budget Process**

As a first step in the budget development process, the Finance Department updates DC Water's ten-year financial plan to reflect any revisions to the capital improvement program and any other major revenue or operating budget issues, and analyzes the potential impact of these items on rates. In addition to these items, the ten-year plan is also developed based on the financial and rate-setting policies adopted by the Board as well as the Board's Strategic Plan.

## **Approval Process**

Typically in May or June, the CEO & General Manager and CFO kick off the budget season. In July, departments submit their initial budget requests for management review. DC Water's strategic and operational priorities are included in each department's work plan and performance agreements, as appropriate. During the month of August and in early September, departments complete budget reviews with budget staff, and in September and October, reviews are held with the Executive Team and with the CEO & General Manager in tandem.

Typically, in December of each year, management presents the operating budget, ten-year capital improvement program and ten-year financial plan to the Board’s Environmental Quality and Operations Services, DC Water Retail Water and Sewer Rates and Finance and Budget Committees for their review. The budget is proposed for the following fiscal year (e.g. beginning October 1, 2019). The Committees review the budget documents in December through February and submit budget recommendations to the full Board in March. Typically, decisions are finalized and Board action on the budget is taken between March and April.

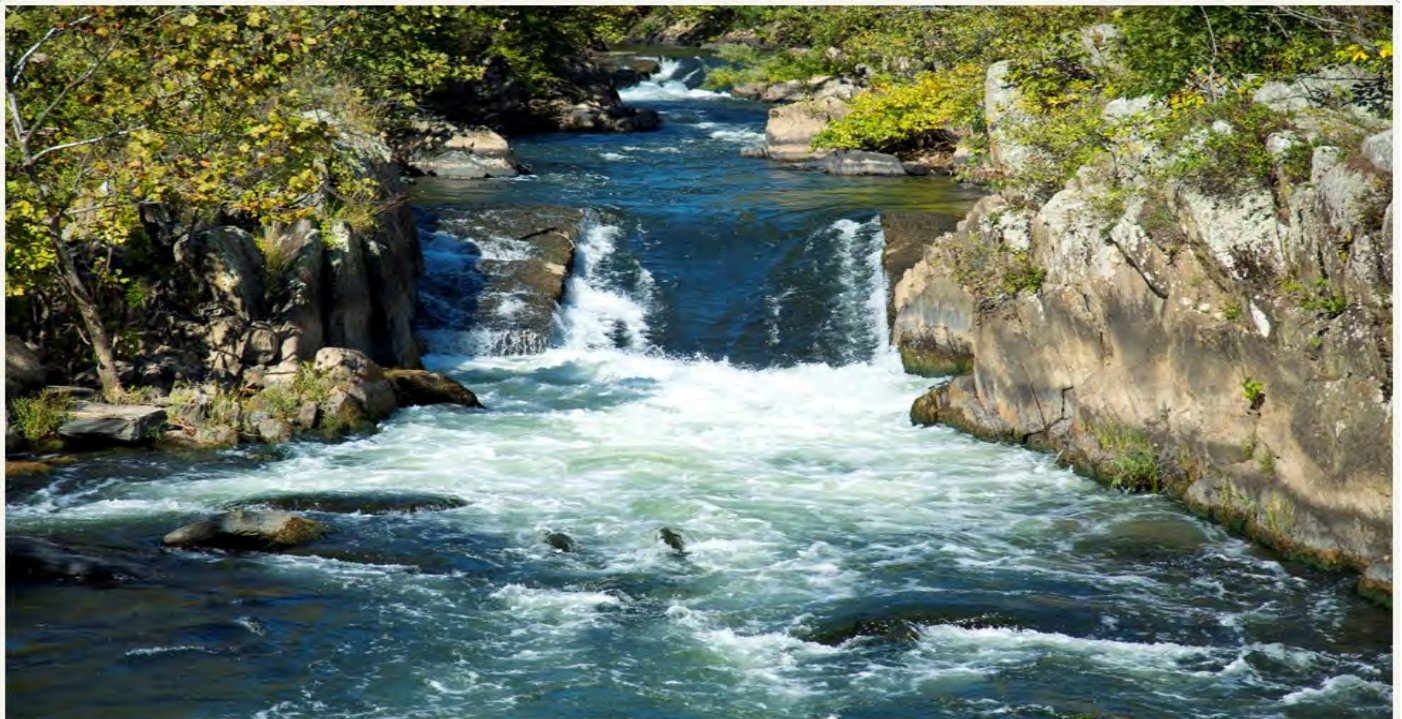
Upon budget adoption, the Budget Office publishes and distributes the approved budget book and ensures that DC Water’s budget is included in the District of Columbia’s budget submission, which is transmitted to the U.S. Congress for approval. Once approved by Congress, the budget is effective October 1 of each year.

## Budgetary Control

After the U.S. Congress approves the budget, the operating and capital budgets are loaded into the DC Water’s financial management system, which prevents overspending without appropriate approvals. The Finance Department prepares monthly management reports for each operating unit, management staff, the Board of Directors and its various committees. The reports are consistently reviewed each month to ensure that DC Water complies with its authorized budget levels.

## Amendment Process

The CEO & General Manager has control over the budget as approved by the U.S. Congress, at the appropriation level, i.e., DC Water’s overall approved operating budget and capital authority at the Authority-wide level in the capital budget. The CEO & General Manager has the authority to approve budget reprogramming between departments. Any additional budget spending above the budget appropriation level requires approval from the U.S. Congress.



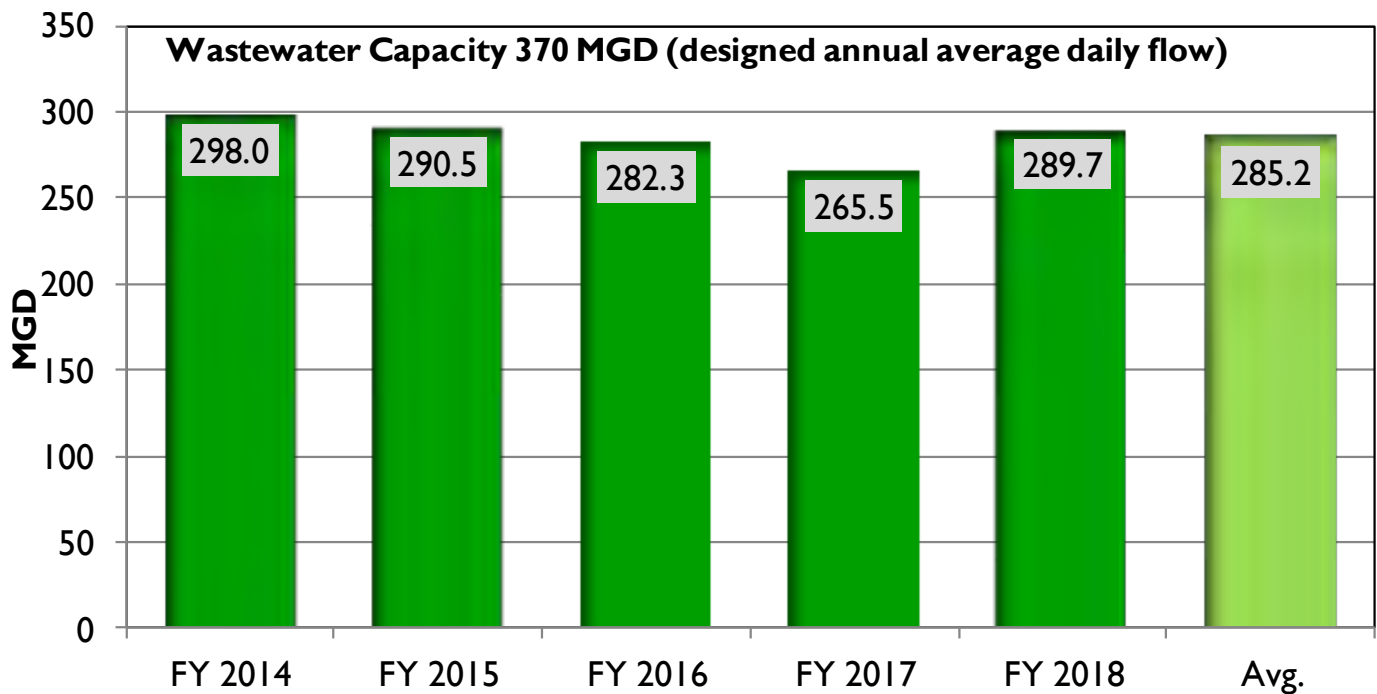
Month	Activity
<b>July 6</b>	Distribution of budget templates and guidelines
<b>July 10</b>	Chief Executive Officer (CEO) & General Manager's (GM) Budget Kickoff Meeting
<b>July 12</b>	Budget Bootcamp (Budget Process & Authority-wide shared Items Review)
<b>August 10 - 24</b>	Departmental FY 2020 budget submission to Budget Office
<b>September 7</b>	Executive Team Briefing on Departmental O&M Budgets
<b>October 4 - 15</b>	Departmental FY 2020 Operating and Capital Budget Reviews with Budget Office, Office of General Manager, Information Technology (IT), Engineering & Technical Services and Administrative Services
<b>October 16</b>	Executive Team Briefing (Ten-year Capital Improvement Program)
<b>October 18</b>	Environmental Quality & Operations Committee Review of Capital Improvement Program options
<b>October 25</b>	Finance & Budget Committee Review of Capital Improvement Program options
<b>November 2</b>	Transmit Preliminary Budget Recommendations to Departments
<b>November 15</b>	CEO & GM and Executive Team's briefing of Operating and Ten-year CIP
<b>December 6</b>	Retail Rates Committee Review of Capital Improvement Program options & Financial Impacts
<b>December 17</b>	Executive Team's briefing of Operating and Capital Equipment
<b>December 18</b>	Finance & Budget Committee Review of Capital Improvement Program options & Financial Impact
<b>January 25</b>	Finalize Ten-Year Financial Plan (Operating, Capital Improvement Program, Revenues, Rates & Fees) Transmittal of CEO's & GM's Final Budget Proposal to Executive Vice Presidents & Department Heads
<b>February 7</b>	Budget Workshop - Board Briefing of the CEO & GM's Proposed FY 2020 Budgets
<b>February 8</b>	Wholesale Customer Briefing
<b>February</b>	Board Committees Conducted in-depth Review of Budget Proposal
<b>March</b>	Board Committees Forward Recommendations to Full Board for deliberation/action Budget Book Preparation & Production
<b>April 4</b>	Board Adoption Submission to the District of Columbia for onward transmission to U.S. Congress



## Wastewater System Capacity Ensures Service Area Meets Needs Through 2040

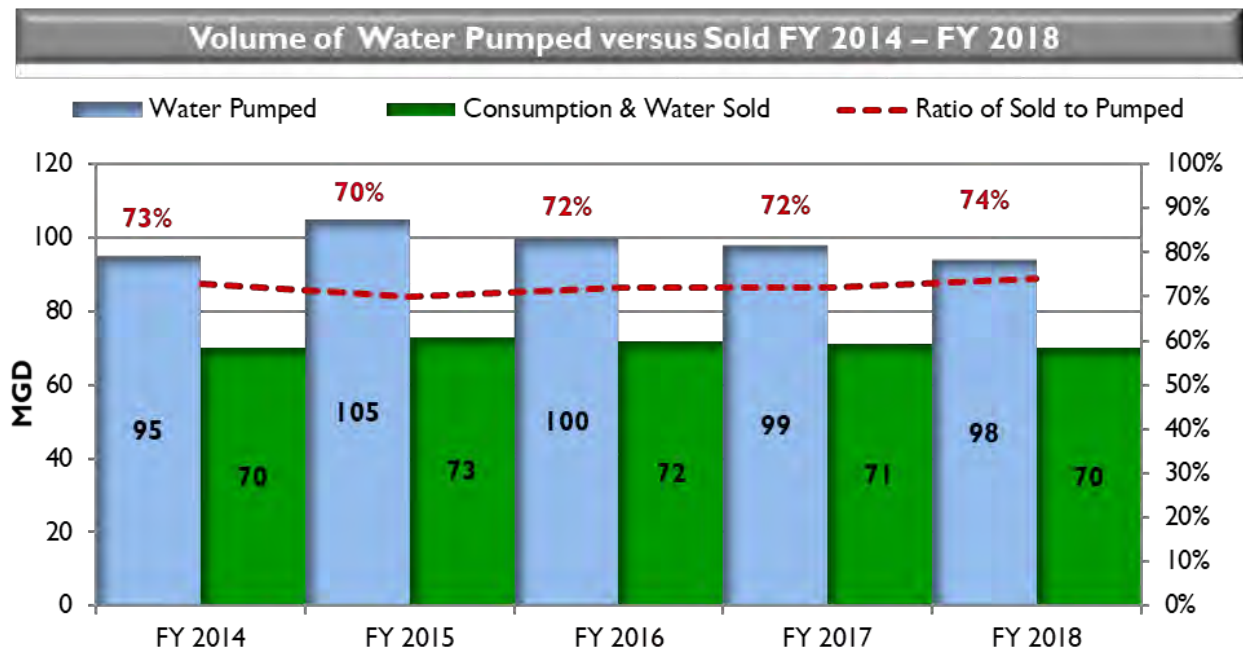
- Blue Plains is the world’s largest advanced wastewater treatment plant
  - Treats an average of approximately 300 million gallons per day (MGD) annually
  - Designed for average daily flow of 370 MGD and peak wet weather capacity of 1,076 MGD
- System comprises 1,800 miles of sanitary, stormwater and combined sewers; 125,000 building sewer lateral; 22 flow-metering stations; 9 off-site wastewater pumping stations; and 16 stormwater pumping stations

### Historical Wastewater Treatment vs. Capacity FY 2014 –FY 2018



## Water System Capacity Meets Service Area Needs

- Water is purchased from the Washington Aqueduct, owned and operated by the U.S. Army Corps of Engineers
- Four pumping stations provide adequate capacity to meet peak demand
  - Bryant Street, New Fort Reno, 16th and Alaska, Anacostia
- One Washington Aqueduct pumping station with capacity sufficient to take over for Bryant Street pumping station
- System comprises 1,350 miles of interconnected pipes



Strong financial planning requires careful monitoring and analysis of various trends and factors that may influence the market place. In this case, the market place for DC Water is the District of Columbia and its surrounding region. DC Water monitors consumption and wastewater flow trends within the customer base, weather patterns, regional income changes, population trends, federal activity in the region, housing starts, office vacancy rates and employment trends. A review of experiences from similar national systems is a useful benchmark assessment. While there are no crystal balls in the area of forecasting water demand, monitoring such data can provide insight into customer behavior and anticipated service demands.

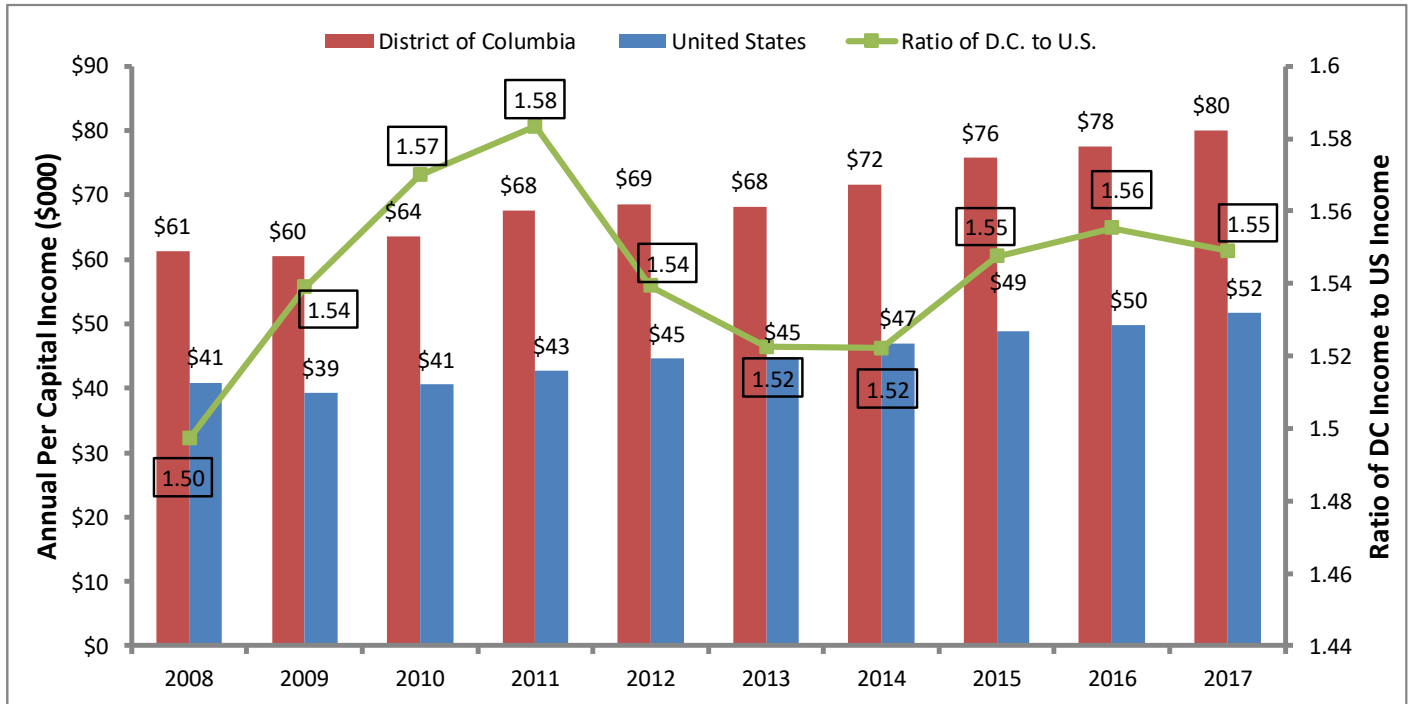
## Regional Economy

DC Water's service area has weathered the recent national recession well. Regional unemployment rates remain relatively low and the regional per capita incomes remain higher than the U.S. average. Office vacancy rates have increased in recent years while retail vacancy rates remain low. A major local employer, the federal government, remains relatively stable for this employment sector. Select demographic charts following support the generally positive outlook for the Washington Metropolitan region and its economy.

As the largest job center in the DC Metropolitan region, DC can be impacted by economic declines. However, impacts are tempered by the relatively stable federal employment enjoyed by the nation's capital.

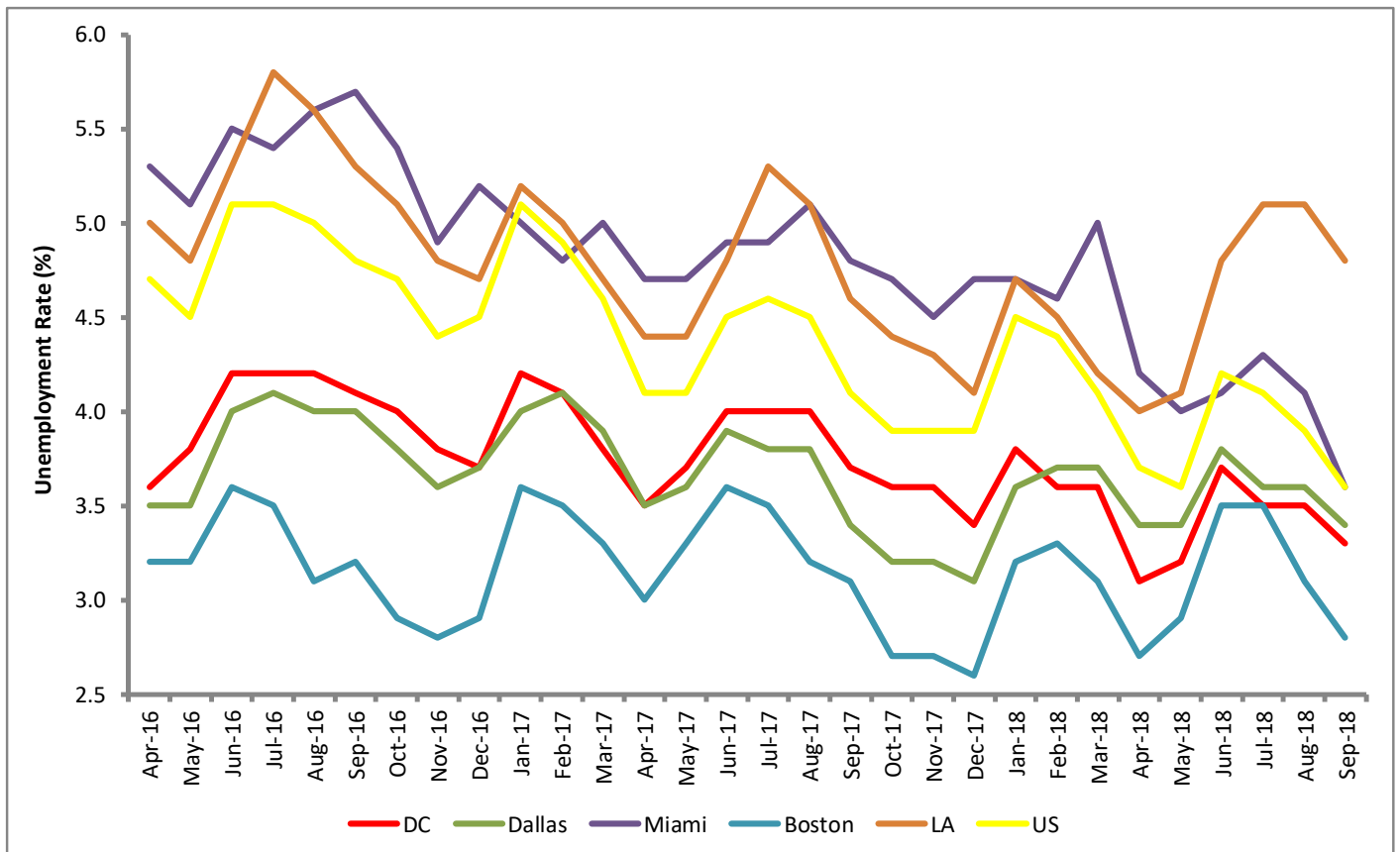


## DC Per Capita Income is Higher than US Average



Source: Bureau of Labor Statistics

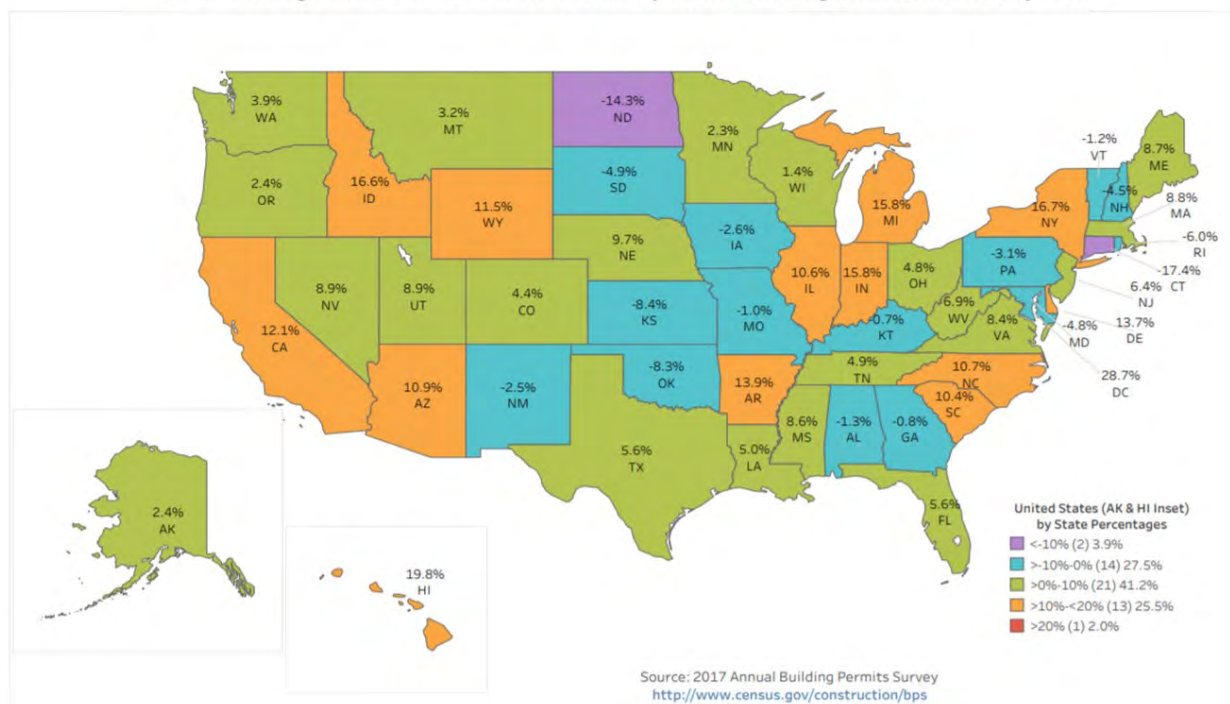
## Unemployment Rate in the DC Region Remains Relatively Low



Source: Bureau of Labor Statistics

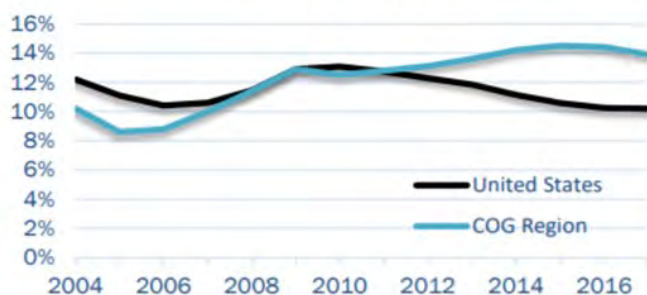
## 2016 – 2017 Significant Growth in New Housing Permit Issuance in DC

Percent Change from 2016-2017 of New Privately-Owned Housing Units Authorized by State

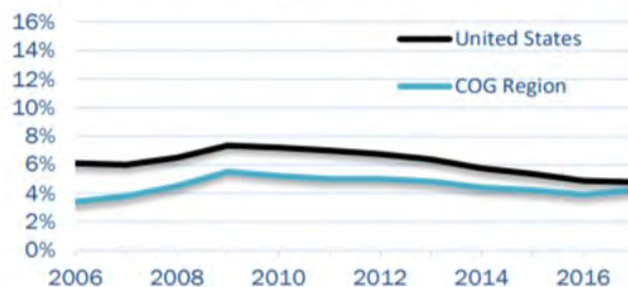


## DC Metro Vacancy Rates are Above Pre-Recession Levels partly due to New Spaces Added to the Market

Vacancy Rate for Office Space  
2004 - 2017



Vacancy Rate for Retail Space  
2006 - 2017



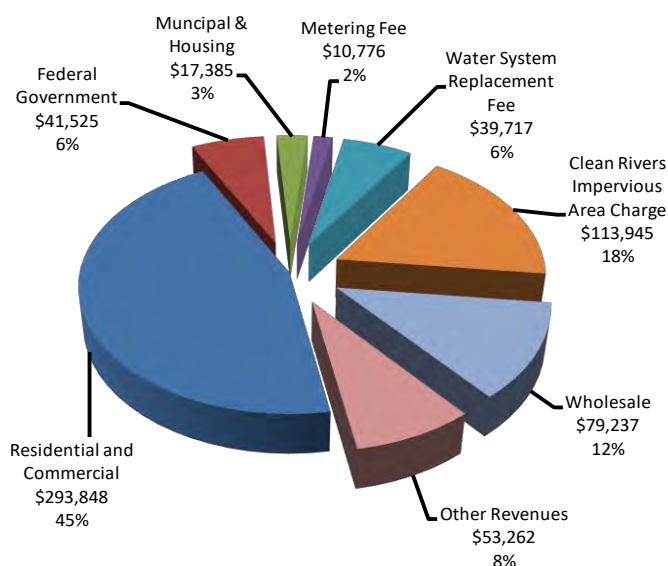
DC Water's performance is driven by federal government growth and associated industries, supporting regional growth and diversification.

- Source: Metropolitan Washington Council of Governments (COG)
- Note: COG region includes the District of Columbia, Northern Virginia, and Suburban Maryland

The regional indicators are positive with strong incomes and unemployment below the national level. These factors, coupled with stable consumption and the financial strength of the major AAA rated customers helps to ensure the financial success of DC Water.

## The DC Water service area includes highly-rated customers

- About 18.6% of the projected FY 2019 revenues come from “AAA” rated entities and are received in advance of service:
  - Federal Government
  - Fairfax County
  - Washington Suburban Sanitary Commission
  - Loudoun County Sanitation Authority
- An additional 2.7% of revenues come from the District of Columbia which is rated “AA”

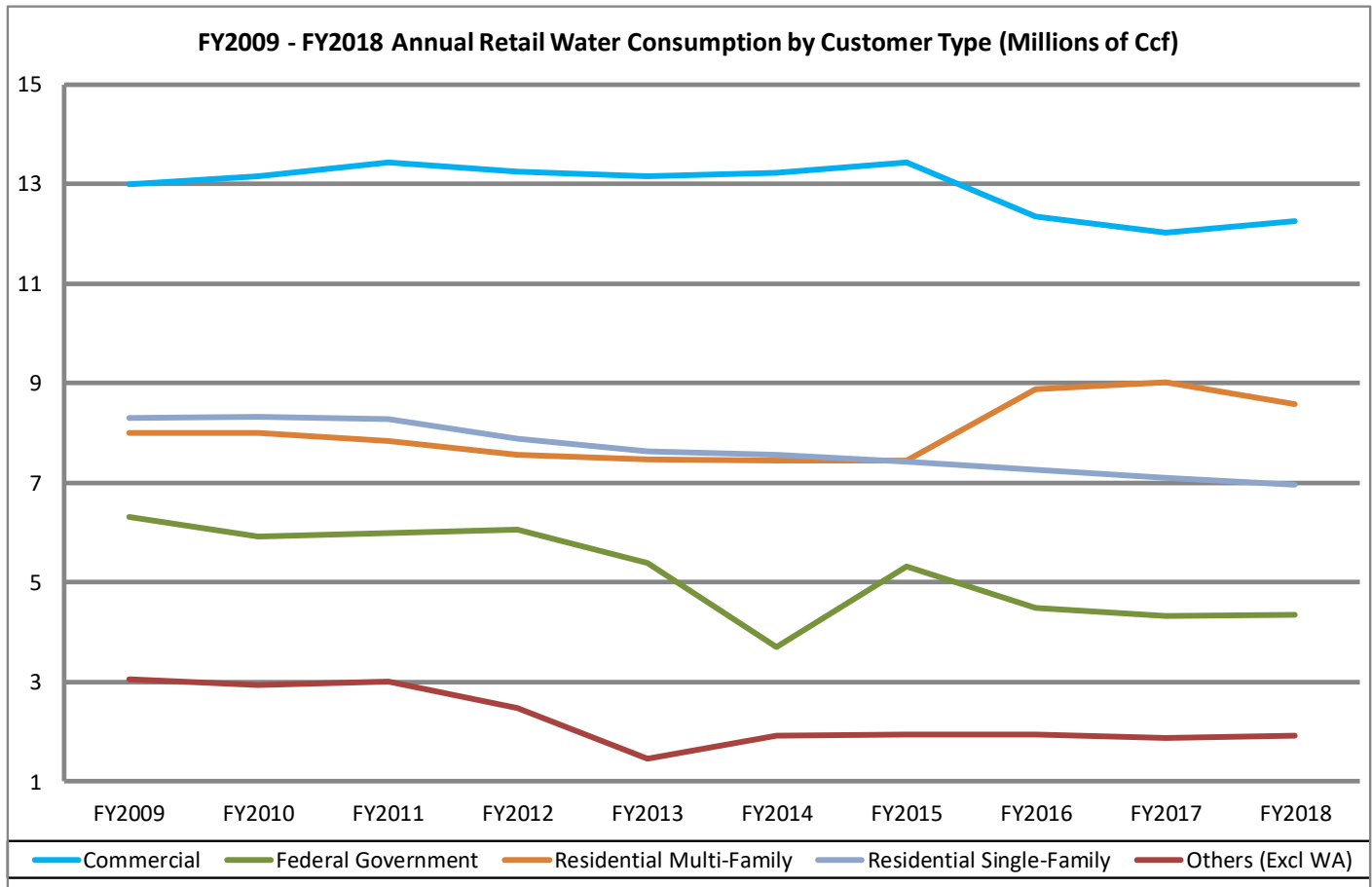


## Media reports reference the service area’s economic strength

- “The District of Columbia's Q4 2017 per capita GDP of \$193,091 and April 2018 average weekly wage of \$1,552 were far and away the highest in the country.” Business Insider, June 30, 2018
- “The District continues to grow and diversify... Multifamily construction, according to the report, is on a tear — a record pace, in fact, with nearly 16,000 units now under construction ...” Washington Business Journal, December 15, 2017
- “The Washington metropolitan area added 65,908 new residents last year, the fifth-largest numerical increase in population in 2017...” WTOP, March 22, 2018
- “... population in the “inner region” of Washington and eight nearby jurisdictions increased by 7 percent from 2010 to 2016... Households with incomes above \$150,000 grew by 34 percent between 2000 and 2016, more than households at lower income levels.” Loudoun Times-Mirror, November 5, 2018

**Customer Demand:** A reasonable degree of accuracy in forecasting water demand is important for sound financial planning and rate setting. The FY 2009 - 2018 actual average decline in usage is 1.4% annually, excluding the Washington Aqueduct. FY 2009 – FY 2018 average annual rate of change in demand for the customer classes: Commercial -0.7%; Federal Government: -4.1%; Single Family: -1.9%; and Other (include Exempt, DC Housing Authority, DC Municipal Government, and DC Water): -4.9%. Multi-Family increased by 0.8% annually.

## DC Water Consumption by Customer Type



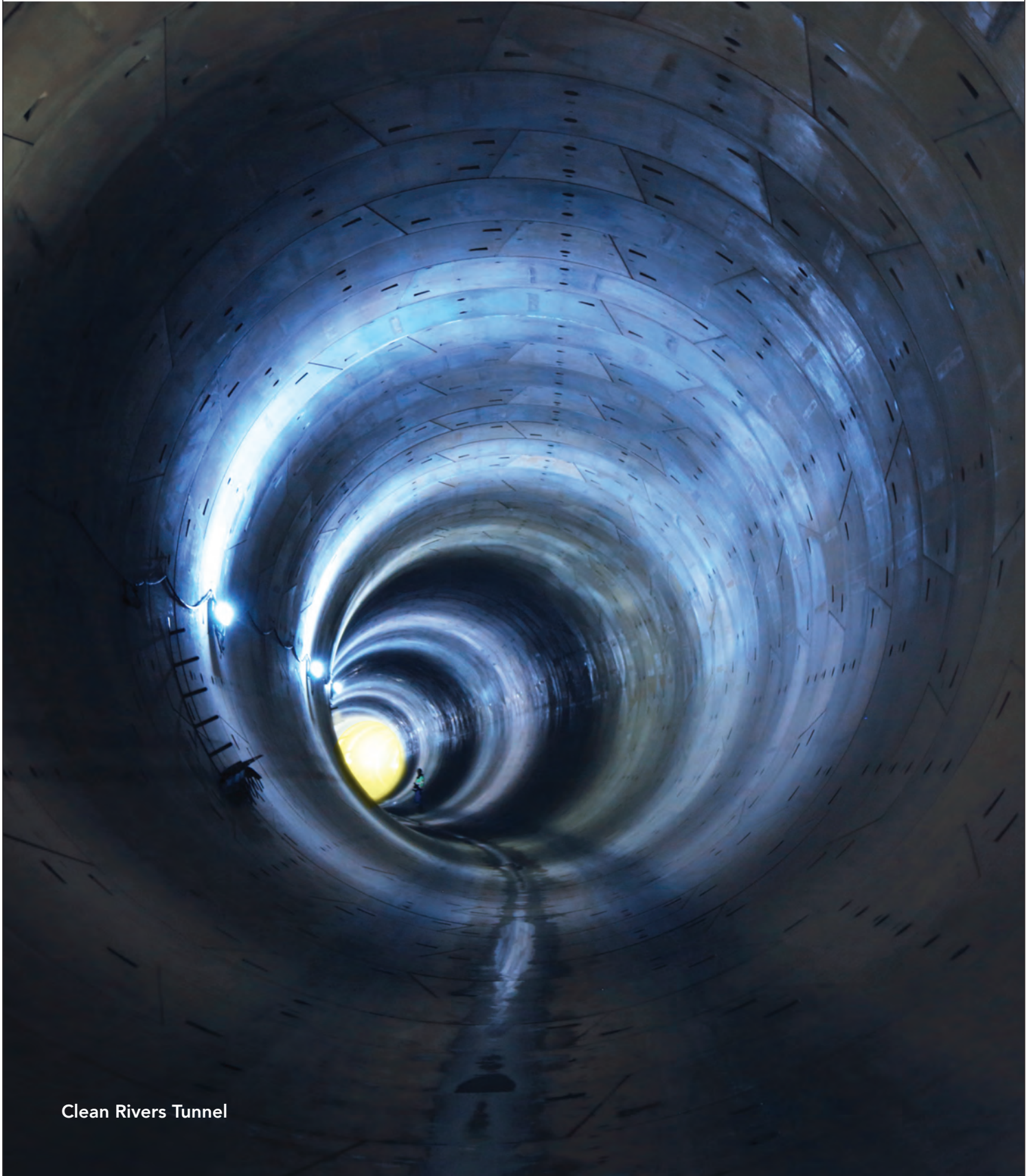
Source: DC Water

- FY 2018 consumption decreased 0.9%, mostly due to decreases in consumption for Single Family and Multi-Family accounts, offset somewhat by the increase in consumption in Commercial accounts.
- DC Water has typically assumed an annual reduction in water demand of 1.0% in line with historic averages. The Financial Plan assumes an annual retail water consumption decline of 1%. We believe that this estimate is prudent, consistent with peers such as New York and Boston and assures revenue sufficiency for the Authority.





**Approved FY 2020 Budgets**  
**Section III: FINANCIAL PLAN**



Clean Rivers Tunnel

## The Blueprint

The Blueprint is DC Water’s Strategic Plan Framework for future decision-making and provides a structure through which annual reviews can be accomplished to assure that the goals and objectives retain their relevance over time. By laying out a course of action, this plan represents a disciplined process for making fundamental decisions and shaping DC Water's future.

The plan represents the collaboration of the Board of Directors, Executive Management, and the management team, as well as input from key external stakeholders. The plan is designed to be a lasting framework, although updates would be made as the organization moves forward and circumstances change.

This plan contains the DC Water vision, mission statement, strategic programs and values. It addresses DC Water's current challenges and helps ensure continued success in operations and management of resources and assets.

DC Water's vision describes the desired future state and guides the organization toward the future, while the mission of the utility describes the purpose of the organization and its role within the service area. Values articulate the deeply-held beliefs, norms, and qualities of the utility, and are the basis from which each DC Water staff member should operate.



## Overview

DC Water's strong financial performance and its success in achieving and maintaining strong bond ratings have been primarily due to the annual development of and adherence to a ten-year strategic financial plan. During FY 2018, Standard and Poor's, Moody's and Fitch Group reaffirmed DC Water's ratings to AAA, Aa1 and AA, respectively. This financial plan serves as one of management's key tools to monitor progress in meeting financial goals and to proactively address future financial and operational issues. During FY 2018, DC Water met or exceeded the goals set by Board policy and the FY 2018 – FY 2027 ten-year plan. This budget includes DC Water's nineteenth comprehensive ten-year financial plan, covering FY 2019 – FY 2028.

The necessity of a ten-year financial plan is clear:

1. DC Water operates under a regulatory and capital project-driven environment that requires a longer term ten-year planning horizon. In order to provide our customers with the best service possible and with gradual and predictable rate increases, DC Water must plan for all projects on a long-term and integrated basis, including both capital and operating requirements. A five-year, capital-only financial plan would insufficiently prepare DC Water to address the major regulatory, operational and capital project issues that will impact service, operations, and rates over the next five to ten years.
2. In accordance with Board policy, DC Water sets rates so that each customer is charged for the actual cost to provide each service, rate increases are implemented transparently and predictably, utilizing all available options to mitigate future customer impacts. Since proposed future rate increases are primarily driven by financing of DC Water's capital program and full utilization of the rate stabilization fund, the development of a ten-year financial plan allows DC Water to meet these key goals.
3. The Board has directed DC Water management to undertake internal improvements and investments that will significantly lower operating costs over a ten-year period. A ten-year plan is required to bridge current operations and related capital and operating budgets with these longer term cost reduction goals.

Board policies, strategic plan, priorities and guidance in several key financial areas drive the development of the FY 2019 – FY 2028 financial plan. Given DC Water's substantial borrowing needs over the next ten years, adherence to these Board policies is crucial in order to cost-effectively access the capital markets and retain our credibility with customers and regulators.



DC Water's board policies include:

- **DEBT SERVICE COVERAGE** – DC Water will set rates and develop operating and capital budgets that ensure **senior debt service coverage of 140 percent**
  - This coverage level exceeds DC Water's bond indenture requirement of 120 percent senior debt service coverage
- **CASH RESERVES** – DC Water will maintain cash reserves equivalent to 120 days of budgeted operations and maintenance expenses with the objective of maintaining at least \$125.5 million in operating reserves.
- **PAY-GO FINANCING OF CAPITAL** – DC Water will finance a portion of its capital program on a pay-go basis from cash balances that exceed operations requirements or restricted use.
- **RATE-SETTING POLICIES**
  - Rates that, together with other revenue sources, **cover current costs** and **meet or exceed all bond and other financial requirements** as well as goals set by the Board
  - Rates that yield a **reliable and predictable** stream of revenues, taking into account trends in costs and in units of service
  - Rates based on **annually updated forecasts of operating and capital budgets**
  - Rate structures that are **legally defensible**, based on objective criteria, **and transparently designed**
  - Rate structures **that customers can understand** and DC Water can **implement efficiently and efficaciously**
  - Rates increases, if required, are implemented **transparently and predictably**.

To the extent annual revenues exceed costs, the Board's policy will continue to utilize all available options to mitigate future customer impacts and annual rate increases, including transferring some or all of such excess funds to the Rate Stabilization Fund.

- **RATE STABILIZATION FUND** - Once DC Water achieves its **required level of cash reserves**, a **rate stabilization fund** will be established **to avoid "rate shock."** Based on favorable financial performance in FY 2018, the balance in the RSF was \$61.45 million.

## Financing and Reserve Policies

In FY 2004, and again in FY 2008, the Board completed a review of its existing financing policies, reaffirming the core policies. Two modifications were made to the reserves policy: 1) Changing the timing of when DC Water is required to meet its overall operations and maintenance reserve requirement from September 1 to an average daily balance basis, resulting in a more conservative calculation; and 2) revising the indenture-required renewal and replacement reserve requirement from two percent of original plant in service to \$35 million, with a requirement to revisit this reserve level every five years in conjunction with the indenture-required system assessment prepared by DC Water's independent rate consultants. The assessment was performed in 2013 and then in 2018.



In FY 2013, the Board adopted further revisions which modified the operating reserve policy and under Resolution #13-57 revised the DC Water’s Statement of Financial Policies as follows:

1. DC Water will maintain financial practices and policies that result in high quality investment grade bond ratings to ensure the lowest practical cost of debt necessary to finance DC Water’s long-term capital program.
2. DC Water will maintain strong levels of operating cash reserves, equivalent to 120 days of budgeted operations and maintenance costs, calculated on an average daily balance basis, with the objective of maintaining at least \$125.5 million in operating reserves. The annual reserve amount will be formally approved by the Board as part of its annual approval of the operating and capital budgets and ten-year plan. The operating reserve requirement will be evaluated every five years by DC Water’s independent rate consultant in conjunction with the Indenture-required system assessment.
3. The operating reserve will, at a minimum, include any reserve requirements contained in DC Water’s Master Indenture of Trust, (the “Indenture”), excluding any debt service reserve funds and the rate stabilization fund, as follows:
  - Operating Reserve – equivalent to sixty days’ operating costs
  - Renewal & Replacement Reserve - \$35 million. This reserve requirement will be in conjunction with the Indenture-required system assessment
4. DC Water will maintain senior debt service coverage of 140 percent, in excess of DC Water’s indenture requirement of 120 percent. Senior debt service coverage will be calculated in accordance with DC Water’s indenture.
5. In general, DC Water will utilize operating cash in excess of the Board’s reserve requirement and any other significant one-time cash infusions for capital financing or for repayment of higher cost debt.
6. DC Water will whenever possible use the least costly type of financing for capital projects, based on a careful evaluation of DC Water’s capital and operating requirements and financial position for each year.
7. DC Water will attempt to match the period of debt repayment, in total, with the lives of the assets financed by any such debt.

### Pay-As-You-Go Capital Financing Policy

1. The CEO/General Manager will include in the annual ten-year financial plan, developed as part of the annual operating budget process, a separate schedule showing projected annual cash balances and planned annual pay-go financing of capital projects.
2. The planned annual pay-go financing will be formally approved by the Board of Directors as part of its annual approval of the ten-year financial plan, operating and capital budgets.
3. At any time during the fiscal year, the CEO & General Manager may use pay-go financing for capital projects, as approved by the Board of Directors.
4. During the fourth quarter of each fiscal year, the CEO & General Manager (or designee) will conduct an analysis of DC Water's financial performance.
5. The CEO & General Manager will report the results of this analysis and his recommendations, including updated projected annual cash balances and annual pay-go financing, to the Finance and Budget Committee no later than its regularly scheduled meeting in July, for recommendation to the Board for action at its September meeting.

### Cash Management and Investment Policies

The Board has adopted a "Statement of Investment Policy". This policy is designed to ensure the prudent management of Authority funds, the availability of operating and capital funds when needed, and an investment return competitive with comparable funds and financial market indices. The investment portfolio shall be managed to accomplish the following hierarchy of objectives:

1. Safety
2. Liquidity
3. Return on investment

The current Investment Policy is available on-line at [www.dewater.com](http://www.dewater.com).

### Debt Policy and Guidelines

The purpose of DC Water’s Debt Policy and Guidelines (the “Debt Policy”) is to provide DC Water officials and staff a comprehensive guide to DC Water’s issuance and use of debt to fund capital projects or to refund/refinance/restructure outstanding debt. The advantages of adopting and adhering to a clear, concise and comprehensive debt policy are:

- Enhancing the quality of decisions
- Documenting the decision-making process
- Identifying objectives clearly to facilitate staff implementation
- Demonstrating a commitment to Long-Term financial planning objectives that result in a sound financial position
- Enhancing the positive assessment of credit quality by the bond Rating Agencies to maintain and improve DC Water’s high credit ratings
- Integrating the Debt Policy with the operating and capital budgets, the multi-year Capital Improvement Program (CIP), multi-year Financial Plan and other financial policies

The financial policies outlined in this document, in most cases, impose higher standards than the legal requirements contained in DC Water’s Master Indenture of Trust dated as of April 1, 1998 as amended and supplemented from time to time (the “Indenture”) and other legal requirements.

The current Debt Policy and Guidelines is available on-line at [www.dewater.com](http://www.dewater.com).

During FY 2018, DC Water met or exceeded the financial goals set out by the Board and the FY 2018 – FY 2027 financial plan. Senior debt service coverage, reserve levels, and budget performance met or surpassed Board policies, as discussed in more detail below:

- DC Water Board policy requires senior debt service coverage of at least 140 percent; greater than the indenture requirement of 120 percent. **DC Water's senior debt service coverage in FY 2018 was at 494 percent**, while maintaining the Board's rate setting and financial policies. The senior debt service coverage is expected to increase to 614 percent by FY 2028 despite increase in capital spending and related debt issuance; the coverage is above the Board requirement of 140 percent. Subordinate debt service coverage, which includes DC Water's subordinated lien revenue bonds and Jennings Randolph Reservoir debt, was at 239 percent in FY 2018. DC Water is required to have 100 percent coverage of subordinate debt service. Combined debt service coverage was at 1.86 percent in FY 2018.
- DC Water has maintained its bond rating from Standard & Poor's (AAA), Moody's (Aa1), and Fitch Group (AA). DC Water's Green bond was assessed at GB1.
- **COMMERCIAL PAPER:** These notes issued are considered subordinate debt under the Master Indenture of Trust. DC Water's commercial paper is issued in increments with maturities less than 270 days. The Board approved the commercial paper program in early FY 2002; proceeds from the sale of the notes are used for interim bond financing, short-term financing for capital equipment and certain taxable costs for the Washington Aqueduct. Each new bond issuance is evaluated to determine the most cost effective way of reducing the amount of taxable commercial paper. Normal market conditions for commercial paper carry significantly lower interest rates than long-term debt. Two series of notes have been issued under the commercial paper program: the tax-exempt Series B CP Notes in an aggregate principal amount not to exceed \$100,000, and the taxable Series C CP Notes in an aggregate principal amount not to exceed \$50,000. To provide liquidity and credit support for the Commercial Paper Notes, the Authority obtained irrevocable, direct-pay letters of credit issued by Helaba-Landesbank Hessen-Thüringen Girozentrale, New York Branch which currently expires on May 15, 2020.
- **EXTENDABLE MUNICIPAL COMMERCIAL PAPER (EMCP):** The addition of the EMCP program in the amount of \$100 million provides diversification of the variable rate products available for interim financing needs. EMCP does not require a supporting bank letter of credit but relies on DC Water's liquidity to address any failed re-marketing of the EMCP. The initial placement is typically for 90 – 180 days and in the event of a failed re-marketing due to poor market conditions, DC Water has 3 – 6 months to address payment with a maximum number of days from the initial issuance of 270 days.



- **DC Water did not utilize rate stabilization fund (RSF) in FY 2018** and had not contributed to RSF. The Rate Stabilization Fund's ending balance for FY 2018 was \$61.45 million.
- **DC Water continued its strong operating budget performance in FY 2018** – For FY 2018, actual cash receipt was higher than the revised budget by \$10.7 million, or 1.7 percent. Actual operating expenditures were \$8.7 million, or 1.5 percent lower than budget. Underspending in debt service was attributable to lower interest rates, refinancing and delayed issuances. Furthermore, due to favorable O&M position at 99.5% of budget, the Cash Financed Capital Improvements Fund was utilized for pay-go financing.
- **The Clean Rivers Impervious Surface Area Charge (CRIAC) was implemented in May 2009** to recover the cost of the Combined Sewer Overflow Long-Term Control Plan (CSO LTCP), also known as the DC Clean Rivers Project. In FY 2011, a six-tiered rate structure was successfully implemented for all residential retail customers to better reflect the impacts of various size residential properties. The twenty-five year CSO LTCP, whose terms are outlined in a consent decree executed in March 2005, exclusive of the nine-minimum controls programs are projected to cost \$2.7 billion. See “Combined Sewer Overflow Long-Term Control Plan” in Section IV, Rates and Revenues for additional details on the projected rate impact of the plan.
- **DC Water implemented a retail water and sewer rate increase of 5.0 percent in FY 2018** to recover increased retail water and sewer revenue requirements of \$11.9 million. No Rate Stabilization Fund (RSF) was utilized in FY 2018. If needed, the RSF helps to mitigate rate shock and reduces needed retail rate increases. In addition, there was a 2 percent increase in PILOT as per the PILOT MOU signed with the District on September 4, 2014. ROW fees increased by \$0.01 to \$0.18 per Ccf. The changes in PILOT and ROW fee are made to recover the full costs of these fees charged to DC Water by the District of Columbia government. The rate changes are mainly due to the increase in debt service cost to finance the capital improvement program.
- **Water System Replacement Fee (WSRF) was implemented in FY 2016**, effective October 1, 2015 (FY 2016), WSRF recovers the costs of 1 percent renewal and replacement program for water service lines. WSRF varies with meter size. The WSRF for 5/8” meter size is \$6.30. Low income CAP customers get 100 percent discount for this fee.
- **Multi-Year Rates:** DC Water moved to a multi-year rate proposal in FY 2016 covering the period FY 2017 and FY 2018. This is the second time that DC Water has adopted a multi-year rate proposal in FY 2018 covering the period FY 2019 and FY 2020 and will become effective from October 1, 2018.

The benefits of multi-year rates include:

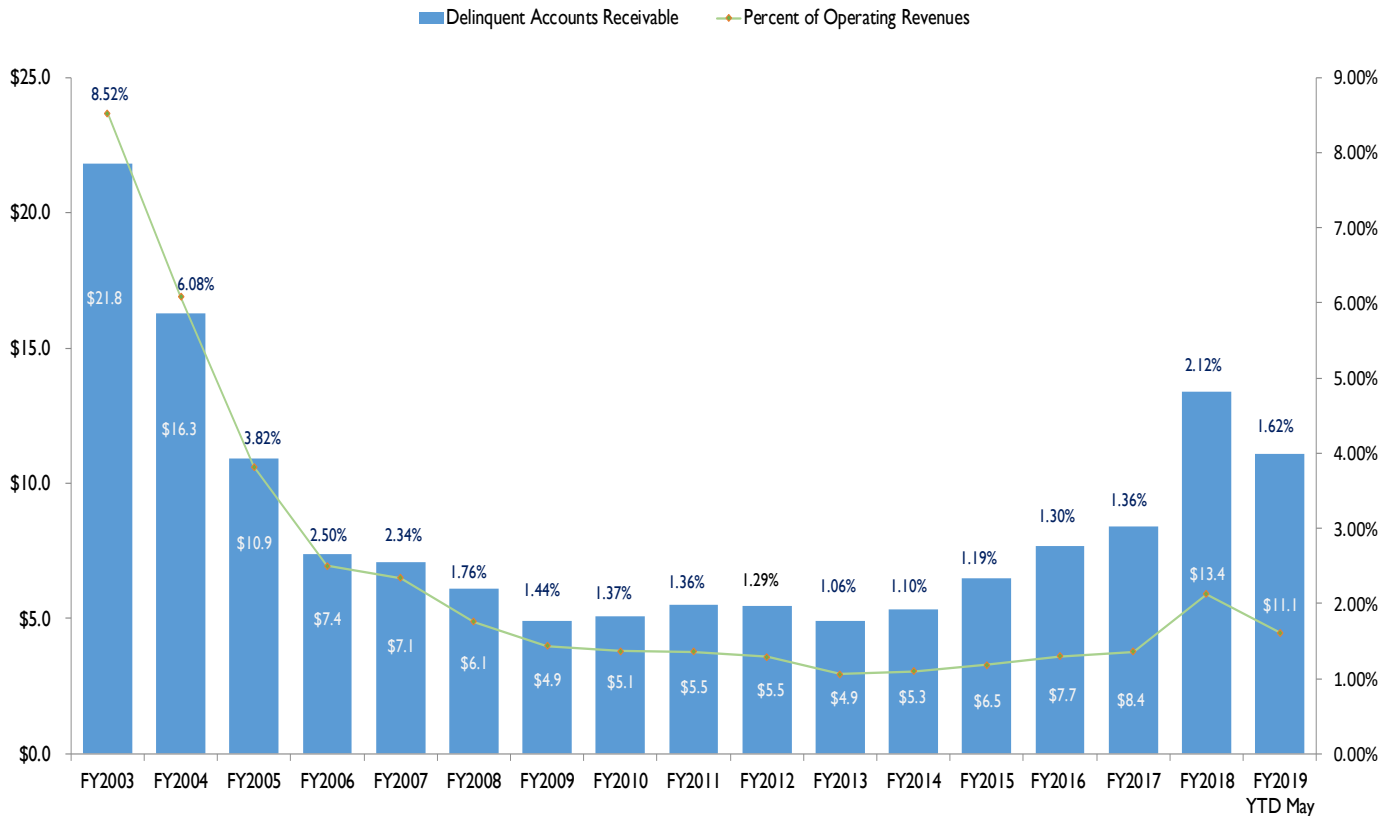
- Greater revenue certainty
- Increased budget discipline
- Better alignment between revenues and expenditures

Based on meetings with the Stakeholder Alliance and discussions with other Customer groups, an 18% CRIAC shift to Sewer Volumetric rate was proposed for FY 2020 in order for the rates and charges to be fair and equitable for all customer classes. With the proposed shift, the overall household charges increase of 5.7% is the same as previously forecasted.

- For the eighteenth consecutive year, DC Water received the Government Finance Officers' Award for Distinguished Budget Presentation for its FY 2018 budget submission. DC Water also received its twenty first unqualified audit opinion for the fiscal year ended September 30, 2017 and received the twenty first GFOA Certificate of Achievement for Excellence in Financial Reporting.
- In FY 2018, DC Water successfully renewed all of the Authority's operations insurance policies at essentially the same terms at 1.1% higher costs than previous year. DC Water's coverage is generally comparable to expiring.
- DC Water completed its fourteenth year of its rolling owner-controlled insurance program (ROCIP), tenth year of ROCIP II, seventh year of ROCIP III and is actively managing ROCIP IV. DC Water procures general liability and workers' compensation insurance coverage for the majority of its construction contractors. The result is substantially higher insurance coverage levels for all contractors and significant cost savings. At the end of FY 2018, 65 projects and 393 contractors were enrolled in the expired ROCIP I program, 47 projects and 770 contractors were enrolled in the now expired ROCIP II program, 46 projects and 790 contractors were enrolled in the ROCIP III program and 25 projects and 375 contractors are currently enrolled in the ROCIP IV program. Preliminary avoided costs (aka savings) are estimated in the range of \$4 to \$5 million for ROCIP I; approximately \$8 million for ROCIP II, \$12 million for ROCIP III and \$15 million for ROCIP IV. ROCIP II and III were three-year insurance programs that support an estimated \$2.4 billion of planned and completed construction. A major reason for the cost savings is the implementation of a uniformly strong safety program for all contractors.
- DC Water revenue collection rates rival high levels of performance achieved by investor-owned water utilities. Delinquent accounts receivable represents less than 2 percent of Total Operating Cash Receipts by:
  - Advanced Metering Infrastructure (AMI) – In 2017, DC Water began upgrading 90,000 residential customers and some smaller multi-unit meters to its new AMI platform
  - Defined as the Water Meter Rehabilitation Program, the first replacement was completed in 2nd quarter FY 2017 and by the contract close date, DC Water's contractor completed 84,334 meter/MTU installations, which increased the overall AMR transmission rate to 90.1%. The program encouraged cooperation with multiple departments to support the contractor in addressing both the known and challenging installations. Key achievements for 2018 include all costs remained within the approved budget; the contractor exceeded the goal of 60% or more inside appointments and maintained a low amount of potential risk management claims.
- Benefits Observed:
  - New technology provides two-way communication to and from a device
  - New technology allows us to increase data points from the field from twice daily to hourly or 15-minute interval data
  - Increased data points sets the foundation for improved technology advancements in consumption analysis, leak detection, and bill accuracy
  - Provides complete control over access to consumption data with on-demand reads virtually eliminating the need for truck rolls after installation

- Assures the highest read success rate in the industry with redundant readings transmissions and collection paths
- Customer Information System (CIS) – In 2017, DC Water upgraded its system to a new Vertex One CIS
  - New functionality for managing customer relationships, not just locations
  - Improved customer relationship management
  - Advanced process automation capabilities
  - Improved customer self-service features
  - Enhanced security over personal and financial information
  - Robust customer communication/notifications related to changes to customer profiles
- New mobile work management application
- The gradual decoupling of revenues from volumetric based revenues to more predictable relatively fixed revenue sources increases our ability to negotiate payment plans with customers based on expected future bills
- Maintain the predictive dialer outbound calls to remind customers to pay before balances become unmanageable
- Adhering to payment plan policies that balance managing arrears and keep a vital service on for customers
- Continuous placement of property liens when an account balance exceeds \$200 and is more than 60 days past due
- Getting Executive and Board support for credit policies and developing assistance programs such as the customer assistance program (CAP) and SPLASH program for low income customers. The CAP discount program administered by DOEE provided discount as of September 30, 2018 to 4,324 customers representing \$1,188,574.
- SPLASH – This program provides assistance to needy customers as well. It operates solely on contributions from Customers, the community and DC Water employees. DC Water pays all administrative fees to Greater Washington Urban League (GWUL), who administers the program. For FY 2018, DC Water received \$104,361 in contributions and assisted 212 customers as of September 2018. CAP and SPLASH together provide approximately \$1,292,935 per year in assistance to approximately 4,536 low income households to help make their bills more affordable.
- Continuous focus is placed on the top 75 accounts with the largest balances by making outbound calls to negotiate payments and assess risk

## Delinquent Accounts Receivable (\$ in Millions)



- The graph above represents Delinquent Accounts Receivable as percent of Total Operating Cash Receipts (includes Retail, Wholesale and Other)
- In FY 2018, there was an increase in delinquent accounts receivable, greater than 90 days, due to the implementation of DC Water's new Customer Information System (CIS). During the implementation, DC Water did not disconnect delinquent accounts. Therefore, there was an increase in the number and dollar amount of delinquent accounts.
- DC Water's delinquent accounts receivable for FY 2019, is significantly below year-end totals for FY 2018. The FY 2019 amount is current 90 day delinquent accounts over projected FY 2019 operating revenues.



## General Principles of Affordability for Low-Income Customers Policy

On September 4, 2014, The General Principles of Affordability for Low-Income customers was approved. It is the policy of the Board of Directors of DC Water in setting retail rates, to follow the General Principles of Affordability for Low-Income Customers articulated herein:

1. Consideration of rate impacts on low-income customers;
2. Exploration of affordability alternatives for low-income customers; and
3. Development of a more innovative rate structure, the goal of which is to reduce the economic burden on low-income customers at the earliest practicable date consistent with the Board's need to gather sufficient data to support any rate structure chosen.

DC Water reviews the equity and sufficiency of its rates and rate structures periodically through various cost of service (COS) studies. The COS study prioritizes the following pricing objectives:

- Revenue sufficiency – Rates should recover revenue necessary to operate and maintain the utility in perpetuity
- Cost of Service Recovery – Rates should be supported by industry practice and ensure that customers pay their fair share
- Simplicity – Rates and charges should be easy for our customers to understand
- Affordability – DC Water should minimize customer bills while not sacrificing good, clean and safe service

In FY 2015, a Cost of Service Study was conducted by the Independent Financial Consultants which provided several recommendations:

### Additional Alternative Fees and Charges:

1. Customer Class-Based Volumetric Rates – Rate differentiation based on the peaking demands of each customer class (residential, multi-family and non-residential)
2. Lifeline Rate – A lifeline rate for first 4 Ccf of Single Family Residential (SFR) water use to reflect baseline usage by residential customers without peaking costs. The lifeline rate provides an economic benefit to low-volume Residential customers, while spreading the cost of peaking to high-volume Residential customers.
3. Water System Replacement Fee (WSRF) – In Fiscal Year 2016, DC Water to modify its existing rate structure and to implement 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 WSRF will generate \$40 million per year. DC Water's low income CAP customers would receive a 100% credit for this fee.

4. System Availability Fee (SAF) – DC Water to propose a new System Availability Fee (SAF). A one-time fee assessed to a property owner of any premises, building or structure to recover the cost of system capacity put in place to serve 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.
5. Based on the 2015 Cost of Service Study, DC Water has adopted several changes to its existing retail rate structure starting in Fiscal Year 2016. These changes are designed to better align the Authority’s revenues and expenditures by establishing customer class-based volumetric water rates based upon peaking factors, to create a more progressive rate structure for its residential customers by establishing lifeline water rates which discount core consumption, and to fund the Authority’s water main replacement program by establishing a monthly, fixed Water System Replacement Fee.

In FY 2018, a Cost of Service study was conducted by the Independent Financial Consultants which provided several recommendations:

- Every three years DC Water conducts Cost of Service Study for the Water and Sewer rates, and the Clean Rivers Impervious Area Charge (CRIAC) to update actual and projected expenditures to ensure that these charges are appropriately recovering costs
- DC Water has taken several actions over the last several years to lower CRIAC costs including Century Bonds, refinancing older debt for savings, and restructuring debt so the relief is provided to today’s customers. These savings are now reflected in the projected charges
- A reallocation of the costs associated with the Clean Rivers Impervious Area Charge (CRIAC) to the Sewer utility results in a reduction in the CRIAC and an increase in the Sewer volumetric charge
- The revenue collected from the Water System Replacement Fee, originally designed to fund the annual costs of 1% of DC Water’s water service line renewal and replacement program has been used in its entirety to offset the Water utility’s revenue requirements, resulting in a decrease to all Water volumetric charges
- Although these two reallocations cause shifts in the cost structure, and subsequent rates, DC Water customers will see only minimal changes to their bills

## 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 water infrastructure. It is anticipated that the Water System Replacement Fee (WSRF) will generate approximately \$39.7 million per year from fiscal years 2019 through 2028. The fee is based upon meter size and average flow. DC Water's low income CAP customers receive a 100% credit for this fee.

Effective October 1, 2017, (FY 2018), DC Water amended the Water System Replacement Fee (WSRF) regulations to add rules and procedures for a Multi-family WSRF adjustment; amended the Customer Classifications to clarify the definitions for Residential, Multi-family and Non-Residential customers to include cooperative housing associations and other clarifications; and amended the definitions set forth in Chapter 41 to define the terms Condominium, Cooperative Housing Association, and Dwelling Unit used in the Customer Classification regulations.

The following terms are defined:

**Condominium** – real estate, portions of which are designated for separate ownership and the remainder of which is designated for common ownership solely by the owners of the portions designated for separate ownership, provided the undivided interests in the common elements are vested in the unit owners.

**Cooperative Housing Association** – an association, whether incorporated or unincorporated, organized for the purpose of owning and operating residential real property, the shareholders or members of which, by reason of their ownership of a stock or membership certificate, a proprietary lease or other evidence of membership, are entitled to occupy a dwelling unit pursuant to the terms of a proprietary lease or occupancy agreement.

**Dwelling Unit** – any habitable room or group of rooms with kitchen and bathroom facilities forming a single unit located within a building or structure, which is wholly or partially used or intended to be used for living, sleeping and the preparation and consumption of meals by human occupants, and is under the control of and for the use of the occupant.

## Fire Services Protection Fee

DC Water has assessed a fire protection fee to the District of Columbia since April 1, 2000. This fee is intended to recover costs incurred by DC Water for fire protection service provided by the Water System of DC Water. The purpose of the 2018 cost of service study was to assess the appropriate level of cost recovery required from the District government for this service.

Fire protection service differs from other services offered by water utilities because it is primarily a standby service that is required to be available when the need exists, i.e., as demanded. The development and maintenance of the supply, treatment, pumping, storage and distribution capacity for fire protection service requires capital investments in facilities that are designed larger than would otherwise be required to be able to accommodate fire demand and annual operation and maintenance (“O&M”) expenses to ensure that the assets are appropriately maintained and provide service as needed.

As per the 2018 cost of service study, the Fire Protection Service Fee projected for the years FY 2019 to FY 2022 increased from \$10.796 million to \$12.527 million per year.

## 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 is assessed for all new buildings, structures or properties under development and properties under redevelopment. For properties under redevelopment, DC Water determines 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 would be zero. Properties under redevelopment would not receive a credit for accounts that are inactive for more than 12 months.

In FY 2018, DC Water determined that implementing the System Availability Fee (SAF) regulations on the effective date of January 1, 2018 could present significant fiscal impacts to the District’s New Communities Initiative, which included redevelopment, one for one replacement and/or augmentation, of affordable housing units. On March 1, 2018, the DC Water Board considered comments received during the SAF public comment period and agreed to: 1) Extend the System Availability Fee (SAF) effective date from January 1, 2018 to June 1, 2018 for DCRA Construction Permit Applicants and federal facilities 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



fee schedule and requirements; 2) revise the DC Water guidance document used to determine the SAF meter size from DC Water Standard Details and Guideline Masters to DC Water's Sizing Instructions and Worksheets; 3) add procedures and requirements to receive credits for Affordable Housing Units (AHU) development and redevelopment; 4) clarify the requirements for projects submitted prior to the effective date of June 1, 2018 and approved by June 1, 2019; 5) add formulas to clarify how the SAF is calculated with the SAF credit, AHU credit and Net AHU credit; 6) clarify requirements for Payment Plan Agreement; 7) properties under redevelopment shall not receive a credit for accounts that are inactive for more than 24 months.

Effective June 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.

- In 2018, the Independent Financial Consultants performed a cost of service study (COS) to determine the costs of providing fire protection service to the District. DC Water provides Fire Protection Services to the District, including but not limited to the delivery of water for firefighting, inspection, maintenance and upgrading of public fire hydrants in the District of Columbia. The consultants compared DC Water costs with the revenues received from the District for fire protection services. The consultants reviewed and tabulated historical fire service costs of DC Water (FY 2013 - 2017). Projections of DC Water costs were developed for FY 2018 – FY 2021. As per terms of the 2013 MOU and based on the results of the 2018 COS, Fire Protection Service fee was established at \$12.527 million for fiscal years FY 2019, FY 2020 and FY 2021. This fee is \$1.7 million higher than the FY 2015 fee of \$10.8 million.
- A new PILOT MOU was signed between DC Water and the District of Columbia on September 4, 2014, which reduced the annual PILOT payment. As per agreement, the PILOT of \$15.3 million for FY 2015 would be escalated by 2 percent per year. The agreement will be effective till September 30, 2024.
- On October 07, 2014, DC Water and the District reached an agreement on the ROW terms and conditions, which provides that DC Water will continue to make payments totaling \$5.1 million annually to the District for FY 2015 – FY 2024.
- DC Water periodically reassesses its policies every five years regarding the operating reserve requirement. The Independent Financial Consultants conducted the study to consider the appropriate level of its Total Operating Reserves for FY 2013 and subsequent years. The Independent Financial Consultants recommended that DC Water maintain its current operating reserve policy to require a minimum balance of the greater of \$125.5 million or 120 days of budgeted O&M expenses. In 2018, Independent Financial Consultants conducted the study and recommended to revise the current reserve policy (120 days of operating and maintenance expenses or \$125.5 million, the bond indenture requires 60 days of operating expenses) to the higher of \$140.0 million or 140 days of operating and maintenance expense. The next Operating Reserves study will be conducted in FY 2022.

- The Independent Financial Consultants noted that the wholesale customers have not contributed to the reserves and that DC Water may consider having wholesale customers provide a proportionate share of the contributions required for the R&R Reserve Fund.
- DC Water Indenture of Trust requires the Authority to maintain a Renewal and Replacement (R&R) Reserve Fund. In FY 2013, the Independent Financial Consultants conducted this study to examine the reasonableness of the amount on deposit in the R&R Reserve Fund and make recommendations to the Authority for the value of the Fund for the next 5-year period of FY 2013 through FY 2017. The Independent Financial Consultants recommended that DC Water maintain its current R&R Reserve Fund policy to require a balance of \$35 million. In FY 2018 study, the Independent Financial Consultants recommended to maintain R&R Reserve Fund at \$35.0 million. The recommendation will be presented to the DC Water Board for approval. The next R&R Reserve Fund study will be conducted in FY 2022.
- Over the last ten years, DC Water has made contributions to the RSF and made withdrawals to help mitigate rate increases. In FY 2018, the Independent Financial Consultant performed a cost of service (COS) study to determine the appropriate level of Rate Stabilization Fund (RSF) to help mitigate rate increases. The study recommended that the Authority maintain current RSF policy of allowing management discretion on deposits and withdraws; consider adding to the RSF in future years from year-end operation balances to support one or more Board objectives.
- With respect to Operating Reserves, Renewal and Replacement (R&R) Reserve Fund Study and Rate Stabilization Fund (RSF), the Independent Financial Consultants also recommended the following:
  - DC Water’s Operating Reserves, Rate Stabilization (RSF) and R&R Reserve Fund requirement be reassessed at least every five years in conjunction with the Indenture-required system assessment (or sooner in event of changes in the underlying factors, assumptions, or market conditions)
  - DC Water and its financial advisor should monitor the rating agencies assessment of the Total Operating Reserves (including the R&R Reserve Fund) on an ongoing basis. The purpose of such monitoring would be to ensure that the rating agencies remain comfortable with the level of the reserves

All Legal Covenants, Financial Board Policies, Accomplishments and Targets are Incorporated into the Ten-Year Financial Plan

Compliant	Description	Legal covenant	Performance Target	FY 2018 Actual	FY 2019 Revised	FY 2020 Approved
<input type="checkbox"/>	Senior Debt Service Coverage	120%	140%	494%	425%	438%
<input type="checkbox"/>	Operating Cash Reserves	N/A	\$125.5 million	166.80 million	\$165 million	\$180 million
<input type="checkbox"/>	Short Term Investment Return Benchmark Merrill Lynch 3-Month Treasury Index	N/A	25 basis points	167 basis points	238 basis points	219 basis points
<input type="checkbox"/>	Long Term Investment Return Benchmark Merrill Lynch 1-3 Year Treasury Index	N/A	50 basis points	230 basis points	248 basis points	242 basis points
<input type="checkbox"/>	Water and Sewer Rates	Revenues must be sufficient to cover: operating expenses, senior and sub debt service, amounts necessary to maintain DSRF and ORF levels, and any annual PILOT payments	Each customer will be charged for the actual cost to provide each service, and rate increases will be reliable and predictable	Future rate increases are driven by financial impact of the capital program and full utilization of the RSF; the development of a 10-year financial plan allows DC Water to meet these key goals of full cost recovery and predictability	Same as Performance Target	
<input type="checkbox"/>	Rate Stabilization Fund (RSF)	N/A	Help to avoid spikes in rate increases for retail customers	Zero Utilization of the RSF, leaving a balance of \$61.45 million.	Projected at \$55.45 million at the end of FY 2019	Projected at \$55.45 million at the end of FY 2020

The Approved FY 2019 - FY 2028 financial plan includes the resources necessary to accomplish critical financial and operational goals over the coming years, as summarized below

- Continue adherence to the Board's financial, investment, rate-setting and long-term planning policies
- Continue implementation of the ten-year \$5.0 billion capital improvement program
- Includes disbursements of \$1.3 billion over the ten-year planning period for Clean Rivers Project (CSO Long-Term Control Plan) exclusive of the nine-minimum controls program
- Continued exceptional financial performance, reduction in overtime, adherence to Board's customer outreach and transparency to include customer input and flexibility to meet emerging needs
- Improving Public Image: re-focus of the government relations activities to bring greater visibility to DC Water and the national need for infrastructure investment and funding; and various pilot projects to look for additional improvements to DC Water services
- Workforce
  - Continue to focus employees' efforts on DC Water's most important goals in line with the Board Strategic Plan
  - Improve recruiting process by identifying high-quality candidates using job descriptions based upon the expertise of high performing employees holding uniquely valued competencies
  - Fill critical talent management needs and address company and industry changes promptly
  - Continue to enhance management skills through training

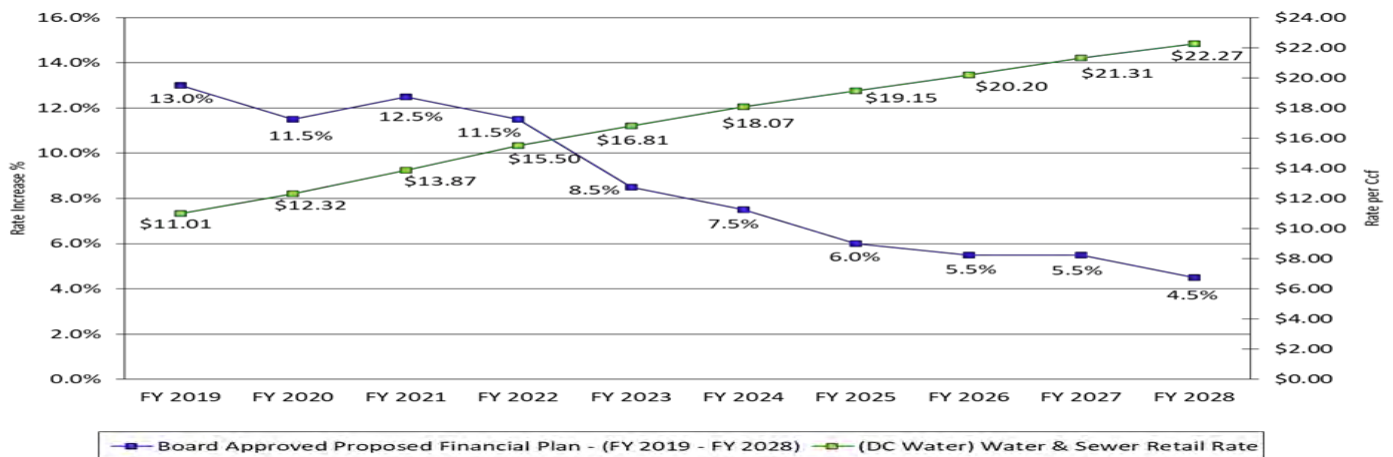
The ten-year financial plan reflects the following major assumptions:

- Operating and maintenance expenses (excluding the payment-in-lieu-of-taxes and right-of-way fee) are projected to grow at an average annual rate of 3.1 percent, primarily due to projected inflation
- Personnel services is projected to increase to accommodate for insourcing initiatives to support the capital program
- Payment-in-lieu-of-taxes (PILOT) to the District of Columbia for FY 2019 will be at \$16.60 million. PILOT payment is projected to increase by 2 percent per annum in accordance with the new memorandum of understanding (MOU) signed on September 4, 2014 with the District
- According to the new memorandum of understanding (MOU) dated October 4, 2014, the Right-of-Way payment to the District of Columbia stays level at \$5.1 million
- Days of cash on hand which is an important measure of short and long term liquidity typically exceeds 250 days of cash including the Rate Stabilization Fund
- Management's practice is to target combined coverage at 1.6X. The combined coverage for FY 2020 to FY 2028 range from 1.68 to 1.89. DC Water Indenture requires Senior Lien coverage of 1.2X and Subordinate at 1.0X, Board Policy is 1.4X for Senior and 1.0X for Subordinate.
- Debt Service:
  - Overall increase of Debt Service is to support the capital program. The Debt Service as a percent of operating revenues does not exceed 33 percent in the Financial Plan. Debt Service represents 30% and 31% of the total operating revenue in FY 2019 and FY 2020, respectively.
  - Interest on Variable debt assumed to be 2.50 percent in FY 2019 and FY 2020
  - Interest on Fixed debt assumed to be 5.5 percent in FY 2019 and 6.0 percent in FY 2020
  - Utilization of the Commercial Paper program / Extendable Municipal Commercial Paper (EMCP) is assumed for interim financing for bond issuance, capital equipment and Washington Aqueduct



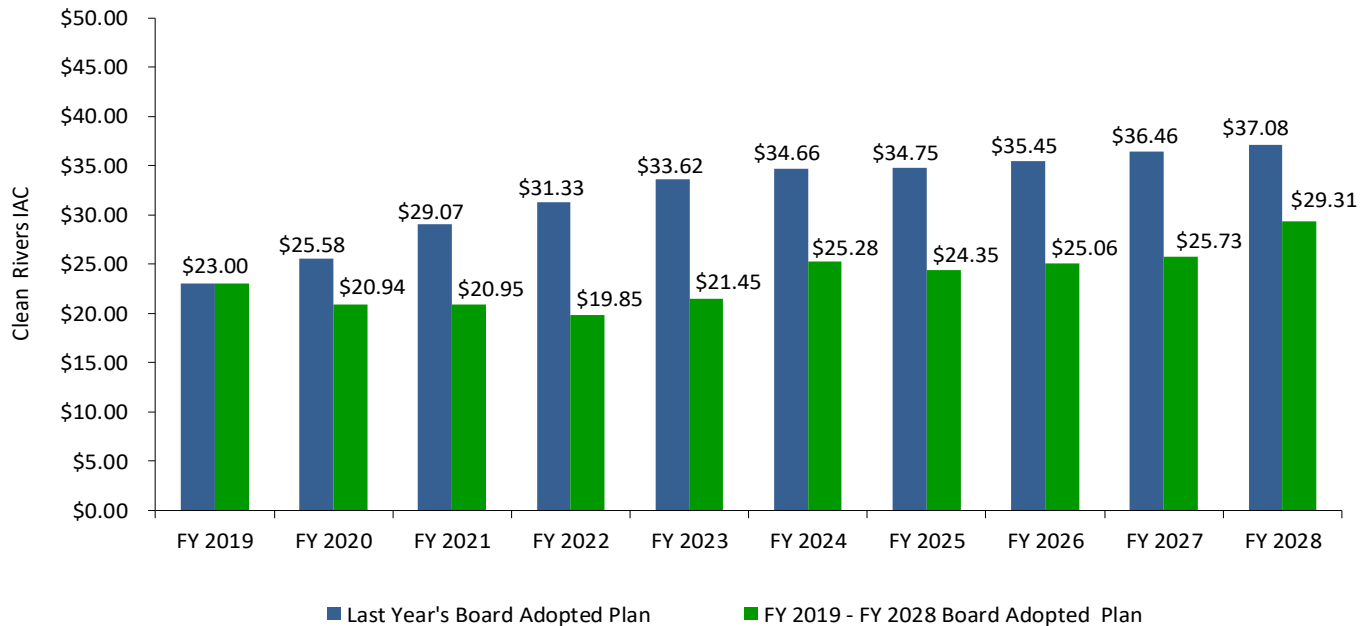
Due to these ongoing and new initiatives, from FY 2019 – FY 2028 DC Water’s water and sewer volumetric retail rates are projected to increase by \$0.96 to \$1.63 per 100 cubic feet as shown in the chart below. Cumulative rate increases would total 86.0 percent over the ten-year period compared to 50.0 percent projected in last year’s ten-year plan (FY 2019 – FY 2028).

## Projected Retail Rate Increases



Rates shown above reflect weighted water and sewer rates for Residential customers’ category. The proposed retail water and sewer combined rate for FY 2019 is \$11.01 per Ccf and \$12.32 per Ccf for FY 2020. In addition, the approved increase in the combined Right-of-Way and PILOT Fees is \$0.01 per Ccf, {\$0.01 per 1,000 gallons}, in FY 2019 and is \$0.02 per Ccf, {\$0.02 per 1,000 gallons} in FY 2020 to recover the full amount for services charged to DC Water by the District. There is no increase in FY 2019 Right-of-Way Fee, which remains same at \$0.18 per Ccf (\$0.24 per 1,000 gallons). The proposed monthly Clean Rivers Project CRIAC charges for FY 2019 and FY 2020 are \$23.00 and \$20.94 respectively per ERU (Equivalent Residential Unit); decrease of \$2.18 over the FY 2018 charge and decrease of \$2.06 over the FY 2019 charge respectively.

## Projected Monthly Clean Rivers Impervious Surface Area Charge Increases FY 2019 – FY 2028



- The projected charges displayed in the chart above are primarily driven by anticipated debt service costs necessary to support the twenty-five year Clean Rivers Project totaling \$2.8 billion federally mandated Clean Rivers Project (CSO LTCP), and the nine-minimum control program.
- The annual Clean Rivers Project IAC costs for the average Tier 2 residential customer (700 – 2,000 sq. ft. of Impervious Area) is projected to decrease from \$23.00 per month in FY 2019 to \$29.31 per month in FY 2028.
- The proposed CRIAC shift to sewer volumetric with 18% in FY 2020, 28% in FY 2021 and 37% in FY 2022 and beyond is recommended because it balances infrastructure investment with growth in rates. The shift is based on an assessment that on average 37 percent of volume in the tunnels is from wastewater. With the proposed shift the overall household charges increase of 5.7 percent is the same as previously forecasted for FY2020. The gradual shift helps avoid rate shock to customers. The CRIAC for FY 2020 is projected to decrease from \$25.58 to \$20.94 per ERU, per month.

The proposed rate and fee adjustments included in the FY 2019 – FY 2028 financial plan are driven by the following trends and initiatives:

- Assumed retail water consumption decline of 1 percent in FY 2019 over FY 2018 projection and conservation of 1 percent in FY 2020 and onwards.
- Increasing debt service expenditures, driven by DC Water’s \$5.0 billion capital improvement program (cash disbursements basis), which increases on average by 5.9 percent over the Financial Plan period.
- Operations and maintenance expenditure (excluding the payment-in-lieu-of-taxes and right-of-way -fee) increase on average of 3.1 percent annually over ten year period.
  - Increasing operating expenditures, driven primarily by projected increases in personnel services, contractual services, chemicals, and water purchases
  - Continuation of In-Sourcing Proposals for in-house planning & design and valve operations
  - Enhanced service to the development community through improved permitting operations

**Customer Assistance Programs:** We continued our commitment to help improve the quality of life for those of our customers who are least able to pay, by providing relief through our customer assistance programs (CAP). Through CAP, we provide eligible customers a discount of 4 Ccf per month on their water and sewer bills. Since it began in FY 2001, participation in CAP has continued to increase. In FY 2004, the authority expanded the CAP to include tenants who meet financial eligibility requirements and whose primary residence is separately metered by the Authority. As of October 1, 2010, the Board expanded the CAP discount to include the first 4 Ccf of Payment-in-Lieu of Taxes (PILOT) and Right- of-Way (ROW) to qualifying low-income residential customers. The District Department of Energy and Environment (DOEE), administers this program for the Authority and several other utilities in the area.

In FY 2016, DC Water implemented Water System Replacement Fee (WSRF). This is a fixed monthly fee set to recover the costs of the 1 percent renewal and replacement program for water service lines. The fee is based on meter size and average flow. The DC Water’s low-income CAP customer will receive 100 percent credit for this fee.

As of May 1, 2017, the Authority further expanded the CAP to include 50 percent discount for CRIAC.

DC Water Board Approved a DC Clean Rivers Impervious Surface Area Charge Incentive Program (CRIAC) effective from October 1, 2013. This is a three year pilot credit/discount program for the DC Clean Rivers Impervious Surface Area Charge. Eligibility determinations are made by the District Department of Energy and Environment. Customers who manage stormwater on their property through the use of approved best management practices such as rain gardens, rain barrels, pervious paving, green roofs, bio retention practices and stormwater will avail this discount. This budget proposes an increase from 4% to 20% for stormwater best management practices.



## Future Goals and Financial Assumptions

[summary](#)[overview](#)[financial plan](#)[rates&rev](#)[capital](#)[financing](#)[departmental](#)[glossary](#)

For FY 2018, \$1,188,574 in discount benefits was provided to 4,324 CAP customers. Our SPLASH program customers donated an additional \$104,361 through their water bills for the benefit of those customers who needed additional help.

\$ in thousands

The Revised FY 2019 operating receipts projection totals \$665.7 million, an increase of \$16.2 million above the FY 2019 Approved budget. The Proposed FY 2020 operating receipts total \$694.0 million, an increase of \$28.3 million over the Revised FY 2019 receipts.

## Comparative Operating Receipts FY 2019 – FY 2020

	FY 2019 Approved	FY 2019 Revised	Increase/ (Decrease)	Percent Change	FY 2020 Proposed	Increase/ (Decrease)	Percent Change
Residential	\$ 117,377	\$118,531	1,154	1.0%	\$124,353	5,822	4.9%
Commercial	163,067	164,542	1,475	0.9%	173,826	9,284	5.6%
Multi-family	93,208	93,137	(71)	-0.1%	100,884	7,747	8.3%
<b>Sub-Total Residential, Commercial and Multi-family</b>	<b>373,652</b>	<b>\$376,210</b>	<b>2,558</b>	<b>0.7%</b>	<b>\$399,063</b>	<b>22,853</b>	<b>6.1%</b>
Federal Government(I)	67,054	67,054	(0)	0.0%	71,887	4,834	7.2%
District Government	17,362	18,009	647	3.7%	17,585	(424)	-2.4%
D.C. Housing Authority	9,719	9,860	141	1.5%	10,525	664	6.7%
Transfer from Rate Stabilization Fund	-	6,000	6,000	0.0%	-	-	0.0%
Water System Replacement Fee (WSRF)	39,717	39,717	-	0.0%	39,717	-	0.0%
Metering Fee	10,776	10,776	-	0.0%	10,776	-	0.0%
<b>Total Retail</b>	<b>518,280</b>	<b>527,626</b>	<b>9,346</b>	<b>1.8%</b>	<b>549,553</b>	<b>21,927</b>	<b>4.2%</b>
IMA Wastewater Charges	70,371	72,735	2,364	3.4%	72,066	(669)	-0.9%
Potomac Interceptor Wastewater Charges	8,866	10,257	1,391	15.7%	10,473	216	2.1%
<b>Total Wholesale</b>	<b>79,237</b>	<b>82,992</b>	<b>3,755</b>	<b>4.7%</b>	<b>82,539</b>	<b>(453)</b>	<b>-0.5%</b>
District Stormwater Revenue (2)	1,000	1,000	-	-	1,000	-	0.0%
Misc. Rev. (e.g. water tap installation, fire hydrant usage, etc.)	22,235	25,317	3,082	13.9%	28,840	3,523	13.9%
Washington Aqueduct Debt Service Revenue for Falls Church & Arlington	193	193	-	-	193	-	0.0%
Interest Income (including interest on Bond Debt Service Reserve Fund)	2,971	2,971	-	0.0%	3,966	995	33.5%
System Availability Fee (SAF)	3,850	3,850	-	0.0%	5,775	1,925	50.0%
Transfer from DC PILOT/ROW Fund	-	-	-	0.0%	-	-	0.0%
DC Contribution of 50% PILOT Fund to DCW	-	-	-	0.0%	-	-	0.0%
Right of Way	5,100	5,100	-	0.0%	5,100	-	0.0%
PILOT Fee	16,601	16,601	-	0.0%	17,013	412	2.5%
<b>Total Other</b>	<b>51,950</b>	<b>55,032</b>	<b>3,082</b>	<b>5.9%</b>	<b>61,887</b>	<b>6,855</b>	<b>12.5%</b>
<b>Total Operating Cash Receipts</b>	<b>\$ 649,467</b>	<b>\$ 665,650</b>	<b>\$ 16,183</b>	<b>2.5%</b>	<b>\$ 693,979</b>	<b>\$ 28,330</b>	<b>4.3%</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 III 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 III for further explanation.



- **Residential, Commercial and Multi-Family Receipts** - are projected at \$376.2 million, which is approximately \$2.5 million higher than the Board approved FY 2019 level, primarily due to slightly higher CRIAC projection.
- **Federal revenues** - are projected to remain the same at \$67.1 million reflecting the Congressional approval level for the FY 2019 federal bill.
- **Municipal & D.C. Housing Authority Receipts** - are projected to increase by \$0.8 million (or 2.9 percent) primarily due to increase in CRIAC projection for these categories.
- **Rate Stabilization Fund Utilization** – The 2019 approved budget assumed no utilization of RSF. However, the DC Water Board approved a \$6.0 million transfer from the RSF in order to fund the CAP2 program, which resulted in a \$6.0 million increase in the revised budget. The ten-year plan and near-term revenue projections assume no utilization of the RSF in from FY 2020 to FY 2028. Prior years’ plans assumed the use of these funds, which is necessary as DC Water reaches its peak years of spending in the CIP. Utilization of RSF monies allows DC Water to implement future rate increases in a reliable and predictable manner while still meeting Board and indenture policies on cash reserves and debt service coverage.
- **Customer Metering Fee** - This fee recovers the costs associated with installing, operating, maintaining and replacing meters, and is charged to all retail customers (including federal and municipal customers). The fee varies based on meter size, with monthly fees ranging from \$3.86 for a 5/8-inch meter (typical size of a residential customer meter) to \$349.06 for 16” meters (typically used for large commercial customers). No revenue change is anticipated in this category.
- **Wholesale Receipts** – Wholesale revenues in FY 2019 revised budget are projected to increase by \$3.8 million as compared to FY 2019 approved budget due to the new Multi-Jurisdictional User Facility(MJUF) operations and maintenance costs and revised operations and maintenance expense projection for FY2019.
- **Stormwater** - DC Water’s FY 2019 receipts include \$1.0 million from the Department of Energy and Environment (DOEE), formerly DDOE, which will be used to fund DC Water’s services provided on behalf of the District’s stormwater permit compliance activities including the billing and collection through DC Water invoices of fees established by DOEE. The FY 2019 – FY 2028 financial plan assumes that all incremental costs borne by DC Water for stormwater permit compliance activities will be reimbursed by the stormwater fund, and that DC Water funds will be advanced to pay for these activities.
- **Other revenues** - In FY 2019, other revenues are projected to increase by \$3.1 million, or 5.9 percent, mainly due to increase in the DC Fire Protection Fee and IMA Indirect Cost Reimbursement for Capital Projects.
- **Right-of-Way and Payment-In-Lieu of Taxes (PILOT) Pass-Through Fees** - Similar to other Washington area utilities, DC Water has implemented fees that pass through the costs of the District’s Right-of-Way fee (ROW) and Payment In Lieu of Taxes (PILOT) as separate line items on its bill. In FY 2019 revised budget as compared to FY 2019 approved budget, PILOT is projected to remain the same at \$16.6 million. ROW fee also remains same at \$5.1 million.

Other major assumptions underlying the revenue projections contained in the FY 2019 – FY 2028 financial plan include:

- For FY 2019, 1.0 percent reduction in water sales is assumed over FY 2018 projection for all customer categories, based on historical trends in consumption levels. For FY 2020 and onwards, 1.0 percent conservation is assumed for all categories.
- 3.0 percent average revenue increase between FY 2021 and FY 2028 for wholesale customers, in line with operating and maintenance expense increases for joint use facilities. In FY 2020, however, the wholesale revenues are projected to decrease by \$0.5 million or 0.5 percent due to lower projected flows for FY 2020.
- Based on the current interest rate environment, interest projections are conservatively assumed at 2.00 percent earnings rate in FY 2020 and 3.0 percent in FY 2021 and 4.0 percent FY 2022 on operating funds. Interest rates for FY 2023 and onwards are assumed at 4.0 percent.
- The majority of other non-operating revenues, totaling \$35.8 million in FY 2020 are projected to increase within the ten-year plan, and include such items as:
  - Reimbursement from Arlington County and Falls Church for debt service issued for pre-1997 Washington Aqueduct capital improvements - \$0.2 million.
  - Reimbursement from the Stormwater Enterprise Fund for services provided to DOEE under their MS4 permit - \$1.0 million.
  - Recovery of indirect costs from DC Water’s IMA partners - \$4.6 million - this reflects recovery of indirect costs on capital projects (e.g., costs for Finance, Accounting and Budget, General Counsel, and Human Resources functions).
  - Reimbursement from the District for the Fire Protection Services fee of \$12.5 million.
  - Other miscellaneous fees and charges, including service line replacements, developer-related fees, and the Engineering Review, wastehauler fees and System Availability Fee (SAF) - \$17.5 million.

The Proposed FY 2020 receipts projection totals \$694.0 million, approximately \$28.3 million, or 4.3 percent higher than the revised FY 2019 projections. This increase is due primarily to:

- **Residential, Commercial & Multi-Family** - FY 2020 projections reflect an increase of \$22.9 million, or 6.1 percent from FY 2019 revised due primarily to proposed retail rate increases of 11.5 percent (water and sewer volumetric rates) and decrease of \$2.06 monthly ERU fee for the Clean Rivers IAC (see Section IV- Rate and Revenues for detail on all rate and fee proposals)
  - One percent decrease in consumption over FY 2018 projections has been assumed due to conservation in FY 2019
- **Federal Revenues** - Approved FY 2020 federal revenues are projected to increase by \$4.8 million or 7.2 percent over revised FY 2019 budget. 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 2020 billing was prepared in April 2018, 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 2018 estimated vs. actual consumption and rate increases will be included in the FY 2021 billing, prepared in April 2019). 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, the proposed FY 2020 federal revenues reflect the final billing sent to the federal government in April 2018 net of the adjustment for the prior-year (FY 2017) reconciliation.
- **Municipal & D.C. Housing Authority Receipts** - are projected to increase \$0.2 million (or 0.9 percent), mainly due to proposed retail rate increases of 11.5 percent and decrease of \$2.06 monthly ERU fee for the Clean Rivers IAC.
- **The Rate Stabilization Fund** - is not utilized in FY 2020. There will be a balance of \$55.45 million by the end of FY 2028.
- **Water System Replacement Fee** - Proposed fixed monthly fee set to recover the costs of 1 percent renewal and replacement program for water service lines generating approximately \$39.7 million per year.
- **Customer Metering Fee** - This fee recovers the costs associated with installing, operating, maintaining and replacing meters, and is charged to all retail customers (including federal and municipal customers). The fee varies based on meter size, with monthly fees ranging from \$3.86 for a 5/8 inch meter (typical size of a residential customer meter) to \$349.06 for 16" meters (typically used for large commercial customers). No revenue change is anticipated in this category.
- **Wholesale Receipts** - DC Water's wholesale customers are responsible for a proportionate share of operating and maintenance expenses (associated only with shared facilities primarily at Blue Plains) based on their respective share of wastewater volume discharged. In addition, each user is responsible for a proportionate share of related indirect costs. In FY 2020 wholesale revenues are projected to decrease by \$0.5 million or 0.5 percent to \$82.5 million due to lower projected flows for FY 2020.

- **Stormwater** - As noted earlier, the proposed FY 2020 receipts for this category include \$1.0 million each year from the Department of Energy and Environment (DOEE).
- FY 2020 **PILOT Fee** increase by 2 percent over prior year as per new PILOT MOU signed with the District Government on September 4, 2014.

(\$ in thousands)

DC Water										
FY 2019 – FY 2028 Financial Plan										
OPERATING	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Retail*										
Wholesale*	\$ 543,327	\$ 571,666	\$ 618,152	\$ 659,845	\$ 704,304	\$ 756,859	\$ 780,566	\$ 810,514	\$ 841,471	\$ 879,686
Other	82,992	82,539	85,015	87,566	90,193	92,898	95,685	98,556	101,513	104,558
RSF	33,331	39,774	46,805	51,271	53,758	53,445	54,361	57,081	57,391	58,349
	6,000	-	-	-	-	-	-	-	-	-
Operating Receipts (1)	\$ 665,650	\$ 693,979	\$ 749,972	\$ 798,682	\$ 848,255	\$ 903,202	\$ 930,612	\$ 966,151	\$ 1,000,375	\$ 1,042,593
Operating Expenses	(338,499)	(347,881)	(358,264)	(368,967)	(379,998)	(391,369)	(403,089)	(415,169)	(427,622)	(440,458)
Debt Service	(198,754)	(215,340)	(235,421)	(254,235)	(272,838)	(285,693)	(295,505)	(306,629)	(318,969)	(331,609)
Cash Financed Capital Improvement	\$ (26,999)	\$ (28,556)	\$ (30,907)	\$ (39,591)	\$ (49,301)	\$ (52,980)	\$ (62,445)	\$ (72,946)	\$ (75,732)	\$ (79,172)
Net Revenues After Debt Service	\$ 101,398	\$ 102,202	\$ 125,380	\$ 135,889	\$ 146,118	\$ 173,160	\$ 169,573	\$ 171,407	\$ 178,052	\$ 191,354
Operating Reserve-Beg Balance	166,796	165,000	180,000	185,000	194,000	201,000	205,000	215,000	220,000	230,000
Other Misc (Disbursements)/Receipts										
Wholesale/Federal True Up	(16,803)	(2,131)	-	-	-	-	-	-	-	-
Project Billing Refunds	(11,000)	(4,000)	(4,000)	-	-	-	-	-	-	-
Transfers To RSF	-	-	-	-	-	-	-	-	-	-
Pay-Go Financing	(75,391)	(81,071)	(116,380)	(126,890)	(139,118)	(169,161)	(159,573)	(166,407)	(168,052)	(181,356)
Operating Reserve - Ending Balance	\$ 165,000	\$ 180,000	\$ 185,000	\$ 194,000	\$ 201,000	\$ 205,000	\$ 215,000	\$ 220,000	\$ 230,000	\$ 240,000
Rate Stabilization Fund Balance RSF (2)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)
Senior Debt Service Coverage	425%	438%	461%	508%	505%	593%	611%	598%	585%	614%
Combined Debt Service Coverage	162%	168%	174%	178%	180%	187%	187%	188%	187%	189%
Actual/Projected Water/Sewer Rate Increases	13.0%	11.5%	12.5%	11.5%	8.5%	7.5%	6.0%	5.5%	5.5%	4.5%
*Operating Receipts \$ Increase/Decrease										
Retail	23,697	28,339	46,486	41,693	44,459	52,555	23,707	29,948	30,957	38,215
Wholesale	1,970	(453)	2,476	2,551	2,627	2,705	2,787	2,871	2,957	3,045
*Operating Receipts % Increase/Decrease										
Retail	4.6%	5.2%	8.1%	6.7%	6.7%	7.5%	3.1%	3.8%	3.8%	4.5%
Wholesale	2.4%	-0.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

(1) Includes interest earnings on senior lien revenue bonds' debt service reserve fund

(2) FY 2020 planned transfers of \$0.0 million to Rate Stabilization Fund will maintain the total fund balance at \$55.45 million



\$ in thousands

As in previous years, debt service continues to be the fastest growing expenditure in the ten-year financial plan as a result of DC Water's \$5.0 billion capital improvement program, growing at an average annual rate of 8.2 percent. All other operating expenses are projected to grow at an average annual rate of 4 percent. The following chart provides detailed comparison of the FY 2019 and FY 2020 operating budgets.

## Comparative Operating Budgets FY 2019 – FY 2020

	FY 2019 Approved	FY 2020 Approved	Increase/(Decrease)	
			\$	%
Total Personnel Services	\$ 162,620	\$ 170,680	\$ 8,060	5.0%
Non-Personnel Services				
Contactual Services	76,618	77,007	389	0.5%
Biosolids	5,061	4,879	(182)	-3.6%
Water Purchase	30,520	34,929	4,409	14.4%
Supplies	8,524	7,977	(547)	-6.4%
Chemicals	23,558	25,181	1,623	6.9%
Utilities	26,915	26,953	38	0.1%
Small Equipment	1,240	989	(251)	-20.2%
<b>Subtotal Operations &amp; Maintenance</b>	<b>335,055</b>	<b>348,594</b>	<b>13,539</b>	<b>4.0%</b>
Debt Service	199,025	215,340	16,315	8.2%
Cash Financed Capital Improvements	26,999	28,556	1,557	5.8%
PILOT	16,602	16,934	332	2.0%
Right of Way Fee	5,100	5,100	0	0.0%
<b>Subtotal Debt Service, CFCI &amp; PILOT/ROW</b>	<b>247,726</b>	<b>265,930</b>	<b>18,204</b>	<b>7.3%</b>
<b>TOTAL OPERATING EXPENDITURES</b>	<b>\$ 582,781</b>	<b>\$ 614,524</b>	<b>\$ 31,743</b>	<b>5.4%</b>
Less Personnel Services Charged to Capital Projects	(18,259)	(22,748)	(4,489)	24.6%
<b>Total Net Operating Expenditures</b>	<b>\$ 564,522</b>	<b>\$ 591,776</b>	<b>\$ 27,254</b>	<b>4.8%</b>

The approved FY 2020 budget total of \$614.5 million is approximately 5.4 percent higher than the approved FY 2019 budget. This net increase is primarily due to increase in debt service costs associated with DC Water's capital improvement program, as well as increase in the operations and maintenance budget. The FY 2020 operations and maintenance budget net increase of 4.0 percent is primarily due to increase in personnel services, various maintenance and professional services, and offset by projected decreases in biosolids hauling costs, and reduced utilities. Specific information regarding each department is included in Section VII. A description of the assumptions and major issues/changes in each major expenditure category follows.

**Personnel Services** – increase of \$8.1 million or 5.0 percent above the approved FY 2019 budget. The increase is primarily attributable to salary adjustments, combined with 12 additional headcount to provide in-house support of various programs, higher overtime, and increase in benefits for retirement, due to aging workforce. This is offset in part by the elimination of 63 positions.

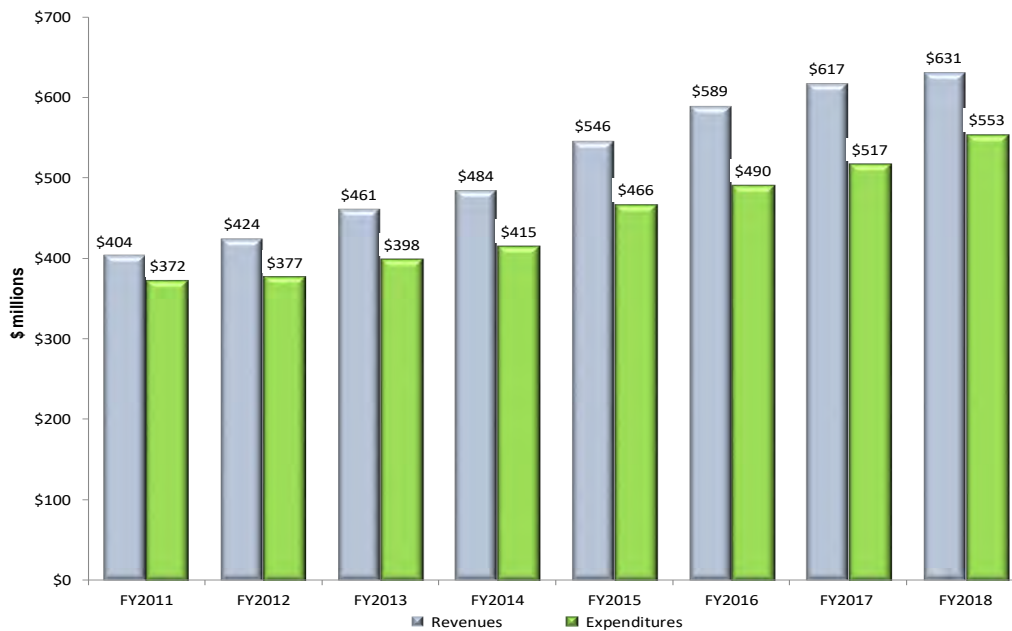
- **Utilities** – Total utilities cost relatively flat compared to the approved FY 2019 budget at approximately \$27.0 million. However, water usage and electricity budgets increased by \$0.6 million due to increase in flows from the Wet Weather Facility and Filtrate Treatment Facility (FTF) activities that became operational in 2018. DC Water’s thermal hydrolysis process and anaerobic digesters continues to generate approximately 7MW electricity to offset the Authority-wide energy consumption of 32MW. Additional reduction resulted from the rental budget for recent departmental relocations into the new Headquarters Office (HQO) in late 2018/2019.
- **Chemicals** – increase of \$1.6 million or 7.0 percent above the approved FY 2019 budget is due to escalating unit prices for major chemicals (methanol and sodium bisulfite) and high chemical usage from increased effluent from the Tunnel Dewatering Pump Station during rain events.
- **Water Purchase** – increase of approximately \$4.4 million or 14.4 percent above the approved FY 2019 budget. This represents DC Water’s share of the Washington Aqueduct’s FY 2019 O&M budget.
- **Biosolids Hauling** – slightly lower compared to FY 2019 budget, due to continued increased marketing efforts of BLOOM, and the materialized savings from reduced transportation costs attributable to production of Class A biosolids, estimated at 450 wet tons/day from the Combined Heat and Power (CHP) facility. Previously, the Blue Plains Plant produced 1,200 wet tons per/day of Class B biosolids.

\$ in thousands

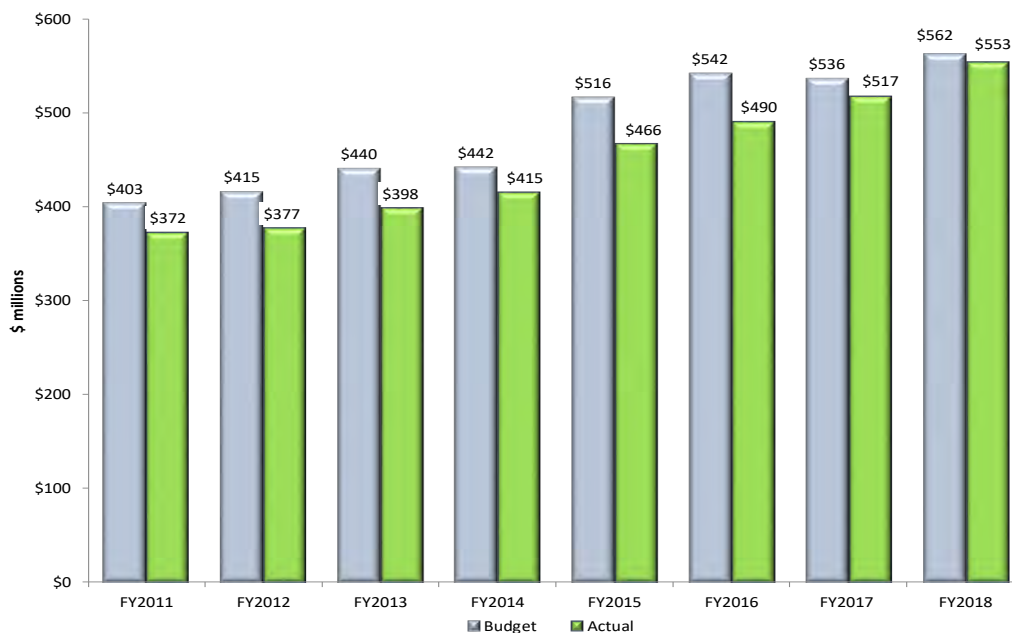
## Solid Financial Performance with Revenues Consistently Exceeding Expenses

- FY 2018 Actual Operating cash receipts increased by 14.2 million to \$631.2 million or 2.2 percent
- FY 2018 Actual Operating expenses increased by \$36.3 million to \$553.2 million, or 6.6 percent
- FY 2018 Budget to actual results showed both revenues exceeding and expenses below budget

### Comparative Operating Receipts



### Expenditure Budget to Actual



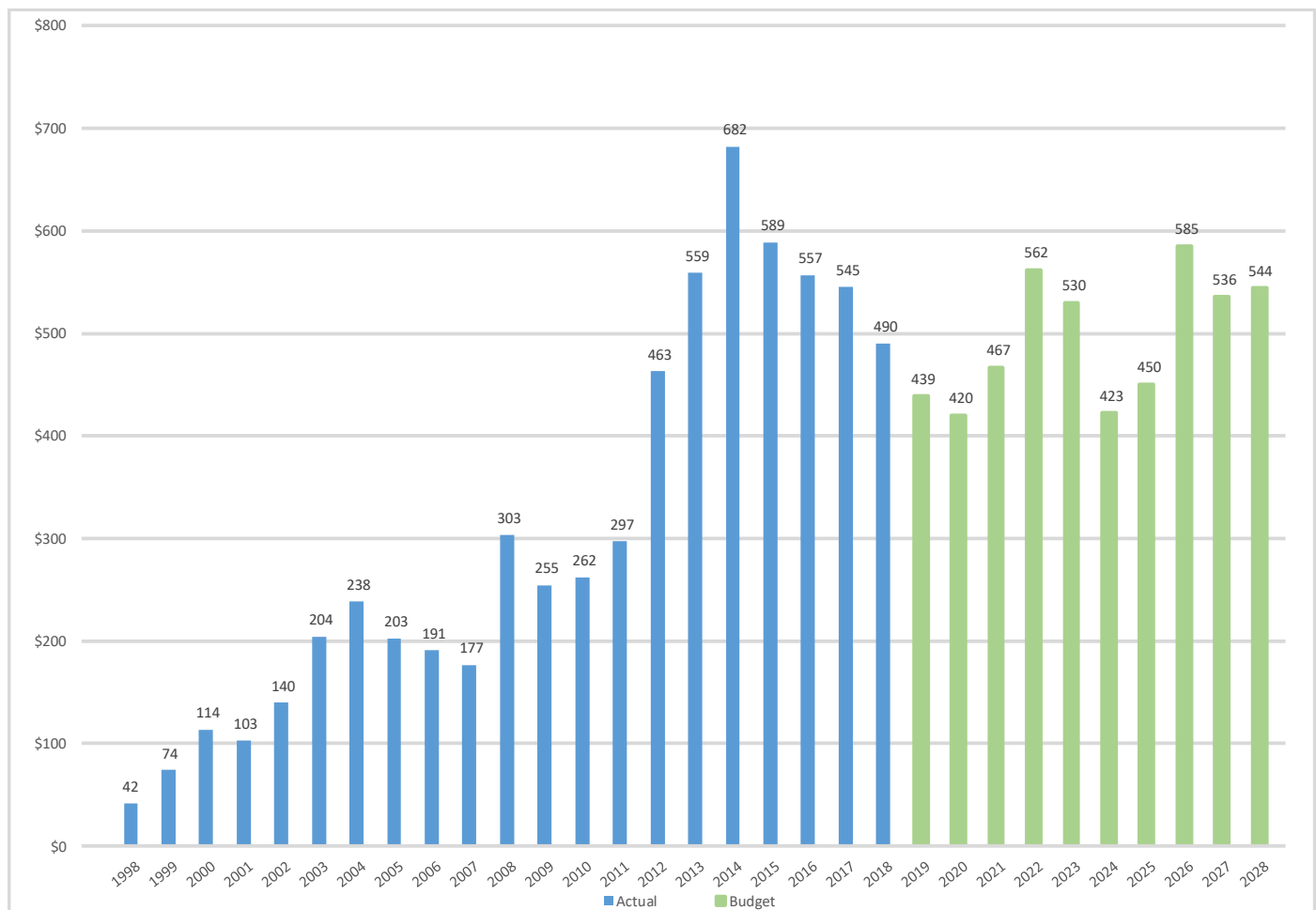
\$ in thousands

## The \$4.95 Billion Ten-Year CIP Protects Our Assets While Leveraging Long-Term Debt

The FY 2019 – FY 2028 financial plan anticipates capital disbursements of \$4.95 billion. Over the last 21 years, \$6.5 billion has been invested on DC Water’s system averaging approximately \$309 million per year. Projected annual spending ranges from \$420 million to nearly \$544 million as shown in the chart below (or approximately \$496 million per year from FY 2019 – FY 2028). The financing of DC Water’s capital program comes from four primary sources, as more fully described in this section. The amount of EPA grant funding is defined by annual federal appropriations, while jurisdictional capital contributions are based on a fixed percentage of Blue Plains and other shared facilities. The remainder of the program is funded with DC Water’s debt and Pay-Go financing from operations.

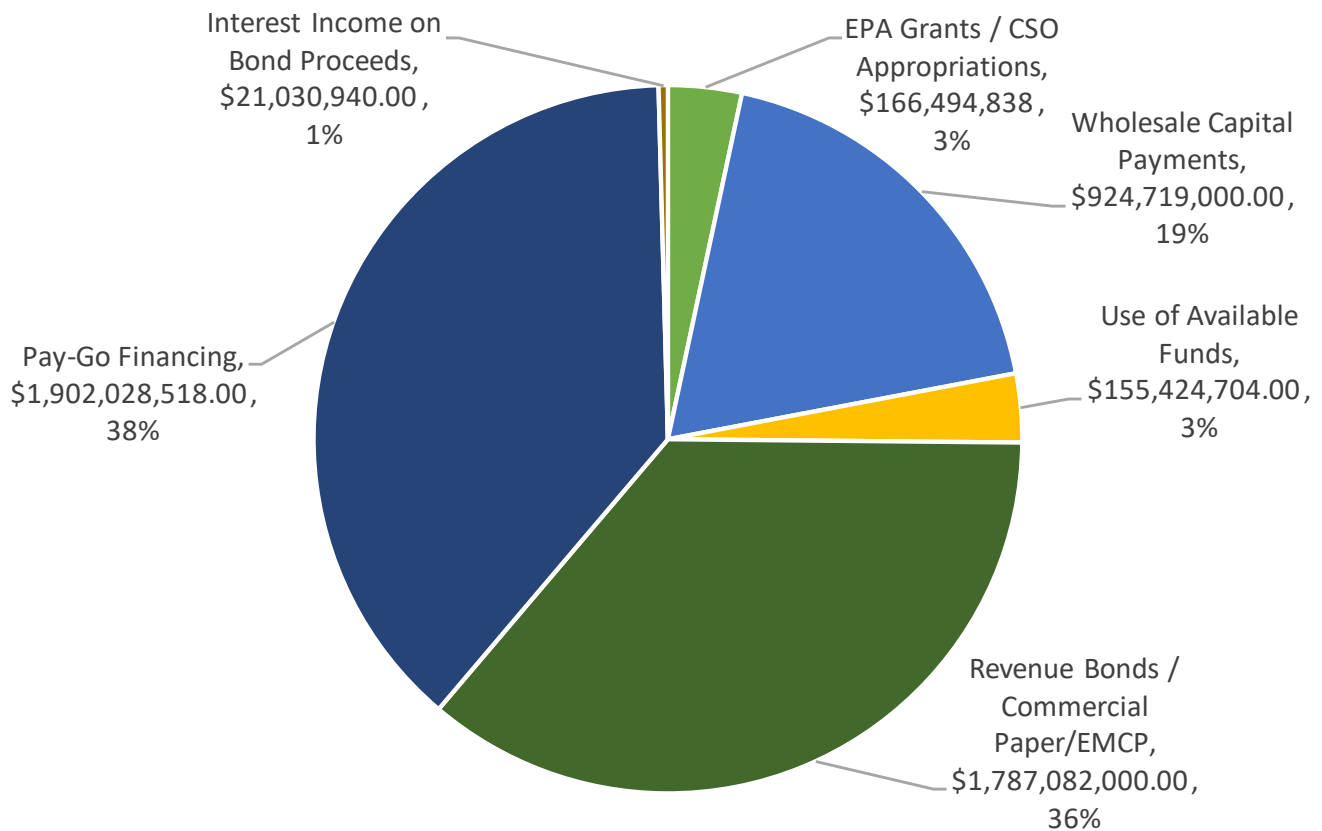
As noted earlier in this section, DC Water developed a comprehensive financing plan in FY 1999 with the dual goals of 1) securing the lowest cost of capital possible, and 2) maximizing administrative and operating flexibility. The plan includes the following components: Grants; wholesale capital payments; permanent financing; Interim financing and Pay-Go.

### Historical and Projected Capital Spending FY 1998 – FY 2028



## FY 2019 – FY 2028 Capital Improvement Program Sources of Funds

	<b>FY2019 - 2028 PLAN TOTAL</b>	<b>Percent of Total</b>
EPA Grants / CSO Appropriations	\$ 166,494,838	3.36%
Wholesale Capital Payments	924,719,000	18.66%
Use of Available Funds	155,424,704	3.14%
Revenue Bonds / Commercial Paper/EMCP	1,787,082,000	36.05%
Pay-Go Financing	1,902,028,518	38.37%
Interest Income on Bond Proceeds	21,030,940	0.42%
<b>TOTAL SOURCES</b>	<b>\$ 4,956,780,000</b>	<b>100.0%</b>





- **EPA and CSO Grants** – For FY 2019 – FY 2028, EPA and CSO grants represent only 3.3 percent of the funding for 10-year capital program. DC Water currently plans to finance part of its Ten-Year CIP through EPA grant funding for certain eligible projects under the Clean Water and Safe Drinking Water Acts. In general, the District of Columbia projects carried out by DC Water are supported by approximately one percent of the available annual funding through revolving fund programs associated with the Clean Water and Safe Drinking Water Acts. In addition, DC Water has received \$ 252.8 million in Congressional appropriations for the Clean Rivers Project (aka CSO LTCP) as of September 30, 2018.
- **Wholesale Capital Payments** - Approximately 60 percent of the capacity of DC Water’s wastewater treatment facilities are contractually committed to provide wholesale service to suburban jurisdictions under various contracts. Montgomery and Prince George's Counties (through the Washington Suburban Sanitary Commission (WSSC), Fairfax County, and the Loudoun County Sanitation Authority pay a proportionate share of capital-related costs equal to their share of contracted capacity at Blue Plains. DC Water anticipates 18.7 percent of its capital funding will come from wholesale customers.
- **Revenue Bonds/Commercial Paper/EMCP-** Currently debt financing represent only 36.1 percent of the funding in the ten-year capital program.
- **Pay-Go (Internal) Financing** – ‘Pay-Go’ financing shall mean any cash financing of capital projects. The amount transferred from operations to the capital program each year shall be cash in excess of all operating requirements or restricted use. Approximately 38.4 percent of total funding for the FY 2019 – FY 2028 plan is projected to come from Pay-Go financing, which strikes an appropriate balance between maintaining moderate debt levels and financing provided by current ratepayers.

Pay-Go funds will be used in a manner consistent with our financial policies: 1) to fund capital financing or for repayment of higher cost debt and that whenever possible, the least costly capital financing be used for capital projects, 2) to produce the lowest practical cost of debt for financing its capital projects.

## FY 2019 and FY 2020 Debt Issuance Plans & Debt Service Assumptions

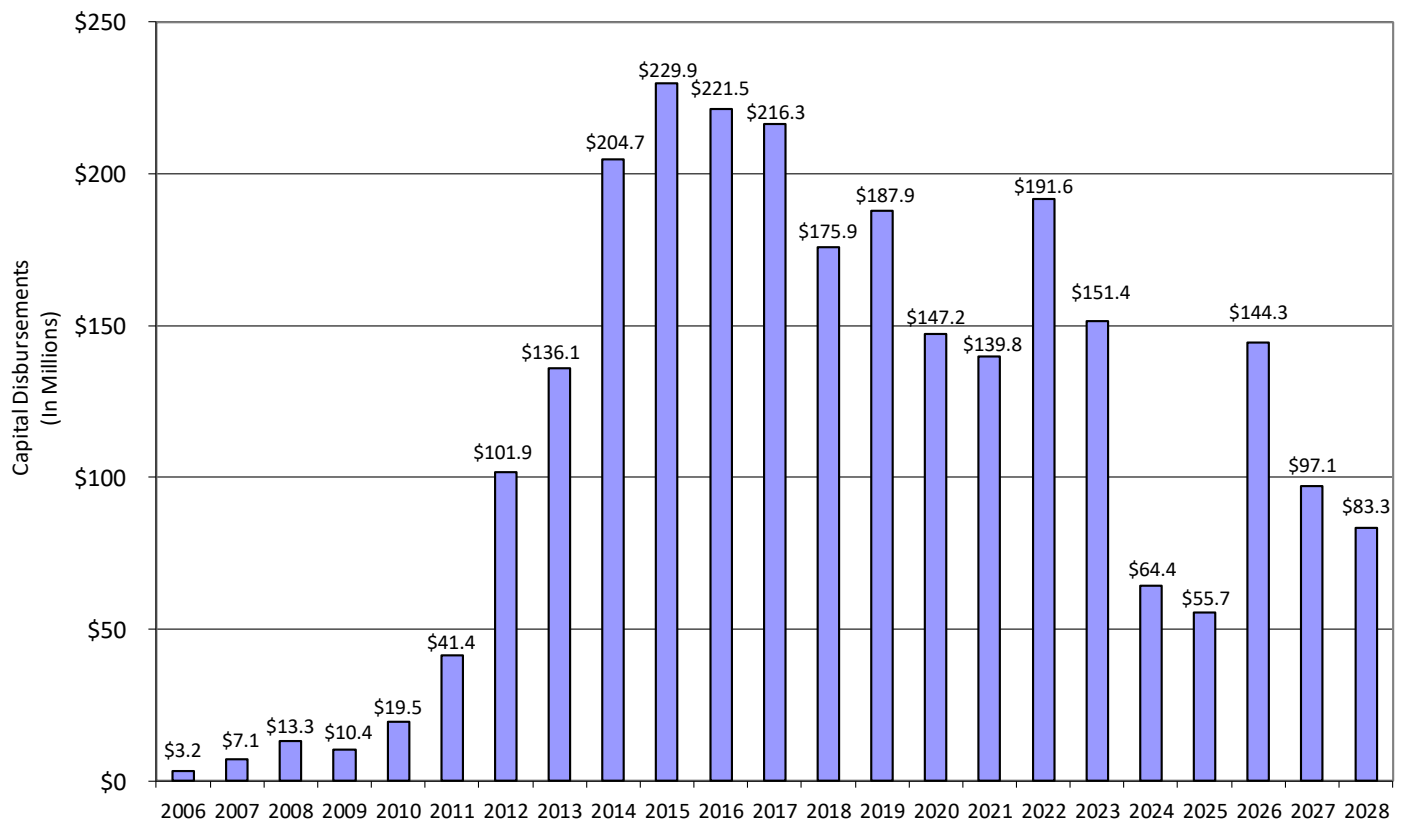
Based on current capital project spending, we plan to: 1) issue approximately \$250 million in new bonds in third quarter of FY 2019. For the purpose of financial planning we have assumed fixed rate, tax-exempt bonds at 5.0 percent. Similarly, for the remainder of the ten-year plan we have assumed issuing long term bonds at 5.50 percent for FY 2019, 6.0 percent for FY 2020, and 6.50 percent for FY 2021 – FY 2028, 2) issue commercial paper/EMCP for interim financing. The ten-year plan assumes a variable interest rate of 2.50 percent in FY 2019 – FY 2028. In order to yield the best possible interest rate savings, our debt portfolio is evaluated on a regular basis.

## DC Clean Rivers Project

In December 2004, the Board reached agreement with the federal government on the proposed DC Clean Rivers Project LTCP and entered into a related consent decree. Lifetime capital costs for this project currently stands at approximately \$2.8 billion and this year's approved ten-year plan includes \$1.3 billion of projected disbursements. Projected spending by fiscal year for the Clean Rivers Project is shown in the next chart.

In FY 2018, DC Water received federal funding of \$14.05 million for the Combined Sewer Overflow Long Term Control Plan Service Area. However, as the project spending increases over the years, so does the projected Clean Rivers Impervious Service Area Charge (CRIAC) rate. If additional federal assistance is provided, the Clean Rivers IAC would increase at a slower pace than this ten-year plan proposal assumes. As noted earlier, this plan assumes jurisdictional contributions, for joint-use Projects, to the Clean Rivers Project under the IMA of 7.1 percent beginning in FY 2011. Please see section IV for more details on the Clean Rivers IAC.

**Clean Rivers CSO LTCP Disbursements by Fiscal Year**



Cash balances totaled \$229.2 million at the end of FY 2018. As detailed below, this includes \$61.45 million for rate stabilization. Over the next ten years, cash balances are projected to meet the Board-required reserve level, of 120 days of operating and maintenance budget or no less than \$125.5 million.

DC Water's operating reserve includes the following components:

## FY 2018 Year - End Cash

### Board-Adopted Operating Reserves (120 Days of O&M)

60 Day Operating Reserve (Indenture Required)	\$51,705
Renewal & Replacement Reserve (Indenture Required)	35,000
Undesignated Reserve	38,795
<b>Total Operating Revenue</b>	<b>\$125,500</b>

### Other Reserves

Rate Stabilization Fund Reserve	\$61,450
DC Insurance Reserve	1,000
<b>Total Other Reserve</b>	<b>\$62,450</b>

### Total Reserves

Cash in Excess of Reserves <sup>(1)</sup>	\$41,296
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<b>Total Cash Position <sup>(1)</sup></b>	<b>\$ 229,246</b>
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(1) Excludes Debt Service Reserve Funds

- **Indenture-Required Operating Reserve** - This reserve is required by DC Water's bond indenture and is equivalent to two months' operations and maintenance expenses from the prior year, or approximately \$51.7million in FY 2018.
- **Renewal & Replacement Reserve** - In FY 2013 the Board reaffirmed the amount of \$35 million in the financing policy. In 2018, Independent Financial Consultant reviewed R&R Reserves and recommended to maintain it at \$35 million. The recommendations will be presented to the Board for review and approval. The reserve level will be reviewed every five years by DC Water's independent rate consultants in conjunction with the indenture-required assessment of the physical condition of the system.

- **Undesignated Reserve** - After allocating portions of the operating and maintenance reserve to the reserves listed above, the amount that remains (approximately \$38.8 million for FY 2018) is DC Water's undesignated reserve, and is available for other contingencies.

DC Water has other reserves that are available for very specific circumstances:

- **Rate Stabilization Fund** - Consistent with the Board's financial policies and as envisioned in the bond indenture, this fund is to be established to mitigate large annual rate increases. This year's plan reflects continued use of the rate stabilization fund, which totaled \$61.45 million as of September 2018. Future deposits to the rate stabilization fund will be determined annually based on financial performance in that fiscal year and updated ten-year capital and operating forecasts. The current plan anticipates \$55.45 million available at the end of FY 2019 – 2028.
- **Debt Service Reserve Funds** - The supplemental bond indenture associated with the Series 1998 senior lien bonds requires DC Water to maintain a debt service reserve fund. This reserve which is in addition to the 120 days operating and maintenance reserve, is held by DC Water's trustee and can only be used in the event that net revenues are insufficient to meet the next debt service payment. DC Water earns interest on this reserve that is included in other operating revenue and is used to offset annual debt service payments. The amount of interest earnings that DC Water can retain on the debt service reserve fund is limited by federal arbitrage restrictions.



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## Approved FY 2020 Budgets

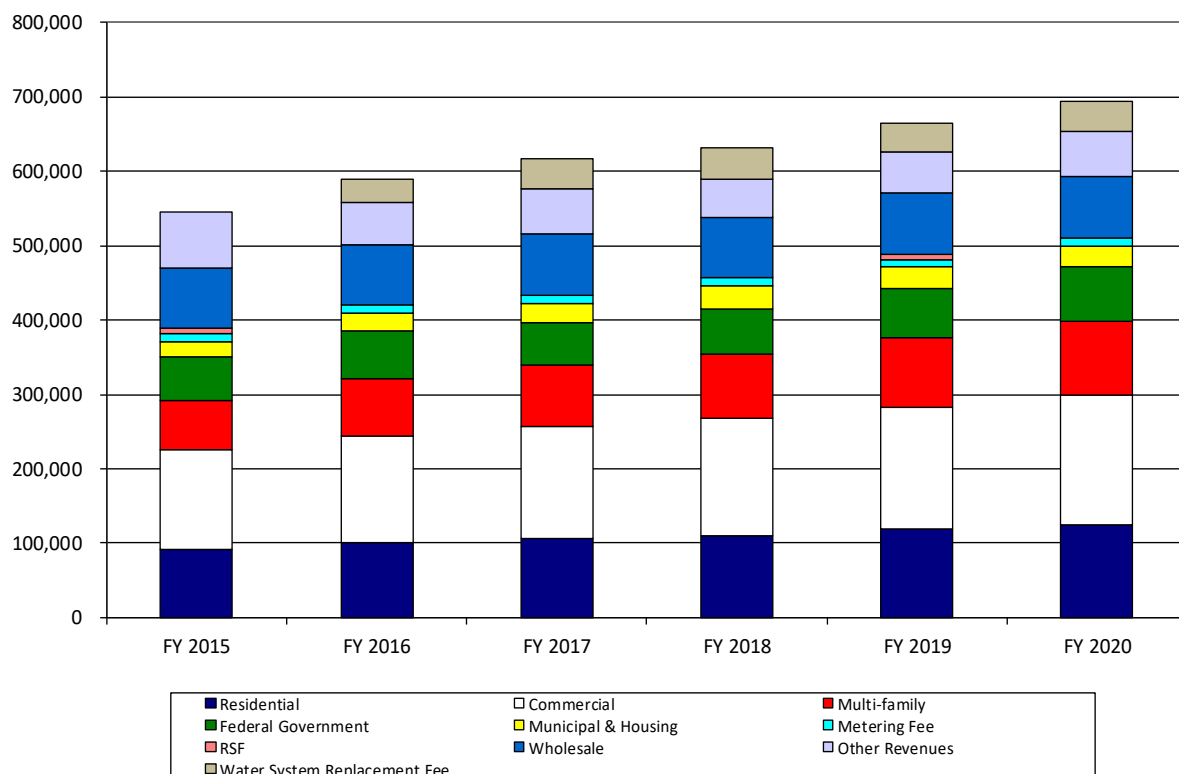
### Section IV: RATES AND REVENUES



Meet and Greet with David Gadis

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 and Projected Cash Receipts (\$'000's)



### Historical and Projected Operating Cash Receipts (\$000's)

	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Revised	FY 2020 Proposed
Residential	\$90,765	\$100,032	\$106,417	\$109,135	\$118,531	\$124,353
Commercial	134,724	144,355	149,991	158,021	164,542	173,826
Multi-family	66,378	77,566	82,238	86,431	93,137	100,884
<b>Sub-Total Residential, Commercial and Multi-family</b>	<b>\$291,867</b>	<b>\$321,953</b>	<b>\$338,646</b>	<b>\$353,587</b>	<b>\$376,210</b>	<b>\$399,063</b>
Federal Government (1)	59,171	62,989	57,540	62,100	67,054	71,887
District Government	12,894	15,988	17,628	21,362	18,009	17,585
D.C. Housing Authority	6,968	8,772	8,560	8,704	9,860	10,525
Transfer from Rate Stabilization Fund	7,500	-	-	-	6,000	-
Water System Replacement Fee (WSRF)	-	30,287	40,522	40,896	39,717	39,717
Metering Fee	11,111	11,479	11,566	11,745	10,776	10,776
<b>Total Retail</b>	<b>\$389,511</b>	<b>\$451,467</b>	<b>\$474,462</b>	<b>\$498,394</b>	<b>\$527,626</b>	<b>\$549,553</b>
IMA Wastewater Charges	73,889	71,970	72,931	71,080	72,735	72,066
Potomac Interceptor Wastewater Charges	7,341	7,814	8,205	9,942	10,257	10,473
<b>Total Wholesale</b>	<b>\$81,230</b>	<b>\$79,784</b>	<b>\$81,136</b>	<b>\$81,022</b>	<b>\$82,992</b>	<b>\$82,539</b>
District Stormwater Revenue (2)	899	944	1,025	1,247	1,000	1,000
Misc. Rev. (e.g. water tap installation, fire hydrant usage, etc.)	31,169	33,703	37,748	26,881	25,317	28,840
Washington Aqueduct Debt Service Revenue for Falls Church & Arlington	193	193	193	193	193	193
Interest Income (including interest on Bond Debt Service Reserve Fund)	846	1,253	1,676	2,200	2,971	3,966
System Availability Fee (SAF)	-	-	-	-	3,850	5,775
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	5,100	5,100
PILOT Fee	16,998	16,885	15,677	16,136	16,601	17,013
<b>Total Other</b>	<b>\$75,354</b>	<b>\$58,078</b>	<b>\$61,419</b>	<b>\$51,757</b>	<b>\$55,032</b>	<b>\$61,887</b>
<b>Total Operating Cash Receipts</b>	<b>\$546,095</b>	<b>\$589,329</b>	<b>\$617,017</b>	<b>\$631,173</b>	<b>\$665,650</b>	<b>\$693,979</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

## CUSTOMER CATEGORIES AND ACCOUNTS

As of September 30, 2018, DC Water had 124,931 active, metered water and wastewater accounts. In addition, there are 7,484 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, D.C. Municipal and Housing Authority.

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 D.C. 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 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 customer whose premises is a single-family dwelling unit used for domestic purposes, whether as a row, detached or semi-detached structure, or as a single dwelling unit within an apartment building, or as a single dwelling unit within a condominium, or as a single dwelling unit within a cooperative housing association, where each unit is served by a separate service line and is individually metered and used for domestic purposes; or a multi-family structure or development of less than four (4) single-family, apartment, condominium, or cooperative housing association dwelling units where all the units are used for domestic purposes and served by a single service line that is master metered; excluding a premises operated as a nursing home, dormitory or transient housing business, including, but not limited to a bed and breakfast, hotel, motel, inn, boarding house or rooming house.

**Multi-Family** – a customer whose premises is a multi-family structure or development (such as an apartment, condominium, or cooperative housing association) used for domestic purposes, with four or more single-family, apartment, condominium, or cooperative housing association residential dwelling units served by the same service line that is master metered; excluding premises operated as a nursing home, dormitory or transient housing business, including, but not limited to a bed and breakfast, hotel, motel, inn, boarding house or rooming house.

**Non-residential** – all customers not within either the residential or multi-family class including customers whose premises is comprised of one or more units that is not used for domestic purposes and all units are served by the same service line that is master metered.

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

In FY 2018, a COS was conducted by Independent Financial Consultants, which provided several recommendations that were incorporated in the FY 2019 rate proposal, and were approved by the Board.

- A reallocation of the costs associated with the Clean Rivers Impervious Area Charge (CRIAC) to the sewer utility results in a reduction in the CRIAC and an increase in the sewer volumetric charge.
- The revenue collected from the Water System Replacement Fee (WSRF), originally designed to fund the annual costs of 1% of DC Water’s water service line renewal and replacement program, has been used in its entirety to offset the water utility’s revenue requirements, resulting in a decrease to all water volumetric charges.
- Although these two reallocations cause shifts in the cost structure, and subsequent rates, DC Water customers will see only minimal changes to their bills.

**Residential, commercial and multi-family receipts are projected to increase in FY 2019 by approximately \$22.6 million, or 6.4 percent, over the FY 2018 level due to:**

- Board-approved volumetric retail rate (water and sewer) increase of 13.0 percent, effective October 1, 2018
- Board-approved Clean Rivers Project CRIAC rate decreased from \$25.18 in FY 2018 to \$ 23.00 per ERU in FY 2019



- 1 percent decrease in consumption due to conservation from projected 2018 consumption
- In FY 2018, DC Water's collections on its retail receivables was strong, with accounts receivable over 90 days at \$13.4 million as of September 30, 2018. DC Water will continue its aggressive collection efforts
- The customer assistance program reduces projected revenues by approximately \$2.9 million

## Residential, commercial and multi-family customers:

- In FY 2019, residential customers include 105,430 accounts that comprise 17.8 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 2019, there are 8,332 accounts that comprise 14.0 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 9,028 accounts and will comprise 24.7 percent of the projected FY 2019 operating revenues. In FY 2020, they will comprise 25.0 percent of the fiscal year operating revenue.

FY 2020 projections for Residential, Multi-Family and Commercial customers reflect an increase of \$22.9 million, or 6.1 percent from FY 2019 revised due primarily to proposed retail rate increase of 11.5 percent (combined water and sewer volumetric rates), and a decrease of \$2.06 monthly ERU fee for the Clean Rivers Impervious Area Charge (CRIAC). In FY 2019 and onwards, one percent decrease in consumption has been assumed due to conservation.

**The Federal customers' revised FY 2019 receipts are projected to total \$67.1 million; an increase of \$5.0 million, or 8.0 percent over FY 2018.** In FY 2020, Federal revenues are projected to be \$71.9 million or 10.4 percent of the total operating revenues. The projected federal revenues will be higher by \$4.8 million or 7.2 percent in FY 2020 due to estimated rate and consumption assumptions provided under the federal billing policies. It may be noted that in order to reduce costs, the federal government issued 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.

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 2019 billing was prepared in April 2017), 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 2019 estimated vs. actual consumption and rate increases will be included in the FY 2022 billing, to be prepared in April 2020).

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 2019 federal revenues reflect the final billing sent to the federal government in April 2017 net of the adjustment for the prior year (FY 2016) 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 2019 receipts from the District of Columbia government and the District of Columbia Housing Authority are projected at \$27.9 million, a decrease of \$2.2 million or 7.3 percent over FY 2018.** In FY 2020, receipts from these organizations are projected to total \$28.1 million, an increase of \$0.2 million, or 0.9 percent, mainly due to increases in retail volumetric rates. In FY 2020, the projected increase is \$0.2 million or 0.9 percent over FY 2019.

- The municipal customer group includes 517 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 2.7 percent of the FY 2019 operating budget and 2.5 percent of the proposed FY 2020 budget.
- The D.C. Housing Authority has multiple accounts that include public housing at various facilities throughout the District of Columbia. They have 1,130 accounts. Their annual billings make up only 1.5 percent of the FY 2019 cash receipts and 1.5 percent of the proposed FY 2020 cash receipts.

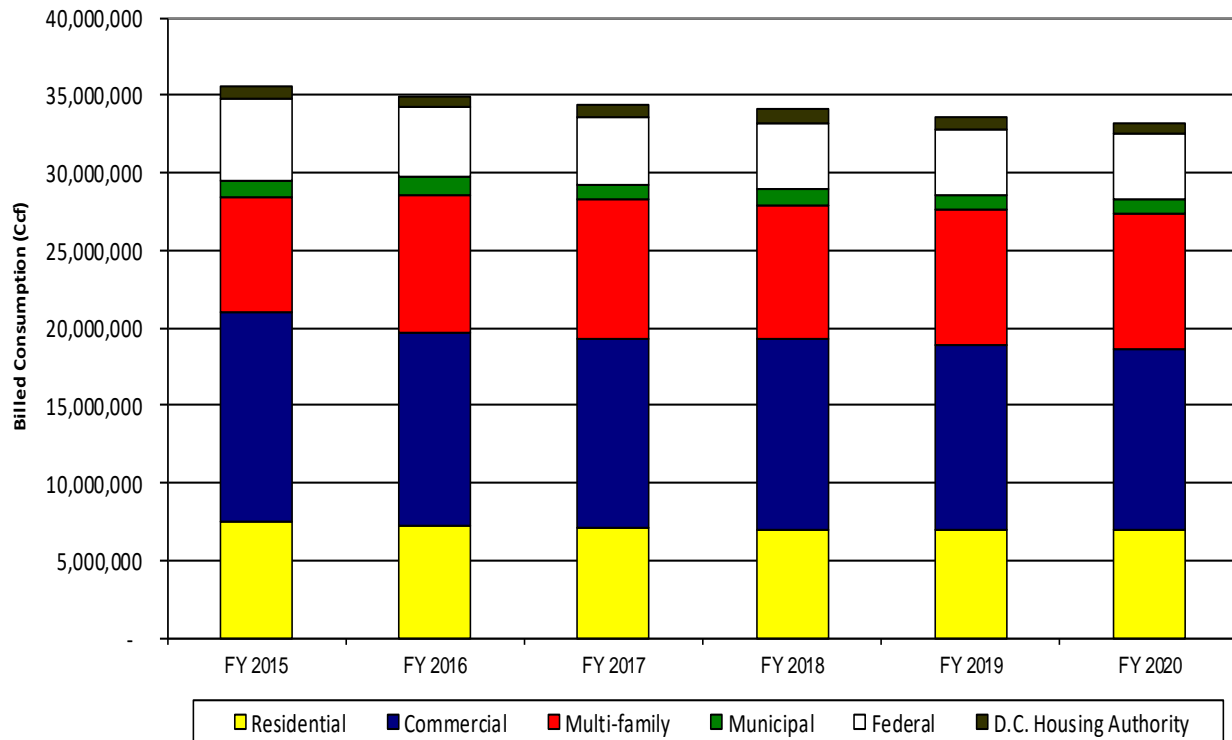
**Wholesale customer revenue - FY 2019 revenues are projected at \$83.0 million, an increase of \$2.0 million or 2.4 percent compared to FY 2018.** In FY 2020, wholesale revenues are projected to decrease by \$0.5 million or 0.5 percent to \$82.5 million. DC Water provides wholesale wastewater treatment services to User Jurisdictions at the Blue Plains Plant. The wholesale customers' share of operating costs at Blue Plains and other multi-jurisdictional use facilities (MJUFs) 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 in November, February, May and August. Receipts are projected to be 12.5 percent and 11.9 percent of total receipts in FY 2019 and FY 2020 respectively. In FY 2017, DC Water began billing our wholesale customers for the operating and maintenance costs of MJUFs, which include twelve interceptors and four pumping stations that carry suburban wastewater to the Blue Plains Plant. 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 0.9 percent in FY 2018. 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 2019 over FY 2018 projection and 1 percent decline in FY 2020 and beyond.

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



## Historical and Projected Billed Consumption (Ccf)

	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Projected	FY 2020 Projected
Residential	7,431,013	7,262,184	7,108,543	6,961,844	6,967,000	6,897,000
Commercial (1)	13,507,756	12,440,516	12,144,071	12,353,040	11,902,000	11,783,000
Multi-family	7,437,925	8,889,754	9,013,474	8,574,676	8,712,000	8,625,000
Municipal (2)	1,066,587	1,110,717	993,799	1,024,775	974,000	964,000
Federal	5,319,948	4,493,362	4,335,937	4,339,051	4,250,000	4,208,000
D.C. Housing Authority	<u>795,696</u>	<u>761,401</u>	<u>765,900</u>	<u>800,225</u>	<u>750,000</u>	<u>743,000</u>
<b>Total Retail</b>	<b>35,558,925</b>	<b>34,957,934</b>	<b>34,361,724</b>	<b>34,053,611</b>	<b>33,555,000</b>	<b>33,220,000</b>

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

(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)

In FY 2018, a Cost of Service Study (COS) was conducted by Independent Financial Consultants, which provided several recommendations that were incorporated in the FY 2019 rate proposal, and were approved by the Board.

- A reallocation of the costs associated with the Clean Rivers Impervious Area Charge (CRIAC) to the sewer utility results in a reduction in the CRIAC and an increase in the sewer volumetric charge.
- The revenue collected from the Water System Replacement Fee (WSRF), originally designed to fund the annual costs of 1% of DC Water's water service line renewal and replacement program, has been used in its entirety to offset the water utility's revenue requirements, resulting in a decrease to all water volumetric charges.

- Although these two reallocations cause shifts in the cost structure, and subsequent rates, DC Water customers will see only minimal changes to their bills.

## 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). The class-based water volumetric rates for FY 2019 to FY 2020 are listed below:

Water Volumetric	Class-Based (w/ lifeline)	
	FY 2019	FY 2020
Residential - 0-4 Ccf	\$2.91	\$3.06
Residential - >4 Ccf	\$3.90	\$4.10
Multi-Family / DC Housing	\$3.37	\$3.54
Non-Residential	\$4.05	\$4.25

## 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 WSRF will generate approximately \$39.7 million per year from fiscal years 2019 through 2028. The fee is based upon meter size and average flow. DC Water's low income CAP customers receive a 100% credit for this fee.

Effective October 1, 2017 (FY 2018), DC Water amended the WSRF regulations to add rules and procedures for a Multi-family WSRF adjustment; amend the Customer Classifications to clarify the definitions for Residential, Multi-family and Non-Residential customers to include cooperative housing associations and other clarifications; and amend the definitions set forth in Chapter 41 to define the terms Condominium, Cooperative Housing Association, and Dwelling Unit used in the Customer Classification regulations.

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

The following terms are defined:

**Condominium** – real estate, portions of which are designated for separate ownership and the remainder of which is designated for common ownership solely by the owners of the portions designated for separate ownership, provided the undivided interests in the common elements are vested in the unit owners.

**Cooperative Housing Association** – an association, whether incorporated or unincorporated, organized for the purpose of owning and operating residential real property, the shareholders or members of which, by reason of their ownership of a stock or membership certificate, a proprietary lease or other evidence of membership, are entitled to occupy a dwelling unit pursuant to the terms of a proprietary lease or occupancy agreement.

**Dwelling Unit** – any habitable room or group of rooms with kitchen and bathroom facilities forming a single unit located within a building or structure, which is wholly or partially used or intended to be used for living, sleeping and the preparation and consumption of meals by human occupants, and is under the control of and for the use of the occupant.

### Multi-Year Rates

DC Water moved to a multi-year rate proposal in FY 2016 covering the period FY 2017 and FY 2018. The second time that DC Water had adopted a multi-year rate proposal was in FY 2018 covering the period FY 2019 and FY 2020. The FY 2019 rates became effective from October 1, 2018.

The benefits of multi-year rates include:

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

The proposed CRIAC shift to sewer volumetric with 18% in FY 2020, 28% in FY 2021 and 37% in FY 2022 and beyond is recommended because it balances infrastructure investment with growth in rates. The shift is based on an assessment that on average 37 percent of volume in the tunnels is from wastewater. With the proposed shift the overall household charges increase of 5.7 percent is the same as previously forecasted for FY2020. The gradual shift helps avoid rate shock to customers. The CRIAC for FY 2020 is projected to decrease from \$25.58 to \$20.94 per ERU, per month.

### 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 SAF is assessed for all new buildings, structures or properties under development and properties under redevelopment. For properties under redevelopment, DC Water will determine the net SAF 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 SAF, the net SAF shall be zero. Properties under redevelopment shall not receive a credit for accounts that are inactive for more than 12 months.

DC Water has determined that implementing the SAF regulations on the effective date of January 1, 2018 could present significant fiscal impacts to the District's New Communities Initiative, which includes redevelopment, one for one replacement and/or augmentation, of affordable housing units. On March 1, 2018, the DC Water Board considered comments received during the SAF public comment period and agreed to; 1) Extend the SAF effective date from January 1, 2018 to June 1, 2018 for DCRA Construction Permit Applicants and federal facilities 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; 2) Revised the DC Water guidance document used to determine the SAF meter size from DC Water Standard Details and Guideline Masters to DC Water's Sizing Instructions and Worksheets; 3) Added procedures and requirements to receive credits for Affordable Housing Units (AHU) development and redevelopment; 4) Clarified the requirements for projects submitted prior to the effective date of June 1, 2018 and approved by June 1, 2019; 5) Added formulas to clarify how the SAF is calculated with the SAF credit, AHU credit and Net AHU credit; 6) Clarified requirements for Payment Plan Agreement; 7) Properties under redevelopment shall not receive a credit for accounts that are inactive for more than 24 months.

Effective June 1, 2018, DCRA Construction Permit Applicants and federal facilities shall be assessed a 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:

SAF Meter Size (inches)	Water System Availability Fee	Sewer System Availability Fee	Total System Availability Fee
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:

SAF Meter Size (inches)	Water System Availability Fee	Sewer System Availability Fee	Total System Availability Fee
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** – construction of a premises, building or structure that establishes a new water and/or sewer connection.

**Redevelopment** – 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.

**Affordable Housing Unit (AHU)** – A housing unit that is offered for rent or sale for residential occupancy and as a result of a federal or District subsidy, incentive or benefit, and is made available and affordable to households whose income limit requirements are established by the federal or District program or agency or the Council for the District of Columbia.

**Force Majeure Event** – an event arising from causes beyond the control of DC Water or the control of any entity controlled by DC Water, which results in the closure of DC Water facilities.

**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, 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 March 2, 2017, the Board approved the expansion of 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 CRIAC. The CRIAC became effective May 1, 2017.

### Clean Rivers Impervious Area Charge (CRIAC)

In September 2018, DC Water formed the 19-member Stakeholder Alliance (DCWSA) to provide independent advice and a diversity of viewpoints to DC Water Management on a variety of programs and policies; increase customer education by providing DC Water with new opportunities for outreach; and propose to DC Water ways to continue effective and efficient long-term public involvement with improved communication tools.

DCWSA conducted several meetings to discuss the Clean Rivers Impervious Area Charge (CRIAC) and options to mitigate the rapidly increasing CRIAC. Some of the possible criteria included: 1) equitableness; 2) administrative feasibility; 3) revenue neutrality; 4) legal challenges and defensibility, 5) executable; and 6) adheres to industry practice.

DC Water's Department of Engineering and Technical Services (DETS) proposed two methodologies for shifting cost from the CRIAC to sewer volumetric rate. The two methodologies that were calculated: 1) 18% Shift – calculated based on an average of pollutants concentrations in sanitary wastewater, stormwater runoff and Combined Sewer Overflow (CSO); and 2) 37% Shift – calculated based on volume of sanitary wastewater, stormwater runoff and CSO. The 18% shift calculation and methodology has a lot more variation in the pollutant concentrations depending on the data used and the time of year. Management determined that the 37% Shift volumetric methodology has a greater justification, more easily defended and could be phased-in.

However, based on meetings with the DCWSA and discussions with the customer groups, an 18% CRIAC shift to sewer volumetric rate was proposed for FY 2020 in order for the rates and charges to be fair and equitable for all customers.

After considering all possible criteria and customer impacts, the Board agreed to a proposal shifting 37% cost from the CRIAC to sewer volumetric rate to be phased-in 18% in FY 2020, 28% in FY 2021 and 37% in FY 2022, effective October 1, 2019.

### Clean Rivers Impervious Area Charge Incentive Program Discount

On October 1, 2013, DC Water's Board established the Clean Rivers Area Incentive Program Discount for stormwater best management practices, which provided a 4% maximum incentive discount off the chargeable CRIAC for customers that installed certain eligible stormwater best management practices that reduce the amount of stormwater runoff generated from a property.

The general public and DCWSA voiced concerns that the Clean Rivers Area Program Discount 4% maximum incentive for stormwater was too low and did not incentivize customers to install best management practices.

DC Water's management analyzed and evaluated the Clean Rivers Area Program Discount historical data and determined that it was feasible to increase the CRIAC incentive discount for customers that installed certain eligible stormwater best management practices.

On April 4, 2019, DC Water’s Board adopted a proposal to increase the maximum CRIAC incentive discount from 4% to 20%, effective October 1, 2019.

The Board has approved the following rates and fees to be effective from October 1, 2018:

- Water volumetric rates:
  - Residential customers: “Consumption of 0 – 4 Ccf” - water rate decrease of \$0.48 per Ccf, {\$0.64 per 1,000 gallons} from \$3.39 per Ccf to \$2.91 per Ccf, {\$3.89 per 1,000 gallons}
  - Residential customers: “Consumption greater than 4 Ccf” - water rate decrease of \$0.36 per Ccf, {\$0.49 per 1,000 gallons} from \$4.26 per Ccf to \$3.90 per Ccf, {\$5.21 per 1,000 gallons}
  - Multi-family customers: water rate decrease of \$0.43 per Ccf, {\$0.57 per 1,000 gallons} from \$3.80 per Ccf to \$3.37 per Ccf, {\$4.51 per 1,000 gallons}
  - Non-Residential customers: water rate decrease of \$0.35 per Ccf, {\$0.46 per 1,000 gallons} from \$4.40 per Ccf to \$4.05 per Ccf, {\$5.42 per 1,000 gallons}
- Sewer rate increase of \$1.75 per Ccf, {\$2.34 per 1,000 gallons} for all classes of customers from \$6.00 per Ccf to \$7.75 per Ccf, {\$10.36 per 1,000 gallons}
- Monthly Clean Rivers Impervious Area Charge (CRIAC) decrease of \$2.18 from \$25.18 per ERU to \$23.00 per ERU
- Clean Rivers Impervious Area Charge (CRIAC) six-tier residential rates structure is shown in the table below:

Tiers	Residential Impervious Area Range	ER U
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 2018. 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 same at \$0.18 per Ccf, {\$0.24 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 \$0.50 per Ccf, (\$0.67 per 1,000 gallons)
- These changes increased the typical residential customer’s total monthly bill by \$6.02 or 5.9 percent

The Board has proposed the following changes in the rates and fees for rate making to be effective from October 1, 2019:

- **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 \$2.91 per Ccf to \$3.06 per Ccf, {\$4.09 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 \$3.90 per Ccf to \$4.10 per Ccf, {\$5.48 per 1,000 gallons}
  - Multi-family customers: water rate increase of \$0.17 per Ccf, {\$0.22 per 1,000 gallons} from \$3.37 per Ccf to \$3.54 per Ccf, {\$4.73 per 1,000 gallons}
  - Non-Residential customers: water rate increase of \$0.20 per Ccf, {\$0.26 per 1,000 gallons} from \$4.05 per Ccf to \$4.25 per Ccf, {\$5.68 per 1,000 gallons}
- Sewer rate increase of \$1.14 per Ccf, {\$1.53 per 1,000 gallons} for all classes of customers from \$7.75 per Ccf to \$8.89 per Ccf, {\$11.89 per 1,000 gallons}
- Monthly Clean Rivers Impervious Area Charge (CRIAC) decrease of \$2.06 from \$23.00 per ERU to \$20.94 per ERU
- The WSRF recovers the cost of 1% renewal and replacement program for water service lines. There will be no increase in WSRF. The WSRF varies with meter size. 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 \$0.51 per Ccf, {\$0.68 per 1,000 gallons}
  - Increase of \$0.01 in the ROW fee, {\$0.01 per 1,000 gallons} to \$0.19 per Ccf, {\$0.25 per 1,000 gallons}
- These changes increased the typical residential customer’s total monthly bill by \$6.17 or 5.7 percent

The ten-year projected water and sewer rate increases under this year's plan (FY 2019 – FY 2028) total 86.0 percent driven primarily by capital spending for DC Water's \$5.0 billion capital improvement program.

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

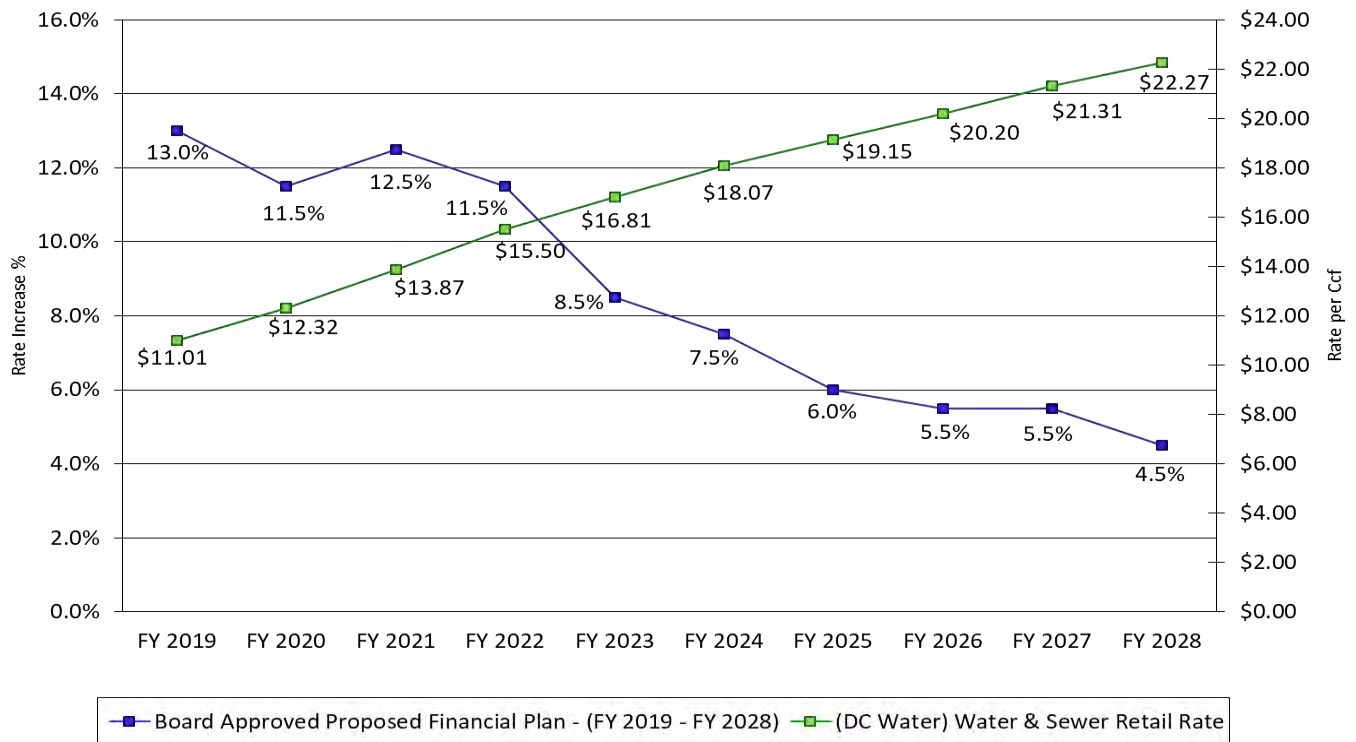
Based on feedback from the new Stakeholder Alliance and discussions with customers about the Clean Rivers Impervious Area Charge (CRIAC) that funds the Clean Rivers Program, there is a proposal for FY 2020 to shift 18 percent of the costs for the Clean Rivers program from the CRIAC to the sewer volumetric rate. This will increase to 28 percent in FY 2021 and 37 percent in FY 2022. This is based on an assessment that, on average, 37 percent of the volume in the new tunnels is from wastewater. With the proposed shift, the overall household charges increase of 5.7 percent is the same as previously forecasted for FY 2020.

The public outreach and comment process for the rate proposal for FY 2020 will occur between May and June 2019. With the approval of the rates by DC Water Board, these changes will increase the typical residential customer's monthly bill by \$6.17 or 5.7 percent in FY 2020 as shown on page IV–27.



## PROJECTED RETAIL WATER & SEWER RATE CHANGES

FY 2019 – FY 2028



- 1) Rates shown above reflect weighted water and sewer rates for Residential customer category
- 2) In FY 2020 approved water and sewer rate increase of \$1.31 per Ccf, (\$1.75 per 1,000 gallons)
  - Combined water and sewer rate increases from \$11.01 to \$12.32 per Ccf
- 3) Rate increase of 11.5 percent for FY 2020

## PROJECTED MONTHLY CLEAN RIVERS IMPERVIOUS SURFACE AREA CHARGE (CRIAC) CHANGES

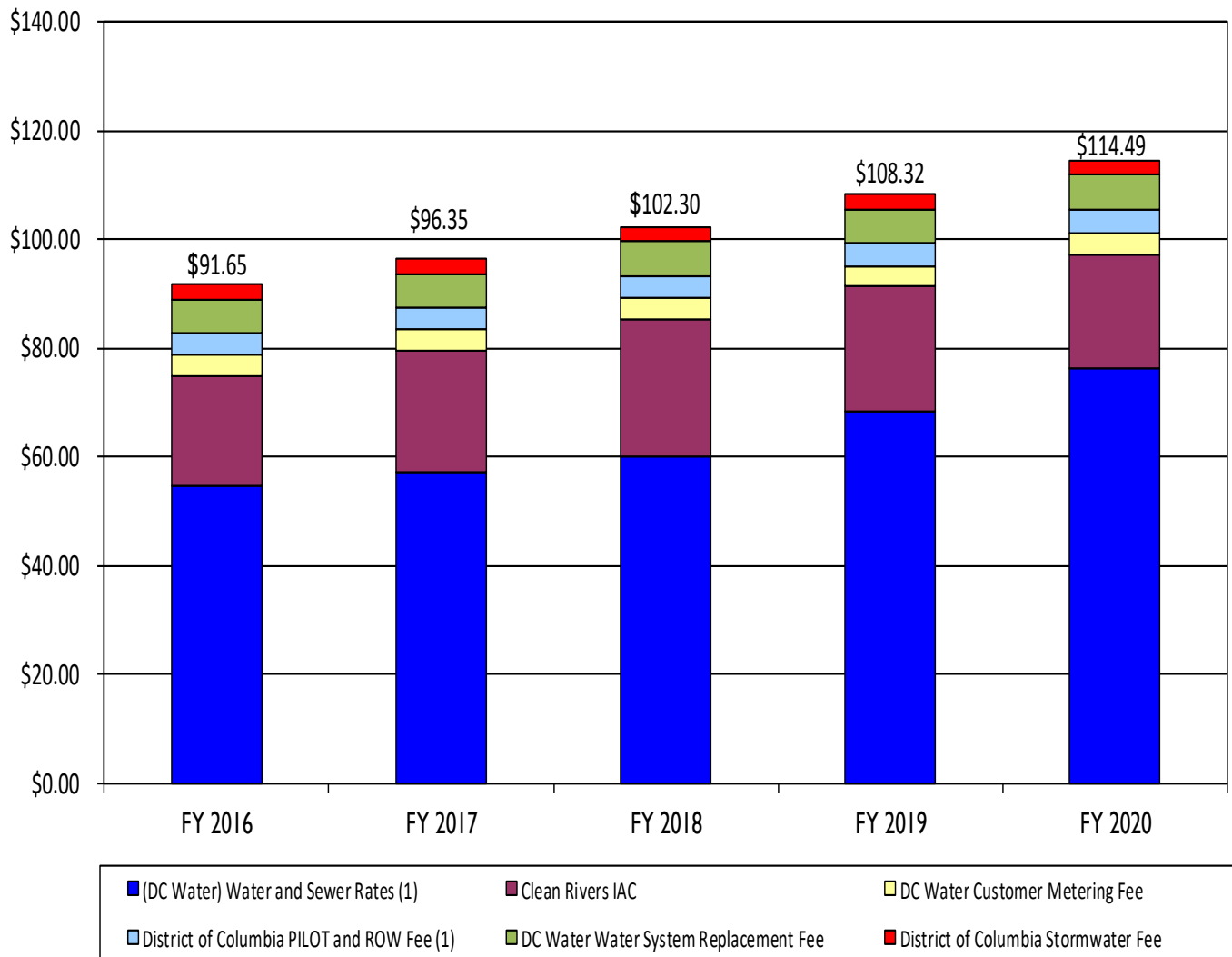
FY 2019 – FY 2028



- The projected charges displayed in the chart above are primarily driven by anticipated debt service costs necessary to support the twenty-five year \$2.7 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 \$251.28 in FY 2020 to \$351.72 in FY 2028
- The proposed CRIAC shift to sewer volumetric with 18% in FY 2020, 28% in FY 2021 and 37% in FY 2022 and beyond is recommended because it balances infrastructure investment with growth in rates. The shift is based on an assessment that on average 37 percent of volume in the tunnels is from wastewater. With the proposed shift the overall household charges increase of 5.7 percent is the same as previously forecasted for FY2020. The gradual shift helps avoid rate shock to customers. The CRIAC for FY 2020 is projected to decrease from \$25.58 to \$20.94 per ERU, per month.

## AVERAGE RESIDENTIAL CUSTOMER MONTHLY BILL

FY 2016 – FY 2020



- (1) Assumes average monthly consumption of 6.20 Ccf, or 4,638 gallons  
 - FY 2020 cost per gallon is a little over \$0.01 (water and sewer rates only)

## AVERAGE RESIDENTIAL CUSTOMER MONTHLY BILL

### FY 2016 – FY 2020

	Units	FY 2016	FY 2017	FY 2018	Current FY 2019	Proposed FY 2020
DC Water Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$ 54.56	\$ 57.25	\$ 60.13	\$ 68.27	\$ 76.38
DC Water Clean Rivers IAC <sup>(2)</sup>	ERU	20.30	22.24	25.18	23.00	20.94
DC Water Customer Metering Fee	5/8"	3.86	3.86	3.86	3.86	3.86
DC Water Water System Replacement Fee <sup>(4)</sup>	5/8"	6.30	6.30	6.30	6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		<b>\$ 85.02</b>	<b>\$ 89.65</b>	<b>\$ 95.47</b>	<b>\$ 101.43</b>	<b>\$ 107.48</b>
Increase / Decrease		\$ 10.97	\$ 4.63	\$ 5.82	\$ 5.96	\$ 6.05
District of Columbia PILOT Fee <sup>(1)</sup>	Ccf	\$ 2.91	\$ 2.98	\$ 3.04	\$ 3.10	\$ 3.16
District of Columbia Right-of-Way Fee <sup>(1)</sup>	Ccf	1.05	1.05	1.12	1.12	1.18
District of Columbia PILOT/ROW Fee <sup>(1)</sup>	Ccf	3.96	4.03	4.16	4.22	4.34
District of Columbia Stormwater Fee <sup>(3)</sup>	ERU	2.67	2.67	2.67	2.67	2.67
<b>Subtotal District of Columbia Charges</b>		<b>\$ 6.63</b>	<b>\$ 6.70</b>	<b>\$ 6.83</b>	<b>\$ 6.89</b>	<b>\$ 7.01</b>
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 91.65</b>	<b>\$ 96.35</b>	<b>\$ 102.30</b>	<b>\$ 108.32</b>	<b>\$ 114.49</b>
Increase / Decrease Over Prior Year		\$ 11.03	\$ 4.70	\$ 5.95	\$ 6.02	\$ 6.17
<b>Percent Increase in Total Bill</b>		<b>13.7%</b>	<b>5.1%</b>	<b>6.2%</b>	<b>5.9%</b>	<b>5.7%</b>

(1) Assumes average monthly consumption of 6.2 Ccf, or (4,638 gallons)

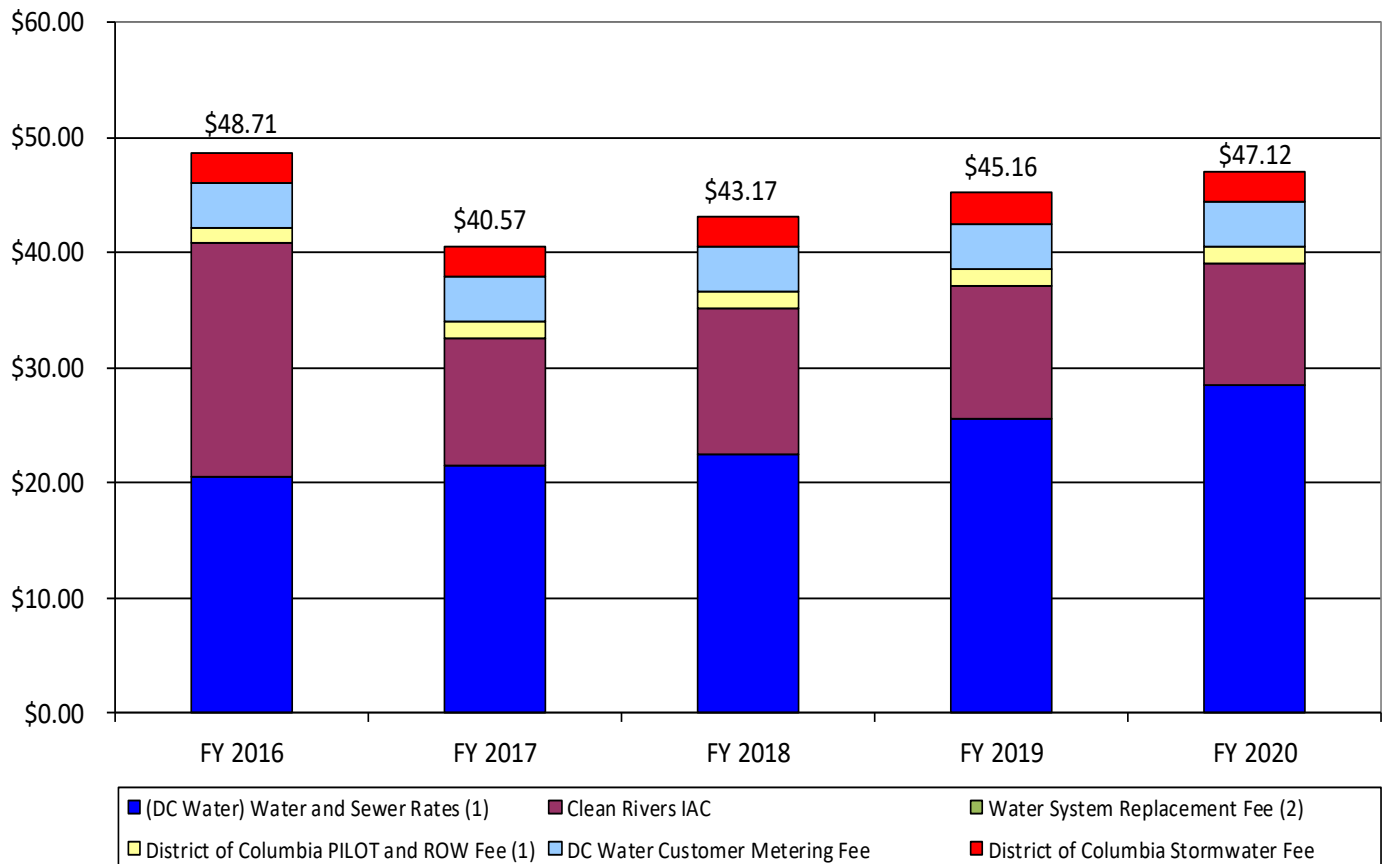
(2) Assumes average 1 Equivalent Residential Unit (ERU)

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

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

## AVERAGE CAP CUSTOMER MONTHLY BILL

FY 2016 – FY 2020



- 1) Assumes average monthly consumption of 6.20 Ccf, or 4,638 gallons
  - FY 2020 cost per gallon is a little over \$0.01 (water and sewer rates only)
- 2) Assumes 100 percent discount for Water System Replacement Fee (WSRF) to CAP customers, therefore, WSRF is not shown in the above graph
- 3) Assumes 50 percent credit for Clean Rivers Impervious Area Charge (CRIAC) to CAP customers

## AVERAGE CAP CUSTOMER MONTHLY BILL

FY 2016 – FY 2020

	Units	FY 2016	FY 2017	FY 2018	Current FY 2019	Proposed FY 2020
DC Water Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$ 54.56	\$ 57.25	\$ 60.13	\$ 68.27	\$ 76.38
DC Water Clean Rivers IAC	ERU	20.30	22.24	25.18	23.00	20.94
DC Water Customer Metering Fee	5/8"	3.86	3.86	3.86	3.86	3.86
DC Water Water System Replacement Fee	5/8"	6.30	6.30	6.30	6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		<b>\$ 85.02</b>	<b>\$ 89.65</b>	<b>\$ 95.47</b>	<b>\$ 101.43</b>	<b>\$ 107.48</b>
Increase / Decrease		\$ 10.97	\$ 4.63	\$ 5.82	\$ 5.96	\$ 6.05
District of Columbia PILOT Fee <sup>(1)</sup>	Ccf	\$ 2.91	\$ 2.98	\$ 3.04	\$ 3.10	\$ 3.16
District of Columbia Right-of-Way Fee <sup>(1)</sup>	Ccf	1.05	1.05	1.12	1.12	1.18
District of Columbia Stormwater Fee <sup>(4)</sup>	ERU	\$ 2.67	\$ 2.67	2.67	2.67	2.67
<b>Subtotal District of Columbia Charges</b>		<b>\$ 6.63</b>	<b>\$ 6.70</b>	<b>\$ 6.83</b>	<b>\$ 6.89</b>	<b>\$ 7.01</b>
<b>Total Amount</b>		<b>\$ 91.65</b>	<b>\$ 96.35</b>	<b>\$ 102.30</b>	<b>\$ 108.32</b>	<b>\$ 114.49</b>
Less: CAP Discount (4 Ccf per month) <sup>(1), (2)</sup>		\$ (36.64)	(38.36)	(40.24)	(45.36)	(50.60)
Water System Replacement Fee (WSRF) <sup>(3)</sup>		\$ (6.30)	(6.30)	(6.30)	(6.30)	(6.30)
Clean Rivers IAC <sup>(5)</sup>		\$ -	(11.12)	(12.59)	(11.50)	(10.47)
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 48.71</b>	<b>\$ 40.57</b>	<b>\$ 43.17</b>	<b>\$ 45.16</b>	<b>\$ 47.12</b>
Increase / Decrease Over Prior Year		\$ 5.09	\$ (8.14)	\$ 2.60	\$ 1.99	\$ 1.96
<b>CAP Customer Discount as a Percent of Total Bill</b>		<b>-46.9%</b>	<b>-57.9%</b>	<b>-57.8%</b>	<b>-58.3%</b>	<b>-58.8%</b>

(1) Assumes average monthly consumption of 6.2 Ccf, or (4,638 gallons)

(2) Expansion of CAP program in FY 2009 to first 4 Ccf of Water and Sewer and the first 4 Ccf of PILOT and ROW in FY 2011

(3) Assumes 100 percent discount for Water System Replacement Fee (WSRF) to CAP customers effective October 1, 2015

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

(5) Assumes 50 percent discount for the Clean Rivers IAC effective May 1, 2017



## AVERAGE CAP2 CUSTOMER MONTHLY BILL

FY 2019 – FY 2020

	Units		Current FY 2019	Proposed FY 2020
DC Water Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$	68.27	\$ 76.38
DC Water Clean Rivers IAC	ERU		23.00	20.94
DC Water Customer Metering Fee	5/8"		3.86	3.86
DC Water Water System Replacement Fee	5/8"		6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		\$	<b>101.43</b>	\$ <b>107.48</b>
Increase / Decrease		\$	5.96	\$ 6.05
District of Columbia PILOT Fee	Ccf	\$	3.10	\$ 3.16
District of Columbia Right-of-Way Fee	Ccf		1.12	1.18
District of Columbia Stormwater Fee	ERU		2.67	2.67
<b>Subtotal District of Columbia Charges</b>		\$	<b>6.89</b>	\$ <b>7.01</b>
<b>Total Amount</b>		\$	<b>108.32</b>	\$ <b>114.49</b>
Less: CAP2 Discount (3 Ccf per month) <sup>(2)</sup>			(31.98)	(35.85)
Clean Rivers IAC <sup>(3)</sup>			(11.50)	(10.47)
<b>Total Amount Appearing on DC Water Bill</b>		\$	<b>64.84</b>	\$ <b>68.17</b>
Increase / Decrease Over Prior Year		\$	-	\$ <b>3.33</b>
<b>CAP Customer Discount as a Percent of Total Bill</b>			<b>-40.1%</b>	<b>-40.5%</b>

(1) Assumes average monthly consumption of 6.2 Ccf, or (4,638 gallons)

(2) Expansion of CAP2 program in FY 2019 assumes discount to first 3 Ccf of Water and Sewer

(3) Expansion of CAP2 program in FY 2019 assumes 50 percent discount for the Clean Rivers IAC

## AVERAGE CAP3 CUSTOMER MONTHLY BILL

FY 2019 – FY 2020

	Units		Current FY 2019	Proposed FY 2020
DC Water Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$	68.27	\$ 76.38
DC Water Clean Rivers IAC	ERU		23.00	20.94
DC Water Customer Metering Fee	5/8"		3.86	3.86
DC Water Water System Replacement Fee	5/8"		6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		\$	<b>101.43</b>	<b>\$ 107.48</b>
Increase / Decrease		\$	5.96	\$ 6.05
District of Columbia PILOT Fee	Ccf	\$	3.10	\$ 3.16
District of Columbia Right-of-Way Fee	Ccf		1.12	1.18
District of Columbia Stormwater Fee	ERU		2.67	2.67
<b>Subtotal District of Columbia Charges</b>		\$	<b>6.89</b>	<b>\$ 7.01</b>
<b>Total Amount</b>		\$	<b>108.32</b>	<b>\$ 114.49</b>
Less: CAP3 Discount Clean Rivers IAC <sup>(2)</sup>			(17.25)	(15.71)
<b>Total Amount Appearing on DC Water Bill</b>		\$	<b>91.07</b>	<b>\$ 98.78</b>
Increase / Decrease Over Prior Year		\$	-	\$ 7.71
<b>CAP Customer Discount as a Percent of Total Bill</b>			<b>-16.0%</b>	<b>-13.7%</b>

(1) Assumes average monthly consumption of 6.2 Ccf, or (4,638 gallons)

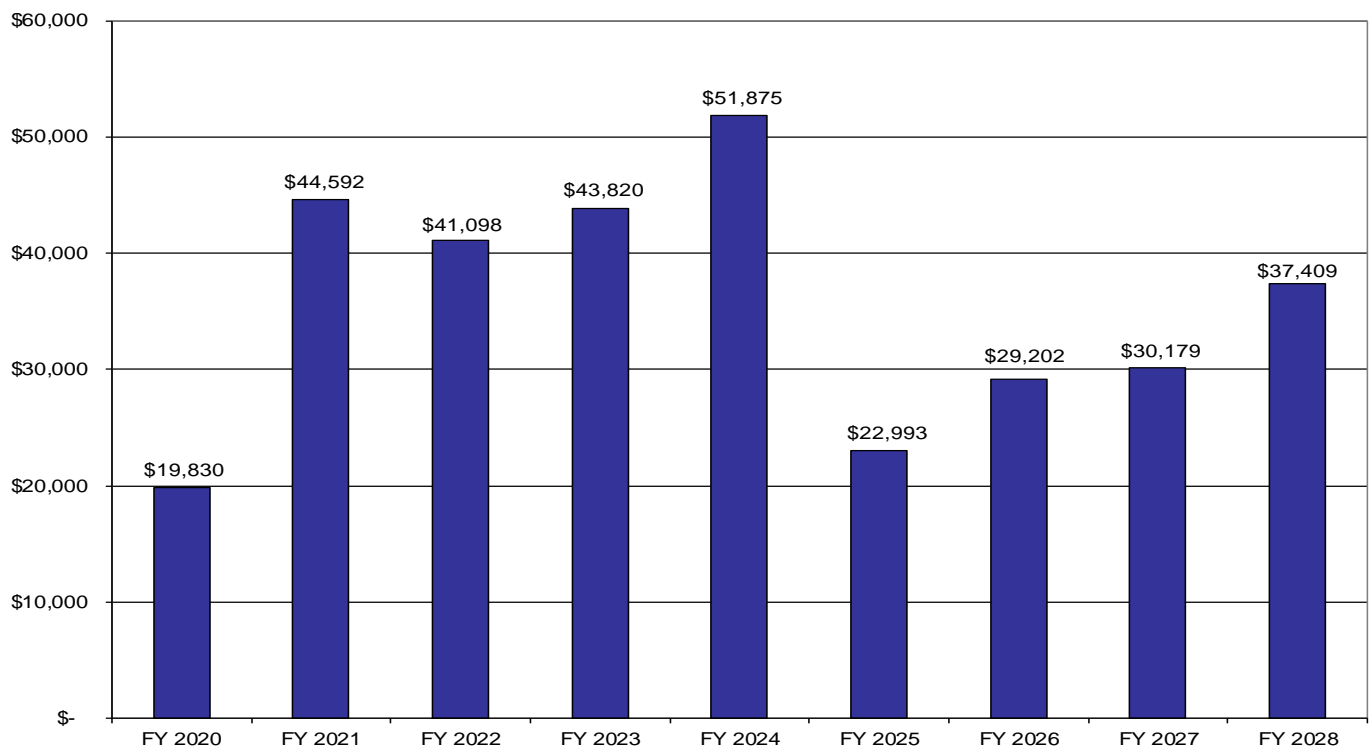
(2) Expansion of CAP3 program in FY 2019 assumes 75 percent discount for the Clean Rivers IAC

## FY 2019 – FY 2028 FINANCIAL PLAN

As shown in the chart below, incremental increases in retail revenues are projected to range from \$19.8 million to \$51.9 million in FY 2020 – FY 2028, due to:

- Average annual debt service increase of 5.9 percent
- Average annual O&M increase of 3.1 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 plan reflects increases in operating and maintenance and increases in debt service cost associated with DC Water's Capital Improvement Program (CIP).

### INCREMENTAL INCREASE IN REVENUES FY 2020 – FY 2028 (\$'000's)

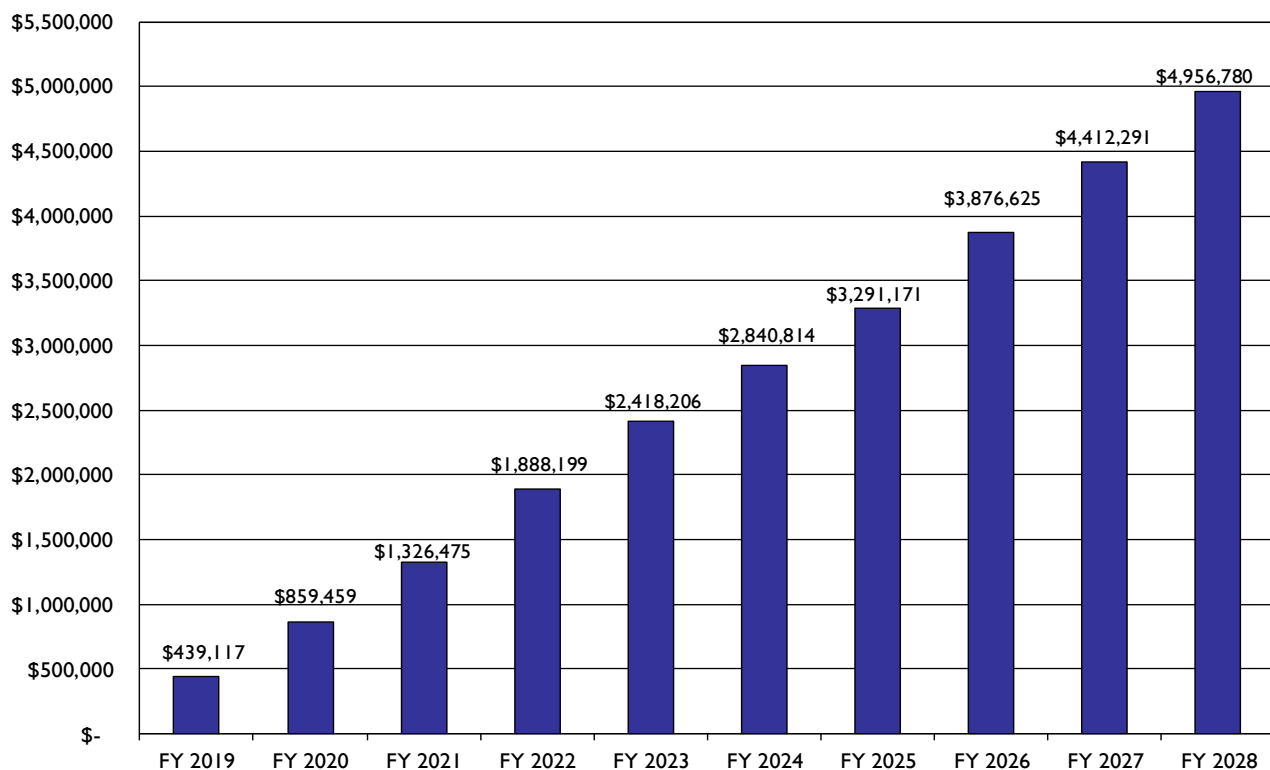


These costs would be recovered through:

- Proposed water and sewer rate increases of 11.5 percent in FY 2020 and 4.5 percent to 12.5 percent from FY 2021 to FY 2028
- Proposed Clean Rivers Impervious Surface Area Charge (CRIAC) revenues ranging from \$20.95 to \$29.31 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 2019 – FY 2028** **(\$000's)**

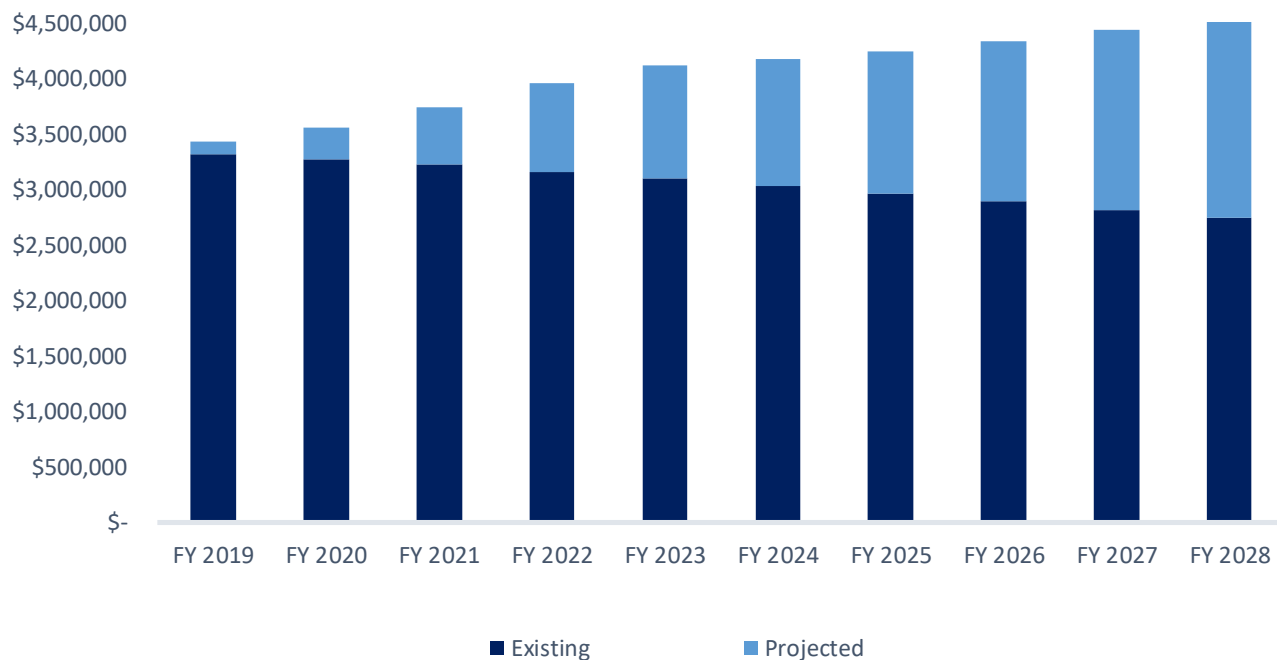


- DC Water's ten-year capital improvement program totals \$5.0 billion, with annual spending ranging from \$420.3 million to \$561.7 million
- Once completed, the ten-year capital improvement project will double the book value of DC Water's infrastructure
- The ten-year plan includes disbursements of the Clean Rivers Project (CSO LTCP), totaling nearly \$1.26 billion exclusive of nine minimum controls
- Water and sewer infrastructure continues to drive the ten-year Capital Improvement Plan from FY 2019 through FY 2028

## NEW & EXISTING DEBT OUTSTANDING

FY 2019 – FY 2028

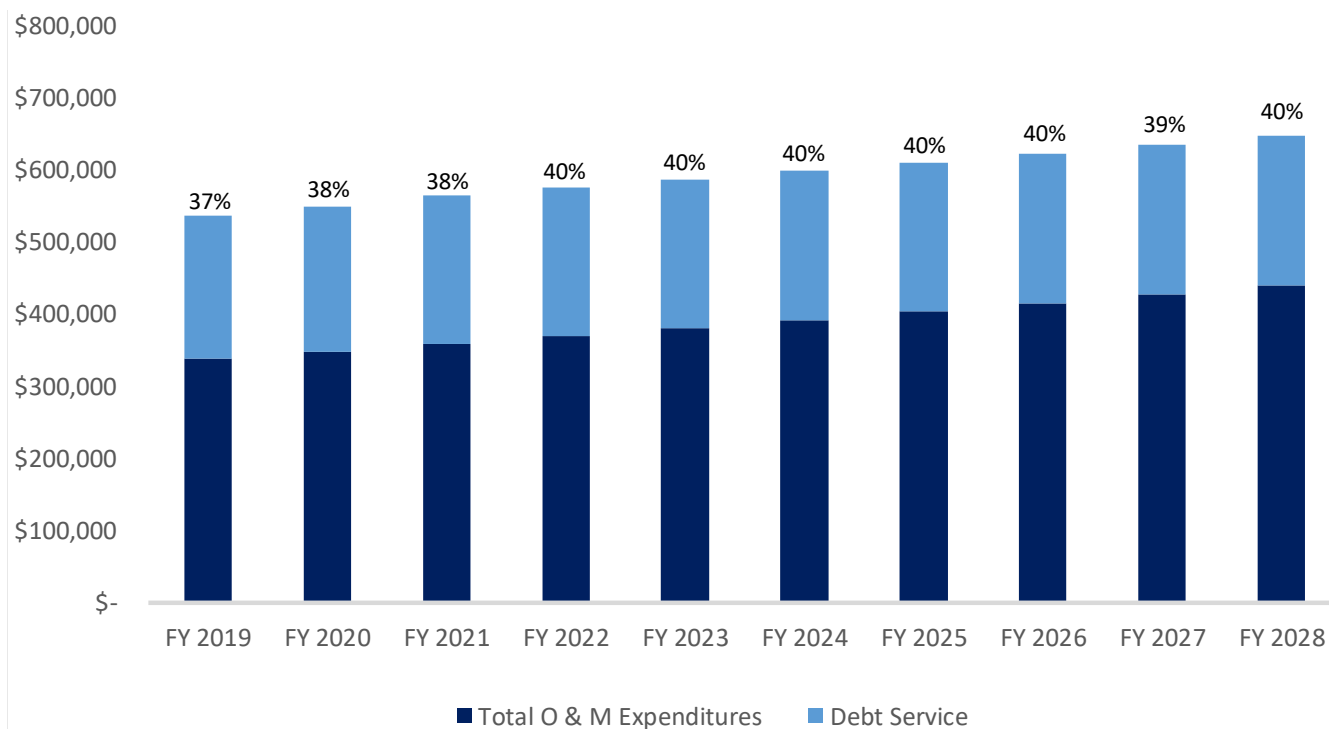
(\$000's)



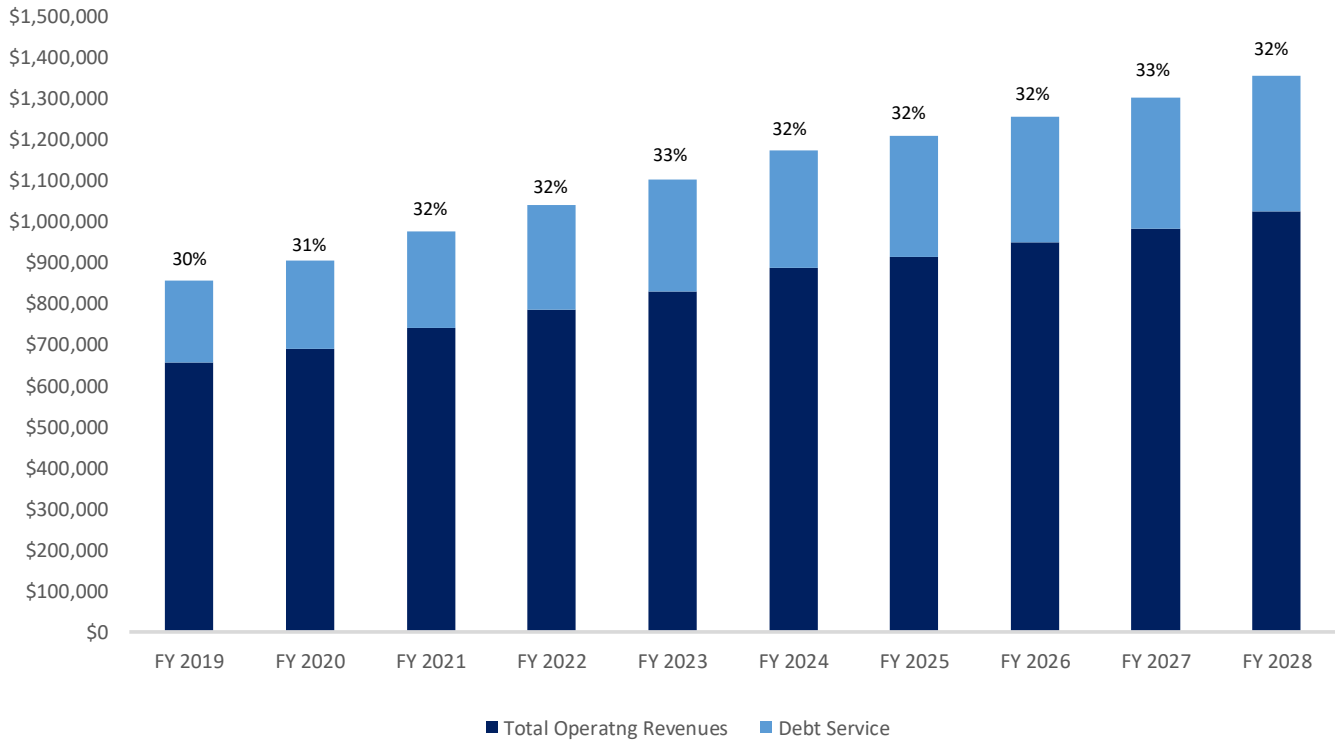
- The largest source of funding for DC Water's capital program is debt
- Over the next ten years, DC Water will issue approximately \$1.8 billion in new debt (which includes the funding of reserves and costs of issuance), increasing total debt outstanding to \$4.6 billion at the end of FY 2028



## DEBT SERVICE AS PERCENT OF TOTAL OPERATING & MAINTENANCE EXPENDITURES FY 2019 – FY 2028 (\$000's)



## DEBT SERVICE AS PERCENT OF TOTAL OPERATING REVENUES FY 2019 – FY 2028 (\$000's)



## OPERATING & DEBT SERVICE EXPENDITURES

FY 2019 – FY 2028

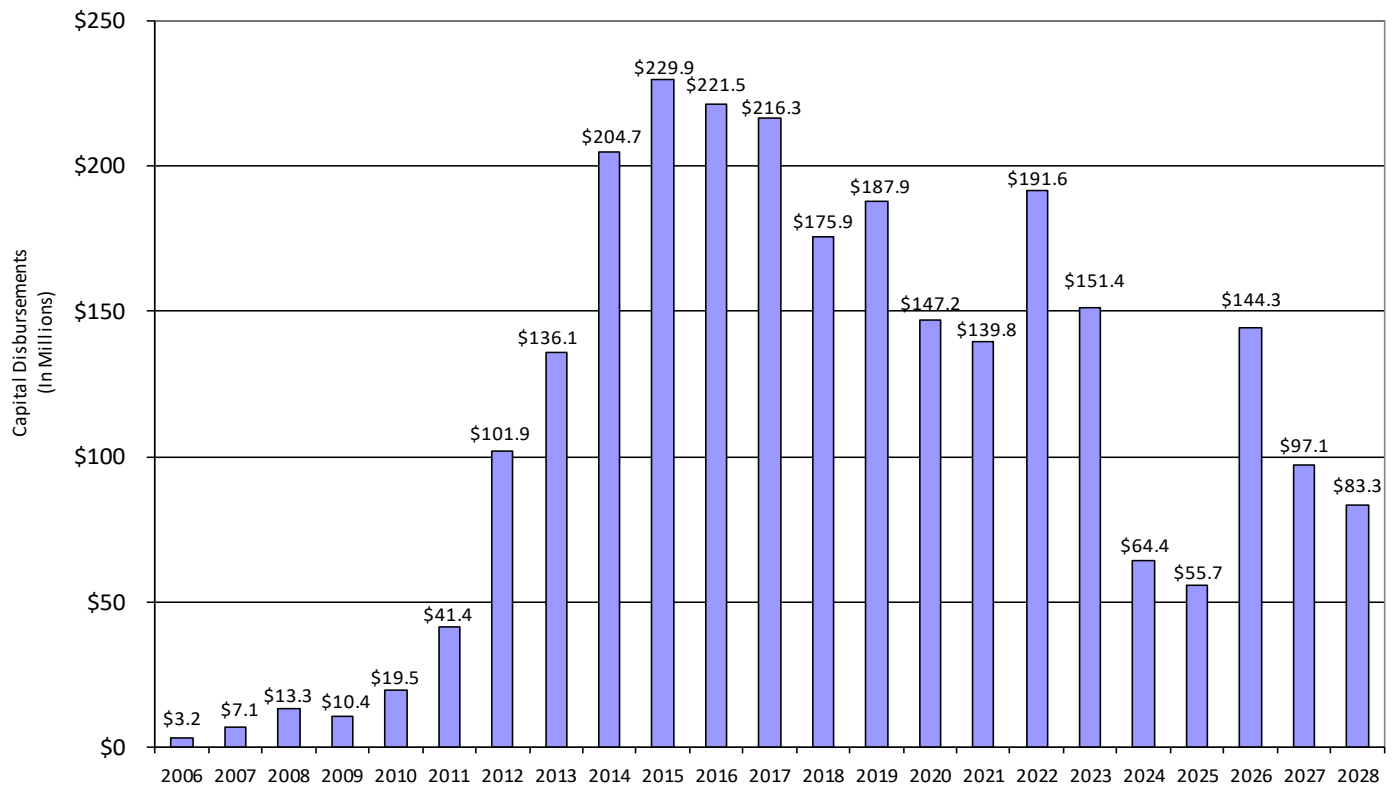
Over the ten-year period, total expenditures increase on average by 4.2 percent annually

***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 3.1 percent annually
- Debt service expenditures grow at an annual average rate of 5.9 percent
- This year’s ten-year plan reflects increases in operating and maintenance and increases in debt service costs associated with DC Water’s Capital Improvement Program (CIP)

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

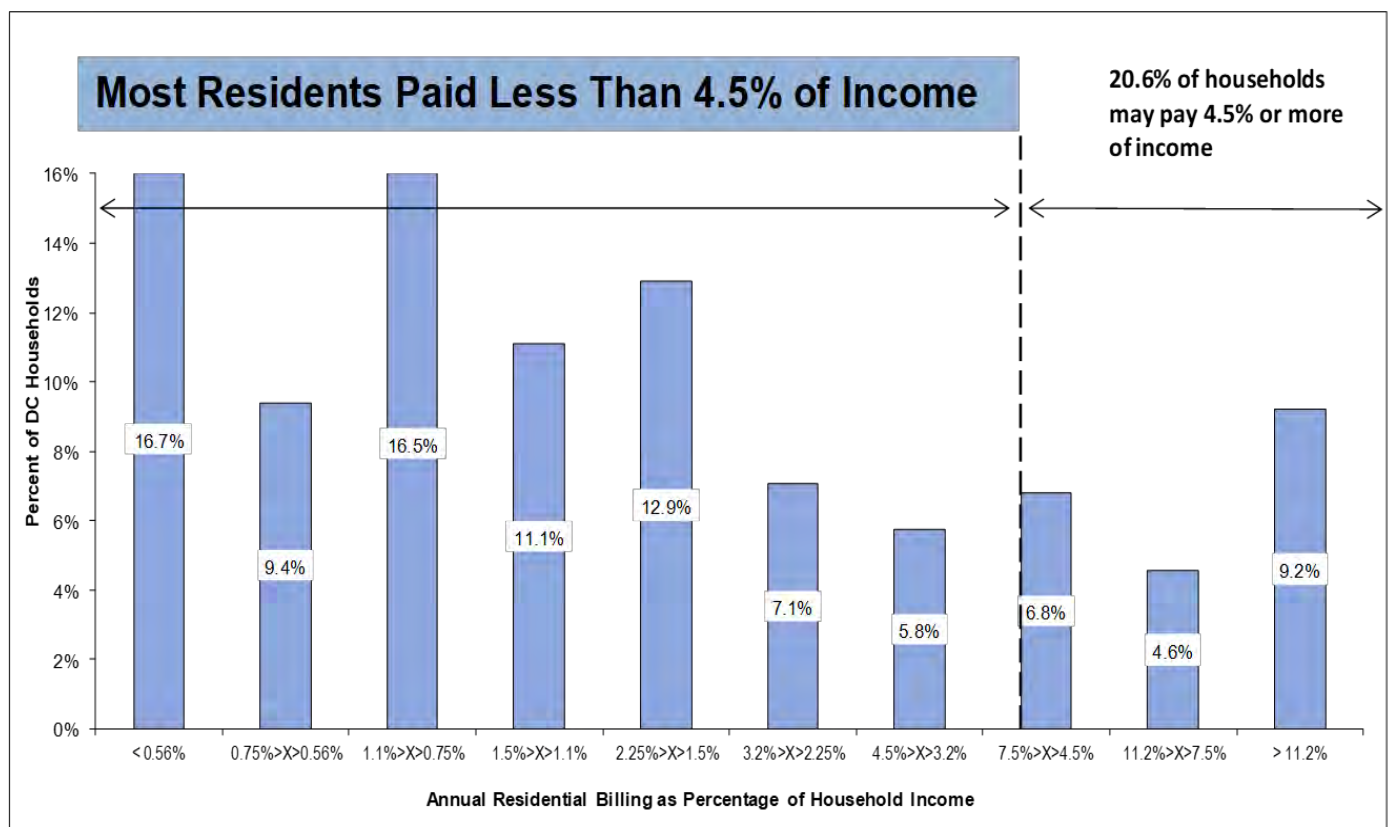
### Clean Rivers CSO LTCP Disbursements by Fiscal Year



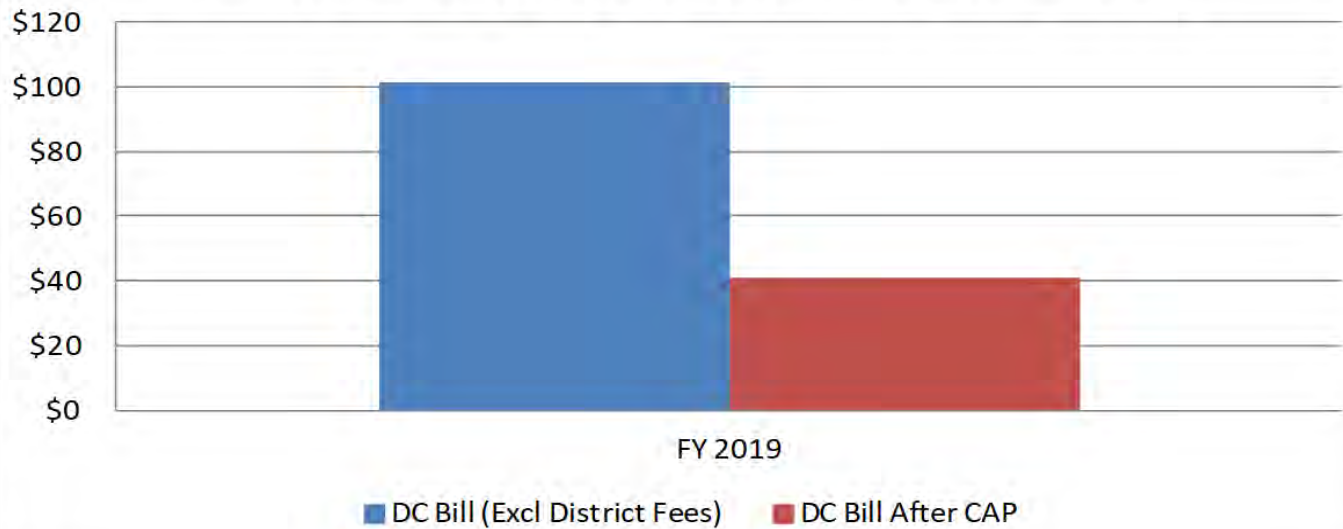
In December 2004, the Board reached an agreement with the federal government on the Clean Rivers Project (CSO-LTCP) and entered into a related consent decree. Actual and projected disbursements by fiscal year for the Clean Rivers Project are shown in the chart above and are the drivers for changes in 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, 2018, \$252.8 million has been received through federal appropriations. Lifetime capital costs for the plan (exclusive of the nine – minimum controls program) total approximately \$2.7 billion, and this year’s proposed ten-year plan includes \$1.26 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 4.5% of income for 79.4% 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)
- **Customer Assistance Programs** are in place to help eligible low income customers with their water/sewer bills



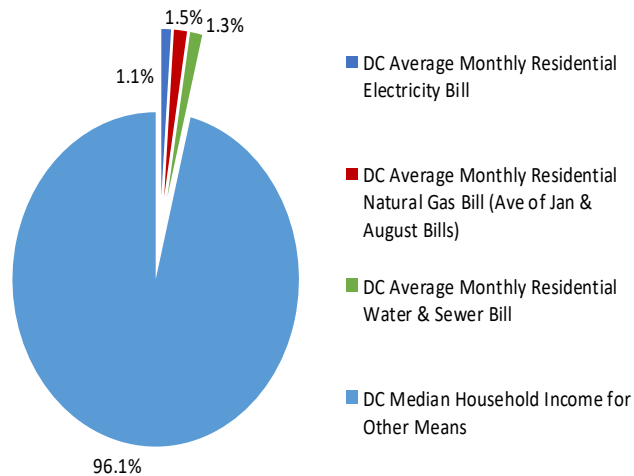
## FY 2019 Single Family Residential Average Monthly Bill With and Without CAP Credits



- After CAP credits, a family of 4 at the 2018 Federal Poverty level spends 1.96% of income on DC Water Bills



## 2017 Monthly DC Median Household Income



### Observation:

- DC Water's average monthly residential water & sewer bill is about 1.4 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

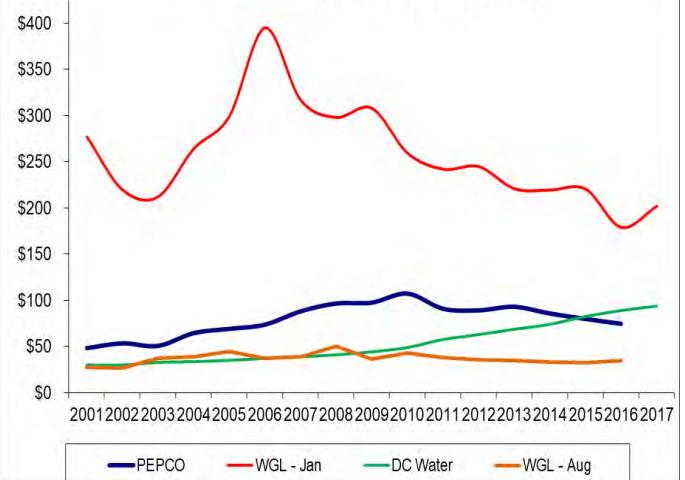
#### Source

Electricity and Gas: DC Public Service Commission

Water and Sewer: DC Water Assuming 6.20 Ccf, or 4,638 gallons consumption

Median HH Income: US Census Bureau, American Community Survey 2017 1-Year Estimates

## Monthly Residential Utility Bills



### Observation:

- Average natural gas is higher than water & sewer bills

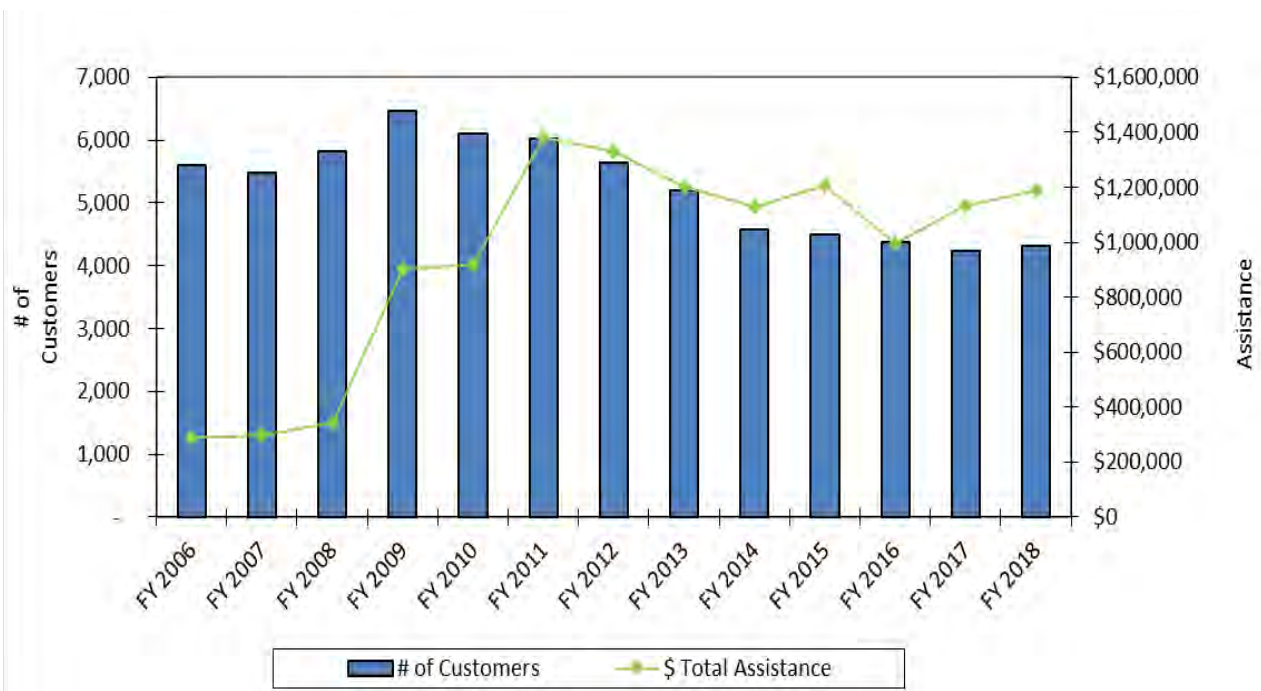
### Assumption:

- Average DC customer is assumed to use 6.20 Ccf of water, 200 Therms of natural gas and 604 kWh of electricity per month in 2016

## 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 (WSRF). In FY 2017, the Authority further expanded the CAP to include 50 percent discount for CRIAC. In FY 2018, CAP assisted over 4,324 customers and provided \$1,188,574 in discounts to low-income customers. In FY 2018, the District of Columbia's Budget Support Act authorized the Mayor to establish a financial assistance program to assist residential customers with incomes "not exceeding 100% of the area median income" with payment of CRIAC and to supplement the financial assistance programs implemented by DC Water. On December 6, 2018, the DC Water Board approved resolution #18-80 to expand the Customer Assistance Program (CAP) to establish rules for DC Water's CAP2. Under CAP2 program, eligible single-family or individually metered residential customers shall receive a discount of up to 3 Ccf on their billed water and sewer service charges and 50% on their billed CRIAC in FY 2019.

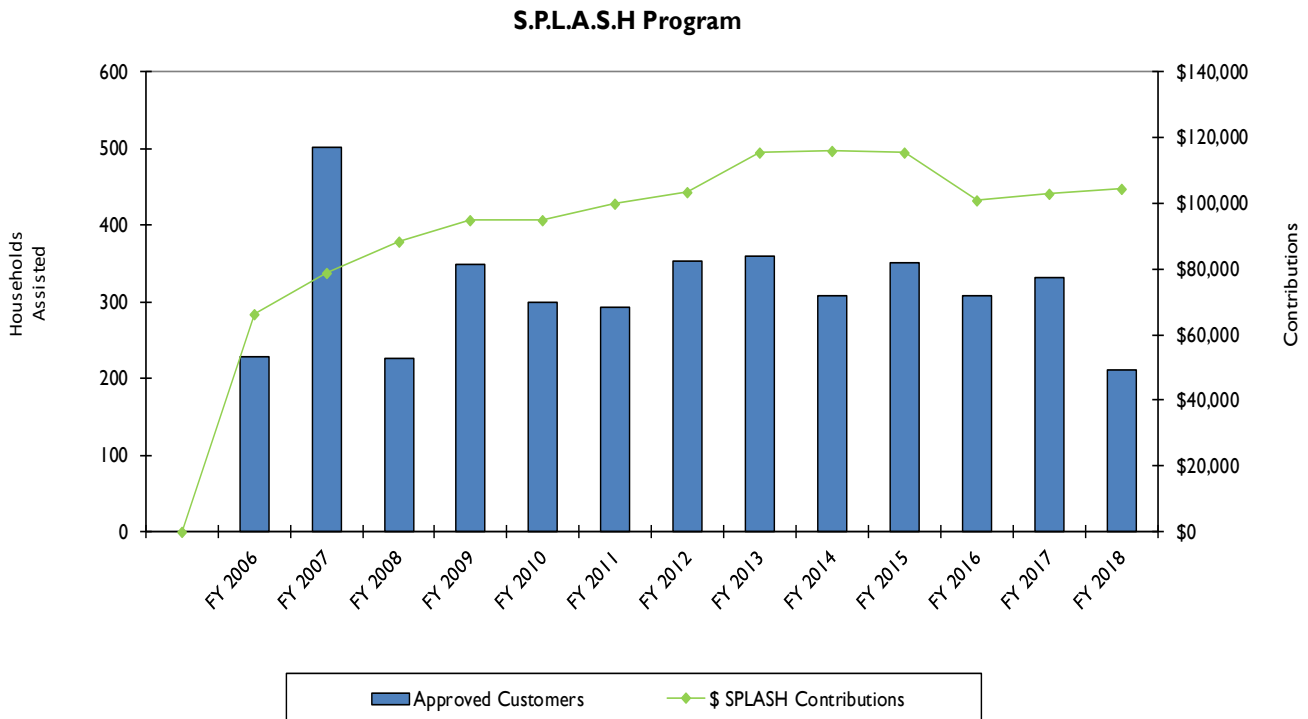
**Customer Assistance Program**



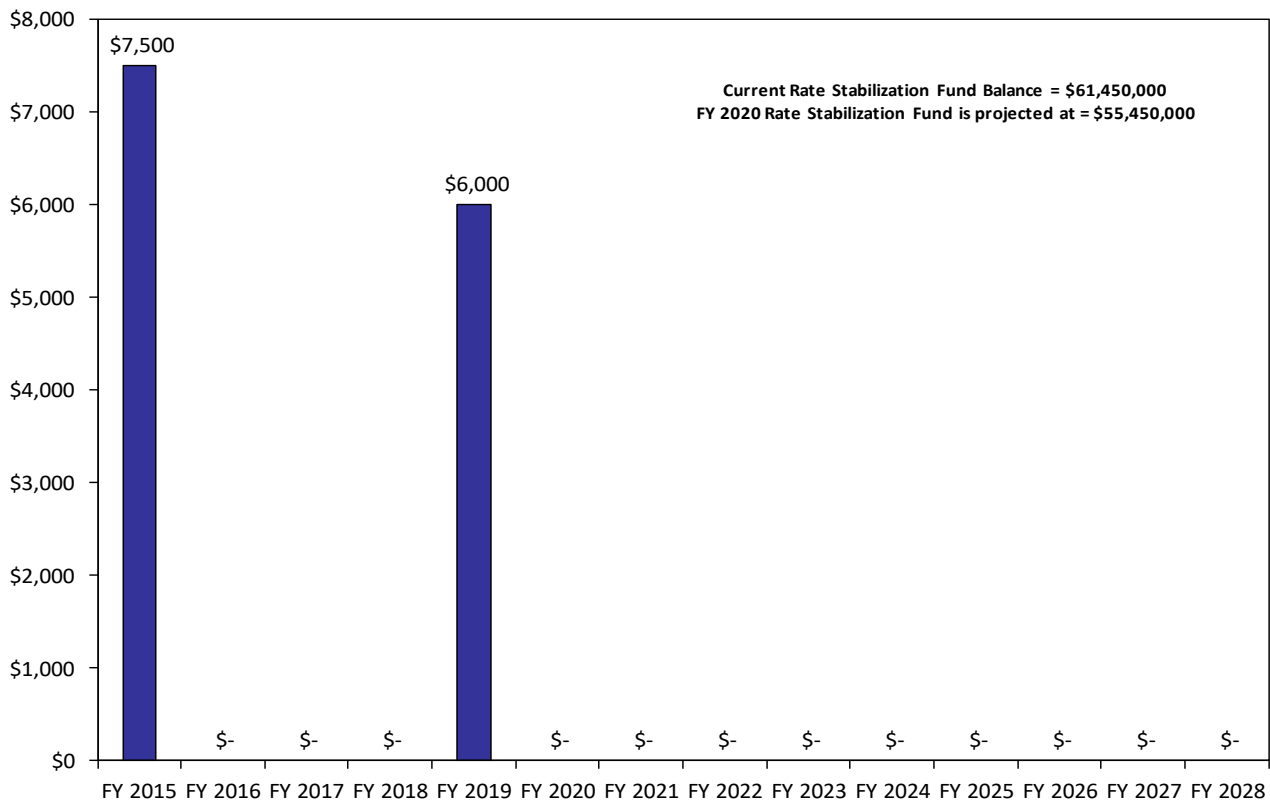
The following terms are defined:

- **Customer Assistance Program (CAP)** – Existing program that uses LIHEAP (Low Income Home Energy Assistance Program) criteria to provide DC Water-funded discounts to low-income residential customers with incomes up to 60 percent of the State Median Income (SMI from Health and Human Services (HHS)). Eligible customers receive the first 4 Ccf of water and sewer services, PILOT and ROW, 100 percent discount for the Water System Replacement Fee (WSRF) and 50 percent discount for the CRIAC.
- **Customer Assistance Program II (CAP2)** – DC Water’s proposed expanded program for low-income residential customers who do not qualify for CAP with household income up to 80% Area Median Income (AMI). Eligible customers receive a discount of up to 3 Ccf per month for water and sewer services and a 50 percent discount for CRIAC.
- **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% Area Median Income (AMI) who do not qualify for CAP or CAP2. Eligible customers receive a 75 percent discount for CRIAC.
- **CRIAC (Clean Rivers Impervious Area Charge) Nonprofit Relief Program** – New District-funded program to provide CRIAC credits to nonprofit organizations as determined by the District Department of the Environment (DOEE). Eligible customers receive up to 90 percent discount for CRIAC.

- **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 2018, SPLASH assisted 212 households and provided \$104,361 in contributions to low-income customers.



## RATE STABILIZATION FUND USAGE FY 2019 - FY 2028 (\$000's)



- At the end of FY 2018, DC Water's rate stabilization fund (RSF) balance was \$61.45 million. As approved by the Board, \$6.0 million RSF will be utilized in FY 2019 to fund the CAP2 program. No RSF is proposed to be utilized from FY 2020 to FY 2028. RSF will have a balance of \$55.45 million at the end of FY 2028.

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 November 2018, DC Water's charges for a single family residential customer as a percentage of median income, excluding District fees, were comparable to the average of other large and regional water and wastewater utilities.

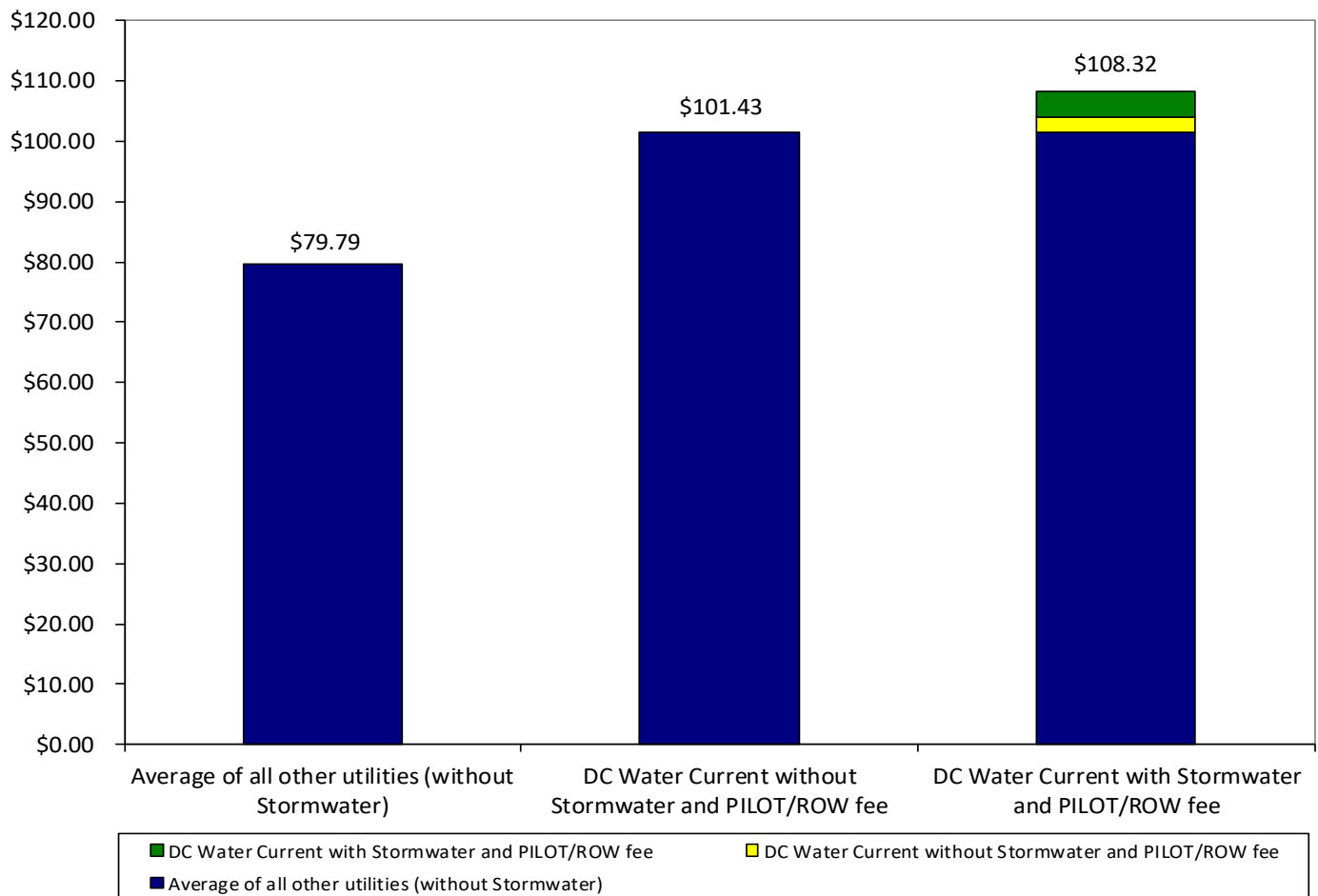
The following charts provide DC Water combined water, sewer and stormwater charges for single family residential customers compared to: large CSO communities, other similar large jurisdictions and other regional jurisdictions. There are distinct differences between DC Water and other large and regional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

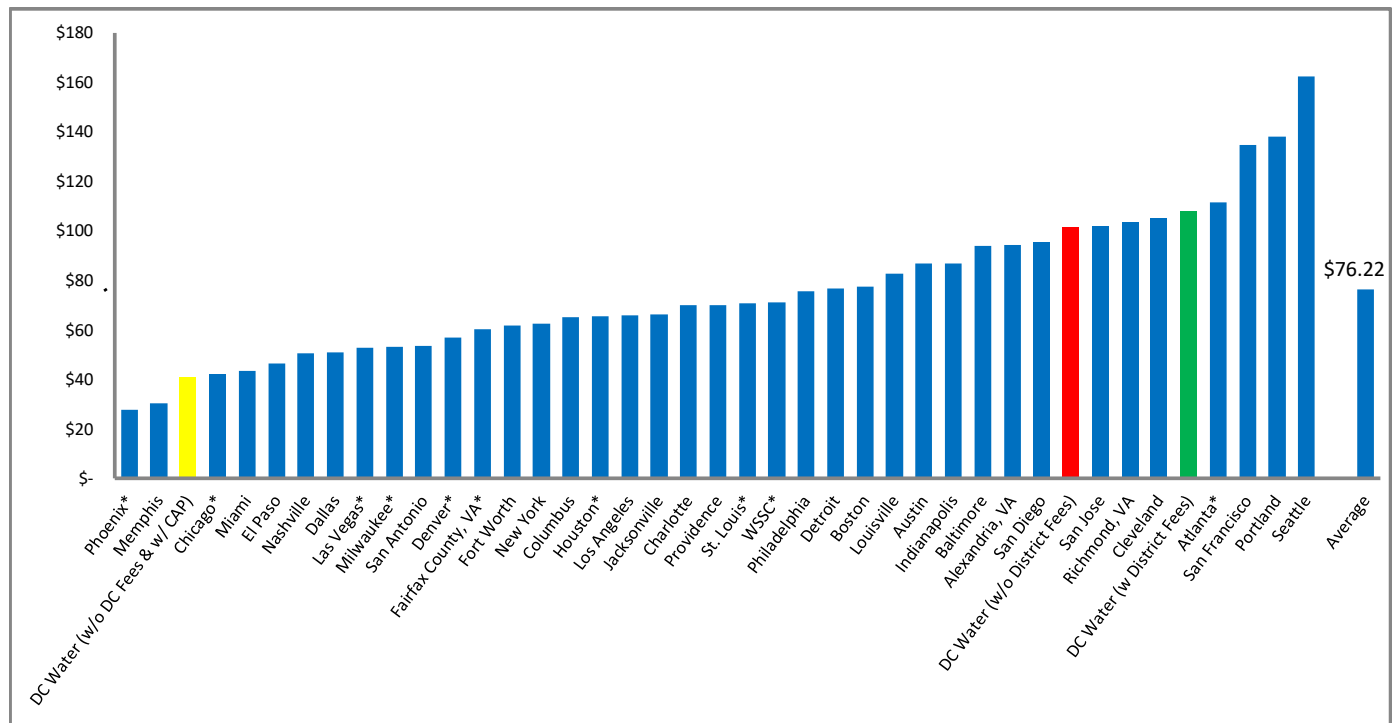


## DC WATER'S RETAIL RATES ARE COMPARABLE TO OTHER UTILITIES

### DC Water's Current FY 2019 Monthly Residential Bill vs. Average Monthly Bill of Other Utilities in Effect Fall 2018



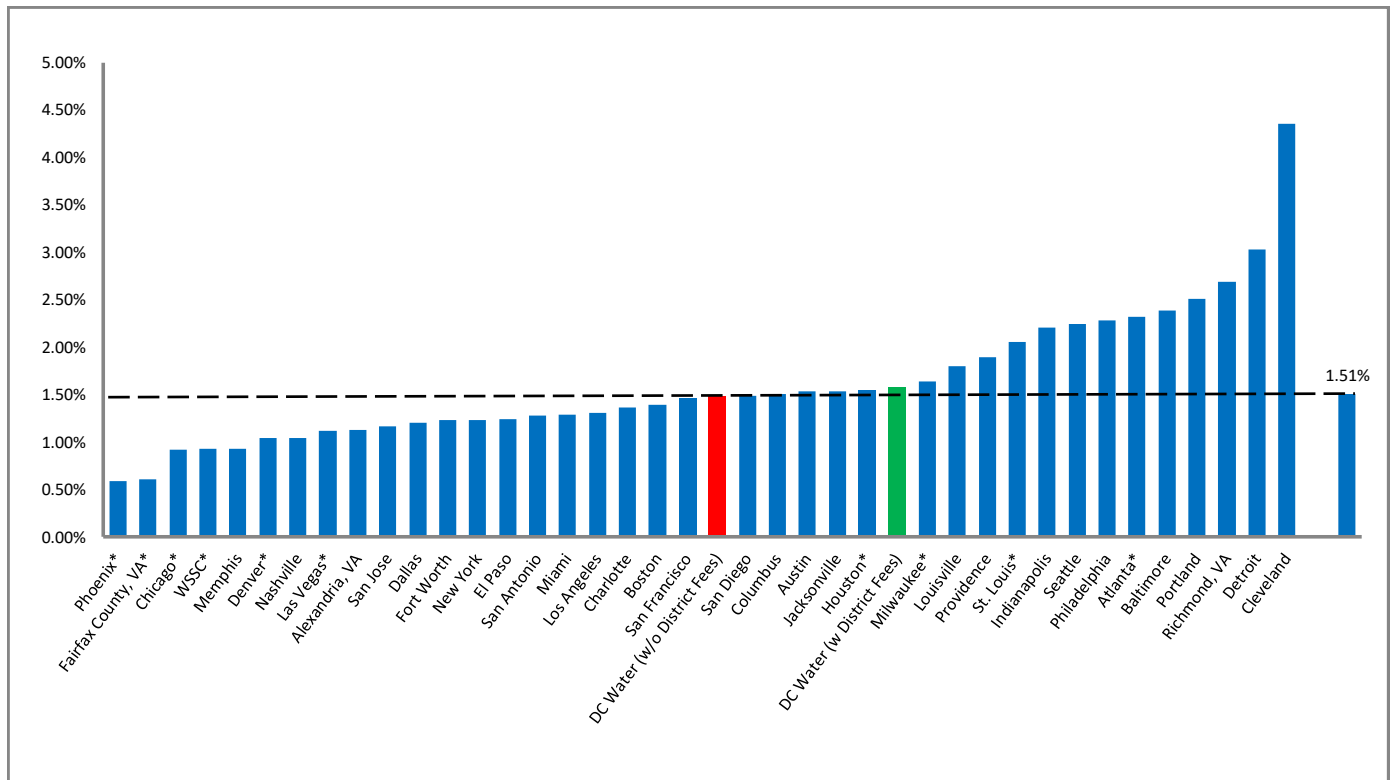
## DC Water Retail Rates Compared to Other Large Utilities (Based on Rates in effect Fall 2018)



- (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 November 1, 2018. The Authority's rate includes the PILOT/ROW fee totaling \$0.68 per Ccf (effective October 1, 2018) 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.

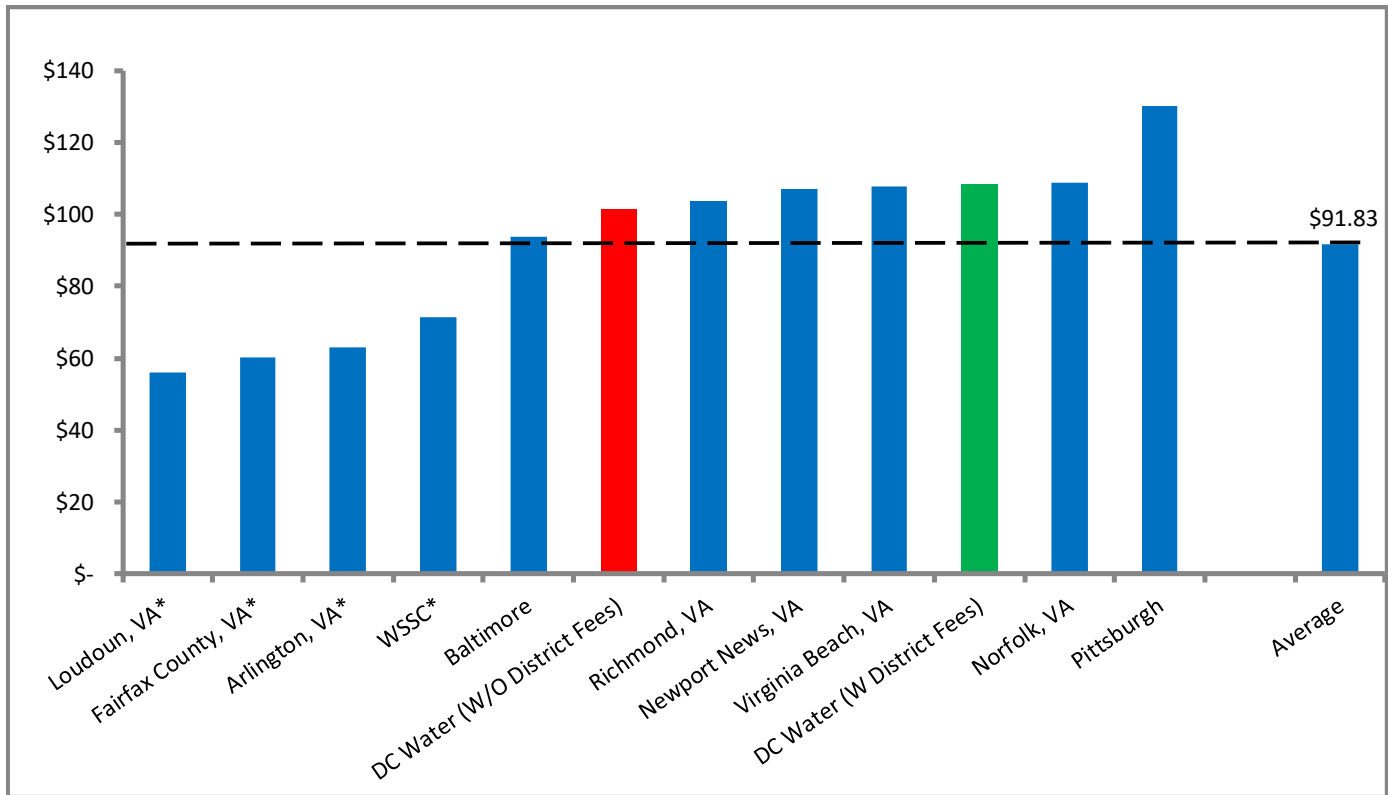
In the chart below, DC Water current charges rank at the median for bill comparison purposes for water and wastewater services compared to a select group of large, regional and CSO utilities, but well within US EPA guidance of 4 percent.

## Single Family Residential (SFR) Monthly Bill as % of Median Household Income - Large National Utilities (Based on Rates in effect Fall 2018)



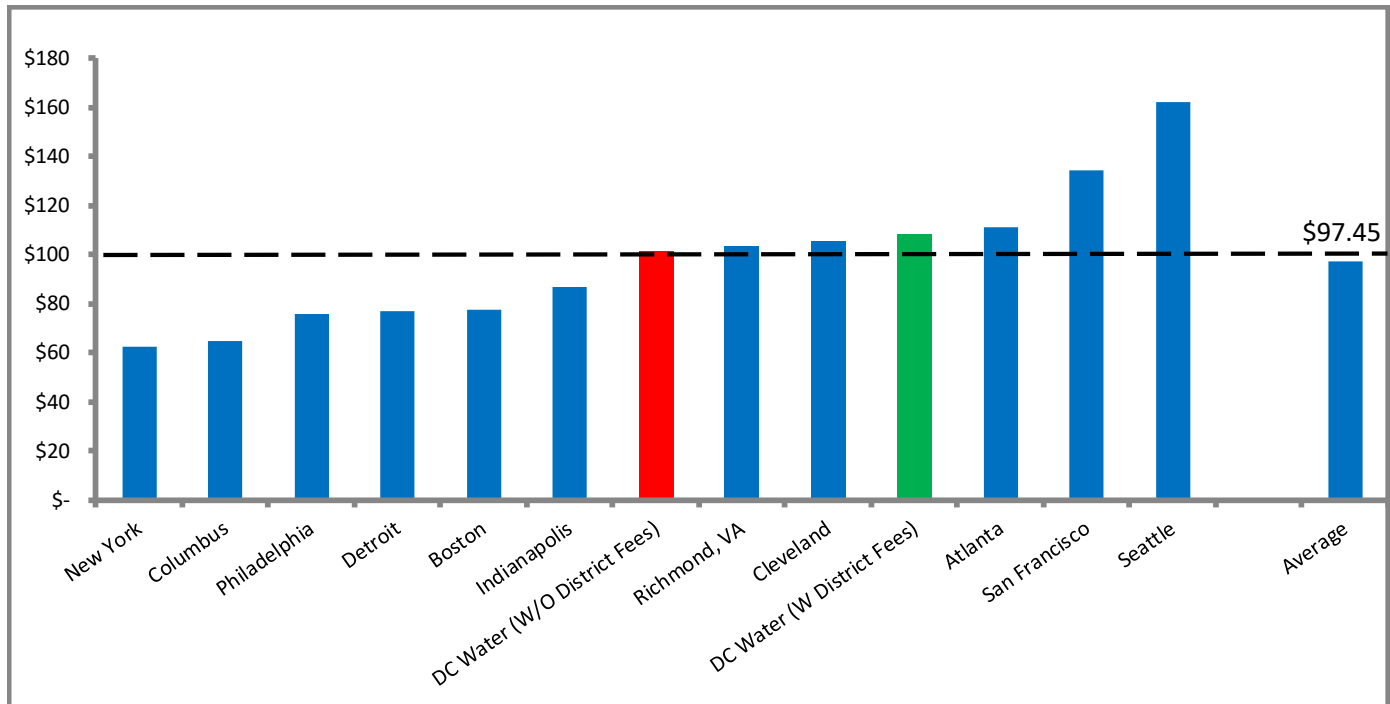
- 1) Assumes average residential consumption of 6.20 Ccf, or 4,638 gallons, per month. Ccf = hundred cubic feet, or 748 gallons
- 2) Reflects rates and fees in place as of November 1, 2018. The Authority's rate includes the PILOT/ROW fee totaling \$0.68 per Ccf (effective October 1, 2018) and the DOEE residential stormwater rate of \$2.67 per ERU per month. 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 Fall 2018)



- 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 November 1, 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.

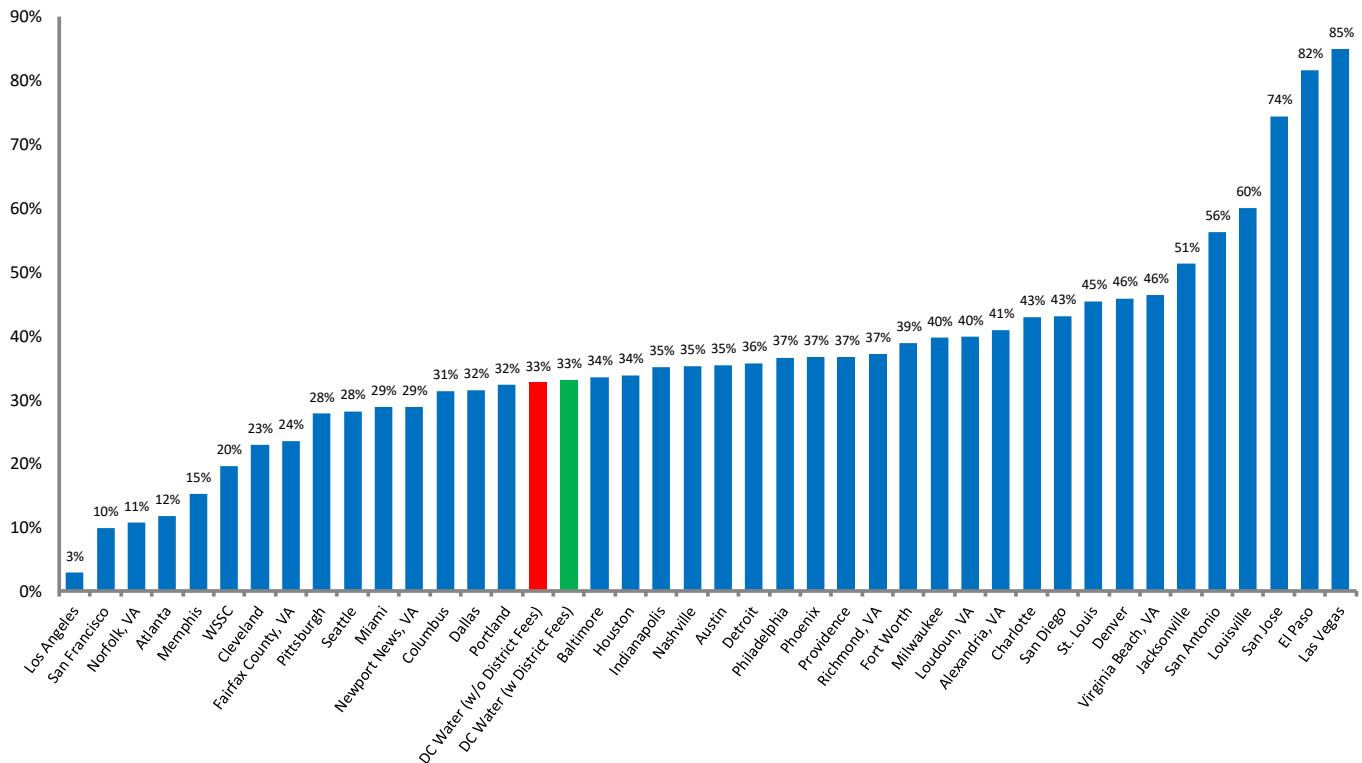
## DC Water Compared to CSO Communities (Based on Rates in effect Fall 2018)



- 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 November 1, 2018. The Authority's rate includes the PILOT/ROW fee totaling \$0.68per Ccf (effective October 1, 2018) and the DOEE 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 Fall 2018)



- 1) User Charges are based upon information provided by the identified cities and standardized assumptions regarding water consumption, wastewater discharge, stormwater drainage area and other factors. Actual charges in each city will vary in accordance with local usage patterns. Some cities bill for sewer use on the basis of winter consumption which could affect sewer billings if a customer's use was not uniform throughout the year. 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. In such situations, the user charges will not reflect the full cost of water, wastewater or stormwater services.
- 2) DC Water rate schedule was effective October 1, 2018. Whereas, charges for all cities reflect rate schedules in effect November 1, 2018
- 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





**Approved FY 2020 Budgets**  
**Section V: CAPITAL PROGRAMS**



**Anacostia Drinking Water Pump Station**

(\$ in thousands)

FY 2018	FY 2019 - FY 2028 Disbursement Plan											Lifetime
Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY2027	FY2028	10-Yr Total	Budget
\$489,928	\$439,117	\$420,342	\$467,016	\$561,724	\$530,006	\$422,607	\$450,358	\$585,454	\$535,666	\$544,490	\$4,956,780	\$12,127,945



DC Water Headquarters



Anacostia River Tunnel Project



Bryant Street Pump Station

## Overview

DC Water's Capital Improvement Program (CIP) supports the continuation of major capital asset investment in programs and projects that will upgrade the water distribution and sewer system as well as maintain compliance with federal mandates, and improve the efficiency of operations. The CIP includes all mandated projects, rehabilitation of assets required to meet permit and other regulatory requirements, and projects to meet the immediate needs necessary to maintain existing service levels.

The CIP is presented on two different basis; the ten-year disbursement plan and lifetime budget.

- **Ten-Year Disbursement Plan** – This category represents the actual cash disbursements “cash out of the door” for each project, excluding contingencies. It provides a more realistic approach and basis for forecasting the anticipated level of rate increases, as well as, timing for pursuing capital financing. In addition, the ten-year disbursement plan includes projected completion rates, program management, and in-house labor costs.
- **Lifetime Budget** – The “lifetime” budget, reflects historical spending prior to, during, and beyond the current ten-year period, including in-house labor. Lifetime budgets represent projects active during the ten-year period, and are the primary area of focus in budget development and day-to-day monitoring. In addition to “active” projects, the lifetime budget includes projects for which all activities have been completed during the previous fiscal year and are listed as “closed” and included in the CIP. Closed projects are dropped from the CIP in the next fiscal year, and new projects are continuously added, as needed, each fiscal year.

Detailed information on the projects can be found online at [www.dewater.com](http://www.dewater.com)

## CIP Development and Approval Process

DC Water’s capital budget review process begins each year in the spring. The Department of Engineering & Technical Services conducts a review of major accomplishments, priorities, status of major projects, and emerging regulatory and related issues impacting the capital program. The review process is a collaborative effort, and involves departments with responsibility for managing the operations of DC Water services and capital projects; staff from the department of Finance; and members of the Executive Team. The CIP is integrated into DC Water’s ten-year financial plan; and is the primary driver of DC Water’s projected rate increases over the ten-year planning period.

This review process spans over several months and culminates with the presentation of the CIP to DC Water’s Board of Directors’ Environmental Quality and Operations; Finance and Budget; and DC Retail Water and Sewer Rates committees in February. The operating budgets, capital improvement program, and ten-year financial plan were adopted by the full Board on April 4, 2019.

After adoption by the Board of Directors, DC Water is required to submit its annual operating and ten-year capital budgets to the Mayor and the District of Columbia Council for review and comment. However, neither has the power to change DC Water’s annual budgets. The District of Columbia includes DC Water’s budgets in their submission to Congress.

## Capital Authority Request

Capital authority represents the amount of Congressionally-authorized funding that DC Water can use to administer its capital program. Sufficient authority is required to be in place prior to contracts being executed. Actual commitments within the eight service areas may vary up or down for a particular year. However, they are “not to exceed the total” FY 2020 – FY 2028 capital authority request in the amount of \$4.5 billion.

It should be noted that the execution of contracts require the approval of the CEO and General Manager, as Contracting Officer, or his delegee. Major projects and contracts valued at \$1 million or more,, require DC Water Board approval.

## Capitalization Policy

DC Water’s capitalization policy determines how expenditures will be recognized and accounted. DC Water matches the financing of an asset to its projected useful life and the policy determines how projects will be financed.

### DEFINITION:

- Capital Project – an average life of 30 years and is financed with long-term debt
- Capital Equipment – has a life of at least three years, is financed with short-term debt or cash, an individual component cost of \$5,000 or more. The cost of capital equipment purchases that are part of a clearly identified capital program can be aggregated. In which case, capitalize all cost relating to the capital program at the project level regardless of the individual component amount.

The following guidelines are used to categorize items as either capital equipment or an operating expense.

Expenditure Type	Financial Treatment	Definition
<b>Rehabilitation</b>		
Enhancement	Capitalize	Addition/replacement of a sub-component of an asset, to improve the “attributes” of the asset. This will include all such work as valve replacement or replacement of a section of a pipe.
Refurbishment	Capitalize	Expenditure on an asset that creates a material extension to the Estimated Operating Life (EOL) of the asset. This is distinct from maintenance work, which is carried out to ensure that an asset is able to perform its designated function for its normal EOL. An example of refurbishment would be pipe lining and pipe grouting.
Rebuild	Capitalize	Expenditures to reconstruct, renovate, remodel, remake or reassemble an asset or infrastructure after it has been damaged or destroyed. An example of a rebuild is a valve rehabilitation, reconstruction of the valve elements
<b>Replacement</b>	Capitalize	Expenditure to replace substantially all of an asset. An example is replacement and installation of a new pipe including the ensuing disinfection applications and all associated activities relating to the replacement
<b>Repair</b>	Expense	Expenditure on an asset that maintains or restores the design functionality or attributes of an asset, enabling the asset to perform its intended function during its EOL. Examples of these will include service line repairs such as clamp application on service pipes, bolt application/replacement/adjustment, small scale chemical applications such as use of dechlorinating tablets, meter shut off valve, curb stop, small service line repairs that does not involve replacement nor meter housing, high pressure jet vacuum or any other obstruction removal methodology
<b>Maintenance</b>	Expense	Scheduled and recurring costs for the continued performance of an asset





# Capital Improvement Program

summary overview financial plan rates&rev capital financing departmental glossary

(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
NON PROCESS FACILITIES												
Facility Land Use	\$15,309	\$36,002	\$26,793	\$20,665	\$6,831	\$11,058	\$10,396	\$3,901	\$3,553	\$3,560	\$138,067	\$212,833
Subtotal: Facility Land Use	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	212,833
WASTEWATER TREATMENT												
Liquid Processing	21,488	30,915	37,087	48,495	36,646	38,979	41,124	84,082	107,253	107,354	553,422	1,166,818
Plantwide	15,777	20,223	18,885	25,882	39,576	24,810	17,052	25,410	20,726	7,341	215,681	494,048
Solids Processing	6,672	10,511	19,988	22,645	30,530	15,286	12,862	3,899	1,186	8,304	131,883	906,481
Enhanced Nitrogen Removal Facilities	26,042	4,972	549	614	3,295	3,359	10,211	19,947	8,411	351	77,751	998,714
Subtotal	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738	3,566,060
COMBINED SEWER OVERFLOW												
DC Clean Rivers	187,859	147,208	139,786	191,573	151,411	64,415	55,689	144,295	97,067	83,286	1,262,589	2,764,255
Program Management	1,685	1,241	743	1,482	2,653	4,046	4,310	2,871	1,745	2,718	23,494	77,756
Combined Sewer	5,805	2,978	8,701	6,533	5,994	9,473	4,542	2,930	3,848	4,880	55,684	191,538
Subtotal	195,350	151,427	149,230	199,588	160,057	77,935	64,541	150,095	102,660	90,884	1,341,767	3,033,549
STORMWATER												
Local Drainage	37	17	244	822	770	768	1,410	769	156	3,084	8,048	20,225
On-Going	1,056	511	598	929	706	742	451	735	713	919	7,360	10,511
Pumping Facilities	1,996	7,877	6,966	6,429	1,909	3,218	5,492	5,792	4,100	5,773	49,553	61,204
DDOT	-	-	-	-	-	-	-	-	-	-	-	3,237
Research and Program Management	405	84	223	319	341	260	212	198	269	326	3,310	12,889
Trunk/Force Sewers	81	82	87	86	-	-	-	-	-	-	337	15,510
Subtotal	4,220	8,571	8,118	8,587	3,725	4,987	7,564	7,494	5,239	10,102	68,608	123,574
SANITARY SEWER												
Collection Sewers	12,186	2,476	10,012	20,547	21,664	24,747	33,310	42,591	44,337	36,594	241,712	498,192
On-Going	13,653	12,842	13,483	13,711	13,667	14,185	15,019	15,253	15,111	15,312	142,239	219,540
Pumping Facilities	2,248	1,619	4,868	6,649	6,495	4,935	9,975	10,882	12,457	29,612	89,739	270,778
Program Management	2,495	2,452	4,752	6,868	5,073	3,942	3,127	3,334	4,126	4,923	41,919	119,035
Interceptor/Trunk Force Sewers	16,613	24,257	24,133	37,813	50,321	50,384	53,579	67,961	58,633	54,174	441,526	963,054
Subtotal	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	957,135	2,070,599
WATER												
Distribution Systems	30,729	40,948	63,054	58,127	49,881	61,921	68,714	62,636	60,526	82,102	578,638	1,359,993
Lead Program	4,338	5,928	6,723	6,307	6,715	7,438	6,544	5,830	6,654	6,706	63,182	243,414
On-Going	10,080	10,238	10,126	12,297	13,351	15,199	16,789	18,583	20,447	22,981	150,091	215,064
Pumping Facilities	3,341	2,513	6,282	8,110	2,850	3,947	3,095	3,502	3,523	1,974	36,993	123,911
DDOT	942	76	3	5	-	-	-	-	-	-	1,076	33,933
Storage Facilities	12,807	5,223	2,549	8,940	7,526	3,913	3,770	8,779	7,098	-	57,181	137,364
Program Management	4,091	5,163	6,795	7,255	4,073	4,073	4,414	6,815	7,089	4,614	57,854	90,944
Subtotal	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,377	945,015	2,204,622
CAPITAL PROJECTS	447,805	377,987	414,200	513,102	462,275	371,098	382,087	540,993	489,029	486,890	4,429,330	11,211,236
CAPITAL EQUIPMENT	20,299	17,105	30,027	29,656	29,295	33,750	32,610	32,496	31,409	31,349	295,098	
ONGOING METER REPLACEMENT	8,630	2,618	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	28,676	
ERP PROJECT (Financial & HCM)	-	4,500	3,950	500	500	-	-	-	-	-	16,550	
SUBTOTAL - CAPITAL EQUIPMENT	28,929	34,518	36,907	33,086	32,725	36,680	35,426	35,426	34,339	34,279	340,324	340,324
WASHINGTON AQUEDUCT	13,194	12,930	15,532	15,909	15,536	14,830	32,731	9,034	12,298	23,321	187,127	187,127
ADDITIONAL CAPITAL PROGRAMS	42,123	47,448	42,355	52,816	48,622	51,509	68,272	44,461	46,637	57,600	527,450	527,450
LABOR												389,258
TOTAL CAPITAL BUDGETS	\$489,928	\$439,117	\$420,342	\$467,016	\$561,724	\$422,607	\$450,358	\$585,454	\$535,666	\$544,490	\$4,956,780	\$12,127,945

(\$ in thousands)

## Prioritization Schedule

The Authority evaluates and prioritizes capital projects based on a specific criteria. These criteria are fundamental in developing a CIP based on demonstrated needs and are set forth in the following table and described below.

Approximately 26 percent of the current CIP ten-year disbursements are for large regulatory mandates which includes the Clean Rivers Project. As we progress closer to the completion of the mandated projects, DC Water is able to increase investments in upgrading its aging water and sewer infrastructure, starting FY 2021 and beyond.

MEASURE OF PRIORITY										
1A			2A	2B	2C	2D	3A		3B	
Mandates			Health & Safety	Board Policy	Potential Failure	High Profile Good Neighbor	Good Engineering High Payback		Good Engineering Lower Payback	
Agreements, Regulatory standards, Court orders, Issues and Permits requirements, Stipulated Agreements, Etc.			Required to address Public Safety	Undertaken as a result of the Board's commitment to outside agencies	Related to Facilities in danger of failing, or critical to meeting permit requirements	Address Public concerns	Need to fulfill Mission and upgrade Facilities		Lower priority Projects	
FY 2019	\$210,807	48%	\$13,874	\$33,472	\$36,117	\$8,132	\$87,332	20%	\$49,385	\$439,117
FY 2020	150,388	36%	3,821	67,776	42,560	501	98,520	23%	56,776	420,342
FY 2021	139,790	30%	5,858	72,529	41,437	924	112,534	24%	93,944	467,016
FY 2022	191,411	34%	6,928	53,535	37,742	3,315	149,552	27%	119,241	561,724
FY 2023	151,297	29%	2,099	42,382	72,801	1,281	151,811	29%	108,335	530,006
FY 2024	64,692	15%	5,368	50,055	34,511	558	158,304	37%	109,120	422,607
FY 2025	55,919	12%	12,457	54,634	35,514	1,415	183,675	41%	106,744	450,358
FY 2026	144,295	25%	18,848	48,081	40,102	2,679	162,071	28%	169,379	585,454
FY 2027	97,067	18%	8,604	44,926	31,137	89	152,165	28%	201,677	535,666
FY 2028	83,286	15%	1,511	65,369	33,705	-	167,928	31%	192,690	544,490
Total	\$1,288,951		\$79,366	\$532,760	\$405,626	\$18,893	\$1,423,892		\$1,207,291	\$4,956,780
% of Total	26.0%		1.6%	10.7%	8.2%	0.4%	28.7%		24.4%	



(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
\$35,527	\$15,309	\$36,002	\$26,793	\$20,665	\$6,831	\$11,058	\$10,396	\$3,901	\$3,553	\$3,560	\$138,067	\$212,833



**DC Water Headquarters**



**Main Pumping Station**



**Fleet Maintenance Facility**

## Overview

The Non Process Facilities Service Area accommodates projects approved under the Non Process Facilities Master Plan (NPFMP) and related improvements necessary to support DC Water activities and critical operations. The goals of this CIP are the same as those in the NPFMP, which are designed to:

- Optimize efficient use of existing DC Water land and facilities
- Introduce state-of-the-art material management technologies that will enhance inventory security, storage, distribution, and transportation
- Implement Green Strategies and Sustainable Design within DC Water infrastructure and facility planning
- Maximize flexibility throughout DC Water facilities for future treatment needs, distribution system operations, and innovative opportunities

## PROGRAM AREAS

**Facility Land Use** – The primary objective of this service area is to implement the NPFMP. Projects that generally improve DC Water’s operations do not represent a core process area within DC Water’s mission. Therefore, these projects continue to be evaluated and reallocated as needed, into this category. Some of the projects included in this program are:

- **Headquarters Building** – The DC Water Administrative Headquarters Building, located next to the historic Main Pumping Station, is DC Water’s most sustainable construction project ever. The Headquarters anchor DC Water’s new publicly-accessible campus along the Anacostia River. Additionally, by relocating nonessential personnel from the Blue Plains industrial campus, DC Water preserved what little remaining space exists – an irreplaceable commodity – for future process improvements, if required by permit or desired for innovation.
- **Floatable Debris Dock Replacement** – The existing docks are more than 25 years old and need to be replaced. The replacement slips (at least five) and associated new piles will allow flexibility and maneuverability of the boats, overcome the existing draft challenges on the Anacostia River, and most importantly, create safe conditions for the staff and their operations. Future improvements include the installation of a new boat ramp and updated fencing and lighting to further improve the efficiencies of skimmer boat operations.
- **Main & O Redevelopment Efforts** – This project relocates Sewer and Fleet Operations from the Main & O Campus in order to accommodate the redevelopment plans for the District of Columbia in and around the Navy Yard. All cost associated with the acquisition of new land and construction of new facilities will be reimbursed to DC Water by the District of Columbia, with a completion target of 2022 for both facilities.
- **Water System Laboratory Facilities** – A new Water Quality Lab will be designed at Fort Reno, to maximize operations and allow for increased lab services to benefit the entire Water Services department.
- **Renovations to Central Operations Facility** – The 2013 NPFMP called for utilizing the Central Operations Facility as the operations center for Blue Plains as originally intended, consolidating all Engineering staff except Clean Rivers. In addition to efficiently organizing the space vacated by Administrative personnel now located at Headquarters Building, this project consists of identifying a range of potential activities, such as structural requirements, code compliance upgrades, energy efficiency, and resiliency measures, that will modernize and improve operations at the facility.
- **Renovations to Bryant Street Campus** – The 2013 NPFMP required the development of improved spaces for our Water Operations and expanding critical functions through the development of a proper Emergency Operations Center (EOC), while maintaining the Bryant Street Pump Station’s historic character. In addition to efficiently organizing the space vacated by personnel now located at HQO, this project consists of identifying a range of potential activities, such as structural requirements, code compliance upgrades, energy efficiency, and resiliency measures, that will improve operations at the Bryant Street campus.

### ACCOMPLISHMENTS

- The Headquarters Building is now complete and occupied
- Completed the design stage for the new Fleet Service Facility and Sewer Services Field Operations Center
- DC Water is in the schematic design/program development phase for the renovations of Field Operations Center and Bryant Street, to inform the final workplan and budget for the renovations of those facilities
- Received the following awards:
  - American Institute of Architects (AIA) – Northern Virginia Chapter – Juror’s Citation in Conceptual/Unbuilt Architecture
  - American Institute of Architects (AIA) – Maryland Chapter – Jury Citation Award
  - Fast Company Innovation by Design – Spaces, Places and Cities – Honorable Mention

### OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Headquarters Building** – This new building is LEED® Platinum Class A certified, and incorporated environmentally sustainable features used to capture onsite rainfall for irrigation and non-potable water needs inside the facility. Additionally, alternative energy will be supplied by an innovative sewer heat recovery system that will lower operating cost.

# Non Process Facilities

(\$ in thousands)

FACILITY LAND USE		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget
DS	New Headquarters Building	FY 2008	Ongoing	\$35,288	\$10,749	\$7	\$12	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$10,769	\$76,100
DU	Water System Laboratory Facilities	FY 2006	Ongoing	11	72	164	6	0	0	0	0	0	0	0	242	646
HE	Bryant Street Pump Station Building Mod.	FY 2018	Ongoing	0	2	1,337	3,334	7,527	0	0	0	0	0	0	12,200	14,370
HF	Fort Reno Pump Station	FY 2020	Ongoing	0	0	220	667	1,679	28	0	0	0	0	0	2,594	2,950
HH	Main & O Redevelopment Efforts	FY 2015	Ongoing	227	3,112	28,098	7,139	219	0	0	0	0	0	0	38,568	41,031
HJ	Central Operations Facility Renovation	FY 2018	Ongoing	1	895	4,261	3,295	0	0	0	0	0	0	0	8,451	12,904
RV	Non-Process Area - HVAC And Roofing Projects	FY 2019	New	0	3	1,681	10,708	10,319	6,803	11,058	10,396	3,901	3,553	3,560	61,981	61,000
HK	CMF Renovations And Consolidation	FY 2018	Ongoing	0	0	3	1,002	920	0	0	0	0	0	0	1,925	2,500
NZ	Floatable Debris Dock Replacement	FY 2018	Ongoing	0	476	231	630	0	0	0	0	0	0	0	1,337	1,332
TOTAL FACILITY LAND USE BUDGETS				\$35,527	\$15,309	\$36,002	\$26,793	\$20,665	\$6,831	\$11,058	\$10,396	\$3,901	\$3,553	\$3,560	\$138,067	\$212,833
TOTAL NON PROCESS FACILITIES BUDGETS				\$35,527	\$15,309	\$36,002	\$26,793	\$20,665	\$6,831	\$11,058	\$10,396	\$3,901	\$3,553	\$3,560	\$138,067	\$212,833

(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
\$106,104	\$69,979	\$66,620	\$76,510	\$97,635	\$110,047	\$82,434	\$81,249	\$133,338	\$137,575	\$123,351	\$978,738	\$3,566,060



**Blue Plains Advanced Wastewater  
Treatment Plant**



**Secondary Sedimentation**



**Nitrification Reactors**

## Overview

Capital projects in the Wastewater Treatment Service Area are required to rehabilitate, upgrade or provide new facilities at Blue Plains to ensure that it can reliably meet its National Pollutant Discharge Elimination System (NPDES) permit requirements and produce a consistent, high-quality dewatered solids product. DC Water's current NPDES permit is effective from August 26, 2018 through August 25, 2023. This permit requires wastewater treatment to a level that meets one of the most stringent NPDES discharge permits in the United States.

Blue Plains Advanced Wastewater Treatment Plant treated an annual average flow of 300 million gallons per day (MGD) and has a design capacity of 384 MGD, with a peak wet weather design capacity to treat one billion gallons per day. Wastewater flows in from the District of Columbia, Montgomery and Prince George's Counties in Maryland, and Fairfax and Loudoun counties in Virginia.

## PROGRAM AREAS

**Liquid Processing** – Projects in this program area encompass upgrading and rehabilitating facilities involved in handling flows from the sanitary and combined sewer systems. These flows progress sequentially through the Plant processes and ultimately discharge the treated effluents into the Potomac River.

**Plantwide** – This program provides for upgrading, rehabilitating, or installing support systems and facilities that are required for both the liquid processing and solids processing programs.

**Solids Processing** – Biosolids processing involves reductions in volume along with treatment to meet applicable federal, state and local requirements for beneficial reuse of biosolids. Treatment is provided by a system of processing facilities that include gravity thickening of primary sludge, floatation thickening of the biological waste sludge produced by the secondary and nitrogen removal processes, pre-dewatering of blended thickened solids by centrifuge, pretreatment of solids by thermal hydrolysis, anaerobic digestion, and final dewatering of Class A biosolids by belt filter press.

**Enhanced Nitrogen Removal Facilities** – Provides for new facilities and upgrades to existing facilities needed at Blue Plains to meet the total nitrogen discharge limit assigned to DC Water. In addition to expansion of existing nitrification and denitrification processes, this program includes a new wet weather treatment facility that simultaneously treats combined stored sewage and reduces the peak flow through the biological treatment system. The necessary facilities to meet the current NPDES permit are in operation. However, close out activities continue into fiscal year 2019 and an expansion will be required in the future to treat future increases in influent load to the Plant.

## ACCOMPLISHMENTS

- Substantially completed construction of the Filtrate Treatment Facility – This side-stream treatment project utilizes Anaerobic Ammonium Oxidation (anammox) bacteria to remove nitrogen from the filtrate, and belt filter press facility resulting in savings in electrical power and methanol addition, which are otherwise necessary when the filtrate is processed through the Plant.
- Met Consent Decree date of March 23, 2018 to place in service the Tunnel Dewatering Pump Station and Enhanced Clarification Facility (TDPS/ECF). Over 5.3 billion gallons of combined sewer overflows and nearly 1,400 tons of trash, debris, and other solids were captured and prevented from discharging into the Anacostia River.
- Substantially completed construction of the Enhanced Nitrogen Removal Facility North – This project improved the performance of the secondary treatment facilities by providing limited nitrogen removal and more consistent quality for the downstream nitrogen removal processes.
- Ongoing construction of Raw Wastewater Pump Station 2 – The pump station delivers wastewater from the wastewater collection system to the east preliminary treatment processes at Blue Plains. This project updates aging electrical equipment, both replacing equipment that is beyond its useful life and relocating sensitive electronic equipment to a less corrosive environment to reduce the rate of deterioration of the equipment. The construction contract was issued in September 2016 and is scheduled to be completed by March 2020.
- Began design of upgrades to Screenings, Grit and Primary Treatment Facilities. These upgrades comprise replacement of deteriorated electrical equipment and systems and improvement to the ventilation system to extend the life of equipment in highly corrosive areas.
- Began design of upgrades to the Central Operations Facility (COF) Electrical System. This project replaces the electrical switchgear that supports the COF and the Information Technology building.
- Began design of Final Reclaimed Effluent Pump Station Upgrade. The Reclaimed Final Effluent (RFE) pump system is the source of water for the Process Service Water system (PSW) at Blue Plains.

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Tunnel Dewatering Pump Station (TDPS) / Enhanced Clarification Facility (ECF)** – This facility dewateres the Anacostia River Tunnel system that captures and stores combined sewage, preventing it from overflowing into the Anacostia River. The TDPS conveys stored combined sewage from the tunnel to the ECF, for treatment during wet weather events.



***Filtrate Treatment Facility (FTF)*** – FTF is part of the Total Nitrogen Removal/Wet Weather plan. This new facility uses six sequencing batch reactors to treat a nitrogen-rich stream from the Final Dewatering Facility’s belt filter presses. The deammonification process represents a breakthrough in nitrogen removal, which lowers the use of methanol relative to treating the flow in the mainstream. It also has approximately 60 percent lower energy demand than the mainstream treatment and lowers greenhouse gas (GHG) emissions.

LIQUID PROCESSING		FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
A2	Liquid Processing Program Management	\$1,978	\$912	\$3,292	\$3,779	\$4,537	\$3,655	\$2,626	\$3,284	\$4,529	\$4,647	\$3,992	\$35,252	\$54,828	FY 2031
B6	Primary Sedimentation Tank Covers	0	0	0	546	852	116	3,593	2,997	18,874	7,370	127	34,476	43,598	FY 2028
B7	Primary Sedimentation Tank Odor Scrubblers	0	0	0	0	0	0	686	98	1,736	1,104	12,671	16,297	45,870	FY 2031
BC	Headworks Influent Structures	0	17	469	550	2,512	3,653	1,900	0	0	0	0	9,101	11,970	FY 2024
BG	Dual Purpose Rehabilitation	2,434	1,617	18	0	0	0	0	0	0	0	0	1,635	32,250	FY 2021
BP	Grit Chamber Facilities Phase II	19	356	45	0	0	0	0	0	0	0	0	401	530	FY 2019
BQ	Grit and Screenings and Primary	0	1,636	1,456	1,582	9,406	7,642	610	0	0	0	0	22,332	37,987	FY 2024
BR	Nitrification/Denitrification Facility	2,724	1,542	926	907	1,473	120	168	80	17	0	0	5,234	54,568	FY 2025
BT	Filtration/Disinfection Facility Phase II	98	373	285	61	797	1,024	111	0	0	0	0	2,652	24,018	FY 2024
BV	Raw Wastewater Pump Station No. 2 Upgrades	9,697	8,594	3,678	0	0	0	0	0	0	0	0	12,272	46,870	FY 2020
I4	Grit Removal Facilities - 20 Year Rebuild	0	0	0	0	0	0	0	0	1,933	7,862	13,929	23,724	52,500	FY 2030
I5	Raw Water Pump Stations 1 & 2 - 20 Year Rebuild	0	0	0	22	868	780	8,819	10,617	1,967	0	0	23,072	29,000	FY 2025
I7	Primary Treatment - 20 Year Rebuild	0	0	0	0	0	0	589	7,093	16,742	13,046	6,557	44,027	54,600	FY 2028
RN	Liquids Processing Rehabilitation	0	0	0	619	224	0	116	1,838	11,687	3,567	293	18,345	23,321	FY 2029
IY	Effluent Filter Upgrade	1,167	2,856	2,507	7,366	13,048	10,236	9,340	7,591	10,182	38,817	20,522	122,466	165,588	FY 2029
IZ	Replace/Upgrade Influent Screens	26	877	3,556	3,891	4,157	562	0	248	2,613	2,261	5,529	23,695	81,476	FY 2032
J2	Replace/Upgrade Primary Treatment Mechanisms	81	165	1,108	2,652	2,991	2,423	1,795	426	17	30	1,010	12,615	22,752	FY 2030
J6	Deaermonification Project	0	9	87	295	1,468	818	14	0	0	0	0	2,690	3,503	FY 2024
JC	Secondary East and West - 20 Year Rebuild	0	0	0	0	0	0	0	479	5,408	13,877	17,527	37,290	96,000	FY 2032
LC	Effluent Disinfection Upgrades	0	0	0	0	0	1	700	5	257	427	4,784	6,175	8,011	FY 2030
LF	Nitrification Reactor/Sedimentation - 20 Year Rebuild	0	0	0	0	0	0	0	3,270	8,119	14,244	20,412	46,045	138,000	FY 2033
OZ	Grit Chambers 1 & 2 Upgrades	2,340	1,301	247	390	519	3,970	3,575	0	0	0	0	10,002	15,129	FY 2024
PD	Secondary East & West Upgrades	194	183	0	0	307	402	3,788	3,099	0	0	0	7,778	9,685	FY 2025
PE	Nitrification Reactor/Sedimentation Upgrades	125	202	1,303	1,851	1,188	1,245	551	0	0	0	0	6,341	10,665	FY 2024
UC	Filtration/Disinfection Facility	707	849	11,937	12,575	4,146	0	0	0	0	0	0	29,508	104,100	FY 2022
TOTAL LIQUID PROCESSING BUDGETS			\$21,590	\$21,488	\$30,915	\$37,087	\$48,495	\$36,646	\$38,979	\$41,124	\$94,082	\$107,253	\$107,354	\$553,422	\$1,166,818

PLANTWIDE		FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
AL	Plantwide Project Program Management	\$3,846	\$1,643	\$3,408	\$4,202	\$4,840	\$4,981	\$4,505	\$2,352	\$1,547	\$1,087	\$3	\$28,568	\$49,515	FY 2029
AZ	Central Operations Facility Renovation	928	112	89	0	0	0	0	0	0	0	0	202	17,885	FY 2020
BY	Additional Chemical Systems Phase III	0	0	0	0	0	0	109	379	734	790	477	2,491	3,822	FY 2029
CH	Miscellaneous Facility Projects	138	107	31	2	0	0	0	0	0	0	0	139	8,039	FY 2020
CV	Laboratory Upgrades	3	45	582	4	0	0	0	0	0	0	0	631	9,268	FY 2020
CW	Security at Blue Plains	688	809	695	533	6	0	0	0	0	0	0	2,043	6,568	FY 2021
DQ	Non-OEM PLC Interfaces/Replacements	64	7	0	0	0	0	0	0	0	0	0	7	2,185	FY 2019
EI	Plantwide Painting of Steel Pipes	0	0	0	0	0	214	1,478	1,387	1,148	0	0	4,227	4,960	FY 2026
GP	Instrumentation & Control & Electric Program Management	1,166	1,075	102	0	0	0	0	0	0	0	0	1,177	5,075	FY 2019

# Wastewater Treatment

summary overview financial plan rates&rev capital

financing departmental glossary

(\$ in thousands)

PLANTWIDE (cont.)	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
GW Control Systems Replacement	0	0	0	355	410	486	851	1,941	6,584	10,490	5,646	26,763	37,000	FY 2030
HL DWT - Process and Operations Jobs	184	714	845	83	18	990	0	0	0	0	0	2,650	7,417	FY 2023
IC Electrical Monitoring Systems	0	0	238	343	1,509	5,987	2,060	0	0	0	0	10,137	13,611	FY 2024
IT Hauled Waste Receiving Facility	0	0	0	0	0	4	1,518	1,425	1,398	0	0	4,345	5,000	FY 2026
IU Solar Photovoltaic System	0	2	156	196	31	0	0	0	0	0	0	385	960	FY 2021
IV Blue Plains IT Backbone Fibre-Optic Cables Tubes	85	388	336	1,521	194	212	0	0	0	0	0	2,651	5,899	FY 2023
JF Construction of Flood Seawall	0	0	2,245	1,256	1,482	2,932	1,677	352	0	0	0	9,943	13,553	FY 2025
LP Wastewater Asset Management Technical	243	244	273	258	210	322	0	0	0	0	0	1,307	10,000	FY 2023
LS Miscellaneous Facility Projects FY 2013	2,622	1,892	1,875	254	251	237	615	385	378	381	382	6,651	16,952	FY 2030
LX Process Control System Upgrade	0	0	0	1,561	1,489	2	0	0	0	0	0	3,051	4,000	FY 2022
OD Plantwide Paving	750	363	77	405	405	1,566	1,401	1,315	325	0	0	5,856	8,240	FY 2025
OE Plantwide Drainage & Runoff	551	253	4,213	1,017	3	971	1,910	2,535	1,604	0	0	12,507	17,289	FY 2026
OG City Water & Sewer Upgrades at Wastewater	0	0	0	0	18	438	412	0	0	0	0	869	1,250	FY 2024
OH Plantwide Demolition	0	0	0	0	0	0	36	1,279	4,540	3,005	522	9,381	11,100	FY 2028
OI Plantwide Painting & Signage	0	0	0	0	0	0	106	242	43	0	0	391	450	FY 2025
OM Plantwide Hot Water System/ Loop Rehabilitation	830	2,837	1,515	0	0	0	0	0	0	0	0	4,352	6,654	FY 2020
ON Plantwide Grounding Upgrades	0	0	0	0	82	280	898	925	1,504	837	11	4,537	5,500	FY 2027
OP Plantwide Sump Pump Rehabilitation	0	0	0	0	0	0	105	295	290	164	2	855	1,000	FY 2027
OQ Plantwide Roofing Upgrades	0	0	0	0	95	391	695	349	3,293	3,640	0	8,463	10,000	FY 2027
OS Plantwide Lighting Upgrades	39	1,285	868	231	0	0	0	0	0	0	0	2,384	3,015	FY 2020
PF Chemical System/Building Upgrades	4,152	1,661	281	565	584	4,003	2,715	1,560	1,727	35	0	13,130	23,482	FY 2026
TA Process Computer Control System	733	0	0	0	0	0	0	0	0	0	0	0	64,182	FY 2019
TZ Electric Power System - Power Gear	406	1,577	1,550	6,023	13,982	14,583	2,779	0	0	0	0	40,495	69,092	FY 2024
YD Miscellaneous Projects	218	762	843	77	271	977	940	331	294	296	298	5,090	51,084	FY 2029
<b>TOTAL PLANTWIDE BUDGETS</b>	<b>\$17,649</b>	<b>\$15,777</b>	<b>\$20,223</b>	<b>\$18,885</b>	<b>\$25,882</b>	<b>\$39,576</b>	<b>\$24,810</b>	<b>\$17,052</b>	<b>\$25,410</b>	<b>\$20,726</b>	<b>\$7,341</b>	<b>\$215,681</b>	<b>\$494,048</b>	

SOLIDS PROCESSING	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
AM Solids Processing Program Management	\$390	\$338	\$1,990	\$1,995	\$2,206	\$1,761	\$1,132	\$714	\$448	\$451	\$453	\$11,489	\$18,205	FY 2028
BX Gravity Thickener Upgrades Phase II	1,175	2,072	7,159	16,749	14,308	7,232	10	0	0	0	0	47,530	66,066	FY 2023
EV Area Substation No. 6	0	189	0	0	0	0	0	0	0	0	0	189	22,104	FY 2019
I3 Biosolids Blending Development Center	406	46	0	0	0	4	1,598	2,800	0	0	0	4,448	5,923	FY 2025
LD Pre-Dewatering Additional Centrifuges	0	0	427	413	2,996	3,474	441	0	0	0	0	7,752	10,118	FY 2024
LE High Strength Waste Receiving Facility (includes Fats, Oils & Grease)	0	0	0	0	225	531	3,436	463	0	0	0	4,655	6,008	FY 2025
RM Biosolids Rehabilitation	0	0	0	0	168	14,833	4,243	6,147	1,284	264	265	27,204	79,996	FY 2033
XA New Digestion Facilities	6,160	3,943	474	334	0	0	0	0	0	0	0	4,752	552,896	FY 2021
XB Centrifuge Thickener Facility	36	32	0	0	0	0	0	0	0	0	0	32	48,726	FY 2019
XZ Solids Processing Building / Dewatered Sludge Loading Facility	486	51	459	497	2,742	2,695	4,425	2,738	2,167	471	7,586	23,831	96,440	FY 2032
<b>TOTAL SOLIDS PROCESSING BUDGETS</b>	<b>\$8,652</b>	<b>\$6,672</b>	<b>\$10,511</b>	<b>\$19,988</b>	<b>\$22,645</b>	<b>\$30,530</b>	<b>\$15,286</b>	<b>\$12,862</b>	<b>\$3,899</b>	<b>\$1,186</b>	<b>\$8,304</b>	<b>\$131,883</b>	<b>\$906,481</b>	

(\$ in thousands)

		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
		Actual													
<b>ENHANCED NITROGEN REMOVAL</b>															
BI	Enhanced Nitrogen Removal (ENR) North	\$3,891	\$781	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$781	\$77,076	FY 2019
E8	Enhanced Clarification Facilities	28,567	9,354	808	102	563	1,500	1,611	0	0	0	0	13,938	193,628	FY 2024
E9	Nitrogen Removal Facilities	133	359	71	0	0	0	0	0	0	0	0	431	272,930	FY 2019
EE	Filtrate Treatment Facilities	6,586	1,847	418	45	0	0	0	0	0	0	0	2,310	108,521	FY 2022
EG	Blue Plains Tunnel	6	42	8	0	0	0	0	0	0	0	0	50	177,532	FY 2020
FG	Secondary Treatment Upgrades for Total Nitrogen	31	46	379	46	0	1,754	1,739	10,211	19,947	8,411	351	42,883	57,168	FY 2028
FR	Blue Plains Tunnel Dewatering Pumping Station	4,010	1,651	757	324	0	0	0	0	0	0	0	2,731	35,617	FY 2021
FS	Bolling Overflow & Diversion	8,106	4,272	0	0	0	0	0	0	0	0	0	4,272	55,937	FY 2019
LM	Enhanced Nitrogen Removal Program Management	6,884	7,691	2,531	32	51	41	9	0	0	0	0	10,355	20,303	FY 2025
<b>TOTAL ENHANCED NITROGEN REMOVAL BUDGETS</b>		<b>\$58,213</b>	<b>\$26,042</b>	<b>\$4,972</b>	<b>\$549</b>	<b>\$614</b>	<b>\$3,295</b>	<b>\$3,359</b>	<b>\$10,211</b>	<b>\$19,947</b>	<b>\$8,411</b>	<b>\$351</b>	<b>\$77,751</b>	<b>\$998,714</b>	
<b>TOTAL WASTEWATER TREATMENT BUDGETS</b>		<b>\$106,104</b>	<b>\$69,979</b>	<b>\$66,620</b>	<b>\$76,510</b>	<b>\$97,635</b>	<b>\$110,047</b>	<b>\$82,434</b>	<b>\$81,249</b>	<b>\$133,338</b>	<b>\$137,575</b>	<b>\$123,351</b>	<b>\$978,738</b>	<b>\$3,566,060</b>	

(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
\$188,294	\$195,350	\$151,427	\$149,230	\$199,588	\$160,057	\$77,935	\$64,541	\$150,095	\$102,660	\$90,884	\$1,341,767	\$3,033,549



**Northeast Boundary Tunnel  
Boring Machine, Chris**



**Northeast Boundary Tunnel**



**Kennedy Street Green Infrastructure**

## Overview

Similar to more than 700 older communities in the Mid-Atlantic, Northeast, and Midwest portions of the country, a portion of the District of Columbia is served by a combined sewer system. Approximately one-third of the system is combined, mostly in the downtown and older parts of the city. In dry weather, the system delivers wastewater to the Blue Plains Advanced Wastewater Treatment Plant. In wet weather, rain water also enters the system and, if the conveyance capacity of the system is exceeded, the excess flow spills into the waterways of the District of Columbia. This discharge is called Combined Sewer Overflow (CSO). There are 48 potentially active CSO outfalls in the District.

DC Water has continued to implement its CSO Long Term Control Plan (LTCP), called the DC Clean Rivers project, to reduce CSO's that discharge to the Anacostia and Potomac Rivers, as well as Rock Creek. DC Water obtained an amendment to the CSO Consent Decree in January of 2016 which allows DC Water to evaluate Green Infrastructure for control of certain CSOs and extend the completion milestone to 2030. First phase of Anacostia River tunnel system was completed and all structures south of RFK stadium are in operation since March 2018. When fully implemented, CSO's will be reduced by a projected 96 percent during an average year (98 percent on the Anacostia River), resulting in improved water quality and significantly reducing debris on our nations capital waterways.

## PROGRAM AREAS

**DC Clean Rivers** – The plan includes a variety of improvements throughout portion of the District served by combined sewers. For the Anacostia River, the plan includes constructing a series of massive tunnels and diversion facilities to control CSO's and to relieve surface flooding, and a tunnel dewatering pumping station and increased wet weather flow treatment at Blue Plains, with system completion in 2025. In addition, the amended plan includes a combination of green infrastructure in large scale and a tunnel system to control Potomac River overflows with project completion in 2030. Green infrastructure will also be constructed to control CSOs to Piney Branch/Rock Creek, with the first project anticipated for completion in 2019.

**Program Management** – The CSO Program Manager is responsible for evaluation of combined sewer systems, as well as management for sewer pumping station replacement and other sewer infrastructure projects.

**Combined Sewer** – Projects within the Combined Sewer Program Area include rehabilitation and/or relocation of combined sewers, control of wet weather related pollution, and upgrades to pumping stations. Most projects in this Program Area are related to the Nine Minimum Controls and include planned upgrades to facilities based on our long term facilities plan.

## ACCOMPLISHMENTS

- Continued construction of the Northeast Boundary Tunnel, the final segment of the Anacostia River Tunnel System
- Substantially completed construction of the first Rock Creek Green Infrastructure project
- Began post construction monitoring of the first Rock Creek Green Infrastructure project
- Substantially completed the first Potomac Green Infrastructure project
- Began post construction monitoring of the first Potomac Green Infrastructure project
- Developing the Finding of No Significant Impact (FONSI) for the Potomac River Tunnel Environmental Assessment (EA) – The last step of the National Environmental Policy Act (NEPA)
- Developing a Programmatic Agreement for the Potomac River Tunnel EA – The last step of the National Historic Preservation Act (NHPA) Section 106 compliance process
- Completed and submitted the Potomac River Tunnel Facility Plan to the Environmental Protection Agency (EPA) in accordance with the Long-Term Control Plan Consent Decree which required submittal by December 31, 2018
- Received EPA approval of the Facility Plan for Potomac River Tunnel on March 5, 2019
- The new approved National Pollutant Discharge Elimination System (NPDES) Permit increases the dry weather permitted capacity of Blue Plains from 370 mgd to 384 mgd with no new capital investments required. This has a value of at least \$140 million



- Received the following awards:
  - Engineering News Records Award of Merit in the Water/Wastewater category for the Anacostia River Tunnel project
  - Excellence in Dispute Avoidance and Resolution Award for the Anacostia River Tunnel Project from the Dispute Resolution Board Foundation
  - International Tunneling Association (ITA) Sustainability Initiative of the Year (2017) Award for the Anacostia River Tunnel Project in Paris, France from the International Tunneling and Underground Space Association
  - American Shotcrete Association (ASA) 2018 Outstanding Shotcrete Project of the Year in the Underground Category - Tiber Creek Sewer

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**DC Clean Rivers** – This project aims to control CSO's to the Anacostia and Potomac Rivers and Rock Creek to meet the District's water quality standards, while improving the health of the Chesapeake Bay. This ongoing project includes green infrastructure initiatives that will divert stormwater runoff prior to entering the sewer system. The first portion of Anacostia River Tunnel System, between Blue Plains and Overflow and Diversion Facilities (CSO-019) is complete. All structures south of RFK Stadium are in operation since March 20, 2018. As of March 31, 2019, the first portion of the Anacostia River Tunnel system had captured approximately 5.3 billion gallons of combined sewer overflows and nearly 1,400 tons of trash, debris, and other solids. The system is achieving a 90% CSO capture rate, exceeding the projected 80% capture rate at this stage of implementation. The tunnel system will improve operational flexibility by providing alternate means of transferring flow to Blue Plains, thereby allowing temporary diversion of flows to the tunnel to facilitate operation, maintenance and rehabilitation throughout the combined sewer system.

**Potomac Pump Station Upgrades** – Upgrades nearing completion address health & safety improvements and increase the reliability of the pumping station.

# Combined Sewer Overflow

summary overview financial plan rates&rev capital financing departmental glossary

(\$ in thousands)

DC CLEAN RIVERS			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
Start	Status	Actual														
CY	Anacostia Long Term Control Plan Projects	FY 2005 Ongoing	\$132,757	\$156,598	\$133,751	\$124,994	\$135,818	\$80,017	\$0	\$0	\$0	\$0	\$0	\$631,178	\$1,943,834	FY 2025
CZ	Potomac Long Term Control Plan Projects	FY 2008 Ongoing	25,919	17,338	9,238	11,856	42,315	45,725	59,556	41,044	116,979	84,013	48,648	476,713	562,323	FY 2029
DZ	Rock Creek CSS LTCP Project	FY 2008 Ongoing	17,198	13,922	4,219	2,936	13,440	25,670	4,859	14,645	27,316	13,054	34,638	154,697	258,099	FY 2030
TOTAL DC CLEAN RIVERS BUDGETS			\$175,874	\$187,859	\$147,208	\$139,786	\$191,573	\$151,411	\$64,415	\$55,689	\$144,295	\$97,067	\$83,286	\$1,262,589	\$2,764,255	
PROGRAM MANAGEMENT			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
Start	Status	Actual														
AV	Combined Sewer Overflow Program Management	FY 2000 Ongoing	\$3,469	\$1,685	\$1,241	\$743	\$1,482	\$2,653	\$4,046	\$4,310	\$2,871	\$1,745	\$0	\$20,776	\$57,756	FY 2027
RP	CSO Program Management	FY 2027 New	0	0	0	0	0	0	0	0	0	0	2,718	2,718	20,000	
TOTAL PROGRAM MANAGEMENT BUDGETS			\$3,469	\$1,685	\$1,241	\$743	\$1,482	\$2,653	\$4,046	\$4,310	\$2,871	\$1,745	\$2,718	\$23,494	\$77,756	
COMBINED SEWER			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
Start	Status	Actual														
BA	DC Water Low Impact Development Projects	FY 2001 Ongoing	\$0	\$131	\$272	\$22	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$425	\$2,870	FY 2021
EJ	Potomac Pumping Station - Phase III Rehabilitation	FY 2008 Ongoing	5,200	1,344	160	0	0	0	0	0	0	0	0	1,504	35,571	FY 2020
EK	Long Term Rehabilitation - Main & O Pump Station	FY 2021 Ongoing	0	0	0	17	48	1,360	4,958	3,546	2,887	3,806	4,840	21,463	55,644	FY 2031
EQ	Potomac Pumping Station-Phase IV Rehabilitation	FY 2019 Ongoing	0	44	97	1,280	0	0	0	0	0	0	0	1,421	2,325	FY 2021
FQ	Main & O Street PS Intermediate Upgrade	FY 2009 Ongoing	2,951	4,185	2,435	5,038	1,204	1,461	153	0	0	0	0	14,477	37,349	FY 2024
FX	Rehabilitation Northeast Boundary Sewer - Phase 1	FY 2014 Ongoing	116	22	5	8	18	33	35	40	42	42	40	287	4,617	FY 2031
FZ	Tiber Creek Sewer Lining - Phase 1	FY 2011 Ongoing	0	0	0	424	188	0	200	69	0	0	0	882	1,197	FY 2026
G7	Combined Sewers Under Buildings	FY 2009 Ongoing	4	64	10	1,750	2,757	67	0	0	0	0	0	4,647	16,463	FY 2023
IH	Combined Sewer Rehabilitation 2	FY 2012 Ongoing	651	15	0	160	2,203	2,739	705	0	0	0	0	5,823	26,934	FY 2024
IP	Tiber Creek Trunk Sewer Rehabilitation	FY 2018 Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2026
OB	FY 2024 - Inflatable Dams Replacement	FY 2022 Ongoing	0	0	0	0	115	334	3,421	887	0	0	0	4,757	6,675	FY 2025
TOTAL COMBINED SEWER BUDGETS			\$8,951	\$5,805	\$2,978	\$8,701	\$6,533	\$5,994	\$9,473	\$4,542	\$2,930	\$3,848	\$4,880	\$55,684	\$191,538	
TOTAL COMBINED SEWER OVERFLOW BUDGETS			\$188,294	\$195,350	\$151,427	\$149,230	\$199,588	\$160,057	\$77,935	\$64,541	\$150,095	\$102,660	\$90,884	\$1,341,767	\$3,033,549	

(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
\$1,988	\$4,220	\$8,571	\$8,118	\$8,587	\$3,725	\$4,987	\$7,564	\$7,494	\$5,239	\$10,102	\$68,608	\$123,574



**City Street Catch Basin**



**Stormwater Overflow**



**Potomac River**

## Overview

Stormwater runoff occurs when rain or snowmelt flows over impervious surfaces or surfaces that do not allow water to soak into the ground such as roads, driveways, sidewalks, parking lots, and buildings. The District is required to meet certain regulatory requirements in managing its separate stormwater system under the District's Municipal Separate Storm Sewer System (MS4) permit issued by the federal government.

The stormwater system has about 575 miles of storm sewer pipes and 16,000 manholes, about 15,000 catch basins and inlets, and other special structures and related facilities. Some components of the existing storm sewer system are over 100 years old. DC Water is responsible for the maintenance and replacement of the publicly-owned collection and conveyance facilities that transport stormwater runoff to the Anacostia and Potomac Rivers, Rock Creek, and other receiving streams within the District of Columbia. This year's ten-year CIP adds funding for pumps, valves, piping, ventilators and other equipment replacements and upgrades needed in the Stormwater pump stations.

## PROGRAM AREAS

**Local Drainage** – This category includes several projects for investigation, design and rehabilitation of local sewers to relieve local flooding and to address short term needs for improvements to storm sewers located in the separate and combined sewer areas.

**On-Going** – These include storm sewer rehabilitation projects carried out by DC Water's Department of Sewer Services. These annual projects also provide funding to assist in immediate storm sewer construction to alleviate flooding.

***Pumping Facilities*** – DC Water’s 16 stormwater pump stations serve critical areas of the District and are integral to the road network to maintain safe passage of vehicles through areas that do not drain without the assistance of mechanical means. DC Water has projects to upgrade all 16 of these stormwater pump stations to replace aging equipment and improve reliability, safety, and code compliance.

***DDOT*** – The annual program of stormwater infrastructure projects are coordinated with street rehabilitation or other construction work performed by the DDOT. In an effort to ease public disruption and save paving costs, DC Water coordinates its activities with those by DDOT.

***Research and Program Management*** – Provides engineering program management services for the stormwater service area capital projects and required technical assessments and hydraulic studies required to assess problems in the stormwater system. It also provides engineering services for condition assessment of the storm sewer system.

***Trunk/Force Sewers*** – Provides for the design and construction services for stormwater interceptors, trunk sewers and force mains that require upgrades. Sewers rehabilitated by this project are defined by the major planning and condition assessment program underway for the stormwater sewer system. As the assessment of the storm sewer system progresses and specific rehabilitation needs are identified, jobs will be created under this program area to remediate system problems.

## ACCOMPLISHMENTS

- Refurbished failing major stormwater outfall structure at 14<sup>th</sup> & Gallatin Streets, NE
- Finalized Infiltration and Inflow (I&I) study for the collection system
- Construction continued for the rehabilitation and improvement of the Watts Branch Storm Sewer Phase 3
- Installed new pumps, piping, valves at 1<sup>st</sup> & Canal Stormwater Pump Station
- Construction is scheduled to begin for the rehabilitation of 14<sup>th</sup> Street Bridge SW in 2019 and is partially supported by Federal Emergency Management Agency (FEMA) grant funding
- Began rebuilds at the following Stormwater pump stations: Kenilworth Stormwater Pump Station and 1<sup>st</sup> & D Streets

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

***Stormwater Pumping Stations Rehabilitation*** – This project implements the highest priority rehabilitation or upgrades, addresses issues related to health and safety and station reliability, and will reduce maintenance needs.

(\$ in thousands)

LOCAL DRAINAGE		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
GY	Storm Sewer Rehabilitation at Various Locations	FY 2012	Ongoing	\$37	\$8	\$0	\$175	\$349	\$23	\$0	\$0	\$0	\$0	\$0	\$555	\$5,908	FY 2023
RR	Local Storm Sewer Rehabilitation	FY 2027	New	0	0	0	0	0	0	0	0	0	156	3,084	3,240	7,300	FY 2029
IE	Storm Sewer Rehabilitation 3	FY 2019	Ongoing	0	0	17	69	474	747	768	1,410	769	0	0	4,253	7,017	FY 2026
TOTAL LOCAL DRAINAGE BUDGETS				\$37	\$8	\$17	\$244	\$822	\$770	\$768	\$1,410	\$769	\$156	\$3,084	\$8,048	\$20,225	

ON-GOING		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
FN	FY2017 - DSS Stormwater Projects	FY 2017	Ongoing	\$576	\$57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57	\$1,000	FY 2019
H5	FY2018 - DSS Stormwater Projects	FY 2018	Ongoing	84	584	66	0	0	0	0	0	0	0	0	650	770	FY 2020
HM	FY2019 - DSS Stormwater Projects	FY 2018	Ongoing	0	415	232	0	0	0	0	0	0	0	0	647	794	FY 2020
JH	FY2020 - DSS Stormwater Projects	FY 2019	Ongoing	0	0	213	405	0	0	0	0	0	0	0	618	820	FY 2021
LO	FY2021 - DSS Stormwater Projects	FY 2020	Ongoing	0	0	0	193	437	0	0	0	0	0	0	630	845	FY 2022
M8	FY2022 - DSS Stormwater Projects	FY 2021	Ongoing	0	0	0	0	492	197	0	0	0	0	0	688	820	FY 2023
MG	FY2023 - DSS Stormwater Projects	FY 2022	Ongoing	0	0	0	0	0	509	206	0	0	0	0	715	845	FY 2024
NV	FY2024 - DSS Stormwater Projects	FY 2023	Ongoing	0	0	0	0	0	0	536	210	0	0	0	746	870	FY 2025
PI	FY2025 - DSS Stormwater Projects	FY 2025	Ongoing	0	0	0	0	0	0	0	241	517	0	0	757	896	FY 2026
T7	FY2028 - DSS Stormwater Projects	FY 2028	New	0	0	0	0	0	0	0	0	0	0	425	425	979	FY 2029
QA	FY2026 - DSS Stormwater Projects	FY 2026	Ongoing	0	0	0	0	0	0	0	0	218	483	0	702	923	FY 2027
T9	FY2027 - DSS Stormwater Projects	FY 2027	Ongoing	0	0	0	0	0	0	0	0	0	230	494	725	950	FY 2028
TOTAL ON-GOING BUDGETS				\$691	\$1,056	\$511	\$598	\$929	\$706	\$742	\$451	\$735	\$713	\$919	\$7,360	\$10,511	

PUMPING FACILITIES		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
NG	Stormwater Pumping Station Rehabilitation	FY 2016	Ongoing	\$774	\$1,996	\$7,877	\$6,966	\$6,429	\$1,909	\$3,218	\$5,492	\$5,792	\$4,100	\$5,773	\$49,553	\$61,204	FY 2028
TOTAL PUMPING FACILITIES BUDGETS				\$774	\$1,996	\$7,877	\$6,966	\$6,429	\$1,909	\$3,218	\$5,492	\$5,792	\$4,100	\$5,773	\$49,553	\$61,204	
DDOT		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
H4	FY 2018 - DDOT Stormwater Projects	FY 2018	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,017	FY 2019
HP	FY 2019 - DDOT Stormwater Projects	FY 2018	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	220	FY 2020
TOTAL DDOT BUDGETS				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,237	

(\$ in thousands)

		FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
<b>RESEARCH &amp; PROGRAM MANAGEMENT</b>															
AT Stormwater Program Management	Start Status	\$405	\$1,078	\$84	\$223	\$319	\$341	\$260	\$195	\$0	\$0	\$0	\$2,500	\$11,389	FY 2025
RQ Storm Water Program Management	FY 2000 Ongoing FY 2025 New	0	0	0	0	0	0	0	16	198	269	326	810	1,500	FY 2030
<b>TOTAL RESEARCH &amp; PROGRAM MANAGEMENT BUDGETS</b>		<b>\$405</b>	<b>\$1,078</b>	<b>\$84</b>	<b>\$223</b>	<b>\$319</b>	<b>\$341</b>	<b>\$260</b>	<b>\$212</b>	<b>\$198</b>	<b>\$269</b>	<b>\$326</b>	<b>\$3,310</b>	<b>\$12,889</b>	
<b>TRUNK/FORCE SEWERS</b>															
BO Future Stormwater Projects	Start Status	\$81	\$82	\$82	\$87	\$86	\$0	\$0	\$0	\$0	\$0	\$0	\$337	\$15,510	FY 2022
<b>TOTAL TRUNK/FORCE SEWERS BUDGETS</b>		<b>\$81</b>	<b>\$82</b>	<b>\$82</b>	<b>\$87</b>	<b>\$86</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$337</b>	<b>\$15,510</b>	
<b>TOTAL STORMWATER BUDGETS</b>		<b>\$1,988</b>	<b>\$4,220</b>	<b>\$8,571</b>	<b>\$8,118</b>	<b>\$8,587</b>	<b>\$3,725</b>	<b>\$4,987</b>	<b>\$7,564</b>	<b>\$7,494</b>	<b>\$5,239</b>	<b>\$10,102</b>	<b>\$68,608</b>	<b>\$123,574</b>	



(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
\$46,888	\$44,927	\$43,646	\$57,249	\$85,588	\$97,220	\$98,194	\$115,011	\$140,020	\$134,664	\$140,615	\$957,135	\$2,070,599



**Sewer Line Rehabilitation Perma-liner**



**Catch Basin**



**Linear Pipe Restoration**

## Overview

DC Water is responsible for wastewater collection in the District of Columbia, including operation and maintenance of the sanitary sewer system. The sewer system includes approximately 720 miles of sanitary sewers, 6,000 manholes, and nine wastewater pumping stations. DC Water is also responsible for sewer lateral connections from the sewer mains to the property lines of residential, government, and commercial properties. In addition, DC Water is responsible for the 50-mile long Potomac Interceptor System, which provides conveyance of wastewater from Dulles International Airport, and areas in Virginia and Maryland, to the Blue Plains AWWTP.

### PROGRAM AREAS

**Collection Sewers** – Projects to rehabilitate sanitary sewer pipes based on the findings of inspection and assessment conducted on these assets.

**On-Going** – Urgent projects managed by the Department of Sewer Services including the replacement of sewer laterals, sewer mains, inspection and cleaning of sewer laterals and mains.

**Pumping Facilities** – Projects required for the upgrade of existing wastewater pumping stations, as well as projects for the engineering and construction of new wastewater pumping facilities to enhance the reliability and integrity of DC Water's sanitary sewer system.

**Program Management** – Engineering program management services for the sewer system capital improvement program, including assessing system needs, developing facilities plans, developing design scopes of work, preparing cost estimates, preparing task orders or agreements, and reviewing design documents.

**Interceptor/Trunk Force Sewers** – The replacement or rehabilitation of large diameter sewers that have reached the end of their useful life or are in need of major rebuild or refurbishment.

## ACCOMPLISHMENTS

- DC Water completed over eight miles of Closed Circuit Television (CCTV) inspection and sonar inspection of the Potomac Interceptor
- Design services began for portable generators to serve Main & O Street, and Potomac pump stations. Construction commenced in 2018
- DC Water is participating with the District Department of Energy and Environment (DDEE) on a stream restoration project, along Pope Branch, to protect the sewer in the stream valley
- Completed the calibration of a new sewer system hydraulic model which will greatly increase DC Water's predictive capabilities for system performance and will support a variety of planning and operations & maintenance (O&M) activities
- Completed revisions to Standard Operating Procedures (SOPs) for existing pump stations. These new SOPs will enhance the standardization of typical pump station operations, as well as a variety of preventive and corrective maintenance activities
- Assessment and cleaning of Oxon Run completed. Managed the removal of obstructions and major blockages in Oxon Run Sewers
- Construction of the rehabilitation of the Low Area Trunk Sewer commenced in 2018
- Emergency rehabilitation of 3rd and Constitution Pump Station completed to facilitate Low Area Trunk Sewer rehabilitation
- Purchased and installed new screen at East Side Pump Station
- Construction for the rehabilitation and cleaning of B Street & New Jersey Avenue Trunk Sewer commenced in 2018
- In-house design for rehabilitation of local sewers began. This project includes 14 miles of sewers ranging from 8 inches to 27 inches

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Pump Stations** – The updating of SOPs will enhance the standardization of typical pump station operations, as well as a variety of preventive and corrective maintenance activities.

**Ongoing and Local Sewer Rehabilitation** – Renewal of small diameter sewer infrastructure will reduce emergency repair and maintenance demands for these neighborhood sewers.

(\$ in thousands)

COLLECTION SEWERS		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
G1	Small Local Sewer Rehabilitation 1	FY 2009	Ongoing	\$4,368	\$3,202	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,202	\$29,128	FY 2021
G8	Small Local Sewer Rehabilitation 2	FY 2009	Closed	47	0	0	0	0	0	0	0	0	0	0	0	1,364	FY 2018
GA	Small Local Sewer Rehabilitation 4	FY 2014	Ongoing	196	673	0	0	0	0	0	0	0	0	0	673	9,062	FY 2019
J3	Sewer Upgrade - City Wide	FY 2000	Ongoing	7,575	1,515	7	381	1,243	0	0	0	0	0	0	3,146	18,315	FY 2022
JX	Sanitary Sewer Rehabilitation 10	FY 2016	Ongoing	0	8	16	310	5,585	1,486	0	0	0	0	0	7,405	13,604	FY 2023
QS	Local Sewer Rehabilitation 5	FY 2019	New	0	30	768	7,989	10,482	15,188	4,636	0	0	0	0	39,094	59,418	FY 2024
QX	Local Sewer Assessment 1	FY 2019	New	0	5	1,685	1,332	1,175	1,135	0	0	0	0	0	5,332	8,264	FY 2023
QT	Local Sewer Rehabilitation 6	FY 2021	New	0	0	0	0	995	2,775	14,857	19,000	5,266	0	0	42,893	63,846	FY 2026
QY	Local Sewer Rehabilitation 2	FY 2021	New	0	0	0	0	1,068	1,079	2,591	2,398	2,558	0	0	9,695	16,553	FY 2026
RG	Local Sewer Rehabilitation 9	FY 2024	New	0	0	0	0	0	0	1,943	8,013	14,410	12,158	7,013	43,538	70,000	FY 2028
QU	Local Sewer Rehabilitation 7	FY 2023	New	0	0	0	0	0	0	720	3,900	19,026	24,448	2,187	50,280	71,964	FY 2028
QW	Local Sewer Rehabilitation 8	FY 2025	New	0	0	0	0	0	0	0	0	1,323	4,785	24,347	30,455	119,100	FY 2030
QZ	Local Sewer Assessment 3	FY 2026	New	0	0	0	0	0	0	0	0	8	2,945	3,047	5,999	17,200	FY 2030
U3	B Street & New Jersey Avenue Trunk Sewer	FY 2021	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2025
TOTAL COLLECTION SEWERS BUDGETS				\$12,186	\$5,434	\$2,476	\$10,012	\$20,547	\$21,664	\$24,747	\$33,310	\$42,591	\$44,337	\$36,594	\$241,712	\$498,192	
ON-GOING		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
BF	FY2011 - DSS Sanitary Sewer Projects	FY 2011	Closed	\$31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,808	FY 2017
D6	FY2014 - DSS Sanitary Sewer Projects	FY 2013	Ongoing	1,909	17	0	0	0	0	0	0	0	0	0	17	10,651	FY 2018
DI	FY2015 - DSS Sanitary Sewer Projects	FY 2014	Closed	1,126	116	0	0	0	0	0	0	0	0	0	116	11,275	FY 2018
DW	FY2016 - DSS Sanitary Sewer Projects	FY 2015	Ongoing	820	717	0	0	0	0	0	0	0	0	0	717	15,631	FY 2020
FP	FY2017 - DSS Sanitary Sewer Projects	FY 2016	Ongoing	8,222	966	0	0	0	0	0	0	0	0	0	966	12,150	FY 2019
H6	FY2018 - DSS Sanitary Sewer Projects	FY 2017	Ongoing	1,731	4,997	947	0	0	0	0	0	0	0	0	5,943	11,923	FY 2020
HN	FY2019 - DSS Sanitary Sewer Projects	FY 2018	Ongoing	0	6,363	1,909	0	0	0	0	0	0	0	0	\$8,272	\$12,200	FY 2019
J1	FY2020 - DSS Sanitary Sewer Projects	FY 2019	Ongoing	0	0	6,869	5,793	0	0	0	0	0	0	0	12,662	12,568	FY 2021
LN	FY2021 - DSS Sanitary Sewer Projects	FY 2020	Ongoing	0	0	0	5,010	6,636	0	0	0	0	0	0	11,646	12,945	FY 2022
M9	FY2022 - DSS Sanitary Sewer Projects	FY 2021	Ongoing	0	0	0	0	5,404	6,918	0	0	0	0	0	12,322	13,335	FY 2023
NW	FY2024 - DSS Sanitary Sewer Projects	FY 2022	Ongoing	0	0	0	0	0	5,963	6,460	0	0	0	0	12,423	13,735	FY 2024
OX	FY2025 - DSS Sanitary Sewer Projects	FY 2023	Ongoing	0	0	0	0	0	0	5,698	6,260	0	0	0	11,959	14,225	FY 2025
PZ	FY2026 - DSS Sanitary Sewer Projects	FY 2024	Ongoing	0	0	0	0	0	0	0	5,491	6,385	0	0	11,876	14,650	FY 2026
Q3	FY2023 - DSS Sanitary Sewer Projects	FY 2025	Ongoing	0	0	0	0	0	0	0	0	5,662	6,889	0	12,551	15,090	FY 2027
Q3	FY2003 - DSS Sanitary Sewer Projects	FY 2002	Ongoing	45	139	0	0	0	0	0	0	0	0	0	139	12,784	FY 2019
QQ	DDCS Sewer Pumping Project Ongoing FY19-28	FY 2019	New	0	241	2,221	1,910	1,191	562	1,448	2,334	2,290	1,428	1,274	14,899	-	FY 2028
QR	DDCS Stormwater Pumping Project Ongoing	FY 2019	New	0	97	896	771	480	225	579	934	916	571	509	5,978	-	FY 2028
T6	FY2028 - DSS Sanitary Sewer Projects	FY 2028	New	0	0	0	0	0	0	0	0	0	0	0	6,414	16,020	FY 2029
T8	FY2027 - DSS Sanitary Sewer Projects	FY 2026	Ongoing	0	0	0	0	0	0	0	0	0	6,223	7,116	13,338	15,550	FY 2028
TOTAL ON-GOING BUDGETS				\$13,884	\$13,653	\$12,842	\$13,483	\$13,711	\$13,667	\$14,185	\$15,019	\$15,253	\$15,111	\$15,312	\$142,239	\$219,540	

(\$ in thousands)

PUMPING FACILITIES		FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
CX	Sewer Facilities Security Upgrades	\$77	\$102	\$119	\$43	\$44	\$0	\$0	\$0	\$0	\$0	\$0	\$308	\$1,417	FY 2022
GZ	Sewer Instrumentation & Control	240	879	348	0	0	0	0	0	0	0	0	1,227	9,141	FY 2020
LY	Sewer Facilities Security Upgrades	0	0	40	89	91	53	0	0	0	0	0	273	2,000	FY 2023
MB	3rd Street & Constitution Ave NW - Pumping Station	98	96	10	0	1,247	2,430	383	0	0	0	0	4,166	7,501	FY 2024
MC	Additional Sewer SCADA System Sites	1,296	637	56	856	1,833	830	0	0	0	0	0	4,211	8,099	FY 2022
PM	East Side Pumping Station	0	426	439	1,015	1,428	0	0	0	0	0	0	3,307	4,000	FY 2022
RH	Sewer Pump Stations Upgrades	0	109	591	2,836	928	1,104	0	0	0	0	0	5,568	8,644	FY 2023
RU	Sewer Pump Station Upgrades - Pumps & VFDs	0	0	0	0	988	1,682	4,503	9,975	7,260	4,390	0	28,797	35,950	FY 2027
RS	Sewer Pump Station Upgrades 2	0	0	0	0	0	0	0	0	3,622	5,318	20,402	29,342	150,720	FY 2032
RT	Sewer Pump Station Upgrades 3	0	0	0	0	0	0	0	0	0	2,750	9,209	11,959	42,600	FY 2034
PT	Existing Sewer Facilities Building Optimization	0	0	16	29	92	396	50	0	0	0	0	582	705	FY 2023
TOTAL PUMPING FACILITIES BUDGETS		\$1,711	\$2,248	\$1,619	\$4,868	\$6,649	\$6,495	\$4,935	\$9,975	\$10,882	\$12,457	\$29,612	\$89,739	\$270,778	
PROGRAM MANAGEMENT		FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
AU	Sanitary Sewer Program Management	\$1,765	\$1,482	\$1,990	\$3,456	\$3,966	\$4,340	\$3,303	\$2,489	\$0	\$0	\$0	\$21,025	\$65,441	FY 2025
DN	Sewer Inspection Program	541	1,745	352	1,192	2,799	628	640	638	626	630	471	9,721	27,794	FY 2029
QH	Sanitary Sewer Program Management FY26-30	0	0	0	0	0	0	0	0	2,708	3,495	4,452	10,655	20,800	FY 2030
LR	Sanitary Sewer Asset Management	188	94	110	105	104	105	0	0	0	0	0	518	5,000	FY 2023
TOTAL PROGRAM MANAGEMENT BUDGETS		\$2,495	\$3,321	\$2,452	\$4,752	\$6,868	\$5,073	\$3,942	\$3,127	\$3,334	\$4,126	\$4,923	\$41,919	\$119,035	
INTERCEPTOR/TRUNK FORCE		FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
A4	Future Sewer System Upgrades	\$542	\$3,126	\$19	\$2,039	\$1,192	\$0	\$0	\$0	\$0	\$0	\$0	\$6,376	\$44,313	FY 2024
DM	Upper Anacostia Main Interceptor Relief Sewer	0	0	0	88	266	256	213	70	2,660	5,159	1,408	10,119	17,141	FY 2028
DR	Low Area Trunk Sewer Rehabilitation	243	4,740	3,857	69	0	0	0	0	0	0	0	8,665	22,714	FY 2020
FW	Rehab Piney Branch Trunk Sewer	39	51	848	524	4,970	11,605	5,168	0	0	0	0	23,166	40,480	FY 2024
FY	Rehab Upstream Rock Creek Main Interceptor	187	48	22	0	0	0	0	0	0	0	0	70	2,515	FY 2029
G2	Sewer Structure Rehabilitation 1	26	16	89	122	1,397	299	0	0	0	0	0	1,922	9,225	FY 2023
G4	Upper Potomac Intercept Sewer Rehabilitation	3,453	855	0	0	0	0	0	0	0	0	0	855	7,213	FY 2024
G5	Sewer Rehab Near Creek Beds	1,111	877	951	3,817	2,450	700	624	5,134	12,194	7,591	1,231	35,568	73,451	FY 2028
G6	Sanitary Sewers Under Buildings 1	0	26	0	851	1,295	14	0	0	0	0	0	2,185	6,805	FY 2022
GG	Large Sewer Rehabilitation 2	0	0	0	0	0	0	0	0	0	0	0	0	468	FY 2018
GH	Large Sewer Rehabilitation 3	0	33	0	0	0	6,368	5,077	0	0	0	0	11,478	20,200	FY 2024
HS	Rehabilitation of Influent Sewers	0	0	175	555	648	896	869	3,535	8,306	5,302	1,336	21,622	37,430	FY 2030
HT	Rehabilitation of Anacostia Force Main	64	603	4,928	1,612	0	0	0	264	344	255	2,630	10,636	21,520	FY 2030
IF	Sanitary Sewer Rehabilitation 2	194	96	0	0	0	0	0	0	0	0	0	96	1,594	FY 2019
IK	Potomac Force Main Rehabilitation	0	0	0	443	67	182	234	1,675	880	0	0	3,481	6,127	FY 2026
IL	Creekbed Sewer Rehabilitation 2	8,815	4,114	990	850	599	631	3,507	3,486	2,220	0	127	16,524	58,214	FY 2031
IM	Creekbed Sewer Rehabilitation 3	1	0	63	259	1,343	104	124	1,192	1,203	142	141	4,570	15,497	FY 2032
IN	Upper East Side Trunk Sewer Rehabilitation	0	0	0	286	531	502	1,120	5,853	2,904	0	0	11,196	19,044	FY 2026
IQ	Slash Run Sewer Rehabilitation	0	0	0	0	0	0	335	674	4,992	374	0	6,375	10,000	FY 2027

(\$ in thousands)

INTERCEPTOR/TRUNK FORCE (cont.)		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
J0	B Street New Jersey Avenue Trunk Sewer Rehab	FY 2003	Ongoing	44	2,774	2,370	286	0	0	0	0	0	0	0	5,430	17,825	FY 2020
J1	Oxon Run Sewer Rehabilitation	FY 2003	Ongoing	29	124	0	0	0	0	0	(0)	0	0	0	124	1,848	FY 2031
Little Falls Rehabilitation Project		FY 2025	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2029
LZ	Potomac Interceptor Projects - Rehab. Phase 2	FY 2015	Ongoing	909	2,789	9,376	7,569	19,634	12,103	4,335	9,688	10,191	5,302	2,803	83,789	144,461	FY 2029
N7	Potomac Sewer System Rehabilitation	FY 1999	Ongoing	954	2	37	182	102	0	0	0	0	0	0	323	48,909	FY 2022
O4	Southwest Interceptor Rehabilitation	FY 2023	Ongoing	0	0	0	0	0	0	165	1	0	0	0	166	275	FY 2027
O7	East Rock Creek Diversion Rehabilitation	FY 2020	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2023
RA	Major Sewer Assessment and Heavy Cleaning 1	FY 2020	New	0	0	2	3,794	156	1,751	1,915	2,050	78	0	0	9,745	15,800	FY 2025
RC	Major Sewer Rehabilitation 1	FY 2020	New	0	0	148	660	2,882	9,805	18,065	12,135	4,393	79	0	48,167	79,998	FY 2026
RE	Major Sewer Rehabilitation 3	FY 2023	New	0	0	0	0	0	54	880	1,471	3,253	13,681	23,242	42,581	88,255	FY 2030
RD	Major Sewer Rehabilitation 2	FY 2023	New	0	0	0	0	0	202	1,675	4,962	7,753	11,427	7,944	33,964	73,128	FY 2031
RJ	Creekbed Sewer Rehabilitation 4	FY 2026	New	0	0	0	0	0	0	0	0	0	2,576	6,539	9,116	22,000	FY 2029
RL	Potomac Interceptor Projects - Rehab Phase 3	FY 2025	New	0	0	0	0	0	0	0	0	4,053	4,082	4,101	12,236	22,500	FY 2029
OA	West Rock Creek Diversion Rehabilitation	FY 2022	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2025
RB	Major Sewer Assessment and Heavy Cleaning 2	FY 2025	New	0	0	0	0	0	0	0	0	2,538	2,666	2,671	7,875	14,100	FY 2028
PJ	Re-Activation of Anacostia Force Main/Gravity Main as Relief to Anacostia Force Main	FY 2018	Ongoing	0	0	381	129	281	4,849	6,077	1,390	0	0	0	13,108	20,001	FY 2024
PU	Easby Point Trunk Sewer	FY 2020	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2023
PV	Broad Branch Trunk Sewer	FY 2023	Ongoing	0	0	0	0	0	0	0	0	0	0	0	0	-	FY 2026
TOTAL INTERCEPTOR/TRUNK FORCE SEWER BUDGETS				\$16,613	\$20,270	\$24,257	\$24,133	\$37,813	\$50,321	\$50,384	\$53,579	\$67,961	\$58,633	\$54,174	\$441,526	\$963,054	
TOTAL SANITARY SEWER BUDGETS				\$46,888	\$44,927	\$43,646	\$57,249	\$85,588	\$97,220	\$98,194	\$115,011	\$140,020	\$134,664	\$140,615	\$957,135	\$2,070,599	



(\$ in thousands)

FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
\$69,005	\$61,884	\$71,720	\$96,300	\$101,039	\$84,395	\$96,491	\$103,325	\$106,145	\$105,338	\$118,378	\$945,015	\$2,204,622



**Meter Reading**



**12th Street Water Main Break**



**Water Meter Installation**

## Overview

Delivery of safe, clean, high-quality drinking water is one of DC Water's highest priorities. Drinking water in the District of Columbia comes from the Potomac River. The U.S. Army Corps of Engineers, Washington Aqueduct (Aqueduct), is a federally owned agency responsible for treating the drinking water. DC Water purchases water from the Aqueduct and is responsible for maintaining the distribution system that delivers drinking water to customers. DC Water distributes drinking water through 1,100 miles of pipes to more than 700,000 residents and businesses in the District of Columbia.

The DC Water distribution system begins at the water treatment plant and ends at private service lines. Customer service lines connect to the mains in the streets and deliver water to residents and commercial buildings, eventually reaching taps. Water is continuously moving through our distribution system, typically at a high flow rate that keeps the water fresh. However, once the water leaves the main and enters a customer's service line, the flow of water is dependent on individual water usage.

DC Water is committed to providing customers with the highest quality drinking water and continuously works to deliver water that goes beyond federal standards. We accomplish this goal by aiming to meet target levels that are stricter than water quality standards required by the EPA. We have a dedicated Drinking Water division that collects and analyzes water samples throughout the District of Columbia. These monitoring programs include sampling and analyses that are required by EPA and additional sampling programs conducted voluntarily by DC Water.

DC Water conducts compliance monitoring on a daily basis to ensure that water quality meets EPA standards. Water quality technicians collect and analyze samples for lead and copper, total coliform (bacteria) and disinfection byproduct levels. Compliance monitoring ensures that drinking water treatment effectively prevents pipe corrosion, removes bacteria and other contaminants, and minimizes potentially harmful treatment byproducts.



DC Water operates voluntary sampling programs to support our commitment to providing high-quality drinking water to our customers. Water quality technicians collect and analyze hundreds of water samples throughout the District of Columbia. The Drinking Water division responds quickly to customer complaints and conducts water quality monitoring among the District's most vulnerable populations. DC Water operates two mobile laboratories that allow technicians to conduct on-site water quality tests and respond to emergencies. The Drinking Water division also distributes hundreds of lead test kits each year to residents and assists residents with identifying lead sources.

## PROGRAM AREAS

***Distribution Systems*** – Provides for the rehabilitation, replacement or extension of the water distribution system through several projects. The distribution systems program area is the largest for drinking water and includes three primary elements: small diameter water main renewal, large diameter water main rehabilitation, and valve replacements.

***Lead Program*** – The replacement of approximately 20,960 lead water service lines with copper piping has been completed. Additional replacement continues throughout the water distribution system as part of water main renewal projects and for customers that request full replacement.

***On-Going*** – Includes small projects for urgent replacements of water main breaks, valves and fire hydrants, water service connections, and other minor water main rehabilitation work.

***Pumping Facilities*** – Rehabilitate or upgrade water-pumping stations in the system. All four water pumping stations have completed major upgrades within the last fifteen years, and only minor projects are anticipated for the near future.

***Storage Facilities*** – Rehabilitation or upgrade of elevated tanks and reservoirs. Studies to the system have identified the need for upgrades and/or new storage facilities to support changing development patterns, for regulatory compliance, to provide additional water pressure to certain areas of the District, and to provide redundant service during unplanned outages.

***DDOT*** – Projects for the relocation, rehabilitation, replacement and extension of water mains, for which the work is completed under the District of Columbia's District Department of Transportation (DDOT) construction contracts for street paving or reconstruction. This program is being closed and combined with distribution projects.

***Program Management*** – Provides engineering program management services for the drinking water system capital improvements program, including asset management, developing facilities plans, advancement of the smart infrastructure program, conceptual designs, design scopes of work, cost estimates, and design document review.

## ACCOMPLISHMENTS

- The water service area continues to install small diameter water mains to meet the DC Water Board goal of renewing 1% percent of the system annually. This renewal includes a combination of replacement with new water mains to reduce water quality degradation from tuberculation as well as replacement to reduce the likelihood of water main breaks.
- DC Water continues its Pipe Condition Assessment (PCA) of large diameter water mains. The assessments include detailed field inspection and leak detection of five miles of high-risk water transmission mains annually. Recommendations for rehabilitation result in targeted capital projects to address the identified pipe sections in need of replacements or refurbishments.
- The construction of the new St. Elizabeth Water Tower, and the creation of the new Anacostia pressure zone was completed. This was the capstone to increase pressure by 22 psi to over 6,000 customers in Ward 8, to improve residential water service as well as provide additional fire protection for the neighborhoods around Congress Heights.

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Water Mains** – During FY 2018, the Authority continued renewal of small diameter water pipes with the goal of 1% annual renewal. Large water main rehabilitation projects continued with two projects using internal structural techniques on the existing transmission system. The capital expenditures for linear water asset renewal yields reduced reactive maintenance due to breaks and other unscheduled repairs, particularly helpful in reducing long-term maintenance costs.

**Water Pumping and Storage** – Two minor reservoir upgrade projects were completed in FY 2018, to maintain regulatory compliance as well as for operational improvements. One minor pump station upgrade project was completed in coordination with the new Anacostia pressure zone. We are continuing with minor upgrades to reduce maintenance costs and avoid the need for major upgrades later.

(\$ in thousands)

		FY 2018														Lifeline	
		Actual	Status	Start	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Budget	Completion
<b>DISTRIBUTION SYSTEMS</b>																	
C9	Large Diameter Water Mains 1	\$362	Ongoing	FY 2013	\$4,893	\$1,534	\$2,110	\$1,289	\$0	\$0	\$0	\$0	\$0	\$0	\$9,826	\$19,785	FY 2022
DE	Small Diameter Water Main Rehabilitation 12	13,499	Ongoing	FY 2014	5,252	726	3,507	4,915	3,077	0	0	0	0	0	17,476	48,375	FY 2021
F1	Small Diameter Water Main Rehabilitation 13	133	Ongoing	FY 2014	218	10,723	8,809	5,425	0	0	0	0	0	0	25,175	38,430	FY 2021
F2	Small Diameter Water Main Rehabilitation 14	0	Ongoing	FY 2017	740	12,884	16,028	7,743	0	0	0	0	0	0	37,395	56,678	FY 2022
F6	Steel Water Main Rehabilitation - Rehabilitation I	0	Ongoing	FY 2008	0	191	169	3,331	856	0	0	0	0	0	4,547	12,139	FY 2023
FE	20 Low Service Main & Pressure Reducing Valve	280	Ongoing	FY 2011	627	0	0	0	0	0	0	0	0	0	627	8,534	FY 2018
FT	Water Mains Rehabilitation Phase II	500	Ongoing	FY 2014	1,692	5,485	3,479	5,432	5,279	1,680	849	180	0	0	24,076	35,556	FY 2026
GQ	Fire Hydrant Replacement Program - Phase II	531	Ongoing	FY 2009	1,949	570	29	21	8	0	0	0	0	0	2,577	28,516	FY 2025
GR	Small Diameter Water Main Rehabilitation 15	0	Ongoing	FY 2018	0	5,015	10,916	7,674	5,200	0	0	0	0	0	28,806	52,000	FY 2023
HX	Small Diameter Water Main Rehabilitation 16	0	Ongoing	FY 2018	190	736	15,360	12,155	98	0	0	0	0	0	28,539	52,000	FY 2023
I8	Large Valve Replacement (Contract 11-13)	1,615	Ongoing	FY 2011	1,009	101	0	0	0	0	0	0	0	0	1,110	19,614	FY 2019
J7	Small Diameter Water Main Rehabilitation 17	0	Ongoing	FY 2020	0	421	850	4,489	6,861	1,302	292	0	0	0	14,214	22,650	FY 2024
JZ	Large Diameter Water Main Replacement 3 - 4 & 5	0	Ongoing	FY 2021	0	0	337	1,566	7,552	16,240	17,051	11,081	2,499	0	56,326	81,320	FY 2027
K7	Large Diameter Water Main Replacement 6 - 7 & 8	0	Ongoing	FY 2024	0	0	0	0	0	473	1,839	8,246	18,392	20,809	49,758	89,140	FY 2030
K8	Large Diameter Water Main Replacement 9 - 10 & 11	0	Ongoing	FY 2027	0	0	0	0	0	0	0	0	420	1,762	2,182	76,400	FY 2033
KE	Small Diameter Water Main Rehabilitation 18	0	Ongoing	FY 2021	0	0	748	2,567	11,271	13,370	3,625	266	0	0	31,847	46,340	FY 2026
KF	Small Diameter Water Main Rehabilitation 19	0	Ongoing	FY 2022	0	0	0	503	6,158	15,255	16,738	4,120	0	0	42,774	59,950	FY 2026
KG	Small Diameter Water Main Rehabilitation 20	0	Ongoing	FY 2023	0	0	0	0	2,812	9,950	14,606	12,695	3,525	111	43,698	61,100	FY 2027
KH	Small Diameter Water Main Rehabilitation 21	0	Ongoing	FY 2024	0	0	0	0	0	2,741	10,096	14,576	13,584	3,655	44,652	63,300	FY 2028
KI	Small Diameter Water Main Rehabilitation 22	0	Ongoing	FY 2025	0	0	0	0	0	0	2,733	10,366	16,510	15,023	44,633	64,520	FY 2029
KJ	Small Diameter Water Main Rehabilitation 23	0	Ongoing	FY 2026	0	0	0	0	0	0	0	228	1,590	20,580	22,398	66,780	FY 2030
KK	Small Diameter Water Main Rehabilitation 24	0	Ongoing	FY 2027	0	0	0	0	0	0	0	0	3,064	12,219	15,283	68,080	FY 2031
KL	Small Diameter Water Main Rehab 25	0	New	FY 2028	0	0	0	0	0	0	0	0	0	7,075	7,075	76,750	FY 2032
QF	District Metering	0	New	FY 2021	0	0	0	248	711	910	883	878	944	868	5,443	9,930	FY 2030
MU	Small Diameter Water Main Rehabilitation 2	0	Closed	FY 2001	0	0	0	0	0	0	0	0	0	0	0	15,043	FY 2018
MV	Small Diameter Water Main Rehabilitation 3	2	Ongoing	FY 2005	73	45	712	772	0	0	0	0	0	0	1,601	15,677	FY 2022
NA	Clean & Line 20 4th High Water Main	169	Closed	FY 1999	0	0	0	0	0	0	0	0	0	0	0	3,643	FY 2018
O1	Small Diameter Water Main Rehabilitation 9	1,416	Ongoing	FY 2011	2,426	0	0	0	0	0	0	0	0	0	2,426	26,170	FY 2019
O2	Small Diameter Water Main Rehabilitation 10	44	Ongoing	FY 2012	2,725	2,084	0	0	0	0	0	0	0	0	4,810	38,292	FY 2020
O3	Small Diameter Water Main Rehabilitation 11	9,439	Ongoing	FY 2013	8,614	11	0	0	0	0	0	0	0	0	8,625	40,763	FY 2020
PK	Large Meter Vault and Piping Improvements	17	Closed	FY 2014	0	0	0	0	0	0	0	0	0	0	0	996	FY 2022
S3	Large Valve Replacement (Contract 3-7)	0	Ongoing	FY 1999	320	420	0	0	0	0	0	0	0	0	741	23,181	FY 2021
<b>TOTAL DISTRIBUTION SYSTEMS BUDGETS</b>		<b>\$28,008</b>			<b>\$30,729</b>	<b>\$40,948</b>	<b>\$63,054</b>	<b>\$58,127</b>	<b>\$49,881</b>	<b>\$61,921</b>	<b>\$68,714</b>	<b>\$62,636</b>	<b>\$60,526</b>	<b>\$82,102</b>	<b>\$578,638</b>	<b>\$1,359,993</b>	
<b>LEAD PROGRAM</b>																	
BW	Lead Service Replacement Program	\$5,610	Ongoing	FY 2003	\$4,338	\$5,928	\$6,723	\$6,307	\$6,715	\$7,438	\$6,544	\$5,830	\$6,654	\$6,706	\$63,182	\$243,414	FY 2030
<b>TOTAL LEAD PROGRAM BUDGETS</b>		<b>\$5,610</b>			<b>\$4,338</b>	<b>\$5,928</b>	<b>\$6,723</b>	<b>\$6,307</b>	<b>\$6,715</b>	<b>\$7,438</b>	<b>\$6,544</b>	<b>\$5,830</b>	<b>\$6,654</b>	<b>\$6,706</b>	<b>\$63,182</b>	<b>\$243,414</b>	

(\$ in thousands)

ON-GOING	FY 2018 Actual	Start	Status	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
				\$434	\$99	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$533	\$10,248	FY 2020
D5 FY 2014 - DWS Water Projects	\$348	FY 2013	Ongoing													FY 2019
DG FY 2016 - DWS Water Projects	4	FY 2014	Closed											0	8,806	FY 2018
DY FY 2015 - DWS Water Projects	1,776	FY 2015	Ongoing	151	0	0	0	0	0	0	0	0	0	151	10,330	FY 2019
FK FY 2017 - DWS Water Projects	7,539	FY 2016	Ongoing	516	0	0	0	0	0	0	0	0	0	516	9,918	FY 2020
GS FY 2018 - DWS Water Projects	4,540	FY 2017	Ongoing	4,852	66	0	0	0	0	0	0	0	0	4,918	9,630	FY 2020
HY FY 2019 - DWS Water Projects	0	FY 2018	Ongoing	3,171	552	0	0	0	0	0	0	0	0	3,723	9,631	FY 2020
JA FY 2020 - DWS Water Projects	0	FY 2019	Ongoing	0	8,692	930	0	0	0	0	0	0	0	9,622	15,070	FY 2021
KW FY 2021 - DWS Water Projects	0	FY 2020	Ongoing	0	0	8,245	1,917	0	0	0	0	0	0	10,162	11,630	FY 2022
KX FY 2022 - DWS Water Projects	0	FY 2021	Ongoing	0	0	0	8,391	1,861	0	0	0	0	0	10,252	11,664	FY 2023
KY FY 2023 - DWS Water Projects	0	FY 2022	Ongoing	0	0	0	0	9,286	2,171	0	0	0	0	11,458	13,150	FY 2024
KZ FY 2024 - DWS Water Projects	0	FY 2023	Ongoing	0	0	0	0	0	10,567	2,624	0	0	0	13,191	14,452	FY 2025
L1 FY 2025 - DWS Water Projects	0	FY 2024	Ongoing	0	0	0	0	0	0	11,306	2,626	0	0	13,932	14,780	FY 2026
QJ DDCS Water Pumping and Storage Projects	0	FY 2019	New	956	828	951	0	0	0	0	0	0	0	2,735	3,000	FY 2021
QK DDCS Water Pumping and Storage Projects	0	FY 2021	New	0	0	0	1,989	2,203	2,461	2,859	3,088	3,427	3,784	19,813	19,040	FY 2028
L7 FY 2028 - DWS Water Projects	0	FY 2027	New	0	0	0	0	0	0	0	0	0	16,346	16,346	19,575	FY 2029
L2 FY 2026 - DWS Water Projects	0	FY 2025	Ongoing	0	0	0	0	0	0	0	12,869	2,231	0	15,100	15,890	FY 2027
L6 FY 2027 - DWS Water Projects	0	FY 2026	Ongoing	0	0	0	0	0	0	0	0	14,789	2,851	17,640	18,250	FY 2028
<b>TOTAL ON-GOING BUDGETS</b>	<b>\$14,207</b>			<b>\$10,080</b>	<b>\$10,238</b>	<b>\$10,126</b>	<b>\$12,297</b>	<b>\$13,351</b>	<b>\$15,199</b>	<b>\$16,789</b>	<b>\$18,583</b>	<b>\$20,447</b>	<b>\$22,981</b>	<b>\$150,091</b>	<b>\$215,064</b>	
PUMPING FACILITIES	FY 2018 Actual	Start	Status	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
				\$518	\$265	\$121	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$905	\$14,041	FY 2021
AY Upgrades to Fort Reno Pumping Station	\$121	FY 2001	Ongoing	0	0	0	0	0	0	0	0	0	0	0	4,993	FY 2020
F8 16th & Alaska Avenue Pumping Station	32	FY 2009	Closed	62	30	16	0	0	0	0	0	0	0	107	2,132	FY 2021
FD Water Facility Security System Upgrades	142	FY 2009	Ongoing	0	0	0	0	0	0	0	0	0	0	0	14,569	FY 2018
FH Discharge Piping Bryant Street Pumping Station	1	FY 2008	Ongoing	0	0	0	0	0	0	0	0	0	0	4,400	5,920	FY 2025
HI Bryant Street Pump Station Phase III	0	FY 2021	Ongoing	0	0	28	207	304	2,617	1,245	0	0	0	3,446	4,700	FY 2026
HR Anacostia Pump Station Improvements Phase II	0	FY 2021	Ongoing	0	0	0	0	135	163	675	2,384	89	0	4,871	7,845	FY 2023
HV Bryant Street Pump Station - Spill Header Flow	0	FY 2012	Ongoing	41	63	1,839	2,387	542	0	0	0	0	0	5,779	12,178	FY 2022
JB Bryant Street PS Improvements - Phase II	2,695	FY 2011	Ongoing	303	406	1,598	3,472	0	0	0	0	0	0	5,809	8,364	FY 2022
LT Water-System SCADA	277	FY 2013	Ongoing	275	1,749	2,681	1,105	0	0	0	0	0	0	1,512	2,000	FY 2026
LU Water Facilities Security System Upgrades 2	0	FY 2016	Ongoing	0	0	0	105	331	519	334	224	0	0	0	33,505	FY 2019
M7 Replacement of Anacostia Pump Station	72	FY 2001	Closed	0	0	0	0	0	0	0	0	0	0	4,269	5,600	FY 2028
OW Water System Sensor Program (WaSSP)	0	FY 2021	New	0	0	0	603	606	618	617	605	609	611	4,733	6,430	FY 2028
OR Fort Reno Pump Station Improvements Phase II	0	FY 2024	Ongoing	0	0	0	0	0	31	224	289	2,825	1,364	505	695	FY 2023
PS Existing Water Facilities Building Optimization	0	FY 2020	Ongoing	0	0	0	119	386	0	0	0	0	0	657	940	FY 2023
S6 West Venturi Meter - Bryant Street Pumping	0	FY 2021	Ongoing	0	0	0	112	545	0	0	0	0	0			
<b>TOTAL PUMPING FACILITIES BUDGETS</b>	<b>\$3,341</b>			<b>\$1,199</b>	<b>\$2,513</b>	<b>\$6,282</b>	<b>\$8,110</b>	<b>\$2,850</b>	<b>\$3,947</b>	<b>\$3,095</b>	<b>\$3,502</b>	<b>\$3,523</b>	<b>\$1,974</b>	<b>\$36,993</b>	<b>\$123,911</b>	

(\$ in thousands)

DDOT		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
B0	B0 FY 2010 - DDOT Water Projects	FY 2009	Ongoing	\$0	\$49	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49	\$17,171	FY 2020
BN	FY 2011 - DDOT Water Projects	FY 2010	Ongoing	901	80	14	0	0	0	0	0	0	0	0	94	8,738	FY 2020
CJ	FY 2012 - DDOT Water Projects	FY 2008	Ongoing	41	376	25	3	4	0	0	0	0	0	0	408	6,474	FY 2022
CM	FY 2013 - DDOT Water Projects	FY 2012	Ongoing	0	486	38	0	0	0	0	0	0	0	0	525	1,549	FY 2020
TOTAL DDOT BUDGETS				\$942	\$992	\$76	\$3	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$1,076	\$33,933	

STORAGE FACILITIES		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
FA	Water Storage Facility Upgrades	FY 2008	Ongoing	\$2,904	\$1,342	\$4,361	\$1,276	\$1,869	\$236	\$0	\$0	\$0	\$0	\$0	\$9,084	\$37,383	FY 2022
HW	Rehabilitation of Elevated Water Tanks	FY 2020	Ongoing	0	0	0	98	285	703	1,975	1,199	491	0	0	4,751	7,000	FY 2026
MA	Saint Elizabeth Water Tank	FY 2001	Ongoing	9,903	7,709	721	841	5,100	1,077	0	0	0	0	0	15,448	47,055	FY 2023
MQ	2MG 4th High Storage Tank	FY 2003	Ongoing	0	257	142	24	147	241	834	1,169	1,341	589	0	4,742	9,720	FY 2027
QG	Anacostia First and Second High Storage	FY 2019	New	0	0	0	310	1,489	5,200	513	321	1,851	2,995	0	12,679	19,171	FY 2027
MR	2nd High Water Storage	FY 2008	Ongoing	0	76	0	0	50	69	591	1,081	5,096	3,515	0	10,477	17,034	FY 2027
TOTAL STORAGE FACILITIES BUDGETS				\$12,807	\$9,384	\$5,223	\$2,549	\$8,940	\$7,526	\$3,913	\$3,770	\$8,779	\$7,098	\$0	\$57,181	\$137,364	

PROGRAM MANAGEMENT		Start	Status	FY 2018 Actual	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	Lifetime Budget	Completion
KV	Water Program Management Services 2F	FY 2019	Ongoing	\$0	\$1,759	\$3,785	\$5,183	\$5,296	\$3,942	\$2,223	\$0	\$0	\$0	\$0	\$22,187	\$30,610	FY 2024
LB	Water Program Management Services 2G	FY 2024	Ongoing	0	0	0	0	0	0	1,851	4,414	6,815	7,089	4,614	24,783	35,480	FY 2029
LQ	Water Service Area Asset Management	FY 2013	Ongoing	100	81	91	79	78	90	0	0	0	0	0	420	5,000	FY 2023
ME	Water System Program Management Services	FY 1998	Ongoing	3,991	3,323	2,919	2,300	1,881	40	0	0	0	0	0	10,464	19,854	FY 2022
TOTAL PROGRAM MANAGEMENT BUDGETS				\$4,091	\$5,163	\$6,795	\$7,562	\$7,255	\$4,073	\$4,073	\$4,414	\$6,815	\$7,089	\$4,614	\$57,854	\$90,944	

TOTAL WATER BUDGETS		\$69,005	\$61,884	\$71,720	\$96,300	\$101,039	\$84,395	\$96,491	\$103,325	\$106,145	\$105,338	\$118,378	\$945,015	\$2,204,622	
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(\$ in thousands)

	FY 2018 Actual	FY 2019 - FY 2028 Disbursement Plan											Lifetime Budget
		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
CAPITAL EQUIPMENT	\$28,929	\$34,518	\$26,823	\$36,907	\$33,086	\$32,725	\$36,680	\$35,540	\$35,426	\$34,339	\$34,279	\$340,324	\$340,324
WASHINGTON AQUEDUCT	13,194	12,930	15,532	15,909	15,536	35,006	14,830	32,731	9,034	12,298	23,321	187,127	187,127
ADDITIONAL CAPITAL PROGRAMS	\$42,123	\$47,448	\$42,355	\$52,816	\$48,622	\$67,731	\$51,509	\$68,272	\$44,461	\$46,637	\$57,600	\$527,450	\$527,450



**Maintenance Services**



**Mobile Command Center**



**Meter Replacement Program**

## Overview

Additional Capital Programs is a subset of DC Water's Capital Improvement Program (CIP) and is comprised of Capital Equipment and the Washington Aqueduct.

**Capital Equipment** – This category accounts for over 60% of the Additional Capital Programs Budget and includes capital equipment purchases, refurbishment, replacement and enhancement of operational facilities, vehicle equipment, office renovations, mechanical equipment, and IT software/hardware needs. This year's ten-year CIP adds funding in the latter years that were previously underfunded in the prior plan. The current capital equipment disbursement budget includes the following cluster groups:

- **Administration** – Capital equipment within this cluster are primarily for the departments of Emergency Management, Facilities Management, Fleet Management, Security, and Safety. The activities/purchases include, plumbing, elevators, photocopiers, appliances, furniture, vehicles, buses, vacuum trucks, boats, backhoes, cranes, trailers, forklifts, fire suppression system equipment, renovations, cameras, and sensors.
- **Customer Experience** – The cluster is comprised of the following departments: Customer Care, Marketing & Communications, Industry & Business Relations, and Information Technology (IT). The activities/purchases support the enhancements, replacements, and upgrades of residential and commercial water meters. The IT department includes equipment purchases for infrastructure and enterprise projects which include: laptops, cabling, radios, servers, telephones, and software applications.
- **Finance and Procurement** – This cluster includes the departments of Finance and Procurement & Compliance. The activities/purchases are primarily for reserve funds to support additional capital equipment needs for new facilities, unplanned emergencies, and capital equipment requiring long-lead times.



- **Operations & Engineering** – This cluster is comprised of Wastewater Operations, Water Operations, Sewer Operations, and Engineering. The capital equipment activities/purchases support work attributable to rehabilitation, replacement, and continuous improvements or enhancements for pumps, screens, large motors, centrifuges, process control systems, actuators, flow meters, and Supervisory Control and Data Acquisition (SCADA) hardware. In addition, it includes the purchases of pipes/fittings, manhole covers/frames, sewer cameras, trenchless, generators, and various other equipment for the plant, distribution and collection systems.

**Washington Aqueduct** – The Washington Aqueduct, managed by the U.S. Army Corps of Engineers (USACE), provides wholesale water treatment services to DC Water and wholesale customers in Northern Virginia, (Arlington County and Fairfax County Water Authority). DC Water purchases approximately 74 percent of the water produced by the Aqueduct’s two treatment facilities, the Dalecarlia and McMillan Treatment Plants, and thus is responsible for approximately 74 percent of the Aqueduct’s operating and capital costs. Under federal legislation and a memorandum of understanding enacted in 1997 and updated in 2013, when Fairfax Water replaced the City of Falls Church, DC Water and the Aqueduct’s wholesale customers in Northern Virginia inherited a much greater role in oversight of the Aqueduct’s operations and its Capital Improvement Program, than prior to 1997.

The USACE, in accordance with Federal procurement regulations, requires DC Water to remit cash in an amount equal to the total project cost in advance of advertising contracts, and these funds are transferred immediately to a USACE/U.S. Treasury account to be drawn down during the execution of the project, through completion, with no interest going to DC Water. Over the years, extensive discussions with the U.S. Office of Management and Budget (OMB) and the USACE resulted in a proposal in the President’s FY 2006 and FY 2007 budgets that would allow Aqueduct customers to deposit funds for any projects required by their National Pollutant Discharge Elimination System (NPDES) permit (including the residuals project) to a separate escrow account, allowing the Aqueduct customers to retain interest on these funds. The proposal was submitted in May 2006 to the Senate and House. During FY 2006, the USACE briefed the Senate Environment and Public Works Committee staff and in conjunction with DC Water, briefed the Senate Homeland Security and Government Affairs committee staff. Additionally, DC Water and Washington Aqueduct staff provided DC Delegate Norton’s office with the Administration’s proposal. Neither committees acted on the proposal.

We continue to pursue other options that would be more favorable to DC Water, including transferring dollars on a phased basis, utilizing taxable bonds, or taxable commercial paper. In the past, some of these options have not been viewed favorably by the U.S. Treasury, but we will continue our outreach efforts to Congressional staff, federal agencies and the Corps on this critical issue.

DC Water’s share of Washington Aqueduct’s infrastructure improvements to achieve established service levels for FY 2019 – FY 2028 is \$187.1 million. The increased investments of \$67.1 million fully funds Washington Aqueduct’s risk-based asset management CIP, except the following projects: Federally Owned Water Mains, Travilah Quarry Acquisition Outfitting, and Advanced Treatment.

# Additional Capital Programs

summary overview financial plan rates&rev capital financing departmental glossary

(\$ in thousands)

FY 2018		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total
Actual												
<b>CAPITAL EQUIPMENT</b>												
<b>OPERATIONS &amp; ENGINEERING</b>												
WASTEWATER OPERATIONS												
	EQP4710 Wastewater Operations	\$ 39	\$ 100	\$ 100	\$ 100	\$ 100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500
	EQP4730 Process Engineering	163	550	350	475	475	-	-	-	-	-	2,325
	EQP4830 Maintenance Services	1,685	3,600	3,160	3,920	4,040	-	-	-	-	-	18,660
	EQP4210 Pumping Services	2,113	1,700	1,650	1,900	1,950	-	-	-	-	-	9,200
	Subtotal	4,000	5,950	5,260	6,395	6,565	-	-	-	-	-	30,685
WATER OPERATIONS												
	EQP4410 Water Operations	101	590	610	700	700	-	-	-	-	-	3,300
	EQP4110 Water Quality and Technology	48	150	125	125	125	-	-	-	-	-	650
	Subtotal	150	740	735	825	825	-	-	-	-	-	3,950
SEWAGE OPERATIONS												
	EQP4610 Sewer Operations	310	225	260	260	260	-	-	-	-	-	1,265
	Subtotal	310	225	260	260	260	-	-	-	-	-	1,265
ENGINEERING												
	EQP4310 Engineering & Technical Services	77	20	20	175	25	-	-	-	-	-	265
	Subtotal	77	20	20	175	25	-	-	-	-	-	265
<b>FINANCE &amp; PROCUREMENT</b>												
FINANCE												
	EQP2410 Finance	333	800	10	10	10	-	-	-	-	-	840
	EQP2411 Reserve Fund	1,503	7,000	1,000	10,000	9,000	33,750	32,610	32,496	31,409	31,349	197,615
	Subtotal	1,837	7,800	1,010	10,010	9,010	33,750	32,610	32,496	31,409	31,349	198,455
<b>CUSTOMER EXPERIENCE</b>												
CUSTOMER CARE												
	EQP2340 AMR Replacement	8,630	-	-	-	-	-	-	-	-	-	-
	EQP2350 On-Going Replacement	1,662	2,618	2,618	2,930	2,930	2,930	2,930	2,930	2,930	2,930	28,676
	Subtotal	10,292	2,618	2,618	2,930	2,930	2,930	2,930	2,930	2,930	2,930	28,676
INFORMATION TECHNOLOGY												
	EQP2110 IT Infrastructure	1,754	3,050	2,600	2,767	3,081	-	-	-	-	-	14,148
	EQP2115 IT Enterprise Technology	6,375	6,245	8,540	6,950	4,500	-	-	-	-	-	30,735
	Subtotal	8,129	9,295	11,140	9,717	7,581	-	-	-	-	-	44,883
<b>ADMINISTRATION</b>												
	EQP3410 Facilities Management	1,481	2,855	1,805	1,995	1,890	-	-	-	-	-	10,355
	EQP3610 Security	517	515	515	550	450	-	-	-	-	-	2,480
	EQP5610 Fleet Management	2,137	4,500	3,460	4,000	3,500	-	-	-	-	-	19,160
	EQPXXX Emergency Management	-	-	-	50	50	-	-	-	-	-	150
	Subtotal	4,135	7,870	5,780	6,595	5,890	-	-	-	-	-	32,145
<b>TOTAL CAPITAL EQUIPMENT</b>		<b>\$28,929</b>	<b>\$34,518</b>	<b>\$26,823</b>	<b>\$36,907</b>	<b>\$33,086</b>	<b>\$32,725</b>	<b>\$36,680</b>	<b>\$35,540</b>	<b>\$34,339</b>	<b>\$34,279</b>	<b>\$340,324</b>
<b>WASHINGTON AQUEDUCT</b>		<b>13,194</b>	<b>12,930</b>	<b>15,532</b>	<b>15,909</b>	<b>15,536</b>	<b>35,006</b>	<b>14,830</b>	<b>32,731</b>	<b>12,298</b>	<b>23,321</b>	<b>187,127</b>
<b>TOTAL ADDITIONAL CAPITAL PROGRAMS</b>		<b>\$42,123</b>	<b>\$47,448</b>	<b>\$42,355</b>	<b>\$52,816</b>	<b>\$48,622</b>	<b>\$67,731</b>	<b>\$51,509</b>	<b>\$68,272</b>	<b>\$46,637</b>	<b>\$57,600</b>	<b>\$527,450</b>



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## Approved FY 2020 Budgets

### Section VI: CAPITAL FINANCING, CASH AND DEBT



Clean Rivers Tunnel Dewatering  
Pump Station

\$ in thousands

DC Water relies on several funding sources to finance its capital projects and cash flow needs. The process of identifying, obtaining, and managing these funds is a combined effort throughout the Authority. This includes future revenues, collections, grant applications, planning, and debt service management. Approximately 64% of DC Water's Capital Program is funded from debt and Pay-Go, 19% of the funds is contributed by the wholesale capital payments, and the remaining estimated 18% funds comes from other available funds.

Below is the list of funding sources and percentage contribution, to support DC Water's overall CIP needs.

Ten-year Sources of Funds	Amount	Percentage
Debt Financing (1)	\$1,787,082	36.1%
Use of Available Funds	155,425	3.1%
Wholesale Capital Payment	924,719	18.7%
EPA Grants & CSO Appropriation	166,495	3.4%
Interest Income on Bond Proceeds	21,031	0.4%
Pay-Go Financing (2)	1,394,402	28.1%
Clean Rivers Impervious Area Charge (CRIAC)	436,401	8.8%
System Availability Fee (SAF)	71,225	1.4%
<b>Total</b>	<b>\$4,956,780</b>	<b>100.0%</b>

- 1) Debt financing refers to the borrowing of funds through long-term revenue bonds, commercial paper, and other short-term notes
- 2) Pay-Go financing is any funds available after meeting the reserves and rate stabilization fund deposits

\$ in thousands

## Sources and Uses of Funds

	FY 2018 Actual	FY 2019 Approved	FY 2019 Revised	FY 2020 Approved
<b>Sources</b>				
<b>Beginning Balance</b>	<b>\$ 172,706</b>	<b>\$ 249,878</b>	<b>\$ 282,107</b>	<b>\$ 143,688</b>
New Debt Proceeds / Commercial Paper / EMCP <sup>(1)</sup>	\$ 346,672	\$ 110,000	\$ 110,000	\$ 180,716
System Availability Fee (SAF)	-	3,850	3,850	5,775
Clean Rivers Impervious Area Charge (CRIAC)	-	30,824	31,270	34,769
Pay-Go Financing	113,021	65,948	67,270	69,083
EPA Grants	25,332	44,339	18,215	38,990
CSO Appropriation	14,054	-	-	-
Wholesale Customer Capital Contributions	98,522	65,851	67,112	67,321
Interest Income	1,730	2,981	2,981	3,658
<b>Total Sources</b>	<b>\$ 599,330</b>	<b>\$ 323,793</b>	<b>\$ 300,698</b>	<b>\$ 400,311</b>
<b>Uses</b>				
Water Projects	\$ 69,006	\$ 45,747	\$ 61,885	\$ 71,721
Wastewater Treatment	106,104	74,617	69,979	66,620
Sanitary Sewer Treatment	46,888	32,947	44,927	43,646
Combined Sewer & LTCP Projects	188,294	200,343	195,349	151,427
Stormwater Projects	1,988	4,909	4,220	8,571
Non-Process Facilities	35,526	33,107	15,309	36,002
Washington Aqueduct	13,194	12,930	12,930	15,532
Capital Equipment	14,430	27,400	27,400	17,105
Meter Replacement / AMR/ CIS	14,499	7,118	7,118	9,718
<b>Total Uses</b>	<b>\$ 489,929</b>	<b>\$ 439,118</b>	<b>\$ 439,117</b>	<b>\$ 420,342</b>
<b>Ending Balance</b>	<b>\$ 282,107</b>	<b>\$ 134,553</b>	<b>\$ 143,688</b>	<b>\$ 123,657</b>

(1) Commercial Paper and Extendable Municipal Commercial Paper are used for interim financing and capital equipment

## Cash Reserve Summary

	FY 2018 Actual	FY 2019 Approved	FY 2019 Revised	FY 2020 Approved
<b>Beg. O&amp;M Reserve Balance (Net of Rate Stabilization Fund)</b>	<b>\$ 147,212</b>	<b>\$ 140,000</b>	<b>\$ 166,796</b>	<b>\$ 165,000</b>
Operating Surplus	\$ 97,149	\$ 84,520	\$ 100,974	\$ 101,633
Wholesale Customer Prior Year Billing Reconciliation	8,987	(1,500)	(10,982)	(3,448)
Project Billing Refund	-	(4,000)	(11,000)	(4,000)
Transfer to Rate Stabilization Fund	-	-	-	-
Federal Customer Prior Year Billing Reconciliation	(9,019)	(5,821)	(5,821)	1,317
Interest Earned from Bond Proceeds	227	424	424	570
Pay-Go Capital Financing	(77,761)	(73,624)	(75,391)	(81,071)
<b>Ending O&amp;M Reserve Balance (Net of Rate Stabilization Fund)</b>	<b>\$ 166,796</b>	<b>\$ 140,000</b>	<b>\$ 165,000</b>	<b>\$ 180,000</b>
Rate Stabilization Fund	\$ 61,450	\$ 61,450	\$ 55,450	\$ 55,450



\$ in thousands

## Interest Rate Assumptions

### ■ Budget Appropriation and Financial Plan

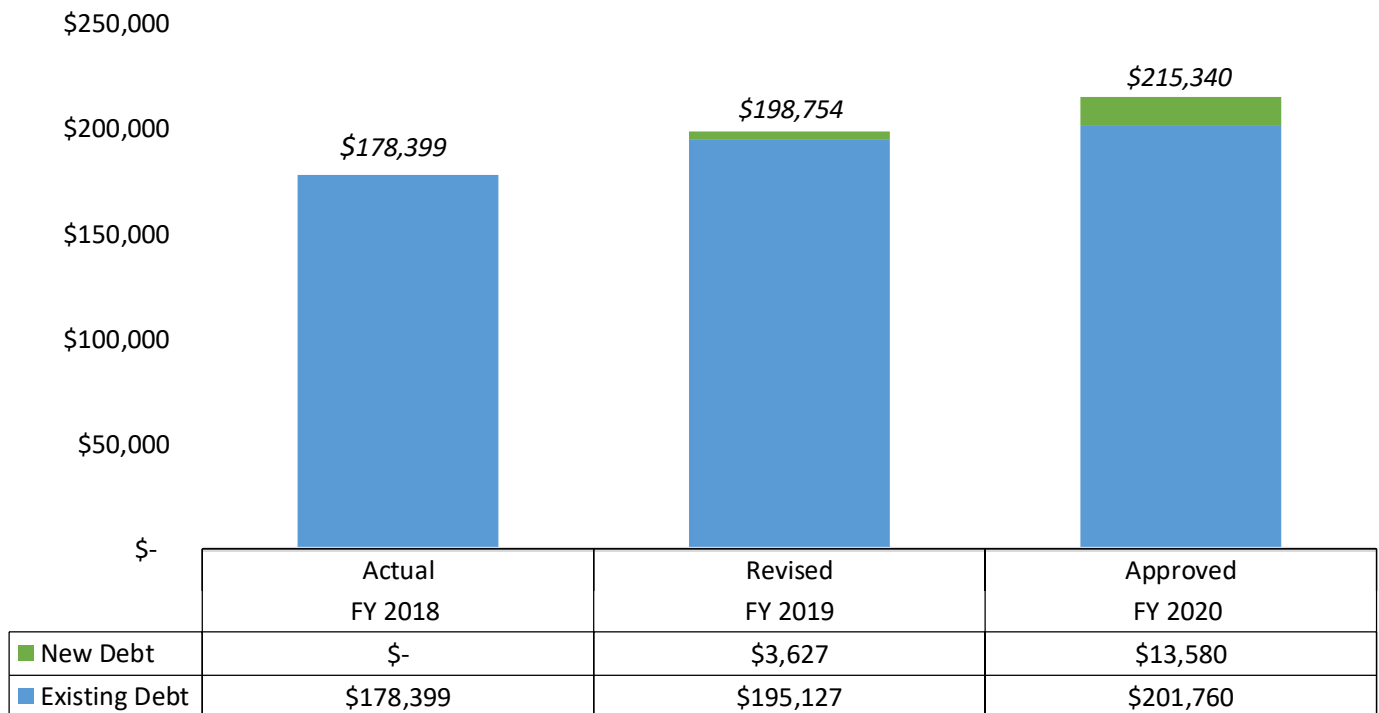
- 1) Variable rate
  - 2.50% in FY 2019 and FY 2020
- 2) Fixed rate
  - 5.50% in FY 2019 and 6.00% in FY 2020
  - Plus cost of issuance and insurance

## Capital Financing Plan

### ■ DC Water's comprehensive capital financing plan includes three key goals:

- 1) minimize cost of capital
- 2) increase operational flexibility
- 3) optimize asset/liability matching through: Interim Financing, Pay-Go Financing, Permanent Bond financing, and Federal Grants

## Debt Management FY 2018 - FY 2020



\$ in thousands

The chart below shows debt service payment of principal and interest for a three-year outlook.

Bond Series	FY 2018 Actual	FY 2019 Revised	FY 2020 Approved
<b>Senior Lien</b>			
Series 1998	\$ 22,647	\$ 23,366	\$ 23,368
Series 2009	4,436	-	-
2014A	16,849	16,849	16,849
2017A / B	17,072	17,069	17,845
2018A / B	6,292	18,325	18,324
<b>Total Senior Lien</b>	<b>\$ 67,296</b>	<b>\$ 75,609</b>	<b>\$ 76,385</b>
<b>Subordinate Lien</b>			
Series 2008A Subordinate Bond	\$ 7,208	\$ -	\$ -
Series 2010A Subordinate Bond	10,999	11,094	15,609
Series 2012A,B-1,B-2,C Subordinate Bond	21,058	21,061	20,091
Series 2013A Subordinate Bond	14,994	14,994	14,994
Series 2014B Subordinate Bond	1,250	3,250	3,253
Series 2014C Subordinate Bond	17,467	17,998	30,302
Series 2015A,B Subordinate Bond	18,101	19,503	19,423
Series 2016 Subordinate Bond	17,420	28,955	17,039
Series 2016B Subordinate Bond	858	858	858
EMCP	674	500	1,500
Commercial Paper	271	500	1,500
Jennings Randolph Bond	805	805	805
<b>Total Subordinate Lien</b>	<b>\$ 111,104</b>	<b>\$ 119,518</b>	<b>\$ 125,375</b>
<b>Proposed Debt Service</b>	<b>\$ -</b>	<b>\$ 3,627</b>	<b>\$ 13,580</b>
<b>Total Debt Service</b>	<b>\$ 178,399</b>	<b>198,754</b>	<b>215,339</b>

As of September 2018, DC Water has reaffirmed its credit rating; this allows for a lower borrowing cost which in turn reduces ratepayer cost in the long run.

Senior Bond Ratings		
Moody's Investor Service	Aa1	Stable Outlook
Standard & Poor's Corporation	AAA	Stable Outlook
Fitch's Rating	AA	Positive Outlook

\$ in thousands

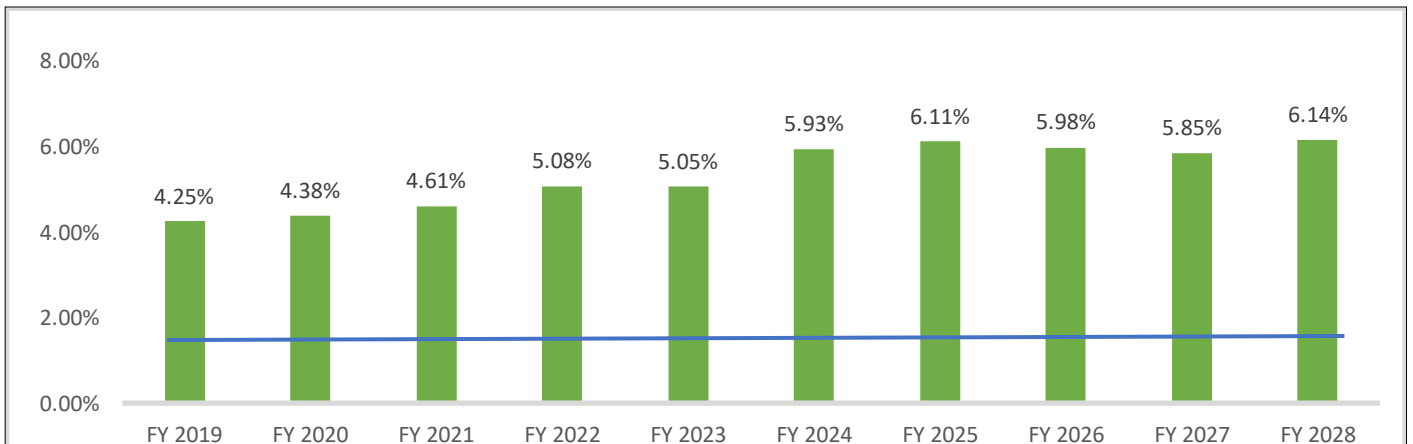
## Debt Service Coverage (FY 2019 - FY 2028)

DC Water is authorized to issue additional debt only to the extent that it can satisfy the Debt Service Coverage (annual net revenues as a percent of annual debt service) requirements established in the Indenture and certain Board policies.

Debt level	Master Indenture	Board Resolution	Management Practice
Senior	120x	140x	140x
Subordinate	100x	100x	100x

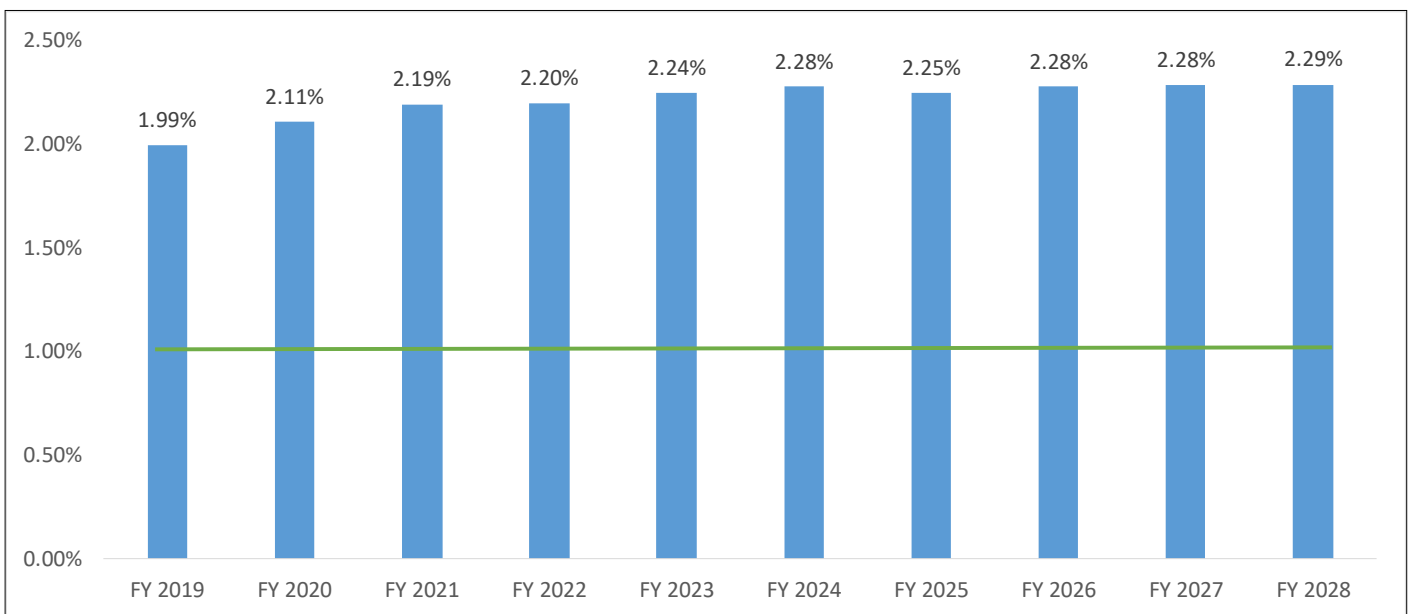
### Senior Debt Service Coverage

Senior Debt Service Coverage (Board/Management target = 140x)



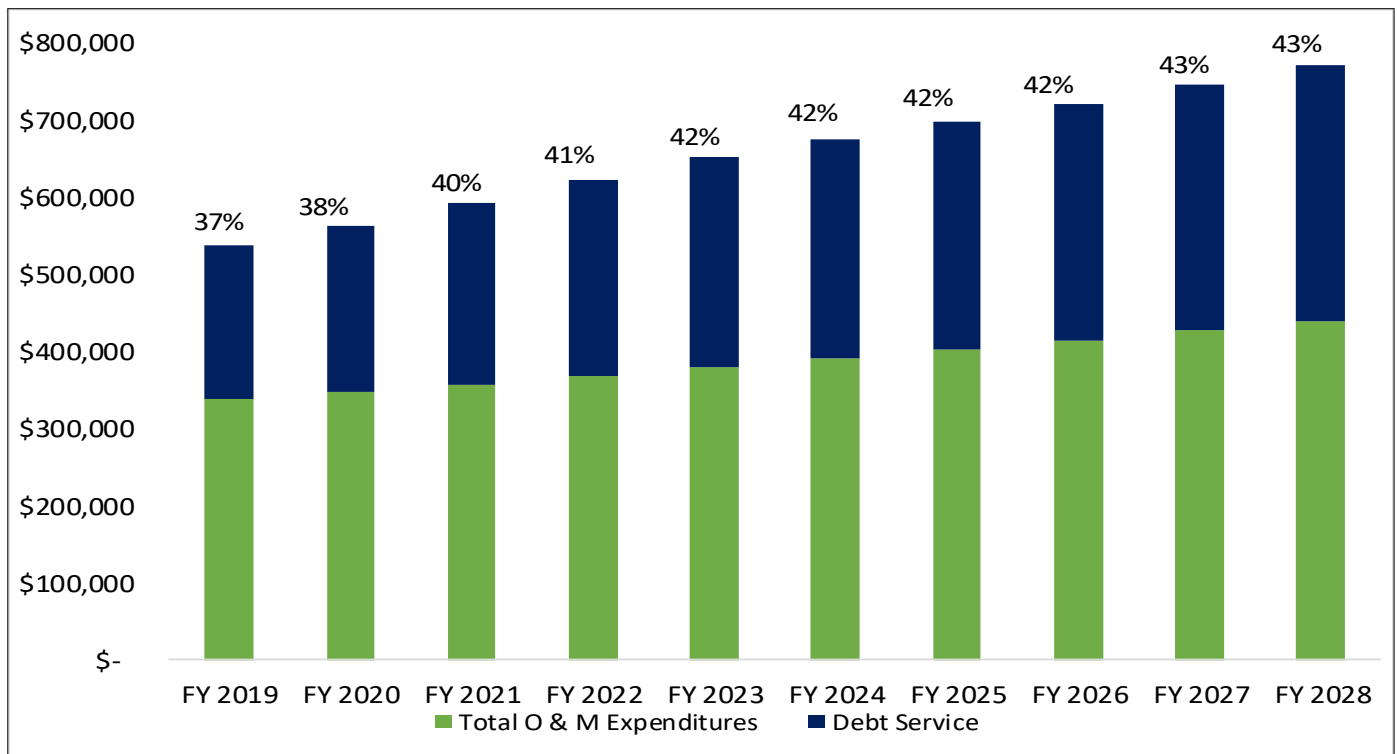
### Subordinate Debt Service Coverage

Subordinate Debt Service (Board/Management target = 100x)

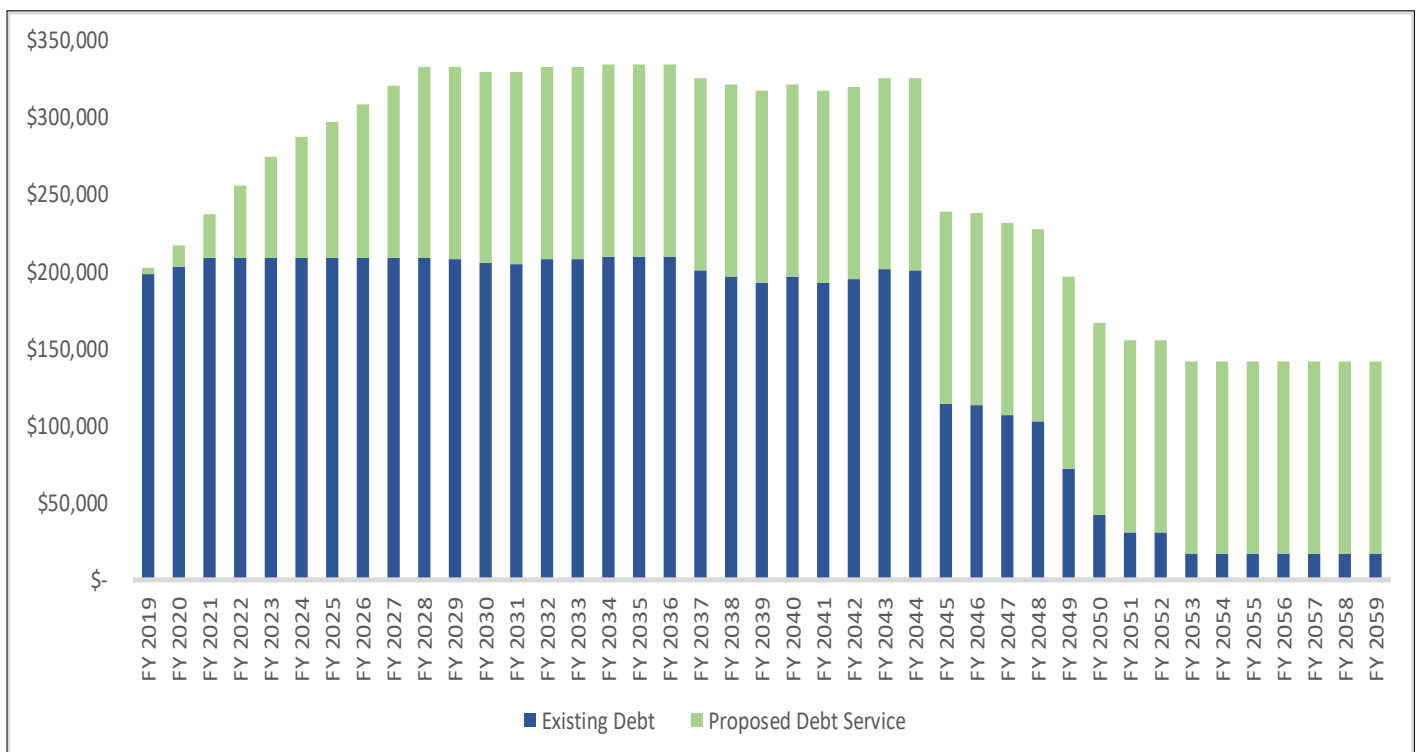


\$ in thousands

### Debt Service as Percentage of O&M Expenditures

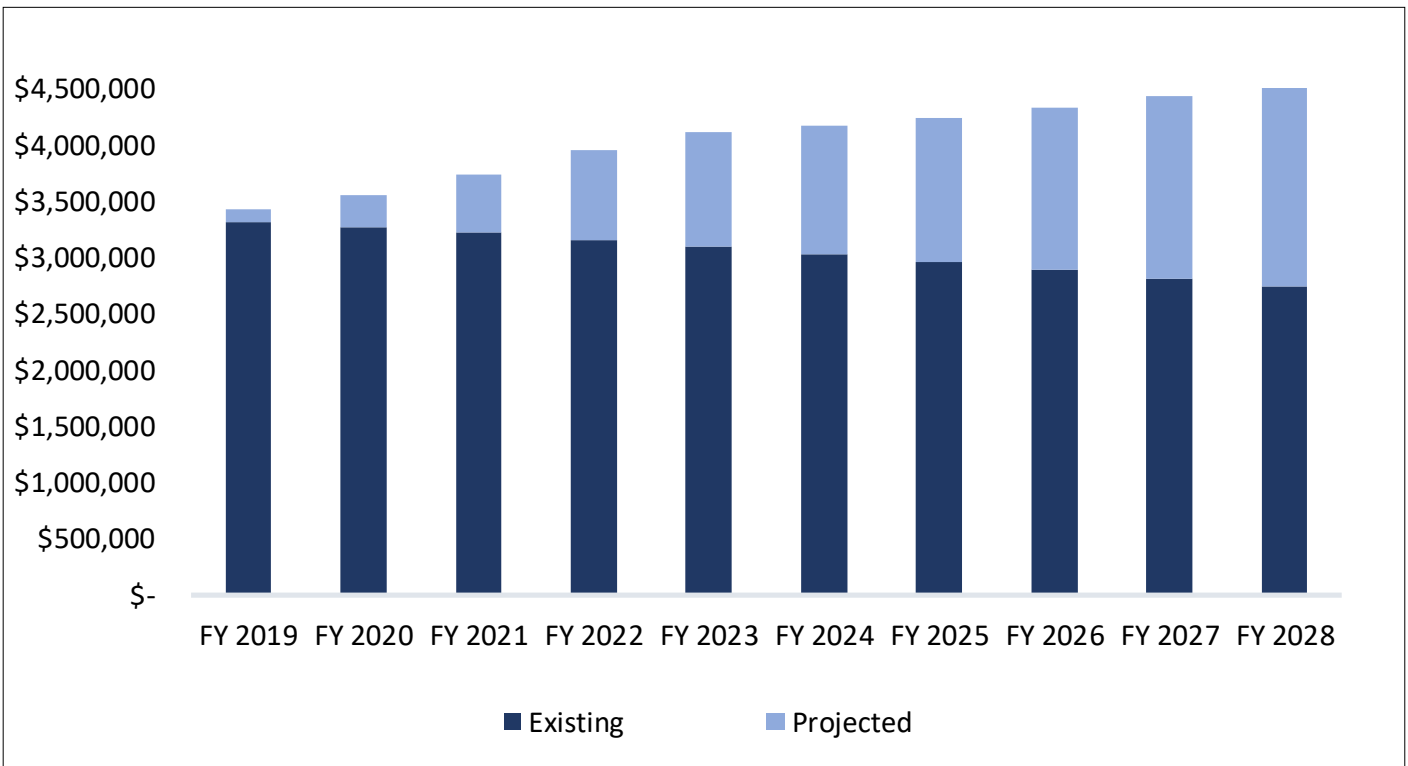


### Total Long Term Outstanding & Proposed Debt Service

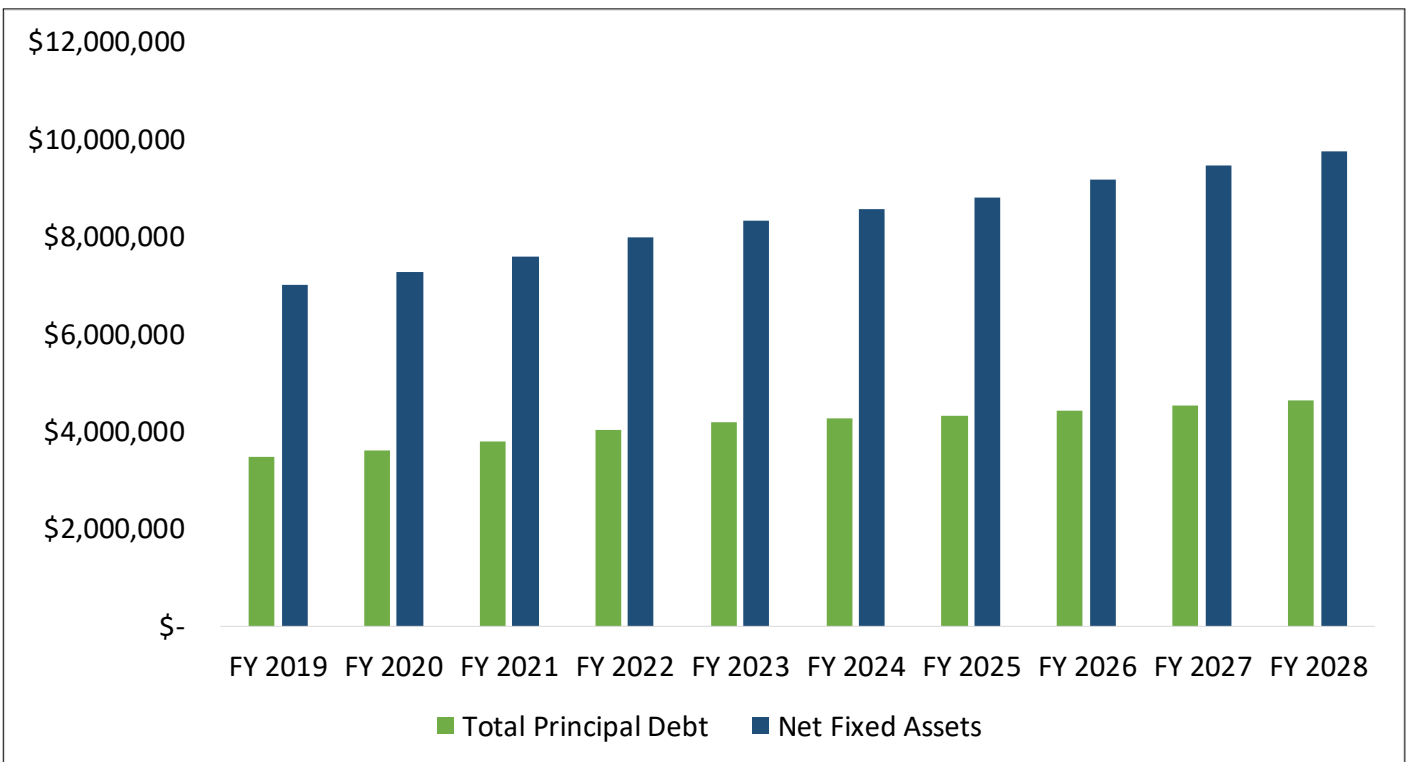


\$ in thousands

### Principal Outstanding Debt

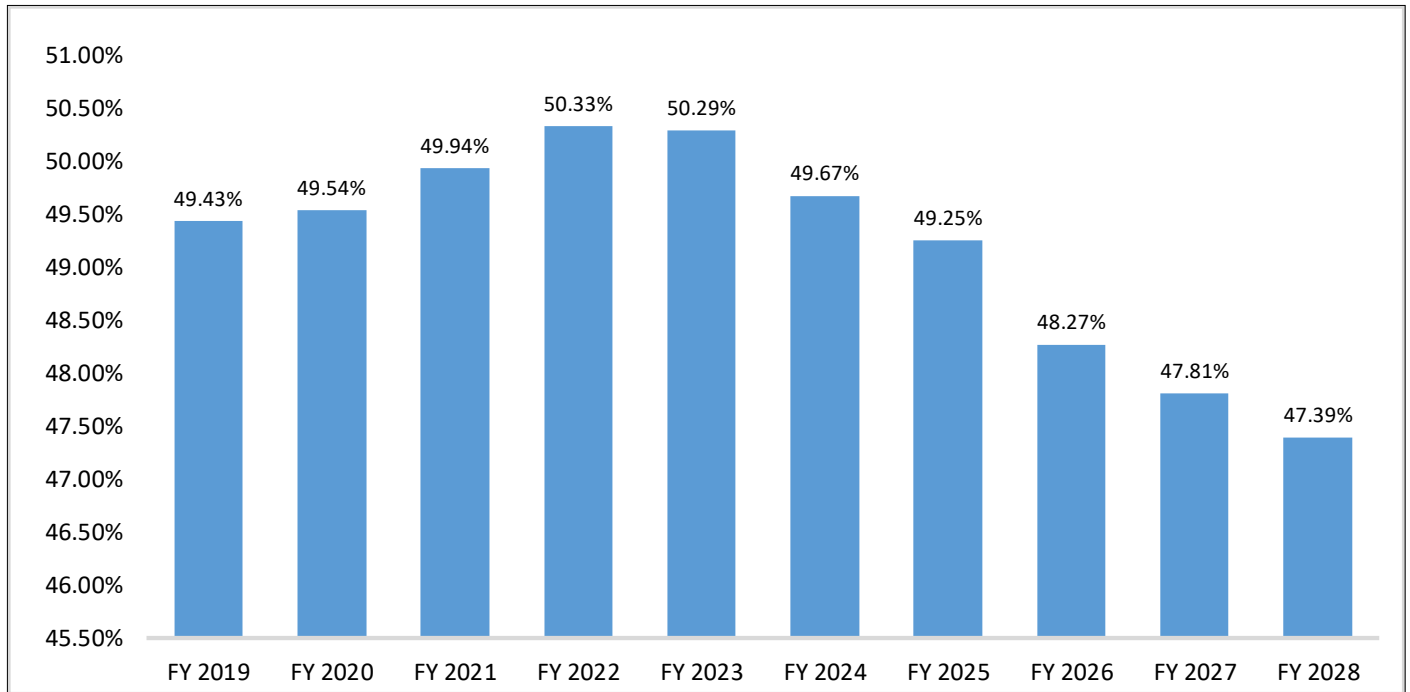


### Principal vs Net Fixed Assets



\$ in thousands

### Debt to Net Fixed Assets Ratio





**DEBT LIMIT:** DC Water is not subject to any legal debt limitations. However, prior to any new debt issuance, DC Water must meet an additional bonds test and certify revenue sufficiency

**PUBLIC UTILITY SENIOR LIEN REVENUE BONDS:** 1) Series 1998 (March 1998); 2) Series 2014A (July 2014); 3) Series 2017A (January 2017); 4) Series 2017B (January 2017); 5) Series 2018A (April 2018); and 6) Series 2018B (April 2018)

**PUBLIC UTILITY SUBORDINATE LIEN REVENUE BONDS:** 1) Series 2012A (March 2012); 2) Series 2013A (July 2013); 3) Series 2014B (July 2014); 4) Series 2013A (July 2013); 5) Series 2014B (July 2014); 6) Series 2015A (October 2015); 7) Series 2015B (October 2015); and 8) Series 2016B Environmental Impact Bond (September 2016)

**PUBLIC UTILITY SUBORDINATE LIEN REVENUE BONDS (FEDERALLY TAXABLE ISSUER SUBSIDY BUILD AMERICA BONDS):** 1) Series 2010A (October 2010)

**PUBLIC UTILITY SUBORDINATE LIEN REVENUE REFUNDING BONDS:** 1) Series 2008A: (refunded Series 2004, Assured Guaranty insured, April 2008; 2) Series C taxable commercial paper: (refunded Series 2007B, April 2008); 3) Series 2012C: (advance refunded Series 2003, March 2012); 4) Series 2014C: (advanced refunded all or a portion of Series 2007A, 2008A, 2009A, and 2012B, October 2014); and 5) Series 2016A: (advanced refunded all or a portion of Series 2007A, 2008A, and 2009A, January 2016)

**NOTES FOR JENNINGS RANDOLPH RESERVOIR:** The note payable to the Federal government for improvements to the Jennings Randolph Reservoir is considered subordinate debt under the Master Indenture of Trust. The notes were issued to provide a backup water supply facility for the Authority. DC Water's share of operating and capital cost is 30 percent

**NOTES FOR LITTLE SENECA RESERVOIR:** The note payable to Washington Suburban Sanitary Commission (WSSC) is considered subordinate debt under the Master Indenture of Trust. The notes were issued by WSSC for construction of the Little Seneca Dam and Lake for backup and peak-day water supply for the Authority. DC Water's share of operating and capital costs is 40 percent. DC Water prepaid the note in full in August 2013

**COMMERCIAL PAPER (CP):** These notes issued are considered subordinate debt under the Master Indenture of Trust. DC Water's commercial paper program is issued in increments with maturities less than 270 days. As described in Section III, the Board approved the commercial paper program in early FY 2002; proceeds from the sale of the notes are used for interim bond financing, short-term financing for capital equipment and certain taxable costs for the Washington Aqueduct. Each new bond issuance is evaluated to determine the most cost effective way of reducing the amount of taxable commercial paper. Normal market conditions for commercial paper carries significantly lower interest rates than long-term debt. In May 2015, DC Water successfully extended JP Morgan Chase Bank as the dealer and US Bank as the paying

agent and entered a Letter of Credit (LOC) with Landesbank Hessen - Thuringen Girozentrale, New York Branch (Helaba). The \$150 million commercial paper program includes: (1) Series B (tax-exempt) aggregate principal amount not to exceed \$100 million; and (2) Series C (taxable) aggregate principal amount not to exceed \$50 million

**EXTENDABLE MUNICIPAL COMMERCIAL PAPER (EMCP):** This program will provide interim financing for a portion of the Authority's Capital Improvement Program. Under this program, the notes are issued backed by the liquidity and credit rating of the Authority. Each Series A EMCP Note will mature on its respective "Original Maturity Date", which may range from one to 90 days from the date of issuance, unless its maturity is extended on the "Original Maturity Date" to the "Extended Maturity Date", which will be the date that is 270 days after the date of issuance of the Series A EMCP Note. The notes are payable from and secured by a subordinate lien on the Authority's net revenues, as further described in the Authority's Master Indenture of Trust as supplemented. In November 2015, DC Water authorized the deal for the EMCP program with Goldman, Sachs & Co. The \$100 million extendable municipal commercial paper program includes: (1) Series A (tax-exempt) aggregate principal amount not to exceed \$100 million

**DEBT POLICY:** DC Water's comprehensive debt policy can be found on our website at [www.dewater.com](http://www.dewater.com)

**INVESTOR RELATIONS:** DC Water's investor relations can be found via BondLink at [www.dewaterbonds.com](http://www.dewaterbonds.com)



## Approved FY 2020 Budgets

### Section VII: DEPARTMENTAL SUMMARIES



Fleet Equipment

## Introduction to DC Water's Operational and Administrative (Support) Departments

DC Water's organizational structure is a key tool for ensuring that the organizational mission is achieved. The structure consists of twenty-six departments that are defined primarily along functional roles and further grouped along service lines (Operational or Administrative) or reporting clusters of authority.

**Service Lines:** Operational departments include: Water Operations, Sewer Operations, Pumping Operations, and Wastewater Treatment services (including maintenance of these facilities). These departments are responsible for the day-to-day operations of the DC Water's extensive infrastructure and facilities that provide direct services to our customers. Similarly, the Customer Care Department is classified as an operational department due to the integrated nature of their work to operations (i.e., customer care, metering and billing). Provision of first-line customer care to our customers includes 24 hour emergency service. The departments of Engineering and Technical Services, Wastewater Engineering, Clean Rivers and Permit Operations are responsible for ongoing reinvestment of the system infrastructure, compliance with various mandates and provides services to the development community throughout the District of Columbia.

All other departments provide critical administrative and technical support to ensure the safe and reliable continuity of our vital services through short and long-term planning, asset management, leadership and all financial and human capital support requirements.

**Reporting Lines:** Departments are grouped within clusters to ensure accountability and to enhance efficiency and delivery of various services. A member of the Executive Team heads each cluster group and is accountable for service delivery and performance metrics of the departments within their cluster.

DC Water continues to make organizational changes and improvement to enhance efficiencies, improve processes and efficiently utilize all assets with the goal of better serving the public and protecting the environment. To this end in FY 2018, DC Water's Executive Team implemented series of structural changes aimed at leveraging organizational strengths to produce maximum results, promote high performing team culture across all business units, and provide best employee experience.

DC Water’s new organizational chart can be found on page VII-13 and reflects structural changes for the following departments and cluster groups:

- **Administrative Services** – Support Services cluster is now Administrative Services. It includes Security, Occupational Safety and Health, Office of Emergency Management, Fleet, and Facilities departments.
- **Finance and Procurement** – This cluster is comprised of Finance, and Procurement & Compliance departments. All goods, services and engineering procurement administration are consolidated under the Procurement and Compliance department.
- **People and Talent** – Human Capital Management is now the Human Resources department and includes Labor Relations under this cluster.
- **Performance** – Newly created business unit within the CEO’s office, focuses on continuous improvement of performance throughout the Authority.
- **Customer Experience** – This cluster includes Customer Care (previously Customer Service), Information Technology, and Office of Marketing and Communications (previously External Affairs) departments.
- **Operations and Engineering** – All operational and engineering functions are consolidated into a single cluster. This includes Department of Engineering & Technical Services (DETS), Wastewater Engineering, Clean Rivers, and Permit Operations under engineering. The operations departments include Sewer Operations, Water Operations (includes Water Quality and Technology), Pumping Operations, Wastewater Operations, Process Engineering, Maintenance Services, and Infrastructure Management.
- **Legal Affairs** – General Counsel is now Legal Affairs.

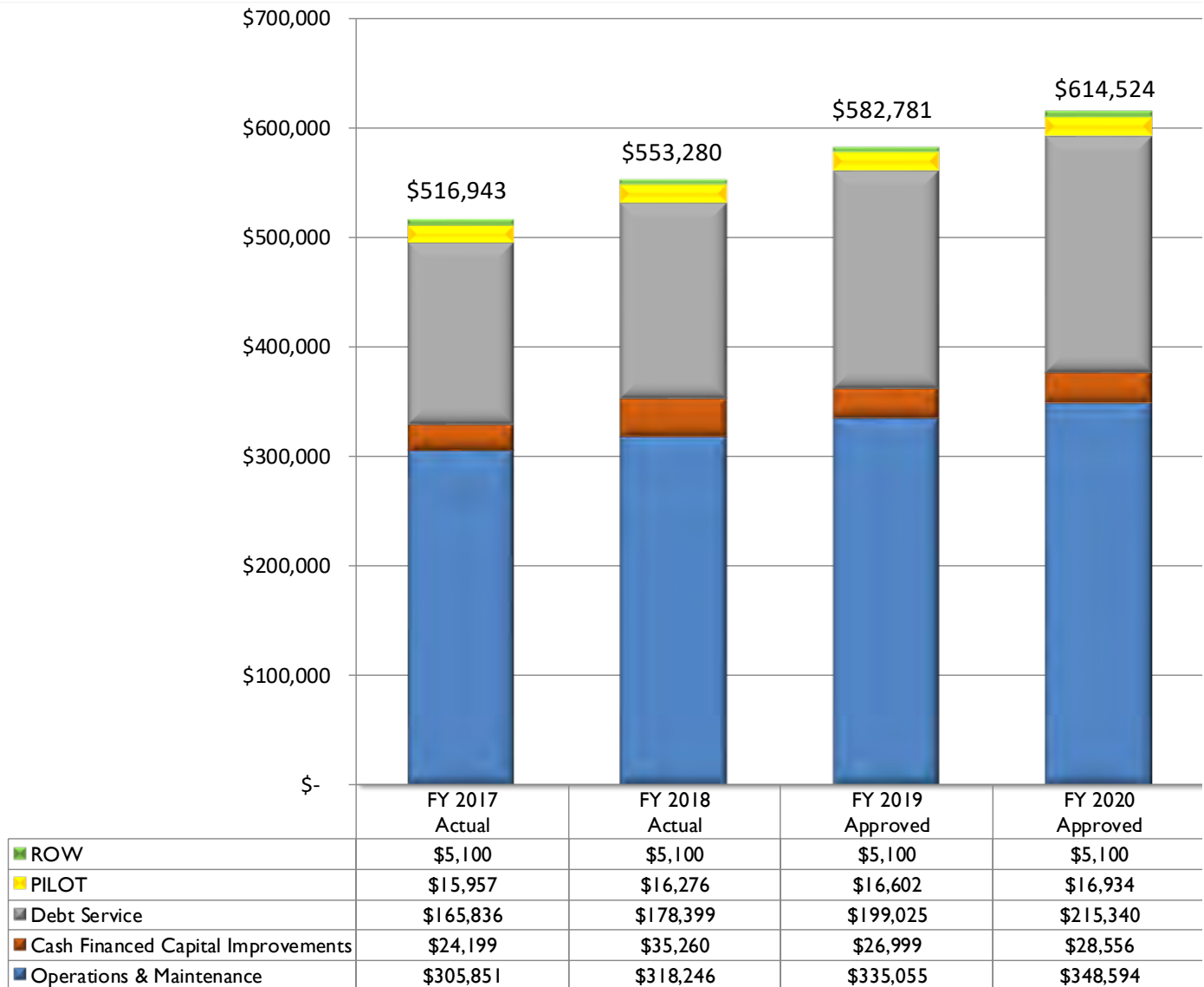
## Executive Team

<b>CEO &amp; General Manager</b>	<b>Executive Vice- President Administrative Services</b>	<b>Executive Vice- President Finance/ Procurement</b>	<b>Executive Vice- President People/ Talent</b>	<b>Executive Vice- President Performance</b>	<b>Executive Vice- President Customer Experience</b>	<b>Executive Vice- President Legal Affairs</b>	<b>Executive Vice- President Operations/ Engineering</b>
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\$ in thousands

## FY 2017 - FY 2020

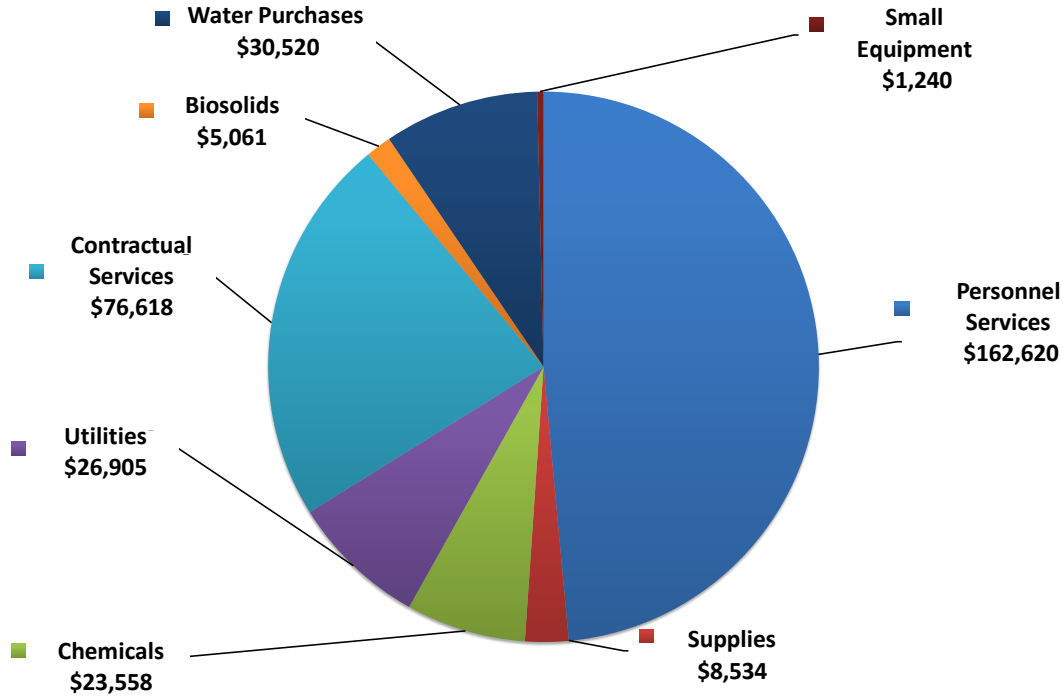


The above chart shows steady growth in operations and maintenance (O&M) costs to maintain appropriate service levels. The overall operating budget is constrained by the increasing debt service costs required to support DC Water's Capital Improvement Program.

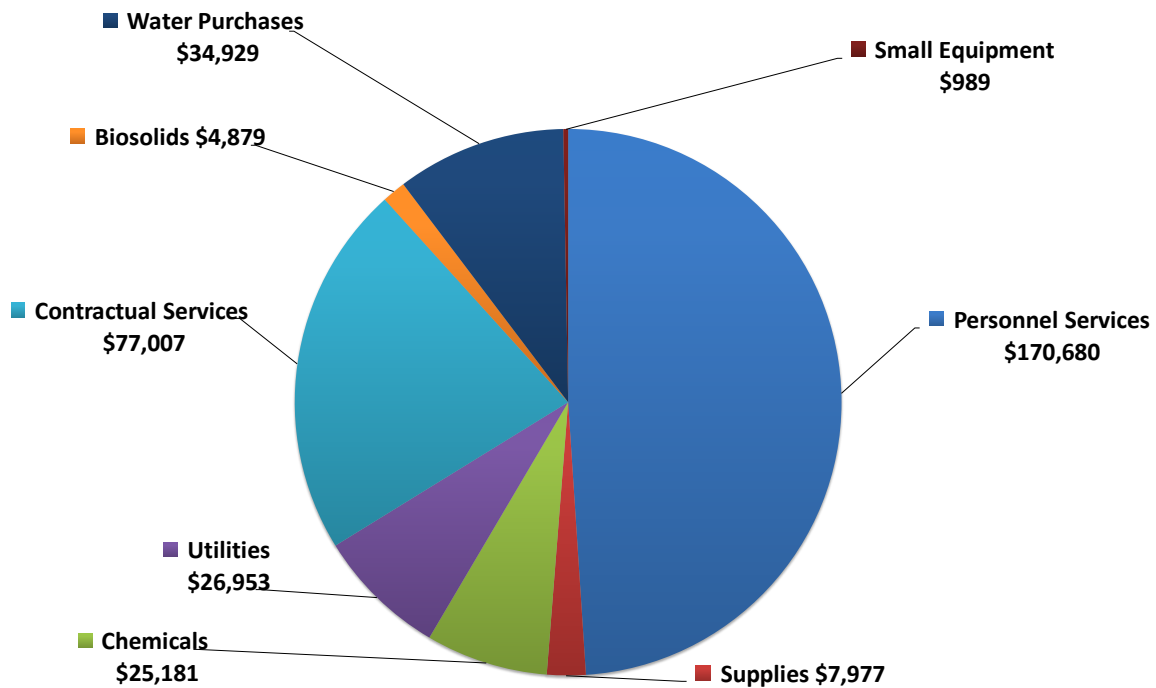


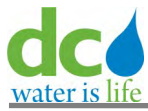
\$ in thousands

## FY 2019 Approved \$335,055



## FY 2020 Approved \$348,594





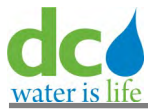
## Operating Expenditures by Object

[summary](#)[overview](#)[financial plan](#)[rates&rev](#)[capital](#)[financing](#)[departmental](#)[glossary](#)

\$ in thousands

Object	FY 2017 ACTUAL	FY 2018 ACTUAL	FY 2019 APPROVED	FY 2020 APPROVED
Personnel Services	\$ 149,293	\$ 157,635	\$ 162,620	\$ 170,680
Contractual Services	72,951	74,914	81,679	81,886
Water Purchases	26,796	28,357	30,520	34,929
Chemicals and Supplies	31,373	30,482	32,082	33,158
Utilities	24,260	26,158	26,915	26,953
Small Equipment	1,178	700	1,240	989
<b>Subtotal Operations &amp; Maintenance Expenditures</b>	<b>305,851</b>	<b>318,246</b>	<b>335,055</b>	<b>348,595</b>
Debt Service	165,836	178,399	199,025	215,340
Cash Financed Capital Improvements	24,199	35,260	26,999	28,556
Payment in Lieu of Taxes	15,957	16,276	16,602	16,934
Right of Way Fees	5,100	5,100	5,100	5,100
<b>Total Operating Expenditures</b>	<b>\$ 516,943</b>	<b>\$ 553,280</b>	<b>\$ 582,781</b>	<b>\$ 614,524</b>
Personnel Services charged to Capital Projects	(17,231)	(15,527)	(18,259)	(22,748)
<b>Total Net Operating Expenditures</b>	<b>\$ 499,712</b>	<b>\$ 537,753</b>	<b>\$ 564,522</b>	<b>\$ 591,776</b>

- **Personnel Services** – This covers the salaries, benefits, overtime, on-call and other employee compensation for full time employees, temporary/part-time employees and the DC Water’s internship program.
- **Contractual Services** – This includes the maintenance and repairs for DC Water’s water, sewer and wastewater infrastructure, automotive and various operational facilities. It also covers the legal, insurance and compliance requirements, customer support and community outreach programs, employee training, safety programs, software maintenance, information technology services, etc.
- **Water Purchases** – This is for water purchased from the U.S. Army Corps of Engineers (Washington Aqueduct), the entity that sources, treats and produces the tap water distributed by DC Water in the District.
- **Chemicals and Supplies** – This includes the various chemicals used in the treatment processes, office supplies, parts sourced from the warehouse, uniforms for operational and technical employees, etc.
- **Utilities** – This covers the costs for telecommunications (radios, cell and phone lines), electricity, natural gas, water usage, building rentals, etc.
- **Small Equipment** – Include items such as adding machines, cameras, small appliances, etc.
- **Debt Service** – This is for repayment of principal and interest on debt issued for the capital program.
- **Cash Financed Capital Improvements (CFCI)** – The purpose of this fund is two-fold: to serve as an Operations and Maintenance budget contingency and to provide sufficient debt service coverage.
- **Payment in Lieu of Taxes and Right of Way** – These are payments to the District for water and sewer conduits that it occupies within the District of Columbia, consistent with memorandum of understanding (MOU).



# Operating Expenditures by Department and Cluster

[summary](#)
[overview](#)
[financial plan](#)
[rates&rev](#)
[capital](#)
[financing](#)
[departmental](#)
[glossary](#)

\$ in thousands

Departments & Clusters	FY 2017 ACTUAL	FY 2018 ACTUAL	FY 2019 APPROVED	FY 2020 APPROVED
<b>OPERATIONS &amp; ENGINEERING</b>	<b>\$ 214,285</b>	<b>\$ 218,109</b>	<b>\$ 229,981</b>	<b>\$ 238,803</b>
Maintenance Services	18,719	17,807	19,567	19,653
Wastewater Treatment-Operations	73,066	72,716	75,115	77,105
Wastewater Treatment-Process Engineering	7,008	6,944	7,187	7,064
Water Quality and Technology	-	2,929	3,419	-
Water Operations	24,703	23,927	25,079	65,124
Sewer Operations	13,513	14,074	14,342	15,829
Pumping Operations/DDCS	46,585	48,798	51,611	18,616
DC Clean Rivers	2,704	2,274	3,046	2,761
Engineering & Technical Services	25,756	23,995	24,791	24,962
Wastewater Engineering		1,964	3,064	3,995
Permit Operations	2,233	2,680	2,760	3,693
<b>FINANCE &amp; PROCUREMENT</b>	<b>18,424</b>	<b>20,642</b>	<b>22,026</b>	<b>26,714</b>
Finance	13,296	15,076	16,341	20,906
Procurement & Compliance	5,128	5,566	5,685	5,808
<b>CUSTOMER EXPERIENCE</b>	<b>31,686</b>	<b>34,863</b>	<b>34,350</b>	<b>34,763</b>
Customer Care	19,195	21,217	20,340	21,236
Marketing and Communication	2,137	2,457	2,470	2,614
Information Technology	10,354	11,189	11,541	10,913
<b>INDEPENDENT OFFICES</b>	<b>5,190</b>	<b>5,900</b>	<b>5,840</b>	<b>5,824</b>
Board Secretary	559	599	599	613
Office of the Chief Executive Officer	4,053	4,405	4,301	4,326
Internal Audit (outsourced)	579	896	940	885
<b>PEOPLE AND TALENT</b>	<b>7,107</b>	<b>8,609</b>	<b>8,281</b>	<b>10,028</b>
Human Resources	7,107	8,609	8,281	10,028
<b>LEGAL AFFAIRS</b>	<b>6,905</b>	<b>6,359</b>	<b>8,557</b>	<b>6,222</b>
Legal Affairs	6,905	6,359	8,557	6,222
<b>ADMINISTRATIVE SERVICES</b>	<b>22,254</b>	<b>23,763</b>	<b>26,020</b>	<b>26,241</b>
Administration Office	506	706	578	586
Office of Emergency Management	-	-	-	1,408
Fleet Management	5,184	6,241	5,773	6,129
Occupational Safety & Health	1,878	1,944	2,247	2,181
Facilities Management	7,830	7,680	9,615	8,930
Security	6,855	7,191	7,807	7,007
<b>Subtotal O &amp; M Expenditures</b>	<b>305,851</b>	<b>318,246</b>	<b>335,055</b>	<b>348,594</b>
Debt Service	165,836	178,399	199,025	215,340
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# FY 2019 Approved Budget by Department by Category


aco

water is life

(\$ in thousands)

summary													overview		financial plan		rates&rev		capital		financing		departmental		glossary			
Auth Pos		Pay		Fringe		Overtime		Personnel Services		Supplies		Chemicals		Utilities		Contracts		Biosolids		Water Purchases		Equipment		Total Non-Personnel Services		Total Operating		
O	127	\$	11,065	\$	3,013	\$	1,831	\$	15,909	\$	1,147	\$	23,449	\$	18,006	\$	11,410	\$	5,061	\$	-	\$	134	\$	59,206	\$	75,115	
e	39		3,682		1,006		45		4,733		475		-		60		1,902		-		-	18		2,454		7,187		
p	110		8,827		2,620		545		11,991		3,581		-		164		3,516		-		-	315		7,575		19,567		
r	182		15,020		5,051		1,522		21,593		709		-		322		2,365		-		-	90		3,486		25,079		
a	22		2,008		616		30		2,653		74		30		-		612		-		-	50		766		3,419		
t	104		7,858		2,745		1,068		11,671		533		25		669		1,411		-		-	33		2,671		14,342		
i	126		10,273		3,366		311		13,950		178		-		843		5,291		-		-	78		6,389		20,340		
o	90		8,055		2,422		800		11,276		690		54		3,965		4,979		-		30,520	126		40,335		51,611		
n	150		16,133		4,992		864		21,989		193		-		636		1,910		-		-	62		2,802		24,791		
s	15		1,710		564		36		2,310		13		-		-		736		-		-	5		754		3,064		
	15		2,072		589		-		2,661		26		-		110		249		-		-	-		385		3,046		
	15		1,580		526		99		2,205		38		-		353		153		-		-	11		555		2,760		
Subtotal Operations		995		88,282		27,510	7,151		122,943		7,656		23,558		25,127		34,534		5,061		30,520	922		127,377		250,320		
A	16		2,653		732		9		3,394		13		-		36		858		-		-	-		907		4,301		
d	2		243		41		9		293		18		-		6		281		-		-	1		306		599		
m	-		-		-		-		-		-		-		7		933		-		-	-		940		940		
i	16		2,020		502		3		2,525		8		-		22		6,003		-		-	-		6,032		8,557		
n	13		1,448		394		5		1,846		2		-		33		576		-		-	12		623		2,470		
i	28		3,604		935		6		4,545		34		-		48		3,655		-		-	-		3,737		8,281		
s	28		3,401		913		15		4,330		42		-		152		6,923		-		-	94		7,211		11,541		
t	36		3,574		975		30		4,579		41		-		63		997		-		-	5		1,106		5,685		
r	53		6,184		1,874		40		8,097		40		-		67		8,132		-		-	4		8,244		16,341		
a	3		409		95		1		504		4		-		8		61		-		-	-		74		578		
t	56		4,207		1,325		300		5,832		553		-		223		2,930		-		-	77		3,783		9,615		
i	9		877		242		-		1,119		66		-		304		6,268		-		-	50		6,688		7,807		
o	11		1,255		348		1		1,604		29		-		43		566		-		-	5		643		2,247		
n	8		754		250		4		1,009		19		-		775		3,900		-		-	70		4,764		5,773		
Subtotal Administration		279		30,628		8,627	423		39,677		867		-		1,787		42,085		-		-	318		45,057		84,734		
Subtotal O & M Expenditures		1,274	\$	118,909	\$	36,137	\$	7,575	\$	162,620	\$	8,524	\$	23,558	\$	26,915	\$	76,618	\$	5,061	\$	30,520	\$	1,240	\$	172,435	\$	335,055
Debt Service																												
Cash Financed Capital Improvements																												
Payment in Lieu of Taxes																												
Right of Way																												
Total OPERATING EXPENDITURES																												
Personnel Services charged to Capital Projects																												
TOTAL NET OPERATING EXPENDITURES																												

(\$ in thousands)

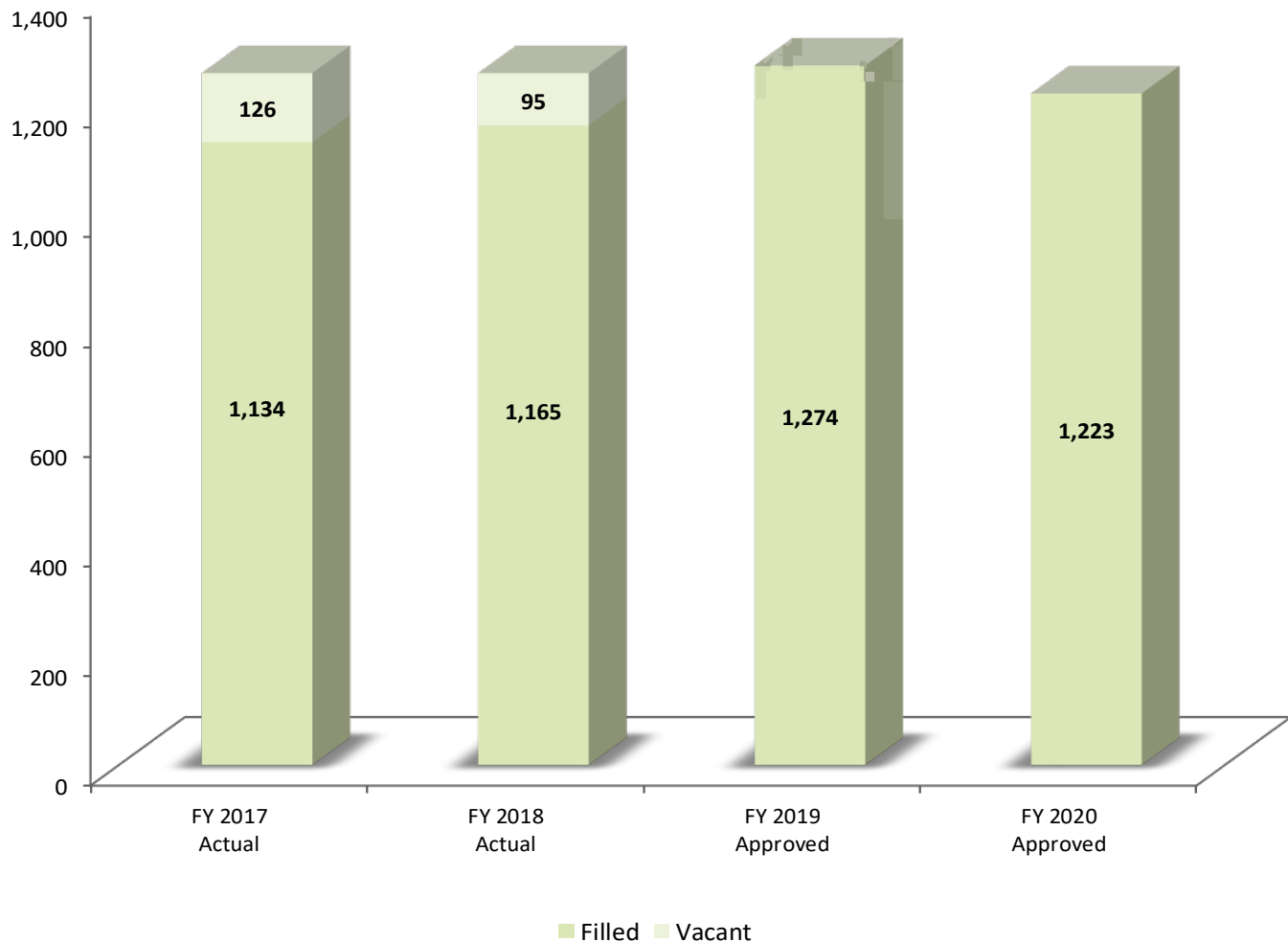


(\$ in thousands)

summary				overview		financial plan			rates&rev		capital		financing		glossary
Auth Pos	Pay	Fringe	Overtime	Personnel Services		Supplies	Chemicals	Utilities	Contracts	Biosolids	Water Purchases	Equipment	Total Non-Personnel Services	Total Operating	

O	127	\$	11,725	\$	3,527	\$	1,845	\$	17,096	\$	853	\$	25,036	\$	18,528	\$	10,620	\$	4,879	\$	-	\$	94	\$	60,009	\$	77,105		
Wastewater Treatment - Operations																													
e	33	\$	3,633	\$	1,142	\$	50	\$	4,825	\$	496	\$	-	\$	57	\$	1,668	\$	-	\$	-	\$	18	\$	2,239	\$	7,064		
Maintenance Services																													
r	102	\$	9,167	\$	2,813	\$	610	\$	12,590	\$	3,450	\$	-	\$	157	\$	3,181	\$	-	\$	-	\$	275	\$	7,063	\$	19,653		
Water Operations																													
a	199	\$	17,290	\$	6,219	\$	1,815	\$	25,324	\$	1,002	\$	30	\$	501	\$	3,307	\$	-	\$	-	\$	34,929	\$	39,801	\$	65,124		
Sewer Operations																													
t	99	\$	8,181	\$	2,921	\$	1,318	\$	12,420	\$	534	\$	15	\$	637	\$	2,191	\$	-	\$	-	\$	32	\$	3,408	\$	15,829		
Customer Care																													
t	122	\$	10,791	\$	3,758	\$	302	\$	14,851	\$	88	\$	-	\$	315	\$	5,918	\$	-	\$	-	\$	65	\$	6,385	\$	21,236		
Pumping Operations/DDCS																													
i	78	\$	7,342	\$	2,298	\$	750	\$	10,389	\$	637	\$	100	\$	3,960	\$	3,438	\$	-	\$	-	\$	91	\$	8,226	\$	18,616		
Engineering and Technical Services																													
o	135	\$	15,790	\$	4,706	\$	938	\$	21,433	\$	145	\$	-	\$	517	\$	2,792	\$	-	\$	-	\$	75	\$	3,529	\$	24,962		
WasteWater Engineering																													
n	18	\$	2,479	\$	735	\$	25	\$	3,239	\$	15	\$	-	\$	-	\$	739	\$	-	\$	-	\$	2	\$	756	\$	3,995		
D.C. Clean Rivers																													
s	11	\$	1,834	\$	525	\$	-	\$	2,359	\$	27	\$	-	\$	126	\$	249	\$	-	\$	-	\$	-	\$	402	\$	2,761		
Permitt Operations																													
	20	\$	2,102	\$	769	\$	50	\$	2,920	\$	41	\$	-	\$	377	\$	355	\$	-	\$	-	\$	-	\$	773	\$	3,693		
Subtotal Operations	944	\$	90,332	\$	29,413	\$	7,703	\$	127,448	\$	7,287	\$	25,181	\$	25,175	\$	34,457	\$	4,879	\$	-	\$	34,929	\$	132,591	\$	260,039		
A																1,043					4,326								
d	15		2,541		738		3		3,283		13		-		29		1,001		-		-		-		1,043		4,326		
m	2		261		49		9		320		17		-		4		271		-		-		1		293		613		
Office of the Chief Executive Officer																													
Office of the Secretary																													
Internal Audit (outsourced)																													
i	15		2,050		557		3		2,610		6		-		24		878		-		-		-		885		885		
Legal Affairs																													
n	13		1,499		443		1		1,943		14		-		27		617		-		-		12		671		2,614		
Marketing and Communications																													
i	29		3,880		1,046		5		4,930		35		-		24		5,039		-		-		-		5,098		10,028		
Human Resources																													
s	28		3,498		995		10		4,502		12		-		152		6,153		-		-		94		6,411		10,913		
Information Technology																													
t	35		3,759		1,121		30		4,910		32		-		32		832		-		-		3		898		5,808		
Procurement and Compliance																													
r	52		6,969		2,261		40		9,270		25		-		44		11,563		-		-		4		11,636		20,906		
Finance																													
a	3		439		109		1		549		1		-		4		32		-		-		-		37		586		
Administration Office																													
t	6		745		238		-		982		6		-		13		375		-		-		30		425		1,408		
Office of Emergency Management																													
i	52		4,200		1,384		275		5,859		428		-		250		2,327		-		-		66		3,071		8,930		
Facilities Management																													
o	8		875		258		-		1,133		59		-		297		5,468		-		-		50		5,874		7,007		
Security																													
n	11		1,333		388		1		1,721		23		-		31		406		-		-		-		460		2,181		
Occupational Safety and Health																													
Fleet Management																													
	10		913		305		3		1,220		18		-		840		4,006		-		-		45		4,909		6,129		
Subtotal Administration	279		32,961		9,891		381		43,232		689		-		1,778		42,550		-		-		305		45,323		88,555		
Debt Service																													
Cash Financed Capital Improvements																													
Payment in Lieu of Taxes																													
Right of Way																													
Total OPERATING EXPENDITURES																\$	614,523					\$	614,523					\$	614,523
Personnel Services charged to Capital Projects																													
TOTAL NET OPERATING EXPENDITURES	1,223	\$	123,293	\$	39,303	\$	8,084	\$	170,680	\$	7,977	\$	25,181	\$	26,953	\$	77,007	\$	4,879	\$	-	\$	34,929	\$	177,914	\$	348,594		
Subtotal O & M Expenditures																													
Debt Service																													
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Subtotal O & M Expenditures																													

## FY 2017 - FY 2020



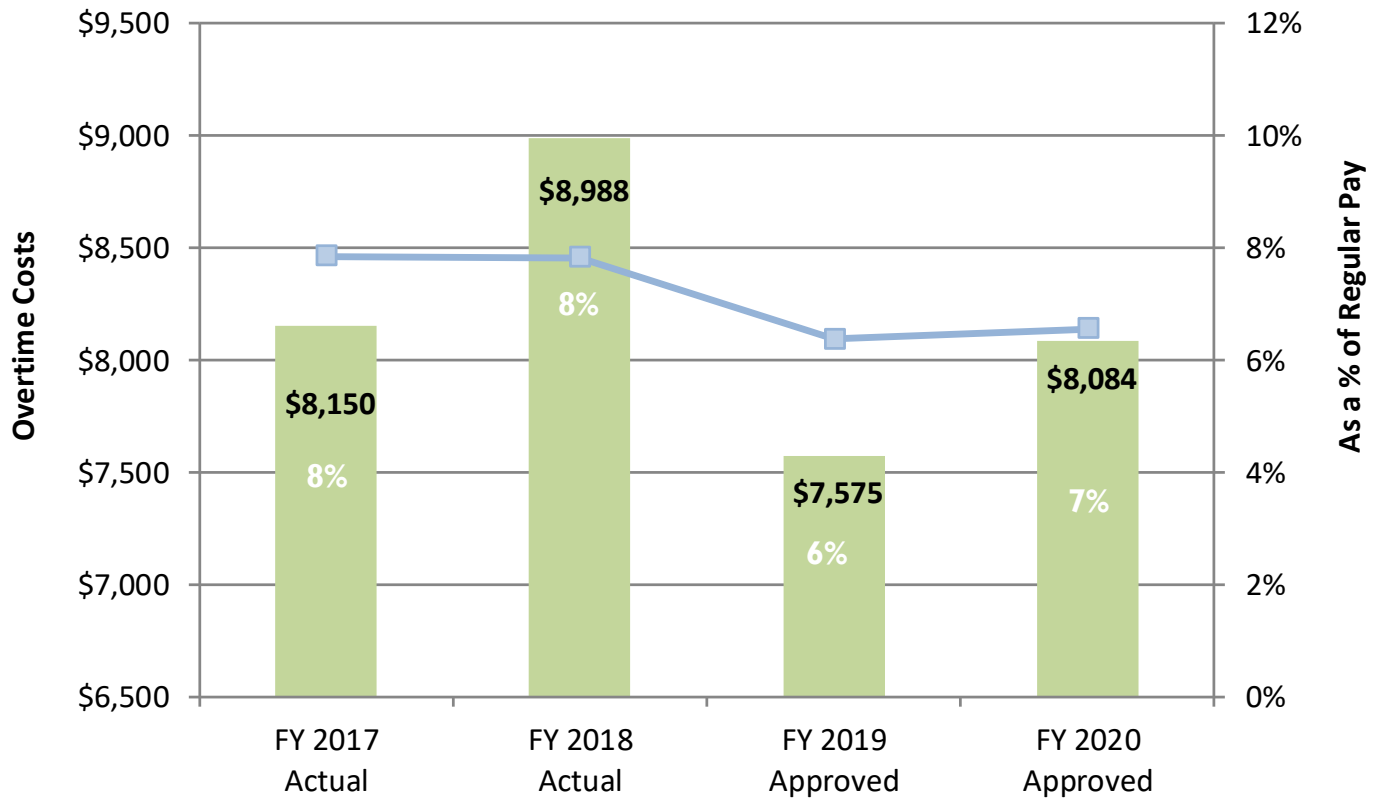
Prior to FY 2017, DC Water had high historical vacancy rate up to 14%. Subsequently, management committed to a strategic goal of reducing vacancies to achieve a lower vacancy rate. Through FY 2019, the approach undertaken included a closer look and assessment of staffing requirements needed to maintain service levels, coupled with increased hiring efforts in areas of need throughout the Authority.

These strategic initiatives are reflected in the FY 2020 budget, which includes the deactivation of 63 aged and hard to fill vacant positions to lower costs, and addition of 12 new positions for a net reduction of 51. The new positions are for in-house support of various operational requirements for water quality compliance, automotive parts, permits, and other strategic programs. The FY 2020 authorized headcount reflects management's commitment to achieve lower single-digit vacancy rate in the future.



		FY 2017		FY 2018		FY 2019	FY 2020
		Authorized	Year -End Filled	Authorized	Year -End Filled	Authorized	Authorized
O	Wastewater Treatment - Operations	122	111	122	122	127	127
p	Wastewater Treatment - Process Engineering	39	30	39	35	39	33
e	Maintenance Services	115	91	115	95	110	102
r	Water Operations	195	191	190	172	182	199
a	Sewer Operations	110	91	115	94	104	99
t	Customer Care	125	114	126	115	126	122
i	Pumping Operations/DDCS	89	77	88	84	90	78
o	Water Quality & Technology				24	22	
n	Engineering and Technical Services	166	147	166	127	150	135
s	Wastewater Engineering				16	15	18
	D.C. Clean Rivers	15	13	15	9	15	11
	Permit Operations	15	13	15	19	15	20
Subtotal		991	878	991	912	995	944
A	Office of the Chief Executive Officer	16	15	16	12	16	15
d	Office of the Secretary	2	2	2	2	2	2
m	Internal Audit (outsourced)	-	-	-	-	-	-
i	Legal Affairs	14	14	14	14	16	15
n	Marketing and Communications	14	12	14	13	13	13
i	Human Resources	25	26	25	27	28	29
s	Information Technology	28	27	28	28	28	28
t	Procurement and Compliance	36	35	36	34	36	35
r	Finance	49	48	49	49	53	52
a	Administration Office	3	3	3	1	3	3
t	Office of Emergency Management						6
i	Facilities Management	59	50	57	48	56	52
o	Security	7	8	9	8	9	8
n	Occupational Safety and Health	9	10	9	10	11	11
	Fleet Management	7	6	7	7	8	10
Subtotal		269	256	269	253	279	279
Total Positions		1,260	1,134	1,260	1,165	1,274	1,223

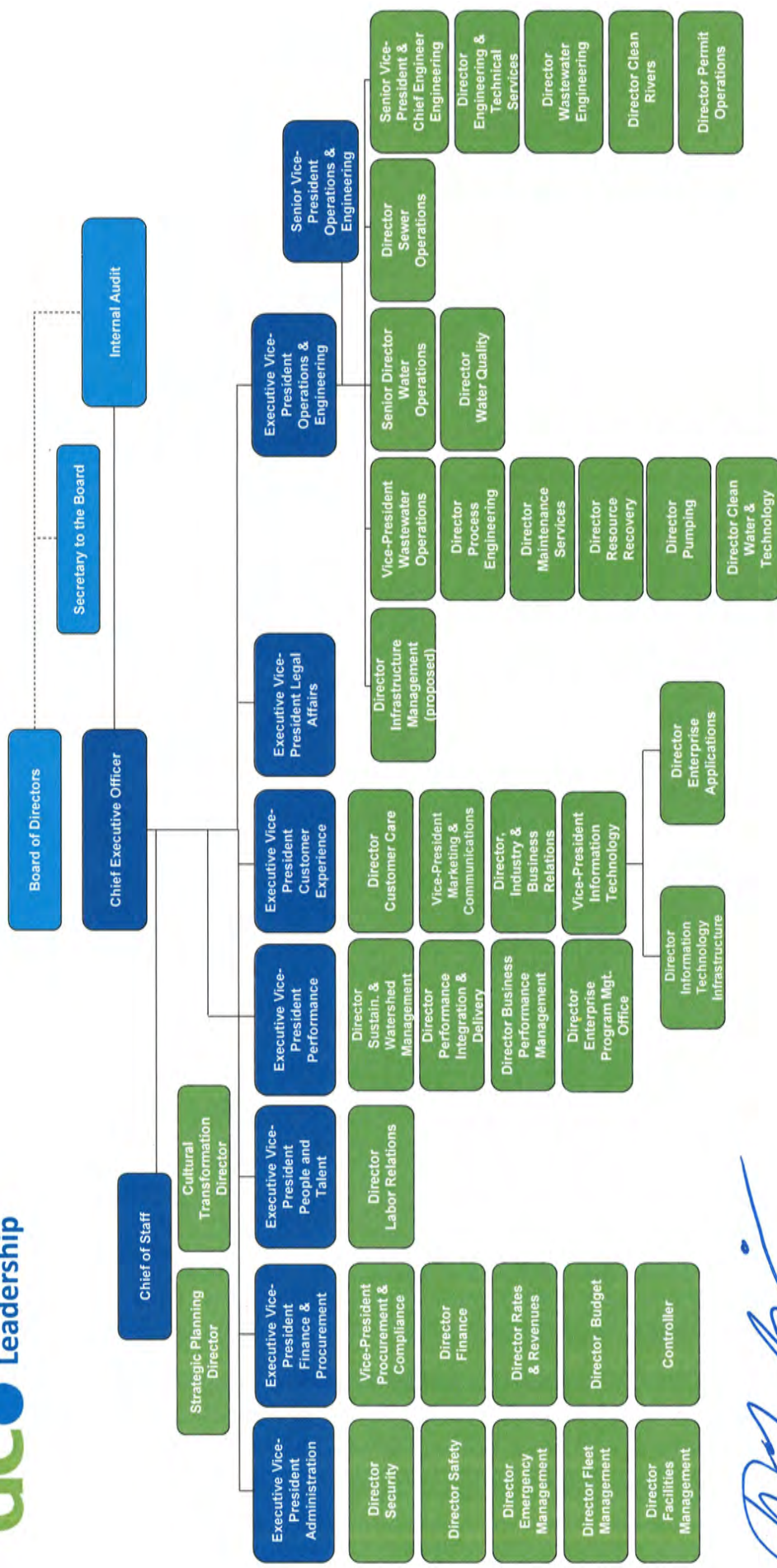
Year-round interns, short-term temps and summer temps are not included in the filled count.



The Authority's overtime target is 6 percent of regular pay. Overtime costs in FY 2018 increased due to support for the Automated Meter Reading (AMR) replacement project; work performed in response to emergencies during the winter (including de-icing of roads and snow removal), SWIRL activities (which tend to happen during late evening into the night), and water/sewer maintenance due to aging infrastructure.

Department	FY 2017 Actual	FY 2018 Actual	FY 2019 Approved	FY 2020 Approved
Wastewater Treatment - Operations	\$ 1,859	\$ 1,746	\$ 1,831	\$ 1,845
Wastewater Treatment - Process Engineering	25	21	45	50
Maintenance Services	764	634	545	610
Water Operations	1,664	1,985	1,522	1,815
Sewer Operations	1,172	1,737	1,068	1,318
Customer Care	615	627	311	302
Pumping Operations/DDCS	862	972	800	750
Water Quality & Technology		-	30	-
Engineering and Technical Services	802	908	864	938
Wastewater Engineering		21	36	25
DC Clean Rivers	0	8	-	-
Permit Operations	11	29	99	50
Office of the Chief Executive Officer	11	4	9	3
Office of the Secretary	13	11	9	9
Internal Audit (outsourced)	-	-	-	-
Legal Affairs	0	3	3	3
Marketing and Communications	1	1	5	1
Information Technology	14	8	15	10
Finance	25	33	40	40
Administration Office	0	-	1	1
Human Resources	5	3	6	5
Facilities Management	276	201	300	275
Security	1	0	-	-
Procurement and Compliance	26	32	30	30
Occupational Safety and Health	0	1	1	1
Fleet Management	3	2	4	3
<b>Total</b>	<b>\$ 8,150</b>	<b>\$ 8,988</b>	<b>\$ 7,575</b>	<b>\$ 8,084</b>

# Organization Chart

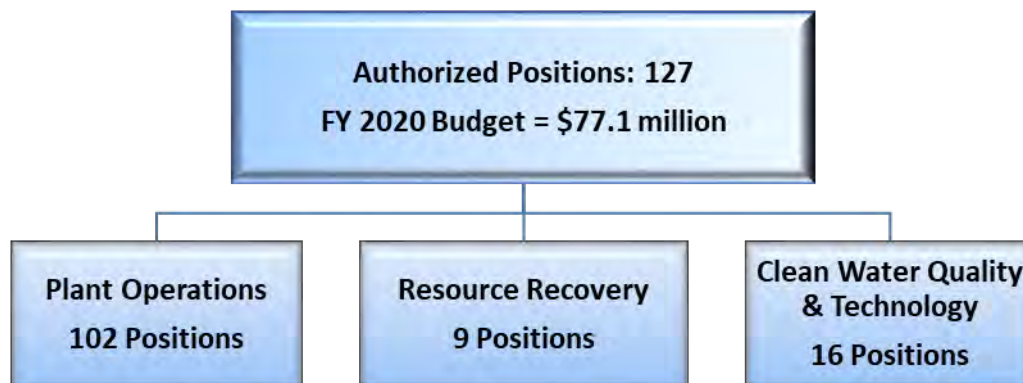


David L. Gadis, Chief Executive Officer

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Wastewater Treatment Operations

<b>PURPOSE:</b>	Operate the Advanced Wastewater Treatment Plant at Blue Plains to produce treated effluent that meet stringent Federal Clean Water Act and local water quality requirements
<b>MISSION:</b>	To treat wastewater delivered to Blue Plains from the collection system of the District of Columbia and surrounding jurisdictions in Maryland and Virginia, and ensure that effluent is in compliance with the Clean Water Act



### FUNCTIONS

Plant Operations	Resource Recovery	Clean Water Quality & Technology
Treat influent wastewater to remove pollutants and meet National Pollutant Discharge Elimination System Permit (NPDES) requirements	Biosolids storage, loading, hauling and utilization/ beneficial use	Physical, chemical and biological analysis of wastewater and biosolids used for process control and permit reporting
Condition, thicken, dewater and stabilize biosolids for beneficial use	Certification and marketing of Class A Biosolids	Industrial pretreatment discharge monitoring
Manage 4 shift crews – round the clock and manage use of resources – chemicals, energy, and contracts, including the Combined Heat and Power (CHP) facility	Outreach and partnership with surrounding jurisdictions on regulatory requests for biosolids applications	Treatment process innovation and R&D administration of the DC Water Advanced Research & Testing (ART) Program
Implement Asset Management goals and administer effective use of Maximo	Identify, prioritize, study, and implement energy generation and optimization options	

## Department: Wastewater Treatment Operations

### BUDGET

The \$2.0 million increase in FY 2020 over the FY 2019 budget is mainly for personnel service cost adjustments, price escalation of major chemicals, including increased usage for treatment in the Tunnel Dewatering Pump Station (TDPS)

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	125	130	127	127	0	
Headcount: Filled	118	122				
Total Personnel Services	\$15,818	\$16,456	\$15,909	\$17,096	\$1,187	7%
Supplies	915	730	1,147	853	-294	-2%
Chemicals	22,828	23,001	23,449	25,036	1,587	7%
Utilities & Rent	16,374	16,077	18,006	18,528	522	3%
Contractual Services	10,727	10,137	11,410	10,619	-791	-7%
Biosolids	6249	6251	5,061	4,879	-182	-4%
Small Equipment	296	63	134	94	-40	-30%
Total Non-Personnel Services	57,388	56,260	59,206	60,009	803	1%
<b>Department Total</b>	<b>\$73,206</b>	<b>\$72,716</b>	<b>\$75,115</b>	<b>\$77,105</b>	<b>\$1,990</b>	<b>3%</b>
<b>Capital Equipment</b>	<b>\$100</b>	<b>\$31</b>	<b>\$100</b>	<b>\$100</b>	<b>0</b>	<b>0%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Achieve NACWA Award Status	Platinum	Platinum	Platinum	Platinum
Compliance with disposal of biosolids regulations (100%)	100 % compliance	100 % compliance	100 % compliance	100 % compliance
Inspection and Sampling of Pretreatment Permittees (100%)	100 % compliance	100 % compliance	100 % compliance	100 % compliance
Obtain 90% acceptable results on discharge monitoring report quality assurance samples	90 % compliance	100 % compliance	Greater than 90 % compliance	Greater than 90 % compliance

Note: EPA 503 (i.e. Title 40 of the Code of Federal Regulations, Part 503) regulates the use or disposal of sewage sludge or biosolids EPA DMR QA (i.e. Discharge Monitoring Report Quality Assurance) is conducted on wastewater samples used for permit compliance reports. Achieving acceptable results for at least 90% of samples will minimize the potential for EPA to audit the laboratory.



## Department: Wastewater Treatment Operations

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue optimizing the new Wet Weather Treatment Facility (WWTF) and Filtrate Treatment Facility (FTF) that was placed into operations in March 2018
- Implement workforce development to enhance skill and create a learning environment for staff
- Continue to support implementation of other CIP projects in progress, including Long Term Control Plan (LTCP), Raw Wastewater Pump Station 2 (RWWPS2), Gravity Thickener, and Primary Scum Screening Degrating Building (PSSDB) upgrades
- Continue implementation of Safety and Operator Cross Training
- Continue implementation of an Asset Management Program in tandem with an Asset Reliability Program
- Continue to improve the structure and use of Maximo
- Continue to work with surrounding jurisdictions (Maryland and Virginia) on regulatory requirements for biosolids and land applications
- Continue to increase the use of biosolids products (Bloom), in the service area, for restoration projects, tree plant, and Low Impact Development (LID) projects
- Continue biosolids product assurance to maintain low number of offsite odor complaints
- Implement the marketing plan for Class A exceptional quality Bloom
- Continue to take a lead in conducting cutting-edge research in wastewater treatment and biosolids management
- Expansion of innovative research strategies such as Advanced Research Technology (ART) initiatives
- Continue monitoring of revenue and costs associated with high strength waste program and evaluate new sources as appropriate

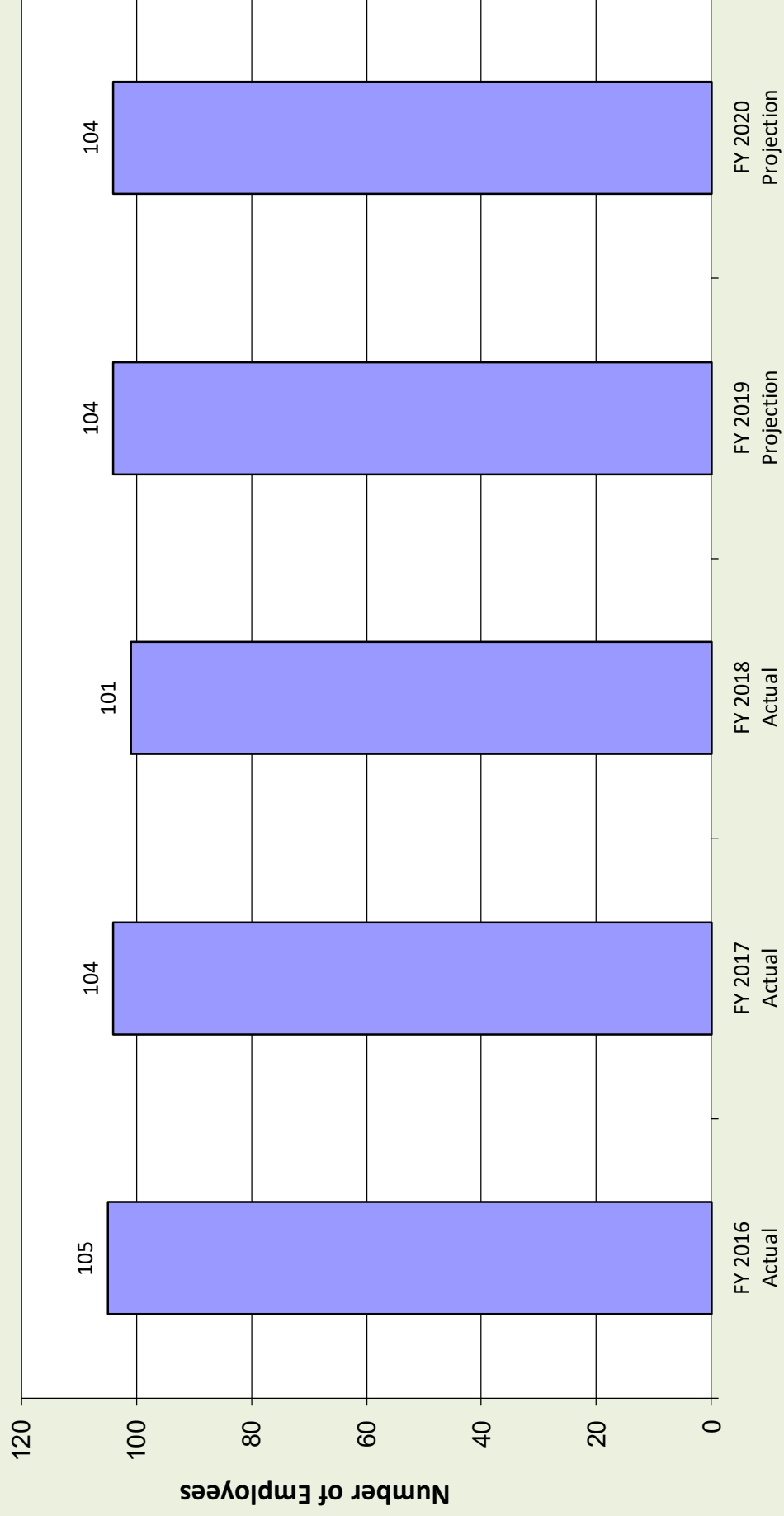
### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue implementation of an Asset Management Program in tandem with an Asset Reliability Program
- Continue optimization of the Filtrate Treatment Facilities (FTF), Tunnel Dewatering Pump Station (TDPS), and Class A Biosolids Facilities

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

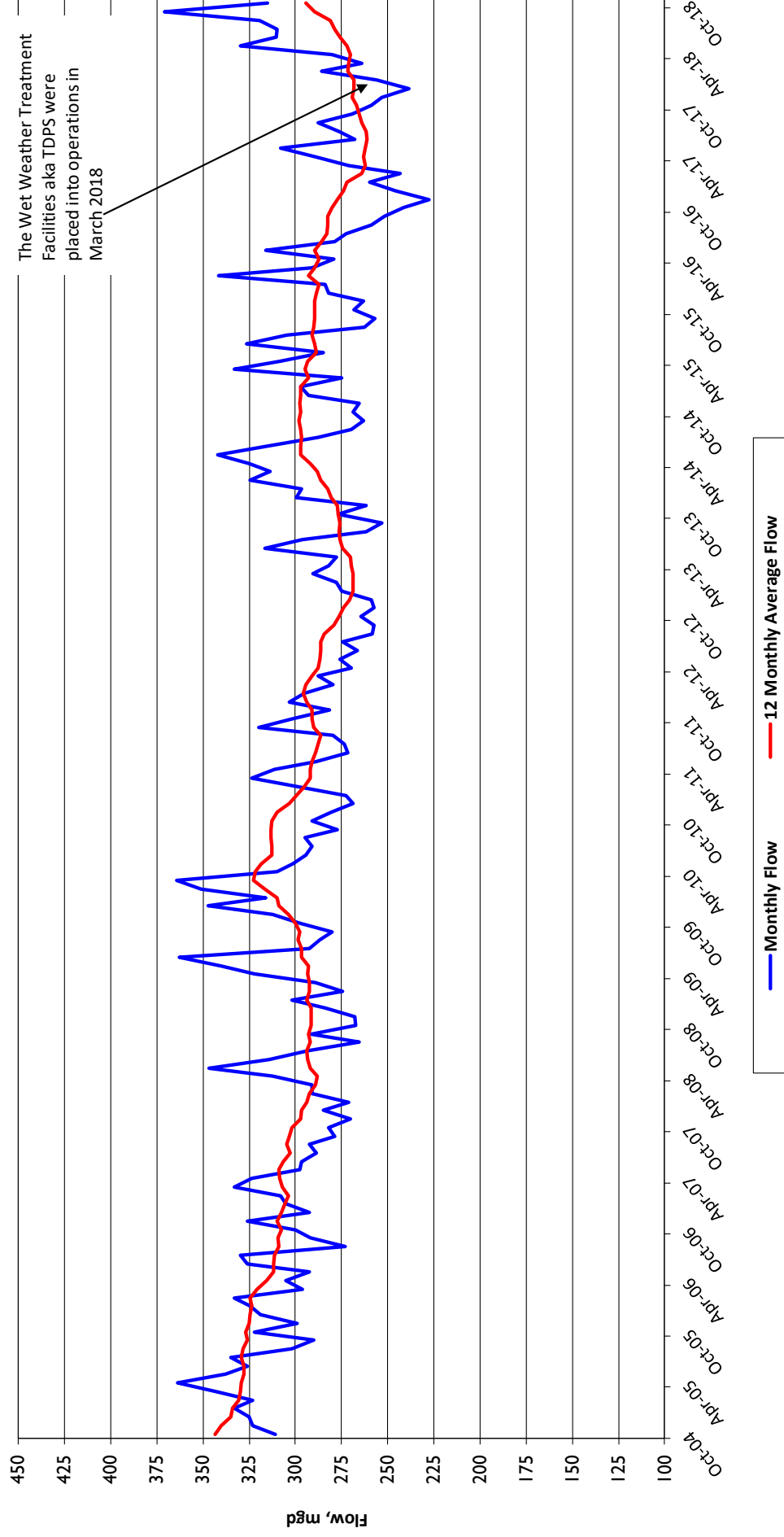
- Full year operation of the Filtrate Treatment Facilities (FTF) will decrease methanol usage, increase electricity usage and other associated operation and maintenance costs
- Full year operation of the Tunnel Dewatering Enhanced clarification Facilities will increase electricity usage, chemicals and other associated operation and maintenance costs

## Wastewater Treatment Certified Operators\* FY 2016 - FY 2020

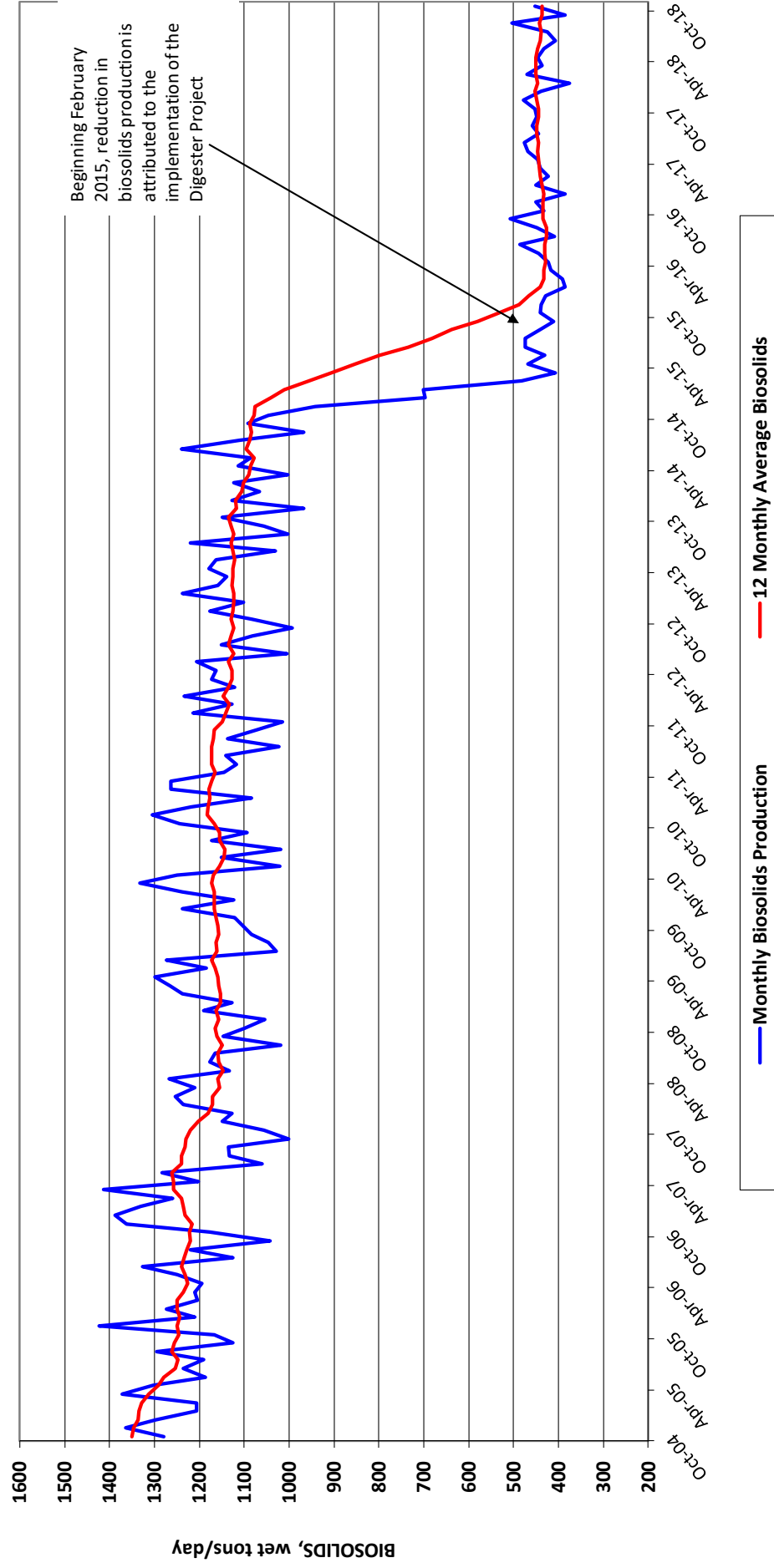


\*Includes all positions with Certified Wastewater Treatment Plant Operator License

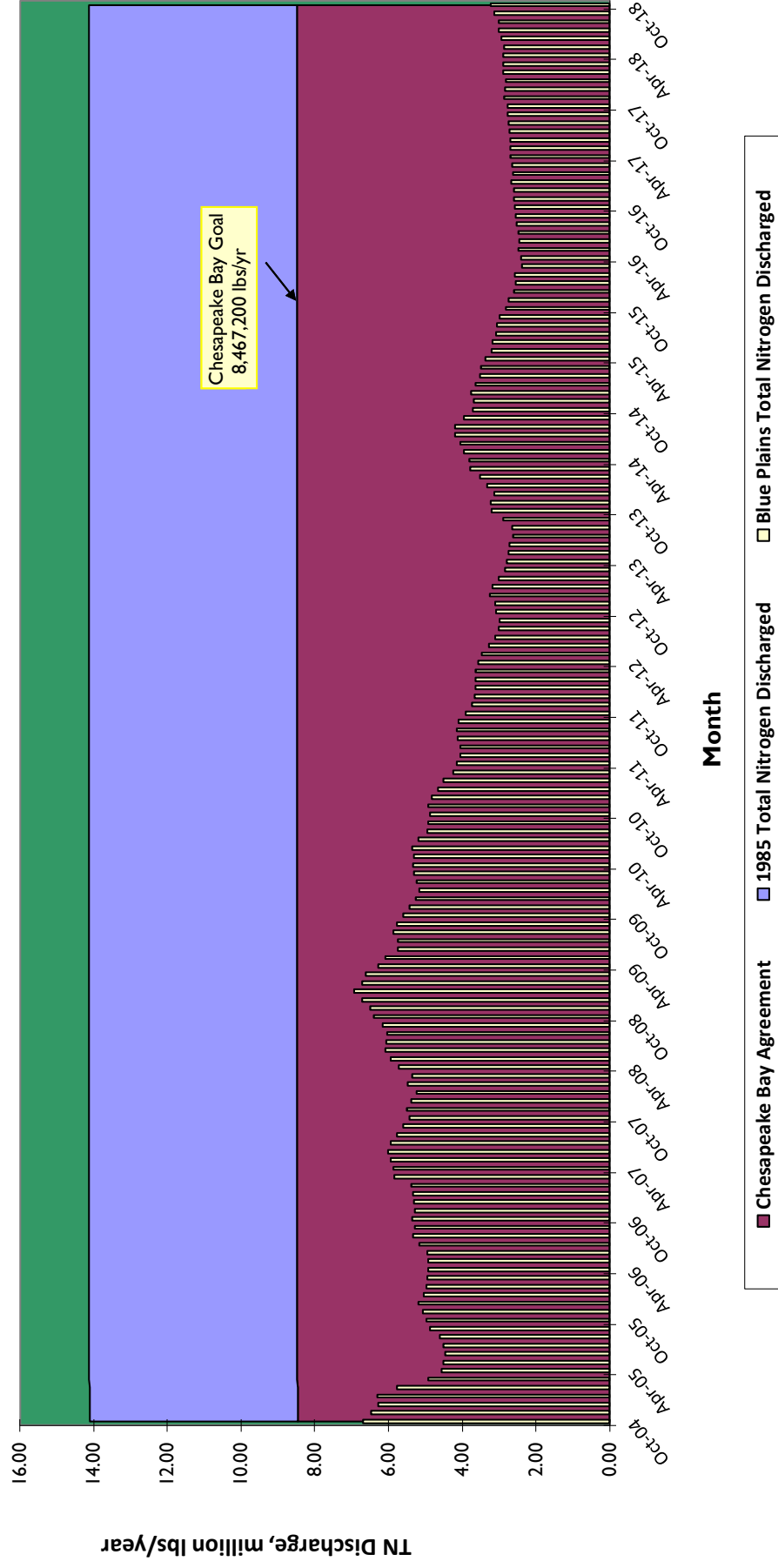
## BLUE PLAINS PLANT EFFLUENT FLOW OCTOBER 2004 - OCTOBER 2018



## BLUE PLAINS PLANT BIOSOLIDS PRODUCTION OCTOBER 2004 - OCTOBER 2018



## ANNUAL TOTAL NITROGEN LOAD GRAPH OCTOBER 2004 - OCTOBER 2018



## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Wastewater Treatment - Process Engineering

<b>PURPOSE:</b>	To assist in the operation of the Advanced Wastewater Treatment Plant at Blue Plains, to produce treated effluent and Class A Biosolids that meet stringent Federal Clean Water Act and local water quality requirements
<b>MISSION:</b>	To economically maintain DC Water's process equipment and facilities at the Blue Plains Advanced Wastewater Treatment Plant, and ensure that the operational and customer service objectives of the Authority are achieved



### FUNCTIONS

Process Engineering	Process Control Systems	Process Control Maintenance
Establish Process Control operating targets for Blue Plains	Maintain Process Control System (PCS) for Blue Plains Advanced Wastewater Treatment Plant	Plan and coordinate all activities for corrective, preventive, and predictive maintenance
Optimize process, chemical, and power use at the Plant;  Provide design comments and support during construction of capital projects	Provide Design and Construction interface to PCS;  Manage PCS hardware, software, maintenance, and support services	Maintain electronic process control systems, flow measurement, metering and recording equipment for the Plant
Troubleshoot process performance problems	Troubleshoot PCS issues and train Process and Instrumentation staff	



## Department: Wastewater Treatment - Process Engineering

### BUDGET

The \$0.1 million decrease in FY 2020 compared to the FY 2019 budget is due to rightsizing of major maintenance functions, and offset by personnel service cost adjustments

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	39	39	39	33	6	15%
Headcount: Filled	31	35				
Total Personnel Services	\$4,356	\$4,689	\$4,733	\$4,825	\$92	2%
Supplies	315	382	475	496	21	4%
Utilities & Rent	58	72	60	57	-3	-5%
Contractual Services	2,267	1,788	1,902	1,668	-234	-12%
Small Equipment	12	14	18	18	0	0%
Total Non-Personnel Services	2,651	2,256	2,454	2,239	-215	-9%
<b>Department Total</b>	<b>\$7,008</b>	<b>\$6,944</b>	<b>\$7,187</b>	<b>\$7,064</b>	<b>-\$123</b>	<b>-2%</b>
<b>Capital Equipment</b>	<b>\$810</b>	<b>\$870</b>	<b>\$550</b>	<b>\$350</b>	<b>-\$200</b>	<b>-40%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Critical Equipment Availability (97%)	>97%	97%	>97%	>97%

## Department: Wastewater Treatment - Process Engineering

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Maintain full compliance with the National Pollutant Discharge Elimination Systems (NPDES) permit
- Continue training staff on new Filtrate Treatment Facilities (FTF) and Wet Weather Facility commissioned in 2018
- Continue to support implementation of other CIP projects in progress, including Long Term Control Plan (LTCP), Raw Wastewater Pump Station 2 (RWWPS2), Gravity Thickener and Primary Scum Screening De-grating Building (PSSDB) upgrades, Filtrate Treatment Facilities (FTF), Tunnel Dewatering Pumping Station (TDPS) aka Wet Weather Facility, and Filter Influent Pump Replacement
- Continue implementation of Rehabilitation Program to ensure availability of critical process equipment
- Continue implementation and support of an Asset Management Program in tandem with an Asset Reliability Program
- Continue to improve the structure and use of Maximo

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue implementation of an Asset Management Program in tandem with an Asset Reliability Program
- Continued optimization of the Filtrate Treatment Facilities (FTF), Tunnel Dewatering Pump Station (TDPS), and Class A Biosolids Facilities

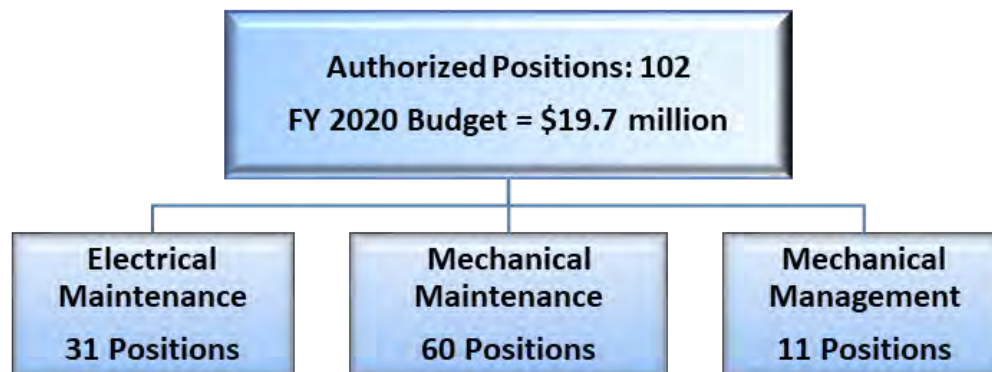
### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Operational startup of Filtrate Treatment Facilities (FTF) will decrease methanol usage, increase electricity usage (1MW) and other associated operation and maintenance costs
- Operational startup of the tunnel dewatering and treatment facilities will increase electricity usage (10MW when operational), chemical usage and other associated operation and maintenance costs

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Maintenance Services

<b>PURPOSE:</b>	Maintain all mechanical and electrical equipment at the Blue Plains Advanced Wastewater Treatment Plant
<b>MISSION:</b>	To economically maintain DC Water's process equipment and facilities at the Blue Plains Advanced Wastewater Treatment Plant, ensuring that the operational and customer service objectives of the Authority are achieved



### FUNCTIONS

Electrical Maintenance	Mechanical Maintenance	Mechanical Management
Maintain electrical process control systems, equipment, and components for the Blue Plains Advanced Wastewater Treatment Plant	Maintain mechanical process systems and equipment for the Plant	Plan and coordinate all activities for corrective, preventive, and predictive maintenance
Operate and maintain electrical power distribution system from 5kv to 69kv, electrical control systems for all process equipment and all DC Water facilities	Plan, schedule, and perform condition monitoring for all process equipment at all DC Water facilities	Plan and operate support systems to manage maintenance by planning, estimating, inspecting, and scheduling maintenance activities
Inspect and maintain cranes for all DC Water facilities		Coordinate work through operations and engineering and provide administrative support

## Department: Maintenance Services

### BUDGET

The \$0.1 million increase in FY 2020 compared to the FY 2019 budget is due to personnel service cost adjustment, and offset by rightsizing of major electrical utilization & systems contracts

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	111	110	110	102	2	1%
Headcount: Filled	98	95				
Total Personnel Services	\$11,537	\$10,906	\$11,991	\$12,590	\$599	5%
Supplies	2,948	3,025	3,591	3,450	-141	-4%
Utilities & Rent	139	128	154	157	3	2%
Contractual Services	3,863	3,563	3,516	3,181	-336	-10%
Small Equipment	231	184	315	275	-40	-13%
Total Non-Personnel Services	7,181	6,900	7,575	7,063	-512	-7%
<b>Department Total</b>	<b>\$18,719</b>	<b>\$17,807</b>	<b>\$19,567</b>	<b>\$19,653</b>	<b>\$86</b>	<b>0%</b>
<b>Capital Equipment</b>	<b>\$3,711</b>	<b>\$4,141</b>	<b>\$3,600</b>	<b>\$3,770</b>	<b>\$170</b>	<b>5%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Critical Equipment Availability (97%)	Criteria Not Established	94% <sup>(1)</sup>	Criteria Under review <sup>(2)</sup>	Criteria Under review <sup>(2)</sup>

<sup>1</sup> Includes out of service equipment awaiting capital upgrades (RWWPS2, East Screens, Gravity Thickeners, Filter Influent Pumps)

<sup>2</sup> Criteria under review for consistency within the Wastewater Operations

## Department: Maintenance Services

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue training of maintenance staff on new Filtrate Treatment Facilities (FTF) and Wet Weather Facility commissioned in 2018
- Continue to perform preventive, corrective and predictive maintenance services in all treatment process area equipment to improve reliability, reduce down time and maximize asset life
- Continue all methanol maintenance activities in-house and eliminate contract support
- Continue implementation of High Priority Rehabilitation Program to ensure availability of critical process equipment
- Continue implementation of an Asset Management Program in tandem with an Asset Reliability Program
- Continue to track, report, and analyze asset failures by cost to identify “poor performers”
- Continue to increase safety awareness by planning and scheduling work orders, enhancing equipment specific LOTO (lockout/ tagout) procedure and conducting Job Safety Analyses
- Continue to drive productivity, efficiency and effectiveness using process performance indicators
- Increase level of work order planning and schedule compliance to reduce level of reactive maintenance

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Fully embrace the culture of Reliability and Asset Management in the department and shared across the Authority
- Increase the level of data driven decision making at all levels of the organization
- Deploy mobile Maximo for use by maintenance personnel

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Assume maintenance responsibility of Filtrate Treatment Deammonification (DEMON) Process
- Assume maintenance responsibility of Tunnel Dewatering Pump Station and the Enhanced Clarification Facility

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Water Operations

**PURPOSE:** The Department of Water Operations (DWO) is charged with operating and maintaining the water distribution system delivering potable water to the citizens and visitors to the District of Columbia. DWO ensures compliance with the applicable regulations promulgated by the Safe Drinking Water Act s of sewer effluent to Blue Plains

**MISSION:** To support the Authority's mission as defined by the strategic plan and exceed expectations by providing high quality water services in a safe, environmentally friendly, and efficient manner



### FUNCTIONS

Distribution Control	Distribution Maintenance	Construction Contract Management	Linear Asset Management	Water Quality & Technology	Office of the Director
Preventative maintenance on the 43,000 system valves	Repair and replace water mains, service lines, valves, hydrants and other appurtenances including linear assets	Manage ongoing multifaceted contracts to support water and sewer infrastructure rehabilitation and replacement programs	Administer the comprehensive asset management program for both water and sewer systems	Environmental Protection Agency (EPA) drinking water compliance, monitoring and reporting	Provide oversight and ensure operational compliance with various MOUs
Inspect, maintain and replace 9,500 fire hydrants, in accordance with the Memorandum of Understanding (MOU)	Perform all water services taps, and abandonments 2" and smaller, in the District of Columbia	Administer Public Space Restoration Program	Optimize and prioritize capital program projects using condition assessment and analysis of Computerized Management Maintenance Software (CMMS)	Ensure water quality within the distribution system	Manage departments operating and capital budgets and perform budget monitoring functions
First responders to Investigate water system leaks emergencies		Provide inspection services for private developers validating service connections and abandonments	Support Voluntary Lead Service Program	Assess online water quality data and models and enforce fire hydrant usage policies and regulations	
Manage the Operations Control Center, emergency repairs, and the Washington Aqueduct		Manage the acquisition of District Department of Transportation (DDOT) permits to facilitate emergency repairs and scheduled projects	Manage the lifecycle maintenance costs and extend service life of assets preventative maintenance programs	Manage cross connection program and establish a new Fats, Oil & Grease (FOG) program	
				Collaborate with District agencies to mitigate adverse health effects from drinking water contaminants	



## Department: Water Operations

### BUDGET

The \$40.0 million increase in FY 2020 over the FY 2019 budget is mainly for the reprogramming of water purchases from the Department of Pumping Operations and costs associated with merging Water Operations and the Department of Water Quality and Technology

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from	
Description	Actuals	Actuals	Approved	Approved	FY 2019	Variance %
Headcount: Authorized	195	190	182	199	17	9%
Headcount: Filled	183	172				
Total Personnel Services	\$21,006	\$13,684	\$21,593	\$25,324	\$3,731	17%
Supplies & Chemicals	1,312	933	709	1,032	323	46%
Utilities & Rent	-615	257	322	501	179	56%
Contractual Services	2,718	2,077	2,365	3,307	942	40%
Water Purchases				34,929	34,929	100%
Small Equipment	34	5	90	32	-58	-64%
Total Non-Personnel Services	3,449	3,271	3,486	39,801	36,315	1042%
<b>Department Total</b>	<b>\$24,455</b>	<b>\$23,603</b>	<b>\$25,079</b>	<b>\$65,124</b>	<b>\$40,045</b>	<b>160%</b>
<b>Capital Equipment</b>	<b>\$604</b>	<b>\$645</b>	<b>\$740</b>	<b>\$735</b>	<b>-\$5</b>	<b>-1%</b>

TARGETED PERFORMANCE MEASURES	FY 2017	FY 2018	FY 2019	FY 2020
	Results	Results	Targets	Targets
Maintain full compliance with Safe Drinking Water Act standards for positive coliform results (less than 5%)	5%	5%	5%	5%
Maintain a 99% fire hydrant operational rate	99%	99%	99%	99%
Respond to 95% of all emergency service orders in less than 45 minutes	97%	97%	97%	97%

## Department: Water Operations

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Conduct annual preventative maintenance, repairs and replacements on all public fire hydrants in accordance with the Memorandum of Understanding (MOU), and correct 90% of fire hydrants that are out-of-service within 30 days
- Support the Capital Improvement Program (CIP), developer, and District Department of Transportation (DDOT) projects with distribution system valve isolations
- Provide permit application support to obtain and renew DDOT public space as well as the Department of Consumer and Regulatory Affairs (DCRA) after-hours permits for all water/sewer construction and repair activities, performed by the Department of Water Operations (DWO) and the Department of Sewer Operations (DSO) contractual and in-house crews
- Provide contractual support through the Infrastructure Repair and Replacement (IR&R) contracts to execute emergency water and sewer repairs, as well as special construction projects requested by the Department of Pumping Operations, as required by regulatory or other requirements
- Execute CIP lead service line replacements through the IR&R contracts under the Lead Service Replacement (LSR)-Demand Program, execute restorations through the public space restoration contract for public space (paved and non-paved surfaces)
- Execute right-sized small diameter main replacement projects with internal resources addressing ongoing water quality concerns within the distribution system
- Begin Small Diameter Sewer Inspection and Condition Assessment utilizing Redzone Robotics
- Continue Messtechnik Associates (MTA) Pipe-Inspector Leak Detection Program for water distribution system
- Begin water main inspection, Condition Assessment and cathodic protection inspection and maintenance program and the asset Inspection Program Pilot via use of Drone technology
- Manage compliance programs related to cross connections and Fats, Oil & Grease (FOG) program, perform cross connection inspection surveys at non-residential premises and implement fines and fees

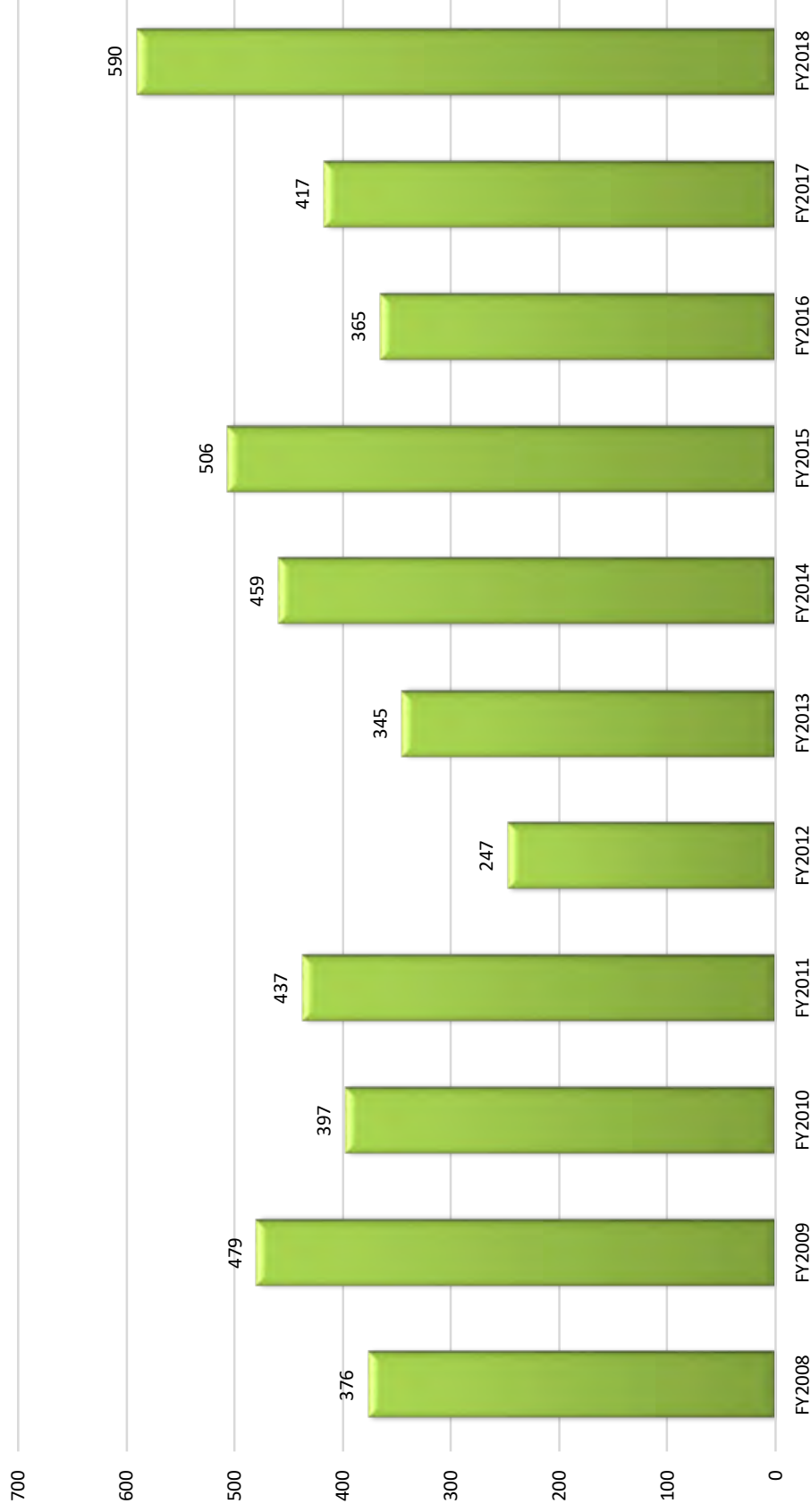
### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to develop the transmission and distribution valve assessment and rehabilitation program to extend the full life expectancy of the assets
- Continue to perform inspection services for large water service connections and support sewer connections and abandonments
- Expand water main inspection, Condition Assessment Program and cathodic protection inspection and maintenance program
- Implement mobile computing solution in support of all operational activities
- Manage Compliance Programs related to Cross Connections and Fats, Oil & Grease (FOG) program, perform cross connection inspection surveys at non-residential premises and implement fines and fees

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

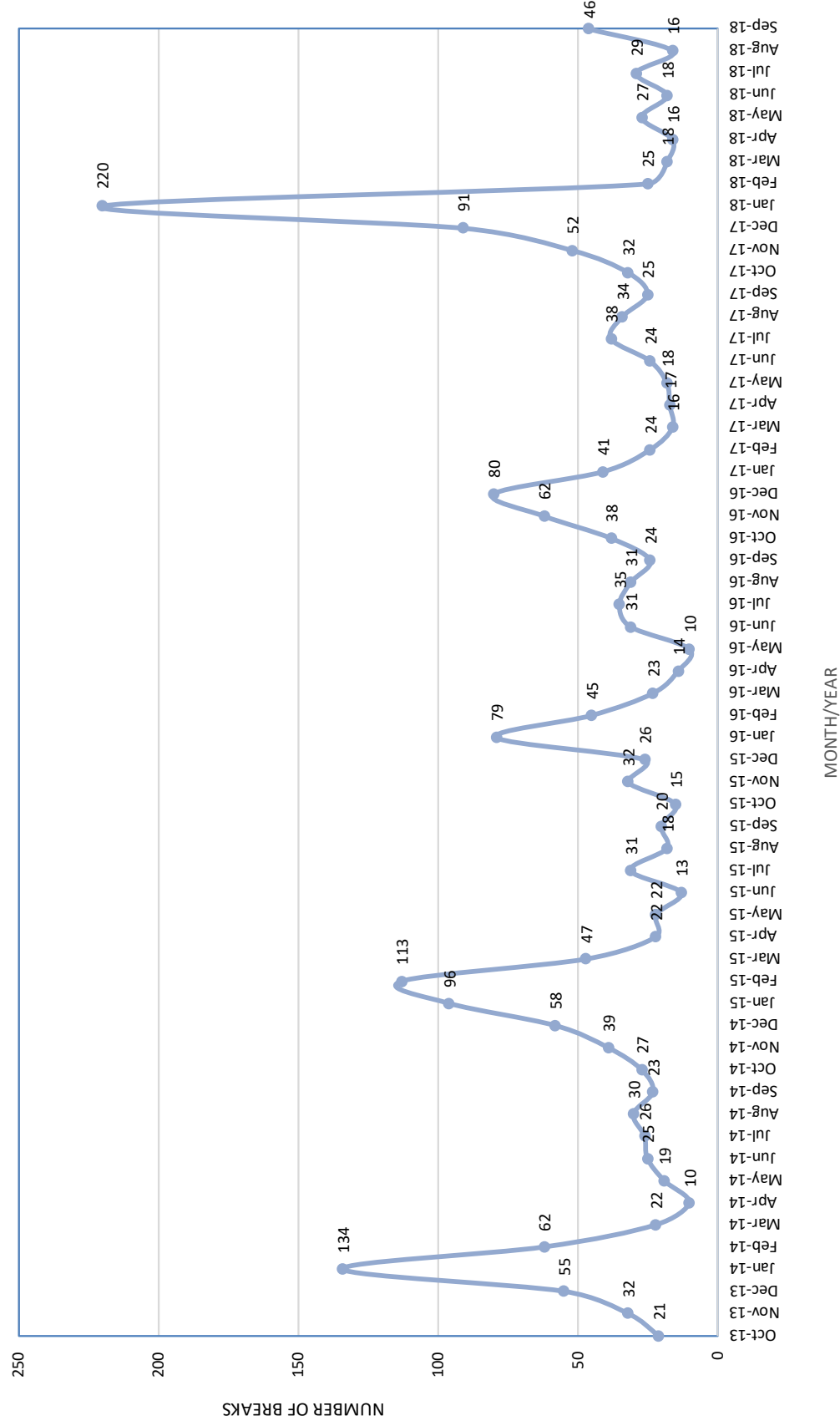
- New Lead Service Replacement bill will impact both operating and capital equipment
- Further deferral/delay of capital improvement projects will potentially increase overtime and other normal operational and equipment costs

## Historical Water Main Breaks



Number of Water Main Breaks Reported FY 2008- FY 2018

## HISTORICAL MONTHLY MAIN BREAK October 2013 thru September 2018

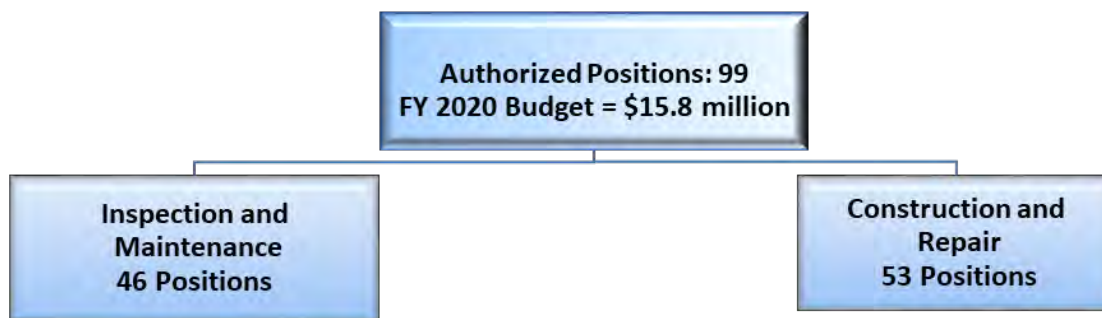


## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Sewer Operations

**PURPOSE:** The purpose of the Department is to provide for the operation and maintenance of the sewer system which collects and transports wastewater and stormwater flows to treatment areas and authorized discharge points

**MISSION:** To perform engineering planning, design, and construction management necessary to execute DC Water's Capital Improvement Program (CIP); to provide assistance and advice to operating departments and management on engineering aspects of the Authority's operation and facilities. To develop and maintain engineering documentation of the Authority's facilities and systems; and to assist the Authority with environmental policy



### FUNCTIONS

Inspection and Maintenance	Construction and Repair
Inspect public sewers and sewer laterals;	Install and repair sewer mains and sewer laterals;
Clean sewers and inlet/ outlet structures	Install and repair catch basins
Monitor & Control Operations;	Responsible for the cleaning and maintenance operations of regular catch basins, stormceptors, and grate ponds
Removal of floatable debris	
Enforcement of Fats, Oils and Grease (FOG) removal program	Oversees maintenance program for storm water structures, filter bio-retention and water quality catch basins cleaning
Operate and maintain sewer regulator structures	

## Department: Sewer Operations

### BUDGET

The \$1.5 million increase in FY 2020 over the FY 2019 budget is due to increase in personnel services, and contractual services mainly for sewer repairs and hauling and disposal of grit removed from the sewers

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	110	115	104	99	-5	-5%
Headcount: Filled	91	94				
Total Personnel Services	\$11,093	\$11,650	\$11,671	\$12,420	\$749	6%
Supplies & Chemicals	590	686	558	549	-9	-2%
Utilities & Rent	-22	610	669	637	-32	-5%
Contractual Services	1,817	1,099	1,411	2,191	780	55%
Small Equipment	10	25	33	32	-1	-3%
Total Non-Personnel Services	2,394	2,420	2,671	3,408	737	28%
<b>Department Total</b>	<b>\$13,487</b>	<b>\$14,070</b>	<b>\$14,342</b>	<b>\$15,829</b>	<b>\$1,487</b>	<b>10%</b>
<b>Capital Equipment</b>	<b>\$197</b>	<b>\$200</b>	<b>\$225</b>	<b>\$260</b>	<b>\$35</b>	<b>16%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Tar- gets
Number of catch basins cleaned annually	29,315	28,592	27,500	27,500
Number of laterals investigated/relieved annually	1,979	1,330	2,000	2,000
Number of floatable debris tonnage removed from rivers	520	720	400	400
Number of sewer laterals repaired/replaced annually	453	313	350	350
Number of sewer main and lining footage repaired/replaced annually	99	56	500	500



## Department: Sewer Operations

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Evaluate application of red zone small diameter sewer inspection project for condition assessment of service life restoration on mainline sewers
- Collaborate with Department of Engineering Services (DETS) for red zone large diameter sewer inspection project for condition assessment of service life restoration on mainline sewers
- Administer the chemical root foaming contract at critical locations
- Continue the FOG program at critical locations
- Continue coordination efforts with DC Clean Rivers Program on construction activities that interface with sewer operations
- Coordinate inspection and training responsibility for Department of Sewer Services (DSS) crews with completed structures on DC Clean Rivers tunnel installation
- Continue replacement of Sewer Laterals using Trenchless Technologies
- Continue installation of point patch repair of mainline sewer using Trenchless Technologies
- Continue to improve the catch basin inventory using the Catch Basin Application
- Work with DETS to implement permit requirements for Municipal Separate Storm Sewer System (MS4) Outfalls
- Provide new building and dock facilities where the floatable debris removal program will be located permanently
- Plan for relocation to new DSS campus
- Implement inspection schedule for MS4 Sewer Outfalls

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue chemical root foaming contract at problematic locations
- Assess application of red zone small diameter sewer inspection project
- Continue installation of point patch repair of mainline sewer using Trenchless Technologies
- Continue replacement of Sewer Laterals using Trenchless Technologies
- Continue evaluating emerging technologies for conditional applications that promote cost efficiency with the repair of our sewer system
- Coordinate inspection and training responsibilities for DSS crews with completed structures on DC Clean Rivers tunnel installation
- Continue to analyze catch basin data to determine frequency of cleaning
- Continue working on new building and dock facilities for the floatable debris removal program
- Continue inspection of MS4 Sewer Outfalls

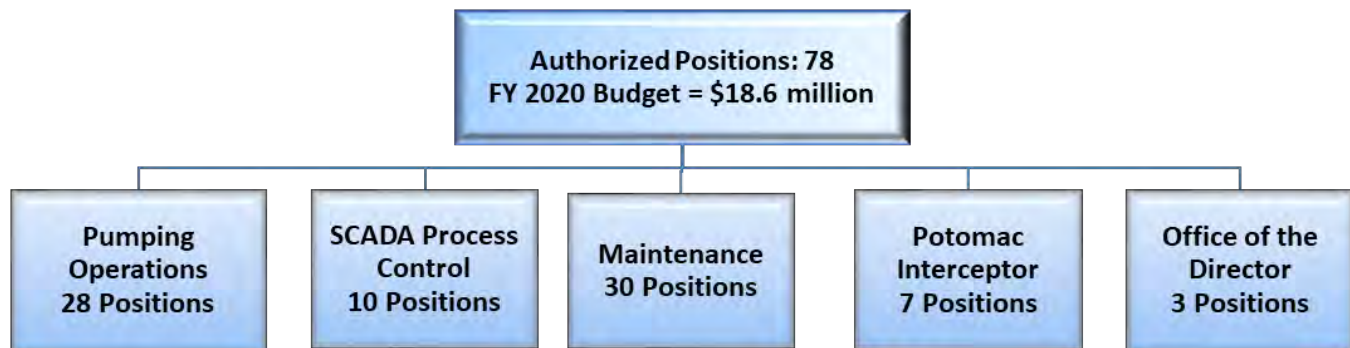
### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Recruit and train additional personnel to inspect and maintain new near surface structures on the Clean Rivers tunnels
- Operate and maintain the new Combined Sewer Overflow (CSO) tunnels and provide support on the mainline sewer rehabilitation projects
- Operating and Maintenance costs from additional water quality catch basins installed by District Department of Transportation (DDOT)

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Pumping Operations

<b>PURPOSE:</b>	The purpose of the Department is to ensure that DC Water operates and delivers clean, safe and reliable drinking water to its customers and efficient flows of sewer effluent to Blue Plains
<b>MISSION:</b>	To provide resilient delivery of water distribution and sewer pumping services every minute of every day



### FUNCTIONS

Pumping Operations	SCADA Process Control	Maintenance	Potomac Interceptor	Office of the Director
Operate Water, Sewer, and Stormwater Pumping Stations, Water Storage Facilities and Water Towers	Operate and maintain Supervisory Control and Data Acquisition (SCADA) computer system, Applications, Hardware and Network Support	Plan and coordinate corrective, emergency, preventive, and predictive maintenance for pump stations	Operate and maintain Potomac Interceptor (PI) Sewer	Directs Department of Pumping Operations
Remove screenings and debris from pump stations and prepare work order for equipment in need of repair	Operate and maintain all process instrumentation and controls, including completion of all related preventative and corrective maintenance	Maintain, troubleshoot, and repair mechanical and electrical process systems and equipment	Operate and maintain PI Flow Meters and odor control facilities and manholes	Plans and manages the capital equipment and operating funds
Prepare management reports for Compliance Perform Stormwater Pollution Prevention Plan inspections and reports	Facilitate, compile and administer Consent Decree reporting;  Administer and manage service contracts and special projects for department	Plan, schedule, and perform condition monitoring for process equipment, including vibration, infrared, and oil analysis	Manage Miss Utility service in Virginia and Montgomery County in Maryland; Monitor Right-of-Way to maintain integrity and prevent encroachment	Manage Maximo operations and perform reviews to evaluate effectiveness of methods in relation to asset management, uptime, Mean Time to Repair (MTTR), and Mean Time Between Failures (MTBF) metrics
Inspect inflatable dams to maintain proper function during rain events	Ensure integrity of SCADA, disaster Recovery Planning, Implementation and Testing	Perform Capital Improvement Program (CIP) project review during planning, design and construction stages	Review consultants and contractors plans, specifications, designs for compliance to standards	Manage, develop, Implement and maintain Reliability Centered Maintenance (RCM), Root Cause, Failure Mode and Effects Analysis (FMEA) programs

## Department: Pumping Operations

### BUDGET

The \$32.5 million decrease in FY 2020 compared to FY 2019 budget is mainly for reallocation of water purchases to the department of Water Operations, Office of Emergency Management (OEM) and personnel service cost adjustments

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	89	88	90	78	-12	-15%
Headcount: Filled	98	84				
Total Personnel Services	\$10,147	\$11,154	\$11,276	\$10,389	-\$887	-8%
Supplies & Chemicals	1,439	664	743	737	-6	-1%
Utilities & Rent	4,144	4,536	3,965	3,960	-5	0%
Contractual Services	3,864	3,994	4,508	3,438	-1,070	-24%
Water Purchases	26,796	28,357	30,520		-30,520	-100%
Small Equipment	185	75	81	91	10	12%
Total Non-Personnel Services	36,427	37,626	39,816	8,226	-31,590	-79%
<b>Department Total</b>	<b>\$46,574</b>	<b>\$48,780</b>	<b>\$51,093</b>	<b>\$18,616</b>	<b>-\$32,477</b>	<b>-64%</b>
<b>Capital Equipment</b>	<b>\$1,986</b>	<b>\$2,034</b>	<b>\$1,700</b>	<b>\$1,700</b>	<b>\$0</b>	<b>0%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Critical Equipment Availability (95%)	98%	95%	95%	95%

## Department: Pumping Operations

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Develop and report key performance indicators, i.e. Availability of critical process assets (Pumps/ Screens) and performance visibility
- Implement maintenance reliability programs - oil analysis, thermography, vibration analysis, and ultra sound
- Continue Reliability Centered Management (RCM) for CSO sites, inflatable dams, and pumping stations
- Increase safety awareness highlighting best practice daily among our department, internal, external customers and stakeholders
- Operate Water Pumping Stations, Reservoirs and Storage Tanks within the regulations of Safe Drinking Water Act, and guidelines of DC Water for the benefit of our customers
- Operate Sewer Pumping Stations, Storm water Pumping Stations, Inflatable Dams, within the requirements of the National Pollution Discharge Elimination System (NPDES) Permit, the Municipal Separate Storm Water Sewer System (MS4) Permit and DC Water Standard Operating Procedures
- Operate all odor control facilities along the Potomac Interceptor and at Sewer Pumping Stations and ensure proper and safe operation by remote monitoring of various parameters through the Supervisory Control and Data Acquisition (SCADA) computer system
- Work with the Department of Engineering Services (DETS) to design, implement improvements and fully automate storm water pump stations
- Coordinate with DETS/Clean Rivers on the commissioning/operating of new facilities

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to report on key performance indicators, i.e. availability of critical process assets (Pumps/ Screens) and performance visibility
- Continue to maintain and evaluate results from the maintenance reliability programs - oil analysis, thermography, vibration analysis, and ultra sound
- Continue reliability centered maintenance for sewer pumping stations and documentation of all work management processes
- Continue to maintain safety awareness highlighting best practice daily among our department, internal, external customers and stakeholders
- Continue to operate and maintain all facilities in compliance with regulatory requirements, DC Water's guidelines and for the benefit of our customers

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Delay in CIP projects are potential for emergency repairs such as main pump station and stormwater pump stations repairs

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Engineering and Technical Services

**PURPOSE:** To perform engineering planning, design, and construction management necessary to execute DC Water's Capital Improvement Program (CIP)

**MISSION:** To provide assistance and advice to operating departments and management on engineering aspects of the Authority's operation and facilities. To develop and maintain engineering documentation of the Authority's facilities and systems; and to assist the Authority with environmental policy



### FUNCTIONS

Design	Engineering Management	Planning	Water & Sewer Construction	Asset Management	Quality Management
Design linear capital projects (water and sewer) and support construction efforts	Manage and track the Capital Improvement Plan (CIP)	Develop and maintain the water and sewer hydraulic models	Administer contracts for new construction, major repair and modifications to water & sewer systems and facilities	Develop, implement and oversee Asset Management Program	Develop, implement, and monitor all aspects of department's Quality Management System (QMS)
Develop all Small Diameter Water mains and select Sewer Rehabilitation designs	Ensure contract documents comply with DC Water and Environmental Protection Agency (EPA) procurement regulations	Develop the 10 -year CIP for all water and sewer system infrastructure improvements	Inspect construction; Manage critical customer concerns as necessary with government leadership	Ensure asset management policies and practices are consistent and being followed	Lead the QMS integration and training within the department
Manage outside professional engineering consulting firms	Manage DETS engineering systems hardware/ software	Prepare water and sewer master plans	QA/QC Inspection of Precast structures		Ensure compliance with quality plans and DC Water Standards

## Department: Engineering and Technical Services

### BUDGET

The \$0.2 million increase in FY 2020 over the FY 2019 budget is due to the increase in contractual services for as-builts program, and offset by a reduction in personnel services costs

\$000's Description	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	166	166	150	135	-15	-10%
Headcount: Filled	152	127				
Total Personnel Services	\$22,102	\$21,621	\$21,989	\$21,433	-\$556	-3%
Supplies & Chemicals	176	127	193	145	-48	-25%
Utilities & Rent	439	496	636	517	-119	-19%
Contractual Services	2,327	2,258	1,910	2,792	882	46%
Small Equipment	82	38	62	75	13	21%
Total Non-Personnel Services	3,025	2,919	2,802	3,529	727	26%
<b>Department Total</b>	<b>\$25,126</b>	<b>\$24,540</b>	<b>\$24,790</b>	<b>\$24,962</b>	<b>\$171</b>	<b>1%</b>
<b>Capital Equipment</b>	<b>\$132</b>		<b>\$20</b>	<b>\$20</b>	<b>\$0</b>	<b>0%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Percentage of KPI's Completed	80%	80%	80%	80%
Use 100% of Clean Water Act grant funds	100%	100%	100%	100%
Use 100% of Safe Drinking Water Act grant funds	100%	100%	100%	100%



## Department: Engineering and Technical Services

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to validate and prioritize Capital Improvement Program (CIP) projects using the enterprise Asset Management Framework
- Lead and manage timely and on-budget delivery of CIP projects
- Implement Water, Wastewater Treatment, Sewer Facility Plans and corresponding Asset Management Plans
- Improve program management, project development, and implementation across the service areas
- Improve metering and development of the sewer hydraulic model
- Acquire permits and approvals needed to execute various CIP projects
- Continue condition assessments of large diameter water mains
- Inspect and assess the condition of major and critical trunk sewers and interceptors
- Continue implementation of the Total Nitrogen/Wet Weather plan for Blue Plains Advanced Wastewater Treatment Plan (AWTP) through the completion and placing on-line of the Tunnel Dewatering Pump station/Enhanced Clarification project (required on-line per Consent Decree - March 23, 2018)
- Continue implementation of the Long-Term Control Plan (DC Clean Rivers)
- Monitor EPA Fair Share Objectives
- Develop and implement biosolids related projects to ensure continued success of the Biosolids Management Plan/Program
- Obtain grant funds, as appropriate, under the Clean Water Act, Safe Drinking Water Act and Federal Emergency Management Agency (FEMA)
- Ensure all grant funding is obligated in accordance with grant requirements

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to validate and prioritize CIP projects using the Enterprise Asset Management Framework

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Staffing to support implementation of the \$4.95 billion CIP for FY 2019 – FY 2028

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Wastewater Engineering

<b>PURPOSE:</b>	Oversee the construction and rehabilitation of wastewater treatment, water, and sewer pumping facilities to meet all required National Pollutant Discharge Elimination System (NPDES) and consent decree requirements, and continued performance for critical functionality of assets
<b>MISSION:</b>	Plan and execute a Capital Improvement Program (CIP) that supports DC Water in effectively and efficiently meeting the NPDES standards



### FUNCTIONS

Technical Support	Program Management	Blue Plains Project
Review and approve PCS, SCADA, and Instrumentation and Control (I&C) engineering documents for compliance with established guidelines and standards	Develop and maintain long-term facility planning  Provide staff support for environmental policy affecting DC Water	Perform construction management of new construction, major repairs and modifications to process and non-process facilities
Manage the engineering responsibilities for all PCS and SCADA related projects from planning, design, construction, commissioning and operational support	Provide engineering data for development and maintenance of the Capital Improvement Plan	Administer contracts for construction management, new construction, major upgrades, modifications, and start-up to the Blue Plains Advanced Wastewater Treatment Plant, pump stations, and facilities that serve the water distribution and wastewater collection systems
Coordinate with all DC Water user and customer groups/ departments on all SCADA, PCS, and I&C matters	Generate bid documents for construction and rehabilitation projects	Perform design reviews and coordinate construction work with other departments at Blue Plains

## Department: Wastewater Engineering

### BUDGET

The \$0.9 million increase in FY 2020 over the FY 2019 budget is for personnel services cost adjustments due to increased headcount

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	0	18	15	18	3	20%
Headcount: Filled	0	16	-	-	0	0%
Total Personnel Services	\$0	\$1,767	\$2,310	\$3,239	\$929	40%
Supplies & Chemicals	0	0	13	15	2	15%
Utilities & Rent	0	0	0	0	0	0%
Contractual Services	0	0	736	739	3	0%
Small Equipment	0	0	5	2	-3	-60%
Total Non-Personnel Services	0	0	754	756	2	0%
<b>Department Total</b>	<b>\$0</b>	<b>\$1,767</b>	<b>\$3,064</b>	<b>\$3,995</b>	<b>\$931</b>	<b>30%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Design Lock-In and Stag-gating with comment closure	N/A	N/A	2	NYE
Construction Contracts Awarded			3	
Construction Contracts Closed			2	

\*NYE – Not Yet Established

## Department: Wastewater Engineering

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implement improvements for vertical sewer and stormwater facilities including FEMA grant funded projects at Main Pump Station and 14<sup>th</sup> Street Bridge Pump Station, upgrades at O-Street Pump Station, and planning/execution for additional priority upgrades at the Main Pump Station, Potomac Pump Station, and several stormwater pump stations
- Commissioning of the Filtrate Treatment Facility
- Continue construction of Raw Wastewater Pump Station 2 Rehabilitation
- Award construction contract for Gravity Thickener Phase 2 Upgrade
- Award construction contract for Filter Influent Pumps 1-10 Upgrade
- Continue design for Reclaimed Final Effluent Pump Station Upgrade
- Pre-select equipment for Reclaimed Final Effluent Pump Station Upgrade
- Complete concept design for Headworks Electrical Upgrade at Blue Plains

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Issue Design-build Contract for Segment C of Floodwall at Blue Plains
- Start design on upgrade to Blue Plains influent structures
- Advertise construction contract for Reclaimed Effluent Pump Station Upgrade
- Recruit, hire and integrate into the department, a planning team and a task order construction team for the department including additional design managers

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

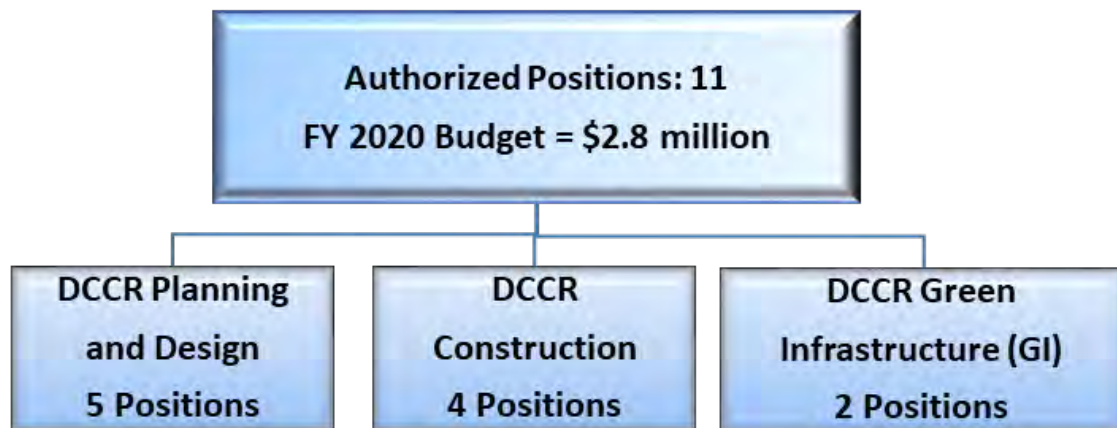
- Execution of capital projects will result in reduced costs for operations and maintenance of pumping facilities that are reaching or exceeding the anticipated useful life of critical assets
- Purchase of solar power at Blue Plains will reduce annual power expenditures

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Clean Rivers

**PURPOSE:** To oversee the Authority's DC Clean Rivers to reduce combined sewer overflows to bring them into compliance with the District water quality standards, and provide flood relief to neighborhoods in the Northeast Boundary section of the City. The project is a combination of tunnel systems and Green Infrastructure

**MISSION:** To develop, design, construct and implement the Authority's 25-year DC Clean Rivers Project (aka Combined Sewer Overflow Long Term Control Plan) that includes federally enforceable consent decree driven milestones



#### FUNCTIONS

DCCR Planning and Design	DCCR Construction	DCCR Green Infrastructure (GI)
Manage and oversee the planning and design phase of the \$2.7 billion, 25 year Clean Rivers Program	Manage and oversee the construction phase of the 20 year Clean Rivers Project	Manage and oversee the completion of the Green Infrastructure (GI) Program, siting and planning for GI projects
Oversee the program consultant's management of design contracts; and guide value engineering efforts to improve the quality and design cost effectiveness	Ensure adherence to all construction related consent decree requirements and guide constructability review efforts	Manage collaboration with external stakeholders including MOU development and negotiation with District
Develop risk mitigation strategies for all Clean Rivers projects and ensure adherence to all design related consent decree milestones	Develop risk mitigation strategies for all Clean Rivers projects, inspect tunnel construction and other CSO abatement facilities	Manage the design and construction of GI Challenge
Provide assistance in creating an accurate DC Clean Rivers Engineering Assets inventory with the integration of DC Water's operating facilities	Identify and mitigate potential project delay and scope growth	Ensure adherence to all GI consent decree milestones

## Department: Clean Rivers

### BUDGET

The \$0.3 million decrease in FY 2020 compared to the FY 2019 budget is for personnel services cost adjustments for reduced headcount

\$000's Description	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	15	15	15	11	-4	-27%
Headcount: Filled	13	9				
Total Personnel Services	\$2,597	\$2,163	\$2,661	\$2,359	-\$302	-11%
Supplies & Chemicals	3	3	26	27	1	4%
Utilities & Rent	102	34	110	126	16	15%
Contractual Services	54	74	248	249	1	4%
Small Equipment	7	0	0	0	0	0%
Total Non-Personnel Services	159	111	384	402	18	5%
<b>Department Total</b>	<b>\$2,757</b>	<b>\$2,274</b>	<b>\$3,046</b>	<b>\$2,761</b>	<b>-\$285</b>	<b>-9%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Actual	FY 2018 Actual	FY 2019 Targets	FY 2020 Targets
Meet all CSO LTCP consent decree milestones	100%	100%	100%	100%



## Department: Clean Rivers

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue construction of Northeast Boundary Tunnel (NEBT)
- Complete the facility planning for the Potomac River Tunnel (PRT) system
- Continue the geotechnical field investigation of PRT
- Complete the development of the Environmental Assessment (EA) for PRT system
- Begin design of CSO-025/026 Sewer Separation
- Begin the procurement for CSO-025/026 Sewer Separation
- Complete the construction of Rock Creek Green Infrastructure (GI) Project 1 (RC-A) including GI Challenge projects
- Begin post-construction monitoring of RC-A
- Complete the construction of Potomac River GI Project 1 (PR-A)
- Begin post-construction monitoring of PR-A
- Continue implementation of National GI Certification Program
- Continue the deployment of Clean Rivers' assets into DC Water's enterprise asset management system
- Continue the coordination of preventive maintenance of Clean Rivers assets
- Continue the maintenance of GI facilities
- Regulatory requirements compliance

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue construction of Northeast Boundary Tunnel (NEBT)
- Continue planning and design for Potomac River Tunnel (PRT)
- Complete design and continue procurement of CSO-025/026 Sewer Separation
- Complete post-construction monitoring of RC-A and practicability assessment of Green Infrastructure (GI) within Rock Creek sewershed
- If GI is determined to be practicable, begin planning and design for Rock Creek GI Project 2
- Complete post-construction monitoring of PR-A and practicability assessment of GI within Potomac sewershed
- Continue the deployment of Clean Rivers assets into DC Water's enterprise asset management system
- Continue the coordination of preventive maintenances of Clean Rivers assets
- Continue the maintenance of GI facilities
- Regulatory requirements compliance

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- If Green Infrastructure (GI) is determined to be practicable, Clean Rivers will hire more DC Water staff (GI planning Coordinators) to oversee the program management staff in the development of contract documents, bid support, design support during construction, construction oversight management

## CLUSTER: OPERATIONS AND ENGINEERING

### DEPARTMENT: Permit Operations

<b>PURPOSE:</b>	Support the District of Columbia's construction permit process through coordinated effort with the Department of Consumer and Regulatory Affairs (DCRA), the District Department of Transportation (DDOT) and the Department of Environment and Energy (DOEE). This is done through the review and approval of plans for new construction and/or renovations that impact the water or sewer system
<b>MISSION:</b>	To manage DC Water's development and permit services

**Authorized Positions: 20**  
**FY 2020 Budget = \$3.7 million**

#### FUNCTIONS

Review and approve permit applications, issue work orders for the inspection of proposed work
Ensure development community compliance with DC Water design standards, criteria and specifications
Assess and collect fees for permit review, fixed fee services, inspection services, System Availability Fees, and manage the fee collection process
Create accounts for collected fees and manage return of unused reimbursable fees
Evaluate impact of proposed development on water and sewer infrastructure for capacity and hydraulic grade
Ensure compliance with combined sewer system/DC Clean Rivers program initiatives; current CIP and proposed improvements
Coordinate with various DC agencies (DCRA, DDOT and DDOE) in support of the District's permit procedures
Update and/or create customer service records (Premises) and the GIS database

## Department: Permit Operations

### BUDGET

The \$0.9 million increase in FY 2020 compared to FY 2019 budget is for personnel cost adjustments for additional positions and contractual services to support engineering review of permit applications

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	15	15	15	20	5	33%
Headcount: Filled	13	19				
Total Personnel Services	\$1,811	\$2,205	\$2,205	\$2,920	\$715	32%
Supplies & Chemicals	11	12	38	41	3	8%
Utilities & Rent	342	336	353	377	24	7%
Contractual Services	68	128	153	355	202	132%
Small Equipment	0	0	11	0	-11	-100%
Total Non-Personnel Services	421	476	555	773	218	39%
<b>Department Total</b>	<b>\$2,233</b>	<b>\$2,680</b>	<b>\$2,760</b>	<b>\$3,693</b>	<b>\$933</b>	<b>34%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Process all permit applications in accordance with the service level agreement timeframe (85%)	85%	83%	85%	85%

## Department: Permit Operations

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue Support of As-built fee collection
- Continue support of account refunds where applicable
- Add Enterprise level GIS Data, such as permits and construction status integrated with Maximo

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Assess permit review fees
- Implement on-line payment portal to expedite processing
- Implement on-line permit application process
- Integrate 3PP with Maximo and Customer Information System to streamline receipt and deposit of fees

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

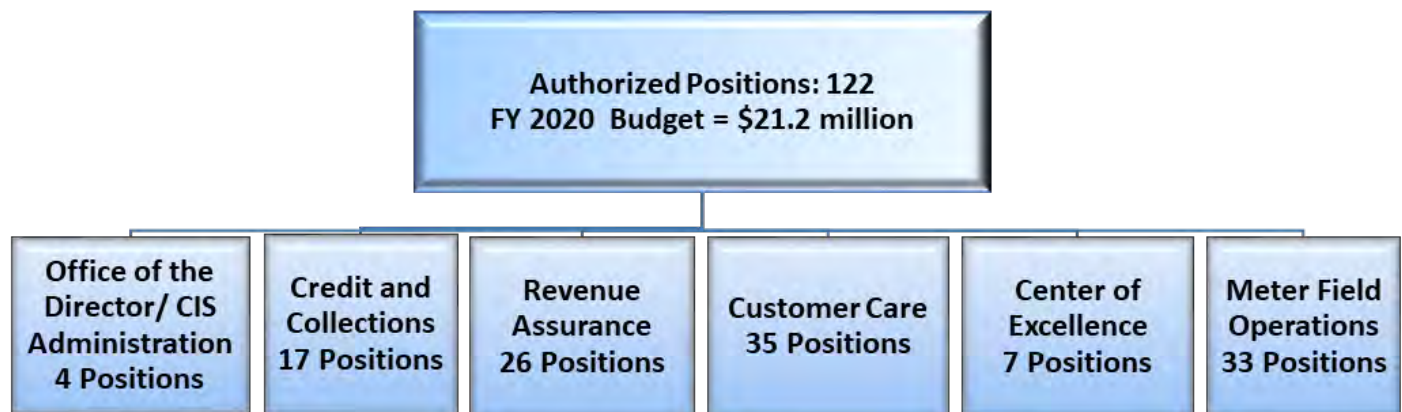
- None

## CLUSTER: CUSTOMER EXPERIENCE

### DEPARTMENT: Customer Care

**PURPOSE:** To ensure that DC Water delivers a satisfying experience for customers by providing timely and accurate billing, appropriate meter replacement and maintenance as well as responding to customer inquiries through multiple channels in compliance with District of Columbia laws and regulations

**MISSION:** To provide superior, equitable and responsive customer service to the diverse community we serve



### FUNCTIONS

Office of the Director / CIS Administration	Credit and Collections	Revenue Assurance	Customer Care	Center of Excellence	Meter Field Operations
Manage customer care and operations initiatives and programs	Manage delinquent accounts based on customer payment history	Manage customer accounts and billing processes	Provide timely responses to customer inquiries across multiple channels	Manage disputes, hearings, and external requests	Manage AMR System and manual reads
Administrator for the Customer Information System including web and mobile applications	Manage property lien filing, dunning process, receivership, and tax sale	Manage and process bill exceptions, adjustments and cancellations	Address billing issues and inquires	Perform Ebill, Auto Pay, reporting and analytics	Maintain, install, test, repair and replace meters
Conduct Customer Satisfaction Survey	Manage the DC Water Customer Assistance Programs (CAP) and Serving People By Lending A Supporting Hand (SPLASH) programs	Manage the new accounts creation including impervious area GIS database assuring accurate billing of impervious surfaces in the District	Provide 24/7 Emergency customer call response and dispatch	Manage 3 <sup>rd</sup> Party Portal	Manage meter lab and inventory  Perform field turn on and disconnect

## Department: Customer Care

### BUDGET

The \$0.9 million increase in FY 2020 over the FY 2019 budget is for personnel services cost adjustments, credit card fees and maintenance of the Customer Information System. This is offset by reduced utilities costs due to relocation to the new Headquarters Building

\$000's					Change from FY 2019	
Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Variance	%
Headcount: Authorized	124	126	126	122	-4	-3%
Headcount: Filled	114	115				
Total Personnel Services	\$12,103	\$13,577	\$13,950	\$14,851	\$901	6%
Supplies & Chemicals	149	104	178	88	-90	-51%
Utilities & Rent	1,877	1,840	843	315	-528	-63%
Contractual Services	5,032	5,685	5,291	5,918	628	12%
Small Equipment	33	10	78	65	-13	-17%
Total Non-Personnel Services	7,092	7,640	6,389	6,385	-4	0%
<b>Department Total</b>	<b>\$19,195</b>	<b>\$21,217</b>	<b>\$20,340</b>	<b>\$21,237</b>	<b>\$897</b>	<b>4%</b>
<b>Capital Equipment</b>	<b>\$20,227</b>	<b>\$6,263</b>	<b>\$2,618</b>	<b>\$2,618</b>	<b>0</b>	<b>0%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Calls answered within 40 seconds	85%	85%	85%	85%
Dispatch Water and Sewer Emergencies within 10 Minutes	85%	90%	90%	90%
AMR Target - to obtain actual meter readings	90%	90%	95%	96%
Collection Rate: Residential, Commercial and Multi-family	98%	98%	95%	98%
Regular Accounts Billed Monthly / Special Accounts as Scheduled	97%	95%	97%	98%



## Department: Customer Care

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Initiate an e-bill marketing campaign and targeted program guidelines related to adding tenants and property managers to receive bills to double e-bill enrollment from 10% to 20% by year end
- In partnership with the Finance department, develop a plan to manage the increasing costs of credit card fees
- Strategic use of part time employees, shifts, cross training and developmental assignments to promote employee growth and engagement while offsetting potential overtime needs
- Leverage development of the union performance goals to improve employee productivity and modify the Customer Information System to gain efficiency opportunities
- Implement System Availability Fee and the expanded Customer Assistant Programs (CAP)
- Complete the closeout plan and address unresolved change outs for the Automated Meter Reading (AMR) project, including a recovery plan and route optimization
- Redesign the ownership and processes to improve meter maintenance, read accuracy and testing plan
- Log all large meters as “Critical Assets in Maximo” and improve the tracking and maintenance of these assets
- Meter Testing Program Benchmarking to determine if we maintain the program in-house vs outsourcing, and if in-house can we offer service to others for a fee
- Review aged receivables greater than two years old in partnership with the Finance and Legal Affairs departments to determine the collection path forward and perform associated write-off, where necessary
- Enhance the customer communication and employee training related to bill disputes, bill escalations, and leak adjustment
- Enhance the new account set-up transition and billing processes

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implement a Damage Utility Prevention Program
- Continue to implement safety goals and initiatives in association with The Blueprint
- Continue to provide support to the Office of Risk Management in the oversight of the ROCIP and Non-ROCIP Programs for DC Water
- Begin implementation of damage prevention initiative to reduce the occurrence of utility strikes by both in-house and contractor crews
- Focused and full implementation of the safety training program

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Implementation of AMI (Advanced Metering Infrastructure) will impact personnel and non-personnel O&M costs

## CLUSTER: CUSTOMER EXPERIENCE

### DEPARTMENT: Marketing and Communications

**PURPOSE:** To promote and enhance the value of our services by listening to and engaging with our customers

**MISSION:** To provide information about DC Water services and programs and to raise awareness about DC Water's efforts and achievements to improve the quality of life in the region by protecting the environment in which it operates and supporting the community it serves



#### FUNCTIONS

Production and Operations	Communications and Government Relations	Public Outreach
Produce graphics, collateral and videos that support a wide range of trainings and programs across the Authority. Compose script for the Authority's Stars of Water Event	Prepare speeches, testimony, editorials, special reports and stakeholder presentations. Produce content for and manage Authority's social media accounts. Respond to customer and stakeholder inquiries	Maximize partnerships with local agencies, organizations and other critical community stakeholders; Manage the Authority's participation in a host of community outreach activities and initiatives; coordinate annual town hall meetings and special media events; Manage Speakers Bureau
Manage the production of the Annual Report, Water Quality Report, newsletters, Leadership Updates, exhibits, marketing materials and the content of specific segment of the DC Water website	Produce reports, newsletters, brochures, DC Water exhibits and materials. Provide editing support for other departmental communication projects and produce special high-profile project communications materials	Manage outreach program to engage community stakeholders such as Mayor's Office of Community Relations and Services (MOCRS), DC Council, Advisory Neighborhood Commissioners (ANCs), civic associations, residents and businesses about upcoming and ongoing construction projects, increase their understanding of the condition of our aged Infrastructure, and better understand their needs and concerns relating to projects affecting quality of life
Produce Public Service Announcements, commercials, videos as well as produce live and archived webcasts of Board meetings and manage stakeholder presentations. Manage Plant tours and develop departmental budget	Respond to local/national media inquiries, manage website content; track and strategically influence relevant policy proposals. Establish and enhance working relationships with elected and appointed officials. Pursue state and federal government funding opportunities	Coordinate stakeholder presentations and community events; conduct Sewer Science and other public school programs

## Department: Marketing and Communications

### BUDGET

The Approved FY 2020 budget increased by approximately \$0.1 million compared to the approved FY 2019 budget due to personnel service cost adjustments and contractual services for community outreach activities

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	12	13	13	13	0	0%
Headcount: Filled	12	13				
Total Personnel Services	\$1,697	\$1,920	\$1,8476	\$1,943	\$97	5%
Supplies & Chemicals	11	17	2	14	12	611%
Utilities & Rent	27	36	33	27	-6	-18%
Contractual Services	391	484	576	617	41	7%
Small Equipment	10	0	12	12	0	0%
Total Non-Personnel Services	\$439	\$537	\$623	\$671	47	8%
<b>Department Total</b>	<b>\$2,137</b>	<b>\$2,457</b>	<b>\$2,470</b>	<b>\$2,614</b>	<b>\$144</b>	<b>6%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Publication of DC Water's Annual Report	1	1	1	1
Publication of Customer Newsletter	10	10	4	4
Publication of Clean River's Update	2	2	2	2
Publication of Employee Newsletter	11	11	11	11
Publication of Water Quality Report	1	1	1	1
Community meetings/outreach re: lead, rates, CSO/CIP projects, etc.	140	173	100	100

## Department: Marketing and Communications

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Develop and implement a Strategic Communications Plan to support The Blueprint, DC Water's strategic plan
- Expand our customer engagement and crisis communications capabilities, utilizing the additional support of an outside public relations firm
- Launch a campaign to demonstrate the value of DC Water's services and build support for needed investments in infrastructure
- Work with the DC Clean Rivers Project team to engage with residents, businesses and commuters impacted by construction on the Northeast Boundary Tunnel Project
- Expand DC Water's internal (employee) engagement, working closely with People and Talent, the Office of the CEO and other departments
- Create a unified planning calendar for all marketing and communications activities

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- No major changes anticipated

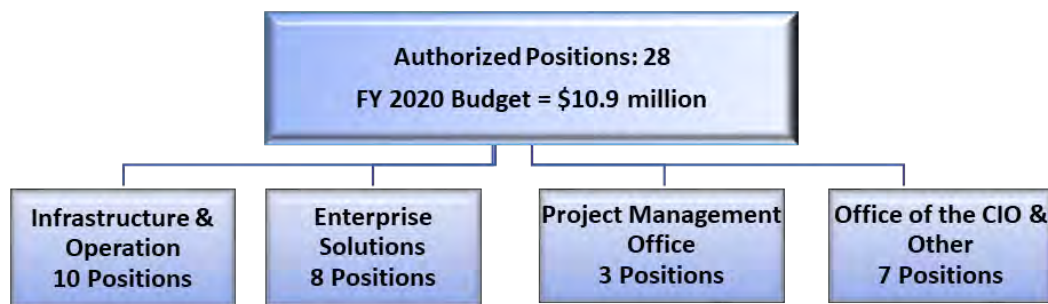
### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No direct impact

## CLUSTER: CUSTOMER EXPERIENCE

### DEPARTMENT: Information Technology

<b>PURPOSE:</b>	To identify, define, develop and support an integrated set of solutions that leverages people, process and technology to improve reliability, increase efficiency, reduce cost, drive innovation and improve the employee and customer experience
<b>MISSION:</b>	To ensure that the Authority's mission is supported by state-of-the-art technology with an infrastructure capable of accommodating all traffic and connectivity demands, and a computing environment that encourages development of efficient business



### FUNCTIONS

Infrastructure & Operation	Enterprise Solutions	Project Management Office	Office of the CIO & Other
Provide technical support for applications and manage the IT infrastructure; Develop and provide standards for System Architecture/Integration	Support DC Water's Authority-wide and business unit goals, objectives and business functions	Design and maintain DC Water's website to allow customer e-business access; Develop and support DC Water's intranet and manage project prioritization process	Manage Information Technology initiatives, functions and assets of the enterprise
Maintain DC Water's technology standards. Implement and support radio systems/phone	Support the IT Governance process and maintain information needed to make sound business decisions for Local and Executive IT Steering Committees (ESC and LSCs)	Integrate and provide product support for the financial, payroll, maintenance and customer information and billing, Automated Meter Reader (AMR), Interactive Voice Response (IVR), Asset Management (AM) systems	Manage project implementations, database administration and related budgets
Maintenance of the Enterprise Continuity of Operations (COOP) capabilities	Create, plan, assist and implement enterprise solutions utilizing technology to meet the Authority's needs	Manage the project portfolio and provide program and project management services for the Authority	Design and implement Cyber security strategy for the enterprise. Test and validate Cyber protections
Manage the Solution Center (Help Desk)	Maintain, service and enhance DC Water's enterprise applications	Support project planning, management, and implementation	Support Disaster Recovery for the Authority

## DEPARTMENT: Information Technology

### BUDGET

The \$0.6 million decrease in FY 2020 compared to the FY 2019 budget is for personnel cost adjustments and planned reduction in the use of consultants for IT functions

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	28	28	28	28	0	0%
Headcount: Filled	26	28				
Total Personnel Services	\$3,866	\$4,359	\$4,660	\$4,502	-\$158	-3%
Supplies & Chemicals	8	16	42	12	-30	-71%
Utilities & Rent	226	167	152	152	0	0%
Contractual Services	6,105	6,556	6,924	6,153	-771	-11%
Small Equipment	149	92	94	94	0	0%
Total Non-Personnel Services	6,489	6,831	7,212	6,411	-801	-11%
<b>Department Total</b>	<b>\$10,354</b>	<b>\$11,189</b>	<b>\$11,541</b>	<b>\$10,913</b>	<b>-\$628</b>	<b>-5%</b>
<b>Capital Equipment</b>	<b>\$11,543</b>	<b>\$7,589</b>	<b>\$9,295</b>	<b>\$7,410</b>	<b>-\$1,885</b>	<b>-20%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
98% Network uptime round the clock	99%	99%	99%	98%
96% of high priority tickets completed within 4 hours	97%	97%	98%	96%
60% Tickets closed by Tier 1 support	68%	69%	70%	60%
50% of Projects Completed on-time	57%	58%	60%	50%
98% Network uptime during peak hours	99%	99%	98%	98%

## DEPARTMENT: Information Technology

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Mobility Blue Plains (Mobile Informer) Implementation
- Facilities Mobility (Mobile Informer) Implementation
- ArcGIS Upgrade
- LiveLink Upgrade and Migration to Cloud
- Third Party Portal payment gateway and other enhancements
- Electronic Permits Application enhancements
- Safety Risk System implementation
- Pipe Defects Analytics Implementation
- Field Mobile Applications conversion to KONA system
- Impervious Area System Enhancements
- VertexOne Upgrade to S4/HANA
- Migration of Maximo to SQL Server and Move to Cloud

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Enterprise Application Integration Platform (Ipass)
- Oracle Unifier & Primavera Cloud Implementation
- ERP (financial and human resources) Implementation
- Impervious Area System Enhancements
- DC Water.com refresh
- Maximo Upgrade & migration to cloud
- AMR/HUNA Dashboard redesign
- Field Mobile Applications conversion to KONA continuation
- Performance Management Platform
- Application Integration Platform
- Pipe Defects Analytics Phase 3
- Third Party Portal payment gateway and other enhancements
- Install Smart Water Systems to predict and prevent maintenance and other costly issues
- Implement Customer Master file to allow access from any system with the organization
- Implement Performance Management Platform to collect and display Key Performance Indicators
- Implement Tours Mobile Application to allow a virtual plant tour experience

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No direct impact



## CLUSTER: INDEPENDENT OFFICES

### DEPARTMENT: Office of the Chief Executive Officer (CEO)

<b>PURPOSE:</b>	The CEO's/General Manager's Office administers, plans, organizes, and directs the operations of DC Water
<b>MISSION:</b>	To provide DC Water customers with access to affordable, safe and reliable utility infrastructure and services

**Authorized Positions: 15**

**FY 2020 Approved Budget = \$4.3 million**

## FUNCTIONS

Strategic Planning	Operations	Performance
Provide overall operational and policy direction in support of the Board of Director's Strategic Plan	Organize, plan and direct all operations of the Authority  Ensure development and implementation of improvement processes to increase operational efficiencies	Facilitate development of cross-functional Enterprise Performance Plans  Establish and maintain an Enterprise Program Management office to enhance collaboration, governance, and accountability across the Authority

## Department: Office of the Chief Executive Officer (CEO)

### BUDGET

The Approved FY 2020 budget is relatively flat compared to the Approved FY 2019 budget

\$000's Description	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	15	14	16	15	-1	-7%
Headcount: Filled	15	12				
Total Personnel Services	\$3,286	\$3,466	\$3,394	\$3,283	-\$111	-3%
Supplies & Chemicals	21	69	13	13	0	0%
Utilities & Rent	26	27	36	29	-7	-20%
Contractual Services	720	842	858	1,001	143	17%
Small Equipment	0	0	0	0	0	0%
Total Non-Personnel Services	767	939	907	1,043	136	15%
<b>Department Total</b>	<b>\$4,053</b>	<b>\$4,405</b>	<b>\$4,301</b>	<b>\$4,326</b>	<b>\$25</b>	<b>1%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Implement all policies and directives of the Board of Director's	100%	100%	100%	100%

## Department: Office of the Chief Executive Officer (CEO)

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Support implementation of the Blueprint
- Administer a comprehensive performance management system Authority-wide
- Utilize findings of employee engagement survey to implement initiatives and programs designed to enhance and sustain a result driven, high performing work culture
- Administer and enhance DC Water's Succession Plan and Leadership Development Program (Leading Blue)
- Continue to administer oversight of DC Water operation and financial performance
- Establish governance structure for the Enterprise Program Management Office
- Develop optimized model for business process improvement for the Authority

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continuously monitor the "Blue Print" and publish status of Key Performance Indicators (KPIs)
- Continue/expand engagement with the community through the Stakeholder Alliance and other forums
- Complete implementation of DC Water's Apprenticeship Program
- Complete implementation of the Culture and Engagement Roadmap designed to build a high performing culture
- Implementation of initial actions in our new Sustainability strategy, including engagement with District-wide initiatives like Sustainability 2.0 and Resilient DC
- Watershed-based stakeholder engagement, including continued support of the Anacostia freshwater mussel project to improve water quality and protect our investment in cleaning the Anacostia River
- Participation in a sector-wide initiative with leading water utilities to capture best-practices in Business Case Evaluation and CIP Prioritization
- Support the development and delivery of a national Women of Water event in the DC Region to showcase and recognize women leaders in the water sector
- Continue assessment and implementation of opportunities to enhance key business processes, including but not limited to meter to cash and procurement
- Develop a Program/Project Optimization framework, approach, operating model, and create a community of practice and standard approaches to drive projects from idea to implementation
- Work with leadership to identify, gather and synthesize key measures that will validate DC Water's progress against critical short-term initiatives and long-term strategic objectives
- Develop the FY 2020 Enterprise Performance Accountability Report (ePAR)
- Identify and design a comprehensive DC Water enterprise-wide governance, risk, and compliance framework

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No major items identified

## CLUSTER: INDEPENDENT OFFICES

### DEPARTMENT: Office of the Secretary

<b>PURPOSE:</b>	Serves as the Authority's executive level business entity that manages the day to day activities of the Board of Directors
<b>MISSION:</b>	To support DC Water's Blue Print/Strategic Plan by effectively managing assigned resources to accomplish the duties of the Office of the Secretary (Board)

**Authorized Positions: 2**  
**FY 2020 Budget = \$0.6 million**

#### FUNCTIONS

Manage logistics for the Board of Directors and Committee meetings, Public Hearings, Workshops, the Strategic Planning Process, and all other business activities of the Board
Manage and oversee the day to day operations of the Board of Directors and execute custodial oversight of all books, records and official documents of the board
Administer the subpoena process and provide Notary Service for the Authority

## Department: Office of the Secretary

### BUDGET

The FY 2020 budget is relatively flat compared to the FY 2019 level

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	2	2	2	2	0	%
Headcount: Filled	2	2				
Total Personnel Services	\$306	\$354	\$293	\$320	\$27	9%
Supplies & Chemicals	24	12	18	17	-1	-6%
Utilities & Rent	8	5	6	4	-2	-33%
Contractual Services	221	228	281	271	-10	-4%
Small Equipment	0	0	0	1	1	0%
Total Non-Personnel Services	253	245	303	293	-12	-4%
<b>Department Total</b>	<b>\$559</b>	<b>\$599</b>	<b>\$599</b>	<b>\$613</b>	<b>\$14</b>	<b>0%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Results	FY 2020 Targets
Provide timely and accurate Board and Committee agendas, reports and minutes	100%	100%	100%	100%
Follow-up and complete Board actions	100%	100%	100%	100%

## Department: Office of the Secretary

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to draft and submit notices and agendas for all Board and Committee meetings and Public Hearings for publication in the District of Columbia Register as required by the Open Meetings Act of 2010
- Continue to publish all Board and Committee agendas, meeting materials and meeting minutes on DC Water's website as required by the Open Meetings Act of 2010
- Continue to coordinate logistics for the Board's Strategic Planning Session (retreat)
- Continue to coordinate the process to fill the expired and/or vacant Board appointments, as needed
- Continue to effectively monitor follow-up requests from the Board and Committees to ensure timely responses
- Continue to enhance data dissemination process for the Board, DC Water employees, the general public and stakeholders by use of state-of-the-art technology that supports the Board's Strategic Plan
- Continue to manage recordkeeping process by ensuring accuracy, comprehensiveness and effective maintenance of all Board related documents and materials
- Continue to work with Information Technology to secure, install and utilize state-of-the-art technology to ensure efficient and effective recording of proceedings for all Board and Committee meetings
- Continue accomplishing all duties as required and further enhance processes, as needed

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- No major changes anticipated

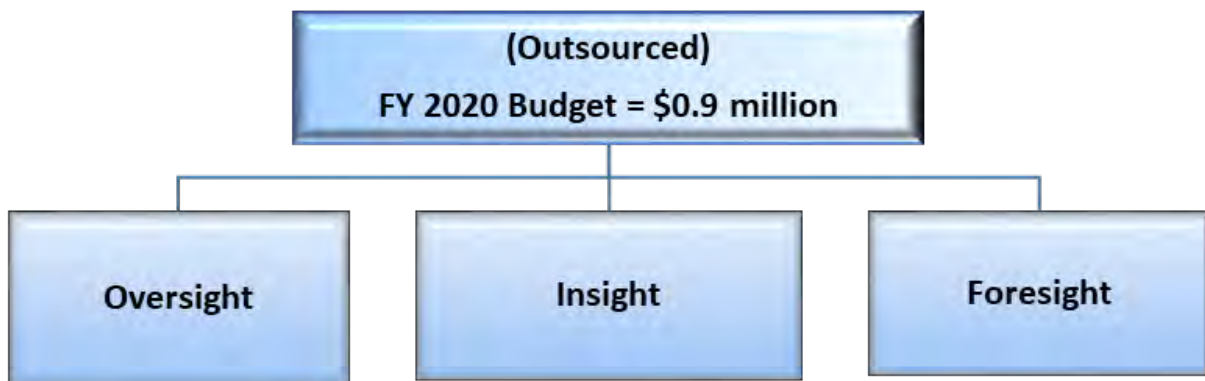
### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No direct impact

## CLUSTER: INDEPENDENT OFFICES

### DEPARTMENT: Internal Audit

<b>PURPOSE:</b>	Assists the Authority in accomplishing its objectives by bringing a systematic and disciplined approach to evaluate and improve the effectiveness of the organization's risk management, control and governance processes
<b>MISSION:</b>	To provide independent, objective assurance and consulting activity that is guided by a philosophy of adding value to improve the operations of DC Water



### FUNCTIONS

Oversight	Insight	Foresight
Conduct periodic audits	Assess programs and policies	Identify trends and challenges before they become crises
Conduct audits requested by the Board of Directors and/or the Chief Executive Officer & General Manager	Share best practices and benchmarking information	Identify risks and opportunities
Review of corporate governance	Provide ongoing feedback for re-engineering management practices and policies	Risk-based auditing



## Department: Internal Audit

### BUDGET

The FY 2020 budget is relatively flat compared to the FY 2019 level, with minor alignment based on projected audit workplan

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
<a href="#">Headcount: Authorized</a>						
<a href="#">Headcount: Filled</a>						
Total Personnel Services						
Supplies & chemicals						
Utilities & Rent	7	5	7	7	0	0%
Contractual Services	571	891	933	878	-55	-6%
Small Equipment						
Total Non-Personnel Services	579	896	940	885	-55	-6%
<b>Department Total</b>	<b>\$579</b>	<b>\$896</b>	<b>\$940</b>	<b>\$885</b>	<b>-\$55</b>	<b>-6%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Internal Audit Work Planned	12	14	14	14

## Department: Internal Audit

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Conduct an updated risk assessment and internal audit plan for the Authority
- Continue to manage DC Water's hotline and implement the hotline protocol
- Report to the Board of Directors via the Audit Committee on the status of prior internal audit findings and management action plans
- Conduct follow-up procedures on newly presented audit findings and determine status of management action plans
- Implement committee and Board-approved audit plans

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- No major changes anticipated

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No direct impact

## CLUSTER: INDEPENDENT OFFICES

### DEPARTMENT: Legal Affairs

**PURPOSE:** To provide legal advice and services to the Board of Directors, CEO and General Manager and the DC Water departments

**MISSION:** To provide professional, timely, and useful legal advice and services, manage the services of outside counsel as needed, and to minimize liability exposure by recommending and implementing appropriate policies, practices, and procedures

**Authorized Positions: 15**  
**FY 2020 Budget = \$6.2 million**

### FUNCTIONS

Litigation	Administrative Law
Appellate	Board of Directors Support
Bankruptcy	Organize, plan and direct all operations of the Authority
Contract	Ensure development and implementation of improvement processes to increase operational efficiencies
Construction	Construction Claims
Environmental	Safe Drinking Water Act & Regulatory Compliance
Procurement	Employment Law Matters
Tort	Intra-Governmental & Inter Jurisdictional Agreements
Receivership	Municipal Law & Real Property Matters
Employment	Pretreatment Enforcement Support
Foreclosures	Procurement Protests, Claims & Internal Appeals

## Department: Legal Affairs

### BUDGET

The approved FY 2020 budget is lower than the approved FY 2019 budget by \$2.3 million primarily for expenses consistent with historical trends

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	16	16	16	15	-1	-7%
Headcount: Filled	14	14				
Total Personnel Services	\$2,110	\$2,405	\$2,525	\$2,610	\$85	3%
Supplies & Chemicals	6	7	8	6	-2	-20%
Utilities & Rent	19	18	22	24	2	11%
Contractual Services	4,770	3,929	6,003	3,582	-2,421	-40%
Small Equipment	0	0	0	0	0	0%
Total Non-Personnel Services	4,794	3,953	6,032	3,612	-2,420	-40%
<b>Department Total</b>	<b>\$6,905</b>	<b>\$6,359</b>	<b>\$8,557</b>	<b>\$6,222</b>	<b>-\$2,336</b>	<b>-27%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Hours of employee time spent on direct work 1,700	1,700	1,700	1,700	1,700

## Department: Legal Affairs

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to manage and support litigation to include complex matters
- Continue to provide support to Clean Rivers Project and other long term Capital Improvement Program (CIP) Projects
- Provide legal support for Green Infrastructure activities
- Support Innovative initiatives
- Support environmental permits – National Pollutant Discharge Elimination System (NPDES), Total Maximum Daily Limit (TMDL), Municipal Separate Storm Sewer System (MS4), Potomac Interceptor, and construction and operating permits under the Clean Air Act

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to manage and support litigation to include complex matters
- Continue to provide support to Clean Rivers Project and other long term capital Improvement Program (CIP) Projects
- Provide legal support for Green Infrastructure activities
- Support Innovative initiatives
- Support environmental permits – National Pollutant Discharge Elimination System (NPDES), Total Maximum Daily Limit (TMDL), Municipal Separate Storm Sewer System (MS4)
- Continue to review and revise regulations
- Provide support to Anacostia Sediment Cicla action
- Enforcement actions to collect delinquent revenues

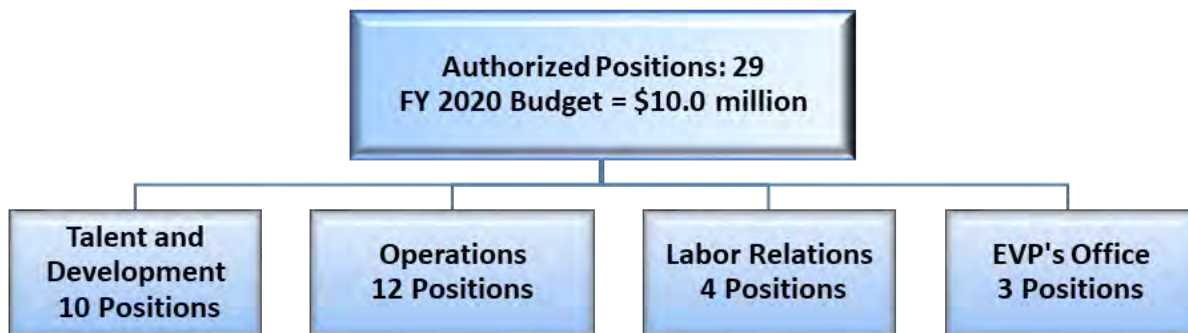
### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Provide legal support in environmental and financial issues affecting DC Water CIP Projects
- Provide legal support to ongoing Labor Compliance Programs, Green Infrastructure, and TMDL litigation activities

## CLUSTER: PEOPLE AND TALENT

### DEPARTMENT: Human Resources

<b>PURPOSE:</b>	Support the Authority and Executive Team by creating organizational alignment and line of sight; work collaboratively with all Departments to improve the employee experience; recruit talent who will embrace DC Water; and focus on employee strengths
<b>MISSION:</b>	To deliver high quality, innovative, valued and timely labor resources that are responsive to the needs of DC Water employees and departments, in order to help facilitate employees to achieve their individual and organizational goals



### FUNCTIONS

Talent and Development	Operations	Labor Relations	Executive Vice President's Office
Recruitment, onboarding, training and development	Market analysis, Performance pay, job evaluation and position control	Labor Relations, Arbitration, and grievance resolution	Strategic initiatives
Performance management, succession planning and employee engagement	Administration of Benefits, Wellness, American with Disabilities Act, Drug and Alcohol testing, Workers Compensation, and Employee Assistance Programs	Employee relations	Change management
Education assistance, internship, rewards and recognition	Systems, data integrity, records management and predictive analytics	Equal Employment Opportunity and Workplace Violence	Management of resources and operations

## DEPARTMENT: Human Resources

### BUDGET

The approved FY 2020 budget is higher than the FY 2019 approved budget by approximately \$1.7 million primarily due to personnel services adjustments and workers' compensation claims

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	28	27	28	29	1	4%
Headcount: Filled	25	10				
Total Personnel Services	\$3,664	\$4,255	\$4,545	\$4,930	\$385	8%
Supplies & Chemicals	18	9	34	35	1	4%
Utilities & Rent	44	37	48	24	-24	-50%
Contractual Services	3,380	4,308	3,655	5,039	1,383	38%
Small Equipment				0	0	0%
Total Non-Personnel Services	3,443	4,356	3,737	5,098	1,361	36%
<b>Department Total</b>	<b>\$7,107</b>	<b>\$8,609</b>	<b>\$8,281</b>	<b>\$10,028</b>	<b>\$1,746</b>	<b>21%</b>
Capital Equipment						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
120 days from job posting to hire	120	112	110	107
10 days to initiate disciplinary action	7	7	7	7
14 days new hire benefit set-up	14	13	12	10
22.5 Average number training hours per FTE	22.5	22.7	23	25
Comparison DC Water Employees Compensation (100%) vs Market 50 <sup>th</sup> -tile	100%	100%	100%	100%



## DEPARTMENT: Human Resources

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Recommend and implement medical plan design changes to avoid the Patient Protection and Affordable Care Act (PPACA) excise “Cadillac” tax exposure projected for 2020
- Negotiate Compensation Agreement for all five Unions and DC Water
- Negotiate two Working Conditions Agreements for American Federation of Government Employees (AFGE) Locals 631 and 872
- Coordinate performance management systems training for DC Water union employees and managers
- Conduct assessment for DC Water Succession Planning program
- Finalize all DC Water policies and procedures with the Unions after impacts and effects bargaining to have updated Chief Executive Officer’s signature
- Continue departmental reorganization to focus on Human Resources (HR) operations, talent, strategy, succession, and change management
- Continue with new talent acquisition and onboarding program focused on enhancing quality of hire and employee engagement
- Assess the results of the DC Water Employee Engagement Survey and determine how the results can support efforts in accomplishing DC Water’s Blueprint/Strategic Plan
- Continue working upwards towards Innovating and program initiatives designed to improve service delivery and business unit maturity
- Monitor the success of “Advancing Blue” Performance Management System for Union employees
- Further enhance the HR Dashboard of key performance indicators for HR programs and services
- Develop and administer trainings on collective bargaining agreements, administering discipline, performance management and compliance programs

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implement Enterprise resource planning (ERP) application as the core HR, Payroll, Benefits, Self Service, and Applicant Tracking enterprise system
- Centralize all DC Water training and development dollars under HR for better accountability, measurement, and tracking

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Asset Management Training in FY 2019 & FY 2020

## DEPARTMENT: Human Resources

### FY 2019 AND FY 2020 TALENT DEVELOPMENT PLAN

#### TALENT DEVELOPMENT OVERVIEW

At DC Water, our talent is our people, Team Blue. Talent development consists of training and development strategies and programs that motivate, engage, and educate our employees to cultivate a high performing workforce and results driven culture. Our ability to meet demands, realize our vision and fulfill our mission relies on the character and competence of our talent. Simply put, achieving world-class relies on Team Blue!

The vision of DC Water’s Blueprint is that “we will be known for superior service, ingenuity and stewardship to advance the health and well-being of our diverse workforce and communities. A strategic program in the Blueprint is “The Employee Experience”. Enhancing this experience is dependent on the relationship between our management team and the employees they lead. As a result, we are connecting the concept development with building a culture of coaching. Effective coaching provides specific, timely, and actionable feedback to employees. We believe the role of the management team is much deeper than simply providing direction. Our leaders are charged with:

- Improving individual performance
- Opening up new possibilities for team members
- Removing obstacles in the way of success
- Playing a role in the ongoing development of the employees under their supervision

At DC Water, our management team leads by coaching. Coaching unleashes the full array of talent and ingenuity our team possesses that would otherwise be untapped.

Other forms of talent development at DC Water include:

**In-House Training** – classes and programs designed in-house. In-house training may focus on non-technical courses, skills development, or new processes.

**External Training** – classes and programs that support individual employee development needs and requirements, not designed by an external vendor. This is an effective means of providing highly specialized or special focus training to individuals or a small group of employees. DC Water’s education assistance and tuition reimbursement program is included in this category.

**eLearning** - online courses housed within our learning management system (LMS), Cornerstone.

## DEPARTMENT: Human Resources

### FY 2019 AND FY 2020 TALENT DEVELOPMENT PLAN

#### FY 2018 ACCOMPLISHMENTS

In FY 2018 our organizational structure allowed us to have a comprehensive approach to managing the Authority's talent. We continued with **Leading Blue** Cohort II participants for our second pilot in 2018. The feedback thus far has been very positive. The streamlined New Hire Orientation program is providing employees with the skills needed to add work value immediately.

The Authority continued to leverage its relationships with colleges and universities we use through the Tuition Assistance program. We started a year long journey creating our college vendor Partner Program. The goal is to reduce tuition costs and establish paths to pay the schools directly. This reduces paperwork and streamlines the payment process for all. This year, our employees continued to pursue critical infrastructure certifications in the areas of: Professional Engineering and Program Management. Also, in FY 2018, 69 employees participated in the Education Assistance Reimbursement benefit program. DC Water provided approximately \$178,000 to assist employees continue their education programs.

The DC Water Summer Internship Program was enhanced this year. Pre-screening and interviews were conducted which led to a high number of quality candidates. We hired approximately 50 interns from hundreds of candidates. The diverse group of students were from local areas such as Maryland, Virginia, and the District of Columbia and as far away as Nigeria, Ghana, Indonesia, Malawi, Vietnam, and China. Interns participated in an Intern Expo at the end of the 10-week program, where each intern presented their key contributions and work progress in a science fair type format. All DC Water employees were invited and there was significant attendance, with the interns receiving considerable praise. The interns were also treated to a "day out," at Terrapin Adventures and participated in Lunch & Learn program facilitated by the learning & development business unit on topics such as *Networking, Responsible Social Media Use, and Leadership*.

Web-based (e-learning) training on Personally Identifiable Information was developed and piloted for official launch in FY 2018.

#### FY 2019 and FY 2020 Training Budgets

The approved FY 2020 training budget totals \$1.2 million, which is approximately \$0.5 million lower compared to the approved FY 2019 budget.

The Talent branch of Human Resources Department is positioned to help the Authority transform and will continue to focus on the need to develop our workforce beyond the initial job qualifications. Considerable attention will continue to be given to Performance Management, Succession Planning, and Employee Engagement. Additionally, we will complete development of two critical training paths: Web-based Enterprise Compliance Training and Front-Line Supervisor training for all current and new supervisors.

The Talent branch will lead the charge in the development of DC Water's workforce of the future.

## CLUSTER: FINANCE AND PROCUREMENT

### DEPARTMENT: Finance

<b>PURPOSE:</b>	Responsible for the financial integrity of the Authority's assets and liabilities, funds acquisition, budget execution, and management and planning of expenditures for all programs and initiatives
<b>MISSION:</b>	Stewardship of DC Water's financial activities to ensure financial integrity and ensure performance that meets the expectations of the Board of Directors, Stakeholders, and the broader financial community



### FUNCTIONS

Finance & Administration	Accounting	Financial Systems & Control	Budget	Rates & Revenue
<p>Oversight and management of Finance, Accounting, Budget, Financial Systems &amp; Control, and Rates &amp; Revenue;</p> <p>Manage and oversee Treasury, Debt, insurance and Risk Management functions of the organization</p>	<p>Manage accounting and financial reporting functions of the organization, Comprehensive Annual Financial Report (CAFR), and financial transactions;</p> <p>Establish accounting and reporting policies, maintain financial records and effective internal control structure</p>	<p>Manage and Support organization-wide Financial System and related applications;</p> <p>To ensure accountability and safeguarding of the Authority's assets;</p>	<p>Develop, monitor and report the annual operating and 10 Year Capital Improvements Program (CIP) budgets;</p> <p>Board Committees' reporting process and Financial relationship with the Washington Aqueduct</p>	<p>Manage short and long-range financial planning, revenue forecasting, and monitoring and establishing rates;</p> <p>Manage cost of service studies for water &amp; sewer, Clean Rivers Impervious Area Charge (CRIAC), fire protection service fee, Potomac Interceptor, operating reserves, renewal &amp; replacement reserves, rate stabilization fund and engineering study</p>
<p>Debt and investment portfolios, operations of cashiering and banking services;</p> <p>Administer all insurance and risk management activities, manage all general liability and tort claims for DC Water's Operations</p>	<p>Payroll operations, vendor payment operation and asset management finance and accountability;</p> <p>Manage the billing activities of the organization, including grants and county billing operations</p>	<p>Management of Financial System, including upgrades and enhancements;</p> <p>Financial System user support/access control/user training and Business Intelligence and Reporting</p>	<p>Prepare quarterly reports and monthly Financial Reports;</p> <p>Perform ongoing financial management of critical programs and maintain department's web page</p>	<p>Monitors consumption, revenue, collections, accounts receivable and delinquencies greater than 90 days;</p> <p>Manages independent budget and rate review for public hearing</p>

## DEPARTMENT: Finance

### BUDGET

The \$4.6 million increase in FY 2020 over the FY 2019 budget is for personnel services cost adjustments, and software maintenance and consultant support for replacement of the Authority's financial system

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	52	53	53	52	-1	2%
Headcount: Filled	48	49				
Total Personnel Services	\$7,123	\$7,807	\$8,097	\$9,270	\$1,173	14%
Supplies & Chemicals	26	25	40	25	-15	-38%
Utilities & Rent	187	163	67	44	-23	-35%
Contractual Services	5,959	7,097	8,132	11,563	3,431	42%
Small Equipment	1	1	4	4	0	0%
Total Non-Personnel Services	6,173	7,286	8,244	11,636	3,392	41%
<b>Department Total</b>		<b>\$15,093</b>	<b>\$16,341</b>	<b>\$20,906</b>	<b>\$4,565</b>	<b>28%</b>
	<b>\$13,296</b>					
<b>Capital Equipment</b>	<b>\$506</b>	<b>\$3,022</b>	<b>\$7,800</b>	<b>\$5,600</b>	<b>-\$2,200</b>	<b>-39%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Manage DC Water's financial operations to ensure revenue projections and O&M expenditures are within budget	103.6% 96%	101.7% 100%	99% 95%	99% 95%
Comply with the Board's investment policy and strategy	100%	100%	100%	100%
Benchmarks: Short-Term Funds - ML 3 months US T-Bill Index and Core Funds - ML 1 - 3 year	102 143	167 230	159 177	219 242
Manage DC Water's financial operations to ensure 140% senior debt service coverage	547%	494%	561%	438%
Meet or exceed the 120 day operating and maintenance expense with the objective of maintaining at least \$125.5 million in operating reserves as set by Board policy	\$147.2 million	\$166.8 million	\$165.0 million	\$180.0 million
Issue Comprehensive Annual Financial Report (CAFR) in accordance with Generally Accepted Accounting Principles (GAAP)	February	February	February	February
Pay 97% of all undisputed invoices within 30 days	97%	97%	97%	97%
Publish Annual Budgets within 90 days of Board adoption	< 90 days	< 90 days	90 days	90 days

## DEPARTMENT: Finance

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

#### Finance:

- Analyze and evaluate operating reserve level requirements
- Administer post compliance reporting for all outstanding debt and monitor bond market for Green Bond issuance and performance
- Continue to evaluate investment portfolio strategy, performance and reporting
- Issue debt as required for liquidity in accordance with the 10-year financial plan
- Issue Request for Proposal for bond counsel services
- Update and revise Investor Relations portion of the DC Water website
- Complete Rolling Owner Controlled Insurance Program (ROCIP) property valuation of DC Water assets

#### Rates and Revenue:

- Continue water balance monitoring
- Continue to monitor economic conditions and affordability
- Coordinate with Customer Care and Information Technology departments to resolve post implementation billing (revenue, consumption, ERU's and collections) and reporting issues
- Review of Clean Rivers Impervious Area Charge (CRIAC) to explore discount options for non-profit organizations, small businesses, charitable and religious organizations and low-income customers not enrolled in Customer Assistance Program (CAP)
- Update the Cost of Service Study for Potomac Interceptor users
- Update the Cost of Service Study for miscellaneous fees including permit fee, cross-connection fee and fats, oils & grease fees, etc.
- Undertake the independent review of budget, rates and preparation of the public hearing on multi-year rate proposals

#### Financial Systems & Controls:

- Continue the preparation of and selection process for the upgrade/replacement of Enterprise Resource Planning (ERP) system
- Start ERP system implementation with selected Software as a Service (SaaS) provider

#### Accounting:

- Coordinate and support Internal Auditors
- Minimize/eliminate paper check payments to vendors
- Implement Ceridian Dayforce HR/Payroll System
- Ensure a clean external audit opinion
- Issuance of quarterly financial reports and annual Comprehensive Annual Financial Report (CAFR)
- Continue to review and update Capitalization Policy
- Increase focus on CIP, Intangible and Fixed Assets

## DEPARTMENT: Finance

### Budget:

- Develop, monitor and report the annual operating and 10 year CIP budgets
- Ongoing financial management of critical programs
- Continue monitoring of key financial performance targets
- Continue participation in the implementation of new ERP system
- Implement streamlined and continue improvements to the budget planning process

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue improvements to the budget development and reporting process
- Explore alternative revenue generating initiatives
- New bond issuance
- Continue with FY 2019 major activities
- Implementation of System Availability Fee (SAF), and other fees approved by the Board
- Begin implementation of a new ERP system

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

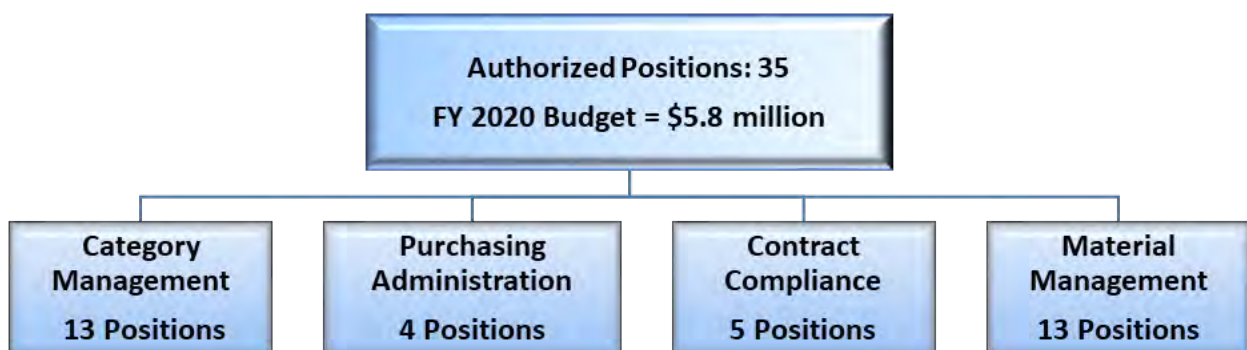
- Consultant support, training and related subscription costs for new ERP system



## CLUSTER: FINANCE AND PROCUREMENT

### DEPARTMENT: Procurement and Compliance

<b>PURPOSE:</b>	The department is responsible for the acquisition of goods and services in support of the Authority's business activities in accordance with approved procurement policies and guidelines
<b>MISSION:</b>	To procure the best value products and services, with the highest degree of procurement integrity, utilizing efficient and cost-effective procurement methods, with a continuing focus on Local, Small and Disadvantaged Business Enterprises (LSDBE) contracting participation



### FUNCTIONS

Category Management	Purchasing Administration	Contract Compliance	Material Management
Manage DC Water's procurement process for products and services	Manage requisition process and purchasing operations	Manage DC Water's small business development, outreach programs, and local hiring initiative	Manage the warehouse and associated functions
Develop category and sourcing strategies	Provide procurement system administrative support	Manage the DC WaterWorks program, purchase and travel cards and other contract compliance programs	Administer the material control system and associated functions, conduct spot, cycle and annual physical inventory
Manage vendor relationships	Manage all IT system projects that impacts Procurement System	Maintain the department's web page	Provide direction and guidance on inventory policies and procedures, disposal of excess and obsolete inventory

## DEPARTMENT: Procurement and Compliance

### BUDGET

The \$0.1 million increase in FY 2020 over the FY 2019 budget is for personnel services cost adjustments, and offset by cost reduction in contractual services

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	36	36	36	35	-1	0%
Headcount: Filled	32	27				
Total Personnel Services	\$4,155	\$4,505	\$4,579	\$4,910	\$331	7%
Supplies & Chemicals	36	24	41	32	-9	-22%
Utilities & Rent	67	55	63	32	-31	-50%
Contractual Services	869	983	997	832	-165	-17%
Small Equipment	1	0	5	3	-2	-40%
Total Non-Personnel Services	973	1,062	1,106	898	-208	-19%
<b>Department Total</b>	<b>\$5,128</b>	<b>\$5,566</b>	<b>\$5,685</b>	<b>\$5,808</b>	<b>\$123</b>	<b>2%</b>
<b>Capital Equipment</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Timely processing of small purchases within 7 working days	95%	95%	95%	95%
Issue Invitation for Bid (IFB) and award contracts within 90 calendar days	95%	95%	95%	95%
Issue Requests for Proposal (RFP) and award contracts within 120 calendar days	95%	95%	95%	95%
Issue Procurement request for inventory restock within one (1) business day of approval	95%	95%	95%	95%
System and physical issue of all stock request within same day of authorized request	95%	95%	95%	95%

## DEPARTMENT: Procurement and Compliance

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue training of procurement staff on strategic sourcing, category management, and Microsoft tools
- Enhance eSourcing tool (Sourcing/Contract Management/Supplier Portal/Supplier Scorecard/Spend Analytic) to continue improvement in procurement efficiency and results
- Continue enhancement of Materials Management System and process
- Refine category management and strategic sourcing capabilities
- Generate, capture, and report cost savings through category management and strategic sourcing projects
- Continue improvement and expansion of the DC WaterWorks program (a local hiring initiative)
- Continue selection process for the upgrade/replacement of a new Enterprise Resource Planning (ERP) system

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implement the new ERP system
- Achieve near 100% customer (internal) satisfaction
- Generate, capture, and report cost savings through category management and strategic sourcing projects
- Continue to improve process and eSourcing tool to reach the best practice goal
- Optimize organization structure to improve resource utilization and best match skill sets
- Continue stabilization/enhancement of materials management system and process
- Continuously improve category strategies to improve vendor base while lowering cost and supply risk
- Provide continuous training of procurement staff and Contracting Officer's Technical Representative (COTRs) to improve vendor relationships and performance

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Consultant support, training and related subscription costs for new ERP system

## CLUSTER: ADMINISTRATIVE SERVICES

### DEPARTMENT: Administration Office

<b>PURPOSE:</b>	To oversee and direct the administrative functions that support the achievement of DC Water's goals
<b>MISSION:</b>	Ensure continuity of operations and a safe, secure and healthy working environment by providing a foundation of resources and support to DC Water employees through the management of facility, security, safety, emergency management, and fleet services

**Authorized Positions: 3**  
**FY 2020 Budget = \$0.6 million**

#### FUNCTIONS

Facilities Management	Security	Occupational Safety & Health	Emergency Management	Fleet Management
Develop and direct the strategic objectives of the Authority's administrative departments				
Oversee and direct the administrative functions that support the achievement of the Enterprise's performance goals				

## DEPARTMENT: Administration Office

### BUDGET

The Approved FY 2020 budget is relatively flat compared to FY 2019 budget

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	3	3	3	3	0	0%
Headcount: Filled	3	3				
Total Personnel Services	\$481	\$677	\$504	\$549	\$45	9%
Supplies & Chemicals	2	4	4	1	-3	-75%
Utilities & Rent	9	2	8	4	-4	-56%
Contractual Services	14	23	61	32	-29	-47%
Small Equipment						
Total Non-Personnel Services	25	29	74	37	-37	-50%
<b>Department Total</b>	<b>\$506</b>	<b>\$706</b>	<b>\$578</b>	<b>\$586</b>	<b>\$8</b>	<b>1%</b>
Capital Equipment						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Strategic analysis and planning meetings with Directors:				
Facilities	4	4	4	12
Security	4	4	4	12
Fleet Management	4	4	4	12
Occupational Safety & Health	4	4	4	12
Emergency Management	n/a	4	4	12

## DEPARTMENT: Administration Office

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Revise and continue to implement the Non-Process Facilities Master Plan, with an emphasis on expanding and enhancing the ability of DC Water to provide Facilities that are safe & secure, sustainable & resilient
- Analyze business processes and implement activities to improve efficiency, including centrally-managed budget items and fleet optimization

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Optimize the operations of safety, security and emergency management and increase participation from all DC Water employees
- Analyze business processes and implement activities to improve efficiency, including centrally-managed budget items
- Creation and implementation of an Environmental, Health and Safety program at DC Water facilities

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

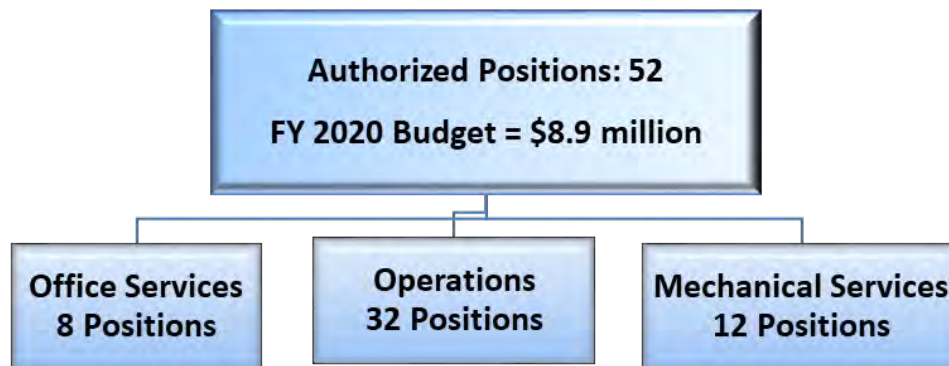
- Operational cost increases for facilities and security departments when new facilities come online (Headquarters Office, Sewer Operations, and Fleet Maintenance)

## CLUSTER: ADMINISTRATIVE SERVICES

### DEPARTMENT: Facilities Management

**PURPOSE:** Administers programs for construction, operation, maintenance and continuous improvement of the Authority's physical infrastructure and building services

**MISSION:** To support the operation of the Authority through routine maintenance, custodial services, repair and improvement of its facilities, buildings, grounds and roadways for DC Water's operations



#### FUNCTIONS

Office Services	Operations	Mechanical Services
Mail, courier and freight services	Building operations/maintenance, procure and assign furniture, repair fences and rollup doors	Predictive/preventive maintenance
Motor pool services	Coordinate workspace assignments and moves	Adequate indoor air quality
Manage DC Water's recycling program (paper, cans, bottles)	Janitorial service, landscaping, trash removal, and pest control	Engage in project management of major construction and renovation projects
Coordinate work order requests and surveys for facilities	Adequate ground direction and building signage	Elevator and HVAC systems maintenance
Manage DC Water's copy services	Manage cafeteria operations	Plumbing



## DEPARTMENT: Facilities Management

### BUDGET

The \$685k decrease in FY 2020 compared to the FY 2019 budget is due to decrease in mechanical and nursery supplies and contractual services (janitorial, HVAC, Building Maintenance)

\$000's	FY 2017	FY 2018	FY 2019	FY 2020	Change from FY 2019	
Description	Actuals	Actuals	Approved	Approved	Variance	%
Headcount: Authorized	59	56	56	52	-4	-7%
Headcount: Filled	52	48				
Total Personnel Services	\$5,407	\$5,203	\$5,832	\$5,859	\$27	0%
Supplies & Chemicals	491	462	553	428	-125	-23%
Utilities & Rent	89	110	223	250	27	12%
Contractual Services	1773	1825	2,930	2327	-603	-21%
Small Equipment	70	81	77	66	-11	-14%
Total Non-Personnel Services	\$2,423	\$2,478	\$3,783	\$3,071	-712	-19%
<b>Department Total</b>	<b>\$7,830</b>	<b>\$7,680</b>	<b>\$9,615</b>	<b>\$8,930</b>	<b>-\$685</b>	<b>-7%</b>
<b>Capital Equipment</b>	<b>\$1,933</b>	<b>\$,1314</b>	<b>\$2,855</b>	<b>\$2,305</b>	<b>-\$550</b>	<b>-19%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Annual Work Orders Closed	6,889	6,911	8,500	8,500

## DEPARTMENT: Facilities Management

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue the implementation of the Building Automation Program (HVAC systems)
- Continue relocation of offices and departments into vacated Central Office Facilities (COF) Building
- Adhere to and follow the results of the Maturity Modeling Program
- Continue to implement new industry innovations
- Assess and re-organize the Facilities Department: Develop new Land Use Branch of Facilities
- In Coordination with IT, finalize and roll-out the new, tablet based, automated service request to work order system
- Develop and begin to implement the strategy for relocation of offices and departments into vacated Central Office Facilities (COF) Building
- Support the Department of Pumping Operations with office work area updates within the main pumping station
- Support the Department of Water Services with the addition of new trailer-based office space at Fort Reno
- Complete the move-in process for the new headquarters building
- Define and establish the facilities management program for the headquarters building
- Procure, execute and complete the contract for the replacement of the roof over the DSLF
- Identify roof replacement needs for DC Water facilities and estimate the associated costs

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to refine the reorganization of the Facilities Department
- In Coordination with IT, utilize, review, report and refine the use of the tablet based, automated service request to work order system
- Implement the strategy for relocation of offices and departments into vacated Central Office Facilities (COF) Building
- Prioritize, procure, execute and complete contracts for the replacement of the roofs that can be budgeted in FY20
- Begin alignment of DC Water Facilities Department with best-practices in the facilities industry
- Identify and provide training related to best practices in the facilities industry
- Continue to implement new industry innovations

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Increased ability to monitor and maintain DC Water facilities and its expanding property inventory
- Continued improvement of CMF, COF, Bryant Street and 125 O Street systems and buildings, while reducing the overall maintenance efforts and ultimately expenditures

## CLUSTER: ADMINISTRATIVE SERVICES

### DEPARTMENT: Department of Security

<b>PURPOSE:</b>	To deliver best-in-practice security services that safeguard and protect DC Water's mission-critical resources and employees in meeting the enterprise commitment to our communities and the environment
<b>MISSION:</b>	To support and maintain a safe and welcoming workplace that is customer focused and intended to enhance the well-being of staff and visitors



### FUNCTIONS

Security Operations	Security Asset Protection
Locksmith, Key Control	Electronic security asset testing and maintenance
Guard force and traffic management Identification and Badge Control	Management of security related Capital Improvement Plan projects
Emergency Management & First Response and community awareness/training	Loss prevention, asset protection, vulnerability assessments, and hazardous threat training/awareness
Investigations, local and federal liaison, and Security work order requests	Information security, site surveys, and Key management

## DEPARTMENT: Department of Security

### BUDGET

The \$0.8 million decrease in FY 2020 compared to the FY 2019 budget is primarily in professional services contract

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	9	9	9	8	-1	-11%
Headcount: Filled	9	8				
Total Personnel Services	\$1,048	\$1,022	\$1,119	\$1,133	\$14	1%
Supplies & Chemicals	82	51	66	59	-7	-11%
Utilities & Rent	23	279	304	297	-7	-2%
Contractual Services	5,675	5,783	6,268	5,468	-800	-13%
Small Equipment	28	56	50	50	0	0%
Total Non-Personnel Services	5,807	6,169	6,688	5,874	-814	-12%
<b>Department Total</b>	<b>\$6,855</b>	<b>\$7,191</b>	<b>\$7,807</b>	<b>\$7,007</b>	<b>-\$800</b>	<b>-10%</b>
<b>Capital Equipment</b>	<b>\$848</b>	<b>\$500</b>	<b>\$515</b>	<b>\$515</b>	<b>\$0</b>	<b>0%</b>

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Completion times to initial security investigation report. Target = 21 days	21 days	7days	21 days	3 days
Response times to register/complete initial incident reports. Target = 24 hours	24 hours	24 hours	24 hours	24 hours
Number of DC Water community trained/ briefed on Security/Parking/Crime Prevention issues: Target = 8.3% of population per month	8.3%	8.3%	5.0%	5.0%
Turnover rate of Guard Force Officers = NTE 25% per month	<25%	<5%	<10%	<5%
Camera Operational Uptime: Target = 95%	95%	98%	98%	99%
Smart Card Readers Operational Uptime: Target = 95%	95%	95%	98%	99%

## DEPARTMENT: Department of Security

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue with Phase III of Hardening Project at Blue Plains
- Initiate license plate reader (LPR) at Bryant Street and Head Quarter compounds
- Initiate concept design of Blue Plains Main Entrance modifications
- Continue integration of operations cameras at 'off-Blue Plains' locations
- Continue to develop and populate Department of Security (DSEC)'s proprietary asset protection software
- Increase the ability to initiate and support internal investigations via cross training existing DSEC personnel
- Analyze throughout the Authority areas in need of additional and/or new traffic control devices

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implement 'Self-Service' visitor temporary pass management system at new HQ
- Replace/Upgrade Fire Protection systems at Blue Plains
- Initiate recommendations of new Office of Emergency Management (OEM) Vulnerability Assessment product incorporating operational elements
- Integrate additional departments into the asset protection program for enhancing protective protocols throughout the Authority. Specifically, the Head Quarters Building is targeted to receive increased asset protective measures via the use of "best practices" for asset protection
- Improvements with restructuring and cross training of DSEC personnel in investigations, with direct impact on the ability to network with our regional, Federal and State law enforcement partners as a professional colleague
- Integrate key electronic traffic control devices at all major access control traffic points throughout the Authority. Additional enhancements via integrating these electronic control devices into the Physical Security Information Management (PSIM) located within the Security Command Center

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Continued improvement of security systems will reduce overall maintenance, improve response time, and decrease threat levels
- Mega-projects require significant security upgrades and enhancements which will require increased manning to provide full support
- The new Fleet Facility is expected to increase security operations costs in future years

## CLUSTER: ADMINISTRATIVE SERVICES

### DEPARTMENT: Occupational Safety and Health

<b>PURPOSE:</b>	Oversight of the Authority's Comprehensive Health and Safety Program, to accomplish a safe and healthy work environment, as well as, compliance with environmental health and safety regulations
<b>MISSION:</b>	To support DC Water's Blue Print /Strategic Plan by effectively managing Department resources to accomplish a healthy work environment for all DC Water employees



#### FUNCTIONS

Operations Safety	Construction Safety	Data and Analysis
Compliance with environmental health and safety management system	Compliance with environmental health and safety management system	Compliance with environmental health and safety management system
Implement comprehensive safety program; including facility and crew safety inspections, and accident and incident investigations	Oversight of the implementation of comprehensive construction safety program	Develop and analyze safety metrics
Support DC Water's Emergency Response activities and serve as the Safety Officer when the Incident Management Team (IMT) is activated	Coordinate with and support the Office of Risk Management, Emergency Management, Emergency Preparedness of Contractors, and the Department of Engineering and Technical Services, including the Rolling Owner Controlled Insurance Program (ROCIP), Safety Program, and Non-ROCIP contracts	Generate and provide required safety reports
Oversight of hazardous waste program and storage tank compliance. Identify, develop, schedule and deliver required safety training	Implement initiatives to prevent and reduce accidents, occupational illnesses, and exposure to health and physical hazards	Administer and maintain safety database

## DEPARTMENT: Occupational Safety and Health

### BUDGET

The FY 2020 budget is relatively flat compared to the FY 2019 level

\$000's Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Change from FY 2019	
					Variance	%
Headcount: Authorized	9	11	11	11	0	0%
Headcount: Filled	9	11				
Total Personnel Services	\$1,290	\$1,581	\$1,604	\$1,721	\$117	7%
Supplies & Chemicals	11	22	29	23	-6	-21%
Utilities & Rent	30	30	43	31	-12	-28%
Contractual Services	540	306	566	406	-160	-30%
Small Equipment	7	5	5	0	-5	-100%
Total Non-Personnel Services	\$588	\$363	\$643	\$460	-\$183	-30%
<b>Department Total</b>	<b>\$1,878</b>	<b>\$1,944</b>	<b>\$2,247</b>	<b>\$2,181</b>	<b>-\$66</b>	<b>-3%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
OSHA recordable accidents per hours worked (Reduce 10%)	4.5	4.6	3.7	3.5
Lost time work cases due to non-fatal accidents per hours worked	3.7	3.8	3	2.8
No. of time work stopped due to unplanned unsafe conditions	0.0	2.0	1.0	1.0
No. of formally raised safety related employee concerns reported	47	159	57	170
No. of Vehicle Accidents	47	47	38	35



## DEPARTMENT: Occupational Safety and Health

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue to provide support to the Office of Risk Management in the oversight of the Rolling Owner Controlled Insurance Program (ROCIP) for DC Water Contractors
- Continue the implementation of the Occupational Safety and Health Administration (OSHA) requirement for Crystalline Silica and Hearing Conservation Programs
- Assess organization compliance with new OSHA and National Fire Protection Association (NFPA) standards
- Conduct a training needs assessment in all departments to identify the gaps in the Authority's safety training and develop a strategy and schedule for implementing an effective and sustainable training program
- Update Safety Policies and Procedures
- "Matrix" Occupational Safety and Health staff into operating departments
- Develop and implement safety goals and initiatives as part of the Authority's new Blueprint

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implement a Damage Utility Prevention Program
- Continue to implement safety goals and initiatives in association with the Blueprint
- Continue to provide support to the Office of Risk Management in the oversight of the ROCIP and Non-ROCIP Programs for DC Water
- Begin implementation of damage prevention initiative to reduce the occurrence of utility strikes by both in-house and contractor crews
- Focus on the full implementation of the safety training program

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No direct impact

## CLUSTER: ADMINISTRATIVE SERVICES

### DEPARTMENT: Fleet Management

**PURPOSE:** Ensure DC Water's fleet and equipment are safe and functioning to meet the operational needs of the Authority

**MISSION:** To provide safe, reliable and cost effective vehicles and equipment to DC Water for use by all departments in performance of their missions



### FUNCTIONS

Administrative	Acquisitions
Preventive and repair maintenance	Acquisition/Disposal of vehicles/equipment
Performance Measurements - percent of uptime/availability, and Commercial Driver's License (CDL) Safe Drivers Program	Integration and retrofitting of vehicles Integration mobile technology support
Manage and support the Fleet Wave System, and monitor fuel usage	Inventory control of automotive parts
Manage fleet maintenance contractor and vendors	
Management of vehicles, equipment, parts and DC Water loaner pool program	

## DEPARTMENT: Fleet Management

### BUDGET

The \$0.4 million increase in FY 2020 over the FY 2019 budget is due to increase in personnel services for insourcing of automotive functions, fuel and contractual services costs (warranty programs and software maintenance)

\$000's					Change from FY 2019	
Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Variance	%
Headcount: Authorized	7	8	8	10	2	20%
Headcount: Filled	6	7				
Total Personnel Services	\$892	\$935	\$1,009	\$1,220	\$211	21%
Supplies & Chemicals	6	10	19	18	-1	-1%
Utilities & Rent	727	814	775	840	65	8%
Contractual Services	3,460	4,449	3,900	4,006	106	3%
Small Equipment	99	33	70	45	-25	-36%
Total Non-Personnel Services	4,292	5,306	4,764	4,909	145	3%
<b>Department Total</b>	<b>\$5,184</b>	<b>\$6,241</b>	<b>\$5,773</b>	<b>\$6,129</b>	<b>\$356</b>	<b>6%</b>
<b>Capital Equipment</b>	<b>\$5,582</b>	<b>\$656</b>	<b>\$4,500</b>	<b>\$4,000</b>	<b>-\$500</b>	<b>-11%</b>

	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
<b>TARGETED PERFORMANCE MEASURES</b>				
Preventive maintenance completed on schedule	96%	96%	96%	96%
Vehicles available for use	96%	96%	96%	96%
DC Water Priority vehicle in-service	98%	98%	98%	98%

## DEPARTMENT: Fleet Management

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Implementation of Field Services Mobile Support Technology Program upgrading, staging, and profiling
- Continue systems integration and upgrades to Fleet Management Information System-Wireless Access in Vehicular Environments (FMIS-WAVE) Geotab, and Rideshare program
- Continue utilization of grants and enterprise collaborations for the purchase of Alternative Fueled Vehicles (AFV's), Hybrid Plug-in Electric Vehicles (HPEV's), Plug-in Electric Vehicles (PEV's), Bio-Diesel, Flex-Fuel Vehicles and Custom Fleet Solutions
- Continue the "Right Sizing-Effective Efficiency Use" Program to reduce the carbon footprint and acquire best value equipment
- Continue purchasing of Customized Smart Infrastructure and Advanced Technology, Clean Idle, certified cleaned diesel, and electric vehicles, where possible to reduce carbon emission
- Continue increased usage of environmentally friendly Soy and Bio-based products and cleaners, where applicable
- Continue planning for relocation and transition to the new Fleet Facility

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Continue implementation and upgrade of Field Services Mobile Support Technology Programs meshing, smart Infrastructure and vehicle sensor technology
- Continue systems integration and upgrades to Fleet Management Information System (WAVE) Geotab and rideshare program
- A reassessment of the Priority Equipment and major change outs according to Departmental Programs
- Begin to transition Fleet parts supply to an In-house Operation
- Reassess all major equipment repair contracts
- Continue utilization of grants and enterprise collaborations for the purchase of Alternative Fueled Vehicles (AFV's), Hybrid Plug-in Electric
- Continue the "Right Sizing- Effective Efficiency Use" Program as well as reduce the carbon footprint and the re-issuance of underutilized units
- Continue purchasing of Customized Smart Infrastructure and Advanced Technology, Clean Idle, certified clean diesel, and electric vehicles, where possible to reduce carbon emission
- Continue increased usage of environmentally friendly soy and bio-based products and cleaners, where applicable
- Continue with planning for relocation and transition to the new Fleet Facility

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- Mobile maintenance service repairs
- Acquisition and Disposal of units and equipment

## CLUSTER: ADMINISTRATIVE SERVICES

### DEPARTMENT: Office of Emergency Management

**PURPOSE:** To provide planning and operational support to the entire Authority during emergencies and to ensure DC Water complies with the American Water Infrastructure Act

**MISSION:** To facilitate the development and sustainment of a disaster resilient utility

**Authorized Positions: 6**  
**FY 2020 Budget = \$1.4 million**

### FUNCTIONS

Emergency Management Program	Training
Manage, develop and administer Emergency Management throughout the Authority	Preparedness training and educational requirements for DC Water staff and contractors
Perform vulnerability assessment and integration into CIP	Provide continual support to ensure all employees and contractors are prepared, trained, and equipped to respond to man-made and natural emergencies
Critical infrastructure protection, key resource management for emergency (man-made and natural)	Responsible for critical infrastructure protection, key resource management for emergency (man-made and natural) preparedness training and educational requirements for DC Water staff and Contractors
Management of DC Water's Internal Emergency Alert system and provide improvement planning measures	

## DEPARTMENT: Office of Emergency Management

### BUDGET

During FY 2019, the Office of Emergency Management (OEM) was established as a stand alone department from the Pumping department. The \$0.3 million increase in FY 2020 over the FY 2019 budget is for personnel services costs adjustment for the department

\$000's					Change from FY 2019	
Description	FY 2017 Actuals	FY 2018 Actuals	FY 2019 Approved	FY 2020 Approved	Variance	%
Headcount: Authorized			6	6	0	0%
Headcount: Filled						
Total Personnel Services			\$621	\$982	\$361	58%
Supplies & Chemicals			2	6	4	200%
Utilities & Rent				13	13	100%
Contractual Services			471	375	-96	-20%
Small Equipment			45	30	-15	-33%
Total Non-Personnel Services			518	425	-93	-18%
<b>Department Total</b>			<b>\$1,139</b>	<b>\$1,408</b>	<b>\$269</b>	<b>24%</b>
<b>Capital Equipment</b>						

TARGETED PERFORMANCE MEASURES	FY 2017 Results	FY 2018 Results	FY 2019 Targets	FY 2020 Targets
Maintain full compliance with Safe Drinking Water Act standards for positive coliform results (less than 5%)	<5%	<5%	<5%	<5%

## DEPARTMENT: Office of Emergency Management

### FY 2019 MAJOR PLANNED ACTIVITIES AND CHANGES

- Complete Emergency Management Accreditation Program (EMAP) accreditation – coordination and collaboration among several programs
- Continue to foster improvements to DC Water’s emergency management capabilities through: implementing, updating, and creating critical plans and procedures; providing Authority wide training and exercises to include simulations, emergency communication, fire extinguisher, evacuation chairs, and fire prevention awareness training (contractors), and building depth within the Integration Management Team (IMT)
- Establish a DC Water Annex to the District’s Hazard Mitigation Plan
- Finalize Critical Customer mass communication dataset and run functionality test
- Facilitate the compliance to the American Water Infrastructure Act signed Oct. 2018
- Collaborate with the Information Technology department (IT) and Office of Marketing and Communication (OMAC) on a Mass Emergency Communication and Notification system
- Convert traditional in-person emergency management trainings into online courses using adult learning format
- Implement and update the After-Action Improvement Matrix (AIM) and provide training to staff
- Continue to use findings from J100 Vulnerability and risk assessment to develop capital projects and improve resiliency
- Integrate the DC Water IMT with the District’s IMT and the National Capital Region IMT
- Continue to access grant funding from DC Homeland Security and Emergency Management Agency (HSEMA) for Federal Emergency Management Association (FEMA) Hazard Mitigation Grant Program

### FY 2020 MAJOR PLANNED ACTIVITIES AND CHANGES

- Support DC Water’s overall emergency response capabilities through the development of virtual reality training
- Full revision of two emergency response plans and update remaining six plans
- Explore an IMT activation and documentation solution for quicker emergency documentation and plan references
- Develop a fire inspection and investigation division within fire and life safety program
- Establish mobile incident command post capabilities
- Expand on regional water emergency response capability
- Continue to source and implement FEMA Hazard Mitigation Grants

### IMPACT OF CAPITAL PROJECTS ON OPERATING BUDGET

- No direct impact





## Approved FY 2020 Budgets

### Section VIII: GLOSSARY AND ACRONYMS



Anacostia  
River Festival

## GLOSSARY

**ACCRUAL BASIS:** The method of accounting under which revenues are recorded when they are earned (whether or not cash is received at that time) and expenditures are recorded when goods and services are received (whether or not cash disbursements are made at that time).

**ADVANCED METERING INFRASTRUCTURE (AMI):** Also known as Smart meters, are updated, digital versions of the traditional electrical meter attached to the outside of your home. Smart meters are also designed to transmit pricing and energy information from the utility company to the consumer (two-way communication).

**ADVANCED RESEARCH & TESTING PROGRAM:** Specialized wastewater treatment services to outside entities

**A/E CONTRACT:** Architectural and Engineering Contracts

**AERATION:** The process that forces compressed air into wastewater. The oxygen keeps the microorganisms alive and sets off a chain reaction; live, eat, and work. Oxygen is an essential ingredient in “activating” sludge.

**ALTERNATIVE FUELED VEHICLE:** An alternative fuel vehicle is a vehicle that runs on a fuel other than traditional petroleum fuels (petrol or Diesel fuel); and also refers to any technology of powering an engine that does not involve solely petroleum.

**AMERICAN RECOVERY AND REINVESTMENT ACT:** Is an economic stimulus package enacted by the 111<sup>th</sup> United States Congress in February 2009. The stimulus was intended to create jobs and promote investment and consumer spending during the recession.

**ANAEROBIC DIGESTION:** A biological process that uses microorganisms to reduce the volume of biosolids.

**ANAMMOX:** An abbreviation for ANaerobic AMMonium OXidation, is a globally important microbial process of the nitrogen cycle..

**APPROPRIATION:** An authorization by Congress, which permits officials to incur obligations and expend Authority resources. Appropriations are usually made for fixed amounts, which extend for a fiscal year. Appropriations for capital improvement projects, however, extend until completion, usually beyond the current fiscal year.

**ARBITRAGE:** The simultaneous purchase and selling of an asset in order to profit from a differential in the price. This usually takes place on different exchanges or marketplaces. Also known as "riskless profit".

**AS-BUILT:** A revised set of drawings submitted by a contractor upon completion of a construction project. As-built drawings show the dimensions, geometry, and location of all components of the project.

**ASSETS:** Property with monetary value owned by the Authority.



**AUDIT:** An independent systematic examination of resource utilization concluding in a written report. It is a test of management's internal accounting records. It also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statements.

**AUTOMATED METER READING (AMR):** System that automatically read customers' meters using radio frequencies, allowing for more accurate and frequent meter readings and transfer of data to a central database for billing and analysis. It is an older technology that only collects electrical energy consumption and transfers that data from the electric meter on the home to the utility (one-way communication).

**BALANCED BUDGET:** A budget in which the income equals expenditure.

**BIOCHEMICAL OXYGEN DEMAND (BOD):** An indicator of the amount of biodegradable contaminants in wastewater.

**BIOSOLIDS:** Sludge that has been treated to reduce pathogens, organics, and odors, forming a reusable agricultural product.

**BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT:** Located in Washington, DC, Blue Plains is the world's largest advanced wastewater treatment plant, and has a permitted capacity of 370 million gallons per day.

**BOARD OF DIRECTORS:** DC Water's governing board (the Board), which includes 11 primary and 11 alternate members; six members from the District of Columbia, two members each from Montgomery and Prince George's Counties in Maryland, and one member from Fairfax County, Virginia.

**BLOOM:** a soil conditioner made from Class A biosolids.

**BOND:** An obligation issued by DC Water promising to pay a specified sum of money (called principal or face value) at a specified future date (called the maturity date) along with periodic interest paid at a specified percentage of the principal (interest rate). Bonds are typically issued to fund specific capital improvement expenditures.

**BUDGET:** A plan of financial operations including an estimate of proposed expenditures and revenues for a fiscal period. The budget establishes funding levels for continuing service programs, operation and maintenance of public facilities, and principal and interest payments on bonded indebtedness. Recurring replacement of capital outlay and minor new capital outlay items are included.

**CA PPM:** Represents a single platform that enables you to manage your entire innovation lifecycle and make more informed strategic investments.

**CLASS A BIOSOLIDS:** Class A Biosolids is a designation for dewatered and heated sewage sludge that meets U.S. EPA guidelines for land application with no restrictions. Thus, class A biosolids can be legally used as fertilizer on farms, vegetable gardens, and can be sold to home gardeners as compost or fertilizer.

**CAPACITY MANAGEMENT OPERATION and MAINTENANCE (CMOM):** A standard framework for municipal sewer collection systems to identify and incorporate widely-accepted wastewater industry practices to meet regulatory compliance.

**CAPITAL BUDGET:** A plan for investment in long-term assets such as buildings, plant, and equipment. DC Water's capital budget includes project schedules and funding needed to acquire, improve or construct properties or facilities to enhance water and sewer services to our customers.

**CAPITAL EQUIPMENT:** A capital asset with a useful life of at least 3 years, a cost exceeding \$5,000 and is financed with short-term debt or cash. Examples include rolling stock and computer equipment.

**CAPITAL IMPROVEMENT PROGRAM (CIP):** A plan, which identifies the nature, schedule and cost of long-term improvements to DC Water's infrastructure.

**CCF (Ccf):** Hundred cubic feet or 748 gallons.

**CERIDIAN:** DC Water's fully integrated payroll and personnel system designed to accommodate a variety of pay, leave, and work rules and to provide a comprehensive set of human resource applications.

**CHLORAMINATION:** The process of adding chloramines to drinking water. Chloramine, a form of chlorine and ammonia, is used as a disinfectant by the Washington Aqueduct.

**CLEAN RIVERS IMPERVIOUS AREA CHARGE: (CRIAC):** DC Water uses information contained in the District of Columbia's GIS plainmetric database, which includes tax and property records to determine impervious surface areas. (All surfaces are classified as either pervious or impervious). An impervious charge is billed to DC Water customers based on Equivalent Residential Unit (ERU). This is the amount of impervious surface area measured in square feet based on a statistical median for a single family residential property.

**CLEAN WATER ACT (CWA):** Act passed by the U.S. Congress in 1972 to control water pollution.

**COMBINED HEAT AND POWER FACILITY (CHP):** The facility provides steam necessary for the thermal hydrolysis process that uses intense heat and pressure to treat wastewater solids, producing a much cleaner biosolids, and onsite generation of up to one third of Blue Plains' electricity needs.

**COMBINED SEWER OVERFLOWS (CSO):** Discharge of untreated wastewater (a mixture of storm water and sanitary waste) directly to waterways during periods of significant rainfall.

**COMBINED SEWER OVERFLOW LONG-TERM CONTROL PLAN (CSO LTCP):** This Program encompasses projects designed to reduce overflows into the local waterways by 98%, and is now known as the Clean Rivers Project.

**COMBINED SEWER SYSTEM LONG-TERM CONTROL PLAN (CSS LTCP):** Final plan submitted by DC Water in July 2002 and approved by EPA in March 2005 to control Combined Sewer Overflow (CSO's) to the Districts waterways.

**COMMERCIAL PAPER:** Short-term (less than 270 days) notes issued by DC Water to provide interim financing of its capital improvement program. Commercial paper typically carries lower interest rates than long-term debt and is issued on a subordinate basis.

**CRIAC NON-PROFITS RELIEF PROGRAM:** New District funded program to provide CRIAC credits to non-profit organizations as determined by the District Department of the Environment (DDOE).

**CUSTOMER ASSISTANCE PROGRAM (CAP):** Existing program that uses LIHEAP (Low Income Home Energy Assistance Program) criteria to provide DC Water-funded discounts to low-income residential customers with incomes up to 60 percent of the State Median Income (SMI from Health and Human Services (HHS))

**CUSTOMER ASSISTANCE PROGRAM II (CAP2):** CDC Water’s proposed expanded program for low-income 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% Area Median Income (AMI) who do not qualify for CAP or CAP2

**CUSTOMER CLASS-BASED VOLUMETRIC RATES:** Rate differentiation based on the peaking demands of each customer class (residential, multi-family and non-residential).

**CUSTOMER INFORMATION SYSTEM (CIS):** System which DC Water utilizes for customer billing and information and other related services.

**DC CLEAN RIVERS PROJECT:** New name for the COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN (CSO LTCP), which is a program that encompasses projects designed to reduce overflows into the local waterways by 98%.

**DC WATER WORKS:** local hiring initiatives for DC Water projects.

**DEAMMONIFICATION:** Involves Anammox bacteria working synergistically with Ammonia Oxidizing Bacteria to oxidize ammonia without organic carbon to produce nitrogen gas.

**DEBT RATING:** An independent opinion, based on a comprehensive quantitative and qualitative evaluation, of a company's financial position, operating performance, business profile and management. Specifically, the debt rating reflects a company’s ability to meet its obligations to repay interest and principal on outstanding obligations to investors. DC Water’s bond ratings provided by Moody’s Investors Service, Standard & Poor’s and Fitch Ratings are Aa2, AA, and AA+, respectively.

**DEBT SERVICE:** Amount of money necessary to pay principal and interest on senior outstanding notes and bonds in any given fiscal year.

**DEBT SERVICE COVERAGE:** Requirement of DC Water’s master trust indenture and Board policy that provides that annual revenue available to pay debt service must exceed annual debt service by a certain percentage. DC Water’s master trust indenture requires 120 percent senior debt service coverage; DC Water Board policy requires 140 percent senior debt service coverage.

**EFFLUENT:** Treated wastewater discharged from the Blue Plains Advanced Wastewater Treatment Plant.

**ENABLING ACT:** Legislation which established DC Water and defined its purpose and authority. DC Water’s enabling legislation was initially enacted in 1996.

**ENCUMBRANCES:** Obligations in the form of purchase orders, contracts or salary commitments which are chargeable to an appropriation and for which a part of the appropriation is reserved. They cease to be encumbrances when paid or when an actual liability is released.

**ENHANCED CLARIFICATION FACILITY (ECF):** This facility is part of DC Water’s proposed Total Nitrogen-Wet Weather plan, which addresses the requirements of the Long Term Control Plan, as well as the Chesapeake Bay Tributary Strategies for reducing nitrogen discharged in the Chesapeake Bay.

**ENHANCED NITROGEN REMOVAL FACILITY:** This Program Area represents the new name for the Total Nitrogen Program (BTN) which includes projects for new facilities and upgrades to existing facilities needed at Blue Plains to meet the total nitrogen discharge limit that has been included in DC Water’s 2010 NPDES permit.

**ENTERPRISE FUND:** A fund established to finance and account for the acquisition, operation, and maintenance of governmental facilities and services, which are entirely or predominantly self-supporting by user charges. This type of fund uses the accrual basis of accounting. DC Water is responsible for two enterprise funds:

- 1) Water and Sewer Enterprise Fund
- 2) The District of Columbia Stormwater Enterprise Fund

**ENVIRONMENTAL PROTECTION AGENCY (EPA):** Federal agency responsible for environmental regulations and enforcement.

**EXPENDITURES:** Payment for goods and services received.

**EXTENDABLE MUNICIPAL COMMERCIAL PAPER PROGRAM (EMCP):** A money-market security issued by large organizations to obtain funds to meet short-term debt obligations, and is backed only by an issuing bank or corporation’s promise to pay the face amount on the maturity date specified on the note.

**EXTRACT, TRANSFORM and LOAD (ETL)** refers to a process in database usage and especially in data warehousing that:

- Extracts data from homogeneous or heterogeneous data sources
- Transforms the data for storing it in proper format or structure for querying and analysis purpose
- Loads it into the final target (database, more specifically, operational data store, data mart, or data warehouse)

**FABRIDAM:** A dynamic weir (or dam) that inflates and deflates depending on the structure set point. Set points vary from structure to structure.

**FILTRATE TREATMENT FACILITY (FTF):** Also known as the Centrate Treatment Facility and is a part of the Total Nitrogen Removal Wet Weather plan, provides a new treatment system that will remove nitrogen from the recycle stream of solids processing at Blue Plains. The facility uses six sequencing batch reactors to treat a nitrogen-rich system from the Final Dewatering Facility’s belt filter presses.

**FISCAL YEAR:** The twelve-month period used by DC Water, which begins October 1 and ends September 30 of the following calendar year.

**FIXED ASSET:** Long-lived property owned by an entity used by an entity in the production of its income. Tangible fixed assets include real estate, plant, and equipment.

**GENERAL OBLIGATION DEBT:** This is money that DC Water still owes the District of Columbia for bond issuance prior to the enabling act that created DC Water

**HYBRID PLUG-IN VEHICLE:** A hybrid electric vehicle that utilizes rechargeable batteries, or another energy storage device, that can be restored to full charge by connecting a plug to an external electric power source (usually a normal electric wall socket)

**IMPERVIOUS SURFACE:** an area that impedes or retards the percolation of water into the subsoil and impedes plant growth. Impervious surfaces include but are not limited to the following: roofprints, footprints of patios, driveways, private streets, other paved areas, tennis courts, and swimming pools, and any path or walkway that is covered by impervious material.

**INFRASTRUCTURE:** DC Water’s facilities, services, and installations needed for its functioning, such as its water, sewer and customer delivery systems.

**INTER-MUNICIPAL AGREEMENT OF 1985 (IMA):** This agreement outlines the operating and financial responsibilities for wholesale wastewater treatment services at Blue Plains. Signatories to the IMA include the District of Columbia, Montgomery and Prince George’s Counties in Maryland, Fairfax County, Virginia, and the Washington Suburban Sanitary Commission.

**INTERCEPTORS:** The large pipes that convey wastewater from the collection system to DC Water’s wastewater treatment plant, Blue Plains.

**INTERNAL IMPROVEMENT PLAN (IIP):** Operational improvement plans for various operating departments across DC Water that will result in improved service and cost savings to DC Water’s customers. Proposed improvements are a function of new capital projects, investments in technology, and new business processes. IIP’s have been developed for the Departments of Wastewater Treatment, Maintenance Services, and Customer Service, and are in process for the Departments of Water and Sewer Services.

**INVERTED BLOCK RATE STRUCTURES:** Is a schedule of rates applicable to blocks of increasing usage in which the usage in each succeeding block is charged at a higher unit rate than in the previous blocks. Generally, each successive block rate may be applicable to a greater volume of water delivery than the preceding block(s).

**JOINT USE SEWERAGE FACILITIES:** A list of specific facilities identified in the DC Official Code, Section #34-2202.01(4).

**LIFELINE RATE:** A lifeline rate for the first 4 Ccf of Single Family Residential (SFR) water use to reflect baseline usage by residential customers without peaking cost.

**LOCAL SMALL DISADVANTAGED BUSINESS ENTERPRISE (LSDBE):** Business entities that are encouraged to do business in the District through supportive legislation, business development programs, and agency and public/private contract compliance.

**LOW IMPACT DEVELOPMENT (LID):** Integrates ecological and environmental considerations into all phases of urban planning, design and construction in order to avoid encroaching on environmentally fragile or valuable lands, and to decrease runoff volumes and peak flow impacts.

**MASTER FACILITIES PLAN:** A twenty-year plan that outlines proposed capital improvements across DC Water. This plan is updated every three to five years.

**MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4):** A regulatory program for controlling stormwater pollution.



**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):** A permit issued by the EPA that governs effluent discharges into various rivers and waterways by Blue Plains and DC Water’s sewer system.

**NINE MINIMUM CONTROLS (NMC):** Nine EPA-designated activities that DC Water must undertake to reduce Combined Sewer Overflow (CSO) while implementing its Long Term Control Plan (LTCP).

**NITRIFICATION:** An aerobic process in which bacteria changes the ammonia and organic nitrogen in wastewater into oxidized nitrogen.

**OPERATING BUDGET:** The budget that encompasses the day-to-day activities for DC Water. The operating budget includes employee salaries, supplies, and other non-personnel items related to current activities. The operating budget also includes other costs including debt service and payment in lieu of taxes/right of way fees.

**OPERATING RESERVE:** Reserve established by the Board of Directors equivalent to approximately 120 days of budgeted operating and maintenance expenses with the objective of maintaining at least \$125.5 million.

**OPERATIONS & MAINTENANCE (O&M):** The activities related to the performance of routine, preventive, and predictive, actions aimed at preventing DC Water’s equipment and infrastructure from failure or decline, with the goal of increasing efficiency, reliability, and safety.

**OUTFALL:** The place or structure where effluent is discharged into receiving waters.

**PAYMENT IN LIEU of TAXES (PILOT):** Amounts which DC Water pays each fiscal year to the District and institutions in which its facilities are located. Consistent with the provisions of DC Water’s Enabling Act, these payments are to be based on services received and certified from the District of Columbia.

**PLANT RESIDUALS:** In 2003, the EPA issued a revised NPDES permit to the Washington Aqueduct (WAD) and entered into a Federal Facilities Compliance Agreement (the federal agency equivalent of an Administrative Order) requiring WAD, to have in operation, by Dec 31, 2009, a new process, which dewater the residuals on site and trucks them off-site for disposal.

**PLUG-IN ELECTRIC VEHICLE:** Any motor vehicle that can be recharged from an external source of electricity, such as wall sockets, and the electricity stored in the rechargeable battery packs drives or contributes to drive the wheels

**POTOMAC INTERCEPTOR:** Fifty-mile interceptor that carries wastewater from Loudoun and Fairfax Counties in Virginia and Montgomery County in Maryland to Blue Plains.

**PRIMARY TREATMENT:** A wastewater treatment process that allows those substances in wastewater that readily settles or floats to be separated from the water being treated.

**PRINCIPAL:** The total amount of money being borrowed or lent.

**PROCESS COMPUTER CONTROL SYSTEM (PCCS):** Electronically monitors and controls all treatment processes and facilities.

**RATE STABILIZATION FUND:** A fund established by the Board of Directors, which is used to implement rate increases on a gradual and predictable basis.

**RESERVES:** An accounting entry that properly reflects contingent liabilities.

**REVENUE:** An increase in (sources of) fund financial resources other than from inter-fund transfers and debt issue proceeds. Revenues should be classified by fund and source.

**REVENUE BONDS:** Bonds payable from specific source of revenue and which do not pledge the full faith and credit of the issuer.

**RIGHT-OF-WAY FEE (ROW):** A permit fee that the District of Columbia Government charges DC Water for water and sewer conduits that it occupies within the District of Columbia.

**SAFE DRINKING WATER ACT (SDWA):** Act passed by the U.S. Congress (most recently amended in 1996) to control drinking water quality.

**SECONDARY TREATMENT:** Usually following primary treatment, secondary treatment employs microorganisms to reduce the level of biochemical oxygen demand (BOD) in wastewater.

**SENIOR DEBT:** Debt whose terms in the event of bankruptcy require it to be repaid before subordinated debt receives any payment.

**SLUDGE:** Solid residue from wastewater treatment, also known as Biosolids.

**SUBORDINATED DEBT:** Debt over which senior debt takes priority. In the event of bankruptcy, subordinated debtholders receive payment only after senior debt claims are paid in full.

**SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA):** Equipment and computer technology used to monitor and control the water distribution and wastewater conveyance systems.

**SUPPLEMENTAL ENVIRONMENTAL PROJECT (SEP):** A project DC Water is funding as part of its nine minimum control (NMC) CSO consent order.

**SYSTEM AVAILABILITY FEE (SAF):** Fee assessed to new development (or redevelopment) to recover the investment in available system capacity, based on meter size.

**THE BLUEPRINT:** DC Water's Strategic Plan

**TUNNEL DEWATERING PUMP STATION (TDPS)/ENHANCED CLARIFICATION FACILITY (ECF):** The TDPS facility starts where the DC Clean Rivers Project tunnels end at Blue Plains. The TDPS will pump millions of gallons of combined sewer overflows and the ECF will treat the captured wet-weather flows, previously flowed into the District's waterways during heavy rain storms.

**WASHINGTON AQUEDUCT:** A division of the U.S. Army Corps of Engineers which owns and operates the water treatment facilities for DC Water, Arlington and Falls Church, Virginia. DC Water purchases treated drinking water on a wholesale basis from the Washington Aqueduct, and is responsible for approximately 73 percent of the Aqueduct's costs.

**WATER SYSTEM REPLACEMENT FEE (WSRF):** A fixed monthly fee designed to fund the 1 percent renewal and replacement of aging water infrastructure for residential, multi-family and non-residential customers.

**WET WEATHER TREATMENT FACILITY:** A wet weather event is deemed to start when plant influent is greater than a rate of 511 mgd and deemed to stop four hours after plant influent drops to a rate of 511 mgd or a period of 4 hours has elapsed since the start of a wet weather event, whichever occurs last.

## ACRONYMS

<b>3PP:</b> Third Party Portal	<b>CCTV:</b> Closed Circuit TV
<b>ADA:</b> Americans with Disability Act	<b>CFCI:</b> Cash Financed Capital Improvements
<b>AED:</b> Automated External Defibrillator	<b>CHP:</b> Combined Heat and Power
<b>AFV:</b> Alternative Fueled Vehicle	<b>CIP:</b> Capital Improvement Program
<b>AMI:</b> Advanced Metering Infrastructure	<b>CIPP:</b> Critical Infrastructure Protection Plan
<b>AMR:</b> Automatic Meter Reading	<b>CIS:</b> Customer Information System
<b>AMSA:</b> Association of Metropolitan Sewerage Agencies	<b>CMF:</b> Central Maintenance Facility
<b>ANC:</b> Advisory Neighborhood Commission	<b>CMOM:</b> Capacity Management Operation and Maintenance
<b>ART:</b> Advanced Research Testing	<b>COBRA:</b> The Consolidated Omnibus Budget Reconciliation Act Of 1985
<b>ASA:</b> American Shotcrete Association	<b>COF:</b> Central Operations Facility
<b>AWWTP:</b> Advanced Waste Water Treatment Plant	<b>COG:</b> Metropolitan Washington Council of Governments
<b>BABs:</b> Build America Bonds	<b>COOP:</b> Continuity of Operations Plan
<b>BOD:</b> Biochemical Oxygen Demand	<b>COTR:</b> Contracting Officer's Technical Representative
<b>BP:</b> Blue Plains	<b>CRIAC:</b> Clean Rivers Impervious Area Change
<b>CAFR:</b> Comprehensive Annual Financial Report	<b>CSO LTCP:</b> Combined Sewer Overflow Long-Term Control Plan
<b>CAP:</b> Customer Assisted Program	<b>CSO:</b> Combined Sewer Overflows
<b>CC&amp;O:</b> Customer Care & Operations	<b>CSP:</b> Comprehensive Safety Program

## ACRONYMS

<b>CSRS:</b> Civil Service Retirement System	<b>EBU:</b> Equivalent Billing Unit
<b>CSS LTCP:</b> Combined Sewer System Long-Term Control Plan	<b>ECF:</b> Enhanced Clarification Facility
<b>CWA:</b> Clean Water Act	<b>EDMC:</b> Engineering Document Management and Control
<b>CWSFR:</b> Clean Water State Revolving Fund	<b>EEOC:</b> Equal Employment Opportunity Commission
<b>DCFEMS:</b> DC Fire and Emergency Medical Services	<b>EIS:</b> Environmental Impact Statement
<b>DCRA:</b> District of Columbia Department of Consumer and Regulatory Affairs	<b>EMA:</b> Emergency Management Agency
<b>DDOT:</b> District of Columbia Department of Transportation	<b>EMAP:</b> Emergency Management Accreditation Program
<b>DEMON:</b> Deammonification Process	<b>EMCP:</b> Extendable Municipal Commercial Paper Program
<b>DETS:</b> Department of Engineering and Technical Services	<b>ENRF:</b> Enhanced Nitrogen Removal Facilities
<b>DMRQA:</b> Discharge Monitoring Report Quality Assurance	<b>EOC:</b> Emergency Operations Center
<b>DOEE:</b> District of Columbia Department of Energy & Environment	<b>EPA:</b> Environmental Protection Agency
<b>DRBCP:</b> Disaster Recovery and Business Continuity Plan	<b>ERDMS:</b> Enterprise Records and Document Management System
<b>DSL:</b> Dewatered Sludge Loading Facility	<b>ERP:</b> Enterprise Resource Planning System
<b>DSS:</b> Department of Sewer Services	<b>ERU:</b> Equivalent Residential Unit
<b>DWE:</b> Department of Wastewater Engineer	<b>ESC:</b> Executive Steering Committee
<b>DWS:</b> Department of Water Services	<b>ESF:</b> Emergency Support Function
<b>EA:</b> Environmental Assessment	<b>ETL:</b> Extract, Tool, Load

## ACRONYMS

<b>FCPA:</b> Foreign Corruption Practices Act	<b>HVAC:</b> Heating Ventilation and Air Conditioning
<b>FDF:</b> Final Dewatering Facility	<b>I&amp;C:</b> Instrumentation and Controls
<b>FEMA:</b> Federal Emergency Management Agency	<b>I&amp;I:</b> Infiltration and Inflow
<b>FOC:</b> Fiber Optic Cable	<b>IAC:</b> Impervious Area Charge
<b>FOG:</b> Fats, Oil, and Grease	<b>IFB:</b> Invitation for Bid
<b>FONSI:</b> Finding of No Significant Impact	<b>IIP:</b> Internal Improvement Plan
<b>FTE:</b> Full Time Employee	<b>IMA:</b> Inter-Municipal Agreement
<b>FTF:</b> Filtrate Treatment Facility	<b>IOT:</b> Internet of Things
<b>GFOA:</b> Government Finance Officers Association	<b>IR&amp;R:</b> Infrastructure Repair & Replacement
<b>GHG:</b> Green House Gas	<b>IT:</b> Information Technology
<b>GICD:</b> Green Infrastructure Consent Decree	<b>ITA:</b> International Tunnelling Association
<b>GIS:</b> Geographical Information System	<b>IVR:</b> Interactive Voice Response
<b>GMP:</b> Guaranteed Maximum Price	<b>JBAB:</b> Joint Base Anacostia-Bolling
<b>HPEV:</b> Hybrid Plug-In Vehicle	<b>JUDD:</b> Joint Utility Discount Day
<b>HPRP:</b> High Priority Rehabilitation Program	<b>KPI:</b> Key Performance Indicators
<b>HQO:</b> Head Quarters Office	<b>LDWMR:</b> Large Diameter Water Main Rehabilitation
<b>HUNA:</b> High Usage Notification Application	<b>LID:</b> Low Impact Development

## ACRONYMS

**LOTO:** Log Out Tag-Out

**NEBT:** North East Boundary Tunnel

**LSC:** Local Steering Committee

**NEPA:** National Environmental Policy Act

**LSDBE:** Local Small Disadvantaged Business Enterprise

**NFPA:** National Fire Protection Agency

**LSR:** Lead Service Replacement

**NHPA:** National Historic Preservation Act

**LTCP:** Long Term Control Plan

**NMC:** Nine Minimum Controls

**MBE:** Minority Business Enterprise

**NPDES:** National Pollutant Discharge Elimination System

**MGD:** Million Gallons Per Day

**NPFMP:** Non-Process Facilities Master Plan

**MJUF:** Multi-Jurisdictional Use Facility

**NWBSO:** Northwest Boundary Sewer Overflow

**MOCRS:** Mayor's Office of Community Relations and Services

**O&M:** Operations & Maintenance

**MOU:** Memorandum of Understanding

**OCIP:** Owner Controlled Insurance Program

**MPT:** Main Process Train

**OEM:** Original Equipment Manufacturer

**MS4:** Municipal Separate Storm Sewer System

**OMAC:** Office of Marketing and Communications

**MTA:** Messtechnik Associates

**OMB:** Office of Management and Budget

**MTBF:** Meantime Between Failures

**OSHA:** Occupational Safety and Health Administration

**MTTR:** Meantime to Repair

**PBS:** Public Broadcasting Service

**MW:** Mega Watt

**PCA:** Pipe Condition Assessment

**NEB:** North East Boundary

**PCCS:** Process Computer Control System



## ACRONYMS

<b>PCS:</b> Process Control System	<b>RCM:</b> Reliability Centered Maintenance
<b>PDMS:</b> Payables Document Management Systems	<b>RFE:</b> Reclaimed Final Effluent
<b>PEV:</b> Plug-In Electric Vehicle	<b>RFP:</b> Request for Proposal
<b>PILOT:</b> Payment In Lieu of Taxes	<b>RFQ:</b> Request for Quotation
<b>PLC:</b> Program Logic Control	<b>RSF:</b> Rate Stabilization Fund
<b>PM:</b> Preventive Maintenance	<b>RWWP:</b> Raw Wastewater Pump Station
<b>PPA:</b> Power Purchase Agreement	<b>SAF:</b> System Availability Fee
<b>PPM:</b> Parts Per Million	<b>SCADA:</b> Supervisory Control and Data Acquisition
<b>PRT:</b> Potomac River Tunnel	<b>SDWA:</b> Safe Drinking Water Act
<b>PRV:</b> Pressure Release Valve	<b>SDWMR:</b> Small Diameter Water Main Replacement
<b>PS:</b> Pumping Station	<b>SEP:</b> Supplemental Environmental Project
<b>PSA:</b> Public Service Announcement	<b>SFR:</b> Single Family Residence
<b>PSIM:</b> Physical Security Information Management	<b>SOP:</b> Standard Operating Procedure
<b>PSSDB:</b> Primary Scum Screening Degrating Building	<b>SOX:</b> Sarbanes Oxley Act
<b>PSW:</b> Process Service Water System	<b>SPLASH:</b> Serving People by Lending a Supporting Hand
<b>PZIP:</b> Pressure Zone Increase Project	<b>SSO:</b> Sanitary Sewer Overflow
<b>QMS:</b> Quality Management System	<b>TDPS:</b> Tunnel Dewatering Pump Station

### ACRONYMS

**TEAMS:** Total Enterprise Asset Management System

**TMDL:** Total Maximum Daily Pollutant Loads

**TN:** Total Nitrogen

**UAMI:** Upper Anacostia Main Interceptor

**ULSD:** Ultra-Low Sulfur Diesel

**USACE:** U.S. Army Corps of Engineers

**VAV:** Variable Air Volume

**VEP:** Valve Exercise Program

**VIT:** Vehicle Information Transmitter

**WAD:** Washington Aqueduct

**WaSSP:** Water and Sewer Sensor Program

**WBE:** Women Business Enterprise

**WSRF:** Water System Replacement Fee

**WSSC:** Washington Suburban Sanitary Commission

**WWTP:** Wastewater Treatment Plant

**Presented and Adopted: April 4, 2019**

**SUBJECT: Intent to Reimburse Capital Expenditures with Proceeds  
of a Borrowing**

**#19-17  
RESOLUTION  
OF THE  
BOARD OF DIRECTORS  
OF THE  
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

The Board of Directors ("Board") of the District of Columbia Water and Sewer Authority ("DC Water"), at the Board meeting held on April 4, 2019, upon consideration of a joint-use matter, decided by a vote of eleven (11) in favor and none (0) opposed, to take the following action with respect to the reimbursement of capital expenditure with proceeds of borrowing.

**WHEREAS**, DC Water intends to acquire, construct and equip improvements to the System, which shall be considered "Costs of the System" as defined in the Master Indenture of Trust between DC Water and Wells Fargo Bank, N.A., dated as of April 1, 1998, potentially including, but not limited to the items and projects set forth in Exhibit A hereto (collectively, the "Projects"); and

**WHEREAS**, plans for the Projects have advanced and DC Water expects to advance its own funds to pay expenditures related to the Projects ("Expenditures") prior to incurring indebtedness and to receive reimbursement for such Expenditures from proceeds of tax-exempt bonds or notes or taxable debt, or both.

**NOW THEREFORE BE IT RESOLVED THAT:**

1. DC Water utilizes the proceeds of tax-exempt bonds, taxable bonds or notes (the "Bonds") or other debt in an amount not currently expected to exceed \$340,716,000 to pay costs of the Projects. These costs include amounts heretofore unreimbursed pursuant to Resolution 19-05 of the Board adopted on February 7, 2019, plus amounts projected to be reimbursed during Fiscal Year 2019 – 2020.
2. DC Water intends to use the proceeds of the Bonds to reimburse itself for Expenditures with respect to the Projects made on or after the date that is 60 days prior to the date of this Resolution. DC Water reasonably expects on the date hereof that it will reimburse the Expenditures with the proceeds of the Bonds or other debt.
3. Each Expenditure was or will be, unless otherwise supported by the opinion of bond counsel, either (a) of a type properly chargeable to a capital account under

general federal income tax principles (determined in each case as of the date of the Expenditure), (b) a cost of issuance with respect to the Bonds, (c) a nonrecurring item that is not customarily payable from current revenues, or (d) a grant to a party that is not related to or an agent of DC Water so long as such grant does not impose any obligation or condition (directly or indirectly) to repay any amount to or for the benefit of DC Water.

4. DC Water makes a reimbursement allocation, which is a written allocation by DC Water that evidences DC Water's use of proceeds of the Bonds to reimburse an Expenditure, no later than 18 months after the later of the date on which the Expenditure is paid or the Project is placed in service or abandoned, but in no event more than three years after the date on which the Expenditure is paid. The DC Water recognizes that exceptions are available for certain "preliminary expenditures," costs of issuance, certain de minimis amounts, expenditures by "small issuers" and expenditures for any construction, the completion of which is expected to require at least five years.
5. The Board adopts this Resolution confirming the "official intent" within the meaning of Treasury Regulations 26 C.F.R. § 1.150-2 promulgated under the Internal Revenue Code of 1986, as amended.

This resolution is effective immediately.

  
Secretary to the Board of Directors

## **Exhibit A - List of Projects**

Blue Plains Plantwide Projects  
Blue Plains Enhanced Nitrogen Removal Facilities  
Blue Plains Liquid and Solids Processing Projects  
Sanitary Sewer System Projects  
Combined Sewer System Projects  
DC Clean Rivers Project  
Stormwater Sewer System Projects  
Water Pumping, Distribution and Storage Projects  
Metering and Capital Equipment  
Washington Aqueduct Projects

**Presented and Adopted: April 4, 2019**

**SUBJECT: Approval of Fiscal Year 2019 - 2028 Ten-Year Financial Plan**

**#19-18  
RESOLUTION  
OF THE  
BOARD OF DIRECTORS  
OF THE  
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

The Board of Directors ("Board") of the District of Columbia Water and Sewer Authority ("DC Water") at the Board meeting held on April 4, 2019 upon consideration of a joint-use matter decided by a vote of eleven (11) in favor and zero (0) opposed, to take the following action with respect to the Fiscal Year 2019 - 2028 Financial Plan.

**WHEREAS**, prudent utility financial management requires a long-term financial plan that integrates common elements of the ten-year capital improvement program, future capital financing plans, projected operating and maintenance budgets, revenue requirements and projected rate increases to support long-term capital and operating needs; and

**WHEREAS**, the Board, in Resolutions 11-10 and 13-57, adopted a series of financial policies in the areas of capital financing, long-term financial planning, and rate-setting to assure the short-term and long-term financial health of DC Water; and

**WHEREAS**, adherence to these financial policies has allowed the DC Water to receive strong bond ratings that will reduce debt service costs over the ten-year planning period; and

**WHEREAS**, consistent with the Board policies, the General Manager has prepared a ten-year financial plan in conjunction with the proposed FY 2020 operating and capital budgets; and

**WHEREAS**, the ten-year financial plan is based on assumptions detailed in the proposed Fiscal Year 2020 Operating and Capital Budgets; and

**WHEREAS**, the ten-year financial plan is consistent with projections appearing in the attached Schedules A, B and C of this resolution; and

**WHEREAS**, on February 28, 2019, the DC Retail Water and Sewer Rates Committee met and reviewed the proposed ten-year financial plan, and did not recommend the plan to the Board but asked staff to review the proposed \$5.0 billion modified baseline Capital Investment Plan (CIP) and alternative CIP scenarios; and

**WHEREAS**, on March 26, 2019, and March 28, 2019, the DC Retail Water and Sewer Rates Committee and Finance and Budget Committee, respectively, met and reviewed the proposed ten-year financial plan, and recommended that the Board adopt the plan as recommended by the General Manager.

**NOW THEREFORE BE IT RESOLVED THAT:**

1. The Board hereby accepts and approves the proposed Fiscal Year 2019 - 2028 Financial Plan that is supported by the attached Schedule A, B and C and the proposed Fiscal Year 2020 Operating and Capital Budgets.

This resolution is effective immediately.

  
Secretary to the Board of Directors



# District of Columbia Water & Sewer Authority

## FY 2019 - FY 2028 Financial Plan

(In 000's)

OPERATING	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Retail**</b>										
Wholesale*	\$ 543,327	\$ 571,666	\$ 618,152	\$ 659,845	\$ 704,304	\$ 756,859	\$ 780,566	\$ 810,514	\$ 841,471	\$ 879,686
Other	82,992	82,539	85,015	87,566	90,193	92,898	95,685	98,556	101,513	104,558
RSF	33,331	39,774	46,805	51,271	53,758	53,445	54,361	57,081	57,391	58,349
Operating Receipts (1)	\$ 665,650	\$ 693,979	\$ 749,972	\$ 798,682	\$ 848,255	\$ 903,202	\$ 930,612	\$ 966,151	\$ 1,000,375	\$ 1,042,593
<b>Operating Expenses</b>										
Debt Service	(338,499)	(347,881)	(358,264)	(368,967)	(379,998)	(391,369)	(403,089)	(415,169)	(427,622)	(440,458)
	(198,754)	(215,340)	(235,421)	(254,235)	(272,838)	(285,693)	(295,505)	(306,629)	(318,969)	(331,609)
Cash Financed Capital Improvement	\$ (25,999)	\$ (28,556)	\$ (30,907)	\$ (39,591)	\$ (49,301)	\$ (52,880)	\$ (62,445)	\$ (72,946)	\$ (75,732)	\$ (79,172)
Net Revenues After Debt Service	\$ 101,398	\$ 102,202	\$ 125,380	\$ 135,889	\$ 146,118	\$ 173,160	\$ 169,573	\$ 171,407	\$ 178,052	\$ 191,354
<b>Operating Reserve-Beg Balance</b>	166,796	165,000	180,000	185,000	194,000	201,000	205,000	215,000	220,000	230,000
Other Misc (Disbursements)/Receipts										
Wholesale/Federal True Up	(16,803)	(2,131)	-	-	-	-	-	-	-	-
Project Billing Refunds	(11,000)	(4,000)	(4,000)	-	-	-	-	-	-	-
Transfers To RSF										
Pay-Go Financing	(75,391)	(81,071)	(116,380)	(126,890)	(139,118)	(169,161)	(159,573)	(166,407)	(168,052)	(181,356)
Operating Reserve - Ending Balance	\$ 165,000	\$ 180,000	\$ 185,000	\$ 194,000	\$ 201,000	\$ 205,000	\$ 215,000	\$ 220,000	\$ 230,000	\$ 240,000
<b>Rate Stabilization Fund Balance RSF (2)</b>	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)	\$ (55,450)
Senior Debt Service Coverage	425%	438%	461%	508%	505%	593%	611%	598%	585%	614%
Combined Debt Service Coverage	162%	168%	174%	178%	180%	187%	187%	188%	187%	189%
Actual/Projected Water/Sewer Rate Increases	13.0%	11.5%	12.5%	11.5%	8.5%	7.5%	6.0%	5.5%	5.5%	4.5%
<b>*Operating Receipts \$ Increase/Decrease</b>										
Retail	23,697	28,339	46,486	41,693	44,459	52,555	23,707	29,948	30,957	38,215
Wholesale	1,970	(453)	2,476	2,551	2,627	2,705	2,787	2,871	2,957	3,045
<b>*Operating Receipts % Increase/Decrease</b>										
Retail	4.6%	5.2%	8.1%	6.7%	6.7%	7.5%	3.1%	3.8%	3.8%	4.5%
Wholesale	2.4%	-0.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

(1) Includes interest earnings on senior lien revenue bonds' debt service reserve fund

(2) FY 2020 planned transfers of \$0.0 million to Rate Stabilization Fund will maintain the total fund balance at \$55.45 million

Schedule B

# District of Columbia Water & Sewer Authority

## FY 2019 - FY 2028 Average Residential Customer Monthly Bill

	Units	Proposed										
		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	
DC Water Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$ 68.27	\$ 76.38	\$ 86.00	\$ 96.08	\$ 104.23	\$ 112.02	\$ 118.73	\$ 125.25	\$ 132.14	\$ 138.08	
DC Water Clean Rivers IAC <sup>(2)</sup>	ERU	23.00	20.94	20.95	19.85	21.45	25.28	24.35	25.06	25.73	29.31	
DC Water Customer Metering Fee	5/8"	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	
DC Water Water System Replacement Fee <sup>(4)</sup>	5/8"	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	
<b>Subtotal DC Water Rates &amp; Charges</b>		<b>\$ 101.43</b>	<b>\$ 107.48</b>	<b>\$ 117.11</b>	<b>\$ 126.09</b>	<b>\$ 135.84</b>	<b>\$ 147.46</b>	<b>\$ 153.24</b>	<b>\$ 160.47</b>	<b>\$ 168.03</b>	<b>\$ 177.55</b>	
Increase / Decrease		\$ 5.9%	\$ 6.0%	\$ 9.6%	\$ 8.9%	\$ 9.7%	\$ 11.6%	\$ 5.7%	\$ 7.2%	\$ 7.5%	\$ 9.5%	
<b>Percent Increase in DC Water Portion of Bill</b>		<b>6.2%</b>	<b>6.0%</b>	<b>9.0%</b>	<b>7.7%</b>	<b>7.7%</b>	<b>8.6%</b>	<b>3.9%</b>	<b>4.7%</b>	<b>4.7%</b>	<b>5.7%</b>	
District of Columbia PILOT Fee <sup>(1)</sup>	Ccf	\$ 3.10	\$ 3.16	\$ 3.22	\$ 3.29	\$ 3.35	\$ 3.41	\$ 3.47	\$ 3.53	\$ 3.60	\$ 3.66	
District of Columbia Right-of-Way Fee <sup>(1)</sup>	Ccf	1.12	1.18	1.18	1.18	1.18	1.24	1.24	1.24	1.24	1.24	
District of Columbia Stormwater Fee <sup>(3)</sup>	ERU	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	
<b>Subtotal District of Columbia Charges</b>		<b>\$ 6.89</b>	<b>\$ 7.01</b>	<b>\$ 7.07</b>	<b>\$ 7.14</b>	<b>\$ 7.20</b>	<b>\$ 7.32</b>	<b>\$ 7.38</b>	<b>\$ 7.44</b>	<b>\$ 7.51</b>	<b>\$ 7.57</b>	
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 108.32</b>	<b>\$ 114.49</b>	<b>\$ 124.18</b>	<b>\$ 133.23</b>	<b>\$ 143.04</b>	<b>\$ 154.78</b>	<b>\$ 160.62</b>	<b>\$ 167.91</b>	<b>\$ 175.54</b>	<b>\$ 185.12</b>	
Increase / Decrease Over Prior Year		\$ 6.02	\$ 6.17	\$ 9.69	\$ 9.05	\$ 9.81	\$ 11.74	\$ 5.84	\$ 7.29	\$ 7.63	\$ 9.58	
<b>Percent Increase in Total Bill</b>		<b>5.9%</b>	<b>5.7%</b>	<b>8.5%</b>	<b>7.3%</b>	<b>7.4%</b>	<b>8.2%</b>	<b>3.8%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>5.5%</b>	

(1) Assumes average monthly consumption of 6.2 Ccf or (4,638 gallons)

(2) Assumes average 1 Equivalent Residential Unit (ERU)

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

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

***District of Columbia Water & Sewer Authority***  
**Retail Rates, Charges and Fees**  
**FY 2020**

	Units	FY 2019	Proposed FY 2020
DC Water Retail Rates Water (Residential Lifeline 0 - 4 Ccf)	Ccf	\$ 2.91	\$ 3.06
DC Water Retail Rates Water (Residential > 4 Ccf)	Ccf	\$ 3.90	\$ 4.10
DC Water Retail Rates Water (Multi-Family)	Ccf	\$ 3.37	\$ 3.54
DC Water Retail Rates Water (Non-Residential)	Ccf	\$ 4.05	\$ 4.25
DC Water Retail Rates Sewer	Ccf	\$ 7.75	\$ 8.89
DC Water Clean Rivers IAC	ERU	\$ 23.00	\$ 20.94
DC Water Customer Metering Fee	5/8"	\$ 3.86	\$ 3.86
DC Water Water System Replacement Fee	5/8"	\$ 6.30	\$ 6.30
District of Columbia PILOT Fee	Ccf	\$ 0.50	\$ 0.51
District of Columbia Right-of-Way Fee	Ccf	\$ 0.18	\$ 0.19
District of Columbia Stormwater Fee	ERU	\$ 2.67	\$ 2.67

**Presented and Adopted: April 4, 2019**  
**Subject: Approval of Proposed Fiscal Year 2020 Operating Budget**

**#19-19**  
**RESOLUTION**  
**OF THE**  
**BOARD OF DIRECTORS**  
**OF THE**  
**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

The Board of Directors ("Board") of the District of Columbia Water and Sewer Authority, ("DC Water") at its meeting on April 4, 2019, upon consideration of a joint-use matter, decided by a vote of eleven (11) in favor and none (0) opposed, to take the following action with respect to the Fiscal Year 2020 Proposed Operating Budget.

**WHEREAS**, on February 7, 2019, the Chief Executive Officer and General Manager, Chief Financial Officer and Chief Engineer at the budget workshop briefed Board members on the Proposed FY 2020 Operating Budget that totaled \$614,523,000; and

**WHEREAS**, on February 28, 2019, the Finance and Budget Committee and the DC Retail Water and Sewer Rates Committee, in a joint meeting, reviewed the budget proposals and discussed in detail the budget drivers, strategic budget decisions, budget assumptions, risks and customer impact; and

**WHEREAS**, on March 28, 2019, the Finance and Budget Committee further reviewed the budget proposals and discussed in detail the budget drivers, strategic budget decisions, budget assumptions and risks, and recommended that the Board adopt the FY 2020 Operating Budget that totals \$614,523,000 including \$253,000 for representation, official meetings, employment events, and engagement, of which \$143,000 is for refreshments.

**NOW THEREFORE BE IT RESOLVED THAT:**

The Board hereby approves and adopts DC Water's Proposed Fiscal Year 2020 Operating Budget totaling \$614,523,000 including \$253,000 for representation, official meetings, employment events, and engagement and as further detailed in the Chief Executive Officer and General Manager's Proposed Fiscal Year 2020 Budget presented on February 7, 2019 and March 28, 2019 and accompanying materials.

This resolution is effective immediately.

  
Secretary to the Board of Directors

**Presented and Adopted: April 4, 2019**

**SUBJECT: Proposal to Amend District of Columbia Clean Rivers  
Impervious Area Charge Incentive Program Discount from  
4% to 20% Maximum Incentive Discount**

**#19-20  
RESOLUTION  
OF THE  
BOARD OF DIRECTORS  
OF THE  
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

The District members of the Board of Directors ("Board") of the District of Columbia Water and Sewer Authority ("DC Water") at the Board meeting held on April 4, 2019 upon consideration of a non-joint use matter, decided by a vote of six (6) in favor and none (0) opposed, to approve the following action with respect to amending Title 21 of the District of Columbia Municipal Regulations (DCMR), Chapter 41, Retail Water and Sewer Rate, in order to amend District of Columbia Clean Rivers Impervious Area Charge Incentive Discount Program (the "CRIAC Incentive Discount Program) from 4% to 20% maximum incentive discount.

**WHEREAS**, on March 6, 2008, the Board adopted Resolution # 08-34, which authorized the General Manager to consider developing a credit and incentive policy for certain eligible stormwater management practices that reduce the amount of stormwater runoff generated from a property; and

**WHEREAS**, the "Water and Sewer Authority Equitable Ratemaking Act of 2008" effective March 25, 2009 (D.C. Law 17-370; D.C. Official Code § 34-2202.16a. (2012 Repl.)), required DC Water to establish, together with the District Department of Environment (now Department of Energy and Environment ("DOEE"), an low-impact design incentive program to provide discounts to customers that install certain eligible stormwater management practices that reduce the amount of stormwater runoff generated from a property; and

**WHEREAS**, on July 3, 2013, Resolution 13-80, authorized the General Manager to publish final regulations for the CRIAC Incentive Discount Program in the *D.C. Register*, effective October 1, 2013, which provided a 4% maximum incentive discount off the chargeable CRIAC; and

**WHEREAS**, the regulations for the District of Columbia Clean Rivers Impervious Surface Area Charge Incentive Discount Program also included a provision in 21 DCMR § 4106.9(d) that terminated the CRIAC Incentive Discount Program three (3) years after the effective date; and

**WHEREAS**, on March 26, 2019, the DC Retail Water and Sewer Rates Committee met to review and consider an amendment to increase the CRIAC Incentive Discount Program discount from 4% to 20% maximum incentive discount; and

**WHEREAS**, on March 26, 2019, the DC Retail Water and Sewer Rates Committee recommended that the Board take action on the proposal to increase the maximum CRIAC incentive discount from 4% to 20%, effective October 1, 2019.

**NOW THEREFORE BE IT RESOLVED THAT:**

1. The Board proposes to amend 21 DCMR § 4107.1 for public comment, revising the maximum incentive discount for the DC Clean Rivers IAC Incentive Discount Program as provided in the Attachment and as follows:
  - Amend the DC Clean Rivers IAC incentive discount from 4% to 20% maximum incentive discount (actual discount amount will be calculated based upon the DOEE formula) not to exceed an annual, established budget allowance. The cost for the discounts will be applied to the CRIAC charged. The effective date for this amendment shall be October 1, 2019.
  - Eligibility will continue to be determined by DOEE's Stormwater Management Division based upon its published eligibility guidelines and criteria. Any eligibility appeals will be addressed by DOEE in accordance with their published procedures.
2. The Board proposes to amend 21 DCMR § 4106.9(d), deleting the three (3) year expiration provision as provided in the Attachment.
3. The General Manager is authorized to take all steps necessary in his judgment and as otherwise required, to initiate the public comment process and provide notice of the proposed amendments in the manner provided by the District of Columbia's Administrative Procedure Act.

This resolution is effective immediately.

  
Secretary to the Board of Directors

## Attachment

- 4106.9** The IAC Incentive Discount shall expire on the first of:
- (a) The expiration of DDOE's approved stormwater fee discount period provided in Chapter 5 of this title;
  - (b) DDOE's revocation of the stormwater fee discount; or
  - (c) The sale or transfer of the property to a new owner
- 4107 DISTRICT OF COLUMBIA CLEAN RIVERS IMPERVIOUS SURFACE AREA CHARGE INCENTIVE DISCOUNT PROGRAM: DISCOUNT CALCULATION**
- 4107.1** The IAC Incentive Discount shall not exceed the maximum allowable IAC Incentive Discount percentage, which shall be twenty percent (20%) of the otherwise chargeable Clean Rivers Impervious Area Charge in the first year of the IAC Discount program, which may change in subsequent years subject to DC Water's budget appropriations.



**Presented and Adopted: April 4, 2019**

**SUBJECT: Proposed Revised Fiscal Year 2020 Retail Sewer Service  
Rates and Clean Rivers Impervious Area Charge**

**#19-21  
RESOLUTION  
OF THE  
BOARD OF DIRECTORS  
OF THE  
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

The District members of the Board of Directors ("Board") of the District of Columbia Water and Sewer Authority ("DC Water") at the Board meeting held on April 4, 2019 upon consideration of a non-joint use matter, decided by a vote of six (6) in favor and none (0) opposed, to approve the following action with respect to the proposed revised Fiscal Year 2020 Retail Sewer Service Rate and the Clean Rivers Impervious Area Charge.

**WHEREAS**, the Board has adopted a revised rate setting policy that calls for rates, charges and fees that, together with other revenue sources, yield a reliable and predictable stream of revenues that will generate sufficient revenues to pay for DC Water's projected operating and capital expenses; and

**WHEREAS**, the Board has adopted various financial policies that require revenues to ensure compliance with Board policies regarding maintenance of senior debt coverage and cash reserves; and

**WHEREAS**, on July 5, 2018, the Board through Resolution 18-56, adopted the FY 2019 and 2020 retail water and sewer service rates, Right-of-Way (ROW), Payment-in-Lieu of Taxes (PILOT), and Clean Rivers Impervious Area Charge (CRIAC), and authorized the General Manager to publish a Notice of Final Rulemaking, effective October 1, 2018; and

**WHEREAS**, Resolution 18-56, set the FY 2019 and FY 2020 retail sewer service rate at \$7.75 per one hundred cubic feet ("Ccf") (\$10.36 per 1,000 gallons) and \$8.14 per Ccf (\$10.88 per 1,000 gallons), respectively; and

**WHEREAS**, Resolution 18-56, set the FY 2019 and FY 2020 monthly billed CRIAC charge at \$23.00 per Equivalent Residential Unit (ERU) and \$25.58 per ERU, respectively; and

**WHEREAS**, in September 2018, DC Water formed the 19-member Stakeholder Alliance (DCWSA) to provide independent advice and a diversity of viewpoints to DC Water Management on a variety of programs and policies; increase customer education by providing DC Water with new opportunities for outreach; and propose to DC Water ways

to continue effective and efficient long-term public involvement with improved communication tools; and

**WHEREAS**, beginning in September 2018 through January 2019, the DCWSA held four meetings to discuss infrastructure investments and CRIAC charges, customer assistance programs, science and mathematical calculations behind the CRIAC charge and CRIAC volumetric options, and DCWSA advocacy plan; and

**WHEREAS**, on February 28, 2019, the DC Retail Water and Sewer Rates Committee met and reviewed: proposed shift in the CRIAC charge to sewer volumetric retail rate based on the pollutant concentrations in sanitary wastewater method or the volume of sanitary wastewater method; proposed amendment of the Clean Rivers Impervious Surface Area Incentive Discount Program incentive discount from 4% to 20%; and the proposed \$5.0 billion modified baseline Capital Improvement Plan (CIP); and

**WHEREAS**, on March 26, 2019, the DC Retail Water and Sewer Rates Committee met and reviewed: the proposed shift in the CRIAC charge to sewer volumetric retail rate based on pollutant concentrations in sanitary wastewater method or volume of sanitary wastewater method; the impact of the CRIAC shift on various customer types, including customer's eligible for CAP; proposed amendment of the Clean Rivers Impervious Surface Area Incentive Discount Program incentive discount from 4% to 20%; and the proposed \$5.0 billion modified baseline Capital Improvement Plan (CIP); and

**WHEREAS**, on March 26, 2019, the DC Retail Water and sewer Rates Committee also reviewed the detailed presentation on the DC Water's methods and results to estimate the percentage of wastewater in the CSO, including the pollutant concentration method at 18%; and volumetric method at 37%; and

**WHEREAS**, based on the method and results presented, the General Manager recommend the volumetric method as the best reasonable, explained, and supported method to estimate the percentage of wastewater in the CSO managed by the Clean Rivers tunnel system; and recommended to phase-in the 37% shift in the CRIAC charge to the sewer volumetric retail rate: 18% in FY 2020, 28% in FY 2021 and 37% in FY 2022; and

**WHEREAS**, the General Manager recommended decreasing the monthly billed CRIAC charge from the current (FY 2019) charge at \$23.00 per (ERU) to \$20.94 per ERU; and increasing the metered retail sewer service rate from the current (FY 2019) rate of \$7.75 per Ccf (\$10.36 per 1,000 gallons) to \$8.89 per Ccf (\$11.89 per 1,000 gallons), effective October 1, 2019; and

**WHEREAS**, the DC Retail Water and Sewer Rates Committee recommended that the Board consider for public comment, a decrease of the annual CRIAC charge from \$276.00 per ERU to \$251.28 per ERU; a decrease of \$2.06 per ERU per month to \$20.94 per ERU to recover the \$2.7 billion costs of the Combined Sewer Overflow Long-Term Control Plan (CSO-LTCP); and

**WHEREAS**, the DC Retail Water and Sewer Rates Committee recommended that the Board consider for public comment, an increase in the retail sewer service rate of \$1.14 to \$8.89 per Ccf (\$11.89 per 1,000 gallons) for FY 2020, effective October 1, 2019; and

**WHEREAS**, the increase in the retail sewer service rate for FY 2020 for a Residential customer's first 4 Ccf of water usage (Lifeline) will result in a combined retail water and sewer rate increase of \$1.29 per Ccf (\$1.72 per 1,000 gallons) or a combined water and sewer rate of \$11.95 per Ccf (\$15.98 per 1,000 gallons) of metered water and sewer use for FY 2020; and

**WHEREAS**, the increase in the retail sewer service rate for FY 2020 for a Residential customer's water usage greater than 4 Ccf will result in a combined retail water and sewer rate increase of \$1.34 per Ccf (\$1.79 per 1,000 gallons) or a combined water and sewer rate of \$12.99 per Ccf (\$17.37 per 1,000 gallons) of metered water and sewer use for FY 2020; and

**WHEREAS**, the increase in the retail sewer service rate for a Multi-family customer will result in a combined retail water and sewer rate increase of \$1.31 per Ccf (\$1.75 per 1,000 gallons) or combined water and sewer rate of \$12.43 per Ccf (\$16.62 per 1,000 gallons) of metered water and sewer use for FY 2020; and

**WHEREAS**, the increase in the metered retail sewer service rate for a Non-Residential customer will result in a combined retail water and sewer rate increase of \$1.34 per Ccf (\$1.79 per 1,000 gallons) or a combined water and sewer rate of \$13.14 per Ccf (\$17.57 per 1,000 gallons) of metered water and sewer use for FY 2020; and

**WHEREAS**, adoption of these rates and fee changes would increase the monthly bill of the average Residential customer using 6.20 Ccf (or 4,638 gallons) by approximately \$6.17 per month or \$74.04 per year for FY 2020; and

**WHEREAS**, DC Water's retail revenue projections for Fiscal Year 2020 reflect an approximate \$26.4 million increase due to the proposed \$43.8 million increase in retail water and sewer rates, an approximate \$0.4 million increase due to the PILOT fee increase, and an approximate \$17.8 million decrease due to the proposed Clean Rivers IAC decrease; and

**WHEREAS**, DC Retail Water and Sewer Rates Committee recommended that the Board take final action on the proposed rate and fee increases at the conclusion of the public notice and comment period and Public Hearing, which will occur over the next several months.

**NOW THEREFORE BE IT RESOLVED THAT:**

1. The Board finds DC Water's recommended volumetric method is the best reasonable, explained, and supported method to estimate the percentage of wastewater in the CSO managed by the Clean Rivers tunnel system; and finds

that the phase-in of the 37% shift in the CRIAC charge to the sewer volumetric retail rate: 18% in FY 2020, 28% in FY 2021 and 37% in FY 2022, will help minimize the impact of customer increases as a result of the shift.

2. The Board authorizes the General Manager to propose for public comment, a decrease in the CRIAC charge and an increase in the metered retail sewer service rate as described below:

**Retail Sewer Service Rate  
(Metered and Unmetered)**

- a. Increase in the rate for retail sewer services:

**Metered Sewer Services**

	FY 2019		FY 2020		FY 2020 vs. FY 2019 Incr. / (Decr.)	
	Ccf	1,000 Gal.	Ccf	1,000 Gal.	Ccf	1,000 Gal.
<b>Residential customers</b>	\$7.75	\$10.36	\$8.89	\$11.89	\$1.14	\$1.53
<b>Multi-Family customers</b>	\$7.75	\$10.36	\$8.89	\$11.89	\$1.14	\$1.53
<b>Non-Residential customers</b>	\$7.75	\$10.36	\$8.89	\$11.89	\$1.14	\$1.53

- b. Decrease the annual Clean Rivers Impervious Area Charge (CRIAC) from \$276.00 to \$251.28 per Equivalent Residential Unit (ERU) in FY 2020.

The charge per ERU will be billed monthly at:

**Clean Rivers Impervious Area Charge (CRIAC)**

	FY 2019	FY 2020	FY 2020 vs. FY 2019 Incr. / (Decr.)
	ERU	ERU	ERU
<b>Residential customers</b>	\$23.00	\$20.94	(\$2.06)
<b>Multi-Family customers</b>	\$23.00	\$20.94	(\$2.06)
<b>Non-Residential customers</b>	\$23.00	\$20.94	(\$2.06)

3. The Board authorizes the General Manager to take all steps necessary in his judgment and as otherwise required, to initiate the public comment process and provide notice of the proposed rate and fee adjustments and a Public Hearing in the manner provided by the District of Columbia's Administrative Procedure Act and 21 DCMR Chapter 40.

This resolution is effective immediately.

  
Secretary to the Board of Directors

## Attachment

**Chapter 41, RETAIL WATER AND SEWER RATES AND CHARGES, is amended as follows:**

**Paragraph 4101.1(a) and Subsection 4101.3, RATES FOR SEWER SERVICE, are amended as follows:**

### **4101 RATES AND CHARGES FOR SEWER SERVICE**

**Paragraph 4101.1(a) is amended to read as follows:**

- 4101.1 (a) The retail rates for sanitary sewer service for each one hundred cubic feet (1 Ccf) of water use shall be:

Customer	Effective October 1, 2019	
	Per Ccf of water use	Per 1,000 Gals. of water use
Residential	\$8.89	\$11.89
Multi-Family	\$8.89	\$11.89
Non-Residential	\$8.89	\$11.89

**Subsection 4101.3 is amended to read as follows:**

- 4101.3 The annual Clean Rivers Impervious Area Charge (CRIAC) per Equivalent Residential Unit (ERU) shall be:

Customer	Effective October 1, 2019	
	Annual CRIAC per ERU	Monthly CRIAC per ERU
Residential	\$251.28	\$20.94
Multi-Family	\$251.28	\$20.94
Non-Residential	\$251.28	\$20.94

**Presented and Adopted: April 4, 2019**

**Subject: Approval of Proposed Fiscal Year 2019 - 2028 Capital Improvement Program**

**#19-22  
RESOLUTION  
OF THE  
BOARD OF DIRECTORS  
OF THE  
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

The Board of Directors ("Board") of the District of Columbia Water and Sewer Authority, ("DC Water") at its meeting on April 4, 2019 upon consideration of a joint-use matter, decided by a vote of eleven (11) in favor and none (0) opposed, to take the following action with respect to the Fiscal Year 2019 - 2028 Capital Improvement Program (10-Year Disbursement Plan and Lifetime Budget).

**WHEREAS**, the Board's financial policies require an annually updated 10-Year Financial Plan, which includes a 10-Year Capital Disbursement Plan; and

**WHEREAS**, on February 7, 2019, the Chief Executive Officer and General Manager, Chief Financial Officer, and Chief Engineer, at the budget workshop briefed Board members on the Proposed 10-Year Disbursement Plan totaling \$4,956,780,000; and

**WHEREAS**, on February 21, 2019, the Environmental Quality and Operations Committee, reviewed the budget proposals and discussed in detail the budget drivers, strategic budget decisions, budget assumptions and risks; and

**WHEREAS**, on February 28, 2019, the Finance & Budget Committee and the DC Retail Water and Sewer Rates Committee, in a joint meeting, reviewed the budget proposals and discussed in detail the budget drivers, strategic budget decisions, budget assumptions, risks, and customer impacts; and

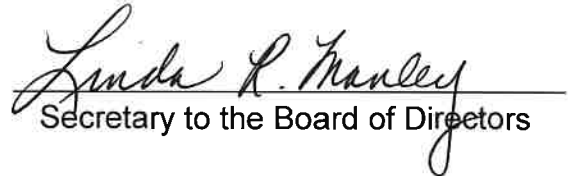
**WHEREAS**, on March 21, 2019, the Environmental Quality and Operations Committee, reviewed the budget proposals and discussed in detail the alternate budget scenarios, budget drivers, strategic budget decisions, budget assumptions, risks and customer impacts and recommended that the Board adopt the Proposed 10-Year Disbursement Plan totaling \$4,956,780,000, related Lifetime Budget, which totals \$12,127,945,000; and

**WHEREAS**, on March 28, 2019, the Finance & Budget Committee, reviewed the budget proposals and discussed in detail the alternative budget scenarios, budget drivers, strategic budget decisions, budget assumptions, and customer impacts, and recommended that the Board adopt the Proposed 10-Year Disbursement Plan totaling \$4,956,780,000 and related Lifetime Budget, which totals \$12,127,945,000.

**NOW THEREFORE, BE IT RESOLVED THAT:**

The Board hereby approves and adopts DC Water's Fiscal Year 2019 – 2028 Capital Improvement Program with the 10-Year Disbursement Plan totaling \$4,956,780,000, related Lifetime Budget which totals \$12,127,945,000 (Attachment A-1), and as further detailed in the Chief Executive Officer and General Manager's Proposed Fiscal Year 2020 Budget, presented on February 7, 2019 and accompanying materials.

This resolution is effective immediately.

  
Secretary to the Board of Directors



# Capital Improvement Program

10-Year Disbursement Plan - projected annual cash disbursements, \$ in thousands

## Attachment A-1

	FY 2019 - FY 2028 Proposed Disbursement Plan											Lifetime Budget
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	10-Yr Total	
<b>NON PROCESS FACILITIES</b>												
Facility Land Use	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	\$212,833
Subtotal: Facility Land Use	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	212,833
<b>WASTEWATER TREATMENT</b>												
Liquid Processing	21,488	30,915	37,087	48,495	36,646	38,979	41,124	84,082	107,253	107,354	553,422	1,166,818
Plantwide	15,777	20,223	18,885	25,882	39,576	24,810	17,052	25,410	20,726	7,341	215,681	494,048
Solids Processing	6,672	10,511	19,988	22,645	30,530	15,286	12,862	3,899	1,186	8,304	131,883	906,481
Enhanced Nitrogen Removal Facilities	26,042	4,972	549	614	3,295	3,359	10,211	19,947	8,411	351	77,731	998,714
Subtotal	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738	3,566,060
<b>COMBINED SEWER OVERFLOW</b>												
DC Clean Rivers	187,859	147,208	139,786	191,573	151,411	64,415	55,689	144,295	97,067	83,286	1,262,589	2,764,255
Program Management	1,685	1,241	743	1,482	2,653	4,046	4,310	2,871	1,745	2,718	23,494	77,756
Combined Sewer	5,805	2,978	8,701	6,533	5,994	9,473	4,542	2,930	3,848	4,880	55,684	191,538
Subtotal	195,350	151,427	149,230	199,588	160,057	77,935	64,541	150,095	102,660	90,884	1,341,767	3,033,549
<b>STORMWATER</b>												
Local Drainage	8	17	244	822	770	768	1,410	769	156	3,084	8,048	20,225
On-Going	1,056	511	598	929	706	742	451	735	713	919	7,360	10,511
Pumping Facilities	1,996	7,877	6,966	6,429	1,909	3,218	5,492	5,792	4,100	5,773	49,553	61,204
DDOT	-	-	-	-	-	-	-	-	-	-	-	3,237
Research and Program Management	1,078	84	223	319	341	260	212	198	269	326	3,310	12,889
Trunk/Force Sewers	82	82	87	86	-	-	-	-	-	-	337	15,510
Subtotal	4,220	8,571	8,118	8,587	3,725	4,987	7,564	7,494	5,239	10,102	68,608	123,574
<b>SANITARY SEWER</b>												
Collection Sewers	5,434	2,476	10,012	20,547	21,664	24,747	33,310	43,591	44,337	36,594	241,712	498,192
On-Going	13,653	12,842	13,483	13,711	13,667	14,185	15,019	15,253	15,111	15,312	142,239	219,540
Pumping Facilities	2,248	1,619	4,868	6,649	6,495	4,935	9,975	10,882	12,457	29,612	89,739	270,778
Program Management	3,321	2,452	4,752	4,522	5,073	3,942	3,127	3,334	4,126	4,923	41,919	119,035
Interceptor/Trunk Force Sewers	20,270	24,257	24,133	37,813	50,321	50,384	53,579	67,961	58,633	54,174	441,526	963,054
Subtotal	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	937,135	2,070,599
<b>WATER</b>												
Distribution Systems	30,729	40,948	63,054	58,127	49,881	61,921	68,714	62,636	60,526	82,102	578,638	1,359,993
Lead Program	4,338	5,928	6,723	6,307	6,715	7,438	6,544	5,830	6,654	6,706	63,182	243,414
On-Going	10,080	10,238	10,126	12,297	13,351	15,199	16,789	18,583	20,447	22,981	150,091	215,064
Pumping Facilities	1,199	2,513	6,282	8,110	2,850	3,947	3,095	3,502	3,523	1,974	36,993	123,911
DDOT	992	76	3	5	-	-	-	-	-	-	1,076	33,933
Storage Facilities	9,384	5,223	2,549	8,940	7,526	3,913	3,770	8,779	7,098	-	57,181	137,364
Program Management	5,163	6,795	7,562	7,255	4,073	4,073	4,414	6,815	7,089	4,614	57,054	90,944
Subtotal	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,377	945,015	2,204,622
<b>CAPITAL PROJECTS</b>	<b>391,669</b>	<b>377,987</b>	<b>414,200</b>	<b>513,102</b>	<b>462,275</b>	<b>371,098</b>	<b>382,087</b>	<b>540,993</b>	<b>489,029</b>	<b>464,890</b>	<b>4,429,330</b>	<b>11,211,236</b>
<b>CAPITAL EQUIPMENT</b>	<b>27,400</b>	<b>17,105</b>	<b>30,027</b>	<b>29,656</b>	<b>29,295</b>	<b>33,750</b>	<b>32,610</b>	<b>32,496</b>	<b>31,409</b>	<b>31,349</b>	<b>295,098</b>	
ONGOING METER REPLACEMENT	2,618	2,618	2,930	2,930	2,930	2,930	2,930	2,930	2,930	2,930	28,676	
ERP PROJECT (Financial & HCM)	4,500	7,100	3,950	500	500	-	-	-	-	-	16,550	
SUBTOTAL - CAPITAL EQUIPMENT	34,518	26,823	36,907	33,086	32,725	36,680	35,540	35,426	34,339	34,279	340,324	
WASHINGTON AQUEDUCT	12,930	15,532	15,909	15,536	35,006	14,830	32,731	9,034	12,298	23,321	187,127	
ADDITIONAL CAPITAL PROGRAMS	47,448	42,155	52,816	48,622	67,731	51,509	68,272	44,461	46,637	57,600	527,450	
<b>LABOR</b>												
<b>TOTAL CAPITAL BUDGETS</b>	<b>\$439,117</b>	<b>\$420,342</b>	<b>\$467,016</b>	<b>\$561,724</b>	<b>\$530,006</b>	<b>\$422,607</b>	<b>\$450,358</b>	<b>\$585,454</b>	<b>\$535,666</b>	<b>\$544,490</b>	<b>\$4,956,780</b>	<b>\$12,127,945</b>