

# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

## Board of Directors

*Joint Meeting of the  
DC Retail Water and Sewer Rates and  
Finance and Budget Committees*

*Thursday, February 28, 2019  
10:00 a.m.*

## AGENDA

- I. Call to Order..... Rev. Kendrick Curry, Vice Chairperson  
Sarah Mostch, Vice Chairperson
- II. Proposed FY 2020 Budget (**Attachment 1**)..... Matthew T. Brown
- III. Financial Metrics & Planned Borrowing (**Attachment 2**)..... Matthew T. Brown
- IV. Executive Session \*
- V. Adjournment

\* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(1); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10); proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.



# Overview of FY 2020 Budget

Presentation to the Joint Committee meeting of the DC Retail Water & Sewer Rates and Finance & Budget on February 28, 2019



STEWARDSHIP

ACCOUNTABILITY

SUSTAINABILITY





# Agenda

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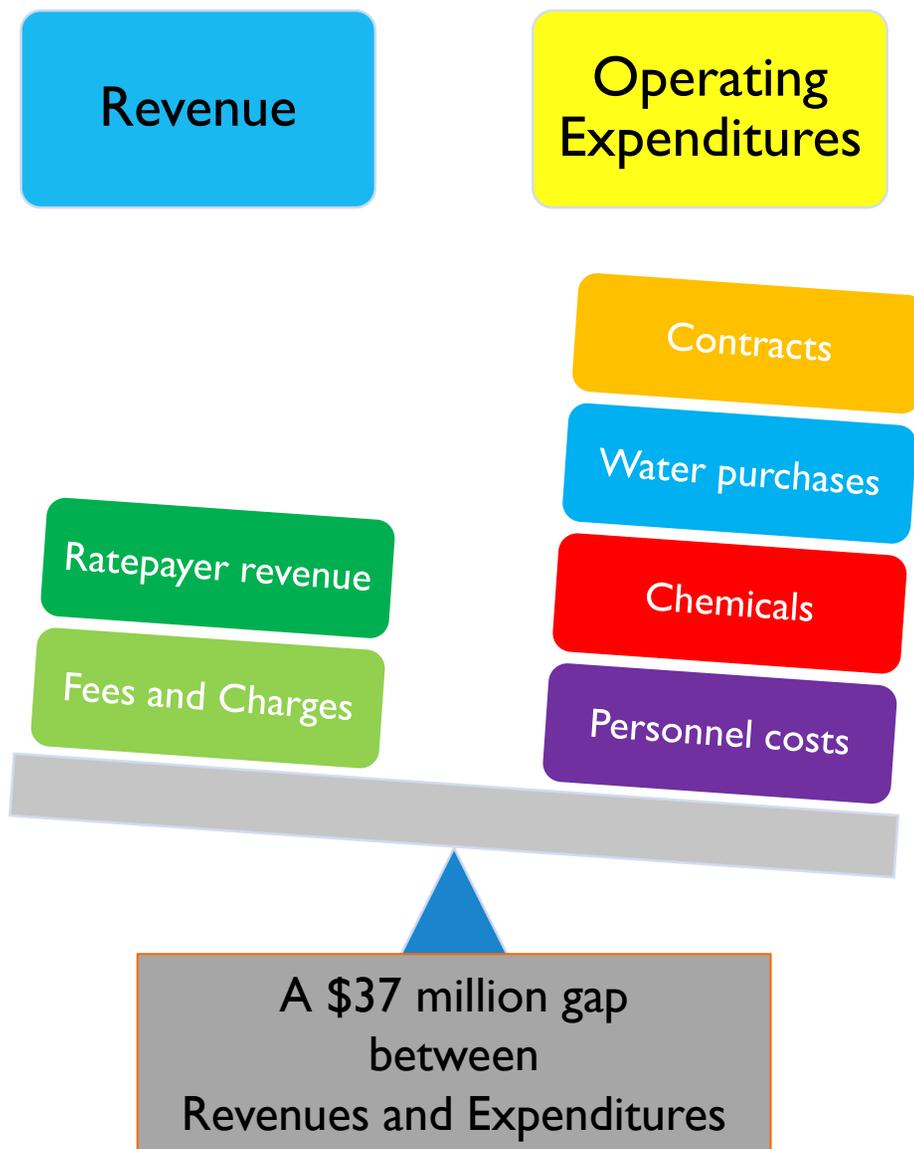
- Executive Summary..... 3
- Capital Improvement Program ..... 10
- Operating Expenditure Budgets..... 15
- Operating Revenue Budgets..... 26
- Financial Plan..... 40
- CRIAC Discount Analysis ..... 50



# Executive Summary



# Where We Started





# Budget Requests

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## 💧 Personnel services – Gap of \$19.1 million

- \$5.6 million increase in salaries and wages for existing 1165 employees, total of \$115 million plus benefits
- \$7.7 million increase to fully fund 115 vacant positions, including related wage increases and benefits
- \$0.5 million increase to align overtime to current trends of \$8.1 million
- \$3.2 million to hire twenty-eight employees to insource automotive maintenance and parts contracts
- \$2.1 million for other needs including \$0.2 million for support of the new Fats, Oils & Grease (FOG) and Cross Connection Programs

## 💧 Chemicals - \$2.5 million price increase and higher usage by new tunnels during rain events

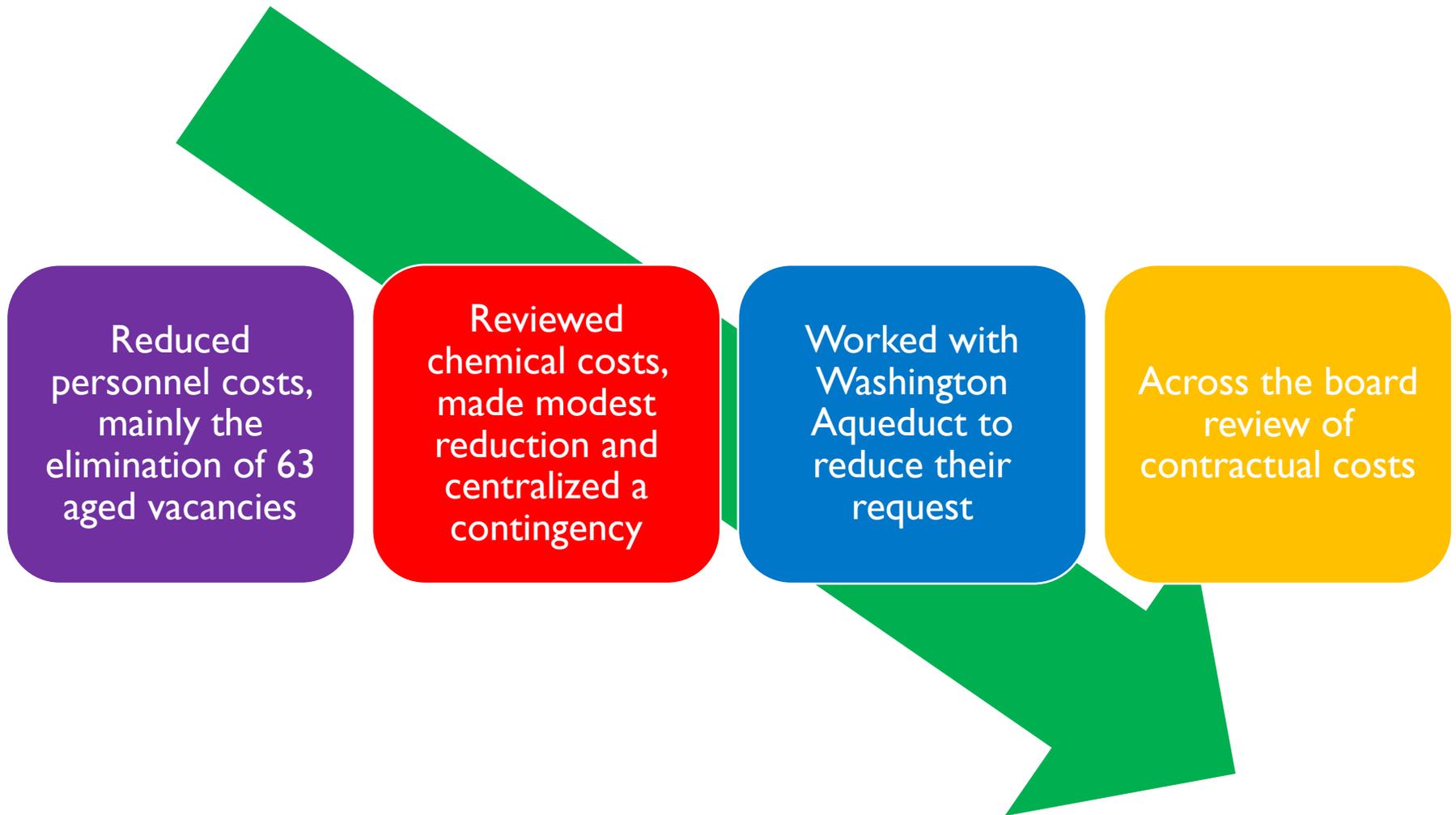
## 💧 Water Purchases - \$6.5 million to fully fund Washington Aqueduct request, mainly personnel

## 💧 Contracts - \$8.9 million increase in major programs

- \$2.4 million increase for ERP project including subscription, data conversion, training and consultant support
- \$1.2 million increase in maintenance of equipment, automotive, warranties, debris hauling & disposal
- \$1.6 million for workers' compensation consistent with prior year experience and reserves requirement
- \$1.2 million for changes in capitalization policy for infrastructure repairs previously funded in CIP
- \$1 million increase in credit card fees and \$0.2 million to support the FOG/Cross Connection programs
- \$1 million for the as-builts program
- \$0.3 million for employee training, conference and travels



# Tough Choices to Balance the Budget





# Tough Choices

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## 💧 Personnel Services

- Saved \$7.4 million annually by eliminating 63 aged, vacancies
- \$3.2 million reduction to continue existing fleet maintenance services through contracting, in lieu of hiring
- Reduced \$0.4 million in the use of temps and part time employees
- Reduced \$1.2 million by partially funding the remaining vacancies critical for operations

💧 Reduced chemicals by \$0.5 million based on modest price escalation, with risks assumed in CFCI

💧 Reduced water purchases by \$2.1 million by working with Washington Aqueduct

## 💧 Contract services

- Aligned contracted legal and insurance expenditures with current trends, reducing \$3.5 million
- \$1.6 million reduction in consultants for IT and finance functions, support for the ERP project, and more reliance on staff experts
- \$1.4 million reduction in facilities and security management services, but reexamining requirements
- Reduced employee training and conference costs by \$0.7 million
- Saved \$0.7 million through cloud migration services and new technology solutions (customer call center & Skype for business)
- Reduced \$0.4 million in biosolids hauling costs
- Aligned several professional services for maintenance and repairs of equipment and automotive, debris hauling, laboratory, research, software maintenance, as-builts, and credit card fees, shaving off \$1.5 million

💧 Centralized contingencies for volatility in prices and usage (chemicals & utilities), legal, biosolids and other unplanned/unknown business needs in Cash Financed Capital Improvements (CFCI)

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# Proposed FY 2020 Budget

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- 💧 **Capital Budget: 10-year, \$4.96 billion, an increase of \$0.95 billion over previous plan**
  - Spending levels for FY 2019 and FY 2020 remain the same as previous approval
  - Capital Projects - Beginning in FY 2021, additional \$745.4 million for the increased funding requirements primarily for water and sewer infrastructure
  - Capital Equipment - Increase of \$142.2 million mainly to fully account for planned spending
  - Washington Aqueduct - Increase of \$67.1 million for DC Water's share of capital program
  
- 💧 **Operating Budget: \$614.5 million**
  - Core O&M - \$348.6 million, an increase of \$13.5 million mainly in personnel, chemicals and water purchases
  - Debt Service and District Payments - \$215 million for debt service, an increase of \$16.3 million; \$0.3 million for PILOT consistent with District agreement (total of \$22 million to the District)
  - CFCI - Increase of \$1.6 million to \$28.6 million
  - Capital Labor - Increase of \$4.5 million, total of \$22.7 million
  
- 💧 **Revenue: \$694.0 million**
  - Shift of 18% of Clean Rivers expenditures to volumetric rate, providing ratepayers more control over their bills
  - Reflect \$3.5 million for new FOG and Cross Connection, and engineering fees
  - Increase from 4% to 20% CRIAC discount for Stormwater Best Management Practices



# Budget Adoption Calendar

## Board Member Questions & Follow Up

- Submit budget-related questions to Board Secretary
- Board Secretary will distribute questions to appropriate staff

## Committee Reviews, Recommendations & Actions – February & March

	Environmental Quality & Operations	DC Retail Water & Sewer Rates	Finance & Budget
FY 2019 - FY 2028 Capital Budget (Disbursements & Lifetime)	Action Required		Action Required
FY 2020 Operating Budget			Action Required
Intent to Reimburse Capital Expenditures with Proceeds of a Borrowing			Action Required
FY 2019 – FY 2028 Financial Plan		Action Required	Action Required
FY 2020 Rates, Charges & Fees		Action Required	

## Board Adoption – April 4



# Proposed FY 2019 – FY 2028 Capital Improvement Program



The proposed 10-year disbursements (FY 2019 - FY 2028) of \$4.96 billion increases investment in our aging infrastructure

## 💧 Capital Construction Projects - \$4.43 billion

- \$1.34 billion fully funds the DC Clean Rivers' project to meet Consent Decree requirements
- Increase of \$44.2 million fully funds Stormwater pump stations, \$68.6 million over ten-years
- \$424.6 million increase in the Sewer Service area to fully fund the pump station requirements, and ramp up to the annual 1% rehabilitation (17.5 mi/year) by FY 2023 for the small sewer lines, ten-year total of \$957 million
- Adds \$214.3 million in the Water Service area for the full replacement of small diameter water mains to achieve 1% per year, totaling \$945 million
- Adds \$122.8 million in the Wastewater Service area to fully fund major rehabilitation for the liquids and biosolids processing projects and meet the NPDES permit, totaling \$978.7 million
- \$138 million to fund Non Process Facilities, like HVAC, Roofs, and Fleet/Sewer Services relocation

## 💧 Additional Capital Programs - \$527 million

- \$340 million for capital equipment items to meet purchases/replacement of mechanical equipment, operational facilities, vehicle equipment, office renovations, and IT software/hardware
- \$187 million for DC Water's share of WAD's infrastructure improvements to achieve established service levels



# 10-Year Engineering CIP Options Compared

Service Area	Current Baseline \$3.8B	Modified Baseline \$4.4B	Asset Management \$5.4B
<b>Clean Rivers</b>	<b>Fully funded</b> to meet Consent Decree	<b>Fully funded</b> to meet Consent Decree	<b>Fully funded</b> to meet Consent Decree
<b>Wastewater</b>	<b>Generally funded</b> to meet NPDES Permit and established levels of service	<b>Fully funded</b> to meet NPDES Permit and established levels of service	<b>Fully funded</b> to meet NPDES Permit and established levels of service
<b>Stormwater</b>	<b>Underfunded</b>	<b>Fully funded</b>	<b>Fully funded</b>
<b>Water</b>			
Pump Stations & Storage Facilities	<b>Generally funded</b> to current service levels	<b>Generally funded</b>	<b>Fully funded</b>
Small Diameter WMs	<b>Underfunded; (Funded to meet 1% replacement/rehab goal [11 mi/year]), but only 0.7% a year at full replacement</b>	<b>Underfunded; (Funded to meet 1% per year replacement level - increased cost is due to switch to full replacement [11 mi/year])</b>	<b>Fully funded to ramp up to 2% replacement level [22 mi/year]</b>
Large Diameter WMs	<b>Generally funded</b>	<b>Generally funded</b>	<b>Generally funded</b>
<b>Sewer</b>			
Pump Stations	<b>Underfunded</b>	<b>Fully funded</b>	<b>Fully funded</b>
Sewer Lines < 60" dia.	<b>Substantially underfunded [0.35%; 6.2 mi/year]</b>	<b>Underfunded (Funded to ramp up to 1.0% per year rehabilitation level [17.5 mi/year] by FY23)</b>	<b>Fully funded to ramp up to 2.3% rehabilitation level [40 mi/year]</b>
Sewer Lines ≥ 60"	<b>Generally Funded</b>	<b>Generally Funded</b>	<b>Generally Funded</b>
<b>Non Process</b>	<b>Fully funded</b> for HQ, Fleet and Sewer Operations Facilities, Otherwise <b>Underfunded</b>	<b>Fully funded</b>	<b>Fully funded</b>

'Generally Funded' = What we know or expect to find can be rehabilitated 'Underfunded' = What we know or expect to find is not all funded 'Fully Funded' = All needs known or expected are met



# 10-Year CIP Disbursements

## Modified Baseline CIP

- 1) FY19 & FY20 Total spending for each year has been kept at FY18-27 board approved baseline levels to remain congruent with previously approved 5% rate increases
- 2) Ramp-up to modified Baseline CIP beginning in FY21

Service Area (\$000's)	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	10-Yr Total	Last Year's CIP	(Increase) /Decrease
Non-Process Facilities	15,309	36,002	26,793	20,665	6,831	11,058	10,396	3,901	3,553	3,560	138,067	108,032	(30,036)
Wastewater Treatment	69,979	66,620	76,510	97,635	110,047	82,434	81,249	133,338	137,575	123,351	978,738	855,948	(122,790)
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	1,313,196	50,607
Combined Sewer	7,491	4,219	9,444	8,015	8,646	13,520	8,852	5,800	5,593	7,598	79,178	119,151	39,973
Stormwater	4,220	8,571	8,118	8,586	3,725	4,987	7,564	7,494	5,239	10,102	68,608	24,452	(44,156)
Sanitary Sewer	44,927	43,646	57,249	85,588	97,220	98,194	115,011	140,020	134,664	140,615	957,135	532,490	(424,645)
Water	61,884	71,720	96,300	101,039	84,395	96,491	103,325	106,145	105,338	118,378	945,015	730,672	(214,343)
<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>486,890</b>	<b>4,429,330</b>	<b>3,683,941</b>	<b>(745,389)</b>
Capital Equipment	34,518	26,823	36,907	33,086	32,725	36,680	35,540	35,426	34,339	34,279	340,324	198,133	(142,191)
Washington Aqueduct	12,930	15,532	15,909	15,536	35,006	14,830	32,731	9,034	12,298	23,321	187,127	120,052	(67,075)
<b>ADDITIONAL CAPITAL PROGRAMS</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>44,461</b>	<b>46,637</b>	<b>57,600</b>	<b>527,450</b>	<b>318,185</b>	<b>(209,265)</b>
<b>TOTAL CIP</b>	<b>439,117</b>	<b>420,342</b>	<b>467,016</b>	<b>561,724</b>	<b>530,006</b>	<b>422,608</b>	<b>450,358</b>	<b>585,454</b>	<b>535,665</b>	<b>544,490</b>	<b>4,956,780</b>	<b>4,002,126</b>	<b>(954,655)</b>
Last Years CIP	439,118	420,342	402,681	445,647	385,312	326,284	318,360	439,427	375,004		4,002,126		
(Increase)/Decrease	1	(0)	(64,335)	(116,077)	(144,694)	(96,324)	(131,998)	(146,027)	(160,661)	(544,490)	(954,655)		



# Overview of Additional Capital Programs

## Capital Equipment

- \$142.2 million increase over the ten-year period is to right-size the latter years for projected needs which were previously underfunded

## Washington Aqueduct

- \$67.1 million increase is for DC Water’s proportionate share of WAD’s infrastructure improvements to achieve established service levels. These excludes the Federally Owned Water Mains, Travillah Quarry Acquisition Outfitting and Advanced Treatment projects

Cash Disbursements, in \$000’s

Years	Capital Equipment			Washington Aqueduct			Total Additional Capital Programs		
	Approved	Proposed	(Inc)/Dec	Approved	Proposed	(Inc)/Dec	Approved	Proposed	(Inc)/Dec
FY 2019	\$ 34,518	\$ 34,518	\$ 0	\$ 12,930	\$ 12,930	\$ -	\$ 47,448	\$ 47,448	\$ 0
FY 2020	29,383	26,823	2,560	12,944	15,532	(2,588)	42,327	42,355	(28)
FY 2021	27,998	36,907	(8,909)	13,039	15,909	(2,870)	41,037	52,816	(11,779)
FY 2022	9,579	33,086	(23,507)	13,039	15,536	(2,497)	22,618	48,622	(26,004)
FY 2023	10,306	32,725	(22,419)	12,312	35,006	(22,694)	22,618	67,731	(45,113)
FY 2024	10,850	36,680	(25,830)	11,768	14,830	(3,062)	22,618	51,509	(28,892)
FY 2025	11,177	35,540	(24,363)	11,441	32,731	(21,291)	22,618	68,272	(45,654)
FY 2026	12,122	35,426	(23,305)	10,496	9,034	1,462	22,618	44,461	(21,843)
FY 2027	12,303	34,339	(22,037)	10,315	12,298	(1,983)	22,617	46,637	(24,019)
FY 2028	39,898	34,279	5,619	11,768	23,321	(11,553)	51,666	57,600	(5,935)
<b>Ten-Year Total</b>	<b>\$ 198,133</b>	<b>\$ 340,324</b>	<b>\$ (142,191)</b>	<b>\$ 120,052</b>	<b>\$ 187,127</b>	<b>\$ (67,074)</b>	<b>\$ 318,185</b>	<b>\$ 527,450</b>	<b>\$ (209,265)</b>



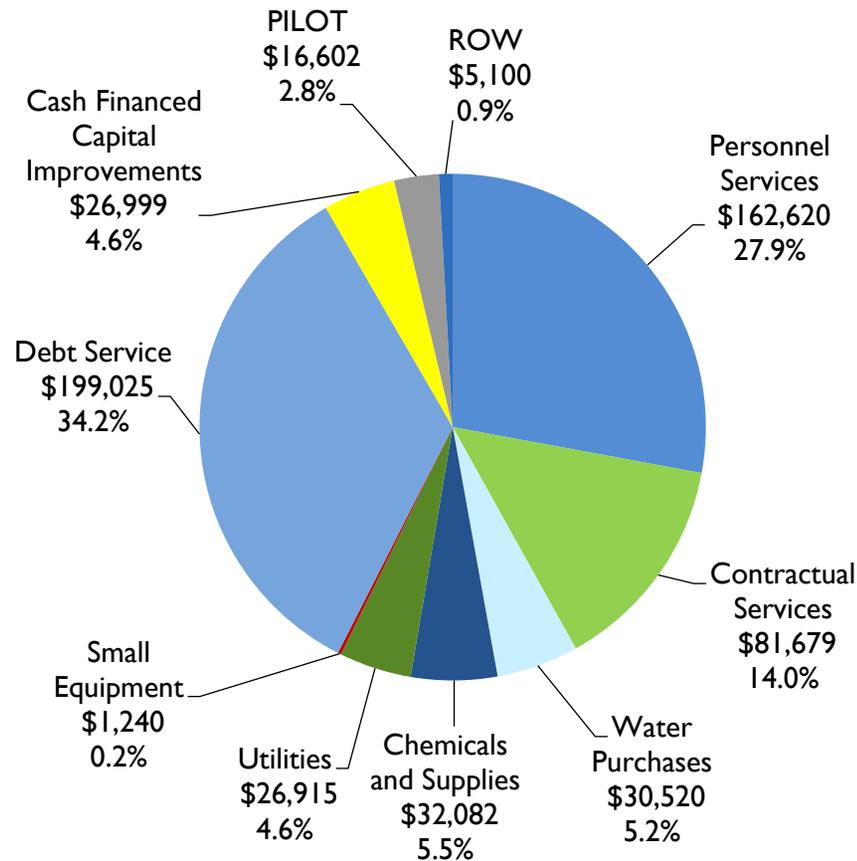
# Operating Expenditure



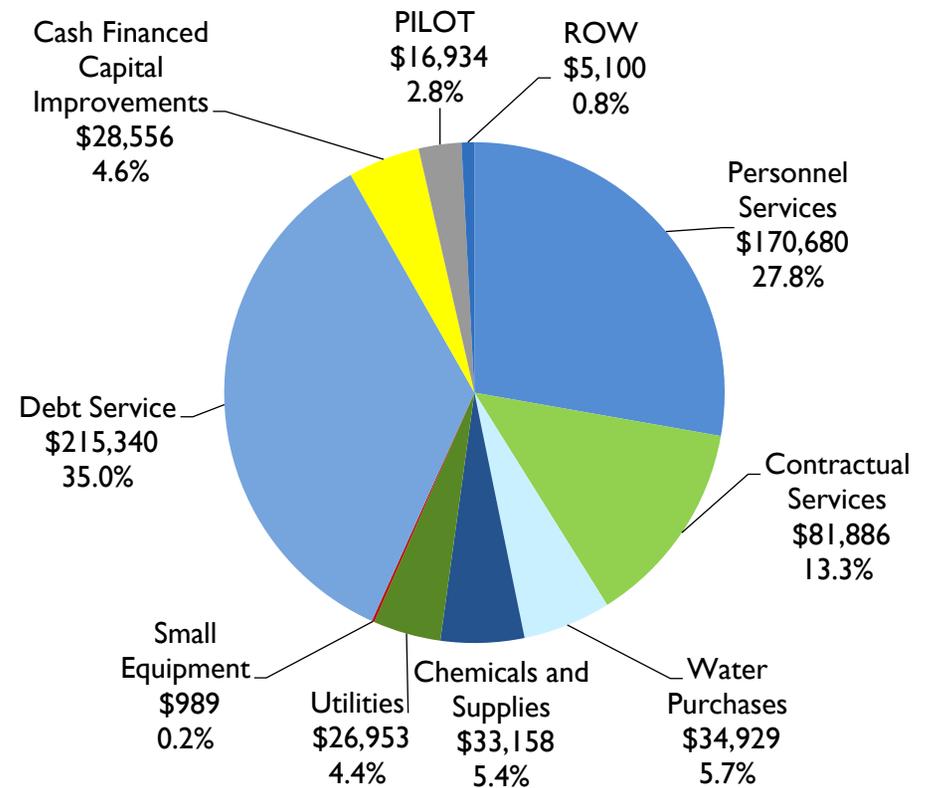
# FY 2019 vs. FY 2020 Expenditure Budgets

\$ in thousands

## Approved FY 2019 \$582,781



## Proposed FY 2020 \$614,523





## Comparison by Cost Category

- 💧 Total operating expenditure is projected to increase by \$31.7 million or 5.4 percent
- 💧 Total O&M expenditure is projected to increase by \$13.5M or 4.0 percent

(\$000's)	FY 2018 Approved	FY 2018 Actual	FY 2018 Variance	FY 2019 Approved	FY 2020 Proposed	(Increase)/ Decrease	
Total Personnel Services	\$ 149,193	\$ 157,635	\$ (8,442)	\$ 162,620	\$ 170,680	\$ (8,060)	-5.0%
Non-Personnel Services							
Chemicals & Supplies	30,658	30,482	176	32,082	33,157	(1,075)	-3.4%
Utilities	29,399	26,158	3,241	26,915	26,953	(38)	-0.1%
Contractual Services	79,354	74,914	4,440	81,679	81,886	(207)	-0.3%
Water Purchases	30,156	28,357	1,799	30,520	34,929	(4,409)	-14.4%
Small Equipment	1,071	700	371	1,240	989	251	20.2%
Total Non-Personnel Services	170,638	160,610	10,028	172,435	177,914	(5,479)	-3.2%
Total Operations & Maintenance	\$ 319,831	\$ 318,245	\$ 1,586	\$ 335,055	\$ 348,594	\$ (13,539)	-4.0%
Debt Service	185,480	178,399	7,081	199,025	215,340	(16,315)	-8.2%
PILOT & ROW	21,376	21,376	-	21,702	22,034	(332)	-1.5%
Cash Financed Capital Improvements	35,260	35,260	-	26,999	28,556	(1,557)	-5.8%
Total Non-O&M	242,116	235,035	7,081	247,726	265,929	(18,203)	-7.3%
Total Operating Expenditure	\$ 561,947	\$ 553,279	\$ 8,667	\$ 582,781	\$ 614,523	\$ (31,742)	-5.4%
Capital Labor Charges	(21,061)	(15,527)	(5,534)	(18,259)	(22,748)	4,489	-24.6%
Net Operating Expenditure	\$ 540,886	\$ 537,752	\$ 3,133	\$ 564,522	\$ 591,775	\$ (27,253)	-4.8%

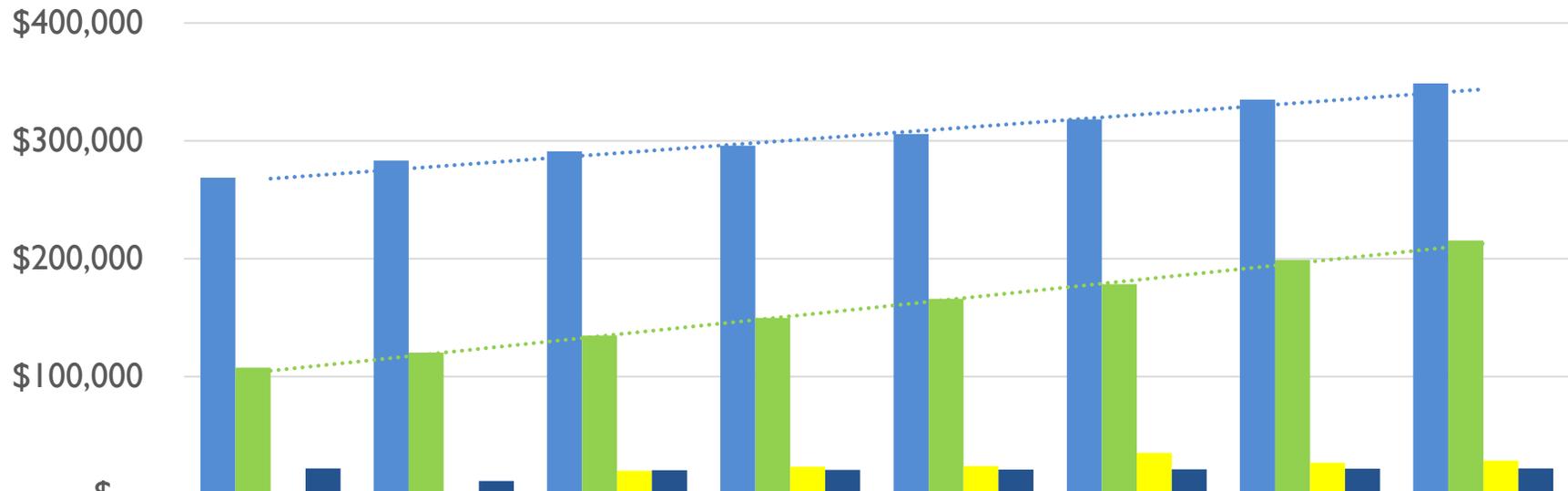


# Efficient Operations

- Constrained annual growth of operations and maintenance budget offset by 10.4 percent annual average growth in debt service costs

FY 2013 – FY 2020 Historical & Projected Operating Expenditure

\$ in thousands



	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Approved	FY 2020 Proposed
■ Core O & M	\$268,630	\$283,316	\$290,970	\$295,888	\$305,851	\$318,263	\$335,055	\$348,594
■ Debt Service	\$107,700	\$120,165	\$134,845	\$149,781	\$165,836	\$178,399	\$199,025	\$215,340
■ CFCI	\$-	\$-	\$20,058	\$23,475	\$24,199	\$35,260	\$26,999	\$28,556
■ District Payments	\$21,982	\$11,458	\$20,437	\$20,744	\$21,057	\$21,376	\$21,702	\$22,034



## FY 2019 vs FY 2020

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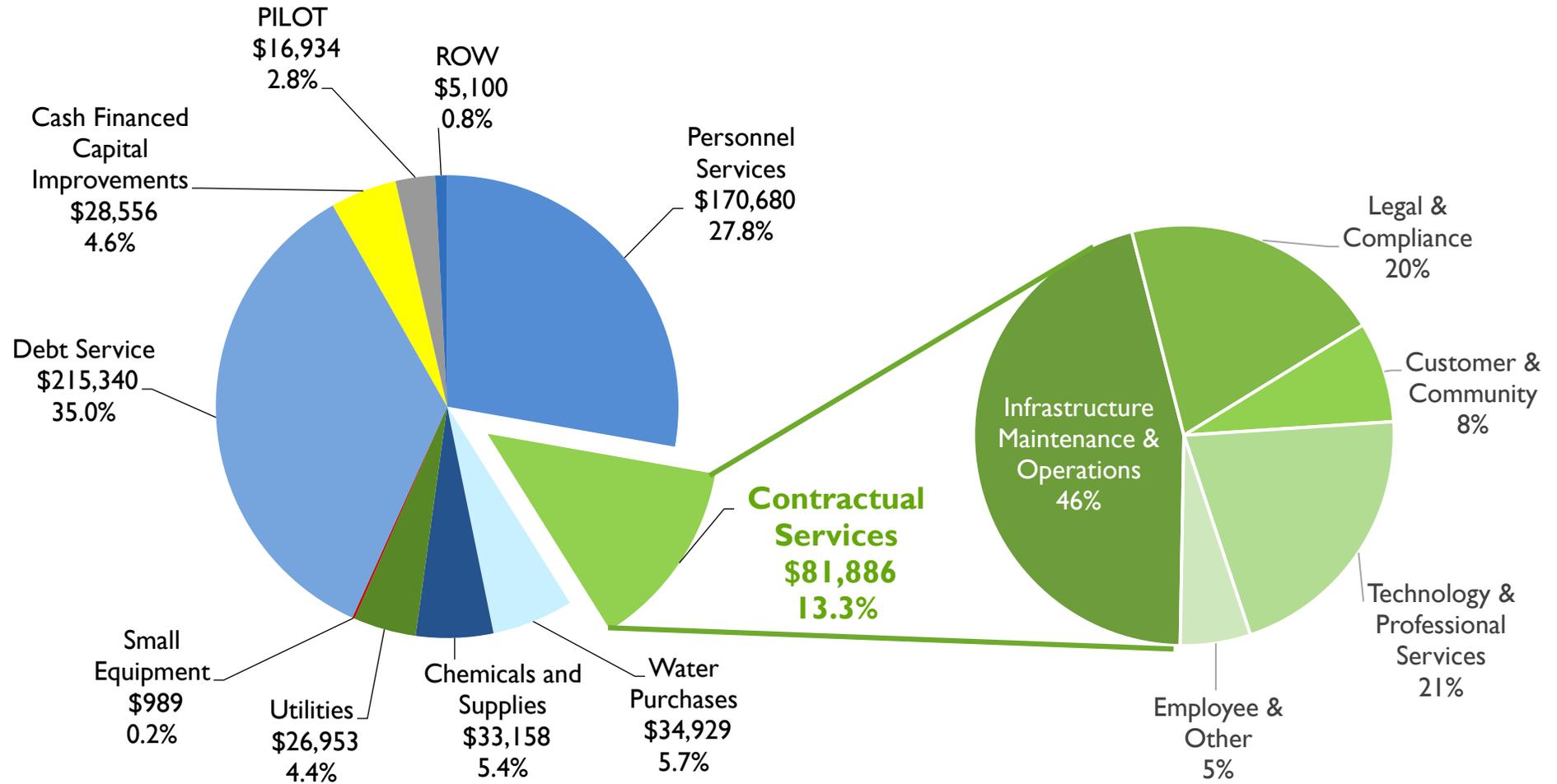
- 💧 **Personnel Services** - \$8.1 million increase mainly for annualized impact of salary adjustments, vacancies, overtime, and other employee-related benefits
- 💧 **Chemicals & Supplies** - \$1.6 million increase mainly due to unit prices for major chemicals (methanol and sodium bisulfite) and high chemical usage in the Tunnel Dewatering Pump Station during rain events
- 💧 **Utilities** - Relatively flat compared to FY 2019 budget and assumes onsite electric generation of 8MW from the Combined Heat & Power (CHP) facility
- 💧 **Water Purchases** - \$4.4 million increase fully funds the appropriation O&M requirement for Washington Aqueduct. Approved FY 2019 budget level was based on historical budget performance of 90%
- 💧 **Contracts** - Relatively flat compared to FY 2019 levels with cost adjustments for major programs offset by cost reductions in various professional services



# Breakdown of Contractual Services

\$ in thousands

**Proposed FY 2020**  
**\$614,523**

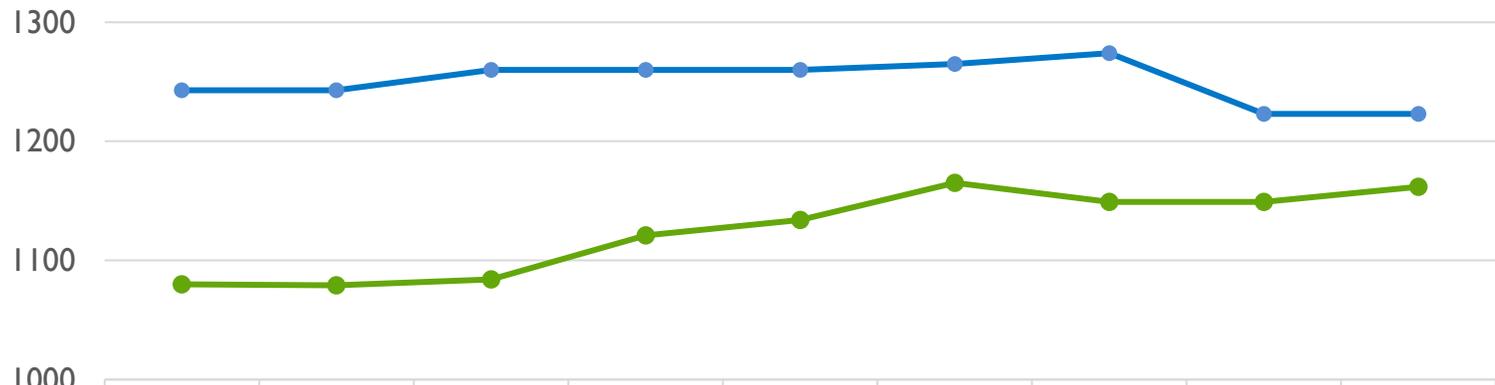




# Headcount

- 💧 Since at least 2013 headcount has grown or remained constant
- 💧 This year 63 positions will be eliminated, saving ratepayers \$7.4 million a year
  - Adds 12 new positions for in-house support of various operational requirements for water quality compliance, automotive parts, permits and other strategic programs

**Historical & Projected Headcount**



	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019 Approved	FY 2019 Adjusted*	FY 2020 Proposed
● Total Headcount	1243	1243	1260	1260	1260	1265	1274	1223	1223
● Filled/Projected Positions	1080	1079	1084	1121	1134	1165	1149	1149	1162
● Vacancy Rate	13%	13%	14%	11%	10%	8%	10%	6%	5%

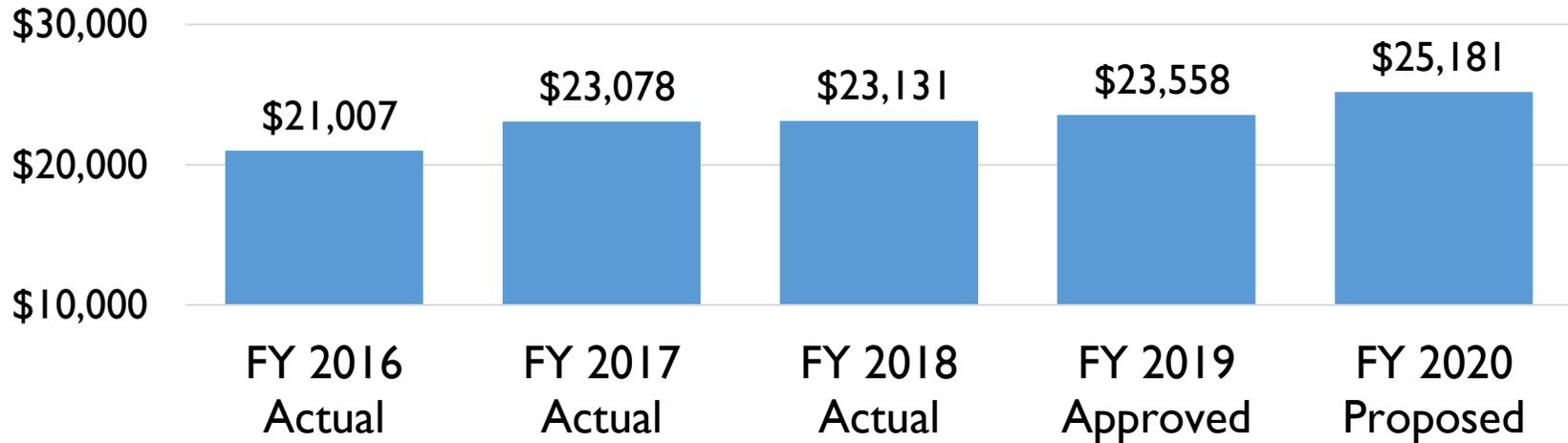
\* FY 2019 reflects filled positions as of January 2019 and excludes the eliminated vacant positions



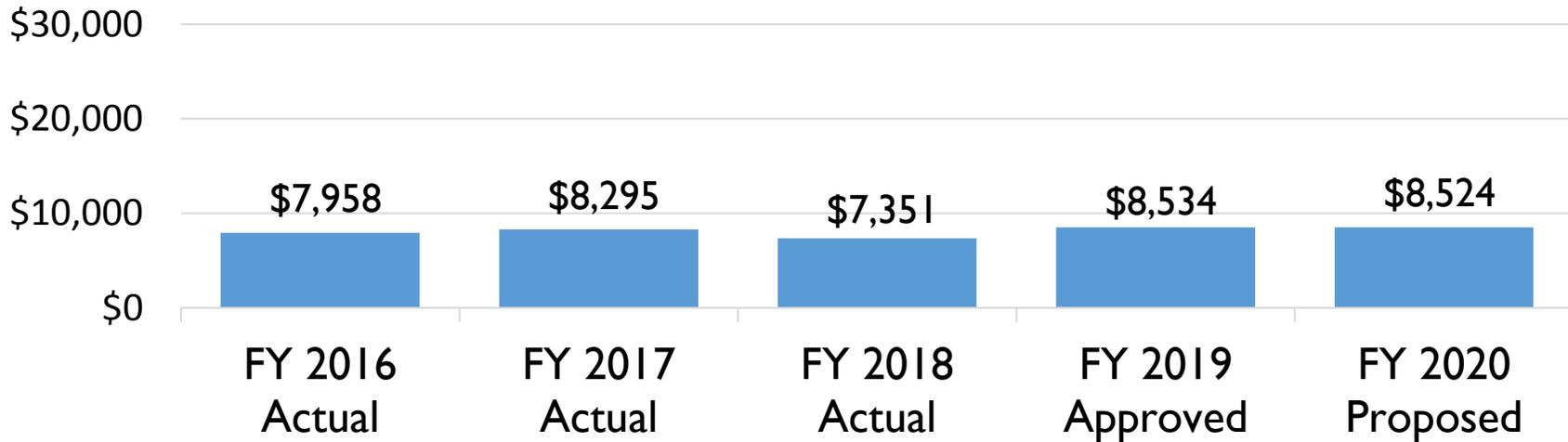
# O&M: Chemicals & Supplies

\$ in thousands

## Chemicals



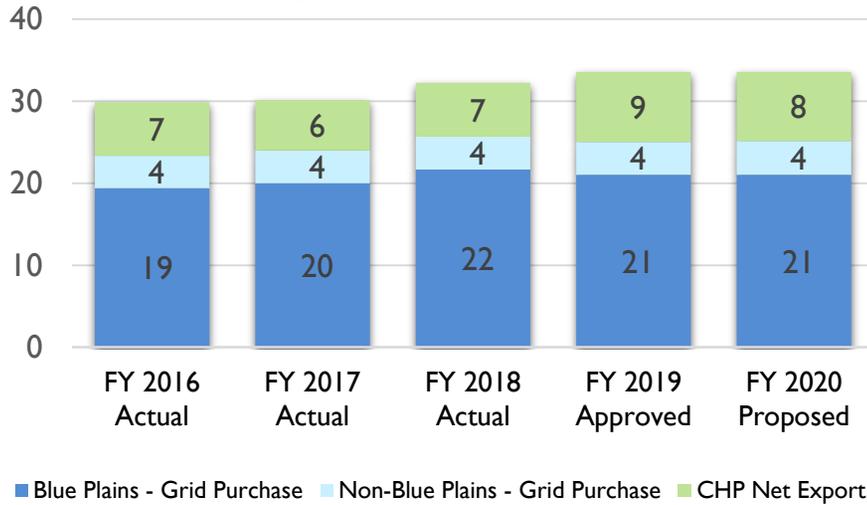
## Supplies



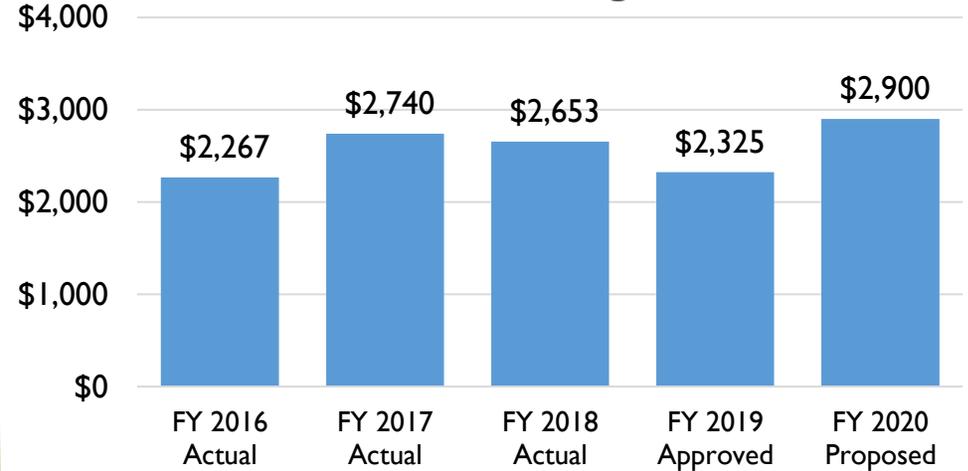


# O&M: Utilities

### Average Electric Usage (MW)



### Water Usage

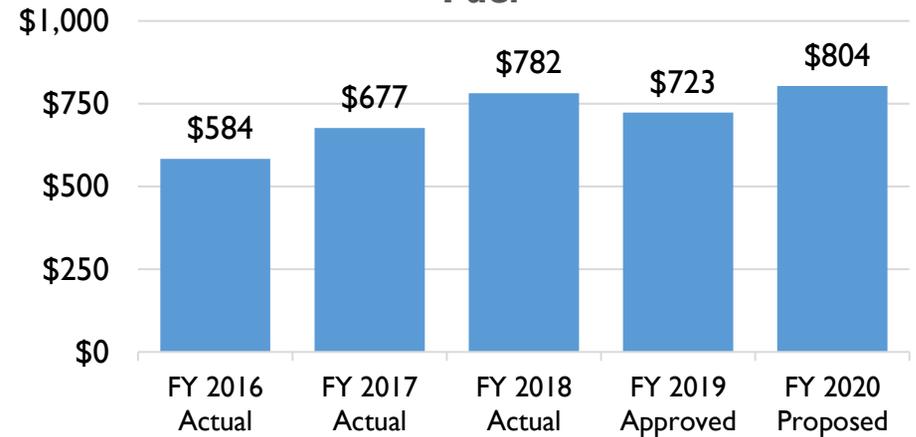


\$ in thousands

### Electricity Costs



### Fuel



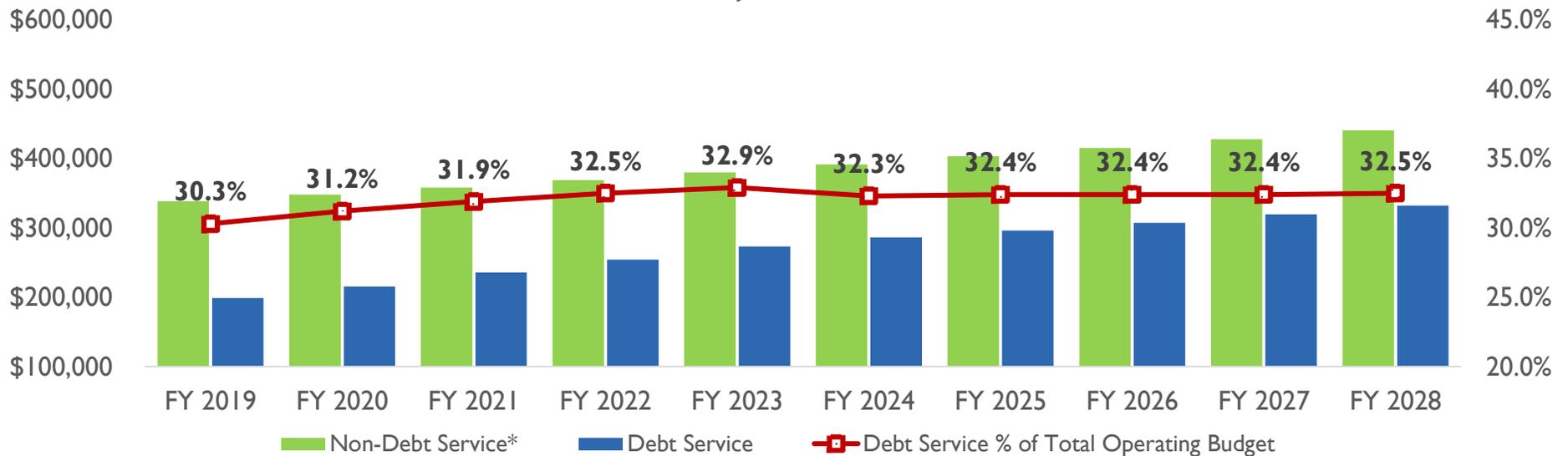


# Debt Service

- 💧 New Bond Issuance - \$300 million anticipated during late Summer 2019
- 💧 Debt Service - Overall increase is to support the capital program
  - Represents 30% and 31% of the total operating revenue in FY 2019 and FY 2020, respectively
  - Projected to grow from \$198.8 million in FY 2019 to \$332.1 million by FY 2028 (approx. 67% increase)
  - Projected ten-year average of 32% of total operating revenue

\$ in thousands

**FY2019 - FY2028 Projected Debt Service Costs**



\* Non-Debt Service includes O&M, PILOT, ROW and CFCI estimates



# Budget Risks

Category	Description
Personnel	Union contract expires September 30, 2019, overtime requirements during winter season, healthcare, staffing needs
Chemicals	Unit prices, rain events, process optimization
Utilities	CHP optimization, solar project output & timeline
New facilities	Parts, equipment and maintenance requirement for tunnels, Fleet & Sewer Services and other additional facilities
Biosolids/ BLOOM	Hauling/marketing of 65,000 tons
Litigation and Insurance	Impacts of unanticipated legal cases and insurance policy requirements
Enterprise Resource Planning (ERP) System	Project implementation and Go-live pending outcome of RFP review and contract negotiation
Clean Energy DC Act	Impact of the Clean Energy DC Omnibus Amendment Act of 2018 on energy, building energy performance requirements and transportation initiatives to reduce carbon emissions



# Operating Revenue



## Proposed FY 2020 Budget

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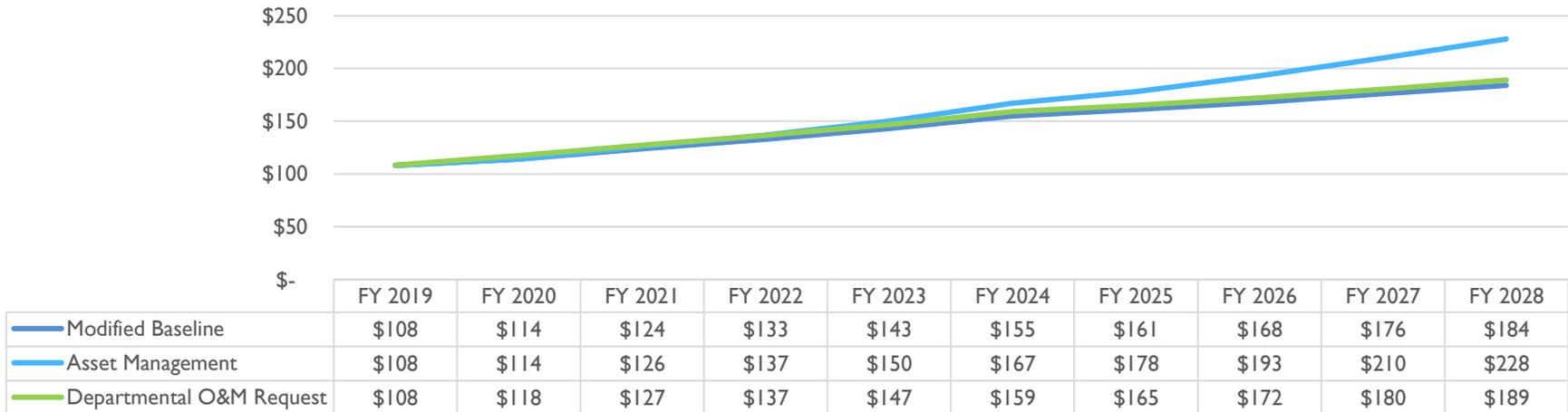
- 💧 Overall household charges increase 5.7%, the same as previously forecasted for FY2020
- 💧 Proposed change in the way that Clean Rivers costs are recovered
  - \$99.1 million in FY2020 for Clean Rivers
  - Proposal to shift 18 percent from Impervious Area Charge to Sewer Rate
    - Based on methodology that allocates pollutant loads
  - The proposed budget:
    - Decreases the Clean Rivers Impervious Area Charge (CRIAC) from projected \$25.58 in FY 2020 to \$20.94 per ERU, per month
    - Increases the Water & Sewer rate by 11.5% in FY 2020
    - Average household charge changes from \$114.48 to \$114.49
    - Provides customers ability to reduce their bills
- 💧 Increase from 4% to 20% CRIAC discount from Stormwater Best Management Practices



# Proposed FY 2020 Budget

- The modified asset management plan is recommended because it balances infrastructure investment with growth in rates
- Under the previous financial plan, water and sewer charges would increase 5% a year, and the average household charge would increase 5.0% each year of the ten-year plan
  - The current proposal increases water and sewer rates an average of 8.2% and the average household charge an average of 6.8% over the ten year period
  - The full Asset Management plan would have increased the average household bill and average of 11.0% over the ten year period

Average Household Charge



■ Modified Baseline     
 ■ Asset Management     
 ■ Departmental O&M Request

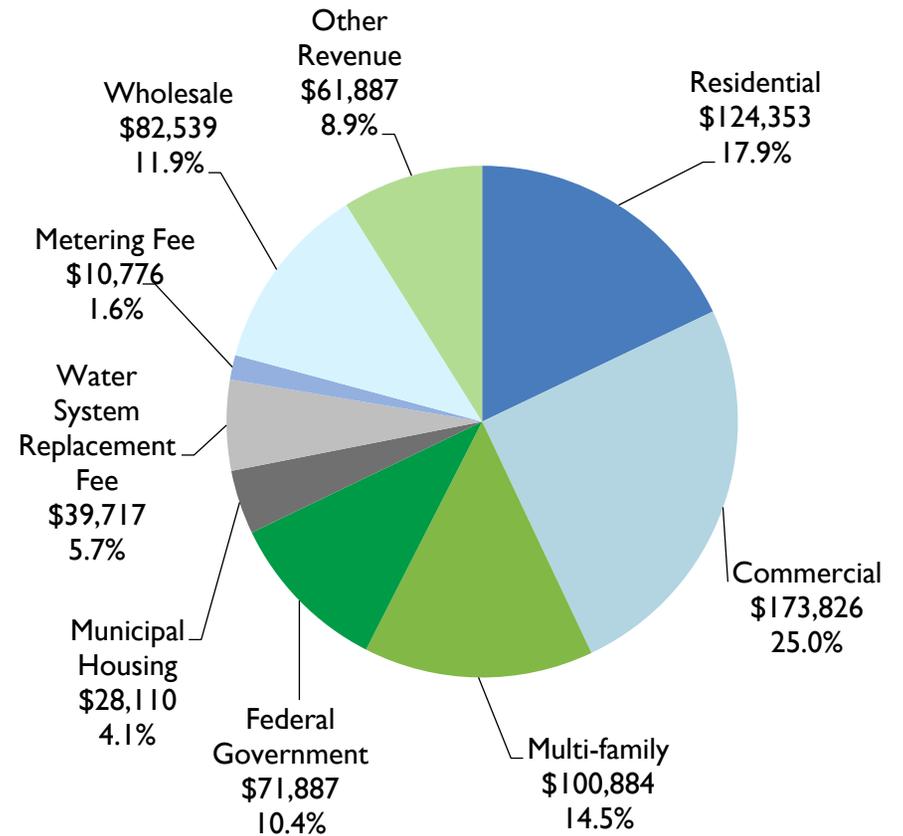
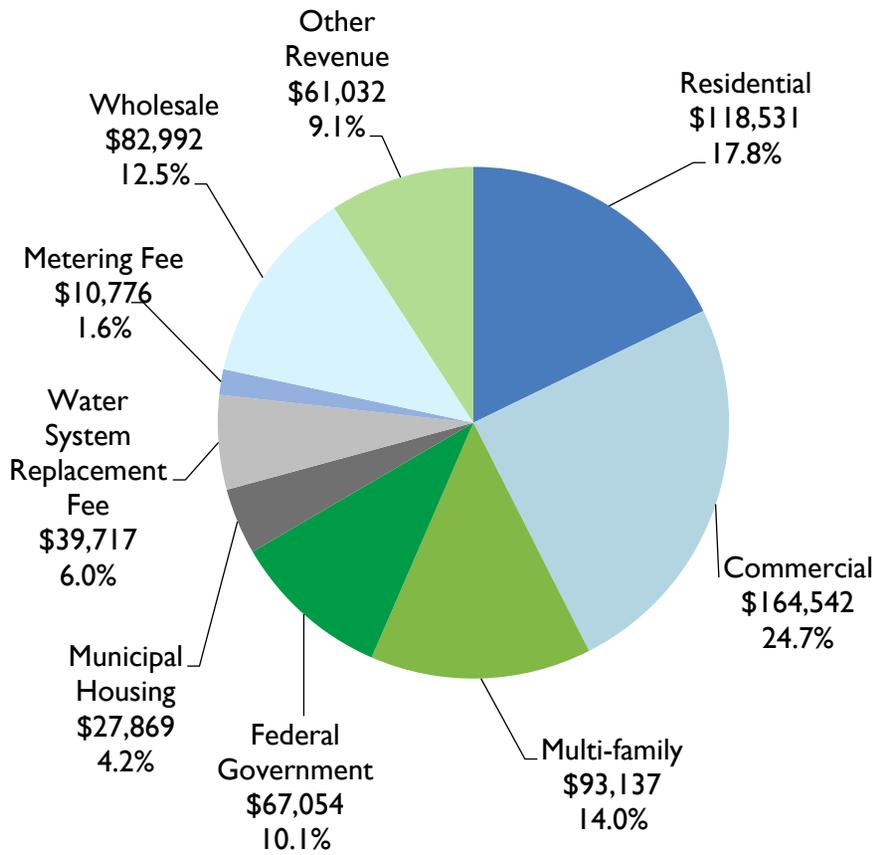


# FY 2019 vs. FY 2020 Operating Revenues

**Revised FY 2019**  
**\$665,650**

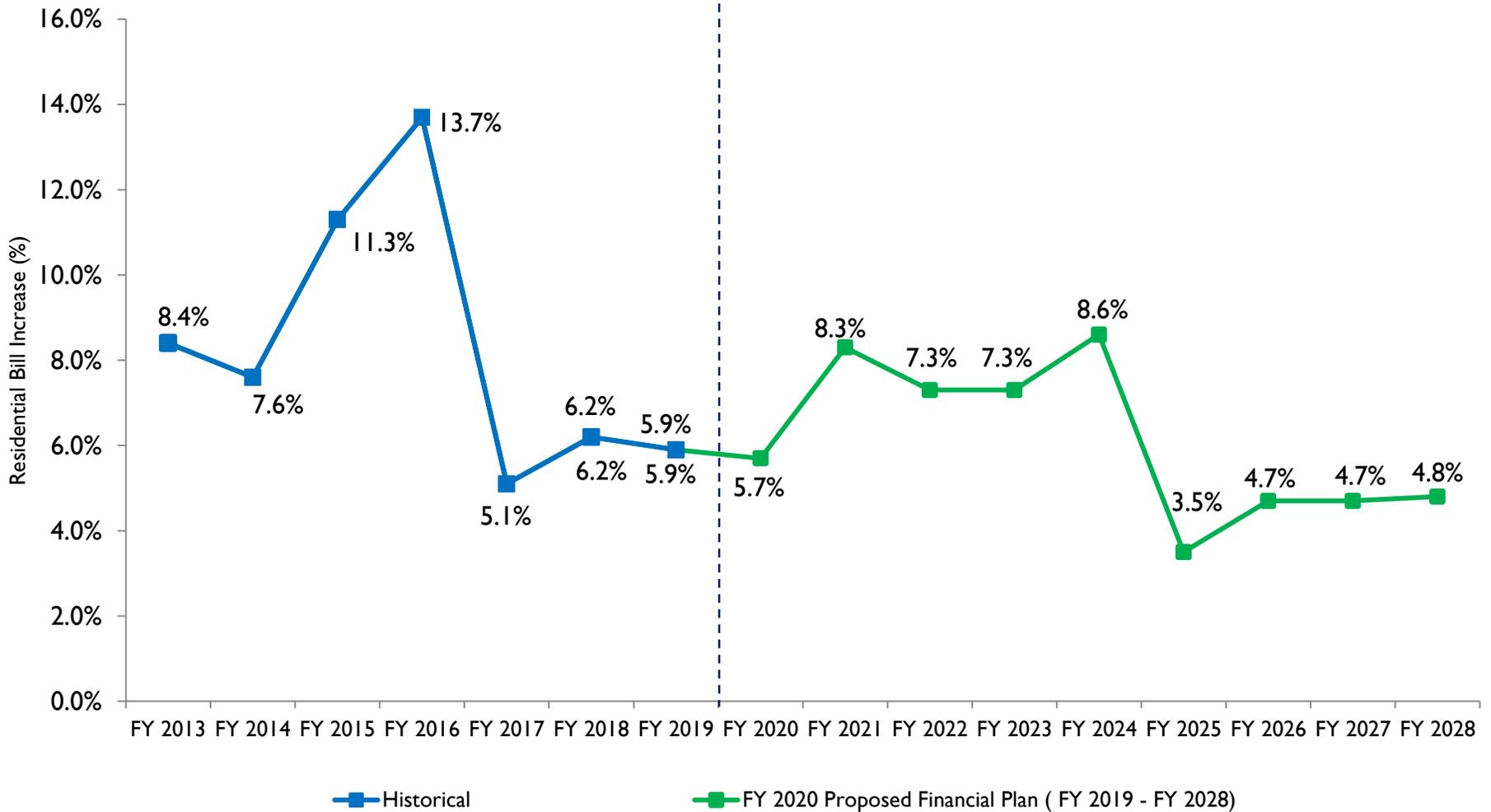
(\$000's)

**Proposed FY 2020**  
**\$693,979**

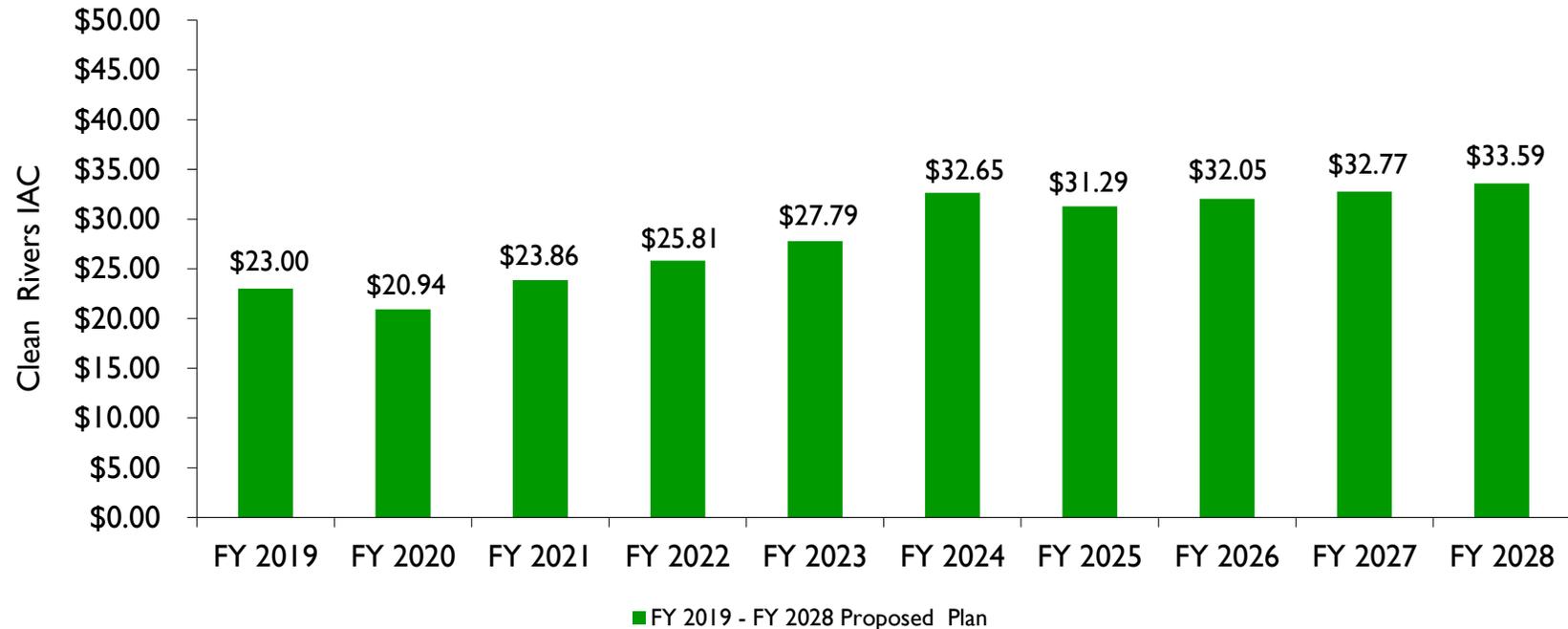




# Historic and Projected Combined Household Increases for Residential Customers



# dc Projected Clean Rivers Impervious Area Charge



- Charges are driven by debt service costs necessary to support the \$2.7 billion Clean Rivers Project
- The annual Clean Rivers Project costs for the average residential customer (700 – 2,000 sq. ft. of impervious area) is projected to increase from \$251.28 in FY 2020 to \$403.08 in FY 2028



## Shifting Cost from CRIAC to Sewer Volumetric Rate

### Shifting Cost from CRIAC to Sewer Volumetric Rate:

- 18% Shift:
  - Calculated based on pollutant concentrations in sanitary wastewater, stormwater runoff and CSO
  - Uses average of following pollutants: total suspended solids (TSS), biochemical oxygen demand (BOD), total nitrogen (TN) and total phosphorus (TP)
  - Variability in results based on underlying variability in pollutant concentrations from multiple sources
- 37% Shift:
  - Calculated based on volume of sanitary wastewater, stormwater runoff and CSO
  - Uses collection system computer model for average rainfall year to predict volume of each component
  - Model applied for same conditions used to design the Clean Rivers Project and obtain regulatory determination that plan will meet District water quality standards

### Impact of a Shift to Volumetric:

- 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
- As a class, Multi-family and Commercial would pay more while Federal Government would pay less
- Small volume customers in every class would generally pay less
- Average Residential customers would pay about the same
- Shift could be phased-in



# Shifting Cost from CRIAC to Sewer Volumetric Rate

## Alternative 1: 18% of CRIAC Shift to Sewer Volumetric

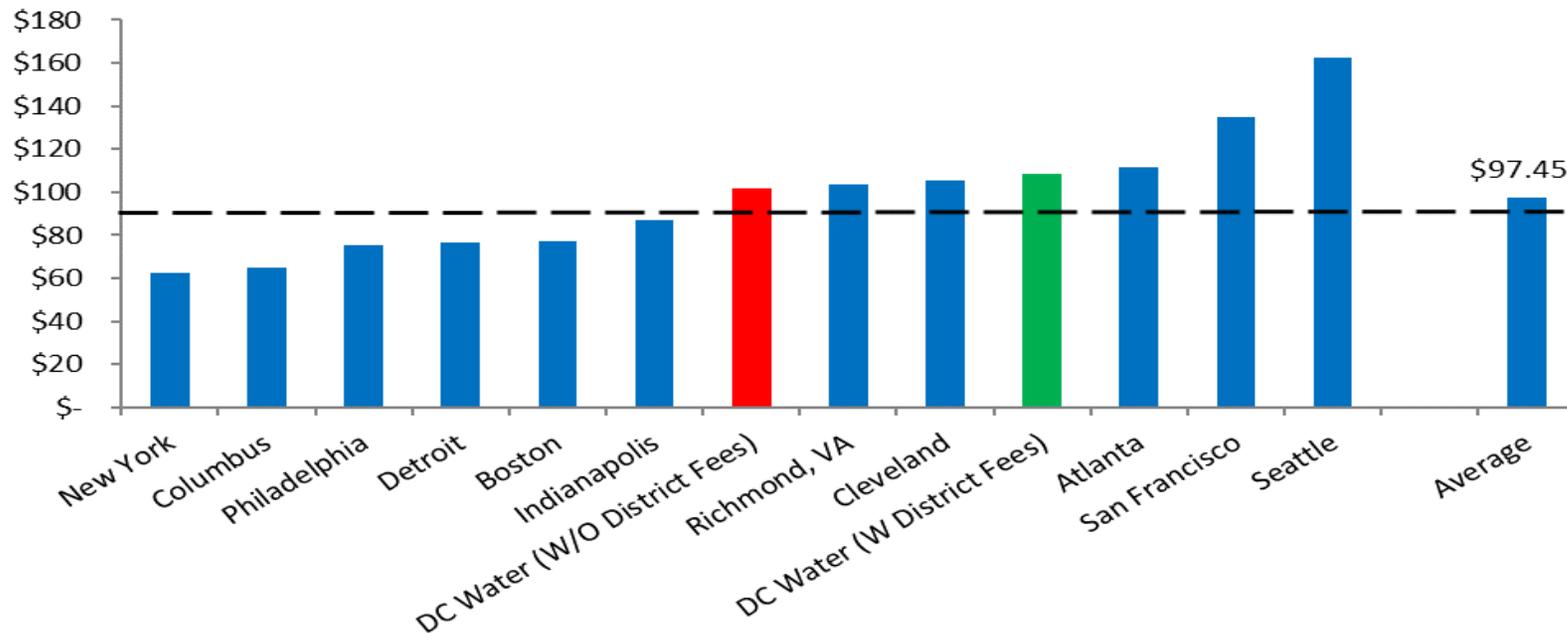
Monthly	Average Household	Average Multi-Family	Sample Commercial	Sample Cemetery	Sample House of Worship (High Con)	Sample House of Worship (Low Con)
Monthly CCF	6.2	92.6	4,478	4.0	876	9.42
ERU	1	6.3	52.2	115.1	128.6	59.2
FY2020 Monthly Total Bill	\$114	\$1,373	\$62,315	\$3,314	\$15,812	\$1,887
FY 2020 Estimated Total Bill with 18% IAC recovered through Volumetric Charge	\$114	\$1,413	\$65,431	\$2,783	\$15,873	\$1,619

## Alternative 2: 37% of CRIAC Shift to Sewer Volumetric

Monthly	Average Household	Average Multi-Family	Sample Commercial	Sample Cemetery	Sample House of Worship (High Con)	Sample House of Worship (Low Con)
Monthly CCF	6.2	92.6	4,478	4.0	876	9.42
ERU	1	6.3	52.2	115.1	128.6	59.2
FY2020 Monthly Total Bill	\$114	\$1,373	\$62,315	\$3,314	\$15,812	\$1,887
FY 2020 Estimated Total Bill with 37% IAC recovered through Volumetric Charge	\$114	\$1,454	\$68,671	\$2,228	\$15,932	\$1,340

# dc DC Water Compared to CSO Communities

DC Water is implementing an expensive consent decree program, \$2.7 billion paid for by 700,000 residents (or 125,000 customer accounts)



\* Assumes average residential consumption of 6.20 Ccf, or 4,638 gallons, per month. Ccf = hundred cubic feet, or 748 gallons  
Reflects rates and fees in place as of November 1, 2018



# This Budget continues the CAP Program

💧 CAP customers would receive a discount of 58.8%

	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 <sup>(1)</sup>	Ccf	\$ 3.10	\$ 3.16
District of Columbia Right-of-Way Fee <sup>(1)</sup>	Ccf	1.12	1.18
District of Columbia Stormwater Fee <sup>(4)</sup>	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>
Increase / Decrease Over Prior Year		\$ 6.02	\$ 6.17
<b>Percent Increase in Total Bill</b>		<b>5.9%</b>	<b>5.7%</b>
Less: CAP Discount (4 Ccf per month) <sup>(1), (2)</sup>		(45.36)	(50.60)
Water System Replacement Fee (WSRF) <sup>(3)</sup>		(6.30)	(6.30)
Clean Rivers IAC <sup>(5)</sup>		(11.50)	(10.47)
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 45.16</b>	<b>\$ 47.12</b>
Increase / Decrease Over Prior Year		\$ 1.99	\$ 1.96
<b>CAP Customer Discount as a Percent of Total Bill</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 to first 4 Ccf of PILOT and ROW in FY 2011

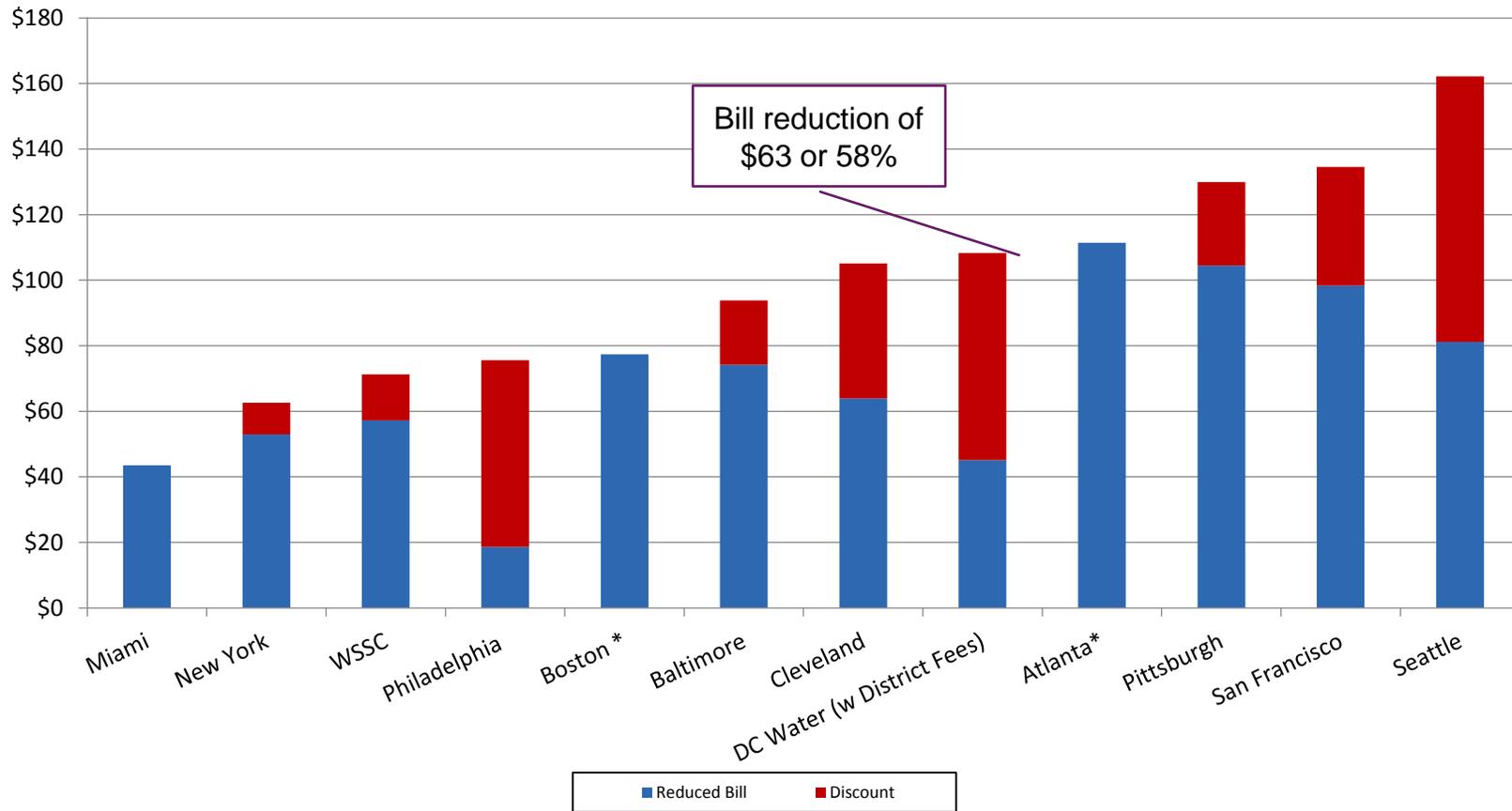
(3) Assumes 100 percent discount for Water System Replacement Fee (WSRF) to CAP customers effective October 1, 2015

(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



# SFR Monthly Bills – Comparison of Charges With & With Out Income-Based Affordability Programs

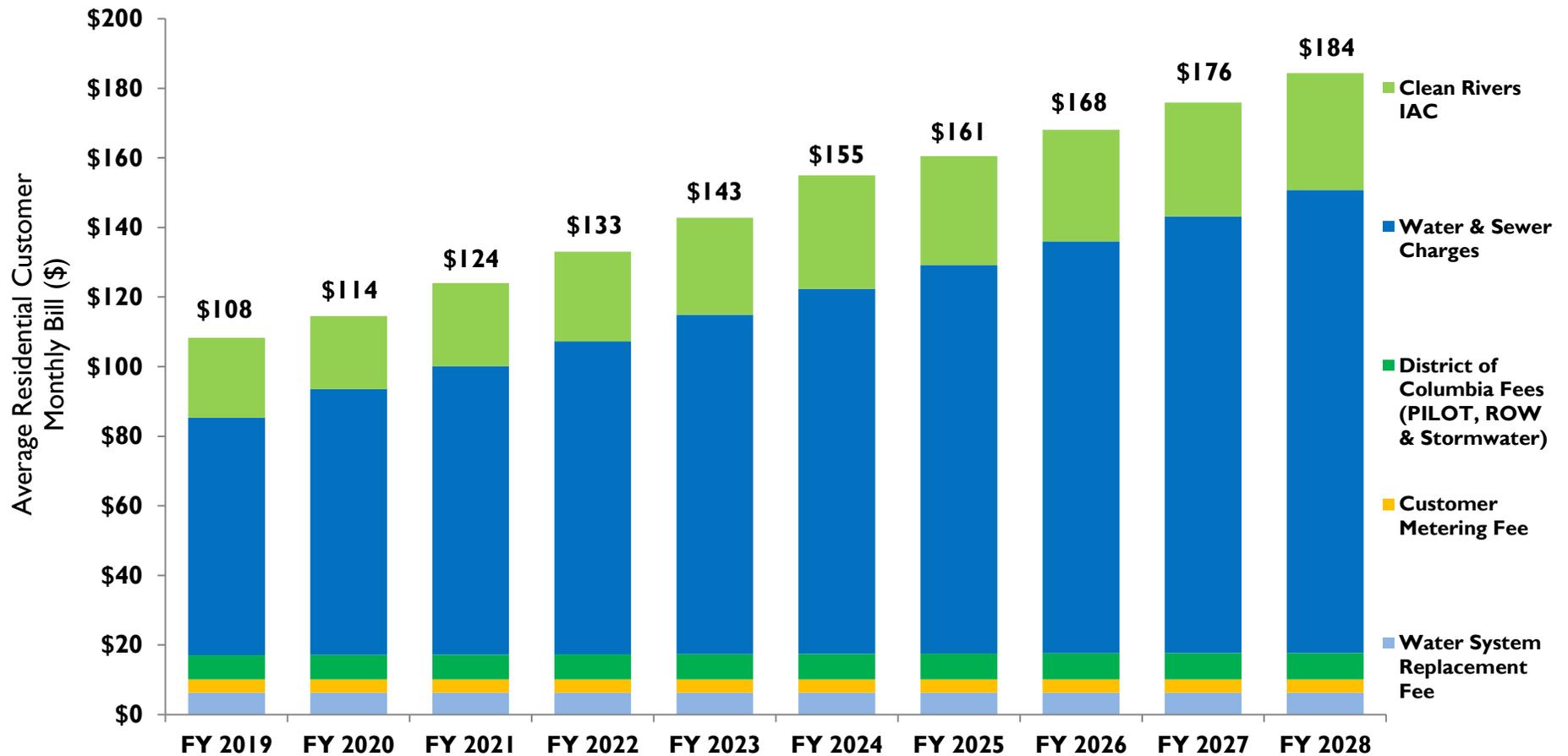


\* Boston provides a 30% discount on water bills for senior citizens or fully disabled customers with no income eligibility requirement. Atlanta provides a 30% discount on bills for seniors citizens who meet income eligibility requirement.



# Projected Average Residential Customer Bill

Projected average monthly residential customer bill ranges from \$108 in FY 2019 to \$184 in FY 2028





## Revenue Comparison by Customer Class

- 💧 Total revenue is projected to increase by \$28.3M or 4.3%
- 💧 Retail revenue is projected to increase by \$27.9M or 5.4%
- 💧 Wholesale revenue is projected to decrease by \$0.5M or 0.5% because of flows

(\$000's)	Revised	Proposed	FY 2020 vs FY 2019	
	FY 2019	FY 2020	Incr/(Decr) \$	%
Retail Revenue	\$521,626	\$549,553	\$27,927	5.4%
Wholesale Revenue				
Potomac Interceptor (PI)	2,715	2,715	-	-
Loudoun County Sanitation Authority (LCSA)	7,541	7,758	217	2.9%
Washington Suburban Sanitary Commission (WSSC)	58,335	57,284	(1,051)	(1.8%)
Fairfax County	14,401	14,782	381	2.6%
Total Wholesale Revenue	\$82,992	\$82,539	(\$453)	(0.5%)
Other Revenue	61,032	61,887	855	1.4%
Rate Stabilization Fund	-	-	-	-
<b>Total Revenues</b>	<b>\$665,650</b>	<b>\$693,979</b>	<b>\$28,329</b>	<b>4.3%</b>



# Customer Impacts

<b>Residential -Avg. 6.2 Ccf / 1ERU Modified Baseline \$5.0 Billion</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Water & Sewer Rate (%)	13.0%	11.5%	8.5%	8.5%	8.5%	7.5%	6.5%	6.0%	6.0%	6.0%
CRIAC (\$/ERU)	\$23.00	\$20.94	\$23.86	\$25.81	\$27.79	\$32.65	\$31.29	\$32.05	\$32.77	\$33.59
Avg. Customer Bill (\$)	\$108	\$114	\$124	\$133	\$143	\$155	\$161	\$168	\$176	\$184
Avg. Customer Bill (%)	5.9%	5.7%	8.3%	7.3%	7.3%	8.6%	3.5%	4.7%	4.7%	4.8%

<b>Multi-family - Avg. 92.6 Ccf / 6.3 ERU Modified Baseline \$5.0 Billion</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Water & Sewer Rate (%)	13.0%	11.5%	8.5%	8.5%	8.5%	7.5%	6.5%	6.0%	6.0%	6.0%
CRIAC (\$/ERU)	\$23.00	\$20.94	\$23.86	\$25.81	\$27.79	\$32.65	\$31.29	\$32.05	\$32.77	\$33.59
Avg. Customer Bill (\$)	\$1,303	\$1,413	\$1,530	\$1,650	\$1,778	\$1,921	\$2,016	\$2,123	\$2,236	\$2,356
Avg. Customer Bill (%)	9.2%	8.5%	8.3%	7.8%	7.8%	8.0%	5.0%	5.3%	5.3%	5.4%

<b>Commercial - Avg. 114 Ccf / 13.1ERU Modified Baseline \$5.0 Billion</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Water & Sewer Rate (%)	13.0%	11.5%	8.5%	8.5%	8.5%	7.5%	6.5%	6.0%	6.0%	6.0%
CRIAC (\$/ERU)	\$23.00	\$20.94	\$23.86	\$25.81	\$27.79	\$32.65	\$31.29	\$32.05	\$32.77	\$33.59
Avg. Customer Bill (\$)	\$1,850	\$1,978	\$2,145	\$2,310	\$2,488	\$2,697	\$2,814	\$2,956	\$3,107	\$3,267
Avg. Customer Bill (%)	7.7%	6.9%	8.4%	7.7%	7.7%	8.4%	4.3%	5.1%	5.1%	5.2%



# Financial Plan



## Financial Plan Objectives

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- 💧 DC Water's 10-year financial plan serves as the fiscal roadmap to achieve the Board's strategic plan
- 💧 It is one of management's key tools to monitor progress in meeting financial goals and targets
- 💧 It also ensures meeting or exceeding all debt-related legal and policy requirements, as well as maintaining sufficient liquidity to meet all current financial obligations
- 💧 DC Water's financial plan objectives focus on:
  - minimizing rate increases while meeting all financial obligations;
  - satisfying all indenture requirements and Board policies; and
  - maintaining the DC Water's current credit ratings of AAA/Aa1/AA



# Financial Plan Assumptions

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- Assumptions for Proposed FY 2019 - FY 2028 Financial Plan include:
  - CRIAC cost shift of 18% and 37% to Sewer Volumetric
  - Combined coverage of 1.60
  - Debt Service as a percent of Operating Revenue of 33% or less
  - Days of cash (including RSF) of 250
  - Increase in Revenue of \$2.0 million for Engineering and Permit Fee
  - Additional Revenue of \$1.5 million for new Fat, Oil and Grease (FOG) and Back Flow Preventer ( BFP)
  - County Refunds increase of approximately \$9.5 million in FY 2019
  - Project Billing amount increase of \$7.0 million in FY 2019
  - Transfer of \$6.0 million for one-time CAP2 program in FY 2019

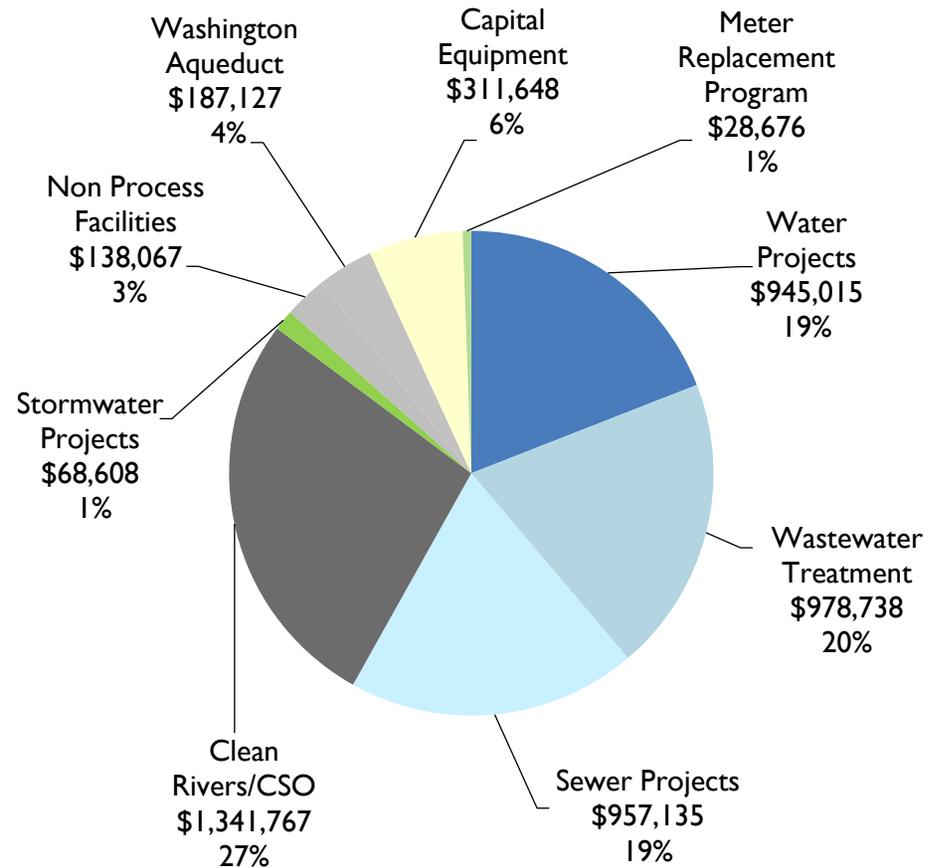
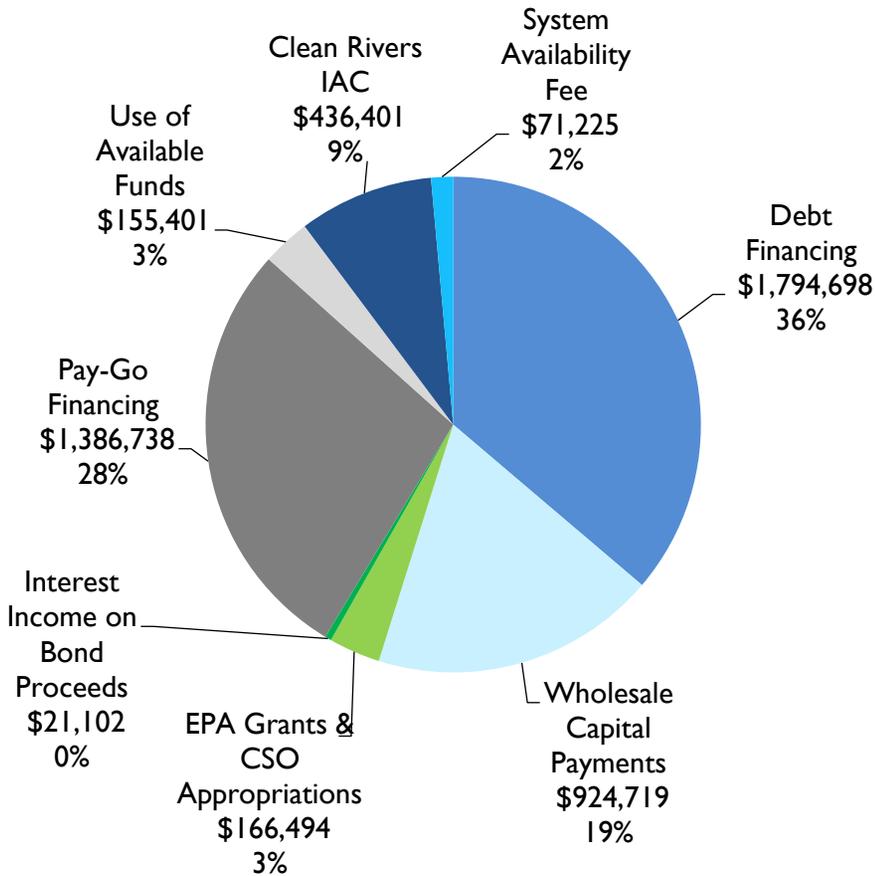


# Ten Year CIP: Sources and Uses of Funds

## Sources \$4.96 Billion

(\$000's)

## Uses \$4.96 Billion





# Ten Year Financial Plan

## Modified Baseline Plan | 8% CRIAC Shift

OPERATING	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Retail*</b>	\$ 543,327	\$ 571,666	\$ 616,427	\$ 657,926	\$ 701,984	\$ 757,324	\$ 779,904	\$ 811,395	\$ 844,062	\$ 877,890
<b>Wholesale*</b>	82,992	82,539	85,015	87,566	90,193	92,898	95,685	98,556	101,513	104,558
<b>Other</b>	33,331	39,774	46,779	51,207	53,590	53,291	54,315	57,064	57,435	58,346
<b>RSF</b>	6,000	-	-	-	-	-	-	-	-	-
<b>Operating Receipts (1)</b>	\$ 665,650	\$ 693,979	\$ 748,221	\$ 796,699	\$ 845,766	\$ 903,514	\$ 929,904	\$ 967,015	\$ 1,003,009	\$ 1,040,793
<b>Operating Expenses</b>	(338,499)	(347,881)	(358,264)	(368,967)	(379,998)	(391,369)	(403,089)	(415,169)	(427,622)	(440,458)
<b>Debt Service</b>	(198,754)	(215,340)	(235,488)	(254,297)	(273,038)	(286,143)	(295,992)	(307,149)	(319,444)	(332,088)
<b>Cash Financed Capital Improvement</b>	\$ (26,999)	\$ (28,556)	\$ (30,821)	\$ (39,476)	\$ (49,139)	\$ (53,013)	\$ (62,392)	\$ (73,026)	\$ (75,966)	\$ (79,010)
<b>Net Revenues After Debt Service</b>	\$ 101,398	\$ 102,202	\$ 123,647	\$ 133,960	\$ 143,591	\$ 172,990	\$ 168,431	\$ 171,671	\$ 179,978	\$ 189,238
<b>Operating Reserve-Beg Balance</b>	166,796	165,000	180,000	185,000	190,000	200,000	205,000	215,000	220,000	230,000
<b>Other Misc (Disbursements)/Receipts</b>										
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)	(114,647)	(128,960)	(133,591)	(167,990)	(158,431)	(166,671)	(169,978)	(179,238)
<b>Operating Reserve - Ending Balance</b>	\$ 165,000	\$ 180,000	\$ 185,000	\$ 190,000	\$ 200,000	\$ 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)
<b>Senior Debt Service Coverage</b>	425%	438%	459%	506%	501%	591%	607%	596%	585%	609%
<b>Combined Debt Service Coverage</b>	162%	168%	173%	177%	179%	187%	186%	188%	188%	188%
<b>Actual/Projected Water/Sewer Rate Increases</b>	13.0%	11.5%	8.5%	8.5%	8.5%	7.5%	6.5%	6.0%	6.0%	6.0%
<b>*Operating Receipts \$ Increase/Decrease</b>										
Retail	23,697	28,338	44,761	41,499	44,058	55,339	22,580	31,491	32,667	33,828
Wholesale	1,970	(453)	2,476	2,550	2,627	2,705	2,787	2,871	2,957	3,045
<b>*Operating Receipts % Increase/Decrease</b>										
Retail	4.6%	5.2%	7.8%	6.7%	6.7%	7.9%	3.0%	4.0%	4.0%	4.0%
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



# FY 2019 – FY 2028 Average Residential Customer Monthly Bill – Modified Baseline Plan 18% CRIAC Shift

## District of Columbia Water & Sewer Authority Average Residential Customer Monthly Bill FY 2019 - FY 2028

	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	\$ 82.90	\$ 89.94	\$ 97.60	\$ 104.89	\$ 111.68	\$ 118.39	\$ 125.49	\$ 133.03
DC Water Clean Rivers IAC	ERU	23.00	20.94	23.86	25.81	27.79	32.65	31.29	32.05	32.77	33.59
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>(3)</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>\$ 116.92</b>	<b>\$ 125.91</b>	<b>\$ 135.55</b>	<b>\$ 147.70</b>	<b>\$ 153.13</b>	<b>\$ 160.60</b>	<b>\$ 168.42</b>	<b>\$ 176.78</b>
Increase / Decrease		\$ 5.96	\$ 6.05	\$ 9.44	\$ 8.98	\$ 9.64	\$ 12.16	\$ 5.43	\$ 7.47	\$ 7.83	\$ 8.36
<b>Percent Increase in DC Water Portion of Bill</b>		<b>6.2%</b>	<b>6.0%</b>	<b>8.8%</b>	<b>7.7%</b>	<b>7.7%</b>	<b>9.0%</b>	<b>3.7%</b>	<b>4.9%</b>	<b>4.9%</b>	<b>5.0%</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>(2)</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>\$ 123.99</b>	<b>\$ 133.05</b>	<b>\$ 142.75</b>	<b>\$ 155.02</b>	<b>\$ 160.51</b>	<b>\$ 168.04</b>	<b>\$ 175.93</b>	<b>\$ 184.35</b>
Increase / Decrease Over Prior Year		\$ 6.02	\$ 6.17	\$ 9.50	\$ 9.06	\$ 9.70	\$ 12.27	\$ 5.49	\$ 7.53	\$ 7.89	\$ 8.42
<b>Percent Increase in Total Bill</b>		<b>5.9%</b>	<b>5.7%</b>	<b>8.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>8.6%</b>	<b>3.5%</b>	<b>4.7%</b>	<b>4.7%</b>	<b>4.8%</b>

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

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

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



# Retail Rates, Charges and Fees

## 18% Shift

### District of Columbia Water & Sewer Authority Retail Rates, Charges and Fees FY 2018 - FY 2028

	Units	Proposed									
		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
DC Water Retail Rates Water (Residential Lifeline 0 - 4 Ccf)	Ccf	\$ 2.91	\$ 3.06	\$ 3.32	\$ 3.60	\$ 3.91	\$ 4.20	\$ 4.47	\$ 4.74	\$ 5.02	\$ 5.32
DC Water Retail Rates Water (Residential > 4 Ccf)	Ccf	\$ 3.90	\$ 4.10	\$ 4.45	\$ 4.83	\$ 5.24	\$ 5.63	\$ 6.00	\$ 6.36	\$ 6.74	\$ 7.14
DC Water Retail Rates Water (Multi-Family)	Ccf	\$ 3.37	\$ 3.54	\$ 3.84	\$ 4.17	\$ 4.52	\$ 4.86	\$ 5.18	\$ 5.49	\$ 5.82	\$ 6.17
DC Water Retail Rates Water (Non-Residential)	Ccf	\$ 4.05	\$ 4.25	\$ 4.61	\$ 5.00	\$ 5.43	\$ 5.84	\$ 6.22	\$ 6.59	\$ 6.99	\$ 7.41
DC Water Retail Rates Sewer	Ccf	\$ 7.75	\$ 8.89	\$ 9.65	\$ 10.47	\$ 11.36	\$ 12.21	\$ 13.00	\$ 13.78	\$ 14.61	\$ 15.49
DC Water Clean Rivers IAC	ERU	\$ 23.00	\$ 20.94	\$ 23.86	\$ 25.81	\$ 27.79	\$ 32.65	\$ 31.29	\$ 32.05	\$ 32.77	\$ 33.59
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	5/8"	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30
District of Columbia PILOT Fee	Ccf	\$ 0.50	\$ 0.51	\$ 0.52	\$ 0.53	\$ 0.54	\$ 0.55	\$ 0.56	\$ 0.57	\$ 0.58	\$ 0.59
District of Columbia Right-of-Way Fee	Ccf	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.19	\$ 0.19	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20
District of Columbia Stormwater Fee	ERU	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67



# Ten Year Financial Plan

## Modified Baseline Plan 37% CRIAC Shift

<b>OPERATING</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<i>Retail*</i>	\$ 543,327	\$ 571,326	\$ 617,789	\$ 659,587	\$ 704,091	\$ 756,589	\$ 780,249	\$ 813,070	\$ 844,112	\$ 888,887
<i>Wholesale*</i>	82,992	82,539	85,015	87,566	90,193	92,898	95,685	98,556	101,513	104,558
<i>Other</i>	33,331	39,774	46,796	51,262	53,672	53,334	54,325	57,120	57,491	58,587
<i>RSF</i>	6,000	-	-	-	-	-	-	-	-	-
<b>Operating Receipts (1)</b>	<b>\$ 665,650</b>	<b>\$ 693,639</b>	<b>\$ 749,600</b>	<b>\$ 798,415</b>	<b>\$ 847,955</b>	<b>\$ 902,821</b>	<b>\$ 930,259</b>	<b>\$ 968,746</b>	<b>\$ 1,003,116</b>	<b>\$ 1,052,032</b>
<b>Operating Expenses</b>	<b>(338,499)</b>	<b>(347,881)</b>	<b>(358,264)</b>	<b>(368,967)</b>	<b>(379,998)</b>	<b>(391,369)</b>	<b>(403,089)</b>	<b>(415,169)</b>	<b>(427,622)</b>	<b>(440,458)</b>
<b>Debt Service</b>	<b>(198,754)</b>	<b>(215,352)</b>	<b>(235,461)</b>	<b>(254,148)</b>	<b>(272,729)</b>	<b>(285,742)</b>	<b>(295,591)</b>	<b>(306,649)</b>	<b>(318,819)</b>	<b>(330,979)</b>
<b>Cash Financed Capital Improvement</b>	<b>\$ (26,999)</b>	<b>\$ (28,556)</b>	<b>\$ (30,889)</b>	<b>\$ (39,575)</b>	<b>\$ (49,286)</b>	<b>\$ (52,961)</b>	<b>\$ (62,420)</b>	<b>\$ (73,176)</b>	<b>\$ (75,970)</b>	<b>\$ (80,000)</b>
<b>Net Revenues After Debt Service</b>	<b>\$ 101,398</b>	<b>\$ 101,850</b>	<b>\$ 124,985</b>	<b>\$ 135,725</b>	<b>\$ 145,941</b>	<b>\$ 172,750</b>	<b>\$ 169,159</b>	<b>\$ 173,751</b>	<b>\$ 180,706</b>	<b>\$ 200,596</b>
<b>Operating Reserve-Beg Balance</b>	<b>166,796</b>	<b>165,000</b>	<b>180,000</b>	<b>185,000</b>	<b>190,000</b>	<b>200,000</b>	<b>205,000</b>	<b>215,000</b>	<b>220,000</b>	<b>230,000</b>
<b>Other Misc (Disbursements)/Receipts</b>										
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)	(80,719)	(115,985)	(130,725)	(135,941)	(167,750)	(159,159)	(168,751)	(170,706)	(190,596)
<b>Operating Reserve - Ending Balance</b>	<b>\$ 165,000</b>	<b>\$ 180,000</b>	<b>\$ 185,000</b>	<b>\$ 190,000</b>	<b>\$ 200,000</b>	<b>\$ 205,000</b>	<b>\$ 215,000</b>	<b>\$ 220,000</b>	<b>\$ 230,000</b>	<b>\$ 240,000</b>
<b>Rate Stabilization Fund Balance RSF (2)</b>	<b>\$ (55,450)</b>	<b>\$ (55,450)</b>								
<b>Senior Debt Service Coverage</b>	<b>425%</b>	<b>437%</b>	<b>460%</b>	<b>508%</b>	<b>504%</b>	<b>591%</b>	<b>609%</b>	<b>599%</b>	<b>587%</b>	<b>622%</b>
<b>Combined Debt Service Coverage</b>	<b>162%</b>	<b>168%</b>	<b>174%</b>	<b>178%</b>	<b>180%</b>	<b>187%</b>	<b>186%</b>	<b>188%</b>	<b>188%</b>	<b>192%</b>
<b>Actual/Projected Water/Sewer Rate Increases</b>	<b>13.0%</b>	<b>18.0%</b>	<b>8.5%</b>	<b>8.5%</b>	<b>8.5%</b>	<b>7.5%</b>	<b>6.0%</b>	<b>6.0%</b>	<b>5.5%</b>	<b>5.5%</b>
<b>*Operating Receipts \$ Increase/Decrease</b>										
Retail	23,697	27,999	46,463	41,799	44,504	52,498	23,659	32,821	31,042	44,774
Wholesale	1,970	(453)	2,476	2,550	2,627	2,706	2,787	2,871	2,957	3,045
<b>*Operating Receipts % Increase/Decrease</b>										
Retail	4.6%	5.2%	8.1%	6.8%	6.7%	7.5%	3.1%	4.2%	3.8%	5.3%
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



# FY 2019 – FY 2028 Average Residential Customer Monthly Bill – Modified Baseline Plan 37% CRIAC Shift

## District of Columbia Water & Sewer Authority Average Residential Customer Monthly Bill FY 2019 - FY 2028

	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	\$ 81.21	\$ 88.11	\$ 95.58	\$ 103.74	\$ 111.52	\$ 118.23	\$ 125.31	\$ 132.20	\$ 139.49
DC Water Clean Rivers IAC	ERU	23.00	16.09	18.37	19.95	21.57	25.40	24.47	25.17	25.84	29.45
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>(3)</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>\$ 107.46</b>	<b>\$ 116.64</b>	<b>\$ 125.69</b>	<b>\$ 135.47</b>	<b>\$ 147.08</b>	<b>\$ 152.86</b>	<b>\$ 160.64</b>	<b>\$ 168.20</b>	<b>\$ 179.10</b>
Increase / Decrease		\$ 5.96	\$ 6.03	\$ 9.18	\$ 9.05	\$ 9.78	\$ 11.61	\$ 5.78	\$ 7.78	\$ 7.56	\$ 10.90
<b>Percent Increase in DC Water Portion of Bill</b>		<b>6.2%</b>	<b>5.9%</b>	<b>8.5%</b>	<b>7.8%</b>	<b>7.8%</b>	<b>8.6%</b>	<b>3.9%</b>	<b>5.1%</b>	<b>4.7%</b>	<b>6.5%</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>(2)</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>\$ 114.47</b>	<b>\$ 123.71</b>	<b>\$ 132.83</b>	<b>\$ 142.67</b>	<b>\$ 154.40</b>	<b>\$ 160.24</b>	<b>\$ 168.08</b>	<b>\$ 175.71</b>	<b>\$ 186.67</b>
Increase / Decrease Over Prior Year		\$ 6.02	\$ 6.15	\$ 9.24	\$ 9.12	\$ 9.84	\$ 11.73	\$ 5.84	\$ 7.84	\$ 7.63	\$ 10.96
<b>Percent Increase in Total Bill</b>		<b>5.9%</b>	<b>5.7%</b>	<b>8.1%</b>	<b>7.4%</b>	<b>7.4%</b>	<b>8.2%</b>	<b>3.8%</b>	<b>4.9%</b>	<b>4.5%</b>	<b>6.2%</b>

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

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

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



# Retail Rates, Charges and Fees

## 37% Shift

### District of Columbia Water & Sewer Authority Retail Rates, Charges and Fees FY 2018 - FY 2028

	Units	Proposed									
		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
DC Water Retail Rates Water (Residential Lifeline 0 - 4 Ccf)	Ccf	\$ 2.91	\$ 3.06	\$ 3.32	\$ 3.60	\$ 3.91	\$ 4.20	\$ 4.45	\$ 4.72	\$ 4.98	\$ 5.25
DC Water Retail Rates Water (Residential > 4 Ccf)	Ccf	\$ 3.90	\$ 4.10	\$ 4.45	\$ 4.83	\$ 5.24	\$ 5.63	\$ 5.97	\$ 6.33	\$ 6.68	\$ 7.05
DC Water Retail Rates Water (Multi-Family)	Ccf	\$ 3.37	\$ 3.54	\$ 3.84	\$ 4.17	\$ 4.52	\$ 4.86	\$ 5.15	\$ 5.46	\$ 5.76	\$ 6.08
DC Water Retail Rates Water (Non-Residential)	Ccf	\$ 4.05	\$ 4.25	\$ 4.61	\$ 5.00	\$ 5.43	\$ 5.84	\$ 6.19	\$ 6.56	\$ 6.92	\$ 7.30
DC Water Retail Rates Sewer	Ccf	\$ 7.75	\$ 9.67	\$ 10.49	\$ 11.38	\$ 12.35	\$ 13.28	\$ 14.08	\$ 14.92	\$ 15.74	\$ 16.61
DC Water Clean Rivers IAC	ERU	\$ 23.00	\$ 16.09	\$ 18.37	\$ 19.95	\$ 21.57	\$ 25.40	\$ 24.47	\$ 25.17	\$ 25.84	\$ 29.45
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	5/8"	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30	\$ 6.30
District of Columbia PILOT Fee	Ccf	\$ 0.50	\$ 0.51	\$ 0.52	\$ 0.53	\$ 0.54	\$ 0.55	\$ 0.56	\$ 0.57	\$ 0.58	\$ 0.59
District of Columbia Right-of-Way Fee	Ccf	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.19	\$ 0.19	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.20
District of Columbia Stormwater Fee	ERU	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67	\$ 2.67



# CRIAC Discount Analysis



## CRIAC Discount

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- Resolution #13-80 – DC Water established the Clean Rivers Impervious Surface Area Charge (CRIAC) Incentive Program
  - 4% maximum incentive credit
  - Concern about ensuring that DC Water has sufficient resources to pay mandated Clean Rivers costs
  
- The Incentive Program
  - 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, bioretention practices, and stormwater
  - Eligibility determinations are made by the District Department of Energy and the Environment
  
- This budget proposes an increase from 4% to 20% for stormwater best management practices



# Appendix



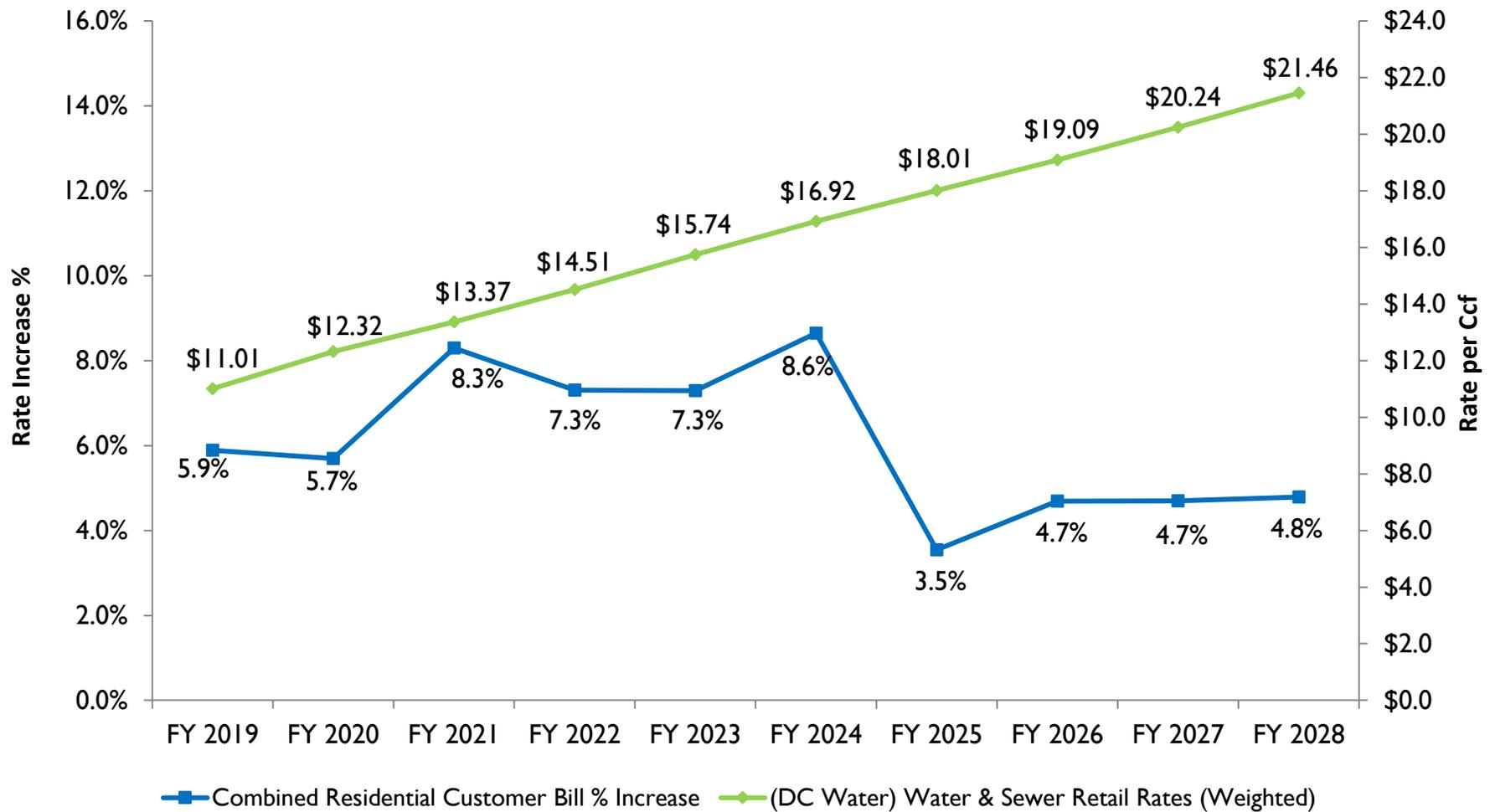
# Breakdown of Contractual Services

\$ in thousands

Approximately 66 percent of the contracts budget is for infrastructure maintenance, legal and compliance requirements

Description	FY 2019 Approved	FY 2020 Proposed	(Incr.)/ Decr.	FY 2020 Allocation
Maintenance & Repairs - Wastewater Treatment Operations	\$ 7,818	\$ 7,041	\$ 777	9%
Maintenance & Repairs - Water & Sewer Operations	6,587	6,395	192	8%
Maintenance & Repairs - Automotive	3,688	3,679	9	4%
Maintenance & Repairs - Others	924	1,066	(142)	1%
Combined Heat & Power - Operations & Maintenance Cost	4,800	4,800	-	6%
Biosolids & BLOOM Related	5,716	5,274	442	6%
Research & Development	1,835	1,600	235	2%
Facility & Security Management	8,975	7,594	1,381	9%
<b>Subtotal</b>	<b>40,342</b>	<b>37,449</b>	<b>2,894</b>	<b>46%</b>
Legal, Compliance & Strategic	12,205	13,401	(1,196)	16%
Insurance Premiums	3,361	3,141	220	4%
<b>Subtotal</b>	<b>15,566</b>	<b>16,542</b>	<b>(976)</b>	<b>20%</b>
Customer Support	4,115	3,803	312	5%
Credit Card Fees	750	1,558	(808)	2%
Community Outreach Programs	984	984	0	1%
<b>Subtotal</b>	<b>5,849</b>	<b>6,345</b>	<b>(496)</b>	<b>8%</b>
Technology - Professional Services	4,228	3,821	407	5%
Technology - Software Maintenance	6,293	6,626	(332)	8%
Professional Services - Others	3,960	6,678	(2,718)	8%
<b>Subtotal</b>	<b>14,481</b>	<b>17,125</b>	<b>(2,644)</b>	<b>21%</b>
Employee Related	3,859	3,114	745	4%
Others (Transportation, advertisement, printing, etc.)	1,581	1,312	269	2%
<b>Subtotal</b>	<b>5,440</b>	<b>4,426</b>	<b>1,014</b>	<b>5%</b>
<b>TOTAL</b>	<b>\$ 81,678</b>	<b>\$ 81,886</b>	<b>\$ (207)</b>	<b>100%</b>

# dc Combined Residential Customer Bill % Increase





# Financial Metrics & Planned Borrowing Review

Joint Committee Meeting of the DC Retail Water & Sewer Rates and  
Finance and Budget Committees  
February 28, 2019

District of Columbia Water and Sewer Authority





## Purpose

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- 💧 Review current financial metrics
- 💧 Discuss the FY2019-2028 financial plan
- 💧 Inform committee of 2019 debt issuance



# Financial Metrics



# Moody's Water & Sewer Utility Scorecard

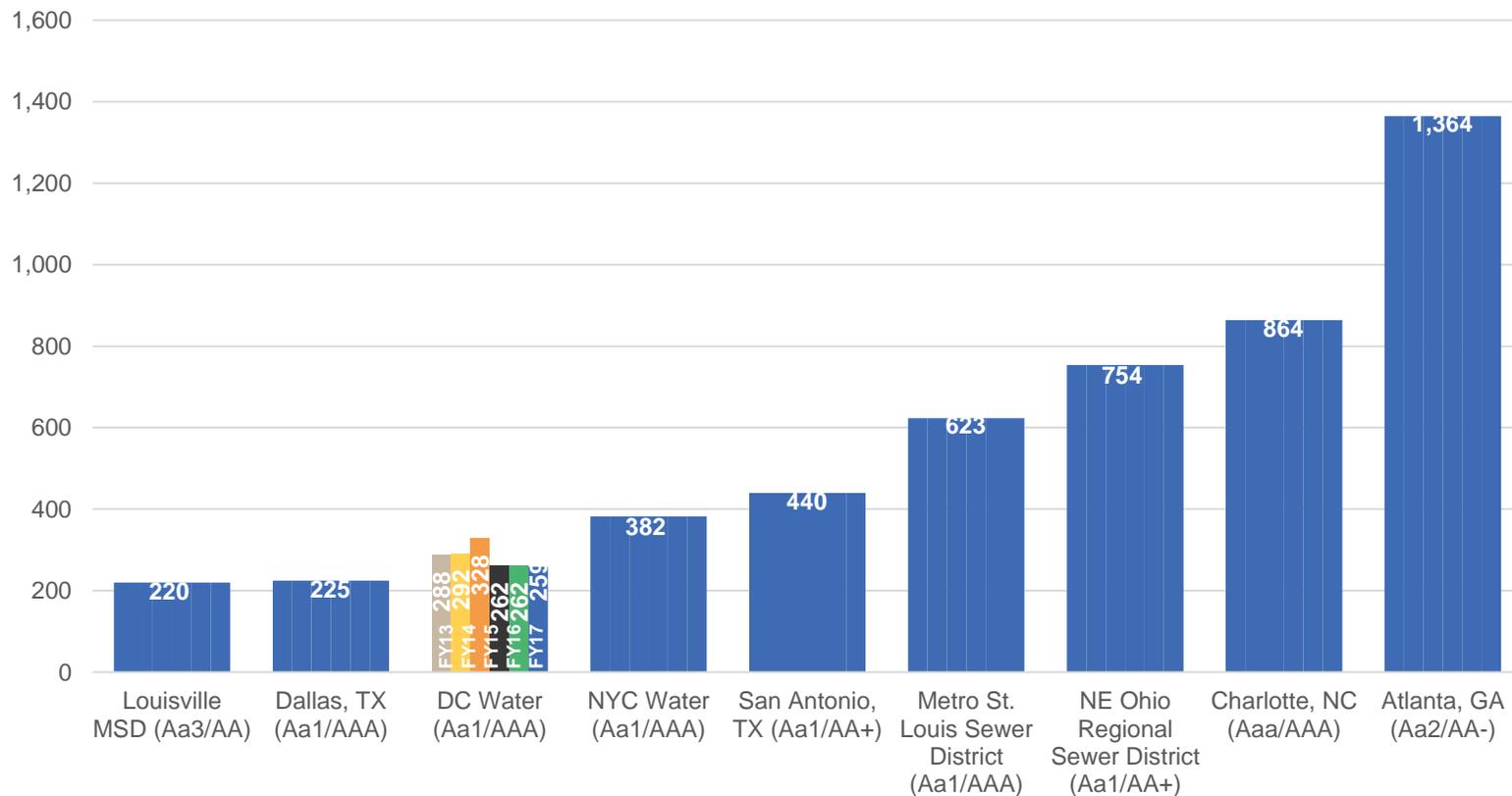
Scoring on Moody's Municipal Utility Methodology										
Factor	Description	Weight	Aaa 0.50-1.49	Aa 1.50-2.49	A 2.50-3.49	Baa 3.50-4.49	Ba 4.50-5.49	DC Water Input	Category Score	DC Water Est. Score
System Characteristics (30%)	Asset Condition - Remaining Useful Life (Net Fixed Assets / Annual Depreciation)	10%	> 75 Years	75 years ≥ n > 25 years	25 years ≥ n > 12 years	12 years ≥ n > 9 years	9 years ≥ n > 6 years	66.8 years	2	0.200
	System Size: (O&M in 000s)	7.5%	> \$65 million	\$65 M ≥ n > \$30 M	\$30 M ≥ n > \$10 M	\$10 M ≥ n > \$3 M	\$3 M ≥ n > \$1 M	\$299.4 million	1	0.075
	Service Area Wealth: MFI	12.5%	> 150% of US median	150% to 90% of US Median	90% to 75% of US Median	75% to 50% of US Median	50% to 40% of US Median	131%	2	0.250
Financial Strength and Liquidity (40%)	Annual Debt Service Coverage	15%	> 2.00x	2.00x ≥ n > 1.70x	1.70x ≥ n > 1.25x	1.25x ≥ n > 1.00x	1.00x ≥ n > 0.70x	1.9x	2	0.300
	Days Cash on Hand	15%	> 250 days	250 days ≥ n > 150 days	150 days ≥ n > 35 days	35 days ≥ n > 15 days	15 days ≥ n > 7 days	259 days	1	0.150
	Debt to Operating Revenues	10%	Less than 2.00x	2.00x < n ≤ 4.00x	4.00x < n ≤ 7.00x	7.00x < n ≤ 8.00x	8.00x < n ≤ 9.00x	5.2x	3	0.300
Management of System (20%)	Rate Management	10%	Excellent rate setting; no material political, practical, or regulatory limit to rate increases	Strong rate setting; little material political, practical, or regulatory limit to rate increases	Average rate setting; some material political, practical, or regulatory limit to rate increases	Adequate rate setting; political, practical, or regulatory impediments place material limits to rate increases	Below average rate setting; political, practical, or regulatory impediments place material limits to rate increases	Strong rate setting	1	0.100
	Regulatory Compliance and Capital Planning	10%	Fully compliant OR proactively addressing compliance issues; Maintains sophisticated and manageable Capital Improvement Plan that addresses more than a 10-year period	Actively addressing minor compliance issues; Maintains comprehensive and manageable 10-year Capital Improvement Plan	Moderate violations with adopted plan to address issues; Maintains manageable 5-year Capital Improvement Plan	Significant compliance violations with limited solutions adopted; Maintains single year Capital Improvement Plan	Not fully addressing compliance issues; Limited or weak capital planning	Addressing compliance Issues	1	0.100
Legal Provisions (10%)	Rate Covenant	5%	>1.30x	1.30x ≥ n > 1.20x	1.20x ≥ n > 1.10x	1.10x ≥ n > 1.00x	≤ 1.00x	1.20x	3	0.150
	Debt Service Reserve Requirement	5%	DSRF funded at MADS	DSRF funded at lesser of standard 3 prong test	DSRF funded at less than 3 prong test	No explicit DSRF	No explicit DSRF	1998 Reserve only	3	0.150
(Aaa = 0.50 to 1.50; Aa1 = 1.50 to 1.83; Aa2 = 1.83 to 2.17))										1.775

Source: Moody's US Municipal Utility Debt Methodology, October 19, 2017. Data from Series 2018 Moody's Report, updated where available.



# Days of Cash on Hand

- Days of cash on hand is an important measure of short and long term liquidity due to operational needs of an organization
- DC Water typically exceeds 250 days of cash, and this has included the Rate Stabilization Fund
- Many AAA utilities exceed 250 days of cash





# Days of Cash Calculation

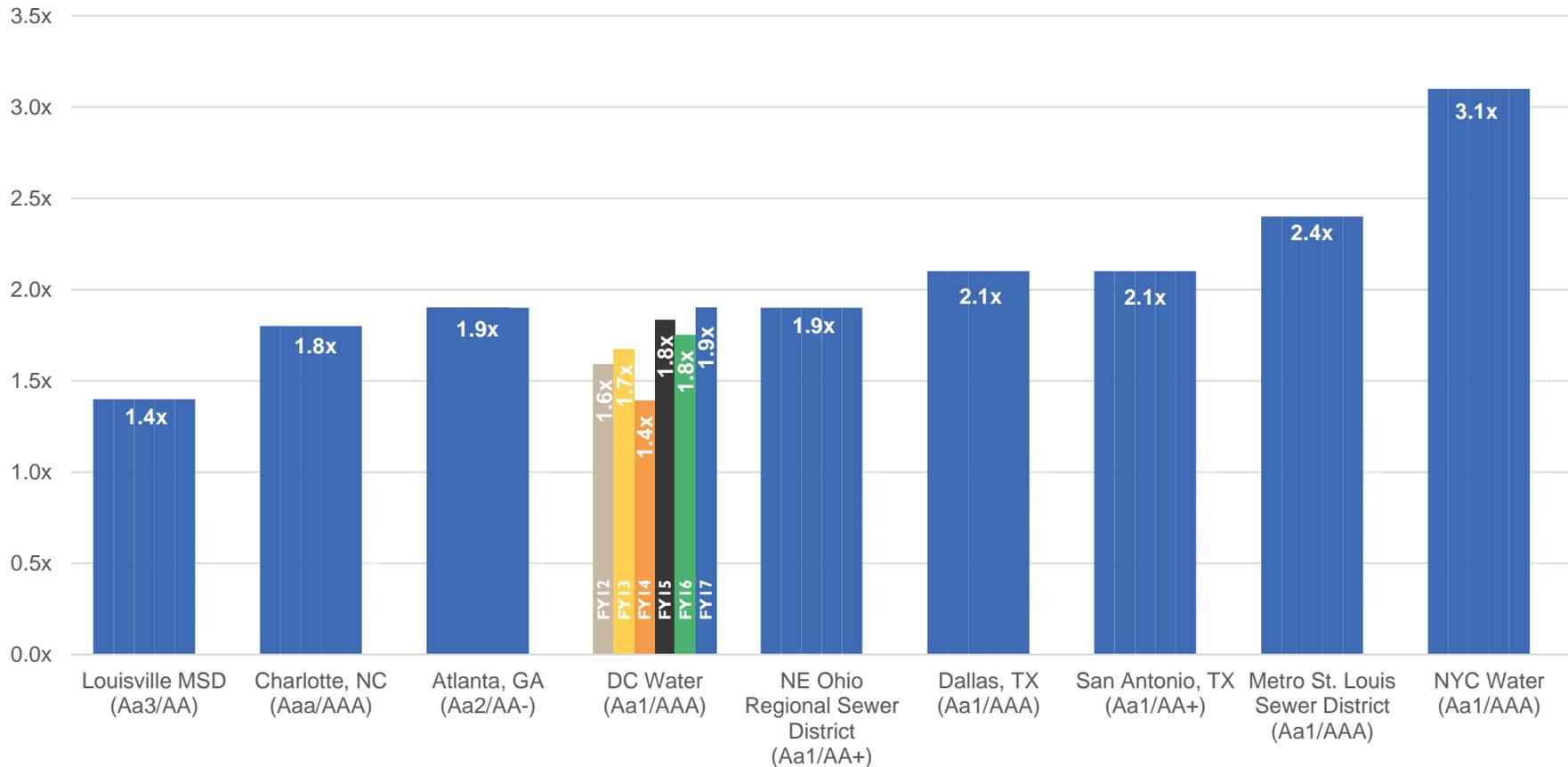
- 💧 DC Water is recognized by rating agencies for having over 250 days of cash
- 💧 The Board Policy is 120 days-of-cash
- 💧 Without additional reserves, the days-of-cash will fall as expenditures increase in future budgets

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>
<b>Operating and Maintenance</b>	\$ 313,869,035	\$ 320,137,447	\$ 338,498,706	\$ 348,334,650	\$ 358,462,353	\$ 368,890,500	\$ 379,628,035
<b>Less: PILOT, ROW &amp; Stormwater</b>	21,057,041	21,376,182	23,701,706	22,033,740	23,372,415	22,717,863	23,070,220
<b>Net Operating and Maintenance</b>	\$ 292,811,994	\$ 298,761,265	\$ 314,797,000	\$ 326,300,910	\$ 335,089,938	\$ 346,172,637	\$ 356,557,815
<b>Daily Operating Expenditures</b>	\$ 813,367	\$ 829,892	\$ 874,436	\$ 906,391	\$ 930,805	\$ 961,591	\$ 990,438
<b>Ending Cash Balance</b>	\$ 147,212,244	\$ 166,795,693	\$ 140,000,000	\$ 140,000,000	\$ 140,000,000	\$ 140,000,000	\$ 140,000,000
<b>Rate Stabilization Fund (RSF)</b>	\$ 61,450,000	\$ 61,450,000	\$ 55,450,000	\$ 55,450,000	\$ 55,450,000	\$ 55,450,000	\$ 55,450,000
<b>DC Reserve Insurance</b>	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
<b>Ending Cash Balance including RSF</b>	209,662,244	229,245,693	196,450,000	196,450,000	196,450,000	196,450,000	196,450,000
<b>Days Cash on Hand</b>	259	277	225	217	212	205	199



# Coverage

- 💧 Coverage for utilities with AAA rating range is typically from 1.8 to 3.1
- 💧 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
  - Management practice has been to target combined coverage at 1.6X





# Value of Robust Credit Ratings

DC Water’s AAA credit rating saves our ratepayers money

Rating	Yield Differential vs. AAA Rating	Individual Bond Sale (\$200 million)			Aggregate Debt Issuance for Capital Program (\$2 billion)		
		Annual Cost Differential (\$200 million)	Total Cost Differential (Through Maturity)	PV at 4%	Annual Cost (\$2 billion)	Total Cost Differential (Through Maturity)	PV at 4% (\$200MM Issued Annually, 10 Yrs)
AAA	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AA+	0.10%	200,000	4,000,000	2,708,463	2,000,000	40,000,000	19,071,322
AA	0.20%	400,000	8,000,000	5,416,927	4,000,000	80,000,000	38,142,644
AA-	0.30%	600,000	12,000,000	8,125,390	6,000,000	120,000,000	57,213,966
A+	0.40%	800,000	16,000,000	10,833,853	8,000,000	160,000,000	76,285,288
A	0.50%	1,000,000	20,000,000	13,542,316	10,000,000	200,000,000	95,356,610
A-	0.60%	1,200,000	24,000,000	16,250,780	12,000,000	240,000,000	114,427,932



## Select Peer Group

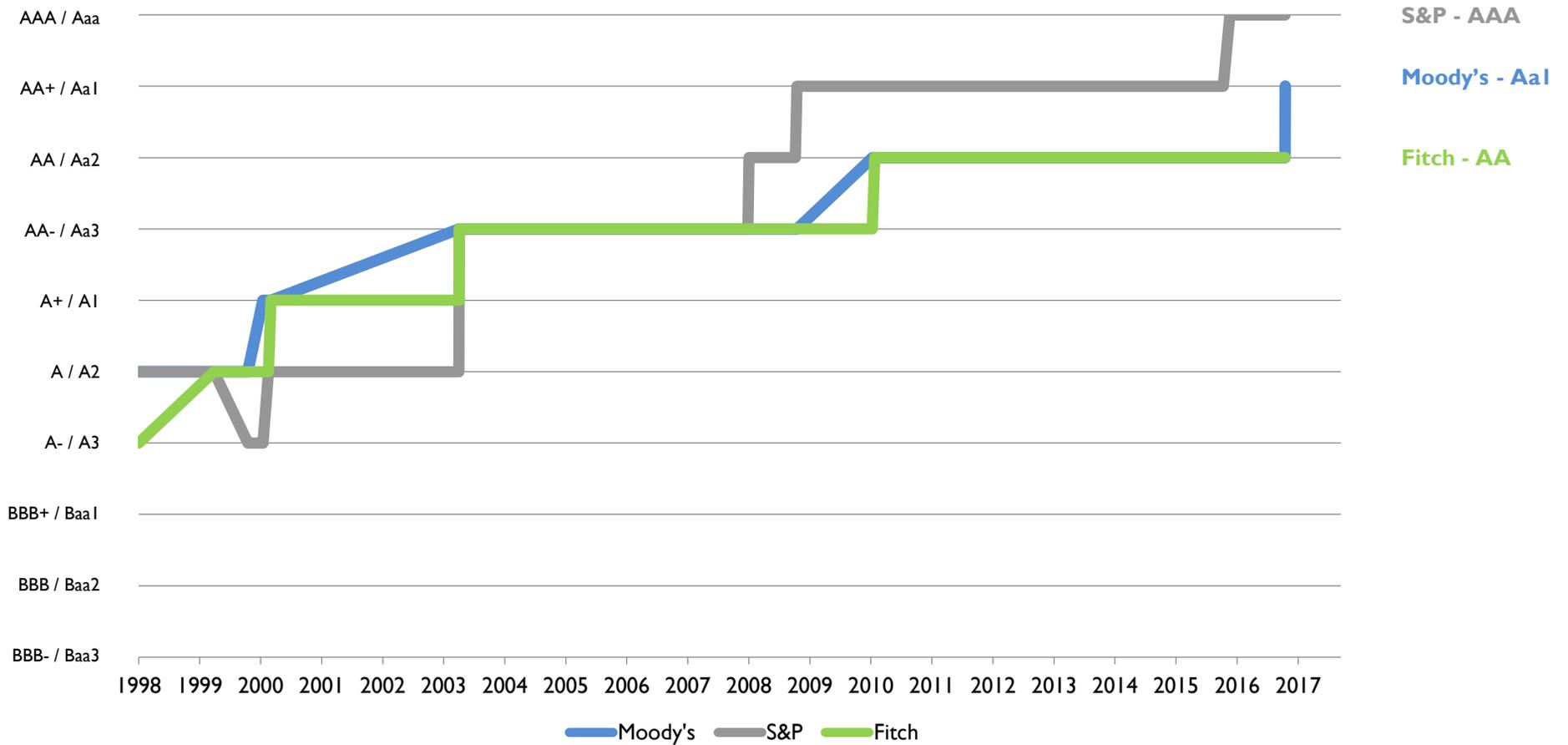
DC Water’s ability and willingness to raise rates to meet capital requirements, and the area’s relative wealth are credit strengths

Selected Peer	Type	Moody’s Rating (Senior)	S&P Rating (Senior)	Total Operating Revenues (\$000s)	Total Annual Debt Service (\$000s)	Debt Ratio	Long Term Debt (\$000s)	Total Debt Service Coverage	DS as a % of Total Operating Revenues	Days Cash on Hand	Average Bill as % of Median Effective Buying Income
Atlanta, GA	Water & Sewer	Aa2	AA-	486,285	213,856	45.6%	2,924,317	1.9x	44.0%	1,364	4.1%
Charlotte, NC	Water & Sewer	Aaa	AAA	378,019	132,439	40.9%	1,527,327	1.8x	35.0%	864	2.0%
Dallas, TX	Water & Sewer	Aa1	AAA	632,469	182,000	46.7%	2,605,865	2.1x	28.8%	225	1.8% <sup>1</sup>
DC Water	Water & Sewer	Aa1	AAA	624,447	169,346	62.8%	3,224,567	1.9x	27.1%	259	1.6%
Louisville MSD, KY	Sewer	Aa3	AA	273,907	137,857	61.9%	1,865,260	1.4x	50.3%	220	1.3% <sup>1</sup>
Metro St. Louis Sewer District, MO	Sewer	Aa1	AAA	333,470	69,328	40.4%	1,351,437	2.4x	20.8%	623	1.2% <sup>1</sup>
NE Ohio Regional Sewer District	Sewer	Aa1	AA+	343,880	110,603	50.4%	1,546,085	1.9x	32.2%	754	2.3%
NYC Water	Water & Sewer	Aa1	AAA	3,828,715	821,000	97.8%	31,266,750	3.1x	21.4%	382	2.2%
San Antonio, TX	Water & Sewer	Aa1	AA+	678,110	173,005	46.0%	2,811,870	2.1x	25.5%	440	1.7%



# Senior Lien Credit Rating History

Senior Lien Ratings History (1998 – Present)





# Rating Agency Viewpoint

Summary of Rating Agency Views		
Moody's Investors Service	Standard & Poor's	Fitch Ratings
Aa1 (Sr.) / Aa2 (Sub.) / P-1 (Short-term) Stable Outlook	AAA (Sr.) / AA (Sub.) / A-1+ (Short-term) Stable Outlook	AA (Sr.) / AA- (Sub.) / F1+ (Short-term) Positive Outlook
Strengths		
<ul style="list-style-type: none"> <li>Large service area bolstered by considerable wealth and institutional presence</li> <li>Excellent rate management record</li> <li>Liquidity is solid, and indenture requirements and board policies will protect the authority's cash position in the future</li> <li>Excellent financial metrics because the utility has consistently raised rates to ensure good debt service coverage</li> <li>No unfunded pension or OPEB liability</li> </ul>	<ul style="list-style-type: none"> <li>Robust service area that has continued to demonstrate a strong economic rebound from the recession</li> <li>Strong financial management, including conservative financial forecasts and a detailed CIP</li> <li>Governing board's demonstrated willingness to adjust rates</li> <li>View that the management team remains committed to balancing environmental stewardship and a socially responsible agenda with ongoing financial commitments</li> <li>Liquidity and reserves that include high levels of unrestricted cash and investments</li> </ul>	<ul style="list-style-type: none"> <li>Essential service provider to a large and economically diverse territory and affluent customer base</li> <li>Demonstrated ability to raise rates independent of outside oversight</li> <li><b>Continued shift towards greater fixed cost recovery</b></li> <li>Financial projections include rate increases sufficient for stable debt service coverage metrics</li> <li>Retail rates are considered affordable for the base majority of the rate base and are regionally competitive</li> <li>Strong financial margins and healthy liquidity</li> </ul>
Challenges		
<ul style="list-style-type: none"> <li>Heavy capital needs, in part from regulatory mandates</li> <li>Need for further rate increases to support substantial capital plan</li> </ul>	<ul style="list-style-type: none"> <li>Downward pressure could come from a collapse in financial performance, a change in the way the federal government pays the Authority, or prolonged interruption in operations</li> </ul>	<ul style="list-style-type: none"> <li>Leverage is considered high, but projected rate increases should offset annual debt service costs</li> <li>An unexpected or material increase in the current capital spending plan, or a sharp escalation in unfunded capital mandates could preclude or delay future upward rating potential</li> </ul>



# Financial Plan and Planned Borrowing



## FY2019-FY2028 Financial Plan

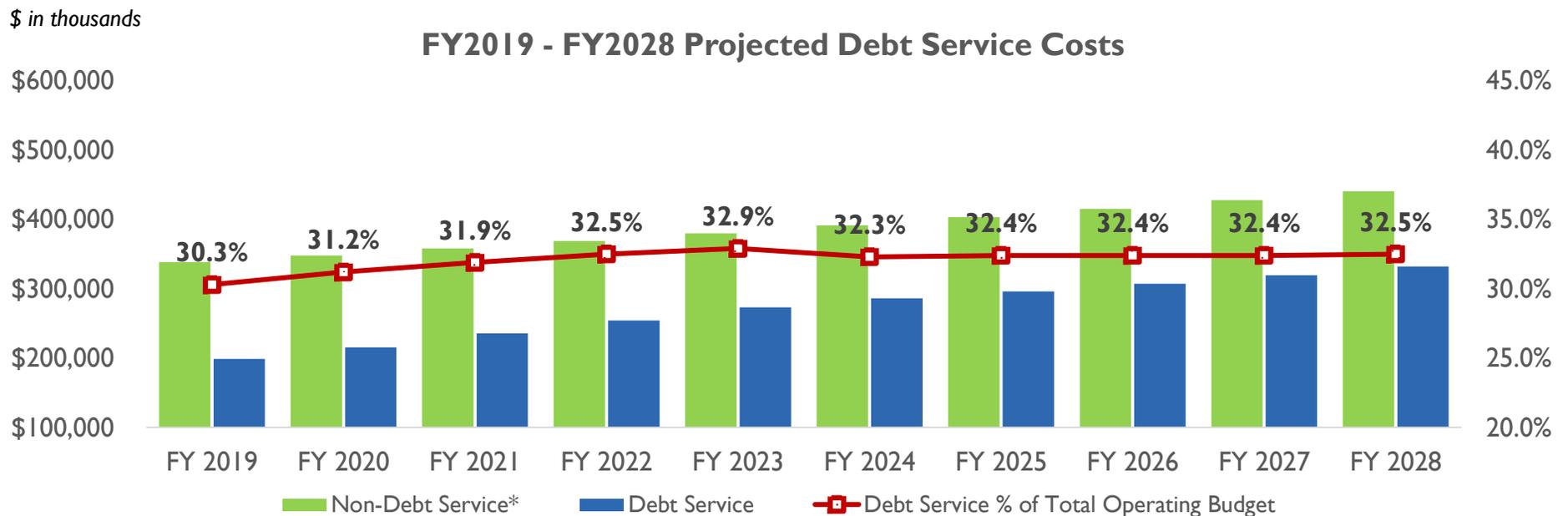
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- 💧 Total borrowing of \$1.9 billion
- 💧 250 Days of Cash on Hand
- 💧 Coverage of 1.62x – 1.88x
- 💧 Value of triple AAA credit rating
- 💧 Debt service does not exceed 33% of operating revenue



# Debt Service

- Debt Service - Overall increase is to support the capital program
  - Represents 30% and 31% of the total operating revenue in FY 2019 and FY 2020, respectively
  - Projected to grow from \$198.8 million in FY 2019 to \$332.1 million by FY 2028 (approx. 67% increase)
  - Projected ten-year average of 32% of total operating revenue



\* Non-Debt Service includes O&M, PILOT, ROW and CFCI estimates



## 2019 New Money Financing Projections

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• Expected to borrow up to \$300 million utilizing two series

- FY2019 – FY2020 borrowing
- Clean Rivers (green anticipated)
- Non-Clean Rivers

• 30 year rates as of February 2019

- Current AAA Municipal Market Rates are at 3.10%
- Current U.S. Treasury rates are at 3.04%



## Debt Issuance Schedule

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- Feb/Mar 2019 – Meet with senior underwriters
- March 2019 – Select underwriter(s)
- March to June 2019 – Begin preparing the preliminary official statement
- July 2019 – Present the preliminary official statement to F&B committee
- September 2019 – Present approval package to the Board
- September 2019 – Issue bonds to investors