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Approved FY 2021 Budgets

Section III: FINANCIAL PLAN

Clean Rivers Northeast Boundary Tunnel

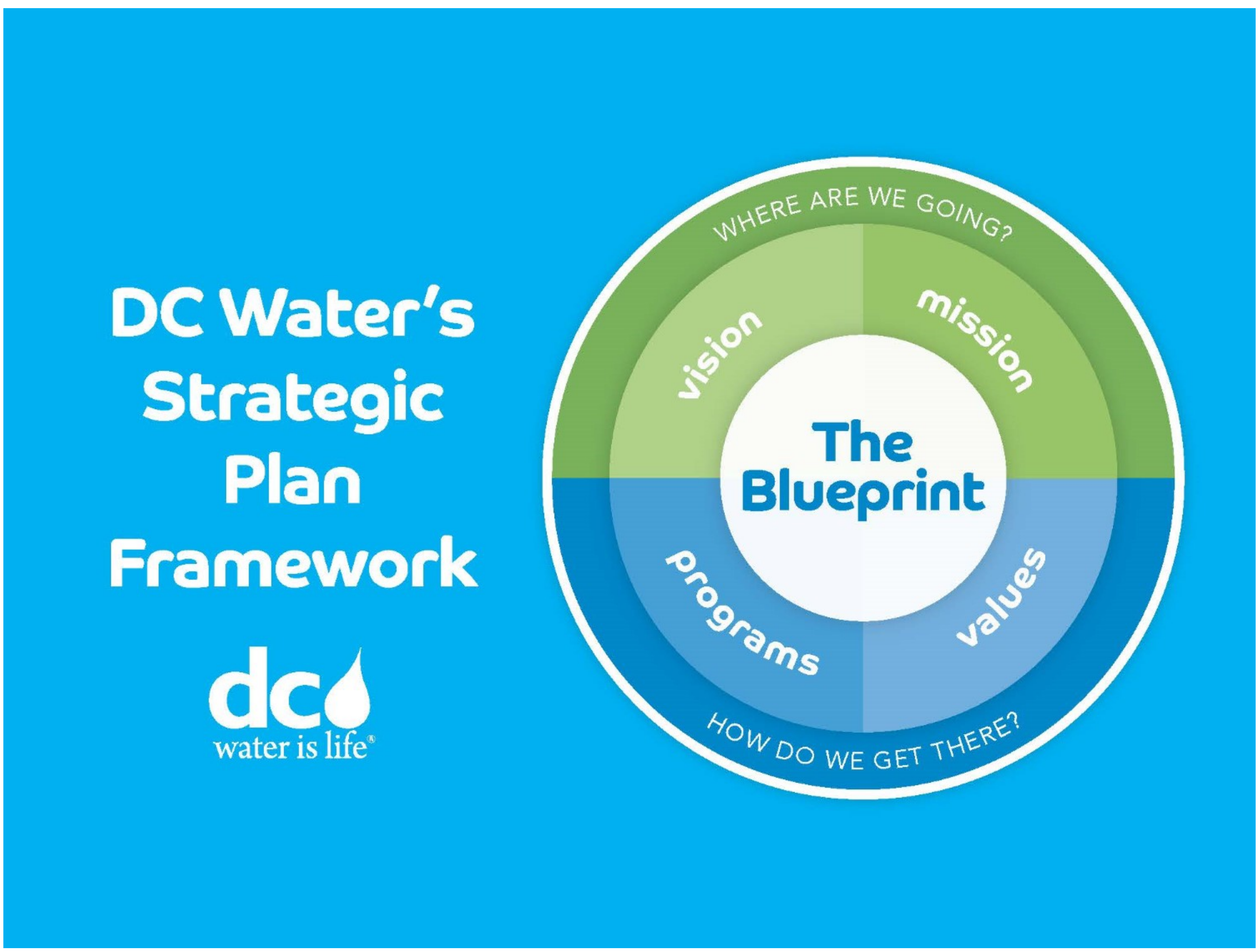
The Blueprint

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 should be made to goals, objectives, and initiatives as the organization moves forward and circumstances change.

This plan contains the DC Water vision, mission statement, values, goals, objectives, and initiatives. 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. In August 2019, Fitch Ratings upgraded DC Water's credit rating to AA+ for senior lien revenue bonds and the Authority maintained a AAA credit rating by S&P and an Aa1 by Moody's. DC Water also maintained a GB1 rating for green bonds, Moody's highest possible green bond assessment. 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 2019, DC Water met or exceeded the goals set by Board policy and the FY 2019 – FY 2028 ten-year plan. This budget includes DC Water's twentieth comprehensive ten-year financial plan, covering FY 2020 – FY 2029.

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 2020 - FY 2029 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 2019, 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
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 provide 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.dcwater.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.dcwater.com.

During FY 2019 DC Water met or exceeded the financial goals set out by the Board and the FY 2019 – FY 2028 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 2019 was at 463 percent**, while maintaining the Board's rate setting and financial policies. The senior debt service coverage is expected to increase to 769 percent by FY 2029 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 232 percent in FY 2019. DC Water is required to have 100 percent coverage of subordinate debt service. Combined debt service coverage was at 181 percent in FY 2019.
- DC Water has maintained its bond rating from Standard & Poor's (AAA), Moody's (Aa1), and Fitch (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 expired on May 15, 2020. In May 2020, DC Water authorized the Letter of Credit facility to TD Bank, NA. Additionally, DC Water successfully extended JP Morgan Chase Bank as the authorized dealer and US Bank as the Issuing Paying Agent. 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)**: 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 utilized $6.0 million from the rate stabilization fund (RSF) in FY 2019** for CAP2 program. DC Water contributed $6.0 million at the end of FY 2019, which resulted in the Rate Stabilization Fund's ending balance to remain same at $61.45 million.
- **DC Water continued its strong operating budget performance in 2019** – For FY 2019, actual cash receipt was higher than the revised budget by $28.8 million, or 4.3 percent. Actual operating expenditures were $12.9 million, or 2.3 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 97.7 percent 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 $2.8 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 13.0 percent in FY 2019** to recover increased retail water and sewer revenue requirements of $37.9 million. $6.0 million from Rate Stabilization Fund (RSF) was utilized in FY 2019 for CAP2 program. 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 fee remains the same at $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 becoming** effective from 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 third time that DC Water has adopted a multi-year rate proposal in FY 2020 covering the period FY 2021 and FY 2022 and will become effective from October 1, 2020 and October 1, 2021, respectively.

  The benefits of multi-year rates include:
  - Greater revenue certainty
  - Increased budget discipline
  - Better alignment between revenues and expenditures

- In FY 2020, an Independent Review of Rate Structure and Customer Assistance Programs was conducted to review and benchmark DC Water's rates, rate structure and Customer Assistance Programs (CAP) to peer utilities. The findings of the study concurred that DC Water's current customer class structure, monthly water lifeline threshold of 4 Ccf, ERU basis for recovering the CRIAC charge, CAP bill discount and temporary assistance programs are consistent with industry standards for ratemaking.
- In FY 2020, DC Water conducted a Cost of Service Study (COS) to align the COS with the multi-year rate proposals, therefore both will be done every two years going forward. Previously, Cost of Service study was conducted every three years. The COS consist of three components: i) revenue sufficiency analysis – to ensure that the revenues cover the costs that DC Water incurs; ii) cost of service analysis/rate equity – to ensure that the rates are equitably recovering the costs of service provided to customers; and iii) alternative rate structure analysis – to ensure that DC Water meets its priority pricing objectives. The results of the COS support the multi-year rate, charges and fee proposals for FY 2021 and FY 2022.
- For the nineteenth-consecutive year, DC Water received the Government Finance Officers' Award for Distinguished Budget Presentation for its FY 2020 budget, submitted in 2019. DC Water also received its twenty second unqualified audit opinion for the fiscal year ended September 30, 2018 and received the twenty second GFOA Certificate of Achievement for Excellence in Financial Reporting.
- In FY 2019, DC Water successfully renewed all of the Authority's operations insurance policies at essentially the same terms up 9.2 percent from expiring costs than previous year. DC Water's coverage is generally comparable to expiring.
- DC Water completed its fifteenth year of its rolling owner-controlled insurance program (ROCIP), eleventh year of ROCIP II, eighth 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 enrolled contractors and significant cost savings. At the end of FY 2019, 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 37 projects and 440 contractors are/were enrolled in the ROCIP IV program. Verified avoided costs (aka savings) are in the range of $5.4 million for ROCIP I; approximately $11.2 million for ROCIP II, $8.1 million for ROCIP III and $5.8 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.
- Customer Assistance Programs (CAP) – In FY 2019, DC Water, Mayor Muriel Bowser and the DC Council worked together to expand the existing customer assistance program. The new benefits were earmarked for non-profits, including churches and cemeteries, along with a group of residential customers who did not previously meet the income guidelines for assistance. The FY 2019 customer benefits were as follows:

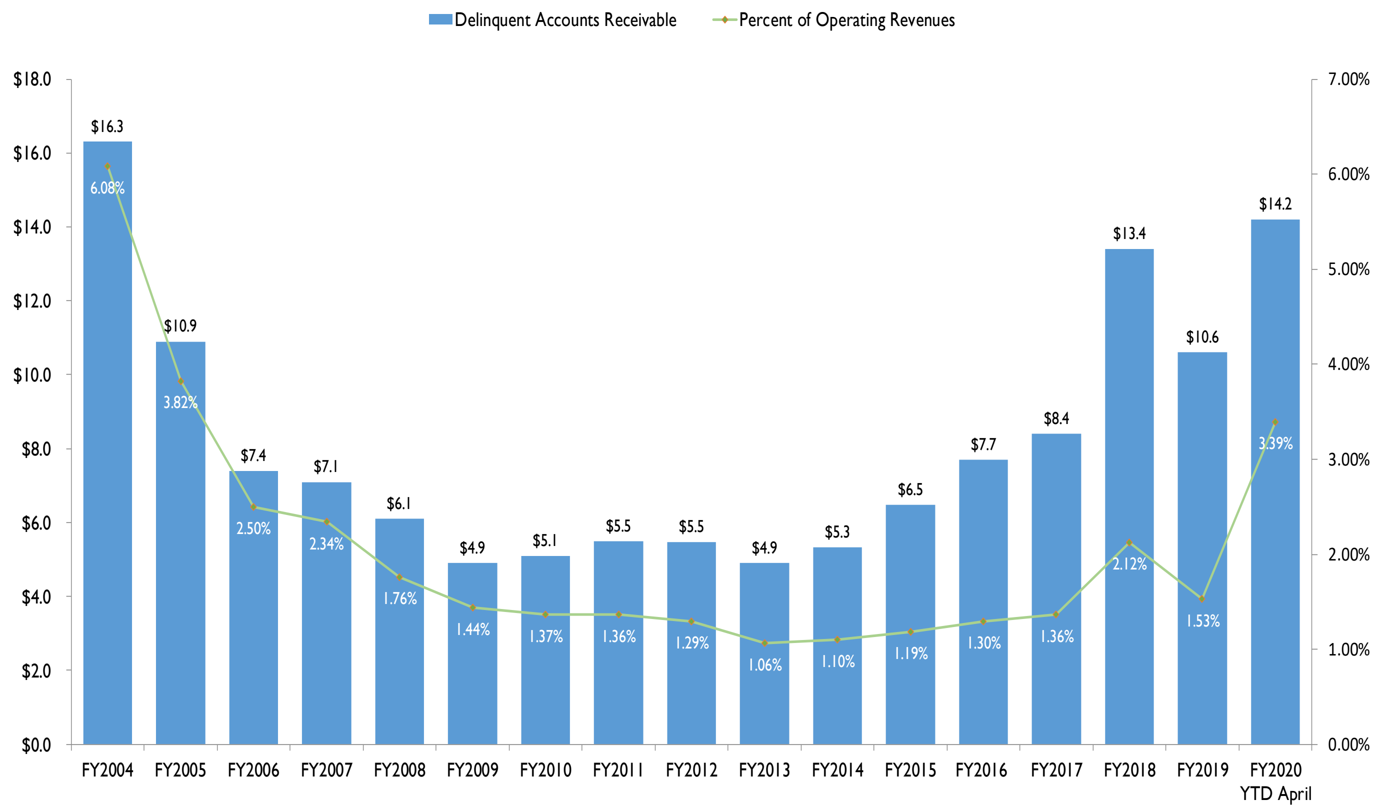
Program	Assistance	Assisted Customers
CRIAC Residential Relief Program		
CAP (Original)	$1.29 million	4,436
CAP 2	$47,490	191
CAP 3	$9,436	48
CRIAC Non-Profit Relief Program		
Non-Profit Relief	$1.36 million	175

The CAP and CAP2 discount programs administered by DOEE provided discount as of September 30, 2019 to 4,627 customers representing $1,338,288.

- 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 2019, DC Water received $84,427 in contributions and assisted 276 customers as of September 2019. CAP and SPLASH together provide $1,422,715 per year in assistance to approximately 4,903 low income households to help make their bills more affordable.
- Defined as the Water Meter Rehabilitation Program, the first phase of the project from 2nd quarter FY 2017 to late FY 2019 completed 84,334 meter/MTU installations, which increased the overall AMI transmission rate to 90.1 percent. The program entered the second phase in October 2019. Through May 2020, approximately 5,500 meters were exchanged, increasing the overall AMI transmission rate to 93.8 percent. By the end of FY 2020, an additional 3,000 locations are anticipated to be changed.
- Increasing AMI transmission rates should reduce the number of estimated bills and provide better revenue projections by capturing accurate consumption.
- 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 set 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

**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. However, due to increase in cut off and collection efforts the delinquency greater than 90-days improved from 2.12 percent in FY 2018 to 1.53 percent in FY 2019
- Delinquent accounts receivable decreased by $2.7 million from FY 2018 to FY 2019 due to the following collections activities:
  - Automated outbound calls to remind customers to pay before balances become unmanageable
  - Continuous focus on the top 75 accounts with the largest balances by making manual outbound calls to negotiate payments and assess risk
  - Adhering to payment plan policies that balance managing arrears and keep a vital service on for customers
  - Service disconnection when an account balance exceeds $200
  - Continuous placement of property liens when an account balance exceeds $200 and is more than 60 days past due
  - Development of write-off procedure for inactive account balances

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 percent 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 percent 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 conducted 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 percent 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

In FY 2020, an Independent Review of Rate Structure and Customer Assistance Programs was conducted to review and benchmark DC Water's rates, rate structure and Customer Assistance Programs (CAP) to peer utilities. The findings of the study concurred that DC Water's current customer class structure, monthly water lifeline threshold of 4 Ccf, ERU basis for recovering the CRIAC charge, CAP bill discount and temporary assistance programs are consistent with industry standards for ratemaking.

In FY 2020, DC Water conducted a Cost of Service Study (COS) to align the COS with the multi-year rate proposals, therefore both will be done every two years going forward. Previously, the Cost of Service study was conducted every three years. The COS consist of three components: i) revenue sufficiency analysis – to ensure that the revenues cover the costs that DC Water incurs; ii) cost of service analysis/rate equity – to ensure that the rates are equitably recovering the costs of service provided to customers; and iii) alternative rate structure analysis – to ensure that DC Water meets its priority pricing objectives. The results of the COS support the multi-year rate, charges and fee proposals for FY 2021 and FY 2022.

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 percent renewal and replacement program for water service lines. It is anticipated that the new Water System Replacement Fee (WSRF) will generate approximately $39.7 million per year from fiscal years 2019 through 2028. The fee is based upon meter size and average flow. DC Water's low-income CAP customers receive a 100 percent 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; 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.

The following terms are defined:

Condominium – means 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 – means 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.

System Availability Fee (SAF)

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

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

In FY 2018, DC Water has 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 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 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) 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 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 2019 Actual	FY 2020 Revised	FY 2021 Approved	FY 2022 Approved
√	Senior Debt Service Coverage	120%	140%	463%	459%	502%	533%
√	Operating Cash Reserves	N/A	$125.5 million	186.8 million	$180 million	$185 million	194 million
√	Short Term Investment Return Benchmark Merrill Lynch 3-Month Treasury Index	N/A	25 basis points	226 basis points	78 basis points	18 basis points	150 basis points
√	Long Term Investment Return Benchmark Merrill Lynch 1-3 Year Treasury Index	N/A	50 basis points	225 basis points	79 basis points	27 basis points	167 basis points
√	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		
√	Rate Stabilization Fund (RSF)	N/A	Help to avoid spikes in rate increases for retail customers	$6. milion utilization from and $6. million contribution to the RSF, leaving a balance of $61.45 million.	Projected at $74.45 million at the end of FY 2020	Projected at $71.95 million at the end of FY 2021	Projected at $61.45 million at the end of FY 2022

The Approved FY 2020 - FY 2029 financial plan includes the resources necessary to accomplish critical financial and operational goals over the coming years, as summarized below.

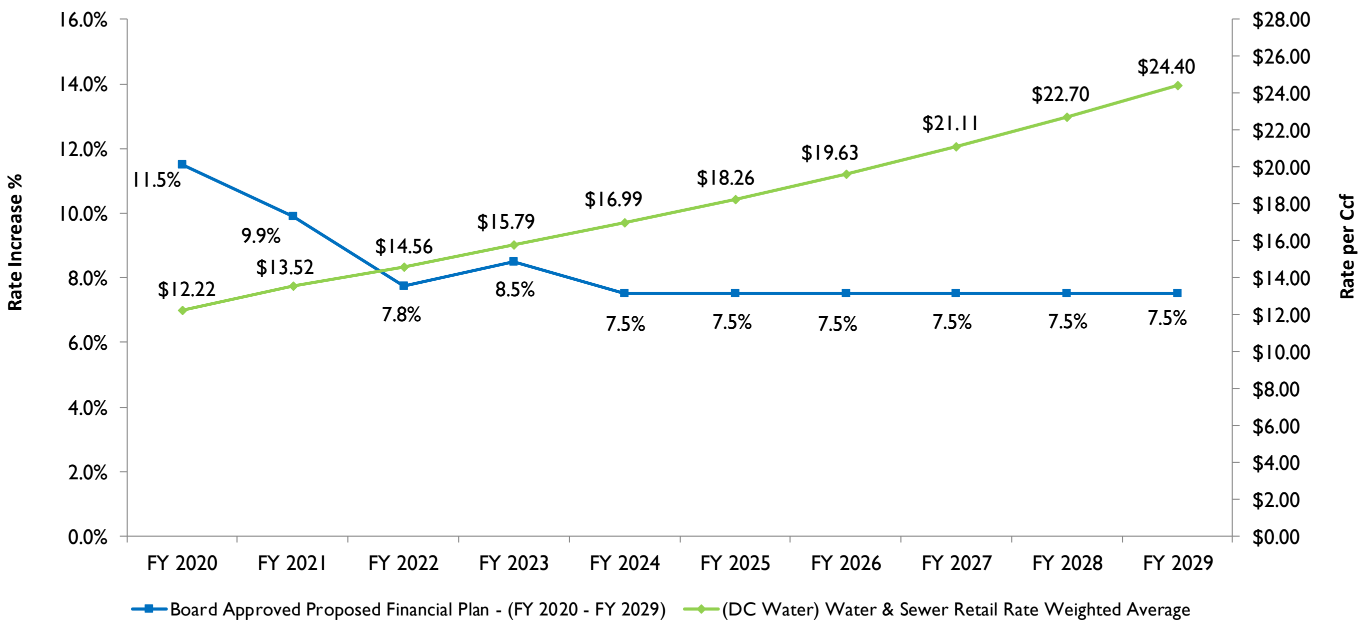
- Continue adherence to the Board's financial, investment, rate-setting and long-term planning policies
- Continue implementation of the ten-year $5.45 billion capital improvement program
- Includes disbursements of $1.2 billion over the ten-year planning period for Clean Rivers Project (CSO Long-Term 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 3.3 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 2020 will be at $17.01 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 2021 to FY 2029 range from 1.72 to 1.87. 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 30.5 percent and 32.0 percent of the total operating revenue in FY 2021 and FY 2022, respectively
  - Interest on Variable debt assumed to be 2.5 percent in FY 2020 and FY 2021
  - Interest on Fixed debt assumed to be 5.5 percent in FY 2020 and 5.0 percent in FY 2021
  - Utilization of the Commercial Paper program/Extendable Municipal Commercial Paper (EMCP) is assumed for interim financing for bond issuance, capital equipment and Washington Aqueduct

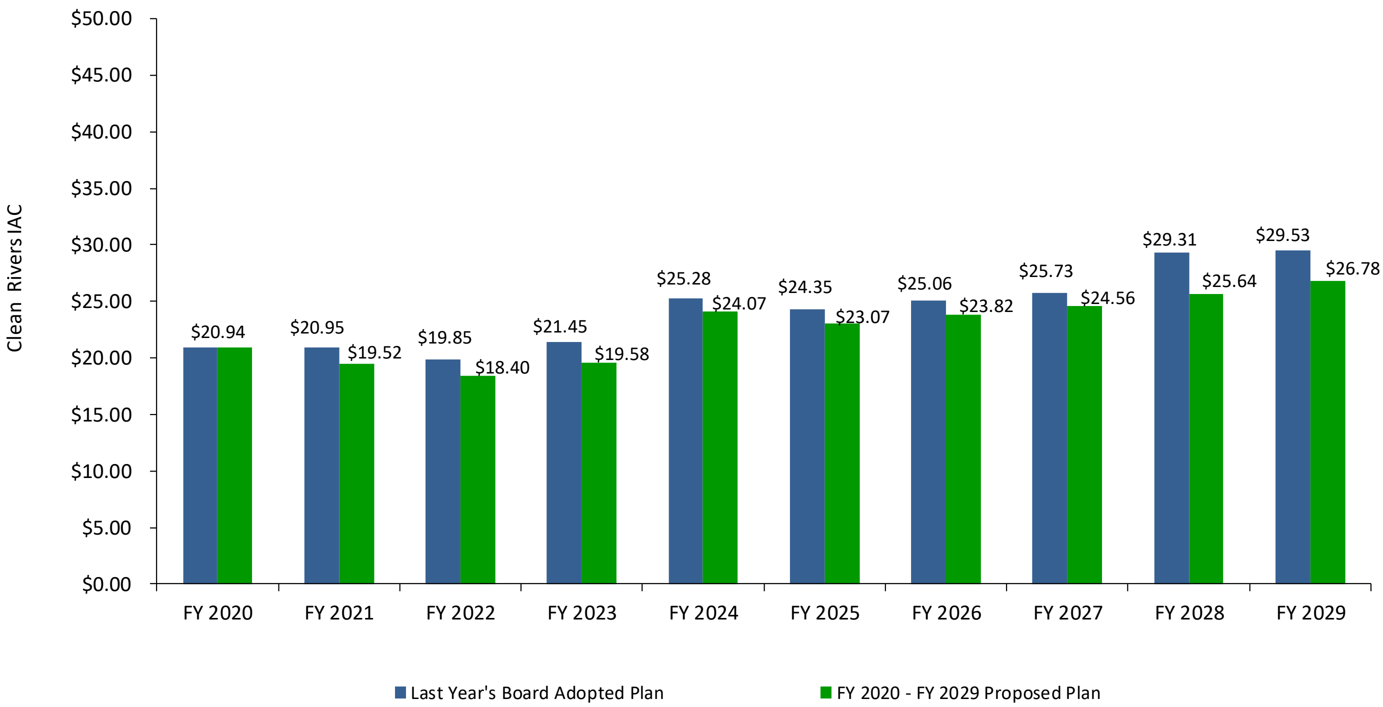
Due to these ongoing and new initiatives, from FY 2020 – FY 2029 DC Water's water and sewer volumetric retail rates are projected to increase by $1.04 to $1.70 per 100 cubic feet as shown in the chart below. Cumulative rate increases would total 82.7 percent over the ten-year period compared to 86.0 percent projected in last year's ten-year plan (FY 2019 – FY 2028).

Projected Retail Rate Increases
FY 2020—FY 2029



Rates shown above reflect weighted water and sewer rates for Residential customers' category. The proposed retail water and sewer combined rate for FY 2021 is $13.52 per Ccf and $14.56 per Ccf for FY 2022. In addition, the proposed increase in the combined Right-of-Way and PILOT Fees is $0.03 per Ccf, {$0.04 per 1,000 gallons}, in FY 2021 and is $0.02 per Ccf, {$0.03 per 1,000 gallons} in FY 2022 to recover the full amount for services charged to DC Water by the District. There is no increase in Right-of-Way Fee for FY 2021 and FY 2022, which remains same at $0.19 per Ccf ($0.25 per 1,000 gallons). The proposed monthly Clean Rivers Project CRIAC charges for FY 2021 and FY 2022 are $19.52 and $18.40 respectively per ERU (Equivalent Residential Unit); decrease of $1.42 compared to the FY 2020 charge and decrease of $1.12 compared to the FY 2021 charge respectively

Projected Monthly Clean Rivers Impervious Surface Area Charge (CRIAC) Changes FY 2020 – FY 2029



- The projected charges displayed in the chart above are primarily driven by anticipated debt service costs necessary to support the twenty-five year $2.8 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 $20.94 per month in FY 2020 to $26.78 per month in FY 2029
- The proposed CRIAC shift to sewer volumetric with 18 percent in FY 2020, 28 percent in FY 2021 and 37 percent 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 is 6.6 percent for FY 2021. The gradual shift helps avoid rate shock to customers. The CRIAC for is projected to decrease from $20.94 to $19.52 per ERU, per month for FY 2021 and to $18.40 per ERU per month for FY 2022.

The proposed rate and fee adjustments included in the FY 2020 – FY 2029 financial plan are driven by the following trends and initiatives:

- Assumed retail water consumption decline of 1.5 percent in FY 2020 over FY 2019 Actual, conservation of 1.5 percent in FY 2021 and 1 percent in FY 2022 and onwards.
- Increasing debt service expenditures, driven by DC Water's $5.45 billion capital improvement program (cash disbursements basis), which increases on average by 6.1 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 3.3 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.

In FY 2019, DC Water, Mayor Muriel Bowser and the DC Council worked together to expand the existing customer assistance program. The new benefits were earmarked for non-profits, including churches and cemeteries, along with a group of residential customers who did not previously meet the income guidelines for assistance (CAP2 and CAP3).

For FY 2019, $1,290,797 in discount benefits was provided to 4,436 CAP customers and 191 CAP2 customers received discount of $9,436. The CAP and CAP2 discount programs administered by DOEE provided discount as of September 30, 2019 to 4,627 customers representing $1,338,288. DC Water's SPLASH program customers donated an additional $84,427 through their water bills for the benefit of those customers who needed additional help.

For 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, previous paving, green roofs, bio retention practices and stormwater will avail this discount. This budget proposes an increase from 4 percent to 20 percent for stormwater best management practices.

$ in thousands

The Proposed FY 2021 operating receipts projection totals $733.7 million, an increase of $34.8 million above the FY 2020 Revised budget. The Proposed FY 2022 operating receipts total $766.3 million, an increase of $32.6 million over the Proposed FY 2021 receipts.

Comparative Operating Receipts
FY 2020 – FY 2022

	FY 2020 Approved	FY 2021 Proposed	Increase/ (Decrease)	Percent Change	FY 2022 Proposed	Increase/ (Decrease)	Percent Change
Residential	$ 124,353	$ 130,803	$ 6,450	5.2%	$ 137,229	$ 6,426	4.9%
Commercial	173,826	180,589	6,763	3.9%	191,375	10,786	6.0%
Multi-family	100,884	110,241	9,357	9.3%	116,768	6,527	5.9%
Sub-Total Residential, Commercial and Multi-family	399,063	421,633	22,570	5.7%	445,372	23,739	5.6%
Federal Government(1)	71,887	77,571	5,684	7.9%	67,220	(10,352)	-13.3%
District Government	17,585	18,377	792	4.5%	18,668	291	1.6%
D.C. Housing Authority	10,524	11,941	1,417	13.5%	12,592	651	5.5%
Transfer from Rate Stabilization Fund	-	2,500	2,500	0.0%	10,500	8,000	320.0%
Water System Replacement Fee (WSRF)	39,717	39,717	-	0.0%	39,717	-	0.0%
Metering Fee	10,776	15,405	4,628	43.0%	24,083	8,678	56.3%
Total Retail	**549,553**	**587,144**	**37,591**	**6.8%**	**618,152**	**31,008**	**5.3%**
IMA Wastewater Charges	72,066	70,791	(1,275)	-1.8%	72,915	2,124	3.0%
Potomac Interceptor Wastewater Charges	10,473	11,194	721	6.9%	11,530	335	3.0%
Total Wholesale	**82,539**	**81,986**	**(554)**	**-0.7%**	**84,445**	**2,459**	**3.0%**
District Stormwater Revenue (2)	1,000	1,000	-	-	1,000	-	0.0%
Misc. Rev. (e.g. water tap installation, fire hydrant usage, etc.)	33,840	29,824	(4,016)	-11.9%	28,238	(1,586)	-5.3%
Washington Aqueduct Debt Service Revenue for Falls Church & Arlington	193	193	-	-	193	-	0.0%
Interest Income (including interest on Bond Debt Service Reserve Fund)	3,966	3,428	(537)	48.5%	3,726	298	8.7%
System Availablibility Fee (SAF)	5,775	7,700	1,925	33.3%	7,700	-	0.0%
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	17,013	17,363	350	2.1%	17,744	381	2.2%
Total Other	**66,887**	**64,608**	**(2,278)**	**-3.4%**	**63,701**	**(907)**	**-1.4%**
Total Operating Cash Receipts	**$ 698,979**	**$ 733,738**	**$ 34,759**	**5.0%**	**$ 766,298**	**$ 32,560**	**4.4%**

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.
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.

Major assumptions underlying the revenue projections contained in the FY 2020 – FY 2029 financial plan include:

- FY 2022, 1.5 percent reduction in water sales is assumed over FY 2021 projection for all customer categories, based on historical trends in consumption levels. For FY 2023 and onwards, 1.0 percent conservation is assumed for all categories.
- 3.0 percent average revenue increase between FY 2022 and FY 2029 for wholesale customers, in line with operating and maintenance expense increases for joint use facilities. In FY 2021, however, the wholesale revenues are projected to decrease by $0.6 million or -0.7 percent due to lower projected flows for FY 2021.
- Based on the current interest rate environment, interest projections are conservatively assumed at 2.0 percent earnings rate in FY 2021 and 3.0 percent in FY 2022 and 4.0 percent in FY 2023. Interest rates for FY 2023 and onwards are assumed at 3.0 percent.
- The majority of other non-operating revenues, totaling $38.7 million in FY 2021 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 - $5.1 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) - $19.9 million.

The Proposed FY 2021 receipts projection totals $733.7 million, approximately $34.8 million, or 5.0 percent higher than the Revised FY 2020 projections. The increase is due primarily to:

- **Residential, Commercial and Multi-Family** - FY 2021 projections reflect an increase of $22.6 million, or 5.7 percent from FY 2020 Revised due primarily to proposed retail rate increase of 9.9 percent (water and sewer volumetric rates) and decrease of $1.42 monthly ERU fee for the Clean Rivers IAC (see Section IV – Rates and Revenues for details on all rate and fee proposals) One and a half percent decrease in consumption has been assumed due to conservation in FY 2021.
- **Federal revenues** - Proposed FY 2021 federal revenues are projected to increase by $5.7 million or 7.9 percent over Revised FY 2020 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 2021 billing was prepared in April 2019, 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, 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, the proposed FY 2021 federal revenues reflect the final billing sent to the federal government in April 2019 net of the adjustment for the prior-year (FY 2018) reconciliation.
- **Municipal & D.C. Housing Authority Receipts** - are projected to increase by $2.2 million (or 7.9 percent) mainly due to proposed rate increase of 9.9 percent and decrease of $1.42 monthly ERU fee for the Clean Rivers IAC.
- **Rate Stabilization Fund Utilization** – The ten-year plan and near-term revenue projections assume utilization of $2.5 million of RSF in FY 2021. There will be a balance of $61.45 million by the end of FY 2029. 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.
- **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 $4.96 for a 5/8-inch meter (typical size of a residential customer meter) to $449.04 for 16" meters (typically used for large commercial customers). Based on the FY 2020 Cost of Service study, the Customer Metering fees due to proposed increase is projected to generate $15.4 million in FY 2021.

- **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 2021 wholesale revenues are projected to decrease by $0.5 million or 0.7 percent to $82.0 million due to lower projected flows for FY 2021.
- **Stormwater** - DC Water's FY 2020 and FY 2021 receipts include $1.0 million each year from the Department of Energy and Environment (DOEE) 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 2020 – FY 2029 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.
- **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. PILOT fee increase by 2 percent over prior year as per PILOT MOU signed with the District Government on September 4, 2014. In FY 2021 Proposed budget as compared to FY 2020 Revised budget, PILOT is projected to increase by $0.35 million or 2.1 percent. ROW fee remains same at $5.1 million.

The Proposed FY 2022 receipts projection totals $766.3 million, approximately $32.6 million, or 4.4 percent higher than the Proposed FY 2021 projections. This increase is due primarily to:

- **Residential, Commercial & Multi-Family** - FY 2022 projections reflect an increase of $23.76 million, or 5.6 percent from FY 2021 Proposed due primarily to proposed retail rate increases of 7.8 percent (water and sewer volumetric rates) and decrease of $1.12 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 2021 projections has been assumed due to conservation in FY 2022
- **Federal Revenues** - Proposed FY 2022 federal revenues are projected to decrease by $10.4 million or 13.3 percent below the proposed FY 2021 budget to $67.2 million.
- **Municipal & D.C. Housing Authority Receipts** - are projected to increase by $0.9 million (or 3.1 percent), mainly due to proposed retail rate increases of 7.8 percent and decrease of $1.12 monthly ERU fee for the Clean Rivers IAC
- **The Rate Stabilization Fund** - The ten-year plan and near-term revenue projections assume utilization of $10.5 million of RSF in FY 2022. There will be a balance of $61.45 million by the end of FY 2029.
- **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 $7.75 for a 5/8 inch meter (typical size of a residential customer meter) to $701.62 for 16” meters (typically used for large commercial customers). Based on the FY 2020 Cost of Service study, the Customer Metering fees due to proposed increase is projected to generate $24.1 million in FY 2022.
- **Wholesale Receipts** - In FY 2022, Wholesale revenues are projected to increase by $2.5 million or 3.0 percent to $84.4 million due to projected 3.0 percent increase in operations and maintenance expenses.
- **Stormwater** - As noted earlier, the proposed FY 2022 receipts for this category include $1.0 million each year from the Department of Energy and Environment (DOEE).
- FY 2022 **PILOT Fee** increase by 2 percent over prior year as per the PILOT MOU signed with the District Government on September 4, 2014.

($ in thousands)

DC Water
FY 2020 – FY 2029 Financial Plan

OPERATING	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
*Retail**	$ 571,666	$ 607,107	$ 630,495	$ 669,848	$ 723,657	$ 752,224	$ 791,988	$ 833,503	$ 879,616	$ 928,122
*Wholesale**	82,539	81,986	84,445	86,978	89,588	92,275	95,044	97,895	100,832	103,857
Other	44,774	42,145	40,858	44,081	46,959	51,637	54,692	54,970	56,935	57,752
RSF	-	2,500	10,500	-	-	-	-	-	-	-
Operating Receipts [1]	$ 698,979	$ 733,738	$ 766,298	$ 800,907	$ 860,204	$ 896,136	$ 941,724	$ 986,368	$ 1,037,383	$ 1,089,731
Operating Expenses	(347,881)	(365,658)	(376,303)	(387,553)	(399,149)	(411,101)	(423,421)	(436,120)	(449,209)	(462,701)
Debt Service	(205,137)	(222,268)	(240,497)	(257,460)	(271,238)	(286,756)	(299,489)	(315,321)	(332,807)	(348,316)
Cash Financed Capital Improvement	$ (28,556)	$ (30,355)	$ (37,830)	$ (46,889)	$ (50,656)	$ (60,178)	$ (71,279)	$ (75,015)	$ (79,165)	$ (83,531)
Net Revenues After Debt Service	$ 117,405	$ 115,456	$ 111,668	$ 109,005	$ 139,161	$ 138,101	$ 147,535	$ 159,912	$ 176,202	$ 195,183
Operating Reserve-Beg Balance	186,764	180,000	185,000	194,000	201,000	205,000	215,000	220,000	230,000	240,000
Other Misc (Disbursements)/Receipts										
Wholesale/Federal True Up	(5,372)	(3,184)	(5,490)	-	-	-	-	-	-	-
Project Billing Refunds	(4,000)	(4,000)	-	-	-	-	-	-	-	-
Transfers To RSF	(13,000)	-	-	-	-	-	-	-	-	-
Pay-Go Financing	(101,797)	(103,272)	(97,178)	(102,005)	(135,161)	(128,101)	(142,535)	(149,912)	(166,202)	(185,183)
Operating Reserve - Ending Balance	$ 180,000	$ 185,000	$ 194,000	$ 201,000	$ 205,000	$ 215,000	$ 220,000	$ 230,000	$ 240,000	$ 250,000
Rate Stabilization Fund Balance RSF [2]	$ (74,450)	$ (71,950)	$ (61,450)	$ (61,450)	$ (61,450)	$ (61,450)	$ (61,450)	$ (61,450)	$ (61,450)	$ (61,450)
Senior Debt Service Coverage	459%	502%	533%	513%	616%	647%	632%	618%	660%	769%
Combined Debt Service Coverage	171%	172%	169%	170%	179%	177%	181%	182%	184%	187%
Actual/Projected Water/Sewer Rate Increases	11.5%	9.9%	7.8%	8.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
*Operating Receipts $ Increase/Decrease										
Retail	7,460	35,441	23,388	39,353	53,809	28,567	39,764	41,514	46,113	48,507
Wholesale	423	(554)	2,460	2,533	2,609	2,688	2,768	2,851	2,937	3,025
*Operating Receipts % Increase/Decrease										
Retail	1.3%	6.2%	3.9%	6.2%	8.0%	3.9%	5.3%	5.2%	5.5%	5.5%
Wholesale	0.5%	-0.7%	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 2021 planned transfers of $0.0 million to Rate Stabilization Fund and $2.5 million utilization will bring the total fund balance to $71.95 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 $5.45 billion capital improvement program, growing at an average annual rate of 6.1 percent. All other operating expenses are projected to grow at an average annual rate of 3.3 percent. The following chart provides detailed comparison of the FY 2020 and FY 2021 operating budgets.

Comparative Operating Budgets
FY 2020 – FY 2021

	FY 2020 APPROVED	FY 2021 APPROVED	Increase (Decrease)	Percentage Change
Personnel Services	$170,680	$177,863	$7,183	4.2%
Contractual Services	81,886	88,532	6,646	8.1%
Water Purchases	34,929	36,250	1,321	3.8%
Chemicals and Supplies	33,158	36,081	2,923	8.8%
Utilities	26,953	27,911	958	3.6%
Small Equipment	989	1,030	41	4.1%
Subtotal Operations & Maintenance	**$348,594**	**$367,668**	**$19,074**	**5.5%**
Debt Service	215,340	222,268	6,928	3.2%
Cash Financed Capital Improvements	28,556	30,355	1,799	6.3%
Payment in Lieu of Taxes	16,934	17,272	338	2.0%
Right of Way Fees	5,100	5,100	-	0.0%
Subtotal Debt Service, CFCI & PILOT/ROW	265,930	274,995	9,065	3.4%
Total Operating Expenditures	**$614,523**	**$642,663**	**$28,140**	**4.6%**
Personnel Services charged to Capital Projects	(22,748)	(24,382)	(1,634)	7.2%
Total Net Operating Expenditures	**$591,775**	**$618,281**	**$26,506**	**4.5%**

The approved FY 2021 budget total of $642.7 million is approximately 4.6 percent higher than the approved FY 2020 budget. The 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 2021 operations and maintenance budget net increase of 5.5 percent is primarily due to increase in personnel services, various maintenance and professional services, escalating unit price for major chemicals, and 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 $7.2 million or 4.2 percent above the approved FY 2020 budget. The increase is primarily attributable to salary adjustments, combined with 5 additional positions for the DC Water Consumer Protection Amendment Act of 2018, higher overtime, and increase in health insurance premiums.

Utilities – increase of approximately $1.0 million or 3.6 percent above the approved FY 2020 budget is due to electricity budget increase of $0.8 million resulting from increase in flows from the Wet Weather Facility and Filtrate Treatment Facility (FTF) activities that became fully operational in 2019. DC Water's thermal hydrolysis process and anaerobic digesters continues to generate approximately 6MW electricity to offset the Authority-wide energy consumption of 33MW. Additional reduction of $0.2 million resulted from changes/upgrade to telephone services.

Chemicals – increase of $2.6 million or 10.3 percent above the approved FY 2020 budget is due to escalating unit prices for major chemicals (methanol, ferric chloride and sodium bisulfite) and high chemical usage from increased effluent from the Tunnel Dewatering Pump Station during rain events.

Water Purchase – increase of approximately $1.3 million or 3.8 percent above the approved FY 2020 budget. This represents DC Water's share of the Washington Aqueduct's FY 2021 O&M budget.

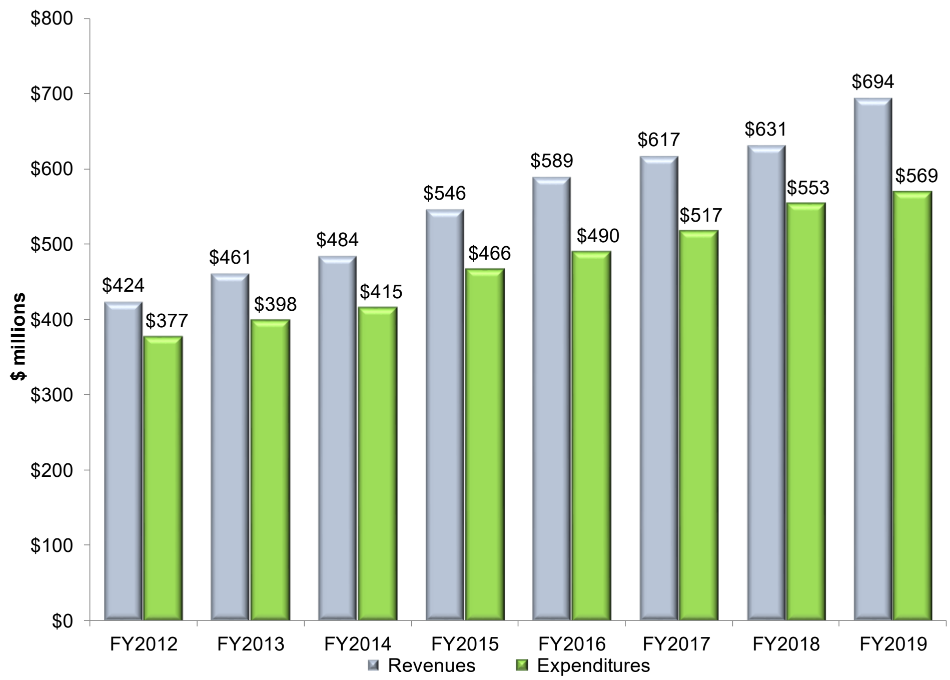
Biosolids Hauling – slightly lower compared to FY 2020 budget, due to continued increased marketing efforts of BLOOM, and the materialized savings from reduced transportation costs attributable to production of Class A biosolids, estimated at 450 wet tons/day from the Combined Heat and Power (CHP) facility. Previously, the Blue Plains Plant produced 1,200 wet tons per/day of Class B biosolids.

$ in thousands

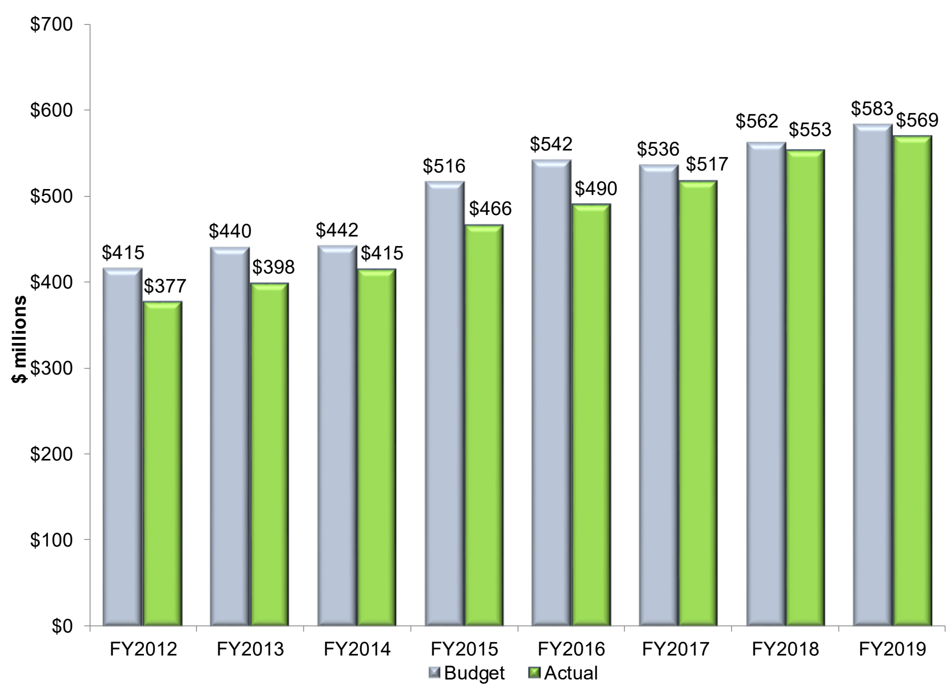
Solid Financial Performance with Revenues Consistently Exceeding Expenses

- FY 2019 Actual Operating cash receipts increased by 63.2 million to $694.4 million or 10.0 percent
- FY 2019 Actual Operating expenses increased by $16.0 million to $569.3 million, or 2.9 percent
- FY 2019 Budget to actual results showed revenues exceeding and expenses below budget

Comparative Operating Receipts



Expenditure Budget to Actual



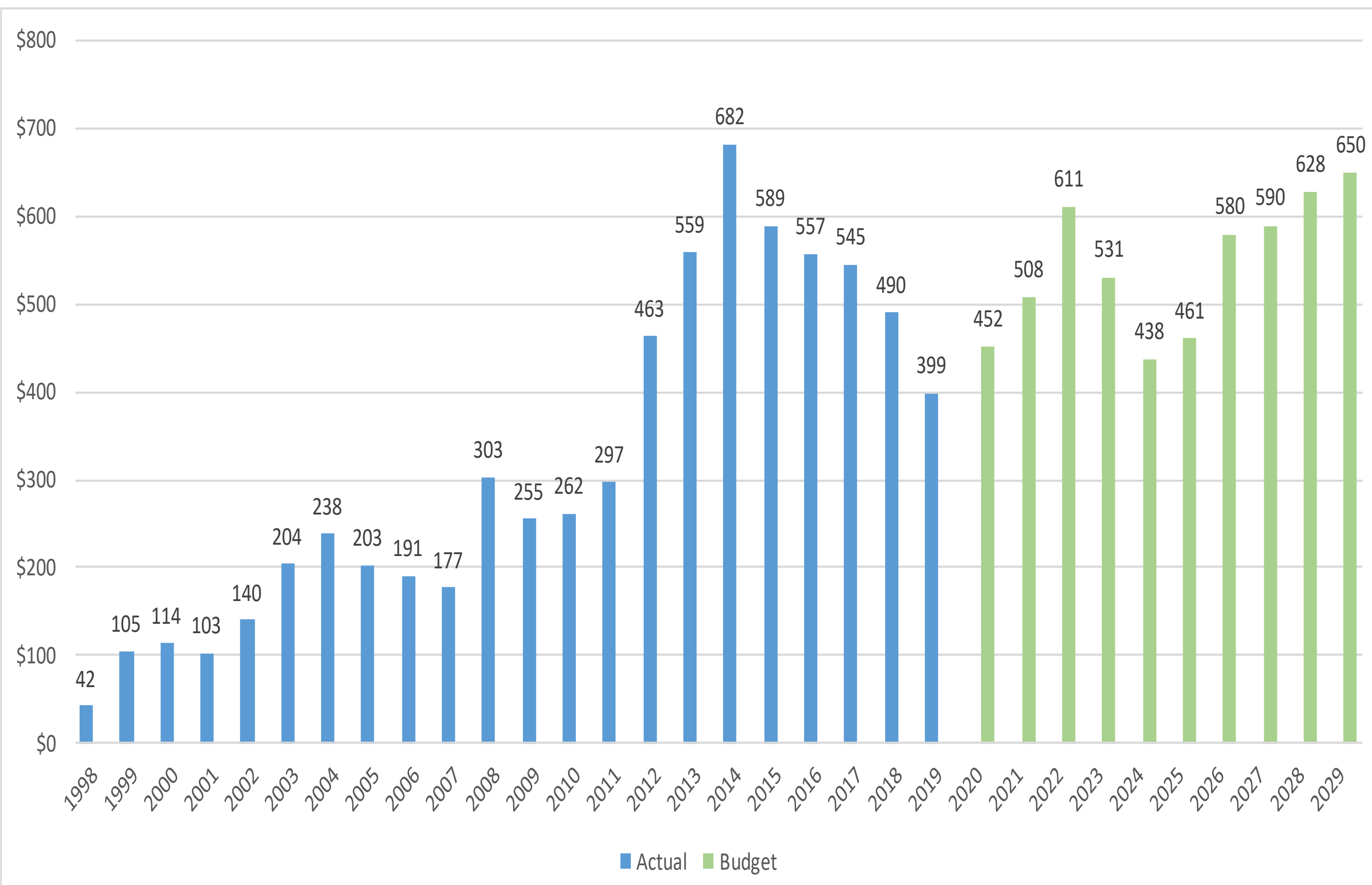
$ in thousands

The 5.45 Billion Ten-Year CIP Protects Our Assets While Leveraging Long-Term Debt

The FY 2020 – FY 2029 financial plan anticipates capital disbursements of $5.45 billion. Over the last 22 years, $6.9 billion has been invested on DC Water's system averaging approximately $314 million per year. Projected annual spending ranges from $438 million to nearly $650 million as shown in the chart below (or approximately $545 million per year from FY 2020 – FY 2029). 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.

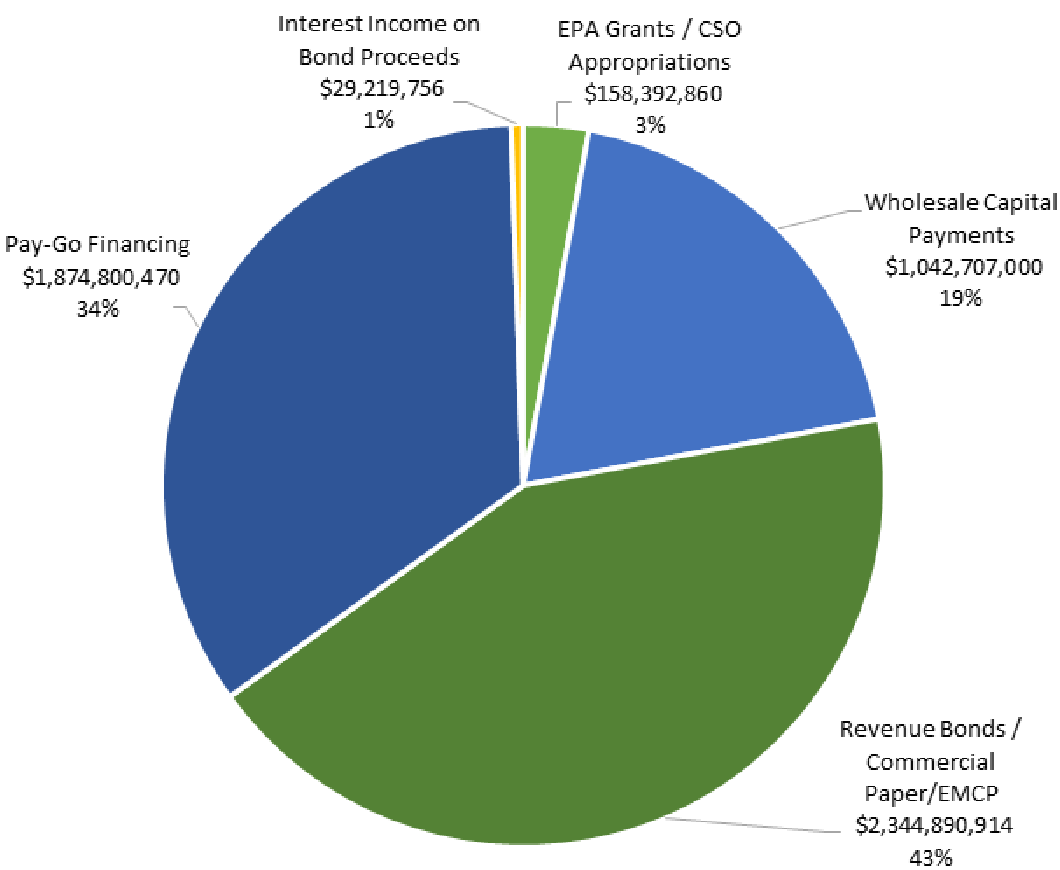
As noted earlier in this section, DC Water developed a comprehensive financing plan in FY 1999 with the dual goals of 1) securing the lowest cost of capital possible, and 2) maximizing administrative and operating flexibility. The plan includes the following components: Grants; wholesale capital payments;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

Historical and Projected Capital Spending
FY 1998 – FY 2029



FY 2020 – FY 2029 Capital Improvement Program
Sources of Funds

	FY2020 - 2029 PLAN TOTAL	Percent of Total
EPA Grants / CSO Appropriations	$ 158,392,860	2.91%
Wholesale Capital Payments	1,042,707,000	19.13%
Revenue Bonds / Commercial Paper/EMCP	2,344,890,914	43.02%
Pay-Go Financing	1,874,800,470	34.40%
Interest Income on Bond Proceeds	29,219,756	0.54%
TOTAL SOURCES	**$ 5,450,011,000**	**100.00%**



- **EPA and CSO Grants** – For FY 2020 – FY 2029, EPA and CSO grants represent only 2.91 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 $260.8. million in Congressional appropriations for the Clean Rivers Project (aka CSO LTCP) as of September 30, 2019.

- **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 19.1 percent of its capital funding will come from wholesale customers.

- **Revenue Bonds/Commercial Paper/EMCP -** Currently debt financing represents only 43.03 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 34.4 percent of total funding for the FY 2020 – FY 2029 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 2020 and FY 2021 Debt Issuance Plans & Debt Service Assumptions

DC Water issued $300 million in new bonds for Series 2019 A, B, C, and D, additionally refunding $343 million of Series 2013A bonds in the first quarter of FY 2020.

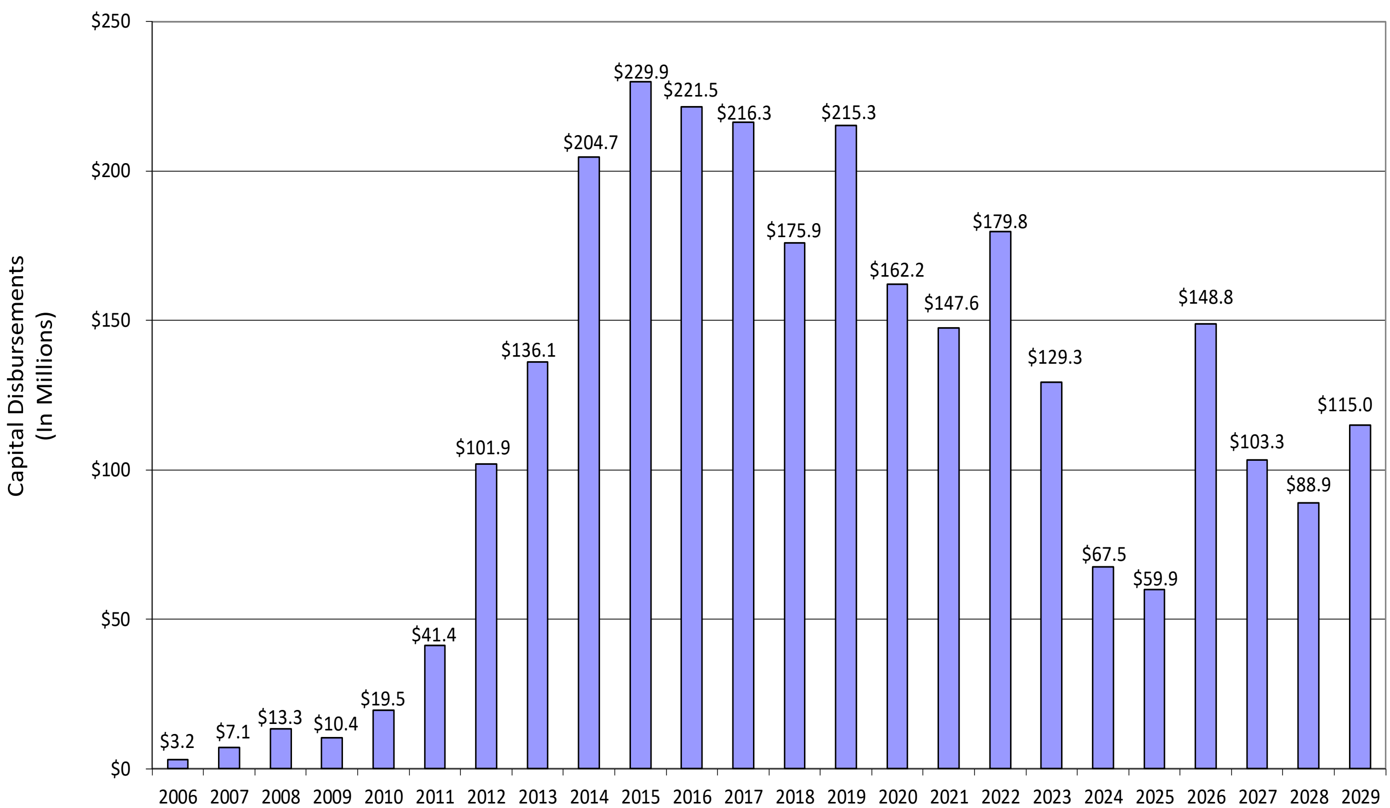
Based on current capital project spending, DC Water plans to: 1) issue approximately $300 million in new bonds between the second and third quarters of FY 2021. For the purpose of financial planning, we have assumed fixed rate, tax-exempt bonds at 5.50 percent for FY 2020. Similarly, for the remainder of the ten-year plan we have assumed issuing long term bonds at 5.00 percent for FY 2021 and FY 2022, 5.50 percent for FY 2023 and FY 2024, and 6.00 percent for FY 2025 – FY 2029, and 2) issue commercial paper/ EMCP for interim financing. The ten-year plan assumes a variable interest rate of 2.50 percent in FY 2020 – FY 2029. 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 $1.2 billion of projected disbursements. Projected spending by fiscal year for the Clean Rivers Project is shown in the next chart.

In FY 2019, DC Water received federal funding of $8.0 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 Surface Area Charge (CRIAC) fee. 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 $249.2 million at the end of FY 2019. 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 2019 Year - End Cash ($ in thousands)

Board-Adopted Operating Reserves (120 Days of O&M)		
60 Day Operating Reserve (Indenture Required	$	51,694
Renewal & Replacement Reserve (Indenture Required)		35,000
Undesignated Reserve		38,806
Total Operating Revenue	**$**	**125,500**
Other Reserves		
Rate Stabilization Fund Reserve	$	61,450
DC Insurance Reserve		1,000
Total Other Reserve	**$**	**62,450**
Total Reserves		
Cash in Excess of Reserves (1)	$	61,264
Total Cash Position (1)	**$**	**249,214**

(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 $51.7 million in FY 2019.
- **Renewal & Replacement Reserve** - In FY 2018 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 were 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 2019) 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 2019. 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 $61.45 million available at the end of FY 2020 – 2029.

- **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.