



dc  **Comprehensive Annual
Financial Report**

2018

Fiscal Years Ended September 30, 2018 and 2017

David Gadis, CEO and General Manager
Matthew T. Brown, Chief Financial Officer

District of Columbia Water and Sewer Authority

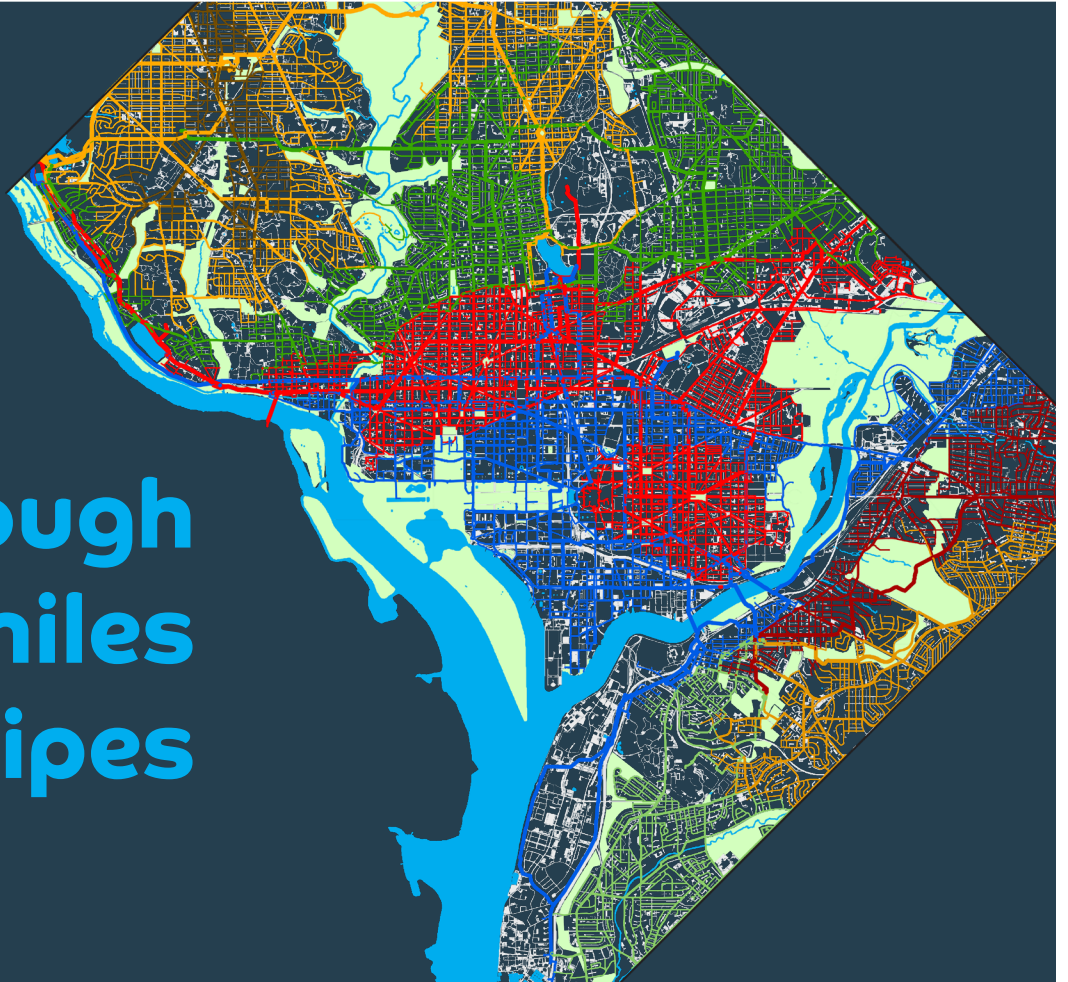
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**DC Water
distributes
99 million
gallons
of clean
drinking
water per
day . . .**



**. . . through
1350 miles
of pipes**



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FY 2018

District of Columbia Water and Sewer Authority

Comprehensive Annual Financial Report

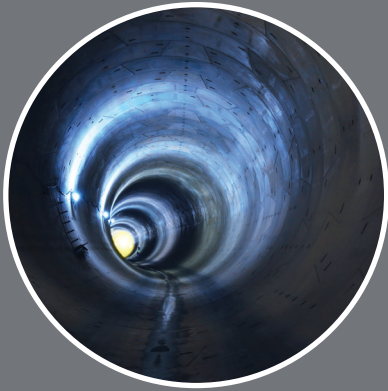
Fiscal Years
Ended September 30, 2018 and 2017

Prepared by:
Department of Finance, Accounting and Budget

Matthew T. Brown, Chief Financial Officer

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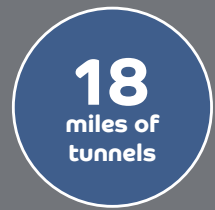
dc clean
RIVERS
PROJECT



System-wide CSO volume



CSO volume to the Anacostia River



Over 100 feet below ground



For areas served by the Northeast Boundary Tunnel



Reduction of nitrogen to the Chesapeake Bay



Blue Plains
Wastewater
Treatment Plant
1937 - 2018



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DC Water distributes drinking water and collects and treats wastewater for more than 694,000 residents and **22.8 million annual visitors** in the District of Columbia.



498 ACRES
OF LAND MANAGED
BY GREEN
INFRASTRUCTURES

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TABLE OF CONTENTS

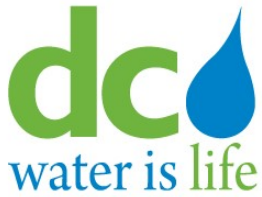
INTRODUCTORY SECTION (UNAUDITED) 1	
Letter of Transmittal 3	
Overview of DC Water 4	
Economic Condition..... 4	
Major Initiatives..... 5	
Capital Improvement Program..... 5	
Blue Plains and Anacostia River Tunnels..... 5	
Green Infrastructure 5	
Water Meter Rehabilitation Project..... 5	
Credit Rating Upgrades 6	
Awards and Acknowledgements 6	
CAFR Award 6	
Acknowledgements..... 6	
Board of Directors 7	
Principal Staff Members..... 7	
Governance and Organizational Structure 8	
GFOA Certificate of Achievement..... 9	
FINANCIAL SECTION 11	
Independent Auditors’ Report..... 13	
Management’s Discussion & Analysis (Unaudited)..... 15	
Basic Financial Statements 29	
Statements of Net Position..... 29	
Statements of Revenues, Expenses, and Changes in Net Position..... 30	
Statements of Cash Flows 31	
Notes to the Financial Statements 33	
STATISTICAL SECTION (UNAUDITED) 77	
Financial Trends 79	
Exhibit 1: Change in Net Position for FY 2009-2018..... 80	
Exhibit 2: Summary of Net Position for FY 2009-2018..... 81	
Exhibit 3: Capital Disbursements for FY 2009-2018..... 82	
Revenue Capacity..... 83	
Exhibit 4: Operating Revenues and Rate Increases for FY 2009-2018 84	
Exhibit 5: Number and Type of Customer Accounts for FY 2009-2018..... 85	
	Exhibit 6: Ten Largest Commercial Customers FY 2009-2018 86
	Exhibit 7: Ten Largest Government Customers for FY 2009-2018 87
	Exhibit 8: Retail Water and Sewer Rates for FY 2009-2018 88
	Exhibit 9: Residential Water and Wastewater Bill Comparisons as a Percentage of Median Household Income 89
	Exhibit 10: Residential Water and Wastewater Bill Comparisons to Local and Regional Utilities..... 90
	Debt Capacity 91
	Exhibit 11: Outstanding Debt and Debt Ratios for FY 2009-2018 92
	Exhibit 12: Calculation of Debt Service Coverage for FY 2018 93
	Demographic and Economic Information 95
	Exhibit 13: Population of Service Area Jurisdictions for CY 2009-2018 96
	Exhibit 14: Personal Income of Service Area Jurisdictions CY 2009-2018 97
	Exhibit 15: Per Capita Personal Income of Service Area Jurisdictions CY 2009-2018 98
	Exhibit 16: Unemployment Rates for CY 2009-2018 99
	Exhibit 17: Employment by Sector..... 100
	Operating Information 101
	Exhibit 18: Water Delivered (Pumped) and Billed (Sold) for FY 2009-2018 102
	Exhibit 19: Water Demand for FY 2009-2018 103
	Exhibit 20: Miscellaneous Statistics About Authority Operations for FY 2009-2018... 104
	Exhibit 21: Schedule of Insurance as of September 30, 2018 107
	Exhibit 22: Summary of Major Permits and Administrative Orders as of September 30, 2018 108
	Exhibit 23: Budgetary Comparison Schedule for FY 2018..... 109

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**Introductory Section
(Unaudited)**

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January 28, 2019

Board of Directors
District of Columbia Water and Sewer Authority
5000 Overlook Avenue, S.W.
Washington, D.C. 20032

Dear Members of the Board:

I am pleased to present the District of Columbia Water and Sewer Authority's ("DC Water" or the "Authority") Comprehensive Annual Financial Report ("CAFR") for the fiscal year ended September 30, 2018. The Authority's financial statements were prepared in accordance with U.S. generally accepted accounting principles ("GAAP"), as promulgated by the Governmental Accounting Standards Board ("GASB") and audited by a firm of independent certified public accountants retained by DC Water. In accordance with the Authority's enabling legislation, DC Water is required to perform an annual audit of its financial statements and submit it to the District of Columbia's Mayor, Chief Financial Officer, and District Council.

Responsibility for the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with DC Water's management. To the best of my knowledge and belief, the information contained in this report is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the Authority. All disclosures necessary for the reader to gain an understanding of DC Water's financial activity have been included.

DC Water's management is responsible for establishing and maintaining an internal control structure designed to ensure that its assets are adequately safeguarded against loss, theft, or misuse and to maintain accurate and reliable financial records for the preparation of financial statements and the representations made by management. The internal control structure is designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that: 1) the cost of internal controls should not exceed the benefits derived from the controls; and 2) the evaluation of costs and benefits requires management's exercise of judgment. To the best of my knowledge and belief, DC Water's internal accounting controls adequately safeguard its assets and provide reasonable assurance of the proper recording of financial transactions in accordance with GAAP.

KPMG LLP, Certified Public Accountants, has been retained by DC Water to serve as its independent auditors and has issued an unmodified ("clean") opinion on DC Water's financial statements for the years ended September 30, 2018 and 2017. The independent auditors' report is located at the front of the financial section of this report.

GAAP requires that management provide a narrative introduction, overview and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis ("MD&A"). This letter of transmittal is

designed to supplement the MD&A and should be read in conjunction with it. DC Water's MD&A is located immediately following the independent auditors' report.

Overview of DC Water

The District of Columbia Water and Sewer Enterprise Fund (the "Fund") was established in 1979 and was operated by the Water and Sewer Utility Administration, a division of the Government of the District of Columbia (the "District") Department of Public Works. The Authority, an independent authority of the District, was created in April 1996 and began operating on October 1, 1996 under and pursuant to an act of the Council of the District entitled the "Water and Sewer Authority and Department of Public Works Reorganization Act of 1996 (as amended)", and an Act of the United States Congress entitled the "District of Columbia Water and Sewer Authority Act of 1996". The Authority is considered a related organization of the District for purposes of presentation in the District's financial statements.

DC Water provides retail drinking water distribution and wastewater conveyance and treatment services to approximately 694,000 residential, commercial and governmental customers in the District of Columbia, and wholesale wastewater conveyance and treatment services to approximately 1.6 million users in Montgomery and Prince George's Counties in Maryland, and Fairfax and Loudoun Counties in Northern Virginia.

DC Water is governed by a Board of Directors consisting of eleven principal and eleven alternate members who represent the District of Columbia, Montgomery and Prince George's Counties in Maryland, and Fairfax County in Virginia.

Budgets are prepared annually and reviewed and approved by The Authority's Board of Directors. After approval by the Board, DC Water is required to submit its annual budget to the District for inclusion in the Mayor's annual budget. The District then includes DC Water's budget as an enterprise fund as part of its own budget submission to the U.S. Congress for approval.

Economic Condition

Washington, D.C., is not only known as being the nation's capital, but it is also an international city with a vibrant tourist industry and business climate. The U.S. Census Bureau estimated that there were 693,972 residents in Washington, D.C. in 2017, an increase of 1.9% from the same period of the prior year. The Washington Metropolitan Region has a population of more than 6.2 million individuals and is the sixth largest metropolitan area in the country.

The District's economic base is driven by the federal and local governments as well as diplomatic embassies and international organizations. The federal civilian workforce in the District averaged 236,318 employees, while thousands more are estimated to work elsewhere in the metropolitan area. The District is host to more than 180 foreign embassies and other recognized diplomatic missions. A number of international organizations, such as the International Monetary Fund, World Bank, Inter-American Development Bank and Organization of American States are headquartered in the District. An estimated 22.8 million people visit the Washington Metropolitan Region on an annual basis, not only to do business with the federal government and local firms, but also to visit the national monuments, historic sites, museums and other major cultural attractions.

Income has grown considerably in the District in recent years. The unemployment rate in the District decreased from 10.2% in 2011 to 6.0% in 2018. The District's economy grew consistently faster than the national economy for much of this decade and is expected to continue to grow in 2019. The District's economy is relatively more information and service industry dependent than most states, accounting for the region's relative insulation from the most recent national housing and credit centric recession.

Major Initiatives

Capital Improvement Program

DC Water's ultimate success in achieving its mission of providing world-class water and wastewater services as a leading steward of the environment depends in large part on the implementation of its 10-year \$4.0 billion capital improvement program ("CIP"). Approximately 36.0% of the CIP is either federally mandated or required by a court-ordered consent decree, including the Clean Rivers Project. DC Water plans to finance its \$4.0 billion capital improvement program from a variety of sources, including the issuance of revenue bonds, grants from the U.S. Environmental Protection Agency ("EPA"), federal appropriations, capital contributions from wholesale customers, and Pay-Go.

Blue Plains and Anacostia River Tunnels

The first phase of the DC Clean Rivers Project Anacostia River Tunnel System, including 7 miles of tunnels, diversions for each of the remaining Anacostia River CSOs, and additional wet weather treatment facilities at Blue Plains, was placed into operation in March 2018 ahead of the consent decree deadline. It is projected that phase of the project will reduce combined sewer overflows into the Anacostia River by approximately 80 percent in an average year of rainfall.

In order to protect DC Water stakeholders, DC Water issued the industry's first Environmental Impact Bond. Similar in nature to "pay for success" bonds, the borrowing is designed to pay bondholders for successful results achieved in the GI projects or pay bondholders less in the event that successful results are not achieved. This historic issuance is expected to introduce the wastewater industry to alternative sources of funding for a national issue regarding EPA required effluent composition reductions to the nation's waterways.

Green Infrastructure

DC Water completed the construction of 79 new green facilities in the Rock Creek Watershed, reaching substantial completion in October 2018. Measurement processes have been established to monitor their effectiveness which data is anticipated to aid in the enterprise's decision whether to continue with green infrastructure to achieve CSO reduction for Rock Creek. Establishment of an innovative certification program to train and hire workers in installation and maintenance of green infrastructure has produced tangible socioeconomic benefit.

Water Meter Rehabilitation Project

The DC Water Meter Rehabilitation Project is focusing on replacing meters and meter transmitting units that are nearing the end of their useful life in various locations throughout the District of Columbia. This project supports

the rehabilitation of DC Water's Automated Meter Reading (AMR) system, which uses radio transmitters wired to water meters to convey data to a network of radio receivers, also referred to as Advanced Metering Infrastructure (AMI). These new meters and transmitting units have improved capabilities compared to the last series of meters and promote timely and accurate monthly bills for customers. As of September 30, 2018, DC Water has installed 79,500 new meters, which increased overall transmissions to 86%. Installment of these meters required cooperation with multiple departments and all costs remain within the approved budget. This project exceeded the contract goal of scheduling 60% of more inside appointments and has maintained a potential claims rate of 0.03%.

Credit Rating Upgrades

In April 2018, DC Water issued \$300 million in tax-exempt, fixed rate bonds, including \$100 million designated as Green Bonds, leveraging the AAA credit rating upgrade by S&P and its GB1 rating, Moody's highest possible green bond assessment.

Combined, these two ratings made DC Water's bonds highly desirable. Strong credit ratings enable the Authority to issue debt at lower borrowing costs, which in turn reduces ratepayer costs in the long run.

Awards and Acknowledgements

CAFR Award

The Authority's 2017 CAFR received the Government Finance Officers Association's ("GFOA") Certificate of Achievement for Excellence in Financial Reporting. The CAFR was judged based on its conformity to GAAP and its compliance with other financial, legal and contractual provisions. The Certificate of Achievement is the highest form of recognition in governmental accounting and financial reporting, and its attainment represents a significant accomplishment for any municipality or government agency. To date, DC Water has received the GFOA's CAFR award for every year of its existence as an independent Authority, for a total of twenty-one consecutive awards.

Acknowledgements

With deep appreciation, I wish to recognize the outstanding leadership and personal commitment of Controller John Madrid and his dedicated team of professionals for their collective effort in drafting DC Water's FY 2018 Comprehensive Annual Financial Report.

Respectfully submitted,



Matthew T. Brown
Chief Financial Officer



BOARD OF DIRECTORS

PRINCIPAL MEMBERS

TOMMY WELLS, CHAIR, DISTRICT OF COLUMBIA
ELLEN O. BOARDMAN, DISTRICT OF COLUMBIA
RACHNA BUTANI, DISTRICT OF COLUMBIA
DAVID FRANCO, DISTRICT OF COLUMBIA
EMILE THOMPSON, DISTRICT OF COLUMBIA
VACANT, DISTRICT OF COLUMBIA
TIMOTHY L. FIRESTINE, MONTGOMERY COUNTY, MD
BONNIE KIRKLAND, MONTGOMERY COUNTY, MD
NICHOLAS MAJETT, PRINCE GEORGE'S COUNTY, MD
BRADLEY FROME, PRINCE GEORGE'S COUNTY, MD
JAMES PATTESON, FAIRFAX COUNTY, VA

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HOWARD GIBBS, DISTRICT OF COLUMBIA
IVAN FRISHBERG, DISTRICT OF COLUMBIA
REV. KENDRICK CURRY, DISTRICT OF COLUMBIA
ANTHONY GIANCOLA, DISTRICT OF COLUMBIA
KRYSTAL BRUMFIELD, DISTRICT OF COLUMBIA
FARIBA KASSIRI, MONTGOMERY COUNTY, MD
PATTY BUBAR, MONTGOMERY COUNTY, MD
LAVINIA BAXTER, PRINCE GEORGE'S COUNTY, MD
ADAM ORTIZ, PRINCE GEORGE'S COUNTY, MD
SARAH MOTSCH, FAIRFAX COUNTY, VA

PRINCIPAL STAFF MEMBERS

OFFICE OF THE GENERAL MANAGER

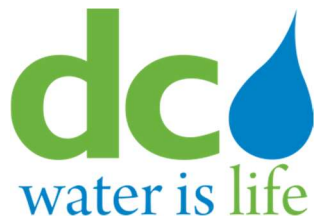
DAVID GADIS, CEO AND GENERAL MANAGER
HENDERSON J. BROWN, IV, GENERAL COUNSEL
BIJU GEORGE, CHIEF OPERATING OFFICER

OFFICE OF THE CHIEF FINANCIAL OFFICER

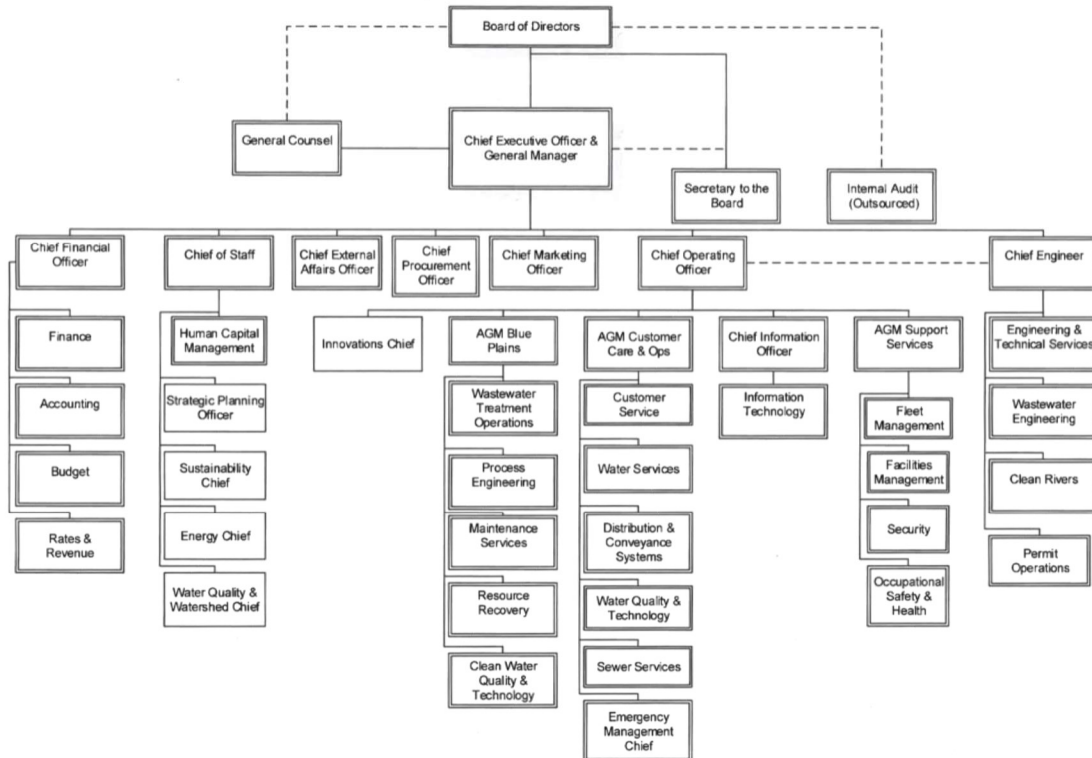
MATTHEW T. BROWN, CHIEF FINANCIAL OFFICER
JOHN MADRID, CONTROLLER
IVAN BOYKIN, FINANCE DIRECTOR
LOLA OYEYEMI, BUDGET DIRECTOR
SYED KHALIL, DIRECTOR, RATES AND REVENUE

OPERATIONS AND ADMINISTRATION

AKILE TESFAYE, ASSISTANT GENERAL MANAGER
WASTEWATER TREATMENT
LEONARD BENSON, CHIEF ENGINEER, ENGINEERING AND
TECHNICAL SERVICES
ROSALIND INGE, ASSISTANT GENERAL MANAGER, SUPPORT
SERVICES
CHARLES W. KIELY, ASSISTANT GENERAL MANAGER
CONSUMER SERVICES
THOMAS KUCZYNSKI, CHIEF INFORMATION OFFICER
JOHN LISLE, CHIEF OF EXTERNAL AFFAIRS



Governance and Organizational Structure





Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**District of Columbia
Water and Sewer Authority**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

September 30, 2017

Christopher P. Morill

Executive Director/CEO

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Financial Section

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KPMG LLP
Suite 12000
1801 K Street, NW
Washington, DC 20006

Independent Auditors' Report

Board of Directors
District of Columbia Water and Sewer Authority

We have audited the accompanying financial statements of the District of Columbia Water and Sewer Authority (the Authority) as of and for the years ended September 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements for the years then ended as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the District of Columbia Water and Sewer Authority as of September 30, 2018 and 2017, and the changes in its financial position and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.



Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 15 through 27 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Authority's basic financial statements. The introductory and statistical sections as listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

KPMG LLP

Washington, D.C.
December 20, 2018

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

This section of the Authority's annual financial report presents our discussion and analysis of the Authority's financial position and changes in financial position as of and for the fiscal years ended September 30, 2018 and 2017. The Management's Discussion and Analysis ("MD&A") should be read in conjunction with the Authority's basic financial statements and the related notes to the financial statements, which immediately follow this section.

Financial Highlights – Fiscal 2018

- In April 2018, the Authority issued \$100.0 million of 2018 Series A and \$200.0 million of 2018 Series B senior lien revenue bonds with fixed interest rates at 5.0%. The 2018 Series A green bonds and the 2018 Series B bonds mature in 2050. Gross proceeds from the bond issuance totaled approximately \$348.6 million, including \$48.6 million original issue premium. Approximately \$115 million of 2018 Series A was used to fund a portion of the costs of the Authority's DC Clean Rivers Project; \$146.6 million of the 2018 Series B was used to fund various capital improvements to the system; \$85 million of 2018 Series B was used to pay principal of and interest on all or a portion of the Authority's outstanding commercial paper notes, Series B; and \$2 million was used to pay the underwriter's discount and cost of issuance.
- Operating revenues increased by \$41.3 million to \$684.5 million, or 6.4%, primarily due to the retail rate increase of 5.0%, a 13.2% increase in the Clean Rivers Impervious Area Charge (CRIAC), and a 20.0% increase in wholesale waste water charges offset by a decrease in other revenues.
- Operating expenses increased by \$31.3 million to \$439.5 million, or 7.7%, due to increases in depreciation expense, personnel services, and contractual services offset by a decrease in chemicals, supplies, and small equipment.
- Capital assets, net of depreciation and amortization, increased by \$416.8 million to \$7.0 billion, or 6.4%, as a result of capital additions of \$556.5 million offset by depreciation and amortization of \$115.5 million and capital disposals of \$24.3 million. Capital additions incurred in 2018 were in line with the Authority's approved 10-year capital improvement program.
- Current assets increased by \$44.3 million to \$647.2 million, or 7.3%, primarily due to a \$18.5 million increase in restricted cash and investments, a \$19.1 million increase in cash and cash equivalents, an \$11.8 million increase in customer receivables, and a \$3.3 million increase in receivables from the Federal government offset by an \$11.4 million decrease in receivables from other jurisdictions.
- The Authority's net position increased by \$187.4 million to \$2.1 billion, or 9.9%, as a result of current year operations and capital contributions.
- Effective October 1, 2017, the Authority raised its retail water and wastewater rates by 5.0% and its CRIAC by 13.2%.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

Financial Highlights – Fiscal 2017

- In January 2017, the Authority issued \$100.0 million of 2017 Series A and \$200.0 million of 2017 Series B senior lien revenue bonds with fixed interest rates ranging from 4.0% to 5.0%. The 2017 Series A green bonds mature in 2053 and are being used to fund the Clean Rivers Project. The 2017 Series B bonds mature in 2045 and are being used to fund the Authority's various capital improvements to the system. Gross proceeds from the bond issuance totaled approximately \$334.3 million, including \$34.3 million original issue premium.
- Operating revenues increased by \$47.4 million to \$643.2 million, or 8.0%, primarily due to the retail rate increase of 5.0%, a 9.6% increase in CRIAC and a 10.6% increase in wholesale waste water charges.
- Operating expenses increased by \$19.7 million to \$408.1 million, or 5.1%, primarily due to increases in personnel, depreciation expense and chemicals, supplies and small equipment offset by a decrease in contractual services expense.
- Capital assets, net of depreciation and amortization, increased by \$547.8 million to \$6.5 billion, or 9.1%, as a result of capital additions of \$653.4 million offset by depreciation and amortization of \$97.9 million. Capital additions incurred in 2017 were in line with the Authority's approved 10-year capital improvement program.
- Current assets increased by \$53.5 million to \$603.0 million, or 9.7%, primarily due to a \$42.2 million increase in restricted cash and investments, and an \$18.4 million increase in receivables from other Jurisdictions and the Federal government, offset by a decrease in unrestricted cash and cash equivalents of \$7.5 million and a decrease in receivables from the District government of \$2.2 million.
- The Authority's net position increased by \$194.6 million to \$1.9 billion, or 11.4%, as a result of current year operations and capital contributions.
- Effective October 1, 2016, the Authority raised its retail water and wastewater rates by 5.0% and its CRIAC by 9.6%.

Using This Annual Report

This annual report consists of three sections: Management's Discussion and Analysis; the Financial Statements; and Notes to the Financial Statements that explain in more detail some of the information in the Financial Statements.

Required Financial Statements

The Statements of Net Position include the Authority's assets plus deferred outflows of resources and liabilities plus deferred inflows of resources and provides information about the nature and amounts of investments in resources (assets) and nature and extent of obligations (liabilities) with the difference between them being reported as net position. It also provides the basis for computing the rates of return, evaluating the capital structure of the Authority, and assessing the liquidity and financial flexibility of the Authority.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

The Statements of Revenues, Expenses, and Changes in Net Position present the changes in net position from one reporting period to another by accounting for revenues and expenses and measuring the financial results of operations. This statement measures the profitability of the Authority's operations over the past year and can be used to determine whether the Authority has successfully recovered all of its costs through its user fees and other charges.

The Statements of Cash Flows provide information about the Authority's cash receipts, cash payments, and net changes in cash and cash equivalents resulting from operating, investing, and capital and non-capital financing activities. It also provides information regarding sources of cash, uses of cash, and changes in cash balances during the reporting period.

Notes to the financial statements include information essential to understand the above statements, such as the Authority's significant accounting policies and information about certain financial statement account balances.

Financial Analysis of the Authority

Net Position

The Authority's total net position at September 30, 2018 was approximately \$2.1 billion, a \$187.4 million, or 9.9%, increase from September 30, 2017. Total assets increased \$557.0 million, or 7.7%, to \$7.8 billion and total liabilities increased \$366.4 million, or 6.7%, to \$5.8 billion.

The Authority's total net position at September 30, 2017 was approximately \$1.9 billion, a \$194.6 million, or 11.4%, increase from September 30, 2016. Total assets increased \$594.1 million, or 8.9%, to \$7.3 billion and total liabilities increased \$396.3 million, or 7.9%, to \$5.4 billion.

Summary of Net Position (\$ in 000's)

	Fiscal Year			2018 vs 2017		2017 vs 2016	
	2018	2017	2016	Amount	%	Amount	%
Current assets	\$ 647,224	\$ 602,959	\$ 549,496	44,265	7.3	53,463	9.7
Restricted assets	167,390	61,318	56,992	106,072	173.0	4,326	7.6
Capital assets	6,959,868	6,543,100	5,995,347	416,768	6.4	547,753	9.1
Other noncurrent assets	43,301	53,436	64,920	(10,135)	(19.0)	(11,484)	(17.7)
Total assets	7,817,783	7,260,813	6,666,755	556,970	7.7	594,058	8.9
Deferred outflows of resources	66,734	69,946	73,157	(3,212)	(4.6)	(3,211)	(4.4)
Current liabilities	477,324	461,771	440,888	15,553	3.4	20,883	4.7
Long-term debt outstanding	3,494,610	3,193,727	2,900,329	300,883	9.4	293,398	10.1
Long-term liabilities	1,827,382	1,777,421	1,695,406	49,961	2.8	82,015	4.8
Total liabilities	5,799,316	5,432,919	5,036,623	366,397	6.7	396,296	7.9
Net investments in capital assets	1,808,622	1,655,867	1,491,925	152,755	9.2	163,942	11.0
Restricted	38,907	33,276	33,135	5,631	16.9	141	0.4
Unrestricted	237,672	208,697	178,229	28,975	13.9	30,468	17.1
Total net position	\$ 2,085,201	\$ 1,897,840	\$ 1,703,289	187,361	9.9	194,551	11.4

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

The following is a discussion of the more significant changes in assets, liabilities and net position in 2018.

- Capital assets, net of depreciation and amortization, increased by \$416.8 million to \$7.0 billion, or 6.4%, as a result of capital additions of \$556.5 million offset by depreciation and amortization of \$115.5 million and capital disposals of \$24.3 million. Capital additions incurred in 2018 were in line with the Authority's approved 10-year capital improvement program which is discussed in more detail on page 29.
- Current assets increased by \$44.3 million to \$647.2 million, or 7.3%, primarily due to a \$18.5 million increase in restricted cash and investments, a \$19.1 million increase in cash and cash equivalents, an \$11.8 million increase in customer receivables, and a \$3.3 million increase in receivables from the Federal government offset by an \$11.4 million decrease in receivables from other jurisdictions.
- Long-term debt, including current maturities, increased by \$306.1 million to \$3.5 billion, or 9.5%, primarily due to the issuance of \$100.0 million of 2018 Series A and \$200.0 million of 2018 Series B senior lien revenue bonds for a total of \$300.0 million in April 2018.
- Current liabilities increased by \$15.6 million to \$477.3 million, or 3.4%, primarily due to a \$5.6 million increase in accrued interest, a \$5.2 million increase in current maturities of long-term debt, a \$3.3 million increase in due to jurisdictions, and a \$4.3 million increase in compensation payable.
- The Authority's net position increased by \$187.4 million to \$2.1 billion, or 9.9%, as a result of current year operations and capital contributions.

The following is a discussion of the more significant changes in assets, liabilities and net position in 2017.

- Capital assets, net of depreciation and amortization, increased by \$547.8 million to \$6.5 billion, or 9.1%, as a result of capital additions of \$653.4 million offset by depreciation and amortization of \$97.9 million. Capital additions incurred in 2017 were in line with the Authority's approved 10-year capital improvement program which is discussed in more detail on page 29.
- Current assets increased by \$53.5 million to \$603.0 million, or 9.7%, primarily due to a \$42.2 million increase in restricted cash and investments, and an \$18.4 million increase in receivables from other Jurisdictions and the Federal government offset by a decrease in unrestricted cash and cash equivalents of \$7.5 million and a decrease in receivables from the District government of \$2.2 million.
- Long-term debt, including current maturities, increased by \$294.9 million to \$3.2 billion, or 10.1%, primarily due to the issuance of \$100.0 million of 2017 Series A (Green Bonds) and \$200.0 million of 2017 Series B senior lien revenue bonds for a total of \$300.0 million in January 2017.
- Current liabilities increased by \$21.0 million to \$462.0 million, or 4.7%, primarily due to a \$35.7 million increase in accounts payable and accrued expenses and a \$4.9 million increase in accrued interest offset by a \$22.6 million decrease in unearned revenue.
- The Authority's net position increased by \$194.6 million to \$1.9 billion, or 11.4%, as a result of fiscal year 2017 operations and capital contributions.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

Changes in Net Position

The increase in net position at September 30, 2018 was \$187.4 million, or 9.9%, as compared with September 30, 2017. The Authority's total operating revenues increased by 6.4% to \$684.5 million and total operating expenses increased by 7.7% to \$439.5 million.

The increase in net position at September 30, 2017 was \$194.6 million, or 11.4%, as compared with September 30, 2016. The Authority's total operating revenues increased by 8.0% to \$643.2 million and total operating expenses increased by 5.1% to \$408.1 million.

Change in Net Position (\$ in 000's)

	Fiscal Year			2018 vs 2017		2017 vs 2016	
	2018	2017	2016	Amount	%	Amount	%
Operating revenues	\$ 684,502	\$ 643,169	\$ 595,789	\$ 41,333	6.4	\$ 47,380	8.0
Operating expenses	439,470	408,131	388,384	31,339	7.7	19,747	5.1
Net non-operating revenues (expenses)	(88,090)	(64,553)	(66,489)	(23,537)	36.5	1,936	(2.9)
Change in net position before capital contributions	156,942	170,485	140,916	(13,543)	(7.9)	29,569	21.0
Capital contributions	30,419	24,066	32,431	6,353	26.4	(8,365)	(25.8)
Change in net position	187,361	194,551	173,347	(7,190)	(3.7)	21,204	12.2
Net position - beginning of year	1,897,840	1,703,289	1,529,942	194,551	11.4	173,347	11.3
Net position - end of year	\$ 2,085,201	\$ 1,897,840	\$ 1,703,289	\$ 187,361	9.9	\$ 194,551	11.4

The following provides a discussion as to the primary reasons for the more significant fluctuations in the Authority's revenues and expenses between fiscal years 2018 and 2017, and between fiscal years 2017 and 2016, respectively.

Fiscal Year 2018:

- Operating revenues increased by \$41.3 million to \$684.5 million, or 6.4%, primarily due to a retail rate increase of 5.0%, a 13.2% increase in the CRIAC, and a 20.0% increase in wholesale waste water charges.
- Operating expenses increased by \$31.3 million to \$439.5 million, or 7.7%, due to increases in depreciation expense, personnel services, and contractual services offset by a decrease in chemicals, supplies, and small equipment.

Fiscal Year 2017:

- Operating revenues increased by \$47.4 million to \$643.2 million, or 8.0%, primarily due to a retail rate increase of 5.0%, a 9.6% increase in CRIAC and a 10.6% increase in wholesale waste water charges offset by decrease in other revenues.
- Operating expenses increased by \$19.7 million to \$408.1 million, or 5.1%, primarily due to increases in personnel, depreciation expense and chemicals, supplies and small equipment and offset by a decrease in contractual services expense.

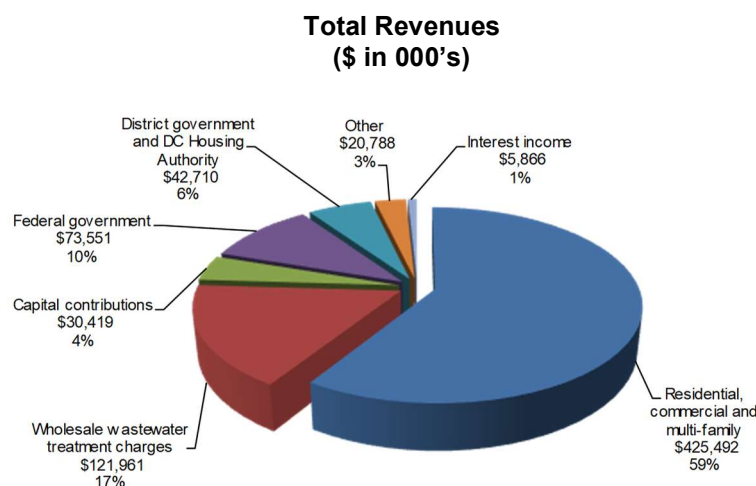
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

2018 Total Revenues

Total revenues increased \$49.8 million, or 7.4%, to \$720.8 million in fiscal year 2018.



- Revenues from residential, commercial and multi-family customers increased by \$24.2 million to \$425.5 million, or 6.0%, primarily due to a 5.0% water and wastewater rate increase and a 13.2% increase in the CRIAC offset by a decrease in consumption.
- Revenues from the Federal government increased by \$5.9 million to \$73.6 million, or 8.7%, primarily due to a 5.0% rate increase and a 13.2% increase in the CRIAC and an increase in consumption offset by lower billing adjustments for several Federal agencies during fiscal year 2018.
- Revenues from the District of Columbia government and the District of Columbia Housing Authority increased by \$2.2 million to \$42.7 million, or 5.5%, primarily due to a 5.0% rate increase, a 13.2% increase in the CRIAC offset by a decrease in consumption.
- Revenues from wholesale wastewater treatment increased by \$20.3 million to \$122.0 million, or 20.0%, primarily due to new billings for Multi-Jurisdictional Use Facilities (MJUF) of \$12.1 million and a \$4.9 million increase in IMA capital reimbursement revenues recognized in fiscal year 2018.
- Other revenues decreased by \$11.4 million to \$20.8 million, or 35.3%, primarily due to a decrease in miscellaneous revenues from the Authority's other activities such as special projects billings and insurance reimbursements related to claim and litigation expenses.
- Capital contributions increased by \$6.4 million to \$30.4 million, or 26.4%, primarily due to a \$6.1 million increase in federal grants.

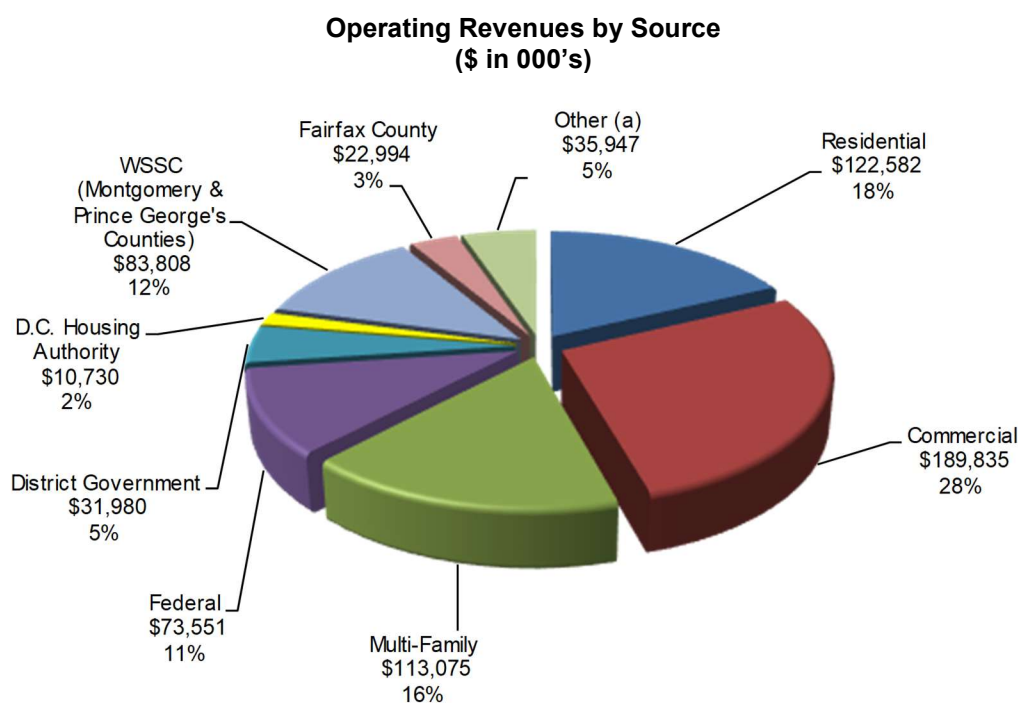
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

Diversity and Stability of Operating Revenues

The Authority's operating revenue base is very diverse, including established customers such as the Federal government, the District government, surrounding jurisdictions in Maryland and Virginia, and commercial and residential customers within the District. As shown on the chart below, no one category accounts for more than 28% of the Authority's total operating revenues of \$684.5 million for the fiscal year ended September 30, 2018.



(a) Other revenues include \$12.3 million from Loudoun County and \$2.8 million from Potomac Interceptor.

- Revenues from commercial and multi-family customers in the District comprise approximately 44% of the Authority's total operating revenues. Commercial revenues are reliable due to the presence of many national associations, law firms, consulting firms, colleges and universities and foreign embassies in the District. The commercial customer category also includes multi-family dwellings.
- The Authority provides wastewater conveyance and treatment services to Montgomery and Prince George's Counties in Maryland through the Washington Suburban Sanitary Commission ("WSSC") and Fairfax and Loudoun Counties in Northern Virginia. Operating revenues from WSSC and Fairfax County account for 15% of the Authority's revenues and are based on their share of operating costs at Blue Plains. Loudoun County and Potomac Interceptor customers account for an additional 2.2% of the Authority's revenues and are included in other revenues.
- Residential customers in the District account for 18% of total revenues.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

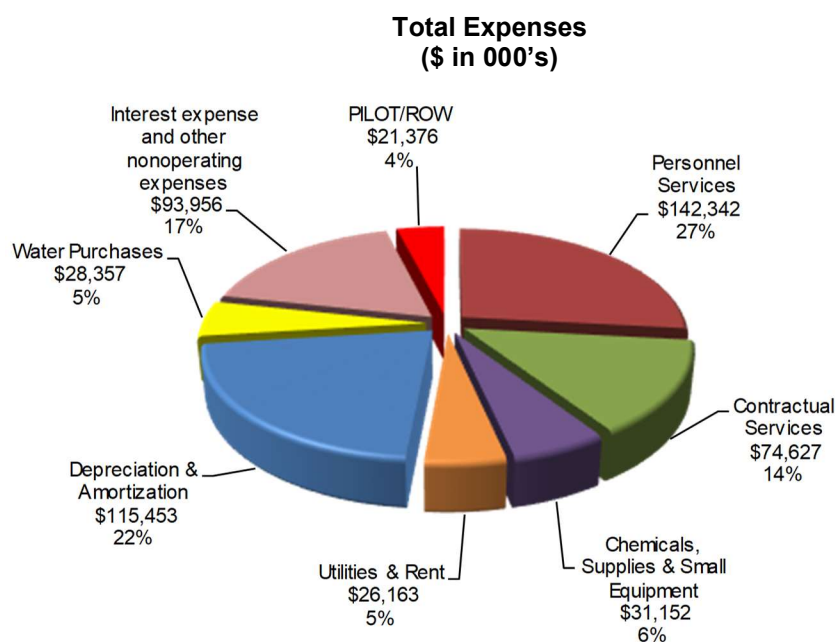
Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

- Revenues from the Federal government comprise 11% of the Authority's total operating revenues and include customers such as the U.S. Congress, the Smithsonian Institution, and a range of federal departments and agencies.
- Revenues from the Government of the District of Columbia and the District of Columbia Housing Authority make up 7% of total operating revenues.

2018 Total Expenses

Total expenses increased by \$57.0 million, or 12.0%, to \$533.4 million in fiscal year 2018.



- Personnel services increased by \$10.2 million to \$142.3 million, or 7.7%, primarily due to increases in wages and benefits.
- Contractual services increased by \$2.0 million to \$74.6 million, or 2.8%, due to an increase in fees for various outside consulting services.
- Chemicals, supplies and small equipment decreased by \$2.2 million to \$31.2 million, or 6.7%, due to a stabilization in chemical rates, a decline in the use of methanol, and decreased spending on small equipment.
- Utilities and rent increased by \$1.9 million to \$26.2 million, or 7.8%, primarily due to higher electricity consumption in 2018 compared to 2017.
- Depreciation and amortization increased by \$17.6 million to \$115.5 million, or 17.9%, primarily due to an increase in capital assets in service.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

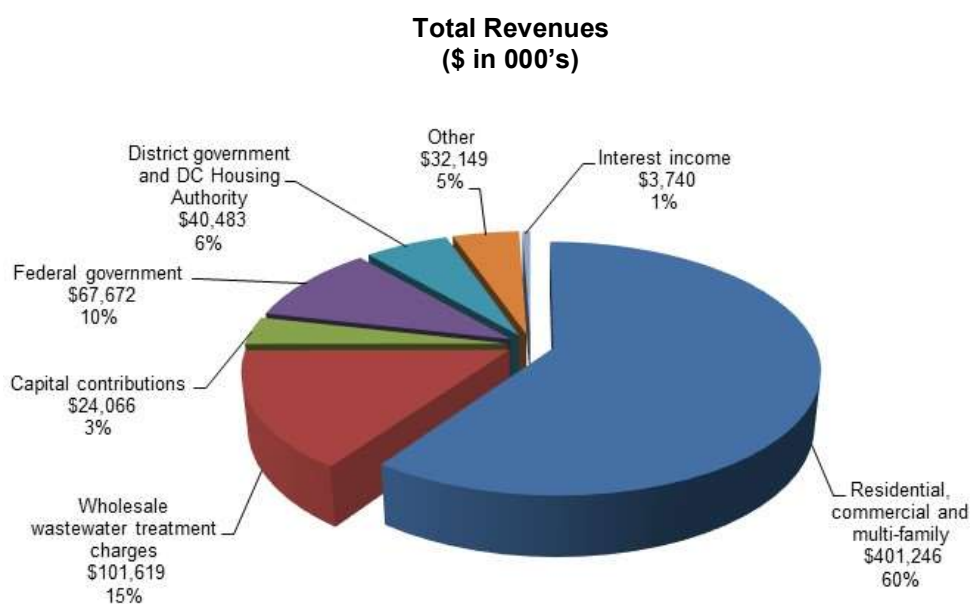
Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

- Water purchases increased by \$1.6 million to \$28.4 million, or 5.8%, primarily due to a 10.5% increase in the water rate offset by a 4.8% decrease in water consumption in fiscal year 2018 compared to fiscal year 2017.
- Interest expense and other nonoperating expenses increased by \$25.7 million to \$94.0 million, or 37.6%, primarily due to an increase in the loss on disposal of capital assets of \$17.9 million and an increase in interest incurred on long-term debt of \$9.2 million, offset by an increase in the amount of capitalized interest related to the Authority's capital improvement program which increased from \$77.0 million in fiscal year 2017 to \$79.4 million in fiscal year 2018.

2017 Total Revenues

Total revenues increased \$40.1 million, or 6.4%, to \$670.9 million in fiscal year 2017.



- Revenues from residential, commercial and multi-family customers increased by \$18.7 million to \$401.2 million, or 4.9%, primarily due to a 5.0% water and wastewater rate increase and a 9.6% increase in the Clean Rivers Impervious Area Charges (CRIAC).
- Revenues from the Federal government increased by \$4.3 million to \$67.7 million, or 6.7%, primarily due to a 5.0% rate increase, 9.6% increase in the CRIAC and increase in consumption offset by lower billing adjustments for several Federal agencies during fiscal year 2017.
- Revenues from the District government and the District of Columbia Housing Authority increased by \$2.3 million to \$40.5 million, or 6.0%, primarily due to a 5.0% rate increase, 9.6% increase in CRIAC offset by a decrease in consumption.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

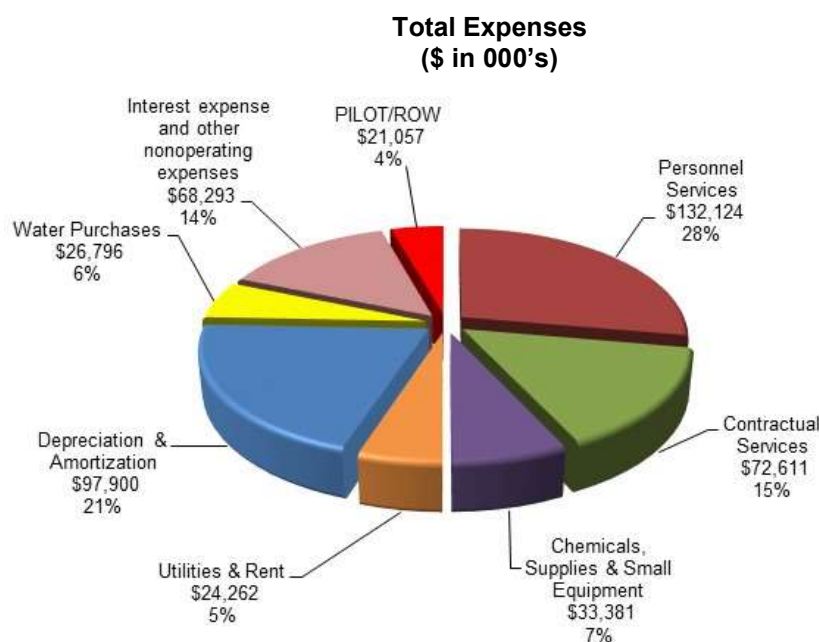
Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

- Revenues from wholesale wastewater treatment increased by \$9.7 million to \$101.6 million, or 10.6%, primarily due to an increase in the Intermunicipal Agreement (IMA) shareable operating costs of the Blue Plains Plant and a \$4.6 million increase in IMA capital reimbursement revenues recognized in fiscal year 2017.
- Other revenues increased by \$12.4 million to \$32.1 million, or 62.7%, primarily due to an increase in miscellaneous revenues from the Authority's other activities such as special projects billings and insurance reimbursements related to claim and litigation expenses.
- Capital contributions decreased by \$8.4 million, or 25.8%, primarily due to a \$5.5 million reduction in federal grants and a \$2.9 million reduction in capital contributions from the District government.

2017 Total Expenses

Total expenses increased by \$18.9 million, or 4.1%, to \$476.4 million in fiscal year 2017.



- Personnel services increased by \$7.9 million to \$132.1 million, or 6.4%, primarily due to increases in wages and benefits.
- Contractual services decreased by \$1.4 million to \$72.6 million, or 2.0%, due to a decrease in litigation costs and biosolids hauling costs stemming from newly installed digester operations at the Blue Plains facility.
- Chemicals, supplies and small equipment increased by \$3.9 million to \$33.4 million, or 13.1%, primarily due to higher unit prices in chemicals such as methanol and increase in parts and supplies.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

- Utilities and rent increased by \$0.3 million to \$24.3 million, or 1.4%, primarily due to increase in space rental and water usage to generate steam for Combine Heat Power (CHP) offset by onsite electricity generation from CHP project, which became operational in the summer of 2015.
- Depreciation and amortization increased by \$8.4 million to \$97.9 million, or 9.4%, primarily due to an increase in capital assets in service.
- Water purchases increased by \$0.5 million to \$26.8 million, or 1.7%, primarily due to a 4.4% increase in the water rate and offset by a 1.5% decrease in water consumption in fiscal year 2017 compared to fiscal 2016.
- Interest expense and other nonoperating expenses decreased by \$0.8 million to \$68.3 million, or 1.2%, primarily due to an increase in interest incurred on long-term debt of \$1.8 million and an increase in losses on the disposal of capital assets of \$7.7 million, offset by an increase in the amount of capitalized interest related to the Authority's capital improvement program which increased from \$62.8 million in fiscal year 2016 to \$77.0 million in fiscal year 2017.

Capital Assets and Debt Administration

Capital Assets

As of September 30, 2018, 2017 and 2016, respectively, the Authority had \$7.0 billion, \$6.5 billion and \$6.0 billion of capital assets (net of depreciation). This includes wastewater collection, wastewater treatment, water distribution systems, deep tunnel systems, purchased capacity, capital equipment and construction in progress. The Authority's net capital assets increased by approximately \$416.8 million, or 6.4%, during fiscal year 2018, and increased by approximately \$547.8 million, or 9.1%, during fiscal year 2017, primarily due to continued capital spending in accordance with the Authority's capital improvement program. See note 4 to the financial statements for more information on capital assets.

Capital Assets Net of Accumulated Depreciation (\$ in 000's)

	As of September 30,		
	2018	2017	2016
Wastewater treatment plant	\$ 3,213,907	\$ 3,010,074	\$ 2,383,176
Wastewater collection facilities	858,060	856,859	843,095
Water distribution system	1,125,358	1,112,458	1,095,216
Deep tunnel system	1,171,226	-	-
Purchased capacity	364,211	356,850	349,210
Capital equipment	296,295	253,437	220,584
Construction in progress	1,574,081	2,489,255	2,544,698
Less accumulated depreciation	(1,643,270)	(1,535,833)	(1,440,632)
Net capital assets	<u>\$ 6,959,868</u>	<u>\$ 6,543,100</u>	<u>\$ 5,995,347</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management's Discussion and Analysis (unaudited)

September 30, 2018 and 2017

The Authority's contractual commitments are primarily associated with the long-term capital improvement program. Outstanding contractual commitments related to the capital improvement program as of September 30, 2018 and 2017 were \$879.3 million and \$1.1 billion, respectively, which will be financed primarily with unspent bond proceeds, proceeds from future bond issuances, capital contributions from IMA participants, Federal capital contributions and PAY-GO capital contributions from the Authority.

Debt Administration

At the end of fiscal year 2018, the Authority had a total of \$3.5 billion in long term debt outstanding, an increase of \$306.1 million, or 9.5%, over fiscal year 2017.

At the end of fiscal year 2017, the Authority had a total of \$3.2 billion in long term debt outstanding, an increase of \$294.9 million, or 10.1%, over fiscal year 2016.

A schedule of long-term debt activity including current year maturities for the year ended September 30, 2018 is shown below:

Description	Balance 9/30/2017	Increases	Decreases	Balance 9/30/2018
Outstanding bonds and notes	\$ 3,003,874	\$ 300,000	\$ (30,840)	\$ 3,273,034
Unamortized bond premiums	222,786	48,644	(11,852)	259,578
Unamortized bond discounts	(2,093)	-	129	(1,964)
Total bonds and notes	<u>\$ 3,224,567</u>	<u>\$ 348,644</u>	<u>\$ (42,563)</u>	<u>\$ 3,530,648</u>

In April 2018, the Authority issued \$100.0 million of 2018 Series A and \$200.0 million of 2018 Series B senior lien revenue bonds with fixed interest rates at 5.0%. The 2018 Series A green bonds and the 2018 Series B bonds mature in 2050. Net proceeds from the bond issuance totaled approximately \$348.6 million, including \$2.0 million of underwriter's discount and cost of issuance. Approximately \$115 million of 2018 Series A was used to fund a portion of the costs of the Authority's DC Clean Rivers Project; \$146.6 million of the 2018 Series B was used to fund various capital improvements to the system; \$85 million of 2018 Series B was used to pay principal of and interest on all or a portion of the Authority's outstanding commercial paper notes; Series B, and \$2 million was used to pay the underwriter's discount and cost of issuance.

The increases (decreases) in outstanding bonds and notes payable were related to the new bond issuance and scheduled principal repayments.

A schedule of long-term debt activity including current year maturities for the year ended September 30, 2017 is shown below:

Description	Balance 9/30/2016	Increases	Decreases	Balance 9/30/2017
Outstanding bonds and notes	\$ 2,733,191	\$ 300,000	\$ (29,317)	\$ 3,003,874
Unamortized bond premiums	198,677	34,345	(10,236)	222,786
Unamortized bond discounts	(2,222)	-	129	(2,093)
Total bonds and notes	<u>\$ 2,929,646</u>	<u>\$ 334,345</u>	<u>\$ (39,424)</u>	<u>\$ 3,224,567</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management’s Discussion and Analysis (unaudited)

September 30, 2018 and 2017

In January 2017, the Authority issued \$100.0 million of 2017 Series A and \$200.0 million of 2017 Series B senior lien revenue bonds with fixed interest rates ranging from 4.0% to 5.0%. The 2017 Series A green bonds mature in 2053 and are being used to fund the Clean Rivers Project. The 2017 Series B bonds mature in 2045 and are being used to fund the Authority's various capital improvements to the system. Net proceeds from the bond issuance totaled approximately \$334.3 million, including \$1.9 million of underwriter’s discount and cost of issuance.

The increases (decreases) in outstanding bonds and notes payable were related to the new bond issuance and scheduled principal repayments.

Credit Ratings

Long Term Credit Ratings		
Moody's Investors' Service	Aa1	Stable Outlook
Standard & Poor's Corporation	AAA	Stable Outlook
Fitch Ratings	AA	Positive Outlook

Short Term Credit Ratings		
Moody's Investors' Service	P-1	
Standard & Poor's Corporation	A-1+	
Fitch Ratings	F1+	

Rates

Effective October 1, 2017, the Authority raised its retail water and wastewater rates by 5.0%. The Authority’s approved ten-year financial plan includes a projected retail water and wastewater annual rate increase of approximately 13.0% for fiscal year 2019 and projected annual rate increases of 5.0% for each year thereafter until 2027. The plan also includes projected revisions to its metering, right-of-way fee and payment-in-lieu of taxes pass-through, the Clean River Impervious Area Charge (CRIAC), and the Water System Replacement Fee (WSRF).

Contacting the Authority’s Financial Management

This financial report is designed to provide our customers and other stakeholder with a general overview of the Authority’s finances. If you have questions about this report or need additional financial information, contact the Office of the Chief Financial Officer at 5000 Overlook Avenue, S.W., Washington D.C. 20032 or call 202-787-2000. A copy of this report is also available on DC Water’s web site at www.dcwater.com.

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DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
Statements of Net Position
September 30, 2018 and 2017
(In thousands)

Assets and Deferred Outflows of Resources	2018	2017
Current assets:		
Cash and cash equivalents (note 3)	\$ 123,908	\$ 104,834
Investments (note 3)	108,048	107,633
Restricted cash and cash equivalents (note 3)	169,339	133,683
Restricted investments (note 3)	86,883	104,035
Customer receivables, net of allowance for doubtful accounts of \$20,327 in 2018 and \$16,857 in 2017 (note 7)	80,264	68,506
Due from other jurisdictions (note 8)	13,083	24,508
Due from Federal government (note 6)	40,513	37,222
Due from District government (note 13)	4,534	4,235
Inventory	13,304	12,358
Prepaid assets	7,348	5,945
Total current assets	647,224	602,959
Noncurrent assets:		
Restricted assets (note 3):		
Cash and cash equivalents	19,805	8,364
Investments	147,585	52,954
Total restricted cash and cash equivalents and investments	167,390	61,318
Capital assets (note 4):		
In-service	7,029,057	5,589,678
Less accumulated depreciation	(1,643,270)	(1,535,833)
Net capital assets in service	5,385,787	4,053,845
Construction-in-progress	1,574,081	2,489,255
Net capital assets	6,959,868	6,543,100
Other noncurrent assets:		
Due from District government (note 13)	35,148	41,006
Due from other jurisdictions (note 8)	8,153	12,430
Total other noncurrent assets	43,301	53,436
Total noncurrent assets	7,170,559	6,657,854
Total assets	7,817,783	7,260,813
Deferred Outflows of Resources		
Deferred loss on debt refunding	66,734	69,946
Total assets and deferred outflows of resources	7,884,517	7,330,759
Liabilities		
Current liabilities:		
Accounts payable and accrued expenses	193,187	195,720
Unearned revenue	51,101	52,267
Accrued interest	76,162	70,583
Commercial paper notes payable (note 10)	79,200	79,200
Current maturities of long-term debt (note 11)	36,038	30,840
Due to jurisdictions	12,231	8,980
Compensation payable (note 9)	14,847	10,560
Other liabilities (note 12)	14,558	13,621
Total current liabilities	477,324	461,771
Noncurrent liabilities:		
Long-term debt, excluding current maturities (note 11)	3,494,610	3,193,727
Unearned revenue	1,801,135	1,750,789
Other liabilities (note 12)	10,523	9,444
Compensated absences payable (note 9)	15,724	17,188
Total noncurrent liabilities	5,321,992	4,971,148
Total liabilities	5,799,316	5,432,919
Net Position		
Net investments in capital assets	1,808,622	1,655,867
Restricted for debt service	38,907	33,276
Unrestricted	237,672	208,697
Total net position	\$ 2,085,201	\$ 1,897,840

The notes to the basic financial statements are an integral part of these financial statements.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
Statements of Revenues, Expenses and Changes in Net Position
Years Ended September 30, 2018 and 2017
(In thousands)

	2018	2017
Operating revenues:		
Water and wastewater user charges:		
Residential, commercial and multi-family customers	\$ 425,492	\$ 401,246
Federal government	73,551	67,672
District government and D.C. Housing Authority (note 13)	42,710	40,483
Charges for wholesale wastewater treatment	121,961	101,619
Other	20,788	32,149
Total operating revenues	684,502	643,169
Operating expenses:		
Personnel services	142,342	132,124
Contractual services	74,627	72,611
Chemicals, supplies and small equipment	31,152	33,381
Utilities and rent	26,163	24,262
Depreciation and amortization	115,453	97,900
Water purchases	28,357	26,796
Payment in lieu of taxes and right of way fee (note 13)	21,376	21,057
Total operating expenses	439,470	408,131
Operating income	245,032	235,038
Nonoperating revenues (expenses):		
Interest income	5,866	3,740
Interest expense and other nonoperating expenses	(93,956)	(68,293)
Total nonoperating (expenses)	(88,090)	(64,553)
Change in net position before capital contributions	156,942	170,485
Capital contributions (note 5)	30,419	24,066
Change in net position	187,361	194,551
Net position, beginning of year	1,897,840	1,703,289
Net position, end of year	\$ 2,085,201	\$ 1,897,840

The notes to the basic financial statements are an integral part of these financial statements.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Statements of Cash Flows

Years Ended September 30, 2018 and 2017

(In thousands)

	2018	2017
Cash flows from operating activities:		
Cash received from customers	\$ 638,796	\$ 594,592
Cash paid to suppliers for goods and services	(158,209)	(158,530)
Cash paid to employees for services	(139,518)	(131,700)
Cash paid to District for PILOT and ROW	(21,376)	(21,057)
Net cash provided by operating activities	319,693	283,305
Cash flows from capital and related financing activities:		
Proceeds from issuance of revenue bonds	348,644	334,345
Proceeds from other jurisdictions	102,649	113,488
Repayments of bond principal and notes payable to Federal government	(30,840)	(29,317)
Acquisition of capital assets	(492,664)	(546,496)
Payments of interest and fiscal charges	(147,357)	(147,285)
Contributions of capital from Federal and District governments	38,494	28,267
Proceeds from issuance of commercial paper	1,148,200	612,800
Repayments of commercial paper	(1,148,200)	(612,800)
Net cash used in capital and related financing activities	(181,074)	(246,998)
Cash flows from investing activities:		
Cash received for interest	5,446	3,461
Investment purchases	(301,323)	(443,976)
Investment maturities	223,429	413,091
Net cash used in investing activities	(72,448)	(27,424)
Net increase in cash and cash equivalents	66,171	8,883
Cash and cash equivalents at beginning of year	246,881	237,998
Cash and cash equivalents at end of year	\$ 313,052	\$ 246,881
Operating income	\$ 245,032	\$ 235,038
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	115,453	97,900
Change in operating assets and liabilities:		
(Increase) decrease in customer and other receivables	(14,925)	933
Increase in inventory and prepaid assets	(2,347)	(304)
Increase in payables and accrued liabilities	10,441	229
Decrease in unearned revenue	(33,961)	(50,491)
Net cash provided by operating activities	\$ 319,693	\$ 283,305
Noncash Investing, Capital and Financing Activities:		
Capital asset additions included in accounts payable	\$ 164,987	\$ 169,885
Net decrease in the fair value of investments	(54)	(563)

The notes to the basic financial statements are an integral part of these financial statements.

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DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(1) Background, Governance, Operations and Reporting Entity

(a) Background

The District of Columbia Water and Sewer Enterprise Fund (the "Fund") was established in 1979 and was operated by the Water and Sewer Utility Administration, a division of the Government of the District of Columbia (the "District") Department of Public Works. The District of Columbia Water and Sewer Authority ("DC Water" or the "Authority"), an independent authority of the District, was created in April 1996 and began operating on October 1, 1996 under and pursuant to an act of the Council of the District entitled the "Water and Sewer Authority and Department of Public Works Reorganization Act of 1996 (as amended)", and an Act of the United States Congress entitled the "District of Columbia Water and Sewer Authority Act of 1996". The Authority is considered a related organization of the District for purposes of presentation in the District's financial statements.

(b) Governance

The Authority is governed by a Board of Directors consisting of eleven principal and eleven alternate members. The Board is composed of six District of Columbia representatives, two each from Montgomery and Prince George's Counties in Maryland, and one from Fairfax County in Virginia. The Mayor of the District of Columbia appoints, and the DC Council confirms, all six District Board members and alternates, including the Chairman. In addition, the Mayor appoints the five principal and alternate members who represent the surrounding jurisdictions based on executive submissions from those jurisdictions.

(c) Operations

The Authority provides water and wastewater services to District residents, businesses, federal and municipal customers, and certain facilities of the Federal government in Virginia and Maryland. DC Water also operates a regional advanced wastewater treatment plant (Blue Plains or, "the Plant") and an interceptor trunk line that carries wastewater primarily from Loudoun and Fairfax Counties and Dulles Airport to the Blue Plains wastewater treatment facility.

The Authority's wastewater service territory includes over 2.1 million people in Montgomery and Prince George's Counties in Maryland, Fairfax and Loudoun Counties in Virginia, and the District. The Blue Plains Intermunicipal Agreement between the Authority; the District; Fairfax County, Virginia; and the Washington Suburban Sanitary Commission ("WSSC"), which comprises Montgomery and Prince George's Counties in Maryland (collectively referred to as the "Participants"), was executed in September 1985 (the "1985 IMA").

The 1985 IMA was replaced in 2012 and became effective on April 3, 2013 by a new Intermunicipal Agreement (the "2012 IMA"), which was negotiated, approved and executed by each of the original signatories to the 1985 IMA. The IMA provides for the allocation of capital, operating, and maintenance costs among the Participants. Capital costs of the Plant are allocated among the Participants in proportion to their respective wastewater treatment capacity allocation as defined in the 2012 IMA. Operating costs are allocated based on wastewater flows from each participant.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(1) Background, Governance, Operations and Reporting Entity (Continued)

The Loudoun County Sanitation Authority and the Potomac Interceptor Group also purchase wastewater services from the Authority. The Potomac Interceptor Group consists of the Town of Vienna, Virginia; the U.S. Park Service; the U.S. Department of the Navy; and the Metropolitan Washington Airports Authority (Dulles Airport).

The Authority purchases water from the Washington Aqueduct (the "Aqueduct"), which is owned by the Federal government and operated by the U.S. Army Corps of Engineers (USACE) under the direction of the Secretary of the Army. Since 1852, an act of Congress placed the care, management, and superintendence of the Washington Aqueduct under the USACE. Under the Act, USACE was given responsibility for supplying water in the District for use by the Federal government and for the use and benefit of the inhabitants of the District. The USACE operates two water purification plants at the Aqueduct, Dalecarlia and McMillan, for the exclusive benefit of the Authority, Arlington County and Fairfax County Water Authority ("FCWA"). The Aqueduct facilities supply treated water to distribution systems of the Authority, Arlington County, FCWA, the Federal government, and other parts of northern Virginia.

As of January 3, 2014, FCWA assumed ownership and operation of the water distribution system previously owned and operated by the City of Falls Church. The Authority is responsible for managing the treated Water System that serves the District and several other governmental customers outside the District. The Authority currently purchases approximately 74% of the finished water produced by the Aqueduct, and Arlington County and the FCWA purchase the remainder. Under this agreement, which remains in effect until September 30, 2023 and then thereafter until terminated, the Authority is responsible for funding approximately 74% of the Aqueduct's annual operating and capital costs. Additionally, the Authority obtains back-up and peak-day water supply from the Jennings Randolph Reservoir (Bloomington Dam) and Little Seneca Lake. The Jennings Randolph Reservoir was constructed by the Federal government and is operated by the USACE. The Little Seneca Lake was constructed and is operated by the WSSC.

(d) Reporting Entity

A financial reporting entity consists of a primary government and its component units. The criteria used to determine whether organizations are to be included as component units within the Authority's reporting entity are as follows:

- The Authority holds the corporate powers of the organization, and
- The Authority appoints a voting majority of the organization's board, and
- The Authority is able to impose its will on the organization, or
- The organization has the potential to impose a financial burden on, or provide a financial benefit to the Authority, or
- It would be misleading to exclude the organization from the Authority's financial statements.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(1) Background, Governance, Operations and Reporting Entity (Continued)

Based on the application of the above criteria, Blue Drop, LLC, a separate not-for-profit organization created by DC Water in November, 2016 by the Board Resolution #16-90, is considered to be a component unit of the Authority. Blue Drop, LLC which is legally separate from the Authority was established as a pilot program to provide the following:

- Relief from rising rates, fees, and charges to DC Water's customers in the District of Columbia, to other participating jurisdictions and to users of the joint-use sewage facilities,
- Advancing and promoting innovative strategies and technologies in the treatment and delivery of potable water, the treatment and collection of wastewater, and related products and services,
- Improving the state of the water and wastewater treatment sectors by sharing knowledge, research, and expertise throughout the country and the world,
- Promoting resource recovery and conservation; and
- Other purposes consistent with and complementary to the principles described in this Resolution.

A component unit should be included in the reporting entity financial statements using the blending method in any of these circumstances:

- The component unit's governing body is substantively the same as the governing body of the primary government *and* (1) there is a financial benefit or burden relationship between the primary government and the component unit, or (2) management of the primary government has operational responsibility for the component unit.
- The component unit provides entirely, or almost entirely, to the primary government or otherwise exclusively, or almost exclusively, benefits the primary government even though it does not provide services directly to it.
- The component unit's total debt outstanding, including leases, is expected to be repaid entirely, or almost entirely, with resources of the primary government.
- The component unit is organized as a not-for-profit corporation in which the primary government is the sole corporate member, as identified in the component unit's articles of incorporation or bylaws.

Blue Drop, LLC is a blended component unit because it is organized as a not-for-profit corporation in which the Authority is the sole corporate member, as identified in Blue Drop, LLC's articles of incorporation and bylaws. The inclusion of Blue Drop, LLC as a blended component unit did not have a material effect on the fiscal year 2018 or 2017 financial statements. Separate audited financial statements for Blue Drop, LLC are available from the Blue Drop, LLC Office at 80 M Street SE, Washington, DC 20003. Condensed financial statements of Blue Drop, LLC as of and for the years ended September 30, 2018 and 2017 are also included in Note 15.

Additionally, the Authority is not considered to be a component unit of the District as the District is not able to impose its will on the Authority, and the Authority does not impose a financial burden on or provide a financial benefit to the District.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(2) Summary of Significant Accounting Policies (Continued)

The financial statements of the Authority have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"), as applicable to governmental entities. The Governmental Accounting Standards Board ("GASB") is the accepted primary standard-setting body for establishing governmental accounting and financial reporting standards. The Authority's significant accounting policies are described below.

(a) *Measurement Focus and Basis of Accounting*

The financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned, and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. Grants and similar items are recognized when all eligibility requirements imposed by the grantor have been met.

(b) *Cash and Cash Equivalents*

The Authority invests all unrestricted cash balances, in excess of the required compensating balances, in interest-bearing accounts. The Authority's cash equivalents at year end consist of unrestricted and restricted investments, such as registered money market mutual funds and U.S. government agency obligations, which have an original maturity of 90 days or less, and are readily convertible to known amounts of cash.

For purposes of the accompanying statements of cash flows, cash and cash equivalents also include the Authority's restricted cash and cash equivalents.

(c) *Investments*

The Authority's investments at year end consist of unrestricted and restricted U.S. government agency obligations, U.S. Treasury notes, commercial paper, FDIC insured and negotiable certificates of deposit, corporate notes, supranational bonds and municipal bonds which have an original maturity in excess of 90 days. Money market investments and participating interest-earning investment contracts that have a remaining maturity at time of purchase of one year or less are reported at amortized cost. All other Investments are reported at fair value as of September 30, 2018 and 2017, respectively.

(d) *Inventory*

Inventory is recorded at the lower of weighted average cost or market value and consists primarily of operating and maintenance materials.

(e) *Restricted Assets*

Restricted assets represent unspent revenue bond proceeds, funds for the current payment of debt service, and unspent Federal capital appropriations. These assets, which cannot be used for routine operations, are classified as restricted assets since their use is limited by the applicable debt covenants and Federal Appropriations Act.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(2) Summary of Significant Accounting Policies (Continued)

(f) Capital Assets

The Authority's capital assets are comprised of the wastewater treatment plant, wastewater collection facilities, the water distribution systems, deep tunnel systems, purchased capacity, and capital equipment and fleet. Capital assets are reported at historical costs and include all ancillary costs. The wastewater treatment plant, collections facilities, water distribution systems and deep tunnel systems include project construction and development costs, internal engineering and construction management personnel costs, and interest costs incurred during the construction period.

Normal recurring maintenance and repair costs are charged to operations, whereas major repairs, improvements and replacements, which extend the useful lives of the capital assets, are capitalized. Construction-in-progress is transferred to capital assets in-service upon substantial completion or when placed in service, with related depreciation commencing at that time. The Authority's capitalization thresholds are: \$500 for wastewater treatment plant and collection facilities, and water distribution systems improvements; and \$5 for capital equipment and fleet.

Capital assets are depreciated using the straight-line method over the following estimated useful lives:

<u>Asset class</u>	<u>Estimated useful lives</u>
Wastewater treatment plant	60 years
Wastewater collection facilities	60 years
Water distribution systems	60 years
Deep tunnel systems	100 years
Purchased capacity	60 years
Capital equipment and fleet	3 - 20 years

The Authority recognizes a half-year of depreciation in the year the capital asset is placed in service and a half-year in the year of disposal.

As discussed in Note 1, the Authority is responsible for approximately 74% of the Aqueduct's operating and capital costs. The Authority records its share of operating costs as water purchases and capital costs as purchased capacity, an intangible asset. The Authority's policy is to capitalize capital costs required to be funded under long-term water purchase agreements and to amortize such costs over the shorter of the term of the contractual agreement or estimated useful life of the assets. For purposes of the Aqueduct, the Authority considers the term of the water purchase agreement to be indefinite as USACE is required by law to provide the Authority with a source of water from the Aqueduct and the Authority has no intent to terminate its Agreement to purchase water from USACE. Additionally, capital cost reimbursements made in prior years under the Authority's participation in the Jennings Randolph Reservoir (Bloomington Dam) and Little Seneca Lake projects are also included in purchased capacity.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(2) Summary of Significant Accounting Policies (Continued)

(g) *Deferred Outflows of Resources*

Deferred outflows of resources are defined as a consumption of net position by the Authority that is applicable to a future reporting period. Deferred outflows of resources increase net position, similar to assets. Deferred loss on bond refunding resulted from the difference between the carrying value of the refunded debt and its reacquisition price. Net losses are deferred and amortized over the life of the refunded or refunding debt, whichever is shorter.

(h) *Compensated Absences*

Employees earn vacation and sick leave based on a prescribed formula, which allows employees to accumulate an unlimited amount of sick leave, and vacation leave up to the maximum amounts shown in the table below. Vacation leave earned but unused by employees vests and is accrued as a liability. Generally, sick leave does not vest, and accordingly, it is recorded when used. However, as further discussed in Note 14d, the Authority Retirement Health Savings (RHS) Plan allows non-union, non-federal employees to use sick leave that is usually forfeited upon termination, to fund an account that can be used to pay for eligible medical expenses. Eligibility is established upon termination if an employee has five years of service and 100 hours of sick leave.

Accordingly, the Authority has recorded an accrual for earned sick leave only to the extent it is probable that the benefits will result in termination payments. In developing this estimate the Authority has taken into consideration past experience in making termination payments for sick leave, adjusted for the effect of changes in our termination payment policy and other current factors.

<u>Length of Service</u>	<u>Annual Carryover Limits</u>
Regular Union employees:	
1-3 years	240 hours
4-14 years	240-320 hours
Over 15 years	240-360 hours
Non-union employees:	
1-2 years	240 hours
3-6 years	320 hours
7 years	360 hours

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(2) Summary of Significant Accounting Policies (Continued)

(i) *Bond Premiums, Discounts and Issuance Costs*

Bond premiums and discounts incurred to issue debt are capitalized and amortized as interest expense over the related bond issue period using the effective interest method. Bond issuance costs are expensed in the period incurred.

(j) *Net Position*

Net position is categorized into three components as follows:

- *Net investments in capital assets* – This component of net position consists of capital assets, net of accumulated depreciation and amortization and is reduced by the outstanding balances of any bonds or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt are also included in this component.
- *Restricted* – This component of net position consists of restrictions placed on net position as a result of external constraints imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation. When both restricted and unrestricted resources are available for use, generally it is the Authority's policy to use restricted resources first and the unrestricted resources when they are needed.
- *Unrestricted* – This component consists of net position that does not meet the definition of "restricted" or "net investments in capital assets".

(k) *Revenues and Expenses*

Revenues and expenses are distinguished between operating and non-operating items. Operating revenues generally result from providing services in connection with the Authority's principal ongoing operations.

The principal operating revenues of the Authority are water and wastewater user charges, and charges for wholesale wastewater treatment. Revenues from user charges and sales of services are recognized as the related services are provided.

Operating expenses include the costs associated with the conveyance of water and wastewater, treatment of wastewater, administrative expenses, District payments-in-lieu-of-taxes (PILOT) and right-of-way (ROW) fees, and depreciation and amortization of capital assets. All revenues and expenses not meeting these definitions are reported as non-operating revenues and expenses.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(2) Summary of Significant Accounting Policies (Continued)

(l) *Retail Water and Wastewater User Charges*

Retail water and wastewater rates are approved by the Authority's Board of Directors. Charges to the District and the Federal government are the same as those charged to retail customers. Charges for services provided but unbilled at the end of the year are recorded as revenue on an estimated basis, which considers historical usage patterns and current rates. Allowances for customer receivables that ultimately may be uncollectible are estimated and charged to expense. Amounts received in advance or in excess of the user charge for a billing period are recorded as unearned revenues until such time as these amounts are either refunded or applied against future user charges.

(m) *Charges for Wholesale Wastewater Treatment and Unearned Revenue*

The cost of operating and maintaining the wastewater treatment plant and related collection facilities applicable to non-District users is billed to participating jurisdictions based upon their share of flows in accordance with terms of the IMA agreement discussed in Note 1c. The charges for operating and maintenance costs and for overhead costs incurred on capital projects are recorded as charges for wholesale wastewater treatment revenue in the year the costs are incurred. The costs of capital projects required for the joint use facilities are allocated to the participating jurisdictions based on their applicable capacity allocation as set forth in the 2012 IMA. The reimbursements for capital related costs are recorded as unearned revenue and are amortized into user charges for wholesale wastewater treatment revenues over the estimated useful lives of the related assets.

(n) *Contingencies*

Liabilities from loss contingencies arising from claims, assessments, litigation, fines and penalties, and other sources, are recorded when information available before the financial statements are issued indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements and the amount of the loss can be reasonably estimated. When the reasonable estimate of the loss is a range, and when no amount within the range is a better estimate than any other amount, the Authority accrues a loss for the minimum amount in the range.

(o) *Use of Estimates*

The preparation of financial statements in conformity with U.S generally accepted accounting principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities and deferred inflows of resources and disclosure of contingent assets and liabilities at the date of the basic financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(2) Summary of Significant Accounting Policies (Continued)

(p) Adoption of New Accounting Standards

During the fiscal year ended September 30, 2018, the Authority adopted the following new accounting standards issued by the Governmental Accounting Standards Board (GASB): Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*; Statement No. 81, *Irrevocable Split-Interest Agreements*; Statement No. 85, *Omnibus 2017*; and Statement No. 86, *Certain Debt Extinguishment Issues*. The Implementation of these new accounting standards had no impact on the Authority's fiscal year 2018 financial statements.

(q) New Accounting Pronouncements to be Implemented in the Future

The Authority plans to implement the following GASB pronouncements by the required implementation dates:

No.	Title	Required Implementation Date (Period Beginning After)	Authority Fiscal Year
83	Certain Asset Retirement Obligations	June 15, 2018	2019
84	Fiduciary Activities	December 15, 2018	2020
87	Leases	December 15, 2019	2021
88	Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements	June 15, 2018	2019
89	Accounting for Interest Cost Incurred before the End of a Construction Period	December 15, 2019	2021
90	Majority Equity Interests	December 15, 2018	2020

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments

(a) Authorized Cash Deposits and Investments

The Authority's Investment Policy, which is compliant with the Authority's bond covenants and master indenture, requires that all cash and other deposits maintained in financial institutions be collateralized, including bank deposits and collateralized certificates of deposit. Collateral is required to be secured in accordance with the following policy: a) collateralization on all deposits of the Authority in excess of the amount protected by federal deposit insurance; and b) collateralization with any of the following: (i) U.S. Treasury obligations, (ii) Federal agency obligations, or (iii) a Letter of Credit issued by a Federal Home Loan Bank the amount of which shall be 102% of the deposits held. Collateral shall always be held by an independent third-party custodian in the name of the Authority.

The Authority's Investment Policy permits investments in the following securities:

- (1) *U.S. Treasury Obligations.* U.S Treasury bills, notes, or any other obligation or security issued by or backed by the full faith and credit of the US Treasury. These securities shall be limited to a maximum maturity of five (5) years at the time of purchase.
- (2) *Registered Investment Companies (Mutual Funds).* Shares in open-end, no-load investment funds provided such funds are registered under the Federal Investment Company Act of 1940, invest exclusively in the securities permitted under this investment policy, provided that the fund is rated "AAAm" or "AAAm-G" or the equivalent.
- (3) *Repurchase Agreements.* Contracts shall be invested in only if certain conditions are met, including: a) the Repurchase Agreement has a term to maturity of no greater than ninety (90) days; b) the contract is fully secured by deliverable U.S. Treasury and Federal Agency obligations, having a market value at all times of at least one hundred two percent (102%) of the amount of the contract; and c) the counterparty meets certain criteria specified in the Investment Policy.
- (4) *Federal Agency Obligations.* Bonds, notes, debentures, or other obligations or securities issued by a Federal government agency or instrumentality, except Collateralized Mortgage Obligations, with a rating of at least "AA" or equivalent from two major rating agencies. These obligations shall be limited to a maximum maturity of five (5) years at the time of purchase.
- (5) *Bankers' Acceptances.* Issued by a domestic bank or a federally chartered domestic office of a foreign bank, which are eligible for purchase by the Federal Reserve System, may be purchased if the following conditions are met: a) the maturity is no greater than one hundred-eighty days (180) days; and b) it is rated not lower than 'A-1' or the equivalent.
- (6) *Commercial Paper.* Unsecured short-term debt of U.S. corporations may be purchased if certain conditions are met, including: a) the maturity is no greater than two hundred-seventy days (270) days; and b) the issuing corporation, or its guarantor, has a short-term debt rating of no less than "A-1" (or its equivalent) by at least two of the Nationally Recognized Statistical Rating Organizations ("NRSRO").

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

- (7) *Collateralized Certificates of Deposit* in state chartered banks or federally chartered banks. Collateralized Certificates of Deposit shall be collateralized at 102%.
- (8) *Corporate Notes*. High quality corporate notes that meet the following criteria: 1) a rating of at least 'AA' (or its equivalent) from at least one NRSRO and a rating of at least 'A' (or its equivalent) from a second NRSRO; and 2) the final maturity shall not exceed a period of five (5) years from the time of purchase.
- (9) *FDIC insured Certificates of Deposit obtained through Certificate of Deposit placement services including the Certificate of Deposit Account Registry Service (CDARS)*. The program allows the Authority to allocate funds into certificates of deposit in increments, which ensure the funds are eligible for full FDIC insurance.
- (10) *Federal Agency Mortgage-Backed Securities*. Issued by Fannie Mae, Freddie Mac, or the Government National Mortgage Association (GNMA) that meet the following criteria: 1) a rating of at least "AA" (or its equivalent) by two NRSROs; 2) The weighted average life (WAL) shall not exceed a period of five (5) years from the time of purchase.
- (11) *Negotiable Certificates of Deposit and Bank Deposit Notes of domestic banks and domestic offices of foreign banks with:* a) ratings of at least 'A-1' (or its equivalent) by two NRSROs for maturities of one (1) year or less; b) a rating of at least 'AA' (or its equivalent) from at least one NRSRO and a rating of at least 'A' (or its equivalent) from a second NRSRO for maturities over one (1) year; and c) the final maturity shall not exceed a period of five (5) years from the time of purchase.
- (12) *Supranational Bonds*. Obligations, participations or other instruments of any Federal agency, instrumentality or United States government-sponsored enterprise, including those issued or fully guaranteed as to the principal and interest by Federal agencies, instrumentalities or United States government sponsored enterprises, provided that: 1) at time of purchase the maturity does not to exceed five (5) years; and 2) have a rating of at least 'A' (or its equivalent) from at least two NRSROs.
- (13) *Municipal Obligations*. Municipal bonds, notes and other evidences of indebtedness of the District or any state or local government may be purchased that meet certain criteria, including: a) final maturity on the date of investment not to exceed five (5) years; b) rated in either of the two highest rating categories by a NRSRO; and c) the total holdings of any single issue do not represent more than 25% of the total issue.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

Additionally, the Authority's Investment Policy has established the following limits as to the maximum percentage of the investment portfolio that is permitted to be invested in each type of eligible security:

Security		Security	
Collateralized Bank Deposits	100%	Collateralized Certificates of Deposit	30%
U.S. Treasury Obligations	100%	Corporate Notes	30%
Registered Money Market Mutual Funds	100%	FDIC-insured Certificates of Deposit	30%
Repurchase Agreements	100%	Federal Agency Mortgage-Backed Securities	30%
Federal Agency Obligations	80%	Negotiable Certificates of Deposit	30%
Bankers' Acceptances	40%	Supranational Bonds	30%
Commercial Paper	35%	Municipal Obligations	20%

The Authority's Investment Policy also stipulates that no more than 5% of the Authority's portfolio will be invested in the securities of any single issuer with following exceptions:

U.S. Treasury	100% maximum
Each Mutual Fund	50% maximum
Each Repurchase Agreement Counterparty	50% maximum
Each Federal Agency	40% maximum

For the years ended September 30, 2018 and 2017, the Authority was in full compliance with the Investment Policy.

(b) Cash Deposits

At September 30, 2018 and 2017, the carrying amounts of the Authority's unrestricted and restricted bank deposits were \$127,877 and \$104,742 respectively. These bank deposits were entirely insured or collateralized with securities or letters of credit at 102% of the market value of principal, plus accrued interest held by the Authority's independent agent in the Authority's name.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

(c) Fair Value Measurements

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Authority is required to classify certain assets and liabilities based on the following fair value hierarchy:

Level 1: Quoted price in active markets for identical assets.

Level 2: Inputs other than quoted prices included in level 1 that are observable, either directly or indirectly. Debt securities are priced based on a compilation of primarily observable market information or broker quote in a non-active market.

Level 3: Inputs are significant unobservable inputs.

As noted in the following table, all of the Authority's investments that are reported at fair value have been measured using Level 2 inputs as of September 30, 2018 and 2017, respectively:

Investments by fair value level	Fair Value Measurement at Reportable Date Using Significant Other Observable Inputs (Level 2)	
	2018	2017
U.S. Treasury notes	\$ 77,974	\$ 123,493
Corporate notes	16,044	19,586
U.S. government agency obligations	12,713	19,345
Negotiable certificates of deposit	11,038	8,156
Supranational Bonds	10,446	6,410
Municipal bonds	4,704	5,232
Total investments at fair value	132,919	182,222
Investments and cash equivalents carried at amortized cost	394,772	224,539
Total investments and cash equivalents	<u>\$ 527,691</u>	<u>\$ 406,761</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

(d) Cash Equivalents and Investments

As of September 30, 2018, and 2017, the Authority held the following cash equivalents and investments:

Cash equivalents and investments	2018	Weighted Average Maturity (Years)	2017	Weighted Average Maturity (Years)
Registered money market mutual	\$ 185,175	0.083	\$142,139	0.083
U.S. Treasury notes	180,375	0.912	140,975	0.941
Commercial paper	90,469	0.265	49,657	0.342
Corporate notes	16,044	2.114	19,586	1.750
FDIC-insured certificates of deposit	15,327	0.149	15,261	0.151
U.S. government agency obligations	12,713	1.490	19,345	1.871
Negotiable certificates of deposit	12,438	1.503	8,156	1.551
Supranational Bonds	10,446	1.938	6,410	2.076
Municipal bonds	4,704	1.425	5,232	1.442
Total cash equivalents and investments	<u>\$ 527,691</u>	<u>0.577</u>	<u>\$406,761</u>	<u>0.658</u>

The Authority's exposure to foreign currency risk, interest rate risk, credit risk and custodial risk associated with its cash deposits and investments are described below:

Foreign Currency Risk – Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair values of an investment. The Authority's investments are not subject to foreign currency risk as the Authority held no investments denominated in foreign currency as of and for the years ended September 30, 2018 and 2017, respectively.

Interest Rate Risk – Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, an investment with a longer maturity will have a greater sensitivity to fair value changes that are related to market interest rates. As a means of limiting its exposure to fair value losses resulting from rising interest rates, the Authority's Investment Policy limits the Authority's investment portfolio to investments with certain maximum maturities.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

The following are the maximum maturities established by the Authority's investment policy:

Security	Maturities	Security	Maturities
U.S. Treasury Obligations	5 years	Corporate Notes	5 years
Registered Money Market Mutual Funds	NA	FDIC-insured Certificates of Deposit	NA
Repurchase Agreements	90 days	Federal Agency Mortgage-Backed Securities	5 years
Federal Agency Obligations	5 years	Negotiable Certificates of Deposit	5 years
Bankers' Acceptances	180 days	Supranational Bonds	5 years
Commercial Paper	270 days	Municipal Obligations	5 years
Collateralized Certificates of Deposit	NA		

Additionally, the Authority monitors the interest rate risk inherent in its portfolio by measuring the weighted average maturity of its portfolio of debt instruments.

As reflected in the table on the previous page, the weighted average maturity of the Authority's investment portfolio was 0.577 years and 0.658 years as of September 30, 2018 and 2017, respectively.

Credit Risk – Generally, credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized rating organization. The Authority manages this risk by establishing minimum credit ratings in its investment policy.

The table below reflects the allocation of the Authority's investments by credit quality rating as of September 30, 2018:

Investment Type	Credit Quality Rating											Total
	AAA	AA+	AA	AA-	A+	A	A-	A-1	A-1+	AAAm	Not Rated	
U.S. government agency obligations		2.4%										2.4%
Commercial paper								13.2%	4.0%			17.2%
Registered money market mutual										35.1%		35.1%
U.S. Treasury notes		34.1%										34.1%
FDIC-insured certificates of deposit											2.9%	2.9%
Corporate notes	0.1%	0.2%	0.6%	1.2%	0.5%	0.3%	0.2%					3.1%
Negotiable certificates of deposit				0.8%	0.9%			0.6%				2.3%
Supranational Bonds	2.0%											2.0%
Municipal bond	0.1%		0.4%	0.2%		0.2%						0.9%
	<u>2.2%</u>	<u>36.7%</u>	<u>1.0%</u>	<u>2.2%</u>	<u>1.4%</u>	<u>0.5%</u>	<u>0.2%</u>	<u>13.8%</u>	<u>4.0%</u>	<u>35.1%</u>	<u>2.9%</u>	<u>100.0%</u>

At September 30, 2018, the Authority's investments with exposure to credit risk met the minimum credit ratings required in the Authority's investment policy.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

Custodial Credit Risk – Deposits is the risk that, in the event of the failure of the depository financial institution, the Authority will not be able to recover the deposits or collateral securities that are in the possession of an outside party. The Authority had no custodial credit risk associated with cash deposits as all other bank deposits were entirely insured or collateralized with securities or letters of credit at 102% of the market value of principal, plus accrued interest and held by the Authority's independent agent in the Authority's name.

Custodial Credit Risk – Investments is the risk that in the event of the failure of the counterparty, the Authority will not be able to recover the value of its investments or collateral securities that are in the possession of the outside party. The Authority has no custodial credit risk as all Authority investments are held in the Authority's name by an independent custodial agent for the term of the agreement and investments in obligations of the United States or its agencies are held by the Federal Reserve in a custodial account.

Other Required Disclosures – As of and for the years ended September 30, 2018 and 2017, the Authority did not have any:

- Commitments to resell securities under yield maintenance agreements;
- Losses due to defaults by counterparties or recoveries from prior period losses; or
- Investments in any one issuer that represent 5% or more of total investments, excluding investments explicitly guaranteed by the U.S. government and its agencies and investments in mutual funds, external investment pools and other pooled investments that are excluded from this disclosure requirement.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

(d) Cash and Investment Schedule

A schedule of cash, cash equivalents and investments as of September 30, 2018 and 2017 follows:

Description	2018			2017		
	Unrestricted	Restricted	Total	Unrestricted	Restricted	Total
Cash and cash equivalents						
Demand deposits	\$ 123,545	\$ 4,332	\$ 127,877	\$ 104,742	\$ -	\$ 104,742
Registered money market mutual	363	184,812	185,175	92	142,047	142,139
Total cash and cash equivalents	123,908	189,144	313,052	104,834	142,047	246,881
Investments						
U.S. Treasury notes	36,376	143,999	180,375	33,643	107,332	\$ 140,975
Commercial paper	-	90,469	90,469	-	49,657	49,657
Corporate notes	16,044	-	16,044	19,586	-	19,586
FDIC-insured certificates of deposit	15,327	-	15,327	15,261	-	15,261
U.S. government agency obligations	12,713	-	12,713	19,345	-	19,345
Negotiable certificates of deposit	12,438	-	12,438	8,156	-	8,156
Supranational Bonds	10,446	-	10,446	6,410	-	6,410
Municipal bonds	4,704	-	4,704	5,232	-	5,232
Total Investments	108,048	234,468	342,516	107,633	156,989	264,622
Total cash, cash equivalents & investments	\$ 231,956	\$ 423,612	\$ 655,568	\$ 212,467	\$ 299,036	\$ 511,503

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(3) Cash Deposits and Investments (Continued)

(e) Restricted Cash and Investment Schedule

A schedule of restricted cash, cash equivalents and investments as of September 30, 2018 and 2017 follows:

Description	2018	2017
Restricted cash and cash equivalents (current and noncurrent)		
Revenue bonds 2018B	\$ 20,501	\$ -
Revenue bonds 2018A	20,046	-
2016 B EIB Construction Funds	16,941	24,680
Principal payment, 1998 revenue bonds	15,237	14,750
Debt service reserve account, 1998 revenue bonds	11,607	5,526
Interest payment, 2015A,B revenue bonds	8,801	8,760
Interest payment, 2014C revenue bonds	8,783	8,734
Interest payment, 2016A revenue bonds	8,750	8,710
Interest payment, 2014A revenue bonds	8,473	8,425
Interest payment, 2010 revenue bonds	8,211	8,157
Interest payment, 2012A,C revenue bonds	7,903	7,959
Interest payment, 2013 revenue bonds	7,541	7,497
Interest payment, 2017 A&B Senior Lien Interest	7,061	7,013
Principal payment, 2008 revenue bonds	6,911	6,735
2018 A&B Senior Bond Interest	6,298	-
Principal payment, 2012 revenue bonds	5,381	5,140
Cash-Fleet & Sewer Relocation	4,331	-
Principal payment, 2009 revenue bonds	4,253	3,815
Interest payment, 1998 revenue bonds	3,967	4,307
2017 A&B Senior Lien Principal	3,045	-
Extendable municipal commercial paper	2,351	2,330
Commercial Paper Notes Investment	1,174	-
2015 A & B Lien Revenue Bonds	583	-
Interest payment, 2016 B EIB	431	429
Interest payment, 2008 revenue bonds	173	340
Interest payment, 2014B revenue bonds	110	71
Interest payment, 2009 revenue bonds	106	182
Interest payment, EMCP Series A	70	116
Revenue bonds 2014C	64	63
Interest payment, 2012C revenue bonds	38	36
2012 B-2 Bond Interest Account, 2018 B Cost of Issuance	2	-
Combined sewer overflow (CSO) federal appropriations	1	2
Revenue bonds 2017B	-	6,725
Revenue bonds 2015A	-	1,043
Interest payment, commercial paper	-	352
Revenue bonds 2017A	-	117
Revenue bonds 2015B	-	31
Revenue bonds 2014A	-	1
Interest payment, 2007 revenue bonds	-	1
Total restricted cash and cash equivalents	<u>189,144</u>	<u>142,047</u>
Restricted investments (current and noncurrent)		
Revenue bonds 2018B	126,892	-
Revenue bonds 2018A	95,725	-
Debt service reserve account, 1998 revenue bonds	11,851	18,098
Revenue bonds 2017A	-	18,167
Revenue bonds 2017B	-	120,724
Total restricted investments	<u>234,468</u>	<u>156,989</u>
Total restricted cash, cash equivalents & investments	<u>\$ 423,612</u>	<u>\$ 299,036</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(4) Capital Assets

The following tables present the activity in capital assets for the years ended September 30, 2018 and 2017:

	Balance 9/30/2017	Additions	Disposals	Transfers	Balance 9/30/2018
Capital Assets					
Wastewater treatment plant	\$ 3,010,074	\$ -	\$ -	\$ 203,833	\$ 3,213,907
Wastewater collection facilities	856,859	-	(21,962)	23,163	858,060
Water distribution system	1,112,458	-	(9,659)	22,559	1,125,358
Deep tunnel systems	-	-	-	1,171,226	1,171,226
Purchased capacity	356,850	7,361	-	-	364,211
Capital equipment	253,437	2,292	(721)	41,287	296,295
Total capital assets in service	5,589,678	9,653	(32,342)	1,462,068	7,029,057
Less accumulated depreciation:					
Wastewater treatment plant	(675,511)	(53,169)	-	-	(728,680)
Wastewater collection facilities	(280,926)	(13,711)	7,293	-	(287,344)
Water distribution system	(291,070)	(18,733)	-	-	(309,803)
Deep tunnel systems	-	(5,856)	-	-	(5,856)
Purchased capacity	(94,305)	(6,070)	-	-	(100,375)
Capital equipment	(194,021)	(17,912)	721	-	(211,212)
Total accumulated depreciation	(1,535,833)	(115,451)	8,014	-	(1,643,270)
Net capital assets in service	4,053,845	(105,798)	(24,328)	1,462,068	5,385,787
Construction-in-progress	2,489,255	546,894	-	(1,462,068)	1,574,081
Net capital assets	\$ 6,543,100	\$ 441,096	\$ (24,328)	\$ -	\$ 6,959,868

	Balance 9/30/2016	Additions	Disposals	Transfers	Balance 9/30/2017
Capital Assets					
Wastewater treatment plant	\$ 2,383,176	\$ -	\$ -	\$ 626,898	\$ 3,010,074
Wastewater collection facilities	843,095	-	-	13,764	856,859
Water distribution system	1,095,216	-	(9,650)	26,892	1,112,458
Purchased capacity	349,210	7,640	-	-	356,850
Capital equipment	220,584	6,985	(766)	26,634	253,437
Total capital assets in service	4,891,281	14,625	(10,416)	694,188	5,589,678
Less accumulated depreciation:					
Wastewater treatment plant	(629,272)	(46,239)	-	-	(675,511)
Wastewater collection facilities	(267,272)	(13,654)	-	-	(280,926)
Water distribution system	(274,429)	(18,577)	1,936	-	(291,070)
Purchased capacity	(88,360)	(5,945)	-	-	(94,305)
Capital equipment	(181,299)	(13,485)	763	-	(194,021)
Total accumulated depreciation	(1,440,632)	(97,900)	2,699	-	(1,535,833)
Net capital assets in service	3,450,649	(83,275)	(7,717)	694,188	4,053,845
Construction-in-progress	2,544,698	638,745	-	(694,188)	2,489,255
Net capital assets	\$ 5,995,347	\$ 555,470	\$ (7,717)	\$ -	\$ 6,543,100

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(4) Capital Assets (Continued)

For the years ended September 30, 2018 and 2017, total interest expense incurred was \$59,543 and \$52,750, and total capitalized interest was \$79,412 and \$77,003, respectively. During fiscal year 2018, the Authority incurred losses on disposals of capital assets in the amount of \$24,328. This amount has been included in interest expense and other non-operating expenses on the statement of revenues, expenses, and changes in net position.

The following tables present the activity in purchased capacity for the years ended September 30, 2018 and 2017:

	Balance 9/30/2017	Additions	Balance 9/30/2018
Purchased capacity			
Washington Aqueduct	\$ 324,660	\$ 7,361	\$ 332,021
Jennings Randolph Reservoir	19,863	-	19,863
Little Seneca Lake	12,327	-	12,327
Total in service	<u>356,850</u>	<u>7,361</u>	<u>364,211</u>
Less accumulated depreciation:			
Washington Aqueduct	(77,809)	(5,472)	(83,281)
Jennings Randolph Reservoir	(9,823)	(393)	(10,216)
Little Seneca Lake	(6,673)	(205)	(6,878)
Total accumulated depreciation	<u>(94,305)</u>	<u>(6,070)</u>	<u>(100,375)</u>
Purchased capacity, net	<u>\$ 262,545</u>	<u>\$ 1,291</u>	<u>\$ 263,836</u>
	Balance 9/30/2016	Additions	Balance 9/30/2017
Purchased capacity			
Washington Aqueduct	\$ 317,020	\$ 7,640	\$ 324,660
Jennings Randolph Reservoir	19,863	-	19,863
Little Seneca Lake	12,327	-	12,327
Total in service	<u>349,210</u>	<u>7,640</u>	<u>356,850</u>
Less accumulated depreciation:			
Washington Aqueduct	(72,462)	(5,347)	(77,809)
Jennings Randolph Reservoir	(9,430)	(393)	(9,823)
Little Seneca Lake	(6,468)	(205)	(6,673)
Total accumulated depreciation	<u>(88,360)</u>	<u>(5,945)</u>	<u>(94,305)</u>
Purchased capacity, net	<u>\$ 260,850</u>	<u>\$ 1,695</u>	<u>\$ 262,545</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(5) Capital Contributions

Capital contributions consist of the following for the years ended September 30, 2018 and 2017, respectively:

Description	2018	2017
Federal grants and appropriations	\$ 30,096	\$ 23,956
Contributions from District government	323	110
Total	<u>\$ 30,419</u>	<u>\$ 24,066</u>

Capital contributions consist principally of Federal grants and appropriations and certain capital costs incurred by the Authority in fiscal year 2018 and 2017 to be reimbursed by the District government pursuant to the Memorandum of Understanding and Relocation Funding Agreement between the Authority and the District discussed in Notes 13(c) and 13(e).

(6) Due from Federal Government

The amount due from the Federal government consists of the following at September 30, 2018 and 2017, respectively:

Description	2018	2017
Washington Aqueduct advance	\$ 37,827	\$ 31,994
Federal grants receivable	2,686	5,228
Total	<u>\$ 40,513</u>	<u>\$ 37,222</u>

The Washington Aqueduct advance as of September 30, 2018 and 2017 consists of unexpended capital advances and an operating escrow of \$4,675 required under the Water Sales Agreement. Federal grants receivable represents amounts due from federal grantors related to allowable construction costs incurred but not billed and/or reimbursed as of the fiscal year end.

(7) Customer Receivables

The following is a summary of customer receivables, net as of September 30, 2018 and 2017:

Description	2018	2017
Billed customer receivables	\$ 76,907	\$ 63,358
Unbilled customer receivables	23,684	22,005
Total customer receivables	100,591	85,363
Less: Allowance for doubtful accounts	(20,327)	(16,857)
Customer receivables, net	<u>\$ 80,264</u>	<u>\$ 68,506</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(8) Due from Other Jurisdictions

The amount due from other jurisdictions under the 2012 IMA consists of the following at September 30, 2018 and 2017:

Description	2018	2017
Current:		
Washington Suburban Sanitary Commission	\$ 9,760	\$ 18,876
Fairfax	1,774	3,338
Loudoun County Sanitation Authority	741	1,491
Northern Virginia	99	96
Potomac Interceptor	709	707
Total current	13,083	24,508
Noncurrent:		
Washington Suburban Sanitary Commission	4,232	7,475
Fairfax	781	1,434
Loudoun County Sanitation Authority	346	628
Northern Virginia	2,794	2,893
Total noncurrent	8,153	12,430
Total due from other jurisdictions	\$ 21,236	\$ 36,938

(9) Compensated Absences

The following table reflects the activity associated with accrued compensated absences for the years ended September 30, 2018 and 2017, respectively:

Description	2018			2017		
	Vacation	Sick	Total	Vacation	Sick	Total
Beginning of year	\$ 8,868	\$ 10,731	\$ 19,599	\$ 8,315	\$ 9,073	\$ 17,388
Increases (incurred)	5,456	3,598	9,054	1,769	2,518	4,287
Decreases	(5,767)	(2,665)	(8,432)	(1,216)	(860)	(2,076)
End of year	8,557	11,664	20,221	8,868	10,731	19,599
Less: current portion	3,011	1,486	4,497	1,553	858	2,411
Noncurrent portion	\$ 5,546	\$ 10,178	\$ 15,724	\$ 7,315	\$ 9,873	\$ 17,188

The current portion of compensated absences is included in compensation payable in the accompanying statements of net position.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(10) Short-Term Debt—Commercial paper notes payable and Extendable Municipal Commercial Paper

The Authority's commercial paper notes payable are comprised of the following as of September 30, 2018 and 2017, respectively:

Description	Balance 9/30/2017	Balance 9/30/2018
Commercial Paper	\$ 29,200	\$ 29,200
Extendable Municipal Commercial Paper	50,000	50,000
	\$ 79,200	\$ 79,200

(a) Commercial Paper

A schedule of Commercial Paper activity for the years ended September 30, 2018 and 2017 is shown below:

Description	Balance 9/30/2017	2018		Balance 9/30/2018
		Maturities	Re-Issuance	
Series B, interest at 1.30% and 1.68%, maturities at 55 and 67 days	\$ -	\$ (85,000)	\$ 85,000	\$ -
Series C, interest from 0.67% to 1.25%, maturities ranged from 7 to 67 days	29,200	(613,200)	613,200	29,200
	\$ 29,200	\$ (698,200)	\$ 698,200	\$ 29,200

Description	Balance 9/30/2016	2017		Balance 9/30/2017
		Maturities	Re-Issuance	
Series C, interest from 0.67% to 1.25%, maturities ranged from 7 to 67 days	29,200	(262,800)	262,800	29,200
	\$ 29,200	\$ (262,800)	\$ 262,800	\$ 29,200

The Authority has established a commercial paper ("CP") program to provide interim financing for the Authority's capital improvement program. 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, (collectively, the "Commercial Paper Notes"), each as subordinate debt to the senior debt discussed in Note 11. To provide liquidity and credit support for the Commercial Paper Notes, the Authority obtained irrevocable, direct-pay letters of credit (the "Letters of Credit") issued by Landesbank Hessen-Thüringen Girozentrale, New York Branch (the "Bank") which currently expire on May 15, 2020.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(10) Short-Term Debt—Commercial Paper and Extendable Municipal Commercial Paper (Continued)

In connection with the Bank's issuance of the Letters of Credit, the Authority and the Bank entered into a Reimbursement Agreement for each series of CP Notes, each dated as of May 1, 2015, each as amended (collectively, the "Reimbursement Agreements") that obligates the Authority to pay Bank Obligations and Reimbursement Obligations (both as defined in the Eleventh Supplemental Indenture relating to the Commercial Paper Notes) and Fee Obligations (as defined in each Reimbursement Agreement) to the Bank. The Bank Obligations, the Reimbursement Obligations and Fee Obligations are Subordinate Debt under the Indenture.

(b) Extendable Municipal Commercial Paper

A schedule of Extendable Municipal Commercial Paper activity for the years ended September 30, 2018 and 2017 is shown below:

Description	Balance 9/30/2017	2018		Balance 9/30/2018
		Maturities	Re-Issuance	
EMCP Series A, interest from 0.95% to 1.71%, maturities ranged from 29 to 89 days	\$ 50,000	\$ (450,000)	\$ 450,000	\$ 50,000

Description	Balance 9/30/2016	2017		Balance 9/30/2017
		Maturities	Re-Issuance	
EMCP Series A, interest from 0.57% to 1.00%, maturities ranged from 30 to 89 days	\$ 50,000	\$ (350,000)	\$ 350,000	\$ 50,000

The Authority has authorized a \$100,000 Extendable Municipal Commercial Paper (EMCP) Program. The program consists of one series - A, in the amount of \$100,000. This program will provide interim financing for a portion of the Authority's Capital Improvement Program. Under this program the notes are issued backed by the liquidity and credit rating of the Authority. Each Series A EMCP Note will mature on its respective "Original Maturity Date", which may range from one to 90 days from the date of issuance, unless its maturity is extended on the "Original Maturity Date" to the "Extended Maturity Date", which will be the date that is 270 days after the date of issuance of the Series A EMCP Note. The notes are payable from and secured by a subordinate lien on the Authority's net revenues, as further described in the Authority's master trust indenture as supplemented.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt

A schedule of long-term debt activity for the year ended September 30, 2018 is shown below:

Description	Balance 9/30/2017	Increases	Decreases	Balance 9/30/2018	Due Within One Year
2018 Public Utility Revenue Bonds:					
Series A interest at 5.0%, maturing in 2050	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
Series B interest at 5.0%, maturing in 2050	-	200,000	-	200,000	-
2017 Public Utility Revenue Bonds:					
Series A interest at 4.0 % to 5.0%, maturing in 2053	100,000	-	-	100,000	-
Series B interest at 4.0 % to 5.0%, maturing in 2045	200,000	-	-	200,000	3,045
2016 Public Utility Revenue Bonds:					
Series A interest at 2.0 % to 5.0%, maturing in 2040	389,110	-	-	389,110	-
Series B interest at 3.4%, maturing in 2047	25,000	-	-	25,000	-
2015 Public Utility Revenue Bonds:					
Series A interest at 2.0 % to 5.0%, maturing in 2046	100,000	-	-	100,000	580
Series B interest at 5.0 % to 5.25%, maturing in 2045	250,000	-	-	250,000	-
2014 Public Utility Revenue Bonds:					
Series A interest at 4.81%, maturing in 2115	350,000	-	-	350,000	-
Series B-1 interest at 1.0 % to 3.25%, maturing in 2051	50,000	-	-	50,000	-
Series B-2 interest at 1.0 % to 3.25%, maturing in 2051	50,000	-	-	50,000	-
Series C interest at 3.0 % to 5.0%, maturing in 2045	377,110	-	-	377,110	-
2013 Public Utility Revenue Bonds:					
interest at 4.75% to 5.0%, maturing in 2049	300,000	-	-	300,000	-
2012 Public Utility Revenue Bonds:					
Series A interest at 2.0 % to 5.0%, maturing in 2038	158,740	-	(5,140)	153,600	5,345
Series C interest at 4.0% to 5.0%, maturing in 2034	163,215	-	-	163,215	-
2010 Series A Public Utility Revenue Bonds:					
interest at 4.1% to 5.5%, maturing in 2045	300,000	-	-	300,000	-
2009 Series A Public Utility Revenue Bonds:					
interest at 3.0% to 6.0%, maturing in 2019	8,040	-	(3,815)	4,225	4,225
2008 Series A Public Utility Revenue Bonds:					
interest at 4.0% to 5.0%, maturing in 2019	13,600	-	(6,735)	6,865	6,865
1998 Public Utility Revenue Bonds:					
interest ranges from 5.5% to 6.0%, maturing in 2029	156,605	-	(14,750)	141,855	15,565
Notes payable to the Federal Government for Jennings Randolph Reservoir (Bloomington Dam):					
interest at 3.25%, maturing in 2041	12,454	-	(400)	12,054	413
Subtotal	3,003,874	300,000	(30,840)	3,273,034	36,038
Unamortized bond premiums	222,786	48,644	(11,852)	259,578	-
Unamortized bond discounts	(2,093)	-	129	(1,964)	-
Total bonds and notes	\$ 3,224,567	\$ 348,644	\$ (42,563)	\$ 3,530,648	\$ 36,038

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

A schedule of long-term debt activity for the year ended September 30, 2017 is shown below:

Description	Balance 9/30/2016	Increases	Decreases	Balance 9/30/2017	Due Within One Year
2017 Public Utility Revenue Bonds:					
Series A interest at 4.0 % to 5.0%, maturing in 2053	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
Series B interest at 4.0 % to 5.0%, maturing in 2045	-	200,000	-	200,000	-
2016 Public Utility Revenue Bonds:					
Series A interest at 2.0 % to 5.0%, maturing in 2040	389,110	-	-	389,110	-
Series B interest at 3.4%, maturing in 2047	25,000	-	-	25,000	-
2015 Public Utility Revenue Bonds:					
Series A interest at 2.0 % to 5.0%, maturing in 2046	100,000	-	-	100,000	-
Series B interest at 5.0 % to 5.25%, maturing in 2045	250,000	-	-	250,000	-
2014 Public Utility Revenue Bonds:					
Series A interest at 4.81%, maturing in 2115	350,000	-	-	350,000	-
Series B-1 interest at 1.0 % to 3.25%, maturing in 2051	50,000	-	-	50,000	-
Series B-2 interest at 1.0 % to 3.25%, maturing in 2051	50,000	-	-	50,000	-
Series C interest at 3.0 % to 5.0%, maturing in 2045	377,110	-	-	377,110	-
2013 Public Utility Revenue Bonds:					
interest at 4.75% to 5.0%, maturing in 2049	300,000	-	-	300,000	-
2012 Public Utility Revenue Bonds:					
Series A interest at 2.0 % to 5.0%, maturing in 2038	163,655	-	(4,915)	158,740	5,140
Series C interest at 4.0% to 5.0%, maturing in 2034	163,215	-	-	163,215	-
2010 Series A Public Utility Revenue Bonds:					
interest at 4.1% to 5.5%, maturing in 2045	300,000	-	-	300,000	-
2009 Series A Public Utility Revenue Bonds:					
interest at 3.0% to 6.0%, maturing in 2019	11,535	-	(3,495)	8,040	3,815
2008 Series A Public Utility Revenue Bonds:					
interest at 4.0% to 5.0%, maturing in 2019	20,200	-	(6,600)	13,600	6,735
1998 Public Utility Revenue Bonds:					
interest ranges from 5.5% to 6.0%, maturing in 2029	170,525	-	(13,920)	156,605	14,750
Notes payable to the Federal Government for Jennings Randolph Reservoir (Bloomington Dam):					
interest at 3.25%, maturing in 2041	12,841	-	(387)	12,454	400
Subtotal	2,733,191	300,000	(29,317)	3,003,874	30,840
Unamortized bond premiums	198,677	34,345	(10,236)	222,786	-
Unamortized bond discounts	(2,222)	-	129	(2,093)	-
Total bonds and notes	\$ 2,929,646	\$ 334,345	\$ (39,424)	\$ 3,224,567	\$ 30,840

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

(a) Senior Debt

The 2018 Series A and B, 2017 Series A and B, 2014 Series A, 2009 Series A and 1998 Series public utility revenue bonds are considered senior debt under the related Master Indenture of Trust ("Master Indenture"). Payment of the principal and interest on Authority's senior debt is secured by a pledge of Authority's gross revenues (excluding any capital contributions or grants) after provisions for payment of operating expenses.

In April 2018, the Authority issued senior lien revenue bonds with a face value of \$300,000. The bonds were structured in two Series: 2018 Series A (Green Bonds) consisting of \$100,000 with interest rates at 5.0% maturing in 2050; 2018 Series B consisting of \$200,000 with interest rates at 5.0% maturing in 2050. Gross proceeds from the two series of 2018 Bonds totaled \$348,644 including \$48,644 of the original issue premium. Approximately \$115,086 of 2018 series A (Green Bonds) was used to fund a portion of the costs of the Authority's DC Clean Rivers Project; \$146,586 of the 2018 series B was used to fund various capital improvements to the system; \$85,000 of 2018 series B was used to pay principal of and interest on all or a portion of the Authority's outstanding commercial paper notes, Series B (the "Series B CP Notes") and \$1,972 was used to pay the underwriter's discount and cost of issuance.

In January 2017, the Authority issued senior lien revenue bonds with a face value of \$300,000. The bonds were structured in two Series: 2017 Series A (Green Bonds) consisting of \$100,000 with interest rates ranging from 4.0% to 5.0% maturing in 2053; 2017 Series B consisting of \$200,000 with interest rates ranging from 4.0% to 5.0% maturing in 2045. Gross proceeds from the two series of 2017 Bonds totaled \$334,345, including \$34,345 of the original issue premium. Approximately \$107,966 of 2017 series A (Green Bonds) was used to fund a portion of the costs of the Authority's DC Clean Rivers Project; \$224,406 of the 2017 series B was used to fund various capital improvements to the system and \$1,972 was used to pay the underwriter's discount and cost of issuance.

In July 2014, the Authority issued \$350,000 of senior lien public utility revenue bonds 2014 Series A. The 2014 Series A bonds are federally taxable green bonds with a fixed rate of 4.81% and a 100 year final maturity in 2115. The proceeds of the issuance will be used to help finance the construction of the Authority's DC Clean Rivers Project. Net proceeds from the bond issuance totaled approximately \$346,000 including \$4,000 of underwriter's discount and cost of issuance.

In February 2009, the Authority issued senior lien public utility revenue bonds 2009 Series A with a face value of \$300,000, consisting of \$38,355 in Serial Bonds and \$261,645 in Term Bonds. The Serial Bonds have maturity dates and interest rates ranging from 2010-2030 and 3.0% to 5.4%, respectively. The Term Bonds have maturity dates and interest rates ranging from 2024-2039 and 4.8% to 6.0%, respectively. Debt proceeds were used to repay \$14,800 of the taxable Series A Commercial Paper Notes and \$50,000 of the tax exempt Series B Commercial Paper Notes with the remainder used to finance the ongoing capital improvement program. During fiscal years 2015 and 2016, the Authority advance refunded \$128,835 and \$144,810, of the 2009 Series A bonds respectively. Details of the advance refunding are discussed below. The remaining undefeased 2009 Series A bonds outstanding as of September 30, 2016 will mature in fiscal years 2017 through 2019.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

In April 1998, the Authority issued \$266,120 of senior lien public utility revenue bonds 1998 Series. Gross proceeds from the Series 1998 Series bonds totaled \$285,200, including \$18,800 of the original issue premium. Approximately \$77,200 was used to fund various capital projects; \$181,000 was used to repay the outstanding balances of a revolving line of credit and certain notes payable to the Federal government and to advance-refund approximately \$152,200 of District general obligation bonds. The refunded bonds have been fully extinguished. The remainder of the gross proceeds, approximately \$27,000, was used to fund the debt service reserve fund and to pay the cost of issuance. The payment of principal and interest on the Series 1998 bonds is insured by Financial Security Assurance, Inc.

(b) Subordinate Debt

Payments of the Authority's subordinate debt are made after payments of senior debt and after certain reserves have been funded (see "Bond Covenants" below).

In September 2016, the Authority issued \$25,000 of tax-exempt public utility subordinate lien revenue bonds, 2016 Series B (Environmental Impact Bonds) (the "2016 Series B Bonds"). The 2016 Series B Bonds are multimodal variable rate bonds, initially issued bearing a 3.43% fixed rate through the mandatory tender date, April 1, 2021. The net proceeds (after payment of \$472 of issuance expenses) of \$24,528 of the 2016 Series B Bonds will be used for construction of green infrastructure (GI) in Rock Creek Project A (RC-A). The GI practices are designed to mimic natural processes to absorb and slow surges of stormwater during periods of heavy rainfall, reducing the incidence and volume of combined sewer overflows (CSOs) that pollute the District's waterways.

The 2016 Series B Bonds are designated as Environmental Impact Bonds and, as such, include provisions for the possibility of an Outcome Payment by the Authority to the Original Purchasers of the 2016 Series B Bonds of \$3,300 in the event of a runoff reduction greater than 41.3%, and for the possibility of a Risk Share Payment by the Original Purchasers to the Authority of \$3,300 in the event of a runoff reduction less than 18.6%. Runoff reduction means the percentage reduction of storm water runoff in RC-A per impervious acre treated to manage the volume of runoff produced by 1.2 inches of rain as compared to the existing conditions runoff in RC-A as defined in the Private Placement Agreement between the Authority and Original Purchasers. The potential obligation of the Authority to pay the Outcome Payment is an unsecured obligation. No provision has been included in these financial statements for the potential obligation related to the Outcome Payment due to the uncertainties surrounding the effectiveness of GI in RC-A, which will be independently assessed prior to the mandatory tender date.

In February 2016, the Authority issued subordinate lien revenue refunding bonds 2016 Series A for \$389,110. The proceeds from these bonds were used to advance refund \$67,295 of the remaining portion of subordinated lien revenue bonds 2007 Series A, \$141,555 of subordinate lien revenue bonds 2008 Series A, \$144,810 of senior lien revenue bonds 2009 Series A and current refund the remaining portion of \$48,285 of subordinated lien revenue bonds 2007 Series A. The proceeds from 2016 Series A were used to purchase securities that were placed in an irrevocable trust with an escrow agent to provide for all future debt service payments on the refunded 2007 Series A, 2008 Series A and 2009 Series A bonds. As a result, the bonds are considered to be defeased and the liability for these bonds has been removed from the financial statements.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

The interest rates on the refunded bonds ranges from 3.0% to 6.0%. The cash flow required to make principal and interest payments on the refunding bonds is approximately \$78,672 less than the debt service requirements of the refunded bonds. The economic gain (the difference between the present values of the debt service payments on the old and new debt) obtained from the advance refunding is \$56,831.

In October 2015, the Authority issued subordinate lien revenue bonds with a face value of \$350,000. The bonds were structured in two Series: 2015 Series A (Green Bonds) consisted of \$100,000 with interest rates ranging from 2.0% to 5.0% maturing in 2045; 2015 Series B consisting of \$250,000 with interest rates ranging from 5.0% to 5.25% maturing in 2044. Gross proceeds from the two series of 2015 Bonds totaled \$406,587, including \$56,587 of the original issue premium. Approximately \$115,869 of 2015 series A (Green Bonds) was used to fund a portion of the costs of the Authority's DC Clean Rivers Project; \$226,584 of the 2015 series B was used to fund various capital improvements to the system; \$62,000 of 2015 series B was used to pay principal of and interest on all or a portion of the Authority's outstanding commercial paper notes, Series B (the "Series 2015 B CP Notes), and \$2,134 was used to pay the underwriter's discount and cost of issuance.

In November 2014, the Authority issued subordinate lien revenue refunding bonds 2014 Series C for \$377,700. The proceeds from these bonds were used to advance refund \$103,135 of subordinated lien revenue bonds 2007 Series A, \$93,560 of subordinate lien revenue bonds 2008 Series A, and \$128,835 of senior lien revenue bonds 2009 Series A; and to current refund \$52,690 of subordinate lien multimodal revenue bonds 2012 Subseries B-1.

The proceeds from 2014 Series C were used to purchase securities that were placed in an irrevocable trust with an escrow agent to provide for all future debt service payments on the refunded 2007 Series A, 2008 Series A and 2009 Series A bonds. As a result, the bonds are considered to be defeased and the liability for these bonds has been removed from the financial statements. The interest rates on the refunded bonds ranges from 2.26% to 6.0%. The cash flow required to make principal and interest payments on the refunding bonds is approximately \$50,356 less than the debt service requirements of the refunded bonds. The economic gain (the difference between the present values of the debt service payments on the old and new debt) obtained from the advance refunding is \$35,266.

In July 2014, the Authority issued \$100,000 of tax-exempt 2014 Series B variable rate multimodal subordinate lien revenue bonds, maturing in 2050 to fund the Authority's capital improvement program. Net proceeds from the bond issuance totaled approximately \$99,500 including \$500 of underwriter's discount and cost of issuance. Initially, the 2014 Series B bonds will bear interest in a weekly rate period but may be converted to daily, index, short term, long term or fixed rate. Funds for the purchase of tendered bonds that are not remarketed will be provided initially by TD Bank, N.A. for a period of three years pursuant to a Standby Bond Purchase Agreement dated July 23, 2014.

In July 2013, the Authority issued \$300,000 of subordinate lien public utility revenue bonds with interest rates ranging from 4.75% to 5.0%, maturing in 2048 to fund the Authority's capital improvement program. Gross proceeds from the 2013 Series A bonds totaled \$298,921, including \$1,014 of original issue premium and \$2,093 of underwriter's discount and cost of issuance.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

In March 2012, the Authority issued subordinate lien revenue bonds with a face value of \$440,645. The bonds were structured in three Series: 2012 Series A consisted of \$177,430 with interest rates ranging from 2.0% to 5.0% maturing in 2038; 2012 Series B consisting of \$100,000 with interest rate at 2.26% maturing in 2045; and 2012 Series C consisting of \$163,215 with interest rates ranging from 4.0% to 5.0% maturing in 2034. Gross proceeds from the three series of 2012 Bonds totaled \$493,934, including \$53,289 of the original issue premium.

Approximately \$302,413 was used to fund various capital projects; \$188,688 was used to advance-refund series 2003 Series bonds, and \$2,833 was used to pay the underwriter's discount and cost of issuance. During fiscal years 2016 and 2015, the Authority current refunded \$47,310 and advance refunded \$52,690 of the series 2012 Series B-2 and 2012 Series B-1 bonds respectively. Details of the current and advance refunding are discussed above.

The Authority completed its advance-refunding of the 2003 Series bonds by using \$188,688 of bond proceeds from 2012 Series C to purchase securities that were placed in an irrevocable trust with an escrow agent to provide for all future debt service payments on the bonds. As a result, the bonds are considered to be defeased and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments by approximately \$25,478 resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of \$17,843. The refunded bonds have been fully extinguished.

In October 2010, the Authority issued the 2010 Series A public utility subordinate lien revenue bonds, 2010 Series A under the Federal Government's Build America Bonds program. Under this program, the Federal government provides the Authority a federal subsidy in the amount of 35% of the interest paid on the bonds which reduces the Authority's effective interest costs to approximately 3.6%. The \$300,000 par amount consisted of \$18,550 in serial bonds maturing in 2033 and gross interest rates ranging from 4.1% to 4.6%, \$30,950 in term bonds maturing in 2028 and a gross interest rate of 5.4%, and \$250,500 in index term bonds maturing in 2044 and a gross interest rate of 5.5%. Approximately \$214,640 was issued to fund costs of certain capital improvements, including \$2,420 for the cost of issuance and underwriter's discount. In addition, approximately \$75,000 was issued to fund the Authority's Digester Project and \$10,360 for capitalized interest. The interest subsidy received by the Authority for the fiscal years ended September 30, 2018 and 2017 amounted to \$5,333 and \$5,316, respectively. In fiscal years 2018 and 2017, the Authority received \$377 and \$394 less than expected due to budget sequester impacts experienced by the Federal government.

In April 2008, the Authority refunded the 2004 and 2007 Series B subordinate public utility revenue bonds for \$295,000 and \$59,000, respectively. Simultaneously, the Authority issued subordinate lien public utility revenue bonds 2008 Series A with a face value of \$290,375 which are due in 2034. The interest rate on these securities is fixed and will have an effective average rate of 4.7% over the life of the bonds. There was \$11,678 of original issue premium and approximately \$5,888 for the cost of issuance, bond insurance and underwriter's discount costs associated with this issuance. The scheduled payments of principal and interest on the 2008 Series A bonds are guaranteed by a municipal bond insurance policy issued by the Assured Guaranty Program. During fiscal years 2015 and 2016, the Authority advance refunded \$93,560 and \$141,555 of the series 2008 Series A bonds respectively. Details of the advance refunding are discussed above. The remaining undefeased 2008 Series A bonds outstanding as of September 30, 2016 will mature in fiscal years 2017 through 2019.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

Notes payable to the Federal government for the Jennings Randolph Reservoir are considered subordinate debt under the Master Indenture and contain no pledge of property, sinking fund provisions, or restrictive covenants. The proceeds of the notes were used to make improvements to the Jennings Randolph Reservoir for back-up and peak-day water supply.

(c) *Bond Covenants*

The Master Indenture sets forth the establishment of accounts, the application of revenues, and certain other covenants to ensure proper operation and maintenance of the water and wastewater system and payment of debt service. Management believes the Authority was in compliance with all bond covenants as of and for the years ended September 30, 2018 and 2017. The primary requirements of the Master Indenture are summarized below:

Rate Covenant — The Authority has covenanted to establish and maintain rates and charges to produce revenues sufficient to pay operating expenses and annual debt service on senior and subordinate debt, to fund certain required reserves, to fund any payment in lieu of taxes, and to produce net revenues sufficient at least equal to the sum of: (1) 120% of annual debt service on senior debt and (2) 100% of annual debt service on subordinate debt. Net revenues are defined generally as all Authority revenues (excluding capital contributions from wholesale customers, Federal grants, or any proceeds derived from the sale of capital assets), less operating and maintenance expenses (excluding any payment in lieu of taxes, depreciation and amortization charges and certain extraordinary, nonrecurring expenses).

Debt Service Reserve Fund — The Authority has established debt service reserve accounts for certain series of bonds, which are only to be used to pay debt service in the event of insufficient funds. The 1998 Series bonds debt service reserve account balance as of September 30, 2018 and 2017 was \$23,458 and \$23,624, respectively, and is required to be maintained at 125% of current and future average annual 1998 Series debt service.

Operating Reserve Fund — The Master Indenture creates an Operating Reserve Fund in which the Authority must maintain a balance equal to at least 60 days of operating and maintenance expenses of the prior year. Moneys in the Operating Reserve Fund shall be used to pay, to the extent necessary, operating expenses of the Authority. In addition, to the extent that moneys on deposit in the Bond Fund are insufficient to make the required interest and principal payments, moneys in the Operating Reserve Fund shall be used prior to any withdrawal from the Debt Service Reserve Fund to satisfy any such deficiencies. The Board has adopted a policy of funding operating reserves to a level in excess of that required by the Master Indenture.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

(d) Debt Service to Maturity

The future debt-service obligations at September 30, 2018 are as follows:

Fiscal year	Principal	Interest	Total
2019	\$ 36,038	\$ 150,025	\$ 186,063
2020	43,022	149,314	192,336
2021	49,625	147,099	196,724
2022	57,180	144,536	201,716
2023	59,920	141,655	201,575
2024 - 2028	346,777	663,074	1,009,851
2029 - 2033	432,014	569,914	1,001,928
2034 - 2038	546,499	455,716	1,002,215
2039 - 2043	619,144	320,479	939,623
2044 - 2048	557,600	172,358	729,958
2049 - 2053	175,215	95,855	271,070
2054 - 2058	—	84,245	84,245
2059 - 2063	—	84,245	84,245
2064 - 2068	—	84,245	84,245
2069 - 2073	—	84,245	84,245
2074 - 2078	—	84,245	84,245
2079 - 2083	—	84,245	84,245
2084 - 2088	—	84,245	84,245
2089 - 2093	—	84,245	84,245
2094 - 2098	—	84,245	84,245
2099 - 2103	—	84,245	84,245
2104 - 2108	88,326	75,874	164,200
2109 - 2113	177,932	38,093	216,025
2114 - 2118	83,742	2,063	85,805
	<u>\$ 3,273,034</u>	<u>\$ 3,968,505</u>	<u>\$ 7,241,539</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(11) Long-Term Debt (Continued)

(e) Outstanding Debt Defeased

The Authority defeased certain revenue bonds in current and prior years by placing cash or the proceeds of new revenue bonds in irrevocable trusts to provide for all future debt service payments on the defeased bonds. Accordingly, the Trust account assets and the liability for the defeased bonds are not reflected in the Authority's financial statements. At September 30, 2018 and 2017, the following outstanding revenue bonds are considered defeased.

Bond issue	Principal Outstanding	
	2018	2017
2009 Series A Public Utility Revenue Bonds: interest at 3.0% to 6.0%, maturing in 2039	\$273,645	\$273,645
2008 Series A Public Utility Revenue Bonds: interest at 4.0% to 5.0%, maturing in 2034	235,115	235,115
2007 Series A Public Utility Revenue Bonds: interest at 4.75% to 5.50%, maturing in 2041	-	170,430
Total Principal Outstanding	<u>\$508,760</u>	<u>\$679,190</u>

(12) Commitments and Contingencies – Other Liabilities

A schedule of other liabilities as of September 30, 2018 and 2017 is shown below:

Description	2018	2017
Risk management contingency	\$ 12,966	\$ 11,670
Rolling owner controlled insurance program	6,667	7,141
Litigation contingency	230	669
Contractual obligations	1,334	825
Retirement health savings plan	3,884	2,760
Total other liabilities	<u>25,081</u>	<u>23,065</u>
Less: current portion	14,558	13,621
Noncurrent portion	<u>\$ 10,523</u>	<u>\$ 9,444</u>

The current portion of other liabilities represents management's estimate of the amounts that will be paid in next fiscal year.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(12) Commitments and Contingencies – Other Liabilities (Continued)

(a) *Risk Management*

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Effective April 7, 1998, the Authority purchased certain commercial insurance coverage. Prior to that date, the Authority was either self-insured or covered under District self-insurance programs.

For each of the three most recent years, settlement of claims has not exceeded insurance coverage. Additionally, there has not been a significant reduction in insurance coverage from coverage in the prior year.

The Authority has purchased \$1,000,000 property coverage (Property Policy) to protect its owned or leased facilities, buildings and contents. Except for catastrophic on-site protection provided on the Property Policy, the Authority self-insures its fleet of vehicles. The deductible for each claim for buildings and contents is \$1,000 per occurrence. A lower deductible of \$10 per occurrence applies to scheduled watercraft and mobile equipment.

The Authority has purchased liability insurance coverage to protect it from claims alleging damages and injuries caused by automobile accidents, damaged utilities, construction, and other activities. Limits of \$100,000 have been secured in excess of a self-insured retention of \$1,000 for each occurrence. Public Officials' liability insurance has been secured with limits of \$20,000 in excess of a deductible of \$250 per claim.

The Authority self-insures the first \$1,000 per occurrence of workers' compensation claims costs. In order to mitigate the potential self-insured costs of medical expenses, rehabilitation and lost wages, the Authority purchased an Excess Workers' Compensation Policy with unlimited coverage. The Authority contracts with a third-party administrator to support the workers' compensation claims management program.

Liabilities are recognized when it is probable that losses have occurred and the amounts of the losses can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported to date and include a provision for allocated and unallocated claim adjustment expenses.

Because actual claims liabilities depend on such complex factors as inflation, changes in governing laws and standards, and court awards, the process used in computing claims liabilities is reevaluated periodically to take into consideration the history, frequency and severity of recent claims and other economic and social factors.

These liabilities are computed using a combination of actual claims experience and statistically estimated amounts. The Authority has not discounted these estimated liabilities to present value.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(12) Commitments and Contingencies – Other Liabilities (Continued)

Changes in the Authority's estimated risk management liabilities related to workers' compensation and general liability claims during the years ended September 30, 2018, 2017 and 2016 were as follows:

Description	2018	2017	2016
Balance, beginning of year	\$ 11,670	\$ 11,818	\$ 11,615
Current year claims and changes in estimates	3,449	2,169	2,935
Claim payments	(2,153)	(2,317)	(2,732)
Balance, end of year	<u>\$ 12,966</u>	<u>\$ 11,670</u>	<u>\$ 11,818</u>

(b) *Rolling Owner Controlled Insurance Program*

The Authority procures insurance for the majority of its construction contractors through the Authority's Rolling Owner Controlled Insurance Program (ROCIP). Construction contractors who do not participate in the ROCIP are required to procure insurance on their own. Coverage for participating construction contractors includes general liability, umbrella and workers' compensation insurance. Both general liability and workers' compensation have a \$500 per occurrence deductible. There is also \$100,000-\$200,000 excess general liability coverage in place. The workers' compensation loss coverage is statutory, and unlimited above the retention. For each of the three most recent years, settlement of claims has not exceeded insurance coverage. Additionally, there has not been a significant reduction in insurance coverage from coverage in the prior year.

Liabilities for the self-insured exposure for workers' compensation claims and general liability claims under the ROCIP are recognized when it is probable that losses have occurred and the amounts of the losses can be reasonably estimated.

Liabilities include an amount for claims that have been incurred but not reported to date and include a provision for allocated and unallocated claim adjustment expenses. Because actual claims liabilities depend on such complex factors as inflation, changes in governing laws and standards, and court awards, the process used in computing claims liabilities is reevaluated periodically to take into consideration the history, frequency and severity of recent claims and other economic and social factors.

These liabilities are computed using a combination of actual claims experience and statistically estimated amounts. The Authority has not discounted these estimated liabilities to present value.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(12) Commitments and Contingencies – Other Liabilities (Continued)

Changes in the Authority's estimated ROCIP liabilities related to workers' compensation and general liability claims during the years ended September 30, 2018, 2017 and 2016 were as follows:

Description	2018	2017	2016
Balance, beginning of year	\$ 7,141	\$ 6,518	\$ 5,702
Current year increase (decrease) in ROCIP liability	8,031	11,245	12,239
ROCI administration and claim payments	(8,505)	(10,622)	(11,423)
Balance, end of year	<u>\$ 6,667</u>	<u>\$ 7,141</u>	<u>\$ 6,518</u>

(c) *Litigation*

The Authority is a party in various administrative proceedings, legal actions and claims brought by or against it in the normal course of operations by employees, contractors, and other parties. The following table reflects the changes in the Authority's estimated liabilities for litigation contingencies where the risk of loss is probable during the years ended September 30, 2018 and 2017:

Description	2018	2017
Balance, beginning of year	\$ 669	\$ 2,998
Current year claims and changes in estimates	(184)	1,264
Claim payments	(255)	(3,593)
Balance, end of year	<u>\$ 230</u>	<u>\$ 669</u>

Although the ultimate outcome of these legal proceedings are unknown, in the opinion of the Authority's management and legal counsel, the ultimate resolution of these actions and claims will not materially affect the financial position, results of operations, or cash flows of the Authority.

(d) *Federal Grants*

The Authority's federal capital grants are subject to financial and compliance audits by the federal grantors or their representatives. The Authority's management does not expect that the results of these audits will have a material adverse effect on the accompanying financial statements.

(e) *Construction and Other Significant Commitments*

The Authority's contractual commitments are primarily associated with the long-term capital improvement program. Outstanding contractual commitments related to the capital improvement program as of September 30, 2018 and 2017 were \$879,305 and \$1,134,208, respectively. Outstanding construction commitments are not recorded in the financial statements until goods and services have been received by the Authority in accordance with the terms of the related contracts.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(12) Commitments and Contingencies – Other Liabilities (Continued)

(f) Lease Commitments

The Authority conducts a portion of its operations from leased facilities. Most of the leases contain renewal options. All the leases for equipment and facilities are operating leases, and the rental payments under these leases are charged to operations as incurred.

The Authority's rental expense for the years ended September 30, 2018 and 2017 were as follows:

Description	2018	2017
Facilities leases	\$ 2,121	\$ 2,100
Automobile equipment leases	24	116
Machinery leases	345	588
Other Rentals	-	4
Total	<u>\$ 2,490</u>	<u>\$ 2,808</u>

Future minimum non-cancelable lease payments on existing operating leases at September 30, 2018, which have an initial term of one year or more, are as follows.

Fiscal Year	Amount
2019	\$ 578
2020	212
2021	219
2022	223
2023	228
2024-2028	349
Total	<u>\$1,809</u>

(13) Related Party and Similar Transactions

(a) Water and Wastewater User Charges

The enabling legislation, described in Note 1, established that the District would pay for water and wastewater services. The Authority recorded revenues of \$31,980 and \$30,428 from the District government and \$10,730 and \$10,055 from the District of Columbia Housing Authority ("DCHA") for fiscal years 2018 and 2017, respectively. Both the District government and DCHA revenues are included in water and wastewater user charges in the accompanying statements of revenues, expenses and changes in net position.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(13) Related Party and Similar Transactions (Continued)

(b) PILOT and ROW Fees

On October 2, 2014, DC Water entered into a Right-of-Way memorandum of understanding (ROW MOU) establishing an annual payment of \$5,100 to the District in fiscal years 2015 through 2024. DC Water will make the payment in four equal quarterly installments of \$1,275 due on the 15th of November, February, May and August of each year.

On December 15, 2014, DC Water entered into a Payment In Lieu of Taxes memorandum of understanding (PILOT MOU) establishing a fiscal year 2015 PILOT payment of \$15,337 to the District for services provided in fiscal year 2015. In fiscal years 2016 through 2024, DC Water will increase the PILOT payment by 2.0% per annum based upon the amount of the prior fiscal year's annual PILOT payment. In addition, the MOU stipulates that the Authority is entitled to offset this payment for services rendered to the District under our fire protection program.

The Authority recorded an expense of \$16,276 and \$15,957 for payments-in-lieu-of-taxes (PILOT) to the District for services such as road repairs, fire protection, police protection, and other services for each of the years ended September 30, 2018 and 2017.

The Authority also recorded an expense of \$5,100 for the District's right-of-way (ROW) fee, respectively charged to all area utilities for infrastructure occupancy in public streets, for each of the years ended September 30, 2018 and 2017. As of September 30, 2018, there was no outstanding balance due to the District related to these fees.

(c) Due from District Government

The amounts due from the District government as of September 30, 2018 and 2017 were \$39,682 and \$45,241, respectively. Such amounts were comprised of the following at September 30, 2018 and 2017, respectively:

Description	2018	2017
Northeast Boundary Neighborhood Protection Project	\$ 41,006	\$ 46,864
Storm Water Fees (13 d)	(2,198)	(2,446)
Other miscellaneous items	874	823
Total due from District government	39,682	45,241
Less: current portion	4,534	4,235
Noncurrent portion	<u>\$ 35,148</u>	<u>\$ 41,006</u>

On September 11, 2014, the District and the Authority entered into a Memorandum of Understanding (MOU) whereby the District agreed to fund up to \$58,579 of costs incurred by the Authority on the Northeast Boundary Neighborhood Protection Project. Amounts due from the District as of September 30, 2018 and 2017 under this agreement amounted to \$41,006 and \$46,864, respectively.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(13) Related Party and Similar Transactions (Continued)

Amendment No. 1 of the MOU dated September 1, 2015, calls for ten (10) equal installment payments of \$5,858. The parties agreed that each installment payment is due on January 15th of each year until the costs are paid in full.

(d) Storm Water Fee Billings and Collections

The District of Columbia Council created the Storm Water Compliance Amendment Act of 2000 which established the Authority as the Storm Water Administrator and a fund was established. The administration of the fund was transferred to the District Department of the Environment (“DDOE”) in 2007. The Authority continues to bill and collect storm water fees as a separate item and transfers the funds to the DDOE quarterly.

During the years ended September 30, 2018 and 2017, the activity associated with the Authority providing this service to the District was as follows:

Description	2018	2017
Due from (to) the District-beginning of year	\$ (2,446)	\$ (1,123)
Collections on behalf of the District	(12,665)	(13,431)
Remittances to the District	12,917	12,583
Expenses incurred by the Authority	1,244	1,124
Expenses reimbursed by the District	(1,248)	(1,599)
Due from (to) the District-end of year	<u>\$ (2,198)</u>	<u>\$ (2,446)</u>

Billings and collections associated with the District’s Storm Water fees are not reflected in the Authority’s financial statements as these are not billings and collections of the Authority. However, reimbursable expenses incurred and the related revenues from the District to cover such expenses are reflected in the accompanying statements of revenues, expenses and changes in net position.

The due (to) from the District has been reported in Due from District Government on the statement of net position as of September 30, 2018 and 2017, respectively.

(e) Fleet and Sewer Service Relocation Funding Agreement

On January 4, 2018, the District and the Authority entered into a Relocation Funding Agreement whereby the District has agreed to fund up to \$29,681 of costs associated with the Authority’s relocation of its Fleet Maintenance and Sewer Service operations, which is scheduled to be completed in phases starting in February 2018 through September 2021. As of September 30, 2018, the District has disbursed \$4,331 to DC Water pursuant to this agreement and the Authority has incurred \$315 of eligible costs that are included in capital contributions on the statement of changes in revenues, expenses and net position for the year ended September 30, 2018. The balance of \$4,016 is reflected in unearned revenue on the statement of net position as of September 30, 2018.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(14) Employee Benefits

(a) *Federal Benefit Plans*

Certain DC Water employees who were previously employed by the District of Columbia government prior to October 1, 1987, are eligible to continue to participate in certain federal benefit plans administered by the federal government's Office of Personnel Management ("OPM"). The plans provide retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan participants and beneficiaries. In fiscal years 2018 and 2017, there were 94 and 106 DC Water employees covered by these plans, respectively.

The OPM issues a publicly available financial report that includes financial statements and required supplementary information, which may be obtained at www.opm.gov.

Employees and the Authority each contribute 7% of the employees' salaries to OPM. The contribution requirements of the plan members are established by OPM. During fiscal years 2018, 2017 and 2016, the Authority's contributions to the plans were \$582, \$649 and \$791, respectively. These amounts were 100% of the required contributions under the plans for each of the fiscal years presented.

DC Water is only responsible for funding the employer contributions for participating employees while employed by the Authority. DC Water is not responsible for any unfunded liability for this plan. Under current law, this liability will be paid off eventually through the series of 30-year amortizations payments from the general fund of the U.S. Treasury to the Civil Service Retirement and Disability Fund.

(b) *Defined Contribution Plans*

Defined Contribution Plan - Employees who were hired after September 30, 1987, participate in the U.S. Social Security system and a defined contribution plan administered by the Authority. The District of Columbia Water and Sewer Authority Defined Contribution Plan is a qualified trust under Internal Revenue Code Section 401(a).

The Authority established a retirement plan committee that oversees the 401(a) and 457(b) retirement plans. The committee meets on a semiannual basis to make decisions regarding the plan. Pursuant to the 401(a) plan, employees not reaching the 100% vesting period of three years of service will forfeit amounts related to Basic, Matching, and Discretionary Contributions and may be used to pay for plan expenses or reduce future Authority contributions. There are no amounts of forfeitures reflected in the pension expense reported in fiscal years 2018, 2017, and 2016.

As Plan Administrator, the Authority maintains the plans' records, determines issues related to eligibility as they relate to participation and benefits, interprets the plans, communicates with participants and their beneficiaries and responsible for the plans' operations. Fidelity Investments is the Plan Trustee.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(14) Employee Benefits (Continued)

Defined Contribution Plan - During fiscal years 2018, 2017 and 2016, the Authority's contribution was 7% of base pay up to the social security wage base, plus 5% of base pay in excess of the social security wage base for each eligible employee. Employees do not contribute to the plan.

457(b) Plan - Starting in January 2000, employees who were hired after September 30, 1987, participate in the U.S. Social Security system and a 457(b) Deferred Compensation plan administered by the Authority. The District of Columbia Water and Sewer Defined Contribution Plan is a qualified trust under Internal Revenue Code Section 401.

The Authority makes a matching contribution of 100% of the amount that the employee defers to the 457(b) Deferred Compensation Plan; up to a maximum contribution of 5% of base pay for eligible employees. There is no waiting period before an employee can elect to become a participant of this plan and employees are always 100% vested in their contributions.

The Authority's matching contribution is vested after three years of service. During fiscal years 2018, 2017 and 2016, the Authority's contributions to both defined contribution plans were \$10,042, \$9,286 and \$8,357 respectively. The amount of the Authority's outstanding liability at the end of fiscal years 2018, 2017 and 2016 were \$857, \$746, and \$638, respectively.

(c) *Post-Employment Insurance Plans*

The Authority does not provide post employment health and life insurance benefits to any employees hired after September 30, 1987. The federal government provides healthcare and life insurance benefits to certain retired employees who were previously employed by the District of Columbia government prior to October 1, 1987 under the Federal Employees' Health Benefits Program and the Federal Employee's Group Life Insurance Program at no cost to the Authority.

(d) *Retirement Health Savings Plan*

In fiscal year 2007, the Authority implemented a Retirement Health Savings Plan for non-union employees hired after September 30, 1987. The Plan allows eligible employees to receive a benefit for their unused sick leave upon separation of service. Funds are transferred to a third party (Maritain) to pay for post-employment medical expenses at the termination of employment.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(15) Blended Component Unit Condensed Financial Statements

The following are the condensed financial statements of Blue Drop, LLC as of and for the year ended September 30, 2018 and 2017. As required, all intra-entity activities between Blue Drop and the Authority have been eliminated in the consolidation of Blue Drop, LLC's financial statements with those of the Authority. Such intra-entity activities were comprised of: \$852 and \$894 of support provided by DC Water to Blue Drop for fiscal years 2017 and 2018 as noted in the following table.

Description	2018	2017
Donated employee time	\$ 321	\$434
Donated office space	102	84
Other Support including Cash Transfers	386	345
Marketing fees	43	31
Total	<u>\$ 852</u>	<u>\$894</u>

During fiscal years ended September 30, 2018 and 2017 intra-entity receivables and payables were \$48 and \$22 and \$11 and \$15, respectively.

Condensed Statement of Net Position - Blended Component Unit - Blue Drop, LLC as of September 30, 2018 and 2017

	2018	2017
Current assets	\$ 678	\$ 330
Due from DC Water	48	22
Total assets	<u>726</u>	<u>352</u>
Current liabilities	31	12
Due to DC Water	11	15
Total liabilities	<u>42</u>	<u>27</u>
Unrestricted net position	<u>\$ 684</u>	<u>\$ 325</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(15) Blended Component Unit Condensed Financial Statements (Continued)

Condensed Statement of Revenues, Expenses, and Changes in Net Position - Blended Component Unit - Blue Drop, LLC for the year ended September 30, 2018 and 2017

	2018	2017
DC Water support	\$ 809	\$ 863
Sales of Bloom, Net of cost of sales	67	(59)
Consulting revenue	278	128
Marketing fees, DC Water	43	31
Other	18	-
Total revenues	<u>1,215</u>	<u>963</u>
Personnel services	555	495
Contractual services	153	42
Supplies	41	16
Utilities and rent	107	85
Total operating expenses	<u>856</u>	<u>638</u>
Change in net position	359	325
Net position, beginning of year	325	-
Net position, end of year	<u>\$ 684</u>	<u>\$ 325</u>

Condensed Statement of Cash Flows - Blended Component Unit - Blue Drop, LLC for the year ended September 30, 2018 and 2017

	2018	2017
Net cash provided by operating activities	\$ 343	\$ 302
Net cash provided by (used in) Investing activities	(259)	-
Increase in cash	84	302
Cash, Beginning of Year	302	-
Cash, End of Year	<u>\$ 386</u>	<u>\$ 302</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2018 and 2017

(In thousands)

(16) Subsequent Events

The Authority has evaluated events subsequent to September 30, 2018 through December 20, 2018, the date the financial statements were available to be issued. During this period, the Authority has determined there have not been any events that have occurred that would require adjustments to the financial statements.



**Statistical
Section
(Unaudited)**

Statistical Section (Unaudited)

This section contains statistical tables that reflect financial trends information, revenue capacity information, debt capacity information, demographic and economic information, and operating information. These tables differ from the basic financial statements because they usually cover more than two fiscal years and may present non-accounting data.

The statistical section is divided into five sections as follows:

1. Financial Trends
 2. Revenue Capacity
 3. Debt Capacity
 4. Demographic and Economic Information
 5. Operating Information
-

1. Financial Trends

These schedules contain trend information to better understand how the Authority's financial performance and well-being have changed over time.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 1 CHANGE IN NET POSITION LAST TEN FISCAL YEARS (\$000)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Operating revenues										
Residential, commercial and multi-family customers	\$ 425,492	\$ 401,246	\$ 382,552	\$ 335,711	\$ 295,209	\$ 275,337	\$ 256,846	\$ 241,475	\$ 209,796	\$ 191,543
Federal government	73,551	67,672	63,417	54,274	39,001	45,187	48,381	43,033	37,845	35,195
District government and DC Housing Authority	42,710	40,483	38,185	32,948	28,852	21,677	24,713	25,123	21,947	16,804
Charges for wholesale wastewater treatment	121,961	101,619	91,873	112,522	96,845	87,178	94,549	90,414	87,505	85,519
Other	20,788	32,149	19,762	14,460	13,917	9,700	16,077	8,210	6,655	3,337
Total Operating Revenues	684,502	643,169	595,789	549,915	473,824	439,079	440,566	408,255	363,748	332,398
Operating expenses										
Personnel services	142,342	132,124	124,239	115,233	108,467	103,908	97,784	93,240	88,210	82,248
Contractual services	74,627	72,611	74,086	66,241	68,172	68,417	64,939	71,055	69,497	64,513
Chemicals, supplies and small equipment	31,152	33,381	29,524	32,935	31,748	28,987	28,815	28,188	29,003	29,074
Utilities and rent	26,163	24,262	23,934	30,848	29,939	26,098	26,786	29,429	29,929	32,813
Depreciation and amortization	115,453	97,900	89,512	83,857	77,833	77,330	74,342	70,209	64,425	59,291
Water purchases	28,357	26,796	26,345	29,109	28,407	27,223	28,389	27,170	27,587	25,371
Payment in lieu of taxes and right of way fee	21,376	21,057	20,744	20,437	11,458	21,982	21,982	21,982	20,474	19,183
Total operating expenses	439,470	408,131	388,384	378,660	356,024	353,945	343,037	341,273	329,125	312,493
Operating income	245,032	235,038	207,405	171,255	117,800	85,134	97,529	66,982	34,623	19,905
Non-operating revenue (expenses)										
Interest income	5,866	3,740	2,629	1,316	977	1,144	749	2,036	1,343	1,704
Interest expense and other nonoperating expenses	(93,956)	(68,293)	(69,118)	(61,409)	(69,288)	(63,905)	(74,001)	(73,335)	(57,479)	(53,197)
Total non-operating (expenses)	(88,090)	(64,553)	(66,489)	(60,093)	(68,311)	(62,761)	(73,252)	(71,299)	(56,136)	(51,493)
Change in net position before capital contributions	156,942	170,485	140,916	111,162	49,489	22,373	24,277	(4,317)	(21,513)	(31,588)
Capital contributions	30,419	24,066	32,431	67,965	94,690	58,310	58,957	47,374	30,403	27,752
Change in net position	187,361	194,551	173,347	179,127	144,179	80,683	83,234	43,057	8,890	(3,836)
Net position, beginning of year	1,897,840	1,703,289	1,529,942	1,350,815	1,206,636	1,125,953	1,042,719	999,662	990,772	994,608
Net position, end of year	\$ 2,085,201	\$ 1,897,840	\$ 1,703,289	\$ 1,529,942	\$ 1,350,815	\$ 1,206,636	\$ 1,125,953	\$ 1,042,719	\$ 999,662	\$ 990,772

Source: FY 2009 - 2018 Statements of Revenues, Expenses and Changes in Net Position.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

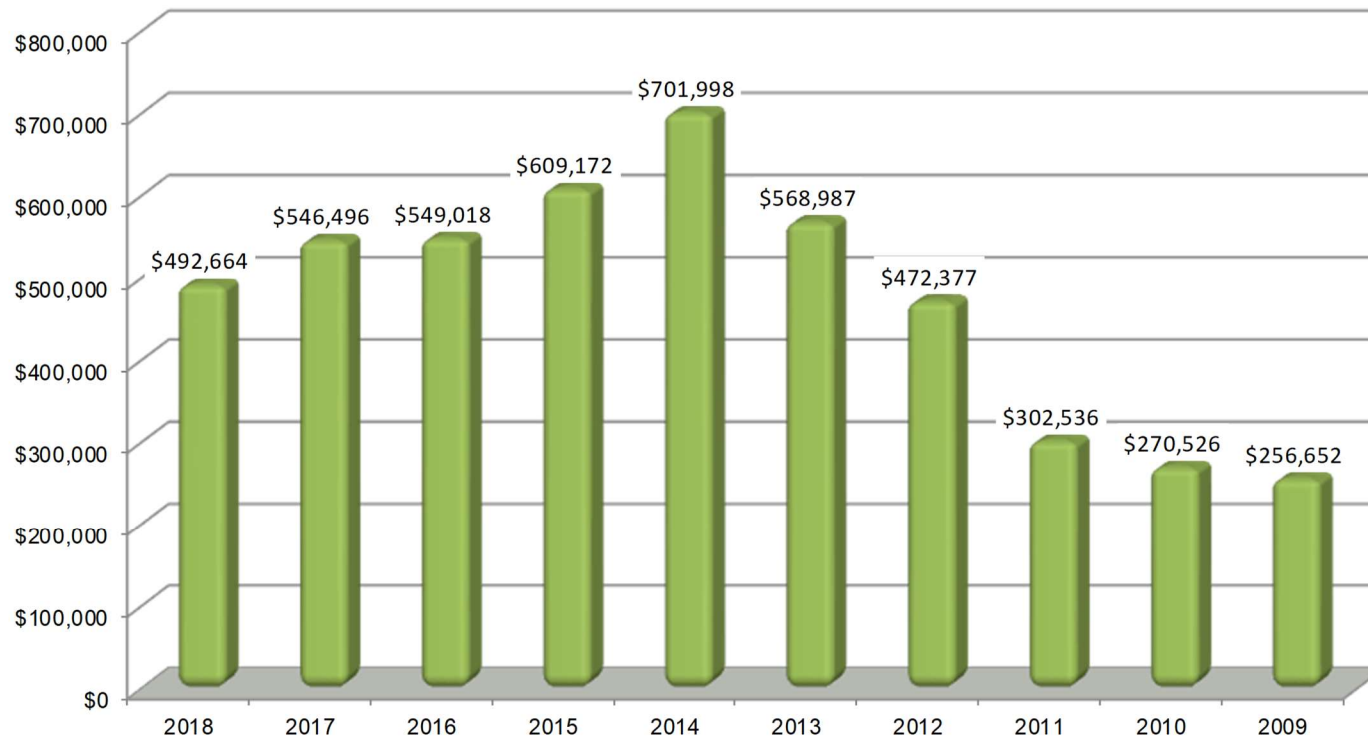
**EXHIBIT 2
SUMMARY OF NET POSITION
LAST TEN FISCAL YEARS
(\$000)**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Net investments in capital assets	\$ 1,808,622	\$ 1,655,867	\$ 1,491,925	\$ 1,348,056	\$ 1,130,952	\$ 1,042,620	\$ 956,397	\$ 874,356	\$ 818,001	\$ 765,709
Restricted	38,907	33,276	33,135	27,054	28,863	29,010	27,297	26,825	17,257	10,244
Unrestricted	237,672	208,697	178,229	154,832	191,000	135,006	142,259	141,538	164,404	214,819
Total net position	<u>\$ 2,085,201</u>	<u>\$ 1,897,840</u>	<u>\$ 1,703,289</u>	<u>\$ 1,529,942</u>	<u>\$ 1,350,815</u>	<u>\$ 1,206,636</u>	<u>\$ 1,125,953</u>	<u>\$ 1,042,719</u>	<u>\$ 999,662</u>	<u>\$ 990,772</u>

Source: FY 2009 - 2018 Statements of Net Position

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 3 CAPITAL DISBURSEMENTS LAST TEN FISCAL YEARS (\$000)



Note: These disbursements include DC Water's share of Washington Aqueduct's capital disbursements.

Source: FY 2009 – 2018 Statements of Cash Flows.

2. Revenue Capacity

These schedules contain information regarding the Authority's most significant revenue sources.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 4
OPERATING REVENUES AND RATE INCREASES
LAST TEN FISCAL YEARS
(\$000)**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Operating Revenues										
Retail Customers										
Residential, Commercial and Multifamily	\$ 425,492	\$401,246	\$382,552	\$335,711	\$295,209	\$275,337	\$256,846	\$241,475	\$209,796	\$191,543
Federal Government	73,551	67,672	63,417	54,274	39,001	45,187	48,381	43,033	37,845	35,195
DC Government	31,980	30,429	28,890	24,453	21,205	14,714	18,213	17,827	15,628	10,116
DC Housing Authority	10,730	10,054	9,295	8,495	7,647	6,963	6,500	7,296	6,319	6,688
Other Revenues	20,788	32,149	19,762	14,460	13,917	9,700	16,077	8,210	6,655	3,337
Total Retail Customers	562,541	541,550	503,916	437,393	376,979	351,901	346,017	317,841	276,243	246,879
Wholesale Customers	121,961	101,619	91,873	112,522	96,845	87,178	94,549	90,414	87,505	85,519
Total Operating Revenues	\$ 684,502	\$643,169	\$595,789	\$549,915	\$473,824	\$439,079	\$440,566	\$408,255	\$363,748	\$332,398
Retail Rate Increases	5.00%	5.00%	6.50%	7.50%	5.50%	5.50%	4.50%	12.50%	9.00%	7.50%

Source: FY 2009 - 2018 Statements of Revenues, Expenses and Changes in Net Position

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 5
NUMBER AND TYPE OF CUSTOMER ACCOUNTS
LAST TEN FISCAL YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Retail Accounts										
Residential	105,430	105,762	106,120	105,735	104,965	104,477	103,887	103,857	103,315	103,665
Commercial ^(A)	17,363	18,807	18,828	18,947	19,433	19,343	19,242	19,165	19,049	19,060
Governmental										
Federal	459	560	558	550	542	542	538	549	546	540
District of Columbia	517	650	641	638	641	630	605	607	603	606
DC Housing Authority	1,130	1,457	1,462	1,446	1,452	1,460	1,435	1,431	1,431	1,220
Total Retail Accounts	124,899	127,236	127,609	127,316	127,033	126,452	125,707	125,609	124,944	125,091
DC Water	30	39	39	39	37	36	36	35	35	30
Washington Aqueduct	2	2	2	2	2	2	2	2	1	2
Wholesale	7	7	7	7	7	7	7	7	7	7
Total Number of Accounts	124,938	127,284	127,657	127,364	127,079	126,497	125,752	125,653	124,987	125,130

^(A) Included in commercial are multi-family and exempt accounts

Source: D.C. Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 6
TEN LARGEST COMMERCIAL CUSTOMERS
LAST TEN FISCAL YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Howard University	\$ 3,879,664	\$ 3,957,007	\$ 3,823,023	\$ 3,237,999	\$ 2,662,949	\$ 2,699,376	\$ 2,596,564	\$ 1,862,880	\$ 1,735,598	\$ 1,640,815
George Washington University	2,522,689	2,477,970	2,338,974	2,763,055	2,609,611	2,161,183	2,530,632	2,122,176	1,618,618	1,777,659
Georgetown University	2,118,763	1,438,247	1,324,563	1,413,714	2,605,884	1,865,068	1,842,860	2,238,766	2,100,705	2,135,768
William C Smith & Co	2,078,614	2,226,722	2,455,990	2,076,534	2,277,833	1,782,719	1,787,150	1,709,334	1,505,145	-
Washington Hospital Center	2,003,551	1,624,588	1,991,344	1,830,586	1,671,855	1,693,655	933,027	1,270,788	1,113,672	823,743
Metropolitan Washington Airports Authority	1,280,248	1,068,877	1,008,250	923,394	807,803	716,929	661,509	-	-	-
Amtrak	1,046,179	983,224	1,019,570	1,028,989	984,336	1,004,177	937,430	903,475	761,235	963,925
American University	1,004,977	750,235	1,001,742	1,078,412	1,125,050	1,253,038	869,211	-	694,565	1,524,262
Medstar-Georgetown Medical Center	850,673	807,540	-	-	-	-	-	-	-	-
Children's Hospital	831,854	-	-	-	-	-	-	-	-	-
Georgetown University Hospital	-	808,884	920,681	720,247	955,353	1,053,659	1,643,380	1,371,035	-	-
Horning Brothers	-	-	1,335,613	-	1,347,287	1,258,995	1,163,586	1,122,879	993,115	-
Shoreham Hotel	-	-	-	1,035,982	-	-	-	-	-	656,182
The Barac Company	-	-	-	-	-	-	-	927,022	776,134	-
Soldiers Home	-	-	-	-	-	-	-	897,121	804,533	818,641
Marriott Wardman Park Hotel	-	-	-	-	-	-	-	-	-	1,037,663
JW Marriott Hotel	-	-	-	-	-	-	-	-	-	556,985
Washington Hilton Hotel	-	-	-	-	-	-	-	-	-	-
Total	\$ 17,617,212	\$ 16,143,294	\$ 17,219,750	\$ 16,108,912	\$ 17,047,961	\$ 15,488,799	\$ 14,965,349	\$ 14,425,476	\$ 12,103,320	\$ 11,935,643
% of Total Operating Revenues	2.57%	2.51%	2.89%	2.93%	3.60%	3.53%	3.40%	3.53%	3.33%	3.59%

Source: DC Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 7
TEN LARGEST GOVERNMENT CUSTOMERS
LAST TEN FISCAL YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
U.S. General Services Administration	\$ 8,096,034	\$ 7,092,342	\$ 11,670,623	\$ 6,425,889	\$ 7,598,077	\$ 7,184,034	\$ 7,443,691	\$ 6,877,787	\$ 6,575,977	\$ 6,773,195
D.C. Housing Authority	5,176,951	7,492,820	6,999,037	6,922,176	6,308,902	5,879,383	5,669,475	6,277,722	5,750,927	6,266,786
U.S. Congress	5,061,870	4,597,331	3,223,507	6,524,863	4,019,627	4,926,790	5,225,952	4,214,640	3,559,903	4,028,564
Smithsonian Institution	4,683,524	3,635,763	2,768,661	3,219,324	2,810,786	3,038,455	2,681,705	3,997,326	2,564,033	3,605,478
Bolling Air Force Base	4,187,710	3,115,393	2,602,439	2,509,536	1,928,617	2,265,348	2,925,847	-	-	2,279,861
National Park Service	3,298,927	4,621,035	3,656,234	2,233,857	1,363,657	2,577,096	2,481,144	2,217,698	2,384,771	2,844,549
Federal Naval Research Lab	2,209,408	1,853,214	1,975,742	1,802,150	1,542,370	1,833,491	1,788,497	-	-	-
Department Defense VA	2,082,125	-	-	4,020,624	3,275,936	3,275,936	3,527,613	2,873,310	2,759,264	2,136,653
Department of the Navy	1,732,073	1,662,225	1,708,908	-	-	1,521,264	1,886,750	3,832,568	2,851,611	3,504,547
D.C. Board of Education	1,569,405	2,497,561	2,228,498	2,166,846	2,391,393	2,092,748	2,213,636	2,142,907	2,534,044	2,292,454
D.C. Recreation and Parks	-	1,604,350	1,695,630	1,702,488	1,216,398	-	-	-	-	-
D.C. Department of Human Services	-	-	-	-	-	-	-	3,272,747	2,047,213	-
Department of Defense DC	-	-	-	-	-	-	-	2,151,529	1,608,642	2,248,076
Total	\$ 38,098,027	\$ 38,172,034	\$ 38,529,279	\$ 37,527,753	\$ 32,455,763	\$ 34,594,545	\$ 35,844,310	\$ 37,858,234	\$ 32,636,385	\$ 35,980,163
% of Total Operating Revenues	5.57%	5.93%	6.47%	6.82%	6.85%	7.88%	8.14%	9.27%	8.97%	10.82%

Source: DC Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 8
RETAIL WATER AND SEWER RATES
LAST TEN FISCAL YEARS**

<u>FISCAL YEAR</u>	<u>(a) METERING FEE</u>	<u>(b) WATER SYSTEM REPLACEMENT FEE</u>	<u>(c) DISTRICT PUBLIC SPACE OCCUPANCY FEE AND PILOT</u>	<u>(d) WATER CONSUMPTION RATE</u>	<u>(e) SEWER CONSUMPTION RATE</u>	<u>(f) COMBINED CONSUMPTION RATE</u>	<u>(g) IMPERVIOUS SURFACE AREA CHARGE ²</u>	<u>AVERAGE MONTHLY BILL ¹</u>
2009	2.010	-	0.52	2.30	3.31	5.61	1.240	41.26
2010	2.010	-	0.57	2.51	3.61	6.12	2.200	45.69
2011	3.860	-	0.63	3.10	3.79	6.89	3.45	53.93
2012	3.860	-	0.64	3.24	3.96	7.20	6.64	59.11
2013	3.860	-	0.66	3.42	4.18	7.60	9.57	64.64
2014	3.860	-	0.70	3.61	4.41	8.02	11.85	69.77
2015	3.860	-	0.63	3.88	4.74	8.62	16.75	77.96
2016	3.860	6.30	0.64	3.36	5.44	8.80	20.30	88.99
2017	3.860	6.30	0.65	3.52	5.71	9.23	22.24	93.66
2018	3.860	6.30	0.67	3.70 ³	6.00	9.70	25.18	99.63

¹ Average residential customer consumption is 6.2 Ccf per month. The average monthly bill is calculated as follows (a)+(b)+(g)+(((c)+(f)) x 6.2 Ccf)

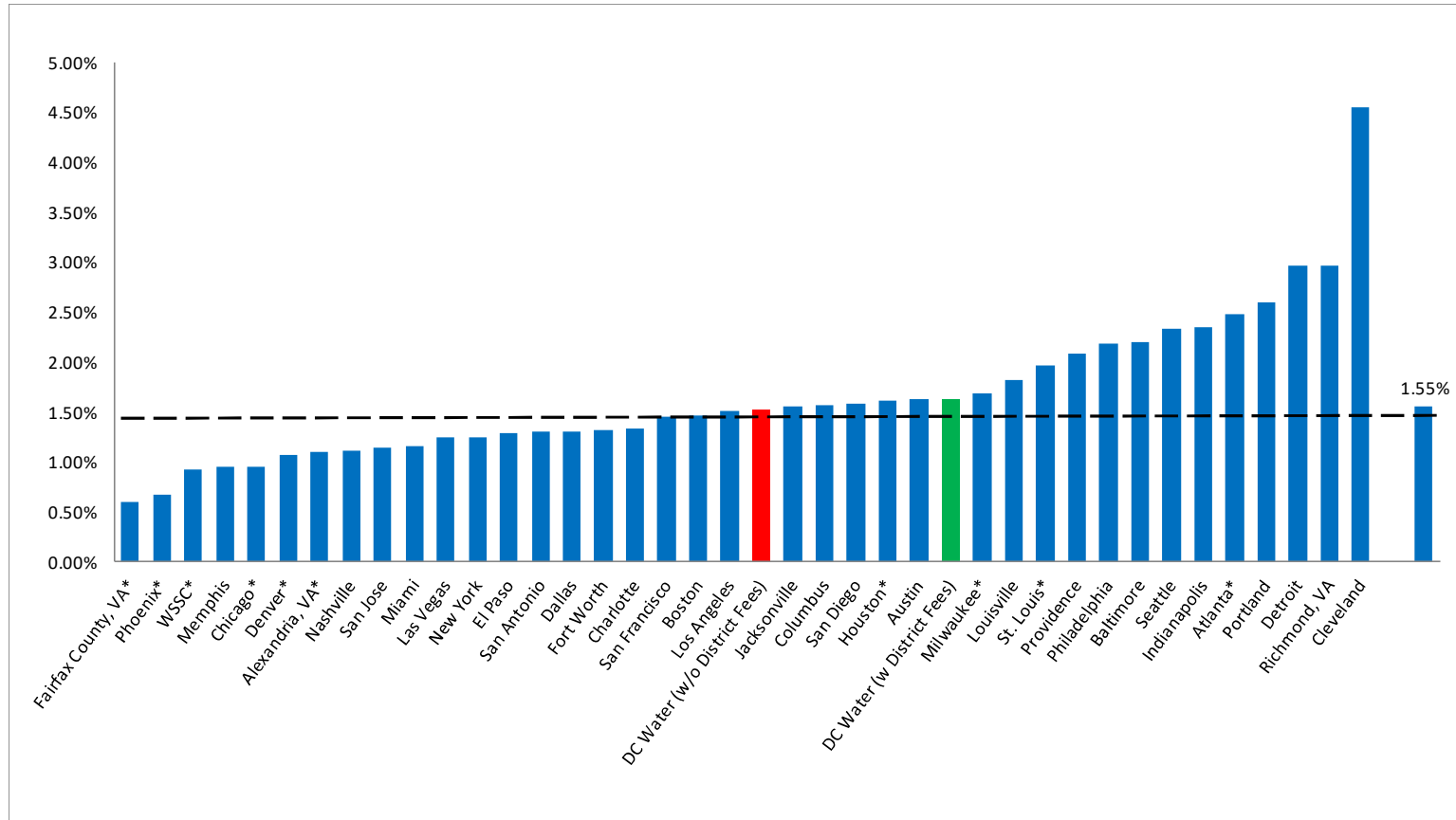
² Per Equivalent Residential Unit (ERU).

³ Weighted average water rate for residential customers.

Source: D.C. Water Department of Finance & Budget

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 9 RESIDENTIAL WATER AND WASTEWATER BILL COMPARISONS AS A PERCENTAGE OF MEDIAN HOUSEHOLD INCOME (1)

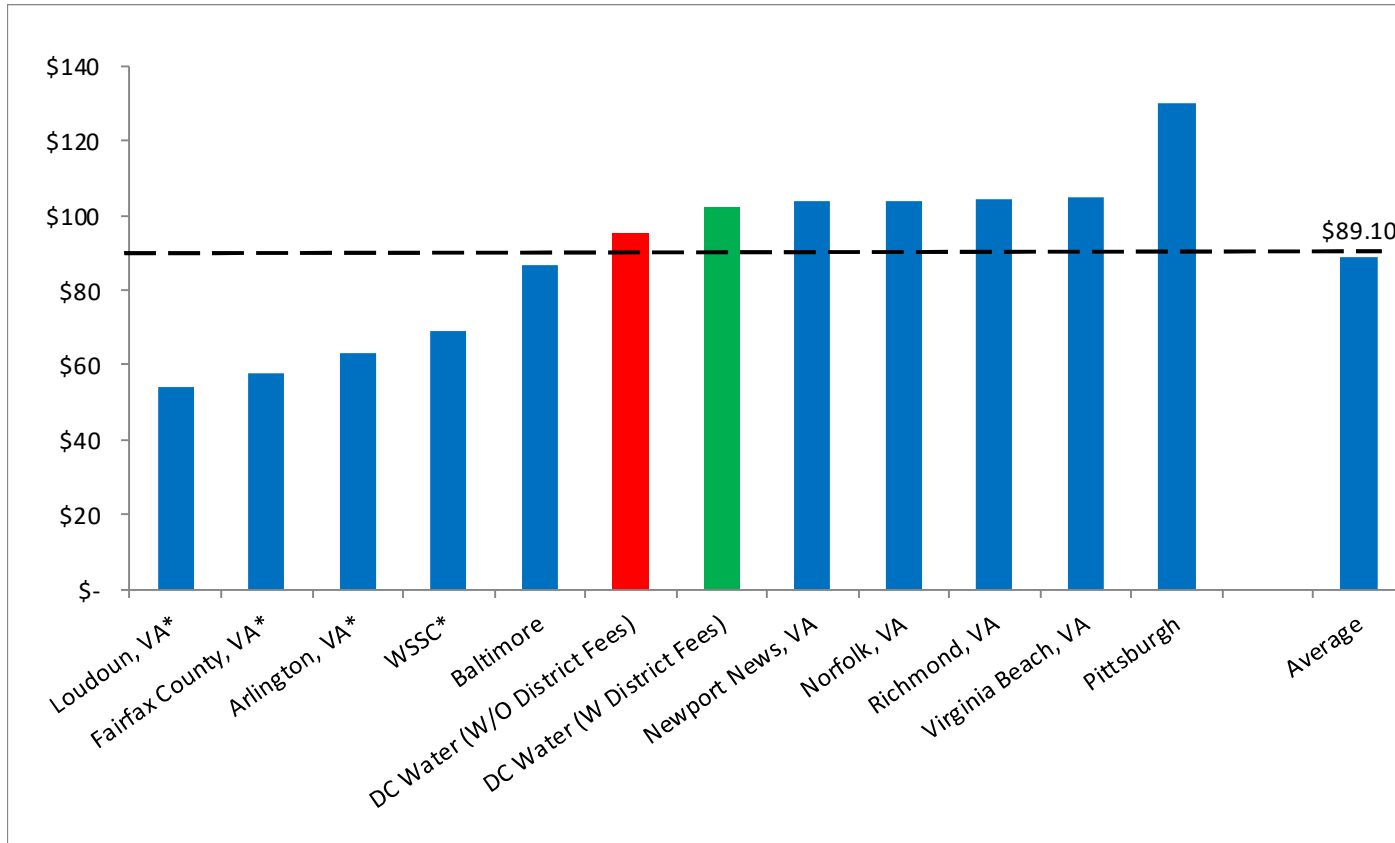


(1) This analysis is based on a single family residential monthly bill as a percentage of median household income for large national utilities based on rates in effect spring 2018.

Source: DC Water Department of Finance & Budget

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 10 RESIDENTIAL WATER AND WASTEWATER BILL COMPARISONS TO LOCAL AND REGIONAL UTILITIES (1)



(1) This analysis represents single family residential average monthly bill based on rates in effect spring 2018.

Source: DC Water Department of Finance & Budget

3. Debt Capacity

These schedules present information showing the Authority's current levels of outstanding debt and the Authority's ability to issue additional debt in the future.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 11 OUTSTANDING DEBT AND DEBT RATIOS LAST TEN FISCAL YEARS (\$000, EXCEPT PER CAPITA)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Senior Debt:										
2018 Series A Public Utility Revenue Bonds	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018 Series B Public Utility Revenue Bonds	200,000	-	-	-	-	-	-	-	-	-
2017 Series A Public Utility Revenue Bonds	100,000	100,000	-	-	-	-	-	-	-	-
2017 Series B Public Utility Revenue Bonds	200,000	200,000	-	-	-	-	-	-	-	-
2014 Public Utility Revenue Bonds	350,000	350,000	350,000	350,000	350,000	-	-	-	-	-
2009 Series A Public Utility Revenue Bonds	4,225	8,040	11,535	159,520	291,145	293,720	296,205	298,225	300,000	300,000
1998 Public Utility Revenue Bonds	141,855	156,605	170,525	183,660	196,050	207,735	218,815	229,315	239,270	248,705
Total Senior Debt	1,096,080	814,645	532,060	693,180	837,195	501,455	515,020	527,540	539,270	548,705
Subordinate Debt:										
2016 Series A Public Utility Revenue Bonds	389,110	389,110	389,110	-	-	-	-	-	-	-
2016 Series B Public Utility Revenue Bonds	25,000	25,000	25,000	-	-	-	-	-	-	-
2015 Series A Public Utility Revenue Bonds	100,000	100,000	100,000	-	-	-	-	-	-	-
2015 Series B Public Utility Revenue Bonds	250,000	250,000	250,000	-	-	-	-	-	-	-
2014 Series B-1 Public Utility Revenue Bonds	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
2014 Series B-2 Public Utility Revenue Bonds	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
2014 Series C Public Utility Revenue Bonds	377,110	377,110	377,110	377,700	-	-	-	-	-	-
2013 Series A Public Utility Revenue Bonds	300,000	300,000	300,000	300,000	300,000	300,000	-	-	-	-
2012 Series A Public Utility Revenue Bonds	153,600	158,740	163,655	168,405	172,990	177,430	177,430	-	-	-
2012 Series B-1 Public Utility Revenue Bonds	-	-	-	-	52,690	52,690	52,690	-	-	-
2012 Series B-2 Public Utility Revenue Bonds	-	-	-	47,310	47,310	47,310	47,310	-	-	-
2012 Series C Public Utility Revenue Bonds	163,215	163,215	163,215	163,215	163,215	163,215	163,215	-	-	-
2010 Series A Public Utility Revenue Bonds	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	-	-
2008 Series A Public Utility Revenue Bonds	6,865	13,600	20,200	168,190	268,095	274,210	279,955	285,540	290,000	290,375
2007 Series A Public Utility Revenue Bonds	-	-	-	115,580	218,715	218,715	218,715	218,715	218,715	218,715
2003 Public Utility Revenue Bonds	-	-	-	-	-	-	-	176,220	176,220	176,220
Notes Payable to the Federal										
Government for Bloomington Dam	12,054	12,454	12,841	13,217	13,580	13,932	14,273	14,603	14,922	15,232
DC General Obligation Bonds	-	-	-	-	-	-	-	245	1,490	5,180
Notes Payable to WSSC for Little Seneca	-	-	-	-	-	-	63	104	142	179
Total Subordinate Debt	2,176,954	2,189,229	2,201,131	1,753,617	1,636,595	1,547,502	1,253,651	995,427	701,489	705,901
Total Senior and Subordinate debt	3,273,034	3,003,874	2,733,191	2,446,797	2,473,790	2,048,957	1,768,671	1,522,967	1,240,759	1,254,606
Unamortized bond premiums	259,578	222,786	198,677	104,060	76,098	79,313	79,674	28,255	29,929	31,102
Unamortized bond discounts	(1,964)	(2,093)	(2,222)	(2,351)	(2,480)	(2,608)	(2,784)	(2,879)	(2,968)	(3,053)
Total Debt	\$ 3,530,648	\$ 3,224,567	\$ 2,929,646	\$ 2,548,506	\$ 2,547,408	\$ 2,125,662	\$ 1,845,561	\$ 1,548,343	\$ 1,267,720	\$ 1,282,655
Debt - per capita										
	N/A	\$ 4,647	\$ 4,301	\$ 3,791	\$ 3,866	\$ 3,288	\$ 2,919	\$ 2,505	\$ 2,096	\$ 2,166
Debt - percentage of personal income										
	N/A	5.81%	5.65%	5.17%	5.54%	4.37%	3.90%	3.40%	2.94%	3.18%

N/A: population and personal income not available

See exhibits 13 and 14 for per capita personal income and population data.

Total debt doesn't include outstanding debt associated with DC Water's short-term debt (commercial paper) program.

Source: D.C. Water Department of Finance & Budget

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 12
CALCULATION OF DEBT SERVICE COVERAGE
FY 2018 (\$000)**

Prepared in accordance with the Authority's Master Trust Indenture, which corresponds closely to the cash basis of accounting.

Calculation of Debt Service Coverage:

Cash Receipts (Revenues)

Retail	\$ 498,394
Wholesale	81,022
Other Non-Operating	51,756
Transfer from (Contributions to) Rate Stabilization Fund	-
Total Cash Receipts (A)	<u>631,172</u>
Cash Disbursements (Operating Expenses) (B)	<u>298,761</u>
Cash Receipts Less Cash Disbursements (C=A-B)	<u>\$ 332,411</u>

Debt Service:

Senior Debt Service (D)	\$ 67,296
Subordinate Debt Service (E)	111,104
Total Outstanding and Projected Debt Service (F=D+E)	<u>\$ 178,400</u>

Calculation of Net Cash Receipts Available for Senior Debt Service:

Cash Receipts Less Cash Disbursements (C)	\$ 332,411
Prior Year Federal Billing Reconciliation	(9,019)
(Refund to)/Payment from Wholesale Customers	8,987
Net Cash Receipts Available for Senior Debt Service (G)	<u>\$ 332,379</u>

Senior Debt Service Coverage (G/D) **4.94**

Calculation of Subordinate Debt Service Coverage:

Net Cash Receipts Available for Senior Debt Service (G)	\$ 332,379
Less Senior Debt Service (D)	(67,296)
Net Cash Receipts Available for Subordinate Debt Service (G-D)	<u>\$ 265,083</u>

Subordinate Debt Service Coverage ((G-D)/E) **2.39**

Combined Debt Service Coverage (G/F) **1.86**

Source: D.C. Water Department of Finance & Budget

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4. Demographic and Economic Information

These schedules offer demographic and economic data to help explain the environment within which the Authority's financial activities take place.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 13
POPULATION OF SERVICE AREA JURISDICTIONS
LAST TEN CALENDAR YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
District of Columbia	N/A	693,972	681,170	672,228	658,893	646,449	632,323	617,996	604,912	592,228
Montgomery County, MD	N/A	1,058,810	1,043,863	1,040,116	1,030,447	1,016,677	1,004,709	989,794	975,439	959,013
Prince George's County, MD	N/A	912,756	908,049	909,535	904,430	890,081	881,138	871,233	865,219	856,161
Fairfax County, VA	N/A	1,187,113	1,176,830	1,180,139	1,175,622	1,168,405	1,155,292	1,135,992	1,121,054	1,099,347
Loudoun County, VA	N/A	398,080	385,945	375,629	363,050	349,679	336,898	325,405	315,305	303,661

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 14
PERSONAL INCOME OF SERVICE AREA JURISDICTIONS
LAST TEN CALENDAR YEARS
(\$000)**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
District of Columbia	N/A	\$55,510,450	\$51,842,801	\$49,275,917	\$46,015,860	\$48,696,519	\$47,280,666	\$45,597,835	\$43,082,099	\$40,326,374
Montgomery County, MD	N/A	91,202,046	84,518,332	79,946,266	75,720,017	73,958,785	73,551,167	69,050,166	65,904,393	62,962,957
Prince George's County, MD	N/A	43,232,981	41,922,938	40,806,805	40,215,913	38,595,921	38,481,250	35,036,640	33,888,631	33,156,357
Fairfax County, VA	N/A	93,041,631	89,412,959	88,419,380	88,180,013	83,835,355	82,727,342	78,392,046	75,161,493	71,954,372
Loudoun County, VA	N/A	29,789,834	27,486,217	26,254,562	24,463,869	20,886,046	20,107,077	18,626,729	16,971,112	15,340,608

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 15
PER CAPITA PERSONAL INCOME OF SERVICE AREA JURISDICTIONS
LAST TEN CALENDAR YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
District of Columbia	N/A	\$ 79,989	\$ 76,108	\$ 73,302	\$ 69,838	\$ 75,329	\$ 74,773	\$ 73,783	\$ 71,220	\$ 69,093
Montgomery County, MD	N/A	86,136	80,967	76,863	73,483	72,746	73,206	69,762	67,564	65,654
Prince George's County, MD	N/A	47,365	46,168	44,866	44,465	43,362	43,672	40,215	39,168	38,727
Fairfax County, VA	N/A	78,376	75,978	74,923	75,007	71,752	71,607	69,008	67,045	65,452
Loudoun County, VA	N/A	74,834	71,218	69,895	67,384	59,729	59,683	57,242	53,824	50,519

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 16
UNEMPLOYMENT RATES
LAST TEN CALENDAR YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
District of Columbia	6.0%	6.2%	6.5%	6.9%	7.0%	7.3%	8.2%	10.2%	10.1%	9.7%
Montgomery County, MD	3.2%	3.4%	3.2%	4.0%	4.1%	4.5%	4.7%	5.2%	5.8%	5.6%
Prince George's County, MD	4.1%	4.3%	4.1%	5.1%	5.5%	6.2%	6.5%	7.0%	7.7%	7.3%
Fairfax County, VA	2.3%	3.4%	3.3%	3.3%	3.6%	3.7%	3.6%	4.3%	4.9%	4.9%
Loudoun County, VA	2.3%	3.4%	3.3%	3.3%	3.6%	3.9%	3.7%	4.2%	4.8%	4.8%

Source: U.S. Department of Labor, Bureau of Labor Statistics

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 17
EMPLOYMENT BY SECTOR**

	DISTRICT OF COLUMBIA	MONTGOMERY COUNTY	PRINCE GEORGE'S COUNTY	FAIRFAX COUNTY	LOUDOUN COUNTY
Agriculture, Forestry, Mining, etc.	0.08%	0.33%	0.09%	0.22%	0.68%
Construction	N/A	5.68%	9.05%	4.66%	8.58%
Manufacturing	N/A	2.06%	1.94%	0.90%	3.39%
Transportation & Public Utilities	1.87%	2.89%	6.10%	N/A	6.52%
Wholesale & Retail Trade	3.64%	8.88%	12.75%	8.07%	11.28%
Finance, Insurance & Real Estate	6.48%	11.82%	6.59%	10.31%	8.68%
Services	59.43%	54.49%	42.63%	62.20%	49.83%
Government (Federal, State & Local)	26.90%	12.79%	19.27%	12.45%	10.48%
Military	1.57%	1.08%	1.59%	1.19%	0.55%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%

Source: U.S. Department of Commerce, Bureau of Economic Analysis
Latest available data is for 2016

N/A: Not Available

5. Operating Information

These schedules contain information about the Authority's operations and resources to help the reader understand how the Authority's financial information relates to the activities it perform.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 18
WATER DELIVERED (PUMPED) AND BILLED (SOLD)
LAST TEN FISCAL YEARS**

FISCAL YEAR	TREATED		SOLD/PUMPED RATIO
	WATER DELIVERED (MG)	WATER BILLED (MG)	
2009	39,998	29,344	73.36%
2010	38,589	29,004	75.16%
2011	37,556	29,040	77.32%
2012	36,930	27,988	75.79%
2013	34,714	26,316	75.81%
2014	34,708	25,374	73.11%
2015	38,146	26,748	70.12%
2016	36,363	26,325	72.40%
2017	35,827	25,845	72.14%
2018	34,343	25,526	74.33%

Source: DC Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 19
WATER DEMAND
LAST TEN FISCAL YEARS**

<u>FISCAL YEAR</u>	<u>ANNUAL DELIVERIES TO SYSTEM (MG)</u>	<u>AVERAGE DAY (MG)</u>	<u>MAXIMUM MONTH AVERAGE (MGD)</u>	<u>MAXIMUM DAY (MGD)</u>	<u>TOTAL ANNUAL WATER SOLD (MG)</u>	<u>AVERAGE DAY (MGD)</u>
2009	39,998	109.6	123.2	150.4	29,344	80.4
2010	38,589	105.7	130.5	146.9	29,004	79.5
2011	37,556	102.9	121.6	143.7	29,040	79.6
2012	36,930	100.9	125.3	142.9	27,988	76.7
2013	34,714	95.1	111.3	129.7	26,316	71.9
2014	34,708	95.1	106.6	123.7	25,374	72.1
2015	38,146	104.5	117.7	148.4	26,748	73.3
2016	36,363	99.4	113.8	127.7	26,325	72.1
2017	35,827	98.2	107.4	122.7	25,845	70.8
2018	34,343	94.1	110.9	132.5	25,526	69.9

Source: DC Water Department of Water Services and Washington Aqueduct

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 20
MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
LAST TEN FISCAL YEARS**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Utilities and supplies per day at Blue Plains										
Electric power (kwh) - Total Used	678,000	632,220	615,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000
Electric power (kwh) - Generated On Site	158,000	138,347	-	-	-	-	-	-	-	-
Sodium hypochlorite (gallons)	14,580	12,880	10,051	10,051	6,850	6,850	6,850	6,850	6,850	6,850
Sodium bisulfite (pounds)	12,130	9,085	7,880	7,880	5,600	5,600	5,600	5,600	5,600	5,600
Water (gallons)	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000
Lime (tons, pounds), dry	-	-	-	39,000	72,050	72,050	72,050	72,050	72,050	72,050
Lime (gallons), slurry	1,150	3,095	-	-	-	-	-	-	-	-
Sodium hydroxide (pounds)	9,350	2,854	14,766	14,766	26,100	26,100	26,100	26,100	26,100	26,100
Methanol (gallons)	19,100	20,705	19,428	19,428	10,000	10,000	10,000	10,000	10,000	10,000
Ferric chloride (10% Iron) (gallons)	15,770	16,054	19,060	19,060	12,900	12,900	12,900	12,900	12,900	12,900
Wastewater treatment capacity										
Average day (mgd)	384	384	370	370	370	370	370	370	370	370
Peak 4 hour flow, through complete process (mgd)	550	511	511	511	740	740	740	740	740	740
Excess storm flow, primary treatment only (mgd)	-	336	336	336	336	336	336	336	336	336
Peak flow (mgd)	-	847	847	847	1,076	1,076	1,076	1,076	1,076	1,076
Captured Combined Flow, through Wet Weather Treatment	225	-	-	-	-	-	-	-	-	-
DC Water employees	1,165	1,134	1,121	1,164	1,079	1,080	1,051	1,032	1,004	1,000

Source: D.C. Water Department of Wastewater Treatment Operations

(CONTINUED ON NEXT PAGE)

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 20
MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
(CONTINUED)**

Wastewater Plant Permit Limitations
August 26, 2018 through August 25, 2023

Parameter	Monthly	Weekly
Biochemical Oxygen Demand (carbonaceous)	5.0 mg/L (15,429 lbs./day)	7.5 mg/l (23,143 lbs./day)
Total Suspended Solids (TSS)	6.1 mg/l (19,603 lbs./day)	9.15 mg/l (29,404 lbs./day)
Ammonia Nitrogen		
Summer (5/1 – 10/31)	4.1 mg/l (13,130 lbs./day)	6.1 mg/l (19,536 lbs./day)
Winter 1 (1/1 – 2/14)	12.8 mg/l (40,993 lbs./day)	19.3 mg/l (61,809 lbs./day)
Winter 2 (2/15 – 4/30)	10.3 mg/l (32,986 lbs./day)	15.4 mg/l (49,319 lbs./day)
Total Phosphorus (annual average)	0.17 mg/l (530 lbs./day)	0.34 mg/l (1,080 lbs./day)
Dissolved Oxygen		
Minimum daily average	5.0 mg/l	
Not less than	4.0 mg/l	
pH		
Minimum	6.0 units	
Maximum	8.5 units	
Total Chlorine	Non detectable	
E.coli	123 cu/100ml Geometric (30 day)	
Chesapeake Bay Voluntary Agreement	N/A	
Total Nitrogen (Annual Average)		
U.S. Environmental Protection Agency	4,370,078 lbs./yr	
Total Nitrogen (Annual Average)		

Wastewater Plant Processes

Primary Treatment

Influent Pumping Capacity	1,300 MGD
Number of bar screens	13
Number of aerated grit chambers	16
Total volume of aerated grit chambers	2.3 MG
Number of primary clarifiers	36
Average detention time (clarifiers)	2.5 hours
Average hydraulic loading (clarifiers)	1,008 gallons/square foot/day
Maximum hydraulic loading (clarifiers)	2,929 gallons/square foot/day

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 20
MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
(CONTINUED)**

Secondary Treatment

Number of reactors	6
Total reactor volume	27.7 MG
Number of clarifiers	24
Average reactor detention time	1.6 hours
Average clarifier hydraulic loading	763 gal/sq ft./day
Number of centrifugal blowers	6
Total blower capacity	280,000 cu ft. /min
Average MLSS	2,200 mg/L
Average SRT	1.6 days
Average SVI	80-100 ml/g
Effluent dissolved oxygen	2-3 mg/L
Effluent alkalinity	140 mg/L as CaCO ₃

Nitrification / Denitrification

Number of Nitrification reactors	12
Total reactor volume	55.2 MG
Number of Denitrification reactors	8
Total reactor volume	36.7 MG
Number of clarifiers	28
Average reactor detention time	3.3 hours
Average clarifier hydraulic loading	755 gallons/square ft./day
Average MLSS	2000 mg/L
Average pH	7.0 units
Average SRT	21 days
Average SVI	80-110 ml/g
Effluent alkalinity	110 mg/L as CaCO ₃

Effluent dissolved oxygen	3.8 – 7.2 mg/L
(Post – Aeration)	
Dual Purpose sedimentation tanks	
	4 Secondary Treatments
	4 Nitrification Treatments
Total Dual Purpose Surface Area	197,160 sq. ft.

Filtration & Disinfection

Number of filters	40
Total filter area	83,200 sq. ft.
Average filtration rate	3.4 gal/ minute/ sq. ft.
Average filter run time	55 hours
Depth of anthracite media	24 inches
Depth of sand media	12 inches
Depth of Gravel Support Layer	12 inches
Number of chlorine contact tanks	4
Average contact time	42 minutes

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 21
SCHEDULE OF INSURANCE
AS OF SEPTEMBER 30, 2018**

TYPE OF COVERAGE	COMPANY	POLICY PERIOD	COVERAGE LIMITS
Blanket Property and Boiler & Machinery	Alliant Public Entity Property Insurance Program (PEPIP)	July 1, 2018– July 1, 2019	<p>\$1,000,000,000 Blanket Buildings and Contents – (Specified Locations) and Mobile Equipment</p> <p>\$100,000,000 Boiler and Machinery</p> <p>\$25,000,000 Miscellaneous Locations</p> <p>\$100,000,000 Earth Movement</p> <p>\$100,000,000 Excess Flood (over NFIP), except \$25,000,000 Locations within 100 Year Flood Zone (e.g. Blue Plains)</p> <p>Terrorism: \$700,000,000 per occurrence, \$1,600,000,000 annual aggregate (Alpha,Hiscox-\$250,000,000 of occurrence and aggregate limit dedicated solely to DC Water)</p> <p>\$25,000,000 Transit Per Shipment</p> <p>Deductibles: \$1,000,000 Any Loss, except \$10,000 Equipment</p>
Fidelity & Crime Insurance	AIG	July 1, 2018– July 1, 2019	<p>\$10,000,000 - Employee Dishonesty, Forgery, Funds Transfer, Fraud, Money & Securities</p> <p>Deductible: \$200,000 Per Occurrence</p>
Commercial General Liability	Self-Funded		\$1,000,000 each occurrence
Commercial Automobile	Self-Funded		<p>\$1,000,000 any one accident</p> <p>100% Physical Damage - self-funded</p>
Worker's Compensation	Self-Funded		<p>\$1,000,000 each accident</p> <p>Statutory WC Benefits</p> <p>Employer's Liability - \$1,000,000 Each Accident; \$1,000,000 Disease/ Employee</p>
Excess Worker's Compensation Insurance	Safety National	July 1, 2018– July 1, 2019	<p>Unlimited - WC Benefits; \$3,000,000 - Employer's Liability (Included - Terrorism)</p> <p>Retentions: \$1,000,000/accident; \$1,000,000 Disease/ Employee.</p>
Excess General Liability, Automobile Liability, and Employers Liability Insurance	AEGIS	July 1, 2018– July 1, 2019	\$35,000,000 in excess of \$1,000,000
Excess Liability	EIM	July 1, 2018– July 1, 2019	\$65,000,000 in excess of \$35,000,000
Public Official Liability	RSUI Indemnity / Chubb Insurance Company	July 1, 2018– July 1, 2019	<p>\$20,000,000 Each Loss / Aggregate</p> <p>Retentions: \$250,000 per wrongful act</p>
Fiduciary Liability	Travelers Insurance	July 1, 2018– July 1, 2019	<p>\$5,000,000 Each Loss / Aggregate</p> <p>Deductible: \$0 per claim</p>
Cyber	XL	July 1, 2018– July 1, 2019	<p>5,000,000 Each Loss/Aggregate</p> <p>Deductible: \$50,000</p>
Professional Liability	Lloyds of London	July 1, 2018– July 1, 2019	<p>\$2,000,000 Each Loss</p> <p>Deductible: \$10,000</p>
National Flood	NFIP	July 1, 2018– July 1, 2019	<p>\$500,000 building/contents</p> <p>Deductible: \$50,000 per building/contents</p>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 22 SUMMARY OF MAJOR PERMITS AND ADMINISTRATIVE ORDERS AS OF SEPTEMBER 30, 2018

Wastewater	Description	Expiration Date	Current Status
<p>National Pollutant Discharge Elimination System</p> <p>Permit # DC0021199</p>	<p>Permit issued to DC Water. Authorizes discharge of treated wastewater from Blue Plains Advanced Wastewater Treatment Plant (Plant) into the Potomac River and from the combined sewer system into Rock Creek, the Anacostia River, and the Potomac River. Prescribes operating conditions for the Plant and sewer system.</p>	August 25, 2023	In Compliance
<p>National Pollutant Discharge Elimination System</p> <p>Permit # DC0000221</p>	<p>Permit issued to Government of District of Columbia. Authorizes discharge from municipal separate storm sewer system (MS4) and prescribes certain actions that DC Water has agreed to perform including:</p> <p>Responding to sanitary sewer overflows (SSO)</p> <p>Reporting SSOs that overflow to MS4 system to public health agencies</p> <p>Cleaning catch basins and removing trash from waterbodies</p> <p>Maintaining storm sewer system infrastructure</p> <p>Collection of stormwater fees for the District of Columbia</p>	June 22, 2023	In Compliance
<p>1995 Consent Decree</p> <p>Civil Action No.: 90-1643-JGP and 84-2842-JGP</p>	<p>Requires certain actions including:</p> <p>Review procurement practices & maintenance procedures</p> <p>Undertake Operational Capability Review</p> <p>Conduct a pilot project for biological nitrogen reduction</p>	N/A	In Compliance All items completed; awaiting action to terminate decree
<p>1996 Stipulated Agreement & Order</p> <p>Civil Action No.: 96-669-TFH</p>	<p>Requires certain actions including:</p> <p>Rehabilitate and maintain certain facilities and capital equipment in good operating condition</p> <p>Maintain certain records and data for status reports and prepare monthly reports on status of compliance</p> <p>Maintain user fees in separate accounts and make timely payment of invoices</p>	N/A	In Compliance All items completed; awaiting action to terminate agreement and order
<p>2003 Consent Decree</p> <p>Civil Action No.: 1:00CV00183TFH</p> <p>Civil Action No.: 02-2511 (TFH)</p>	<p>Requires certain actions including:</p> <p>Replacement/repair of control structures</p> <p>Cleaning/inspection of catch basins</p> <p>Rehabilitation of pumping stations</p> <p>Rehabilitation of Blue Plains grit chambers and influent screens</p> <p>Inspection of certain sewers and siphons</p> <p>Public education/outreach activities</p> <p>Payment of civil penalty of \$250,000</p> <p>Conduct/support of supplemental environmental projects</p>	N/A	In Compliance
<p>2005 Modified Consent Decree for CSS LTCP</p> <p>Consolidate Civil Action No; 1:00CV00183TFH</p>	<p>Requires implementing projects for various components of the combined sewer system (CSS) long term control plan (LTCP). On January 14, 2016, the Court entered the First Amendment to the Consent Decree to incorporate DC Water's Total Nitrogen Wet Weather Plan and modify the requirement for the Potomac and Rock Creek watersheds to include Green/Gray Infrastructure in Potomac watershed, and Gray Infrastructure in the Rock Creek watershed. The Consent Decree does not have an expiration date.</p>	N/A	In Compliance
<p>DC Department of Energy and the Environment</p>	<p>Permit to construct the enhanced nitrogen removal facility</p>	2/20/2015(1)	In Compliance
<p>DC Department of Energy and The Environment</p>	<p>Permit to construct biosolids project – main process train/combined heat & power/final dewatering facility</p>	3/15/2015(1)	In Compliance

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 23
BUDGETARY COMPARISON SCHEDULE
FOR FISCAL YEAR 2018**

	Approved Budget	Actual Expenditures	Variance
Expenditures			
Personnel services	\$ 149,193	\$ 157,635	\$ (8,442)
Contractual services	79,354	74,914	4,440
Water purchases	30,156	28,357	1,799
Chemicals and supplies	30,658	30,482	176
Utilities and rent	29,399	26,158	3,241
Small equipment	1,071	700	371
Interest and fiscal charges (debt service)	185,480	169,014	16,466
Payment in lieu of tax & right of way fee	21,376	21,376	-
Cash financed capital improvements	35,260	-	35,260
Total budgetary basis expenditures	<u>\$ 561,946</u>	<u>\$ 508,635</u>	<u>\$ 53,311</u>

Reconciliation between total budgetary basis expenditures and total expenses reported in statements of revenues, expenses and changes in net position

Capitalized personnel expenditures	(15,528)
Depreciation and amortization expense	115,453
Long-term debt - principal payments	(30,840)
Long-term debt - capitalized interest	(79,412)
Build America Bonds subsidy	5,333
Inventory issuances	(70)
Blue Drop	(6)
Non-budgeted expenses	<u>29,861</u>
Total expenses reported in statements of revenues, expenses and changes in net position	<u>\$ 533,426</u>

(CONTINUED ON NEXT PAGE)

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 23 BUDGETARY COMPARISON SCHEDULE FOR FISCAL YEAR 2018 (CONTINUED)

BUDGETARY ACCOUNTING AND CONTROL

Budget Law

The Authority prepares its operating and capital budgets under the provisions of its enabling legislation. In accordance with those provisions, the following process is used to adopt the annual budget.

- Development of the 10-year financial plan
- Development of individual departmental operating budgets, based on the financial framework in the 10-year financial plan
- Review and development of the Authority wide proposed budget by the Chief Executive Officer (CEO) and General Manager
- Presentation of proposed budget to the Board of Directors
- Review of proposed budget by the various Board Committees
- Adoption of proposed budget by the Board of Directors
- Submission of proposed budget to the District of Columbia for inclusion in its budget
- District of Columbia budget submission to U.S. Congress
- Approval of proposed budget by U.S. Congress and President

Budgetary Accounting

The Authority is a single enterprise fund and maintains accounting records using the accrual basis of accounting, in accordance with U.S. generally accepted accounting principles (GAAP). Under this basis of accounting, revenues are recognized when earned, and expenses are recognized when goods and services are received. The Authority's expenditure budget is prepared on a comparable basis to GAAP, with the exception of debt service, which is budgeted in full when due, including principal and interest. Depreciation is not budgeted; depreciation is recorded as an expense for financial statement purposes. Certain other items are also not budgeted such as bad debt expense or (recovery) and loss (gain) on disposals of fixed assets or inventory.

Budgetary Requirements

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