DC Water distributes 98 million gallons of clean drinking water per day. . .

. . . through 1350 miles of pipes
FY 2019
District of Columbia Water and Sewer Authority
Comprehensive Annual
Financial Report
Fiscal Years
Ended September 30, 2019 and 2018
Prepared by:
Department of Finance, Accounting, and Budget
Matthew T. Brown, Chief Financial Officer and Executive Vice President, Finance and Procurement
Blue Plains Wastewater Treatment Plant
1937 - 2019
DC Water distributes drinking water and collects and treats wastewater for more than 702,000 residents and 23.8 million annual visitors in the District of Columbia.

498 ACRES OF LAND MANAGED BY GREEN INFRASTRUCTURES
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January 27, 2020

Board of Directors
District of Columbia Water and Sewer Authority
1385 Canal Street, SE
Washington, D.C. 20003

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, 2019. 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, 2019 and 2018. 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 702,000 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 702,455 residents in Washington, D.C. in 2018, an increase of 1.2% 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 234,424 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 23.8 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 5.3% in 2019. 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 $5.0 billion capital improvement program (“CIP”). Approximately 26.0% 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 $5.0 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.

**Northeast Boundary Tunnel**

DC Water’s Clean Rivers (DCCR) Project has initiated construction of the Northeast Boundary Tunnel (NEBT). The NEBT is the largest component of the Clean Rivers Project and starts south of RFK Stadium and extends north to Rhode Island Avenue NE and west to 6th Street NW. The Clean Rivers Project will reduce combined sewer overflow volume annually by 96 percent system-wide and provide flood relief at the Northeast Boundary.

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 clean rivers 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.

DC Water’s roles as public servant and environmental steward are well served by the green bond certification provided by Vigeo’s independent second party opinion of DC Water’s sustainable management of the DCCR project. Vigeo is a leading European sustainability consultant and was commissioned by DC Water to provide an opinion on its practices and performance on internationally accepted environmental, social and governance standards. The Authority welcomes the transparency and accountability provided by Vigeo’s green bond opinion, which can be found at www.dcwater.com.

**Green Infrastructure**

DC Water completed the construction of 79 new green facilities in the Rock Creek sewershed, reaching substantial completion in October 2018. Final completion is anticipated in December of 2019. In the Potomac sewershed, DC Water completed the construction of 44 new green infrastructure facilities, and reached final completion in August of 2019. Measurement processes have been established to monitor green infrastructure effectiveness, the collected data will aid in the enterprise’s decision whether to continue with green infrastructure to achieve CSO reduction for the Rock Creek and Potomac River. Monitoring for both sewersheds will continue into the spring and summer of 2020. Establishment of an innovative certification program to train and hire workers in installation and maintenance of green infrastructure has produced tangible socioeconomic benefits.

**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. DC Water completed Phase 1 of this project in March of 2019 and launched Phase 2 in September of 2019 to finalize the remaining 11,000 meters. As of September 30, 2019, DC Water has installed 84,534 new meters, which increased overall transmissions to 92.4%. 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%.

New Customer Assistance Programs

DC Water joined DC Government to create a $13 million hardship fund to assist customers who have been impacted by their water bills. In a unanimous vote, DC Water’s Board of Directors voted to create two additional levels of Customer Assistance Programs for customers who do not qualify for the Authority’s existing program. These programs now assist customers with household incomes of up to $121,300 and the discounts range from approximately $188 and $550 per year.

Headquarters

Early in 2019, DC Water opened its brand-new headquarters building located along the Anacostia River in the Capital Riverfront neighborhood. This new facility has allowed DC Water to consolidate all administrative offices to one location, terminate costly office leases around the city, and facilitate future growth at our treatment plant. This building will be certified LEED Platinum Class A and uses numerous environmentally sustainable features including sewer heat recovery and the use of rainfall for non-potable water needs. Most importantly, this new location allows DC Water to more-closely interact with our customers and educate them about our mission.

BLOOM

DC Water produces Class A Exceptional Quality biosolids at our Blue Plains Advanced Wastewater Treatment Plant that can be added to the soil and can help plants grow. Some of the biosolids produced at Blue Plains are exported and applied to farms in Maryland and Virginia as a soil amendment. Applying biosolids to the land helps capture carbon and prevents it from being released to the atmosphere, helps to recycle important nutrients like phosphorous and nitrogen back into the soil instead of releasing them into our waterways, and reduces our carbon footprint and saves energy when compared to conventional petroleum based fertilizers.

BLOOM is sold by Blue Drop, LLC, the Authority’s non-ratepayer revenue affiliate. In FY 2019, 40,514 tons of Blue Drop were sold resulting in $147,000 of revenue and over $1 million in net savings. BLOOM has resulted in a total net savings of $1.8 million since production started in 2017.

Credit Rating Upgrades

In August 2019, Fitch Ratings upgraded DC Water’s credit rating to AA+ for senior lien revenue bonds and the Authority maintained a AAA credit rating by S&P and an Aa1 by Moody’s. DC Water also maintained a GB1 rating for green bonds, Moody’s highest possible green bond assessment.

Combined, these 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 2018 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 22 consecutive awards.
Acknowledgements

With deep appreciation, I wish to recognize the outstanding leadership and personal commitment of Controller John Madrid through fiscal year 2019 as well as DC Water’s dedicated team of finance professionals for their collective effort in drafting DC Water’s FY 2019 Comprehensive Annual Financial Report.

Respectfully submitted,

Matthew T. Brown
Chief Financial Officer and Executive Vice President
Finance and Procurement
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 C. Thompson, District of Columbia
Krystal Brumfield, District of Columbia
Adam Ortiz, Montgomery County, MD
Fariba Kassiri, Montgomery County, MD
Floyd Holt, Prince George’s County, MD
Major F. Riddick, Jr., Prince George’s County, MD
Randy Bartlett, Fairfax County, VA

ALTERNATE MEMBERS
Jed Ross, District of Columbia
Howard Gibbs, District of Columbia
Ivan Frishberg, District of Columbia
Rev. Dr. Kendrick Curry, District of Columbia
Anthony Giancola, District of Columbia
Adriana Hochberg, Montgomery County, MD
Steven Shofar, Montgomery County, MD
Lavinia A. Baxter, Prince George’s County, MD
Joseph P. Gill, Prince George’s County, MD
Sarah Motsch, Fairfax County, VA

PRINCIPAL STAFF MEMBERS

OFFICE OF THE CHIEF EXECUTIVE OFFICER AND GENERAL MANAGER
David Gadis, Chief Executive Officer
Gregory Hope, Interim Executive Vice-President, Office of Legal Affairs
Biju George, Executive Vice President, Operations and Engineering

OFFICE OF FINANCE AND PROCUREMENT
Matthew T. Brown, Chief Financial Officer and Executive Vice President, Finance and Procurement
John Madrid, Controller
Ivan Boykin, Finance Director
Lola Oyeyemi, Budget Director
Syed Khalil, Director, Rates and Revenue
Dan Bae, Vice President, Procurement and Compliance

OPERATIONS AND ADMINISTRATION
Maureen Holman, Executive Vice President, Administration
Armon Curd, Executive Vice President, Customer Experience
Wayne Griffith, Executive Vice President, Performance
Leonard Benson, Senior Vice President
Salil Kharkar, Senior Vice President, Operations and Engineering
Aklile Tesfaye, Vice President, Wastewater Operations
Thomas Kuczyński, Vice President, Information Technology
John Lisle, Vice President, Marketing and Communications
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, 2018

-Christopher P. Morrison

Executive Director/CEO
Financial Section
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Independent Auditors’ Report

Board of Directors
District of Columbia Water and Sewer Authority

Report on the Financial Statements

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, 2019 and 2018, 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, 2019 and 2018, 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 opinions 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.

Washington, D.C.
December 19, 2019
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, 2019 and 2018. 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 2019

- Operating revenues increased by $20.6 million to $705.1 million, or 3.0%, primarily due to the retail rate increase of 13.0% offset by the 8.7% decrease in the Clean Rivers Impervious Area Charge (CRIAC) and a 5.9% decrease in wholesale wastewater charges.

- Operating expenses increased by $21.4 million to $460.9 million, or 4.9%, due to increases in depreciation expense, water purchases, chemicals, supplies, and small equipment, and contractual services offset by a decrease in personnel services.

- Capital assets, net of depreciation and amortization, increased by $264.3 million to $7.2 billion, or 3.8%, as a result of capital additions of $402.1 million offset by depreciation and amortization of $127.5 million and capital disposals of $10.3 million. Capital additions incurred in 2019 were in line with the Authority’s approved 10-year capital improvement program.

- Current assets decreased by $30.5 million to $616.7 million, or 4.7%, primarily due to a $50.2 million decrease in restricted cash and investments, a $2.6 million decrease in receivables from other jurisdictions, and a $2.4 million decrease in receivables from the Federal government offset by an $24.7 million increase in unrestricted cash and investments.

- The Authority’s net position increased by $165.3 million to $2.3 billion, or 7.9%, as a result of current year operations and capital contributions.

- Effective October 1, 2018, the Authority raised its retail water and wastewater rates by 13.0% and decreased its CRIAC by 8.7%.
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management’s Discussion and Analysis (unaudited)

September 30, 2019 and 2018

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%.

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.
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, 2019 was approximately $2.3 billion, a $165.3 million, or 7.9%, increase from September 30, 2018. Total assets increased $81.9 million, or 1.0%, to $7.9 billion and total liabilities decreased $86.5 million, or 1.5%, to $5.7 billion.

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.

Summary of Net Position

<table>
<thead>
<tr>
<th></th>
<th>Fiscal Year</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
<th>Amount</th>
<th>%</th>
<th>Amount</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets</td>
<td></td>
<td>$616,690</td>
<td>$647,224</td>
<td>$602,959</td>
<td>(30,534)</td>
<td>(4.7)</td>
<td>44,265</td>
<td>7.3</td>
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<tr>
<td>Restricted assets</td>
<td></td>
<td>22,524</td>
<td>167,390</td>
<td>61,318</td>
<td>(144,866)</td>
<td>(86.5)</td>
<td>106,072</td>
<td>173.0</td>
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<tr>
<td>Capital assets</td>
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<td>7,224,123</td>
<td>6,959,868</td>
<td>6,543,100</td>
<td>264,255</td>
<td>3.8</td>
<td>416,768</td>
<td>6.4</td>
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<tr>
<td>Other noncurrent assets</td>
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<td>36,394</td>
<td>43,301</td>
<td>53,436</td>
<td>(6,907)</td>
<td>(16.0)</td>
<td>(10,135)</td>
<td>(19.0)</td>
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<tr>
<td>Total assets</td>
<td></td>
<td>7,899,731</td>
<td>7,817,783</td>
<td>7,260,813</td>
<td>81,948</td>
<td>1.0</td>
<td>556,970</td>
<td>7.7</td>
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<tr>
<td>Deferred outflows of resources</td>
<td></td>
<td>63,523</td>
<td>66,734</td>
<td>69,946</td>
<td>(3,211)</td>
<td>(4.8)</td>
<td>(3,212)</td>
<td>(4.6)</td>
</tr>
<tr>
<td>Current liabilities</td>
<td></td>
<td>437,493</td>
<td>477,324</td>
<td>461,771</td>
<td>(39,831)</td>
<td>(8.3)</td>
<td>15,553</td>
<td>3.4</td>
</tr>
<tr>
<td>Long-term debt outstanding</td>
<td></td>
<td>3,438,695</td>
<td>3,494,610</td>
<td>3,193,727</td>
<td>(55,915)</td>
<td>(1.6)</td>
<td>300,883</td>
<td>9.4</td>
</tr>
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<td>Long-term liabilities</td>
<td></td>
<td>1,836,611</td>
<td>1,827,382</td>
<td>1,777,421</td>
<td>9,229</td>
<td>0.5</td>
<td>49,961</td>
<td>2.8</td>
</tr>
<tr>
<td>Total liabilities</td>
<td></td>
<td>5,712,799</td>
<td>5,799,316</td>
<td>5,432,919</td>
<td>(86,517)</td>
<td>(1.5)</td>
<td>366,397</td>
<td>6.7</td>
</tr>
<tr>
<td>Net investments in capital assets</td>
<td></td>
<td>1,935,786</td>
<td>1,808,622</td>
<td>1,655,867</td>
<td>127,164</td>
<td>7.0</td>
<td>152,755</td>
<td>9.2</td>
</tr>
<tr>
<td>Restricted</td>
<td></td>
<td>43,762</td>
<td>38,907</td>
<td>33,276</td>
<td>4,855</td>
<td>12.5</td>
<td>5,631</td>
<td>16.9</td>
</tr>
<tr>
<td>Unrestricted</td>
<td></td>
<td>270,907</td>
<td>237,672</td>
<td>208,697</td>
<td>33,235</td>
<td>14.0</td>
<td>28,975</td>
<td>13.9</td>
</tr>
<tr>
<td>Total net position</td>
<td></td>
<td>2,250,455</td>
<td>2,085,201</td>
<td>1,897,840</td>
<td>165,254</td>
<td>7.9</td>
<td>187,361</td>
<td>9.9</td>
</tr>
</tbody>
</table>
The following is a discussion of the more significant changes in assets, liabilities and net position in 2019.

- Capital assets, net of depreciation and amortization, increased by $264.3 million to $7.2 billion, or 3.8%, as a result of capital additions of $402.1 million offset by depreciation and amortization of $127.5 million and capital disposals of $10.3 million. Capital additions incurred in 2019 were in line with the Authority's approved 10-year capital improvement program which is discussed in more detail on page 25.

- Current assets decreased by $30.5 million to $616.7 million, or 4.7%, primarily due to a $50.2 million decrease in restricted cash and investments, a $2.6 million decrease in receivables from other jurisdictions, a $2.4 million decrease in receivables from the Federal government, and a $1.8 million decrease in customer receivables offset by an $24.7 million increase in unrestricted cash and investments.

- Long-term debt, including current maturities, decreased by $48.9 million to $3.5 billion, or 1.4%, primarily due to principal payments of $36.0 million.

- Current liabilities decreased by $39.8 million to $437.5 million, or 8.3%, primarily due to a $45.7 million decrease in accounts payable and accrued expenses, a $5.9 million decrease in due to jurisdictions offset by a $7.0 million increase in current maturities of long-term debt and a $4.0 million increase in unearned revenue.

- The Authority’s net position increased by $165.3 million to $2.3 billion, or 7.9%, 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 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 25.

- 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.
Changes in Net Position

The increase in net position at September 30, 2019 was $165.3 million, or 7.9%, as compared with September 30, 2018. The Authority’s total operating revenues increased by 3.0% to $705.1 million and total operating expenses increased by 4.9% to $460.9 million.

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.

<table>
<thead>
<tr>
<th>Change in Net Position ($ in 000’s)</th>
<th>2019 vs 2018</th>
<th>2018 vs 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenues</td>
<td>2019</td>
<td>2018</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>$ 705,147</td>
<td>$ 684,502</td>
</tr>
<tr>
<td></td>
<td>$ 20,645</td>
<td>3.0</td>
</tr>
<tr>
<td>Net non-operating revenues (expenses)</td>
<td>(95,323)</td>
<td>(88,090)</td>
</tr>
<tr>
<td></td>
<td>(7,233)</td>
<td>8.2</td>
</tr>
<tr>
<td>Change in net position before capital contributions</td>
<td>148,941</td>
<td>156,942</td>
</tr>
<tr>
<td>Capital contributions</td>
<td>16,313</td>
<td>30,419</td>
</tr>
<tr>
<td></td>
<td>(14,106)</td>
<td>(46.4)</td>
</tr>
<tr>
<td>Change in net position</td>
<td>165,254</td>
<td>187,361</td>
</tr>
<tr>
<td></td>
<td>(22,107)</td>
<td>(11.8)</td>
</tr>
<tr>
<td>Net position - beginning of year</td>
<td>2,085,201</td>
<td>1,897,840</td>
</tr>
<tr>
<td></td>
<td>(217,546)</td>
<td>(11.5)</td>
</tr>
<tr>
<td>Net position - end of year</td>
<td>$ 2,250,455</td>
<td>$ 2,085,201</td>
</tr>
<tr>
<td></td>
<td>$ 165,254</td>
<td>7.9</td>
</tr>
</tbody>
</table>

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 2019 and 2018, and between fiscal years 2018 and 2017, respectively.

Fiscal Year 2019:

- Operating revenues increased by $20.6 million to $705.1 million, or 3.0%, primarily due to the retail rate increase of 13.0% offset by the 8.7% decrease in the Clean Rivers Impervious Area Charge (CRIAC) and a 5.9% decrease in wholesale waste water charges.
- Operating expenses increased by $21.4 million to $460.9 million, or 4.9%, due to increases in depreciation expense, water purchases, chemicals, supplies, and small equipment, and contractual services offset by a decrease in personnel services.

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.
2019 Total Revenues

Total revenues increased $10.0 million, or 1.4%, to $730.8 million in fiscal year 2019.

- Revenues from residential, commercial and multi-family customers increased by $18.0 million to $443.5 million, or 4.2%, primarily due to a 13.0% water and wastewater rate increase offset by an 8.7% decrease in the CRIAC and a decrease in consumption.

- Revenues from the Federal government decreased by $0.2 million to $73.4 million, or 0.2%, primarily due to an 8.7% decrease in the CRIAC and a decrease in consumption, offset by a 13.0% water and wastewater rate increase.

- Revenues from the District of Columbia government and the District of Columbia Housing Authority increased by $3.1 million to $45.8 million, or 7.3%, primarily due to a 13.0% rate increase and an increase in consumption offset by an 8.7% decrease in the CRIAC.

- Revenues from wholesale wastewater treatment decreased by $7.2 million to $114.8 million, or 5.9%, primarily due to normalization of Multi-Jurisdictional Use Facilities (MJUF) billings.

- Other revenues increased by $6.9 million to $27.7 million, or 33.2%, primarily due to reinstatement of customer penalties.

- Capital contributions decreased by $14.1 million to $16.3 million, or 46.4%, primarily due to a $16.7 million decrease in federal grants.
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 $705.1 million for the fiscal year ended September 30, 2019.

(a) Other revenues include $11.5 million from Loudoun County and $2.6 million from Potomac Interceptor.

- Revenues from commercial and multi-family customers in the District comprise approximately 45% 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 14% 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 2.0% of the Authority’s revenues and are included in other revenues.

- Residential customers in the District account for 18% of total operating revenues.
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management’s Discussion and Analysis (unaudited)

September 30, 2019 and 2018

- Revenues from the Federal government comprise 10% 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.

2019 Total Expenses

Total expenses increased by $32.1 million, or 6.0%, to $565.5 million in fiscal year 2019.

- Personnel services decreased by $1.3 million to $141.0 million, or 0.9%, primarily due to a decrease in headcount.

- Contractual services increased by $1.2 million to $75.8 million, or 1.6%, due to an increase in fees for various outside consulting services.

- Chemicals, supplies and small equipment increased by $5.4 million to $36.6 million, or 17.4%, due to increased chemical usage for the tunnel dewatering pump station as well as higher unit prices for methanol, sodium hydroxide, and sodium bisulfite.

- Utilities and rent decreased by $0.4 million to $25.8 million, or 1.3%, due to reduced lease payments as a result of full relocation to headquarters office.

- Depreciation and amortization increased by $12.0 million to $127.5 million, or 10.4%, 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, 2019 and 2018**

- Water purchases increased by $4.1 million to $32.4 million, or 14.4%, primarily due to an 11.1% increase in the water rate.

- Interest expense and other nonoperating expenses increased by $10.7 million to $104.6 million, or 11.4%, primarily due to an increase in interest incurred on long-term debt of $34.8 million and a decrease in the amount of capitalized interest related to the Authority’s capital improvement program which decreased from $79.4 million in fiscal year 2018 to $50.6 million in fiscal year 2019 offset by a decrease in loss on disposal of capital assets of $16.2 million.

**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.
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Management’s Discussion and Analysis (unaudited)

September 30, 2019 and 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.

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, 2019 and 2018

- 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.

Capital Assets and Debt Administration

Capital Assets

As of September 30, 2019, 2018 and 2017, respectively, the Authority had $7.2 billion, $7.0 billion, and $6.5 billion (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 $264.3 million, or 3.8%, during fiscal year 2019 and increased by approximately $416.8 million, or 6.4%, during fiscal year 2018, 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.

<table>
<thead>
<tr>
<th>Capital Assets</th>
<th>Net of Accumulated Depreciation ($ in 000's)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As of September 30,</td>
</tr>
<tr>
<td></td>
<td>2019</td>
</tr>
<tr>
<td>Wastewater treatment plant</td>
<td>$3,233,698</td>
</tr>
<tr>
<td>Wastewater collection facilities</td>
<td>937,315</td>
</tr>
<tr>
<td>Water distribution system</td>
<td>1,138,598</td>
</tr>
<tr>
<td>Deep tunnel system</td>
<td>1,027,954</td>
</tr>
<tr>
<td>Purchased capacity</td>
<td>375,164</td>
</tr>
<tr>
<td>Capital equipment</td>
<td>314,667</td>
</tr>
<tr>
<td>Construction in progress</td>
<td>1,966,037</td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>(1,769,310)</td>
</tr>
<tr>
<td>Net capital assets</td>
<td>$7,224,123</td>
</tr>
</tbody>
</table>
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, 2019 and 2018 were $777.8 million and $879.3 million, 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 2019, the Authority had a total of $3.5 billion in long term debt outstanding, a decrease of $48.9 million, or 1.4%, over fiscal year 2018.

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.

A schedule of long-term debt activity including current year maturities for the year ended September 30, 2019 is shown below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2018</th>
<th>Increases</th>
<th>Decreases</th>
<th>Balance 9/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding bonds and notes</td>
<td>$3,273,034</td>
<td>$93</td>
<td>$(36,038)</td>
<td>$3,237,089</td>
</tr>
<tr>
<td>Unamortized bond premiums</td>
<td>259,578</td>
<td>-</td>
<td>$(13,118)</td>
<td>246,460</td>
</tr>
<tr>
<td>Unamortized bond discounts</td>
<td>(1,964)</td>
<td>-</td>
<td>129</td>
<td>(1,835)</td>
</tr>
<tr>
<td>Total bonds and notes</td>
<td>$3,530,648</td>
<td>$93</td>
<td>$(49,027)</td>
<td>$3,481,714</td>
</tr>
</tbody>
</table>

The decreases in outstanding bonds and notes payable were related to scheduled principal repayments.

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

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

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.

Credit Ratings

<table>
<thead>
<tr>
<th></th>
<th>Long Term Credit Ratings</th>
<th>Short Term Credit Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moody's Investors' Service</td>
<td>Aa1</td>
<td>Stable Outlook</td>
</tr>
<tr>
<td>Standard &amp; Poor's Corporation</td>
<td>AAA</td>
<td>Stable Outlook</td>
</tr>
<tr>
<td>Fitch Ratings</td>
<td>AA+</td>
<td>Stable Outlook</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moody's Investors' Service</td>
<td>P-1</td>
<td></td>
</tr>
<tr>
<td>Standard &amp; Poor's Corporation</td>
<td>A-1+</td>
<td></td>
</tr>
<tr>
<td>Fitch Ratings</td>
<td>F1+</td>
<td></td>
</tr>
</tbody>
</table>

Rates

Effective October 1, 2018, the Authority raised its retail water and wastewater rates by 13.0%. The Authority’s approved ten-year financial plan includes projected annual retail water and wastewater rate increases for each of the fiscal years 2020 to 2030. 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 1385 Canal Street, S.E., Washington D.C. 20003 or call 202-787-2000. A copy of this report is also available on DC Water’s web site at www.dcwater.com.
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Statements of Net Position
September 30, 2019 and 2018
(In thousands)

<table>
<thead>
<tr>
<th>Assets and Deferred Outflows of Resources</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents (note 3)</td>
<td>$144,477</td>
<td>$123,908</td>
</tr>
<tr>
<td>Investments (note 3)</td>
<td>112,183</td>
<td>108,048</td>
</tr>
<tr>
<td>Restricted cash and cash equivalents (note 3)</td>
<td>187,185</td>
<td>169,339</td>
</tr>
<tr>
<td>Restricted investments (note 3)</td>
<td>18,860</td>
<td>86,883</td>
</tr>
<tr>
<td>Customer receivables, net of allowance for doubtful accounts of $22,404 in 2019 and $20,327 in 2018 (note 7)</td>
<td>78,497</td>
<td>80,264</td>
</tr>
<tr>
<td>Due from other jurisdictions (note 8)</td>
<td>10,530</td>
<td>13,083</td>
</tr>
<tr>
<td>Due from Federal government (note 6)</td>
<td>38,089</td>
<td>40,513</td>
</tr>
<tr>
<td>Due from District government (note 13)</td>
<td>4,893</td>
<td>4,534</td>
</tr>
<tr>
<td>Inventory</td>
<td>13,940</td>
<td>13,304</td>
</tr>
<tr>
<td>Prepaid assets</td>
<td>8,036</td>
<td>7,348</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>616,690</td>
<td>647,224</td>
</tr>
<tr>
<td><strong>Noncurrent assets:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restricted assets (note 3):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>22,524</td>
<td>19,805</td>
</tr>
<tr>
<td>Investments</td>
<td>147,585</td>
<td>19,805</td>
</tr>
<tr>
<td><strong>Total restricted cash and cash equivalents and investments</strong></td>
<td>22,524</td>
<td>167,390</td>
</tr>
<tr>
<td>Capital assets (note 4):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-service</td>
<td>7,027,396</td>
<td>7,029,057</td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>(1,769,310)</td>
<td>(1,643,270)</td>
</tr>
<tr>
<td><strong>Net capital assets in service</strong></td>
<td>5,258,086</td>
<td>5,385,787</td>
</tr>
<tr>
<td>Construction-in-progress</td>
<td>1,966,037</td>
<td>1,574,081</td>
</tr>
<tr>
<td><strong>Net capital assets</strong></td>
<td>7,224,123</td>
<td>6,959,868</td>
</tr>
<tr>
<td>Other noncurrent assets:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Due from District government (note 13)</td>
<td>29,290</td>
<td>35,148</td>
</tr>
<tr>
<td>Due from other jurisdictions (note 8)</td>
<td>7,104</td>
<td>8,153</td>
</tr>
<tr>
<td><strong>Total other noncurrent assets</strong></td>
<td>36,394</td>
<td>43,301</td>
</tr>
<tr>
<td><strong>Total noncurrent assets</strong></td>
<td>7,283,041</td>
<td>7,170,559</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>7,899,731</td>
<td>7,817,783</td>
</tr>
<tr>
<td><strong>Deferred Outflows of Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred loss on debt refunding</td>
<td>63,523</td>
<td>66,734</td>
</tr>
<tr>
<td><strong>Total assets and deferred outflows of resources</strong></td>
<td>7,963,254</td>
<td>7,884,517</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current liabilities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and accrued expenses</td>
<td>147,500</td>
<td>193,187</td>
</tr>
<tr>
<td>Unearned revenue</td>
<td>55,081</td>
<td>51,101</td>
</tr>
<tr>
<td>Accrued interest</td>
<td>76,457</td>
<td>76,162</td>
</tr>
<tr>
<td>Commercial paper notes payable (note 10)</td>
<td>79,200</td>
<td>79,200</td>
</tr>
<tr>
<td>Current maturities of long-term debt (note 11)</td>
<td>43,019</td>
<td>36,038</td>
</tr>
<tr>
<td>Due to jurisdictions</td>
<td>6,302</td>
<td>12,231</td>
</tr>
<tr>
<td>Compensation payable (note 9)</td>
<td>17,258</td>
<td>14,847</td>
</tr>
<tr>
<td>Other liabilities (note 12)</td>
<td>12,676</td>
<td>14,558</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>437,493</td>
<td>477,324</td>
</tr>
<tr>
<td>Noncurrent liabilities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term debt, excluding current maturities (note 11)</td>
<td>3,438,695</td>
<td>3,494,610</td>
</tr>
<tr>
<td>Unearned revenue</td>
<td>1,811,621</td>
<td>1,801,135</td>
</tr>
<tr>
<td>Other liabilities (note 12)</td>
<td>11,131</td>
<td>10,523</td>
</tr>
<tr>
<td>Compensated absences payable (note 9)</td>
<td>13,859</td>
<td>15,724</td>
</tr>
<tr>
<td><strong>Total noncurrent liabilities</strong></td>
<td>5,275,306</td>
<td>5,321,992</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>5,712,799</td>
<td>5,799,316</td>
</tr>
<tr>
<td><strong>Net Position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net investments in capital assets</td>
<td>1,935,786</td>
<td>1,808,622</td>
</tr>
<tr>
<td>Restricted for debt service</td>
<td>43,762</td>
<td>38,907</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>270,907</td>
<td>237,672</td>
</tr>
<tr>
<td><strong>Total net position</strong></td>
<td>$2,250,455</td>
<td>$2,085,201</td>
</tr>
</tbody>
</table>

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, 2019 and 2018**  
(In thousands)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating revenues:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water and wastewater user charges:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential, commercial and multi-family customers</td>
<td>$443,481</td>
<td>$425,492</td>
</tr>
<tr>
<td>Federal government</td>
<td>73,393</td>
<td>73,551</td>
</tr>
<tr>
<td>District government and D.C. Housing Authority (note 13)</td>
<td>45,816</td>
<td>42,710</td>
</tr>
<tr>
<td>Charges for wholesale wastewater treatment</td>
<td>114,766</td>
<td>121,961</td>
</tr>
<tr>
<td>Other</td>
<td>27,691</td>
<td>20,788</td>
</tr>
<tr>
<td><strong>Total operating revenues</strong></td>
<td>705,147</td>
<td>684,502</td>
</tr>
<tr>
<td><strong>Operating expenses:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel services</td>
<td>141,040</td>
<td>142,342</td>
</tr>
<tr>
<td>Contractual services</td>
<td>75,818</td>
<td>74,627</td>
</tr>
<tr>
<td>Chemicals, supplies and small equipment</td>
<td>36,579</td>
<td>31,152</td>
</tr>
<tr>
<td>Utilities and rent</td>
<td>25,813</td>
<td>26,163</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>127,501</td>
<td>115,453</td>
</tr>
<tr>
<td>Water purchases</td>
<td>32,430</td>
<td>28,357</td>
</tr>
<tr>
<td>Payment in lieu of taxes and right of way fee (note 13)</td>
<td>21,702</td>
<td>21,376</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>460,883</td>
<td>439,470</td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td>244,264</td>
<td>245,032</td>
</tr>
<tr>
<td><strong>Nonoperating revenues (expenses):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest income</td>
<td>9,307</td>
<td>5,866</td>
</tr>
<tr>
<td>Interest expense and other nonoperating expenses</td>
<td>(104,630)</td>
<td>(93,956)</td>
</tr>
<tr>
<td><strong>Total nonoperating expenses</strong></td>
<td>(95,323)</td>
<td>(88,090)</td>
</tr>
<tr>
<td>Change in net position before capital contributions</td>
<td>148,941</td>
<td>156,942</td>
</tr>
<tr>
<td>Capital contributions (note 5)</td>
<td>16,313</td>
<td>30,419</td>
</tr>
<tr>
<td><strong>Change in net position</strong></td>
<td>165,254</td>
<td>187,361</td>
</tr>
<tr>
<td>Net position, beginning of year</td>
<td>2,085,201</td>
<td>1,897,840</td>
</tr>
<tr>
<td><strong>Net position, end of year</strong></td>
<td>$2,250,455</td>
<td>$2,085,201</td>
</tr>
</tbody>
</table>

The notes to the basic financial statements are an integral part of these financial statements.
<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flows from operating activities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash received from customers</td>
<td>$666,767</td>
<td>$638,796</td>
</tr>
<tr>
<td>Cash paid to suppliers for goods and services</td>
<td>(170,251)</td>
<td>(158,209)</td>
</tr>
<tr>
<td>Cash paid to employees for services</td>
<td>(140,494)</td>
<td>(139,518)</td>
</tr>
<tr>
<td>Cash paid to District for PILOT and ROW</td>
<td>(21,702)</td>
<td>(21,376)</td>
</tr>
<tr>
<td>Total operating cash flows</td>
<td>334,320</td>
<td>319,693</td>
</tr>
<tr>
<td>Net cash used in capital and related financing activities</td>
<td>(514,330)</td>
<td>(181,074)</td>
</tr>
<tr>
<td>Cash flows from investing activities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash received for interest</td>
<td>9,671</td>
<td>5,446</td>
</tr>
<tr>
<td>Investment purchases</td>
<td>(129,356)</td>
<td>(301,323)</td>
</tr>
<tr>
<td>Investment maturities</td>
<td>340,829</td>
<td>223,429</td>
</tr>
<tr>
<td>Total investing cash flows</td>
<td>221,144</td>
<td>(72,448)</td>
</tr>
<tr>
<td>Net increase in cash and cash equivalents</td>
<td>41,134</td>
<td>66,171</td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of year</td>
<td>313,052</td>
<td>246,881</td>
</tr>
<tr>
<td>Cash and cash equivalents at end of year</td>
<td>$354,186</td>
<td>$313,052</td>
</tr>
</tbody>
</table>

Operating income | $244,264 | $245,032 |

Adjustments to reconcile operating income to net cash provided by operating activities:

- Depreciation and amortization | 127,501 | 115,453 |
- Change in operating assets and liabilities:
  - (Increase) decrease in customer and other receivables | 658 | (14,925) |
  - Increase in inventory and prepaid assets | (1,326) | (2,347) |
  - Increase in payables and accrued liabilities | (3,766) | 10,441 |
  - Decrease in unearned revenue | (33,011) | (33,961) |

Net cash provided by operating activities | $334,320 | $319,693 |

Noncash Investing, Capital and Financing Activities:

- Capital asset additions included in accounts payable | $117,496 | $164,987 |
- Net increase (decrease) in the fair value of investments | 1,881 | (54) |

The notes to the basic financial statements are an integral part of these financial statements.
(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 2.5 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, 2019 and 2018

(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 (Bloomingtom 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, 2019 and 2018

(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 2019 or 2018 financial statements. Separate audited financial statements for Blue Drop, LLC are available from the Blue Drop, LLC Office at 1385 Canal Street SE, Washington, DC 20003. Condensed financial statements of Blue Drop, LLC as of and for the years ended September 30, 2019 and 2018 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, 2019 and 2018

(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, 2019 and 2018, 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.
(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:

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

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.
(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.

<table>
<thead>
<tr>
<th>Length of Service</th>
<th>Annual Carryover Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Union employees:</td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>240 hours</td>
</tr>
<tr>
<td>4-14 years</td>
<td>240-320 hours</td>
</tr>
<tr>
<td>Over 15 years</td>
<td>240-360 hours</td>
</tr>
<tr>
<td>Non-union employees:</td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>240 hours</td>
</tr>
<tr>
<td>3-6 years</td>
<td>320 hours</td>
</tr>
<tr>
<td>7 years</td>
<td>360 hours</td>
</tr>
</tbody>
</table>
(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.
(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.
(2) **Summary of Significant Accounting Policies (Continued)**

**(p) Adoption of New Accounting Standards**

During the fiscal year ended September 30, 2019, the Authority adopted the following new accounting standards issued by the Governmental Accounting Standards Board (GASB): Statement No. 83, *Certain Asset Retirement Obligations* and Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*.

Implementation of GASB Statement No. 83 had no impact on the Authority's fiscal year 2019 financial statements. The Authority's implementation of GASB Statement No. 88 did not have a material impact, but did result in additional required disclosures surrounding debt. See notes 10 and 11.

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

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

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Required Implementation Date (Period Beginning After)</th>
<th>Authority Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>Fiduciary Activities</td>
<td>December 15, 2018</td>
<td>2020</td>
</tr>
<tr>
<td>87</td>
<td>Leases</td>
<td>December 15, 2019</td>
<td>2021</td>
</tr>
<tr>
<td>89</td>
<td>Accounting for Interest Cost Incurred before the End of a Construction Period</td>
<td>December 15, 2019</td>
<td>2021</td>
</tr>
<tr>
<td>90</td>
<td>Majority Equity Interests</td>
<td>December 15, 2018</td>
<td>2020</td>
</tr>
<tr>
<td>91</td>
<td>Conduit Debt Obligations</td>
<td>December 15, 2020</td>
<td>2022</td>
</tr>
</tbody>
</table>
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(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”).
### (3) Cash Deposits and Investments (Continued)

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(7)</td>
<td><strong>Collateralized Certificates of Deposit</strong> in state chartered banks or federally charted banks. Collateralized Certificates of Deposit shall be collateralized at 102%.</td>
</tr>
<tr>
<td>(8)</td>
<td><strong>Corporate Notes.</strong> 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.</td>
</tr>
<tr>
<td>(9)</td>
<td><strong>FDIC insured Certificates of Deposit obtained through Certificate of Deposit placement services including the Certificate of Deposit Account Registry Service (CDARS).</strong> In 2012, the Authority began participating in CDARS program. The program allows the Authority to allocate funds into certificates of deposit in increments, which ensure the funds are eligible for full FDIC insurance.</td>
</tr>
<tr>
<td>(10)</td>
<td><strong>Federal Agency Mortgage-Backed Securities.</strong> Issued by Fannie Mae, Freddie Mac, or the Government National Mortgage Association (GNMA) that meet the following criteria: 1) a rating of at least &quot;AA&quot; (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.</td>
</tr>
<tr>
<td>(11)</td>
<td><strong>Negotiable Certificates of Deposit and Bank Deposit Notes of domestic banks and domestic offices of foreign banks with:</strong> 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.</td>
</tr>
<tr>
<td>(12)</td>
<td><strong>Supranational Bonds.</strong> 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.</td>
</tr>
<tr>
<td>(13)</td>
<td><strong>Municipal Obligations.</strong> 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.</td>
</tr>
</tbody>
</table>
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(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:

<table>
<thead>
<tr>
<th>Security</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collateralized Bank Deposits</td>
<td>100%</td>
</tr>
<tr>
<td>U.S. Treasury Obligations</td>
<td>100%</td>
</tr>
<tr>
<td>Registered Money Market Mutual Funds</td>
<td>100%</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>100%</td>
</tr>
<tr>
<td>Federal Agency Obligations</td>
<td>80%</td>
</tr>
<tr>
<td>Bankers’ Acceptances</td>
<td>40%</td>
</tr>
<tr>
<td>Commercial Paper</td>
<td>35%</td>
</tr>
<tr>
<td>Collateralized Certificates of Deposit</td>
<td>30%</td>
</tr>
<tr>
<td>Corporate Notes</td>
<td>30%</td>
</tr>
<tr>
<td>FDIC-insured Certificates of Deposit</td>
<td>30%</td>
</tr>
<tr>
<td>Federal Agency Mortgage-Backed Securities</td>
<td>30%</td>
</tr>
<tr>
<td>Negotiable Certificates of Deposit</td>
<td>30%</td>
</tr>
<tr>
<td>Supranational Bonds</td>
<td>30%</td>
</tr>
<tr>
<td>Municipal Obligations</td>
<td>20%</td>
</tr>
<tr>
<td>U.S. Treasury</td>
<td>100% maximum</td>
</tr>
<tr>
<td>Each Mutual Fund</td>
<td>50% maximum</td>
</tr>
<tr>
<td>Each Repurchase Agreement Counterparty</td>
<td>50% maximum</td>
</tr>
<tr>
<td>Each Federal Agency</td>
<td>40% maximum</td>
</tr>
</tbody>
</table>

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, 2019 and 2018, the Authority was in full compliance with the Investment Policy.

(b) Cash Deposits

At September 30, 2019 and 2018, the carrying amounts of the Authority’s unrestricted and restricted bank deposits were $147,125 and $127,877 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.


(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, 2019 and 2018, respectively:

<table>
<thead>
<tr>
<th>Investments by fair value level</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Treasury notes</td>
<td>$60,584</td>
<td>$77,974</td>
</tr>
<tr>
<td>Corporate notes</td>
<td>21,021</td>
<td>16,044</td>
</tr>
<tr>
<td>U.S. government agency obligations</td>
<td>11,888</td>
<td>12,713</td>
</tr>
<tr>
<td>Negotiable certificates of deposit</td>
<td>11,255</td>
<td>11,038</td>
</tr>
<tr>
<td>Supranational Bonds</td>
<td>6,720</td>
<td>10,446</td>
</tr>
<tr>
<td>Municipal bonds</td>
<td>4,146</td>
<td>4,704</td>
</tr>
<tr>
<td>Total investments at fair value</td>
<td>115,614</td>
<td>132,919</td>
</tr>
</tbody>
</table>

Investments and cash equivalents carried at amortized cost

<table>
<thead>
<tr>
<th>Investments and cash equivalents carried at amortized cost</th>
<th>222,490</th>
<th>394,772</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total investments and cash equivalents</td>
<td>$338,104</td>
<td>$527,691</td>
</tr>
</tbody>
</table>


DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(In thousands)

(3) Cash Deposits and Investments (Continued)

(d) Cash Equivalents and Investments

As of September 30, 2019 and 2018, the Authority held the following cash equivalents and investments:

<table>
<thead>
<tr>
<th>Cash equivalents and investments</th>
<th>2019</th>
<th>Weighted Average Maturity (Years)</th>
<th>2018</th>
<th>Weighted Average Maturity (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered money market mutual</td>
<td>$207,061</td>
<td>0.083</td>
<td>$185,175</td>
<td>0.083</td>
</tr>
<tr>
<td>U.S. Treasury notes</td>
<td>60,584</td>
<td>1.780</td>
<td>180,375</td>
<td>0.912</td>
</tr>
<tr>
<td>Corporate notes</td>
<td>21,021</td>
<td>2.202</td>
<td>16,044</td>
<td>2.114</td>
</tr>
<tr>
<td>FDIC-insured certificates of deposit</td>
<td>15,429</td>
<td>0.146</td>
<td>15,327</td>
<td>0.149</td>
</tr>
<tr>
<td>U.S. government agency obligations</td>
<td>11,888</td>
<td>1.902</td>
<td>12,713</td>
<td>1.490</td>
</tr>
<tr>
<td>Negotiable certificates of deposit</td>
<td>11,255</td>
<td>1.373</td>
<td>12,438</td>
<td>1.503</td>
</tr>
<tr>
<td>Supranational Bonds</td>
<td>6,720</td>
<td>1.433</td>
<td>10,446</td>
<td>1.938</td>
</tr>
<tr>
<td>Municipal bonds</td>
<td>4,146</td>
<td>2.055</td>
<td>4,704</td>
<td>1.425</td>
</tr>
<tr>
<td>Commercial paper</td>
<td>-</td>
<td>-</td>
<td>90,469</td>
<td>0.265</td>
</tr>
<tr>
<td>Total cash equivalents and investments</td>
<td>$338,104</td>
<td>0.680</td>
<td>$527,691</td>
<td>0.577</td>
</tr>
</tbody>
</table>

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, 2019 and 2018, 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.
DISTRIBUTION OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(In thousands)

(3) Cash Deposits and Investments (Continued)

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

<table>
<thead>
<tr>
<th>Security</th>
<th>Maturities</th>
<th>Security</th>
<th>Maturities</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Treasury Obligations</td>
<td>5 years</td>
<td>Corporate Notes</td>
<td>5 years</td>
</tr>
<tr>
<td>Registered Money Market Mutual Funds</td>
<td>NA</td>
<td>FDIC-insured Certificates of Deposit</td>
<td>NA</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>90 days</td>
<td>Federal Agency Mortgage-Backed Securities</td>
<td>5 years</td>
</tr>
<tr>
<td>Federal Agency Obligations</td>
<td>5 years</td>
<td>Negotiable Certificates of Deposit</td>
<td>5 years</td>
</tr>
<tr>
<td>Bankers’ Acceptances</td>
<td>180 days</td>
<td>Supranational Bonds</td>
<td>5 years</td>
</tr>
<tr>
<td>Commercial Paper</td>
<td>270 days</td>
<td>Municipal Obligations</td>
<td>5 years</td>
</tr>
<tr>
<td>Collateralized Certificates of Deposit</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 0.680 years and 0.577 years as of September 30, 2019 and 2018, 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, 2019:

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>AAA</th>
<th>AA+</th>
<th>AA-</th>
<th>A+</th>
<th>A-</th>
<th>A-1</th>
<th>A-1+</th>
<th>AAAm</th>
<th>Not Rated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. government agency obligations</td>
<td>3.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered money market mutual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.3%</td>
<td></td>
<td>61.3%</td>
</tr>
<tr>
<td>U.S. Treasury notes</td>
<td>17.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDIC-insured certificates of deposit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.6%</td>
<td></td>
<td>4.6%</td>
</tr>
<tr>
<td>Corporate notes</td>
<td>0.1%</td>
<td>0.4%</td>
<td>1.0%</td>
<td>2.6%</td>
<td>1.0%</td>
<td>0.4%</td>
<td>0.7%</td>
<td></td>
<td></td>
<td>6.2%</td>
</tr>
<tr>
<td>Negotiable certificates of deposit</td>
<td></td>
<td>0.9%</td>
<td>0.4%</td>
<td></td>
<td></td>
<td>1.4%</td>
<td>0.5%</td>
<td></td>
<td></td>
<td>3.3%</td>
</tr>
<tr>
<td>Supranational Bonds</td>
<td>2.0%</td>
<td></td>
<td>0.2%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.0%</td>
</tr>
<tr>
<td>Municipal bond</td>
<td>0.4%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.3%</td>
<td></td>
<td></td>
<td></td>
<td>0.2%</td>
<td></td>
<td>1.2%</td>
</tr>
</tbody>
</table>

2.5% 22.0% 11% 3.8% 1.5% 0.4% 0.7% 1.4% 0.5% 61.3% 4.8% 100.0%

At September 30, 2019, 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, 2019 and 2018

(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, 2019 and 2018, 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.
DISTRIBUTION OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(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, 2019 and 2018 follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019 Unrestricted</th>
<th>2019 Restricted</th>
<th>2019 Total</th>
<th>2018 Unrestricted</th>
<th>2018 Restricted</th>
<th>2018 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand deposits</td>
<td>$144,317</td>
<td>$2,808</td>
<td>$147,125</td>
<td>$123,545</td>
<td>$4,332</td>
<td>$127,877</td>
</tr>
<tr>
<td>Registered money market mutual</td>
<td>160</td>
<td>206,901</td>
<td>207,061</td>
<td>363</td>
<td>184,812</td>
<td>185,175</td>
</tr>
<tr>
<td>Total cash and cash equivalents</td>
<td>144,477</td>
<td>209,709</td>
<td>354,186</td>
<td>123,908</td>
<td>189,144</td>
<td>313,052</td>
</tr>
<tr>
<td>Investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Treasury notes</td>
<td>41,724</td>
<td>18,860</td>
<td>60,584</td>
<td>36,376</td>
<td>143,999</td>
<td>$180,375</td>
</tr>
<tr>
<td>Corporate notes</td>
<td>21,021</td>
<td>-</td>
<td>21,021</td>
<td>16,044</td>
<td>-</td>
<td>16,044</td>
</tr>
<tr>
<td>FDIC-insured certificates of deposit</td>
<td>15,429</td>
<td>-</td>
<td>15,429</td>
<td>15,327</td>
<td>-</td>
<td>15,327</td>
</tr>
<tr>
<td>U.S. government agency obligations</td>
<td>11,888</td>
<td>-</td>
<td>11,888</td>
<td>12,713</td>
<td>-</td>
<td>12,713</td>
</tr>
<tr>
<td>Negotiable certificates of deposit</td>
<td>11,255</td>
<td>-</td>
<td>11,255</td>
<td>12,438</td>
<td>-</td>
<td>12,438</td>
</tr>
<tr>
<td>Supranational Bonds</td>
<td>6,720</td>
<td>-</td>
<td>6,720</td>
<td>10,446</td>
<td>-</td>
<td>10,446</td>
</tr>
<tr>
<td>Municipal bonds</td>
<td>4,146</td>
<td>-</td>
<td>4,146</td>
<td>4,704</td>
<td>-</td>
<td>4,704</td>
</tr>
<tr>
<td>Commercial paper</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>90,469</td>
<td>90,469</td>
</tr>
<tr>
<td>Total Investments</td>
<td>112,183</td>
<td>18,860</td>
<td>131,043</td>
<td>108,048</td>
<td>234,468</td>
<td>342,516</td>
</tr>
<tr>
<td>Total cash, cash equivalents &amp; investments</td>
<td>$256,660</td>
<td>$228,569</td>
<td>$485,229</td>
<td>$231,956</td>
<td>$423,612</td>
<td>$655,568</td>
</tr>
</tbody>
</table>
### Notes to the Financial Statements

#### September 30, 2019 and 2018

**(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, 2019 and 2018 follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted cash and cash equivalents (current and noncurrent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue bonds 2018B</td>
<td>$40,465</td>
<td>$20,501</td>
</tr>
<tr>
<td>Revenue bonds 2018A</td>
<td>26,726</td>
<td>20,046</td>
</tr>
<tr>
<td>Principal payment, 1998 revenue bonds</td>
<td>16,542</td>
<td>15,237</td>
</tr>
<tr>
<td>Principal payment, 2016 revenue bonds</td>
<td>11,535</td>
<td>-</td>
</tr>
<tr>
<td>Interest payment, 2016A revenue bonds</td>
<td>8,796</td>
<td>8,750</td>
</tr>
<tr>
<td>Interest payment, 2015A,B revenue bonds</td>
<td>8,776</td>
<td>8,801</td>
</tr>
<tr>
<td>Interest payment, 2014C revenue bonds</td>
<td>8,748</td>
<td>8,783</td>
</tr>
<tr>
<td>Interest payment, 2014A revenue bonds</td>
<td>8,451</td>
<td>8,473</td>
</tr>
<tr>
<td>Interest payment, 2010 revenue bonds</td>
<td>8,174</td>
<td>8,211</td>
</tr>
<tr>
<td>Interest payment, 2012A,C revenue bonds</td>
<td>7,760</td>
<td>7,903</td>
</tr>
<tr>
<td>Interest payment, 2013 revenue bonds</td>
<td>7,521</td>
<td>7,541</td>
</tr>
<tr>
<td>2018 A&amp;B Senior Bond Interest</td>
<td>7,520</td>
<td>6,298</td>
</tr>
<tr>
<td>Interest payment, 2017 A&amp;B Senior Lien Interest</td>
<td>6,973</td>
<td>7,061</td>
</tr>
<tr>
<td>DC Water Customer Assistance Program 2</td>
<td>5,767</td>
<td>-</td>
</tr>
<tr>
<td>Principal payment, 2012 revenue bonds</td>
<td>5,639</td>
<td>5,381</td>
</tr>
<tr>
<td>Debt service reserve account, 1998 revenue bonds</td>
<td>5,274</td>
<td>11,607</td>
</tr>
<tr>
<td>Interest payment, 1998 revenue bonds</td>
<td>3,482</td>
<td>3,967</td>
</tr>
<tr>
<td>2018 A&amp;B Senior Bond Principal</td>
<td>3,350</td>
<td>-</td>
</tr>
<tr>
<td>DC Government Customer Assistance Program 3</td>
<td>3,290</td>
<td>-</td>
</tr>
<tr>
<td>2017 A&amp;B Senior Lien Principal</td>
<td>3,195</td>
<td>3,045</td>
</tr>
<tr>
<td>Cash-Fleet &amp; Sewer Relocation</td>
<td>2,795</td>
<td>4,331</td>
</tr>
<tr>
<td>Extendable municipal commercial paper</td>
<td>2,392</td>
<td>2,351</td>
</tr>
<tr>
<td>2015 A &amp; B Lien Revenue Bonds</td>
<td>2,015</td>
<td>563</td>
</tr>
<tr>
<td>DC Government Customer Assistance Program 2</td>
<td>1,202</td>
<td>-</td>
</tr>
<tr>
<td>2016 B EIB Construction Funds</td>
<td>875</td>
<td>16,941</td>
</tr>
<tr>
<td>Principal payment, 2014 revenue bonds</td>
<td>548</td>
<td>-</td>
</tr>
<tr>
<td>Danbury Meter Installation</td>
<td>501</td>
<td>-</td>
</tr>
<tr>
<td>CSX Project</td>
<td>501</td>
<td>-</td>
</tr>
<tr>
<td>Interest payment, 2016 B EIB</td>
<td>430</td>
<td>431</td>
</tr>
<tr>
<td>Commercial Paper Debt Service</td>
<td>181</td>
<td>-</td>
</tr>
<tr>
<td>Interest payment, 2014B revenue bonds</td>
<td>109</td>
<td>110</td>
</tr>
<tr>
<td>Revenue bonds 2014C</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>Interest payment, EMCP Series A</td>
<td>55</td>
<td>70</td>
</tr>
<tr>
<td>Interest payment, 2012C revenue bonds</td>
<td>39</td>
<td>38</td>
</tr>
<tr>
<td>Combined sewer overflow (CSO) federal appropriations</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Commercial Paper Notes Investment</td>
<td>3</td>
<td>1,174</td>
</tr>
<tr>
<td>2012 B-2 Bond Interest Accoun, 2018 B Cost of Issuance</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Principal payment, 2008 revenue bonds</td>
<td>-</td>
<td>6,911</td>
</tr>
<tr>
<td>Principal payment, 2009 revenue bonds</td>
<td>-</td>
<td>4,253</td>
</tr>
<tr>
<td>Interest payment, 2008 revenue bonds</td>
<td>-</td>
<td>173</td>
</tr>
<tr>
<td>Interest payment, 2009 revenue bonds</td>
<td>-</td>
<td>106</td>
</tr>
<tr>
<td>Total restricted cash and cash equivalents</td>
<td>209,709</td>
<td>189,144</td>
</tr>
</tbody>
</table>

#### Restricted investments (current and noncurrent)

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt service reserve account, 1998 revenue bonds</td>
<td>18,860</td>
<td>11,851</td>
</tr>
<tr>
<td>Revenue bonds 2018B</td>
<td>-</td>
<td>126,892</td>
</tr>
<tr>
<td>Revenue bonds 2018A</td>
<td>-</td>
<td>95,725</td>
</tr>
<tr>
<td>Total restricted investments</td>
<td>18,860</td>
<td>234,468</td>
</tr>
</tbody>
</table>

Total restricted cash, cash equivalents & investments: $228,569, $423,612
### Notes to the Financial Statements

#### September 30, 2019 and 2018

(In thousands)

#### (4) Capital Assets

The following tables present the activity in capital assets for the years ended September 30, 2019 and 2018:

<table>
<thead>
<tr>
<th>Capital Assets</th>
<th>Balance 9/30/2018</th>
<th>Additions</th>
<th>Disposals</th>
<th>Transfers</th>
<th>Balance 9/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater treatment plant</td>
<td>$3,213,907</td>
<td>$ -</td>
<td>$ -</td>
<td>$19,791</td>
<td>$3,233,698</td>
</tr>
<tr>
<td>Wastewater collection facilities</td>
<td>658,060</td>
<td>80,255</td>
<td>(9,412)</td>
<td>8,412</td>
<td>937,315</td>
</tr>
<tr>
<td>Water distribution system</td>
<td>1,125,358</td>
<td>-</td>
<td>-</td>
<td>13,240</td>
<td>1,138,598</td>
</tr>
<tr>
<td>Deep tunnel systems</td>
<td>1,171,226</td>
<td>-</td>
<td>(905)</td>
<td>(142,367)</td>
<td>1,027,954</td>
</tr>
<tr>
<td>Purchased capacity</td>
<td>364,211</td>
<td>10,953</td>
<td>-</td>
<td>-</td>
<td>375,164</td>
</tr>
<tr>
<td>Capital equipment</td>
<td>296,295</td>
<td>12</td>
<td>(1,461)</td>
<td>19,821</td>
<td>314,667</td>
</tr>
<tr>
<td><strong>Total capital assets in service</strong></td>
<td>7,029,057</td>
<td>91,220</td>
<td>(11,778)</td>
<td>(81,103)</td>
<td>7,027,396</td>
</tr>
<tr>
<td>Less accumulated depreciation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wastewater treatment plant</td>
<td>(728,680)</td>
<td>(54,878)</td>
<td>-</td>
<td>-</td>
<td>(783,558)</td>
</tr>
<tr>
<td>Wastewater collection facilities</td>
<td>(287,344)</td>
<td>(4,949)</td>
<td>-</td>
<td>-</td>
<td>(292,293)</td>
</tr>
<tr>
<td>Water distribution system</td>
<td>(309,803)</td>
<td>(28,454)</td>
<td>-</td>
<td>-</td>
<td>(338,257)</td>
</tr>
<tr>
<td>Deep tunnel systems</td>
<td>(5,856)</td>
<td>(10,272)</td>
<td>-</td>
<td>-</td>
<td>(16,128)</td>
</tr>
<tr>
<td>Purchased capacity</td>
<td>(100,375)</td>
<td>(6,223)</td>
<td>-</td>
<td>-</td>
<td>(106,598)</td>
</tr>
<tr>
<td>Capital equipment</td>
<td>(211,212)</td>
<td>(22,725)</td>
<td>1,461</td>
<td>-</td>
<td>(232,476)</td>
</tr>
<tr>
<td><strong>Total accumulated depreciation</strong></td>
<td>(1,643,270)</td>
<td>(127,501)</td>
<td>1,461</td>
<td>-</td>
<td>(1,769,310)</td>
</tr>
<tr>
<td><strong>Net capital assets in service</strong></td>
<td>5,385,787</td>
<td>(36,281)</td>
<td>(10,317)</td>
<td>(81,103)</td>
<td>5,258,086</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital Assets</th>
<th>Balance 9/30/2017</th>
<th>Additions</th>
<th>Disposals</th>
<th>Transfers</th>
<th>Balance 9/30/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater treatment plant</td>
<td>$3,010,074</td>
<td>$ -</td>
<td>$ -</td>
<td>$203,833</td>
<td>$3,213,907</td>
</tr>
<tr>
<td>Wastewater collection facilities</td>
<td>856,859</td>
<td>-</td>
<td>(21,962)</td>
<td>23,163</td>
<td>858,060</td>
</tr>
<tr>
<td>Water distribution system</td>
<td>1,112,458</td>
<td>-</td>
<td>(9,659)</td>
<td>22,559</td>
<td>1,125,358</td>
</tr>
<tr>
<td>Deep tunnel systems</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,171,226</td>
<td>1,171,226</td>
</tr>
<tr>
<td>Purchased capacity</td>
<td>356,850</td>
<td>7,361</td>
<td>-</td>
<td>-</td>
<td>364,211</td>
</tr>
<tr>
<td>Capital equipment</td>
<td>253,437</td>
<td>2,292</td>
<td>(721)</td>
<td>41,287</td>
<td>296,295</td>
</tr>
<tr>
<td><strong>Total capital assets in service</strong></td>
<td>5,589,678</td>
<td>9,653</td>
<td>(32,342)</td>
<td>1,462,068</td>
<td>7,029,057</td>
</tr>
<tr>
<td>Less accumulated depreciation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wastewater treatment plant</td>
<td>(675,511)</td>
<td>(53,169)</td>
<td>-</td>
<td>-</td>
<td>(728,680)</td>
</tr>
<tr>
<td>Wastewater collection facilities</td>
<td>(280,926)</td>
<td>(13,711)</td>
<td>-</td>
<td>-</td>
<td>(294,637)</td>
</tr>
<tr>
<td>Water distribution system</td>
<td>(291,070)</td>
<td>(18,733)</td>
<td>-</td>
<td>-</td>
<td>(309,803)</td>
</tr>
<tr>
<td>Deep tunnel systems</td>
<td>-</td>
<td>(5,856)</td>
<td>-</td>
<td>-</td>
<td>(5,856)</td>
</tr>
<tr>
<td>Purchased capacity</td>
<td>(94,305)</td>
<td>(6,070)</td>
<td>-</td>
<td>-</td>
<td>(100,375)</td>
</tr>
<tr>
<td>Capital equipment</td>
<td>(194,021)</td>
<td>(17,912)</td>
<td>721</td>
<td>-</td>
<td>(211,212)</td>
</tr>
<tr>
<td><strong>Total accumulated depreciation</strong></td>
<td>(1,535,833)</td>
<td>(115,451)</td>
<td>8,014</td>
<td>-</td>
<td>(1,643,270)</td>
</tr>
<tr>
<td><strong>Net capital assets in service</strong></td>
<td>4,053,845</td>
<td>(36,281)</td>
<td>(10,317)</td>
<td>81,103</td>
<td>5,258,086</td>
</tr>
</tbody>
</table>

##### Construction-in-progress

<table>
<thead>
<tr>
<th>Balance</th>
<th>Additions</th>
<th>Disposals</th>
<th>Transfers</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,959,888</td>
<td>274,572</td>
<td>(10,317)</td>
<td>$ -</td>
<td>$7,224,123</td>
</tr>
</tbody>
</table>

##### Construction-in-progress

<table>
<thead>
<tr>
<th>Balance</th>
<th>Additions</th>
<th>Disposals</th>
<th>Transfers</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,543,100</td>
<td>441,096</td>
<td>(24,328)</td>
<td>$ -</td>
<td>$6,959,868</td>
</tr>
</tbody>
</table>
During 2019, the Authority determined that fiscal year 2018 transfers from construction-in-progress (CIP) to capital assets in service related to deep tunnel systems should have been $948,965, instead of $1,171,226. To adjust for this misclassification within net capital assets, the Authority recorded a reclassification adjustment in the amount of $222,261 in fiscal year 2019 to reduce capital assets in service and increase CIP as of September 30, 2019. This reclassification adjustment is reflected as a negative transfer for the year ended September 30, 2019.

For the years ended September 30, 2019 and 2018, total interest expense incurred was $94,311 and $59,543, and total capitalized interest was $50,571 and $79,412, respectively. During fiscal year 2019, the Authority incurred losses on disposals of capital assets in the amount of $892. 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, 2019 and 2018:

<table>
<thead>
<tr>
<th>Purchased capacity</th>
<th>Balance 9/30/2018</th>
<th>Additions</th>
<th>Balance 9/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Aqueduct</td>
<td>$332,021</td>
<td>$10,953</td>
<td>$342,974</td>
</tr>
<tr>
<td>Jennings Randolph Reservoir</td>
<td>19,863</td>
<td>-</td>
<td>19,863</td>
</tr>
<tr>
<td>Little Seneca Lake</td>
<td>12,327</td>
<td>-</td>
<td>12,327</td>
</tr>
<tr>
<td>Total in service</td>
<td>364,211</td>
<td>10,953</td>
<td>375,164</td>
</tr>
</tbody>
</table>

Less accumulated depreciation:

<table>
<thead>
<tr>
<th>Purchased capacity</th>
<th>Balance 9/30/2018</th>
<th>Additions</th>
<th>Balance 9/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Aqueduct</td>
<td>(83,281)</td>
<td>(5,625)</td>
<td>(88,906)</td>
</tr>
<tr>
<td>Jennings Randolph Reservoir</td>
<td>(10,216)</td>
<td>(393)</td>
<td>(10,609)</td>
</tr>
<tr>
<td>Little Seneca Lake</td>
<td>(6,878)</td>
<td>(205)</td>
<td>(7,083)</td>
</tr>
<tr>
<td>Total accumulated depreciation</td>
<td>(100,375)</td>
<td>(6,223)</td>
<td>(106,598)</td>
</tr>
</tbody>
</table>

Purchased capacity, net $263,836 $4,730 $268,566
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018
(In thousands)

(4) Capital Assets (Continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2017</th>
<th>Additions</th>
<th>Balance 9/30/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased capacity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington Aqueduct</td>
<td>$324,660</td>
<td>$7,361</td>
<td>$332,021</td>
</tr>
<tr>
<td>Jennings Randolph Reservoir</td>
<td>19,863</td>
<td>-</td>
<td>19,863</td>
</tr>
<tr>
<td>Little Seneca Lake</td>
<td>12,327</td>
<td>-</td>
<td>12,327</td>
</tr>
<tr>
<td>Total in service</td>
<td>356,850</td>
<td>7,361</td>
<td>364,211</td>
</tr>
<tr>
<td>Less accumulated depreciation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington Aqueduct</td>
<td>(77,809)</td>
<td>(5,472)</td>
<td>(83,281)</td>
</tr>
<tr>
<td>Jennings Randolph Reservoir</td>
<td>(9,823)</td>
<td>(393)</td>
<td>(10,216)</td>
</tr>
<tr>
<td>Little Seneca Lake</td>
<td>(6,673)</td>
<td>(205)</td>
<td>(6,878)</td>
</tr>
<tr>
<td>Total accumulated depreciation</td>
<td>(94,305)</td>
<td>(6,070)</td>
<td>(100,375)</td>
</tr>
<tr>
<td>Purchased capacity, net</td>
<td>$262,545</td>
<td>$1,291</td>
<td>$263,836</td>
</tr>
</tbody>
</table>

(5) Capital Contributions

Capital contributions consist of the following for the years ended September 30, 2019 and 2018, respectively:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal grants and appropriations</td>
<td>$ 13,360</td>
<td>$ 30,096</td>
</tr>
<tr>
<td>Contributions from District government</td>
<td>2,953</td>
<td>323</td>
</tr>
<tr>
<td>Total</td>
<td>$ 16,313</td>
<td>$ 30,419</td>
</tr>
</tbody>
</table>

Capital contributions consist principally of Federal grants and appropriations and certain capital costs incurred by the Authority in fiscal year 2019 and 2018 to be reimbursed by the District government pursuant to the Memorandum of Understanding between the Authority and the District discussed in Note 13(c).
(6) Due from Federal Government

The amount due from the Federal government consists of the following at September 30, 2019 and 2018, respectively:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Aqueduct advance</td>
<td>$37,722</td>
<td>$37,827</td>
</tr>
<tr>
<td>Federal grants receivable</td>
<td>367</td>
<td>2,686</td>
</tr>
<tr>
<td>Total</td>
<td>$38,089</td>
<td>$40,513</td>
</tr>
</tbody>
</table>

The Washington Aqueduct advance 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, 2019 and 2018:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billed customer receivables</td>
<td>$77,216</td>
<td>$76,907</td>
</tr>
<tr>
<td>Unbilled customer receivables</td>
<td>23,685</td>
<td>23,684</td>
</tr>
<tr>
<td>Total customer receivables</td>
<td>100,901</td>
<td>100,591</td>
</tr>
<tr>
<td>Less: Allowance for doubtful accounts</td>
<td>(22,404)</td>
<td>(20,327)</td>
</tr>
<tr>
<td>Customer receivables, net</td>
<td>$78,497</td>
<td>$80,264</td>
</tr>
</tbody>
</table>
(8) **Due from Other Jurisdictions**

The amount due from other jurisdictions under the 2012 IMA consists of the following at September 30, 2019 and 2018:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington Suburban Sanitary Commission</td>
<td>8,692</td>
<td>9,760</td>
</tr>
<tr>
<td>Fairfax</td>
<td>796</td>
<td>1,774</td>
</tr>
<tr>
<td>Loudoun County Sanitation Authority</td>
<td>386</td>
<td>741</td>
</tr>
<tr>
<td>Northern Virginia</td>
<td>102</td>
<td>99</td>
</tr>
<tr>
<td>Potomac Interceptor</td>
<td>554</td>
<td>709</td>
</tr>
<tr>
<td><strong>Total current</strong></td>
<td>10,530</td>
<td>13,083</td>
</tr>
<tr>
<td>Noncurrent:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington Suburban Sanitary Commission</td>
<td>3,480</td>
<td>4,232</td>
</tr>
<tr>
<td>Fairfax</td>
<td>638</td>
<td>781</td>
</tr>
<tr>
<td>Loudoun County Sanitation Authority</td>
<td>295</td>
<td>346</td>
</tr>
<tr>
<td>Northern Virginia</td>
<td>2,691</td>
<td>2,794</td>
</tr>
<tr>
<td><strong>Total noncurrent</strong></td>
<td>7,104</td>
<td>8,153</td>
</tr>
<tr>
<td><strong>Total due from other jurisdictions</strong></td>
<td>$17,634</td>
<td>$21,236</td>
</tr>
</tbody>
</table>

(9) **Compensated Absences**

The following table reflects the activity associated with accrued compensated absences for the years ended September 30, 2019 and 2018, respectively:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vacation</td>
<td>Sick</td>
</tr>
<tr>
<td>Beginning of year</td>
<td>$8,557</td>
<td>$11,664</td>
</tr>
<tr>
<td>Increases (incurred)</td>
<td>8,911</td>
<td>3,935</td>
</tr>
<tr>
<td>Decreases</td>
<td>(8,727)</td>
<td>(3,052)</td>
</tr>
<tr>
<td>End of year</td>
<td>8,741</td>
<td>12,547</td>
</tr>
<tr>
<td>Less: current portion</td>
<td>5,237</td>
<td>2,192</td>
</tr>
<tr>
<td>Noncurrent portion</td>
<td>$3,504</td>
<td>$10,355</td>
</tr>
</tbody>
</table>

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, 2019 and 2018

(In thousands)

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

The Authority’s commercial paper notes payable are comprised of the following as of September 30, 2019 and 2018, respectively:

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2018</th>
<th>Balance 9/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Paper</td>
<td>$ 29,200</td>
<td>$ 29,200</td>
</tr>
<tr>
<td>Extendable Municipal Commercial Paper</td>
<td>50,000</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>$ 79,200</td>
<td>$ 79,200</td>
</tr>
</tbody>
</table>

(a) Commercial Paper

A schedule of Commercial Paper activity for the years ended September 30, 2019 and 2018 is shown below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2018</th>
<th>2019</th>
<th>Re-Issuance 9/30/2019</th>
<th>Balance 9/30/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series C, interest from 2.15% to 2.55%, maturities ranged from 29 to 73 days</td>
<td>$ 29,200</td>
<td>(204,400)</td>
<td>204,400</td>
<td>$ 29,200</td>
</tr>
<tr>
<td>$ 29,200</td>
<td>(204,400)</td>
<td>$ 204,400</td>
<td>$ 29,200</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2017</th>
<th>2018</th>
<th>Re-Issuance 9/30/2018</th>
<th>Balance 9/30/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series B, interest at 1.30% and 1.68%, maturities at 55 and 67 days</td>
<td>$ -</td>
<td>$ (85,000)</td>
<td>$ 85,000</td>
<td>$ -</td>
</tr>
<tr>
<td>Series C, interest from 0.67% to 1.25%, maturities ranged from 7 to 67 days</td>
<td>$ 29,200</td>
<td>(613,200)</td>
<td>613,200</td>
<td>$ 29,200</td>
</tr>
<tr>
<td>$ 29,200</td>
<td>(698,200)</td>
<td>$ 698,200</td>
<td>$ 29,200</td>
<td></td>
</tr>
</tbody>
</table>
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.

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.

As of September 30, 2019 and 2018, the unspent amount related to the Series B and Series C Commercial Paper Notes was $120,800.

(b) Extendable Municipal Commercial Paper

A schedule of Extendable Municipal Commercial Paper activity for the years ended September 30, 2019 and 2018 is shown below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2017</th>
<th>Maturities</th>
<th>Re-Issuance 9/30/2018</th>
<th>Balance 9/30/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMCP Series A, interest from 1.38% to 1.85%, maturities ranged from 29 to 89 days</td>
<td>$ 50,000</td>
<td>$ (300,000)</td>
<td>$ 300,000</td>
<td>$ 50,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2017</th>
<th>Maturities</th>
<th>Re-Issuance 9/30/2018</th>
<th>Balance 9/30/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMCP Series A, interest from 0.95% to 1.71%, maturities ranged from 29 to 89 days</td>
<td>$ 50,000</td>
<td>$ (450,000)</td>
<td>$ 450,000</td>
<td>$ 50,000</td>
</tr>
</tbody>
</table>
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. On December 1, 2015, the Authority issued the Series A EMCP Notes in the amount of $50,000. The proceeds were used to (1) redeem $47,310 of currently outstanding Commercial Paper (2) pay $1 of accrued interest on the Commercial Paper as well as the interest associated with the Authority's public utility subordinate lien multimodal revenues bonds, 2012 series B-2 (3) pay $355 associated cost of issuance of the Series A EMCP Note and (4) the remaining $2,334 were contributed to the Construction Account.

As of September 30, 2019 and 2018, the unspent amount related to the Series A EMCP Notes was $50,000.
(11) Long-Term Debt

A schedule of long-term debt activity for the year ended September 30, 2019 is shown below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 9/30/2018</th>
<th>Increases</th>
<th>Decreases</th>
<th>Balance 9/30/2019</th>
<th>Due Within One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 5.0%, maturing in 2050</td>
<td>$100,000</td>
<td>-</td>
<td>-</td>
<td>$100,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B interest at 5.0%, maturing in 2050</td>
<td>200,000</td>
<td>-</td>
<td>-</td>
<td>200,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2017 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 4.0% to 5.0%, maturing in 2053</td>
<td>100,000</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B interest at 4.0% to 5.0%, maturing in 2045</td>
<td>200,000</td>
<td>-</td>
<td>(3,045)</td>
<td>196,955</td>
<td>3,196</td>
</tr>
<tr>
<td><strong>2016 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 2.0% to 5.0%, maturing in 2040</td>
<td>389,110</td>
<td>-</td>
<td>-</td>
<td>389,110</td>
<td>11,536</td>
</tr>
<tr>
<td><strong>2015 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 2.0% to 5.0%, maturing in 2046</td>
<td>100,000</td>
<td>-</td>
<td>(580)</td>
<td>99,420</td>
<td>2,000</td>
</tr>
<tr>
<td>Series B interest at 5.0% to 5.25%, maturing in 2045</td>
<td>250,000</td>
<td>-</td>
<td>-</td>
<td>250,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2014 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 4.81%, maturing in 2114</td>
<td>350,000</td>
<td>-</td>
<td>-</td>
<td>350,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B-1 interest at 3.25%, maturing in 2050</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B-2 interest at 3.25%, maturing in 2050</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>-</td>
</tr>
<tr>
<td>Series C interest at 3.0% to 5.0%, maturing in 2044</td>
<td>377,110</td>
<td>-</td>
<td>-</td>
<td>377,110</td>
<td>530</td>
</tr>
<tr>
<td><strong>2013 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 4.75% to 5.0%, maturing in 2049</td>
<td>300,000</td>
<td>-</td>
<td>-</td>
<td>300,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2012 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 2.0% to 5.0%, maturing in 2037</td>
<td>153,600</td>
<td>-</td>
<td>(5,345)</td>
<td>148,255</td>
<td>5,590</td>
</tr>
<tr>
<td>Series B-2 interest at 2.26%, maturing in 2040</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Series C interest at 4.0% to 5.0%, maturing in 2033</td>
<td>163,215</td>
<td>-</td>
<td>-</td>
<td>163,215</td>
<td>-</td>
</tr>
<tr>
<td><strong>2010 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 4.1% to 5.5%, maturing in 2044</td>
<td>300,000</td>
<td>-</td>
<td>-</td>
<td>300,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2009 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 3.0% to 6.0%, maturing in 2039</td>
<td>4,225</td>
<td>-</td>
<td>(4,225)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>2008 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 4.0% to 5.0%, maturing in 2034</td>
<td>6,865</td>
<td>-</td>
<td>(6,865)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>1998 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest ranges from 5.5% to 6.0%, maturing in 2028</td>
<td>141,855</td>
<td>-</td>
<td>(15,565)</td>
<td>126,290</td>
<td>16,420</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>3,235,980</td>
<td>-</td>
<td>(35,625)</td>
<td>3,200,355</td>
<td>42,595</td>
</tr>
<tr>
<td><strong>Direct Placement &amp; Borrowings of Debt:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2016 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series B interest at 3.4%, maturing in 2047</td>
<td>25,000</td>
<td>-</td>
<td>-</td>
<td>25,000</td>
<td>-</td>
</tr>
<tr>
<td>Notes payable to the Federal Government interest at 3.25%, maturing in 2041</td>
<td>12,054</td>
<td>93</td>
<td>(413)</td>
<td>11,734</td>
<td>424</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>37,054</td>
<td>93</td>
<td>(413)</td>
<td>36,734</td>
<td>424</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unamortized bond premiums</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes payable to the Federal Government interest at 3.25%, maturing in 2041</td>
<td>259,578</td>
<td>-</td>
<td>(13,118)</td>
<td>246,460</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,273,034</td>
<td>93</td>
<td>(36,038)</td>
<td>3,237,098</td>
<td>43,019</td>
</tr>
<tr>
<td><strong>Unamortized bond discounts</strong></td>
<td>1,964</td>
<td>-</td>
<td>129</td>
<td>1,835</td>
<td>-</td>
</tr>
<tr>
<td><strong>Grand total bonds and notes</strong></td>
<td>$ 3,530,648</td>
<td>93</td>
<td>(49,027)</td>
<td>$ 3,481,714</td>
<td>43,019</td>
</tr>
</tbody>
</table>
A schedule of long-term debt activity for the year ended September 30, 2018 is shown below:

<table>
<thead>
<tr>
<th>Description</th>
<th>9/30/2017</th>
<th>Increases</th>
<th>Decreases</th>
<th>9/30/2018</th>
<th>Due Within One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 5.0%, maturing in 2050</td>
<td>$ -</td>
<td>$100,000</td>
<td>$ -</td>
<td>$ 100,000</td>
<td>$ -</td>
</tr>
<tr>
<td>Series B interest at 5.0%, maturing in 2050</td>
<td>-</td>
<td>200,000</td>
<td>-</td>
<td>200,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2017 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 4.0% to 5.0%, maturing in 2053</td>
<td>100,000</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B interest at 4.0% to 5.0%, maturing in 2045</td>
<td>200,000</td>
<td>-</td>
<td>-</td>
<td>200,000</td>
<td>3,045</td>
</tr>
<tr>
<td><strong>2016 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 2.0% to 5.0%, maturing in 2040</td>
<td>389,110</td>
<td>-</td>
<td>-</td>
<td>389,110</td>
<td>-</td>
</tr>
<tr>
<td><strong>2015 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 2.0% to 5.0%, maturing in 2046</td>
<td>100,000</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>580</td>
</tr>
<tr>
<td>Series B interest at 5.0% to 5.25%, maturing in 2045</td>
<td>250,000</td>
<td>-</td>
<td>-</td>
<td>250,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2014 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 4.81%, maturing in 2115</td>
<td>350,000</td>
<td>-</td>
<td>-</td>
<td>350,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B-1 interest at 1.0% to 3.25%, maturing in 2051</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>-</td>
</tr>
<tr>
<td>Series B-2 interest at 1.0% to 3.25%, maturing in 2051</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
<td>50,000</td>
<td>-</td>
</tr>
<tr>
<td>Series C interest at 3.0% to 5.0%, maturing in 2045</td>
<td>377,110</td>
<td>-</td>
<td>-</td>
<td>377,110</td>
<td>-</td>
</tr>
<tr>
<td><strong>2013 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 4.75% to 5.0%, maturing in 2049</td>
<td>300,000</td>
<td>-</td>
<td>-</td>
<td>300,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2012 Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series A interest at 2.0% to 5.0%, maturing in 2038</td>
<td>158,740</td>
<td>- (5,140)</td>
<td>153,600</td>
<td>5,345</td>
<td></td>
</tr>
<tr>
<td>Series C interest at 4.0% to 5.0%, maturing in 2034</td>
<td>163,215</td>
<td>-</td>
<td>-</td>
<td>163,215</td>
<td>-</td>
</tr>
<tr>
<td><strong>2010 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 4.1% to 5.5%, maturing in 2045</td>
<td>300,000</td>
<td>-</td>
<td>-</td>
<td>300,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>2009 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 3.0% to 6.0%, maturing in 2019</td>
<td>8,040</td>
<td>- (3,815)</td>
<td>4,225</td>
<td>4,225</td>
<td></td>
</tr>
<tr>
<td><strong>2008 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest at 4.0% to 5.0%, maturing in 2019</td>
<td>13,600</td>
<td>- (6,735)</td>
<td>6,865</td>
<td>6,865</td>
<td></td>
</tr>
<tr>
<td>1998 Public Utility Revenue Bonds:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interest ranges from 5.5% to 6.0%, maturing in 2029</td>
<td>156,605</td>
<td>- (14,750)</td>
<td>141,855</td>
<td>15,565</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>2,966,420</td>
<td>300,000</td>
<td>(30,440)</td>
<td>3,235,980</td>
<td>35,625</td>
</tr>
<tr>
<td><strong>Direct Placement &amp; Borrowings of Debt:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016 Public Utility Revenue Bonds:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series B interest at 3.4%, maturing in 2047</td>
<td>25,000</td>
<td>-</td>
<td>-</td>
<td>25,000</td>
<td>-</td>
</tr>
<tr>
<td>Notes payable to the Federal Government interest at 3.25%, maturing in 2041</td>
<td>12,454</td>
<td>- (400)</td>
<td>12,054</td>
<td>413</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>37,454</td>
<td>- (400)</td>
<td>37,054</td>
<td>413</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,003,874</td>
<td>300,000</td>
<td>(30,840)</td>
<td>3,273,034</td>
<td>36,038</td>
</tr>
<tr>
<td>Unamortized bond premiums</td>
<td>222,786</td>
<td>48,644</td>
<td>(11,852)</td>
<td>259,578</td>
<td>-</td>
</tr>
<tr>
<td>Unamortized bond discounts</td>
<td>(2,093)</td>
<td>-</td>
<td>129</td>
<td>(1,964)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Grand total bonds and notes</strong></td>
<td>$3,224,567</td>
<td>$348,644</td>
<td>$(42,563)</td>
<td>$3,530,648</td>
<td>$36,038</td>
</tr>
</tbody>
</table>
(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 the 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. As of September 30, 2019, the bonds are considered to be defeased and the liability for these bonds has been removed from the financial statements.
In April 1998, the Authority issued $266,120 of senior lien public utility revenue bonds 1998 Series. Gross proceeds from the Series 1998 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.
(11) Long-Term Debt (Continued)

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. 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.
(11) Long-Term Debt (Continued)

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, 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.

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 2037; 2012 Series B consisting of $100,000 with interest rate at 2.26% maturing in 2044; and 2012 Series C consisting of $163,215 with interest rates ranging from 4.0% to 5.0% maturing in 2033. 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.
Notes to the Financial Statements

September 30, 2019 and 2018

(In thousands)

(11) Long-Term Debt (Continued)

The interest subsidy received by the Authority for the fiscal years ended September 30, 2019 and 2018 amounted to $5,356 and $5,333, respectively. In fiscal years 2019 and 2018, the Authority received $354 and $377 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. As of September 30, 2019, the bonds are considered to be defeased and the liability for these bonds has been removed from the financial statements.

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, 2019 and 2018. 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).
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(In thousands)

(11) Long-Term Debt (Continued)

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, 2019 and 2018 was $24,134 and $23,458, 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.

Events of default with finance related consequences — If the Trustee is required to draw moneys from the Debt Service Reserve Fund to pay principal or interest on the Bonds and the Authority fails to begin replenishing the Debt Service Fund within 60 days, the Trustee shall send a notice of default to Holders of Senior Debt that have related Debt Service Reserve Accounts notifying them of the Authority’s failure to replenish such draws.

Termination of Proceedings — Where default proceedings have been discontinued or abandoned for any reason or shall have been determined adversely to the trustee, the Authority and the Trustee shall be restored to their former positions and rights under the terms of the Master Indenture, and all rights, remedies and power of the Trustee shall continue as if no such proceedings had taken place.

Acceleration — Where the Trustee declares by written notice to the Authority, that the entire unpaid principal of the Bonds due and payable, the Authority shall forthwith pay to the holders of the Bonds the entire unpaid principal of, premium, if any, and accrued interest on the Bonds, but only from Net Revenues and other moneys specifically pledged for payments of Bondholders under the terms of the Master Indenture.
(d) Debt Service to Maturity

The future debt-service obligations at September 30, 2019 are as follows:

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Principal</th>
<th>Interest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$43,019</td>
<td>149,314</td>
<td>192,333</td>
</tr>
<tr>
<td>2021</td>
<td>49,622</td>
<td>147,099</td>
<td>196,721</td>
</tr>
<tr>
<td>2022</td>
<td>57,177</td>
<td>144,536</td>
<td>201,713</td>
</tr>
<tr>
<td>2023</td>
<td>59,916</td>
<td>141,655</td>
<td>201,571</td>
</tr>
<tr>
<td>2024</td>
<td>62,891</td>
<td>138,619</td>
<td>201,510</td>
</tr>
<tr>
<td>2025 - 2029</td>
<td>363,782</td>
<td>646,238</td>
<td>1,010,020</td>
</tr>
<tr>
<td>2030 - 2034</td>
<td>452,471</td>
<td>549,441</td>
<td>1,001,912</td>
</tr>
<tr>
<td>2035 - 2039</td>
<td>559,775</td>
<td>429,886</td>
<td>989,661</td>
</tr>
<tr>
<td>2040 - 2044</td>
<td>653,706</td>
<td>290,208</td>
<td>943,914</td>
</tr>
<tr>
<td>2045 - 2049</td>
<td>485,090</td>
<td>149,531</td>
<td>634,621</td>
</tr>
<tr>
<td>2050 - 2054</td>
<td>99,640</td>
<td>90,322</td>
<td>189,962</td>
</tr>
<tr>
<td>2055 - 2059</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
</tr>
<tr>
<td>2060 - 2064</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
</tr>
<tr>
<td>2065 - 2069</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
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<tr>
<td>2070 - 2074</td>
<td>-</td>
<td>84,245</td>
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<tr>
<td>2075 - 2079</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
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<tr>
<td>2080 - 2084</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
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<tr>
<td>2085 - 2089</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
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<tr>
<td>2090 - 2094</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
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<tr>
<td>2095 - 2099</td>
<td>-</td>
<td>84,245</td>
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<tr>
<td>2100 - 2104</td>
<td>-</td>
<td>84,245</td>
<td>84,245</td>
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<tr>
<td>2105 - 2109</td>
<td>120,647</td>
<td>70,066</td>
<td>190,713</td>
</tr>
<tr>
<td>2110 - 2114</td>
<td>186,498</td>
<td>29,115</td>
<td>215,613</td>
</tr>
<tr>
<td>2115 - 2119</td>
<td>42,855</td>
<td></td>
<td>42,855</td>
</tr>
</tbody>
</table>

$3,237,089 $3,818,480 $7,055,569
DISTRIBUT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(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, 2019 and 2018, the following outstanding revenue bonds are considered defeased:

<table>
<thead>
<tr>
<th>Bond issue</th>
<th>Principal Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
</tr>
<tr>
<td>interest at 3.0% to 6.0%, maturing in 2039</td>
<td>$ -</td>
</tr>
<tr>
<td><strong>2008 Series A Public Utility Revenue Bonds:</strong></td>
<td></td>
</tr>
<tr>
<td>interest at 4.0% to 5.0%, maturing in 2034</td>
<td>$ -</td>
</tr>
<tr>
<td><strong>Total Principal Outstanding</strong></td>
<td>$ -</td>
</tr>
</tbody>
</table>

(12) Commitments and Contingencies – Other Liabilities

A schedule of other liabilities as of September 30, 2019 and 2018 is shown below:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk management contingency</td>
<td>$12,033</td>
<td>$12,966</td>
</tr>
<tr>
<td>Rolling owner controlled insurance program</td>
<td>5,582</td>
<td>6,667</td>
</tr>
<tr>
<td>Litigation contingency</td>
<td>348</td>
<td>230</td>
</tr>
<tr>
<td>Contractual obligations</td>
<td>1,333</td>
<td>1,334</td>
</tr>
<tr>
<td>Retirement health savings plan</td>
<td>4,511</td>
<td>3,884</td>
</tr>
<tr>
<td><strong>Total other liabilities</strong></td>
<td>23,807</td>
<td>25,081</td>
</tr>
</tbody>
</table>

Less: current portion | 12,676 | 14,558 |

Noncurrent portion | $11,131 | $10,523 |

The current portion of other liabilities represents management’s estimate of the amounts that will be paid in next fiscal year.
(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 any significant changes in insurance coverage in comparison to 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, cyber 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. Additional insurance includes professional liability, which provides protection for errors or omissions arising from engineering, consulting or testing services provided to third parties for a fee. Crime & Fidelity/Employee insurance provides dishonesty coverage and miscellaneous crime coverages. Fiduciary liability provides protection for wrongful acts that are actually or allegedly caused by trustees and employees of the DC Water sponsored Employee Benefit Plans.

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.
Notes to the Financial Statements

September 30, 2019 and 2018

(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, 2019, 2018 and 2017 were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$12,966</td>
<td>$11,670</td>
<td>$11,818</td>
</tr>
<tr>
<td>Current year claims and changes in estimates</td>
<td>1,258</td>
<td>3,449</td>
<td>2,169</td>
</tr>
<tr>
<td>Claim payments</td>
<td>(2,191)</td>
<td>(2,153)</td>
<td>(2,317)</td>
</tr>
<tr>
<td>Balance, end of year</td>
<td>$12,033</td>
<td>$12,966</td>
<td>$11,670</td>
</tr>
</tbody>
</table>

(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.
(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, 2019, 2018 and 2017 were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>$6,667</td>
<td>$7,141</td>
<td>$6,518</td>
</tr>
<tr>
<td>Current year increase (decrease) in ROCIP liability</td>
<td>6,953</td>
<td>8,031</td>
<td>11,245</td>
</tr>
<tr>
<td>ROCIP administration and claim payments</td>
<td>(8,038)</td>
<td>(8,505)</td>
<td>(10,622)</td>
</tr>
<tr>
<td>Balance, end of year</td>
<td>$5,582</td>
<td>$6,667</td>
<td>$7,141</td>
</tr>
</tbody>
</table>

(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, 2019 and 2018:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance, beginning of year</td>
<td>230</td>
<td>669</td>
</tr>
<tr>
<td>Current year claims and changes in estimates</td>
<td>145</td>
<td>(184)</td>
</tr>
<tr>
<td>Claim payments</td>
<td>(28)</td>
<td>(255)</td>
</tr>
<tr>
<td>Balance, end of year</td>
<td>348</td>
<td>230</td>
</tr>
</tbody>
</table>

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, 2019 and 2018 were $777,819 and $879,305, 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.
(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 of 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, 2019 and 2018 were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities leases</td>
<td>$927</td>
<td>$2,121</td>
</tr>
<tr>
<td>Automobile equipment leases</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>Machinery leases</td>
<td>331</td>
<td>345</td>
</tr>
<tr>
<td>Total</td>
<td>$1,278</td>
<td>$2,808</td>
</tr>
</tbody>
</table>

Future minimum non-cancelable lease payments on existing operating leases at September 30, 2019, which have an initial term of one year or more, are as follows:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$212</td>
</tr>
<tr>
<td>2021</td>
<td>219</td>
</tr>
<tr>
<td>2022</td>
<td>223</td>
</tr>
<tr>
<td>2023</td>
<td>228</td>
</tr>
<tr>
<td>2024</td>
<td>232</td>
</tr>
<tr>
<td>2025-2029</td>
<td>117</td>
</tr>
<tr>
<td>Total</td>
<td>$1,230</td>
</tr>
</tbody>
</table>

(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 $33,985 and $31,980 from the District government and $11,831 and $10,730 from the District of Columbia Housing Authority (“DCHA”) for fiscal years 2019 and 2018, 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, 2019 and 2018

(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 $16,602 and $16,276 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, 2019 and 2018.

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, 2019 and 2018. As of September 30, 2019 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, 2019 and 2018 were $34,183 and $39,682, respectively. Such amounts were comprised of the following at September 30, 2019 and 2018, respectively:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Boundary Neighborhood Protection Project</td>
<td>$35,148</td>
<td>$41,006</td>
</tr>
<tr>
<td>Storm Water Fees (13 d)</td>
<td>(2,662)</td>
<td>(2,198)</td>
</tr>
<tr>
<td>Other miscellaneous items</td>
<td>1,697</td>
<td>874</td>
</tr>
<tr>
<td>Total due from District government</td>
<td>34,183</td>
<td>39,682</td>
</tr>
<tr>
<td>Less: current portion</td>
<td>4,893</td>
<td>4,534</td>
</tr>
<tr>
<td>Noncurrent portion</td>
<td>$29,290</td>
<td>$35,148</td>
</tr>
</tbody>
</table>
(13) Related Party and Similar Transactions (Continued)

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, 2019 and 2018 under this agreement amounted to $35,148 and $41,006, respectively. 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, 2019 and 2018, the activity associated with the Authority providing this service to the District was as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due from (to) the District-beginning of year</td>
<td>(2,198)</td>
<td>(2,446)</td>
</tr>
<tr>
<td>Collections on behalf of the District</td>
<td>(13,490)</td>
<td>(12,665)</td>
</tr>
<tr>
<td>Remittances to the District</td>
<td>13,043</td>
<td>12,917</td>
</tr>
<tr>
<td>Expenses incurred by the Authority</td>
<td>1,253</td>
<td>1,244</td>
</tr>
<tr>
<td>Expenses reimbursed by the District</td>
<td>(1,270)</td>
<td>(1,248)</td>
</tr>
<tr>
<td>Due from (to) the District-end of year</td>
<td>(2,662)</td>
<td>(2,198)</td>
</tr>
</tbody>
</table>

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, 2019 and 2018, 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, 2019, the District has disbursed $4,331 to DC Water pursuant to this agreement and the Authority has incurred $2,834 of eligible costs that are included in capital contributions on the statement of changes in net position for the year ended September 30, 2019. The balance of $1,497 is reflected in unearned revenue on the statement of net position as of September 30, 2019.
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018

(In thousands)

(13) Related Party and Similar Transactions (Continued)

(f) Danbury Station Water Meter Installation

On May 2, 2019, the DDOE and the Authority entered into an MOU whereby the DDOE advanced $500 in funds to support costs incurred by the Authority to install individual water meters and appurtenances and perform related excavation and restoration work for dwelling units at the Danbury Station. As of September 30, 2019, the Authority has incurred $389 of eligible costs. The balance of $111 is reflected in unearned revenue on the statement of net position as of September 30, 2019.

(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 2019 and 2018, there were 83 and 94 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 2019, 2018, and 2017, the Authority’s contributions to the plans were $514, $582, and $649, 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).
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Notes to the Financial Statements

September 30, 2019 and 2018
(In thousands)

(14) Employee Benefits (Continued)

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 2019, 2018, and 2017.

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.

**Defined Contribution Plan** - During fiscal years 2019, 2018, and 2017, 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 2019, 2018, and 2017, the Authority’s contributions to both defined contribution plans were $9,963, $10,042, and $9,286, respectively. The amount of the Authority’s outstanding liability at the end of fiscal years 2019, 2018, and 2017 were $1,357, $857, and $746, 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 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.
Notes to the Financial Statements

September 30, 2019 and 2018
(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, 2019 and 2018. 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: $1,005 and $852 of support provided by DC Water to Blue Drop for fiscal years 2019 and 2018 as noted in the following table:

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Support including Cash Transfers</td>
<td>$797</td>
<td>$386</td>
</tr>
<tr>
<td>Marketing fees</td>
<td>203</td>
<td>43</td>
</tr>
<tr>
<td>Donated employee time</td>
<td>5</td>
<td>321</td>
</tr>
<tr>
<td>Donated office space</td>
<td>-</td>
<td>102</td>
</tr>
<tr>
<td>Total</td>
<td>$1,005</td>
<td>$852</td>
</tr>
</tbody>
</table>

During fiscal years ended September 30, 2019 and 2018 intra-entity receivables were $48 and intra-entity payables were $11.

Condensed Statement of Net Position - Blended Component Unit - Blue Drop, LLC as of September 30, 2019 and 2018:

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets</td>
<td>$1,425</td>
<td>$678</td>
</tr>
<tr>
<td>Property and Equipment - Net</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Due from DC Water</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Total assets</td>
<td>1,484</td>
<td>726</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>Due to DC Water</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Deferred Rental Revenue</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>33</td>
<td>42</td>
</tr>
<tr>
<td>Unrestricted net position</td>
<td>$1,451</td>
<td>$684</td>
</tr>
</tbody>
</table>
## Condensed Statement of Revenues, Expenses, and Changes in Net Position - Blended Component Unit - Blue Drop, LLC for the year ended September 30, 2019 and 2018:

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Water support</td>
<td>$ 803</td>
<td>$ 809</td>
</tr>
<tr>
<td>Product and IP Revenue</td>
<td>599</td>
<td>-</td>
</tr>
<tr>
<td>Sales of Bloom, Net of cost of sales</td>
<td>169</td>
<td>67</td>
</tr>
<tr>
<td>Consulting revenue</td>
<td>118</td>
<td>278</td>
</tr>
<tr>
<td>Marketing fees, DC Water</td>
<td>203</td>
<td>43</td>
</tr>
<tr>
<td>Event Rental</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td>1,910</td>
<td>1,215</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel services</td>
<td>655</td>
<td>555</td>
</tr>
<tr>
<td>Contractual services</td>
<td>427</td>
<td>153</td>
</tr>
<tr>
<td>Supplies</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>Utilities and rent</td>
<td>35</td>
<td>107</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td>1,143</td>
<td>856</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in net position</td>
<td>767</td>
<td>359</td>
</tr>
<tr>
<td>Net position, beginning of year</td>
<td>684</td>
<td>325</td>
</tr>
<tr>
<td><strong>Net position, end of year</strong></td>
<td>$1,451</td>
<td>$ 684</td>
</tr>
</tbody>
</table>

## Condensed Statement of Cash Flows - Blended Component Unit - Blue Drop, LLC for the year ended September 30, 2019 and 2018:

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net cash provided by operating activities</td>
<td>$ 236</td>
<td>$ 343</td>
</tr>
<tr>
<td>Net cash used in investing activities</td>
<td>(13)</td>
<td>(259)</td>
</tr>
<tr>
<td><strong>Increase in cash</strong></td>
<td>223</td>
<td>84</td>
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<tr>
<td>Cash at beginning of year</td>
<td>386</td>
<td>302</td>
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<tr>
<td><strong>Cash at end of year</strong></td>
<td>$ 609</td>
<td>$ 386</td>
</tr>
</tbody>
</table>
(16) Subsequent Events

The Authority has evaluated events subsequent to September 30, 2019 through December 19, 2019, the date the financial statements were available to be issued. During this period, the Authority has issued $104.0 million of Public Utility Subordinate Lien Revenue Bonds, 2019 Series A (Green Bonds), $58.3 million of Public Utility Subordinate Lien Revenue Bonds, 2019 Series B, $343.2 million of Public Utility Subordinate Lien Revenue Refunding Bonds, 2019 Series D (Federally Taxable), and $99.5 million of Public Utility Subordinate Lien Multimodal Revenue Bonds, 2019 Series C.
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)

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<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Operating revenues</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential, commercial and multi-family customers</td>
<td>$443,481</td>
<td>$425,492</td>
<td>$401,246</td>
<td>$382,552</td>
<td>$335,711</td>
<td>$295,209</td>
<td>$275,337</td>
<td>$256,846</td>
<td>$256,846</td>
<td>$241,475</td>
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<td>Federal government</td>
<td>73,393</td>
<td>73,551</td>
<td>67,672</td>
<td>63,417</td>
<td>39,001</td>
<td>45,187</td>
<td>48,361</td>
<td>43,033</td>
<td>37,845</td>
<td>21,947</td>
</tr>
<tr>
<td>District government and DC Housing Authority</td>
<td>45,816</td>
<td>42,710</td>
<td>40,483</td>
<td>38,185</td>
<td>32,948</td>
<td>28,852</td>
<td>21,677</td>
<td>24,173</td>
<td>25,123</td>
<td>21,947</td>
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<td>Charges for wholesale wastewater treatment</td>
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<td>121,961</td>
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<td>91,873</td>
<td>112,522</td>
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<td>87,178</td>
<td>94,549</td>
<td>90,414</td>
<td>87,505</td>
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<tr>
<td>Other</td>
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<td>32,149</td>
<td>19,762</td>
<td>14,460</td>
<td>13,917</td>
<td>9,700</td>
<td>16,077</td>
<td>8,210</td>
<td>6,655</td>
</tr>
<tr>
<td><strong>Total Operating Revenues</strong></td>
<td>705,147</td>
<td>684,502</td>
<td>643,169</td>
<td>595,789</td>
<td>549,915</td>
<td>473,824</td>
<td>439,079</td>
<td>440,566</td>
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<td>363,748</td>
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<td><strong>Operating expenses</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Personnel services</td>
<td>141,040</td>
<td>142,342</td>
<td>132,124</td>
<td>124,239</td>
<td>115,233</td>
<td>108,467</td>
<td>103,908</td>
<td>97,784</td>
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<td>72,611</td>
<td>74,086</td>
<td>66,241</td>
<td>68,172</td>
<td>68,417</td>
<td>64,939</td>
<td>71,055</td>
<td>69,497</td>
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<td>Chemicals, supplies and small equipment</td>
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<td>31,152</td>
<td>33,381</td>
<td>29,524</td>
<td>32,935</td>
<td>31,748</td>
<td>28,987</td>
<td>28,188</td>
<td>29,003</td>
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<td>26,163</td>
<td>24,262</td>
<td>23,934</td>
<td>30,848</td>
<td>29,393</td>
<td>26,098</td>
<td>26,786</td>
<td>29,429</td>
<td>29,929</td>
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<td>Depreciation and amortization</td>
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<td>115,453</td>
<td>97,900</td>
<td>89,512</td>
<td>83,857</td>
<td>77,330</td>
<td>77,432</td>
<td>74,001</td>
<td>70,209</td>
<td>64,425</td>
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<td>21,376</td>
<td>21,057</td>
<td>20,744</td>
<td>20,437</td>
<td>11,458</td>
<td>21,982</td>
<td>21,982</td>
<td>21,982</td>
<td>20,474</td>
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<td>439,470</td>
<td>408,131</td>
<td>388,384</td>
<td>378,660</td>
<td>356,024</td>
<td>353,945</td>
<td>343,037</td>
<td>329,125</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Operating income</strong></td>
<td>244,264</td>
<td>245,032</td>
<td>235,038</td>
<td>207,405</td>
<td>171,255</td>
<td>117,800</td>
<td>85,134</td>
<td>97,529</td>
<td>66,982</td>
<td>34,623</td>
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<tr>
<td><strong>Non-operating revenue (expenses)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Interest income</td>
<td>9,307</td>
<td>5,866</td>
<td>3,740</td>
<td>2,629</td>
<td>1,316</td>
<td>977</td>
<td>1,144</td>
<td>749</td>
<td>2,036</td>
<td>1,343</td>
</tr>
<tr>
<td>Interest expense and other nonoperating expenses</td>
<td>(104,630)</td>
<td>(93,956)</td>
<td>(68,293)</td>
<td>(69,118)</td>
<td>(69,140)</td>
<td>(69,288)</td>
<td>(63,905)</td>
<td>(74,001)</td>
<td>(73,335)</td>
<td>(57,479)</td>
</tr>
<tr>
<td><strong>Total non-operating (expenses)</strong></td>
<td>(95,323)</td>
<td>(88,090)</td>
<td>(64,553)</td>
<td>(66,489)</td>
<td>(60,093)</td>
<td>(68,311)</td>
<td>(62,761)</td>
<td>(73,252)</td>
<td>(71,299)</td>
<td>(56,136)</td>
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<tr>
<td><strong>Change in net position before capital contributions</strong></td>
<td>148,941</td>
<td>156,942</td>
<td>170,485</td>
<td>140,916</td>
<td>111,162</td>
<td>49,489</td>
<td>22,373</td>
<td>24,277</td>
<td>(4,317)</td>
<td>(21,513)</td>
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<tr>
<td><strong>Capital contributions</strong></td>
<td>16,313</td>
<td>30,419</td>
<td>24,066</td>
<td>32,431</td>
<td>67,966</td>
<td>94,690</td>
<td>58,310</td>
<td>58,957</td>
<td>47,374</td>
<td>30,403</td>
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<tr>
<td><strong>Change in net position</strong></td>
<td>165,254</td>
<td>187,361</td>
<td>194,551</td>
<td>173,437</td>
<td>179,127</td>
<td>144,179</td>
<td>80,683</td>
<td>83,234</td>
<td>43,057</td>
<td>8,890</td>
</tr>
<tr>
<td><strong>Net position, beginning of year</strong></td>
<td>2,085,201</td>
<td>1,897,840</td>
<td>1,703,289</td>
<td>1,529,942</td>
<td>1,350,815</td>
<td>1,206,636</td>
<td>1,125,953</td>
<td>1,042,719</td>
<td>999,662</td>
<td>990,772</td>
</tr>
<tr>
<td><strong>Net position, end of year</strong></td>
<td>2,250,455</td>
<td>2,085,201</td>
<td>1,897,840</td>
<td>1,703,289</td>
<td>1,529,942</td>
<td>1,350,815</td>
<td>1,206,636</td>
<td>1,125,953</td>
<td>1,042,719</td>
<td>999,662</td>
</tr>
</tbody>
</table>

### District of Columbia Water and Sewer Authority

#### Exhibit 2

**Summary of Net Position**  
**Last Ten Fiscal Years**  
($000)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net investments in capital assets</td>
<td>$1,935,786</td>
<td>$1,808,622</td>
<td>$1,655,867</td>
<td>$1,491,925</td>
<td>$1,348,056</td>
<td>$1,130,956</td>
<td>$1,042,620</td>
<td>$956,397</td>
<td>$874,356</td>
<td>$818,001</td>
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<tr>
<td>Restricted</td>
<td>43,762</td>
<td>38,907</td>
<td>33,276</td>
<td>33,135</td>
<td>27,054</td>
<td>28,863</td>
<td>29,010</td>
<td>27,297</td>
<td>26,825</td>
<td>17,257</td>
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<tr>
<td>Unrestricted</td>
<td>270,907</td>
<td>237,672</td>
<td>208,697</td>
<td>178,229</td>
<td>154,832</td>
<td>191,000</td>
<td>135,006</td>
<td>142,259</td>
<td>141,538</td>
<td>164,404</td>
</tr>
<tr>
<td>Total net position</td>
<td>$2,250,455</td>
<td>$2,085,201</td>
<td>$1,897,840</td>
<td>$1,703,289</td>
<td>$1,529,942</td>
<td>$1,350,815</td>
<td>$1,206,636</td>
<td>$1,125,953</td>
<td>$1,042,719</td>
<td>$999,662</td>
</tr>
</tbody>
</table>

Source: FY 2010 - 2019 Statements of Net Position
Note: These disbursements include DC Water’s share of Washington Aqueduct’s capital disbursements.

2. Revenue Capacity

These schedules contain information regarding the Authority’s most significant revenue sources.
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retail Customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Residential, Commercial and Multifamily</td>
<td>$443,481</td>
<td>$425,492</td>
<td>$401,246</td>
<td>$382,552</td>
<td>$335,711</td>
<td>$295,209</td>
<td>$275,337</td>
<td>$256,846</td>
<td>$241,475</td>
<td>$209,796</td>
</tr>
<tr>
<td>Federal Government</td>
<td>73,393</td>
<td>73,551</td>
<td>67,672</td>
<td>63,417</td>
<td>54,274</td>
<td>39,001</td>
<td>45,187</td>
<td>48,381</td>
<td>43,033</td>
<td>37,845</td>
</tr>
<tr>
<td>DC Government</td>
<td>33,985</td>
<td>31,980</td>
<td>30,429</td>
<td>28,890</td>
<td>24,453</td>
<td>21,205</td>
<td>14,714</td>
<td>18,213</td>
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<td>DC Housing Authority</td>
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<td>8,495</td>
<td>7,647</td>
<td>6,963</td>
<td>6,500</td>
<td>7,296</td>
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<td>Other Revenues</td>
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<td>20,788</td>
<td>32,149</td>
<td>19,762</td>
<td>14,460</td>
<td>13,917</td>
<td>9,700</td>
<td>16,077</td>
<td>8,210</td>
<td>6,655</td>
</tr>
<tr>
<td><strong>Total Retail Customers</strong></td>
<td>590,381</td>
<td>562,541</td>
<td>541,550</td>
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<td>437,393</td>
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<td>276,243</td>
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<tr>
<td>Wholesale Customers</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>114,766</td>
<td>121,961</td>
<td>101,619</td>
<td>91,873</td>
<td>112,522</td>
<td>96,845</td>
<td>87,178</td>
<td>94,549</td>
<td>90,414</td>
<td>87,505</td>
</tr>
<tr>
<td><strong>Total Operating Revenues</strong></td>
<td>$705,147</td>
<td>$684,502</td>
<td>$643,169</td>
<td>$595,789</td>
<td>$549,915</td>
<td>$473,824</td>
<td>$439,079</td>
<td>$440,566</td>
<td>$408,255</td>
<td>$363,748</td>
</tr>
<tr>
<td>Retail Rate Increases</td>
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<td>5.00%</td>
<td>5.00%</td>
<td>6.50%</td>
<td>7.50%</td>
<td>5.50%</td>
<td>5.50%</td>
<td>4.50%</td>
<td>12.50%</td>
<td>9.00%</td>
</tr>
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</table>

Source: FY 2010 - 2019 Statements of Revenues, Expenses and Changes in Net Position
## EXHIBIT 5

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

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<thead>
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<tbody>
<tr>
<td>Retail Accounts</td>
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<tr>
<td>Residential</td>
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<td>542</td>
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<td>District of Columbia</td>
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<td>630</td>
<td>605</td>
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<td>603</td>
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<td>DC Housing Authority</td>
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<td>1,462</td>
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<td>1,452</td>
<td>1,460</td>
<td>1,435</td>
<td>1,431</td>
<td>1,431</td>
</tr>
<tr>
<td>Total Retail Accounts</td>
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<td>127,609</td>
<td>127,316</td>
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<td>126,452</td>
<td>125,707</td>
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<tr>
<td>Washington Aqueduct</td>
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<td>Wholesale</td>
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<td>7</td>
<td>7</td>
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<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Total Number of Accounts</td>
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</table>

(A) DC Water began excluding inactive accounts in 2018 after conversion to new CIS.

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

Source: D.C. Water Department of Customer Service
### TEN LARGEST COMMERCIAL CUSTOMERS
### LAST TEN FISCAL YEARS

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<td>2,161,183</td>
<td>2,530,632</td>
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<td>897,121</td>
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<td>897,121</td>
<td>804,533</td>
<td>-</td>
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<td>The Barac Company</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>927,022</td>
<td>776,134</td>
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<td><strong>Total</strong></td>
<td><strong>$20,106,617</strong></td>
<td><strong>$17,617,212</strong></td>
<td><strong>$16,143,294</strong></td>
<td><strong>$17,219,750</strong></td>
<td><strong>$16,108,912</strong></td>
<td><strong>$17,047,961</strong></td>
<td><strong>$15,488,799</strong></td>
<td><strong>$14,965,349</strong></td>
<td><strong>$14,425,476</strong></td>
<td><strong>$12,103,320</strong></td>
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<td><strong>% of Total Operating Revenues</strong></td>
<td>2.85%</td>
<td>2.57%</td>
<td>2.51%</td>
<td>2.89%</td>
<td>2.93%</td>
<td>3.60%</td>
<td>3.53%</td>
<td>3.40%</td>
<td>3.53%</td>
<td>3.33%</td>
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Source: DC Water Department of Customer Service
## DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

### EXHIBIT 7

#### TEN LARGEST GOVERNMENT CUSTOMERS

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<td>$5,750,927</td>
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<td>U.S. General Services Administration</td>
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<td>8,096,034</td>
<td>7,092,342</td>
<td>11,670,623</td>
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<td>7,443,691</td>
<td>6,877,787</td>
<td>6,575,977</td>
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<td>U.S. Congress</td>
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<td>5,061,870</td>
<td>4,597,331</td>
<td>3,223,507</td>
<td>6,524,863</td>
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<td>4,926,790</td>
<td>5,225,952</td>
<td>4,214,640</td>
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<td>4,683,524</td>
<td>3,635,763</td>
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<td>Bolling Air Force Base</td>
<td>4,279,384</td>
<td>4,187,710</td>
<td>3,115,393</td>
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<td>1,833,491</td>
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<td>1,521,264</td>
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<td>3,832,568</td>
<td>2,851,611</td>
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<td>3,272,747</td>
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<td>Department of Defense DC</td>
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<td>2,151,529</td>
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<td><strong>Total</strong></td>
<td><strong>$43,541,966</strong></td>
<td><strong>$38,098,027</strong></td>
<td><strong>$38,172,034</strong></td>
<td><strong>$38,529,279</strong></td>
<td><strong>$37,527,753</strong></td>
<td><strong>$32,455,763</strong></td>
<td><strong>$34,594,545</strong></td>
<td><strong>$35,844,310</strong></td>
<td><strong>$37,858,234</strong></td>
<td><strong>$32,636,385</strong></td>
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</tbody>
</table>

% of Total Operating Revenues

|                      | 6.17% | 5.57% | 5.93% | 6.47% | 6.82% | 6.85% | 7.88% | 8.14% | 9.27% | 8.97% |

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**

<table>
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<tr>
<th>FISCAL YEAR</th>
<th>(a) DISTRICT WATER SYSTEM FEE</th>
<th>(b) REPLACEMENT FEE</th>
<th>(c) OCCUPANCY FEE AND PILOT RATE</th>
<th>(d) WATER CONSUMPTION RATE</th>
<th>(e) SEWER CONSUMPTION RATE</th>
<th>(f) COMBINED SURFACE AREA RATE</th>
<th>(g) IMPERVIOUS SURFACE MONTHLY CHARGE</th>
<th>AVERAGE BILL</th>
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<td>2010</td>
<td>2.010</td>
<td>-</td>
<td>0.57</td>
<td>2.51</td>
<td>3.61</td>
<td>6.12</td>
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<td>2011</td>
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<td>-</td>
<td>0.63</td>
<td>3.10</td>
<td>3.79</td>
<td>6.89</td>
<td>3.450</td>
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<td>-</td>
<td>0.64</td>
<td>3.24</td>
<td>3.96</td>
<td>7.20</td>
<td>6.64</td>
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<td>3.860</td>
<td>-</td>
<td>0.66</td>
<td>3.42</td>
<td>4.18</td>
<td>7.60</td>
<td>9.57</td>
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<td>3.860</td>
<td>-</td>
<td>0.70</td>
<td>3.61</td>
<td>4.41</td>
<td>8.02</td>
<td>11.85</td>
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<td>0.63</td>
<td>3.88</td>
<td>4.74</td>
<td>8.62</td>
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<td>6.00</td>
<td>9.70</td>
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<td>7.75</td>
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</table>

1 Average residential customer consumption is 6.2 Ccf per month for up to FY 2018 and 5.42 Ccf for FY 2019. The average monthly bill is calculated as follows: (a)+(b)+(g)+(((c)+(f)) x 5.42 Ccf)

2 Per Equivalent Residential Unit (ERU).

3 Weighted average water rate for residential customers.

Source: D.C. Water Department of Finance & Budget
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 fall 2019.

Source: DC Water Department of Finance & Budget
This analysis represents single family residential average monthly bill based on rates in effect fall 2019.

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.
### Outstanding Debt and Debt Ratios

**Last Ten Fiscal Years ($000, Except Per Capita)**

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<tr>
<td><strong>Senior Debt:</strong></td>
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<td>Total Senior Debt</td>
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<td>539,270</td>
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<tr>
<td>2014 Series B-1 Public Utility Revenue Bonds</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>2014 Series B-2 Public Utility Revenue Bonds</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>2014 Series C Public Utility Revenue Bonds</td>
<td>377,110</td>
<td>377,110</td>
<td>377,110</td>
<td>377,110</td>
<td>377,700</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>2013 Series A Public Utility Revenue Bonds</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>-</td>
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<tr>
<td>2012 Series A Public Utility Revenue Bonds</td>
<td>148,255</td>
<td>153,600</td>
<td>158,740</td>
<td>163,655</td>
<td>168,405</td>
<td>172,990</td>
<td>177,430</td>
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<tr>
<td>2012 Series B-1 Public Utility Revenue Bonds</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>47,310</td>
<td>47,310</td>
<td>47,310</td>
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<tr>
<td>2010 Series A Public Utility Revenue Bonds</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
<td>300,000</td>
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<tr>
<td>2008 Series A Public Utility Revenue Bonds</td>
<td>-</td>
<td>6,865</td>
<td>13,600</td>
<td>20,200</td>
<td>168,190</td>
<td>274,210</td>
<td>279,955</td>
<td>285,540</td>
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<tr>
<td>2007 Series A Public Utility Revenue Bonds</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>115,580</td>
<td>218,715</td>
<td>218,715</td>
<td>218,715</td>
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<tr>
<td>2003 Public Utility Revenue Bonds</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Notes Payable to the Federal Government for Bloomington Dam</td>
<td>11,734</td>
<td>12,054</td>
<td>12,454</td>
<td>12,841</td>
<td>13,217</td>
<td>13,580</td>
<td>13,932</td>
<td>14,273</td>
<td>14,603</td>
<td>14,922</td>
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<tr>
<td>DC General Obligation Bonds</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Notes Payable to WSSC for Little Seneca</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Notes Payable to WSSC for Little Seneca</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Subordinate Debt</td>
<td>2,163,844</td>
<td>2,176,954</td>
<td>2,189,229</td>
<td>2,201,131</td>
<td>1,753,617</td>
<td>1,636,595</td>
<td>1,547,502</td>
<td>1,253,651</td>
<td>995,427</td>
<td>701,489</td>
</tr>
<tr>
<td>Total Senior and Subordinate debt</td>
<td>3,237,089</td>
<td>3,273,034</td>
<td>3,003,874</td>
<td>2,733,191</td>
<td>2,446,797</td>
<td>2,473,790</td>
<td>2,048,957</td>
<td>1,768,671</td>
<td>1,522,967</td>
<td>1,240,759</td>
</tr>
<tr>
<td>Unamortized bond premiums</td>
<td>246,460</td>
<td>259,578</td>
<td>222,786</td>
<td>198,677</td>
<td>104,060</td>
<td>76,098</td>
<td>79,313</td>
<td>79,674</td>
<td>28,255</td>
<td>29,929</td>
</tr>
<tr>
<td>Unamortized bond discounts (1,835)</td>
<td>(1,835)</td>
<td>(1,964)</td>
<td>(2,093)</td>
<td>(2,222)</td>
<td>(2,351)</td>
<td>(2,480)</td>
<td>(2,608)</td>
<td>(2,784)</td>
<td>(2,879)</td>
<td>(2,968)</td>
</tr>
<tr>
<td>Total Debt</td>
<td>$3,481,714</td>
<td>$3,530,648</td>
<td>$3,224,567</td>
<td>$2,926,646</td>
<td>$2,548,506</td>
<td>$2,547,408</td>
<td>$2,015,682</td>
<td>$1,845,561</td>
<td>$1,548,343</td>
<td>$1,287,720</td>
</tr>
</tbody>
</table>

**Debt - per capita**

<table>
<thead>
<tr>
<th></th>
<th>N/A</th>
<th>$5,026</th>
<th>$4,647</th>
<th>$4,301</th>
<th>$3,791</th>
<th>$3,866</th>
<th>$3,286</th>
<th>$2,919</th>
<th>$2,505</th>
<th>$2,096</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt - percentage of personal income</td>
<td>N/A</td>
<td>6.13%</td>
<td>5.81%</td>
<td>5.65%</td>
<td>5.17%</td>
<td>5.54%</td>
<td>4.37%</td>
<td>3.90%</td>
<td>3.40%</td>
<td>2.94%</td>
</tr>
</tbody>
</table>

N/A: population and personal income not available
See exhibits 13 and 14 for per capita personal income and population data.

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

Source: D.C. Water Department of Finance & Budget
## Calculation of Debt Service Coverage

**FY 2019 ($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)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>543,130</td>
</tr>
<tr>
<td>Wholesale</td>
<td>82,116</td>
</tr>
<tr>
<td>Other Non-Operating</td>
<td>69,191</td>
</tr>
<tr>
<td>Transfer from (Contributions to) Rate Stabilization Fund</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Cash Receipts (A)</strong></td>
<td>694,437</td>
</tr>
</tbody>
</table>

**Cash Disbursements (Operating Expenses) (B)**: 314,529

**Cash Receipts Less Cash Disbursements (C=A-B)**: 379,908

**Debt Service**:

- **Senior Debt Service (D)**: 75,282
- **Subordinate Debt Service (E)**: 117,753

**Total Outstanding and Projected Debt Service (F=D+E)**: 193,035

### Calculation of Net Cash Receipts Available for Senior Debt Service:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Receipts Less Cash Disbursements (C)</td>
<td>379,908</td>
</tr>
<tr>
<td>Prior Year Federal Billing Reconciliation</td>
<td>(5,753)</td>
</tr>
<tr>
<td>(Refund to)/Payment from Wholesale Customers</td>
<td>(10,940)</td>
</tr>
<tr>
<td><strong>Net Cash Receipts Available for Senior Debt Service (G)</strong></td>
<td>363,215</td>
</tr>
</tbody>
</table>

**Senior Debt Service Coverage (G/D)**: 4.82

### Calculation of Subordinate Debt Service Coverage:

- **Net Cash Receipts Available for Senior Debt Service (G)**: 363,215
- **Less Senior Debt Service (D)**: 75,282

**Net Cash Receipts Available for Subordinate Debt Service (G-D)**: 287,933

**Subordinate Debt Service Coverage ((G-D)/E)**: 2.45

**Combined Debt Service Coverage (G/F)**: 1.88

Source: D.C. Water Department of Finance & Budget
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.
## EXHIBIT 13

### POPULATION OF SERVICE AREA JURISDICTIONS

LAST TEN CALENDAR YEARS

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia</td>
<td>N/A</td>
<td>702,455</td>
<td>693,972</td>
<td>681,170</td>
<td>672,228</td>
<td>658,893</td>
<td>646,449</td>
<td>632,323</td>
<td>617,996</td>
<td>604,912</td>
</tr>
<tr>
<td>Montgomery County, MD</td>
<td>1,052,567</td>
<td>1,058,810</td>
<td>1,043,863</td>
<td>1,040,116</td>
<td>1,030,447</td>
<td>1,016,677</td>
<td>1,004,709</td>
<td>989,794</td>
<td>975,439</td>
<td></td>
</tr>
<tr>
<td>Prince George's County, MD</td>
<td>N/A</td>
<td>909,308</td>
<td>912,756</td>
<td>908,049</td>
<td>909,535</td>
<td>904,430</td>
<td>890,081</td>
<td>881,138</td>
<td>871,233</td>
<td>865,219</td>
</tr>
<tr>
<td>Fairfax County, VA</td>
<td>1,190,141</td>
<td>1,187,113</td>
<td>1,176,830</td>
<td>1,180,139</td>
<td>1,175,622</td>
<td>1,168,405</td>
<td>1,155,292</td>
<td>1,135,992</td>
<td>1,121,054</td>
<td>1,075,439</td>
</tr>
<tr>
<td>Loudoun County, VA</td>
<td>N/A</td>
<td>406,850</td>
<td>398,080</td>
<td>385,945</td>
<td>375,629</td>
<td>363,050</td>
<td>349,679</td>
<td>336,898</td>
<td>325,405</td>
<td>315,305</td>
</tr>
</tbody>
</table>

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis
## PERSONAL INCOME OF SERVICE AREA JURISDICTIONS
### LAST TEN CALENDAR YEARS

($000)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia</td>
<td>N/A</td>
<td>$57,604,817</td>
<td>$55,510,450</td>
<td>$51,842,801</td>
<td>$49,275,917</td>
<td>$46,015,860</td>
<td>$48,696,519</td>
<td>$47,280,666</td>
<td>$45,597,835</td>
<td>$43,082,099</td>
</tr>
<tr>
<td>Montgomery County, MD</td>
<td>N/A</td>
<td>94,404,295</td>
<td>91,202,046</td>
<td>84,518,332</td>
<td>79,946,266</td>
<td>75,720,017</td>
<td>73,958,785</td>
<td>73,551,167</td>
<td>69,050,166</td>
<td>65,904,393</td>
</tr>
<tr>
<td>Prince George's County, MD</td>
<td>N/A</td>
<td>44,938,165</td>
<td>43,232,981</td>
<td>41,922,938</td>
<td>40,806,805</td>
<td>40,215,913</td>
<td>38,595,921</td>
<td>38,481,250</td>
<td>35,036,640</td>
<td>33,888,631</td>
</tr>
<tr>
<td>Fairfax County, VA</td>
<td>N/A</td>
<td>98,116,827</td>
<td>93,041,631</td>
<td>89,412,959</td>
<td>88,419,380</td>
<td>88,180,013</td>
<td>83,835,355</td>
<td>82,727,342</td>
<td>78,392,046</td>
<td>75,161,493</td>
</tr>
<tr>
<td>Loudoun County, VA</td>
<td>N/A</td>
<td>31,762,679</td>
<td>29,789,834</td>
<td>27,486,217</td>
<td>26,254,562</td>
<td>24,463,869</td>
<td>20,886,046</td>
<td>20,107,077</td>
<td>18,626,729</td>
<td>16,971,112</td>
</tr>
</tbody>
</table>

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis
## PER CAPITA PERSONAL INCOME OF SERVICE AREA JURISDICTIONS
### LAST TEN CALENDAR YEARS

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia</td>
<td>N/A</td>
<td>$82,005</td>
<td>$79,989</td>
<td>$76,108</td>
<td>$73,302</td>
<td>$69,838</td>
<td>$75,329</td>
<td>$74,773</td>
<td>$73,783</td>
<td>$71,220</td>
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<tr>
<td>Montgomery County, MD</td>
<td>N/A</td>
<td>89,690</td>
<td>86,136</td>
<td>80,967</td>
<td>76,863</td>
<td>73,483</td>
<td>72,746</td>
<td>73,206</td>
<td>69,762</td>
<td>67,564</td>
</tr>
<tr>
<td>Prince George's County, MD</td>
<td>N/A</td>
<td>49,420</td>
<td>47,365</td>
<td>46,168</td>
<td>44,866</td>
<td>44,465</td>
<td>43,362</td>
<td>43,672</td>
<td>40,215</td>
<td>39,168</td>
</tr>
<tr>
<td>Fairfax County, VA</td>
<td>N/A</td>
<td>82,441</td>
<td>78,376</td>
<td>75,978</td>
<td>74,923</td>
<td>75,007</td>
<td>71,752</td>
<td>71,607</td>
<td>69,008</td>
<td>67,045</td>
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<tr>
<td>Loudoun County, VA</td>
<td>N/A</td>
<td>78,070</td>
<td>74,834</td>
<td>71,218</td>
<td>69,895</td>
<td>67,384</td>
<td>59,729</td>
<td>59,683</td>
<td>57,242</td>
<td>53,824</td>
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</table>

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis
# Exhibit 16
## Unemployment Rates
### Last Ten Calendar Years

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia</td>
<td>5.3%</td>
<td>6.0%</td>
<td>6.2%</td>
<td>6.5%</td>
<td>6.9%</td>
<td>7.0%</td>
<td>7.3%</td>
<td>8.2%</td>
<td>10.2%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Montgomery County, MD</td>
<td>2.8%</td>
<td>3.2%</td>
<td>3.4%</td>
<td>3.2%</td>
<td>4.0%</td>
<td>4.1%</td>
<td>4.5%</td>
<td>4.7%</td>
<td>5.2%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Prince George's County, MD</td>
<td>3.6%</td>
<td>4.1%</td>
<td>4.3%</td>
<td>4.1%</td>
<td>5.1%</td>
<td>5.5%</td>
<td>6.2%</td>
<td>6.5%</td>
<td>7.0%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Fairfax County, VA</td>
<td>2.0%</td>
<td>2.3%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
<td>3.6%</td>
<td>3.7%</td>
<td>3.6%</td>
<td>4.3%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Loudoun County, VA</td>
<td>2.0%</td>
<td>2.3%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.3%</td>
<td>3.6%</td>
<td>3.9%</td>
<td>3.7%</td>
<td>4.2%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Labor, Bureau of Labor Statistics
## DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

### EXHIBIT 17

#### EMPLOYMENT BY SECTOR

<table>
<thead>
<tr>
<th>Sector</th>
<th>District of Columbia</th>
<th>Montgomery County</th>
<th>Prince George's County</th>
<th>Fairfax County</th>
<th>Loudoun County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Mining, etc.</td>
<td>0.05%</td>
<td>0.28%</td>
<td>0.09%</td>
<td>0.16%</td>
<td>0.69%</td>
</tr>
<tr>
<td>Construction</td>
<td>2.04%</td>
<td>5.55%</td>
<td>8.83%</td>
<td>4.50%</td>
<td>8.48%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.24%</td>
<td>2.04%</td>
<td>1.88%</td>
<td>0.86%</td>
<td>3.43%</td>
</tr>
<tr>
<td>Transportation &amp; Public Utilities</td>
<td>2.14%</td>
<td>3.82%</td>
<td>7.61%</td>
<td>N/A</td>
<td>6.96%</td>
</tr>
<tr>
<td>Wholesale &amp; Retail Trade</td>
<td>3.50%</td>
<td>8.62%</td>
<td>12.37%</td>
<td>9.91%</td>
<td>10.94%</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>6.26%</td>
<td>11.70%</td>
<td>6.54%</td>
<td>10.00%</td>
<td>8.68%</td>
</tr>
<tr>
<td>Services</td>
<td>58.63%</td>
<td>54.40%</td>
<td>42.12%</td>
<td>61.24%</td>
<td>49.64%</td>
</tr>
<tr>
<td>Government (Federal, State &amp; Local)</td>
<td>25.60%</td>
<td>12.51%</td>
<td>19.01%</td>
<td>12.13%</td>
<td>10.67%</td>
</tr>
<tr>
<td>Military</td>
<td>1.52%</td>
<td>1.08%</td>
<td>1.56%</td>
<td>1.18%</td>
<td>0.53%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>100.00%</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Department of Commerce, Bureau of Economic Analysis  
Latest available data is for 2018

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

<table>
<thead>
<tr>
<th>FISCAL YEAR</th>
<th>WATER DELIVERED (MG)</th>
<th>WATER BILLED (MG)</th>
<th>SOLD/PUMPED RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>38,589</td>
<td>29,004</td>
<td>75.16%</td>
</tr>
<tr>
<td>2011</td>
<td>37,556</td>
<td>29,040</td>
<td>77.32%</td>
</tr>
<tr>
<td>2012</td>
<td>36,930</td>
<td>27,988</td>
<td>75.79%</td>
</tr>
<tr>
<td>2013</td>
<td>34,714</td>
<td>26,316</td>
<td>75.81%</td>
</tr>
<tr>
<td>2014</td>
<td>34,708</td>
<td>25,374</td>
<td>73.11%</td>
</tr>
<tr>
<td>2015</td>
<td>38,146</td>
<td>26,748</td>
<td>70.12%</td>
</tr>
<tr>
<td>2016</td>
<td>36,363</td>
<td>26,325</td>
<td>72.40%</td>
</tr>
<tr>
<td>2017</td>
<td>35,827</td>
<td>25,845</td>
<td>72.14%</td>
</tr>
<tr>
<td>2018</td>
<td>34,343</td>
<td>25,526</td>
<td>74.33%</td>
</tr>
<tr>
<td>2019</td>
<td>35,189</td>
<td>25,067</td>
<td>71.24%</td>
</tr>
</tbody>
</table>

Source: DC Water Department of Customer Service
## Exhibit 19
### WATER DEMAND
#### LAST TEN FISCAL YEARS

<table>
<thead>
<tr>
<th>FISCAL YEAR</th>
<th>ANNUAL DELIVERIES TO SYSTEM (MG)</th>
<th>AVERAGE DAY (MG)</th>
<th>MAXIMUM MONTH AVERAGE (MGD)</th>
<th>MAXIMUM DAY (MGD)</th>
<th>TOTAL ANNUAL WATER SOLD (MG)</th>
<th>AVERAGE DAY (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>38,589</td>
<td>105.7</td>
<td>130.5</td>
<td>146.9</td>
<td>29,004</td>
<td>79.5</td>
</tr>
<tr>
<td>2011</td>
<td>37,556</td>
<td>102.9</td>
<td>121.6</td>
<td>143.7</td>
<td>29,040</td>
<td>79.6</td>
</tr>
<tr>
<td>2012</td>
<td>36,930</td>
<td>100.9</td>
<td>125.3</td>
<td>142.9</td>
<td>27,988</td>
<td>76.7</td>
</tr>
<tr>
<td>2013</td>
<td>34,714</td>
<td>95.1</td>
<td>111.3</td>
<td>129.7</td>
<td>26,316</td>
<td>71.9</td>
</tr>
<tr>
<td>2014</td>
<td>34,708</td>
<td>95.1</td>
<td>106.6</td>
<td>123.7</td>
<td>25,374</td>
<td>72.1</td>
</tr>
<tr>
<td>2015</td>
<td>38,146</td>
<td>104.5</td>
<td>117.7</td>
<td>148.4</td>
<td>26,748</td>
<td>73.3</td>
</tr>
<tr>
<td>2016</td>
<td>36,363</td>
<td>99.4</td>
<td>113.8</td>
<td>127.7</td>
<td>26,325</td>
<td>72.1</td>
</tr>
<tr>
<td>2017</td>
<td>35,827</td>
<td>98.2</td>
<td>107.4</td>
<td>122.7</td>
<td>25,845</td>
<td>70.8</td>
</tr>
<tr>
<td>2018</td>
<td>34,343</td>
<td>94.1</td>
<td>110.9</td>
<td>132.5</td>
<td>25,526</td>
<td>69.9</td>
</tr>
<tr>
<td>2019</td>
<td>35,189</td>
<td>96.4</td>
<td>115.9</td>
<td>133.3</td>
<td>25,067</td>
<td>68.7</td>
</tr>
</tbody>
</table>

Source: DC Water Department of Water Services and Washington Aqueduct
## MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
### LAST TEN FISCAL YEARS

(Continued on next page)
### Wastewater Plant Permit Limitations
**August 26, 2018 through August 25, 2023**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical Oxygen Demand (carbonaceous)</td>
<td>5.0 mg/L (16,013 lbs./day)</td>
<td>7.5 mg/l (24,019 lbs./day)</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>6.1 mg/l (19,603 lbs./day)</td>
<td>NL (29,404 lbs./day)</td>
</tr>
<tr>
<td>Ammonia Nitrogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer (5/1 – 10/31)</td>
<td>4.1 mg/l (13,130 lbs./day)</td>
<td>6.1 mg/l (19,536 lbs./day)</td>
</tr>
<tr>
<td>Winter 1 (1/1 – 2/14)</td>
<td>12.8 mg/l (40,993 lbs./day)</td>
<td>19.3 mg/l (61,809 lbs./day)</td>
</tr>
<tr>
<td>Winter 2 (2/15 – 4/30)</td>
<td>10.3 mg/l (32,986 lbs./day)</td>
<td>15.4 mg/l (49,319 lbs./day)</td>
</tr>
<tr>
<td>Total Phosphorus (annual average)</td>
<td>0.17 mg/l (530 lbs./day)</td>
<td>0.34 mg/l (1,080 lbs./day)</td>
</tr>
<tr>
<td>Dissolved Oxygen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum daily average</td>
<td>5.0 mg/l</td>
<td></td>
</tr>
<tr>
<td>Not less than</td>
<td>4.0 mg/l</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>6.0 units</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>8.5 units</td>
<td></td>
</tr>
<tr>
<td>E.coli</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chesapeake Bay Voluntary Agreement</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Total Chlorine</td>
<td>Non detectable</td>
<td></td>
</tr>
<tr>
<td>U.S. Environmental Protection Agency</td>
<td>126 cu/100ml Geometric (30 day)</td>
<td></td>
</tr>
<tr>
<td>Total Nitrogen (Annual Average)</td>
<td>N/A</td>
<td>4,370,078 lbs./yr</td>
</tr>
</tbody>
</table>

### 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
### Secondary Treatment

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of reactors</td>
<td>6</td>
</tr>
<tr>
<td>Total reactor volume</td>
<td>27.7 MG</td>
</tr>
<tr>
<td>Number of clarifiers</td>
<td>24</td>
</tr>
<tr>
<td>Average reactor detention time</td>
<td>1.6 hours</td>
</tr>
<tr>
<td>Average clarifier hydraulic loading</td>
<td>763 gal/sq ft./day</td>
</tr>
<tr>
<td>Number of centrifugal blowers</td>
<td>6</td>
</tr>
<tr>
<td>Total blower capacity</td>
<td>280,000 cu ft./min</td>
</tr>
<tr>
<td>Average MLSS</td>
<td>2,200 mg/L</td>
</tr>
<tr>
<td>Average SRT</td>
<td>1.6 days</td>
</tr>
<tr>
<td>Average SVI</td>
<td>80-100 ml/g</td>
</tr>
<tr>
<td>Effluent dissolved oxygen</td>
<td>2-3 mg/L</td>
</tr>
<tr>
<td>Effluent alkalinity</td>
<td>140 mg/L as CaCO3</td>
</tr>
</tbody>
</table>

### Nitrification / Denitrification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Nitrification reactors</td>
<td>12</td>
</tr>
<tr>
<td>Total reactor volume</td>
<td>55.2 MG</td>
</tr>
<tr>
<td>Number of Denitrification reactors</td>
<td>8</td>
</tr>
<tr>
<td>Total reactor volume</td>
<td>36.7 MG</td>
</tr>
<tr>
<td>Number of clarifiers</td>
<td>28</td>
</tr>
<tr>
<td>Average reactor detention time</td>
<td>3.3 hours 755 gallons/square ft./day</td>
</tr>
<tr>
<td>Average clarifier hydraulic loading</td>
<td>2000 mg/L</td>
</tr>
<tr>
<td>Average pH</td>
<td>7.0 units</td>
</tr>
<tr>
<td>Average SRT</td>
<td>21 days</td>
</tr>
<tr>
<td>Average SVI</td>
<td>80-110 ml/g</td>
</tr>
<tr>
<td>Effluent alkalinity</td>
<td>110 mg/L as CaCO3</td>
</tr>
</tbody>
</table>

### Filtration & Disinfection

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of filters</td>
<td>40</td>
</tr>
<tr>
<td>Total filter area</td>
<td>83,200 sq. ft.</td>
</tr>
<tr>
<td>Average filtration rate</td>
<td>3.4 gal/ minute/ sq. ft.</td>
</tr>
<tr>
<td>Average filter run time</td>
<td>55 hours</td>
</tr>
<tr>
<td>Depth of anthracite media</td>
<td>24 inches</td>
</tr>
<tr>
<td>Depth of sand media</td>
<td>12 inches</td>
</tr>
<tr>
<td>Depth of Gravel Support Layer</td>
<td>12 inches</td>
</tr>
<tr>
<td>Number of chlorine contact tanks</td>
<td>4</td>
</tr>
<tr>
<td>Average contact time</td>
<td>42 minutes</td>
</tr>
</tbody>
</table>
## DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

### EXHIBIT 21

#### SCHEDULE OF INSURANCE

**AS OF SEPTEMBER 30, 2019**

<table>
<thead>
<tr>
<th>TYPE OF COVERAGE</th>
<th>COMPANY</th>
<th>POLICY PERIOD</th>
<th>COVERAGE LIMITS</th>
</tr>
</thead>
</table>
| **Blanket Property and Boiler & Machinery** | Alliant Public Entity Property Insurance Program (PEPIP) | July 1, 2019– July 1, 2020 | $1,000,000,000 Blanket Buildings and Contents – (Specified Locations) and Mobile Equipment  
$100,000,000 Boiler and Machinery  
$25,000,000 Miscellaneous Locations  
$100,000,000 Earth Movement  
$100,000,000 Excess Flood (over NFIP), except $25,000,000 Locations within 100 Year Flood Zone (e.g. Blue Plains)  
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)  
$25,000,000 Transit Per Shipment  
Deductibles: $1,000,000 Any Loss, except $10,000 Equipment |
| **Fidelity & Crime Insurance** | AIG | July 1, 2019– July 1, 2020 | $10,000,000 - Employee Dishonesty, Forgery, Funds Transfer, Fraud, Money & Securities  
Deductible: $200,000 Per Occurrence |
| **Commercial General Liability** | Self-Funded | | $1,000,000 each occurrence |
| **Commercial Automobile** | Self-Funded | | $1,000,000 any one accident  
100% Physical Damage - self-funded |
| **Worker’s Compensation** | Self-Funded | | $1,000,000 each accident  
Statutory WC Benefits  
Employer’s Liability - $1,000,000 Each Accident; $1,000,000 Disease/ Employee |
| **Excess Worker’s Compensation Insurance** | Safety National | July 1, 2019– July 1, 2020 | Unlimited - WC Benefits; $3,000,000 - Employer’s Liability (Included - Terrorism)  
Retentions: $1,000,000/accident; $1,000,000 Disease/ Employee |
| **Excess General Liability, Automobile Liability, and Employers Liability Insurance** | AEGIS | July 1, 2019– July 1, 2020 | $35,000,000 in excess of $1,000,000 |
| **Excess Liability** | EIM | July 1, 2019– July 1, 2020 | $65,000,000 in excess of $35,000,000 |
| **Public Official Liability** | RSUI Indemnity / Chubb Insurance Company | July 1, 2019– July 1, 2020 | $20,000,000 Each Loss / Aggregate  
Retentions: $250,000 per wrongful act |
| **Fiduciary Liability** | Travelers Insurance | July 1, 2019– July 1, 2020 | $5,000,000 Each Loss / Aggregate  
Deductible: $0 per claim |
| **Cyber** | XL | July 1, 2019– July 1, 2020 | $5,000,000 Each Loss/Aggregate  
Deductible: $50,000 |
| **Professional Liability** | Lloyds of London | July 1, 2019– July 1, 2020 | $2,000,000 Each Loss  
Deductible: $10,000 |
| **National Flood** | NFIP | July 1, 2019– July 1, 2020 | $500,000 building/contents  
Deductible: $50,000 per building/contents |
### SUMMARY OF MAJOR PERMITS AND ADMINISTRATIVE ORDERS AS OF SEPTEMBER 30, 2019

<table>
<thead>
<tr>
<th>Wastewater</th>
<th>Description</th>
<th>Expiration Date</th>
<th>Current Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National Pollutant Discharge Elimination System</strong>&lt;br&gt;Permit # DC0021199</td>
<td>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.</td>
<td>August 25, 2023</td>
<td>In Compliance</td>
</tr>
<tr>
<td><strong>National Pollutant Discharge Elimination System</strong>&lt;br&gt;Permit # DC0000221</td>
<td>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: Responding to sanitary sewer overflows (SSO) Reporting SSOs that overflow to MS4 system to public health agencies Cleaning catch basins and removing trash from waterbodies Maintaining storm sewer system infrastructure Collection of stormwater fees for the District of Columbia</td>
<td>June 22, 2023</td>
<td>In Compliance</td>
</tr>
<tr>
<td><strong>1995 Consent Decree</strong>&lt;br&gt;Civil Action No.: 90-1643-JGP and 84-2842-JGP</td>
<td>Requires certain actions including: Review procurement practices &amp; maintenance procedures Undertake Operational Capability Review Conduct a pilot project for biological nitrogen reduction</td>
<td>N/A</td>
<td>In Compliance All items completed; awaiting action to terminate decree</td>
</tr>
<tr>
<td><strong>1996 Stipulated Agreement &amp; Order</strong>&lt;br&gt;Civil Action No.: 96-669-TFH</td>
<td>Requires certain actions including: Rehabilitate and maintain certain facilities and capital equipment in good operating condition Maintain certain records and data for status reports and prepare monthly reports on status of compliance Maintain user fees in separate accounts and make timely payment of invoices</td>
<td>N/A</td>
<td>In Compliance All items completed; awaiting action to terminate agreement and order</td>
</tr>
<tr>
<td><strong>2003 Consent Decree</strong>&lt;br&gt;Civil Action No.: 1:00CV00183TFH</td>
<td>Requires certain actions including: Replacement/repair of control structures Cleaning/inspection of catch basins Rehabilitation of pumping stations Rehabilitation of Blue Plains grit chambers and influent screens Inspection of certain sewers and siphons Public education/outreach activities Payment of civil penalty of $250,000 Conduct/support of supplemental environmental projects</td>
<td>N/A</td>
<td>In Compliance</td>
</tr>
<tr>
<td><strong>2005 Modified Consent Decree for CSS LTCP</strong>&lt;br&gt;Consolidate Civil Action No; 1:00CV00183TTH</td>
<td>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.</td>
<td>N/A</td>
<td>In Compliance</td>
</tr>
<tr>
<td><strong>DC Department of Energy and the Environment</strong>&lt;br&gt;Permit to operate the enhanced nitrogen removal facility</td>
<td>Permit to operate the enhanced nitrogen removal facility</td>
<td>12/13/2023</td>
<td>In Compliance</td>
</tr>
<tr>
<td><strong>DC Department of Energy and The Environment</strong>&lt;br&gt;Permit to construct and operate biosolids project – main process train/combined heat &amp; power/final dewatering facility</td>
<td>Permit to construct and operate biosolids project – main process train/combined heat &amp; power/final dewatering facility</td>
<td>4/19/2023</td>
<td>In Compliance</td>
</tr>
</tbody>
</table>
### District of Columbia Water and Sewer Authority

#### Exhibit 23

**Budgetary Comparison Schedule for Fiscal Year 2019**

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Approved Budget</th>
<th>Actual Expenditures</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel services</td>
<td>$162,620</td>
<td>$157,979</td>
<td>$4,641</td>
</tr>
<tr>
<td>Contractual services</td>
<td>81,679</td>
<td>76,204</td>
<td>5,475</td>
</tr>
<tr>
<td>Water purchases</td>
<td>30,520</td>
<td>32,430</td>
<td>(1,910)</td>
</tr>
<tr>
<td>Chemicals and supplies</td>
<td>32,091</td>
<td>34,979</td>
<td>(2,888)</td>
</tr>
<tr>
<td>Utilities and rent</td>
<td>26,905</td>
<td>25,778</td>
<td>1,127</td>
</tr>
<tr>
<td>Small equipment</td>
<td>1,240</td>
<td>731</td>
<td>509</td>
</tr>
<tr>
<td>Interest and fiscal charges (debt service)</td>
<td>199,025</td>
<td>178,359</td>
<td>20,666</td>
</tr>
<tr>
<td>Payment in lieu of tax &amp; right of way fee</td>
<td>21,702</td>
<td>21,702</td>
<td>-</td>
</tr>
<tr>
<td>Cash financed capital improvements</td>
<td>26,999</td>
<td>-</td>
<td>26,999</td>
</tr>
</tbody>
</table>

**Total budgetary basis expenditures**

| Approved Budget | $582,780  | Actual Expenditures | $528,161 | Variance | $54,619 |

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

- Capitalized personnel expenditures: (17,589)
- Depreciation and amortization expense: 127,501
- Long-term debt - principal payments: (36,038)
- Long-term debt - capitalized interest: (50,571)
- Build America Bonds subsidy: 5,356
- Inventory issuances: 844
- Blue Drop: 324
- Non-budgeted expenses: 7,525

**Total expenses reported in statements of revenues, expenses and changes in net position**

$565,513

(Continued on next page)
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 and recommendation 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 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.