2019

FOR THE YEAR ENDED JUNE 30

WSSC Where Water Matters

Annual Financial Report

CliftonLarsonAllen LLP
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INDEPENDENT AUDITORS' REPORT

Commissioners of the
Washington Suburban Sanitary Commission
Laurel, Maryland

Report on the Financial Statements

We have audited the accompanying financial statements of the Washington Suburban Sanitary Commission (the Commission), as of and for the years ended June 30, 2019 and June 30, 2018, and the related notes to the financial statements, which collectively comprise the Commission's basic financial statements 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 accounting principles generally accepted in the United States of America; 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 opinions 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 and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits 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 Commission'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 opinions on the effectiveness of the Commission's internal control. Accordingly, we express no such opinions. 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 opinions.

Commissioners of the
Washington Suburban Sanitary Commission

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Commission as of June 30, 2019 and June 30, 2018, and the respective changes in financial positions and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management discussion and analysis on pages 3-13, the schedule of changes in net pension liability and related ratios and related notes on page 51, the schedule of employer contributions and related notes on page 52, the schedule of changes in net OPEB liability and related ratios on page 53 and the schedule of employer contributions and related notes on page 54 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 audit 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 Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 16, 2019, on our consideration of the Commission's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Commission's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Commission's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

CliftonLarsonAllen LLP

Baltimore, Maryland
October 16, 2019

WASHINGTON SUBURBAN SANITARY COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
REQUIRED SUPPLEMENTARY INFORMATION
FOR THE YEARS ENDED JUNE 30, 2019 AND 2018
(Unaudited)

This section of the Washington Suburban Sanitary Commission (WSSC) annual financial report presents our discussion and analysis of WSSC's financial performance for the fiscal years ended June 30, 2019 and 2018. GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* which replaces the requirements of GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions.* The primary objective of this Statement was to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions. The statement is effective for periods beginning after June 15, 2017. WSSC implemented this GASB in fiscal year 2018.

FINANCIAL HIGHLIGHTS

Fiscal Year 2019

- WSSC maintained AAA bond ratings from Fitch Ratings, Moody's Investors Service, and S&P Global.
- In December 2018, WSSC issued $390.0 million of Consolidated Public Improvement Bonds to fund new construction, rehabilitation and replacement of water and sewer infrastructure.
- In March 2019, WSSC sold $39.3 million of refunding bonds with interest rates ranging from 2.00% to 5.00% to refund $42.8 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 3.00% to 5.00%. The net proceeds of $43.5 million (including a premium of $4.4 million) were used to purchase selected open market securities. Those securities were deposited with an escrow agent to provide for all future debt service payments and the early redemption of callable bonds. The March 2019 refunding will reduce WSSC's total debt service payments over the next 15 years by $3.0 million and provide an economic gain of $2.9 million.
- In December 2017, WSSC sold $79.1 million of crossover refunding bonds with an interest rate of 5.00%. The bonds refunded $90.0 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 4.35% to 5.00%. Build America Bonds – Direct Payment to the Issuer, Series 2009B was defeased on the crossover date, and removed as a liability on June 1, 2019. Proceeds from the refunding bonds were used to purchase U.S. government securities in an irrevocable trust with an escrow agent, and provided debt service payments until the crossover date of June 1, 2019. As a result of the crossover refunding issue, WSSC saved $4.9 million in debt service payments and achieved an economic gain of $4.2 million.
- The Commission redeemed $12.4 million in Notes on June 27, 2019 as part of the water, sewer and general debt service amortization.
- A Consent Decree with the Environmental Protection Agency, the Department of Justice, the State of Maryland, and four environmental groups entered its fourteenth year. The Consent Decree formally identifies the remedial measures to eliminate and/or reduce sanitary sewer overflows. In fiscal year 2016, the U.S. District Court approved a six-year extension to the original term of the Consent Decree. Costs of the remedial measures are estimated at $1,636.9 million and are to be expended over at least 19 years, $249.5 million of which is expected to be incurred after fiscal year 2019. The costs for each fiscal year are or will be included in WSSC's budget and six-year capital improvements program.
- Under a Consent Decree executed by the District Court of Maryland on April 15, 2016, the Commission is required to undertake short-term operational changes and capital improvements at the Potomac Water Filtration Plant that will enable WSSC to reduce solids discharged to the river, and to plan, design and implement upgrades or new construction to achieve requirements established by MDE and incorporated in a new discharge permit. An Audit report and Long-Term Upgrade Plan

were submitted by WSSC for consideration by MDE on December 26, 2016. WSSC and its consultant prepared an Amended Long-Term Upgrade Plan to address deficiencies in the 2016 Plan and issues raised by MDE and Potomac Riverkeepers, Inc. in response to the Plan, which was submitted in September 2018. In April 2019, MDE responded by approving the proposed option which best satisfies the requirement of the Consent Decree. The work required to implement the Long-Term Capital Improvement Project(s) shall be fully implemented in accordance with the schedule in the Long-Term Upgrade Plan. The Commission shall be subject to lump-sum stipulated penalties for failure to implement Long-Term Capital Improvement Project(s) by January 1, 2026. Costs for implementation of improvements are estimated at $202 million, $194 million of which is expected to be incurred after fiscal year 2019. The costs are included in WSSC's budget and capital improvements program.

- WSSC's operating revenues increased $18.0 million, or 2.5% in comparison to fiscal year 2018, which was primarily attributable to rate increases.
- Operating expenses increased $14.6 million, or 2.3%, in comparison to fiscal year 2018.
    - Settlement adjustments in 2019 for intermunicipal agency sewage disposal costs related to the Blue Plains facility resulted in reductions of $7.3 million. Conversely, settlement adjustments in 2018 resulted in additional costs of $4.9 million. Consequently, costs due to settlements in 2019 decreased $12.2 million.
    - Merits, COLAs, the hiring of staff, and additional hours devoted to the implementation of a new billing system resulted in a $6.6 million increase in salaries.
    - Various costs (chemicals, engineering and rental) increased $3.9 million to address record rainfalls during the year.
    - Increased pipe inspections and related engineering services triggered additional costs of $2.4 million.
    - The majority of the remaining variance, or $11.7 million, represents depreciation on capital assets placed in service in recent years.
- Capital assets (water and sewer lines, water tanks, treatment plants, pumping stations, multi-purpose facilities and other facilities), net of accumulated depreciation, increased by $323.5 million, while overall debt increased $146.5 million in comparison to the previous fiscal year.
- The increase in net position during the year included net income of $55.4 million, and capital contributions of $84.3 million.

Fiscal Year 2018

- WSSC maintained AAA bond ratings from Fitch Ratings, Moody's Investors Service, and S& P Global.
- In November 2017, WSSC issued $459.3 million of Consolidated Public Improvement Bonds to fund new construction, rehabilitation and replacement of water and sewer infrastructure.
- In November 2017, WSSC sold $220.2 million of refunding bonds with interest rates ranging from 3.00% to 5.00% to refund $217.5 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 3.00% to 5.00%. The net proceeds of $237.2 million (including a premium of $18.1 million) were used to purchase selected open market securities. Those securities were deposited with an escrow agent to provide for all future debt service payments and the early redemption of callable bonds. The November 2017 refunding will reduce WSSC's total debt service payments over the next 15 years by $11.7 million and provide an economic gain of $9.8 million.
- In December 2017, WSSC sold $79.1 million of crossover refunding bonds with an interest rate of 5.00%. The bonds will refund $90.0 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 4.35% to 5.00%. Build America Bonds – Direct Payment to the Issuer, Series 2009B will not be defeased until the crossover date, and will not be removed as a liability until June 1, 2019. Proceeds from the refunding bonds were used to purchase U.S. government securities in an irrevocable trust with an escrow agent, and will provide future debt service payments until the crossover date of June 1, 2019. As a result of the crossover refunding issue, WSSC will save $4.9 million in debt service payments and achieve an economic gain of $4.2 million.

- The Commission redeemed $12.4 million in Notes on June 28, 2018 as part of the water, sewer and general debt service amortization.
- A Consent Decree with the Environmental Protection Agency, the Department of Justice, the State of Maryland, and four environmental groups entered its thirteenth year. The Consent Decree formally identifies the remedial measures to eliminate and/or reduce sanitary sewer overflows. In fiscal 2016, the U.S. District Court approved a six-year extension to the original term of the Consent Decree. Costs of the remedial measures are estimated at $2,060.6 million and are to be expended over at least 19 years, $742.4 million of which is expected to be incurred after fiscal year 2018. The costs for each fiscal year are or will be included in WSSC's budget and six-year capital improvements program.
- Under a Consent Decree executed by the District Court of Maryland on April 15, 2016, the Commission is required to undertake short-term operational changes and capital improvements at the Potomac Water Filtration Plant that will enable WSSC to reduce solids discharged to the river, and to plan, design and implement upgrades or new construction to achieve requirements established by MDE and incorporated in a new discharge permit. An Audit report and Long-Term Upgrade Plan were submitted by WSSC for consideration by MDE on December 26, 2016. WSSC and its consultant are preparing an Amended Long-Term Upgrade Plan to address deficiencies in the 2016 Plan and issues raised by MDE and Potomac Riverkeepers, Inc. in response to the Plan. Estimated order of magnitude costs for implementation of improvements in the draft revised Plan range from $151 million to $282 million, depending on the design plan options that are to be determined as part of the Parties' future resolution process. The WSSC Adopted FY19-24 Capital Improvements Program (CIP) has programmed a total of $155 million for implementation of improvements pursuant to a Long-Term Upgrade Plan. If necessary, WSSC will seek to amend the project for additional costs needed as part of an approved Long-Term Upgrade Plan.
- WSSC's operating revenues were consistent with fiscal year 2017. Average rates for water consumption and sewer use revenues were comparable to the prior year.
- Operating expenses increased $45.2 million, or 7.7%, during fiscal year 2018.
    - Increases in IT costs relate to the planned implementation of new billing, work and asset management systems in fiscal year 2019. Pre-configuration costs in the current year were $6.9 million.
    - An operating procedure was implemented for Blue Plains Multi-Jurisdictional Users Facilities' (MJUF) in fiscal year 2018. The procedure employs a new methodology to determine the allocated flow by users through the various facilities (such as pump stations and major conveyance pipelines through the District of Columbia) for O&M billing purposes. Additional costs for MJUF and Intermunicipal Agreement settlement adjustments totaled $14.2 million.
    - Additional costs of $8.3 million were expended to address an increase in water main breaks.
    - Merits, COLAs and the hiring of additional staff resulted in a $3.2 million increase in salaries.
    - The majority of the remaining variance, or $10.1 million, represents depreciation on capital assets placed in service in recent years.
- Capital assets (water and sewer lines, water tanks, treatment plants, pumping stations, multi-purpose facilities and other facilities), net of accumulated depreciation, increased by $339.5 million, while overall debt increased $416.7 million in comparison to the previous fiscal year.
- The increase in net position during the year included net income of $48.5 million, and capital contributions of $71.1 million.

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual report consists of three parts - management's discussion and analysis, the required financial statements, and other required supplementary information. The required financial statements consist of:

- Balance sheets
- Statements of revenues, expenses, and changes in net position
- Statements of cash flows
- Notes to the financial statements

The balance sheets provide a snapshot of WSSC's financial position at June 30, the end of the fiscal year. WSSC's balance sheets present current and long-term assets and liabilities, deferred outflows and inflows of resources, as well as net position.

WSSC's statements of revenues, expenses and changes in net position reflect activity for the fiscal years. These statements measure operating revenues and expenses as well as non-operating revenues and expenses. The statements also present capital contributions as well as changes in net position.

The statements of cash flows present WSSC's inflows and outflows of cash. Cash flows from operating activities, capital and related financing activities, and investment activities are shown separately. Cash provided by operating activities is reconciled to operating income.

The financial statements also include notes that provide more detailed data and explanations for some of the information in the financial statements.

WSSC operates as an enterprise fund, which is one type of proprietary fund. Enterprise funds operate similarly to private businesses in that charges for services to customers are expected to cover expenses. WSSC's financial statements are presented using the accrual basis of accounting and the economic resources measurement focus. All assets and liabilities are included in the financial statements. Revenue is recognized when water or other services are delivered. Expenses are recognized when goods and services are received. All revenues and expenses are recognized regardless of when cash is received or paid.

FINANCIAL ANALYSIS

Net Position

Fiscal Year 2019

WSSC's net position increased 2.9% to $4,884.0 million (See Table A-1). The majority of this increase is attributable to the change in the net investment in capital assets. Capital assets, net of accumulated depreciation, increased 4.0% to $8,446.8 million. Unused bond proceeds at the end of the year were $140.3 million. During fiscal year 2019, developers constructed $51.3 million of capital assets and donated them to WSSC. Additional information is presented in the Capital Asset and Debt Administration section of this discussion.

Total debt, including current maturities increased to $3,570.0 million. Capital contributions of $33.0 (net of donated capital assets) million were available to finance capital projects during the year. These funding sources reduced the amount of bonds WSSC needed to sell for construction of water and sewer projects. A more detailed description of WSSC's debt can be found in Notes J and K of the financial statements.

Fiscal Year 2018

WSSC's net position increased 2.6% to $4,744.3 million (See Table A-1). The majority of this increase is attributable to the change in the net investment in capital assets. Capital assets, net of accumulated depreciation, increased 4.4% to $8,123.3 million. Unused bond proceeds at the end of the year were $83.6 million. During fiscal year 2018, developers constructed $31.0 million of capital assets and donated them to WSSC. Rights of way of $2.6 million were also donated. Additional information is presented in the Capital Asset and Debt Administration section of this discussion.

Total debt, including current maturities increased to $3,423.5 million. Capital contributions of $37.5 (net of donated capital assets) million were available to finance capital projects during the year. These funding sources reduced the amount of bonds WSSC needed to sell for construction of water and sewer projects. A more detailed description of WSSC's debt can be found in Notes J and K of the financial statements

TABLE A-1
WSSC's Condensed Balance Sheet
(in millions of dollars)

	FY 2019	FY 2018	FY 2017 As Restated	FY 2019 % Change	FY 2018 % Change
Current and other assets	$ 500.6	$ 564.7	$ 398.4	(11.4)	41.7
Capital assets, net of accumulated depreciation	8,446.8	8,123.3	7,783.8	4.0	4.4
Total assets	8,947.4	8,688.0	8,182.2	3.0	6.2
Total deferred outflows of resources	88.9	26.1	62.2	240.6	(58.0)
Current and other liabilities	902.7	812.0	908.5	11.2	(10.6)
Bonds and notes payable, net of current maturities	3,236.3	3,085.1	2,658.9	4.9	16.0
Total liabilities	4,139.0	3,897.1	3,567.4	6.2	9.2
Total deferred inflows of resources	13.3	72.7	52.3	(81.7)	39.0
Net position:					
Net investment in capital assets	4,807.0	4,685.4	4,569.4	2.6	2.5
Restricted for growth construction	9.8	8.4	19.3	16.7	(56.5)
Unrestricted	67.2	50.5	36.0	33.1	40.3
Total net position	$ 4,884.0	$ 4,744.3	$ 4,624.7	2.9	2.6

Changes in Net Position

Fiscal Year 2019

WSSC's operating revenues increased 18 million, or 2.5% in comparison with 2018, which is primarily attributable to rate increases. (see Table A-2). Total income from front foot benefit assessments and house connection charges continued to decline. Front foot benefit extensions and related house connections have been built primarily by outside developers for in excess of fifteen years. Assessments for construction by WSSC prior to that time are collected over the remaining term of the debt utilized to finance the construction.

- Operating expenses increased $14.6 million, or 2.3%, during fiscal year 2019.
    - Settlement adjustments in 2019 for intermunicipal agency sewage disposal costs related to the Blue Plains facility resulted in reductions of $7.3 million. Conversely, settlement adjustments in 2018 resulted in additional costs of $4.9 million. Consequently, costs due to settlements in 2019 decreased $12.2 million.

- Merits, COLAs, the hiring of staff, and additional hours devoted to the implementation of a new billing system resulted in a $6.6 million increase in salaries.
- Various costs (chemicals, engineering and rental) increased $3.9 million to address record rainfalls during the year.
- Increased pipe inspections and related engineering services triggered additional costs of $2.4 million.
- The majority of the remaining variance, or $11.7 million, represents depreciation on capital assets placed in service in recent years.

The net changes in revenues and expenses during the year resulted in a 14.2% increase in income before capital contributions to $55.4 million. Capital contributions increased by 18.6% to $84.3 million. Grant revenue decreased $2.7 million due to a reduction in costs incurred on ENR projects. Donated assets, constructed and contributed by developers were up $17.7 million in comparison to the prior fiscal year.

Fiscal Year 2018

WSSC's operating revenues were consistent with fiscal year 2017 (see Table A-2). Average rates for water consumption and sewer use revenues were comparable to the prior year. Income from front foot benefit assessments and house connection charges continued to decline. Front foot benefit extensions and related house connections have been built primarily by outside developers for in excess of fifteen years. Assessments for construction by WSSC prior to that time are collected over the remaining term of the debt utilized to finance the construction.

Operating expenses increased $45.2 million, or 7.7%, during fiscal year 2018.

- Increases in IT costs relate to the planned implementation of new billing, work and asset management systems in fiscal year 2019. Pre-configuration costs in the current year were $6.9 million.
- An operating procedure was implemented for Blue Plains Multi-Jurisdictional Users Facilities' (MJUF) in fiscal year 2018. The procedure employs a new methodology to determine the allocated flow by users through the various facilities (such as pump stations and major conveyance pipelines through the District of Columbia) for O&M billing purposes. Additional costs for MJUF and Intermunicipal Agreement settlement adjustments totaled $14.2 million.
- Additional costs of $8.3 million were expended to address an increase in water main breaks.
- Merits, COLAs and the hiring of additional staff resulted in a $3.2 million increase in salaries.
- The majority of the remaining variance, or $10.1 million, represents depreciation on capital assets placed in service in recent years.

The net changes in revenues and expenses during the year resulted in a 49.3% decrease in income before capital contributions to $48.5 million. Capital contributions decreased by 16.8% to $71.1 million. Grant revenue decreased $9.3 million due to a reduction in costs incurred on ENR projects. Donated assets, constructed and contributed by developers were down $4.4 million in comparison to the prior fiscal year.

TABLE A-2
WSSC's Condensed Changes in Net Position
(in millions of dollars)

	FY 2019	FY 2018	FY 2017 As Restated	FY 2019 % Change	FY 2018 % Change
Operating revenues	$ 742.8	$ 724.8	$ 725.8	2.5	(0.1)
Operating expenses	(645.1)	(630.5)	(585.3)	2.3	7.7
Net non-operating revenues (expenses)	(42.3)	(45.8)	(44.8)	(7.6)	2.2
Income before capital contributions	55.4	48.5	95.7	14.2	(49.3)
Capital contributions	84.3	71.1	85.5	18.6	(16.8)
Changes in net position	$ 139.7	$ 119.6	$ 181.2	16.8	(34.0)

CAPITAL ASSETS AND DEBT ADMINISTRATION

Capital Assets

Fiscal Year 2019

As of June 30, 2019, WSSC had invested $8,446.8 million, net of accumulated depreciation, in a broad range of capital assets including water and sewer lines, water tanks, treatment plants, pumping stations, multi-purpose facilities and other facilities. This amount represents a net increase of $323.5 million, or 4.0%, over fiscal year 2018.

Fiscal Year 2018

As of June 30, 2018, WSSC had invested $8,123.3 million, net of accumulated depreciation, in a broad range of capital assets including water and sewer lines, water tanks, treatment plants, pumping stations, multi-purpose facilities and other facilities. This amount represents a net increase of $339.5 million, or 4.4%, over fiscal year 2017.

TABLE A-3
WSSC's Capital Assets
(net of depreciation and impairment losses, in millions of dollars)

	FY 2019	FY 2018	FY 2017 As Restated	FY 2019 % Change	FY 2018 % Change
Land and rights of way	$ 129.4	$ 126.4	$ 121.7	2.4	3.9
Construction in progress	1,462.4	1,527.6	1,574.8	(4.3)	(3.0)
Water supply	2,393.3	2,236.9	1,949.8	7.0	14.7
Sewage disposal	1,906.5	1,784.8	1,661.8	6.8	7.4
General construction	1,388.5	1,370.6	1,379.7	1.3	(0.7)
Intangible assets	1,135.4	1,041.3	1,053.4	9.0	(1.1)
Other	31.3	35.7	42.6	(12.3)	(16.2)
Total capital assets	$ 8,446.8	$ 8,123.3	$ 7,783.8	4.0	4.4

Capital assets completed and placed in service in 2019 decreased $98.8 million or 17.4%, in comparison to fiscal year 2018. Upgrades of water filtration plants decreased $99.6 million. Major additions to capital assets being depreciated during fiscal year 2019 are illustrated in Table A-4.

Capital assets completed and placed in service in 2018 increased $93.8 million or 19.8%, in comparison to fiscal year 2017. Upgrades of water filtration plants increased $107.8 million. Major additions to capital assets being depreciated during fiscal year 2018 are illustrated in Table A-5.

Additional information relative to WSSC's capital assets is presented in Note D of the financial statements.

TABLE A-4
WSSC's Additions to Capital Assets Being Depreciated
Fiscal Year 2019
(in millions of dollars)

	Water Supply	Sewage Disposal	General Construction
Financed from proceeds of bonds, notes, operating revenues or capital contributions:			
Water and sewer mains	$ 184.5	$ 169.1	$ 3.7
House connections	8.3	11.8	4.8
Water meters	1.2	1.1	-
Multi-use facility	-	-	12.9
Water filtration plants	5.8	-	-
Water pumping stations	0.1		
Water storage facilities	7.7	-	-
Wastewater treatment facilities	-	2.0	-
Wastewater pumping stations	-		-
Miscellaneous assets	4.6	-	-
Constructed and contributed by developers:			
House connections	-	-	11.8
Water and sewer mains	-	-	39.4
Total fiscal year 2019 additions to capital assets being depreciated	$ 212.2	$ 184.0	$ 72.6

TABLE A-5
WSSC's Additions to Capital Assets Being Depreciated
Fiscal Year 2018
(in millions of dollars)

	Water Supply	Sewage Disposal	General Construction
Financed from proceeds of bonds, notes, operating revenues or capital contributions:			
Water and sewer mains	$ 191.7	$ 169.1	$ 3.3
House connections	12.6	13.1	5.5
Water meters	0.8	0.8	-
Multi-use facility	-	-	1.8
Water filtration plants	105.4	-	-
Water storage facilities	25.4	-	-
Wastewater treatment facilities	-	5.6	-
Wastewater pumping stations	-	0.7	-
Miscellaneous assets	0.8	-	-
Constructed and contributed by developers:			
House connections	-	-	6.7
Water and sewer mains	-	-	24.3
Total fiscal year 2018 additions to capital assets being depreciated	$ 336.7	$ 189.3	$ 41.6

TABLE A-6
WSSC's Additions to Capital Assets Being Depreciated
Fiscal Year 2017
(in millions of dollars)

	Water Supply	Sewage Disposal	General Construction
Financed from proceeds of bonds, notes, operating revenues or capital contributions:			
Water and sewer mains	$ 190.3	$ 160.5	$ 4.0
House connections	11.0	25.8	5.3
Water meters	1.3	1.3	-
Water filtration plants	(2.4)	-	-
Water storage facilities	34.9	-	-
Wastewater treatment facilities	-	2.7	-
Wastewater pumping stations	-	2.6	-
Miscellaneous assets	1.2	-	-
Constructed and contributed by developers:			
House connections	-	-	4.8
Water and sewer mains	-	1.5	29.0
Total fiscal year 2017 additions to capital assets being depreciated	$ 236.3	$ 194.4	$ 43.1

Bonds and Notes Payable

Fiscal Year 2019

At the end of fiscal year 2019, bonds and notes outstanding totaled $3,570.0 million, a $146.5 million increase in comparison to the previous fiscal year. In December 2018, WSSC issued $390.0 million of Consolidated Public Improvement Bonds to fund new construction, rehabilitation and replacement of water and sewer infrastructure.

Fiscal Year 2018

At the end of fiscal year 2018, bonds and notes outstanding totaled $3,423.5 million, a $416.7 million increase in comparison to the previous fiscal year. In November 2017, WSSC issued $459.3 million of Consolidated Public Improvement Bonds to fund new construction, rehabilitation and replacement of water and sewer infrastructure

TABLE A-7
WSSC's Bonds and Notes Payable
(in millions of dollars)

	FY 2019	FY 2018	FY 2017	FY 2019 % Change	FY 2018 % Change
Water supply	$ 1,438.8	$ 1,368.2	$ 1,155.9	5.2	18.4
Sewage disposal	1,956.7	1,869.8	1,647.3	4.6	13.5
General construction	174.5	185.5	203.6	(5.9)	(8.9)
Total	3,570.0	3,423.5	3,006.8	4.3	13.9
Current maturities	333.7	338.4	347.9	(1.4)	(2.7)
Long-term portion	3,236.3	3,085.1	2,658.9	4.9	16.0
Total bonds and notes payable	$ 3,570.0	$ 3,423.5	$ 3,006.8	4.3	13.9

Bond Ratings

Fitch Ratings, Moody's Investors Service, and S&P Global assigned and affirmed ratings of 'AAA', 'Aaa', and 'AAA', respectively, on WSSC's outstanding water supply, sewage disposal and general construction general obligation bonds. The agencies identified strengths of the Commission in support of their ratings which include a sizeable, diverse tax base in Montgomery and Prince George's Counties, good finances characterized by the self-supporting nature of the water and sewer system, and a skilled management team. The bonds and notes are ultimately secured by an unlimited ad valorem property tax which may be assessed on properties in the WSSD District, although no such tax has been levied due to sufficient revenues.

Limitations on Debt

Maryland law limits the amount of bonds and notes WSSC may have outstanding at any time. This limitation is generally based on legislated percentages of the real property assessable tax base and personal property and operating real property assessments within the Washington Suburban Sanitary District. As of June 30, 2019 and 2018, the calculated limits were $11,808.4 million and $11,241.8 million, respectively. WSSC's outstanding debt was significantly below those limits.

Additional information relative to WSSC's Bonds and Notes activity is presented in Notes J and K of the financial statements.

SUBSEQUENT EVENTS

WSSC successfully implemented a new billing system, Customer to Meter (C2M), and part of the Mobile Workforce Management (MWM) system on July 2, 2019. Ninety days subsequent to the implementation is considered the system stabilization period in which the Cornerstone project team has been working on multiple releases to satisfy additional requirements or fix issues. With the new billing system, WSSC has also adopted a new 4-tier increasing block rate, effective in fiscal year 2020.

CONTACT INFORMATION

Any questions regarding this report can be directed to the Finance Office at 14501 Sweitzer Lane, Laurel, Maryland, 20707. A copy of the report is also available on WSSC's website at www.wsscwater.com.

WASHINGTON SUBURBAN SANITARY COMMISSION
BALANCE SHEETS
AS OF JUNE 30, 2019 AND 2018
(in thousands)

	2019	2018
ASSETS		
Current assets:		
Cash (Note B)	$ 23,967	$ 27,888
Cash with fiscal agent (Note B)	-	92,403
Investments (Note B)	175,193	200,238
Accrued interest receivable	2,613	1,460
Receivables, net (Note C)	124,754	125,022
State grants receivable	6,581	8,446
Prepaid expenses	3,265	274
Materials and supplies, net	14,833	15,481
Total current assets	351,206	471,212
Non-current assets:		
Capital assets, net of accumulated depreciation (Note D)	8,446,780	8,123,311
Investments restricted for capital construction (Note B)	140,345	83,583
Note receivable (Note E)	9,032	9,836
Total non-current assets	8,596,157	8,216,730
Total assets	8,947,363	8,687,942
DEFERRED OUTFLOWS OF RESOURCES		
Deferred amount from pension differences between projected and actual plan investments (Note L)	62,428	-
Deferred amount from pension resulting from changes in assumptions (Note L)	10,753	16,129
Deferred amount from OPEB contributions (Note M)	4,441	4,236
Deferred amount from OPEB differences between projected and actual plan investments (Note M)	8,324	-
Deferred amount from OPEB differences between expected and actual experience (Note M)	2,956	3,942
Deferred amount from debt refunding (Note F)	-	1,836
Total deferred outflows of resources	88,902	26,143
Total assets and deferred outflows of resources	$9,036,265	$8,714,085

The accompanying notes are an integral part of these financial statements.

WASHINGTON SUBURBAN SANITARY COMMISSION
BALANCE SHEETS
AS OF JUNE 30, 2019 AND 2018
(in thousands)

	2019	2018
LIABILITIES		
Current liabilities:		
Bonds and notes payable, current maturities (Notes J and K)	$ 333,736	$ 338,363
Accounts payable and accrued liabilities	175,047	208,173
Accrued bond and note interest payable	11,316	10,516
Deposits and unearned revenue	3,834	3,648
Total current liabilities	523,933	560,700
Non-current liabilities:		
Bonds and notes payable, net of current maturities (Notes J and K)	3,236,321	3,085,149
Net pension liability (Note L)	226,628	102,536
Net OPEB liability (Note M)	129,529	121,759
Deposits, unearned revenue and other long-term liabilities (Note I)	22,590	26,959
Total non-current liabilities	3,615,068	3,336,403
Total liabilities	4,139,001	3,897,103
DEFERRED INFLOWS OF RESOURCES		
Deferred amount from pension differences between projected and actual plan investments (Note L)	-	29,595
Deferred amount from pension differences between expected and actual experience (Note L)	11,394	35,576
Deferred amount from OPEB differences between projected and actual plan investments (Note M)	-	7,524
Deferred amount from debt refunding (Note F)	1,887	-
Total deferred inflows of resources	13,281	72,695
Total liabilities and deferred inflows of resources	4,152,282	3,969,798
NET POSITION		
Net investment in capital assets	4,806,999	4,685,410
Restricted for growth construction	9,804	8,372
Unrestricted	67,180	50,505
Total net position	4,883,983	4,744,287
Total liabilities, deferred inflows of resources and net position	$9,036,265	$8,714,085

The accompanying notes are an integral part of these financial statements.

WASHINGTON SUBURBAN SANITARY COMMISSION
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE YEARS ENDED JUNE 30, 2019 AND 2018
(in thousands)

	2019	2018
OPERATING REVENUES:		
Water consumption, sewer use and service charges	$ 686,643	$ 669,934
Front foot benefit assessments	12,690	15,738
House connection charges	6,166	4,818
Other	37,318	34,284
Total operating revenues	742,817	724,774
OPERATING EXPENSES:		
Operations	113,875	107,636
Maintenance	141,332	158,023
Intermunicipal agency sewage disposal	54,668	68,363
Administrative and general	136,066	108,914
Depreciation and amortization	199,201	187,535
Total operating expenses	645,142	630,471
Net operating revenues	97,675	94,303
NON-OPERATING REVENUES (EXPENSES):		
Interest on bonds and notes payable, net of capitalized interest	(56,883)	(43,218)
System development charge credit reimbursements	(4,658)	(13,912)
Loss on disposal of assets	(3,218)	(7,460)
Pension	8,849	10,050
OPEB	260	286
Investment income	11,968	7,043
Other interest income	1,356	1,415
Net non-operating expenses	(42,326)	(45,796)
Income before capital contributions	55,349	48,507
Capital contributions (Note G)	84,347	71,092
Changes in net position	139,696	119,599
Net position, beginning of the year	4,744,287	4,624,688
Net position, end of year	$ 4,883,983	$ 4,744,287

The accompanying notes are an integral part of these financial statements.

WASHINGTON SUBURBAN SANITARY COMMISSION
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED JUNE 30, 2019 AND 2018
(in thousands)

	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Receipts from water and sewer customers	$ 687,249	$ 673,369
Receipts from front foot benefit assessments	14,513	16,977
Receipts from house connection charges	2,404	5,126
Receipts from other customers and miscellaneous	77,833	72,562
Payments to employees	(200,865)	(188,690)
Payments to District of Columbia Water & Sewer Authority	(54,008)	(64,276)
Payments to suppliers and others	(243,295)	(222,242)
Net cash provided by operating activities	283,831	292,826
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
Proceeds from bonds and notes	437,279	772,335
Capital contributions	82,829	70,341
Bond redemptions and note repayments	(300,390)	(383,974)
Interest payments, premiums and discounts on bonds and notes	(88,693)	(53,001)
Capital asset construction	(499,387)	(543,016)
Net cash used in capital and related financing activities	(368,362)	(137,315)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from the sale of investments	859,332	931,353
Purchases of investments	(889,478)	(1,000,398)
Pension and OPEB	9,109	10,336
Interest income received	9,244	4,975
Net cash used in investing activities	(11,793)	(53,734)
Net (decrease) increase in cash	(96,324)	101,777
Cash, beginning of year	120,291	18,514
Cash, end of year	$ 23,967	$ 120,291
Reconciliation of net operating revenues to net cash provided by operating activities:		
Net operating revenue	$ 97,675	$ 94,303
Adjustments to reconcile net operating revenue to net cash provided by operating activities:		
Depreciation and amortization	213,838	204,070
Effect of changes in assets, liabilities and deferred outflows of resources:		
Receivables, net	268	8,424
Materials and supplies	648	(39)
Prepaid expenses	(2,992)	(10)
Deferred outflows of resources - pension and OPEB	(64,614)	6,085
Accounts payable and accrued liabilities	(8,063)	3,579
Unearned revenue	6	220
Deferred inflows of resources - pension and OPEB	(61,299)	42,824
Long-term pension liability	101,979	(56,865)
Long-term OPEB liability	6,385	(9,765)
Net cash provided by operating activities	$ 283,831	$ 292,826

Noncash capital financing activities:

Capital assets of $51,340 and $33,638 were acquired through contributions from developers in 2019 and 2018, respectively.

The accompanying notes are an integral part of these financial statements.

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Washington Suburban Sanitary Commission (WSSC) is a bi-county political subdivision of the State of Maryland, created to provide water supply and sewage disposal services for Montgomery and Prince George's Counties. The financial statements are presented using the accrual basis of accounting and the economic resources measurement focus. Significant accounting policies are summarized below.

Operating and Non-Operating Revenues and Expenses

Revenues and expenses derived from financing and investment activities are classified as non-operating revenues and expenses. All other revenues and expenses are classified as operating.

Water and sewer service rates are established to provide sufficient funds to recover operating costs and debt service relating to the water supply and sanitary sewer systems. Metered water and sewer revenues are invoiced and recognized as customers utilize water. Revenue generated for which customers have not been invoiced is estimated based on past billings and recorded as unbilled revenue.

Estimated intermunicipal agency sewage disposal expenses are paid quarterly. Adjustments resulting from audits and/or reconciliations of WSSC's share of estimated and actual expenses are recognized in the year of settlement.

Front foot benefit and house connection assessments levied on properties where water and/or sanitary sewer service is available are the principal source of funds to service general construction bond debt. Front foot benefit assessments are recorded as operating revenue ratably over the levy year; house connection assessments and fees are recognized as operating revenue over the life of the bonds issued to finance the house connections.

Interest on bonds and notes payable is presented net of capitalized interest.

Capital Contributions

In July 1993, a system development charge (SDC) was established to help finance the cost of expanding water and sewage systems to accommodate growth in the Washington Suburban Sanitary District. System development charges are recorded as capital contributions when received. Certain qualified projects may be eligible for SDC credits or reimbursements. Only those SDC receipts filed in association with plumbing permits under which all covered work has obtained an approved final inspection are eligible for reimbursement. The credits are presented as non-operating expenses on the statement of revenues and changes in net position.

Developer fees and charges are established to recover costs related to services provided to outside developers for the construction of capital assets. These fees are recorded as permits are issued.

Federal and State grants are recognized as capital contributions when related capital costs are incurred.

Donated assets consist principally of capital assets constructed by developers and subsequently donated to WSSC. Values are established by using developers' estimated costs to construct the assets or WSSC's estimated costs to construct similar assets. Donated land and rights of way are recorded at estimated acquisition values. The capital assets, and related capital contributions, are recognized upon completion of construction.

WSSC follows Governmental Accounting Standards Board Statement No. 33, "*Accounting and Financial Reporting for Nonexchange Transactions*" (GASB No. 33). GASB No. 33 requires recognition of all contributions of capital assets, including donated assets, as revenues (capital contributions in the Statements of Revenues, Expenses and Changes in Net Position).

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Cash

Cash includes amounts in demand deposits.

Investments

Investments are stated at fair value, with any related gain or loss reported in investment income on the accompanying Statements of Revenues, Expenses and Changes in Net Position. Fair value is generally based on quoted market prices on the last business day of the fiscal year. Investments in market-traded securities, including U.S. government and agency securities, municipal and corporate bonds are reported at last quoted sales/bid prices provided by independent pricing vendors. Non-current investments represent unused bond proceeds at the end of the fiscal year.

Capital Assets

Capital assets include water and sewer lines, water filtration and distribution, wastewater collection and treatment as well as multi-purpose facilities, equipment and fleet. Capital assets are stated at historical costs, which include related payroll, payroll taxes, fringe benefits, administrative costs and interest capitalized during construction if applicable. Normal recurring maintenance and repair costs are charged to operations, whereas major repairs, improvements and replacements, which extend the useful lives of the assets, are capitalized. Costs incurred for capital construction are carried in construction in progress until completion.

Costs incurred for the purchase of software and water and wastewater capacity are treated as intangibles and amortized over the estimated useful life of the asset or the term of the contractual agreement.

Depreciation and Amortization

Capital assets are depreciated or amortized using the straight-line method. Estimated useful lives of some significant asset categories are as follows:

Buildings and other structures	40 – 50 years
Pipe and pipe improvements	35 – 100 years
Equipment and vehicles	3 – 12 years
Purchased capacity	50 years

Depreciation and capitalized interest on constructed assets are appropriately adjusted at substantial completion.

Inventory

Materials and supplies inventory is recorded utilizing a perpetual (moving average) cost methodology and is reduced for estimated losses due to obsolescence.

Bonds and Notes Payable

Bonds and notes payable are recorded at the principal amount outstanding, net of any applicable premium or discount.

Bonds outstanding, which have been refunded and economically defeased, are not included in long-term debt. The related assets are not included in investments. The difference between the reacquisition price and the net carrying amount of the old debt is a deferred inflow of resources and is amortized as a component of interest expense (see Note F).

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Pension

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pension, and pension expense, information about the net position of the Washington Suburban Sanitary Commission Employees' Retirement Plan (the Plan) and additions to/deductions from the Plan's net position have been determined on the same basis as they are reported by the Plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Pension costs are impacted by fluctuations in the market affecting actual and projected investment income and related deferred outflows or inflows. Investment activities are reported as non-operating revenues, therefore pension costs are allocated amongst operating and non-operating costs and/or revenues.

Other Postemployment Benefits (OPEB)

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the net position of the Washington Suburban Sanitary Commission Employees' OPEB Plan (the OPEB Plan) and additions to/deductions from the OPEB Plan's net position have been determined on the same basis as they are reported by the OPEB Plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

OPEB costs are impacted by fluctuations in the market affecting actual and projected investment income and related deferred outflows or inflows. Investment activities are reported as non-operating revenues, therefore OPEB costs are allocated amongst operating and non-operating costs and/or revenues.

Compensated Absences

Employees earn annual leave based on length of service. Accumulated annual leave in excess of 360 hours at the end of each year is transferred to sick leave. At termination, employees will be paid for unused annual leave but will not receive any pay or time off for unused sick leave. At retirement, an employee may convert unused annual leave to sick leave. Unused sick leave at retirement may be credited to an employee's total service time for retirement benefit purposes. Annual leave earned but unused is accrued as a liability.

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Reclassifications

The 2018 financial statements reflect certain reclassifications to conform with the 2019 presentation.

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Net Position

Capital assets, as defined above, net of related outstanding debt represent the largest portion of WSSC's net position, or net investment in capital assets.

Net position associated with unspent SDC proceeds is restricted for growth construction.

Unrestricted net position is the residual amount not included in the other classifications.

Accounting Changes

GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans,* replaces GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans.* Statement No. 74 addresses the financial reports of defined benefit OPEB Plans that are administered through trusts that meet specified criteria. The Statement requires a statement of fiduciary net position, a statement of changes in fiduciary net position, more extensive note disclosures and RSI related to the measurement of the OPEB liabilities for which assets have been accumulated, including information about the annual money-weighted rate of return on plan investments. Statement No. 74 also sets forth note disclosure requirements for defined contribution OPEB plans. This Statement is effective for Plans with fiscal years beginning after June 15, 2016. The pronouncement was adopted by the OPEB Plan in fiscal year 2018.

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* replaces the requirements of GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions.* Among other things, Statement No. 75 requires governments to report a liability on the face of the financial statements for the OPEB that they provide and requires governments in all types of OPEB plans to present more extensive note disclosures and required supplementary information about their OPEB liabilities. This Statement is effective for fiscal years beginning after June 15, 2017. GASB No.75 was implemented in fiscal year 2018 and related prior year balances were restated.

GASB Statement No. 83, *Certain Asset Retirement Obligations,* establishes uniform accounting and financial reporting requirements for asset retirement obligations (AROs). This Statement is effective for fiscal years beginning after June 15, 2018. The adoption of the pronouncement did not have an impact on WSSC's financial statements.

GASB Statement No. 84, *Fiduciary Activities,* establishes uniform accounting and financial reporting requirements for fiduciary activities. This Statement is effective for fiscal years beginning after December 15, 2018. Management is evaluating the impact of the pronouncement on its financial statements.

GASB Statement No. 85, *Omnibus 2017,* establishes accounting and financial reporting requirements for blending component units, goodwill, fair value measurement and application, and postemployment benefits. This Statement is effective for fiscal years beginning after June 15, 2017. Where applicable, the pronouncement was adopted in fiscal year 2018 with the enhancement of certain financial statement disclosures.

GASB Statement No. 86, *Certain Debt Extinguishment Issues,* establishes standards of accounting and financial reporting for in-substance defeasance transactions in which cash and other monetary assets acquired with only existing resources are placed in an irrevocable trust for the purpose of extinguishing debt. This Statement is effective for fiscal years beginning after June 15, 2017. The adoption of the pronouncement did not have an impact on WSSC's financial statements.

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

GASB Statement No. 87, *Leases,* establishes uniform accounting and financial reporting requirements for leases by lessees and lessors. This Statement is effective for fiscal years beginning after December 15, 2019. Management is evaluating the impact of the pronouncement on its financial statements.

GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements,* establishes additional financial statement disclosure requirements related to debt obligations of governments, including direct borrowings and direct placements. Direct borrowings and direct placements have terms negotiated directly with the investor or lender and are not offered for public sale. This Statement is effective for fiscal years beginning after June 15, 2018. Where applicable, the pronouncement was adopted in fiscal year 2019 with the enhancement of certain financial statement disclosures.

GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period,* establishes requirements for interest cost incurred before the end of a construction period. This Statement is effective for fiscal years beginning after December 15, 2019. Changes adopted to conform to the provisions of the Statement should be applied prospectively. Management is evaluating the impact of the pronouncement on its financial statements.

B. CASH AND INVESTMENTS

At June 30, 2019 and 2018, cash per WSSC's records amounted to $24.0 million and $27.9 million, respectively, and reported bank balances were $30.3 million and $32.6 million, respectively. All collected bank balance funds were secured by Federal depository insurance or by collateral held in WSSC's name under a tri-party collateral agreement with M&T and BNY Mellon.

In addition, BNY Mellon held cash and investments of $92.4 million at June 30, 2018. These funds, the net proceeds of a crossover refunding of Build America Bonds – Direct Payment to the Issuer, Series 2009B, were used to purchase U.S. government securities (SLGS) in an irrevocable trust with an escrow agent. The proceeds provided debt service payments on the Series 2009B until the crossover date of June 1, 2019.

WSSC's investment policy conforms to Maryland laws on the investment of public monies. Consequently, WSSC is authorized to invest in the investment types identified in the table below. The table also identifies certain provisions of the Maryland law or WSSC investment policy, which address interest rate risk, credit risk and concentration of credit risk.

Authorized Investment Type	Maximum Maturity	Maximum Percentage Of Portfolio	Maximum Investment In One Issuer
U.S. Government securities	1 year	None	None
Federal agency securities	1 year	None	None
Bankers' acceptances	6 months	None	20%
Collateralized repurchase agreements	1 year	None	20%
Commercial paper	1 year	5%	None
Certificates of deposit	1 year	None	20%
Money market investments		None	None

Any investment with a maturity in excess of 1 year must be approved by the Treasurer and will be limited to U.S. Government and Federal agency securities. The aggregated value of investments with any one bank or broker will not exceed 20% of the total investment portfolio at the time of investment, unless approved by the Investment Manager or WSSC Treasurer.

B. CASH AND INVESTMENTS (continued)

Custodial credit risk is the risk that, in the event of a failure of a financial institution, WSSC would not be able to recover deposits, the value of its investments, or collateral securities that are in the possession of an outside party. Maryland State law requires that collateral shall be maintained for all deposits and certificates of deposit with amounts in excess of Federal insurance coverage. State law also requires the securities collateralizing repurchase agreements have a market value of at least 102 percent of the principal of the investment plus accrued interest. There were no repurchase agreements at June 30, 2019 and 2018.

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. As of June 30, 2019 and 2018, all of WSSC's investments had remaining maturities of 1 year or less.

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Credit risk is measured by the assignment of a rating by a nationally recognized statistical rating organization. WSSC may invest in bankers' acceptances and commercial paper having a short-term rating of the highest letter and numerical rating issued by at least one nationally recognized statistical rating organization. WSSC does not have a formal policy for other investment types; however virtually all remaining investments are in, or collateralized by, Federal agency securities. Actual ratings as of June 30, 2019 and 2018 are presented below for each investment type.

Investments at June 30, 2019 (in thousands):

Investment Type	Credit Rating	Remaining Maturity	Cost	Fair Value
Money market investments	Aaa	1 year or less	$ 6,313	$ 6,313
Certificates of deposit	Aaa	1 year or less	15,286	15,434
Commercial paper	A-1+	1 year or less	14,833	14,927
U. S. Government Treasury bonds	Aaa	1 year or less	59,277	59,816
Federal agency securities	Aaa	1 year or less	217,100	219,048
Total investments (includes $10,349 restricted for capital projects and $140,345 which is classified as non-current)			$ 312,809	$ 315,538

Investments at June 30, 2018 (in thousands):

Investment Type	Credit Rating	Remaining Maturity	Cost	Fair Value
Money market investments	Aaa	1 year or less	$ 52,688	$ 52,688
Certificates of deposit	Aaa	1 year or less	12,090	12,171
Commercial paper	A-1+	1 year or less	4,974	4,987
U. S. Government Treasury bonds	Aaa	1 year or less	64,632	64,759
Federal agency securities	Aaa	1 year or less	148,280	149,216
Total investments (includes $8,868 restricted for capital projects and $83,583 which is classified as non-current)			$ 282,664	$ 283,821

B. CASH AND INVESTMENTS (continued)

Concentration of credit risk is the risk of loss due to the magnitude of WSSC's investment in the securities of any single issuer. The investment policy of WSSC contains no limitations on the amount that can be invested in any one issuer. Those that represent 5% or more of total investments are as follows (in thousands):

Issuer	Investment Type	2019	2018
FHLB	Federal agency securities	$ 219,048	$ 89,306
FHLMC	Federal agency securities	-	59,910
U.S. Government	Treasury bonds	59,816	64,759

The change in fair value of investments is recognized as an increase or decrease to investment assets and investment income.

WSSC categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The valuation technique uses a three level hierarchy of inputs to measure fair value. Investments classified in Level 1 within the fair value hierarchy are valued using prices quoted in active markets for identical assets. Level 2 investment valuations utilize inputs other than quoted prices included in Level 1 that are observable, either directly or indirectly. If fair value inputs are unobservable, the investments will be classified as Level 3.

Fair value measurements at June 30, 2019 (in thousands) using:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments by fair value level:				
Certificates of deposit	$ 15,434	$ -	$ -	$ 15,434
Commercial paper	14,927	-	-	14,927
U. S. Government bonds	59,816	-	-	59,816
Federal agency securities	219,048	-	-	219,048
Total investments by fair value level	$ 309,225	$ -	$ -	309,225
Investments measured at cost -				
Money market investments				6,313
Total investments				$ 315,538

B. CASH AND INVESTMENTS (continued)

Fair value measurements at June 30, 2018 (in thousands) using:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments by fair value level:				
Certificates of deposit	$ 12,171	$ -	$ -	$ 12,171
Commercial paper	4,987	-	-	4,987
U. S. Government bonds	64,759	-	-	64,759
Federal agency securities	149,216	-	-	149,216
Total investments by fair value level	$ 231,133	$ -	$ -	231,133
Investments measured at cost -				
Money market investments				52,688
Total investments				$ 283,821

C. RECEIVABLES

Receivables consisted of the following at June 30 (in thousands):

	2019	2018
Front foot benefit assessments accrued and billed	$ 6,958	$ 8,975
Water and sewer services unbilled	56,749	48,690
Water and sewer services billed	59,081	56,597
Miscellaneous	8,120	17,191
	130,908	131,453
Less allowance for doubtful accounts	(6,154)	(6,431)
Total receivables, net	$ 124,754	$ 125,022

D. CAPITAL ASSETS

Capital asset activity for the year ended June 30, 2019 was as follows (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets not being depreciated:				
Land and rights of way	$ 126,376	$ 3,050	$ -	$ 129,426
Construction in progress	1,527,629	573,502	(638,668)	1,462,463
Total capital assets not being depreciated	1,654,005	576,552	(638,668)	1,591,889
Capital assets being depreciated:				
Water supply	3,007,874	212,188	(702)	3,219,360
Sewage disposal	2,550,564	183,986	(1,601)	2,732,949
General construction	2,640,277	72,592	(4,643)	2,708,226
Intangible assets	1,407,904	127,175	(1,831)	1,533,248
Other	168,429	7,053	(2,849)	172,633
Total capital assets being depreciated	9,775,048	602,994	(11,626)	10,366,416
Less accumulated depreciation for:				
Water supply	(771,023)	(55,716)	702	(826,037)
Sewage disposal	(765,686)	(60,917)	80	(826,523)
General construction	(1,269,727)	(53,345)	3,367	(1,319,705)
Intangible assets	(366,594)	(32,276)	974	(397,896)
Other	(132,712)	(11,492)	2,840	(141,364)
Total accumulated depreciation	(3,305,742)	(213,746)	7,963	(3,511,525)
Capital assets being depreciated, net	6,469,306	389,248	(3,663)	6,854,891
Total capital assets, net	$ 8,123,311	$ 965,800	$ (642,331)	$ 8,446,780

D. CAPITAL ASSETS (continued)

Capital asset activity for the year ended June 30, 2018 was as follows (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets not being depreciated:				
Land and rights of way	$ 121,711	$ 4,665	$ -	$ 126,376
Construction in progress	1,574,818	595,740	(642,929)	1,527,629
Total capital assets not being depreciated	1,696,529	600,405	(642,929)	1,654,005
Capital assets being depreciated:				
Water supply	2,680,679	336,724	(9,529)	3,007,874
Sewage disposal	2,361,183	189,381	-	2,550,564
General construction	2,603,318	41,595	(4,636)	2,640,277
Intangible assets	1,388,814	19,090	-	1,407,904
Other	167,178	6,476	(5,225)	168,429
Total capital assets being depreciated	9,201,172	593,266	(19,390)	9,775,048
Less accumulated depreciation for:				
Water supply	(726,372)	(48,649)	3,998	(771,023)
Sewage disposal	(709,481)	(56,205)	-	(765,686)
General construction	(1,218,043)	(52,921)	1,237	(1,269,727)
Intangible assets	(335,392)	(31,202)	-	(366,594)
Other	(124,578)	(13,033)	4,899	(132,712)
Total accumulated depreciation	(3,113,866)	(202,010)	10,134	(3,305,742)
Capital assets being depreciated, net	6,087,306	391,256	(9,256)	6,469,306
Total capital assets, net	$ 7,783,835	$ 991,661	$ (652,185)	$ 8,123,311

Interest costs of $47.3 million and $47.5 million were capitalized during fiscal years 2019 and 2018, respectively.

D. CAPITAL ASSETS (continued)

Purchased Software

Purchased software and related development stage costs of $1.1 million and $1.9 million were capitalized in accordance with GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets* in fiscal years 2019 and 2018, respectively. Costs of $40.7 million are included in the Construction in Progress balance as of June 30, 2019 and will commence amortization upon implementation of the software. Intangible assets include the balance of costs placed in service, net of accumulated amortization, of $5.3 million and $8.0 million in fiscal 2019 and 2018, respectively.

Purchased Capacity

Jennings Randolph

An intangible asset for purchased capacity has been established for WSSC's share of capital costs in the Jennings Randolph Reservoir (Bloomington Dam). The Reservoir provides backup and peak-day water supply to WSSC and is operated by the U.S. Army Corps of Engineers, Baltimore District. WSSC funds 50% of the capital costs, and intangible asset balances, net of accumulated amortization, of $27.1 million and $27.3 million, for fiscal years 2019 and 2018, respectively, are included above.

Mattawoman and Poolesville

WSSC participates in the funding of capital costs for the Mattawoman and Poolesville Wastewater Treatment Plants through agreements with Charles County and the Town of Poolesville, respectively. In exchange for this participation, WSSC obtains the right to discharge wastewater from the Washington Suburban Sanitary District into said facilities. Costs of $3.1 million are included in the Construction in Progress balance as of June 30, 2019 and will commence amortization when placed in service. Asset balances, net of accumulated amortization, totaling $8.4 million and $8.3 million, for fiscal years 2019 and 2018, respectively, are included in intangible assets above.

Blue Plains

The Commission, the District of Columbia (the District), the District of Columbia Water and Sewer Authority (DC Water), Fairfax County, Virginia, Montgomery County, Maryland, and Prince George's County, Maryland are "Parties" to a regional Intermunicipal Agreement (IMA) that provides for dedicated allocation of wastewater flow capacity for treatment at the Blue Plains facility in Washington DC. The *Blue Plains Intermunicipal Agreement of 1985 Equity Payment Study* and the subsequent equity payments required by the 1985 IMA reconciled all capital cost contributions for the Parties prior to 1987 and established a new baseline as of 1988 for calculating and allocating future capital costs associated with Blue Plains.

The 1985 IMA was replaced, effective April 3, 2013, by a new Blue Plains Intermunicipal Agreement of 2012 (the "2012 IMA"), which was executed by each of the original signatories to the 1985 IMA. The 2012 IMA provides for the allocation of capital, operating, and maintenance costs among the Parties. The parties have demonstrated their willingness to share in the burdens associated with the demands for regional wastewater collection and treatment and biosolids management. Capital costs of Blue Plains are allocated among the Parties in proportion to their respective capacity allocation of the wastewater treatment, collection, and conveyance facilities as defined in the 2012 IMA. Operating costs are allocated on a proportional basis, by the wastewater flows from each participant to the Blue Plains facilities. The Commission has a wastewater treatment capacity entitlement of 169.60 MGD, which is approximately 45.8% of the Plant's total capacity of 370 MGD.

An operating procedure was implemented for Multi-Jurisdictional Users Facilities' (MJUF) in fiscal year 2018. The procedure employs a new methodology to determine the allocated flow by users through the various facilities (such as pump stations and major conveyance pipelines through the District of Columbia) for O&M billing purposes. There was no change in the Blue Plains capital cost allocation as defined.

D. CAPITAL ASSETS (continued)

To address technical, policy and financial issues related to the 2012 IMA, the Parties may act at three different levels of authority: 1) the policy level, as an IMA signatory, 2) the administrative level, as a member of the Leadership Committee, and 3) the technical level, as a member of the Regional Committee. WSSC has representation at each of these levels.

If any participant's projected annual flow is anticipated to exceed its allocated flow capacity, the following options are available for consideration by the Regional and Leadership Committees, with participation from all of the Parties: 1) wastewater flow management adjustments, 2) modification of treatment processes at Blue Plains, 3) diversion of flows from the Blue Plains Service Area to other facilities, 4) sale or rental of excess capacity at Blue Plains between the Parties, and 5) expansion or addition of treatment and/or storage facilities. The rental or sale of allocated flow capacity shall be at the discretion of the Party which is providing the capacity for sale or rent, and the related Parties to the transaction will mutually agree on the cost basis.

The 2012 IMA remains in effect until amended, replaced or terminated by mutual consent of the Parties.

The Commission's capital investment in Blue Plains, under the 2012 IMA, is accounted for as an intangible asset and is amortized over the estimated useful lives of the underlying assets. Costs of $301.0 million are included in the Construction in Progress balance as of June 30, 2019 and will commence amortization when assets are placed in service. Asset balances, net of accumulated amortization, totaling $1,094.6 million and $997.7 million, for fiscal years 2019 and 2018, respectively, are included in intangible assets above.

The amount shown in the statements of revenues, expenses and changes in net assets for depreciation and amortization does not include depreciation of vehicles and equipment. Depreciation of these assets, $11.5 million in fiscal 2019 and $13.0 million in fiscal 2018, is classified with other related operating and maintenance costs.

E. NOTE RECEIVABLE

On April 4, 2007, WSSC entered into a Purchase and Sale Contract with Montgomery County for the County's purchase of WSSC's property which previously was the site of a biosolids composting facility. On January 15, 2009, the closing date of the sale, WSSC received a promissory note in the amount of $10,000,000 from Montgomery County.

Interest accrues at a rate of 4.43%, which commenced six months after the execution of the promissory note. Under the provisions of the promissory note, the minimum annual payment by Montgomery County is $400,000 and is due on July 15, 2009 and annually thereafter. Payments shall be allocated first to interest, then to principal. At June 30, 2019 and 2018, the balance of this Note Receivable was $9.0 million and $9.8 million, respectively.

As Montgomery County develops the property, additional payments become due when a 'Payment Event' occurs. A 'Payment Event' is defined as a sale or ground lease of a parcel or the commencement of initial construction on a parcel. The additional payment shall be applied to the minimum annual payment amount. Montgomery County is obligated to pay additional payments for amounts in excess of the minimum annual payment.

The principal portion of additional payments shall be at least determined based upon the ratio of the developable square feet (DSF) of the sold or developed parcel to the sum of the DSF of the sold or developed parcel plus the total DSF of the unsold parcels. Interest shall be the outstanding unpaid interest accrued as of the date of the applicable Payment Event.

The promissory note was amended and restated in 2017, to change the repayment schedule and extend the maturity date from January 15, 2024 to July 15, 2027. Under the amended Promissory Note, the County agrees to make a minimum payment of $1,238,855, at the interest rate of 4.43%, commencing July 15, 2018 and annually thereafter until the principal and all accrued and unpaid interest and other charges are paid.

F. DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

Deferred outflows of resources represent a consumption of net position that is applicable to a future period. Reported examples include:

(a) Deferred losses on bond refundings resulting from the difference between the carrying value of the refunded debt and its reacquisition price
(b) Net difference between projected and actual earnings on pension plan investments
(c) Results of changes in pension assumptions
(d) Contributions to the OPEB Plan subsequent to the measurement date of the net OPEB liability and before the end of WSSC's reporting period
(e) Differences between expected and actual experience in the measurement of the total OPEB liability

Deferred inflows of resources represent an acquisition of net assets that is applicable to a future period. Reported examples include:

(a) Differences between expected and actual experience in the measurement of the total pension liability
(b) Net difference between projected and actual earnings on pension plan investments
(c) Net difference between projected and actual earnings on OPEB plan investments

G. CAPITAL CONTRIBUTIONS

Capital contributions consisted of the following for the years ended June 30 (in thousands):

	2019	2018
System development charges	$ 26,276	$ 28,447
Developer fees	5,737	5,301
Federal and State grants	995	3,706
House connections	11,781	6,699
Land and rights of way	158	2,651
Other construction projects	39,400	24,288
Total	$ 84,347	$ 71,092

H. COMPENSATED ABSENCE LIABILITY

Compensated absence liability activity consisted of the following for the years ended June 30 (in thousands):

	2019	2018
Compensated absence liability – beginning of year	$ 12,810	$ 12,255
Increases (incurred)	11,168	10,748
Decreases	(10,834)	(10,193)
Compensated absence liability – end of year	$ 13,144	$ 12,810

This liability is included in accounts payable and accrued expenses on the balance sheet.

I. DEPOSITS, UNEARNED REVENUE AND OTHER LONG-TERM LIABILITIES

Deposits, unearned revenue and other long-term liabilities, reflected as non-current liabilities on the Balance Sheet, consisted of the following at June 30 (in thousands):

	2019	2018
Unearned revenue for house connections	$ 13,004	$ 16,124
Unearned front foot benefit revenue	434	619
Construction deposits	2,308	2,224
House connection deposits	2,466	3,424
Other	4,378	4,568
Total	$ 22,590	$ 26,959

J. BONDS AND NOTES PAYABLE

Bonds and notes payable activity for the year ended June 30, 2019 was as follows (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance	Current Maturities
Bonds and notes payable:					
Water supply - other	$ 1,281,263	$ 181,045	$ (114,071)	$ 1,348,237	$ 153,543
Water supply - direct placement	3,036	-	(1,012)	2,024	1,012
Sewage disposal - other	1,521,877	215,231	(127,519)	1,609,589	114,407
Sewage disposal - direct placement	243,093	7,938	(14,243)	236,788	16,828
General construction - other	172,010	33,065	(42,933)	162,142	47,333
General construction - direct placement	1,993	-	(613)	1,380	613
	3,223,272	437,279	(300,391)	3,360,160	333,736
Plus unamortized premium/discount	200,240	30,762	(21,106)	209,896	-
Total bonds and notes payable	$ 3,423,512	$ 468,041	$ (321,497)	$ 3,570,056	$ 333,736

Bonds and notes payable activity for the year ended June 30, 2018 was as follows (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance	Current Maturities
Bonds and notes payable:					
Water supply - other	$ 1,083,556	$ 331,225	$ (133,517)	$ 1,281,264	$ 155,691
Water supply - direct placement	4,047	-	(1,012)	3,035	1,012
Sewage disposal - other	1,313,496	406,185	(197,803)	1,521,878	115,413
Sewage disposal - direct placement	243,411	13,830	(14,149)	243,092	14,270
General construction - other	187,790	21,095	(36,875)	172,010	51,393
General construction - direct placement	2,611	-	(618)	1,993	584
	2,834,911	772,335	(383,974)	3,223,272	338,363
Plus unamortized premium/discount	171,914	48,917	(20,591)	200,240	-
Total bonds and notes payable	$ 3,006,825	$ 821,252	$ (404,565)	$ 3,423,512	$ 338,363

The unamortized amounts above represent premiums received on outstanding debt issuances.

J. BONDS AND NOTES PAYABLE (continued)

Bonds payable accrue interest at rates ranging from 0.7% to 5.0%, with an effective interest rate of 3.82% at June 30, 2019. All bonds payable at June 30, 2019, exclusive of refunded bonds, are due serially through the year 2048. Generally, the bonds are callable at a premium after a specified number of years.

In December 2018, WSSC issued $390.0 million of Consolidated Public Improvement Bonds to fund new construction, rehabilitation and replacement of general, water and sewer infrastructure.

In November 2017, WSSC issued $459.3 million of Consolidated Public Improvement Bonds to fund new construction, rehabilitation and replacement of water and sewer infrastructure.

In September 2009, WSSC issued $180.0 million of Consolidated Public Improvement Bonds in two series; $90.0 million in Tax-Exempt Bonds, Series 2009A and $90.0 million in Taxable Build America Bonds - Direct Payment to the Issuer, Series 2009B. In September 2010, WSSC issued $240.0 million of Consolidated Public Improvement Bonds in two series; $120.0 million in Tax-Exempt Bonds, Series 2010A and $120.0 million in Taxable Build America Bonds - Direct Payment to the Issuer, Series 2010B. The American Recovery and Reinvestment Act of 2009 created the Build America Bonds program. This program is intended to assist state and local municipalities in issuing debt. One provision of the program is for issuance of taxable Build America Bonds to finance capital expenditures while providing a federal subsidy of 35% of the interest payment to the issuer. Due to government sequestration enacted in March 2013, the December 1, 2015 and June 1, 2016 subsidies were reduced by 2.38%. The December 1, 2016 and June 1, 2017 subsidies were reduced by 2.42%. The December 1, 2017 and June 1, 2018 subsidies were reduced by 2.31%. The December 1, 2018 and June 1, 2019 subsidies were reduced by 2.17%. The subsidy is payable over the life of the issue, and in the schedule below it is assumed that the remainder of subsidy payments will be made at the original 35%.

On December 13, 2017, the Commission completed a crossover refunding for the 2009 Build America Bonds – Direct Payment to the Issuer, Series 2009B. The crossover date for the bonds was June 1, 2019, at which time the 2009 Build America Bonds, 2009B were fully defeased and redeemed.

Bond and note maturities and interest thereon, including Taxable Build America Bond subsidies, for the next five years are as follows (in thousands):

Year Ended June 30	Principal Other Maturities	Principal Direct Placement Maturities	Interest Other Requirements	Interest Direct Placement Requirements	Build America Bond Subsidies
2020	$ 315,283	$ 18,453	$ 125,361	$ 2,215	$ (1,789)
2021	138,530	19,900	118,437	2,013	(1,789)
2022	134,289	18,177	111,784	1,824	(1,640)
2023	132,438	18,319	108,096	1,652	(1,485)
2024	133,327	17,732	101,433	1,483	(1,323)

Bond and note maturities and interest thereon, including Taxable Build America Bond subsidies, in five-year increments for fiscal years after 2024 are as follows (in thousands):

Year Ended June 30	Principal Other Maturities	Principal Direct Placement Maturities	Interest Other Requirements	Interest Direct Placement Requirements	Build America Bond Subsidies
2025-2029	$ 638,060	$ 72,366	$ 417,179	$ 5,267	$ (3,935)
2030-2034	454,853	71,552	290,552	1,946	(204)
2035-2039	425,218	3,693	197,968	27	-
2040-2044	509,945	-	106,290	-	-
2045-2048	238,025	-	18,040	-	-

J. BONDS AND NOTES PAYABLE (continued)

Bond Anticipation Notes (the Notes) are remarketed weekly by WSSC's remarketing agent at prevailing weekly tax-exempt interest rates. Interest rates on the Notes ranged from 0.91% to 2.25% during fiscal year 2019 and from 0.61% to 1.90% during fiscal year 2018. Any or all buyers of the Notes may demand payment from WSSC's remarketing agent upon seven days' notice. WSSC's remarketing agents are prepared to remarket the Notes in such eventuality. The Notes were sold under a bank line of credit agreement which acts as a guarantee of liquidity for the Notes in the event that the Notes cannot be remarketed. On August 28, 2013, the Commission replaced the series '"A" notes with two separate series (A&B), each backed by their own line of credit. On July 26, 2019, the Commission extended the current line of credit agreements with both TD Bank and State Street Bank & Trust through August 28, 2023. The maximum amount available under each line of credit , subject to certain conditions, is $107.5 million. In aggregate, the total line of credit is $215.0 million.

At June 30, 2019 and 2018, $177.8 million and $190.2 million respectively, of the Notes were outstanding. WSSC expects to redeem these Notes with proceeds of future bond issues or annual amortization. The Commission issued $42.5 million in Series A Notes and $52.5 million in Series B Notes on August 31, 2016. On June 24, 2015, the Commission issued $35.0 million in Series A Notes and $55.0 million in Series B Notes. On February 26, 2014, WSSC issued $50.0 million in Series B Notes. The Commission redeemed $12.4 million each in Notes on June 27, 2019 and June 6, 2018, respectively, as part of the water, sewer and general debt service amortization. The Notes are treated as bonds, and as such, are expected to be amortized over a 20-year term. However, because these Notes are callable, the entire $177.8 million has been included in current maturities (fiscal 2019 principal maturities), and an estimated $6.2 million has been included in the fiscal 2020 interest requirements. Additional estimated interest requirements at prevailing rates through 2036 on these Notes, assuming future redemption from proceeds of bonds, would total $64.1 million.

Since November 1989, WSSC has participated in a loan program established by the State of Maryland to loan money to Maryland municipalities for local water and sewer projects. The program, known as the Maryland Water Quality Revolving Loan Fund, is designed to offer these municipalities loans at reduced interest rates. According to GASB Statement No. 88, the Maryland Water Quality Revolving Loan Fund is a direct placement bond. As of June 30, 2019, WSSC borrowed $408.1 million from the program. The total principal balance outstanding as of June 30, 2019 and 2018 was $240.2 million and $248.1 million, respectively. WSSC does not have assets that are pledged as collateral for the loan, however, WSSC has authority to assess an ad valorem tax to pay debt service if necessary. There has not been any event of default or termination on the Maryland Water Quality Revolving Loan.

Proceeds of notes payable to the Federal government were used to make improvements to the Jennings Randolph Reservoir for backup and peak-day water supply. The note payable accrues interest at 3.25% and balances outstanding at June 30, 2019 and 2018 were $20.2 million and $20.9 million, respectively.

WSSC is in compliance with all terms of its debt agreements at June 30, 2019 and 2018.

K. BOND REFUNDINGS

WSSC sells refunding bonds, thereby defeasing outstanding bonds, to reduce total debt service payments over the remaining life of the refunded bonds and to obtain an economic gain (difference between the present value of the old and new debt service payments) from the transactions.

The refunded bonds continue to be general obligations of WSSC until redeemed or called. However, the net proceeds of the refunding bonds are applied toward the purchase of U.S. Government obligations (held in escrow) with maturities and interest sufficient to meet debt service and call premiums, if any, on the refunded bonds. The holders of the refunded bonds have first lien on all assets held in escrow. Refunded bonds outstanding at June 30, 2019 and 2018, which amounted to $217.5 million, are considered to be defeased and are not reflected in the accompanying financial statements.

K. BOND REFUNDINGS (continued)

In March 2019, WSSC sold $39.3 million of refunding bonds with interest rates ranging from 2.00% to 5.00% to refund $42.8 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 3.50% to 5.00%. The net proceeds of $43.5 million (including a premium of $4.4 million) were used to purchase selected open market securities. Those securities were deposited with an escrow agent to provide for all future debt service payments and the early redemption of callable bonds. The March 2019 refunding will reduce WSSC's total debt service payments over the next 15 years by $3.0 million and provide an economic gain of $2.9 million.

In November 2017, WSSC sold $220.2 million of refunding bonds with interest rates ranging from 3.00% to 5.00% to refund $217.5 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 3.00% to 5.00%. The net proceeds of $237.2 million (including a premium of $18.1 million) were used to purchase selected open market securities. Those securities were deposited with an escrow agent to provide for all future debt service payments and the early redemption of callable bonds. The November 2017 refunding will reduce WSSC's total debt service payments over the next 15 years by $11.7 million and provide an economic gain of $9.8 million.

In December 2017, WSSC sold $79.1 million of crossover refunding bonds with an interest rate of 5.00%. The bonds refunded $90.0 million of outstanding callable water supply, sewage disposal and general construction bonds with interest rates ranging from 4.35% to 5.00%. Proceeds from the refunding bonds were used to purchase U.S. government securities in an irrevocable trust with an escrow agent and provided debt service payments on the Series 2009B on the crossover date of June 1, 2019. As a result of the crossover refunding issue, WSSC will save $4.9 million in debt service payments and achieve an economic gain of $4.2 million.

Refunded bonds are considered to be defeased and the liability is not reflected in the financial statements.

Effective July 1, 1993, WSSC adopted GASB Statement No. 23, *Accounting and Financial Reporting for Refundings of Debt Reported by Proprietary Activities*. GASB No. 23 requires deferral of the difference between the reacquisition price and the carrying amount of the old debt. The difference is reported in the accompanying financial statements as a deferred outflow of resources and is being amortized to interest on bonds and notes through the year 2032 using the proportionate-to-stated interest method. Amortization totaling $1.0 million and $1.4 million in fiscal 2019 and 2018, respectively, was recorded as an interest adjustment on bonds and notes payable in the accompanying statements of revenues, expenses and changes in net position.

In accordance with GASB 65, deferred amounts from debt refundings are now illustrated as Deferred Outflows or Inflows of Resources on the Balance Sheet.

L. RETIREMENT PLAN

Plan Description

The Washington Suburban Sanitary Commission Employees' Retirement Plan (the Plan), a single employer contributory defined benefit retirement plan, was established in 1967 to provide retirement and death benefits for the employees of the Washington Suburban Sanitary Commission (WSSC) under conditions set forth in the Plan Document based on an employee's age, length of service, and compensation. The Retirement Plan Document is amended from time to time, with the Plan last amended on January 15, 2016. The Plan may be amended by Commission resolution or by the Executive Director on behalf of the Commission.

WSSC implemented the Open Version of the Plan on July 1, 1978. Members of the Plan as of June 30, 1978 had an option to be included in the Open Version. This option expired December 31, 1978. The Open Version is mandatory for new employees. It generally provides for reduced employee contributions and benefits.

L. RETIREMENT PLAN (continued)

As of December 31, 2018 and 2017, there were 1,641 and 1,616 employees, respectively, participating in the Open Version of the Plan, and 5 and 7 employees, respectively, participating in the Closed Version of the Plan, a total of 1,646 and 1,623 employee participants, respectively.

As of December 31, 2018 and 2017, there were 1,630 and 1,600 retirees and/or beneficiaries, respectively, receiving benefits from the Plan, and there were 110 and 105 terminated vested employees, respectively, not yet receiving benefits. Eleven and sixteen employees retired in fiscal years 2018 and 2017, respectively, and began receiving benefits in subsequent fiscal years.

Actuarial studies are performed at least once every two years as of June 30th and the measurement date for the net pension liability is December 31st.

Contributions

WSSC funds annual pension plan costs based upon a level percentage of payroll costs. WSSC's contribution, which is paid in a lump sum on July 1 each year, amounted to $25.5 million and $24.2 million on July 1, 2018 and 2017, respectively.

Pension Benefits

The Plan provides for 100% vesting of retirement benefits after five years of credited service.

Generally, the normal retirement benefits payable to an eligible participant are equal to the sum of:

1. 2.1% of final average monthly compensation multiplied by the Closed Version credited service, plus
2. 1.4% of final average monthly compensation multiplied by the Open Version credited service where the sum of Closed Version credited service and Open Version credited service, exclusive of accumulated sick leave service is subject to a maximum of 36 years.

The Plan provides options for disability and early retirement to eligible participants or their surviving spouses.

The Plan provides for periodic cost of living increases to retirement benefits. Participants covered by the Closed Version will receive an increase two months following a sustained increase in the Consumer Price Index of 3% or more. Participants in the Open Version receive an increase each March 1, based on the preceding calendar year's increase in the Consumer Price Index. The first increase may be pro-rated depending on the time of retirement.

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of July 1, 2018, using the following actuarial assumptions, applied to all periods included in the measurement:

	2018	2017
Inflation	2.50%	2.50%
Salary increases		
Up to 5 years of Service	7.50%	7.50%
6+ years of service	2.75%	2.75%
Investment rate of return	7.00%	7.00%

L. RETIREMENT PLAN (continued)

The mortality rates for 2018 were based on the RP-2000 Healthy Annuitant Mortality Table for Males or Females, with Blue Collar adjustments and one-year age set-forward, and projected to 2025 using Scale BB.

The actuarial assumptions used in the July 1, 2018 valuation were based on the results of an actuarial experience analysis covering 2011 through 2015.

Further details on assumptions are provided in the valuation report.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. This is then modified through a Monte-Carlo simulation process, by which a (downward) risk adjustment is applied to the baseline expected return. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation and the final investment return assumption are summarized in the following table:

	Target Allocation	Long Term Expected Real Rate of Return
Asset class:		
Domestic Equity	40.00%	5.70%
Non-U.S. Equity	25.00%	5.90%
U.S. Fixed Income	30.00%	2.55%
Real Esate	5.00%	4.25%
Total Weighted Average Real Return	100.00%	4.73%
Plus Inflation		2.50%
Total Return without Adjustment		7.23%
Risk Adjustment		-0.23%
Total Expected Return		7.00%

Discount Rate

The discount rate used to measure the total pension liability was 7.00% for 2018 and 2017. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that Commission contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate.

Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension investments was applied to all periods of projected benefit payments to determine the total pension liability.

L. RETIREMENT PLAN (continued)

Other Key Actuarial Assumptions

The other key actuarial assumptions that determined the total pension liability as of December 31, 2018 and 2017 included:

Valuation date	July 1, 2018	July 1, 2017
Measurement date	December 31, 2018	December 31, 2017
Inflation	2.50%	2.50%
Salary increased including inflation	2.75% to 7.50%	2.75% to 7.50%

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the Plan, calculated using the discount rate of 7.00% for each of 2018 and 2017, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate (in thousands).

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net Pension Liability - 2018	$ 335,194	$ 226,628	$ 134,791
Net Pension Liability - 2017	$ 207,447	$ 102,536	$ 13,785

L. RETIREMENT PLAN (continued)

Changes in the Net Pension Liability

Changes in the Net Pension Liability for the year ended December 31, 2018 were as follows (in thousands):

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Balances at 12/31/17	$ 936,361	$ 833,825	$ 102,536
Changes for the year:			
Service cost	11,558	-	11,558
Interest	65,379	-	65,379
Differences between expected and actual experience	16,448	-	16,448
Changes in assumptions	-	-	-
Contributions – employer	-	25,480	(25,480)
Contributions – employee	-	4,150	(4,150)
Net investment income	-	(60,337)	60,337
Benefit payments, including refunds of employee contributions	(61,533)	(61,533)	-
Administrative expense*	-	-	-
Net change	31,852	(92,240)	124,092
Balances at 12/31/18	$ 968,213	$ 741,585	$ 226,628
Plan's fiduciary net position as a percentage of the total pension liability	76.59%		

* Administrative expenses are paid directly by WSSC

L. RETIREMENT PLAN (continued)

Changes in the Net Pension Liability for the year ended December 31, 2017 were as follows (in thousands):

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Balances at 12/31/16	$ 917,584	$ 744,798	$ 172,786
Changes for the year:			
Service cost	10,745	-	10,745
Interest	63,200	-	63,200
Differences between expected and actual experience	3,474	-	3,474
Changes in assumptions	-	-	-
Contributions – employer	-	24,193	(24,193)
Contributions – employee	-	5,291	(5,291)
Net investment income	-	118,185	(118,185)
Benefit payments, including refunds of employee contributions	(58,642)	(58,642)	-
Administrative expense*	-	-	-
Net change	18,777	89,027	(70,250)
Balances at 12/31/17	$ 936,361	$ 833,825	$ 102,536
Plan's fiduciary net position as a percentage of the total pension liability	89.05%		

* Administrative expenses are paid directly by WSSC

Pension Expense

For the years ended June 30, 2019 and 2018, WSSC recognized pension expense as follows (in thousands):

	2019	2018
Pension cost distributions:		
Operating	$ 21,931	$ 20,544
Non-operating	(8,850)	(10,050)
Capital	26,869	(8,546)
Total pension expense	$ 39,950	$ 1,948

L. RETIREMENT PLAN (continued)

Deferred Outflows (Inflows) of Resources

Deferred outflows of resources and deferred inflows of resources related to pensions were reported for the years ended June 30, 2019 and 2018 from the following sources (in thousands):

Deferred Outflows	2019	2018
Changes in assumptions	$ 10,753	$ 16,129
Net difference between projected and actual earnings on pension plan investments	62,428	-
Deferred Outflows	$ 73,181	$ 16,129
Deferred Inflows		
Differences between expected and actual experience	$ (11,394)	$ (35,576)
Net difference between projected and actual earnings on pension plan investments	-	(29,595)
Deferred Inflows	$ (11,394)	$ (65,171)

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (in thousands):

Year ended June 30	Amortization
2020	$18,992
2021	5,118
2022	11,256
2023	26,421

Historical trend information showing the Plan's progress is presented in the Plan's December 31, 2018 comprehensive annual financial report, which can be requested from WSSC’s offices.

Retirement Restoration Plan

Effective July 1, 1995, WSSC established the Washington Suburban Sanitary Commission Employees' Retirement Restoration Plan (the Restoration Plan), a non-qualified plan. The purpose of the Restoration Plan is to restore most of the benefits foregone by participants in the WSSC Employees' Retirement Plan when such benefits are limited by the maximum benefit provisions of Section 415 of the Internal Revenue Code. During fiscal years 2019 and 2018, the Restoration Plan paid benefits totaling $26,000 and $27,000, respectively.

M. OTHER POST EMPLOYMENT BENEFITS (OPEB)

Plan Description

Post-employment benefits are provided under a set of personnel policies (herein referred to, collectively, as the "OPEB Plan"). The OPEB Plan and its underlying trust, a single employer defined benefit plan, was established in 2007 to provide life insurance, healthcare and prescription drug benefits for OPEB Plan participants and beneficiaries of the WSSC under conditions set forth in the Trust Agreement, including the payment of reasonable administrative expenses. WSSC employees are eligible to continue group insurance coverage after retirement provided that retiring employees have had coverage in effect for two years prior to retirement.

As of December 31, 2018 and 2017, there were 1,646 and 1,623 active employees and 1,630 and 1,600 retirees, respectively. WSSC has the right to amend the Trust Fund Agreement.

Actuarial studies are performed at least once every two years as of June 30th and the measurement date for the net pension liability is December 31st.

Member and Employer Contributions

WSSC contributes to the OPEB Plan as it deems appropriate. WSSC initially elected to phase-in payments to the Trust over a five-year period, such that 20% of the difference between the annual required contribution and total cash expenses (funded on a "Pay-as-you-go" basis) would be funded in fiscal year 2007 and 40% of this difference would be funded in fiscal year 2008. During the third year (2009) of the phase in, WSSC elected to phase-in this difference over an eight- year period, which ended in 2014. WSSC made cash contributions of $10.0 million for the years ending December 31, 2018 and 2017.

The OPEB Plan recognizes revenues and expenditures for third-party payments made by WSSC related to benefits payments and administrative expenses. Accordingly, the OPEB Plan has included "on behalf" payments made by WSSC during the years 2018 and 2017 of $14.8 million and $15.8 million, respectively.

"On-behalf" payments by WSSC made subsequent to the measurement dates of December 31, 2018 and 2017 are reported as deferred outflows of contributions at June 30, 2019 and 2018 totaling $4.4 million and $4.2 million, respectively.

OPEB Benefits

The OPEB Plan pays 70-80% of the full premium for medical and prescription drug coverage for eligible participants and qualified dependents. In addition, employees who retired in 1982 and after are eligible for life insurance benefits. The amount of retiree life insurance coverage begins at 85% of the employee's salary as of the day immediately prior to retirement, and decreases over a four-year period, until coverage equals either 25% of that salary or $5,000, whichever is greater.

OPEB Plan Termination

In the event of the OPEB Plan termination, assets shall be allocated for the payment of benefits and administrative expenses in accordance with the OPEB Plan and Trust Agreement.

M. OTHER POST EMPLOYMENT BENEFITS (OPEB) (continued)

Actuarial Assumptions

The total OPEB liability was determined by an actuarial valuation as of July 1, 2017, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50%
Healthcare cost trends	
2017	5.75%
2018	5.50%
2019	5.25%
2020	4.75%
Thereafter	4.50%
Post-Medicare	4.50%
Investment rate of return	7.00%

The mortality rates for 2017 were based on the RP-2000 Healthy Annuitant mortality table, for males and females, with one year set forward, and projected to 2025 using Scale BB. The RP2000 Disabled tables were used for the valuation of disabled lives. The actuarial assumptions used in the July 1, 2017 valuation were based on the results of an actuarial experience analysis in 2016.

Further details on assumptions are provided in the valuation report.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. This is then modified through a Monte-Carlo simulation process, by which a (downward) risk adjustment is applied to the baseline expected return. Best estimates of arithmetic real rates of return for each major asset class included in the OPEB plan's target asset allocation and the final investment return assumption are summarized in the following tables:

	Target Allocation	Long Term Expected Real Rate of Return
Asset class:		
Domestic Equity	40.70%	5.70%
Non-U.S. Equity	24.80%	5.90%
U.S. Fixed Income - Investment	30.20%	2.00%
U.S. Fixed Income - High Yield	2.60%	3.35%
Emerging Markets Currency	1.70%	3.80%
Total Weighted Average Real Return	100.00%	4.54%
Plus Inflation		2.50%
Total Return without Adjustment		7.04%
Risk Adjustment		-0.04%
Total Expected Return		7.00%

M. OTHER POST EMPLOYMENT BENEFITS (OPEB) (continued)

Discount Rate

The discount rate used to measure the total OPEB liability was 7.00%. The OPEB Plan's funding expectations/policy is to contribute approximately $10.0 million per year to the OPEB trust, in addition to paying benefits for retirees. Based on those assumptions, the OPEB Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the expected trust return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability, calculated using the discount rate of 7.00%, as well as what WSSC's net OPEB liability would be if it were calculated using rates that are 1.00% lower or 1.00% higher than the current rate (in thousands).

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net OPEB Liability - 2018	$ 158,153	$ 129,529	$ 105,731
Net OPEB Liability - 2017	$ 149,872	$ 121,759	$ 98,934

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trends

The following presents the net OPEB liability, calculated using the trend assumptions below, as well as, what WSSC's net OPEB liability would be if it were calculated using rates that are 1% lower or 1% higher than the current rate (in thousands).

	1% Decrease 3.50%	Current Trend 4.50%	1% Increase 5.50%
Net OPEB Liability - 2018	$ 103,709	$ 129,529	$ 160,830
Net OPEB Liability - 2017	$ 97,454	$ 121,759	$ 151,191

Other Key Actuarial Assumptions

The other key actuarial assumptions that determined the total OPEB liability as of December 31, 2018 and 2017 included:

Valuation date	July 1, 2017	July 1, 2017
Measurement date	December 31, 2018	December 31, 2017
Inflation	2.50%	2.50%

M. OTHER POST EMPLOYMENT BENEFITS (OPEB) (continued)

Changes in the Net OPEB Liability

Changes in the Net OPEB Liability for the year ended December 31, 2018 were as follows (in thousands):

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) – (b)
Balances at 12/31/17	$ 240,304	$ 118,545	$ 121,759
Changes for the year:			
Service cost	2,798	-	2,798
Interest	16,659	-	16,659
Differences between expected and actual experience			
Changes in assumptions	-	-	-
Contributions – employer, including benefits paid	-	20,421	- (20,421)
Contributions – retiree	-	4,340	(4,340)
Net investment income	-	(8,690)	8,690
Benefit payments, including refunds of employee contributions	(10,420)	(14,760)	4,340
Administrative expense*	-	(44)	44
Net change	9,037	1,267	7,770
Balances at 12/31/18	$ 249,341	$ 119,812	$ 129,529
Plan's fiduciary net position as a percentage of the total pension liability	48.05%		

* Administrative expenses are paid directly by WSSC

M. OTHER POST EMPLOYMENT BENEFITS (OPEB) (continued)

Changes in the Net OPEB Liability for the year ended December 31, 2017 were as follows (in thousands):

	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
	(a)	(b)	(a) – (b)
Balances at 12/31/16	$ 228,143	$ 94,318	$ 133,825
Changes for the year:			
Service cost	2,716	-	2,716
Interest	16,104	-	16,104
Differences between expected and actual experience	4,927	-	4,927
Changes in assumptions	-	-	-
Contributions – employer, including benefits paid	-	21,586	- (21,586)
Contributions – retiree	-	4,168	(4,168)
Net investment income	-	14,247	(14,247)
Benefit payments, including refunds of employee contributions	(11,586)	(15,754)	4,168
Administrative expense*	-	(20)	20
Net change	12,161	24,227	(12,066)
Balances at 12/31/17	$ 240,304	$ 118,545	$ 121,759

Plan's fiduciary net position as a percentage of the total pension liability	49.33%

* Administrative expenses are paid directly by WSSC

M. OTHER POST EMPLOYMENT BENEFITS (OPEB) (continued)

OPEB Expense

For the years ended June 30, 2019 and 2018, WSSC recognized OPEB expense as follows (in thousands):

	2019	2018
OPEB cost distributions:		
Operating	$ 8,663	$ 9,357
Non-operating	(304)	(286)
Capital	5,110	1,975
Total OPEB expense	$ 13,469	$ 11,046

Deferred Outflows (Inflows) of Resources

Deferred outflows of resources and deferred inflows of resources related to pensions were reported for the years ended June 30, 2019 and 2018 from the following sources (in thousands):

Deferred Outflows	2019	2018
Contributions made subsequent to the measurement date	$ 4,441	$ 4,236
Net difference between expected and actual experience	2,956	3,942
Net difference between projected and actual earnings on OPEB plan investments	8,324	$ -
Deferred Outflows	$ 15,721	$ 8,178
Deferred Inflows		
Net difference between projected and actual earnings on OPEB plan investments	$ -	$ (7,524)
Deferred Inflows	$ -	$ (7,524)

Contributions made subsequent to the measurement date will be recognized as expense in the next year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (in thousands):

Year ended June 30	Amortization
2020	$2,425
2021	2,425
2022	2,974
2023	3,456

M. OTHER POST EMPLOYMENT BENEFITS (OPEB) (continued)

Historical trend information showing the Plan's progress is presented in the Plan's December 31, 2018 comprehensive annual financial report, which can be requested from WSSC’s offices.

N. DEFERRED COMPENSATION PLAN

WSSC offers its employees a deferred compensation plan created in accordance with Internal Revenue Code Section 457. The deferred compensation plan, available to all employees, permits them to defer a portion of their salaries until future years. The deferred compensation is not available to employees until termination, retirement, death, or unforeseeable emergency. All of the assets of the deferred compensation plan are held in a trust for the exclusive benefit of participants and beneficiaries. Participants’ rights under the plan are equal to the fair market value of the deferred account for each participant.

O. COMMITMENTS AND CONTINGENCIES

Construction expenditures for fiscal 2020 are not expected to exceed $639 million, a portion of which will be funded by capital contributions. Commitments in connection with this construction program approximated $175 million at June 30, 2019.

For fiscal years 2019 and 2018, the Commission paid $44.1 million and $83.0 million, respectively, to fund its share of construction costs under the regional Blue Plains Intermunicipal Agreement of 2012. The Commission estimates its share of the construction costs over the next six years to be $368.2 million, of which $62.1 million is expected to be incurred in fiscal year 2020 and the balance over fiscal years 2021 to 2026. In addition, for fiscal years 2019 and 2018, the Commission made total payments of $56.0 million and $56.5 million, respectively, to DC Water for its share of operating and maintenance costs.

WSSC receives several federal and state grants. The grant funds expended are subject to compliance audits by the grantors.

The United States Department of Justice, the United States Environmental Protection Agency and the Maryland Department of the Environment (collectively, “the Regulators”) alleged, in previous years, that sanitary sewer overflows (“SSOs”) from WSSC’s sanitary sewer collection system were violations of the Federal Clean Water Act and analogous State law. Federal agencies have pursued similar enforcement actions nationally against public wastewater treatment system owners. WSSC contested this action and the initial remedial measures proposed by the Regulators. Negotiations to resolve the enforcement action through the entry of a mutually agreeable Consent Decree began in March 2002. In July 2005, a proposed Consent Decree was executed between WSSC, the Regulators and four environmental groups in which WSSC agreed to undertake certain remedial measures to eliminate and/or reduce SSO occurrences. The proposed Consent Decree was approved by the U.S. District Court with an official start date of December 7, 2005. In fiscal 2016, the U.S. District Court approved a six-year extension to the original term of the Consent Decree. Costs of these remedial measures are estimated at $1,636.9 million and are to be expended over at least 19 years, $249.5 million of which is expected to be incurred after fiscal year 2019. The costs are included in WSSC’s budget and capital improvements program. WSSC also paid civil penalties totaling $1.1 million. These costs were accrued in fiscal 2005, and paid in fiscal 2006.

O. COMMITMENTS AND CONTINGENCIES (continued)

In February 2014, the Potomac Riverkeeper, Inc. ("PR") and the Chesapeake Bay Foundation, Inc. ("CBF") filed a complaint for injunctive relief and penalties in U.S. District Court in Maryland alleging violations of the Clean Water Act ("CWA") by the Commission (the "Issuer"). Under a Consent Decree executed by the District Court of Maryland on April 15, 2016, the Commission is required to undertake short-term operational changes and capital improvements at the Potomac Water Filtration Plant that will enable WSSC to reduce solids discharged to the river, and to plan, design and implement upgrades or new construction to achieve requirements established by MDE and incorporated in a new discharge permit. An Audit report and Long-Term Upgrade Plan were submitted by WSSC for consideration by MDE on December 26, 2016. WSSC and its consultant prepared an Amended Long-Term Upgrade Plan to address deficiencies in the 2016 Plan and issues raised by MDE and PR in response to the Plan. The work required to implement the Long-Term Capital Improvement Project(s) shall be fully implemented in accordance with the schedule in the Long-Term Upgrade Plan. The Commission shall be subject to lump-sum stipulated penalties for failure to implement Long-Term Capital Improvement Project(s) by January 1, 2026. Costs for implementation of improvements are estimated at $202 million, $194 million of which is expected to be incurred after fiscal year 2019. The costs are included in WSSC's budget and capital improvements program.

WSSC is involved in judicial and administrative proceedings. These actions include personal injury, property damage, personnel and environmental claims, and various claims filed by contractors against WSSC for cost overruns on construction contracts. While the outcomes of these matters are uncertain, it is the opinion of management and WSSC's General Counsel that resolution of all claims outstanding will not have a material adverse effect on the financial position or changes in net position of WSSC.

WSSC purchases insurance on its property (structures, contents, boiler and machinery, etc.) for physical damages where it has been determined that a reasonable amount of exposure exists. In addition, WSSC is self-insured for workers' compensation in accordance with the statutory requirements of the State of Maryland. The workers' compensation accrued liability includes an estimate for claims incurred but not yet reported to the claims administrator. WSSC also maintains crime and terrorism insurance and fiduciary liability policies having various self-insured retention levels. Claims have not exceeded policy limits in the past three years.

WSSC is self-insured for all public liability. Each year, funds are budgeted for normal claims. However, should the past loss experience change, or should a catastrophic loss occur in excess of applicable insurance coverage, funds for such loss or losses would have to be obtained from ad valorem taxation or other sources of revenue since a self-insurance fund has not been established.

General liability and workers' compensation claim activity consisted of the following at June 30 (in thousands):

	2019		2018	
Claim liability - beginning of year	$	14,437	$	16,981
Current year claims and changes in estimates		3,535		10,475
Claim payments		(9,327)		(13,019)
Claim liability - end of year	$	8,645	$	14,437

This liability is included in accounts payable and accrued expenses on the balance sheet.

During fiscal years 2019 and 2018, WSSC leased a variety of equipment with annual rental payments of approximately $2.3 million and $1.3 million, respectively.

P. SUBSEQUENT EVENTS

The WSSC has evaluated events subsequent to October 17, 2019 and through the date the financial statements were available to be issued, and determined there have not been any events that have occurred that would require adjustments to the financial statements.

REQUIRED SUPPLEMENTARY INFORMATION

WASHINGTON SUBURBAN SANITARY COMMISSION
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
SCHEDULE A-1

	2018	2017	2016	2015	2014	2013
Total Pension Liability						
Service cost	$ 11,557,550	$ 10,744,773	$ 10,576,413	$ 9,828,010	$ 11,098,519	$ 10,541,264
Interest on total pension liability	65,379,327	63,199,825	61,935,402	61,611,259	67,317,785	66,214,298
Effect of plan changes	-	-	-	-	-	-
Effect of assumption changes or inputs	-	-	-	32,257,956	-	-
Differences between expected and actual experience	16,447,791	3,474,382	(10,448,960)	(53,390,196)	(8,657,936)	-
Benefit payments, including refunds	(61,533,446)	(58,642,039)	(57,554,539)	(56,672,851)	(54,934,361)	(53,545,268)
Net change in total pension liability	31,851,222	18,776,941	4,508,316	(6,365,822)	14,824,007	23,210,294
Total pension liability, beginning of the year	936,361,482	917,584,541	913,076,225	919,442,047	904,618,040	881,407,746
Total pension liability, end of the year	968,212,704	936,361,482	917,584,541	913,076,225	919,442,047	904,618,040
Plan Fiduciary Net Pension						
Employer contributions	25,479,895	24,193,214	22,606,529	22,346,849	20,965,016	20,498,919
Member contributions	4,150,303	5,290,757	4,213,793	3,930,364	3,823,065	3,652,732
Investment income, net of investment expenses	(60,337,268)	118,185,475	61,852,141	(10,371,883)	37,575,770	110,734,486
Benefit payments, including refunds	(61,533,446)	(58,642,039)	(57,554,539)	(56,672,851)	(54,934,361)	(53,545,268)
Net change in plan fiduciary net position	(92,240,516)	89,027,407	31,117,924	(40,767,521)	7,429,490	81,340,869
Plan fiduciary net position, beginning of year	833,825,358	744,797,951	713,680,027	754,447,548	747,018,058	665,677,189
Plan fiduciary net position, end of year	741,584,842	833,825,358	744,797,951	713,680,027	754,447,548	747,018,058
Net pension liability, beginning of year	102,536,124	172,786,590	199,396,198	164,994,499	157,599,982	215,730,557
Net pension liability, end of year	$ 226,627,862	$ 102,536,124	$ 172,786,590	$ 199,396,198	$ 164,994,499	$ 157,599,982
Plan fiduciary net position as a percentage of total pension liability	76.6%	89.0%	81.2%	78.2%	82.1%	82.6%
Covered payroll	$ 150,768,609	$ 143,155,101	$ 133,766,444	$ 132,229,882	$ 124,053,349	$ 121,295,379
Plan's net pension liability as a percentage of covered payroll	150.3%	71.6%	129.2%	150.8%	133.0%	129.9%

This schedule is presented to illustrate the requirement to show information for 10 years. The Plan presents information for available years and additional years will be displayed as they become avaialble.

Notes to Schedule of Changes in Net Pension Liability and Related Ratios:

Benefit changes: - There have been no changes in benefit assumptions since the implementation of GASB 67 and 68.

Changes in assumptions - There were several changes in actuarial assumptions since the prior year, including rates of mortality, retirement, and termination; as well as inflation, salary increases, and investment return.

WASHINGTON SUBURBAN SANITARY COMMISSION
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS - PENSION
SCHEDULE A-2

Year	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2009	14,444,809	16,758,266	(2,313,457)	99,161,337	16.9%
2010	12,201,033	18,224,804	(6,023,771)	107,839,077	16.9%
2011	26,295,382	18,686,402	7,608,980	110,570,426	16.9%
2012	22,757,807	19,038,875	3,718,932	112,656,065	16.9%
2013	22,739,819	20,498,919	2,240,900	121,295,379	16.9%
2014	25,745,448	20,965,016	4,780,432	124,053,349	16.9%
2015	20,100,358	22,346,849	(2,246,491)	132,229,876	16.9%
2016	18,393,733	22,606,529	(4,212,796)	133,766,444	16.9%
2017	18,591,764	24,193,214	(5,601,450)	143,155,112	16.9%
2018	18,232,265	25,479,895	(7,247,630)	150,768,609	16.9%

Notes to Schedule of Contributions:

Valuation date:

Actuarially determined contribution rates are calculated as of July 1st of the fiscal year in which the contributions are reported. WSSC's policy is to complete an actuarial study at least once every two years.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age normal (funding valuation uses a fixed rate of contribution)
Inflation	2.50%
Salary increases	2.75 to 7.50 % including inflation
Investment rate of return	7.0% net of pension plan investment expenses, including inflation
Retirement age	Table of rates by age and eligibility
Mortality	Mortality rates were based on the RP-2000 Healthy Annuitant Mortality Table for Males or Females, with Blue Collar adjustments and one-year age set-forward and projected to 2025 using Scale BB. The actuarial assumptions used in the July 1, 2018 valuation were based on the results of the actuarial experience analysis covering 2011 through 2015.

WASHINGTON SUBURBAN SANITARY COMMISSION
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN NET OPEB LIABILITY AND RELATED RATIOS
SCHEDULE A-3

	2018	2017	2016
Total OPEB Liability			
Service cost	$ 2,797,356	$ 2,715,880	$ 2,852,227
Interest on total OPEB liability	16,658,625	16,104,693	15,302,770
Effect of plan changes	-	-	-
Effect of assumption changes or inputs	-	-	-
Differences between expected and actual experience	-	4,927,026	-
Benefit payments, including refunds	(10,420,568)	(11,586,194)	(11,348,096)
Net change in total OPEB liability	9,035,413	12,161,405	6,806,901
Total OPEB liability, beginning of the year	240,305,157	228,143,752	221,336,851
Total OPEB liability, end of the year	249,340,570	240,305,157	228,143,752
Plan Fiduciary Net Pension			
Employer contributions, including benefits paid	20,420,568	21,586,194	21,348,096
Member contributions	4,339,559	4,168,418	3,967,312
Investment income, net of investment expenses	(8,690,017)	14,247,468	8,362,666
Benefit payments, including refunds	(14,760,127)	(15,754,612)	(15,315,408)
Administrative expenses	(43,750)	(20,000)	-
Net change in plan fiduciary net position	1,266,233	24,227,468	18,362,666
Plan fiduciary net position, beginning of year	118,545,704	94,318,236	75,955,570
Plan fiduciary net position, end of year	119,811,937	118,545,704	94,318,236
Net OPEB liability, beginning of year	121,759,453	133,825,516	145,381,281
Net OPEB liability, end of year	$ 129,528,633	$ 121,759,453	$ 133,825,516
Plan fiduciary net position as a percentage of total OPEB liability	48.1%	49.3%	41.3%
Covered employee payroll	$ 132,955,474	$ 124,331,306	$ 122,144,339
Net OPEB liability as a percentage of covered employee payroll	97.4%	97.9%	109.6%

This schedule is presented to illustrate the requirement to show information for 10 years. The OPEB Plan presents information for available years and additional years will be displayed as they become avaialble.

WASHINGTON SUBURBAN SANITARY COMMISSION
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS - OPEB
SCHEDULE A-4

Year	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a % of Covered Employee Payroll
2009	22,745,474	13,829,000	8,916,474	89,245,204	15.5%
2010	21,175,619	14,675,000	6,500,619	97,055,169	15.1%
2011	21,298,235	14,735,000	6,563,235	99,513,383	14.8%
2012	20,180,734	17,539,809	2,640,925	101,390,459	17.3%
2013	20,128,000	19,060,000	1,068,000	109,165,841	17.5%
2014	16,752,000	20,437,000	(3,685,000)	111,648,014	18.3%
2015	16,766,000	22,379,000	(5,613,000)	119,006,893	18.8%
2016	14,960,787	21,348,096	(6,387,309)	122,144,339	17.5%
2017	14,960,787	21,586,194	(6,625,407)	124,331,306	17.4%
2018	14,004,405	20,420,568	(6,416,163)	132,955,474	15.4%

Notes to Schedule of Contributions:

Valuation date:

Actuarially determined contribution rates are calculated as of July 1st of the fiscal year in which the contributions are reported. WSSC's policy is to complete an actuarial study at least once every two years.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age normal
Inflation	2.50%
Investment rate of return	7.00%
Asset valuations methodology	Assets are based on market value
Healthcare cost trend rates	5.75% for 2017, 5.50% for 2018, 5.25% for 2019, 4.75% for 2020, 4.50% thereafter, Post-Medicare 4.50% for all years
Retirement age	Table of rates by age and eligibility
Mortality	Mortality rates were based on the RP-2000 Healthy Annuitant Mortality Table for Males or Females, with Blue Collar adjustments and one-year age set-forward and projected to 2025 using Scale BB. The actuarial assumptions used in the July 1, 2017 valuation were based on the results of the actuarial experience analysis covering 2016.