



FAIRFAX COUNTY WATER AUTHORITY

**Management's Discussion and Analysis, Basic Financial Statements,
Required Supplementary Information and Supplementary Information
December 31, 2019
(With Independent Auditor's Report Thereon)**

FAIRFAX COUNTY WATER AUTHORITY

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INDEPENDENT AUDITOR'S REPORT

To the Honorable Board Members
Fairfax County Water Authority

Report on the Financial Statements

We have audited the accompanying financial statements of the Fairfax County Water Authority (Authority), as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the Authority'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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities, Boards, and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards and specifications require we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's 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 Authority's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority, as of December 31, 2019, and the respective change in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 16 to the financial statements, the Authority restated beginning net position in order to account for the Welfare Benefit Trust Fund as a fiduciary component unit instead of a blended component unit in accordance with the implementation of GASB Statement No. 84.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require the Management's Discussion and Analysis and the required supplementary information on pages 4-9 and 58-64, respectively, be presented to supplement the 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 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 financial statements and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements that collectively comprise the Authority's basic financial statements. The accompanying statement and schedule listed in the table of contents as supplementary information are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Statement of Changes in Assets and Liabilities – Custodial Funds and the Schedule of Bonds Payable are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information noted above is fairly stated, in all material respects, in relation to the financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated April 23, 2020 on our consideration of the Authority'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 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 Authority's internal control over financial reporting and compliance.

PBMares, LLP

Harrisonburg, Virginia
April 23, 2020

FAIRFAX COUNTY WATER AUTHORITY

Management's Discussion and Analysis

This section of the Fairfax County Water Authority (Fairfax Water) annual financial report presents management's analysis of Fairfax Water's financial performance during the fiscal year ended December 31, 2019. This analysis should be read in conjunction with the basic financial statements that follow this section.

Financial Highlights

- Fairfax Water maintained triple-A bond ratings from Moody's Investors Service, Standard & Poor's, and Fitch Ratings.
- Effective April 1, 2019, Fairfax Water increased the commodity charge by thirteen cents to \$3.07. Even with this 4.4% increase, Fairfax Water's rates are among the lowest in the area. Other fees and connection charges were also revised at that time.
- The revenue from retail customers for fiscal year 2019 increased by \$11.1 million, approximately 10.1% over fiscal year 2018.
- The increase in net position during the year of \$36.1 million included operating income of \$25.1 million, net nonoperating income of \$7.4 million and capital contributions of \$3.6 million.
- Operating expenses during 2019 increased by approximately \$1.7 million, which is 1.8% above 2018.
- Capital assets (water lines, water tanks, treatment plants, pumping stations, multi-purpose facilities, and other facilities), net of disposals and accumulated depreciation and amortization, increased by \$44.9 million, approximately 2.5% over 2018.

Overview of the Financial Statements

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

- Statement of Net Position
- Statement of Revenues, Expenses and Change in Net Position
- Statement of Cash Flows
- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to Basic Financial Statements

The Statement of Net Position provides a snapshot of Fairfax Water's assets, deferred outflows of resources, liabilities, and deferred inflows of resources, providing information about the nature and amounts of investments in resources (assets and deferred outflows of resources) and obligations (liabilities and deferred inflows of resources). This statement may be used to evaluate the capital structure, liquidity, and financial flexibility of Fairfax Water. The Statement of Revenues, Expenses and Change in Net Position reflects revenue and expense activity for the fiscal year. This statement allows the user to measure the success of Fairfax Water's operations and can be used to determine whether Fairfax Water has successfully recovered

its costs through user fees and other charges. The Statement of Cash Flows reports the cash provided and used in operating activities as well as other cash sources, such as investment income and cash payments for repayment of bonds and capital additions. Cash provided by operating activities is reconciled to operating income. Fairfax Water uses the direct method for presenting the cash flow statement.

The Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position (custodial and trust funds) account for assets held by Fairfax Water on behalf of other governmental entities and for assets held in a trust capacity. The custodial funds account for amounts collected and owed to Fairfax County and the Cities of Falls Church and Fairfax for sales of sewer services. The trust funds account for the Fairfax County Water Authority Welfare Benefit Trust Fund, a self-insured health benefits plan, and the Fairfax County Water Authority Retirement Plan (the Plan), which accounts for activities of the pension and other postemployment benefits plans. These fiduciary activities are presented using the accrual basis of accounting and the economic resources measurement focus and are excluded from Fairfax Water's basic financial statements.

The Notes to Basic Financial Statements and the Required Supplementary Information provide necessary disclosures that are essential to a full understanding of the data provided in the statements.

Fairfax Water 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. Fairfax Water's basic financial statements are presented using the accrual basis of accounting and the economic resources measurement focus. 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

During 2019, Fairfax Water maintained its sound financial position, as demonstrated by Fairfax Water's continued growth in net position and strong cash and investment portfolio, along with the strategic management of its debt borrowings, as outlined in the financial statements and schedules included in this report. While exercising prudent fiscal discipline, Fairfax Water continues to ensure it is able to provide safe and reliable water to its customers.

Net Position

The following table reflects Fairfax Water's net position at December 31, 2019 and 2018:

Summary of Net Position
(in millions)

	2019	2018 (as restated)	Increase (Decrease)	% Change
Current and other assets	\$ 245.3	\$ 277.0	\$ (31.7)	(11.4)
Capital assets, net of accumulated depreciation and amortization	1,831.6	1,786.7	44.9	2.5
Total assets	2,076.9	2,063.7	13.2	0.6
Deferred outflows of resources	66.4	60.1	6.3	10.5
Other liabilities	32.9	34.3	(1.4)	(4.1)
Long-term liabilities	644.7	651.4	(6.7)	(1.0)
Total liabilities	677.6	685.7	(8.1)	(1.2)
Deferred inflows of resources	20.1	28.6	(8.5)	(29.7)
Net position:				
Net investment in capital assets	1,363.7	1,305.5	58.2	4.5
Restricted for debt service	37.8	41.6	(3.8)	(9.1)
Unrestricted	44.1	62.4	(18.3)	(29.3)
Total net position	\$ 1,445.6	\$ 1,409.5	\$ 36.1	2.6

Restatement of beginning net position was necessary for the adoption of GASB Statement No. 84, *Fiduciary Activities*. A more detailed description can be found in Note 16 of the basic financial statements.

During 2019, Fairfax Water's net position increased 2.6% to \$1,445.6 million. Capital assets, net of accumulated depreciation and amortization, increased 2.5% to \$1,831.6 million. This increase is attributable to various projects to expand and improve Fairfax Water infrastructure. In addition, during 2019, developers constructed \$1.7 million of capital assets and donated them to Fairfax Water. Additional information is presented in the Capital Assets section of this discussion and Notes 4 and 5 of the basic financial statements.

Current and other assets decreased 11.4% due primarily to a \$7.9 million and \$24.3 million decrease in cash and cash equivalents and investments, respectively. The decrease in cash and cash equivalents and investments is the result of ongoing construction spending.

Deferred outflows of resources increased 10.5% to \$66.4 million, primarily due to increased deferred pension plan and other postemployment benefits expenses, resulting from the most recent actuarial valuation. A more detailed description of Fairfax Water's pension and other postemployment benefits plans can be found in Notes 8, 9, 10, and 11 of the basic financial statements.

Total long-term liabilities decreased 1.0% to \$644.7 million, mainly driven by scheduled debt payments and debt refinancing, and was offset by an increase in the net pension liability. Other liabilities decreased 4.1% to \$32.9 million primarily due to a decrease in accounts payable and accrued expenses. A more detailed description of Fairfax Water's long-term liabilities can be found in the Bonds Payable section of this discussion and in Notes 6, 7, 8, 9, 10, and 11 of the basic financial statements.

Deferred inflows of resources decreased 29.7% to \$20.1 million, primarily due to a net investment loss in the pension plan that was partially offset by demographic gains and changes to other postemployment assumptions, resulting from the most recent actuarial valuation. A more detailed description of Fairfax Water's pension and other postemployment benefits plans can be found in Notes 8, 9, 10, and 11 of the basic financial statements.

Changes in Net Position

The following table reflects Fairfax Water's changes in net position for the years ended December 31, 2019 and 2018:

Summary of Changes in Net Position
(in millions)

	2019	2018 (as restated)	Increase (Decrease)	% Change
Operating revenues	\$ 175.3	\$ 173.5	\$ 1.8	1.0
Operating expenses	(95.6)	(93.9)	1.7	1.8
Depreciation and amortization expense	(54.6)	(52.7)	1.9	3.6
Nonoperating revenues, net	7.4	1.3	6.1	469.2
Increase in net position before contributions	32.5	28.2	4.3	15.2
Capital contributions	3.6	4.6	(1.0)	(21.7)
Increase in net position	\$ 36.1	\$ 32.8	\$ 3.3	10.1

For 2018, the above table was restated as a result of the implementation of GASB Statement No. 84.

Fairfax Water's operating revenues increased 1.0% to \$175.3 million. Revenue from wholesale customers decreased \$9.9 million mainly due to a \$6.1 million purchased capacity payment received in 2018, netted against increased billing rates and a 2.2% decrease in wholesale water sales. Additionally, retail water sales revenue increased \$11.1 million as a result of a 3.6% increase in water sales and the thirteen-cent increase in the commodity charge. Operating expenses increased 1.8% to \$95.6 million, driven by increased administrative and general expenses resulting from adjustments for pension and other postemployment benefits, and was offset by decreased costs for supply, transmission, and distribution services. Depreciation and amortization expense increased 3.6% to \$54.6 million. Net nonoperating revenues increased 469.2% to \$7.4 million, due to appreciation in fair value of investments and higher returns on investment income driven by the strong market, coupled with lower bond interest expense as a result of debt refinancing.

Capital Assets and Debt Administration

Capital Assets

As of December 31, 2019, Fairfax Water had a net investment of \$1,831.6 million in a full range of capital assets used in the provision of water service including water lines, water tanks, treatment plants, pumping stations, multi-purpose facilities, and other facilities. This amount represents a net increase of \$44.9 million, or 2.5% over December 31, 2018. The following table reflects a breakdown of capital assets by category at December 31, 2019 and 2018:

Capital Assets
(net of depreciation and amortization, in millions)

	2019	2018	Increase (Decrease)	% Change
Land and rights of way	\$ 43.9	\$ 43.2	\$ 0.7	1.6
Easements	1.9	1.9	-	-
Construction in progress	44.2	51.6	(7.4)	(14.3)
Water supply	116.5	114.7	1.8	1.6
Water treatment	477.0	467.0	10.0	2.1
Transmission	302.8	290.6	12.2	4.2
Distribution	489.4	470.5	18.9	4.0
General plant	355.9	347.2	8.7	2.5
Total capital assets	\$ 1,831.6	\$ 1,786.7	\$ 44.9	2.5

The increase in capital assets in fiscal year 2019 is attributable to expenditures related to various projects to expand and improve Fairfax Water infrastructure as well as developer donated assets.

Bonds Payable

At the end of 2019, net bonds outstanding totaled \$482.6 million. This 5.5% decrease from the previous year is attributable to the normal retirement of bonds as well as the issuance of \$91.2 million of refunding revenue bonds on December 10, 2019 to defease a portion of the outstanding Series 2012 and 2013A bonds. The primary source of revenue utilized for repayment of debt is water consumption charges. In addition, Fairfax Water obtains funds from other sources to reduce the amount of bonds it needs to sell to construct water projects. These other sources include payments from applicants for new service and payments from other jurisdictions for projects that specifically benefit them. A more detailed description of Fairfax Water's bonds payable can be found in Note 7 to the basic financial statements. The following table reflects the composition of bonds payable at December 31, 2019 and 2018:

Bonds Payable
(in millions)

	2019	2018	Increase (Decrease)	% Change
Series 1997	\$ 10.9	\$ 16.0	\$ (5.1)	(31.9)
Series 2005	34.4	37.2	(2.8)	(7.5)
Series 2010	88.9	88.9	-	-
Series 2012	1.2	76.4	(75.2)	(98.4)
Series 2013	38.3	55.8	(17.5)	(31.4)
Series 2017	187.3	194.9	(7.6)	(3.9)
Series 2019	91.2	-	91.2	100.0
Subtotal	452.2	469.2	(17.0)	(3.6)
Plus:				
Unamortized bond premiums	30.4	41.7	(11.3)	(27.1)
Bonds payable, net	482.6	510.9	(28.3)	(5.5)
Current portion	24.4	24.5	(0.1)	(0.4)
Long-term portion	\$ 458.2	\$ 486.4	\$ (28.2)	(5.8)

Bond Ratings

During fiscal year 2019, Moody's Investors Service, Standard & Poor's, and Fitch Ratings maintained ratings of Aaa, AAA, and AAA, respectively, to Fairfax Water's outstanding revenue bonds.

Request for Information

This financial report is designed to provide an overview of Fairfax Water's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Fairfax Water
Attention: Director, Finance Division
8570 Executive Park Avenue
Fairfax, Virginia 22031-2218
www.FairfaxWater.org

FAIRFAX COUNTY WATER AUTHORITY

Statement of Net Position December 31, 2019

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

Current assets:	
Cash and cash equivalents	
Unrestricted	\$ 25,882,715
Restricted	3,871,568
Investments	
Unrestricted	12,782,417
Restricted	35,994,064
Accrued interest receivable	758,515
Customer receivables, net of allowance for doubtful accounts of \$242,000	11,351,582
Unbilled revenue	13,908,304
Notes receivable	67,515
Inventory	5,298,428
Other current assets	5,468,320
Total current assets	115,383,428
Noncurrent assets:	
Investments	
Unrestricted	123,474,392
Restricted	5,287,621
Notes receivable	1,126,094
Capital assets, net of accumulated depreciation and amortization	1,831,647,652
Total noncurrent assets	1,961,535,759
Total assets	2,076,919,187
Deferred outflows of resources:	
Deferred charge on refunding	15,643,081
Pension plan	32,785,908
Other postemployment benefits	17,966,971
Total deferred outflows of resources	66,395,960
Total assets and deferred outflows of resources	\$ 2,143,315,147

FAIRFAX COUNTY WATER AUTHORITY

Statement of Net Position (continued) December 31, 2019

LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION

Current liabilities:	
Accounts payable and accrued expenses	\$ 19,779,419
Compensated absences	2,468,001
Bonds payable, current maturities	24,376,174
Accrued interest on bonds payable	4,234,181
Unearned revenue	6,379,699
Construction contract retainage	2,551,109
Total current liabilities	59,788,583
Noncurrent liabilities:	
Compensated absences	2,257,727
Refundable construction advances	2,283,041
Bonds payable, net of current portion	458,257,760
Net pension liability	123,005,175
Other postemployment benefits liability	32,010,537
Total noncurrent liabilities	617,814,240
Total liabilities	677,602,823
Deferred inflows of resources:	
Pension plan	8,653,928
Other postemployment benefits	11,448,026
Total deferred inflows of resources	20,101,954
Total liabilities and deferred inflows of resources	697,704,777
Net position:	
Net investment in capital assets	1,363,718,464
Restricted for debt service	37,779,597
Unrestricted	44,112,309
Total net position	1,445,610,370
Total liabilities, deferred inflows of resources and net position	\$ 2,143,315,147

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

FAIRFAX COUNTY WATER AUTHORITY

Statement of Revenues, Expenses and Change in Net Position For the year ended December 31, 2019

Operating revenues:	
Sales to retail customers	\$ 121,688,682
Sales to wholesale customers	42,183,771
Sewer service billing charges	6,761,576
Other	4,649,788
Total operating revenues	175,283,817
Operating expenses:	
Supply facilities	10,395,007
Treatment facilities	25,074,447
Transmission system	6,093,077
Distribution system	22,200,027
Administrative and general	31,858,476
Total operating expenses before depreciation and amortization	95,621,034
Operating income before depreciation and amortization	79,662,783
Depreciation and amortization	(54,586,575)
Operating income	25,076,208
Nonoperating revenues (expenses):	
Availability fees and other connection charges	14,108,754
Investment income	8,277,754
Bond subsidy	1,065,528
Lease revenue	1,444,821
Gain on sale of property	202,315
Interest expense	(17,731,877)
Total nonoperating revenues, net	7,367,295
Income before capital contributions	32,443,503
Capital contributions	3,620,658
Increase in net position	36,064,161
Net position, beginning of year, as restated	1,409,546,209
Net position, end of year	\$ 1,445,610,370

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

FAIRFAX COUNTY WATER AUTHORITY

Statement of Cash Flows

For the year ended December 31, 2019

Cash flows from operating activities:	
Cash received from customers	\$ 174,727,021
Cash paid to employees	(53,987,613)
Cash paid to suppliers	(36,723,252)
Net cash provided by operating activities	84,016,156
Cash flows from capital and related financing activities:	
Bond proceeds	91,230,000
Principal paid on bonds	(21,345,000)
Payment to refunded bond escrow agent	(94,449,415)
Interest paid on bonds	(20,080,573)
Construction of capital assets	(100,997,175)
Proceeds from disposition of capital assets	224,475
Availability fees and other connection charges	16,395,943
Lease revenue	1,445,930
Bond subsidy	1,065,528
Capital contributions received from developers	1,875,548
Net cash used in capital and related financing activities	(124,634,739)
Cash flows from investing activities:	
Gross purchases of investments	(131,821,550)
Gross sales and maturities of investments	160,590,261
Interest received	3,904,244
Collection of note receivable	63,794
Net cash provided by investing activities	32,736,749
Net decrease in cash and cash equivalents	(7,881,834)
Cash and cash equivalents, beginning of year, as restated	37,636,117
Cash and cash equivalents, end of year	\$ 29,754,283

FAIRFAX COUNTY WATER AUTHORITY

Statement of Cash Flows (continued) For the year ended December 31, 2019

Reconciliation of operating income to net cash provided by operating activities:

Operating income	\$ 25,076,208
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation and amortization expense	54,586,575
Other postemployment benefits	1,789,516
Pension expense	2,429,753
Change in operating assets and liabilities:	
Customer receivables, net	1,865,222
Unbilled revenue	(1,127,322)
Inventory	(57,725)
Other assets	(1,294,696)
Accounts payable and accrued expenses	871,589
Compensated absences	(122,964)
Total adjustments	58,939,948
Net cash provided by operating activities	\$ 84,016,156

Supplemental schedule of noncash investing, capital and financing activities:

Capital contributions -	
Estimated fair value of capital assets received from developers and others	\$ 1,745,110
Capital assets -	
Capital assets acquired through incurrence of year-end accounts payable	\$ 10,740,928
Investments -	
Change in the fair value of investments	\$ 4,437,638

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

FAIRFAX COUNTY WATER AUTHORITY

Statement of Fiduciary Net Position December 31, 2019

FIDUCIARY FUNDS	Trust Funds			
	Custodial Funds	Welfare Benefit Trust Fund	Pension and OPEB Trust Fund	Total Trust Funds
ASSETS				
Cash and cash equivalents	\$ 4,444,411	\$ 2,454,093	\$ 6,794,967	\$ 9,249,060
Other current assets	-	194,141	366,153	560,294
Investments held in trust at fair value:				
U.S. government obligations	-	13,409,094	15,170,265	28,579,359
Asset-backed securities	-	-	106,991	106,991
Certificates of deposit	-	456,622	-	456,622
Corporate bonds	-	-	10,390,067	10,390,067
Corporate notes	-	1,623,016	-	1,623,016
Common and preferred stock	-	-	167,038,189	167,038,189
Equity mutual funds	-	-	23,141,175	23,141,175
Fixed income pooled funds	-	-	31,860,468	31,860,468
Short-term bond funds	-	-	6,430	6,430
Total investments	-	15,488,732	247,713,585	263,202,317
Total assets	4,444,411	18,136,966	254,874,705	273,011,671
LIABILITIES				
Accounts payable	-	1,168,425	307,185	1,475,610
Total liabilities	-	1,168,425	307,185	1,475,610
NET POSITION				
Restricted for:				
Other localities	4,444,411	-	-	-
Pension and other postemployment benefits	-	16,968,541	254,567,520	271,536,061
Total net position	\$ 4,444,411	\$ 16,968,541	\$ 254,567,520	\$ 271,536,061

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

FAIRFAX COUNTY WATER AUTHORITY

Statement of Changes in Fiduciary Net Position For the year ended December 31, 2019

FIDUCIARY FUNDS	Trust Funds			
	Custodial Funds	Welfare Benefit Trust Fund	Pension and OPEB Trust Fund	Total Trust Funds
Additions:				
Employer contributions	\$ -	\$ 7,891,283	\$ 18,496,272	\$ 26,387,555
Plan member contributions	-	2,156,968	978,931	3,135,899
Sewer service and utility taxes	214,471,465	-	-	-
Other	-	272,298	-	272,298
Total contributions	214,471,465	10,320,549	19,475,203	29,795,752
Investment income:				
Net increase (decrease) in fair value of investments	-	124,847	(21,780,259)	(21,655,412)
Interest	-	367,741	3,129,584	3,497,325
Dividends	-	-	3,491,402	3,491,402
Total investment income (loss)	-	492,588	(15,159,273)	(14,666,685)
Less investment expense	-	-	1,209,719	1,209,719
Net investment income (loss)	-	492,588	(16,368,992)	(15,876,404)
Total additions	214,471,465	10,813,137	3,106,211	13,919,348
Deductions:				
Retirement benefits	-	-	17,110,968	17,110,968
Health insurance benefits	-	-	3,091,378	3,091,378
Health insurance claims	-	8,327,803	-	8,327,803
Refunds of contributions	-	-	37,441	37,441
Remittances to localities	215,040,759	-	-	-
Administrative expenses	-	986,493	136,292	1,122,785
Total deductions	215,040,759	9,314,296	20,376,079	29,690,375
Increase (decrease) in fiduciary net position	(569,294)	1,498,841	(17,269,868)	(15,771,027)
Net position, beginning of year	5,013,705	15,469,700	271,837,388	287,307,088
Net position, end of year	\$ 4,444,411	\$ 16,968,541	\$ 254,567,520	\$ 271,536,061

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

FAIRFAX COUNTY WATER AUTHORITY

Notes to Basic Financial Statements

December 31, 2019

1. Fairfax Water

The Fairfax County Water Authority (Fairfax Water) is a public body, corporate and politic, exercising public and essential governmental functions in the Commonwealth of Virginia. Fairfax Water was created by the Board of Supervisors of Fairfax County, Virginia, and chartered by the State Corporation Commission in 1957 for the purpose of establishing and operating a comprehensive county-wide water system. The management is vested in a Board of ten members appointed by the Fairfax County Board of Supervisors.

2. Summary of Significant Accounting Policies

A. Reporting Entity

The accompanying basic financial statements include the primary business-type activities for Fairfax Water and conform to accounting principles generally accepted in the United States of America, as applicable to enterprise funds of governmental units.

Fairfax Water is not considered a component unit of Fairfax County, Virginia (the County) and all governmental entities operating within the County are excluded from Fairfax Water's financial statements. Although the Fairfax County Board of Supervisors appoints the members of Fairfax Water's Board of Directors, the County is not financially accountable for Fairfax Water. In addition, there is no potential for Fairfax Water to provide specific financial benefit to, or impose specific financial burdens on the County, and Fairfax Water is not fiscally dependent on the County.

Fairfax Water also reports fiduciary activities (custodial and trust funds) in a separate Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position. The custodial funds account for the collection and remittance of sewer and utility tax payments on behalf of Fairfax County and the Cities of Falls Church and Fairfax (the Cities). The Fairfax County Water Authority Welfare Benefit Trust Fund is a fiduciary component unit and accounts for Fairfax Water's self-insured health benefits plan. Health insurance includes medical, vision, dental, and prescription drug benefits for employees, pre-Medicare retirees, and their dependents. The pension and other postemployment benefits trust fund accounts for activities of the Fairfax County Water Authority Retirement Plan (the Plan). Fiduciary activities for the Plan are based on audited financial statements for the year ending December 31, 2018. Fiduciary funds are excluded from Fairfax Water's basic financial statements and cannot be used to support Fairfax Water's own programs. In addition, Fairfax Water is responsible for ensuring that the assets reported in these funds are used for their intended purpose.

B. Basis of Accounting

Basis of accounting refers to when revenues, expenses, assets, deferred outflows of resources, liabilities, and deferred inflows of resources are recognized. The accompanying financial statements have been prepared using the economic resources measurement focus and accrual basis of accounting. Under the accrual basis of accounting, revenues are generally recognized when earned and expenses are recognized when incurred.

Fairfax Water has elected to apply all applicable Governmental Accounting Standards Board (GASB) pronouncements as GASB is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. During the current year, Fairfax Water adopted GASB Statement No. 83, *Certain Asset Retirement Obligations*, GASB Statement No. 84, *Fiduciary Activities*, GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, and GASB Statement No. 90, *Majority Equity Interests- an amendment of GASB Statements No. 14 and No. 61*.

C. Use of 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, deferred outflows of resources, liabilities, and deferred inflows of resources and the disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

D. Revenue Recognition

Rates, fees, and other charges for services to wholesale and retail customers are established to provide sufficient funds to cover the cost of operations, debt service, and essential repairs and improvements to capital assets. Metered sales are recognized as revenue as customers use water. At year-end, the amount of revenue generated for which customers have not been billed is recorded as unbilled revenue. Retail customers pay availability, local facility, and service connection charges for each new service connection and meter installation. These charges are recognized as revenue as service connections are made and meters are installed. Wholesale customers pay a charge to reserve capacity of purification and transmission based on a multi-year contract. Such revenues are recognized at the time Fairfax Water has an enforceable claim to these charges. Sewer service billing charges represent an administrative fee charged to the County and the Cities of Falls Church and Fairfax (the Cities) to cover the cost of billing and collecting sewer service charges by Fairfax Water on behalf of the County and Cities. The administrative fees are recognized as revenue by Fairfax Water as earned.

Fairfax Water's receivables are recorded net of an allowance for doubtful accounts, where considered necessary. As of December 31, 2019, the only receivables that management determined required an allowance relates to retail customers accounts receivable. Fairfax Water calculates the allowance as a percentage of retail sales, based on past bad debt experience. No allowance is calculated for wholesale customer accounts receivable, as Fairfax Water has not historically experienced any collectability issues with its wholesale customers.

E. Operating and Nonoperating Revenues and Expenses

Fairfax Water's Statement of Revenues, Expenses and Change in Net Position distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with Fairfax Water's principal ongoing operations. The principal operating revenues of Fairfax Water are from metered sales to customers and other customer related charges. Operating expenses include the cost of water supply, treatment, transmission and distribution; depreciation and

amortization of capital assets; and general and administrative costs. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses. Customer availability fees and connection charges are reported as nonoperating revenues as such revenues are primarily used to fund capital improvements and expansion.

F. Nonoperating Lease Revenue

Fairfax Water has entered into water tower lease agreements with various cellular phone providers. The leases allow for the placement of cellular antennas on Fairfax Water's water towers. The contracts are generally for five years, with five-year renewal options. The total nonoperating revenue received in 2019 for the water tower leases was \$727,447.

On October 31, 2016 Fairfax Water entered into an agreement with Vulcan Lands, Inc. (Vulcan) to transfer ownership of a portion of Vulcan's Graham Quarry, located between Fairfax Water's Occoquan River supply and the Frederick P. Griffith, Jr. Water Treatment Plant. Vulcan will quarry the land pursuant to a lease agreement until 2035, at which time such land will become available for Fairfax Water's use as a water supply reservoir with storage capacity of 1.7 billion gallons of water. Subsequent to such land becoming available for Fairfax Water's use as a water supply reservoir, Vulcan will continue to quarry adjacent property. Ownership of such adjacent property will transfer to Fairfax Water at no additional cost no later than 2085. When completed, such quarry reservoirs are expected to store up to 17 billion gallons of water. The total nonoperating revenue received in 2019 for the lease agreement was \$528,241.

On March 29, 2017 Fairfax Water entered into an agreement with Penske Truck Leasing Co., LP (Penske) to lease the building and property located at 8515 Lee Highway in Fairfax, Virginia. Penske will utilize the leased property for truck rental and leasing services. The lease term began on April 1, 2017 with an initial expiration of December 31, 2017. On July 29, 2019, Fairfax Water and Penske agreed to a third extension of one year expiring on December 31, 2020. The total nonoperating revenue received in 2019 for the lease agreement was \$189,133.

G. Cash and Cash Equivalents

Cash equivalents consist of short-term, highly liquid investments with original maturities of three months or less. At December 31, 2019, such investments were primarily comprised of money market funds. Restricted cash equivalents represent funds held by the Trustee for debt service in accordance with applicable bond covenants. Restricted cash includes cash in escrow for purchased water and construction contract retainage.

H. Notes Receivable

Fairfax Water entered into an agreement with the Fairfax County Board of Supervisors in July, 2001 to extend Fairfax Water's transmission and distribution system to serve Lewis Park, Colchester Acres and Vannoy Park Subdivision. Under the agreement, Fairfax County agreed to pay Fairfax Water in semi-annual payments on October 1 and March 1 of each year commencing October 1, 2002 and ending March 1, 2032. The total project cost and amount financed was \$1,896,874. The note receivable at December 31, 2019, totaled \$1,193,609.

I. Investments

Investments are stated at fair value, with any related gain or loss reported in investment income on the accompanying Statement of Revenues, Expenses and Change in Net Position. Investment fair values are based on quoted market prices, except for bankers' acceptances, which are based on accreted value. Investments in mutual funds, which are Securities and Exchange Commission 2a-7 investment pools, are stated at share price which is substantially the same as fair value. Restricted investments represent investments held by the Trustee for debt service.

J. Inventory

Inventories of materials and supplies are accounted for using the consumption method and are carried at average costs. Under this method, inventories are expensed as they are consumed.

K. Capital Assets

Capital assets are carried at cost, which, for assets constructed by Fairfax Water, includes associated payroll, fringe benefits, administrative costs, and interest charges capitalized on all projects. Fairfax Water capitalizes all assets that individually cost \$2,500 or more, with useful lives greater than one year. Expenses for repairs and upgrading which materially add to the value or life of an asset are capitalized. Contributed assets consist principally of water mains constructed by developers and subsequently donated to Fairfax Water. Such assets are recorded at acquisition cost on the date of the donation. The acquisition cost is based on Fairfax Water's estimated cost to construct or purchase similar assets. Recurring normal maintenance and repair costs are charged to operations, whereas major repairs, improvements, and replacements are capitalized. In 2019, the capital assets were depreciated or amortized on the straight-line basis over the following estimated useful lives:

Capital Assets	Useful Lives
Pipes	75 – 100 years
Treatment Plants	40 – 60 years
Buildings	30 – 40 years
Equipment/Software	10 – 25 years
Vehicles	5 – 10 years

L. Construction in Progress

Construction in progress includes design and construction costs that accumulate until completion of the respective project, at which time the total cost is transferred to depreciable capital assets. When applicable, interest and other carrying costs are capitalized to construction in progress.

M. Deferred Outflows and Inflows of Resources

In addition to assets, the Statement of Net Position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expense/expenditure) until then. Fairfax Water has

several items that qualify for reporting in this category. One item is a deferred charge on refunding which results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. The remaining items relate to the pension and other postemployment benefits plans. A more detailed description of Fairfax Water's pension and other postemployment benefits plans can be found in Notes 8, 9, 10, and 11 of the basic financial statements.

In addition to liabilities, the Statement of Net Position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, *deferred inflows of resources*, represents an acquisition of net position that applies to future periods and so will not be recognized as an inflow of resources (revenue) until that time. Several items that qualify for reporting in this category relate to the pension and other postemployment benefits plans. A more detailed description of Fairfax Water's pension and other postemployment benefits plans can be found in Notes 8, 9, 10, and 11 of the basic financial statements.

N. Pensions and Other Postemployment Benefits

For purposes of measuring all financial statement elements related to Fairfax Water's pension and other postemployment benefits plans, information about the fiduciary net position of the Fairfax County Water Authority Retirement Plan (the Plan) as well as additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they were reported by the Plan, which are prepared using the accrual basis of accounting. 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.

The Plan document assigns all responsibilities of maintaining the Plan to the Fairfax Water Board of Directors. Additionally, Fairfax Water has established a Benefits Trust Committee to be responsible for the administration of the pension and other postemployment benefits plans. Information about the fiduciary net position and additions to/deductions from the Plans' net fiduciary position have been determined by Fairfax Water's actuary.

O. Unamortized Debt Discounts (Premiums)

Debt discounts (premiums) are amortized over the life of the related bond issuance using the effective interest rate method. The current year amortization is included in interest expense. The debt discount (premium) is netted against the related debt on the accompanying Statement of Net Position. Prior to January 1, 2018, Fairfax Water periodically issued tax-exempt water refunding revenue bonds to advance refund previously issued bonds.

P. Compensated Absences

Employees earn vacation and sick pay based on a prescribed formula that allows employees to accumulate a maximum of 40 days in vacation pay and an unlimited amount of sick pay. Fairfax Water's liability for vacation and vested sick pay earned but not used by its employees is computed using pay rates in effect at year-end. The liability for sick pay vests for employees after three years of service.

Q. Net Position

Net position of Fairfax Water is classified in three components: (1) Net investment in capital assets consists of capital assets net of accumulated depreciation, reduced by the balances of any outstanding borrowings used to finance the purchase or construction of those assets and deferred charges on capital related refundings and retainage payable; (2) Restricted for debt service is amounts deposited with the Trustee as required by the 1992 General Trust Indenture discussed in Note 7 and the portion of debt attributable to the amount of unspent bond proceeds less any interest accrued at year end; and (3) Unrestricted is remaining net resources that do not meet the definition of investment in capital assets nor restricted.

It is Fairfax Water's policy to first apply restricted resources when an expense is incurred for purposes for which both restricted and unrestricted resources are available.

R. Refundable Construction Advances

Refundable construction advances represent assets and cash in aid of construction received by Fairfax Water from developers under Fairfax Water's offsite water main program. These advances are refundable over a ten-year period based on the number of applicable connections made to the offsite water mains. At the end of ten years, the portion not refunded is considered a capital contribution and is reflected in the table in Note 6 as "refundable construction advances".

S. New Accounting Pronouncements

GASB Statement No. 87, *Leases*, requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. This Statement establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Statement 87 will be effective for Fairfax Water beginning with its year ending December 31, 2020.

GASB Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*, requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. Statement 89 will be effective for Fairfax Water beginning with its year ending December 31, 2020.

GASB Statement No. 91, *Conduit Debt Obligations*, provides a single method of reporting conduit debt obligations by clarifying its definition and establishing standards for accounting, financial reporting, and note disclosures of additional commitments and arrangements associated with the obligations. Statement 91 will be effective for Fairfax Water beginning with its year ending December 31, 2021.

GASB Statement No. 92, *Omnibus 2020*, provides guidance to enhance comparability in accounting and financial reporting for leases, pension plans, postemployment benefit arrangements, and a wide range of other accounting and financial reporting issues that have been identified during the implementation and application of certain GASB statements. The requirements related to GASB Statement No. 87, *Leases*, and its associated Implementation Guide are effective upon issuance.

The requirements related to GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*, GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, and GASB Statement No. 84, *Fiduciary Activities*, and the measurement of liabilities (and assets, if any) associated with asset retirement obligations in a government acquisition will be effective for Fairfax Water beginning with its year ending December 31, 2021.

Fairfax Water has not yet determined the effect these GASB Statements will have on its financial statements.

T. Subsequent Events

Fairfax Water has evaluated subsequent events through April 23, 2020, which was the date the financial statements were available to be issued. A more detailed description of Fairfax Water's subsequent event can be found in Note 17 of the basic financial statements.

3. Cash and Investments

- A. Cash and Cash Equivalents** - Cash in bank accounts is insured by the Federal Deposit Insurance Corporation and/or collateralized in accordance with the Virginia Security for Public Deposits Act, Section 2.2-4400 et. Seq. of the *Code of Virginia*. Under the Act, banks holding public deposits in excess of the amounts insured by the Federal Deposit Insurance Corporation (FDIC) must pledge collateral to the State Treasury Board. Savings and loan institutions are required to collateralize 100% of deposits in excess of FDIC limits. Financial institutions may choose between two collateralization methodologies and depending upon that choice, will pledge collateral that ranges from 50% to 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

Business-Type Activities

As of December 31, 2019, the carrying value of Fairfax Water's business-type activities deposits with banks was \$21,395,463, with a bank balance of \$22,613,598. In addition, Fairfax Water held a deposit of \$1,425,296 with the U.S. Army Corps of Engineers, a deposit of \$1,089,530 for construction retainage, and \$5,843,994 of cash equivalents in the PFM Funds and First American Treasury Obligation Fund, which are money market funds, as of December 31, 2019.

Fiduciary Activities

As of December 31, 2019, the carrying value of Fairfax Water's fiduciary activities deposits with banks for custodial funds for sewer collections was \$4,444,411, with a bank balance of \$4,444,411. Cash and cash equivalents held by Fairfax Water for custodial funds are not invested.

As of December 31, 2019, the carrying value of Fairfax Water's fiduciary activities deposits with banks for the Welfare Benefit Trust Fund was \$2,097,395, with a bank balance of \$2,097,395. In addition, \$356,698 of cash equivalents in the PFM Funds, which is a money market fund, are being held by Fairfax Water in a custodial capacity, as of December 31, 2019.

As of December 31, 2018, the carrying value of Fairfax Water's fiduciary activities deposits with banks for the Pension and OPEB Trust Fund was \$1,934,851, with a bank balance of \$2,035,034. In addition, \$4,860,116 of cash equivalents in the Raymond James Bank Deposit Program (RJBDP), are being held by Fairfax Water in a trust capacity, as of December 31, 2018. The RJBDP is a multibank sweep program that provides FDIC insurance coverage.

- B. Investments** – Virginia state statutes authorize Fairfax Water's business-type activities, including its fiduciary component unit (the Welfare Benefit Trust Fund), to invest in obligations of the United States or agencies thereof; obligations of the Commonwealth of Virginia or political subdivisions thereof; qualifying obligations of other states and their political subdivisions; repurchase agreements; commercial paper, rated A or better by at least two of the rating agencies; bankers' acceptances rated A-1 by Standard & Poor's and P-1 by Moody's Investors Service; corporate notes with a maturity no greater than five years and a minimum long-term debt rating of Aa by Moody's Investors Service and AA by Standard & Poor's; negotiable certificates of deposit or bank notes; Virginia Local Government Investment pool; Virginia State Non-Arbitrage Program; Supranational Bonds; registered money market mutual funds; savings accounts; time deposits; and certificates of deposit.

The Plan policy for the fiduciary activities of the Pension and OPEB Trust Fund authorizes obligations of the United States or agencies thereof; corporate debt; mortgage and asset-backed securities; domestic and foreign common stock; convertible preferred and debt securities; and repurchase agreements. All fixed income, mortgage and asset-backed securities shall be rated "A" or better by a nationally recognized rating agency at the time of purchase.

Interest Rate Risk – Fairfax Water's policy is to minimize the risk that the market value of securities in its portfolio will fall due to changes in market interest rates. To achieve this minimization of risk for Fairfax Water's business-type activities and its fiduciary component unit (the Welfare Benefit Trust Fund), Fairfax Water structures the investment portfolio so that sufficient securities mature to meet cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity. Further, Fairfax Water may not directly invest in securities maturing in more than five years from the date of purchase.

The Plan policy for the fiduciary activities of the Pension and OPEB Trust Fund addresses risk that can be managed, but not eliminated, by establishing constraints on the investment portfolio and by properly monitoring the investment markets, the Plan's asset allocation, and the investment managers hired by the Plan. Additionally, each type of asset class in the Plan is designed to be held for a minimum period, typically more than five years. These minimum holding periods are only suggested in order to reduce the volatility of short-term market fluctuations and to allow the Plan to capture historically favorable returns over time.

The following table reflects the fair value and the weighted average maturity (WAM) of Fairfax Water's business-type activities investments as of December 31, 2019. WAM expresses investment time horizons, the time when investments become due and payable, in years, weighted to reflect the dollar size of the individual investments within an investment type. The portfolio's WAM is derived by dollar-weighting the WAM for each investment type. For purposes of the WAM calculation, Fairfax Water assumes that all of its investments will be held to maturity.

Investment Type	Fair Value	Weighted Average Maturity (Years)
U. S. Government Treasury Notes and Bonds	\$ 89,638,523	1.961
U. S. Government Agency Notes	50,490,124	3.009
Certificates of Deposit	7,173,064	1.405
Supranational Bonds	4,731,219	1.325
Corporate Notes	25,505,564	2.482
Total Portfolio	\$ 177,538,494	2.294

The following table reflects the fair value and the weighted average maturity (WAM) of Fairfax Water's fiduciary component unit (the Welfare Benefit Trust Fund) as of December 31, 2019.

Investment Type	Fair Value	Weighted Average Maturity (Years)
U. S. Government Treasury Notes and Bonds	\$ 9,051,816	1.705
U. S. Government Agency Notes	4,357,278	0.642
Certificates of Deposit	456,622	1.714
Corporate Notes	1,623,016	2.197
Total Portfolio	\$ 15,488,732	1.458

The following table reflects the fair value and the weighted average maturity (WAM) of Fairfax Water's fiduciary activities investments for the Pension and OPEB Trust Fund as of December 31, 2018. The Pension and OPEB Trust Fund investments in common and preferred stock and equity mutual funds have no stated maturity and have not been allocated to a time period on the following table.

Investment Type	Fair Value	Weighted Average Maturity (Years)
U. S. Government Treasury Notes and Bonds	\$ 3,120,329	1.680
U. S. Government Agency Notes	12,049,936	5.620
Asset-backed Securities	106,991	3.589
Corporate Bonds	10,390,067	2.340
Common and Preferred Stock	167,038,189	Not applicable
Equity Mutual Funds	23,141,175	Not applicable
Fixed Income Pooled Funds	31,860,468	3.870
Short-term Bond Funds	6,430	0.088
Total Portfolio	\$ 247,713,585	3.840

Credit Risk – Fairfax Water's policy is to minimize the risk of loss due to the failure of an issuer or other counterparty to an investment to fulfill its obligations. For Fairfax Water's business-type activities and its fiduciary component unit (the Welfare Benefit Trust Fund), Fairfax Water and its

Notes to Basic Financial Statements

investment advisor pre-qualify financial institutions and broker-dealers with which they do business. For the fiduciary activities of the Pension and OPEB Trust Fund, the Plan's trustees and the investment consultant pre-qualify investment managers with which they do business. In addition, Fairfax Water limits its investments to the safest types of securities and diversifies its investment portfolio so that potential losses on individual securities will be minimized.

The table below reflects the allocation of credit quality rating of Fairfax Water's business-type activities investments by Standard & Poor's Rating Services as of December 31, 2019.

Investment Type	Credit Quality Rating				
	AAA	AA+	AA	AA-	A-1+
U.S. Government Treasury Notes and Bonds	-	50.4%	-	-	-
U.S. Government Agency Notes	-	24.6%	-	-	3.8%
Certificates of Deposit	-	-	-	1.3%	2.8%
Supranational Bonds	2.7%	-	-	-	-
Corporate Notes	1.5%	3.0%	3.3%	5.7%	0.9%
Total Portfolio	4.2%	78.0%	3.3%	7.0%	7.5%

The table below reflects the allocation of credit quality rating of Fairfax Water's fiduciary component unit (the Welfare Benefit Trust Fund) investments by Standard & Poor's Rating Services as of December 31, 2019.

Investment Type	Credit Quality Rating				
	AAA	AA+	AA	AA-	A-1+
U.S. Government Treasury Notes and Bonds	-	58.4%	-	-	-
U.S. Government Agency Notes	-	28.1%	-	-	-
Certificates of Deposit	-	-	-	1.5%	1.5%
Corporate Notes	3.9%	2.6%	2.0%	2.0%	-
Total Portfolio	3.9%	89.1%	2.0%	3.5%	1.5%

The table below reflects the allocation of credit quality rating of Fairfax Water's fiduciary activities for the Pension and OPEB Trust Fund investments by Standard & Poor's Rating Services as of December 31, 2018. The investments in common and preferred stock and equity mutual funds are not rated and have been excluded from the following table.

Investment Type	Credit Quality Rating				
	AAA	AA+	AA	BBB+	BBB
U.S. Government Treasury Notes and Bonds	-	5.4%	-	-	-
U.S. Government Agency Notes	-	20.9%	-	-	-
Asset-backed Securities	-	-	-	-	0.2%
Corporate Bonds	-	-	-	18.1%	-
Fixed Income Pooled Funds	-	-	-	-	55.4%
Short-term Bond Funds	-	-	-	-	0.0%
Total Portfolio	0.0%	26.3%	0.0%	18.1%	55.6%

Concentration of Credit Risk – To minimize credit risk, Fairfax Water’s investment policy for its business-type activities and fiduciary component unit (the Welfare Benefit Trust Fund) seeks to diversify its portfolio by limiting the percentage of the portfolio that may be invested in any one type of instrument as follows:

Instrument Type	Maximum
U.S. Government Obligations	100%
Repurchase Agreements	50%
Commercial Paper	35%
Bankers’ Acceptances	40%
Corporate Notes	35%
Municipal Obligations	20%
Negotiable Certificates of Deposit/Bank Notes	35%
Supranational Bonds	10%
Virginia Local Government Investment Pool	50%
Virginia State Non-Arbitrage Program	50%
Registered Money Market Mutual Funds	50%
Savings Accounts, Time Deposits, Certificates of Deposit	20%

In addition, not more than five percent of total funds available for investment (based on book value on the date of acquisition) can be invested in any single issuing corporation or bank for corporate notes, commercial paper, or bankers’ acceptances. As of December 31, 2019, there are no concentrations of credit risk beyond the stated policy.

To minimize credit risk for Fairfax Water’s fiduciary activities of the Pension and OPEB Trust Fund, the Plan limits its investments to the safest types of securities and diversifies its investments portfolio so the potential losses will be minimized. The Plan’s current target asset allocation is as follows:

Asset Class	Target Allocation
Domestic Equity	30% - 70%
International Equity	0% - 10%
Fixed Income	20% - 70%
Real Estate	0% - 10%
Cash	0% - 50%
Other	0% - 10%

Custodial Credit Risk – Custodial risk is the risk that in the event of the failure of the counterparty, Fairfax Water will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. However, Fairfax Water’s investment policy requires that all securities purchased by Fairfax Water be properly and clearly labeled as an asset of Fairfax Water and held in safekeeping by a third party custodial bank or institution in compliance with Section 2.2-4515 of the *Code of Virginia*. Therefore, Fairfax Water has no custodial risk.

For Fairfax Water's business-type activities, accrued interest at December 31, 2019 of \$12,752,986 on the Resolution Funding Corporation stripped securities (REFCO Strips) is classified with the REFCO Strips in unrestricted investments. Maturity dates of the investments determine the Statement of Net Position classification.

Fair Value Measurement – Fairfax Water categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable data for substantially the full term of the assets and liabilities (REFCO Strips); and Level 3 inputs are significant unobservable inputs.

The table below details the fair value measurements of Fairfax Water's business-type activities as of December 31, 2019:

Investment Type	Level 1 Inputs	Level 2 Inputs
U. S. Government Treasury Notes and Bonds	\$ 89,638,523	\$ -
U. S. Government Agency Notes	32,027,628	18,462,496
Certificates of Deposit	7,173,064	-
Supranational Bonds	4,731,219	-
Corporate Notes	25,505,564	-
Total Portfolio	\$ 159,075,998	\$ 18,462,496

All of the investments for Fairfax Water's fiduciary component unit (the Welfare Benefit Trust Fund) and the Pension and OPEB Trust Fund are considered Level 1.

4. Capital Assets

The changes in Fairfax Water's capital assets for the year ended December 31, 2019 follow (in thousands):

	Beginning Balance	Increases	Decreases/ Transfers	Ending Balance
Capital assets not being depreciated or amortized:				
Land and rights of way	\$ 43,193	\$ 719	\$ -	\$ 43,912
Easements	1,915	-	-	1,915
Construction in progress	51,564	29,861	(37,182)	44,243
Total capital assets not being depreciated or amortized	96,672	30,580	(37,182)	90,070
Capital assets being depreciated or amortized:				
Water supply	165,756	2,504	3,098	171,358
Water treatment	713,625	11,126	13,404	738,155
Transmission	395,059	11,836	5,097	411,992
Distribution	623,773	14,715	10,892	649,380
General plant	544,359	28,801	(914)	572,246
Total capital assets being depreciated or amortized	2,442,572	68,982	31,577	2,543,131
Less accumulated depreciation or amortization for:				
Water supply	51,040	3,791	-	54,831
Water treatment	246,597	14,538	-	261,135
Transmission	104,473	6,471	(1,700)	109,244
Distribution	153,265	9,420	(2,681)	160,004
General plant	197,175	20,366	(1,202)	216,339
Total accumulated depreciation or amortization	752,550	54,586	(5,583)	801,553
Capital assets being depreciated or amortized, net	1,690,022	14,396	37,160	1,741,578
Total capital assets, net	\$ 1,786,694	\$ 44,976	\$ (22)	\$ 1,831,648

The amount shown in the Statement of Revenues, Expenses and Change in Net Position for interest expense is net of \$1,101,155 capitalized in 2019.

5. Capital Contributions

Capital contributions for the year ended December 31, 2019, are as follows:

Donated capital assets	\$ 1,745,110
Contributions from developers	287,500
Expired construction advances	168,035
Vulcan quarry contributions	1,420,013
Total	<u>\$ 3,620,658</u>

Contributed assets consist principally of water mains constructed by developers and subsequently donated to Fairfax Water as well as mains constructed by Fairfax Water and paid for by the developers.

6. Other Long-Term Liabilities

Other long-term liabilities activity for the year ended December 31, 2019 was as follows (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance	Current Portion
Compensated absences	\$ 4,849	\$ 4,726	\$ (4,849)	\$ 4,726	\$ 2,468
Refundable construction advances	2,150	339	(206)	2,283	-
Total other long-term liabilities	\$ 6,999	\$ 5,065	\$ (5,055)	\$ 7,009	\$ 2,468

7. Bonds Payable

Bonds payable activity for the year ended December 31, 2019 was as follows (in thousands):

	Beginning Balance	Increases	Decreases	Ending Balance	Current Maturities
Bonds payable:					
Series 1997 Bonds	\$ 16,020	\$ -	\$ (5,080)	\$ 10,940	\$ 5,335
Series 2005 Bonds	37,210	-	(2,835)	34,375	2,910
Series 2010 Bonds	88,860	-	-	88,860	-
Series 2012 Bonds	76,390	-	(75,205)	1,185	380
Series 2013 Bonds	55,795	-	(17,455)	38,340	5,700
Series 2017 Bonds	194,880	-	(7,560)	187,320	7,935
Series 2019 Bonds	-	91,230	-	91,230	-
	469,155	91,230	(108,135)	452,250	22,260
Plus unamortized premiums (net)	41,793	-	(11,409)	30,384	2,116
Total bonds payable, net	\$ 510,948	\$ 91,230	\$ (119,544)	\$ 482,634	\$ 24,376

On August 19, 1997, Fairfax Water issued water refunding revenue bonds dated July 15, 1997 in the aggregate principal amount of \$102,210,000 (the Series 1997 Bonds), pursuant to the 1992 General Trust Indenture. The outstanding Series 1997 Bonds bear interest rates at 5.00 percent per annum.

On March 30, 2005, Fairfax Water issued water refunding revenue bonds dated March 30, 2005 in the aggregate principal amount of \$113,440,000 (the Series 2005 Bonds). Interest on the Series 2005 Bonds is payable semiannually on each April 1 and October 1. The outstanding Series 2005 Bonds bear interest rates at 5.25 percent per annum. No amount of the refunded bonds is outstanding at December 31, 2019.

On November 10, 2010, Fairfax Water issued water revenue and refunding revenue bonds dated November 10, 2010 in the aggregate principal amount of \$88,860,000 (the Series 2010 Bonds). Interest on the Series 2010 Bonds is payable semiannually on each April 1 and October 1. The outstanding Series 2010 Bonds bear interest at rates ranging from 3.00 to 5.00 percent per annum. The Series 2010 Bonds with stated maturities after April 2020 are subject to call and redemption prior to maturity. No amount of the refunded bonds is outstanding at December 31, 2019.

On January 24, 2012, Fairfax Water issued water refunding revenue bonds dated January 24, 2012 in the aggregate principal amount of \$81,225,000 (the Series 2012 Bonds). Interest on the Series 2012 Bonds is payable semiannually on each April 1 and October 1. The outstanding Series 2012 Bonds bear interest at rates ranging from 3.00 to 4.25 percent per annum. The Series 2012 Bonds with stated maturities on or before April 2022 are not subject to call and redemption prior to maturity. During 2019, Fairfax Water advance refunded \$74,835,000 of the Series 2012 Bonds. Refunded bonds resulting from the issuance of the 2019 Series include amounts outstanding totaling \$74,835,000 at December 31, 2019.

On February 25, 2013, Fairfax Water issued water refunding revenue bonds dated February 25, 2013 in the aggregate principal amount of \$93,870,000 (the Series 2013 Bonds). Interest on the Series 2013 Bonds is payable semiannually on each April 1 and October 1. The outstanding Series 2013 Bonds bear interest at rates ranging from 1.896 to 5.00 percent per annum. The Series 2013 Bonds with stated maturities on or before April 2023 are not subject to call and redemption prior to maturity. During 2019, Fairfax Water advance refunded \$11,955,000 of the Series 2013A Bonds. Refunded bonds resulting from the issuance of the 2019 Series include amounts outstanding totaling \$11,955,000 at December 31, 2019.

On March 1, 2017, Fairfax Water issued water revenue and refunding revenue bonds dated March 1, 2017 in the aggregate principal amount of \$201,590,000 (the Series 2017 Bonds). Interest on the Series 2017 Bonds is payable semiannually on each April 1 and October 1. The outstanding Series 2017 Bonds bear interest at rates ranging from 3.00 to 5.00 percent per annum. The Series 2017 Bonds with stated maturities on or before April 2027 are not subject to call and redemption prior to maturity. No amount of the refunded bonds is outstanding at December 31, 2019.

On December 10, 2019, Fairfax Water issued water refunding revenue bonds dated December 10, 2019 in the aggregate principal amount of \$91,230,000 (the Series 2019 Bonds). Interest on the Series 2019 Bonds is payable semiannually on each April 1 and October 1. The outstanding Series 2019 Bonds bear interest at rates ranging from 1.885 to 2.629 percent per annum. The Series 2019 Bonds with stated maturities on or before April 2029 are not subject to call and redemption prior to maturity. Refunded bonds resulting from the issuance of the 2019 Series include amounts outstanding totaling \$86,790,000, held in trust at December 31, 2019.

At December 31, Fairfax Water is required to have an account balance with the Trustee sufficient to pay principal and interest due on the outstanding bonds issued under the 1992 General Trust Indenture on the following April 1. At December 31, 2019, this amount consisted of cash equivalents of \$484,141 and investments in U.S. Government securities of \$30,108,111 with a market value of approximately \$30,373,673 meeting the requirements of the 1992 General Trust Indenture. In addition, Fairfax Water is required to maintain with the Trustee an amount equal to the maximum amount of interest accruing on all outstanding bonds in the current or any future bond year. At December 31, 2019, this amount consisted of cash equivalents of \$349,356 and investments in U.S. Government securities of \$10,898,047 with a market value of approximately \$10,908,013.

Under the terms of the 1992 General Trust Indenture, before the commencement of each fiscal year, Fairfax Water is required to fix, establish, or maintain or cause to be fixed, established, and maintained such rates, fees, and charges for the provision of water service, and revise or cause to be revised the same prior to the commencement of each fiscal year, as necessary, as will produce net revenues, in the opinion of the Consulting Engineer, at least equal in such fiscal year to the total of 110 percent of

the principal and interest requirements during that fiscal year. For 2019, Fairfax Water was in compliance with the terms of the 1992 General Trust Indenture.

Future debt payments under all debt agreements as of December 31, 2019 are as follows:

Year	Principal	Interest	Total
2020	\$ 22,260,000	\$ 19,220,612	\$ 41,480,612
2021	23,235,000	17,528,007	40,763,007
2022	24,370,000	16,490,570	40,860,570
2023	22,530,000	15,368,312	37,898,312
2024	27,205,000	14,534,441	41,739,441
2025 – 2029	151,485,000	57,807,845	209,292,845
2030 – 2034	51,555,000	37,219,201	88,774,201
2035 – 2039	52,865,000	27,299,050	80,164,050
2040 – 2044	46,475,000	14,251,250	60,726,250
2045 – 2047	30,270,000	3,076,000	33,346,000
Total	\$ 452,250,000	\$ 222,795,288	\$ 675,045,288

The 1986 Federal Tax Reform Act requires local jurisdictions to report any rebate arbitrage earnings on debt issues to the Federal Government every five years. As of December 31, 2019, Fairfax Water had no arbitrage obligation.

8. Pension Plan

A. Plan Description and Provisions

Fairfax Water sponsors the Fairfax County Water Authority Retirement Plan (the Plan), a single-employer public employee defined benefit pension plan. The Plan provides retirement benefits for all regular full-time employees as well as Board members of Fairfax Water who elected to participate prior to July 1, 2002. The Plan document assigns all responsibilities of maintaining the Plan to the Fairfax Water Board of Directors, including the approval of Plan changes, setting benefit and contribution levels under the Plan, and ensuring the Plan is funded sufficiently to meet its benefit obligations. Fairfax Water has established a Benefits Trust Committee to be responsible for the administration of the Plan. On an ongoing basis, Fairfax Water reviews the established Retirement Plan and makes adjustments accordingly.

The Plan administers six different benefit structures for members, five of which are closed to new entrants (Plan A, Plan B, Plan C, Modified Plan D, and Plan E). Newly hired employees currently earn benefits under Plan D. All regular full-time employees of Fairfax Water are eligible to participate in the Plan immediately upon commencement of employment. The specific provisions and eligibility for each benefit structure are set out below:

Plan A

The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.

Eligible Members – Employees are in Plan A, if chosen at time of employment, if their membership date is before July 1, 1988.

Plan B Opt-In Option – Effective June 1, 1988 (for a 30-day period), Plan A members were given the option to join Plan B. Each Plan A member who elected to join Plan B was required to pay into the Plan. The payment requirement equaled the member's difference between the Plan A and Plan B contributions for the period January 1, 1982 through June 30, 1988, including interest at 10%. Such contributions and interest were credited to the member's contribution amount. The election was irrevocable.

Retirement Contributions – Employees contribute 4.0% of annual creditable compensation up to the Social Security taxable wage base, plus 5.0% of annual creditable compensation in excess of the Social Security taxable wage base to their member contribution account on a bi-weekly basis. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. Fairfax Water makes a separate actuarially determined contribution to the Plan for all covered employees. The Plan invests both member and employer contributions to provide funding for the future benefit payment.

Creditable Service – The sum of a participant's membership service credit, accrued annual leave credit, accrued sick leave service credit, and any additional purchased service. A year of creditable service shall consist of 365 calendar days. Periods less than 365 days shall be prorated to the nearest tenth of a year. A member's total creditable service is one of the factors used to determine eligibility for retirement and to calculate the retirement benefit.

Vesting – Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years of membership service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members are always 100% vested in the contributions they make.

Calculating the Benefit – The basic benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total creditable service at retirement. An early retirement reduction factor of 0.5% is applied to the basic benefit, and supplemental benefit if applicable, for each month that retirement precedes what would have been the normal retirement date.

Average Final Compensation – A member's average final compensation is the average of the three consecutive years of creditable service which will produce the highest average annual compensation.

Service Retirement Multiplier – The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier is 1.9% of average final compensation up to the Social Security Breakpoint, plus 2.1% of the excess.

Supplemental Benefit – In addition to the basic benefit, members who retire prior to the earliest date of eligibility for Social Security benefits shall receive a supplemental benefit of 1.0% of average final compensation up to the Social Security Breakpoint multiplied by years of creditable service.

Payments cease upon first eligibility for Social Security benefits, whether or not application for Social Security benefits has been made or awarded.

Normal Retirement Age – First of the month following attainment of a combination of age and creditable service equal to 80 years, provided the member is not less than 50 years old and has completed at least five years of creditable service, or at age 65 with five years of creditable service, if earlier.

Earliest Unreduced Retirement Eligibility – At age 65 with five years of creditable service or at age 50 with at least 30 years of creditable service.

Earliest Reduced Retirement Eligibility – First of the month following attainment of a combination of age and creditable service equal to 75 years, with at least ten years of creditable service.

Cost-of-Living Adjustment (COLA) in Retirement – Retirement benefits are increased on May 1 of each year by the change in the Consumer Price Index (CPI) for Washington-Arlington-Alexandria, DC-VA-MD-WV for the preceding twelve months ended December 1. If the period of retirement is less than one year, the increase is 25% of the CPI for each completed quarter. If the increase in the CPI is greater than 4%, the Plan actuary determines the increase that is supportable.

Disability Coverage – Participants who become disabled while employed and enter Fairfax Water's long-term disability program, continue to accrue service under the Plan as if they were still working. Upon reaching the normal retirement date, disabled participants begin receiving benefits from the Plan. The basic benefit is calculated using average final compensation at the time of disability.

Plan B

Plan B is the same as Plan A except for the following:

Eligible Members – Employees are in Plan B if they chose Plan B at time of employment between January 1, 1982 and June 30, 1988, or were Plan A members who chose the Plan B Opt-In Option between June 1, 1988 and June 30, 1988, or if their membership date is between July 1, 1988 and December 31, 1996.

Retirement Contributions – Employees contribute 5.0% of their annual creditable compensation to their member contribution account on a bi-weekly basis.

Service Retirement Multiplier – The retirement multiplier is 2.1% of average final compensation.

Plan C

Plan C is the same as Plan A except for the following:

Eligible Members – Employees are in Plan C if their membership date is between January 1, 1997 and December 31, 2006.

Retirement Contributions – Employees contribute 5.0% of their annual creditable compensation to their member contribution account on a bi-weekly basis.

Average Final Compensation – A member's average final compensation is the average of the five consecutive years of creditable service which will produce the highest average annual compensation.

Service Retirement Multiplier – The retirement multiplier is 2.1% of average final compensation to a maximum of twenty-five years of creditable service, plus 1.0% of average final compensation for years of creditable service in excess of twenty-five up to a maximum of ten years.

Normal Retirement Age – First of the month following attainment of a combination of age and creditable service equal to 80 years, provided the member is not less than 55 years old and has completed at least five years of creditable service, or at age 65 with five years of creditable service, if earlier.

Earliest Unreduced Retirement Eligibility – At age 65 with five years of creditable service or at age 55 with at least 25 years of creditable service.

Plan D

Plan D is the same as Plan A except for the following:

Eligible Members – Employees are in Plan D if their membership date is on or after January 1, 2007.

Retirement Contributions – There is no employee contribution for Plan D.

Creditable Service – The sum of a participant's membership service credit, accrued sick leave service credit, and any additional purchased service.

Average Final Compensation – A member's average final compensation is the average of the five consecutive years of creditable service which will produce the highest average annual compensation.

Service Retirement Multiplier – The retirement multiplier is 1.7% of average final compensation to a maximum of twenty-five years of creditable service, plus 1.0% of average final compensation for years of creditable service in excess of twenty-five up to a maximum of ten years.

Supplemental Benefit – There is no supplemental benefit in Plan D.

Normal Retirement Age – First of the month following attainment of a combination of age and creditable service equal to 80 years, provided the member is not less than 60 years old and has completed at least five years of creditable service, or at age 65 with five years of creditable service, if earlier.

Earliest Unreduced Retirement Eligibility – At age 65 with five years of creditable service or at age 60 with at least 20 years of creditable service.

Modified Plan D

Modified Plan D is the same as Plan D except for the following:

Eligible Members – Modified Plan D only applies to vested employees that transferred to Fairfax Water as part of the Asset Purchase Agreement between Fairfax Water and the City of Fairfax dated January 3, 2014 (the transfer date). Effective as of the transfer date, all benefit liabilities for the employees to whom the Asset Purchase Agreement applied and corresponding assets under the City of Fairfax Retirement Plan (the Fairfax City Plan) were transferred to the Plan. Modified Plan D is a closed plan.

Creditable Service – The sum of a participant's membership service credit, accrued sick leave service credit, and any additional purchased service. For purposes of the Modified Plan D retirement benefit, creditable service shall include the member's prior credited service with the Fairfax City Plan as of the transfer date.

Vesting – Members become vested when they have at least five years of creditable service. For purposes of the Modified Plan D, the member's prior credited service with the Fairfax City Plan shall be counted for purposes of vesting as of the transfer date.

Calculating the Benefit – Modified Plan D members are entitled to a basic benefit that is equal to the greater of:

- 1) 1.7% of the member's average final compensation multiplied by years of creditable service to a maximum of 25 years, plus 1.0% of average final compensation multiplied by years of creditable service in excess of twenty-five years up to a maximum of ten years; or
- 2) The basic benefit to which the member was entitled under the Fairfax City Plan in effect as of the transfer date.

An early retirement reduction factor of 0.5% is applied to the basic benefit for each month that retirement precedes what would have been the normal retirement date.

Average Final Compensation – A member's average final compensation is the average of the five consecutive years of creditable service which will produce the highest average annual compensation. For purposes of the Modified Plan D retirement benefit, average final compensation shall include the member's prior annual compensation with the Fairfax City Plan as of the transfer date.

Plan E

Eligible Members – Plan E only applies to employees that transferred to Fairfax Water as part of the Asset Purchase Agreement between Fairfax Water and the City of Falls Church dated January 3, 2014 (the transfer date). Effective as of the transfer date, all benefit liabilities for the employees to whom the Asset Purchase Agreement applied and corresponding assets under the City of Falls Church Basic Pension Plan (the Falls Church City Plan) were transferred to the Plan. Plan E is a closed plan.

Retirement Contributions – Employees contribute 5.0% of their annual creditable compensation to their member contribution account on a bi-weekly basis.

Creditable Service – The sum of a participant's membership service credit and accrued sick leave service credit. For purposes of the Plan E retirement benefit, creditable service shall include the member's prior credited service with the Falls Church City Plan as of the transfer date.

Vesting – Members become vested when they have at least five years of creditable service. For purposes of Plan E, the member's prior credited service with the Falls Church City Plan shall be counted for purposes of vesting as of the transfer date.

Calculating the Benefit – The basic benefit for Plan E members is based on their membership date. If hired before January 1, 2012, 2.0% of the member's average creditable compensation multiplied by years of creditable service. An early retirement reduction factor of 0.33% is applied to the basic retirement benefit for each month that retirement precedes what would have been the normal retirement date. If hired on or after January 1, 2012, 1.8% of the member's average creditable compensation multiplied by years of creditable service. An early retirement reduction factor of 0.63% is applied to the basic retirement benefit for each month that retirement precedes what would have been the normal retirement date.

Average Final Compensation – If hired before January 1, 2012, the member's average final compensation is the average of the 36 consecutive months of creditable service which will produce the highest average annual compensation. If hired on or after January 1, 2012, the member's average final compensation is the average of the 60 consecutive months of creditable service which will produce the highest average annual compensation.

Service Retirement Multiplier – If hired before January 1, 2012, the retirement multiplier is 2.0%. If hired on or after January 1, 2012, the retirement multiplier is 1.8%.

Supplemental Benefit – In addition to the basic retirement allowance, members who retire prior to their normal retirement date shall receive a supplemental benefit of \$200 per month. Payments cease at age 62.

Normal Retirement Age – If hired before January 1, 2012, the normal retirement age is 62. If hired on or after January 1, 2012, the normal retirement age is the member's Social Security Normal Retirement Age.

Earliest Unreduced Retirement Eligibility – If hired before January 1, 2012, at age 62 with five years of creditable service. If hired on or after January 1, 2012, at the member's Social Security Normal Retirement Age with five years of creditable service.

Earliest Reduced Retirement Eligibility – If hired before January 1, 2012, the earlier of age 50 and a combined age and creditable service of 80 years or age 52 with ten years of creditable service. If hired on or after January 1, 2012, the earlier of age 50 and a combined age and creditable service of 90 years or age 52 with ten years of creditable service.

Cost-of-Living Adjustment (COLA) in Retirement – Retirement benefits are increased on January 1 of each year by one half of the percentage increase in the Consumer Price Index, U.S. City Average, limited to a maximum of 4.0%.

Plan Membership

As of the January 1, 2019 actuarial valuation, pension plan membership consisted of the following:

	Number
Retired members or beneficiaries currently receiving benefits	350
Vested terminated members entitled to but not yet receiving benefits	33
Active employees	439
Total plan membership	822

Contributions

Fairfax Water's actuarially determined contribution rate for the year ended December 31, 2019 was 40.66% of covered employee compensation, based on the actuarial valuation dated January 1, 2018. Fairfax Water's current practice is to contribute the greater of the actuarially determined rate or 48% of covered employee compensation. This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by an employee during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from Fairfax Water for 2019 and 2018 exceeded the actuarially determined requirements and amounted to \$15,524,588 and \$14,661,995, respectively. Employee contributions to the Plan for 2019 and 2018 amounted to \$892,871 and \$978,931, respectively.

B. Net Pension Liability

Fairfax Water's net pension liability of \$123,005,175 was measured as of December 31, 2018. The total pension liability was determined by an actuarial valuation performed as of January 1, 2019.

Actuarial Methods and Assumptions

The total pension liability as of January 1, 2019 was based on the following assumptions:

Actuarial cost method	Entry age normal
Amortization method	Level percent of payroll over a 30 year period
Investment rate of return	7.50%, net of pension plan investment expense, including inflation
Inflation	3.00%
Individual salary increases	8.00% for participants under age 45 and 5.00% for participants age 45 and over
Aggregate payroll increases	4.00%
Cost of living adjustments	3.00% for Plans A, B, C, and D and 1.375% for Plan E

Healthy mortality rates were based on the RP-2000 Combined Healthy Mortality Table for males and females, with adjustments for mortality improvements based on Scale AA from 2000.

Disabled mortality rates were based on the RPA Post-1994 Disabled Mortality Table for males and females with no provision for future mortality improvement.

There have been no assumptions or plan changes since the last valuation on January 1, 2018.

Long-Term Expected Rate of Return

The long-term expected rate of return on the pension plan investments was determined using a building-block method in which best-estimate 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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of January 1, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	30% - 70%	6.66%
International equity	0% - 10%	7.21%
Fixed income	20% - 70%	2.21%
Real estate	0% - 10%	5.01%
Cash	0% - 50%	1.41%
Other	0% - 10%	N/A

Discount Rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that Fairfax Water contributions will be made at rates equal to the actuarially determined contribution rates. 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 plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

C. Changes in the Net Pension Liability

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance at December 31, 2017	\$ 325,264,733	\$ 226,413,360	\$ 98,851,373
Changes for the year:			
Service cost	6,153,215	-	6,153,215
Interest	24,213,281	-	24,213,281
Differences between expected and actual experience	(1,971,866)	-	(1,971,866)
Contributions - employer	-	14,661,995	(14,661,995)
Contributions - employee	-	978,931	(978,931)
Net investment income (loss)	-	(11,293,013)	11,293,013
Benefit payments, including refunds of employee contributions	(17,148,409)	(17,148,409)	-
Administrative expense	-	(107,085)	107,085
Net changes	11,246,221	(12,907,581)	24,153,802
Balance at December 31, 2018	\$ 336,510,954	\$ 213,505,779	\$ 123,005,175

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

The following presents the net pension liability of Fairfax Water using the discount rate of 7.50%, as well as what the net pension liability would be if calculated using a discount rate that is one percentage point lower (6.50%) or one percentage point higher (8.50%) than the current rate:

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net pension liability	\$ 163,071,266	\$ 123,005,175	\$ 89,562,904

D. Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended December 31, 2019, Fairfax Water recognized pension expense of \$17,954,341. Fairfax Water also reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual demographic experience	\$ 1,251,381	\$ 8,653,928
Changes of assumptions	16,274	-
Net difference between projected and actual earnings on plan investments	15,993,665	-
Employer contributions subsequent to the measurement date	15,524,588	-
Total	\$ 32,785,908	\$ 8,653,928

Deferred outflows of resources of \$15,524,588 relates to employer contributions subsequent to the measurement date of the pension plan and will be recognized as a reduction of the net pension liability in the year ending December 31, 2020. Other amounts reported as deferred outflows and (inflows) of resources related to pensions will be recognized in pension expense as follows:

Year Ending December 31	Amount
2020	\$ 3,860,922
2021	(270,741)
2022	270,755
2023	4,925,717
2024	(179,261)
Total	\$ 8,607,392

The Plan issues a publicly available financial report that includes the applicable financial statements and supplementary information. That report may be obtained by contacting the Treasurer of the Benefits Trust Committee at 8570 Executive Park Avenue, Fairfax, Virginia 22031.

9. Other Postemployment Benefits – Health Benefits

A. Plan Description and Provisions

Fairfax Water administers a single-employer other postemployment benefit (OPEB) plan under the Plan for retiree health insurance benefits. Health insurance includes medical, vision, dental, and prescription drug benefits for retirees and their dependents. The Plan document assigns all

responsibilities of maintaining the OPEB plan to the Fairfax Water Board of Directors, including the approval of OPEB plan changes, setting benefit and contribution levels, and ensuring the OPEB plan is funded sufficiently to meet its benefit obligations. Fairfax Water has established a Benefits Trust Committee to be responsible for the administration of the OPEB plan.

Each member is part of one of six subplans (Plan A, Plan B, Plan C, Plan D, Modified Plan D, and Plan E) for the entirety of their employment with Fairfax Water based on when the employee was hired. Newly hired employees currently earn benefits under Plan D. To be eligible for retiree health insurance benefits, an employee must retire directly from active employment with an early or normal retirement pension benefit under the Plan and must have been enrolled in Fairfax Water's health insurance program at the time of retirement. Plan D and Modified Plan D Members are not eligible for this benefit until the age of fifty-five. Plan E Members hired on or after April 1, 2008 must have at least 10 years of service at retirement to be eligible for benefits.

The monthly benefit payable is a percentage of the designated premium and varies by subplan.

- Plan A, B, and C – 3.0% multiplied by years of creditable service, limited to a maximum of 25 years of creditable service.
- Plan D – 3.0% multiplied by years of creditable service, limited to a maximum of 25 years of creditable service, reduced by 0.25% for each month that retirement precedes age 60.
- Plan E (hired before April 1, 2008) – 50% of the designated premium.
- Plan E (hired on or after April 1, 2008) – 2.0% multiplied by years of creditable service, limited to a maximum of 25 years of creditable service.

The monthly benefit paid to any participant may not exceed the adjusted cap. The adjusted cap varies by coverage tier and is 116% of the designated premium for that coverage tier as of January 1, 1992, increased by 4% per year from that date.

Plan Membership

As of the January 1, 2019 actuarial valuation, OPEB plan membership consisted of the following:

	Number
Retired members or beneficiaries currently receiving benefits	294
Active employees	439
Total plan membership	733

Contributions

Plan members do not contribute to the OPEB plan while in active employment. In retirement, plan members must pay the remainder of the designated health benefits premium that is not subsidized by the plan in order to maintain coverage.

Fairfax Water's actuarially determined contribution rate for the year ended December 31, 2019 was 40.66% of covered employee compensation, based on the actuarial valuation dated January 1, 2018. Fairfax Water's current practice is to contribute the greater of the actuarially determined rate or 48% of covered employee compensation. This rate was expected to finance the costs of benefits earned by an employee during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the OPEB plan from Fairfax Water for 2019 and 2018 exceeded the actuarially determined requirements and amounted to \$3,112,372 and \$3,834,277, respectively.

B. Net OPEB Liability

Fairfax Water's net OPEB liability of \$23,634,628 was measured as of December 31, 2018. The total OPEB liability was determined by an actuarial valuation performed as of January 1, 2019.

Actuarial Methods and Assumptions

The total OPEB liability as of January 1, 2019 was based on the following assumptions:

Actuarial cost method	Entry age normal
Amortization method	Level percent of payroll over a 30 year period
Investment rate of return	7.50%, net of pension plan investment expense, including inflation
Inflation	3.00%
Individual salary increases	8.00% for participants under age 45 and 5.00% for participants age 45 and over
Aggregate payroll increases	4.00%
Cost-of-living adjustments	3.00% for Plans A, B, C, and D and 1.375% for Plan E
Healthcare cost trend rates:	
Medical and vision (under 65)	6.75%
Medical and vision (over 65)	5.50%
Prescription drug	8.50%
Dental	4.00%
Administrative expenses	2.50%

Healthy mortality rates were based on the RP-2000 Combined Healthy Mortality Table for males and females, with adjustments for mortality improvements based on Scale AA from 2000.

The following assumptions were changed since the last valuation dated January 1, 2018:

- The assumed per-capita retiree health costs were updated to reflect more recent experience and premium rates for insured Medicare-eligible participants.
- The assumed trends on medical, prescription drug, and vision costs were modified.

There were no changes in plan provisions since the prior valuation.

Long-Term Expected Rate of Return

The long-term expected rate of return on the OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These returns 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 and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	30% - 70%	6.66%
International equity	0% - 10%	7.21%
Fixed income	20% - 70%	2.21%
Real estate	0% - 10%	5.01%
Cash	0% - 50%	1.41%
Other	0% - 10%	N/A

Discount Rate

The discount rate used to measure the total OPEB liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that Fairfax Water contributions would be made at rates equal to the actuarially determined contribution rates. Based on the assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

C. Changes in the Net OPEB Liability

	Total OPEB Liability		Plan Fiduciary Net Position		Net OPEB Liability
Balance at December 31, 2017	\$	65,236,869	\$	45,424,028	\$ 19,812,841
Changes for the year:					
Service cost		1,678,160		-	1,678,160
Interest		4,902,701		-	4,902,701
Differences between expected and actual experience		(716,904)		-	(716,904)
Changes of assumptions		(3,313,079)		-	(3,313,079)
Contributions - employer		-		3,834,277	(3,834,277)
Net investment income (loss)		-		(5,075,979)	5,075,979
Benefit payments, including refunds of employee contributions		(3,091,378)		(3,091,378)	-
Administrative expense		-		(29,207)	29,207
Net changes		(540,500)		(4,362,287)	3,821,787
Balance at December 31, 2018	\$	64,696,369	\$	41,061,741	\$ 23,634,628

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

The following presents the net OPEB liability of Fairfax Water, calculated using the discount rate of 7.50%, as well as what the net OPEB liability would be if calculated using a discount rate that is one percentage point lower (6.50%) or one percentage point higher (8.50%) than the current rate:

	1% Decrease (6.50%)		Current Discount Rate (7.50%)		1% Increase (8.50%)
Net OPEB liability	\$	31,282,618	\$	23,634,628	\$ 17,254,422

Sensitivity of the Net OPEB Liability to Changes in the Trend Rates

The following presents the net OPEB liability of Fairfax Water, calculated using current healthcare cost trend rates, as well as what the net OPEB liability would be if calculated using healthcare cost trend rates that are one percentage point lower or one percentage point higher than the current rates:

	1% Decrease in Trend Rates		Current Trend Rates		1% Increase in Trend Rates	
Net OPEB liability	\$	18,242,114	\$	23,634,628	\$	29,453,328

D. OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended December 31, 2019, Fairfax Water recognized OPEB expense of \$3,332,598. Fairfax Water also reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between expected and actual demographic experience	\$	15,421	\$	601,088
Changes of assumptions		-		5,260,191
Net difference between projected and actual earnings on plan investments		5,860,607		-
Employer contributions subsequent to the measurement date		3,112,372		-
Total	\$	8,988,400	\$	5,861,279

Deferred outflows of resources of \$3,112,372 relates to employer contributions subsequent to the measurement date of the OPEB plan and will be recognized as a reduction of the net OPEB liability in the year ending December 31, 2020. Other amounts reported as deferred outflows and (inflows) of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ending December 31	Amount
2020	\$ 156,096
2021	156,096
2022	156,095
2023	471,772
2024	(801,609)
Thereafter	(123,701)
Total	\$ 14,749

10. Other Postemployment Benefits – Implicit Subsidy

A. Plan Description and Provisions

The implicit subsidy liability of Fairfax Water is a result of the current premium structure for pre-Medicare retirees receiving benefits through the Fairfax County Water Authority Retirement Plan, a single-employer OPEB plan that is used to provide postemployment benefits for all regular full-time employees. No assets are accumulated in a trust.

The Plan sets forth an explicit healthcare benefit stated as a percentage of the designated premium. However, for pre-Medicare retirees, the true cost of providing healthcare benefits exceeds the current designated premium, because the designated premium is set based on the blended claims experience of both active employees and pre-Medicare retirees. The difference between the premiums that would be set for pre-Medicare retirees if their claims experiences was analyzed separately from active employees and the current designated premiums is the implicit subsidy.

Plan Membership

As of the January 1, 2019 actuarial valuation, OPEB plan membership consisted of the following:

	Number
Retired members or beneficiaries currently receiving benefits	294
Active employees	439
Total plan membership	733

Contributions

Plan members do not contribute toward the implicit subsidy. Fairfax Water funds the implicit subsidy entirely on a pay-as-you-go basis. Fairfax Water will continue to evaluate the impact of this liability when making OPEB plan changes and during the Plan's actuarial valuation.

B. Total OPEB Liability

Fairfax Water's total OPEB liability of \$6,868,178 was measured as of December 31, 2018. The total OPEB liability was determined by an actuarial valuation performed as of January 1, 2019.

Actuarial Methods and Assumptions

The total OPEB liability as of January 1, 2019 was based on the following assumptions:

Individual salary increases	8.00% for participants under age 45 and 5.00% for participants age 45 and over
Discount rate	4.10%
Healthcare cost trend rates:	
Medical and vision (under 65)	6.75%
Medical and vision (over 65)	5.50%
Prescription drug	8.50%
Dental	4.00%
Administrative expenses	2.50%

Healthy mortality rates were based on the RP-2000 Combined Healthy Mortality Table for males and females, with adjustments for mortality improvements based on Scale AA from 2000.

The actuarial assumptions used in the December 31, 2018 valuation were based on the results of the most recent experience study performed by the prior actuary.

The following assumptions were changed since the last valuation dated January 1, 2018:

- The discount rate was increased from 3.44% to 4.10%.
- The assumed trends on medical, prescription drug, and vision costs were modified.

Discount Rate

The discount rate for OPEB benefits funded entirely on a pay-as-you-go basis is the yield or index rate for 20 year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). For this purpose, the index used is the Bond Buyer 20-Bond General Obligation Municipal Bond index. The index value of the current December 31, 2018 measurement date is 4.10%.

C. Changes in the Total OPEB Liability

	Total OPEB Liability
Balance at December 31, 2017	\$ 12,707,224
Changes for the year:	
Service cost	686,040
Interest	449,817
Differences between expected and actual experience	(173,693)
Changes of assumptions	(6,166,821)
Benefit payments, including refunds of employee contributions	(634,389)
Net changes	(5,839,046)
Balance at December 31, 2018	\$ 6,868,178

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

The following presents the total OPEB liability of Fairfax Water, calculated using the discount rate of 4.10%, as well as what the total OPEB liability would be if calculated using a discount rate that is one percentage point lower (3.10%) or one percentage point higher (5.10%) than the current rate:

	1% Decrease (3.10%)	Current Discount Rate (4.10%)	1% Increase (5.10%)
Total OPEB liability	\$ 7,390,708	\$ 6,868,178	\$ 6,391,412

Sensitivity of the Total OPEB Liability to Changes in the Trend Rates

The following presents the total OPEB liability of Fairfax Water, calculated using current healthcare cost trend rates, as well as what the total OPEB liability would be if calculated using healthcare cost trend rates that are one percentage point lower or one percentage point higher than the current rates:

	1% Decrease in Trend Rates	Current Trend Rates	1% Increase in Trend Rates
Total OPEB liability	\$ 6,270,407	\$ 6,868,178	\$ 7,558,641

D. OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended December 31, 2019, Fairfax Water recognized OPEB expense of \$2,157,776. Fairfax Water also reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual demographic experience	\$ -	\$ 145,633
Changes of assumptions	8,716,955	5,170,566
Total	\$ 8,716,955	\$ 5,316,199

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

Year Ending December 31	Amount
2020	\$ 1,021,919
2021	1,021,919
2022	1,021,919
2023	1,021,919
2024	(492,296)
Thereafter	(194,624)
Total	\$ 3,400,756

11. Other Postemployment Benefits – Life Insurance

A. Plan Description and Provisions

The life insurance benefits provided to retired employees of Fairfax Water are considered a single employer OPEB plan. Benefits are provided to all regular full-time employees. No assets are accumulated in a trust.

A life insurance policy with a death benefit of \$25,000 is provided to each eligible retiree upon retirement. To be eligible for life insurance benefits, the Member must retire directly from active employment with an early or normal retirement pension benefit under the Plan.

Plan Membership

As of the January 1, 2019 actuarial valuation, OPEB Plan membership consisted of the following:

	Number
Retired members or beneficiaries currently receiving benefits	-
Active employees	439
Total plan membership	439

Contributions

Plan members do not contribute toward the life insurance benefit. Fairfax Water funds the full cost of the life insurance policy on a pay-as-you-go basis as employees retire. Contributions to the OPEB plan from Fairfax Water for 2019 and 2018 amounted to \$151,983 and \$512,248, respectively.

B. Total OPEB Liability

Fairfax Water's total OPEB liability of \$1,507,731 was measured as of December 31, 2018. The total OPEB liability was determined by an actuarial valuation performed as of January 1, 2019.

Actuarial Methods and Assumptions

The total OPEB liability as of January 1, 2019 was based on the following assumptions:

Individual salary increases	8.00% for participants under age 45 and 5.00% for participants age 45 and over
Discount rate	4.10%
Administrative expense load	10.00%

Healthy mortality rates were based on the RP-2000 Combined Healthy Mortality Table for males and females, with adjustments for mortality improvements based on Scale AA from 2000.

The actuarial assumptions used in the December 31, 2018 valuation were based on the results of the most recent experience study performed by the prior actuary.

The following assumption was changed since the last valuation dated January 1, 2018:

- The discount rate was increased from 3.44% to 4.10%.

Discount Rate

The discount rate for OPEB benefits funded entirely on a pay-as-you-go basis is the yield or index rate for 20 year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). For this purpose, the index used is the Bond Buyer 20-Bond General Obligation Municipal Bond index. The index value of the current December 31, 2018 measurement date is 4.10%.

C. Changes in the Total OPEB Liability

	Total OPEB Liability
Balance at December 31, 2017	\$ 2,057,096
Changes for the year:	
Service cost	147,171
Interest	67,016
Differences between expected and actual experience	(3,915)
Changes of assumptions	(247,389)
Benefit payments, including refunds of employee contributions	(512,248)
Net changes	(549,365)
Balance at December 31, 2018	\$ 1,507,731

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

The following presents the total OPEB liability of Fairfax Water, calculated using the discount rate of 4.10%, as well as what the total OPEB liability would be if calculated using a discount rate that is one percentage point lower (3.10%) or one percentage point higher (5.10%) than the current rate:

	1% Decrease (3.10%)	Current Discount Rate (4.10%)	1% Increase (5.10%)
Total OPEB liability	\$ 1,902,152	\$ 1,507,731	\$ 1,210,398

Sensitivity of the Total OPEB Liability to Changes in the Trend Rates

The following presents the total OPEB liability of Fairfax Water, calculated using current healthcare cost trend rates, as well as what the total OPEB liability would be if calculated using healthcare cost

trend rates that are one percentage point lower or one percentage point higher than the current rates:

	1% Decrease in Trend Rates		Current Trend Rates		1% Increase in Trend Rates	
Total OPEB liability	\$	1,507,731	\$	1,507,731	\$	1,507,731

D. OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended December 31, 2019, Fairfax Water recognized OPEB expense of \$197,886. Fairfax Water also reported deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between expected and actual demographic experience	\$	-	\$	47,108
Changes of assumptions		109,633		223,440
Employer contributions subsequent to the measurement date		151,983		-
Total	\$	261,616	\$	270,548

Deferred outflows of resources of \$151,983 relates to employer contributions subsequent to the measurement date of the OPEB plan and will be recognized as a reduction of the net pension liability in the year ending December 31, 2020. Other amounts reported as deferred outflows and (inflows) of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ending December 31	Amount
2020	\$ (16,301)
2021	(16,301)
2022	(16,301)
2023	(16,301)
2024	(16,301)
Thereafter	(79,410)
Total	\$ (160,915)

12. Commitments and Contingencies

In connection with its ongoing capital improvement program, Fairfax Water has entered into various construction contracts. As of December 31, 2019, the uncompleted cost of these and other contracts is approximately \$11.0 million.

Fairfax Water has also agreed, in principle, to pay certain portions of the capital and annual operation and maintenance costs relating to various water supply augmentation facilities constructed and proposed to be constructed by other parties for the use and benefit of Fairfax Water and other water supply agencies in the Washington, D.C., metropolitan area. Fairfax Water's share of the capital costs is presently estimated at \$7.5 million which is to be paid with interest over the next 21 years. Fairfax Water's share of annual operation and maintenance costs associated with these facilities for 2020 is estimated to be \$156,000.

On January 3, 2014 Fairfax Water entered into an agreement with the U.S. Army Corps of Engineers (the Army) to purchase water for customers. Fairfax Water also shares the costs of capital improvements to the Washington Aqueduct in accordance with the Approved Capital Improvement Plan. During 2019 Fairfax Water's costs for water and capital improvements was \$4.1 million and \$1.6 million, respectively. These costs were recorded as an expense on Fairfax Water's financial statements. An escrow account has been established for the payments made from which the Army makes draws. The account is interest bearing and all earnings accrue to Fairfax Water. In addition to payments made to the Army, Fairfax Water maintains a balance of approximately three months of the cost of water purchased. The agreement will remain in effect until terminated by either the Army or Fairfax Water, and requires a five year notice. Fairfax Water's cost for water and capital improvements for 2020 is estimated to be \$7.8 million.

In addition, Fairfax Water is contingently liable for claims that arose in the ordinary course of operations and in connection with its capital improvement program. It is the opinion of Fairfax Water and its legal counsel that any losses that may ultimately be incurred as a result of any claims will not be material to the financial statements.

13. Deferred Compensation Plan

Fairfax Water offers its employees a deferred compensation plan created in accordance with Internal Revenue Code (the Code) Section 457. The deferred compensation plan, available to all employees, permits them to defer a portion of their salaries to future years. All of the assets of the deferred compensation plan are held in a trust for the exclusive benefit of participants and beneficiaries and the assets and liabilities are not reported on the accompanying Statement of Net Position. Participants' rights under the plan are equal to the fair market value of the deferred account for each participant.

14. Risk Management

Fairfax Water is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. With the exception of medical coverage for employees, these risks are covered by commercial insurance purchased from independent third parties. Section 6.11 of the 1992 General Trust Indenture states that Fairfax Water "will carry or cause to be carried such insurance with a reputable insurance carrier or carriers, such as is maintained or carried by similar utilities as the Water System." There have been no significant

reductions in insurance coverage from the prior year and settled claims have not exceeded insurance coverage in any of the past three years.

Fairfax Water is self-insured for health benefits coverage for employees up to \$200,000 per individual per year and is protected from catastrophic losses through a stop-loss insurance policy for losses in excess of such levels.

The changes in the Fairfax County Water Authority Welfare Benefit Trust Fund's health benefits claims liability in 2019 and 2018 are as follows:

	2019	2018
Balance, January 1	\$ 616,045	\$ 647,404
Claims incurred	8,327,802	7,331,642
Claims paid	<u>(8,020,592)</u>	<u>(7,363,001)</u>
Balance, December 31	<u>\$ 923,255</u>	<u>\$ 616,045</u>

This liability, which includes an estimate of incurred but not reported claims, is included in accounts payable in the accompanying Statement of Fiduciary Net Position.

15. Related Organizations

Based on an agreement dated January 1, 1989 (original agreement dated July 1, 1978) between the County and Fairfax Water, Fairfax Water bills and collects for the sales of sewer services on behalf of the County's sewer system. During 2019, Fairfax Water collected approximately \$201.6 million on behalf of the County. As of December 31, 2019, approximately \$3.4 million was owed to the County. The County has paid a fee of \$6.4 million for this service in 2019.

Based on an agreement dated January 3, 2014 between the City of Fairfax and Fairfax Water, Fairfax Water bills and collects for the sales of sewer services on behalf of the City's sewer system. During 2019, Fairfax Water collected approximately \$8.6 million on behalf of the City. As of December 31, 2019, approximately \$803,000 was owed to the City. The billing service also includes a utility tax for customers inside the City limits. The City has paid a fee of \$251,000 for this service in 2019.

Based on an agreement dated January 3, 2014 between the City of Falls Church and Fairfax Water, Fairfax Water bills and collects for the sales of sewer services on behalf of the City's sewer system. During 2019, Fairfax Water collected approximately \$4.3 million on behalf of the City. As of December 31, 2019, approximately \$229,000 was owed to the City. The billing service also includes a utility tax for customers inside the City limits. The City has paid a fee of \$98,000 for this service in 2019.

16. Restatement

In accordance with the adoption of GASB Statement No. 84, *Fiduciary Activities*, the beginning net position balance of Fairfax Water has been restated to account for the reclassification of the Welfare Benefit Trust Fund as a fiduciary component unit instead of a blended component unit.

The following table is a summary of the restatement to net position as of January 1, 2019 as a result of the implementation of GASB Statement No. 84:

Net Position

Balance at December 31, 2018, as previously reported	\$ 1,425,015,909
Change in accounting principle for the implementation of GASB Statement No. 84	<u>(15,469,700)</u>
Balance at January 1, 2019, as restated	<u>\$ 1,409,546,209</u>

17. Subsequent Event

On January 7, 2020, Fairfax Water issued \$18,765,000 Water Refunding Revenue Bonds, Series 2020. The Series 2020 Bonds were sold at a true interest cost of 1.93% and generated a net present value savings of approximately \$4.4 million. The Series 2020 Bonds were issued for a current refunding of a portion of the Series 2010 Bonds.

REQUIRED SUPPLEMENTARY INFORMATION

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Changes in the Net Pension Liability and Related Ratios

Information presented is based on the actuarial information for the plan year ended:

Reporting as of December 31,	2018	2017	2016	2015	2014
Total pension liability					
Service cost	\$ 6,153,215	\$ 6,176,821	\$ 6,290,917	\$ 6,138,436	\$ 6,154,281
Interest	24,213,281	23,501,922	23,037,301	22,410,595	20,645,855
Differences between expected and actual experience	(1,971,866)	(3,448,611)	(7,094,162)	(5,057,514)	11,343,166
Changes of assumptions	-	-	-	54,126	-
Benefit payments, including refunds of employee contributions	(17,148,409)	(16,295,082)	(15,554,940)	(15,129,156)	(14,066,004)
Net change in total pension liability	11,246,221	9,935,050	6,679,116	8,416,487	24,077,298
Total pension liability – beginning	325,264,733	315,329,683	308,650,567	300,234,080	276,156,782
Total pension liability – ending (a)	<u>\$ 336,510,954</u>	<u>\$ 325,264,733</u>	<u>\$ 315,329,683</u>	<u>\$ 308,650,567</u>	<u>\$ 300,234,080</u>
Plan fiduciary net position					
Contributions – employer	\$ 14,661,995	\$ 14,500,637	\$ 14,140,723	\$ 14,362,903	\$ 14,197,131
Contributions – employee	978,931	1,023,739	1,076,246	1,128,898	1,192,841
Net investment income (loss)	(11,293,013)	32,630,497	10,955,546	(1,694,011)	9,411,421
Benefit payments, including refunds of employee contributions	(17,148,409)	(16,295,082)	(15,554,940)	(15,129,156)	(14,066,004)
Administrative expense	(107,085)	(109,368)	(125,641)	(152,439)	(108,171)
Net change in plan fiduciary net position	(12,907,581)	31,750,423	10,491,934	(1,483,805)	10,627,218
Plan fiduciary net position – beginning	226,413,360	194,662,937	184,171,003	185,654,808	175,027,590
Plan fiduciary net position – ending (b)	<u>\$ 213,505,779</u>	<u>\$ 226,413,360</u>	<u>\$ 194,662,937</u>	<u>\$ 184,171,003</u>	<u>\$ 185,654,808</u>
Net pension liability – ending (a) – (b)	<u>\$ 123,005,175</u>	<u>\$ 98,851,373</u>	<u>\$ 120,666,746</u>	<u>\$ 124,479,564</u>	<u>\$ 114,579,272</u>
Plan fiduciary net position as a percentage of the total pension liability	63.45%	69.61%	61.73%	59.67%	61.84%
Covered-employee payroll	\$ 38,533,900	\$ 37,236,115	\$ 36,387,442	\$ 36,374,344	\$ 35,701,952
Net pension liability as a percentage of covered-employee payroll	319.21%	265.47%	331.62%	342.22%	320.93%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

Covered-employee payroll figures have been determined by dividing actual employer contributions by the actuarially determined rate or 48%, whichever is greater, given Fairfax Water's funding practice.

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Employer Contributions – Pension Plan (in thousands)

Year Ended December 31	Actuarially Determined Contribution	Contribution in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered- Employee Payroll	Contributions as a Percentage of Covered- Employee Payroll
2014	\$ 12,925	\$ 14,197	\$ (1,272)	\$ 35,702	39.77%
2015	12,657	14,363	(1,706)	36,374	39.49%
2016	13,065	14,141	(1,075)	36,387	38.86%
2017	13,295	14,501	(1,205)	37,236	38.94%
2018	13,196	14,662	(1,466)	38,534	38.05%
2019	13,151	15,525	(2,374)	38,827	39.99%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

Covered-employee payroll figures have been determined by dividing actual employer contributions by the actuarially determined rate or 48%, whichever is greater, given Fairfax Water's funding practice.

Employer contributions are prorated between the pension and health benefits of the Plan based on applicable liability measures for each portion. The total employer contributions to the Plan from Fairfax Water for 2019, 2018, 2017, 2016, 2015, and 2014 was 48% of covered-employee payroll, exceeding the actuarially determined contribution rate, and amounted to \$18,636,960, \$18,496,272, \$17,873,355, \$17,465,972, \$17,459,685, and \$17,136,937, respectively.

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Changes in the Net OPEB Liability and Related Ratios – Health Benefits

Information presented is based on the actuarial information for the plan year ended:

Reporting as of December 31,	2018	2017
Total OPEB liability		
Service cost	\$ 1,678,160	\$ 1,856,476
Interest	4,902,701	4,794,979
Change of benefit terms	-	(270,209)
Differences between expected and actual experience	(716,904)	22,661
Changes of assumptions	(3,313,079)	(3,647,763)
Benefit payments, including refunds of employee contributions	(3,091,378)	(2,904,683)
Net change in total OPEB liability	(540,500)	(148,539)
Total OPEB liability – beginning	65,236,869	65,385,408
Total OPEB liability – ending (a)	\$ 64,696,369	\$ 65,236,869
Plan fiduciary net position		
Contributions – employer	\$ 3,834,277	\$ 3,372,698
Net investment income (loss)	(5,075,979)	4,622,120
Benefit payments, including refunds of employee contributions	(3,091,378)	(2,904,683)
Administrative expense	(29,207)	(30,578)
Net change in plan fiduciary net position	(4,362,287)	5,059,557
Plan fiduciary net position – beginning	45,424,028	40,364,471
Plan fiduciary net position – ending (b)	\$ 41,061,741	\$ 45,424,028
Net OPEB liability – ending (a) – (b)	\$ 23,634,628	\$ 19,812,841
Plan fiduciary net position as a percentage of the total OPEB liability	63.47%	69.63%
Covered-employee payroll	\$ 38,533,900	\$ 37,236,115
Net OPEB liability as a percentage of covered-employee payroll	61.33%	53.21%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Employer Contributions – OPEB Health Benefits (in thousands)

Year Ended December 31	Actuarially Determined Contribution	Contribution in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered- Employee Payroll	Contributions as a Percentage of Covered- Employee Payroll
2017	\$ 3,092	\$ 3,373	\$ (280)	\$ 37,236	9.06%
2018	3,451	3,834	(383)	38,534	9.95%
2019	2,636	3,112	(476)	38,827	8.02%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Changes in the Total OPEB Liability and Related Ratios – Implicit Subsidy

Information presented is based on the actuarial information for the plan year ended:

Reporting as of December 31,	2018	2017
Total OPEB liability		
Service cost	\$ 686,040	\$ -
Interest	449,817	-
Change of benefit terms	-	(102,199)
Differences between expected and actual experience	(173,693)	-
Changes of assumptions	(6,166,821)	12,809,423
Benefit payments, including refunds of employee contributions	(634,389)	-
Net change in total OPEB liability	(5,839,046)	12,707,224
Total OPEB liability – beginning	12,707,224	-
Total OPEB liability – ending	\$ 6,868,178	\$ 12,707,224
Covered-employee payroll	\$ 38,533,900	\$ 37,236,115
Total OPEB liability as a percentage of covered-employee payroll	17.82%	34.13%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

The OPEB plan does not have assets in trusts or equivalent arrangements and is funded on a pay-as-you-go basis.

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Changes in the Total OPEB Liability and Related Ratios – Life Insurance

Information presented is based on the actuarial information for the plan year ended:

Reporting as of December 31,	2018	2017
Total OPEB liability		
Service cost	\$ 147,171	\$ 136,829
Interest	67,016	74,468
Differences between expected and actual experience	(3,915)	(54,160)
Changes of assumptions	(247,389)	136,275
Benefit payments, including refunds of employee contributions	(512,248)	(412,730)
Net change in total OPEB liability	(549,365)	(119,318)
Total OPEB liability – beginning	2,057,096	2,176,414
Total OPEB liability – ending	\$ 1,507,731	\$ 2,057,096
Covered-employee payroll	\$ 38,533,900	\$ 37,236,115
Total OPEB liability as a percentage of covered-employee payroll	3.91%	5.52%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

The OPEB plan does not have assets in trusts or equivalent arrangements and is funded on a pay-as-you-go basis.

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Employer Contributions – OPEB Life Insurance (in thousands)

Year Ended December 31	Employer Contributions	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2017	\$ 413	\$ 37,236	1.11%
2018	512	38,534	1.33%
2019	152	38,827	0.39%

Notes:

This schedule is presented to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

SUPPLEMENTARY INFORMATION

FAIRFAX COUNTY WATER AUTHORITY

Statement of Changes in Assets and Liabilities – Custodial Funds For the year ended December 31, 2019

FAIRFAX COUNTY SEWER

	Balance January 1, 2019	Additions	Reductions	Balance December 31, 2019
Assets				
Cash	\$ <u>4,242,891</u>	\$ <u>201,616,251</u>	\$ <u>202,446,608</u>	\$ <u>3,412,534</u>
Liabilities				
Accounts payable	\$ <u>4,242,891</u>	\$ <u>201,616,251</u>	\$ <u>202,446,608</u>	\$ <u>3,412,534</u>

CITY OF FAIRFAX SEWER AND UTILITY TAX

	Balance January 1, 2019	Additions	Reductions	Balance December 31, 2019
Assets				
Cash	\$ <u>601,388</u>	\$ <u>8,568,019</u>	\$ <u>8,366,712</u>	\$ <u>802,695</u>
Liabilities				
Accounts payable	\$ <u>601,388</u>	\$ <u>8,568,019</u>	\$ <u>8,366,712</u>	\$ <u>802,695</u>

CITY OF FALLS CHURCH SEWER AND UTILITY TAX

	Balance January 1, 2019	Additions	Reductions	Balance December 31, 2019
Assets				
Cash	\$ <u>169,426</u>	\$ <u>4,287,195</u>	\$ <u>4,227,439</u>	\$ <u>229,182</u>
Liabilities				
Accounts payable	\$ <u>169,426</u>	\$ <u>4,287,195</u>	\$ <u>4,227,439</u>	\$ <u>229,182</u>

TOTAL – ALL CUSTODIAL FUNDS

	Balance January 1, 2019	Additions	Reductions	Balance December 31, 2019
Assets				
Cash	\$ <u>5,013,705</u>	\$ <u>214,471,465</u>	\$ <u>215,040,759</u>	\$ <u>4,444,411</u>
Liabilities				
Accounts payable	\$ <u>5,013,705</u>	\$ <u>214,471,465</u>	\$ <u>215,040,759</u>	\$ <u>4,444,411</u>

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Bonds Payable December 31, 2019

Description	Date of Issue	Maturity Dates	Interest		Amount Issued	Outstanding January 1, 2019	Retired During 2019	Outstanding December 31, 2019
			Rate	Dates				
Water Refunding Revenue Bonds, Series 1997	7/15/1997	4/1/2019	5.000	4/1 – 10/1	\$ 5,080,000	\$ 5,080,000	\$ 5,080,000	\$ -
	7/15/1997	4/1/2020	5.000	4/1 – 10/1	5,335,000	5,335,000	-	5,335,000
	7/15/1997	4/1/2021	5.000	4/1 – 10/1	5,605,000	5,605,000	-	5,605,000
						16,020,000	5,080,000	10,940,000
Water Refunding Revenue Bonds, Series 2005	3/30/2005	4/1/2019	5.250	4/1 – 10/1	2,835,000	2,835,000	2,835,000	-
	3/30/2005	4/1/2020	5.250	4/1 – 10/1	2,910,000	2,910,000	-	2,910,000
	3/30/2005	4/1/2021	5.250	4/1 – 10/1	3,475,000	3,475,000	-	3,475,000
	3/30/2005	4/1/2022	5.250	4/1 – 10/1	4,000,000	4,000,000	-	4,000,000
	3/30/2005	4/1/2023	5.250	4/1 – 10/1	5,865,000	5,865,000	-	5,865,000
	3/30/2005	4/1/2024	5.250	4/1 – 10/1	6,175,000	6,175,000	-	6,175,000
	3/30/2005	4/1/2025	5.250	4/1 – 10/1	6,500,000	6,500,000	-	6,500,000
	3/30/2005	4/1/2026	5.250	4/1 – 10/1	2,655,000	2,655,000	-	2,655,000
	3/30/2005	4/1/2027	5.250	4/1 – 10/1	2,795,000	2,795,000	-	2,795,000
						37,210,000	2,835,000	34,375,000

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Bonds Payable (continued) December 31, 2019

Description	Date of Issue	Maturity Dates	Interest		Amount Issued	Outstanding January 1, 2019	Retired During 2019	Outstanding December 31, 2019
			Rate	Dates				
Water Revenue and Refunding Revenue Bonds, Series 2010	11/10/2010	4/1/2022	3.000	4/1 – 10/1	150,000	150,000	-	150,000
	11/10/2010	4/1/2023	3.000	4/1 – 10/1	155,000	155,000	-	155,000
	11/10/2010	4/1/2024	3.000	4/1 – 10/1	155,000	155,000	-	155,000
	11/10/2010	4/1/2025	3.125	4/1 – 10/1	160,000	160,000	-	160,000
	11/10/2010	4/1/2026	3.200	4/1 – 10/1	165,000	165,000	-	165,000
	11/10/2010	4/1/2027	3.250	4/1 – 10/1	170,000	170,000	-	170,000
	11/10/2010	4/1/2028	4.000	4/1 – 10/1	3,380,000	3,380,000	-	3,380,000
	11/10/2010	4/1/2029	4.000	4/1 – 10/1	8,350,000	8,350,000	-	8,350,000
	11/10/2010	4/1/2030	4.250	4/1 – 10/1	3,620,000	3,620,000	-	3,620,000
	11/10/2010	4/1/2031	4.000	4/1 – 10/1	3,770,000	3,770,000	-	3,770,000
	11/10/2010	4/1/2032	4.000	4/1 – 10/1	3,925,000	3,925,000	-	3,925,000
	11/10/2010	4/1/2033	5.000	4/1 – 10/1	2,230,000	2,230,000	-	2,230,000
	11/10/2010	4/1/2034	5.000	4/1 – 10/1	2,305,000	2,305,000	-	2,305,000
	11/10/2010	4/1/2035	5.000	4/1 – 10/1	7,815,000	7,815,000	-	7,815,000
	11/10/2010	4/1/2036	5.000	4/1 – 10/1	8,065,000	8,065,000	-	8,065,000
	11/10/2010	4/1/2037	5.000	4/1 – 10/1	8,330,000	8,330,000	-	8,330,000
	11/10/2010	4/1/2038	5.000	4/1 – 10/1	11,655,000	11,655,000	-	11,655,000
	11/10/2010	4/1/2039	5.000	4/1 – 10/1	12,035,000	12,035,000	-	12,035,000
	11/10/2010	4/1/2040	5.000	4/1 – 10/1	12,425,000	12,425,000	-	12,425,000
						88,860,000	-	88,860,000

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Bonds Payable (continued) December 31, 2019

Description	Date of Issue	Maturity Dates	Interest		Amount Issued	Outstanding January 1, 2019	Retired During 2019	Outstanding December 31, 2019
			Rate	Dates				
Water Refunding Revenue Bonds, Series 2012	1/24/2012	4/1/2019	3.000	4/1 – 10/1	370,000	370,000	370,000	-
	1/24/2012	4/1/2020	3.000	4/1 – 10/1	380,000	380,000	-	380,000
	1/24/2012	4/1/2021	4.250	4/1 – 10/1	395,000	395,000	-	395,000
	1/24/2012	4/1/2022	4.250	4/1 – 10/1	410,000	410,000	-	410,000
	1/24/2012	4/1/2023	4.250	4/1 – 10/1	2,905,000	2,905,000	2,905,000	-
	1/24/2012	4/1/2023	5.000	4/1 – 10/1	6,315,000	6,315,000	6,315,000	-
	1/24/2012	4/1/2024	5.000	4/1 – 10/1	9,660,000	9,660,000	9,660,000	-
	1/24/2012	4/1/2025	5.000	4/1 – 10/1	10,140,000	10,140,000	10,140,000	-
	1/24/2012	4/1/2026	5.000	4/1 – 10/1	10,635,000	10,635,000	10,635,000	-
	1/24/2012	4/1/2027	5.000	4/1 – 10/1	11,160,000	11,160,000	11,160,000	-
	1/24/2012	4/1/2028	5.000	4/1 – 10/1	11,720,000	11,720,000	11,720,000	-
	1/24/2012	4/1/2029	5.000	4/1 – 10/1	12,300,000	12,300,000	12,300,000	-
						76,390,000	75,205,000	1,185,000
Water Refunding Revenue Bonds, Series 2013A	2/25/2013	4/1/2019	4.000	4/1 – 10/1	1,225,000	1,225,000	1,225,000	-
	2/25/2013	4/1/2020	4.000	4/1 – 10/1	1,275,000	1,275,000	-	1,275,000
	2/25/2013	4/1/2021	4.000	4/1 – 10/1	1,325,000	1,325,000	-	1,325,000
	2/25/2013	4/1/2022	5.000	4/1 – 10/1	1,385,000	1,385,000	-	1,385,000
	2/25/2013	4/1/2023	4.000	4/1 – 10/1	1,450,000	1,450,000	-	1,450,000
	2/25/2013	4/1/2024	5.000	4/1 – 10/1	1,520,000	1,520,000	1,520,000	-
	2/25/2013	4/1/2025	5.000	4/1 – 10/1	1,595,000	1,595,000	1,595,000	-
	2/25/2013	4/1/2026	5.000	4/1 – 10/1	1,680,000	1,680,000	1,680,000	-
	2/25/2013	4/1/2027	5.000	4/1 – 10/1	1,765,000	1,765,000	1,765,000	-
	2/25/2013	4/1/2032	4.000	4/1 – 10/1	5,395,000	5,395,000	5,395,000	-
						18,615,000	13,180,000	5,435,000

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Bonds Payable (continued) December 31, 2019

Description	Date of Issue	Maturity Dates	Interest		Amount Issued	Outstanding January 1, 2019	Retired During 2019	Outstanding December 31, 2019
			Rate	Dates				
Water Refunding Revenue Bonds, Series 2013B	2/25/2013	4/1/2019	1.576	4/1 – 10/1	4,275,000	4,275,000	4,275,000	-
	2/25/2013	4/1/2020	1.896	4/1 – 10/1	4,425,000	4,425,000	-	4,425,000
	2/25/2013	4/1/2021	2.155	4/1 – 10/1	4,105,000	4,105,000	-	4,105,000
	2/25/2013	4/1/2022	2.405	4/1 – 10/1	3,860,000	3,860,000	-	3,860,000
	2/25/2013	4/1/2023	2.555	4/1 – 10/1	2,325,000	2,325,000	-	2,325,000
	2/25/2013	4/1/2024	2.705	4/1 – 10/1	2,380,000	2,380,000	-	2,380,000
	2/25/2013	4/1/2025	2.875	4/1 – 10/1	2,445,000	2,445,000	-	2,445,000
	2/25/2013	4/1/2026	3.005	4/1 – 10/1	2,515,000	2,515,000	-	2,515,000
	2/25/2013	4/1/2027	3.085	4/1 – 10/1	2,585,000	2,585,000	-	2,585,000
	2/25/2013	4/1/2028	3.185	4/1 – 10/1	2,670,000	2,670,000	-	2,670,000
	2/25/2013	4/1/2029	3.305	4/1 – 10/1	2,750,000	2,750,000	-	2,750,000
	2/25/2013	4/1/2030	3.405	4/1 – 10/1	2,845,000	2,845,000	-	2,845,000
						37,180,000	4,275,000	32,905,000
						55,795,000	17,455,000	38,340,000

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Bonds Payable (continued) December 31, 2019

Description	Date of Issue	Maturity Dates	Interest		Amount Issued	Outstanding January 1, 2019	Retired During 2019	Outstanding December 31, 2019
			Rate	Dates				
Water Revenue	3/1/2017	4/1/2019	5.000	4/1 – 10/1	7,560,000	7,560,000	7,560,000	-
and Refunding Revenue	3/1/2017	4/1/2020	5.000	4/1 – 10/1	7,935,000	7,935,000	-	7,935,000
Bonds, Series 2017	3/1/2017	4/1/2021	5.000	4/1 – 10/1	8,330,000	8,330,000	-	8,330,000
	3/1/2017	4/1/2022	5.000	4/1 – 10/1	14,565,000	14,565,000	-	14,565,000
	3/1/2017	4/1/2023	5.000	4/1 – 10/1	5,260,000	5,260,000	-	5,260,000
	3/1/2017	4/1/2024	5.000	4/1 – 10/1	5,530,000	5,530,000	-	5,530,000
	3/1/2017	4/1/2025	5.000	4/1 – 10/1	5,795,000	5,795,000	-	5,795,000
	3/1/2017	4/1/2026	5.000	4/1 – 10/1	10,265,000	10,265,000	-	10,265,000
	3/1/2017	4/1/2027	5.000	4/1 – 10/1	10,780,000	10,780,000	-	10,780,000
	3/1/2017	4/1/2028	4.000	4/1 – 10/1	13,250,000	13,250,000	-	13,250,000
	3/1/2017	4/1/2029	5.000	4/1 – 10/1	9,030,000	9,030,000	-	9,030,000
	3/1/2017	4/1/2030	5.000	4/1 – 10/1	5,900,000	5,900,000	-	5,900,000
	3/1/2017	4/1/2031	3.000	4/1 – 10/1	6,185,000	6,185,000	-	6,185,000
	3/1/2017	4/1/2032	3.000	4/1 – 10/1	1,575,000	1,575,000	-	1,575,000
	3/1/2017	4/1/2033	3.125	4/1 – 10/1	6,710,000	6,710,000	-	6,710,000
	3/1/2017	4/1/2034	3.250	4/1 – 10/1	6,925,000	6,925,000	-	6,925,000
	3/1/2017	4/1/2035	3.250	4/1 – 10/1	1,600,000	1,600,000	-	1,600,000
	3/1/2017	4/1/2036	3.250	4/1 – 10/1	1,655,000	1,655,000	-	1,655,000
	3/1/2017	4/1/2037	3.250	4/1 – 10/1	1,710,000	1,710,000	-	1,710,000
	3/1/2017	4/1/2041	5.000	4/1 – 10/1	7,900,000	7,900,000	-	7,900,000
	3/1/2017	4/1/2042	5.000	4/1 – 10/1	8,295,000	8,295,000	-	8,295,000
	3/1/2017	4/1/2043	5.000	4/1 – 10/1	8,710,000	8,710,000	-	8,710,000
	3/1/2017	4/1/2044	5.000	4/1 – 10/1	9,145,000	9,145,000	-	9,145,000
	3/1/2017	4/1/2045	5.000	4/1 – 10/1	9,605,000	9,605,000	-	9,605,000
	3/1/2017	4/1/2046	5.000	4/1 – 10/1	10,080,000	10,080,000	-	10,080,000
	3/1/2017	4/1/2047	5.000	4/1 – 10/1	10,585,000	10,585,000	-	10,585,000
						194,880,000	7,560,000	187,320,000

FAIRFAX COUNTY WATER AUTHORITY

Schedule of Bonds Payable (continued) December 31, 2019

Description	Date of Issue	Maturity Dates	Interest		Amount Issued	Outstanding January 1, 2019	Retired During 2019	Outstanding December 31, 2019
			Rate	Dates				
Water Refunding Revenue Bonds, Series 2019	12/10/2019	4/1/2023	1.885	4/1 – 10/1	7,475,000	-	-	7,475,000
	12/10/2019	4/1/2024	1.965	4/1 – 10/1	12,965,000	-	-	12,965,000
	12/10/2019	4/1/2025	2.106	4/1 – 10/1	13,215,000	-	-	13,215,000
	12/10/2019	4/1/2026	2.206	4/1 – 10/1	13,480,000	-	-	13,480,000
	12/10/2019	4/1/2027	2.279	4/1 – 10/1	13,765,000	-	-	13,765,000
	12/10/2019	4/1/2028	2.379	4/1 – 10/1	12,245,000	-	-	12,245,000
	12/10/2019	4/1/2029	2.429	4/1 – 10/1	12,520,000	-	-	12,520,000
	12/10/2019	4/1/2030	2.629	4/1 – 10/1	65,000	-	-	65,000
	12/10/2019	4/1/2031	2.629	4/1 – 10/1	70,000	-	-	70,000
	12/10/2019	4/1/2032	2.629	4/1 – 10/1	5,430,000	-	-	5,430,000
						-	-	91,230,000
Total Bonds – All Series						\$ 469,155,000	\$ 108,135,000	\$ 452,250,000