


Prince William County Service Authority
Comprehensive Annual

2020

Financial Report

For the fiscal years ended June 30, 2020 and June 30, 2019





Each time we put on a Prince William County Service Authority uniform, we assume the vital and humbling responsibility of providing clean drinking water and dependable sewer service to more than 350,000 residents and businesses in Prince William County. The service we provide is essential to public health and safety. Although we have had to adapt aspects of our daily business operations due to the coronavirus pandemic, our commitment to serving those who live in, work in and visit our community remains unchanged, no matter the circumstances.

Dean E. Dickey

Dean E. Dickey, General Manager



2020 Comprehensive Annual Financial Report

For the fiscal years ended
June 30, 2020 and June 30, 2019

Prepared by the Finance Division: Astrid B. Nelson,
Chief Financial and Business Operation Officer



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Our proficiency in assessing risks and planning for emergencies is a crucial component of our ability to provide an essential service that supports the health of the public and the local economy. Our preparedness and agility enable us to respond to a wide range of emergencies, including water main breaks and water quality concerns.

Continuity of Operations

Continuity





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K. Jack Kooyoomjian, Ph.D., Chairman
Joyce P. Eagles, Vice Chairman
Marlo Thomas Watson, Secretary-Treasurer
Mark Allen, Member
B. Paul O'Meara, Jr., Member
Paul E. Ruecker, Member
Kurt E. Voggenreiter II, Member
Harry W. Wiggins, Member

Dean E. Dickey, General Manager

November 20, 2020

Board of Directors of the
Prince William County Service Authority
Woodbridge, Virginia

Ladies and Gentlemen:

The Comprehensive Annual Financial Report (CAFR) for the Prince William County Service Authority (the Authority) for the fiscal year ended June 30, 2020 is submitted herewith. Financial data, including all appropriate disclosures, have been prepared in accordance with the standards for financial reporting promulgated or permitted by the Governmental Accounting Standards Board (GASB).

Management is responsible, in all material respects, for the accuracy of the data and the completeness and fairness of the presentations, including all disclosures. We believe the data presents fairly the financial position and results of operations of the Authority.

This letter of transmittal is designed to complement the Management's Discussion and Analysis (MD&A) found in the financial section of the CAFR, and should be read in conjunction with it.

THE AUTHORITY

The Authority was created by a resolution of the Board of County Supervisors (BOCS) of Prince William County, Virginia (the County) on January 11, 1983. The Authority is chartered by the State Corporation Commission and is an independent public body responsible for providing a comprehensive county-wide water and sewer system.

The management of the Authority is vested in a Board of eight members appointed by the County's BOCS. The Authority's Board appoints the General Manager, who is responsible for the daily management of the Authority.

ECONOMIC CONDITIONS AND OUTLOOK

Prince William County is the second-largest county in the Commonwealth of Virginia with a population of nearly 468,000, as of June 30, 2020. The County is located approximately 35 miles southwest of Washington, D.C. and encompasses a total area of 348 square miles that includes independent cities and towns, state and federal park properties, and the Quantico Marine Corps Base. A highly-educated, racially and ethnically diverse population makes the county one of the most globally represented communities in the region. Steeped in rich history, surrounded by beautiful parks and open space, Prince William County is a community of choice where individuals, families and businesses choose to live, work and play.

According to the 2014-2018 American Community Survey, the 2018 median household income in the County was \$103,445 which ranks near the top among regions in the Commonwealth of Virginia, and the entire United States. Employment within the service area is well diversified, and as of June 2020, the average unemployment rate was 6.4%, which is higher than prior year because of the coronavirus pandemic but is still below both the national and Virginia state-wide levels. The total civilian labor force in Prince William County is currently estimated at approximately 249,000 persons, up 0.3% from 2019 and 10.4% from 2011. Based on the most current available data, the County has experienced improvement in the residential real estate market, as the average assessed value in 2020 was up 46.1% from the low point in 2011.

The Authority's major customers are well-established entities consisting of county schools, local utilities, multi-family housing complexes, county parks and swimming pools, internet data centers, retail outlets and a hospital. In total, the ten largest customers represent over 6% of total consumption revenues. Overall, the Authority's customer base is primarily residential accounts, representing more than 90% of the accounts. The Authority continues to experience growth in customer accounts, with an additional 1,134 accounts added during fiscal year 2020, representing an increase of 1.2% over the prior year.

The Authority's emergency planning and preparedness ensure the continuity of operations and delivery of essential services to our customers during the coronavirus pandemic. The Authority's financial position and operating results reflect sufficient funds available to pay for operating costs and long-term debt, as well as to invest in the infrastructure improvements needed to maintain and replace critical capital assets.

LONG-TERM FINANCIAL PLANNING

In order to facilitate long-term planning, the Authority maintains a model of its finances projecting 20 years into the future, with particular attention to the immediate five year period. This model includes projections of water and sewer capacity utilization, system growth and related availability fee revenue, operating revenues and expenses, debt service requirements, and cash flows.

The Authority also maintains and updates a Capital Improvements Program (CIP) on an annual basis, which details capital projects that are necessary for system expansion, rehabilitation and improved system reliability. This program details planned spending for the ensuing five year period, and aggregate capital spending anticipated for identified projects in subsequent years.

The Authority uses this data to facilitate projection of necessary rate increases and additional capacity requirements, to ensure proper debt coverage as well as to provide for adequate funding for the Authority's ongoing activities and obligations.

The Authority uses a Strategic Plan developed with input from the Board of Directors, management, and staff as a tool to ensure that financial planning will support the future needs, priorities and vision of the organization. Within the plan, a set of goals, both financial and operational, are created each year to prioritize future actions to align with the strategic vision.

The Authority maintains a AAA/Aaa rating from Standard & Poor's Ratings Services (S&P) and Moody's Investors Service, Inc. (Moody's), respectively, on its outstanding revenue bonds, the highest ratings that can be awarded to local governments. This further demonstrates and validates the Authority's sound financial condition and the positive impact of long-term financial planning.

INTERNAL CONTROL STRUCTURE AND BUDGETARY CONTROLS

The Authority's management is responsible for establishing and maintaining a system of internal accounting controls. The objectives of internal controls are to provide management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and financial records for preparing financial statements and maintaining asset accountability are reliable. The concept of reasonable assurance recognizes that estimates and judgments made by management are required to assess the expected benefits and related costs of internal accounting control procedures and that the cost of a control should not exceed the benefits likely to be derived. Management reviews internal controls on a continuing basis.

The Authority prepares an annual budget for operating expenditures and capital outlays. The proposed budget is prepared by management and submitted to the Board of Directors for approval. The Authority's spending budget for fiscal year 2021 reflect a 0.4% decrease, which is representative of the uncertainties of the current and future economic conditions that may continue to be impacted by the coronavirus pandemic. The Authority controls current year expenses at both the functional and operating division levels. Division directors are responsible for budgetary items that are controllable within their divisions. The Division of Management and Budget is responsible for monitoring expenses by function for the Authority as a whole. Controlling all expenses at different levels strengthens overall budgetary and management controls.

INDEPENDENT AUDIT

The Virginia State Code Section 15.2-2511 requires an annual audit be performed. The Authority's financial statements for the year ended June 30, 2020 and 2019 have been audited by PBMares, LLP, a firm of licensed certified public accountants. The fiscal year 2020 Independent Auditor's Report is located in the financial section of this document.

AWARDS

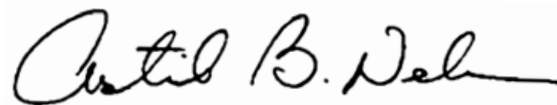
The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to the Prince William County Service Authority for its CAFR for the fiscal year ended June 30, 2019. This was the 31st consecutive year that the Authority has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government entity must publish an easily readable and efficiently organized CAFR, which must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe this year's CAFR continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for continued recognition under this program.

ACKNOWLEDGMENTS

The preparation of the annual CAFR could not have been accomplished without the dedicated services of the Authority's Finance staff. All individuals who assisted in this effort have my sincere appreciation for their contributions made in the preparation of this report. I would also like to thank the Board of Directors, the General Manager, the Deputy General Manager, the Acting Director of Finance and the Director of Management and Budget for their continued interest and support in planning and conducting the financial operations of the Authority in a responsible and progressive manner.

Respectfully submitted,



Astrid B. Nelson, CPA
Chief Financial and Business Operations Officer



Dr. K. Jack Kooyoomjian
Chairman



Joyce P. Eagles
Vice Chairman



Marlo Thomas Watson
Secretary-Treasurer



Mark Allen



B. Paul O'Meara, Jr.



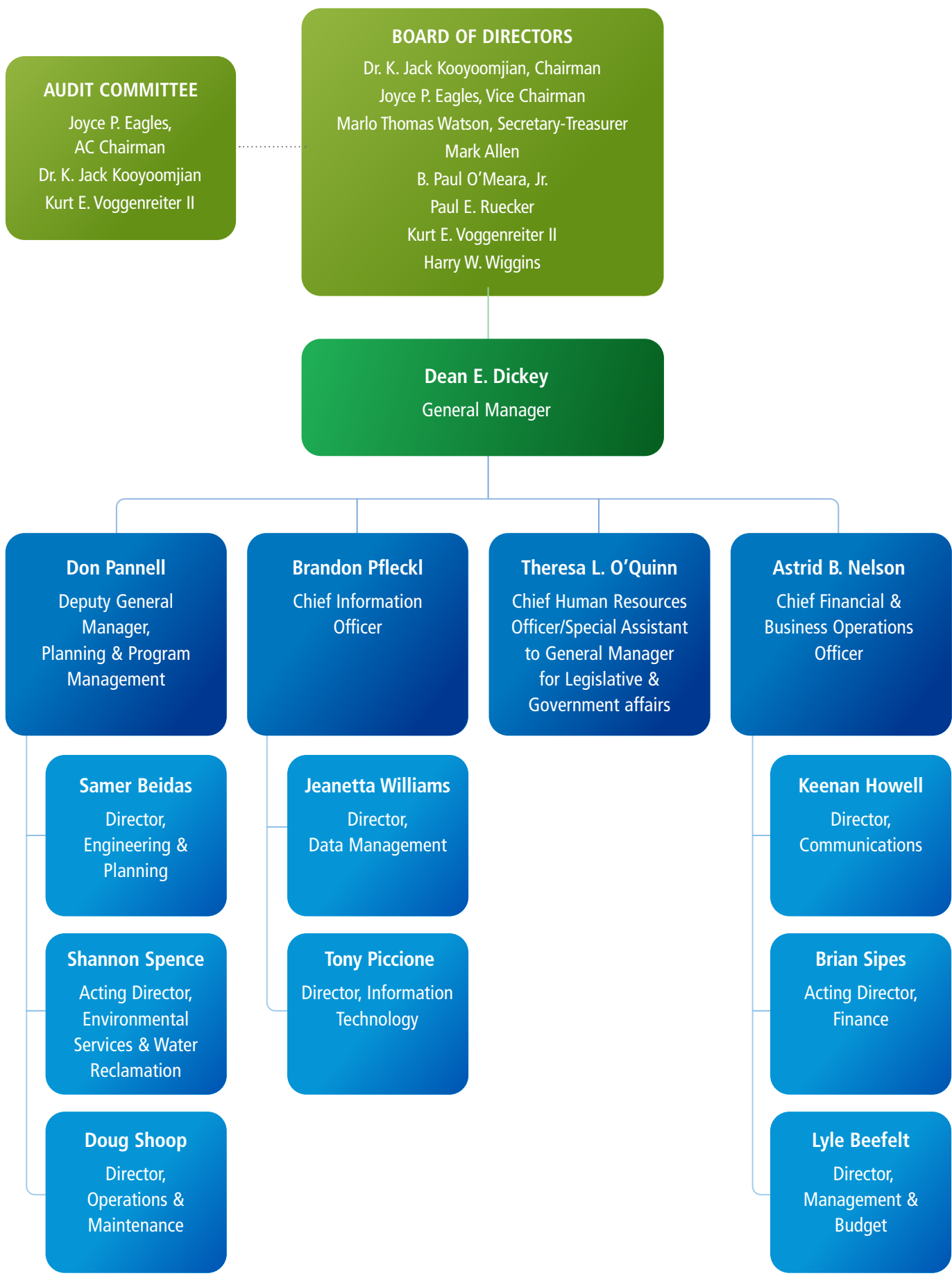
Paul E. Ruecker



Kurt E. Voggenreiter II



Harry W. Wiggins





Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Prince William County
Service Authority, Virginia**

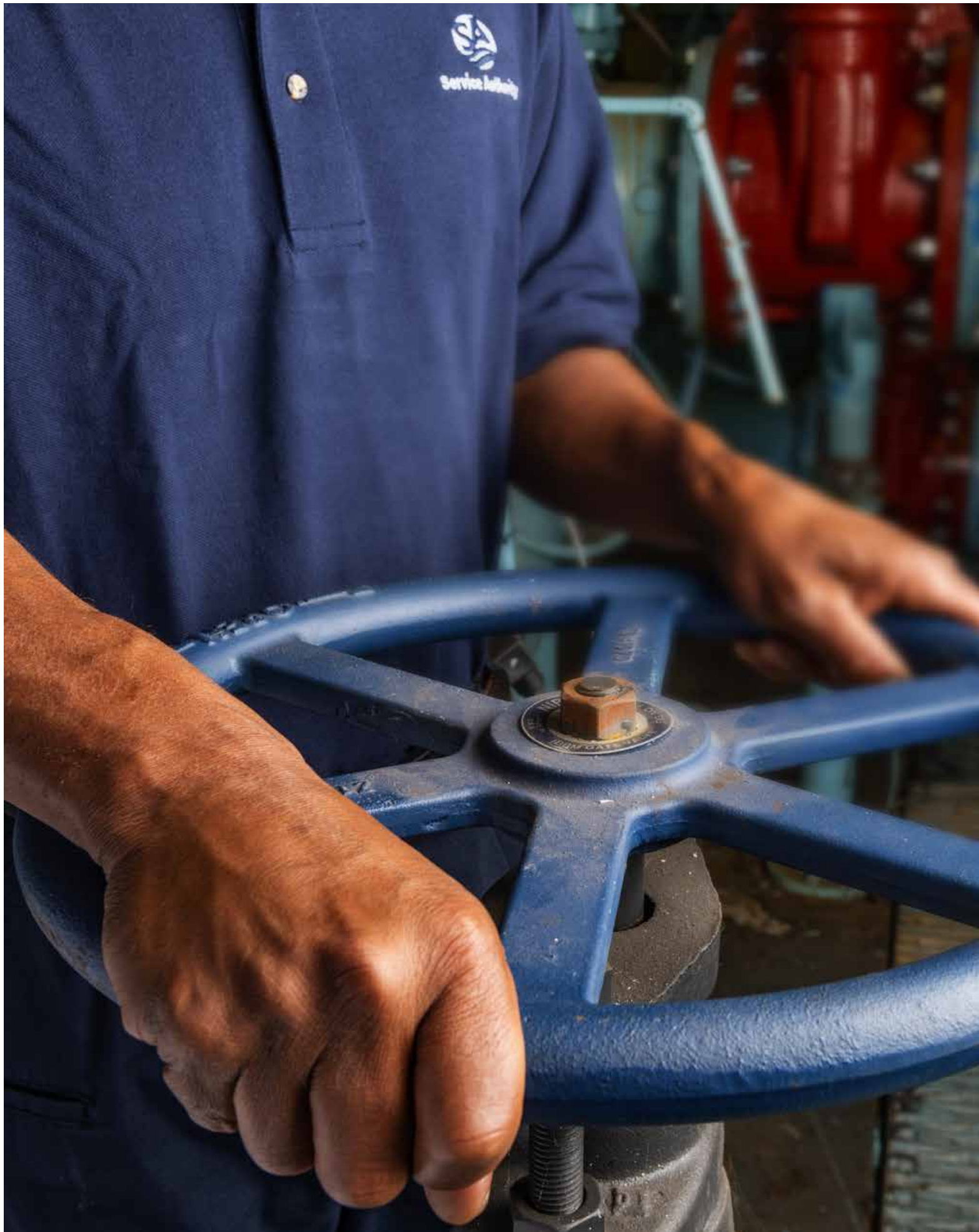
For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morill

Executive Director/CEO


Service Authority



Consistently performing preventative maintenance and monitoring our extensive infrastructure in real time enables us to continuously distribute clean water to thousands of homes and businesses. Our skilled employees are at the ready 24 hours a day, seven days a week to swiftly identify and resolve a water emergency.

Uninterrupted
Service

Uninterrupted



INDEPENDENT AUDITOR'S REPORT

To the Honorable Board of Directors
Prince William County Service Authority

Report on the Financial Statements

We have audited the accompanying basic financial statements of the Prince William County Service Authority (Authority), as of and for the years ended June 30, 2020 and 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 June 30, 2020 and 2019, and the respective changes in financial position and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require the Management's Discussion and Analysis and the required supplementary information on pages 14-29 and 78-88, respectively, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Authority's basic financial statements. The accompanying introductory section and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

These sections have not been subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 20, 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 the effectiveness of the Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

PBMares, LLP

Harrisonburg, Virginia
November 20, 2020





MANAGEMENT'S DISCUSSION

AND ANALYSIS

Management's Discussion and Analysis

This section of Prince William County Service Authority's CAFR presents management's analysis of the Authority's financial performance during the fiscal year ended June 30, 2020. This analysis should be read in conjunction with the basic financial statements, which are located in the next section of the CAFR.

FINANCIAL HIGHLIGHTS

The Authority provides water and wastewater services in Prince William County, which is the second largest county in Virginia with an estimated population of 468,000 and a median household income of \$103,445. In fiscal year 2020, the Authority's financial condition remained very strong, highlighted by the following:

- The pace of development increased from the prior year with 1,871 equivalent residential units (ERU) certified in fiscal year 2020, compared to 1,410 in fiscal year 2019, resulting in availability fee revenue from new connections of \$29.0 million and an increase in the customer base of 1.2%. An ERU is the established average use of a single-family residence.
- The Authority's debt coverage and cash position remain strong. Cash and investments at June 30, 2020 increased \$11.5 million to \$365.9 million. Cash on hand was 881 days.
- Fiscal year 2020 operating revenues were \$119.2 million, a 4.7% increase over the prior fiscal year. Favorable weather, adopted rate increases, and growth in customer accounts offset reduced administrative fees and a customer credit issued to assist customers during the coronavirus pandemic. Account Receivables over 90 days increased to \$500,000 as of June 30, 2020, however, the Service Authority expects to collect the majority of outstanding receivables through customer payment plans.
- Operating expenses increased \$3.3 million, or 3.8%, over the prior fiscal year, mainly due to increased wholesale water and sewer costs of \$2.7 million, increased personnel expense of \$1.3 million due to actuarial valuation adjustments of post-employment benefits, offset by reductions in contractual services and materials and supplies due to work slowdowns resulting from the coronavirus pandemic.
- Construction in progress and other capital assets increased by \$47.3 million in fiscal year 2020. Property, Plant and Equipment is approximately \$1.1 billion, net of accumulated depreciation and amortization. The Authority did not issue any debt in fiscal year 2020 as it continues to fund its capital program with cash. In addition, the Authority maintained the highest bond ratings from Moody's and S&P and exceeded all debt coverage requirements.
- Net position increased in fiscal year 2020 by \$23.3 million to \$1.35 billion.

Additional discussion of operating results is included in subsequent sections of Management's Discussion and Analysis.

The Authority's financial position and results from operations ensure that the Authority will continue to have sufficient funds available to pay for operating costs and long-term debt, as well as to invest in infrastructure improvements needed to maintain and replace capital assets.

OVERVIEW OF THE FINANCIAL STATEMENTS

This CAFR is presented in three sections: introductory, financial and statistical. The introductory section includes a letter of transmittal submitted by the Authority's Chief Financial and Business Operations Officer, a listing of the Authority's Board of Directors and organizational chart as of June 30, 2020, and a copy of the Government Finance Officers Association Certificate of Achievement for Excellence in Financial Reporting that has been awarded to the Authority for the fiscal year ended June 30, 2019.

The financial section consists of the Independent Auditor's Report, Management's Discussion and Analysis, and the Authority's basic financial statements which are discussed below, and are presented comparatively for the fiscal years ended June 30, 2020 and 2019.

- Statements of Net Position
- Statements of Revenues, Expenses and Changes in Net Position
- Statements of Cash Flows
- Notes to Financial Statements
- Required Supplementary Information

The Statements of Net Position report the Authority'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 obligations to creditors (liabilities). These statements may be used to evaluate the capital structure, liquidity, and financial flexibility of the Authority. The Statements of Revenues, Expenses and Changes in Net Position reflect revenue and expense activity of the Authority for the fiscal years presented. These statements allow the user to measure the Authority's profitability and creditworthiness by the financial performance of the Authority's operations, and to determine whether the Authority has successfully recovered its operating costs through user fees and other charges. The Statements of Cash Flows present the Authority's inflows and outflows of cash during the financial reporting periods by reporting cash receipts, cash payments, and the net changes in cash. Cash flows are categorized by operating, non-capital financing, capital and related financing, and investing activities. The Notes to Financial Statements and the Required Supplementary Information provide necessary disclosures essential to a full understanding of the data provided in the aforementioned basic financial statements.

The statistical section includes selected financial, operational, and demographic information presented on a multi-year basis.

The Authority operates as an enterprise fund. Enterprise funds are a type of proprietary fund and function similar to a private business in that user charges and fees are expected to cover costs. The Authority's basic financial statements are presented using the accrual basis of accounting, which provides for revenue recognition in the period in which water and water reclamation services are provided and expense recognition when goods and services are received. Additionally, the Authority's basic financial statements utilize the flow of economic resources measurement focus, in which all assets, deferred outflows of resources, liabilities and deferred inflows of resources are reflected on the Statements of Net Position. The Statements of Changes in Revenues, Expenses and Net Position include all transactions, such as revenues and expenses, that increase or decrease net position.

FINANCIAL ANALYSIS OF THE AUTHORITY

During fiscal year 2020, the Authority maintained its sound financial condition, as demonstrated by the Authority's continued AAA bond rating from S&P and Aaa rating from Moody's. These ratings reflect the Authority's continued growth in total net position and strong cash and investment portfolio, along with the strategic management of its debt borrowings. These are all outlined in the financial statements and schedules included in this report. While exercising prudent fiscal discipline, the Authority continues to ensure it is able to provide safe, reliable and environmentally compliant water and water reclamation services to its customers.

Net Position

The Authority's net position increased by \$23.3 million during fiscal year 2020, which represented a 1.8% increase from the prior fiscal year net position. At June 30, 2020, total net position was \$1.35 billion as compared to \$1.33 billion the previous year.

The following table reflects the Authority's net position at June 30, 2020 and 2019:

Condensed Statements of Net Position

	2020	2019	Increase (Decrease)	% Change
Capital assets, net	\$ 1,055,269,955	\$ 1,052,232,442	\$ 3,037,513	0.3%
Investments	275,892,856	331,201,160	(55,308,304)	(16.7)
Other current and non-current assets	166,495,564	100,360,614	66,134,950	65.9
Total assets	1,497,658,375	1,483,794,216	13,864,159	0.9
Deferred outflows of resources	9,219,162	6,808,415	2,410,747	35.4
Total assets and deferred outflows of resources	\$ 1,506,877,537	\$ 1,490,602,631	\$ 16,274,906	1.1
Bonds and VRA loans payable	\$ 108,263,490	\$ 118,124,226	\$ (9,860,736)	(8.3)
Other liabilities	45,000,932	41,818,261	3,182,671	7.6
Total liabilities	153,264,422	159,942,487	(6,678,065)	(4.2)
Deferred inflows of resources	1,220,648	1,543,730	(323,082)	(20.9)
Total liabilities and deferred inflows of resources	154,485,070	161,486,217	(7,001,147)	(4.3)
Net position:				
Net investment in capital assets	949,098,154	936,479,234	12,618,920	1.3
Restricted	21,268,484	18,228,542	3,039,942	16.7
Unrestricted	382,025,829	374,408,638	7,617,191	2.0
Total net position	1,352,392,467	1,329,116,414	23,276,053	1.8
Total liabilities, deferred inflows of resources and net position	\$ 1,506,877,537	\$ 1,490,602,631	\$ 16,274,906	1.1

The Authority's net position increased by \$24.2 million during fiscal year 2019, which represented a 1.9% increase from the prior fiscal year net position. At June 30, 2019, total net position was \$1.33 billion as compared to \$1.30 billion the previous year.

The following table reflects the Authority's net position at June 30, 2019 and 2018:

Condensed Statements of Net Position

	2019	2018	Increase (Decrease)	% Change
Capital assets, net	\$ 1,052,232,442	\$ 1,024,005,472	\$ 28,226,970	2.8%
Investments	331,201,160	352,313,209	(21,112,049)	(6.0)
Other current and non-current assets	100,360,614	90,512,701	9,847,913	10.9
Total assets	1,483,794,216	1,466,831,382	16,962,834	1.2
Deferred outflows of resources	6,808,415	6,213,669	594,746	9.6
Total assets and deferred outflows of resources	\$ 1,490,602,631	\$ 1,473,045,051	\$ 17,557,580	1.2
Bonds and VRA loans payable	\$ 118,124,226	\$ 127,803,090	\$ (9,678,864)	(7.6)
Other liabilities	41,818,261	38,355,722	3,462,539	9.0
Total liabilities	159,942,487	166,158,812	(6,216,325)	(3.7)
Deferred inflows of resources	1,543,730	1,988,941	(445,211)	(22.4)
Total liabilities and deferred inflows of resources	161,486,217	168,147,753	(6,661,536)	(4.0)
Net position:				
Net investment in capital assets	936,479,234	898,873,093	37,606,141	4.2
Restricted	18,228,542	16,750,451	1,478,091	8.8
Unrestricted	374,408,638	389,273,754	(14,865,116)	(3.8)
Total net position	1,329,116,414	1,304,897,298	24,219,116	1.9
Total liabilities, deferred inflows of resources and net position	\$ 1,490,602,631	\$ 1,473,045,051	\$ 17,557,580	1.2

Net Investment in Capital Assets

Investments in capital assets are essential to the Authority's infrastructure and the ability to provide quality services to its customers. Net investment in capital assets consists of property, plant, and equipment, construction in progress and advance capacity payments, and is net of any related long-term debt outstanding.

2020-2019 Comparison

Net investment in capital assets was \$949.1 million at June 30, 2020 and represented 70.2% of total net position. Net investment in capital assets increased by 1.3% or \$12.6 million over the prior year. The principal factors for this increase were \$47.3 million in capital asset additions, primarily consisting of \$24.7 million in construction in progress and \$13.3 million in lines and improvements, partially offset by \$42.3 million in depreciation and amortization and a \$9.9 million reduction in bonds and VRA loans payable through scheduled debt service payments.

2019-2018 Comparison

Net investment in capital assets was \$936.5 million at June 30, 2019 and represented 70.4% of total net position. Net investment in capital assets increased by 4.2% or \$37.6 million over the prior year. The principal factors for this increase were \$70.7 million in capital asset additions, primarily consisting of \$40.7 million in construction in progress and \$21.9 million in lines and improvements, partially offset by \$41.0 million in depreciation and amortization and a \$9.4 million reduction in bonds and VRA loans payable through scheduled debt service payments.

Restricted Net Position

Restricted net position is comprised of restricted cash and investments and related interest receivable, and is generally subject to external restrictions on how it may be utilized. Restricted cash and investments consist principally of money market funds held by a trustee for debt service and capital project accounts, in addition to customer deposits and other project-related escrow funds.

2020-2019 Comparison

Restricted net position was \$21.3 million at June 30, 2020 and represented 1.6% of total net position. The net increase of \$3.0 million is primarily due to increases in restricted cash and cash equivalents and investments offset by decreases in restricted investments.

2019-2018 Comparison

Restricted net position was \$18.2 million at June 30, 2019 and represented 1.4% of total net position. The net increase of \$1.5 million is primarily due to increases in restricted cash and cash equivalents and investments offset by decreases in restricted investments.

Unrestricted Net Position

Unrestricted net position is used to fund the Authority's CIP and ongoing operating needs. Unrestricted net position is comprised of the Authority's unrestricted cash and investments, receivables, equity interest in UOSA, and other non-capital assets, less other liabilities. Unrestricted cash and investments consist of government securities, bank deposits and other cash equivalents. These assets may be used to finance day-to-day operations without restrictions established by debt covenants or other requirements. When making investments, the Authority considers cash flow requirements as well as the quality and return of potential investments, with the primary goal of preservation of invested capital. The equity interest in UOSA represents the Authority's share of UOSA's net position and is not liquid.

2020-2019 Comparison

Unrestricted net position increased \$7.6 million during fiscal year 2020 to \$382.0 million, a 2.0% increase from the prior year. Unrestricted net position comprises 28.2% of total net position. The increase is primarily due to a \$8.4 million increase in unrestricted cash and investments due primarily to lower investments in capital assets, offset partially by a \$4.0 million reduction in the Authority's equity interest in UOSA and other normal fluctuations in unrestricted asset and liability accounts. At June 30, 2020, unrestricted cash and investments represented 90.2% of unrestricted net position.

2019-2018 Comparison

Unrestricted net position decreased \$14.9 million during fiscal year 2019 to \$374.4 million, a 3.8% decrease from the prior year. Unrestricted net position comprises 28.2% of total net position. The decrease is primarily due to a \$7.2 million reduction in the Authority's equity interest in UOSA, combined with a \$7.1 million decrease in unrestricted cash and investments due primarily to cash used to construct capital assets, partially offset by proceeds from the sale of investments, and other normal fluctuations in unrestricted asset and liability accounts. At June 30, 2019, unrestricted cash and investments represented 89.8% of unrestricted net position.

Changes in Revenues, Expenses and Net Position

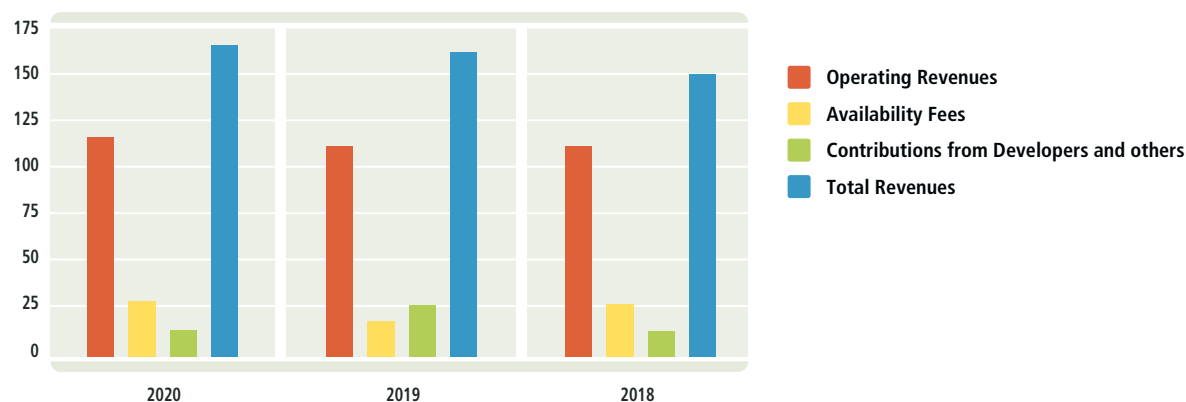
While the Statements of Net Position reflect the change in the Authority's financial position, the Statements of Revenues, Expenses and Changes in Net Position that follow provide insight as to the nature and source of those changes.

The following table summarizes changes in revenues and expenses between fiscal year 2020 and 2019:

Condensed Statements of Revenues, Expenses and Changes in Net Position

	2020	2019	Increase (Decrease)	% Change
Water and sewer user charges	\$ 116,694,479	\$ 111,478,707	\$ 5,215,772	4.7%
Development charges	1,775,068	1,603,267	171,801	10.7
Other	684,730	748,216	(63,486)	(8.5)
Total operating revenues	119,154,277	113,830,190	5,324,087	4.7
Availability fees	28,996,478	21,872,652	7,123,826	32.6
Investment income	10,426,352	9,844,877	581,475	5.9
Grant revenue	5,000	–	5,000	100.0
Equity interest in UOSA	(4,042,609)	(7,202,430)	3,159,821	(43.9)
Other	932,625	376,543	556,082	147.7
Total non-operating revenues	36,317,846	24,891,642	11,426,204	45.9
Contributions from developers and others	13,872,544	27,083,099	(13,210,555)	(48.8)
Total revenues	169,344,667	165,804,931	3,539,736	2.1
Personnel services	39,352,185	38,088,662	1,263,523	3.3
Purchased resources	28,030,998	25,336,192	2,694,806	10.6
Contractual services	9,561,195	10,303,875	(742,680)	(7.2)
Materials and supplies	5,649,709	6,247,372	(597,663)	(9.6)
Other	6,708,100	6,038,315	669,785	11.1
Total operating expenses	89,302,187	86,014,416	3,287,771	3.8
Depreciation and amortization	42,260,795	40,989,979	1,270,816	3.1
Interest expense	3,151,552	3,262,054	(110,502)	(3.4)
Payments for UOSA debt service	10,686,076	10,707,029	(20,953)	(0.2)
Purchased capacity	668,004	612,337	55,667	9.1
Total expenses	146,068,614	141,585,815	4,482,799	3.2
Change in net position	23,276,053	24,219,116	(943,063)	(3.9)
Total net position, beginning of year	1,329,116,414	1,304,897,298	24,219,116	1.9
Total net position, end of year	\$ 1,352,392,467	\$ 1,329,116,414	\$ 23,276,053	1.8

Revenues (In millions)



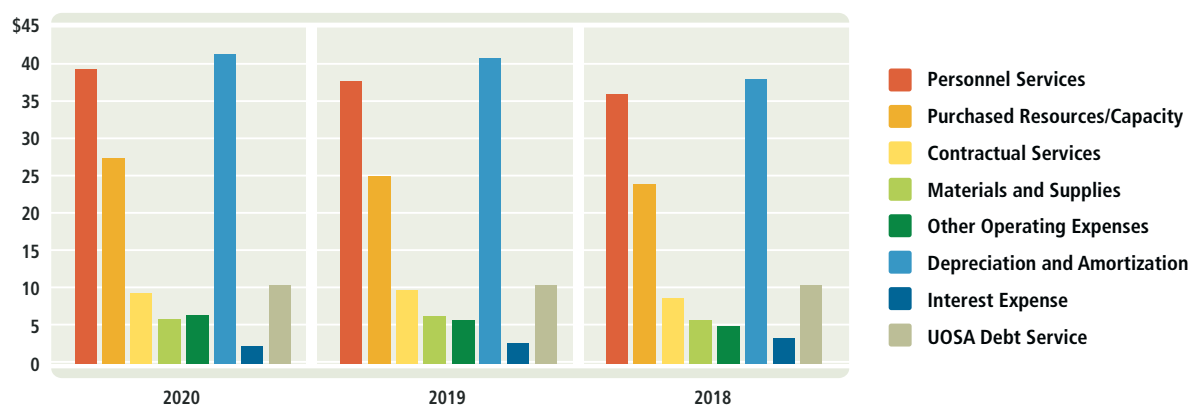
The following table summarizes changes in revenues and expenses between fiscal year 2019 and 2018:

Condensed Statements of Revenues, Expenses and Changes in Net Position

	2019	2018*	Increase (Decrease)	% Change
Water and sewer user charges	\$ 111,478,707	\$ 111,625,426	\$ (146,719)	(0.1)%
Development charges	1,603,267	1,317,157	286,110	21.7
Other	748,216	817,246	(69,030)	(8.4)
Total operating revenues	113,830,190	113,759,829	70,361	0.1
Availability fees	21,872,652	27,777,731	(5,905,079)	(21.3)
Investment income	9,844,877	2,735,103	7,109,774	259.9
Equity interest in UOSA	(7,202,430)	(7,196,620)	(5,810)	(0.1)
Other	376,543	900,429	(523,886)	(58.2)
Total non-operating revenues	24,891,642	24,216,643	674,999	2.8
Contributions from developers and others	27,083,099	15,792,666	11,290,433	71.5
Total revenues	165,804,931	153,769,138	12,035,793	7.8
Personnel services	38,088,662	36,477,254	1,611,408	4.4
Purchased resources	25,336,192	24,375,783	960,409	3.9
Contractual services	10,303,875	9,637,841	666,034	6.9
Materials and supplies	6,247,372	5,996,469	250,903	4.2
Other	6,038,315	5,165,002	873,313	16.9
Total operating expenses	86,014,416	81,652,349	4,362,067	5.3
Depreciation and amortization	40,989,979	38,297,308	2,692,671	7.0
Interest expense	3,262,054	3,718,274	(456,220)	(12.3)
Payments for UOSA debt service	10,707,029	10,802,414	(95,385)	(0.9)
Purchased capacity	612,337	723,671	(111,334)	(15.4)
Total expenses	141,585,815	135,194,016	6,391,799	4.7
Change in net position	24,219,116	18,575,122	5,643,994	30.4
Total net position, beginning of year, as restated July 1, 2017	1,304,897,298	1,286,322,176	18,575,122	1.4
Total net position, end of year	\$ 1,329,116,414	\$ 1,304,897,298	\$ 24,219,116	1.9

*Amounts in the table above reflect reporting changes made in fiscal year 2018 as a result of the adoption of GASB 75.

Expenses (In millions)



Operating Revenues

Operating revenues consist of water and sewer user charges, development charges and other operating revenues, which primarily consist of refuse collection fees, lab testing fees, and grinder pump maintenance fees. Operating revenues are, in part, based on local environmental and economic factors. Demand for water is affected by temperature, precipitation amounts, and precipitation frequency. In addition, the volume of water sold increases in the summer months as customers increase their water usage for irrigation systems, swimming pools, and other applications.

The Authority's Board of Directors adopts rates and fees to cover the cost of service provided. Water and sewer user charges consist of fixed and variable charges. Variable charges are based on the amount of water used. The amount of water used during the peak season of May through October for outdoor watering and commercial cooling is influenced by the weather. Development charges are impacted by development in the County during the year.

2020-2019 Comparison

Operating revenues increased \$5.3 million, or 4.7% over the prior fiscal year to \$119.2 million. The increase is primarily due to favorable weather, which contributed to higher water usage, adopted rate increases, and 1.2% growth in customer accounts. These factors offset decreases to revenue related to the coronavirus pandemic. In March 2020, the Service Authority suspended late fees and service disconnects, resulting in lower administrative fee revenue of \$686,000 through the end of the fiscal year. In addition, to assist customers during the coronavirus pandemic, the Service Authority distributed \$2.8 million to customers as bill credits. Although coronavirus pandemic restrictions resulted in lower commercial usage in the 4th quarter of 2020, increased usage by residential and multi-family customers more than offset the lower commercial usage. Account Receivables over 90 days increased to \$500,000 as of June 30, 2020; however, the Service Authority expects to collect the majority of outstanding receivables through customer payment plans. Developer charges increased \$172,000 predominantly due to an increase in inspections, plan reviews, and as-builts.

2019-2018 Comparison

Operating revenues remained relatively flat from 2018 to 2019 as adopted rate increases and growth in customer accounts was offset by reduced water use, primarily due to unusually high rainfall in 2019. Operating revenues were up only \$70,000, or 0.1% over the prior fiscal year to \$113.8 million as a result of a \$286,000 increase in developer charges predominantly due to an increase in inspections, plan reviews and as-builts, partially offset by a decrease in user rates and fees of \$147,000 and decreases in other operating revenues of \$69,000. User rates and fees decreased by \$147,000 due to a decrease of \$1.3 million in volumetric charges that were offset by an increase in fixed service charges of \$1.2 million. Revenue from service charges increased 6.0% from the prior year after benefiting from a half year of adopted service charge increases that went into effect January 1, 2019 as well as a 0.9% increase in the number of customer accounts. However, revenue from volumetric charges decreased due to unusually high rainfall totals in fiscal year 2019 and thus less water being used during the peak season.

Non-Operating Revenues

Non-operating revenues consist of availability fees, investment income and other non-operating revenues, which consist of property rental income, proceeds from the sale of capital assets and other miscellaneous revenues. Availability fees cover the cost of a customer's pro-rata share of capacity and infrastructure. Availability fees are charged in ERUs at the time of certification, which authorizes a customer to establish service and physically connect to the Authority's system.

2020-2019 Comparison

Non-operating revenues increased by \$11.4 million, or 45.9% in fiscal year 2020 from the prior fiscal year. The primary factors impacting the change were an increase of \$7.1 million in availability fees, a \$3.2 million increase in the equity interest in UOSA, a \$581,000 increase in investment income and a \$556,000 increase in other operating revenues. Revenue from availability fees is directly related to economic development in the County and increased in fiscal year 2020 as the number of ERUs sold increased by 461 to 1,871.

2019-2018 Comparison

Non-operating revenues increased by \$675,000, or 2.8% in fiscal year 2019 from the prior fiscal year. The primary factors impacting the change were an increase of \$7.1 million in investment income, partially offset by \$5.9 million decrease in availability fees and a \$520,000 decrease in other operating revenues. Revenue from availability fees is directly related to economic development in the County and decreased in fiscal year 2019 as the number of ERUs sold decreased by 358 to 1,410.

Contributions from Developers and Others

Developer contributions may consist of cash, property, water mains, sanitary sewer lines, pumping stations, fire hydrants, manholes and associated infrastructure received from developers and governmental entities. Fluctuations in the value of contributions from year to year are due to the number of development projects and the timing of when developers complete expansion projects and convey the related assets to the Authority.

2020-2019 Comparison

Revenue from developer contributions decreased by \$13.2 million, or 48.8%, from fiscal year 2019. Assets deeded to the Authority in fiscal years 2020 and 2019 were approximately \$13.9 million and \$27.1 million, respectively.

2019-2018 Comparison

Revenue from developer contributions increased by \$11.3 million, or 71.5%, from fiscal year 2018. Assets deeded to the Authority in fiscal years 2019 and 2018 were approximately \$27.1 million and \$15.8 million, respectively.

Operating Expenses

Operating expenses consist of personnel services, purchased resources, contractual services, materials and supplies, and other operating expenses, which consist of insurance, training, travel and rent expense.

2020-2019 Comparison

Operating expenses increased \$3.3 million, or 3.8%, from fiscal year 2019. Purchased resources increased \$2.7 million, or 10.6%, due to increased wholesale water and sewer costs. Purchased water costs increased as a result of a higher wholesale rates and higher consumption from favorable weather and account growth. In addition, higher operating costs at UOSA resulted in a higher purchased sewer rate. Expenses related to personnel services increased by \$1.3 million, or 3.3%, from fiscal year 2019. Although payroll expense declined slightly from the prior year, actuarial adjustments to post-employment benefits, such as the Service Authority's pension plan, increased personnel expense by \$1.3 million. Other operating expenses increased \$670,000, or 11.1%, predominantly due to increases in telecommunication expense related to additional remote monitoring sites and an increase in the allowance for doubtful accounts. Contractual services and materials and supplies decreased by \$1.3 million collectively due to the coronavirus pandemic work slowdowns.

2019-2018 Comparison

Operating expenses increased \$4.4 million, or 5.3%, from fiscal year 2018. Expenses related to personnel services increased by \$1.6 million or 4.4% from fiscal year 2018 primarily due to changes in staffing levels and annual merit increases. Although water consumption was down due to lower demand in fiscal year 2019, purchased resources increased \$960,000, or 3.9% due to an increase to the Fairfax Water wholesale rate and slight account growth year-over-year. Other operating expenses increased \$873,000, or 16.9% due to increases in rent expense for additional office space and higher electricity costs during fiscal year 2019, combined with an increase of \$666,000 or 6.9% in contractual services and \$251,000, or 4.2%, in materials and supplies.

Non-Operating Expenses

Non-operating expenses consist of interest expense, payments for UOSA debt service and purchased capacity costs. Interest expense is a function of interest accruals on outstanding debt, plus or minus the amortization of bond premiums, discounts, and deferred amounts on refunding. Payments for UOSA debt service represent the Authority's share of the annual debt obligations of the joint venture, including both principal and interest. Purchased capacity is the Authority's purchase of rights to transmission main capacity from wholesale providers.

2020-2019 Comparison

Non-operating expenses were relatively flat, down only \$76,000, or 0.5%, in fiscal year 2020 as compared to fiscal year 2019. The factors impacting the decrease were a \$111,000 decrease in interest expense, resulting from lower principal balances, a \$56,000 increase in purchased capacity based on established amortization schedules and a \$21,000 decrease in payments for UOSA debt service, based on established amortization schedules.

2019-2018 Comparison

Non-operating expenses decreased by approximately \$663,000, or 4.3%, in fiscal year 2019 as compared to fiscal year 2018. The factors impacting the decrease were a \$456,000 decrease in interest expense, mainly resulting from lower principal balances, an \$111,000 decrease in purchased capacity based on established amortization schedules and a \$95,000 decrease in payments for UOSA debt service, based on established amortization schedules.

CAPITAL ASSETS AND DEBT ADMINISTRATION

The Authority maintains investments in a broad range of capital assets, which include land, buildings, water and sanitary sewer lines, water storage facilities (tanks), water reclamation plants, pumping stations, various machinery and equipment, computers, advance capacity payments and vehicles.

At June 30, 2020, capital assets, net of accumulated depreciation and amortization, was \$1.06 billion, an increase of \$3.0 million or 0.3% over fiscal year 2019.

The following table summarizes the Authority's capital assets, net of accumulated depreciation and amortization, and the changes therein for the years ended June 30, 2020 and 2019.

Capital Assets, Net of Accumulated Depreciation and Amortization

	2020	2019	Increase (Decrease)	% Change
Lines and improvements	\$ 666,013,565	\$ 646,042,709	\$ 19,970,856	3.1%
Equipment	97,489,684	103,720,514	(6,230,830)	(6.0)
Buildings	88,891,943	87,334,227	1,557,716	1.8
Construction in progress	41,673,879	55,310,161	(13,636,282)	(24.7)
Land	9,597,373	5,086,892	4,510,481	88.7
Vehicles	2,835,763	2,595,761	240,002	9.2
Advance Capacity Payments	148,767,748	152,142,178	(3,374,430)	(2.2)
Total Capital Assets	\$ 1,055,269,955	\$ 1,052,232,442	\$ 3,037,513	0.3%

At June 30, 2019, capital assets, net of accumulated depreciation and amortization, was \$1.05 billion, an increase of \$28.2 million or 2.8% over fiscal year 2018.

The following table summarizes the Authority's capital assets, net of accumulated depreciation and amortization, and the changes therein for the years ended June 30, 2019 and 2018.

Capital Assets, Net of Accumulated Depreciation and Amortization

	2019	2018	Increase (Decrease)	% Change
Lines and improvements	\$ 646,042,709	\$ 631,729,891	\$ 14,312,818	2.3%
Equipment	103,720,514	102,511,546	1,208,968	1.2
Buildings	87,334,227	90,282,594	(2,948,367)	(3.3)
Construction in progress	55,310,161	38,570,044	16,740,117	43.4
Land	5,086,892	5,066,504	20,388	0.4
Vehicles	2,595,761	2,164,969	430,792	19.9
Advance Capacity Payments	152,142,178	153,679,924	(1,537,746)	(1.0)
Total Capital Assets	\$ 1,052,232,442	\$ 1,024,005,472	\$ 28,226,970	2.8

Additional information on the Authority's capital assets can be found in Note 1(g), Summary of Significant Accounting Policies, and Note 3, Property, Plant and Equipment, to the accompanying basic financial statements.

Capital Assets, Net of Accumulated Depreciation and Amortization

Capital projects are planned and organized within the following functional project categories:

- **Water Supply** – booster pumping stations and water source projects.
- **Water Storage** – tank projects intended to maintain stable water system pressure, provide fire and reserve storage, and provide water during peak demands that exceed supply, transmission capacity or pumping capacity.
- **Water Transmission** – water main projects (transmission and distribution mains).
- **Sewage Pumping Stations (SPS)** – pump station projects (pump sewage from a low point in one gravity sewer shed to another gravity sewer shed for conveyance to a water reclamation facility). These projects often involve installation of a bypass connection on the force main, which enables the Authority to continue handling the wastewater flows while maintenance is performed on a pump station.

- **Sewage Collection System** – sewer main projects (convey sewage from commercial and residential customers to sewage pumping stations or water reclamation facilities).
- **Water Reclamation Facilities** – construction projects and facility modifications at the H.L. Mooney Advanced Water Reclamation Facility (HLM AWRF).
- **Information Technology** – projects that involve financial and accounting software upgrades, SCADA upgrades and modifications, geographic information system (GIS) improvements and hydraulic modeling studies.
- **Regional Utility** – major expansion or upgrade projects to regional treatment facilities at which the Authority has purchased capacity rights.
- **Miscellaneous** – projects not directly related to other categories.

The Authority continues to proactively manage its wastewater collection system by funding a multi-year program to evaluate the condition of sewer mains and manholes, and by proactively performing rehabilitation and maintenance on those assets prior to their failure. In many instances, this approach extends asset life, reduces the frequency of failure events, and minimizes capital expenditures because cost-effective, trenchless rehabilitation methods can be used, as opposed to waiting for asset failure when costly, open-cut construction methods are required. These efforts also reduce infiltration and inflow of rain water from seeping into the wastewater collection system, thereby eliminating unnecessary costs for treatment and additional purchases of wastewater treatment capacity.

The Authority also proactively manages and funds efforts to repair and rehabilitate and upgrade its water storage tanks. These efforts are designed to preserve and extend the asset life of each water tank, and also upgrade other components as required, including lighting, fencing, control valves, back-up generators, walkway and safety features, and SCADA systems.

The major capital projects completed during fiscal years 2020 and 2019 or under planning, design and/or construction in each of the functional project categories are detailed as follows:

- **Water Supply**
 - Design and construction for the replacement of a water main at Hopkins Drive was started and completed in fiscal year 2019.
 - Design for Rose Hill Circle water main replacement was completed in fiscal year 2018. Construction was started in fiscal year 2019 and completed in fiscal year 2020.
 - Construction on a water main through areas of Manassas from the existing transmission main at Rixlew Lane to the existing water main at Sudley Manor Drive and Ashton Avenue began in fiscal year 2019 and completed in 2020.
 - Design of the Galt Court water main replacement was completed in fiscal year 2019. Construction was started in fiscal year 2019 and completed in fiscal year 2020.
 - Design and construction of a water main extension at Godwin Drive was started in fiscal year 2019 and completed in fiscal year 2020.
 - Construction of a backup/redundant water main to Sentara Hospital completed in fiscal year 2020.
 - Design of a water main along Route 1 from the Garfield Booster Pumping Station to Fuller Heights Road was completed in fiscal year 2020. Construction is estimated to begin in fiscal year 2021.
 - The Bull Run Mountain Well System Upgrades Preliminary Engineering Report (PER) was completed in fiscal year 2020. Final design and easement acquisition will occur in fiscal year 2021 and construction expected to begin in fiscal year 2022.
 - Construction of a water main along Antioch Road from the Dominion Valley Tank to the existing water main along John Marshall Highway is in process and estimated for completion during fiscal year 2022.
 - Design of the replacement of the water main along Possum Point Road from Summer Duck Drive to the Town of Dumfries limits was completed in fiscal year 2020, with construction anticipated to begin in fiscal year 2021.
 - Design of new water mains along the Route 234 corridor in the Montclair Pressure Zone was completed in fiscal year 2020, with construction anticipated to begin in fiscal year 2021.
 - Design of the Manassas Southside BPS rehabilitation and upgrade was completed in fiscal year 2019, with construction scheduled to begin in fiscal year 2021.
 - Design of a new water transmission main along University Boulevard for the Dawkins Branch Water Main Extension project was started in fiscal year 2020. Construction is anticipated to begin in fiscal year 2021.
 - Design of a new water main for the Manassas to Gainesville Southside Connector started in fiscal year 2020. Construction is anticipated to begin in fiscal year 2022.

- **Water Storage**
 - Rehabilitation of the Gainesville and the Airport Road water storage tanks were completed in fiscal year 2019.
 - The rehabilitation of the Manassas Southside water tank was completed in fiscal year 2020.
 - The Preliminary Engineering Report (PER) for the new Bethlehem Road Elevated Water Storage Tank was completed in fiscal year 2019.
 - Design of the new Potomac Shores Elevated Water Storage Tank was completed in fiscal year 2019. Construction has been deferred until fiscal year 2025.
 - Design of the new rechloramination system for the Dominion Valley Elevated Storage Tank was completed in fiscal year 2020. Construction is anticipated to begin in fiscal year 2021.
- **Sewage Pumping Stations**
 - The PERs for the new Koon's, Belmont and Spinnaker Court SPSs were completed in fiscal year 2019.
 - Study and design for the replacement of the Holiday Inn and Airport SPSs were completed in fiscal year 2018. Construction started in 2019 and was completed in fiscal year 2020.
 - Design for Graham Park SPS rehabilitation started in fiscal year 2018 and was completed in fiscal year 2019. Construction began in fiscal year 2020.
 - Designs for Occoquan Forest and Nokesville SPSs rehabilitations started in fiscal year 2018 and continued into fiscal year 2019. Construction is anticipated to begin in fiscal year 2021.
 - Design for the Heritage Hunt SPS replacement started in fiscal year 2018 with construction anticipated to begin in fiscal year 2022.
- **Sewage Collection System**
 - The Colchester Sanitary Sewer Interceptor and Sewage Pump Station and supplemental sewer pumping station were a part of the Colchester Sanitary Sewer System Improvements, which included the addition of a 0.5 MGD sewage pumping station in Marumsco Acres Lake Park, and was designed in fiscal years 2017 and 2018. Construction was completed in fiscal year 2019.
 - The East End Sewer Equalization Study was completed in fiscal year 2019.
 - Design for the Rose Hill Circle sewer main replacement was completed in fiscal year 2018. Construction was started in fiscal year 2019 and completed in fiscal year 2020.
 - The Sudley Road sewer main replacement evaluation was started and completed in 2018. The design of a larger diameter gravity main to replace the existing gravity main was completed in fiscal year 2020. Construction is anticipated to begin in fiscal year 2021.
 - Design of the sewer main realignment at the Old Holiday Inn off Old Stage Road was completed in fiscal year 2019. Construction completed in fiscal year 2020.
 - Design of the Dumfries force main replacement was completed in fiscal year 2014, with construction anticipated to begin in fiscal year 2021.
- **Water Reclamation Facilities**
 - Repair of the fume hoods was completed in 2019.
 - Control & processing building modifications and switchgear building hardening both began in fiscal year 2019 and were completed in fiscal year 2020.
 - The evaluation of freight elevators was completed in fiscal year 2020, and technical scope for the upgrade/refurbishment started with an estimated completion in fiscal year 2022.
 - Installation of gas detection sensors completed in fiscal year 2020.
 - Design for final effluent outfall upgrades completed in fiscal year 2020. Construction is anticipated to be completed in fiscal year 2021.

- Improvements on the existing underground storage tank (UST) were completed in fiscal year 2020.
- Improvements to the odor scrubbers were completed in fiscal year 2020.
- Tertiary filter and meter station SCADA integration upgrades for 50 valves were completed in the fiscal year 2020.
- Integration of additional aeration basin mixers into the SCADA system is anticipated to be completed in fiscal year 2021.
- Installation of nitrate analyzers and flow meters in each aeration basin, as Phase I of efforts to improve control of methanol addition and nitrogen removal in the basins, completed in fiscal year 2020.
- Planning for Phase II of the automated methanol dosing program, which will improve control of methanol addition and nitrogen removal in the basins, is expected to be complete in fiscal year 2021.
- Planning for concrete rehabilitation, baffle wall repairs and modifications to Aeration Basin No. 1 are anticipated to complete in fiscal year 2021.
- **Information Technology**
 - Upgrade of the Customer Information System (CIS-Cayenta) was completed in fiscal year 2019.
 - Upgrade of the JD Edwards financial system was completed in fiscal year 2020.
 - Phase II replacement of the Computerized Maintenance Management System (CMMS-Hansen) was completed in fiscal year 2020. The project provides for increased operational efficiencies and enables the migration of hardware and operating system to a Microsoft platform.
 - Development of a database to house the vertical asset registry was completed in fiscal year 2019. Buildout of the vertical asset database is underway. The project is estimated for completion in fiscal year 2023. The project will provide an inventory of above ground facilities to track work performed on assets within the CMMS Cityworks application.
 - Replacement of the SCADA equipment monitoring system is currently underway, with functionality enhancements that allow for increased reliability to customers, automation of existing manual processes, increased security and real-time monitoring, and increased use of smart phone and other enhancements to SCADA controls by field personnel. The project is estimated for completion in fiscal year 2022.
 - Procurement and implementation of SCADAWatch analytical software was completed in fiscal year 2019. The project enhanced the reporting capabilities of the SCADA application by providing access to SCADA data for reporting and analysis and allow the water hydraulic model to be calibrated/validated with near-real time data.
 - Update of the sewer hydraulic model to an all-pipes model was completed in 2019. Desktop calibration of the sewer model was completed in fiscal year 2020.
 - Implementation of the Dell Boomi integration platform, which allows for the efficient exchange of information between business systems, was completed in fiscal year 2019.
 - Deployment of Tableau visualization software, which allows for the creation of custom designed interactive user dashboards, was completed in fiscal year 2019.
 - Design and deployment of two business analytics dashboards were completed in fiscal year 2019. This project provides at-a-glance customer and financial information within an interactive graphical user interface.
 - Deployment of a mobile device management solution was completed in fiscal year 2019. The application allows the Information Technology Department to monitor, manage, and secure employees' mobile devices remotely from a single portal.

In addition to the capital projects mentioned, residential and commercial development activity continues throughout Prince William County. Cooperative efforts with developers have led to the design and developer-funded construction of major interceptor sewers, sewage pumping stations, water transmission lines and associated infrastructure. In fiscal years 2020 and 2019, developers installed and conveyed to the Authority for ownership and operation approximately 27 miles and 41 miles, respectively, of additional water mains, sanitary sewers, and related infrastructure representing approximately \$13.9 million and \$27.1 million, respectively, in total value.

In fiscal year 2020, 464 development plans representing 1,285 residential units and 3.8 million square feet of commercial development were reviewed, and over 34 miles of water and sewer mains were inspected. In fiscal year 2019, 452 development plans representing 916 residential units and 5.9 million square feet of commercial development were reviewed, and over 24 miles of water and sewer mains were inspected.

Long-Term Debt

At June 30, 2020, the Authority's outstanding long-term debt, net of deferred amounts, was \$108.3 million, compared to \$118.1 million at the end of fiscal year 2019.

Outstanding Long-Term Debt

	2020	2019	Increase (Decrease)	% Change
VRA loans payable	\$ 53,914,819	\$ 60,247,198	\$ (6,332,379)	(10.5)%
Revenue bonds	54,348,671	57,877,028	(3,528,357)	(6.1)
Total long-term debt	\$ 108,263,490	\$ 118,124,226	\$ (9,860,736)	(8.3)

At June 30, 2019, the Authority's outstanding long-term debt, net of deferred amounts, was \$118.1 million, compared to \$127.8 million at the end of fiscal year 2018.

Outstanding Long-Term Debt

	2019	2018	Increase (Decrease)	% Change
VRA loans payable	\$ 60,247,198	\$ 66,460,114	\$ (6,212,916)	(9.3)%
Revenue bonds	57,877,028	61,342,976	(3,465,948)	(5.7)
Total long-term debt	\$ 118,124,226	\$ 127,803,090	\$ (9,678,864)	(7.6)

VRA Loans

The Authority has four outstanding financing agreements with VRA at June 30, 2020, with the proceeds of each being used to finance upgrades at the HLM AWRP in previous years.

2020-2019 Comparison

At June 30, 2020, approximately \$53.9 million of long-term debt was outstanding with the VRA. The net decrease in VRA loans of approximately \$6.3 million was due to scheduled principal payments.

2019-2018 Comparison

At June 30, 2019, approximately \$60.3 million of long-term debt was outstanding with the VRA. The net decrease in VRA loans of approximately \$6.2 million was due to scheduled principal payments.

Revenue Bonds

Revenue bonds are issued to fund capital projects or defease or refund older debt in order to reduce the cost of borrowing.

2020-2019 Comparison

At June 30, 2020, the Authority had approximately \$54.3 million of outstanding revenue bonds, which were issued in 2013 and 2015. The 2015 bonds refunded the higher interest 2005 bonds effective July 1, 2015. The \$3.5 million decrease during fiscal year 2020 resulted from regularly scheduled debt service payments and the amortization of related premiums. In June 2020, the Authority made an advance payment from unrestricted funds toward fiscal year 2021 debt service in the amount of \$6.4 million.

2019-2018 Comparison

At June 30, 2019, the Authority had approximately \$57.9 million of outstanding revenue bonds, which were issued in 2013 and 2015. The 2015 bonds refunded the 2005 bonds effective July 1, 2015. The \$3.5 million decrease during fiscal year 2019 resulted from regularly scheduled debt service payments and the amortization of related premiums. In June 2019, the Authority made an advance payment from unrestricted funds toward fiscal year 2020 debt service in the amount of \$6.1 million.

Compliance

The Authority was in compliance with all bond and loan covenants during fiscal years 2020 and 2019. Detailed information regarding the Authority's long-term debt outstanding is presented in Notes 5, 6, 7 and 8 to the accompanying basic financial statements. Revenue bond coverage calculations are disclosed in Tables 8 and 9 in the Statistical Section of the accompanying basic financial statements.

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET AND RATES

The Prince William County Service Authority is dedicated to excellence in providing safe, reliable water service to our customers and returning clean water to the environment. The Authority's strategic plan supports the mission and is developed with contributions from the Board of Directors, management and staff. Key areas of the strategic plan include customer satisfaction, workforce excellence, financial viability, respected community partnerships, advanced and accessible technology, and agile, optimized and sustainable operations. The Authority's operating and capital budgets are prepared in alignment with the initiatives identified in the strategic plan.

The Authority considered the following general economic and operational factors in the preparation of its fiscal year 2021 budget:

- The Authority estimated certification of 1,350 new ERUs for fiscal year 2021. This represents a combination of projected growth and pending certification plans.
- Revenues are projected to decrease in total by \$4.2 million, or 2.8%, with an anticipated drop in certifications revenue of \$4.0 million, and relatively flat user charges, despite 0.5% projected account growth, adopted rate changes and anticipated customer credits that bring consumption revenues up to \$121.5 million, an increase of 0.6%. In November 2019, the Authority's Board of Directors adopted a three-year rate schedule and included increases in the base charge for water and sewer customers and no change to availability fees. The adopted increases are intended to replenish and sustain the replacement fund and enable investment in future infrastructure improvements needed for maintenance and replacement of the water and sewer systems. Adopted rates will fulfill the Authority's bond covenants and meet the Authority's operating and maintenance needs. Actual revenue realized as a result of the adopted rates depends on growth in new customers and water demand per customer.
- Budgeted expenses are projected to remain relatively flat, with a slight decrease of \$392,000, or 0.4%, in fiscal year 2021 as compared to fiscal year 2020, with an ongoing effort toward minimizing costs while maintaining the level of service expected by our customers. Personnel costs are expected to decrease approximately \$2.8 million, or 6.5%, in fiscal year 2021. The budget reflects deferred hiring and a decrease in the retirement plan contribution rate, offset by an increase in health insurance costs and other non-personnel expenses, and an increase of \$2.4 million, or 8.6% in purchased resources due to anticipated increases in wholesale water rates.
- The Authority's current multi-year CIP program budget includes a maximum estimated cost of \$392.6 million in identified capital projects for fiscal year 2021 and beyond. The Authority prioritizes its CIP projects by weighing five criteria: (1) physical condition, (2) regulatory/environmental impacts, (3) service level/reliability, (4) capacity/technical obsolescence issues, and (5) operations and maintenance impacts. For fiscal year 2021, capital spending is budgeted at a maximum estimated cost of \$60.1 million. Major CIP projects scheduled for fiscal year 2021 include improvements and replacements to elevated water storage tanks, sewer mains, pumping stations and water lines, information technology systems and SCADA system improvements.

CONTACTING THE AUTHORITY'S FINANCIAL MANAGEMENT

The CAFR is designed to provide the reader with a general overview of the Authority's financial position and demonstrate the Authority's accountability for revenues received and expenditures made. Questions concerning information provided in this report or requests for additional financial information should be directed to:

Astrid B. Nelson, CPA
Chief Financial and Business Operations Officer

Prince William County Service Authority
P.O. Box 2266
Woodbridge, VA 22195-2266

Telephone 703-335-7901

E-mail requests may be sent to: anelson@pwcsa.org

FINANCIAL

STATEMENTS



PRINCE WILLIAM COUNTY SERVICE AUTHORITY

STATEMENTS OF NET POSITION JUNE 30, 2020 AND 2019

Assets and Deferred Outflows of Resources	2020	2019
Current assets:		
Cash and cash equivalents (<i>notes 1c and 2</i>)		
Unrestricted	\$ 68,748,038	\$ 7,928,294
Restricted	21,268,434	15,284,885
Investments (<i>notes 1d and 2</i>)		
Unrestricted	141,339,724	290,221,826
Restricted	–	2,912,000
Receivables		
User and development charges (net of allowance for uncollectibles of \$215,283 and \$100,000 at June 30, 2020 and 2019, respectively)	8,121,740	7,685,504
Unbilled water and sewer service (<i>note 1k</i>)	6,788,223	5,720,829
Interest		
Unrestricted	1,371,947	1,273,625
Restricted	51	31,657
Other receivables	277,324	308,385
Materials and supplies inventory (<i>note 1e</i>)	5,382,787	3,838,295
Prepaid expenses (<i>note 1f</i>)	1,162,283	871,794
Total current assets	<u>254,460,551</u>	<u>336,077,094</u>
Non-current assets:		
Investments (<i>notes 1d and 2</i>)		
Unrestricted	134,553,132	38,067,334
Property, plant and equipment, net of accumulated depreciation and amortization (<i>notes 1g and 3</i>)	1,055,269,955	1,052,232,442
Equity in Upper Occoquan Service Authority (<i>notes 1h and 4</i>)	53,374,737	57,417,346
Total non-current assets	<u>1,243,197,824</u>	<u>1,147,717,122</u>
Total assets	<u>1,497,658,375</u>	<u>1,483,794,216</u>
Deferred outflows of resources:		
Deferred charges on refunding (<i>note 5</i>)	2,091,689	2,371,018
Deferred pension outflows (<i>notes 1n and 9</i>)	5,476,565	3,748,344
Deferred OPEB outflows (<i>note 9</i>)	956,163	312,533
Deferred GLI OPEB outflows (<i>notes 1o and 9</i>)	594,120	376,520
Deferred HIC OPEB outflows (<i>notes 1p and 9</i>)	100,625	–
Total deferred outflows of resources	<u>9,219,162</u>	<u>6,808,415</u>
Total assets and deferred outflows of resources	<u>\$ 1,506,877,537</u>	<u>\$ 1,490,602,631</u>

See accompanying notes to financial statements.

STATEMENTS OF NET POSITION (CONTINUED)
JUNE 30, 2020 AND 2019

Liabilities, Deferred Inflows of Resources and Net Position	2020	2019
Current liabilities:		
Accounts payable and accrued expenses	\$ 12,936,837	\$ 14,328,186
Virginia Resources Authority (VRA) loans payable (notes 6 and 7)	6,509,966	6,332,379
Customer deposits	6,387,173	3,744,603
Bonds payable (notes 1j, 5 and 7)	3,215,000	3,105,000
Retainage payable	70,501	1,029,613
Accrued interest payable		
Bonds payable (note 5)	899,166	954,827
VRA loans payable (note 6)	454,872	510,160
Compensated absences (notes 1i and 8)	773,911	442,559
Unearned revenue	29,115	24,033
	<hr/>	<hr/>
Total current liabilities	31,276,541	30,471,360
Long-term liabilities:		
VRA loans payable (net of current portion of \$6,509,966 and \$6,332,379 at June 30, 2020 and 2019, respectively) (notes 6 and 7)	47,404,853	53,914,819
Bonds payable (net of current portion of \$3,215,000 and \$3,105,000 at June 30, 2020 and 2019, respectively) (notes 1j, 5 and 7)	51,133,671	54,772,028
Compensated absences (notes 1i and 8)	4,511,067	4,753,076
Net pension liability (notes 8 and 9)	2,043,180	631,514
Other postemployment benefits liability (notes 8 and 9)	14,470,342	13,448,690
GLI other postemployment benefits liability (notes 8 and 9)	2,162,474	1,951,000
HIC other postemployment benefits liability (notes 8 and 9)	262,294	–
	<hr/>	<hr/>
Total long-term liabilities	121,987,881	129,471,127
Total liabilities	153,264,422	159,942,487
Deferred inflows of resources:		
Deferred pension plan inflows (notes 1n and 9)	851,195	1,100,078
Deferred OPEB inflows (note 9)	211,955	263,652
Deferred GLI OPEB inflows (notes 1o and 9)	137,676	180,000
Deferred HIC OPEB inflows (notes 1p and 9)	19,822	–
	<hr/>	<hr/>
Total deferred inflows of resources	1,220,648	1,543,730
Total liabilities and deferred inflows of resources	154,485,070	161,486,217
Net position:		
Net investment in capital assets	949,098,154	936,479,234
Restricted for:		
Debt service	15,638,880	15,379,033
Other purposes		
Customer Deposits	2,864,213	2,799,005
Customer Rebate Credits	2,732,827	–
Other nonmajor purposes	32,564	50,504
Unrestricted	382,025,829	374,408,638
	<hr/>	<hr/>
Total net position	1,352,392,467	1,329,116,414
Total liabilities, deferred inflows of resources and net position	\$ 1,506,877,537	\$ 1,490,602,631

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION YEARS ENDED JUNE 30, 2020 AND 2019

	2020	2019
Operating revenues:		
Water and sewer user charges	\$ 116,694,479	\$ 111,478,707
Development charges	1,775,068	1,603,267
Other	684,730	748,216
	<hr/>	<hr/>
Total operating revenues	119,154,277	113,830,190
Operating expenses:		
Personnel services	39,352,185	38,088,662
Purchased resources (notes 1m and 4)	28,030,998	25,336,192
Contractual services	9,561,195	10,303,875
Materials and supplies	5,649,709	6,247,372
Utilities	4,644,166	4,396,556
Other	2,063,934	1,641,759
	<hr/>	<hr/>
Total operating expenses	89,302,187	86,014,416
Operating income before depreciation and amortization	29,852,090	27,815,774
Depreciation and amortization (notes 1g and 3)	42,260,795	40,989,979
	<hr/>	<hr/>
Operating loss	(12,408,705)	(13,174,205)
Non-operating income (expense):		
Availability fees (note 1l)	28,996,478	21,872,652
Investment income	10,426,352	9,844,877
Grant revenues	5,000	–
Payments for UOSA debt service (note 4)	(10,686,076)	(10,707,029)
Equity interest in UOSA (note 4)	(4,042,609)	(7,202,430)
Interest expense	(3,151,552)	(3,262,054)
Purchased capacity (note 11)	(668,004)	(612,337)
Other	932,625	376,543
	<hr/>	<hr/>
Total non-operating income, net	21,812,214	10,310,222

See accompanying notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (CONTINUED)
YEARS ENDED JUNE 30, 2020 AND 2019

	2020	2019
Income (loss) before contributions from developers and others	\$ 9,403,509	\$ (2,863,983)
Contributions from developers and others <i>(note 12)</i>	13,872,544	27,083,099
Change in net position	23,276,053	24,219,116
Net position, beginning of year	1,329,116,414	1,304,897,298
Net position, end of year	<u>\$ 1,352,392,467</u>	<u>\$ 1,329,116,414</u>

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

STATEMENTS OF CASH FLOWS

YEARS ENDED JUNE 30, 2020 AND 2019

	2020	2019
Cash flows from operating activities:		
Cash received from customers	\$ 119,382,071	\$ 112,976,590
Cash payments to suppliers for goods and services	(50,129,135)	(50,669,201)
Cash payments to employees for services	(38,918,122)	(38,705,287)
Miscellaneous income from other sources	999,197	896,780
Cash from other operating revenues	715,791	739,422
Net cash provided by operating activities	32,049,802	25,238,304
Cash flows from non-capital financing activities:		
Interest paid for UOSA debt service	(5,063,142)	(5,255,778)
Principal paid for UOSA debt service	(5,622,934)	(5,451,251)
Net cash used in non-capital financing activities	(10,686,076)	(10,707,029)
Cash flows from capital and related financing activities:		
Acquisition and construction of capital assets	(35,651,365)	(38,059,489)
Payments from sale of property and equipment	(66,572)	(227,784)
Grant received	5,000	-
Interest paid on bonds payable	(1,853,994)	(1,963,019)
Principal paid on bonds payable	(3,105,000)	(2,990,000)
Interest paid on VRA loans	(1,552,537)	(1,698,067)
Principal paid on VRA loans	(6,332,379)	(6,186,849)
Receipt of developer charges	28,996,478	21,872,652
Payments for future capacity	(668,004)	(668,004)
Net cash used in capital and related financing activities	(20,228,373)	(29,920,560)
Cash flows from investing activities:		
Purchase of investment securities	(240,333,753)	(197,231,774)
Interest received on cash and cash equivalents	382,640	163,025
Proceeds from sales and maturities of investments	298,832,383	222,427,583
Interest received from investment securities	6,786,670	5,599,905
Net cash used in investing activities	65,667,940	30,958,739
Net increase in cash and cash equivalents	66,803,293	15,569,454
Cash and cash equivalents at beginning of year	23,213,179	7,643,725
Cash and cash equivalents at end of year	\$ 90,016,472	\$ 23,213,179

See accompanying notes to financial statements.

STATEMENTS OF CASH FLOWS (CONTINUED)
YEARS ENDED JUNE 30, 2020 AND 2019

	2020	2019
Reconciliation of operating loss to net cash provided by operating activities:		
Operating loss	\$ (12,408,705)	\$ (13,174,205)
Adjustments to reconcile operating loss to net cash provided by operating activities:		
Depreciation and amortization expense	42,260,795	40,989,979
Other non-cash operating expenses	365,780	198,582
Other postemployment benefits expense	1,550,727	745,294
Miscellaneous income from other sources	999,197	896,780
Adjustment for net pension liability	(565,438)	(1,515,308)
Change in assets and liabilities:		
(Increase) in water and sewer receivable	(662,653)	(518,516)
(Increase) decrease in unbilled water and sewer receivable	(1,067,394)	131,318
Decrease (increase) in other receivables	31,061	(8,600)
(Increase) in materials and supplies inventory	(1,544,492)	(799,070)
(Increase) in prepaid expenses	(290,489)	(352,651)
Increase (decrease) in accounts payable and accrued expenses	649,500	(2,115,285)
Increase in compensated absences	89,343	478,173
Increase in customer deposits	2,642,570	281,813
Total adjustments	44,458,507	38,412,509
Net cash provided by operating activities	\$ 32,049,802	\$ 25,238,304
Supplemental schedule of non-cash investing, capital and financing activities:		
Capital contributions		
Estimated acquisition cost of plant and equipment received	\$ 13,872,544	\$ 27,083,099
Change in fair value of investments		
(Decrease) in Fair Value of Investments	\$ (2,611,038)	\$ (4,689,091)
Equity interest in earnings of UOSA	\$ (4,042,609)	\$ (7,202,430)
Capital asset additions purchased on account	\$ 5,118,971	\$ 7,869,441

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED JUNE 30, 2020 AND 2019

1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Prince William County Service Authority (the Authority) was created by a resolution of the Board of County Supervisors (BOCS) of Prince William County, Virginia (the County) on January 11, 1983. The Authority is chartered by the State Corporation Commission and is an independent public body responsible for providing a comprehensive county-wide water and sewer system, completely within the geographical boundaries of the County. The management of the Authority is vested in a Board of eight members appointed by the County's BOCS. The Authority also maintains an interest in the Upper Occoquan Service Authority (UOSA), a regional joint venture, which is included in the Authority's financial statements under the equity method of accounting, as further discussed in Note 4.

The following is a summary of the Authority's significant accounting policies:

(a) Basis of Presentation and Accounting

The accounting policies of the Authority conform to accounting principles generally accepted in the United States of America as applicable to enterprise funds of governmental units. An enterprise fund is a proprietary type fund used to account for operations that are financed and operated in a manner similar to private business enterprises. The Authority's intent is that the costs of providing goods or services to customers on a continuing basis be financed or recovered primarily through user charges. Periodic determination of revenues earned, expenses incurred, and/or changes in net position is appropriate for capital maintenance, management control and accountability.

The Authority has elected to apply all applicable Governmental Accounting Standards Board (GASB) pronouncements when they become effective, as the GASB is the accepted standard-setting body for establishing governmental accounting and financial reporting principles.

The Authority follows the accrual basis of accounting. Under this basis of accounting, revenue is recognized when earned and expenses are recorded when incurred. Operating revenues and expenses consist of those revenues and expenses that result from the ongoing principal operations of the Authority. Operating revenues consist primarily of charges for water consumption and wastewater treatment. Non-operating revenues and expenses consist of those revenues and expenses that are related to financing and investing type activities, or result from non-exchange transactions and ancillary services.

When an expense is incurred for purposes in which both restricted and unrestricted net position are available, it is the Authority's policy to first apply restricted resources.

(b) Reporting Entity

To determine the appropriate reporting entity for the Authority, its relationship with the County was considered. Although the members of the Authority's Board of Directors are appointed by the BOCS, the County is not financially accountable for the Authority. In addition, there is no potential for the Authority to provide specific financial benefits to, or impose specific financial burdens on, the County, and the Authority is not fiscally dependent on the County. Accordingly, based on these criteria, the Authority is not included as a component unit in the County's financial statements.

(c) Cash and Cash Equivalents

The Authority considers all highly liquid investments with a maturity of three months or less from date of purchase to be cash equivalents.

(d) Investments

All investments are stated at fair value. Three estimates of fair value are obtained from independent financial sources, with the median value chosen as the stated fair value. Interest income from investments is recorded in the year earned.

(e) Materials and Supplies Inventory

Materials and supplies inventory, consisting of items held for consumption, are stated at weighted average cost using the moving average method. In addition, the Authority performs a manual count at the end of the fiscal year of fuel, chemicals and certain field supplies that are not yet used in operations, and values them at cost.

(f) Prepaid Expenses

Certain payments to vendors reflect costs applicable to future accounting periods. These costs are recorded as prepaid expenses in the accompanying Statements of Net Position and are expensed in the period they are used.

(g) Property, Plant and Equipment

The Authority capitalizes all property, plant and equipment with a cost greater than \$5,000 if the asset will have an estimated useful life of five years or more.

Purchased property, plant and equipment are stated at historical cost. Contributed assets received from developers and others are recorded at acquisition cost on the date of donation. The acquisition cost is based on the Authority's estimated cost to construct or purchase similar assets. See Note 12, Contributions from Developers and Others, for additional details on contributed assets.

Property, plant and equipment includes construction in progress, which represents costs associated with the construction of assets that will be used in the Authority's operations when completed. Expenditures for repairs and upgrades which materially add to the value or life of an asset are capitalized. Other maintenance and repair costs are expensed as incurred.

A capital asset is considered impaired when its service utility has declined significantly and unexpectedly. If determined to be permanently impaired, capital assets are reported at the lower of carrying or fair value. The Authority did not maintain any impaired capital assets at year end.

Depreciation and amortization for both purchased and contributed assets is recorded as depreciation and amortization expense on a straight-line basis over the following estimated useful lives:

Lines and improvements	50 years
Buildings	35 - 40 years
Equipment	5 - 15 years
Vehicles	5 - 10 years
Meters	15 years

Advance Capacity Payments are capitalized as intangible assets in accordance with the provisions of GASB Statement No. 51. They are payments made to wholesale water suppliers as part of multi-year capacity agreements, and are amortized over the useful life of such agreements. From their inception, these agreements are amortized over estimated useful lives from 40-50 years.

(h) Equity in Upper Occoquan Service Authority (UOSA)

As further explained in Note 4, Equity in UOSA, the Authority participates in a joint venture with three other local jurisdictions. The Authority accounts for its investment in the joint venture using the equity method of accounting.

(i) Compensated Absences

Accrued leave balances that are eligible for pay out upon employee separation are presented as a liability in the accompanying Statements of Net Position. The Authority has a traditional leave plan in which employees hired before January 1, 2012 accrue annual leave in varying amounts based on years of service, and sick leave at a rate of four hours bi-weekly. The Authority also has a Paid Time Off (PTO) plan, in which employees hired as of January 1, 2012 and employees who made an irrevocable election to convert to the PTO plan accrue hours in varying amounts based on years of service. At the time of separation from service, employees are compensated for accumulated annual leave up to 300 hours and up to 50% of accumulated sick leave hours based on years of service, or PTO leave up to 450 hours.

(j) Bond Premiums, Deferred Losses on Refundings and Issuance Costs

Bond premiums and deferred losses on refundings are deferred and amortized over the life of the bonds using a method which approximates the effective interest method. Deferred losses on refundings, net of amortization, are presented as deferred outflows of resources on the accompanying Statements of Net Position. Deferred outflows of resources is a separate financial statement element which represents the consumption of net position that applies to a future period, and will not be recognized as an outflow of resources (expenditure) until then. Bond premiums, net of amortization, are presented as an increase to the face amount of bonds payable on the accompanying Statements of Net Position. Any balances for these items are presented in the schedules in Note 5, Bonds Payable and Note 7, Debt. Issuance costs are expensed in the year incurred.

(k) Revenue Recognition

Customers are charged for water consumption and wastewater treatment based on metered water usage. An estimated amount has been recorded for services rendered but not yet billed as of the close of the respective years presented. This unbilled receivable is calculated by prorating the billings sent to customers in July and August of the subsequent fiscal year.

(l) Availability Fees

All developers and customers making new connections to the Authority's water and/or wastewater treatment system are required to pay an availability fee prior to the installation of an Authority meter. Availability fees cover the cost of the customer's pro-rata share of water and/or wastewater treatment capacity as well as water transmission mains, sewer interceptors, storage tanks, reservoirs, pumping stations, infiltration and inflow, and engineering administration. Availability fees are not used to pay for operations, maintenance, repairs or capital improvements to benefit existing customers. The Authority classifies this revenue as non-operating income.

(m) Purchased Resources

Purchased resources consist of expenses relating to the purchase of clean water and the treatment of wastewater from wholesale providers under the terms and conditions of relevant agreements.

(n) Pensions

The Virginia Retirement System (VRS) Political Subdivision Retirement Plan (the Authority's retirement plan) is a multi-employer, agent plan. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Authority's Virginia Retirement System (VRS) Plan and the additions to/deductions from the Authority's VRS Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. 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 Authority currently reports employer pension contributions subsequent to the measurement date and differences between expected and actual experience as deferred outflows of resources on the accompanying Statements of Net Position.

Deferred inflows of resources is a separate financial statement element which represents the acquisition of net position that applies to a future period, and will not be recognized as an inflow of resources (revenue) until then. The Authority currently reports differences between expected and actual experience, changes in assumptions, and the net difference between projected and actual earnings on plan investments in this category on the accompanying Statements of Net Position.

(o) Group Life Insurance

The VRS Group Life Insurance Program is a multiple employer, cost-sharing plan. It provides coverage to state employees, teachers, and employees of participating political subdivisions. The Group Life Insurance Program was established pursuant to §51.1-500 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The Group Life Insurance Program is a defined benefit plan that provides a basic group life insurance benefit for employees of participating employers. For purposes of measuring the net Group Life Insurance Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the Group Life Insurance Program OPEB, and Group Life Insurance Program OPEB expense, information about the fiduciary net position of the (VRS) Group Life Insurance program OPEB and the additions to/deductions from the VRS Group Life Insurance Program OPEB's net fiduciary position have been determined on the same basis as they were reported by VRS. In addition, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

(p) Health Insurance Credit

The VRS Health Insurance Credit Program is a multiple-employer, agent defined benefit plan that provides a credit toward the cost of health insurance coverage for retired employees. The VRS Health Insurance Credit Program was established pursuant to §51.1-1400 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. For purposes of measuring the net Political Subdivision Health Insurance Credit Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the Political Subdivision Health Insurance Credit Program OPEB, and the Political Subdivision Health Insurance Credit Program OPEB expense, information about the fiduciary net position of the Virginia Retirement System (VRS) Political Subdivision

Health Insurance Credit Program; and the additions to/deductions from the VRS Political Subdivision Health Insurance Credit Program's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

(q) Estimates

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

(r) New Accounting Pronouncements Adopted

GASB Statement 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*, (Statement 95), was intended to provide temporary relief to governments and other stakeholders in light of the coronavirus pandemic by postponing the effective dates of certain provisions in various Statements and Implementation Guides that first became effective, or are scheduled to be effective, for periods beginning after June 15, 2018, and later.

(s) New Accounting Pronouncements

Management has elected to disclose upcoming GASB pronouncements that may have an impact on the Authority.

GASB Statement No. 84, *Fiduciary Activities* (Statement 84), will enhance consistency and comparability of financial statements among governments by establishing specific criteria for identifying activities that should be reported as fiduciary activities and clarifying whether and how business-type activities should report their fiduciary activities, and will enhance the value provided by the information reported in the financial statements for assessing government accountability and stewardship. Statement 84 will be effective for the Authority beginning with its fiscal year ending June 30, 2021.

GASB Statement No. 87, *Leases* (Statement 87), will enhance comparability of financial statements among governments by requiring lessees and lessors to report leases under a single model, and enhance the usefulness of the financial statements by requiring reporting of certain lease obligations. Statement 87 will be effective for the Authority beginning with its fiscal year ending June 30, 2022.

GASB Statement No. 90, *Majority Equity Interests* (Statement 90), will improve financial reporting by providing essential information related to the presentation of majority equity interest in legally separate organizations and to improve the relevance of financial statement information for certain component units. Statement 90 will be effective for the Authority beginning with its fiscal year ending June 30, 2021.

GASB Statement No. 91, *Conduit Debt Obligations* (Statement 91), will improve the consistency and comparability of reporting a government's debt obligations and inform users of the potential impacts of any commitments issuers extend on the financial resources of issues and help users assess issuers' roles in conduit debt obligations. Statement 91 will be effective for the Authority beginning with its fiscal year ending June 30, 2023.

GASB Statement 96, *Subscription-Based Information Technology Arrangements*, (Statement 96), will improve financial reporting by establishing a definition for subscription-based information technology arrangements and providing uniform guidance for accounting and financial reporting for transactions that meet that definition, which will result in greater consistency and enhance the relevance and reliability of the financial statements. Statement 96 will be effective for the Authority beginning with its fiscal year ending June 30, 2023.

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

(t) Risks and Uncertainties

On January 30, 2020, the World Health Organization declared the coronavirus pandemic a "Public Health Emergency of International Concern" and on March 11, 2020, declared it to be a pandemic. Actions taken around the world to help mitigate the spread of the coronavirus pandemic include restrictions on travel, and quarantines in certain areas, and forced closures for certain types of public places and businesses. The coronavirus pandemic is expected to continue to have an adverse impact on the economies and financial markets of many countries, including the geographical area in which the Authority operates. While actions have been taken to mitigate its public health impact, it is unknown how long these conditions will last and many Authority activities have been impacted.

(u) Subsequent Events

The Authority has evaluated subsequent events through November 20, 2020, the date on which the financial statements were available to be issued.

Tenants must pay an Advance Payment Fee that is included on the first bill and reported as part of Customer Deposits on the accompanying financial statements. The Board voted to reduce this fee from \$250 to \$200, effective October 12, 2020. This change will result in approximately 9,500 customers receiving bill credits during fiscal year 2021 of \$50 each, for total bill credits of approximately \$475,000.

2 CASH AND INVESTMENTS

Cash and Cash Equivalents

At June 30, 2020 and 2019, all cash of the Authority is maintained in accounts collateralized in accordance with the Virginia Security for Public Deposits Act (the Act), Section 2.2-4400 et. seq. of the *Code of Virginia*, or is covered by federal depository insurance.

Under the Act, banks holding public deposits in excess of the amounts insured by the Federal Deposit Insurance Corporation (FDIC) must pledge collateral in the amount of 50% of excess deposits to a collateral pool in the name of the State Treasury Board. Savings and loan institutions are required to collateralize 100% of deposits in excess of FDIC limits. Since the State Treasurer has the ability to make additional assessments of other solvent public depositories on behalf of the collateral pool, any deposit qualifying under the Act is considered entirely insured. The State Treasury Board is responsible for monitoring compliance with the collateralization and reporting requirements of the Act and for notifying local governments of compliance by banks and savings and loans.

The Authority also invests in an externally managed investment pool, the Virginia Local Government Investment Pool (LGIP) and the LGIP Extended Maturity (LGIP EM), which are not registered with the Securities and Exchange Commission (SEC). Pursuant to Sec. 2.2-4600 through 2.2-4606 of the *Code of Virginia*, the Virginia General Assembly created the LGIP and authorized the Treasury Board to administer the LGIP and LGIP EM. As permitted by law, the Treasury Board has delegated certain administrative functions to the State Treasurer. The Treasury Board reviews the LGIP investment portfolio on a monthly basis, and investments in the LGIP are stated at amortized cost per GASB Statement No. 79 requirements, while the LGIP EM are stated at fair value per GASB Statement No. 72 requirements.

The LGIP is managed similar to a money market fund and in compliance with the definition of “2a-7 like pools” in accordance with GASB Statement No. 31 and is managed to meet the portfolio maturity, quality, diversification and liquidity requirements set forth in GASB Statement No. 79.

Unrestricted cash and cash equivalents consist of bank deposits, petty cash funds, LGIP investments and other money market fund investments. Restricted cash and cash equivalents consist of customer deposits, employee withholdings for benefit programs, escrows and retainage held on contracts, and money market funds held by a Trustee for debt service.

At June 30, 2020 and 2019, the Authority had the following cash and cash equivalents:

	2020	2019
Unrestricted Cash and Cash Equivalents		
Cash	\$ 3,089,396	\$ 2,202,291
Investments classified as cash equivalents	65,658,642	5,726,003
Total unrestricted cash and cash equivalents	68,748,038	7,928,294
Restricted Cash and Cash Equivalents		
Money market funds held by trustee	15,638,829	12,435,376
Customer deposits	2,864,213	2,751,441
Other funds	2,765,392	98,068
Total restricted cash and cash equivalents	21,268,434	15,284,885
Total cash and cash equivalents	\$ 90,016,472	\$ 23,213,179

Investments

The *Code of Virginia* Sec. 2.2-4501 et seq. authorizes the Authority to invest in obligations of the United States or agencies thereof; obligations of the Commonwealth of Virginia and political subdivisions thereof; obligations of other states and their political subdivisions; obligations of the International Bank for Reconstruction and Development (World Bank), the Asian Development Bank, and the African Development Bank; “prime quality” commercial paper; negotiable certificates of deposits, bank notes, and corporate bonds rated AA or better by Standard & Poor’s Rating Services (S&P), and Aa or better by Moody’s Investors Services, Inc., and a maturity of no more than five years; bankers’ acceptances; overnight term and open repurchase agreements; money market mutual funds; and the LGIP. The Authority’s investment policy follows state law except where the Authority further limits allowable investments by excluding certain treasury strips and the International, Asian, and African Development Banks. Additionally, the investment policy establishes upper limits on the percentage of the total portfolio that may be invested in certain securities.

The Authority’s investments are subject to interest rate, credit, concentration of credit, and custodial credit risk as described herein.

Interest rate risk: Interest rate risk is the risk the fair value of the securities in the portfolio will decline due to rising interest rates. As a means of limiting this exposure, the Authority’s investment guidelines restrict average duration to 24 months and the maturity of any single investment to five years. Interest rate risk is also contained by avoiding mortgage-backed and callable securities. The risk of loss of fair value from rising interest rates is greater for those types of securities because the expected maturity of such securities increase as rates rise, compounding the impact on fair value. By comparison, the average maturity terms of US Treasury notes, non-callable US Agency securities and the LGIP are generally not affected by periods of rising interest rates.

The Authority’s investments with the LGIP and LGIP EM are included in the accompanying Statements of Net Position as cash and cash equivalents. At June 30, 2020, the average maturity of the underlying LGIP and LGIP EM investments was 52 days, or .14 years and 443 days, or 1.23 years, respectively.

At June 30, 2020 and 2019, the Authority had the following investments and maturities:

Investment Type	2020		2019	
	Fair Value	Weighted Average Maturity (Years)	Fair Value	Weighted Average Maturity (Years)
Unrestricted investments				
US Agencies (FHLB,FFCB)	\$ 153,120,085	1.44	\$ 106,672,821	0.77
US Treasuries	88,433,470	0.80	177,582,690	0.58
Virginia State and Local	5,343,840	1.88	2,769,983	0.40
Commercial Paper	28,995,461	0.09	41,263,666	0.25
Total unrestricted investments	275,892,856		328,289,160	
Restricted investments				
US Treasuries	–	–	2,912,000	0.00
Total restricted investments	–		2,912,000	
Total investments	\$ 275,892,856	1.10	\$ 331,201,160	0.59

Credit risk: Credit risk is the risk of loss due to the failure of the security issuer or backer to repay its obligations, and may also apply where there is loss of fair value of the investment due to a deterioration of an issuer’s credit rating. The Authority’s Investment Policy and Guidelines seek to diversify the Authority’s portfolio by limiting the types of investments that can be purchased and the percentage of the portfolio that may be invested in any one type of instrument.

At June 30, 2020 and 2019, the Authority's investments were rated as follows:

Investment Type	S&P Rating	Moody's Rating	Credit Exposure as a % of Total Investments	
			2020	2019
US Agencies	AA+	Aaa	42.9%	30.5%
US Treasuries*	AA+	Aaa	24.8	51.7
LGIP***	AAAm	N/A	11.0	1.6
Commercial Paper	P1	A1	8.0	11.8
LGIP-EM***	AAAm	N/A	7.4	0.0
Mutual Funds***	AA+	Aaa	4.4	3.6
Virginia State and Local**	AA+	Aaa	1.5	0.8
Total Investments			100.0%	100.0%

* Backed by the full faith and credit of the US government.

** Ratings vary by security.

*** Reflected on the accompanying financial statements as cash equivalents.

Concentration of credit risk: Concentration of credit risk is the risk of loss attributed to the magnitude of investments held from a single issuer. The Authority's guidelines place limits on the amounts the Authority may invest in certain issuers, however, the Authority seeks to maintain at least 15% of the portfolio in US Treasuries and the balance of its investments in other authorized notes, bonds, securities and deposit accounts.

The Authority's investment portfolio as of June 30, 2020 and 2019 is concentrated in securities issued by the US Treasury, the Federal Home Loan Bank (FHLB), the Federal Farm Credit Bank (FFCB) and prime quality commercial paper of US corporations. The obligations of each of these issuers comprise more than 5% of the Authority's total investments.

The Authority 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 significant other observable inputs; Level 3 inputs are significant unobservable inputs. All of the Authority's investments are valued using Level 1 inputs.

The table below details the fair value and percent of total investments for each issuer representing 5% or more of the Authority's total investments as of June 30, 2020 and 2019:

Issuers Over 5% of Total Investments (Restricted & Unrestricted)	Fair Value of Investments (Level 1)		% of Total Investments	
	2020	2019	2020	2019
US Treasuries	\$ 88,433,470	\$ 180,494,690	32.1%	54.5%
FHLB	80,136,964	72,824,399	29.0	22.0
FFCB	72,983,121	33,848,422	26.5	10.2
Commercial Paper	28,995,461	41,263,666	10.5	12.5
Others below 5%	5,343,840	2,769,983	1.9	0.8
Total Investments	\$ 275,892,856	\$ 331,201,160	100.0%	100.0%

Custodial credit risk: Custodial credit risk is the risk that the Authority will not be able to recover the value of its investments or collateral securities that are in the possession of an outside custodial party. All of the securities purchased by the Authority are held in safekeeping by a third party custodial bank or institution and are insured in the Authority's name, and therefore, the Authority is not exposed to custodial credit risk.

3 PROPERTY, PLANT AND EQUIPMENT

Changes in property, plant and equipment are as follows for the year ended June 30, 2020:

	Balance June 30, 2019	Additions	Reductions	Transfers/Other Adjustments	Balance June 30, 2020
Capital assets not being depreciated/amortized:					
Construction in progress	\$ 55,310,161	\$ 24,735,897	\$ (684,863)	\$ (37,687,316)	\$ 41,673,879
Land	5,086,892	4,510,481	–	–	9,597,373
Total capital assets not being depreciated/amortized	60,397,053	29,246,378	(684,863)	(37,687,316)	51,271,252
Other capital assets:					
Lines and improvements	909,184,564	13,282,480	–	25,250,895	947,717,939
Equipment	259,786,981	1,304,815	(74,399)	6,329,604	267,347,001
Buildings	148,693,612	83,818	–	4,835,529	153,612,959
Vehicles	8,612,287	1,056,301	(482,601)	–	9,185,987
Advance capacity payments	206,283,234	2,287,960	–	–	208,571,194
Total other capital assets	1,532,560,678	18,015,374	(557,000)	36,416,028	1,586,435,080
Total capital assets before accumulated depreciation and amortization	1,592,957,731	47,261,752	(1,241,863)	(1,271,288)	1,637,706,332
Depreciation/amortization for:					
Lines and improvements	(263,141,855)	(18,596,814)	–	34,295	(281,704,374)
Equipment	(156,066,467)	(13,857,956)	67,106	–	(169,857,317)
Buildings	(61,359,385)	(3,361,631)	–	–	(64,721,016)
Vehicles	(6,016,526)	(816,299)	482,601	–	(6,350,224)
Advance capacity payments	(54,141,056)	(5,662,390)	–	–	(59,803,446)
Total accumulated depreciation and amortization	(540,725,289)	(42,295,090)	549,707	34,295	(582,436,377)
Total property, plant and equipment, net of accumulated depreciation and amortization	\$ 1,052,232,442	\$ 4,966,662	\$ (692,156)	\$ (1,236,993)	\$ 1,055,269,955

Changes in property, plant and equipment are as follows for the year ended June 30, 2019:

	Balance June 30, 2018	Additions	Reductions	Transfers/Other Adjustments	Balance June 30, 2019
Capital assets not being depreciated/amortized:					
Construction in progress	\$ 38,570,044	\$ 40,706,557	\$ (1,252,746)	\$ (22,713,694)	\$ 55,310,161
Land	5,066,504	55,166	(34,778)	–	5,086,892
Total capital assets not being depreciated/amortized	43,636,548	40,761,723	(1,287,524)	(22,713,694)	60,397,053
Other capital assets:					
Lines and improvements	877,380,581	21,852,575	(223,353)	10,174,761	909,184,564
Equipment	248,774,389	2,358,011	(3,276,357)	11,930,938	259,786,981
Buildings	147,450,130	766,417	(130,930)	607,995	148,693,612
Vehicles	8,175,872	1,052,314	(615,899)	–	8,612,287
Advance capacity payments	202,384,715	3,898,519	–	–	206,283,234
Total other capital assets	1,484,165,687	29,927,836	(4,246,539)	22,713,694	1,532,560,678
Total capital assets before accumulated depreciation and amortization	1,527,802,235	70,689,559	(5,534,063)	–	1,592,957,731
Depreciation/amortization for:					
Lines and improvements	(245,650,690)	(17,630,016)	138,851	–	(263,141,855)
Equipment	(146,262,843)	(13,042,967)	3,239,343	–	(156,066,467)
Buildings	(57,167,536)	(4,261,843)	69,994	–	(61,359,385)
Vehicles	(6,010,903)	(618,888)	613,265	–	(6,016,526)
Advance capacity payments	(48,704,791)	(5,436,265)	–	–	(54,141,056)
Total accumulated depreciation and amortization	(503,796,763)	(40,989,979)	4,061,453	–	(540,725,289)
Total property, plant and equipment, net of accumulated depreciation and amortization	\$ 1,024,005,472	\$ 29,699,580	\$ (1,472,610)	\$ –	\$ 1,052,232,442

4 EQUITY IN UPPER OCCOQUAN SERVICE AUTHORITY

UOSA was created under the provisions of the Virginia Water and Sewer Authorities Act to be the single regional entity to construct, finance and operate the regional sewage treatment facility mandated by the Occoquan policy for the upper portion of the Occoquan Watershed. UOSA is a joint venture formed on March 3, 1971 by a concurrent resolution of the governing bodies of Fairfax and Prince William Counties and the Cities of Manassas and Manassas Park. The Prince William County BOCS assigned all rights and obligations of its allocated capacity to the Authority in 1983.

During fiscal years 1989, 1995, and 2005, UOSA's capacity was increased and each jurisdiction's percentage was adjusted accordingly. The Authority's equity interest in UOSA reported on the accompanying Statements of Net Position as of June 30, 2020 and 2019 is calculated based on its percentage share of capacity in effect for UOSA's fiscal years ended June 30, 2019 and 2018, respectively. The equity interest in UOSA is calculated one year in arrears due to the timing of UOSA's published financial statements.

In January 2008, and again in March 2011, the Authority made purchases totaling an additional 4 MGD of existing plant capacity at UOSA from Fairfax County, at a combined cost of \$73,517,586 for both transactions. With these purchases, the Authority's effective share of the total Permitted UOSA Plant Capacity of 54 MGD, as defined in the transaction agreements, is 36.66%, or approximately 19.8 MGD.

For UOSA's fiscal years ended June 30, 2020, 2019 and 2018, capacity allocation by jurisdiction was as follows:

Jurisdiction	Percentage of Total Allocated Capacity		
	2020	2019	2018
Fairfax County	43.70%	43.70%	43.70%
Prince William County	36.66	36.66	36.66
City of Manassas	14.24	14.24	14.24
City of Manassas Park	5.40	5.40	5.40
Total	100.00%	100.00%	100.00%

The governing body of UOSA is an eight member Board of Directors consisting of two members from each participating jurisdiction appointed to four-year terms. The UOSA Board of Directors adopts an annual operating budget based on projected wastewater flows. The Authority's General Manager currently serves as a member of the UOSA Board of Directors.

Summary financial information of UOSA for the years ended June 30, 2019 and 2018 (the dates of the most recent available audited financial statements) are presented below. Complete financial statements may be obtained from UOSA at Upper Occoquan Service Authority, 14631 Compton Road, Centreville, Virginia 20121-2506, or from their website at www.uosa.org.

	2019		2018	
	UOSA	Authority's Share	UOSA	Authority's Share
Total assets	\$ 541,889,848		\$ 562,632,163	
Deferred outflows of resources	18,654,337		19,357,030	
Total assets and deferred outflows of resources	560,544,185		581,989,193	
Total liabilities	510,699,952		528,579,668	
Deferred inflows of resources	2,993,994		2,557,139	
Total liabilities and deferred inflows of resources	513,693,946		531,136,807	
Total net position	\$ 46,850,239	\$ 11,392,417	\$ 50,852,386	\$ 12,859,656
Total revenues	\$ 35,420,647		\$ 32,109,270	
Total expenses	(58,119,294)		(58,779,317)	
Capital contributions	18,696,500		17,830,318	
Cumulative effect of change in accounting principle	—		(4,141,836)	
Change in net position	\$ (4,002,147)	\$ (1,467,239)	\$ (12,981,565)	\$ (4,759,210)
Prepaid capacity amortization		(2,575,370)		(2,443,220)
Change in equity interest in UOSA		\$ (4,042,609)		\$ (7,202,430)

The equity interest in UOSA is a function of UOSA's annual performance. The Authority's equity interest is adjusted annually based on the Authority's percentage of total capacity for the fiscal year multiplied by the change in UOSA's net position for the latest audited fiscal year. The Authority's percentage of total capacity changes as capacity purchases are made by the Authority or other jurisdictions, therefore the Authority's cumulative share of UOSA's net position is reported at an overall effective share. Prepaid capacity amortization represents the amortization associated with UOSA plant capacity rights that the Authority purchased from Fairfax County. The Authority amortizes these capacity rights over estimated useful lives from 40-50 years. This amortization is reflected as a portion of the equity interest in UOSA.

The Authority made payments to UOSA during fiscal years 2020 and 2019 of approximately \$13.8 million and \$12.5 million, respectively, to pay its share of operation and maintenance expenses and reserve maintenance charges, which represents the Authority's pro-rata share of the participating jurisdictions' metered wastewater flows each year. The Authority records these payments for services from UOSA in the accompanying financial statements as purchased resources expense. The Authority also made payments to UOSA of approximately \$10.7 million for each of the years ended June 30, 2020 and June 30, 2019, to fund its share of UOSA's debt service. The Authority's share of debt service payments are recorded as non-operating expenses in the accompanying financial statements. Each jurisdiction is required to pay its share of debt service based on its percentage of total allocated capacity or as otherwise identified for specific projects within the UOSA Service Agreement. In fiscal years 2020 and 2019, the Authority's 36.66% share of UOSA's change in net position was \$(1,467,239) and \$(4,759,210), respectively.

UOSA's annual debt service for current and future years is funded by each of the participating jurisdictions based on their allocated capacity with certain modifications. As of June 30, 2020, the Authority's future debt service requirements for principal and interest to UOSA, net of UOSA accumulated debt service reserves, are as follows:

Years Ending June 30,	Total Payment
2021	\$ 11,537,609
2022	11,744,929
2023	12,103,318
2024	12,103,241
2025	12,105,860
2026-2030	57,962,972
2031-2035	41,568,544
2036-2040	39,213,342
2041-2045	11,261,699
2046-2050	6,374,385
2051-2052	989,553
Total	\$ 216,965,452

5 BONDS PAYABLE

Bonds payable as of June 30, 2020 consist of the following:

(a) Series 2013 water and sewer system refunding revenue bonds were issued to defease \$44,140,000 of the Series 2005 bonds. At June 30, 2020, \$37,780,000 remained outstanding. Interest rates range from 3.0% to 5.0% annually on the remaining maturity dates from July 1, 2020 to July 1, 2035.

(b) Series 2015 water and sewer system refunding revenue bonds were issued in April 2015 to refund the Series 2005 bonds. At June 30, 2020, \$15,075,000 remained outstanding. The interest rate on the bonds is 2.11% with maturity dates from July 1, 2020 to July 1, 2029.

For each of the outstanding bond series, interest is payable semi-annually on January 1 and July 1, and principal payments are made annually on July 1. In June 2020 and 2019, advance payments in the amount of \$6,400,000 and \$6,100,000, respectively, were made to the Trustee toward debt service for each of the subsequent fiscal years.

During fiscal years 2020 and 2019, the Authority continued to be in compliance with all covenants associated with the outstanding bond indentures. See Statistical Section Tables 7, 8 and 9, on pages 97 and 98 for debt compliance information. For the year ended June 30, 2020, pledged revenues totaled approximately \$159.5 million, and the required debt service payments represented 5.0% of the pledged revenues. The pledge of revenues remains in effect until the debt service requirements are satisfied in fiscal year 2036.

At June 30, 2020, total future debt service requirements for bond principal and interest are approximately \$65.3 million, as follows:

Years ending June 30,	2013 Series		2015 Series		Total	
	Principal	Interest	Principal	Interest	Principal	Interest
2021	\$ 1,665,000	\$ 1,397,000	\$ 1,550,000	\$ 285,378	\$ 3,215,000	\$ 1,682,378
2022	1,745,000	1,309,750	1,585,000	251,934	3,330,000	1,561,684
2023	1,830,000	1,218,250	1,610,000	217,963	3,440,000	1,436,213
2024	1,925,000	1,122,000	1,650,000	183,148	3,575,000	1,305,148
2025	2,020,000	1,021,000	1,685,000	147,595	3,705,000	1,168,595
2026-2030	11,585,000	3,646,150	6,995,000	301,305	18,580,000	3,947,455
2031-2035	13,955,000	1,322,100	—	—	13,955,000	1,322,100
2036	3,055,000	—	—	—	3,055,000	—
Total	\$ 37,780,000	\$ 11,036,250	\$ 15,075,000	\$ 1,387,323	\$ 52,855,000	\$ 12,423,573

Debt service requirements for future principal payments are presented in the accompanying Statements of Net Position, inclusive of the following amounts:

	June 30, 2020	June 30, 2019
Unamortized Bond Premiums	\$ 1,493,671	\$ 1,917,028

Deferred losses on refunding are presented in the accompanying Statements of Net Position, as follows:

	June 30, 2020	June 30, 2019
Deferred Amounts on 2015 Refunding	\$ 45,269	\$ 55,649
Deferred Amounts on 2013 Refunding	2,046,420	2,315,369
Total	\$ 2,091,689	\$ 2,371,018

6 VIRGINIA RESOURCES AUTHORITY LOANS PAYABLE

VRA loans were issued under the Virginia Water Facilities Revolving Fund (VWFRF) program and used for the purpose of construction for expansion and improvements at the HLM AWRF. Each loan is secured by a pledge of revenues from the Authority's water and wastewater system, with interest and principal payable on a semi-annual basis. All balances owed to VRA under the financing agreements are deemed to be parity indebtedness under the terms of the Local Master Indenture.

At June 30, 2020, VRA loans payable consist of the following:

Loans to finance improvements for biological nutrient removal and related expenses:

- (a) December 2000 loan - The outstanding loan balance at June 30, 2020 was \$2,662,948, with interest payable at 3.85% per annum, and principal due through March 2022.
- (b) June 2004 loan - The outstanding loan balance at June 30, 2020 was \$3,786,092 with interest payable at 1.95% (reduced from 3.10% effective December 1, 2016) per annum, and principal due through June 2025.

Loans to finance the expansion and upgrade of the HLM AWRF:

- (c) June 2007 loan - The outstanding loan balance at June 30, 2020 was \$23,716,827, with interest payable at 2.52% (reduced from 2.77% effective September 1, 2014) per annum, and principal due through March 2029.
- (d) June 2009 loan - The outstanding loan balance at June 30, 2020 was \$23,748,952, with interest payable at 2.72% (reduced from 3.55% effective September 1, 2014) per annum, and principal due through March 2030.

At June 30, 2020, total future VRA debt service requirements for principal and interest are approximately \$60.7 million, as follows:

Years ending June 30,	2000 and 2004 Loans		2007 Loan		2009 Loan		Total	
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
2021	\$ 2,034,209	\$ 160,368	\$ 2,379,048	\$ 582,770	\$ 2,096,709	\$ 631,810	\$ 6,509,966	\$ 1,374,948
2022	2,099,244	95,333	2,439,378	522,440	2,154,128	574,392	6,692,750	1,192,165
2023	756,933	41,482	2,501,237	460,581	2,213,118	515,401	5,471,288	1,017,464
2024	771,766	26,649	2,564,666	397,152	2,273,725	454,795	5,610,157	878,596
2025	786,888	11,527	2,629,703	332,115	12,337,422	1,305,177	15,754,013	1,648,819
2026-2030	-	-	11,202,795	644,476	2,673,850	54,669	13,876,645	699,145
Total	\$ 6,449,040	\$ 335,359	\$ 23,716,827	\$ 2,939,534	\$ 23,748,952	\$ 3,536,244	\$ 53,914,819	\$ 6,811,137

7 DEBT

Change in long-term debt obligations for the year ended June 30, 2020, are as follows:

	Balance June 30, 2018	FY 2019 Additions	FY 2019 Reductions	Balance June 30, 2019	FY 2020 Additions	FY 2020 Reductions	Balance June 30, 2020	Due Within One Year
Bonds Payable:								
Revenue Bonds	\$ 58,950,000	\$ —	\$ (2,990,000)	\$ 55,960,000	\$ —	\$ (3,105,000)	\$ 52,855,000	\$3,215,000
Deferred Amounts:								
Issuance								
Premiums	2,392,976	—	(475,948)	1,917,028	—	(423,357)	1,493,671	—
Total Bonds Payable	61,342,976	—	(3,465,948)	57,877,028	—	(3,528,357)	54,348,671	3,215,000
VRA Loans Payable	66,460,114	—	(6,212,916)	60,247,198	—	(6,332,379)	53,914,819	6,509,966
Total Debt	\$127,803,090	\$ —	\$ (9,678,864)	\$ 118,124,226	\$ —	\$ (9,860,736)	\$108,263,490	\$ 9,724,966

From time to time, the Authority may incur debt through bond issuances via the capital markets, and financing agreements (loans) with VRA. The proceeds of all borrowings from these sources are used to finance the acquisition or development of capital assets, or to retire prior debt related to capital assets. Accordingly, all amounts reported as Bonds Payable and VRA Loans Payable (see Notes 5 and 6) are included in the calculation of net investment in capital assets on the accompanying Statements of Net Position.

The Authority's outstanding notes from direct borrowings of \$53.9 million contain a certain provision that in the event of default, outstanding amounts become immediately due if the Authority is unable to make a payment.

The Authority's outstanding notes from direct borrowings are secured with collateral of the underlying investments. These borrowings contain (1) a provision that in the event of default, the timing of repayment of not less than twenty-five percent in aggregate principal amount of the outstanding amounts become immediately due if pledged revenues during the year are less than 120 percent of debt service coverage due in the following year and (2) by notice to the Authority, declare the entire principal of and interest due and payable immediately. The Authority's outstanding notes from direct borrowings contain a subjective acceleration clause that allows the lender to accelerate payment of the entire principal amount to become immediately due if the lender determines that a material adverse change occurs.

8 LONG-TERM LIABILITIES

Long-term liabilities activity for the years ended June 30, 2020 and 2019 are as follows:

	Balance June 30, 2018	FY 2019 Additions	FY 2019 Reductions	Balance June 30, 2019	FY 2020 Additions	FY 2020 Reductions	Balance June 30, 2020	Due Within One Year
Compensated								
Absences	\$ 4,717,462	\$ 718,233	\$ (240,060)	\$ 5,195,635	\$ 812,177	\$ (722,834)	\$ 5,284,978	\$ 773,911
Other Post								
Employment								
Benefits Liability	12,840,396	1,077,045	(468,751)	13,448,690	1,086,431	(64,779)	14,470,342	—
GLI Other Post								
Employment								
Benefits Liability	1,814,000	240,000	(103,000)	1,951,000	305,918	(94,444)	2,162,474	—
HIC Other Post								
Employment								
Benefits Liability	—	—	—	—	292,374	(30,080)	262,294	—
Net Pension								
Liability	1,526,922	4,903,580	(5,798,988)	631,514	5,249,781	(3,838,115)	2,043,180	—
Total Long-term Liabilities	\$20,898,780	\$ 6,938,858	\$ (6,610,799)	\$ 21,226,839	\$ 7,746,681	\$ (4,750,252)	\$24,223,268	\$ 773,911

9 PENSION PLAN AND OTHER POSTEMPLOYMENT BENEFITS

I. Virginia Retirement System (VRS)

(a) Plan Description

The Authority contributes to an agent multiple-employer pension plan administered by the Virginia Retirement System, which acts as a common investment and administrative agent for political subdivisions in the Commonwealth of Virginia.

All full-time, permanent employees of the Authority are automatically covered by the VRS Retirement Plan upon employment. Employees earn one month of service credit for each month they are employed and for which they and the Authority pay contributions to VRS. Employees are eligible to purchase prior service based on specific criteria as defined in the *Code of Virginia*, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave and previously refunded service.

VRS administers three different benefit structures for covered employees – Plan 1, Plan 2, and Hybrid. The specific information for each plan and the eligibility for covered groups within each plan are set out below:

RETIREMENT PLAN PROVISIONS		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>About Plan 1</p> <p>Plan 1 is a defined benefit plan. The retirement benefit is based on a member’s age, service credit and average final compensation at retirement using a formula.</p>	<p>About Plan 2</p> <p>Plan 2 is a defined benefit plan. The retirement benefit is based on a member’s age, service credit and average final compensation at retirement using a formula.</p>	<p>About the Hybrid Retirement Plan</p> <p>The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan.</p> <ul style="list-style-type: none"> • The defined benefit is based on a member’s age, service credit and average final compensation at retirement using a formula. • The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions. • In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.

RETIREMENT PLAN PROVISIONS

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>Eligible Members</p> <p>Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken a refund.</p> <p>Hybrid Opt-In Election</p> <p>VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.</p> <p>Retirement Contributions</p> <p>Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment.</p>	<p>Eligible Members</p> <p>Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.</p> <p>Hybrid Opt-In Election</p> <p>Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.</p> <p>Retirement Contributions</p> <p>Same as Plan 1.</p>	<p>Eligible Members</p> <p>Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:</p> <ul style="list-style-type: none"> • Political subdivision employees • Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014 <p>Retirement Contributions</p> <p>A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan.</p> <p>Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.</p>

RETIREMENT PLAN PROVISIONS

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>Service Credit</p> <p>Service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.</p>	<p>Service Credit</p> <p>Same as Plan 1.</p>	<p>Service Credit</p> <p><u>Defined Benefit Component:</u></p> <p>Under the defined benefit component of the plan, service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.</p> <p><u>Defined Contributions Component:</u></p> <p>Under the defined contribution component, service credit is used to determine vesting for the employer contribution portion of the plan.</p>

RETIREMENT PLAN PROVISIONS

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>Vesting</p> <p>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 (60 months) of service credit. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund.</p> <p>Members are always 100% vested in the contributions that they make.</p>	<p>Vesting</p> <p>Same as Plan 1.</p>	<p>Vesting</p> <p><u>Defined Benefit Component:</u></p> <p>Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit.</p> <p>Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of service credit. Plan 1 or Plan 2 members with at least five years (60 months) of service credit who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.</p> <p><u>Defined Contributions Component:</u></p> <p>Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan.</p> <p>Members are always 100% vested in the contributions that they make.</p> <p>Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service.</p> <ul style="list-style-type: none"> • After two years, a member is 50% vested and may withdraw 50% of employer contributions. • After three years, a member is 75% vested and may withdraw 75% of employer contributions. • After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. <p>Distribution is not required, except as governed by law.</p>

RETIREMENT PLAN PROVISIONS

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>Calculating the Benefit</p> <p>The Basic Benefit is determined using the average final compensation, service credit and plan multiplier.</p> <p>An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit. In cases where the member has elected an optional form of retirement payment, an option factor specific to the option chosen in then applied.</p> <p>Average Final Compensation</p> <p>A member’s average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.</p> <p>Service Retirement Multiplier</p> <p>The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%.</p>	<p>Calculating the Benefit</p> <p>See definition under Plan 1.</p> <p>Average Final Compensation</p> <p>A member’s average final compensation is the average of the 60 consecutive months of highest compensation as a covered employee.</p> <p>Service Retirement Multiplier</p> <p>Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non- hazardous duty members the retirement multiplier is 1.65% for service credit earned, purchased or granted on or after January 1, 2013.</p>	<p>Calculating the Benefit</p> <p><u>Defined Benefit Component:</u> See definition under Plan 1</p> <p><u>Defined Contribution Component:</u> The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.</p> <p>Average Final Compensation</p> <p>Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.</p> <p>Service Retirement Multiplier</p> <p><u>Defined Benefit Component:</u> The retirement multiplier for the defined benefit component is 1.00%.</p> <p>For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans.</p> <p><u>Defined Contribution Component:</u> Not applicable.</p>

RETIREMENT PLAN PROVISIONS

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>Normal Retirement Age Age 65.</p> <p>Earliest Unreduced Retirement Eligibility Age 65 with at least five years (60 months) of service credit or at age 50 with at least 30 years of service credit.</p> <p>Earliest Reduced Retirement Eligibility Age 55 with at least five years (60 months) of service credit or age 50 with at least 10 years of service credit.</p>	<p>Normal Retirement Age Normal Social Security retirement age.</p> <p>Earliest Unreduced Retirement Eligibility Normal Social Security retirement age with at least five years (60 months) of service credit or when their age and service equal 90.</p> <p>Earliest Reduced Retirement Eligibility Age 60 with at least five years (60 months) of service credit.</p>	<p>Normal Retirement Age <u>Defined Benefit Component:</u> Same as Plan 2. <u>Defined Contribution Component:</u> Members are eligible to receive distributions upon leaving employment, subject to restrictions.</p> <p>Earliest Unreduced Retirement Eligibility <u>Defined Benefit Component:</u> Normal Social Security retirement age and have at least five years (60 months) of service credit or when their age and service equal 90. <u>Defined Contribution Component:</u> Members are eligible to receive distributions upon leaving employment, subject to restrictions.</p> <p>Earliest Reduced Retirement Eligibility <u>Defined Benefit Component:</u> Age 60 with at least five years (60 months) of service credit. <u>Defined Contribution Component:</u> Members are eligible to receive distributions upon leaving employment, subject to restrictions.</p>

RETIREMENT PLAN PROVISIONS

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>Cost-of-Living Adjustment (COLA) in Retirement</p> <p>The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%.</p> <p><u>Eligibility:</u></p> <p>For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of service credit, the COLA will go into effect on July 1 after one full calendar year from the retirement date.</p> <p>For members who retire with a reduced benefit and who have less than 20 years of service credit, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.</p> <p><u>Exceptions to COLA Effective Dates:</u></p> <p>The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:</p> <ul style="list-style-type: none"> • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member retires directly from short-term or long-term disability. • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins. 	<p>Cost-of-Living Adjustment (COLA) in Retirement</p> <p>The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%.</p> <p><u>Eligibility:</u></p> <p>Same as Plan 1.</p> <p><u>Exceptions to COLA Effective Dates:</u></p> <p>Same as Plan 1</p>	<p>Cost-of-Living Adjustment (COLA) in Retirement</p> <p><u>Defined Benefit Component:</u></p> <p>Same as Plan 2.</p> <p><u>Defined Contribution Component:</u></p> <p>Not applicable.</p> <p><u>Eligibility:</u></p> <p>Same as Plan 1 and Plan 2.</p> <p><u>Exceptions to COLA Effective Dates:</u></p> <p>Same as Plan 1 and Plan 2.</p>

Employees Covered by Benefit Terms

As of the June 30, 2019 actuarial valuation, the following employees were covered by the benefit terms of the VRS Retirement Plan:

	<u>Number</u>
Active members	320
Inactive members or their beneficiaries currently receiving benefits	128
Inactive members:	
Vested	19
Non-vested	59
Active elsewhere in VRS	20
Total inactive members	98
Total covered employees	<u>546</u>

Contributions

The contribution requirement for active employees is governed by Section 51.1-145 of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. Employees are required to contribute 5% of their annual base compensation toward their retirement. Prior to July 1, 2012, all or part of the 5% member contribution may have been assumed by the employer. Beginning July 1, 2012 new employees were required to pay the 5% member contribution. In addition, for existing employees, employers were required to begin making the employee pay the 5% member contribution. This could be phased in over a period of up to 5 years and the employer was required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution.

The Authority's contractually required contribution rate for fiscal year 2020 was 10.5% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2019. 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. The total of employer and employee contributions to VRS were approximately \$3.7 million for each of the years ended June 30, 2020 and June 30, 2019.

(b) Net Pension Liability

The Authority's net pension liability (NPL) was measured as of June 30, 2019. The TPL used to calculate the NPL was determined by an actuarial valuation performed as of June 30, 2018, using updated actuarial assumptions applied to all periods included in the measurement and date of June 30, 2019.

Actuarial Assumptions

The TPL was based on an actuarial valuation as of June 30, 2018, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June, 30 2019.

Inflation	2.5%
Salary increases, including inflation	3.5% - 5.35%
Investment rate of return	6.75%, net of plan investment expense, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 6.75% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 6.75% to simplify preparation of pension liabilities.

Mortality Rates	25% of deaths are assumed to be service related.
• Pre-retirement	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.
• Post-retirement	RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females 1.5% increase compounded from ages 70 to 85.
• Post-disablement	RP-2014 Disability Mortality Rates projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the change in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

- Updated to a more current mortality table – RP-2014 projected to 2020
- Lowered rates at older ages and changed final retirement from 70 to 75
- Adjusted withdrawal rates to better fit experience at each year age and service through 9 years of service
- Lowered disability rates
- Discount rate decreased from 7.00% to 6.75%

Long-Term Expected Rate of Return

The long-term expected rate of return on VRS investments was determined using a log-normal distribution analysis 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 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. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Real Rate of Return	Weighted Average Long-Term Expected Rate of Return*
Public Equity	34.00%	5.61%	1.91%
Fixed Income	15.00	0.88	0.13
Credit Strategies	14.00	5.13	0.72
Real Assets	14.00	5.27	0.74
Private Equity	14.00	8.77	1.23
MAPS - Multi-Asset Public Strategies	6.00	3.52	0.21
PIP - Private Investment Partnership	3.00	6.29	0.19
Total	100.00%		5.13
Inflation			2.50
Expected arithmetic nominal return*			7.63%

* The above allocation provides a one-year return of 7.63%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 7.11%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75% which is roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation.

Discount Rate

The discount rate used to measure the TPL was 6.75%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the employer rate contributed by the Authority will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly.

From July 1, 2019 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the plan's fiduciary net position is projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the TPL.

(c) Changes in the Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Pension	Net Pension Liability
Balances at June 30, 2018	\$ 42,516,211	\$ 41,884,697	\$ 631,514
Changes for the Year:			
Service cost	2,328,302	–	2,328,302
Interest	2,921,479	–	2,921,479
Changes of assumptions	1,586,517	–	1,586,517
Difference between expected and actual experience	1,180,278	–	1,180,278
Contributions - employer	–	2,515,217	(2,515,217)
Contributions - employee	–	1,213,286	(1,213,286)
Net investment income	–	2,903,907	(2,903,907)
Benefit payments, including refunds of employee contributions	(1,561,607)	(1,561,607)	–
Administrative expense	–	(25,628)	25,628
Other changes	–	(1,872)	1,872
Net changes	6,454,969	5,043,303	1,411,666
Balances at June 30, 2019	\$ 48,971,180	\$ 46,928,000	\$ 2,043,180

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

The following presents the Authority's NPL, using the current discount rate as well as what the Authority's NPL would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate.

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Net pension liability (asset)	\$ 9,131,530	\$ 2,043,180	\$ (3,573,628)

(d) Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2020, the Authority recognized pension expense of \$1,932,078. At June 30, 2020 the Authority also reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 1,713,689	\$ 9,598
Changes of assumptions	1,265,360	447,507
Net difference between projected and actual earnings on plan investments	–	394,090
Employer contributions subsequent to the measurement date*	2,497,516	–
Total	\$ 5,476,565	\$ 851,195

* Deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the NPL in the year ending June 30, 2021.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

<u>Years Ending June 30,</u>	<u>Amount</u>
2021	\$ 729,361
2022	216,084
2023	629,465
2024	552,944
Total	\$ 2,127,854

Information about the VRS Retirement Plan is also available in the separately issued VRS 2019 Comprehensive Annual Financial Report (CAFR). A copy of the 2019 VRS CAFR may be down-loaded from the VRS website at varetire.org/Pdf/Publications/2019-annual-report.pdf, or by writing to the System’s Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

II. Other Postemployment Benefits (OPEB) – Health Benefits

(a) Plan Description

The Authority provides post-retirement health, dental, and vision benefits to retirees who have ten or more years of service with the Authority. These benefits are provided for in a single-employer defined benefit healthcare plan administered by the Authority. For health and dental insurance coverage, retirees pay 100% of their monthly health insurance premium less a contribution by the Authority based on their number of years of service. For vision and supplemental dental coverage, retirees pay 100% of their monthly premiums, with no contribution made by the Authority. None of the assets in the Plan are accumulated in a trust therefore do not meet trust accounting requirements per paragraph 4 of GASB Statement No. 75.

Employees Covered by Benefit Terms

As of the June 30, 2019 actuarial valuation, the following employees were covered by the benefit terms:

	<u>Number</u>
Active members	337
Inactive members or their beneficiaries currently receiving benefits	69
Total covered employees	406

(b) Total OPEB Liability (TOL)

The Authority's OPEB liability was measured as of June 30, 2020, and the total OPEB Liability was determined by an actuarial valuation as of July 1, 2019.

Actuarial Assumptions

The total OPEB liability in the July 1, 2019 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.5%
Salary increases, including inflation	2.5% - 5.35%
Discount rate*	3.50% as of June 30, 2019 2.21% as of June 30, 2020
Age related claims cost**	
Healthcare trend costs	6.3% for fiscal 2020, 4.9% for fiscal 2021, 5.3% for fiscal 2022, then grading to an ultimate rate of 4.0% for 2074.

Mortality Rates

- Pre-retirement RP-2014 Employee Rates to age 80, Healthy Annuitant at ages 81 and older projected with scale BB to 2020; males setback 1 year, 85% of rates; females setback 1 year; 25% of deaths are assumed to be service-related.
- Post-retirement RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females setback 1 year with 1.5% increase compounded from ages 70 to 85.
- Post-disablement RP-2014 Disabled Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.

*Discount rates used to measure TOL were based on the municipal bond market conditions as of the respective measurement dates.

**Age-related claims cost assumptions for medical and dental were developed using the plan's premiums. Manual age-related morbidity factors from the Actuary's Health Cost Guidelines were applied to the premiums to produce the claims costs.

The actuarial assumptions used in the July 1, 2019 valuation were based on the results of an experience study for the period July 1, 2012 through June 30, 2016.

(c) Changes in the Total OPEB Liability

	Total OPEB Liability
Balance at June 30, 2019	\$ 13,448,690
Changes for the Year:	
Service cost	609,660
Interest	476,771
Effect of economic/demographic gains or losses	611,750
Effect of assumption changes or other inputs	203,685
Benefit payments	(880,214)
Net changes	1,021,652
Balance at June 30, 2020	\$ 14,470,342

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

The following presents the Authority's Total OPEB Liability, calculated using the current discount rate. It also presents what the Authority's Total OPEB Liability would be if it were calculated using a discount rate one percentage point lower or one percentage point higher than the current rate.

	1% Decrease (1.21%)	Current Discount Rate (2.21%)	1% Increase (3.21%)
Total OPEB liability	\$ 15,537,333	\$ 14,470,342	\$ 13,457,150

Sensitivity of the total OPEB liability to changes in the healthcare cost trend rate

The following presents the Authority's Total OPEB Liability, calculated using the current healthcare trend rates. It also presents what the Authority's Total OPEB Liability would be if it were calculated using healthcare trend rates that are one percentage point lower or one percentage point higher than the current rate.

	1% Decrease (5.30%)	Current Trend Rate (6.30%)	1% Increase (7.30%)
Total OPEB liability	\$ 12,836,786	\$ 14,470,342	\$ 16,424,095

(d) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the fiscal year ended June 30, 2020, the Authority recognized OPEB expense of \$1,206,539. At June 30, 2020, the Authority reported deferred inflows and deferred outflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 527,949	\$ –
Changes of assumptions or inputs	428,214	211,955
Total	\$ 956,163	\$ 211,955

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

Years Ending June 30,	Amount
2021	\$ 120,108
2022	120,108
2023	120,108
2024	120,108
2025	118,559
Thereafter	145,217
Total	\$ 744,208

III. Other Postemployment Benefits (OPEB) – Group Life Insurance (GLI)

(a) Plan Description

The Authority provides all full-time salaried permanent employees automatic coverage by VRS Group Life Insurance Program upon employment. The Group Life Insurance Program is a multiple employer, cost-sharing defined benefit plan that provides a basic group life insurance benefit for employees and participating employers. The Authority pays 100% of the monthly premiums, with no contributions made by the employees. None of the assets in the Plan are accumulated in a trust therefore do not meet trust accounting requirements per paragraph 4 of GASB Statement No. 75.

Members are also eligible to elect additional coverage for themselves as well as spouse or dependent children through the optional group life insurance program. Employees pay 100% of their monthly insurance premium, with no contribution made by the Authority. Premiums are deducted from members' paychecks and paid by the Authority directly to the insurer; therefore they are not part of the GLI OPEB program.

The benefits payable under the GLI Program have several components:

- Natural death benefit – Employee's covered compensation rounded to the next highest thousand and then doubled.
- Accidental death benefit – Double the natural death benefit
- Other benefit provisions: The program provides additional benefits provided under specific circumstances, including:
 - Accidental dismemberment benefit
 - Safety belt benefit
 - Repatriation benefit
 - Felonious assault benefit
 - Accelerated death benefit option

Employees Covered by Benefit Terms

All full-time salaried permanent employees, employed after the program was established on July 1, 1960, that elect to participate are eligible for the GLI Program.

Reduction in Benefit Amounts

The benefit amounts provided to members covered under the GLI Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.

Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)

For covered members with at least 30 years of service credit, there is a minimum benefit payable under the GLI Program. The minimum benefit was set at \$8,000 by statute in 2015. This amount will be increased annually based on the VRS Plan 2 cost-of-living adjustment calculation. The minimum benefit adjustment for the COLA was \$8,463 as of June 30, 2020.

Contributions

The contribution requirement for the GLI Program are governed by Section 51.1-506 and 51.1-508 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the GLI Program was 1.31% of covered employee compensation. This was allocated into an employee and employer component using a 60/40 split. The employee component was 0.79% (1.31% x 60%) and the employer component was 0.52% (1.31% x 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. The Authority has elected to pay all of the employee contributions in addition to the employer contributions.

The Authority's contractually required contribution for the fiscal year 2020 was 0.52% of covered employee compensation, based on an actuarial valuation as of June 30, 2018. This rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. The total employer and employee contributions paid by the Authority to VRS were approximately \$137,700 and \$136,500 for the years ended June 30, 2020 and June 30, 2019, respectively.

(b) Net GLI OPEB Liability

The Authority's total GLI OPEB Liability was determined by an actuarial valuation as of June 30, 2018, and the net GLI OPEB Liability was measured as of June 30, 2019.

Actuarial Assumptions

The total GLI OPEB liability in the June 30, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Actuarial method	Entry Age Normal Actuarial Cost
Inflation	2.5%
Salary increases, including inflation	3.5% - 5.35%
Investment rate of return	6.75%, net of plan investment expenses, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 6.75% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 6.75% to simplify preparation of OPEB liabilities.

Mortality Rates

- Pre-retirement RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.
- Post-retirement RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; and females set back 1 year with 1.5% increase compounded from ages 70 to 85.
- Post-disablement RP-2014 Disability Life Mortality Table projected with scale BB to 2021; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an experience study for the period July 1, 2012 through June 30, 2016, except in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

- Updated to a more current mortality table – RP-2014 projected to 2020
- Lowered retirement rates at older ages and extended final retirement from 70 to 75
- Adjusted termination rates to better fit experience at each year age and service through 9 years of service
- Adjusted disability rates to better match experience
- Discount Rate decreased from 7.00% to 6.75%

Discount Rate

The discount rate used to measure the GLI OPEB liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the employer rate contributed by the Authority will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly.

From July 1, 2019 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the plan's fiduciary net position is projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

Long-Term Expected Rate of Return

The long-term expected rate of return on VRS investments was determined using a log-normal distribution analysis 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 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. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Real Rate of Return	Weighted Average Long-Term Expected Rate of Return*
Public Equity	34.00%	5.61%	1.91%
Fixed Income	15.00	0.88	0.13
Credit Strategies	14.00	5.13	0.72
Real Assets	14.00	5.27	0.74
Private Equity	14.00	8.77	1.23
MAPS - Multi-Asset Public Strategies	6.00	3.52	0.21
PIP - Private Investment Partnership	3.00	6.29	0.19
Total	100.00%		5.13
Inflation			2.50
Expected arithmetic nominal return*			7.63%

* The above allocation provides a one-year return of 7.63%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 7.11%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75% which is roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation.

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

The following presents the collective net GLI OPEB Liability of the participating employers in the VRS GLI OPEB Plan using the current discount rate, as well as what the collective net GLI OPEB Liability of the participating employers would be if they were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Net GLI OPEB liability	\$ 2,840,892	\$ 2,162,474	\$ 1,612,296

VRS Net GLI OPEB Liability

The net OPEB liability (NOL) for the GLI Program represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2019, NOL amounts for the GLI Program are as follows:

Total GLI OPEB Liability	\$ 3,390,238,000
Plan Fiduciary Net Position	1,762,972,000
Employers' Net GLI OPEB Liability	\$ 1,627,266,000
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	52.00%

The total GLI OPEB liability is calculated by the VRS actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net GLI OPEB liability is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

(c) GLI OPEB Liabilities, GLI OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the Group Life Insurance Program OPEB

At June 30, 2020 and 2019, the Authority reported a liability of \$2,162,474 and \$1,951,000, respectively, for its proportionate share of the Net GLI OPEB liability. The Net GLI OPEB Liability was measured as of June 30, 2019 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. The covered employer's proportion of the Net GLI OPEB Liability was based on the covered employer's actuarially determined employer contributions to the GLI Program for the year ended June 30, 2019 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2019, the participating employer's proportion was 0.128% as compared to 0.133% at June 30, 2018.

For the year ended June 30, 2020, the Authority recognized GLI OPEB expense of \$89,518. Since there was a change in the proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2020, the Authority reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 143,817	\$ 28,049
Net difference between projected and actual earnings on plan investments	-	44,419
Changes of assumptions	136,526	65,208
Changes in proportion	176,057	-
Employer contributions subsequent to the measurement date*	137,720	-
Total	\$ 594,120	\$ 137,676

* Deferred outflows of resources related to the GLI OPEB resulting from the employer's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the fiscal year ending June 30, 2021.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

Years Ending June 30,	Amount
2021	\$ 47,197
2022	47,199
2023	66,012
2024	78,857
2025	63,404
Thereafter	16,055
Total	\$ 318,724

Information contained in the VRS GLI OPEB Program Notes to the Schedule of Employer Allocations and Schedule of GLI OPEB Program Amounts by Employer (Schedules) was extracted from the audited financial statements of the System for the fiscal year ended June 30, 2019. Additional financial information supporting the preparation of the VRS GLI OPEB Program Schedules (including the financial statements and the unmodified audit opinion thereon, and required supplementary information) is presented in the separately issued VRS 2019 *Comprehensive Annual Financial Report* (CAFR). A copy of the 2019 VRS CAFR is publicly available through the About VRS link on the VRS website at www.varetire.org, or a copy may be obtained by submitting a request to the VRS Chief Financial Officer, P.O. Box 2500, Richmond, VA 23218-2500.

IV. Other Postemployment Benefits (OPEB) – VRS Health Insurance Credit (HIC)

a) Plan Description

To assist retirees with the cost of health insurance coverage, the VRS administers a health insurance credit program. The Authority's Health Insurance Credit Program is a multi-employer, agent defined benefit plan that provides a credit toward the cost of health insurance coverage for retired employees. Retirees that have a minimum of fifteen years of service and are enrolled in a qualified health insurance plan may receive a monthly credit of \$1.50 per year of service credit. The health insurance credit is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against qualified health insurance premiums retirees pay for single coverage, excluding any portion covering the spouse or dependents. The credit cannot exceed the amount of the premiums and ends upon the retiree's death. The health insurance credit is funded by the Authority on behalf of its VRS eligible employees.

The Health Insurance Credit Program provides the following benefits for eligible employees:

- At Retirement – For employees who retire, the monthly benefit is \$1.50 per year of service per month with a maximum benefit of \$45.00 per month.
- Disability Retirement – For employees who retire on disability or go on long-term disability under the Virginia Local Disability Program (VLDP), the monthly benefit is \$45.00 per month.

Employees Covered by Benefit Terms

All full-time salaried permanent employees, employed after the program was established on July 1, 1993, who are covered under the VRS pension plan are automatically eligible for the Retiree Health Insurance Credit Program and enrolled at employment. Those who retire with at least 15 years of service credit are eligible to elect the benefit.

As of the June 30, 2018 actuarial valuation, the following employees were covered by the benefit terms of the HIC OPEB plan:

	<u>Number</u>
Active members	320
Inactive members or their beneficiaries currently receiving benefits	<u>83</u>
Total covered employees	<u><u>403</u></u>

HIC Program Notes

The monthly Health Insurance Credit benefit cannot exceed the individual premium amount.

- No Health Insurance Credit for premiums paid and qualified under LODA; however, the employee may receive the credit for premiums paid for other qualified health plans.
- Employees who retire after being on long-term disability under VLDP must have at least 15 years of service credit to qualify for the Health Insurance Credit as a retiree.

Contributions

The contribution requirement for active employees is governed by Section 51.1-1402(E) of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to state agencies and school divisions by the Virginia General Assembly. The Authority's contractually required employer contribution rate for the Health Insurance Credit Program for the years ended June 30, 2020 and June 30, 2019, was 0.14% of covered employee compensation, based on an actuarial valuation as of June 30, 2017. This rate was expected to finance the costs of benefits earned during the year, with an additional amount to finance any unfunded accrued liability. The total employer contributions paid by the Authority to VRS were approximately \$37,000 and \$36,000 for the years ended June 30, 2020 and June 30, 2019, respectively.

(b) Net HIC OPEB Liability

The Authority's net HIC liability was measured as of June 30, 2019. The total HIC OPEB liability was determined by an actuarial valuation as of June 30, 2018, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date as of June 30, 2019.

Actuarial Assumptions

The total HIC OPEB liability was based on an actuarial valuation as of June 30, 2018, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods and rolled forward to the measurement date of June 30, 2019.

Inflation	2.5%
Salary increases, including inflation	3.5% - 5.35%
Investment rate of return	6.75%, net of plan investment expenses, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 6.75% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 6.75% to simplify preparation of OPEB liabilities.

Mortality Rates

- Pre-Retirement: RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.
- Post-Retirement: RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.
- Post-Disablement: RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an experience study for the period July 1, 2012 through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

- Updated to a more current mortality table- RP-2014 projected to 2020
- Lowered retirement rates at older ages and extended final retirement from 70 to 75
- Adjusted termination rates to better fit experience at each year age and service year
- Lowered disability rates
- Discount rate decreased from 7.00% to 6.75%

Long-Term Expected Rate of Return

The long-term expected rate of return on VRS investments was determined using a log-normal distribution analysis 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 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. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Long-Term Expected Real Rate of Return	Weighted Average Long-Term Expected Rate of Return*
Public Equity	34.00%	5.61%	1.91%
Fixed Income	15.00	0.88	0.13
Credit Strategies	14.00	5.13	0.72
Real Assets	14.00	5.27	0.74
Private Equity	14.00	8.77	1.23
MAPS - Multi-Asset Public Strategies	6.00	3.52	0.21
PIP - Private Investment Partnership	3.00	6.29	0.19
Total	100.00%		5.13
Inflation			2.50
Expected arithmetic nominal return*			7.63%

* The above allocation provides a one-year return of 7.63%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 7.11%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75% which is roughly at the 40th percentile of expected long-term results for the VRS fund asset allocation.

Discount Rate

The discount rate used to measure the total HIC OPEB liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the entity for the HIC OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly, which was 100% of the actuarially determined contribution rate.

From July 1, 2019 on, employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the HIC OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total HIC OPEB liability.

(c) Changes in the Net HIC OPEB Liability

	Increase (Decrease)		
	Total HIC OPEB Liability	Plan Fiduciary Net Position	Net HIC OPEB Liability
Balances at June 30, 2018	\$ 563,273	\$ 351,013	\$ 212,260
Changes for the Year:			
Service cost	19,224	–	19,224
Interest	38,101	–	38,101
Changes of assumption	14,536	–	14,536
Difference between expected and actual experience	36,748	–	36,748
Contributions - employer	–	36,426	(36,426)
Net investment income	–	22,663	(22,663)
Benefit payments, including refunds of employee contributions	(37,946)	(37,946)	–
Administrative expense	–	(488)	488
Other changes	–	(26)	26
Net changes	70,663	20,629	50,034
Balances at June 30, 2019	\$ 633,936	\$ 371,642	\$ 262,294

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

The following presents the Authority's net HIC OPEB Liability, using the current discount rate, as well as what the collective net HIC OPEB Liability would be if they were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Net HIC OPEB liability	\$ 326,542	\$ 262,294	\$ 207,358

(d) HIC OPEB Liabilities, HIC OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the Health Insurance Credit Program OPEB

For the year ended June 30, 2019, the Authority recognized Health Insurance Credit Program OPEB expense \$38,910.

At June 30, 2019, the Authority reported deferred outflows of resources and deferred inflows of resources related to the HIC OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on plan investments	\$ 1,873	\$ 5,680
Differences between expected and actual experience	49,633	–
Changes of assumptions	12,366	14,142
Employer contributions subsequent to the measurement date*	36,753	–
Total	\$ 100,625	\$ 19,822

* Deferred outflows of resources related to HIC OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the HIC OPEB Liability in the year ending June 30, 2021.

The \$36,753 reported as deferred outflows of resources related to the HIC OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized in the HIC OPEB expense in the fiscal year ending June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the HIC OPEB will be recognized in the HIC OPEB expense in future reporting periods as follows: future reporting periods as follows:

Years Ending June 30,	Amount
2020	\$ 5,604
2021	5,603
2022	8,274
2023	8,498
2024	10,717
Thereafter	5,354
Total	\$ 44,050

Additional financial information supporting the preparation of the VRS Political Subdivision Plan Schedules (including the financial statements and the unmodified audit opinion thereon, and required supplementary information) is presented in the separately issued VRS 2019 *Comprehensive Annual Financial Report* (CAFR). A copy of the 2019 VRS CAFR is publicly available through the About VRS link on the VRS website at www.varetire.org, or a copy may be obtained by submitting a request to the VRS Chief Financial Officer, P.O. Box 2500, Richmond, VA 23218-2500.

10 RISK MANAGEMENT

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. These risks are covered by insurance purchased from Virginia Risk Sharing Association (VRSA), a group insurance pool in the Commonwealth of Virginia. There have been no significant reductions in insurance coverage from the prior year, and settled claims have not exceeded insurance coverage for each of the fiscal years ended June 30, 2020, 2019, and 2018.

The Authority provides health benefits to employees under a self-insurance plan. Under an excess claims insurance policy, the Authority's liability is limited, on a calendar year basis, to aggregate claims per participant of \$110,000. A year end accrual of potential outstanding claims as of the last day of the fiscal year was estimated at three times the average monthly claim. As reflected in the table below, the liability for claims incurred but not reported as of June 30, 2020, 2019, and 2018 was estimated to be \$1,320,038, \$1,292,165, and \$1,107,394, respectively, and is included in accounts payable and accrued expenses on the accompanying Statements of Net Position.

Amounts reported as deferred inflows of resources related to self-insurance will be recognized in OPEB expense as follows:

	2020	2019	2018
Estimated outstanding claims liability at beginning of fiscal year	\$ 1,292,165	\$ 1,107,394	\$ 1,004,642
Employee and Employer portion of premiums withheld	5,035,450	5,402,527	4,754,116
Payments to Third Party Administrator	(5,064,577)	(5,217,756)	(4,651,364)
Estimated outstanding claims liability at end of fiscal year	\$ 1,263,038	\$ 1,292,165	\$ 1,107,394

For fiscal year 2021, the Authority estimates its share of claims to be approximately \$5.1 million. This estimate represents the Authority's best estimate; however, actual claims and judgments may vary from year to year.

Additionally, the Authority maintains its longstanding commitment of staffing and budget resources to both a regulatory affairs program and a safety loss and control program. The goal of these programs is to proactively manage and maintain its operations and work sites in the safest possible manner for the Authority's employees and its customers.

11 COMMITMENTS

(a) Fairfax Water

The Authority has several agreements with Fairfax Water, which collectively reserve treated water capacity of 62.4 MGD, representing 92% of the Authority's total water capacity. These agreements allow for the purchase of additional capacity, if available, based on actual construction and administrative costs negotiated at the time of sale. In May 2017, the Authority purchased an additional 5 MGD of water capacity for approximately \$26.6 million. Capacity payments are included in property, plant and equipment on the accompanying Statements of Net Position, and are amortized over the estimated useful life from the inception of the agreement, ranging between 40-50 years.

Fairfax Water provides water to the Service Authority from two water treatment plants, the Corbalis Water Treatment Plant in Herndon, Virginia, which withdraws water from the Potomac River and the Griffith Water Treatment Plant in Lorton, Virginia, which withdraws water from the Occoquan Reservoir. The Authority participates in construction and expansion costs of the two water treatment plants based on the Authority's purchased capacity. Amounts expended for construction, expansion and capacity in fiscal years 2020 and 2019, were \$1.9 million and \$3.7 million, respectively, with total payments to date as of June 30, 2020 of \$130.0 million.

The Authority also has agreements with Fairfax Water for the reservation of transmission main capacity. Under these agreements, the Authority is required to make equal monthly payments for varying terms that range up to 420 months (35 years) from the date of the initial payment. Payments made in fiscal years 2020 and 2019 were approximately \$700,000. Future payments due to Fairfax Water for these agreements are as follows:

Years Ending June 30,

2021	\$ 668,006
2022	668,006
2023	668,006
2024	668,006
2025	668,006
2026-2030	3,340,030
Total	\$ 6,680,060

In addition, Fairfax Water charges the Authority a rate per thousand gallons of water delivered. The rate is based on Fairfax Water's operation, maintenance, and general and administrative costs divided by total consumption billed. Purchased water expenditures related to Fairfax Water for fiscal years 2020 and 2019 were approximately \$12.3 million and \$11.1 million, respectively.

(b) City of Manassas

The Authority has a water capacity and service agreement with the City of Manassas which effectively reserves 5 MGD of treated water capacity for the Authority at the City's water treatment facility at Lake Manassas, which represents approximately 7% of the Authority's total available purchased water capacity. The agreement also allows for the use of an additional 2 MGD by either party, if needed. The Authority is obligated to pay the City's wholesale rate for purchases at the water treatment facility and is obligated to pay the City's wholesale rate plus a wheeling charge for water taken at other delivery points. The City's wholesale rate consists of fixed and variable costs per the agreement. The initial amount paid by the Authority to the City for the 5 MGD of capacity was \$8,131,846. This amount is included in property, plant and equipment as advance capacity payments on the accompanying Statements of Net Position, and is being amortized through the year 2039 on a straight-line basis.

The Authority also shares in the cost of certain capital improvements based on the Authority's reserved capacity as a percentage of the total permitted capacity at the City's water treatment facility. The Authority has made payments for capital costs during the fiscal years ended June 30, 2020 and 2019 in the amount of \$204,000 and \$187,000, respectively. These payments are included in property, plant and equipment as advance capacity payments on the accompanying Statements of Net Position, and are being amortized over 40 years on a straight-line basis.

The cost of water purchased by the Authority from the City during fiscal years 2020 and 2019 was approximately \$1.9 million and \$1.6 million, respectively

(c) City of Manassas Park

In December 2008, pursuant to the terms of a Water Capacity Purchase and Service Agreement (the Agreement), the Authority sold 1.4 MGD of wholesale water capacity to the City of Manassas Park for \$9,870,000. The rate for water service will be based on the wholesale rate charged by Fairfax Water to the Authority, plus other charges and costs which are defined in the Agreement.

(d) Prince William County Credit

Effective December 31, 2012, the Authority entered into an Amendment to the Modification and Assumption Agreement with the County (the Amendment), whereby the Authority would assume responsibility for paying the County's existing obligation towards UOSA debt service. Under the terms of the Amendment, the Authority established a non-cash credit for the benefit of the County in the amount of \$13,782,300, representing previous payments made by the County toward UOSA debt service under existing agreements.

The County may use this non-cash credit to purchase water and sewer availability, or any asset of the Authority offered for sale by the Authority. The non-cash credit will be reduced by the value of any such sale. In order to access the non-cash credit, the County must provide to the Authority a duly adopted resolution of the BOCS authorizing the application of the non-cash credit for a specific transaction. To date, the County has used \$1,804,188 of the non-cash credit toward availability fees for various County facilities.

Additionally, an agreement has been executed for the sale of a part of the 57.86 acres of land (the Occoquan Forest site) from the Authority to the County for \$2,000,000, to be paid by the County using the non-cash credit. The sale will be completed per the terms of the sale agreement once the facility has been fully decommissioned in accordance with state and federal requirements, by the end of March 2021.

As of June 30, 2020, the remaining amount of the non-cash credit available to the County is \$9,978,112, of which \$154,514 has been approved by the BOCS for use in earmarked projects.

(e) Virginia Department of Transportation (VDOT)

VDOT requires all entities performing work in the VDOT right-of-way to post a continuous bond or surety to insure compliance with the conditions of land use permits that are issued by VDOT and to guarantee the satisfactory performance of the work.

Through its commercial insurance policies, the Authority meets VDOT's requirements for liability coverage for personal injury, property damage and lawsuits that may arise from the work performed under the permits.

(f) Other Commitments

The Authority has entered into commitments for capital projects and operating expenditures totaling approximately \$28.6 million as of June 30, 2020. These commitments are goods and services ordered, but not yet received as of June 30.

(g) Operating Leases

In April 2016, the Authority executed an agreement to lease commercial industrial space in Woodbridge, VA to be used as warehouse space. The original lease term was for two years, with an expiration date of March 31, 2018, and was then amended and extended for an additional six years through March 31, 2024. Payments made under the lease during the years ended June 30, 2020 and 2019 were \$42,869 and \$42,240 respectively.

In January 2018, the Authority executed an agreement to lease additional commercial industrial space in Woodbridge, VA to be used as warehouse space. The original lease term is for six years and three months, with an expiration date of March 31, 2024. Payments made under the lease during the year ended June 30, 2020 and 2019 were \$66,707 and \$65,893 respectively.

In April 2018, the Authority executed an agreement to lease additional commercial office space in Woodbridge, VA to be used as office space while the Authority constructs a new building on the Raymond L. Spittle Building campus. The original lease term is for three years and nine months, with an expiration date of December 31, 2021. Payments made under the lease during the year ended June 30, 2020 and 2019 were \$367,060 and \$295,534 respectively.

Future minimum lease payments for the remaining lease terms are as follows:

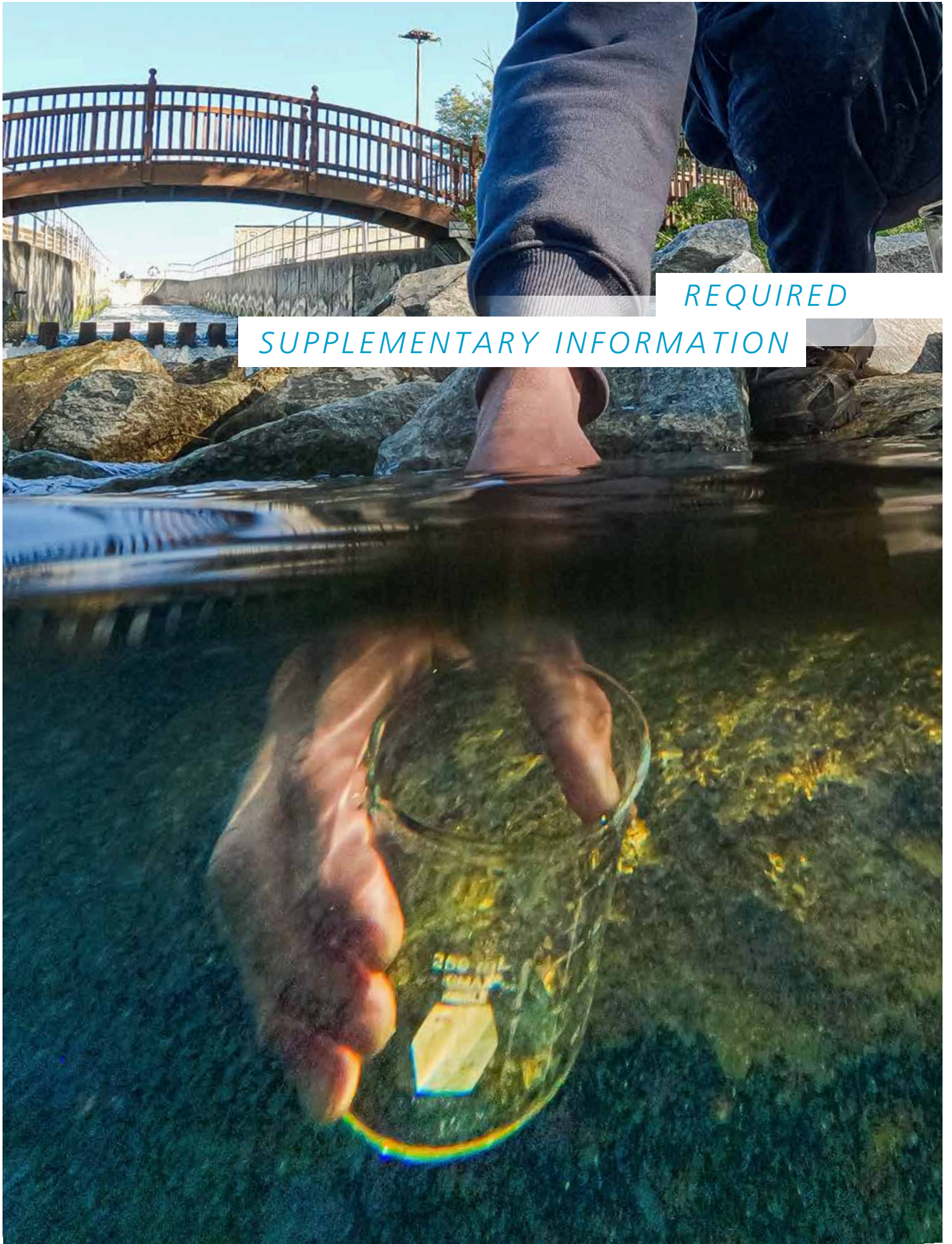
Years Ending June 30,

2021	\$	469,542
2022		287,269
2023		96,015
2024		73,220
Total	\$	<u>926,046</u>

12 CONTRIBUTIONS FROM DEVELOPERS AND OTHERS

	2020	2019
Contributed Assets	<u>\$ 13,872,544</u>	<u>\$ 27,083,099</u>

Contributions from developers and governmental entities were received in the form of cash, property, water mains, sanitary sewer lines, pumping stations, fire hydrants, manholes and associated infrastructure. These amounts are reflected as income on the accompanying Statements of Revenues, Expenses and Changes in Net Position.



*REQUIRED
SUPPLEMENTARY INFORMATION*

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Changes in Net Pension Liability and Related Ratios – VRS

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

	June 30, 2019	June 30, 2018	June 30, 2017
Total Pension Liability			
Service cost	\$ 2,328,302	\$ 2,271,207	\$ 2,309,644
Interest	2,921,479	2,632,373	2,461,107
Difference between expected and actual experience	1,180,278	594,573	(22,744)
Changes of assumptions	1,586,517	–	(1,060,533)
Benefit payments, including refunds of employee contributions	(1,561,607)	(1,174,533)	(1,307,115)
Net change in total pension liability	6,454,969	4,323,620	2,380,359
Total pension liability - beginning	42,516,211	38,192,591	35,812,232
Total pension liability - ending (a)	\$ 48,971,180	\$ 42,516,211	\$ 38,192,591
Plan Fiduciary Net Position			
Contributions - employer	\$ 2,515,217	\$ 2,400,611	\$ 2,243,187
Contributions - employee	1,213,286	1,219,540	1,068,016
Net investment income	2,903,907	2,797,714	3,924,943
Benefit payments, including refunds of employee contributions	(1,561,607)	(1,174,533)	(1,307,115)
Administrative expense	(25,628)	(21,705)	(20,334)
Other	(1,872)	(2,599)	(3,583)
Net change in plan fiduciary net position	5,043,303	5,219,028	5,905,114
Plan fiduciary net position - beginning	41,884,697	36,665,669	30,760,555
Plan fiduciary net position - ending (b)	\$ 46,928,000	\$ 41,884,697	\$ 36,665,669
Net pension liability - ending (a) - (b)	\$ 2,043,180	\$ 631,514	\$ 1,526,922
Plan fiduciary net position as a percentage of the total pension liability - end of year	95.83%	98.51%	96.00%
Covered payroll	\$ 28,187,573	\$ 26,498,366	\$ 23,622,592
Net pension liability as a percentage of covered payroll	7.25%	2.38%	6.46%

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Changes in Net Pension Liability and Related Ratios – VRS

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

	June 30, 2016	June 30, 2015	June 30, 2014
Total Pension Liability			
Service cost	\$ 2,355,421	\$ 2,242,139	\$ 2,206,642
Interest	2,177,586	1,865,113	1,647,355
Difference between expected and actual experience	728,798	1,273,190	–
Benefit payments, including refunds of employee contributions	(1,115,876)	(717,210)	(769,149)
Net change in total pension liability	4,145,929	4,663,232	3,084,848
Total pension liability - beginning	31,666,303	27,003,071	23,918,223
Total pension liability - ending (a)	\$ 35,812,232	\$ 31,666,303	\$ 27,003,071
Plan Fiduciary Net Position			
Contributions - employer	\$ 2,179,687	\$ 2,102,230	\$ 2,153,139
Contributions - employee	1,031,701	1,004,829	977,870
Net investment income	578,136	1,202,198	3,169,360
Benefit payments, including refunds of employee contributions	(1,115,876)	(717,210)	(769,149)
Administrative expense	(15,995)	(13,734)	(14,928)
Other	(223)	(261)	167
Net change in plan fiduciary net position	2,657,430	3,578,052	5,516,459
Plan fiduciary net position - beginning	28,103,125	24,525,073	19,008,614
Plan fiduciary net position - ending (b)	\$ 30,760,555	\$ 28,103,125	\$ 24,525,073
Net pension liability - ending (a) - (b)	\$ 5,051,677	\$ 3,563,178	\$ 2,477,998
Plan fiduciary net position as a percentage of the total pension liability - end of year	85.89%	88.75%	90.82%
Covered payroll	\$ 22,254,970	\$ 21,098,905	\$ 19,834,457
Net pension liability as a percentage of covered payroll	22.70%	16.89%	12.49%

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Employer Contributions

For the Year Ended	Contractually Required Contribution	Contribution in Relation to the Contractually Required Contribution	Contribution Deficiency (excess)	Covered Employee Payroll	Contributions as a Percentage of Covered Payroll
June 30, 2020	\$ 2,497,516	\$ 2,497,516	\$ –	\$ 27,173,316	9.19%
June 30, 2019	2,515,217	2,515,217	–	28,187,573	8.92
June 30, 2018	2,400,611	2,400,611	–	26,498,366	9.06
June 30, 2017	2,243,187	2,243,187	–	23,622,592	9.50
June 30, 2016	2,179,687	2,179,687	–	22,254,970	9.79
June 30, 2015	2,102,230	2,102,230	–	21,098,905	9.96
June 30, 2014	2,153,139	2,153,139	–	19,834,457	10.86

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION FOR THE YEAR ENDED JUNE 30, 2020

1. *Changes of Benefit Terms*

There have been no significant changes to the VRS benefit provisions since the prior actuarial valuation.

2. *Changes of Assumptions*

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period from July 1, 2012, through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumption as a result of the experience study and VRS Board action are as follows:

- Updated to a more current mortality table – RP-2014 projected to 2020
- Lowered rates at older ages and changed final retirement from 70 to 75
- Adjusted withdrawal rates to better fit experience at each age and service year through 9 years of service
- Lowered disability rates
- Discount rate decreased from 7.00% to 6.75%

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

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

	June 30, 2019	June 30, 2018	June 30, 2017
Total OPEB Liability			
Service cost	\$ 609,660	\$ 574,033	\$ 592,753
Interest	476,771	503,012	460,115
Effect of economic/demographic gains or losses	611,750	–	–
Effect of assumption changes or other inputs	203,685	372,635	(367,046)
Benefit payments	(880,214)	(841,386)	(790,802)
Net change in total OPEB liability	1,021,652	608,294	(104,980)
Total OPEB liability - beginning	13,448,690	12,840,396	12,945,376
Total OPEB liability - ending	\$ 14,470,342	\$ 13,448,690	\$ 12,840,396
Total OPEB liability as a percentage of covered-employee payroll	51.34%	50.75%	54.36%
Covered-employee payroll	\$ 28,187,573	\$ 26,498,366	\$ 23,622,592

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION FOR THE YEAR ENDED JUNE 30, 2020

1. *Changes of Benefit Terms*

There have been no actuarially material changes to the OPEB Plan benefit provisions since the prior actuarial valuation.

2. *Changes of Assumptions*

The following changes in actuarial assumptions were made effective June 30, 2020:

- The age-related claims costs used to estimate the true underlying cost of coverage for pre-65 retirees was updated to reflect medical changes since the prior valuation.
- The pre-Medicare healthcare trend assumption was changed from 6.30% in fiscal 2018, 5.90% in fiscal 2019, 6.50% in fiscal 2020, then grading to an ultimate rate of 4.20% in fiscal 2092 to 6.30% for fiscal 2020, 4.90% for fiscal 2021, 5.30% for fiscal 2022, then grading to an ultimate rate of 4.00% for fiscal 2074. These rates are consistent with information from the Getzen Trend Model, Milliman's *Health Costs Guidelines*[™], and actuarial judgment.
- Changed the actuarial cost method from projected unit credit to entry age normal (level percentage of pay).
- Changed the percentage of future retirees assumed to elect to cover their spouse upon retirement based on actual election experience between January 1, 2012 and June 30, 2017.
- Discount rate decreased from 3.50% to 2.21%.

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Employer's Share of Net OPEB Liability - GLI Program

For the Year Ended	June 30, 2019	June 30, 2018	June 30, 2017
Employer's proportion of the Net GLI OPEB Liability	0.128%	0.133%	0.128%
Employer's proportionate share of the net GLI OPEB liability	\$ 2,162,474	\$ 1,951,000	\$ 1,814,000
Employer's covered payroll	28,187,573	26,498,366	23,622,592
Employer's proportionate share of the net GLI OPEB liability as a percentage of its covered payroll	7.7%	7.4%	7.7%
Plan fiduciary net position as a percentage of the total GLI OPEB liability	52.00%	51.22%	48.86%

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

Schedule of Employer Contributions

For the Year Ended	Contractually Required Contribution	Contribution in Relation to the Contractually Required Contribution	Contribution Deficiency (excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
June 30, 2020	\$ 137,720	\$ 137,720	\$ -	\$ 27,173,316	0.51%
June 30, 2019	136,520	136,520	-	28,187,573	0.48
June 30, 2018	127,971	127,971	-	26,498,366	0.48
June 30, 2017	116,567	116,567	-	23,622,592	0.49

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION FOR THE YEAR ENDED JUNE 30, 2020

1. *Changes of Benefit Terms*

There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

2. *Changes of Assumptions*

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period from July 1, 2012, through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumption as a result of the experience study and VRS Board action are as follows:

The benefits payable under the Group Life Insurance Program have several components:

- Updated to a more current mortality table - RP-2014 projected to 2020
- Lowered withdrawal rates at older ages and changed final retirement from 70 to 75
- Adjusted termination rates to better fit experience at each year age and service year through 9 years of service
- Adjusted disability rates to better match experience
- Discount rate decreased from 7.00% to 6.75%

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Changes in Total OPEB Liability and Related Ratios – HIC Program

	June 30, 2019	June 30, 2018	June 30, 2017
Total HIC OPEB Liability			
Service cost	\$ 19,224	\$ 19,982	\$ 21,939
Interest	38,101	35,302	35,563
Difference between actual and expected experience	36,748	26,024	–
Changes of assumptions	14,536	–	(24,831)
Benefit payments	(37,946)	(44,708)	(28,085)
Net change in total HIC OPEB liability	70,663	36,600	4,586
Total HIC OPEB liability - beginning	563,273	526,673	522,087
Total HIC OPEB liability - ending (a)	\$ 633,936	\$ 563,273	\$ 526,673
Plan Fiduciary Net Position			
Contributions - employer	\$ 36,426	\$ 43,908	\$ 40,004
Net investment income	22,663	23,144	33,703
Benefit payments, including refunds of employee contributions	(37,946)	(44,708)	(28,085)
Administrative expense	(488)	(559)	(566)
Other	(26)	(1,635)	1,635
Net change in plan fiduciary net position	20,629	20,150	46,691
Plan fiduciary net position - beginning	351,013	330,863	284,172
Plan fiduciary net position - ending (b)	\$ 371,642	\$ 351,013	\$ 330,863
Net HIC OPEB liability - ending (a) - (b)	\$ 262,294	\$ 212,260	\$ 195,810
Plan fiduciary net position as a percentage of the total HIC OPEB liability - end of year	58.62%	62.32%	62.82%
Covered-employee payroll	\$ 28,187,573	\$ 26,498,366	\$ 23,622,592
Total HIC OPEB liability as a percentage of covered-employee payroll	0.93%	2.13%	2.23%

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Employer Contributions

For the Year Ended	Contractually Required Contribution	Contribution in Relation to the Contractually Required Contribution	Contribution Deficiency (excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
June 30, 2020	\$ 36,753	\$ 36,753	\$ -	\$ 27,173,316	0.14%
June 30, 2019	36,426	36,426	-	28,187,573	0.13%
June 30, 2018	43,908	43,908	-	26,498,366	0.17%
June 30, 2017	40,004	40,004	-	23,622,592	0.17%

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

See accompanying notes to required supplementary information.

Prince William County Service Authority

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION FOR THE YEAR ENDED JUNE 30, 2020

1. *Changes of Benefit Terms*

There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

2. *Changes of Assumptions*

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period from July 1, 2012, through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumption as a result of the experience study and VRS Board action are as follows:

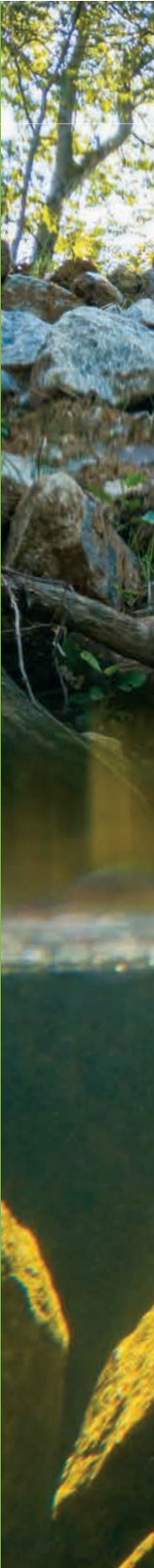
The benefits payable under the Group Life Insurance Program have several components:

- Updated to a more current mortality table - RP-2014 projected to 2020
- Lowered retirement rates at older ages and changed final retirement from 70 to 75
- Adjusted withdrawal rates to better fit experience at each year age and service year through 9 years of service
- Lowered disability rates
- Discount rate decreased from 7.00% to 6.75%

Our responsibility to our customers includes employing sustainable business and operational practices that support the health of the environment. We treat wastewater to exceptionally high standards at our H.L. Mooney Advanced Water Reclamation Facility before returning it to the Chesapeake Bay Watershed.

Enduring
Commitment

Commitment





STATISTICAL SECTION (Unaudited)

This section of the Authority's CAFR presents detailed information to provide a context for understanding what the information in the financial statements, notes to financial statements and required supplementary information says about the Authority's overall financial health.

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FINANCIAL TRENDS

Financial trend information is intended to assist users in understanding how the Authority's financial position has changed over time. The tables which follow disclose ten years of financial data.

TABLE 1 Condensed Statements of Net Position – Last Ten Fiscal Years (in thousands)

Assets and Deferred Outflows of Resources	2020	2019	2018*	2017*	2016	2015**	2014***	2013	2012	2011
Current assets	\$ 254,461	\$ 336,077	\$ 254,853	\$ 154,708	\$ 129,473	\$ 149,886	\$ 130,640	\$ 164,369	\$ 156,753	\$ 147,560
Non-current assets	1,243,198	1,147,718	1,211,978	1,300,963	1,289,955	1,243,984	1,234,393	1,169,506	1,184,570	1,138,866
Deferred outflows of resources	9,219	6,808	6,214	7,507	6,587	5,847	4,675	5,182	–	–
Total assets and deferred outflows of resources	\$1,506,878	\$1,490,603	\$1,473,045	\$1,463,178	\$1,426,015	\$1,399,717	\$1,369,708	\$1,339,057	\$1,341,323	\$1,286,426
Liabilities and Deferred Inflows of Resources										
Current liabilities	\$ 31,277	\$ 30,471	\$ 27,205	\$ 24,756	\$ 26,572	\$ 24,403	\$ 25,917	\$ 21,436	\$ 26,221	\$ 25,094
Long-term liabilities	121,988	129,471	138,954	152,100	148,658	156,032	161,962	169,624	206,578	211,518
Deferred inflows of resources	1,221	1,544	1,989	–	576	1,405	–	–	–	–
Total liabilities and deferred inflows of resources	154,486	161,486	168,148	176,856	175,806	181,840	187,879	191,060	232,799	236,612
Net Position										
Net investment in capital assets	949,098	936,479	898,873	882,957	840,189	806,629	748,917	723,758	660,584	618,970
Restricted	21,268	18,229	16,750	17,204	16,556	15,954	19,060	20,281	28,083	29,719
Unrestricted	382,026	374,409	389,274	386,161	393,464	395,294	413,852	403,958	419,857	401,125
Total net position	1,352,392	1,329,117	1,304,897	1,286,322	1,250,209	1,217,877	1,181,829	1,147,997	1,108,524	1,049,814
Total liabilities, deferred inflows of resources and net position	\$1,506,878	\$1,490,603	\$1,473,045	\$1,463,178	\$1,426,015	\$1,399,717	\$1,369,708	\$1,339,057	\$1,341,323	\$1,286,426

* The Authority implemented GASB Statement 75 in fiscal year 2018, which changed the manner certain items are reported. Data shown for fiscal year 2017 forward is reported in accordance with GASB 75. Prior years were not changed.

** The Authority implemented GASB Statement 68 in fiscal year 2015, which changed the manner certain items are reported. Data shown for fiscal year 2015 forward is reported in accordance with GASB 68. Prior years were not changed.

*** The Authority implemented GASB Statement 65 in fiscal year 2014, which changed the manner certain items are reported. Data shown for fiscal years 2013 forward are reported in accordance with GASB 65. Prior years were not changed.

Source: Prince William County Service Authority.

TABLE 2 Condensed Statements of Revenues, Expenses and Changes in Net Position – Last Ten Fiscal Years (in thousands)

	2020	2019	2018*	2017	2016	2015**	2014***	2013***	2012	2011
Operating revenues										
Water and sewer user charges	\$ 116,694	\$ 111,479	\$ 111,625	\$ 111,896	\$ 105,937	\$ 102,061	\$ 100,592	\$ 98,119	\$ 93,880	\$ 88,650
Other	2,460	2,351	2,134	2,655	2,513	2,380	2,640	2,978	1,947	2,182
Total operating revenues	119,154	113,830	113,759	114,551	108,450	104,441	103,232	101,097	95,827	90,832
Non-operating revenues										
Availability fees	28,996	21,873	27,778	36,617	26,471	33,183	30,892	41,722	34,344	21,875
Investment and other income	11,359	10,221	3,636	1,428	5,288	3,681	3,325	2,191	4,155	3,955
Grants revenue	5	–	–	–	–	–	–	823	1,343	2,219
Contributions from developers/others	13,873	27,083	15,793	22,913	21,794	18,685	16,364	13,422	36,987	31,391
Equity interest in UOSA	(4,043)	(7,202)	(7,197)	822	(8,058)	(3,808)	(5,413)	(1,629)	(3,459)	(7,179)
Total non-operating revenues	50,190	51,975	40,010	61,780	45,495	51,741	45,168	56,529	73,370	52,261
Total revenues	169,344	165,805	153,769	176,331	153,945	156,182	148,400	157,626	169,197	143,093
Operating expenses										
Personnel services	39,352	38,089	36,477	32,914	30,561	29,314	28,757	27,505	25,673	25,284
Purchased resources	28,031	25,336	24,376	23,429	22,972	21,244	21,145	22,121	22,694	20,624
Contractual services	9,561	10,304	9,638	8,698	8,668	7,157	6,487	5,513	5,421	5,129
Materials and supplies	5,650	6,247	5,996	4,857	4,609	4,715	4,818	4,199	4,151	4,081
Other	6,708	6,038	5,166	6,203	5,110	5,317	4,900	4,927	4,614	4,151
Total operating expenses	89,302	86,014	81,653	76,101	71,920	67,747	66,107	64,265	62,553	59,269
Non-operating expenses										
Depreciation/amortization	42,261	40,990	38,297	38,357	34,716	33,103	31,688	30,810	28,924	26,909
Interest expense	3,152	3,262	3,718	3,969	4,221	5,310	5,703	12,275	9,367	8,930
Payments for UOSA debt service	10,686	10,707	10,802	10,389	10,030	10,491	10,343	9,576	8,780	7,919
Other	668	612	724	668	726	726	727	727	863	1,201
Total non-operating expenses	56,767	55,571	53,541	53,383	49,693	49,630	48,461	53,388	47,934	44,959
Total expenses	146,069	141,585	135,194	129,484	121,613	117,377	114,568	117,653	110,487	104,228
Change in net position	23,275	24,220	18,575	46,847	32,332	38,805	33,832	39,973	58,710	38,865
Total net position, beginning of year	1,329,117	1,304,897	1,286,322	1,239,475	1,217,877	1,179,072	1,147,997	1,108,024	1,049,814	1,010,949
Total net position, end of year	\$1,352,392	\$1,329,117	\$1,304,897	\$1,286,322	\$1,250,209	\$1,217,877	\$1,181,829	\$1,147,997	\$1,108,524	\$1,049,814

* The Authority implemented GASB Statement 75 in fiscal year 2018, which required a restatement of beginning Net Position effective July 1, 2016.

** The Authority implemented GASB Statement 68 in fiscal year 2015, which required a restatement of beginning Net Position effective July 1, 2014.

*** The Authority implemented GASB Statement 65 in fiscal year 2014, which changed the manner certain items are reported. Data shown for fiscal years 2013 forward are reported in accordance with GASB 65. Prior years were not changed.

Source: Prince William County Service Authority.

REVENUE CAPACITY INFORMATION

Revenue capacity information is provided to assist users in understanding the factors affecting the Authority's ability to generate sources of revenue. In setting the user rate and availability fee structure, the Authority's general practice has been to cover projected operating costs with user rates and to cover projected capital improvement costs with availability fees. That practice generally allows growth in use of the Authority's services to pay for the additional costs of expanding the Authority's system capacity. The tables below set forth historical user and availability fees for a typical customer over the last ten years. For a complete schedule of all rates and fees, please contact the Authority's Customer Service Department at 703-335-7950 or mail your request to PWCSA, Customer Service Department, PO Box 2266, Woodbridge, Virginia 22195-2266.

TABLE 3 Water and Wastewater Charges – Last Ten Fiscal Years (in dollars)

User fees consist of a fixed monthly service charge, plus a commodity charge for water and sewer service. The monthly service fee is designed to recover fixed administrative costs and is based on meter size and the type of service being provided (water and/or sewer). Commodity charges cover the cost of purchased water and sewage treatment as well as the cost of operation and maintenance for the Service Authority's lines, pumping stations and water storage tanks. Commodity rates are based on the revenue class (Residential or Commercial) and the type of service being provided, and are billed based on metered water usage. Through the fiscal year ended June 30, 2012, any rate increases were effective September 1 of the fiscal year. Starting in the fiscal year ended June 30, 2013 rate increases were effective on January 1.

Fiscal Year	Commodity Charges (1)				Service Charges (2)			
	Residential		Commercial		3/4 inch		1 inch	
	Water	Wastewater	Water	Wastewater	Water	Wastewater	Water	Wastewater
2020	\$ 3.45	\$ 6.65	\$ 3.80	\$ 7.25	\$ 6.85	\$ 12.10	\$ 27.45	\$ 48.40
2019	3.35	6.55	3.70	7.15	5.95	10.45	23.75	41.85
2018	3.35	6.55	3.70	7.15	5.45	9.60	21.80	38.40
2017	3.35	6.55	3.70	7.15	5.45	9.60	21.80	38.40
2016	3.35	6.55	3.70	7.15	5.05	8.90	17.70	31.15
2015	3.35	6.55	3.70	7.15	4.65	8.20	13.95	24.60
2014	3.35	6.55	3.70	7.15	4.25	7.50	10.80	18.75
2013	3.35	6.55	3.70	7.15	4.25	7.50	10.80	18.75
2012	3.20	6.20	3.50	6.80	4.05	7.10	10.25	17.80
2011	3.05	5.90	3.30	6.45	3.85	6.75	9.75	16.90

(1) Commodity charges are based on 1,000 gallons of consumption.

(2) Monthly service charges are based on meter size. The two most common meter sizes are disclosed above.

Source: Prince William County Service Authority.

TABLE 4 Availability Fees – Last Ten Fiscal Years (in dollars)

All new customers connecting to the system are required to pay an availability fee before obtaining a building permit from Prince William County. Availability fees are used to fund long-term commitments associated with future system capacity and costs associated with expanding the system to serve new customers. Availability fees are based on the type of service (water and/or sewer) and the amount of monthly capacity purchased. Through the fiscal year ended June 30, 2012, any rate increases were effective September 1 of the fiscal year. Starting in the fiscal year ended June 30, 2013 rate increases were effective on January 1.

Fiscal Year	Residential (1)			Commercial (2)		
	Water	Wastewater	Total	Water	Wastewater	Total
2020	\$ 4,600	\$ 10,800	\$ 15,400	\$ 18,400	\$ 43,200	\$ 61,600
2019	4,600	10,800	15,400	18,400	43,200	61,600
2018	4,600	10,800	15,400	18,400	43,200	61,600
2017	4,600	10,800	15,400	18,400	43,200	61,600
2016	4,600	10,800	15,400	18,400	43,200	61,600
2015	4,600	10,800	15,400	18,400	43,200	61,600
2014	4,600	10,800	15,400	18,400	43,200	61,600
2013	4,600	10,800	15,400	18,400	43,200	61,600
2012	4,400	10,300	14,700	13,200	30,900	44,100
2011	4,200	9,900	14,100	12,600	29,700	42,300

(1) Residential availability fee disclosed above is based on a 3/4" meter size.

(2) Commercial availability fee disclosed above is based on a 1" meter size.

Source: Prince William County Service Authority.

TABLE 5 Ten Principal Customers by Year – Current Year and Nine Years Ago

Principal rate payer information is useful to determine concentrations in the source of revenues. This information provides predictive value of the Authority's economic condition if, for example, any major customers were to encounter financial difficulties which impact their use of Authority services. Over the past ten years, no single customer accounted for more than 2% of revenues from water and sewer user charges.

Total water and sewer user charge revenues (in thousands)		\$ 116,694		\$ 88,650	
Name	Type	2020		2011	
		Amount	% of Total	Amount	% of Total
Prince William County Schools	Schools	\$ 1,493	1.28%	\$1,233	1.39%
City of Manassas Park	Utility	1,298	1.11%	538	0.61%
Potomac Club	Housing	795	0.68%	–	–
Amazon	Data Centers	777	0.67%	–	–
Summerland Heights Apartments	Housing	583	0.50%	378	0.43%
Prince William County Park Authority	Parks and Swimming Pools	526	0.45%	266	0.30%
Westgate Apartments	Housing	511	0.44%	485	0.55%
Navy Military Housing	Housing	507	0.43%	378	0.43%
Sentara Potomac Hospital	Hospital	455	0.39%	359	0.41%
Potomac Mills Mall	Shopping Mall	437	0.37%	–	–
Coverstone Apartments	Housing	–	–	281	0.32%
INOVA Laundry Facility	Hospital Laundry	–	–	387	0.44%
Dominion Energy	Utility	–	–	332	0.37%

Source: Prince William County Service Authority.

DEBT CAPACITY INFORMATION

Debt capacity information is intended to assist users in understanding the Authority's debt burden and ability to issue additional debt. The ultimate guarantors of Authority debt are its customers, however, availability fees are designed to recover the cost of debt associated with expansion.

TABLE 6 Outstanding Debt Coverage – June 30, 2020

	Outstanding Debt	# of Customers	Debt Coverage per Customer
Virginia Resources Authority (VRA) loans payable	\$ 53,914,819	94,632	\$ 569.73
Revenue Bonds	54,348,671	94,632	574.32
Total	\$ 108,263,490	94,632	\$ 1,144.05

Source: Prince William County Service Authority.

TABLE 7 Pledged Revenue Coverage – Last Ten Fiscal Years (in thousands)

Senior debt consists of Revenue and Refunding bond issuances which are backed by pledged revenues and, senior debt includes financing agreements entered into with the Virginia Resources Authority. Revenues mean all revenues, receipts and other income derived from the ownership or operation of the Authority, including, without limitation, availability fees and any investment earnings. Through fiscal year 2007, subordinate debt consisted of financing agreements entered into with the VRA.

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Pledged revenues	\$ 159,510	\$ 145,924	\$ 145,173	\$ 152,595	\$ 140,209	\$ 141,305	\$ 137,450	\$ 145,010	\$ 134,326	\$ 116,662
Senior debt (1)										
Principal and interest requirements	\$ 7,899	\$ 7,885	\$ 7,927	\$ 7,927	\$ 7,927	\$ 8,256	\$ 8,544	\$ 9,588	\$ 10,327	\$ 13,393
Senior debt revenue coverage	20.19	18.51	18.31	19.25	17.69	17.12	16.09	15.12	13.01	8.71
Subordinate debt (1)										
Principal and interest requirements	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –
Total debt revenue coverage	20.19	18.51	18.31	19.25	17.69	17.12	16.09	15.12	13.01	8.71

(1) Effective with the closing of a new financing agreement with VRA on June 28, 2007, all of the outstanding balances with VRA became parity with the outstanding Revenue and Refunding Bonds debt.

See Table 8 and Table 9 for revenue coverage tests as defined by the Revenue Covenant and associated definitions within the Master Bond Indenture.

Source: Prince William County Service Authority.

TABLE 8 Revenue Bond Coverage, Test 1 – Last Ten Fiscal Years (in thousands)

This coverage test measures whether Net Revenues Available for Debt Service are sufficient to cover 1.2 times (or 120%) of annual debt service requirements. The Authority consistently exceeds the required coverage ratio. Calculations are based on the Revenue Covenant and associated definitions within the Authority’s Master Bond Indenture.

Fiscal Year	Gross Revenues (1)	Operating Expenses (2)	Net Revenues Available for Debt Service	1.2 Times Senior Debt Service Requirements (3)	Coverage (1.0 Req’d)
2020	\$ 159,510	\$ 100,656	\$ 58,854	\$ 9,479	6.21
2019	145,924	97,334	48,590	9,462	5.14
2018	145,173	93,178	51,995	9,512	5.47
2017	152,595	87,158	65,437	9,512	6.88
2016	140,209	82,677	57,532	9,512	6.05
2015	141,305	78,965	62,340	9,907	6.29
2014	137,450	77,177	60,273	10,253	5.88
2013	145,010	74,567	70,443	11,506	6.12
2012	134,326	72,196	62,130	12,392	5.01
2011	116,662	68,388	48,274	16,072	3.00

- (1) Gross revenues include all revenue categories except contributions from developers, funds received from grants and equity in earnings of UOSA.
(2) Operating expenses include operating expenses plus principal and interest payments on UOSA debt and payments on capacity agreements with Fairfax Water.
(3) Effective with the closing of a financing agreement with the VRA on June 28, 2007, all of the outstanding balances with the VRA become parity with the outstanding Revenue and Refunding Bonds debt. In fiscal years 2011 through 2020, the Authority made advanced payments to the Trustee toward debt service for the subsequent year.

Source: Prince William County Service Authority.

TABLE 9 Revenue Bond Coverage, Test 2 – Last Ten Fiscal Years (in thousands)

The Authority is required to meet at least one of the two coverage ratios reported in the table below. Coverage A demonstrates the Authority’s ability to withstand a 50% reduction of Availability Fees and maintain Adjusted Net Revenues sufficient to cover 100% of annual debt service requirements. Coverage B demonstrates the Authority’s ability for Adjusted Net Revenues plus 50% of the Unrestricted Reserves (primarily cash and investments) to cover 1.5 times (or 150%) of annual debt service requirements. The Authority consistently exceeds these required coverage ratios. Calculations are based on the Revenue Covenant and associated definitions within the Master Bond Indenture.

Fiscal Year	Net Revenues Available for Debt Service	Less 50% Developer Charges	Adjusted Net Revenues	Senior Debt Service Requirements (2)	"Either/Or" Coverage Requirement		
					Coverage A (1.0 Req’d)	Adjusted Net Revenues Plus 50% Unrestricted Reserves (1)	Coverage B (1.5 Req’d)
2020	\$ 58,854	\$ 14,498	\$ 44,356	\$ 7,899	5.62	\$ 213,895	27.08
2019	48,590	10,937	37,653	7,885	4.78	201,805	25.59
2018	51,995	13,889	38,106	7,927	4.81	213,518	26.94
2017	65,437	18,309	47,128	7,927	5.95	216,640	27.33
2016	57,532	13,236	44,296	7,927	5.59	213,779	26.97
2015	62,340	16,592	45,748	8,256	5.54	204,675	24.79
2014	60,273	15,446	44,827	8,544	5.25	210,613	24.65
2013	70,443	20,861	49,582	9,588	5.17	205,698	21.45
2012	62,130	17,172	44,958	10,327	4.35	208,736	20.21
2011	48,274	10,938	37,336	13,393	2.79	189,403	14.14

- (1) Unrestricted Reserves is the unrestricted fund balance, less one month’s budgeted operating expense.
(2) All of the outstanding balances with the VRA become parity with the outstanding Revenue and Refunding Bonds debt. In fiscal years 2011 through 2020, the Authority made advanced payments to the Trustee toward debt service for the subsequent year.

Source: Prince William County Service Authority.

D E M O G R A P H I C A N D E C O N O M I C I N F O R M A T I O N

Demographic and economic information is intended to assist users in understanding the socio-economic environment within which the Authority operates and to provide information that facilitates comparisons of financial statement information over time.

TABLE 10 Prince William County Population Data — Last Ten Calendar Years

Calendar Year	Population	Change	% Change
2020	467,900	4,033	0.9%
2019	463,867	3,901	0.8
2018	459,966	3,840	0.8
2017	456,126	6,262	1.4
2016	449,864	8,237	1.9
2015	441,627	8,003	1.9
2014	433,624	7,943	1.9
2013	425,681	7,574	1.8
2012	418,107	7,653	1.9
2011	410,454	8,452	2.1

Source: Prince William County.

TABLE 11 Prince William County Employment Data — Last Ten Calendar Years

Calendar Year	Civilian Labor Force (1)	At-Place Employment	Unemployment Rate % (2)
2020	248,661	132,129	6.4%
2019	247,826	133,102	2.5
2018	242,475	130,335	2.8
2017	239,266	127,892	3.4
2016	234,634	126,283	3.7
2015	231,335	122,607	4.1
2014	231,653	119,463	4.9
2013	231,105	116,645	5.2
2012	228,830	112,954	5.3
2011	225,195	108,137	5.7

(1) Average of monthly statistics for first half of 2020.

(2) Average of monthly statistics for first quarter of 2020.

Source: Prince William County.

TABLE 12 Prince William County Employer Data – Current Year and Nine Years Ago

The ten largest employers in Prince William County for the current year and nine years ago, respectively, are as follows:

Employer	Industry	2020		2011	
		Rank	Employees	Rank	Employees
Prince William County School Board	Local Government	1	1,000 and over	1	1,000 and over
County of Prince William	Local Government	2	1,000 and over	3	1,000 and over
U.S. Department of Defense	Federal Government	3	1,000 and over	2	1,000 and over
Walmart	Private	4	1,000 and over	5	1,000 and over
Morale Welfare and Recreation	Federal Government	5	1,000 and over	7	1,000 and over
Sentara Healthcare/Potomac Hospital Corp	Private	6	1,000 and over	6	1,000 and over
Target Corporation	Private	7	500 to 999	8	500 to 999
Wegmans Store #07	Private	8	500 to 999	9	500 to 999
Northern Virginia Community College	State Government	9	500 to 999	–	–
M J Morgan Group	Private	10	500 to 999	–	–
U.S. Federal Bureau of Investigation	Federal Government	–	–	4	1,000 and over
Minnieland Private Day School	Private	–	–	10	500 to 999

Source: Prince William County.

TABLE 13 Prince William County Personal Wealth Data – Last Ten Calendar Years

Fiscal Year	Average Assessed Housing Value (1)			
	Single Family Detached	Townhouse	Condominium	All Residential
2020	\$ 440,500	\$ 307,900	\$ 252,200	\$ 388,400
2019	423,400	292,900	240,800	372,400
2018	410,400	278,600	228,700	359,100
2017	397,000	267,200	218,300	346,700
2016	389,900	260,500	211,600	340,200
2015	381,600	252,700	205,800	332,600
2014	359,900	234,200	186,600	312,100
2013	335,300	212,000	170,100	289,100
2012	320,400	195,900	160,400	274,300
2011	310,700	189,000	157,100	265,800

(1) Averages reflect housing existing on January 1 of each year.

Source: Prince William County.

OPERATING INFORMATION

Operating information is intended to provide contextual information about the Authority's operations and resources to assist readers in using financial statement information to understand and assess the Authority's economic condition.

TABLE 14 Operating Indicators – Last Ten Fiscal Years

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Number of employees	338	343	335	306	288	281	258	257	253	245
Number of customers	94,632	93,498	92,654	90,892	89,235	88,057	87,061	85,991	85,506	83,687
Days cash on hand	881	1,257	993	600	511	658	529	748	684	657
Miles of water lines	1,273	1,260	1,236	1,225	1,214	1,203	1,195	1,185	1,165	1,149
Miles of sewer lines	1,126	1,116	1,097	1,091	1,086	1,080	1,097	1,097	1,085	1,082
Wastewater pumping stations	62	61	60	59	59	58	58	57	57	57
Water tank storage effective capacity (MG)	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	24.6
Number of fire hydrants	12,141	11,970	11,661	11,481	11,327	11,181	11,010	10,777	10,730	10,562
Water capacity (MGD):										
Capacity at Fairfax Water	62.4	62.4	62.4	62.4	57.4	57.4	51.4	51.4	51.4	51.4
Capacity at City of Manassas	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Service Authority wells	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total water capacity	67.8	67.8	67.8	67.9	62.9	62.9	56.9	56.9	56.9	56.9
Wastewater treatment capacity (MGD):										
Capacity at HLM AWRP	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Capacity at UOSA	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
Total wastewater treatment capacity	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8

Source: Prince William County Service Authority.

TABLE 15 Service Demand – Last Ten Fiscal Years

Fiscal Year	Customer Accounts	Millions of Gallons (MG)			
		Water Produced	Water Purchased	Water Peak Day Flow	Wastewater Treated
2020	94,632	36	10,465	42.1	9,794
2019	93,498	22	9,869	36.9	11,293
2018	92,654	26	10,106	40.5	9,671
2017	90,892	43	10,316	43.0	9,177
2016	89,235	68	9,907	34.2	9,540
2015	88,057	62	9,468	36.4	9,379
2014	87,061	58	9,388	35.3	9,739
2013	85,991	60	9,418	43.2	8,718
2012	85,506	58	9,423	43.7	9,108
2011	83,687	50	9,552	43.8	8,501

Source: Prince William County Service Authority.

GLOSSARY OF ACRONYMS

BOCS	Board of County Supervisors	MG	Million Gallons
BPS	Booster Pumping Station	MGD	Million Gallons per Day
CAFR	Comprehensive Annual Financial Report	NOL	Net OPEB Liability
CIP	Capital Improvements Program	NPL	Net Pension Liability
CIS	Customer Information System	OPEB	Other Postemployment Benefits
CMMS	Computerized Maintenance Management System	ORP	Optional Retirement Plan
COLA	Cost of Living Adjustment	PER	Preliminary Engineering Report
CPI-U	Consumer Price Index for all Urban Consumers	PTO	Paid Time Off
ERU	Equivalent Residential Unit	RP	Retirement Plan
FDIC	Federal Deposit Insurance Corporation	S&P	Standard and Poor's Rating Services
FFCB	Federal Farm Credit Bank	SCADA	Supervisory Control and Data Acquisition
FHLB	Federal Home Loan Bank	SEC	Securities and Exchange Commission
FTE	Full Time Equivalent	SPS	Sewage Pumping Station
GAAP	Generally Accepted Accounting Principles	TOL	Total Other Postemployment Benefits Liability
GASB	Governmental Accounting Standards Board	TPL	Total Pension Liability
GFOA	Government Finance Officers Association	UOSA	Upper Occoquan Service Authority
GIS	Geographic Information System	US	United States
GLI	Group Life Insurance	UST	Underground Storage Tank
HIC	Health Insurance Credit	VDOT	Virginia Department of Transportation
HLM AWRP	H.L. Mooney Advanced Water Reclamation Facility	VLDP	Virginia Local Disability Program
LGIP	Local Government Investment Pool	VRA	Virginia Resources Authority
LGIP EM	Local Government Investment Pool Extended Maturity	VRS	Virginia Retirement System
LODA	Line of Duty Act	VRSA	Virginia Risk Sharing Association
MD&A	Management's Discussion and Analysis	VSDP	Virginia Sickness and Disability Program
		VWFRF	Virginia Water Facilities Revolving Fund



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