



Prince William County Service Authority
Comprehensive Annual
Financial Report

2018


For the fiscal years ended
June 30, 2018
and June 30, 2017

99%



Service Authority
Exceptional Water Service

Woodbridge, Virginia

A man wearing a white hard hat with the Prince William County Service Authority logo, safety glasses, and a yellow high-visibility vest over a white shirt is looking down at a set of blueprints. He is standing on a construction site. In the background, there are yellow CAT excavators, other workers in safety gear, and trees under a blue sky with white clouds. A green diagonal graphic element is overlaid on the left side of the image.

Performance measurement is central to the Prince William County Service Authority's philosophy of continuous improvement.

In order to measure our performance, we track a wide variety of data, from the average service outage time during water main repairs to our overall customer satisfaction rate. We integrate the data provided by our systems and analyze it in order to better inform our future decision-making.

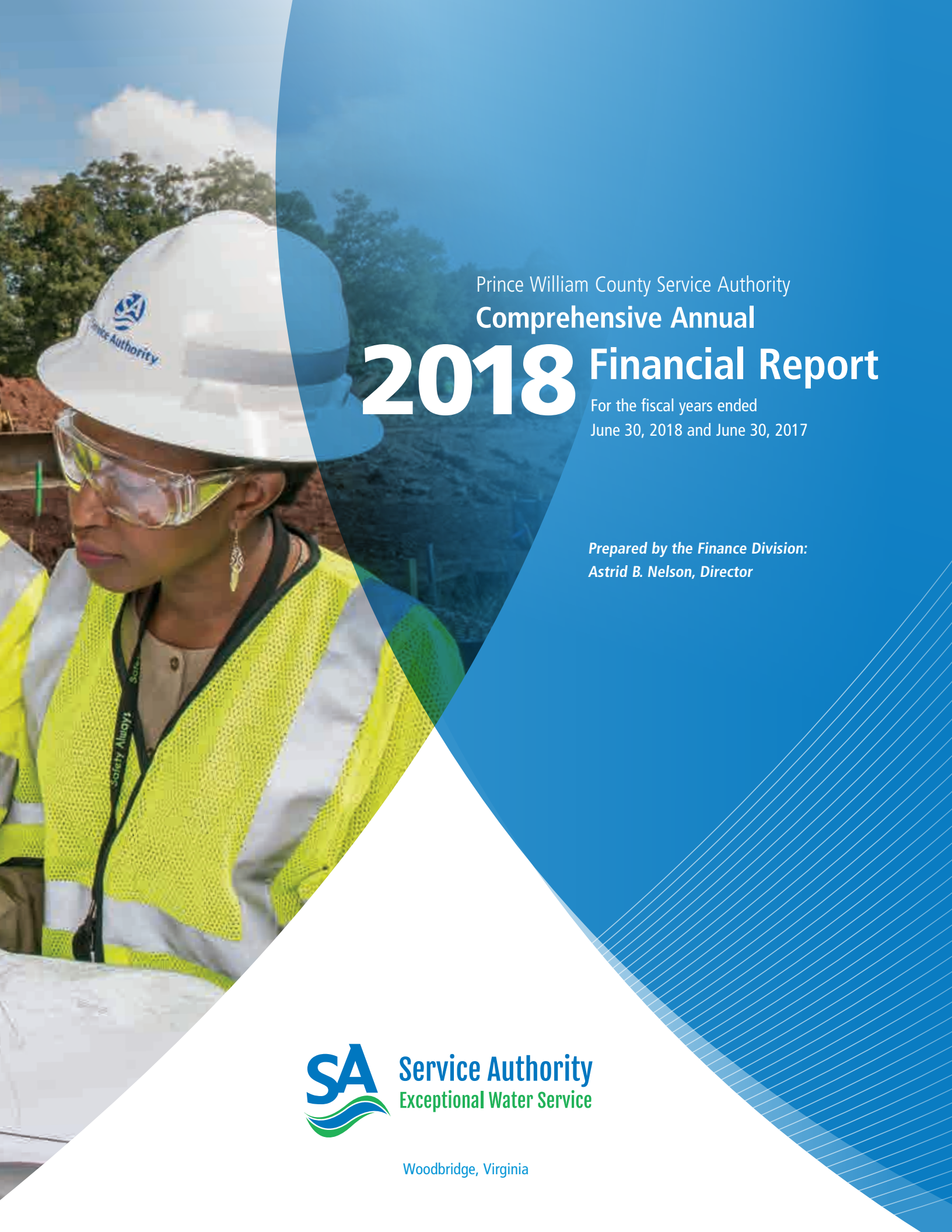
Continuous improvement also means ensuring that our standard operating procedures and processes are up to date and used on a regular basis. We do this by following the Plan-Do-Check-Act model to ensure consistency in how we approach and solve issues.

Providing a world-class customer experience is our bottom line, and we are always striving to meet that goal.

A handwritten signature in black ink that reads "Dean E. Dickey".

Dean E. Dickey

Dean E. Dickey,
General Manager



Prince William County Service Authority

Comprehensive Annual

2018 Financial Report

For the fiscal years ended
June 30, 2018 and June 30, 2017

*Prepared by the Finance Division:
Astrid B. Nelson, Director*



Woodbridge, Virginia



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Customer Satisfaction



9.2/10
Customer
Satisfaction



9.1 /10
Developer
Satisfaction

Workforce Excellence



4.2/5
Employee
Engagement

Annual Training
per Employee



36.7 Hours

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P.O. Box 2266
Woodbridge, VA 22195-2266

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Fax (703) 335-7905
www.pwcsa.org



Paul E. Ruecker, Chairman
Dr. K. Jack Kooyoomjian, Vice Chairman
Kurt E. Voggenreiter II, Secretary-Treasurer
Mark Allen, Member
Janice R. Carr, Member
Joyce P. Eagles, Member
Ernie Gonzales, Member
David A. Rutherford, Member

Dean E. Dickey, General Manager
Leslie A. Griffith, Deputy General Manager/CFO

November 26, 2018

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, 2018 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

The County is located approximately 35 miles southwest of Washington, D.C., encompassing 348 square miles, and is an integral part of the Washington metropolitan area. The service area of the Authority is traversed by two major interstates providing access to the metropolitan area and surrounding jurisdictions. The County's population continues to increase and was approximately 460,000 as of June 30, 2018, an increase of over 17% over the past 10 years.

According to the 2012-2016 American Community Survey, the 2016 median household income in the County was \$98,546, 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 2018, the unemployment rate was 2.9%, which is below both the national and Virginia state-wide levels. The total civilian labor force in Prince William County is currently estimated at approximately 246,000 persons, up 2.8% from 2017 and 18.3% from 2009. Based on the most current available data, the County has experienced improvement in the residential real estate market, as the average assessed value in 2018 was up 44.3% from the low point in 2009.

The Authority's major customers are well-established entities consisting of county schools, local utilities, multi-family housing complexes, internet data centers, a hospital, a related laundry facility, and retail outlets. In total, the ten largest customers represent just under 6% of total consumption revenues. Overall, the Authority's customer base is primarily residential accounts, representing more than 90% of the accounts billed. The Authority continues to experience growth in customer accounts, with an additional 1,762 accounts added during fiscal year 2018, representing an increase of 1.9% over the prior year.

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 these 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 a biennial 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 years 2018 and 2019 reflect a 4.6% and 4.4% increase, respectively. 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 requires an annual audit be performed. The Authority's financial statements for the year ended June 30, 2018 and 2017 have been audited by PBMares, LLP, a firm of licensed certified public accountants. The fiscal year 2018 Independent Auditor's Report is located in the financial section of this document.

AWARDS

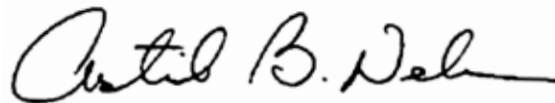
The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to the Prince William County Service Authority for its CAFR for the fiscal year ended June 30, 2017. This was the 29th consecutive year that the 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 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,

A handwritten signature in black ink, reading "Astrid B. Nelson". The signature is fluid and cursive, with a long horizontal line extending from the end.

Astrid B. Nelson, CPA
Chief of Strategic Business Initiatives/Director of Finance



Paul E. Ruecker
Chairman



Dr. K. Jack Kooyoomjian
Vice Chairman



Kurt E. Voggenreiter II
Secretary-Treasurer



Mark Allen



Janice R. Carr



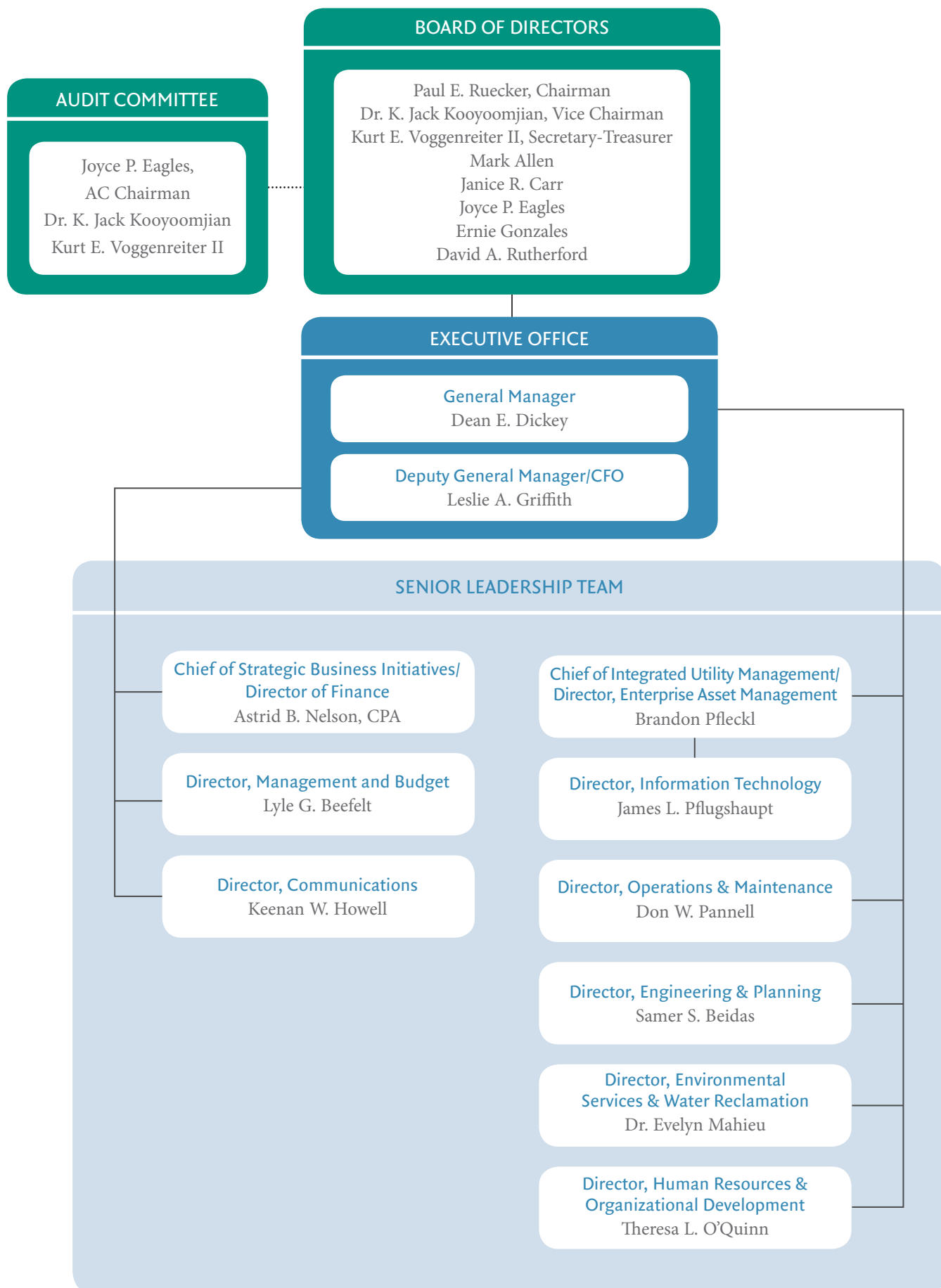
Joyce P. Eagles



Ernie Gonzales



David A. Rutherford





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, 2017

Christopher P. Morill

Executive Director/CEO

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Agile, Optimized and Sustainable Operations

Water Service Reliability

99.999%



Financial Viability

Bond Rating
Aaa/AAA



Regulatory
Compliance Rate
100%

5.6%

Water Loss (Compared to 16% industry average for water purchased but unaccounted for in sales.)



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INDEPENDENT AUDITOR'S REPORT

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

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, 2018 and 2017, 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, 2018 and 2017, 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.

Emphasis of Matter

Change in Accounting Principles

As discussed in Note 1(q) to the financial statements, the Authority restated beginning net position in order to record the other postemployment benefits and related components in accordance with the implementation of GASB Statement No. 75.

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 14-25 and 64-69, 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 26, 2018 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

PBMares, LLP

Harrisonburg, Virginia
November 26, 2018

Management's
Discussion and Analysis

A man wearing a dark baseball cap with a logo, a blue hoodie, and a high-visibility yellow safety vest is sitting at a desk. He is smiling and looking towards the camera. His right hand is on a computer mouse. On the desk, there is a keyboard, a blue control panel with various knobs and buttons, and a blue hard hat. A computer monitor in the background displays a video feed of a sewer pipe inspection. The entire image is framed within a large, stylized circular graphic with green and blue segments.

Sewer Video Inspections
1,044,055 feet

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, 2018. This analysis should be read in conjunction with the basic financial statements, which are located in the next section of the CAFR.

FINANCIAL HIGHLIGHTS

- Prince William County is the second largest county in Virginia with a population of 460,000 residents and a median household income of \$98,546. Although the pace of development is down from the prior year, growth continued with 1,768 equivalent residential units (ERU) certified in fiscal year 2018, resulting in availability fee revenue from new connections of \$27.8 million and an increase in the customer base of 1.9%.
- Fiscal year 2018 ended with Operating Revenue of \$113.8 million and Operating Expenses of \$81.7 million, ensuring sufficient funds continue to be available to pay for routine operating costs, long-term debt, as well as to invest in infrastructure improvements needed to maintain and replace capital assets.
- Cash and Investments increased in fiscal year 2018 by \$11.0 million to \$359.9 million. The Authority's debt coverage and cash position remain strong by exceeding all coverage requirements and holding ample days of cash on hand as of June 30, 2018.
- The Authority has Property, Plant and Equipment net of accumulated depreciation of over \$1 billion, of which \$46.1 million was added to construction in progress and other capital assets in fiscal year 2018. The Authority did not issue any debt in fiscal year 2018 and has strong debt service coverage ratios as it continues to fund its capital program with cash.
- Fiscal year 2018 resulted in a positive change to net position of \$18.6 million for a total net position of \$1.3 billion.

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 Director of Finance, a listing of the Authority's Board of Directors and organizational chart as of June 30, 2018, 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, 2017.

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, 2018 and 2017.

- 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 reports 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 2018, 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 \$18.6 million during fiscal year 2018, which represented a 1.4% increase from the prior fiscal year net position. At June 30, 2018, total net position was \$1.30 billion as compared to \$1.29 billion the previous year.

The following table reflects the Authority's net position at June 30, 2018 and 2017:

Condensed Statements of Net Position

	2018	2017	Increase (Decrease)	% Change
Capital assets, net	\$ 1,024,005,472	\$ 1,017,167,213	\$ 6,838,259	0.7%
Investments	352,313,209	337,598,285	14,714,924	4.4
Other current and non-current assets	90,512,701	100,905,791	(10,393,090)	(10.3)
Total assets	1,466,831,382	1,455,671,289	11,160,093	0.8
Deferred outflows of resources	6,213,669	7,506,473	(1,292,804)	(17.2)
Total assets and deferred outflows of resources	\$ 1,473,045,051	\$ 1,463,177,762	\$ 9,867,289	0.7
Bonds and VRA loans payable	\$ 127,803,090	\$ 137,205,354	\$ (9,402,264)	(6.9)
Other liabilities	38,355,722	39,650,232	(1,294,510)	(3.3)
Total liabilities	166,158,812	176,855,586	(10,696,774)	(6.0)
Deferred inflows of resources	1,988,941	-	1,988,941	100.0
Total liabilities and deferred inflows of resources	168,147,753	176,855,586	(8,707,833)	(4.9)
Net position:				
Net investment in capital assets	898,873,093	882,957,271	15,915,822	1.8
Restricted	16,750,451	17,204,241	(453,790)	(2.6)
Unrestricted	389,273,754	386,160,664	3,113,090	0.8
Total net position, as restated July 1, 2016	1,304,897,298	1,286,322,176	18,575,122	1.4
Total liabilities, deferred inflows of resources and net position	\$ 1,473,045,051	\$ 1,463,177,762	\$ 9,867,289	0.7

The Authority's net position increased by \$36.1 million during fiscal year 2017, which represented a 2.9% increase from the prior fiscal year ending net position. At June 30, 2017, total net position was \$1.29 billion as compared to \$1.25 billion the previous year.

The following table reflects the Authority's net position at June 30, 2017 and 2016:

Condensed Statements of Net Position

	2017	2016	Increase (Decrease)	% Change
Capital assets, net	\$ 1,017,167,213	\$ 983,246,390	\$ 33,920,823	3.4%
Investments	337,598,285	334,560,731	3,037,554	0.9
Other current and non-current assets	100,905,791	101,620,659	(714,868)	(0.7)
Total assets	1,455,671,289	1,419,427,780	36,243,509	2.6
Deferred outflows of resources	7,506,473	6,586,898	919,575	14.0
Total assets and deferred outflows of resources	\$ 1,463,177,762	\$ 1,426,014,678	\$ 37,163,084	2.6
Bonds and VRA loans payable	\$ 137,205,354	\$ 146,407,716	\$ (9,202,362)	(6.3)
Other liabilities	39,650,232	28,822,290	10,827,942	37.6
Total liabilities	176,855,586	175,230,006	1,625,580	0.9
Deferred inflows of resources	—	575,795	(575,795)	(100.0)
Total liabilities and deferred inflows of resources	176,855,586	175,805,801	1,049,785	0.6
Net position:				
Net investment in capital assets	882,957,271	840,189,224	42,768,047	5.1
Restricted	17,204,241	16,555,471	648,770	3.9
Unrestricted	386,160,664	393,464,182	(7,303,518)	(1.9)
Total net position as restated July 1, 2016	1,286,322,176	1,250,208,877	36,113,299	2.9
Total liabilities, deferred inflows of resources and net position	\$ 1,463,177,762	\$ 1,426,014,678	\$ 37,163,084	2.6

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.

2018-2017 Comparison

Net investment in capital assets was \$898.9 million at June 30, 2018 and represented 68.9% of total net position. Net investment in capital assets increased by 1.8% or \$15.9 million over the prior year. The principal factors for this increase were \$46.1 million in capital asset additions, primarily consisting of \$27.8 million in construction in progress and \$13.8 million in lines and improvements, partially offset by \$38.3 million in depreciation and amortization and a \$9.1 million reduction in bonds and VRA loans payable through scheduled debt service payments.

2017-2016 Comparison

Net investment in capital assets was \$883.0 million at June 30, 2017 and represented 68.6% of total net position. Net investment in capital assets increased by 5.1% or \$42.8 million over the prior year. The principal factors for this increase were a \$33.9 million increase in capital assets, net of accumulated depreciation and amortization, and an \$8.8 million reduction in bonds and VRA loans payable through scheduled debt service payments. The primary capital asset additions during the year were developer contributions (\$22.9 million) and the ongoing construction in progress of new or replacement facilities.

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.

2018-2017 Comparison

Restricted net position was \$16.8 million at June 30, 2018 and represented 1.3% of total net position. The net decrease of \$450,000 is primarily due to decreases in restricted cash and cash equivalents and investments.

2017-2016 Comparison

Restricted net position was \$17.2 million at June 30, 2017 and represented 1.3% of total net position. The net increase of \$650,000 is primarily due to slight increases in restricted cash and cash equivalents and investments, and increased volume of tenant account deposits.

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.

2018-2017 Comparison

Unrestricted net position increased \$3.1 million during fiscal year 2018 to \$389.3 million, a 0.8% increase from the prior year. Unrestricted net position comprises 29.8% of total net position. The increase is primarily due to normal fluctuations in unrestricted asset and liability accounts. At June 30, 2018, unrestricted cash and investments represented 88.2% of unrestricted net position.

2017-2016 Comparison

Unrestricted net position decreased \$7.3 million during fiscal year 2017 to \$386.2 million, a 1.9% decrease from the prior year. Unrestricted net position comprises 30.0% of total net position. The decrease is primarily due to the adoption of GASB Statement No. 75, partially offset by normal fluctuations in unrestricted asset and liability accounts. At June 30, 2017, unrestricted cash and investments represented 85.9% 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.

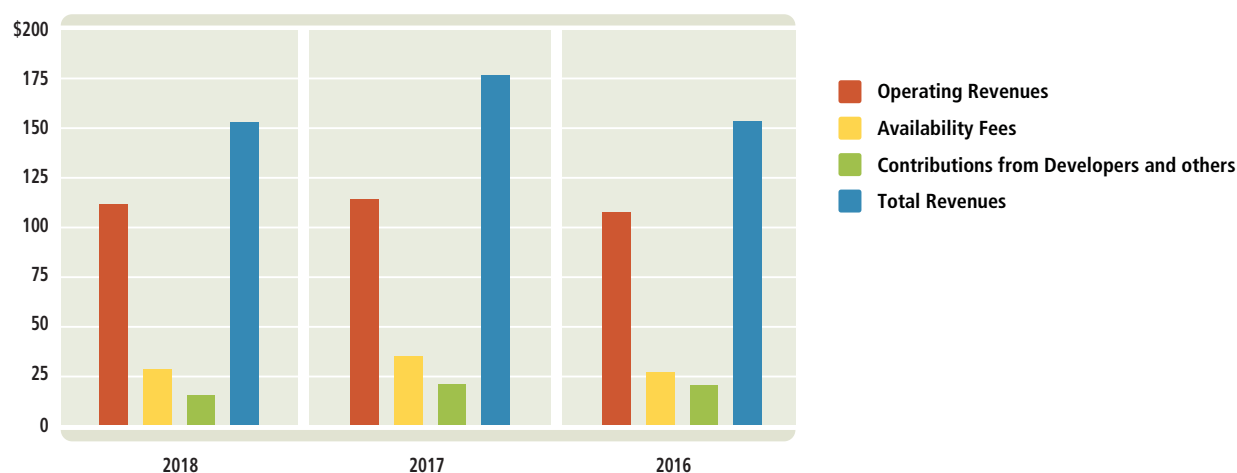
The following table summarizes changes in revenues and expenses between fiscal year 2018 and 2017:

Condensed Statements of Revenues, Expenses and Changes in Net Position

	2018	2017	Increase (Decrease)	% Change
Water and sewer user charges	\$ 111,625,426	\$ 111,896,117	\$ (270,691)	(0.2)%
Development charges	1,317,157	1,907,166	(590,009)	(30.9)
Other	817,246	747,419	69,827	9.3
Total operating revenues	113,759,829	114,550,702	(790,873)	(0.7)
Availability fees	27,777,731	36,616,696	(8,838,965)	(24.1)
Investment income	2,735,103	471,605	2,263,498	480.0
Equity interest in UOSA	(7,196,620)	821,845	(8,018,465)	(975.7)
Other	900,429	956,448	(56,019)	(5.9)
Total non-operating revenues	24,216,643	38,866,594	(14,649,951)	(37.7)
Contributions from developers and others	15,792,666	22,913,046	(7,120,380)	(31.1)
Total revenues	153,769,138	176,330,342	(22,561,204)	(12.8)
Personnel services	36,477,254	32,914,261	3,562,993	10.8
Purchased resources	24,375,783	23,428,840	946,943	4.0
Contractual services	9,637,841	8,698,465	939,376	10.8
Materials and supplies	5,996,469	4,857,141	1,139,328	23.5
Other	5,165,002	6,201,990	(1,036,988)	(16.7)
Total operating expenses	81,652,349	76,100,697	5,551,652	7.3
Depreciation and amortization	38,297,308	38,356,678	(59,370)	(0.2)
Interest expense	3,718,274	3,968,946	(250,672)	(6.3)
Payments for UOSA debt service	10,802,414	10,388,529	413,885	4.0
Purchased capacity	723,671	668,004	55,667	8.3
Total expenses	135,194,016	129,482,854	5,711,162	4.4
Change in net position	18,575,122	46,847,488	(28,272,366)	(60.3)
Total net position, beginning of year, as restated July 1, 2016	1,286,322,176	1,239,474,688	46,847,488	3.8
Total net position, end of year	\$ 1,304,897,298	\$ 1,286,322,176	\$ 18,575,122	1.4

*Amounts in the table above reflect reporting changes made in fiscal year 2018 as a result of the adoption of GASB 75 as disclosed in Note 1(q), Summary of Significant Accounting Policies, to the accompanying financial statements.

Revenues (In millions)

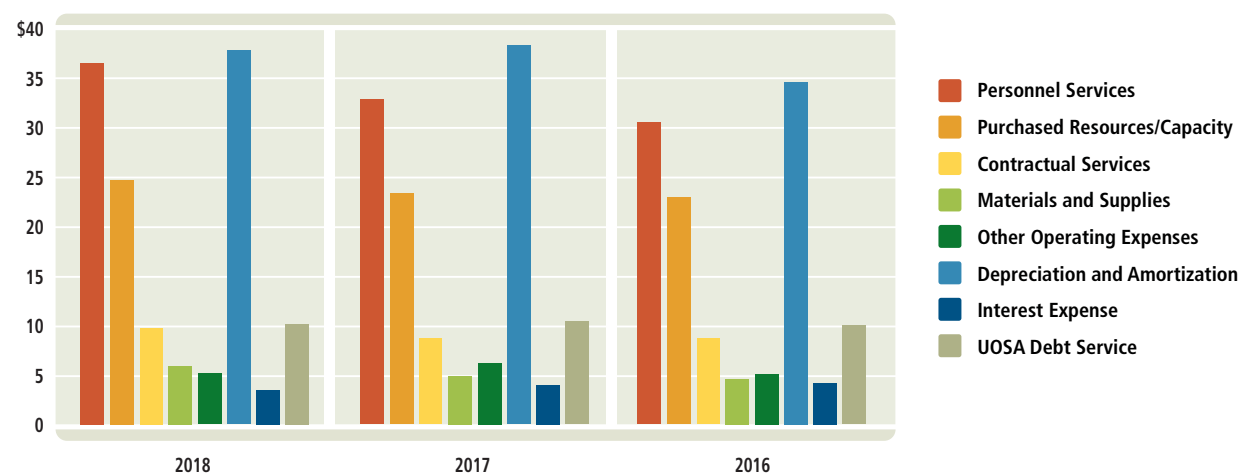


The following table summarizes changes in revenues and expenses between fiscal year 2017 and 2016:

Condensed Statements of Revenues, Expenses and Changes in Net Position

	2017	2016	Increase (Decrease)	% Change
Water and sewer user charges	\$ 111,896,117	\$ 105,937,332	\$ 5,958,785	5.6%
Development charges	1,907,166	1,685,352	221,814	13.2
Other	747,419	827,642	(80,223)	(9.7)
Total operating revenues	114,550,702	108,450,326	6,100,376	5.6
Availability fees	36,616,696	26,471,044	10,145,652	38.3
Investment income	471,605	4,516,908	(4,045,303)	(89.6)
Equity interest in UOSA	821,845	(8,057,877)	8,879,722	110.2
Other	956,448	771,164	185,284	24.0
Total non-operating revenues	38,866,594	23,701,239	15,165,355	64.0
Contributions from developers and others	22,913,046	21,794,174	1,118,872	5.1
Total revenues	176,330,342	153,945,739	22,384,603	14.5
Personnel services	32,914,261	30,560,909	2,353,352	7.7
Purchased resources	23,428,840	22,971,788	457,052	2.0
Contractual services	8,698,465	8,667,969	30,496	0.4
Materials and supplies	4,857,141	4,608,857	248,284	5.4
Other	6,201,990	5,110,948	1,091,042	21.3
Total operating expenses	76,100,697	71,920,471	4,180,226	5.8
Depreciation and amortization	38,356,678	34,715,898	3,640,780	10.5
Interest expense	3,968,946	4,220,935	(251,989)	(6.0)
Payments for UOSA debt service	10,388,529	10,029,748	358,781	3.6
Purchased capacity	668,004	726,420	(58,416)	(8.0)
Total expenses	129,482,854	121,613,472	7,869,382	6.5
Change in net position	46,847,488	32,332,267	14,515,221	44.9
Total net position, beginning of year, as restated July 1, 2016	1,239,474,688	1,217,876,610	21,598,078	1.8
Total net position, end of year	\$ 1,286,322,176	\$ 1,250,208,877	\$ 36,113,299	2.9

Expenses (In millions)



Operating Revenues

Operating revenues consist of water and sewer user charges, development charges and other operating revenues, which primarily consist of miscellaneous customer fees, such as refuse collection, hydrant meter penalties, returned check fees and lab testing revenue. 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.

2018-2017 Comparison

Operating revenues decreased by 0.7%, or \$791,000 over the prior fiscal year to \$113.8 million as a result of a decrease in developer charges of \$590,000 predominantly due to fewer inspections and as-builts during fiscal year 2018, and a decrease in user rates and fees of \$271,000, partially offset by an increase in other operating revenues of \$70,000. User rates and fees decreased by \$271,000 due to a decrease of \$1.5 million in volumetric charges that were offset by an increase in fixed service charges of \$1.2 million. Revenue from service charges increased 6.6% from the prior year after benefiting from a full year of adopted service charge increases that went into effect January 1, 2017 as well as a 1.9% increase in the number of customer accounts. However, revenue from volumetric charges decreased due to unusually high rainfall totals in fiscal year 2018 and thus less water used during the peak season. In addition, 2017 had significantly less rain during the peak season than prior years, resulting in a larger than normal variance in volumetric revenue between 2018 and 2017.

2017-2016 Comparison

Operating revenues increased by 5.6%, or \$6.1 million over the prior fiscal year, to \$114.6 million. The increase in operating revenues is predominantly due to a \$6.0 million increase in water and sewer user charges, which is a result of an adopted rate increase in January 2017, combined with an increase in the customer base and increased consumption as compared to the prior year. The Authority's customer base grew by 1,657 accounts to 90,892, or 1.9% higher than as of the end of fiscal year 2016. In addition, development charges increased approximately \$200,000, due primarily to increased inspection fee revenues during the fiscal year.

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.

2018-2017 Comparison

Non-operating revenues decreased by \$14.6 million, or 37.7% in fiscal year 2018 from the prior year. The primary factors impacting the change were an \$8.8 million decrease in availability fees and an \$8.0 million decrease in the equity interest in UOSA, partially offset by a \$2.3 million increase in investment income. Revenue from availability fees is directly related to economic development in the County and decreased in fiscal year 2018 as the number of ERUs sold decreased by 568 to 1,768. The equity interest in UOSA is a function of UOSA's annual performance and is a formula-based calculation of the Authority's percentage of capacity rights in the joint venture, multiplied by the change in UOSA's net position for the latest audited fiscal year. See Note 4 to the financial statements, Equity in Upper Occoquan Service Authority, for more information.

2017-2016 Comparison

Non-operating revenues increased by \$15.2 million, or 64.0% in fiscal year 2017 from the prior year. The primary factors impacting the change were a \$10.1 million increase in availability fees, and an \$8.9 million increase in the equity interest in UOSA, partially offset by a \$4.0 million decrease in investment income. Revenue from availability fees is directly related to economic development in the County and increased in fiscal year 2017 as the number of ERUs sold increased by 593 to 2,336. The equity interest in UOSA is a function of UOSA's annual performance and is a formula-based calculation of the Authority's percentage of capacity rights in the joint venture, multiplied by the change in UOSA's net position for the latest audited fiscal year. See Note 4 to the financial statements, Equity in Upper Occoquan Service Authority, for more information. The decrease in investment income resulted from an increase in the unrealized fair value losses on the portfolio as compared to the prior year end valuation, partially offset by an increase in income yields, as existing investment maturities are re-invested at higher rates.

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.

2018-2017 Comparison

Revenue from developer contributions decreased by \$7.1 million, or 31.1%, from fiscal year 2017. Assets deeded to the Authority in fiscal years 2018 and 2017 were approximately \$15.8 million and \$22.9 million, respectively.

2017-2016 Comparison

Revenue from developer contributions increased by \$1.1 million, or 5.1%, from fiscal year 2016. Assets deeded to the Authority in fiscal years 2017 and 2016 were approximately \$22.9 million and \$21.8 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.

2018-2017 Comparison

Operating expenses increased \$5.6 million, or 7.3%, from fiscal year 2017. Expenses related to personnel services increased by \$3.6 million or 10.8% from fiscal year 2017 primarily due to changes in staffing levels and annual merit increases. Materials and supplies increased \$1.1 million, or 23.5%, primarily due to operating maintenance and supplies. Although water consumption was down in fiscal year 2018, purchased resources increased \$947,000 or 4%, mostly due to an increase to the Fairfax Water wholesale rate. Contractual services increased \$939,000, or 10.8%, and other operating expenses decreased \$1.0 million, or 16.7%, due to normal fluctuations in those accounts.

2017-2016 Comparison

Operating expenses increased \$4.2 million, or 5.8%, from fiscal year 2016. The increase was primarily due to increases in personnel services, purchased resources and other operating expenses. Expenses related to personnel services increased by \$2.4 million or 7.7% from fiscal year 2016 primarily due to changes in staffing levels and annual merit increases. Purchased resources increased due to slightly higher wholesale rates as well as increased consumption related to account growth and higher water demand. Other operating expenses increased primarily due to emergency planning and security studies along with normal fluctuations in all other accounts.

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.

2018-2017 Comparison

Non-operating expenses increased by approximately \$219,000 in fiscal year 2018 as compared to fiscal year 2017. The factors impacting the increase were a \$414,000 increase in payments for UOSA debt service which is based on established amortization schedules related to UOSA debt and a \$56,000 increase in purchased capacity based on established amortization schedules, partially offset by a \$251,000 reduction in interest expense.

2017-2016 Comparison

Non-operating expenses increased by approximately \$48,000 in fiscal year 2017 as compared to fiscal year 2016. The factors impacting the increase were a \$359,000 increase in payments for UOSA debt service which is based on established amortization schedules related to UOSA debt, partially offset by a \$252,000 reduction in interest expense and a \$58,000 decrease in purchased capacity 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, 2018, capital assets, net of accumulated depreciation and amortization, was \$1.02 billion, an increase of \$6.8 million or 0.7% over fiscal year 2017.

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, 2018 and 2017.

Capital Assets, Net of Accumulated Depreciation and Amortization

	2018	2017	Increase (Decrease)	% Change
Lines and improvements	\$ 631,729,891	\$ 630,328,275	\$ 1,401,616	0.2%
Equipment	102,511,546	108,451,452	(5,939,906)	(5.5)
Buildings	90,282,594	92,845,436	(2,562,842)	(2.8)
Construction in progress	38,570,044	20,343,828	18,226,216	89.6
Land	5,066,504	5,062,158	4,346	0.1
Vehicles	2,164,969	2,168,369	(3,400)	(0.2)
Advance Capacity Payments	153,679,924	157,967,695	(4,287,771)	(2.7)
Total Capital Assets	\$ 1,024,005,472	\$ 1,017,167,213	\$ 6,838,259	0.7

At June 30, 2017, capital assets, net of accumulated depreciation and amortization, was \$1.02 billion, an increase of \$33.9 million or 3.4% over fiscal year 2016.

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, 2017 and 2016.

Capital Assets, Net of Accumulated Depreciation and Amortization

	2017	2016	Increase (Decrease)	% Change
Lines and improvements	\$ 630,328,275	\$ 619,379,090	\$ 10,949,185	1.8%
Equipment	108,451,452	102,109,973	6,341,479	6.2
Buildings	92,845,436	86,910,581	5,934,855	6.8
Construction in progress	20,343,828	31,842,726	(11,498,898)	(36.1)
Land	5,062,158	4,999,873	62,285	1.2
Vehicles	2,168,369	1,827,988	340,381	18.6
Advance Capacity Payments	157,967,695	136,176,159	21,791,536	16.0
Total Capital Assets	\$ 1,017,167,213	\$ 983,246,390	\$ 33,920,823	3.4

Additional information on the Authority's capital assets can be found in Note 1(f), 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 asset activities during fiscal years 2018 and 2017 included the following:

- Design for the Rose Hill Circle water and sewer main replacement was completed in fiscal year 2018.
- Construction activities to meet new air emission standards for sludge incineration were completed in fiscal year 2017. The Air Pollution Control improvements to the Fluidized Bed Incinerator at the H.L. Mooney Advanced Water Reclamation Facility (HLM AWRP) state of the art 24 MGD wastewater reclamation facility were implemented.
- Replacement of the second Evergreen Tank was completed in fiscal year 2017.
- Construction of the Balsam Street water main was completed in fiscal year 2017.
- Construction activities to replace 320 feet of water main in Sudley Manor Drive were completed in fiscal year 2017.

- In fiscal year 2017 the Authority purchased an additional 5 MGD of water capacity from Fairfax Water. More information regarding this project can be found in Note 10 (a), Commitments, to the accompanying basic financial statements.
- Capital improvement projects under planning, design and/or construction included the following:
 - Design of replacement of the Heritage Hunt sewer pump station is underway.
 - Design of the Galt Court water main replacement began in fiscal year 2017. Project to be bid in fiscal year 2019.
 - Design of the G Street water main replacement and upgrade began in fiscal year 2017. Project suspended in fiscal year 2018 pending condition assessment of surrounding neighborhood water mains.
 - Design of the Potomac Shores Elevated Water Storage Tank began in fiscal year 2017 and continued through fiscal year 2018.
 - The Preliminary Engineering Report (PER) for the new Bethlehem Road Elevated Water Storage Tank began in fiscal year 2018.
 - The Bull Run Mountain Well System Upgrades PER was started and completed in fiscal year 2018.
 - The Sudley Road Sewer Evaluation was started and completed in fiscal year 2018.
 - Construction activities to rehabilitate the HLM AWRF Process Water Storage Tank were started in fiscal year 2017 and completed in fiscal year 2018.
 - Study and design for Holiday Inn and Airport sewer pump stations rehabilitation started in fiscal year 2017 and completed in fiscal year 2018, with construction activities scheduled for fiscal year 2019.
 - Study for Graham Park sewer pump station rehabilitation completed in fiscal year 2017; design started in fiscal year 2018.
 - 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, increased use of smart phone and other enhancements to SCADA controls by field personnel. The project is estimated for completion during fiscal year 2022.
 - Phase II replacement of the Computerized Maintenance Management System (CMMS-Hansen) is currently underway with an estimated completion in fiscal year 2019. The project provides for increased operational efficiencies and enables the migration of hardware and operating system to a Microsoft platform.
 - Upgrade of the Customer Information System (CIS-Cayenta) was significantly complete in fiscal year 2018.
- 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. This approach extends asset life 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. Rehabilitation has been strategically initiated in key areas such as Flat Branch, with studies of other areas completed and moved to the construction phase.
- The Cow Branch and Bull Run interceptor sewer replacements have been completed, which eliminates infiltration and inflow from these aging and susceptible sewers. Replacement of the Colchester interceptor sewer, serving a large portion of eastern Prince William County, along with the construction of a supplemental sewer pumping station is currently under design with an estimated construction cost of \$13.9 million. In addition, over 8 miles of sewer mains have been recently rehabilitated using cured-in-place pipe.
- 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 2018 and 2017, developers installed and conveyed to the Authority for ownership and operation approximately 22 miles and 30 miles, respectively, of additional water mains, sanitary sewers, and related infrastructure representing approximately \$15.8 million and \$22.9 million, respectively, in total value.
- In fiscal year 2018, 471 development plans representing 1,959 residential units and 2.2 million square feet of commercial development were reviewed, and over 30 miles of water and sewer mains were inspected. In fiscal year 2017, 309 development plans representing 581 residential units and 2.3 million square feet of commercial development were reviewed, and over 35 miles of water and sewer mains were inspected.

Long-Term Debt

As of June 30, 2018, the Authority's outstanding long-term debt, net of deferred amounts, was \$127.8 million, compared to \$137.2 million at the end of fiscal year 2017.

Outstanding Long-Term Debt

	2018	2017	(Decrease)	% Change
VRA loans payable	\$ 66,460,114	\$ 72,427,732	\$ (5,967,618)	(8.2)%
Revenue bonds	61,342,976	64,777,622	(3,434,646)	(5.3)
Total long-term debt	\$ 127,803,090	\$ 137,205,354	\$ (9,402,264)	(6.9)

As of June 30, 2017, the Authority's outstanding long-term debt, net of deferred amounts, was \$137.2 million, compared to \$146.4 million at the end of fiscal year 2016.

Outstanding Long-Term Debt

	2017	2016	(Decrease)	% Change
VRA loans payable	\$ 72,427,732	\$ 78,225,583	\$ (5,797,851)	(7.4)%
Revenue bonds	64,777,622	68,182,133	(3,404,511)	(5.0)
Total long-term debt	\$ 137,205,354	\$ 146,407,716	\$ (9,202,362)	(6.3)

VRA Loans

The Authority has four outstanding financing agreements with VRA at June 30, 2018, with the proceeds of each being used to finance prior-year upgrades at the HLM AWRF.

2018-2017 Comparison

As of June 30, 2018, approximately \$66.5 million of long-term debt was outstanding with the VRA. The net decrease in VRA loans of approximately \$6.0 million was due to scheduled principal payments.

2017-2016 Comparison

As of June 30, 2017, approximately \$72.4 million of long-term debt was outstanding with the VRA. The net decrease in VRA loans of approximately \$5.8 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.

2018-2017 Comparison

As of June 30, 2018, the Authority had approximately \$61.3 million of outstanding revenue bonds, which were issued in 2013 and 2015. The 2015 bonds refunded the 2005 bonds effective July 1, 2015. The \$3.4 million decrease during fiscal year 2018 resulted from regularly scheduled debt service payments and the amortization of related premiums. In June 2018, the Authority made an advance payment from unrestricted funds toward fiscal year 2019 debt service in the amount of \$4.9 million.

2017-2016 Comparison

As of June 30, 2017, the Authority had approximately \$64.8 million of outstanding revenue bonds, which were issued in 2013 and 2015. The 2015 bonds refunded the 2005 bonds effective July 1, 2015. The \$3.4 million decrease during fiscal year 2017 resulted from regularly scheduled debt service payments and the amortization of related premiums. In June 2017, the Authority made an advance payment from unrestricted funds toward fiscal year 2018 debt service in the amount of \$4.9 million.

Compliance

The Authority was in compliance with all bond and loan covenants during fiscal years 2018 and 2017. Detailed information regarding the Authority's long-term debt outstanding is presented in Notes 5, 6, and 7 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 Service Authority's mission is to be 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 general economic and operational factors discussed below were considered in the preparation of the Authority's fiscal year 2019 budget:

- The Authority's budget estimated certification of 2,000 new ERUs for the year. This represents a combination of projected growth and pending certification plans.
- Revenues are projected to increase by \$13.4 million, or 9.7%, with an account growth of 1.4% and consumption revenues to increase to \$115.4 million or 6.7%. In September 2014, the Authority's Board of Directors adopted a three-year annual rate increase for water and sewer service charges and other fees in response to anticipated rising operating and capital costs. There were no scheduled rate increases for base volumetric charges or availability fees. As a result of the rate increase for water and sewer service charges the typical monthly residential bill increased approximately \$1.10 each year on January 1, with the last scheduled increase effective on January 1, 2017. The next rate study will take place in fiscal year 2019 with anticipated changes to be adopted in fiscal year 2019.
- Budgeted expenses are projected to increase by 4.4% in fiscal year 2019 as compared to fiscal year 2018, with an ongoing effort toward minimizing costs while maintaining the level of service expected by our customers. Personnel costs are expected to increase approximately \$3.0 million, or 7.5%, in fiscal year 2019. The budget reflects adequate staffing level and other non-personnel expenses necessary to fulfill board vision and meet higher customer expectations.
- The Authority's CIP is a planning level document that identifies projects for the next five years and beyond. The CIP is updated each year. Funding for projects is committed through the procurement process. The timing of construction projects is heavily dependent on development activity throughout the county. For fiscal year 2019, \$43 million in multi-year projects was identified and spending is estimated at \$25.5 million. Major project categories scheduled for fiscal year 2019 include improvements and replacements to water transmission mains, sewer collection mains, and water reclamation facility projects.

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 of Strategic Business Initiatives/Director of Finance

Prince William County Service Authority

P.O. Box 2266

Woodbridge, VA 22195-2266

Telephone 703-335-7910

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

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Service Authority
Exceptional Water Service



CUSTOMERS

DEVELOPMENT

WHO WE ARE

WHAT WE DO

DOING BUSINESS WITH US

New Payment Options Available!

Service
Affordability
0.8 vs. 3%
EPA affordability
standard

Average bill as % of County median household income.

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

STATEMENTS OF NET POSITION JUNE 30, 2018 AND 2017

Assets and Deferred Outflows of Resources	2018	2017
Current assets:		
Cash and cash equivalents (<i>notes 1c and 2</i>)		
Unrestricted	\$ 3,616,855	\$ 3,978,997
Restricted	4,026,870	7,329,797
Investments (<i>notes 1d and 2</i>)		
Unrestricted	216,319,169	120,695,699
Restricted	12,640,682	4,922,851
Receivables		
User and development charges (net of allowance for uncollectibles of \$100,000 at June 30, 2018 and 2017)	7,231,805	7,707,124
Unbilled water and sewer service (<i>note 1j</i>)	5,852,147	6,223,622
Interest		
Unrestricted	1,224,196	866,994
Restricted	82,899	29,364
Other receivables	299,785	298,531
Materials and supplies inventory (<i>note 1e</i>)	3,039,225	2,275,158
Prepaid expenses	519,143	379,808
Total current assets	254,852,776	154,707,945
Non-current assets:		
Investments (<i>notes 1d and 2</i>)		
Unrestricted	123,353,358	207,057,506
Restricted	—	4,922,229
Property, plant and equipment, net of accumulated depreciation and amortization (<i>notes 1f and 3</i>)	1,024,005,472	1,017,167,213
Equity in Upper Occoquan Service Authority (<i>notes 1g and 4</i>)	64,619,776	71,816,396
Total non-current assets	1,211,978,606	1,300,963,344
Total assets	1,466,831,382	1,455,671,289
Deferred outflows of resources:		
Deferred charges on refunding (<i>note 5</i>)	2,670,711	2,995,412
Deferred pension outflows (<i>note 8</i>)	3,499,958	4,511,061
Deferred GLI OPEB outflows (<i>note 8</i>)	43,000	—
Total deferred outflows of resources	6,213,669	7,506,473
Total assets and deferred outflows of resources	\$ 1,473,045,051	\$ 1,463,177,762

See accompanying notes to financial statements.

STATEMENTS OF NET POSITION (CONTINUED)
JUNE 30, 2018 AND 2017

Liabilities, Deferred Inflows of Resources and Net Position	2018	2017
Current liabilities:		
Accounts payable and accrued expenses	\$ 12,037,809	\$ 9,537,638
Virginia Resources Authority (VRA) loans payable (notes 6 and 7)	6,142,504	5,967,618
Customer deposits	3,462,790	3,927,845
Bonds payable (notes 5 and 7)	2,990,000	2,905,000
Retainage payable	351,891	72,685
Accrued interest payable		
Bonds payable	1,008,191	1,052,589
VRA loans payable	568,968	621,696
Compensated absences (notes 1h and 7)	615,250	623,028
Unearned revenue	27,293	47,697
Total current liabilities	27,204,696	24,755,796
Long-term liabilities:		
VRA loans payable (net of current portion of \$6,142,504 and \$5,967,618 at June 30, 2018 and 2017, respectively) (notes 6 and 7)	60,317,610	66,460,114
Bonds payable (net of current portion of \$2,990,000 and \$2,905,000 at June 30, 2018 and 2017, respectively) (notes 5 and 7)	58,352,976	61,872,622
Compensated absences (notes 1h and 7)	4,102,212	3,825,001
Net pension liability (note 8)	1,526,922	5,051,677
Other postemployment benefits liability (note 8)	12,840,396	12,945,376
GLI other post-employment benefits liability (note 8)	1,814,000	1,945,000
Total long-term liabilities	138,954,116	152,099,790
Total liabilities	166,158,812	176,855,586
Deferred inflows of resources:		
Deferred pension inflows (note 8)	1,471,592	—
Deferred OPEB inflows (note 8)	315,349	—
Deferred GLI OPEB inflows (note 8)	202,000	—
Total deferred inflows of resources	1,988,941	—
Total liabilities and deferred inflows of resources	168,147,753	176,855,586
Net position:		
Net investment in capital assets	898,873,093	882,957,271
Restricted for:		
Debt service	14,030,875	13,979,672
Other purposes		
Customer Deposits	2,666,861	3,119,099
Other nonmajor purposes	52,715	105,470
Unrestricted	389,273,754	386,160,664
Total net position	1,304,897,298	1,286,322,176
Total liabilities, deferred inflows of resources and net position	\$ 1,473,045,051	\$ 1,463,177,762

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION YEARS ENDED JUNE 30, 2018 AND 2017

	2018	2017
Operating revenues:		
Water and sewer user charges	\$ 111,625,426	\$ 111,896,117
Development charges	1,317,157	1,907,166
Other	817,246	747,419
Total operating revenues	113,759,829	114,550,702
Operating expenses:		
Personnel services	36,477,254	32,914,261
Purchased resources (notes 1f and 4)	24,375,783	23,428,840
Contractual services	9,637,841	8,698,465
Materials and supplies	5,996,469	4,857,141
Utilities	3,809,521	3,821,231
Other	1,355,481	2,380,759
Total operating expenses	81,652,349	76,100,697
Operating income before depreciation and amortization	32,107,480	38,450,005
Depreciation and amortization (notes 1f and 3)	38,297,308	38,356,678
Total operating (loss) income	(6,189,828)	93,327
Non-operating income (expense):		
Availability fees (note 1k)	27,777,731	36,616,696
Investment income	2,735,103	471,605
Payments for UOSA debt service (note 4)	(10,802,414)	(10,388,529)
Equity interest in UOSA (note 4)	(7,196,620)	821,845
Interest expense	(3,718,274)	(3,968,946)
Purchased capacity (note 10)	(723,671)	(668,004)
Other	900,429	956,448
Total non-operating income, net	8,972,284	23,841,115

See accompanying notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION (CONTINUED)
YEARS ENDED JUNE 30, 2018 AND 2017

	2018	2017
Income before contributions from developers and others	\$ 2,782,456	\$ 23,934,442
Contributions from developers and others (<i>note 11</i>)	15,792,666	22,913,046
Change in net position	18,575,122	46,847,488
Net position, beginning of year, as restated July 1, 2016	1,286,322,176	1,239,474,688
Net position, end of year	<u>\$ 1,304,897,298</u>	<u>\$ 1,286,322,176</u>

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

STATEMENTS OF CASH FLOWS

YEARS ENDED JUNE 30, 2018 AND 2017

	2018	2017
Cash flows from operating activities:		
Cash received from customers	\$ 113,781,592	\$ 113,428,702
Cash payments to suppliers for goods and services	(45,625,895)	(42,988,979)
Cash payments to employees for services	(37,088,698)	(32,341,211)
Miscellaneous income from other sources	865,117	965,336
Cash from other operating revenues	815,992	637,558
Net cash provided by operating activities	32,748,108	39,701,406
Cash flows from non-capital financing activities:		
Interest paid for UOSA debt service	(5,683,911)	(5,448,776)
Principal paid for UOSA debt service	(5,118,503)	(4,939,753)
Net cash used in non-capital financing activities	(10,802,414)	(10,388,529)
Cash flows from capital and related financing activities:		
Acquisition and construction of capital assets	(27,494,904)	(52,429,279)
Proceeds from sale of property and equipment	113,601	132,944
Interest paid on bonds payable	(2,060,780)	(2,141,339)
Principal paid on bonds payable	(2,905,000)	(2,835,000)
Interest paid on VRA loans	(1,959,566)	(2,129,333)
Principal paid on VRA loans	(5,967,618)	(5,797,851)
Receipt of developer charges	27,777,731	36,616,696
Payments for future capacity	(723,671)	(668,004)
Net cash used in capital and related financing activities	(13,220,207)	(29,251,166)
Cash flows from investing activities:		
Purchase of investment securities	(140,707,006)	(114,224,186)
Interest received on cash and cash equivalents	156,018	64,473
Proceeds from sales and maturities of investments	123,645,617	107,532,475
Interest received from investment securities	4,514,815	4,049,517
Net cash used in investing activities	(12,390,556)	(2,577,721)
Net decrease in cash and cash equivalents	(3,665,069)	(2,516,010)
Cash and cash equivalents, beginning of year	11,308,794	13,824,804
Cash and cash equivalents, end of year	\$ 7,643,725	\$ 11,308,794

See accompanying notes to financial statements.

STATEMENTS OF CASH FLOWS (CONTINUED)
YEARS ENDED JUNE 30, 2018 AND 2017

	2018	2017
Reconciliation of operating income to net cash provided by operating activities:		
Operating (loss) income	\$ (6,189,828)	\$ 93,327
Adjustments to reconcile operating (loss) income to net cash provided by operating activities:		
Depreciation and amortization expense	38,297,308	38,356,678
Other non-cash operating expenses	67,482	95,092
Other postemployment benefits expense	(76,980)	613,303
Miscellaneous income from other sources	865,117	965,336
Change in net pension liability	(1,042,060)	(362,009)
Change in assets and liabilities:		
Decrease (increase) in water and sewer receivable	413,544	(994,542)
Decrease (increase) in unbilled water and sewer receivable	371,477	(131,168)
(Increase) in other receivables	(1,254)	(109,861)
(Increase) decrease in materials and supplies inventory	(764,067)	92,073
(Increase) decrease in prepaid expenses	(139,335)	88,546
Increase in accounts payable and accrued expenses	623,282	134,942
Increase in compensated absences	269,433	108,560
Increase in customer deposits	53,989	751,129
Total adjustments	38,937,936	39,608,079
Net cash provided by operating activities	\$ 32,748,108	\$ 39,701,406
Supplemental schedule of non-cash investing, capital and financing activities:		
Capital contributions		
Estimated acquisition cost of plant and equipment received	\$ 15,792,666	\$ 22,913,046
Change in fair value of investments		
Increase in fair value of investments	\$ 2,690,938	\$ 2,397,508
Equity interest in earnings of UOSA	\$ (7,196,620)	\$ 821,845
Capital asset additions purchased on account	\$ 5,190,117	\$ 3,059,756

PRINCE WILLIAM COUNTY SERVICE AUTHORITY

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED JUNE 30, 2018 AND 2017

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) 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 11, 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.

(g) 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.

(h) 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.

(i) 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, Long-Term Liabilities. Issuance costs are expensed in the year incurred.

(j) 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.

(k) 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.

(l) 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.

(m) Pensions

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.

(n) 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.

(o) 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.

(p) Reclassifications

Certain prior year amounts have been reclassified to conform to the current year's presentation in these financial statements.

(q) New Accounting Pronouncements Adopted

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (Statement 75), will improve the usefulness of information by requiring the recognition of the entire Other Postemployment Benefits (OPEB) liability and a more comprehensive measure of OPEB expense. The Authority has adopted Statement 75 for the fiscal year ended June 30, 2018.

The following table shows the change to beginning net position as of July 1, 2016 as a result of the implementation of Statement 75:

Balance at June 30, 2016, as reported	\$ 1,250,208,877
Adjustment to present the effect of the implementation of Statement 75	(10,734,189)
Balance at July 1, 2016, as restated	<u>\$ 1,239,474,688</u>

GASB Statement No. 89, *Accounting for Interest Cost incurred before the End of a Construction Period* (Statement 89), will enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and simplify accounting for interest cost incurred before the end of a construction period. The Authority has adopted Statement 89 for the fiscal year ended June 30, 2018.

(r) New Accounting Pronouncements

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

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, 2020.

GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements* (Statement 88), will improve the information disclosed in financial statement notes related to debt, including direct borrowings and direct placements, information about resources to liquidate debt and the risks associated with changes in terms associated with debt, which will enable the users to better understand the effects of debt on future resource flows. Statement 88 will be effective for the Authority beginning with its fiscal year ending June 30, 2019.

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

(s) Subsequent Events

The Authority has evaluated subsequent events through November 26, 2018, the date on which the financial statements were available to be issued.

2 CASH AND INVESTMENTS

Cash and Cash Equivalents

At June 30, 2018 and 2017, 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 and LGIP EM are stated at amortized cost. 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.

As of June 30, 2018 and 2017, the Authority had the following cash and cash equivalents:

	2018	2017
Unrestricted Cash and Cash Equivalents		
Cash	\$ (3,192,193)	\$ (2,882,616)
Investments classified as cash equivalents	6,809,048	6,861,613
Total unrestricted cash and cash equivalents	3,616,855	3,978,997
Restricted Cash and Cash Equivalents		
Money market funds held by trustee	1,307,294	4,105,228
Customer deposits	2,636,930	3,091,964
Other funds	82,646	132,605
Total restricted cash and cash equivalents	4,026,870	7,329,797
Total cash and cash equivalents	\$ 7,643,725	\$ 11,308,794

The negative unrestricted cash balances reflected in the table above result from timing differences related to transfers between cash and short-term investment accounts. At June 30, 2018 and 2017, the Authority transferred excess cash into higher-yielding short-term LGIP investment accounts. The Authority's investments are further discussed below.

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, 2018, the average maturity of the underlying LGIP and LGIP EM investments was 47 days, or .13 years and 303 days, or .83 years, respectively.

As of June 30, 2018 and 2017, the Authority had the following investments and maturities:

Investment Type	2018		2017	
	Fair Value	Weighted Average Maturity (Years)	Fair Value	Weighted Average Maturity (Years)
Unrestricted investments				
US Treasuries	\$ 149,983,048	1.04	\$ 177,583,444	1.64
US Agencies	153,223,581	0.81	129,509,231	1.32
Virginia State and Local	9,851,608	0.73	13,899,977	1.34
Commercial Paper	26,614,290	0.30	6,264,675	0.42
Certificates of Deposit	—	—	495,878	0.83
Total unrestricted investments	339,672,527		327,753,205	
Restricted investments				
US Treasuries	12,640,682	0.34	9,845,080	0.94
Total restricted investments	12,640,682		9,845,080	
Total investments	\$352,313,209	0.85	\$ 337,598,285	1.46

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.

As of June 30, 2018 and 2017, the Authority's investments were rated as follows:

Investment Type	S&P Rating	Moody's Rating	Credit Exposure as a % of Total Investments	
			2018	2017
US Treasuries*	AA+	Aaa	45.1%	53.8%
US Agencies	AA+	Aaa	42.5	37.2
Commercial Paper	P1	A1	7.4	1.8
Virginia State and Local**	AAA/AA+	Aaa/Aa1	2.7	4.0
LGIP-EM***	AAAm	N/A	1.4	—
LGIP***	AAAm	N/A	0.5	2.0
Mutual Funds***	AAAm	Aaa-mf	0.4	1.2
Total Investments			100.0%	100.0%

Certificates of deposits as of June 30, 2018 and 2017 are all FDIC insured and accordingly are not reflected in the total above.

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

** Ratings vary by security.

*** These investments are 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 US Agency securities, so that no single agency dominates the investment portfolio.

The Authority's investment portfolio as of June 30, 2018 and 2017 is concentrated in securities issued by the US Treasury, the Federal Home Loan Bank (FHLB) and the Federal Farm Credit Bank (FFCB). 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, 2018 and 2017:

Issuers Over 5% of Total Investments (Restricted & Unrestricted)	Fair Value of Investments (Level 1)		% of Total Investments	
	2018	2017	2018	2017
US Treasuries	\$ 162,623,730	\$ 187,428,524	46.2%	55.5%
FHLB	116,958,821	88,819,385	33.2	26.3
Commercial Paper	26,614,290	6,264,675	7.6	1.9
FFCB	25,805,808	24,903,409	7.3	7.4
Others below 5%	20,310,560	30,182,292	5.7	8.9
Total Investments	\$ 352,313,209	\$ 337,598,285	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, 2018:

	Balance June 30, 2017	Additions	Reductions	Transfers/Other Adjustments	Balance June 30, 2018
Capital assets not being depreciated/amortized:					
Construction in progress	\$ 20,343,828	\$ 27,750,743	\$ (896,955)	\$ (8,627,572)	\$ 38,570,044
Land	5,062,158	4,346	—	—	5,066,504
Total capital assets not being depreciated/amortized	25,405,986	27,755,089	(896,955)	(8,627,572)	43,636,548
Other capital assets:					
Lines and improvements	858,940,367	13,758,531	(195,504)	4,877,187	877,380,581
Equipment	242,759,721	2,589,748	(219,483)	3,644,403	248,774,389
Buildings	146,859,188	484,960	—	105,982	147,450,130
Vehicles	7,996,776	588,000	(408,904)	—	8,175,872
Advance capacity payments	201,486,039	898,676	—	—	202,384,715
Total other capital assets	1,458,042,091	18,319,915	(823,891)	8,627,572	1,484,165,687
Total capital assets before accumulated depreciation and amortization	1,483,448,077	46,075,004	(1,720,846)	—	1,527,802,235
Depreciation/amortization for:					
Lines and improvements	(228,612,092)	(17,233,642)	195,044	—	(245,650,690)
Equipment	(134,308,269)	(12,132,035)	177,461	—	(146,262,843)
Buildings	(54,013,752)	(3,153,784)	—	—	(57,167,536)
Vehicles	(5,828,407)	(591,400)	408,904	—	(6,010,903)
Advance capacity payments	(43,518,344)	(5,186,447)	—	—	(48,704,791)
Total accumulated depreciation and amortization	(466,280,864)	(38,297,308)	781,409	—	(503,796,763)
Total property, plant and equipment, net of accumulated depreciation and amortization	\$1,017,167,213	\$ 7,777,696	\$ (939,437)	\$ —	\$ 1,024,005,472

Changes in property, plant and equipment are as follows for the year ended June 30, 2017:

	Balance June 30, 2016	Additions	Reductions	Transfers/Other Adjustments	Balance June 30, 2017
Capital assets not being depreciated/amortized:					
Construction in progress	\$ 31,842,726	\$ 19,097,500	\$ (1,116,300)	\$ (29,480,098)	\$ 20,343,828
Land	4,999,873	62,285	—	—	5,062,158
Total capital assets not being depreciated/amortized	36,842,599	19,159,785	(1,116,300)	(29,480,098)	25,405,986
Other capital assets:					
Lines and improvements	831,165,873	19,682,810	—	8,091,684	858,940,367
Equipment	222,186,850	5,101,282	(454,877)	15,926,466	242,759,721
Buildings	137,087,933	4,309,307	—	5,461,948	146,859,188
Vehicles	7,641,658	840,007	(484,889)	—	7,996,776
Advance capacity payments	174,669,285	26,816,754	—	—	201,486,039
Total other capital assets	1,372,751,599	56,750,160	(939,766)	29,480,098	1,458,042,091
Total capital assets before accumulated depreciation and amortization	1,409,594,198	75,909,945	(2,056,066)	—	1,483,448,077
Depreciation/amortization for:					
Lines and improvements	(211,786,783)	(16,818,778)	—	(6,531)	(228,612,092)
Equipment	(120,076,877)	(12,913,537)	398,019	(1,715,874)	(134,308,269)
Buildings	(50,177,352)	(3,099,518)	—	(736,882)	(54,013,752)
Vehicles	(5,813,670)	(499,627)	484,890	—	(5,828,407)
Advance capacity payments	(38,493,126)	(5,025,218)	—	—	(43,518,344)
Total accumulated depreciation and amortization	(426,347,808)	(38,356,678)	882,909	(2,459,287)	(466,280,864)
Total property, plant and equipment, net of accumulated depreciation and amortization	\$ 983,246,390	\$ 37,553,267	\$ (1,173,157)	\$ (2,459,287)	\$ 1,017,167,213

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, 2018 and 2017 is calculated based on its percentage share of capacity in effect for UOSA's fiscal years ended June 30, 2017 and 2016, 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, 2018, 2017 and 2016, capacity allocation by jurisdiction was as follows:

Jurisdiction	Percentage of Total Allocated Capacity		
	2018	2017	2016
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, 2017 and 2016 (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.

	2017		2016	
	UOSA	Authority's Share	UOSA	Authority's Share
Total assets	\$ 588,237,582		\$ 614,454,987	
Deferred outflows of resources	22,793,659		24,335,773	
Total assets and deferred outflows of resources	611,031,241		638,790,760	
Total liabilities	546,966,364		560,475,900	
Deferred inflows of resources	230,926		1,165,632	
Total liabilities and deferred inflows of resources	547,197,290		561,641,532	
Total net position	\$ 63,833,951	\$ 17,618,866	\$ 77,149,228	\$ 22,500,420
Total revenues	\$ 29,807,677		\$ 33,873,929	
Total expenses	(60,352,611)		(56,831,798)	
Capital contributions	17,229,657		31,187,091	
Change in net position	\$ (13,315,277)	\$ (4,881,554)	\$ 8,229,222	\$ 3,016,940
Prepaid capacity amortization		(2,315,066)		(2,195,095)
Equity interest in UOSA		\$ (7,196,620)		\$ 821,845

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. In addition, the purchase of additional capacity (advance capacity payments) is amortized and reflected in equity interest in UOSA.

The Authority made payments to UOSA during fiscal years 2018 and 2017 of approximately \$12.6 million and \$12.4 million, respectively, to pay its share of operation and maintenance expenses and reserve maintenance charges, which are allocated to the participating jurisdictions based on 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 during fiscal years 2018 and 2017 of approximately \$10.8 million and \$10.4 million, respectively, 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. In fiscal years 2018 and 2017, the Authority's 36.66% share of UOSA's change in net position was \$(4,881,554) and \$3,016,940, 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, 2018, 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
2019	\$ 11,047,970
2020	11,046,657
2021	10,905,746
2022	11,113,066
2023	11,112,774
2024-2028	56,363,686
2029-2033	41,143,882
2034-2038	34,220,497
2039-2043	19,258,887
2044-2047	2,837,516
Total	\$ 209,050,681

5 BONDS PAYABLE

Bonds payable as of June 30, 2018 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, 2018, \$40,875,000 remained outstanding. Interest rates range from 3.0% to 5.0% annually on the remaining maturity dates from July 1, 2018 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, 2018, \$18,075,000 remained outstanding. The interest rate on the bonds is 2.11% with maturity dates from July 1, 2018 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 2018 and 2017, advance payments in the amount of \$4,900,000 were made to the Trustee toward debt service for each of the subsequent fiscal years.

During fiscal years 2018 and 2017, 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 79 and 80 for debt compliance information. For the year ended June 30, 2018, pledged revenues totaled approximately \$145.2 million, and the required debt service payments represented 5.5% of the pledged revenues. The pledge of revenues remains in effect until the debt service requirements are satisfied in fiscal year 2036.

As of June 30, 2018, total future debt service requirements for bond principal and interest are approximately \$75.1 million, as follows:

Years ending June 30,	2013 Series		2015 Series		Total	
	Principal	Interest	Principal	Interest	Principal	Interest
2019	\$ 1,510,000	\$ 1,559,500	\$ 1,480,000	\$ 350,155	\$ 2,990,000	\$ 1,909,655
2020	1,585,000	1,480,250	1,520,000	318,083	3,105,000	1,798,333
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
2024-2028	10,615,000	4,616,250	7,445,000	601,350	18,060,000	5,217,600
2029-2033	13,025,000	2,222,750	2,885,000	30,698	15,910,000	2,253,448
2034-2036	8,900,000	272,250	—	—	8,900,000	272,250
Total	\$ 40,875,000	\$ 14,076,000	\$ 18,075,000	\$ 2,055,561	\$ 58,950,000	\$ 16,131,561

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

	June 30, 2018	June 30, 2017
Unamortized Bond Premiums	\$ 2,392,976	\$ 2,922,622

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

	June 30, 2018	June 30, 2017
Deferred Amounts on 2015 Refunding	\$ 67,075	\$ 79,519
Deferred Amounts on 2013 Refunding	2,603,636	2,915,893
Total	\$ 2,670,711	\$ 2,995,412

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.

As of June 30, 2018, 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, 2018 was \$5,130,350, 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, 2018 was \$5,253,703 with interest payable at 3.10% 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, 2018 was \$28,299,864, 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, 2018 was \$27,776,197, with interest payable at 2.72% (reduced from 3.55% effective September 1, 2014) per annum, and principal due through March 2030.

As of June 30, 2018, total future VRA debt service requirements for principal and interest are approximately \$76.8 million, as follows:

Years ending June 30,	2000 and 2004 Loans		2007 Loan		2009 Loan		Total	
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
2019	\$ 1,893,253	\$ 343,594	\$ 2,262,828	\$ 698,990	\$ 1,986,423	\$ 742,096	\$ 6,142,504	\$ 1,784,680
2020	1,961,632	275,213	2,320,210	641,608	2,040,822	687,698	6,322,664	1,604,519
2021	2,032,507	204,338	2,379,048	582,770	2,096,709	631,810	6,508,264	1,418,918
2022	2,105,968	130,877	2,439,378	522,440	2,154,128	574,392	6,699,474	1,227,709
2023	772,513	68,170	2,501,237	460,581	2,213,118	515,401	5,486,868	1,044,152
2024-2028	1,618,180	63,186	13,490,398	1,318,691	12,008,568	1,634,030	27,117,146	3,015,907
2029-2030	—	—	2,906,765	55,052	5,276,429	180,611	8,183,194	235,663
Total	\$ 10,384,053	\$ 1,085,378	\$ 28,299,864	\$ 4,280,132	\$ 27,776,197	\$ 4,966,038	\$ 66,460,114	\$ 10,331,548

7 LONG-TERM LIABILITIES

Long-term liabilities activity for the years ended June 30, 2018 and 2017 were as follows:

	Balance June 30, 2016	FY 2017 Additions	FY 2017 Reductions	Balance June 30, 2017	Prior Period Adjustments	FY 2018 Additions	FY 2018 Reductions	Balance June 30, 2018	Due Within One Year
Bonds Payable:									
Revenue Bonds	\$ 64,690,000	\$ –	\$ (2,835,000)	\$ 61,855,000	\$ –	\$ –	\$ (2,905,000)	\$ 58,950,000	\$ 2,990,000
Deferred Amounts:									
Issuance Premiums	3,492,133	–	(569,511)	2,922,622	–	–	(529,646)	2,392,976	–
Total Bonds Payable	68,182,133	–	(3,404,511)	64,777,622	–	–	(3,434,646)	61,342,976	2,990,000
VRA Loans Payable	78,225,583	–	(5,797,851)	72,427,732	–	–	(5,967,618)	66,460,114	6,142,504
Compensated Absences	4,339,469	564,317	(455,757)	4,448,029	–	618,412	(348,979)	4,717,462	615,250
Other Post Employment Benefits Liability	3,542,884	1,268,228	(654,925)	4,156,187	8,789,189	1,052,868	(1,157,848)	12,840,396	–
GLI Other Post Employment Benefits Liability	–	–	–	–	1,945,000	71,000	(202,000)	1,814,000	–
Net Pension Liability	3,563,178	4,699,887	(3,211,388)	5,051,677	–	4,770,751	(8,295,506)	1,526,922	–
Total Long-term Liabilities	\$ 157,853,247	\$ 6,532,432	\$ (13,524,432)	\$ 150,861,247	\$ 10,734,189	\$ 6,513,031	\$ (19,406,597)	\$ 148,701,870	\$ 9,747,754

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.

8 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:

Plan 1

Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.

Eligible Members – Employees are eligible for VRS 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.

Hybrid Opt-In Election – Non-hazardous duty covered plan 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. The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan. Members who were eligible for an optional retirement plan and had prior service under Plan 1 or Plan 2 were not eligible to elect the Hybrid Retirement Plan and must remain as Plan 1 or Plan 2 members or select the optional retirement plan.

Retirement Contributions – 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.

Creditable Service – Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service 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.

Vesting – Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Members must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions they make.

Calculating the Benefit – The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement. An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.

Average Final Compensation – A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.

Service Retirement Multiplier – 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 1.7%.

Normal Retirement Age – Age 65.

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

Earliest Reduced Retirement Eligibility – Age 55 with at least five years of creditable service or age 50 with at least 10 years of creditable service.

Cost-of-Living Adjustment (COLA) in Retirement – 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%.

For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date. For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.

Certain exceptions to COLA effective dates described above are effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:

- 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 under the Virginia Sickness and Disability Program (VSDP).
- 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.

Disability Coverage – Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.

Purchase of Prior Service – Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.

Plan 2

Plan 2 is the same as Plan 1 except for the following:

Eligible Members – Employees are eligible for 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.

Retirement Contributions – Employees contribute 5% of their compensation each month to their member contribution account through pre-tax salary reduction.

Average Final Compensation – A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.

Service Retirement Multiplier – For non-hazardous duty members the retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013.

Normal Retirement Age – Normal Social Security retirement age.

Earliest Unreduced Retirement Eligibility – Members who are not in hazardous duty positions are eligible for an unreduced retirement benefit when they reach normal Social Security retirement age and have at least five years of creditable service or when their age and service equal 90.

Earliest Reduced Retirement Eligibility – Age 60 with at least five years of creditable service.

Cost-of-Living Adjustment (COLA) in Retirement – 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%.

Disability Coverage – Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.

Hybrid Retirement Plan

The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. Most members hired on or after January 1, 2014 are in this plan, as well as Plan 1 and Plan 2 members who were eligible and opted into the plan during a special election window.

- The defined benefit is based on a member's age, creditable service 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.

Eligible Members – Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:

- 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.

Retirement Contributions – 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. 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.

Creditable Service

Defined Benefit Component: Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service 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.

Defined Contributions Component: Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

Vesting

Defined Benefit Component: Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years of creditable service. Plan 1 or Plan 2 members with at least five years of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.

Defined Contributions Component: 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. Members are always 100% vested in the contributions they make. 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.

- 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.

Distribution is not required by law until age 70½.

Calculating the Benefit

Defined Benefit Component: Same as Plan 1.

Defined Contribution Component: 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.

Average Final Compensation – Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.

Service Retirement Multiplier

Defined Benefit Component: The retirement multiplier is 1.0%. 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.

Defined Contribution Component: Not applicable

Normal Retirement Age

Defined Benefit Component: Same as Plan 2.

Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Earliest Unreduced Retirement Eligibility

Defined Benefit Component: Normal Social Security retirement age and have at least five years of creditable service or when their age and service equal 90.

Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Earliest Reduced Retirement Eligibility

Defined Benefit Component: Age 60 with at least five years of creditable service.

Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Cost-of-Living Adjustment (COLA) in Retirement

Defined Benefit Component: Same as Plan 2.

Defined Contribution Component: Not applicable.

Disability Coverage – Eligible employees (including Plan 1 and Plan 2 opt-ins) participate in an employer-paid program.

Purchase of Prior Service

Defined Benefits Component: Same as Plan 1, with the following exceptions:

- Hybrid Retirement Plan members are ineligible for ported service.

Defined Contribution Component: Not applicable.

Employees Covered by Benefit Terms

As of the June 30, 2017 actuarial valuation, the following employees were covered by the benefit terms of the VRS Retirement Plan:

	Number
Active members	279
Inactive members or their beneficiaries currently receiving benefits	107
Inactive members:	
Vested	15
Non-vested	47
Active elsewhere in VRS	12
Total inactive members	74
Total covered employees	460

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 5.00% 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 5.00% 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 2018 was 10.5% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. 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 \$3.6 million and \$3.3 million, respectively, for each of the years ended June 30, 2018 and June 30, 2017.

(b) Net Pension Liability

The Authority's net pension liability (NPL) was measured as of June 30, 2017. The total pension liability (TPL) used to calculate the NPL was determined by an actuarial valuation performed as of June 30, 2016, using updated actuarial assumptions applied to all periods included in the measurement and date of June 30, 2017.

Actuarial Assumptions

The total pension liability was based on an actuarial valuation as of June 30, 2016, 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 2017.

Inflation	2.5%
Salary increases, including inflation	3.5% - 5.35%
Investment rate of return	7%, 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 7.0%. However, since the difference was minimal, and a more conservative 7.0% 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 7.0% to simplify preparation of pension liabilities.

Mortality Rates	15% 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 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 Mortality Rates 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, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

- Update to a more current mortality table
- 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

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	40.00%	4.54%	1.82%
Fixed Income	15.00	0.69	0.10
Credit Strategies	15.00	3.96	0.59
Real Assets	15.00	5.76	0.86
Private Equity	15.00	9.53	1.43
Total	100.00%		4.80
Inflation			2.50
Expected arithmetic nominal return*			7.30%

* The above allocation provides a one-year return of 7.30%. 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 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the TPL was 7%. 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 Position	Net Pension Liability
Balances at June 30, 2016	\$ 35,812,232	\$ 30,760,555	\$ 5,051,677
Changes for the Year:			
Service cost	2,309,644	—	2,309,644
Interest	2,461,107	—	2,461,107
Changes of assumptions	(1,060,533)	—	(1,060,533)
Difference between expected and actual experience	(22,744)	—	(22,744)
Contributions - employer	—	2,243,187	(2,243,187)
Contributions - employee	—	1,068,016	(1,068,016)
Net investment income	—	3,924,943	(3,924,943)
Benefit payments, including refunds of employee contributions	(1,307,115)	(1,307,115)	—
Administrative expense	—	(20,334)	20,334
Other changes	—	(3,583)	3,583
Net changes	2,380,359	5,905,114	(3,524,755)
Balances at June 30, 2017	\$ 38,192,591	\$ 36,665,669	\$ 1,526,922

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

The following presents the Authority's NPL, using the discount rate of 7%, as well as what the Authority's NPL would be if it were calculated using a discount rate that is one percentage point lower (6%) or one percentage point higher (8%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability (asset)	\$ 7,234,761	\$ 1,526,922	\$ (3,163,914)

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

For the year ended June 30, 2018, the Authority recognized pension expense of \$1,358,551. At June 30, 2018 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	\$ 1,099,347	\$ 18,362
Changes of assumptions	—	856,191
Net difference between projected and actual earnings on plan investments	—	597,039
Employer contributions subsequent to the measurement date*	2,400,611	—
Total	\$ 3,499,958	\$ 1,471,592

* 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, 2019.

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:

Years Ending June 30,	Amount
2019	\$ (145,555)
2020	205,768
2021	60,238
2022	(453,039)
2023	(39,657)
Total	\$ (372,245)

Information about the VRS Retirement Plan is also available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

II. VRS Health Insurance Credit (HIC)

Plan Description

To assist retirees with the cost of health insurance coverage, the VRS administers a health insurance credit program. 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 creditable service. The health insurance credit is funded by the Authority on behalf of its VRS eligible employees.

The total HIC liability was determined by an actuarial valuation as of June 30, 2017, and the Authority's HIC liability of \$195,810 was measured at June 30, 2017. Management has concluded that this amount and the associated OPEB disclosures and required supplementary information are immaterial, therefore the HIC liability is not reflected in the Authority's financial statements.

III. 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. 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. No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

Employees Covered by Benefit Terms

As of the June 30, 2017 actuarial valuation, the following employees were covered by the benefit terms:

	Number
Active members	338
Inactive members or their beneficiaries currently receiving benefits	68
Total covered employees	406

(b) Total OPEB Liability (TOL)

The Authority's OPEB liability was measured as of June 30, 2018, and the total OPEB Liability was determined by an actuarial valuation as of June 30, 2017.

Actuarial Assumptions

The total OPEB liability in the June 30, 2017 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*	3.5% as of June 30, 2017
Age related claims cost**	3.87% as of June 30, 2018
Healthcare trend costs	6.3% for fiscal 2018, 5.9% for fiscal 2019, per year to an ultimate rate of 4.2% for 2092 and beyond
Mortality Rates	
• Pre-retirement	RP-2000 Employee Mortality Table Projected with Scale AA to 2020 with males set forward 4 years and females set back 2 years.
• Post-retirement	RP-2000 Employee Mortality Table Projected with Scale AA to 2020 with males set forward 1 year.
• Post-disablement	RP-2000 Employee Mortality Table Projected with Scale AA to 2020 with males set back 3 years and no provision for future mortality improvement.

* 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 June 30, 2017 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, 2017	\$ 12,945,376
Changes for the Year:	
Service cost	592,753
Interest	460,115
Effect of assumption changes or other inputs	(367,046)
Benefit payments	(790,802)
Net change	(104,980)
Balance at June 30, 2018	\$ 12,840,396

Sensitivity of the total OPEB liability to changes in the discount rate.

The following presents the Authority's Total OPEB Liability, calculated using the discount rate of 3.87%. It also presents what the Authority's Total OPEB Liability would be if it were calculated using a discount rate one percentage point lower (2.87%) and one percentage point higher (4.87%) than the current rate.

	1% Decrease (2.87%)	Current Discount Rate (3.87%)	1% Increase (4.87%)
Total OPEB liability	\$ 13,853,859	\$ 12,840,396	\$ 11,898,069

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 (5.3%)	Current Trend Rate (6.3%)	1% Increase (7.3%)
Total OPEB liability	\$ 11,442,005	\$ 12,840,396	\$ 14,496,480

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

For the fiscal year ended June 30, 2018, the Authority recognized OPEB expense of \$1,001,171. At June 30, 2018, the Authority reported deferred inflows of resources related to OPEB from the following sources:

	Deferred Inflows of Resources
Changes of assumptions or inputs	\$ 315,349
Total	\$ 315,349

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

Years Ending June 30,	Amount
2019	\$ (51,697)
2020	(51,697)
2021	(51,697)
2022	(51,697)
2023	(51,697)
Thereafter	(56,864)
Total	\$ (315,349)

IV. 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 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. No assets are accumulated in a trust that meets the criteria in 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 Group Life Insurance 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 Group Life Insurance Program.

Reduction in Benefit Amounts

The benefit amounts provided to members covered under the Group Life Insurance 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 creditable service, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at \$8,000 by statute. This amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and is currently \$8,111.

Contributions

The contribution requirement for the Group Life Insurance 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 Group Life Insurance 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 2018 was 0.52% of covered employee compensation, based on an actuarial valuation as of June 30, 2016. 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 \$319,900 and \$291,400 for the years ended June 30, 2018 and June 30, 2017, respectively.

(b) Net GLI OPEB Liability

The Authority's total GLI OPEB Liability was determined by an actuarial valuation as of June 30, 2016, and the net GLI OPEB Liability was measured as of June 30, 2017

Actuarial Assumptions

The total GLI OPEB liability in the June 30, 2016 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	7%, net of plan investment expenses, including inflation*

* Administrative expenses as a percent of the fair 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 7.0%. However, since the difference was minimal, and a more conservative 7.0% 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 7.0% 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 year; and females 1% 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, 100% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an experience study for the period July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study 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 age and service year
- Lowered disability rates

Discount Rate

The discount rate used to measure the GLI OPEB liability was 7%. 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	40.00%	4.54%	1.82%
Fixed Income	15.00	0.69	0.10
Credit Strategies	15.00	3.96	0.59
Real Assets	15.00	5.76	0.86
Private Equity	15.00	9.53	1.43
Total	100.00%		4.80
Inflation			2.50
Expected arithmetic nominal return*			7.30%

* The above allocation provides a one-year return of 7.30%. 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 6.83%, including expected inflation of 2.50%.

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 discount rate of 7%, 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 (6%) or one percentage point higher (8%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net GLI OPEB liability	\$ 2,347,000	\$ 1,814,000	\$ 1,383,000

VRS Net GLI OPEB Liability

The net OPEB liability (NOL) for the Group Life Insurance 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, 2017, NOL amounts for the Group Life Insurance Program are as follows:

Total GLI OPEB Liability	\$ 2,942,426,000
Plan Fiduciary Net Position	1,437,586,000
Employers' Net GLI OPEB Liability (Asset)	\$ 1,504,840,000
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	48.86%

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, 2018 and 2017, the Authority reported a liability of \$1,814,000 and 1,945,000, respectively, for its proportionate share of the Net GLI OPEB liability. The Net GLI OPEB Liability was measured as of June 30, 2017 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 Group Life Insurance Program for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the participating employer's proportion was 0.12% as compared to 0.117% at June 30, 2016.

For the year ended June 30, 2018, the Authority recognized GLI OPEB expense of \$28,000. 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, 2018, 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	\$ —	\$ 41,000
Net difference between projected and actual earnings on plan investments	—	68,000
Changes of assumptions	—	93,000
Changes in proportion	43,000	—
Employer contributions subsequent to the measurement date*	—	—
Total	\$ 43,000	\$ 202,000

*There are no deferred outflows of resources related to the GLI OPEB resulting from the employer's contributions subsequent to the measurement date that will be recognized as a reduction of the Net GLI OPEB Liability in the fiscal year ending June 30, 2019. 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
2019	\$ (34,000)
2020	(34,000)
2021	(34,000)
2022	(34,000)
2023	(17,000)
Thereafter	(6,000)
Total	\$ (159,000)

VRS issues a publicly available CAFR that includes financial statements and required supplementary information for the plans which it administers. A copy of that report may be obtained by writing to Virginia Retirement System, P.O. Box 2500, Richmond, Virginia 23218-2500, or from their website at www.varetire.org.

9 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 VML Insurance Programs, 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, 2018, 2017, and 2016.

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, 2018, 2017, and 2016 was estimated to be \$1,107,394, \$1,004,642, and \$1,026,351, 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:

	2018	2017	2016
Estimated outstanding claims liability at beginning of fiscal year	\$ 1,004,642	\$ 1,026,351	\$ 988,565
Employee and Employer portion of premiums withheld	4,754,116	3,872,730	3,813,749
Payments to Third Party Administrator	(4,651,364)	(3,894,439)	(3,775,963)
Estimated outstanding claims liability at end of fiscal year	\$ 1,107,394	\$ 1,004,642	\$ 1,026,351

For fiscal year 2019, the Authority estimates its share of claims to be approximately \$4.3 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.

10 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 2018 and 2017, were \$759,000, and \$26.8 million, respectively, with total payments to date as of June 30, 2018 of \$124.4 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 2018 and 2017 were approximately \$700,000. Future payments due to Fairfax Water for these agreements are as follows:

Years Ending June 30,

2019	\$ 668,006
2020	668,006
2021	668,006
2022	668,006
2023	668,006
2024-2028	3,340,030
2029-2030	1,336,012
Total	\$ 8,016,072

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 2018 and 2017 were approximately \$10.4 million and \$9.5 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, 2018 and 2017 in the amount of \$55,000 and \$24,000, 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 2018 and 2017 was approximately \$1.2 and \$1.5 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 \$1,663,988 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, 2018, the remaining amount of the non-cash credit available to the County is \$10,118,312, of which \$376,274 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 various other commitments for capital projects and operating expenditures totaling approximately \$29.2 million as of June 30, 2018.

(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, 2018 and 2017 were \$44,878 and \$45,555, 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, 2018 were \$34,424.

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, 2018 were \$71,956.

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

Years Ending June 30,	
2019	\$ 383,373
2020	455,779
2021	469,542
2022	287,269
2023	96,015
2024	73,220
Total	<u>\$ 1,765,198</u>

11 CONTRIBUTIONS FROM DEVELOPERS AND OTHERS

	2018	2017
Contributed Assets	<u>\$ 15,792,666</u>	<u>\$ 22,913,046</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

Abandoned Call Rate

2.3 vs. 6.3%

Industry Median

% of customers who hang up
before speaking to an agent.

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, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Total Pension Liability				
Service cost	\$ 2,309,644	\$ 2,355,421	\$ 2,242,139	\$ 2,206,642
Interest	2,461,107	2,177,586	1,865,113	1,647,355
Difference between expected and actual experience	(22,744)	728,798	1,273,190	–
Changes of assumptions	(1,060,533)	–	–	–
Benefit payments, including refunds of employee contributions	(1,307,115)	(1,115,876)	(717,210)	(769,149)
Net change in total pension liability	2,380,359	4,145,929	4,663,232	3,084,848
Total pension liability - beginning	35,812,232	31,666,303	27,003,071	23,918,223
Total pension liability - ending (a)	\$ 38,192,591	\$ 35,812,232	\$ 31,666,303	\$ 27,003,071
Plan Fiduciary Net Position				
Contributions - employer	\$ 2,243,187	\$ 2,179,687	\$ 2,102,230	\$ 2,153,139
Contributions - employee	1,068,016	1,031,701	1,004,829	977,870
Net investment income	3,924,943	578,136	1,202,198	3,169,360
Benefit payments, including refunds of employee contributions	(1,307,115)	(1,115,876)	(717,210)	(769,149)
Administrative expense	(20,334)	(15,995)	(13,734)	(14,928)
Other	(3,583)	(223)	(261)	167
Net change in plan fiduciary net position	5,905,114	2,657,430	3,578,052	5,516,459
Plan fiduciary net position - beginning	30,760,555	28,103,125	24,525,073	19,008,614
Plan fiduciary net position - ending (b)	\$ 36,665,669	\$ 30,760,555	\$ 28,103,125	\$ 24,525,073
Net pension liability - ending (a) - (b)	\$ 1,526,922	\$ 5,051,677	\$ 3,563,178	\$ 2,477,998
Plan fiduciary net position as a percentage of the total pension liability - end of year	96.00%	85.89%	88.75%	90.82%
Covered payroll	\$ 23,622,592	\$ 22,254,970	\$ 21,098,905	\$ 19,834,457
Net pension liability as a percentage of covered payroll	6.46%	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.

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, 2018	\$ 2,400,611	\$ 2,400,611	\$ –	\$ 24,298,245	9.88%
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, 2018

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 following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the system for the four-year period ended June 30, 2016:

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

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

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

	June 30, 2017
Total OPEB Liability	
Service cost	\$ 592,753
Interest	460,115
Effect of assumption changes or other inputs	(367,046)
Benefit payments	(790,802)
Net change in total OPEB liability	(104,980)
Total OPEB liability - beginning	12,945,376
Total OPEB liability - ending	<u>\$ 12,840,396</u>
Total OPEB liability as a percentage of covered payroll	54.36%
Covered payroll	\$ 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 note to required supplementary information.

Prince William County Service Authority

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION FOR THE YEAR ENDED JUNE 30, 2018

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, 2016 based on the most recent experience study of the OPEB Plan for the year ended June 30, 2016:

- Updated age-related claims cost assumptions for medical and dental benefits
- Updated healthcare trend assumption for medical and dental benefits
- 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

Prince William County Service Authority

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

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

Year Ended June 30, 2017

Employer's proportion of the Net GLI OPEB Liability	0.12%
Employer's proportionate share of the net GLI OPEB liability	\$ 1,814,000
Employer's covered payroll	\$ 23,622,592
Employer's proportionate share of the net GLI OPEB liability as a percentage of its covered payroll	7.5%
Plan fiduciary net position as a percentage of the total GLI OPEB liability	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, 2018	\$ 319,927	\$ 319,927	\$ —	\$ 24,298,245	1.3%
June 30, 2017	291,418	291,418	—	23,622,592	1.2

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.

Prince William County Service Authority

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION FOR THE YEAR ENDED JUNE 30, 2018

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 following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the GLI Program for the four-year period ending June 30, 2016:

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 extended final retirement from 70 to 75
- Adjusted termination rates to better fit experience at each year age and service year
- Lowered disability rates

**Advanced and
Accessible Technology**



Network Accessibility
99.9%



99.8%

**Software Application
Accessibility**

**Water Academy
Course Satisfaction**

98.8%



Respected Community Partnerships



8,903

Students Taught

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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	2018*	2017*	2016	2015**	2014***	2013	2012	2011	2010	2009
Current assets	\$ 254,853	\$ 154,708	\$ 129,473	\$ 149,886	\$ 130,640	\$ 164,369	\$ 156,753	\$ 147,560	\$ 206,101	\$ 161,520
Non-current assets	1,211,978	1,300,963	1,289,955	1,243,984	1,234,393	1,169,506	1,184,570	1,138,866	1,043,404	1,048,843
Deferred outflows of resources	6,214	7,507	6,587	5,847	4,675	5,182	–	–	–	–
Total assets and deferred outflows of resources	\$1,473,045	\$1,463,178	\$1,426,015	\$1,399,717	\$1,369,708	\$1,339,057	\$1,341,323	\$1,286,426	\$1,249,505	\$1,210,363
Liabilities and Deferred Inflows of Resources										
Current liabilities	\$ 27,205	\$ 24,756	\$ 26,572	\$ 24,403	\$ 25,917	\$ 21,436	\$ 26,221	\$ 25,094	\$ 33,027	\$ 34,724
Long-term liabilities	138,954	152,100	148,658	156,032	161,962	169,624	206,578	211,518	205,529	210,751
Deferred inflows of resources	1,989	–	576	1,405	–	–	–	–	–	–
Total liabilities and deferred inflows of resources	168,148	176,856	175,806	181,840	187,879	191,060	232,799	236,612	238,556	245,475
Net Position										
Net investment in capital assets	898,873	882,957	840,189	806,629	748,917	723,758	660,584	618,970	583,880	529,065
Restricted	16,750	17,204	16,556	15,954	19,060	20,281	28,083	29,719	30,188	35,812
Unrestricted	389,274	386,161	393,464	395,294	413,852	403,958	419,857	401,125	396,881	400,011
Total net position as restated July 1, 2016	1,304,897	1,286,322	1,250,209	1,217,877	1,181,829	1,147,997	1,108,524	1,049,814	1,010,949	964,888
Total liabilities, deferred inflows of resources and net position	\$1,473,045	\$1,463,178	\$1,426,015	\$1,399,717	\$1,369,708	\$1,339,057	\$1,341,323	\$1,286,426	\$1,249,505	\$1,210,363

* The Authority implemented GASB Statement 75 in fiscal year 2018, which changed the manner in the way 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 in the way 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 in the way 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)

	2018*	2017*	2016	2015**	2014***	2013***	2012	2011	2010	2009
Operating revenues										
Water and sewer user charges	\$ 111,625	\$ 111,896	\$ 105,937	\$ 102,061	\$ 100,592	\$ 98,119	\$ 93,880	\$ 88,988	\$ 82,068	\$ 70,714
Other	2,134	2,655	2,513	2,380	2,640	2,978	1,947	1,832	1,932	1,949
Total operating revenues	113,759	114,551	108,450	104,441	103,232	101,097	95,827	90,820	84,000	72,663
Non-operating revenues										
Availability fees	27,778	36,617	26,471	33,183	30,892	41,722	34,344	21,874	26,106	38,123
Investment and other income	3,636	1,428	5,288	3,681	3,325	2,191	4,155	3,968	8,775	20,549
Grant revenue	—	—	—	—	—	823	1,343	2,219	14,751	15,401
Contributions from developers/others	15,793	22,913	21,794	18,685	16,364	13,422	36,987	31,391	21,125	35,232
Equity interest in UOSA	(7,197)	822	(8,058)	(3,808)	(5,413)	(1,629)	(3,459)	(7,179)	(1,345)	(8,427)
Total non-operating revenues	40,010	61,780	45,495	51,741	45,168	56,529	73,370	52,273	69,412	100,878
Total revenues	153,769	176,331	153,945	156,182	148,400	157,626	169,197	143,093	153,412	173,541
Operating expenses										
Personnel services	36,477	32,914	30,561	29,314	28,757	27,505	25,673	25,207	27,291	25,720
Purchased resources	24,376	23,429	22,972	21,244	21,145	22,121	22,694	20,624	23,630	21,790
Contractual services	9,638	8,698	8,668	7,157	6,487	5,513	5,421	5,138	5,648	4,729
Materials and supplies	5,996	4,857	4,609	4,715	4,818	4,199	4,151	4,127	4,160	6,917
Other	5,166	6,203	5,110	5,317	4,900	4,927	4,614	4,173	4,006	4,725
Total operating expenses	81,653	76,101	71,920	67,747	66,107	64,265	62,553	59,269	64,735	63,881
Non-operating expenses										
Depreciation/amortization	38,297	38,357	34,716	33,103	31,688	30,810	28,924	26,909	21,549	20,513
Interest expense	3,718	3,969	4,221	5,310	5,703	12,275	9,367	8,930	11,751	9,408
Payments for UOSA debt service	10,802	10,389	10,030	10,491	10,343	9,576	8,780	7,919	8,021	7,047
Other	724	668	726	726	727	727	863	1,201	1,295	1,587
Total non-operating expenses	53,541	53,383	49,693	49,630	48,461	53,388	47,934	44,959	42,616	38,555
Total expenses	135,194	129,484	121,613	117,377	114,568	117,653	110,487	104,228	107,351	102,436
Change in net position	18,575	46,847	32,332	38,805	33,832	39,973	58,710	38,865	46,061	71,105
Total net position, beginning of year, as restated July 1, 2016	1,286,322	1,239,475	1,217,877	1,179,072	1,147,997	1,108,024	1,049,814	1,010,949	964,888	893,783
Total net position, end of year	\$ 1,304,897	\$ 1,286,322	\$ 1,250,209	\$ 1,217,877	\$ 1,181,829	\$ 1,147,997	\$ 1,108,524	\$ 1,049,814	\$ 1,010,949	\$ 964,888

* 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 in the way 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. The Authority follows its "growth pays for growth" philosophy by setting user rates and fees to cover the cost of operations, maintenance and capital improvements that benefit existing customers, and setting developer charges and availability fees to cover the cost of growth in the system such as capacity purchases or capital improvements that benefit new users. 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 visit our website at www.pwcsa.org, or contact the Authority's Customer Service Department at 703-335-7950 or mail your request to Prince William County Service Authority, 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. Rate increases were effective September 1 for fiscal years 2009 through 2012 and January 1 starting in fiscal year 2013.

Fiscal Year	Commodity Charges (1)				Service Charges (2)			
	Residential		Commercial		3/4 inch		1 inch	
	Water	Wastewater	Water	Wastewater	Water	Wastewater	Water	Wastewater
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
2010	2.90	5.60	3.15	6.10	3.65	6.40	9.25	16.05
2009	2.65	5.15	2.90	5.55	3.35	5.85	8.45	14.65

(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 June 30, 2018, any rate increases have been effective on September 1 of the fiscal year.

Fiscal Year	Residential (1)			Commercial (2)		
	Water	Wastewater	Total	Water	Wastewater	Total
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
2010	4,000	9,500	13,500	12,000	28,500	40,500
2009	4,000	9,000	13,000	12,000	27,000	39,000

(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)		\$ 111,625		\$ 70,714	
Name	Type	2018		2009	
		Amount	% of Total	Amount	% of Total
Prince William County Schools	Schools	\$1,759	1.58%	\$990	1.40%
City of Manassas Park	Utility	819	0.73%	205	0.29%
Potomac Club	Housing	651	0.58%	–	–
Summerland Heights Apartments	Housing	539	0.48%	346	0.49%
Data Company	Data Centers	518	0.46%	–	–
Westgate Apartments	Housing	483	0.43%	403	0.57%
Crothall Laundry	Hospital Laundry	476	0.43%	269	0.38%
Potomac Mills Mall	Shopping Mall	474	0.42%	219	0.31%
Woodbridge Station Apartments	Housing	436	0.39%	–	–
Sentara Potomac Hospital	Hospital	429	0.38%	255	0.36%
Rollingbrook Village	Housing	–	–	212	0.30%
Coverstone	Housing	–	–	219	0.31%
Markhams Grant	Housing	–	–	205	0.29%

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, 2018

	Outstanding Debt	# of Customers	Debt Coverage per Customer
VRA Loans Payable	\$ 66,460,114	92,654	\$ 717.29
Revenue Bonds	61,342,976	92,654	662.07
Total	<u>\$ 127,803,090</u>	92,654	<u>\$ 1,379.36</u>

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.

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Pledged revenues	\$ 145,173	\$ 152,595	\$ 140,209	\$ 141,305	\$ 137,450	\$ 145,010	\$ 134,326	\$ 116,662	\$ 118,881	\$ 131,336
Senior debt (1) Principal and interest requirements	\$ 7,927	\$ 7,927	\$ 7,927	\$ 8,256	\$ 8,544	\$ 9,588	\$ 10,327	\$ 13,393	\$ 8,485	\$ 7,334
Senior debt revenue coverage	18.31	19.25	17.69	17.12	16.09	15.12	13.01	8.71	14.01	17.91
Total debt revenue coverage	18.31	19.25	17.69	17.12	16.09	15.12	13.01	8.71	14.01	17.91

(1) Effective with the closing of a new financing agreement with the VRA on June 28, 2007, all of the outstanding balances with the VRA became parity with the outstanding Revenue and Refunding Bonds debt. In fiscal years 2009 through 2018, the Authority made advanced payments to the Trustee toward debt service for the subsequent year.

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)
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
2010	118,881	74,053	44,828	10,182	4.40
2009	131,336	72,515	58,821	8,801	6.68

- (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 2009 through 2018, 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)
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	216,641	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
2010	44,828	13,053	31,775	8,485	3.74	197,861	23.32
2009	58,821	19,062	39,759	7,334	5.42	212,554	28.98

- (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 2009 through 2018, the Authority made advanced payments to the Trustee toward debt service for the subsequent year.

Source: Prince William County Service Authority.

DEMOGRAPHIC AND ECONOMIC INFORMATION

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
2018	460,457	4,331	0.9%
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
2010	402,002	9,102	2.3
2009	392,900	4,631	1.2

Source: Prince William County.

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

Calendar Year	Civilian Labor Force (1)	At-Place Employment (2)	Unemployment Rate %
2018	246,494	data not available	2.9%
2017	239,833	127,892	3.4
2016	234,607	126,283	3.7
2015	231,347	122,607	4.1
2014	231,813	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
2010	218,394	103,877	6.1
2009	208,417	102,075	5.4

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	2018		2009	
		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	6	1,000 and over
Sentara Healthcare/Potomac Hospital Corporation	Private	6	1,000 and over	4	1,000 and over
Wegmans Store #07	Private	7	500 to 999	7	500 to 999
Northern Virginia Community College	State Government	8	500 to 999	9	500 to 999
Target Corporation	Private	9	500 to 999	8	500 to 999
M J Morgan Group	Private	10	500 to 999	–	–
Prince William County Parks	Local Government	–	–	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	Total Residential
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
2010	295,500	172,200	152,600	251,200
2009	290,200	173,200	162,200	248,900

(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

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Number of employees	335	306	288	281	258	257	253	245	259	250
Number of customers	92,654	90,892	89,235	88,057	87,061	85,991	84,513	83,687	81,101	78,654
Miles of water lines	1,236	1,225	1,214	1,203	1,195	1,185	1,165	1,149	1,135	1,083
Miles of sewer lines	1,097	1,091	1,086	1,080	1,097	1,097	1,085	1,082	1,052	1,038
Wastewater pumping stations	60	59	59	58	58	57	57	57	57	59
Water tank storage effective capacity (MG)	26.1	26.1	26.1	26.1	26.1	26.1	26.1	24.4	24.4	24.4
Number of fire hydrants	11,661	11,481	11,327	11,181	11,010	10,777	10,730	10,562	10,149	10,098
Water capacity (MGD):										
Capacity at Fairfax Water	62.4	62.4	57.4	57.4	51.4	51.4	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total water capacity	67.8	67.9	62.9	62.9	56.9	56.9	56.9	56.9	56.9	56.9
Wastewater treatment capacity (MGD):										
Capacity at HLM AWRF	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0
Capacity at UOSA	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	17.8	17.8
Total wastewater treatment capacity	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	35.8	35.8

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
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	8,760
2012	84,513	58	9,461	43.7	9,108
2011	83,687	50	9,552	43.8	8,501
2010	81,101	60	9,231	42.2	9,056
2009	78,654	65	8,870	39.5	8,407

Source: Prince William County Service Authority.

GLOSSARY OF ACRONYMS

AAL	Actuarial Accrued Liability	LGIP EM	Local Government Investment Pool Extended Maturity
ABC	Annual Benefit Cost		
APC	Annual Pension Cost	MD&A	Management's Discussion and Analysis
ARC	Annual Required Contribution	MG	Million Gallons
BOCS	Board of County Supervisors	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	PER	Preliminary Engineering Report
COLA	Cost of Living Adjustment	PTO	Paid Time Off
CPI-U	Consumer Price Index for all Urban Consumers	SCADA	Supervisory Control and Data Acquisition
ERU	Equivalent Residential Unit	S&P	Standard and Poor's Rating Services
FDIC	Federal Deposit Insurance Corporation	SEC	Securities and Exchange Commission
FFCB	Federal Farm Credit Bank	TOL	Total Other Postemployment Benefits Liability
FHLB	Federal Home Loan Bank	TPL	Total Pension Liability
GAAP	Generally Accepted Accounting Principles	UAAL	Unfunded Actuarial Accrued Liability
GASB	Governmental Accounting Standards Board	UOSA	Upper Occoquan Service Authority
GFOA	Government Finance Officers Association	US	United States
GLI	Group Life Insurance	VDOT	Virginia Department of Transportation
HIC	Health Insurance Credit	VML	Virginia Municipal League
HLM AWRP	H.L. Mooney Advanced Water Reclamation Facility	VRA	Virginia Resources Authority
		VRS	Virginia Retirement System
		VSDP	Virginia Sickness and Disability Program
LGIP	Local Government Investment Pool	VWFRF	Virginia Water Facilities Revolving Fund



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