2019

Comprehensive Annual Financial Report

For the fiscal years ended
June 30, 2019 and
June 30, 2018

UPPER OCCOQUAN SERVICE AUTHORITY
Regional Water Reclamation System, Centreville, VA

Upper Occoquan Service Authority is officially known as Upper Occoquan Sewage Authority

Fall on the Occoquan Reservoir

2019

Comprehensive Annual Financial Report

For the fiscal years ended
June 30, 2019 and
June 30, 2018

Prepared by the Finance Department

UPPER OCCOQUAN SERVICE AUTHORITY
Regional Water Reclamation System, Centreville, VA

Upper Occoquan Service Authority is officially known as Upper Occoquan Sewage Authority

Committed to environmental sustainability and protecting our water resources now and for future generations.

In 1971, with the counsel and recommendations of the Virginia Department of Health, the Virginia Water Control Board adopted a bold and innovative policy to protect and augment the region's critical water supply, the Occoquan Reservoir. This Policy mandated the formation of the Upper Occoquan Service Authority (UOSA) to provide a state-of-the-art advanced wastewater treatment plant. For over 40 years, UOSA's plant has been a world model for reliable and efficient water supply protection and indirect potable reuse.

UOSA is a regional agency mandated with providing treatment for wastewater that is generated in the Occoquan Watershed. The Watershed is further protected through Virginia Tech's Occoquan Watershed Monitoring Laboratory—an independent organization that continuously monitors the watershed and provides advice on important protective measures for the Reservoir.

As a result of UOSA's formation, the water quality in the Occoquan Reservoir, a major drinking water source for Northern Virginia, has dramatically improved and that improvement has been sustained despite rapid population growth in the watershed.

Today the Millard H. Robbins, Jr. Regional Water Reclamation Plant operates as one of the nation's largest and most successful facilities of its kind for both water reclamation and reuse services.

With a deep understanding that our water is an irreplaceable resource and fundamental to our community's well-being now and into the future, each highly-trained and dedicated UOSA staff member stands behind our mission to protect and augment the water supply for approximately 2.0 million citizens in our area. When managed efficiently and equitably, water plays a key role in strengthening the socio-economic and environmental systems of Prince William County, Fairfax County, the City of Manassas, the City of Manassas Park, and beyond.

Our long-term vision of implementing sustainable practices is designed to not only improve environmental stewardship, minimize risks, and maximize financial savings, but to improve today's water quality within our community, without compromising the water needs of our future generations.

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"The most patriotic thing you can do is to take care of the environment and try to live sustainably."

~ *Robert F. Kennedy, Jr.*

Wildlife on Lake UOSA at daybreak

INTRODUCTORY SECTION

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Upper Occoquan Service Authority

Leader in Water Reclamation and Reuse

14631 COMPTON ROAD, CENTREVILLE, VIRGINIA 20121-2506
(703) 830-2200

November 5, 2019

Board of Directors
Upper Occoquan Service Authority
14631 Compton Road
Centreville, Virginia 20121-2506

Dear Members of the Board:

The Comprehensive Annual Financial Report (CAFR) of the Upper Occoquan Service Authority (UOSA) for the fiscal year ended June 30, 2019, is submitted herewith. This CAFR has been prepared by UOSA's Finance Department in accordance with accounting principles generally accepted in the United States of America and conforms to the requirements of 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 UOSA.

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.

A brief history of UOSA, its fiscal operations, and selected accomplishments are presented below.

ORGANIZATION AND FUNCTION

UOSA was formed on March 3, 1971, by concurrent resolution of the governing bodies of Fairfax and Prince William Counties and the Towns (now Cities) of Manassas and Manassas Park. UOSA's discharge flows via Bull Run to the Occoquan Reservoir, a major water supply source for approximately 2 million people in the Northern Virginia communities of Fairfax, Loudoun, Prince William and Alexandria served by the Fairfax County Water Authority (Fairfax Water).

Studies in 1969-1970 concluded that inadequately treated sewage discharged by eleven secondary treatment plants in the Occoquan Watershed was largely responsible for the serious water quality problems in the Occoquan Reservoir. To remedy the problems, the Virginia State Water Control Board (SWCB) (now the Department of Environmental Quality) in 1971 adopted a comprehensive policy for the Occoquan Watershed (Occoquan Policy). A principal requirement of the Occoquan Policy was the construction of a regional water reclamation facility to replace the eleven existing treatment plants. UOSA was created to address this mandate.

UOSA was created under the provisions of the Virginia Water and Waste Authorities Act (Chapter 51, Title 15.2, *Code of Virginia* of 1950 as amended) to construct, finance and operate the regional water reclamation facility mandated by the Occoquan Policy. The first of nine construction contracts was awarded in early 1974 and UOSA began operation of the treatment facility on June 26, 1978. The National

Pollutant Discharge Elimination System (NPDES) permit issued to UOSA by the SWCB and the United States Environmental Protection Agency (EPA) contained some of the most stringent discharge limits in the United States. UOSA has consistently met these limits and, as a result, eliminated wastewater as a source of pollution in the Occoquan Watershed. Further, the water reclaimed by UOSA contributes significantly to the water supply of Northern Virginia. Tenacious pursuit of an enhanced environment is a continuous activity for UOSA.

UOSA is a public body politic, corporate, and an instrumentality of the Commonwealth of Virginia. The governing body of UOSA is an eight-person Board of Directors consisting of two members appointed for four-year terms by the governing body of each Member Jurisdiction. The UOSA Executive Director is responsible to the Board of Directors for the day-to-day operations of UOSA. The organization is comprised of four Divisions: Finance, Operations and Maintenance, Treatment Process and Technical Services.

REPORTING ENTITY

This CAFR includes all funds and accounts of UOSA. As described above, UOSA provides wastewater treatment and water reclamation services to four Member Jurisdictions on a wholesale basis. In accordance with accounting principles generally accepted in the United States of America for governmental entities, there are no component units to be included in the reporting entity.

ECONOMIC CONDITION AND OUTLOOK

UOSA's service area is located in the Greater Washington D.C. metropolitan area, which is ranked as the fifth largest regional economy in the United States. The Washington D.C. metropolitan area provides close proximity to the federal government and continues to be a premier location for corporate headquarters. It is also the home to fifteen Fortune 500 company headquarters. There have been several major corporate headquarters relocations to the area since 2008, including DXC Technology, Hilton Worldwide, and Northrop Grumman. Other industry leaders located within the Member Jurisdictions include Booz Allen Hamilton, Micron Technology, Lockheed Martin, General Dynamics and Inova Health System. In addition, Amazon announced in November 2018 that its HQ2 location would be in Northern Virginia, which is expected to add 25,000 new jobs to the region. Micron Technology is located in UOSA's Service Area and recently announced a $3 billion expansion that will ultimately double its workforce to 2,000 employees.

The Greater Washington D.C. area unemployment rate is consistently below the national average and has the highest median household income in the United States. The area has a highly educated workforce and is ranked number one among major metropolitan areas for the percent of population with graduate or professional degrees. While the U.S. government is a significant employer and customer of services, which provides a stable economic foundation, in recent years the region has become one of the country's leaders in Professional and Business Services. As a result, the economy is increasingly fueled by private sector growth. The economic forecast from the Center for Regional Analysis at George Mason University indicates that the region's economy will outperform the national average when it comes to growth, but at a slower pace than previous years due to the estimated impact of lower federal spending. Residential housing values have continued to increase as the residential real estate market has improved.

UOSA's service area population has steadily increased over the last ten years. With its expansion to 54 million gallons per day of capacity, UOSA continues to supply essential wastewater reclamation services to the four Member Jurisdictions in the service area.

MAJOR INITIATIVES

In 2005, UOSA completed a major expansion program to increase treatment capacity from 27 million gallons per day (mgd) to 54 mgd. This expansion incorporated process modifications and improved technologies that resulted in facilities that were more efficient and easier to operate and maintain.

UOSA's subsequent ten-year Capital Improvement Plans (CIPs) have identified additional projects, many of which are currently in various stages of design or construction. Primary project categories include the expansion of UOSA's delivery system to accommodate full build-out of the UOSA service area, a nutrient reduction project to be able to comply with regulations designed to protect and restore the Chesapeake Bay, innovative projects designed to improve treatment at low life cycle costs and miscellaneous plant improvements including renewal and replacement projects designed to properly preserve UOSA's assets and infrastructure as they age. UOSA's Capital Improvement Plans are funded by bond issuances, low interest loans, cash and public grants.

INTERNAL CONTROL STRUCTURE AND BUDGETARY CONTROLS

UOSA's management is responsible for establishing and maintaining an internal control structure designed to provide UOSA with reasonable, but not absolute, assurance that assets are safeguarded against loss, theft or misuse; and financial records for preparing financial statements and maintaining asset accountability are reliable. In fulfilling this responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of control procedures. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived. Management reviews internal controls on a continuing basis.

UOSA prepares annual budgets for Operating Expenditures, Reserve Maintenance and Debt Service. The proposed budgets are prepared by management and submitted to the Board of Directors for approval. Budgetary control is maintained at the sub-function level by a review of revenues and expenses by management. The Finance Division is responsible for monitoring expenses by function for UOSA as a whole. UOSA also utilizes an encumbrance system for budgetary control and to ensure the availability of funding before contracts or purchase orders are finalized. Appropriations lapse at year-end and may not be carried forward to the next year, except for funds appropriated for multi-year construction projects. After adoption, increases or decreases in budgets may be made only upon Board approval. The budgets for fiscal year 2019 are as originally adopted and were not amended during the year.

LONG-TERM FINANCIAL PLANNING

UOSA's Board of Directors endorsed a Capital Improvement Plan (CIP) Update in February 2019 that addresses UOSA's capital requirements through 2028. The CIP provides for treatment plant capacity that meets regulatory requirements, future growth, a completely updated and renewed collection and delivery system sized for build-out and the renewal and replacement of aging plant assets. The Plan of Finance projects financing through 2028 to ensure funding is available to meet capital improvement needs. Capital project projections and the associated Plan of Finance are updated on an annual basis.

Currently, a bond issue is anticipated for late 2019 to fund the next phase of the CIP, with additional bond issues planned for 2021, 2023 and 2026.

As part of a 2016 bond issuance in June 2016, Standard & Poor's reaffirmed its rating on UOSA's outstanding revenue bonds at AAA, the highest rating that can be awarded. In addition, Fitch and Moody's both reaffirmed their respective ratings of AA+ and Aa1 as part of the refunding.

	Standard & Poor's	Fitch	Moody's
Revenue Bonds	AAA	AA+	Aa1

Each of the four Member Jurisdictions is required by the Restated Service Agreement to pay its share of the debt service. The shares of the Member Jurisdictions are based on allocated capacity as a percentage of the total capacity allocated to the four participating Member Jurisdictions or as otherwise identified for specific projects within UOSA's Service Agreement.

Completion of the second phase of the Project 54 expansion program (Contract 54) provided an increase in capacity from 32 mgd to 54 mgd. Allocation of the 54 mgd capacity, which was effective February 1, 2005, is shown in Table 1 below.

TABLE 1

Member Jurisdiction	Total Capacity Allocation	Percentage Of Total Capacity
Fairfax County	27.5999 mgd	51.1109%
Prince William County	15.7971 mgd	29.2539
City of Manassas	7.6893 mgd	14.2395
City of Manassas Park	2.9137 mgd	5.3957
Total	54.0000 mgd	100.0000%

Under Section 5.4 of the Service Agreement, any Member Jurisdiction may reallocate any portion of its allocated plant capacity to any other Member Jurisdiction on such terms as may be mutually agreeable, subject to the approval of UOSA. Certain Member Jurisdictions have reallocated capacity pursuant to this provision. However, pursuant to Section 5.4 of the Service Agreement, a reallocation of capacity cannot alter the respective obligations of the Member Jurisdiction under the Service Agreement to pay UOSA's charges for debt service and for replacements and necessary improvements, as set forth in the Service Agreement.

INDEPENDENT AUDIT

The Restated Service Agreement requires an annual audit be performed. UOSA's financial statements for the years ended June 30, 2019 and 2018 were audited by PBMares, LLP, an independent accounting firm selected by the Audit Committee. The fiscal year 2019 Independent Auditor's Report is presented in the financial section of this CAFR.

AWARDS

GFOA Certificate of Achievement for Excellence in Financial Reporting - The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to UOSA for its Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2018. The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting. This is the thirtieth consecutive year UOSA has received the Certificate of Achievement for Excellence in Financial Reporting.

To be awarded a Certificate of Achievement, UOSA published an easily readable and efficiently organized CAFR, whose contents conform to program standards. This report satisfied 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 fiscal year 2019 report continues to conform to the Certificate of Achievement Program's requirements and is being submitted to the GFOA to determine its eligibility for a certificate.

NACWA Platinum Peak Performance Award - The National Association of Clean Water Agencies (NACWA) awarded a Platinum Peak Performance Award to UOSA for 2018. NACWA's National Environmental Achievement Awards Program annually recognizes individual member agencies that have made outstanding contributions to environmental protection and wastewater management by consistently meeting all National Pollution Discharge Elimination System (NPDES) permit limits. This Platinum Peak Performance Award recognized UOSA's 100% NPDES permit compliance for fourteen consecutive years.

ACKNOWLEDGEMENTS

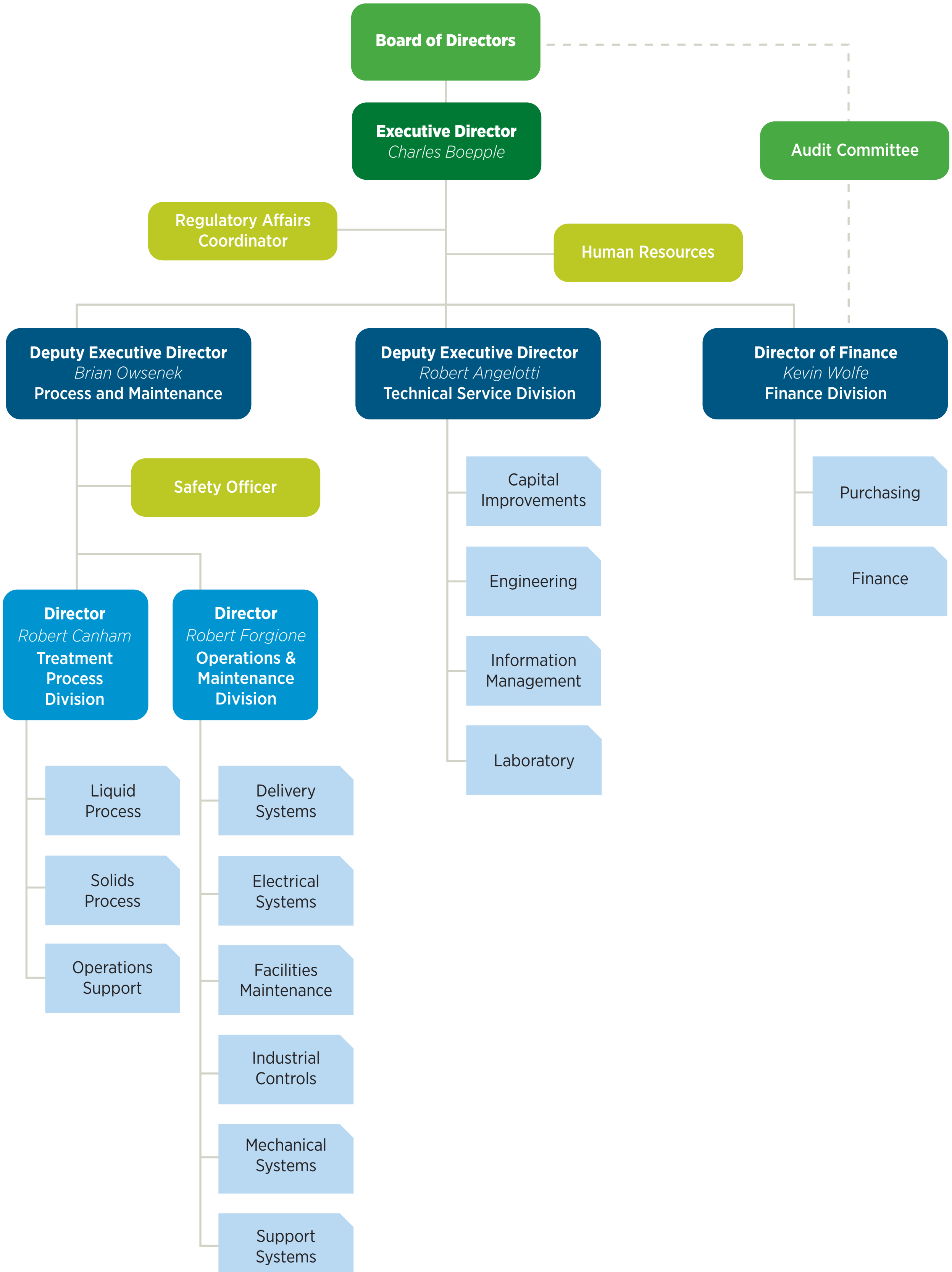
We would like to express our appreciation to all UOSA staff who assisted in the preparation of this CAFR, especially the members of the Finance Department of the Finance Division. We commend them for their professionalism, hard work and continued efforts to improve this report. This CAFR reflects our continued commitment to provide information in conformance with the highest standards of financial reporting.

Respectfully Submitted,

Charles P. Boepple
Executive Director

Kevin D. Wolfe
Director of Finance

Organizational Chart
June 30, 2019



Directory of Board Members and Officials

June 30, 2019

Board of Directors and Officers	Position	Member Jurisdiction/Affiliation
John M. Weber	Chairman	City of Manassas
John W. di Zerega	Vice-Chairman	Fairfax County
Dean E. Dickey	Secretary	Prince William County
Shahram Mohsenin	Treasurer	Fairfax County
Nancy Vehrs	Member	Prince William County
Tony H. Dawood	Member	City of Manassas
Jeanette M. Rishell	Member	City of Manassas Park
Gary Fields	Member	City of Manassas Park
Vacant	Assistant Treasurer	UOSA Staff
June A. Mahoney	Assistant Secretary	UOSA Staff

Officials	Position
Charles P. Boepple	Executive Director
Brian L. Owsenek	Deputy Executive Director – Process & Maintenance
Kevin D. Wolfe	Director of Finance
Robert W. Angelotti	Deputy Executive Director – Technical Services Division

Certificate of Achievement

June 30, 2019

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Upper Occoquan Service Authority

Virginia

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

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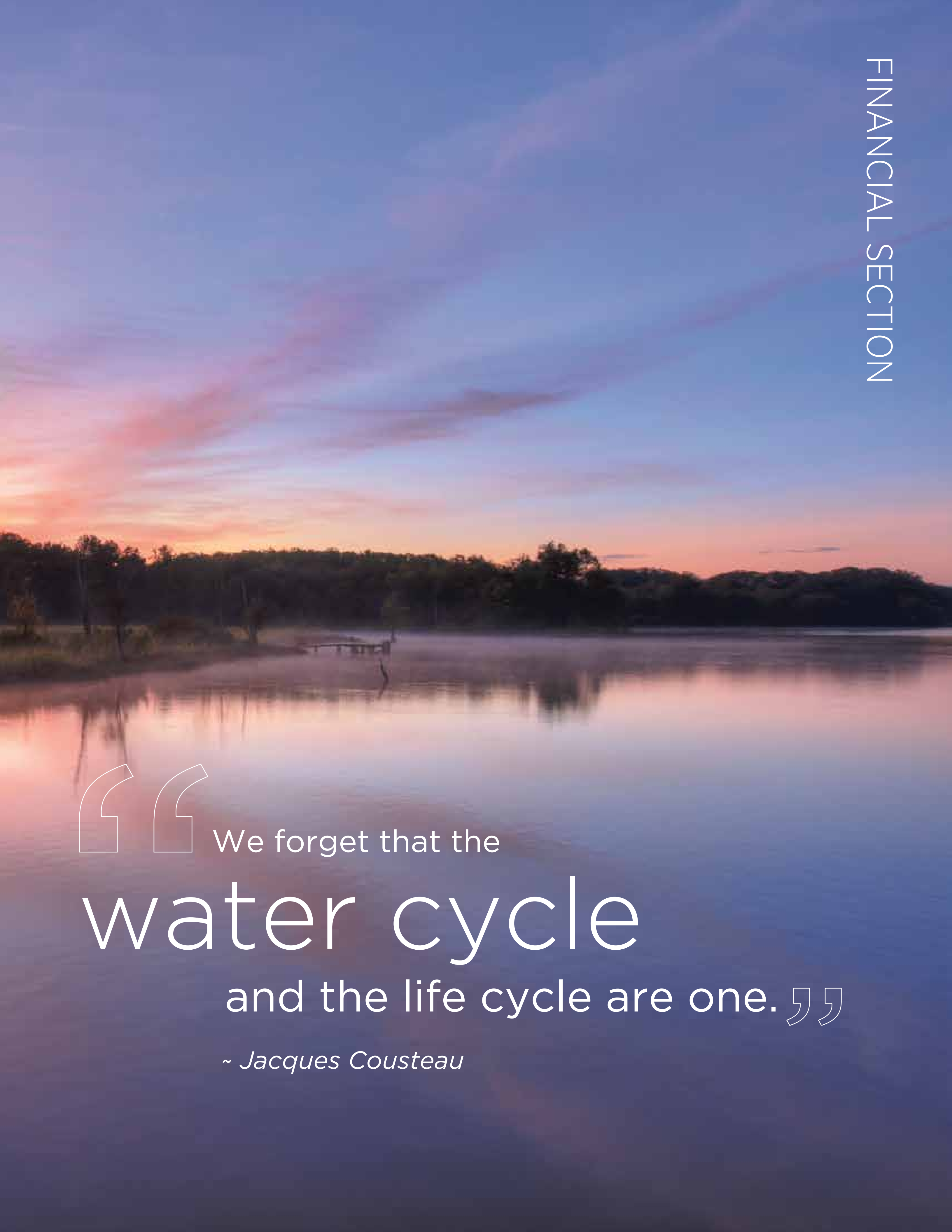
Daybreak on the Potomac River



"We forget that the
water cycle
and the life cycle are one."

~ Jacques Cousteau

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Report of Independent Auditor

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PBMares

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Upper Occoquan Service Authority

Report on the Financial Statements

We have audited the accompanying basic financial statements of the Upper Occoquan Service Authority (UOSA), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise UOSA'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 UOSA'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 UOSA'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 UOSA, as of June 30, 2019, and the respective changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require the Management's Discussion and Analysis and the required supplementary information on pages 19-27 and 71-75, 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 UOSA'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 5, 2019 on our consideration of UOSA'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 UOSA's internal control over financial reporting and compliance.

PBMares, LLP

Harrisonburg, Virginia
November 5, 2019

Management's Discussion and Analysis

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MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

The following discussion and analysis of the Upper Occoquan Service Authority's financial performance provides a narrative overview of the financial activities of UOSA for the year ended June 30, 2019. This analysis should be read in conjunction with the basic financial statements, which are located in the next section of this CAFR.

FINANCIAL HIGHLIGHTS

- Assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by $46.9 million at June 30, 2019 compared to $50.9 million at June 30, 2018.
- UOSA's total net position decreased by $4.0 million, or 7.9%, for fiscal year 2019 compared to a decrease of $13.0 million, or 20.3%, for fiscal year 2018.
- The decrease in net position for the current year is attributable to a $7.2 million decrease in net investment in capital assets, a $3.9 million increase in restricted net position and a $0.7 million decrease in unrestricted net position.
- Fiscal year 2019 operating revenues increased by 5.1% to $30.2 million while operating expenses decreased by 1.4% to $57.8 million, which includes depreciation and amortization expense of $28.3 million.
- Capital contributions from the Member Jurisdictions were $18.7 million and $17.8 million for fiscal years 2019 and 2018, respectively.

OVERVIEW OF THE FINANCIAL STATEMENTS

UOSA operates as a single enterprise fund, which is a proprietary type fund used to account for operations in a manner similar to those used in the private sector. UOSA uses the accrual basis of accounting, under which revenues are recognized when they are earned and expenses are recognized when they are incurred.

This CAFR is presented in three main sections: introductory, financial and statistical. The introductory section includes the letter of transmittal, the GFOA Certificate of Achievement for Excellence in Financial Reporting, a list of Board members and officers, and an organizational chart.

The financial section contains the Independent Auditor's Report, Management's Discussion and Analysis, and the basic financial statements as follows:

- Statements of Net Position – These statements include all of UOSA's assets, deferred outflows of resources, liabilities, deferred inflows of resources and net position. The statements contain information about the nature and amounts of investments in resources and obligations to creditors as well as provide a basis for evaluating the capital structure of UOSA and assessing its liquidity and flexibility.
- Statements of Revenues, Expenses and Changes in Net Position – These statements reflect revenue and expense activity for UOSA and measure the success of its operations.
- Statements of Cash Flows – These statements present the cash provided and used in operating; investing; and capital and related financing activities.
- Notes to the Financial Statements – The notes to the financial statements provide necessary disclosures essential to a full understanding of the data provided in the financial statements.

The statistical section includes selected financial, operational and demographic information about UOSA and its Member Jurisdictions.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

FINANCIAL ANALYSIS OF UOSA'S FINANCIAL POSITION AND RESULTS OF OPERATIONS

The table presented below provides a summary of UOSA's financial position and operations for fiscal year 2019 and fiscal year 2018.

Condensed Statements of Net Position
June 30,

	2019	2018	Change Amount	Change %
Assets and Deferred Outflows of Resources				
Current & other assets	$ 109,858,433	$ 121,454,498	$ (11,596,065)	-9.5%
Capital assets, net	432,031,415	441,177,665	(9,146,250)	-2.1
Total Assets	541,889,848	562,632,163	(20,742,315)	-3.7
Deferred outflows of resources	18,654,337	19,357,030	(702,693)	-3.6
Total Assets and Deferred Outflows of Resources	560,544,185	581,989,193	(21,445,008)	-3.7
Liabilities and Deferred Inflows of Resources				
Current liabilities	38,400,819	36,792,296	1,608,523	4.4
Long-term liabilities	472,299,133	491,787,372	(19,488,239)	-4.0
Total Liabilities	510,699,952	528,579,668	(17,879,716)	-3.4
Deferred inflows of resources	2,993,994	2,557,139	436,855	17.1
Total Liabilities and Deferred Inflows of Resources	513,693,946	531,136,807	(17,442,861)	-3.3
Net Position				
Net (deficit) investment in capital assets	(12,317,474)	(5,169,318)	(7,148,156)	138.3
Restricted	69,427,481	65,545,482	3,881,999	5.9
Unrestricted (deficit)	(10,259,768)	(9,523,778)	(735,990)	7.7
Total Net Position	46,850,239	50,852,386	(4,002,147)	-7.9
Total Liabilities, Deferred inflows of Resources and Net Position	$ 560,544,185	$ 581,989,193	$ (21,445,008)	-3.7

During fiscal year 2019, net position decreased by $4,002,147. Significant factors attributable to the decrease were as follows:

- Net investment in capital assets decreased by $7,148,156, primarily due to a decrease in net capital assets related to depreciation that was partially offset by a decrease in outstanding debt.
- Restricted net position increased by $3,881,999, primarily due to an increase in investments and receivables, partially offset by an increase in accounts payable.
- Unrestricted net position decreased by $735,990, largely due to a decrease in cash and cash equivalents, partially offset by decreases in accounts payable and net pension liability.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

The table presented below provides a summary of UOSA's financial position and operations for fiscal year 2018 and fiscal year 2017.

Condensed Statements of Net Position
June 30,

	2018	2017	Change Amount	Change %
Assets and Deferred Outflows of Resources				
Current & other assets	$ 121,454,498	$ 128,760,240	$ (7,305,742)	-5.7%
Capital assets, net	441,177,665	459,477,342	(18,299,677)	-4.0
Total Assets	562,632,163	588,237,582	(25,605,419)	-4.4
Deferred outflows of resources	19,357,030	22,793,659	(3,436,629)	-15.1
Total Assets and Deferred Outflows of Resources	581,989,193	611,031,241	(29,042,048)	-4.8
Liabilities and Deferred Inflows of Resources				
Current liabilities	36,792,296	35,459,240	1,333,056	3.8
Long-term liabilities	491,787,372	511,507,124	(19,719,752)	-3.9
Total Liabilities	528,579,668	546,966,364	(18,386,696)	-3.4
Deferred inflows of resources	2,557,139	230,926	2,326,213	1007.3
Total Liabilities and Deferred Inflows of Resources	531,136,807	547,197,290	(16,060,483)	-2.9
Net Position				
Net (deficit) investment in capital assets	(5,169,318)	4,881,817	(10,051,135)	-205.9
Restricted	65,545,482	65,770,178	(224,696)	-0.3
Unrestricted (deficit)	(9,523,778)	(6,818,044)	(2,705,734)	39.7
Total Net Position	50,852,386	63,833,951	(12,981,565)	-20.3
Total Liabilities, Deferred inflows of Resources and Net Position	$ 581,989,193	$ 611,031,241	$ (29,042,048)	-4.8

During fiscal year 2018, net position decreased by $12,981,565. Significant factors attributable to the decrease were as follows:

- Net investment in capital assets decreased by $10,051,135, primarily due to a decrease in net capital assets related to depreciation that was partially offset by a decrease in outstanding debt.
- Restricted net position decreased by $224,696, primarily due to a decrease in cash and investments, partially offset by a decrease in accrued interest payable.
- Unrestricted net position decreased by $2,705,734, largely due to an increase in UOSA's OPEB obligation from the implementation of GASB No. 75. This was partially offset by a decrease in the pension and landfill liabilities and an increase in inventory.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

REVENUES AND EXPENSES

The table that follows summarizes the changes in revenues and expenses for UOSA between fiscal year 2019 and fiscal year 2018.

Condensed Statements of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30,

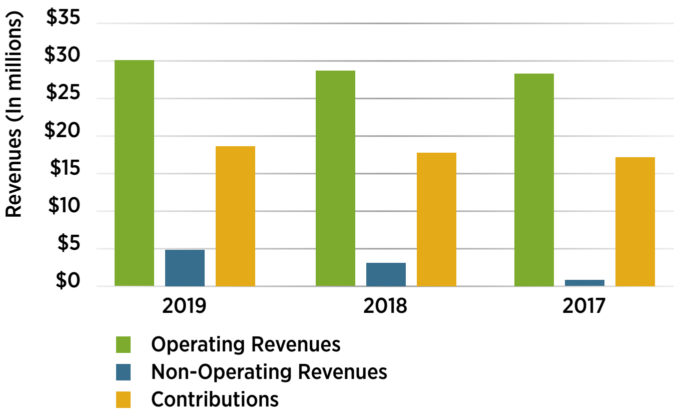
	2019	2018	Change Amount	Change %
Operating Revenues				
Member Jurisdictions	$ 29,825,873	$ 28,515,447	$ 1,310,426	4.6%
Other	410,472	252,651	157,821	62.5
Total Operating Revenues	30,236,345	28,768,098	1,468,247	5.1
Operating Expenses				
Operations	29,525,587	28,158,026	1,367,561	4.9
Depreciation	28,309,856	30,509,501	(2,199,645)	-7.2
Total Operating Expenses	57,835,443	58,667,527	(832,084)	-1.4
Operating Loss	(27,599,098)	(29,899,429)	2,300,331	7.7
Non-operating revenues, net	4,900,451	3,229,382	1,671,069	51.7
Capital contributions	18,696,500	17,830,318	866,182	4.9
Change in Net Position	(4,002,147)	(8,839,729)	4,837,582	54.7
Total net position, beginning of the year	50,852,386	63,833,951	(12,981,565)	-20.3
Cumulative effect of change in accounting principle	-	(4,141,836)	4,141,836	N/A
Total Net Position, End of Year	$ 46,850,239	$ 50,852,386	$ (4,002,147)	-7.9

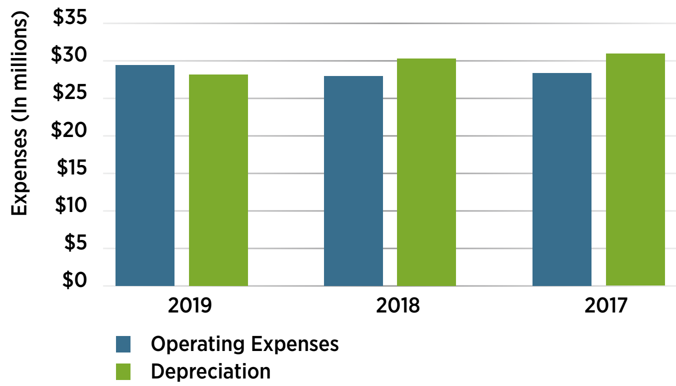
The table that follows summarizes the changes in revenues and expenses for UOSA between fiscal year 2018 and fiscal year 2017.

Condensed Statements of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30,

	2018	2017	Change Amount	Change %
Operating Revenues				
Member Jurisdictions	$ 28,515,447	$ 28,053,582	$ 461,865	1.6%
Other	252,651	274,990	(22,339)	-8.1
Total Operating Revenues	28,768,098	28,328,572	439,526	1.6
Operating Expenses				
Operations	28,158,026	28,603,967	(445,941)	-1.6
Depreciation	30,509,501	31,105,822	(596,321)	-1.9
Total Operating Expenses	58,667,527	59,709,789	(1,042,262)	-1.7
Operating Loss	(29,899,429)	(31,381,217)	1,481,788	4.7
Non-operating revenues, net	3,229,382	836,283	2,393,099	286.2
Capital contributions	17,830,318	17,229,657	600,661	3.5
Change in Net Position	(8,839,729)	(13,315,277)	4,475,548	33.6
Total net position, beginning of the year	63,833,951	77,149,228	(13,315,277)	-17.3
Cumulative effect of change in accounting principle	(4,141,836)	-	(4,141,836)	N/A
Total Net Position, End of Year	$ 50,852,386	$ 63,833,951	$ (12,981,565)	-20.3

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)





OPERATING REVENUES

Operating revenue is derived primarily from billings to the Member Jurisdictions for treatment of sewage. The billings to the four Member Jurisdictions are based on the approved budget and actual monthly flows.

Current Year. Compared to fiscal year 2018, operating revenue increased by $1,468,247, net of a $1,248,502 credit to the Member Jurisdictions for the fiscal year 2019 Operations and Maintenance budget surplus. The variance was due primarily to increases in operating costs.

Prior Year. Compared to fiscal year 2017, operating revenue increased by $439,526, net of a $2,012,699 credit to the Member Jurisdictions for the fiscal year 2018 Operations and Maintenance budget surplus. The variance was due primarily to increases in operating costs.

OPERATING EXPENSES

Operating expenses reflect the cost of services associated with the operation of the treatment plant and delivery systems.

Current Year. Operations expenses increased by $1,367,561 compared to fiscal year 2018. The increase was primarily due to higher requirements for facilities maintenance as well as higher electrical power and chemicals due to record high flows.

Prior Year. Operations expenses decreased by $445,941 compared to fiscal year 2017. The decrease was primarily due to a decrease in the net pension liability and facilities maintenance costs. This was partially offset by higher facility operations expense, higher pricing and usage for electrical power, increased chemical usage and higher miscellaneous expenses.

NON-OPERATING REVENUES

Current Year. Non-operating revenues increased by $1,671,069 in fiscal year 2019 due to an increase in revenue in excess of expenses from restricted accounts. This increase is primarily due to an increase in restricted investment income and a receivable related to the Build America Bonds subsidy.

Prior Year. Non-operating revenues increased by $2,393,099 in fiscal year 2018 due to an increase in revenue in excess of expenses from restricted accounts. This increase is primarily due to an increase in restricted investment income and a decrease in expense related to capital and UOSA's landfill closure liability. This was partially offset by decreases in the bond interest billings.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

CAPITAL ASSETS

At the close of fiscal year 2019, UOSA had $432,031,415 invested in capital assets. This amount represents a net decrease of $9,146,250 or approximately 2% under fiscal year 2018.

Capital Assets at June 30, (net of accumulated depreciation and amortization)

	2019	2018	Change Amount	Change %
Land	$ 7,203,612	$ 7,203,612	$ -	0.0%
Treatment plant and reservoir	258,046,758	275,389,265	(17,342,507)	-6.3
Interceptor sewers	47,776,012	49,294,977	(1,518,965)	-3.1
Pumping stations	83,066,386	87,276,061	(4,209,675)	-4.8
Mobile equipment	433,894	405,307	28,587	7.1
Office furniture and equipment	406,804	436,340	(29,536)	-6.8
Vehicles	568,111	519,914	48,197	9.3
Construction in progress	34,529,838	20,652,189	13,877,649	67.2
Total	$ 432,031,415	$ 441,177,665	$ (9,146,250)	-2.1

Major Additions in Fiscal Year 2019, at Cost, Included:

Construction in Progress:	
Plant and delivery system expansion and improvements	$ 16,174,578
Treatment Plant and Reservoir:	
General plant improvements and assets placed in service (removed from construction in progress)	2,067,974
Office Furniture and Equipment:	
Integrated security system	125,898
Vehicles:	
Fleet vehicles	194,708

This information should be read in conjunction with note 5 to the audited financial statements in order to obtain more detailed information on UOSA's capital assets.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

At the close of fiscal year 2018, UOSA had $441,177,665 invested in capital assets. This amount represents a net decrease of $18,299,677 or approximately 4% under fiscal year 2017.

Capital Assets at June 30,
(net of accumulated depreciation and amortization)

			Change	
	2018	2017	Amount	%
Land	$ 7,203,612	$ 7,203,612	$ -	0.0%
Treatment plant and reservoir	275,389,265	296,392,645	(21,003,380)	-7.1
Interceptor sewers	49,294,977	50,736,541	(1,441,564)	-2.8
Pumping stations	87,276,061	91,612,586	(4,336,525)	-4.7
Mobile equipment	405,307	411,907	(6,600)	-1.6
Office furniture and equipment	436,340	413,961	22,379	5.4
Vehicles	519,914	468,881	51,033	10.9
Construction in progress	20,652,189	12,237,209	8,414,980	68.8
Total	$ 441,177,665	$ 459,477,342	$ (18,299,677)	-4.0

Major Additions in Fiscal Year 2018, at Cost, Included:

Construction in Progress:	
Plant and delivery system expansion and improvements	$ 8,962,070
Office Furniture and Equipment:	
Integrated security system	152,687
Vehicles:	
Fleet vehicles	141,558

This information should be read in conjunction with note 5 to the audited financial statements in order to obtain more detailed information on UOSA's capital assets.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

DEBT ADMINISTRATION

Current Year. At June 30, 2019, the total principal balance due on UOSA's outstanding debt was $451,237,000 compared to $469,105,000 at June 30, 2018. The decrease in outstanding debt from fiscal year 2018 is equal to $17,868,000, which reflects a decrease in bonds payable of $12,440,000 and a reduction in loans payable of $5,428,000.

At June 30, 2019, the total outstanding bonds payable balance was $418,805,000. The decrease reflects principal payments on the 1995A Series Bonds, 2010B Series Bonds and 2013A Series Bonds.

At June 30, 2019, the total outstanding loan balance was $32,432,000. The decrease consisted of principal payments for the 2013B Series loan and the VRA (2011A & B) loans.

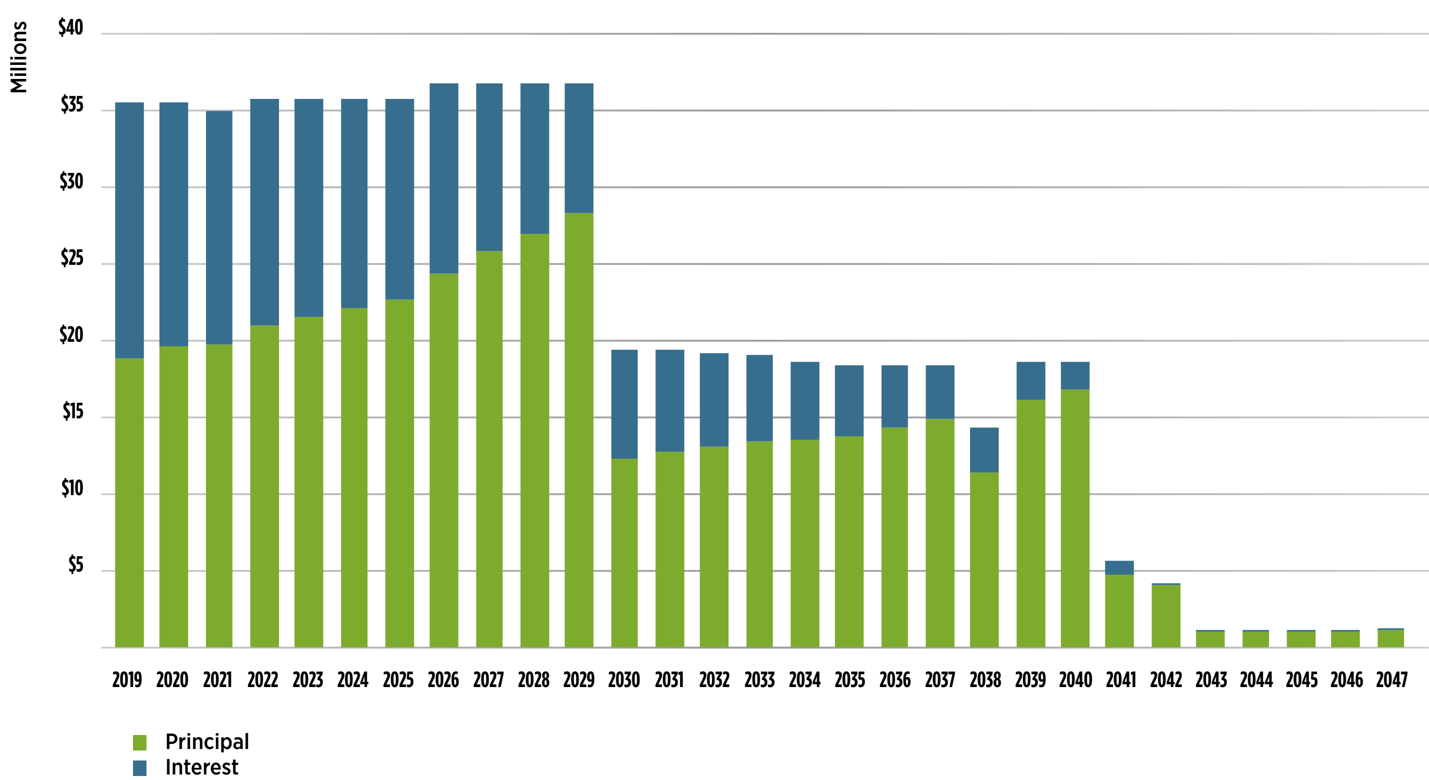
Prior Year. At June 30, 2018, the total principal balance due on UOSA's outstanding debt was $469,105,000 compared to $486,352,000 at June 30, 2017. The decrease in outstanding debt from fiscal year 2017 is equal to $17,247,000, which reflects a decrease in bonds payable of $11,925,000 and a reduction in loans payable of $5,322,000.

At June 30, 2018, the total outstanding bonds payable balance was $431,245,000. The decrease reflects principal payments on the 1995A Series Bonds, 2010B Series Bonds and 2013A Series Bonds.

At June 30, 2018, the total outstanding loan balance was $37,860,000. The decrease consisted of principal payments for the 2013B Series loan and the VRA (2011A & B) loans.

This information should be read in conjunction with the transmittal letter and note 6 to the audited financial statements in order to obtain more detailed information in UOSA's long-term debt.

Annual Debt Service from Existing Bonds



MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET

- UOSA's adopted Annual Budget for fiscal year 2020 is $72.0 million and is primarily comprised of $35.5 million (49.3%) in capital financing costs, $31.8 million (44.2%) in operating expenses, $4.5 million (6.2%) in reserve maintenance expenditures, and $0.2 million (0.3%) in reserve funding. The total represents an increase of $1,016,924 or 1.43% over fiscal year 2019. The increase is primarily due to modest increases for Operations and Maintenance and Reserve Maintenance Budgets.
- The average daily flow projection for fiscal year 2020 is 35.5 million gallons per day (mgd). This represents an increase of 1.0 mgd or 2.90% over fiscal year 2019.
- UOSA's Capital Improvements Program (CIP) includes $212.8 million in forecasted capital projects for plant renewal and improvements; delivery system improvements and expansion; reserve maintenance; and nutrient removal through 2028. Budgeted spending for calendar year 2020 is $25.8 million.
- The next bond issuance is contemplated for late 2019 with additional bond issues planned for 2021, 2023 and 2026, which will fund CIP through 2028.
- The fiscal year 2020 budget reflects efforts to reduce costs by securing fixed pricing for natural gas and treatment plant electrical power, and through the continued use of a cogeneration facility that will produce power from digester gas.
- UOSA's favorable loss experience and risk management efforts resulted in a continuation of the 5.0% premium reduction from VML Insurance for liability, automobile and public officials liability insurance.

CONTACTING UOSA'S FINANCIAL MANAGEMENT

This financial report is designed to provide a general overview of UOSA's finances to all interested parties. Questions about this report or requests for additional financial information should be addressed to UOSA's Director of Finance at the Upper Occoquan Service Authority, 14631 Compton Road, Centreville, VA 20121-2506, or by telephone at (703) 830-2200, or visit UOSA's website at www.uosa.org.

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Financial Statements

STATEMENTS OF NET POSITION

June 30, 2019 and 2018

Assets and Deferred Outflows of Resources	2019	2018
Current Assets		
Cash and cash equivalents (notes 1 and 2)	$ 4,984,227	$ 7,147,885
Investments	2,000,000	1,500,000
Accounts receivable (notes 1 and 3)	1,235,639	368,698
Accrued interest receivable	20,339	15,698
Inventory	3,475,963	3,556,244
Prepaid expenses	436,044	403,036
Restricted assets (notes 1 and 4)		
Cash and cash equivalents (notes 1 and 2)	15,096,139	25,993,335
Investments (notes 1 and 2)	36,503,200	25,381,582
Deposits	70	1,740
Reserve maintenance receivable	2,894,793	2,293,938
Accrued interest receivable	366,371	341,669
Total Current Assets	67,012,785	67,003,825
Non-Current Assets		
Restricted assets (notes 1 and 4)		
Investments (notes 1 and 2)	41,045,648	52,650,673
Arbitrage rebate receivable (note 13)	1,800,000	1,800,000
Capital assets (notes 1 and 5)		
Utility plant and equipment	846,744,712	843,414,796
Other	9,966,152	9,691,936
Accumulated depreciation and amortization	(466,412,899)	(439,784,868)
Land	7,203,612	7,203,612
Construction in progress	34,529,838	20,652,189
Capital assets, net	432,031,415	441,177,665
Total Non-Current Assets	474,877,063	495,628,338
Total Assets	541,889,848	562,632,163
Deferred Outflows of Resources (note 1)		
Deferred amount on refunding of debt	15,325,011	17,456,911
Deferred outflows related to OPEB (notes 1 and 8)	348,908	309,533
Deferred outflows related to pensions (notes 1 and 7)	2,980,418	1,590,586
Total Deferred Outflows of Resources	18,654,337	19,357,030
Total Assets and Deferred Outflows of Resources	**$ 560,544,185**	**$ 581,989,193**

The accompanying notes are an integral part of these statements.

STATEMENTS OF NET POSITION (continued)

June 30, 2019 and 2018

Liabilities, Deferred Inflows of Resources and Net Position	2019	2018
Current Liabilities		
Accounts payable and accrued liabilities	$ 6,247,722	$ 5,416,460
Accrued salaries and benefits	329,490	381,170
Accrued bond interest payable (note 6)	8,715,535	9,001,136
Accrued loan interest payable (note 6)	256,781	304,359
Contract retainage payable (note 6)	73,070	13,610
Income received in advance	2,550	2,580
Revenue bonds payable, net (note 6)	15,157,439	14,246,437
Virginia Resources Authority (VRA) loans payable (note 6)	853,961	832,818
Loans payable, net (note 6)	4,680,000	4,595,000
Compensated absences payable (notes 1 and 6)	2,084,271	1,998,726
Total Current Liabilities	38,400,819	36,792,296
Long-Term Liabilities		
Landfill closure and postclosure obligation (notes 6 and 12)	4,212,820	3,810,975
Contract retainage payable (note 6)	691,388	283,797
Revenue bonds payable, net (note 6)	427,559,501	442,716,940
VRA loans payable (note 6)	13,518,204	14,372,165
Loans payable, net (note 6)	13,380,000	18,060,000
Compensated absences payable (notes 1 and 6)	429,638	424,198
Net other postemployment benefit obligation (notes 1, 6 and 8)	5,873,768	5,868,816
Net pension liability (notes 1, 6 and 7)	6,633,814	6,250,481
Total Long-Term Liabilities	472,299,133	491,787,372
Total Liabilities	510,699,952	528,579,668
Deferred Inflows of Resources (note 1)		
Deferred inflows related to OPEB (notes 1 and 8)	426,870	429,866
Deferred inflows related to pensions (notes 1 and 7)	2,567,124	2,127,273
Total Deferred Inflows of Resources	2,993,994	2,557,139
Net Position		
Net (deficit) investment in capital assets	(12,317,474)	(5,169,318)
Restricted		
Capital projects	2,574,662	1,899,285
Repairs and replacement	6,861,013	6,287,536
Debt service	59,991,806	57,358,661
Unrestricted (deficit)	(10,259,768)	(9,523,778)
Total Net Position	46,850,239	50,852,386
Total Liabilities, Deferred Inflows of Resources and Net Position	$ 560,544,185	$ 581,989,193

The accompanying notes are an integral part of these statements.

STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Years Ended June 30, 2019 and 2018

	2019	2018
Operating Revenues (notes 1 and 9)		
Member jurisdictions	$ 29,825,873	$ 28,515,447
Other	410,472	252,651
Total Operating Revenues	30,236,345	28,768,098
Operating Expenses (notes 1 and 10)		
Operations	29,525,587	28,158,026
Depreciation and amortization	28,309,856	30,509,501
Total Operating Expenses	57,835,443	58,667,527
Operating Loss	(27,599,098)	(29,899,429)
Non-Operating Revenues (Expenses)		
Interest income	148,342	89,362
Federal Build America Bonds subsidy	1,388,875	1,406,857
Loss on sale of assets	(283,851)	(111,790)
Other	670	992
Revenues in excess of expenses from restricted accounts (note 11)	3,646,415	1,843,961
Total Non-Operating Revenues, Net	4,900,451	3,229,382
Net Loss before Capital Contributions	(22,698,647)	(26,670,047)
Capital contributions (note 11)	18,696,500	17,830,318
Change in Net Position	(4,002,147)	(8,839,729)
Total net position, beginning of year	50,852,386	59,692,115
Total Net Position, End of Year	**$ 46,850,239**	**$ 50,852,386**

The accompanying notes are an integral part of these statements.

STATEMENTS OF CASH FLOWS
For the Years Ended June 30, 2019 and 2018

	2019	2018
Cash Flows from Operating Activities		
Cash received from localities	$ 32,992,900	$ 32,212,465
Payments to employees for services	(19,380,602)	(18,976,622)
Payments to suppliers for goods and services	(10,376,905)	(9,871,626)
Net Cash Provided by Operating Activities	3,235,393	3,364,217
Cash Flows from Capital and Related Financing Activities		
Collections for debt service	34,437,279	34,270,816
Federal Build America Bonds subsidy	694,437	1,406,857
Interest payments on long-term debt	(18,469,903)	(19,128,992)
Principal payments on long-term debt	(17,867,818)	(17,247,206)
Acquisition and construction of capital assets	(18,617,711)	(11,185,274)
Proceeds from sale of capital assets	15,335	66,852
Net Cash Used in Capital and Related Financing Activities	(19,808,381)	(11,816,947)
Cash Flows from Investing Activities		
Purchase of investments	(1,824,793)	(4,883,474)
Interest on investments	5,336,927	1,500,766
Net Cash Provided by (Used in) Investing Activities	3,512,134	(3,382,708)
Net Decrease in Cash and Cash Equivalents	(13,060,854)	(11,835,438)
Cash and cash equivalents, beginning of year	33,141,220	44,976,658
Cash and Cash Equivalents, End of Year	**$ 20,080,366**	**$ 33,141,220**
Reconciliation of Operating Loss to Net Cash Provided by Operating Activities		
Operating loss	$ (27,599,098)	$ (29,899,429)
Adjustments to reconcile operating loss to net cash provided by operating activities:		
Depreciation and amortization	28,309,856	30,509,501
Collections for reserve maintenance	4,341,604	4,350,001
Payments for reserve maintenance costs	(663,605)	(864,348)
OPEB expense	(52,044)	(12,475)
Pension expense	(633,788)	(489,895)
Changes in assets and liabilities:		
Net change in accounts receivable, accounts payable, prepaid expenses and inventory	(549,297)	(184,671)
Net change in pension contributions	67,140	(8,008)
Net change in OPEB contributions	14,625	(36,459)
Net Cash Provided by Operating Activities	**$ 3,235,393**	**$ 3,364,217**
Noncash Investing, Capital, and Financing Activities		
Decrease in fair value of investments not classified as cash and cash equivalents	$ (1,808,200)	$ (790,219)
Loss on disposals of capital assets	(283,851)	(111,790)
(Increase) decrease in landfill closure and postclosure care liability	(401,845)	398,230

The accompanying notes are an integral part of these statements.

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

1. SIGNIFICANT ACCOUNTING POLICIES AND PRACTICES

(a) Reporting Entity

The Upper Occoquan Service Authority (UOSA) is a public body politic and corporate created pursuant to the Virginia Water and Sewer Authorities Act (now the Virginia Water and Waste Authorities Act) whose principal purpose is the reclamation of wastewater to protect Northern Virginia's Occoquan Reservoir as a potable water supply source. UOSA is a joint venture formed on March 3, 1971 by a concurrent resolution of the governing bodies of Fairfax County, Prince William County, the City (formerly Town) of Manassas and the City (formerly Town) of Manassas Park (collectively the "Member Jurisdictions"). The governing body of UOSA is an eight-person Board of Directors consisting of two members appointed for four-year terms by the governing body of each Member Jurisdiction.

The obligations of UOSA and its Member Jurisdictions are set forth in a Restated Service Agreement. Under the Restated Service Agreement, UOSA is obligated to process all wastewater delivered to it by the Member Jurisdictions up to their allotted capacities. The Member Jurisdictions are obligated to pay charges for the wastewater processing. These charges include Operations and Maintenance, Reserve Maintenance (the cost of replacements and necessary improvements which do not increase the system capacity), and Debt Service on the loans and bonds issued to finance construction of the UOSA facilities.

As required by accounting principles generally accepted in the United States of America for governmental entities, the financial statements of the reporting entity include all the funds and accounts of UOSA (the primary government). There are no component units to be included in the reporting entity.

(b) Basis of Presentation and Accounting

The accounting policies of UOSA 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 in a manner similar to those used in the private sector. UOSA applies all applicable Governmental Accounting Standards Board (GASB) pronouncements when they become effective. GASB is the independent organization that establishes the accounting and financial reporting standards for state and local governments that follow generally accepted accounting principles.

UOSA uses the accrual basis of accounting, under which revenues are recognized when they are earned and expenses are recognized when they are incurred. Operating revenues and expenses consist of those revenues and expenses that result from the ongoing principal operations of UOSA. Non-operating revenues and expenses consist of those revenues and expenses that are related to financing and investing types of activities or result from non-exchange transactions and ancillary services.

(c) Budget and Budgetary Accounting

The Board of Directors adopts an annual budget for operations and maintenance as required by the Restated Agreement of Trust administered by the Trustee, U.S. Bank National Association. The budget is based on projected wastewater flow and may be amended during the year, as determined necessary, by the Board of Directors. After adoption, increases or decreases in the budget may be made only upon Board approval. The charges to the four Member Jurisdictions, based on the budget and monthly flow, are adjusted upon completion of the annual audit for any deficit or available surplus in the operating account. The deficit or available surplus in the operating account is recorded as a receivable or liability respectively, at year-end. The budget is prepared on the accrual basis of accounting. Budgetary control is maintained at the sub-function level. A review of revenues and expenses compared to the budget is conducted with the Board of Directors on a monthly and quarterly basis. Unexpended budgeted amounts for the operating account lapse at year-end and may not be carried forward to the next year. Design and construction budgets and related funds are multi-year and do not lapse annually.

(d) Cash and Cash Equivalents

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

(e) Investments

UOSA follows GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools* and GASB Statement No. 72, *Fair Value Measurement and Application*, which prescribes that certain investments be reported at their fair value, with the change in fair value being reported as revenue.

(f) Accounts Receivable

Management expects all receivables to be fully collectible; therefore, no allowance for bad debts is maintained. Receivables relate to reserve maintenance, septage facility usage and selected meter stations and pump stations, the latter two of which are operated on behalf of others.

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

(g) Inventories

Inventories are carried at cost using an average unit cost method. UOSA's inventories consist of chemicals, fuels, operating supplies and certain system replacement parts.

(h) Capital Assets

Capital assets consist of the water reclamation system, vehicles, furniture and equipment valued at historical cost. In addition to property and equipment, other direct acquisition costs and certain administrative costs during the construction period have been capitalized. The capitalization threshold for capital assets is $5,000. The assets are depreciated or amortized using the straight-line method.

Capital Assets	Estimated Useful Lives
Treatment Plant and Reservoir	15 – 50 years
Interceptor Sewers	20 – 50 years
Pumping Stations	10 – 50 years
Mobile Equipment	5 – 15 years
Office Furniture and Equipment	5 – 15 years
Vehicles	8 – 15 years

(i) Deferred Outflows and Deferred Inflows of Resources

In addition to assets, the statement of net position contains a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense) until then. UOSA currently reports deferred amounts on bond refundings, deferred outflows related to pensions (see note 7) and deferred outflows related to OPEB (see note 8) as deferred outflows of resources.

In addition to liabilities, the statement of net position contains a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until then. UOSA currently reports deferred inflows related to pensions (see note 7) and deferred inflows related to OPEB (see note 8) as deferred inflows of resources.

(j) Pensions

The Virginia Retirement System (VRS) Political Subdivision Retirement Plan is a multi-employer agent plan. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of UOSA's Retirement Plan and the additions to/deductions from UOSA's Retirement 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.

(k) Other Postemployment Benefits (OPEB)

Health Care Benefit Plan

UOSA administers a single-employer defined post-employment health care benefit plan (the Plan). For purposes of measuring the total OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, an actuarial valuation was performed as of June 30, 2017, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2018. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms. There are no investments as this is a pay-as you-go plan and all cash is held in a cash account.

VRS Group Life Insurance Program

The Virginia Retirement System (VRS) Group Life Insurance Program is a multiple employer, cost-sharing plan. For purposes of measuring the net GLI OPEB liability, deferred outflows of resources and deferred inflows of resources related to the GLI OPEB, and GLI OPEB expense, information about the fiduciary net position of the VRS Group Life Insurance Plan and the additions to/deductions from the VRS Group Life Insurance Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

VACORP/Standard Hybrid Disability Program

The VACORP/Standard Hybrid Disability Program is an insured defined benefit OPEB plan. OPEB expense is recognized as premium payments required for the reporting period in accordance with the agreement with the insurance company are due and payable.

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

(l) Deferred Compensation Plan

UOSA offers its employees a deferred compensation plan in accordance with Internal Revenue Code, Section 457. The funds are held in a trust and managed by a third party. Therefore, UOSA is no longer reporting such assets and associated liabilities on its statement of net position as stated under GASB Statement No. 32 (*Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans*). UOSA's contributions to the deferred compensation plan for the fiscal years ended June 30, 2019 and 2018 were $224,263 and $224,573, respectively.

(m) Compensated Absences

UOSA's employee benefits program provides for the earning and accumulation of vacation and sick leave. The accumulation of vacation leave is limited to 240 hours for employees with less than 10 years of service and 320 hours for 10 or more years. Accumulated vacation hours in excess of the limit are transferred to sick leave. Accrued vacation leave balances are paid to employees who terminate employment. The liability for accrued vacation leave as of June 30, 2019 and 2018, was $1,500,767 and $1,412,751 respectively.

Sick leave may be accumulated up to 480 hours for employees in the VRS Hybrid plan and up to 1040 hours for all other full-time employees. Sick leave accumulation was not limited prior to July 1, 2015 and hours accumulated prior to that date are not subject to the current policy limits. A portion is paid upon termination based on years of service and does not exceed 25% of the total accumulated balance. As of June 30, 2019 and 2018, the liability for accrued sick leave was $1,013,142 and $1,010,173 respectively.

(n) Risk Management

UOSA is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. UOSA purchases insurance coverage for risks including workers' compensation, automobiles, boiler/machinery use, land use, public officials' liability, crime, general liability, and earthquake. UOSA has not incurred any environmental losses through June 30, 2019 and in the past three years there were no insurance settlements that exceeded insurance coverage. Costs resulting from non-insured losses will be charged to operations when incurred.

(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 amount of assets and 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) Restricted Assets

Restricted assets present constraints on resources that are either externally imposed by creditors, contributors, laws and regulation of other governments or imposed by law through state statute.

(q) New Accounting Pronouncements Adopted

UOSA implemented the following GASB pronouncements for the fiscal year ended June 30, 2019:

GASB Statement No. 83, *Certain Asset Retirement Obligations*, will enhance the comparability of financial statements among governments by establishing uniform criteria for governments to recognize and measure certain asset retirement obligations, including obligations that may have not been previously reported.

GASB Statement 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*, will improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt.

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

(r) New Accounting Pronouncements

GASB Statement No. 84, *Fiduciary Activities*, will enhance consistency and comparability by establishing specific criteria for identifying activities that should be reported as fiduciary activities and clarifying whether and how business-type activities should report their fiduciary activities. Statement 84 will be effective for UOSA beginning with its year ending June 30, 2020.

GASB Statement No. 87, *Leases*, will enhance the comparability of financial statements among governments by requiring lessees and lessors to report leases under a single model; require reporting of certain lease liabilities that currently are not reported; and require notes to the financial statements related to the timing, significance and purpose of a government's leasing arrangements. Statement 87 will become effective for UOSA beginning with its year ending June 30, 2021.

GASB Statement No. 90, *Majority Equity Interests – An Amendment of GASB Statements No. 14 and No. 61*, will improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and improve the relevance of financial statement information for certain component units. Statement 90 will become effective for UOSA beginning with its year ending June 30, 2020.

GASB Statement No. 91, *Conduit Debt Obligations*, will provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. Statement 91 will become effective for UOSA beginning with its year ending June 30, 2022.

Management has not yet determined the effect that these Statements will have on its financial statements.

(s) Subsequent Events

UOSA has evaluated subsequent events through November 5, 2019, the date on which the financial statements were available to be issued.

2. CASH AND INVESTMENTS

(a) Cash and Cash Equivalents

At June 30, 2019 and 2018, all cash of UOSA is maintained in accounts covered by federal deposit insurance or collateralized in accordance with the Virginia Security for Public Deposits Act (the Act).

Under the Act, banks holding public deposits in excess of the amounts insured by federal deposit insurance must pledge collateral in the amount of 50% of excess deposits to a collateral pool in the name of the State Treasury Board. If any member bank fails, the entire collateral pool becomes available to satisfy the claims of the governmental entities. With the ability to make additional assessments, the multiple bank collateral pool functions similar to federal deposit insurance. Savings institutions are required to collateralize 100% of deposits in excess of federal deposit insurance limits.

Unrestricted cash and cash equivalents consist of bank deposits and petty cash funds.

Unrestricted Cash and Cash Equivalents	2019	2018
Cash	$ 4,984,227	$ 7,147,885
Total Unrestricted Cash and Cash Equivalents	$ 4,984,227	$ 7,147,885

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

Restricted cash and cash equivalents consist of bank deposits and money market fund investments in debt service and project fund accounts held by a Trustee.

Restricted Cash and Cash Equivalents	2019	2018
Cash	$ 1,375,201	$ 2,250,099
Money market funds held by trustee	13,720,938	23,743,236
Total Restricted Cash and Cash Equivalents	$ 15,096,139	$ 25,993,335

(b) Investments

As of June 30, 2019 and 2018, the fair value of UOSA's investments, with their respective credit ratings, was as follows:

		Fair Value	
Investment Type	Credit Rating	2019	2018
Unrestricted Investments			
Certificate of deposit	N/A	$ 2,000,000	$ 1,500,000
Restricted Investments			
Certificate of deposit	N/A	3,000,000	2,000,000
U.S. securities	AAA	74,548,848	76,032,255
Total Investments		$ 79,548,848	$ 79,532,255

(1) Credit Risk

UOSA's Investment Policy (Policy) authorizes UOSA to invest in (1) obligations of the United States, the Commonwealth of Virginia, the Federal National Mortgage Association, Federal Home Loan Banks, Federal Home Loan Mortgage Corporation, Federal Land Banks, Federal Intermediate Credit Banks, Federal Banks for Cooperatives, Financing Corporation (FICO), and Student Loan Marketing Association, (2) commercial paper with a maturity of 270 days or less rated prime 1 by Moody's Investors Service, Inc. or A-1 by Standard & Poor's Corporation, and (3) repurchase agreements.

(2) Concentration of Credit Risk

The Policy places no limit on the amount UOSA may invest in any one issuer. UOSA had investment types at June 30, 2019 and 2018 that exceed 2% of the total investments.

	2019		2018	
Investment Type (Restricted & Unrestricted)	Fair Value	% of Total Investments	Fair Value	% of Total Investments
U.S. Treasury notes and bills	$ 74,548,848	94%	$ 71,754,905	90%
Certificate of deposit	5,000,000	6	3,500,000	4
Federal National Mortgage Association	-	-	2,991,040	4
Federal Home Loan Bank	-	-	1,286,310	2
Total Investments	$ 79,548,848	100%	$ 79,532,255	100%

(3) Interest Rate Risk

The Policy limits the investment of funds in the operating and restricted asset accounts in obligations of the following maturities:

- Operating Account - Not to exceed date needed for payment of operating expenses
- Restricted Asset Accounts:
  Construction Fund - Not to exceed date needed for payment of construction costs
  Reserve Maintenance - Not to exceed seven years
  Revenue Bond - Not to exceed date needed for payment of principal and interest

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

As of June 30, 2019 and 2018, UOSA had the following investments and maturities:

Investment Type (Restricted & Unrestricted)	Fair Value at June 30, 2019	Original Maturity (in years) 1 Year or Less	1-2 Years	More than 2 Years
U.S. securities	$ 74,548,848	$ 33,503,200	$ -	$ 41,045,648
Certificate of deposit	5,000,000	5,000,000	-	-
Total Investments	$ 79,548,848	$ 38,503,200	$ -	$ 41,045,648

Investment Type (Restricted & Unrestricted)	Fair Value at June 30, 2018	Original Maturity (in years) 1 Year or Less	1-2 Years	More than 2 Years
U.S. securities	$ 76,032,255	$ 23,381,582	$ 6,795,987	$ 45,854,686
Certificate of deposit	3,500,000	3,500,000	-	-
Total Investments	$ 79,532,255	$ 26,881,582	$ 6,795,987	$ 45,854,686

(4) Custodial Credit Risk

The Policy requires execution of a third-party custodial safekeeping agreement for all purchased securities, and requires that securities be held in UOSA's name. As of June 30, 2019 and 2018, all of UOSA's investments and money market funds classified as cash equivalents are held in a bank's trust department in UOSA's name, and therefore UOSA is not exposed to custodial credit risk.

(5) Fair Value Measurement

UOSA categorizes its fair value measurements within the fair value hierarchy established by general accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are quoted prices for similar assets in active markets or quoted prices for identical or similar assets in markets that are not active; Level 3 inputs are significant unobservable inputs.

UOSA has the following recurring fair value measurements:

- U.S. Treasury securities of $74.5 million and $71.8 million as of June 30, 2019 and 2018 respectively, are valued using quoted prices in an active market for identical assets (Level 1 inputs).
- U.S. Agency securities of $0 and $4.3 million as of June 30, 2019 and 2018 respectively, are valued using quoted prices for similar assets in active markets or quoted prices for identical or similar assets in markets that are not active (Level 2 inputs).

3. ACCOUNTS RECEIVABLE

Accounts receivable consists of the following at June 30, 2019 and 2018:

	2019	2018
Fairfax County	$ 382,437	$ 238,397
Prince William County	3,493	3,264
City of Manassas	20,579	9,164
Federal Build America Bonds Subsidy	694,438	-
Other	134,692	117,873
Total	$ 1,235,639	$ 368,698

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

4. RESTRICTED ASSET ACCOUNTS

UOSA's restricted assets are accounted for within the Enterprise Fund accounts rather than through separate fund entities. Therefore, in accordance with the Restated Agreement of Trust and Supplements administered by the Trustee, UOSA had the following restricted asset accounts in operation at June 30, 2019:

Reserve Maintenance - This account receives all revenue derived by UOSA to pay the cost of replacements and necessary improvements that do not increase the system capacity or scope. In accordance with Section 606 of the Restated Agreement of Trust, UOSA charges and collects from the Member Jurisdictions amounts sufficient to make the current balance in the Reserve Maintenance account equal to the greater of (1) $2,000,000, (2) the estimated cost of replacements and necessary improvements which do not increase the system capacity or scope as set forth in the current fiscal year budget, or (3) the amount certified by UOSA's consulting engineer, provided, however, that if such amount certified by the consulting engineer is greater, UOSA may charge and collect the amount over a period not to exceed five fiscal years, so long as the amount on deposit at all times during the year is at least equal to the amount required to pay the cost of replacements and improvements which do not increase the system capacity or scope.

Revenue Bonds - These accounts receive all revenue derived by UOSA to pay the principal and interest on the bonds. At all times, there is on deposit in the Revenue Bond Interest Accounts the amount of interest on the bonds accrued to the last day of the current month. At all times, there is on deposit in the Revenue Bond Principal Accounts the amount of principal due on the outstanding bonds during the next succeeding twelve months accrued to the last day of the current month. At all times, there is on deposit in the Revenue Bond Sinking Fund Accounts the amount of any sinking fund installment due within the next succeeding twelve months accrued to the last day of the current month with respect to any Bonds that are subject to redemption, in accordance with Section 607 of the Restated Agreement of Trust and the First Supplemental Restated Agreement of Trust.

Bond Debt Reserve - This account contains at all times an amount deposited from the proceeds of UOSA's bonds sufficient to cover the maximum amount payable on account of principal and interest in any fiscal year (the Required Reserve) in accordance with the Restated Agreement of Trust, Section 608. According to Section 608, in lieu of the Required Reserve or any portion of it, the account may contain on deposit a surety bond or an insurance policy payable to the Trustee for the benefit of the bondholders, in an aggregate amount equal to the difference between the Required Reserve and the amount on deposit in the Debt Reserve Account.

Construction - This account receives proceeds from the issuance of bonds and is used to pay for construction in accordance with the Restated Agreement of Trust, as supplemented, Section 501.

As of June 30, 2019 and 2018 the Restricted Asset Accounts are summarized below:

	2019			
	CIP	Reserve Maintenance	Debt Service	Total
Cash and cash equivalents	$ 4,080,175	$ 1,375,201	$ 9,640,763	$ 15,096,139
Investments	15,479,560	3,000,000	59,069,288	77,548,848
Deposits	70	-	-	70
Arbitrage rebate receivable	1,800,000	-	-	1,800,000
Reserve maintenance receivable	-	2,894,793	-	2,894,793
Accrued interest receivable	80,154	32,146	254,071	366,371
Total	$ 21,439,959	$ 7,302,140	$ 68,964,122	$ 97,706,221

	2018			
	CIP	Reserve Maintenance	Debt Service	Total
Cash and cash equivalents	$ 5,359,641	$ 2,250,099	$ 18,383,595	$ 25,993,335
Investments	27,980,363	2,000,000	48,051,892	78,032,255
Deposits	1,740	-	-	1,740
Arbitrage rebate receivable	1,800,000	-	-	1,800,000
Reserve maintenance receivable	-	2,293,938	-	2,293,938
Accrued interest receivable	97,545	15,456	228,668	341,669
Total	$ 35,239,289	$ 6,559,493	$ 66,664,155	$ 108,462,937

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

5. CAPITAL ASSETS

(a) Changes in Capital Assets for the Years Ended June 30, 2019 and 2018

	2019				
	Balance June 30, 2018	Additions	Retirements	Transfers	Balance June 30, 2019
Non-Depreciable Capital Assets					
Land	$ 7,203,612	$ -	$ -	$ -	$ 7,203,612
Construction in progress	20,652,189	16,598,930	-	(2,721,281)	34,529,838
Depreciable Capital Assets					
Utility Plant and Equipment:					
Treatment plant and reservoir	641,453,216	2,456,512	(1,934,622)	2,354,533	644,329,639
Interceptor sewers	70,162,895	-	-	-	70,162,895
Pumping stations	128,440,252	291,624	-	48,691	128,780,567
Mobile equipment	3,358,433	113,178	-	-	3,471,611
Other:					
Office furniture and equipment	7,931,137	125,898	(46,390)	-	8,010,645
Vehicles	1,760,799	194,708	-	-	1,955,507
Total Capital Assets	$ 880,962,533	$ 19,780,850	$ (1,981,012)	$ (318,057)	$ 898,444,314

	2018				
	Balance June 30, 2017	Additions	Retirements	Transfers	Balance June 30, 2018
Non-Depreciable Capital Assets					
Land	$ 7,203,612	$ -	$ -	$ -	$ 7,203,612
Construction in progress	12,237,209	9,297,069	-	(882,089)	20,652,189
Depreciable Capital Assets					
Utility Plant and Equipment:					
Treatment plant and reservoir	638,483,410	2,491,540	(310,250)	788,516	641,453,216
Interceptor sewers	70,162,895	-	-	-	70,162,895
Pumping stations	128,239,411	193,106	-	7,735	128,440,252
Mobile equipment	3,262,003	109,032	(12,602)	-	3,358,433
Other:					
Office furniture and equipment	7,739,918	162,772	(9,680)	38,127	7,931,137
Vehicles	1,668,611	141,558	(90,470)	41,100	1,760,799
Total Capital Assets	$ 868,997,069	$ 12,395,077	$ (423,002)	$ (6,611)	$ 880,962,533

Transfers of $318,057 and $6,611 during fiscal years 2019 and 2018, respectively, consist of expenses related to capital from restricted asset accounts (see Note 11).

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

(b) Changes in Accumulated Depreciation and Amortization for the Years Ended June 30, 2019 and 2018

	2019				
	Balance June 30, 2018	Additions	Retirements	Transfers	Balance June 30, 2019
Depreciable Capital Assets					
Utility Plant and Equipment:					
Treatment plant and reservoir	$ 366,063,951	$ 21,854,366	$ (1,635,436)	$ -	$ 386,282,881
Interceptor sewers	20,867,918	1,518,965	-	-	22,386,883
Pumping stations	41,164,191	4,549,990	-	-	45,714,181
Mobile equipment	2,953,126	84,591	-	-	3,037,717
Other:					
Office furniture and equipment	7,494,797	155,433	(46,389)	-	7,603,841
Vehicles	1,240,885	146,511	-	-	1,387,396
Total Accumulated Depreciation and Amortization	$ 439,784,868	$ 28,309,856	$ (1,681,825)	$ -	$ 466,412,899

	2018				
	Balance June 30, 2017	Additions	Retirements	Transfers	Balance June 30, 2018
Depreciable Capital Assets					
Utility Plant and Equipment:					
Treatment plant and reservoir	$ 342,090,765	$ 24,113,463	$ (135,756)	$ (4,521)	$ 366,063,951
Interceptor sewers	19,426,354	1,441,564	-	-	20,867,918
Pumping stations	36,626,825	4,537,366	-	-	41,164,191
Mobile equipment	2,850,096	111,484	(8,454)	-	2,953,126
Other:					
Office furniture and equipment	7,325,957	178,520	(9,680)	-	7,494,797
Vehicles	1,199,730	127,104	(90,470)	4,521	1,240,885
Total Accumulated Depreciation and Amortization	$ 409,519,727	$ 30,509,501	$ (244,360)	$ -	$ 439,784,868

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

6. LONG-TERM DEBT

(a) Bonds Payable

UOSA issues revenue bonds to provide funds for acquisition and construction of major capital facilities and for refunding higher-interest revenue bonds. The bonds are secured by pledges of revenues from UOSA's sewer system, certain pledged reserves and income from investments pursuant to the Trust Agreement between UOSA and U.S. Bank National Association. Bonds payable as of June 30, 2019, consist of the following:

$288,600,000 Regional Sewerage System Revenue Bonds, Series 1995A; dated December 1, 1995, principal maturing annually with interest from 4.30% to 6.00% payable semiannually through July 1, 2020. Of the total 1995A series bonds issued, $225,965,000 has been currently refunded from the proceeds of future bond issuances and is considered defeased. Accordingly, the liability relating to these bonds has been removed from UOSA's financial statements.

$85,180,000 Regional Sewerage System Revenue Bonds, Series 2010; dated December 23, 2010, principal maturing annually with interest from 3.50% to 6.00% payable semiannually through July 1, 2043.

$101,615,000 Regional Sewerage System Revenue Refunding Bonds, Series 2013A; dated May 30, 2013, principal maturing annually with interest from 0.35% to 2.90% payable semiannually through July 1, 2026.

$163,885,000 Regional Sewerage System Revenue Refunding Bonds, Series 2014; dated December 23, 2014, principal maturing annually starting July 1, 2026 with interest from 4.00% to 5.00% payable semiannually through July 1, 2041.

$20,915,000 Regional Sewerage System Revenue Bonds, Series 2016A; dated June 16, 2016, principal maturing annually starting July 1, 2019 with interest from 3.00% to 5.00% payable semiannually through July 1, 2048.

$41,030,000 Regional Sewerage System Revenue Refunding Bonds, Series 2016B; dated June 16, 2016, principal maturing annually starting July 1, 2035 with interest from 3.00% to 4.00% payable semiannually through July 1, 2038.

For each outstanding bond series, principal payments are made annually on July 1 and interest is payable semi-annually on January 1 and July 1. Future debt service requirements are as follows:

Fiscal Year(s)	Principal	Interest	Total
2020	$ 13,330,000	$ 15,653,078	$ 28,983,078
2021	13,925,000	15,040,415	28,965,415
2022	14,030,000	14,566,714	28,596,714
2023	20,120,000	14,168,079	34,288,079
2024	20,600,000	13,662,559	34,262,559
2025-2029	127,145,000	56,184,172	183,329,172
2030-2034	74,630,000	31,923,908	106,553,908
2035-2039	71,460,000	18,856,357	90,316,357
2040-2044	58,430,000	5,140,135	63,570,135
2045-2049	5,135,000	394,125	5,529,125
Total	$ 418,805,000	$ 185,589,542	$ 604,394,542

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

(b) Virginia Resources Authority Loans Payable

In July 2011, UOSA entered into a financing agreement with Virginia Resources Authority (VRA) for the purpose of funding the costs related to the Energy Service (ESCO) Project, including the replacement of an existing blower system and the installation of a generator and cogeneration unit which uses biogas to produce heat and electricity. The loan was authorized under the Virginia Water Facilities Revolving Fund (VWFRF) for $6.1 million, at 2.93% per annum for a term of twenty years. The loan is secured by a pledge of revenues from UOSA's sewer system. Interest and principal are payable on a semi-annual basis each June 1 and December 1. The outstanding loan balance at June 30, 2019 was $4,155,292.

In December 2011, UOSA entered into a second financing agreement with VRA for the purpose of funding Phase 1 of the Nutrient Compliance Improvement Project (PINR), together with related project expenses. The loan was authorized under the VWFRF for $13.9 million, at 2.35% per annum for a term of twenty years. The loan is secured by a pledge of revenues from UOSA's sewer system. Interest and principal are payable on a semi-annual basis each March 1 and September 1. The outstanding loan balance at June 30, 2019 was $10,216,873.

Future debt service requirements for principal and interest are as follows:

	2011A Loan		2011B Loan		
Fiscal Year(s)	Principal	Interest	Principal	Interest	Total
2020	$ 255,002	$ 119,896	$ 598,959	$ 236,598	$ 1,210,455
2021	262,528	112,370	613,117	222,440	1,210,455
2022	270,276	104,621	627,610	207,947	1,210,454
2023	278,254	96,644	642,445	193,112	1,210,455
2024	286,466	88,431	657,631	177,925	1,210,453
2025-2029	1,564,257	310,230	3,528,814	648,970	6,052,271
2030-2034	1,238,509	73,632	3,548,297	211,708	5,072,146
Total	$ 4,155,292	$ 905,824	$ 10,216,873	$ 1,898,700	$ 17,176,689

(c) Loan Payable

In November 2013, UOSA issued the 2013B Series Regional Sewerage System Revenue Refunding Bonds for the purpose of refunding the 2003 Series Regional Sewerage System Revenue Refunding Bonds. The 2013B Series issuance is a direct bank loan for $37.7 million at 1.85% per annum for a term of eight years. The loan is secured by a pledge of revenues from UOSA's sewer system. Interest is payable on a semi-annual basis each January 1 and July 1 and principal is payable on an annual basis each July 1. The outstanding loan balance at June 30, 2019 was $18,060,000.

Future debt service requirements for principal and interest are as follows:

Fiscal Year	Principal	Interest	Total
2020	$ 4,680,000	$ 290,034	$ 4,970,034
2021	4,765,000	202,904	4,967,904
2022	4,845,000	114,252	4,959,252
2023	3,770,000	34,778	3,804,778
Total	$ 18,060,000	$ 641,968	$ 18,701,968

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

(d) Changes in Long-Term Liabilities

The following is a summary of changes in long-term liabilities for the years ended June 30, 2019 and 2018:

2019	Balance June 30, 2018	Additions	Reductions	Balance June 30, 2019	Due Within One Year
Bonds Payable					
1995A Series	$ 29,735,000	$ -	$ 9,420,000	$ 20,315,000	$ 9,900,000
2010B Series	78,070,000	-	1,950,000	76,120,000	1,995,000
2013A Series	97,610,000	-	1,070,000	96,540,000	1,085,000
2014 Series	163,885,000	-	-	163,885,000	-
2016A Series	20,915,000	-	-	20,915,000	350,000
2016B Series	41,030,000	-	-	41,030,000	-
	431,245,000	-	12,440,000	418,805,000	13,330,000
Premium (discount) on bonds payable (net)	25,718,377	-	1,806,437	23,911,940	1,827,439
Net Bonds Payable	456,963,377	-	14,246,437	442,716,940	15,157,439
Loans Payable					
Loan payable (2013B Series)	22,655,000	-	4,595,000	18,060,000	4,680,000
VRA loans payable (2011A & 2011B Series)	15,204,983	-	832,818	14,372,165	853,961
Landfill closure and postclosure obligation	3,810,975	401,845	-	4,212,820	-
Contract retainage payable	297,407	546,302	79,251	764,458	73,070
Compensated absences payable	2,422,924	1,824,049	1,733,064	2,513,909	2,084,271
Net OPEB obligation	5,868,816	485,519	480,567	5,873,768	-
Net pension liability	6,250,481	6,062,990	5,679,657	6,633,814	-
Total	$ 513,473,963	$ 9,320,705	$ 27,646,794	$ 495,147,874	$ 22,848,741

2018	Balance June 30, 2017	Additions	Reductions	Balance June 30, 2018	Due Within One Year
Bonds Payable					
1995A Series	$ 38,695,000	$ -	$ 8,960,000	$ 29,735,000	$ 9,420,000
2010B Series	79,975,000	-	1,905,000	78,070,000	1,950,000
2013A Series	98,670,000	-	1,060,000	97,610,000	1,070,000
2014 Series	163,885,000	-	-	163,885,000	-
2016A Series	20,915,000	-	-	20,915,000	-
2016B Series	41,030,000	-	-	41,030,000	-
	443,170,000	-	11,925,000	431,245,000	12,440,000
Premium (discount) on bonds payable (net)	27,503,558	-	1,785,181	25,718,377	1,806,437
Net Bonds Payable	470,673,558	-	13,710,181	456,963,377	14,246,437
Loans Payable					
Loan payable (2013B Series)	27,165,000	-	4,510,000	22,655,000	4,595,000
VRA loans payable (2011A & 2011B Series)	16,017,189	-	812,206	15,204,983	832,818
Landfill closure and postclosure obligation	4,209,205	-	398,230	3,810,975	-
Contract retainage payable	27,707	269,700	-	297,407	13,610
Compensated absences payable	2,318,413	1,714,783	1,610,272	2,422,924	1,998,726
Net OPEB obligation	1,896,247	4,718,918	746,349	5,868,816	-
Net pension liability	10,156,129	5,236,182	9,141,830	6,250,481	-
Total	$ 532,463,448	$ 11,939,583	$ 30,929,068	$ 513,473,963	$ 21,686,591

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7. PENSIONS

(a) Plan Description

All full-time, salaried permanent employees of UOSA are automatically covered by a VRS Retirement Plan upon employment. This plan is administered by the Virginia Retirement System (VRS) along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members 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.

The System administers three different benefit structures for covered employees - Plan 1, Plan 2, and Hybrid. Each of these benefit structures has different eligibility criteria. The specific information for each plan and the eligibility for covered groups within each plan are set out below:

RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
About VRS 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.	**About VRS Plan 2** Plan 2 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.	**About the Hybrid Retirement Plan** The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. • 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.

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RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Eligible Members Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken a refund. **Hybrid Opt-In Election** VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. 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 (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.	**Eligible Members** Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013. **Hybrid Opt-In Election** Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 2 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 (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.	**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 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.	**Retirement Contributions** Same as Plan 1.	**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.

NOTES TO THE FINANCIAL STATEMENTS

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RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
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.	**Creditable Service** Same as Plan 1.	**Creditable Service** **Defined Benefit Component:** 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. **Defined Contributions Component:** Creditable service is used to determine vesting for the employer contribution portion of the plan.

NOTES TO THE FINANCIAL STATEMENTS

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RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
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. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.	**Vesting** Same as Plan 1.	**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 (60 months) of creditable service. Plan 1 or Plan 2 members with at least five years (60 months) 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 that 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.

NOTES TO THE FINANCIAL STATEMENTS
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RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
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.	**Calculating the Benefit** See definition under Plan 1.	**Calculating the Benefit** **Defined Benefit Component:** See definition under 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 A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** **Defined Benefit Component:** Same as Plan 2 **Defined Contribution Component:** Not applicable.
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%	**Service Retirement Multiplier** Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members, the retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013.	**Service Retirement Multiplier** **Defined Benefit Component:** The retirement multiplier for the defined benefit component is 1.00%. 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 Age 65.	**Normal Retirement Age** Normal Social Security retirement age.	**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.

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

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

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
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%.	**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%.	**Cost-of-Living Adjustment (COLA) in Retirement** **Defined Benefit Component:** Same as Plan 2. **Defined Contribution Component:** Not applicable.
Eligibility: 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.	**Eligibility:** Same as Plan 1.	**Eligibility:** Same as Plan 1 and Plan 2.
Exceptions to COLA Effective Dates: The COLA is 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.	**Exceptions to COLA Effective Dates:** Same as Plan 1.	**Exceptions to COLA Effective Dates:** Same as Plan 1 and Plan 2.

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
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.	**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.	**Disability Coverage** Eligible employees (including Plan 1 and Plan 2 opt-ins) participate in an employer-paid program.
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.	**Purchase of Prior Service** Same as Plan 1.	**Purchase of Prior Service** **Defined Benefit Component:** Same as Plan 1 except that Hybrid Retirement Plan members are ineligible for ported service. **Defined Contribution Component:** Not applicable.

(b) Employees Covered by Benefit Terms

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

	Number
Inactive members or their beneficiaries currently receiving benefits	94
Inactive Members	
Vested inactive members	22
Non-vested inactive members	25
Inactive members active elsewhere in VRS	27
Total Inactive Members	74
Active members	170
Total Covered Employees	338

(c) Contributions

The contribution requirement for active employees is governed by §51.1-145 of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to UOSA by the Virginia General Assembly. Employees are required to contribute 5% of their compensation toward their retirement.

UOSA's contractually required contribution rate for the year ended June 30, 2019 was 7.54% 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 employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from UOSA were $1,077,718 and $1,144,857 for the years ended June 30, 2019 and June 30, 2018, respectively.

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

(d) Net Pension Liability

The net pension liability is calculated separately for each employer and represents that particular employer's total pension liability in accordance with GASB Statement No. 86, less that employer's fiduciary net position. UOSA's net pension liability was measured as of June 30, 2018. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2017, rolled forward to the measurement date of June 30, 2018.

Actuarial Assumptions

The total pension liability was based on an actuarial valuation as of June 30, 2017, 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, 2018.

Inflation	2.5%
Salary increases, excluding inflation	3.5% – 5.35%
Investment rate of return	7.0%, net of pension 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, 2017 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:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability rates	Lowered rates
Salary scale	No change

NOTES TO THE FINANCIAL STATEMENTS

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Long-Term Expected Rate of Return

The long-term expected rate of return on pension System 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 pension System 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 estimate 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 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 total pension liability was 7.00%. 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. Consistent with the phased-in funding provided by the General Assembly, UOSA was provided with an opportunity to use an alternate employer contribution rate. For the year ended June 30, 2018, the alternate rate was the employer contribution rate used in fiscal year 2012 or 90% of the actuarially determined employer contribution rate from the June 30, 2015 actuarial valuation, whichever was greater. From July 1, 2018 on, participating employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current 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 pension liability.

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

Changes in Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Total at June 30, 2017	$ 58,776,567	$ 52,526,086	$ 6,250,481
Changes for the year:			
Service cost	1,183,395	-	1,183,395
Interest	4,040,244	-	4,040,244
Differences between expected and actual experience	802,608	-	802,608
Contributions - employer	-	1,104,020	(1,104,020)
Contributions - employee	-	682,430	(682,430)
Net investment income	-	3,893,207	(3,893,207)
Benefit payments, including refunds of employee contributions	(2,117,578)	(2,117,578)	-
Administrative expenses	-	(33,264)	33,264
Other changes	-	(3,479)	3,479
Net Changes	3,908,669	3,525,336	383,333
Total at June 30, 2018	$ 62,685,236	$ 56,051,422	$ 6,633,814

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Total at June 30, 2016	$ 56,997,196	$ 46,841,067	$ 10,156,129
Changes for the year:			
Service cost	1,274,456	-	1,274,456
Interest	3,923,950	-	3,923,950
Changes of assumptions	(1,206,725)	-	(1,206,725)
Differences between expected and actual experience	(330,771)	-	(330,771)
Contributions - employer	-	1,131,806	(1,131,806)
Contributions - employee	-	720,658	(720,658)
Net investment income	-	5,751,870	(5,751,870)
Benefit payments, including refunds of employee contributions	(1,881,539)	(1,881,539)	-
Administrative expenses	-	(32,643)	32,643
Other changes	-	(5,133)	5,133
Net Changes	1,779,371	5,685,019	(3,905,648)
Total at June 30, 2017	$ 58,776,567	$ 52,526,086	$ 6,250,481

NOTES TO THE FINANCIAL STATEMENTS
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Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of UOSA using the discount rate of 7.00%, as well as what UOSA's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
UOSA's Net Pension Liability (Asset) at June 30, 2018	$ 14,658,315	$ 6,633,814	$ (63,280)
UOSA's Net Pension Liability (Asset) at June 30, 2017	$ 13,974,388	$ 6,250,481	$ (188,704)

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

For the years ended June 30, 2019 and 2018, UOSA recognized pension expense of $511,069 and $641,912 , respectively.

At June 30, 2019, UOSA 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	$ 737,481	$ 269,173
Change of assumptions	-	629,345
Net difference between projected and actual earnings on pension plan investments	1,165,219	1,668,606
Employer contributions subsequent to the measurement date	1,077,718	-
Total at June 30, 2019	$ 2,980,418	$ 2,567,124

At June 30, 2018, UOSA 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	$ 445,729	$ 415,435
Change of assumptions	-	918,035
Net difference between projected and actual earnings on pension plan investments	-	793,803
Employer contributions subsequent to the measurement date	1,144,857	-
Total at June 30, 2018	$ 1,590,586	$ 2,127,273

NOTES TO THE FINANCIAL STATEMENTS
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The $1,077,718 and $1,144,857, reported as deferred outflows of resources related to pensions resulting from UOSA's contributions subsequent to the measurement date, will be recognized as a reduction of the net pension liability in the years ending June 30, 2020 and ended 2019, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended June 30	Deferred Outflows (Inflows) of Resources
2020	$ 43,619
2021	(260,199)
2022	(407,968)
2023	(39,876)

Pension Plan Data

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2018 Comprehensive Annual Financial Report (CAFR). A copy of the 2018 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2018-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

8. OTHER POSTEMPLOYMENT BENEFITS (OPEB)

(a) Health Care Benefit Plan

(1) Plan Description

UOSA administers a single-employer defined post-employment health care benefit plan ("the Plan"). The Plan provides post-employment health care benefits to eligible employees who have retired from UOSA on or after July 1, 1999. In order to participate, retirees must meet the requirements of the Virginia Retirement System (VRS) and have attained age 55 with at least ten years of service. The benefit levels, employee contributions and employer contributions are governed, and can be amended, by UOSA's Board of Directors. Separate financial statements were not issued for the Plan.

Pre-65 Health Insurance

Retirees under the age of 65 and their dependents (spouse and children) are eligible to obtain health insurance from the same medical plans available to active employees provided the retiree was previously enrolled in UOSA's, or another, group medical plan for a minimum of one year immediately prior to retirement. UOSA contributes 2% toward the total cost of the selected coverage for every year of accrued service up to 40 years. Partial years of service are counted in increments of one month. Participation in UOSA's health insurance plan ends once the retiree becomes eligible for Medicare at age 65. At that time, the retiree's dependents will be offered health care coverage under COBRA and the Medicare eligible retiree's post-65 benefit begins.

Post-65 Health Subsidy

Retirees age 65 and older are provided a monthly health care subsidy based on years of service to help offset any expenses not covered by Medicare. UOSA pays each participating Post-65 retiree $5 per month per year of service with a subsidy minimum of $50 and maximum of $150. Employees who retired prior to age 65 do not need to participate in the health insurance plan to receive the monthly health care subsidy at age 65. The health care benefits end at the death of the retiree.

Current UOSA Pre-65 retirees who qualify for health insurance benefits receive an implicit rate subsidy by participating in the active employee health care risk pool.

Employees Covered by Benefit Terms

At June 30, 2018, the following employees were covered by the benefit terms:

Active employees	175
Inactive employees currently receiving benefits	52
Total Covered Employees	227

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Contributions

The contribution requirements of plan members are established and may be amended by UOSA's Board of Directors. UOSA is not required to fund the Plan for an amount greater than the pay-as-you-go balance necessary to provide current benefits to retirees. As of June 30, 2019, UOSA has not established a trust fund to irrevocably segregate assets to fund the OPEB liability; however, UOSA's Board of Directors designated $175,000 in fiscal year 2019, $110,000 in fiscal year 2018, 175,000 in fiscal year 2017, $145,000 in fiscal year 2016, $145,000 in fiscal year 2015, $300,000 in fiscal year 2014 and $250,000 in each of the four preceding fiscal years for a total of $2,050,000 toward future OPEB funding.

(2) Total OPEB Liability

UOSA's total OPEB liability was measured as of June 30, 2018. The total OPEB liability was determined by an actuarial valuation performed as of June 30, 2017 rolled forward to the measurement date of June 30, 2018.

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 and rolled forward to the measurement date of June 30, 2018, unless otherwise specified:

Inflation	2.2%
Salary increases, excluding inflation	1.3% - 3.15%
Discount rate	3.58% as of June 30, 2017 3.62% as of June 30, 2018
Healthcare cost trend rates: Pre-65	5.5% for fiscal 2018, 5.4% for fiscal 2019, to an ultimate rate of 3.9% for 2090 and beyond
Healthcare cost trend rates: Post-65	5.5% for fiscal 2018, 5.4% for fiscal 2019, to an ultimate rate of 3.8% for 2090 and beyond

Discount rates used to measure total OPEB liability were based on an index rate for 20-year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher as of the respective measurement dates.

For healthy Pre-65 retirees, mortality rates were based on the RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with Scale BB to 2020; males setback 1 year, 85% of rates; females setback 1 year. For healthy Post-65 retirees, mortality rates were based on the RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females setback 1 year with 1.5% increase compounded from ages 70 to 85. For disabled retirees, mortality rates were based on the RP-2014 Disabled Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.

Claims data or the community rating algorithm were not disclosed. Accordingly, gross claims for employees and retirees are based on age adjusted premiums.

(3) Changes in OPEB Liability

	Total OPEB Liability
Total at June 30, 2017	$ 4,738,816
Changes for the Year:	
Service cost	137,586
Interest	164,933
Differences between expected and actual experience	(26,956)
Changes in assumptions	(18,088)
Benefit payments	(236,523)
Net Changes	20,952
Total at June 30, 2018	$ 4,759,768

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

	Total OPEB Liability
Total at June 30, 2016	$ 4,995,157
Changes for the Year:	
Service cost	153,526
Interest	139,482
Changes in assumptions	(347,275)
Benefit payments	(202,074)
Net Changes	(256,341)
Total at June 30, 2017	$ 4,738,816

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

The following presents UOSA's total OPEB liability calculated using the discount rate of 3.62% for the fiscal year ended June 30, 2018 and 3.58% for the fiscal year ended June 30, 2017. It also presents what UOSA's total OPEB liability would be if it were calculated using a discount rate one percentage point lower and one percentage point higher than the current rate.

	June 30, 2018		
	1% Decrease (2.62%)	Current Discount Rate (3.62%)	1% Increase (4.62%)
UOSA's Total OPEB Liability	$ 5,240,786	$ 4,759,768	$ 4,336,321

	June 30, 2017		
	1% Decrease (2.58%)	Current Discount Rate (3.58%)	1% Increase (4.58%)
UOSA's Total OPEB Liability	$ 5,225,125	$ 4,738,816	$ 4,311,659

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

The following presents UOSA's total OPEB liability calculated using the current healthcare trend rates. It also presents what UOSA'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 rates.

	1% Decrease (2.80%)	Current Trend Rate (3.80%)	1% Increase (4.80%)
UOSA's Total OPEB Liability at June 30, 2018	$ 4,193,529	$ 4,759,768	$ 5,444,481
UOSA's Total OPEB Liability at June 30, 2017	$ 4,208,954	$ 4,738,816	$ 5,378,621

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

(4) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources

For the years ended June 30, 2019 and 2018, UOSA recognized OPEB expense of $ 253,479 and $249,599, respectively.

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

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 23,586
Changes in assumptions	-	276,284
Employer contributions subsequent to the measurement date	220,453	-
Total at June 30, 2019	$ 220,453	$ 299,870

At June 30, 2018, UOSA reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes in assumptions	$ -	$ 303,866
Employer contributions subsequent to the measurement date	236,523	-
Total at June 30, 2018	$ 236,523	$ 303,866

The $220,453 and $236,523, reported as deferred outflows of resources related to OPEB resulting from UOSA's contributions subsequent to the measurement date, will be recognized as a reduction of the total OPEB liability in the years ending June 30, 2020 and ended 2019, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year ending June 30	Deferred Outflows (Inflows) of Resources
2020	$ (49,040)
2021	(49,040)
2022	(49,040)
2023	(49,040)
2024	(49,040)
Thereafter	(54,670)

(b) VRS Group Life Insurance Program

(1) Plan Description

All full-time, salaried permanent employees of the state agencies, teachers and employees of participating political subdivisions are automatically covered by the VRS Group Life Insurance Program upon employment. This plan is administered by the Virginia Retirement System (the System), along with pensions and other OBEB plans, for public employer groups in the Commonwealth of Virginia.

In addition to the Basic Group Life Insurance benefit, members are also eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program. For members who elect the optional group life insurance coverage, the insurer bills employers directly for the premiums. Employers deduct these premiums from members' paychecks and pay the premiums to the insurer. Since this is a separate and fully insured program, it is not included as part of the Group Life Insurance Program OPEB.

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

Group Life Insurance Program Plan Provisions

Eligible Employees

The Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program.

Basic group life insurance coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their accumulated retirement member contributions and accrued interest.

Benefit Amounts

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

- Natural Death Benefit - The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled.
- Accidental Death Benefit - The accidental death benefit is double the natural death benefit.
- Other Benefit Provisions - In addition to the basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances. These include:
  - Accidental dismemberment benefit
  - Safety belt benefit
  - Repatriation benefit
  - Felonious assault benefit
  - Accelerated death benefit option

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 $8,279.

(2) Contributions

The contribution requirements for the Group Life Insurance Program are governed by §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 an 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. Each employer's contractually required employer contribution rate for the year ended June 30, 2019 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined 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. UOSA's employer contribution to the Group Life Insurance Program was $74,455 and $73,010 for the years ended June 30, 2019 and June 30, 2018, respectively.

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

(3) 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, 2019 and June 30, 2018, UOSA reported a liability of $1,114,000 and $1,130,000, respectively for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2018 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. UOSA's proportion of the Net GLI OPEB Liability was based on UOSA's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2018 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2018, UOSA's proportion was 0.07337% as compared to 0.07512% at June 30, 2017.

For the years ended June 30, 2019 and 2018, UOSA recognized GLI OPEB expense of $4,010, and $11,000, respectively. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2019, UOSA 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	$ 54,000	$ 21,000
Net difference between projected and actual earnings on GLI OPEB program investments	-	36,000
Changes in assumptions	-	46,000
Changes in proportion	-	24,000
Employer contributions subsequent to the measurement date	74,455	-
Total at June 30, 2019	$ 128,455	$ 127,000

At June 30, 2018, UOSA 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	$ -	$ 25,000
Net difference between projected and actual earnings on GLI OPEB program investments	-	43,000
Changes in assumptions	-	58,000
Employer contributions subsequent to the measurement date	73,010	-
Total at June 30, 2018	$ 73,010	$ 126,000

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June 30, 2019 and 2018

The $74,455 and $73,010, reported as deferred outflows of resources related to the GLI OPEB resulting from UOSA's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the years ending June 30, 2020 and ended 2019, respectively. 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 as follows:

Year ending June 30	Deferred Outflows (Inflows) of Resources
2020	$ (21,000)
2021	(21,000)
2022	(21,000)
2023	(11,000)
2024	(1,000)
Thereafter	2,000

(4) Actuarial Assumptions

The total GLI OPEB liability was based on an actuarial valuation as of June 30, 2017, 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, 2018.

Inflation	2.5%
Salary increases, including inflation	3.5% - 5.35%
Investment rate of return	7.0%, net of investment expenses, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 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%.

Mortality Rates:

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

The actuarial assumptions used in the June 30, 2017 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:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal rates	Adjusted termination rates to better fit experience at each age and service year
Disability rates	Lowered disability rates
Salary scale	No change

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

(5) 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 the measurement date of June 30, 2018, NOL amounts for the Group Life Insurance Program are as follows (amounts expressed in thousands):

	Group Life Insurance OPEB Program
Total GLI OPEB liability	$ 3,113,508
Plan fiduciary net position	1,594,773
Employers' Net GLI OPEB Liability	$ 1,518,735
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	51.22%

The total GLI OPEB liability is calculated by the System's 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.

(6) Long-Term Expected Rate of Return

The long-term expected rate of return on the System's 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 System's 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 estimate 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 Rate of Return	Weighted Average Long-Term Expected 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%.

NOTES TO THE FINANCIAL STATEMENTS
June 30, 2019 and 2018

(7) Discount Rate

The discount rate used to measure the total GLI OPEB liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS guidance 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 ended June 30, 2019, the rate contributed by UOSA for the GLI OPEB 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, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

(8) Sensitivity of UOSA's Proportionate Share of the Net GLI OPEB Liability to Changes in the Discount Rate

The following presents UOSA's proportionate share of the net GLI OPEB liability using the discount rate of 7.00%. It also presents what UOSA's proportionate share of the net GLI OPEB liability would be if it were calculated using a discount rate one percentage point lower (6.00%) and one percentage point higher (8.00%) than the current rate.

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
UOSA's Proportionate Share of the Group Life Insurance Program Net OPEB Liability at June 30, 2019	$ 1,456,000	$ 1,114,000	$ 837,000
UOSA's Proportionate Share of the Group Life Insurance Program Net OPEB Liability at June 30, 2018	$ 1,462,000	$ 1,130,000	$ 861,000

(9) Group Life Insurance Program Fiduciary Net Position

Detailed information about the Group Life Insurance Program's Fiduciary Net Position is available in the separately issued VRS 2018 Comprehensive Annual Financial Report (CAFR). A copy of the 2018 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2018-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

(c) VACORP/Standard Hybrid Disability Program

(1) Plan Description

All UOSA's full-time, salaried general employees who are in the VRS Hybrid Retirement Plan benefit structure are covered by the Virginia Association of Counties Risk Pool (VACORP)/Standard Hybrid Disability Program. Political subdivisions are required by Title 51.1 of the *Code of Virginia*, as amended to provide short-term and long-term disability benefits for their Hybrid employees either through a local plan or through the Virginia Local Disability Program. UOSA made an irrevocable election to opt out of the state's Virginia Local Disability Program and entered into the VACORP/Standard Hybrid Disability Program. The VACORP/Standard Hybrid Disability Program is administered by Standard Insurance Company (The Standard). VACORP handles the policy administration and billing for the program. UOSA pays the employees on short-term disability while The Standard processes the claims and advises payment. The long-term disability benefit is fully insured by The Standard. The obligation for the payment of long-term disability benefits has been effectively transferred from UOSA to The Standard.

VACORP/Standard Hybrid Disability Program Plan Provisions

Eligible Employees

The VACORP/Standard Hybrid Disability Program provides short-term and long-term disability benefits for non-work-related and work-related disabilities for employees with Hybrid retirement benefits.

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Eligible employees are covered automatically upon employment. They include:

- Full-time general employees of public political subdivisions covered under the VRS Hybrid Retirement Plan described in § 51.1-169 of the *Code of Virginia*.
- Actively At Work at least the minimum hours per week required by the Employer for coverage under the Program, but in no event less than 10 hours each week (for purposes of the Member definition, Actively At Work will include regularly scheduled days of, holidays or vacation days, so long as the person is capable of Active Work on those days)
- A citizen or resident of the United States or Canada

Member does not include a temporary or seasonal employee, a full-time member of the armed forces of any country, a leased employee, or an independent contractor.

Benefit Amounts

The VACORP/Standard Hybrid Disability Program provides the following benefits for eligible employees:

Short-Term Disability -

- The program provides a short-term disability benefit beginning after a seven calendar-day waiting period from the first day of disability. Employees become eligible for non-work-related short-term disability coverage after one year of continuous participation in VRS Hybrid Retirement Plan with UOSA.
- During the first five years of continuous participation in VRS Hybrid Retirement Plan with UOSA, employees are eligible for 60% of their pre-disability income if they go out on non-work-related or work-related disability.
- Short-term benefit payments are made to the employees directly from UOSA.
- Once the eligibility period is satisfied, employees are eligible for higher income replacement levels.

Long-Term Disability -

- The program provides a long-term disability benefit beginning after 125 workdays of short-term disability. Members are eligible if they are unable to work at all or are working fewer than 20 hours per week.
- Members approved for long-term disability will receive 60% of their pre-disability income. If approved for work-related long-term disability, the benefit will be offset by the workers' compensation benefit. Members will not receive a long-term disability benefit if their workers' compensation benefit is greater than the long-term disability benefit.
- Long-term benefit payments are fully insured and paid to the employees from The Standard. In the event of The Standard's insolvency, the long-term disability benefits will be paid by the Virginia Life, Accident and Sickness Insurance Guaranty Association.

(2) VACORP/Standard Hybrid Disability Program OPEB Expense

UOSA recognized VACORP/Standard Hybrid Disability Program OPEB expense of $13,117 and $8,975 for the years ended June 30, 2019 and June 30, 2018, respectively.

9. OPERATING REVENUES

Operating revenues consist of billings to the Member Jurisdictions for treatment of sewage. Revenues earned for the fiscal years ended June 30, 2019 and 2018 were as follows:

	2019	2018
Fairfax County	$ 11,473,594	$ 10,983,055
Prince William County	11,514,448	11,082,985
City of Manassas	5,482,680	5,254,753
City of Manassas Park	1,355,151	1,194,654
Other	410,472	252,651
Total	$ 30,236,345	$ 28,768,098

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

10. OPERATING EXPENSES

Operating expenses include reimbursable septage receiving facility and pump station/meter station charges. Operating expenses for the fiscal years ended June 30, 2019 and 2018 were as follows:

	2019	2018
Personnel	$ 18,815,840	$ 18,591,810
Electrical power	2,763,864	2,412,866
Chemicals	1,962,993	1,655,535
Facilities operations	942,391	925,022
Facilities maintenance	2,620,559	2,226,367
Contract services	1,871,559	1,686,747
Administration	401,953	390,325
Insurance	405,380	415,034
Miscellaneous	(258,952)	(145,680)
Depreciation	28,309,856	30,509,501
Total	$ 57,835,443	$ 58,667,527

11. REVENUES AND EXPENSES FROM RESTRICTED ASSET ACCOUNTS

The following is a schedule of revenues and expenses from restricted asset accounts for the fiscal years ended June 30, 2019 and 2018:

	2019	2018
Revenues		
Bond interest billings	$ 15,740,779	$ 16,440,498
Bond principal billings	18,696,500	17,830,318
Investment income	3,409,727	789,215
Reserve maintenance billings	4,341,604	4,350,001
	42,188,610	39,410,032
Expenses		
Bond interest	18,462,188	19,263,024
Reserve maintenance	663,605	864,348
Capital improvement projects	318,057	6,611
Landfill closure and postclosure	401,845	(398,230)
	19,845,695	19,735,753
Revenues in Excess of Expenses From Restricted Asset Accounts	$ 22,342,915	$ 19,674,279
Financial Statement Presentation		
Revenues from restricted accounts	$ 3,646,415	$ 1,843,961
Capital contributions	18,696,500	17,830,318

NOTES TO THE FINANCIAL STATEMENTS

June 30, 2019 and 2018

12. LANDFILL CLOSURE AND POSTCLOSURE COST

State and Federal laws and regulations require UOSA to place a final cover on its landfill when it stops accepting waste and to perform certain maintenance and monitoring functions at the site for thirty years after closure. Although closure and post closure care costs will be paid only near or after the date that the landfill stops accepting waste, UOSA reports a portion of these closure and post closure care costs as an expense chargeable to restricted asset accounts in each period based on landfill capacity used as of each balance sheet date. A review of the estimated landfill closure and post closure care costs was performed by SCS Engineers in 2019. An aerial survey was performed in 2017, which resulted in increased landfill capacity due to available air space not previously included. The aerial survey calculated the volume consumed and volume remaining. The $4,212,820 and $3,810,975 reported as landfill closure and post closure care liability at June 30, 2019 and June 30, 2018, respectively, represents the cumulative amount reported to date based on the use of 57% and 55%, respectively, of the estimated capacity of Phase I of the landfill. UOSA will recognize the remaining estimated cost of closure and post closure care of $3,171,327 for Phase I as the remaining estimated capacity is filled. These amounts are based on what it would cost to perform all closure and post closure care in 2019. Based on engineer's estimates, the landfill is expected to reach capacity in 2044. Actual cost may be higher due to inflation, changes in technology, or changes in regulations. The subsequent phases of the landfill will be constructed as required in the future.

13. ARBITRAGE REBATE ASSET

The U.S. Treasury has issued regulations on calculating the rebate due the Federal Government on arbitrage earnings and determining compliance with the arbitrage rebate provisions of the Tax Reform Act of 1986. Arbitrage earnings arise when UOSA temporarily invests the proceeds of tax exempt debt in securities with yields higher than the arbitrage rate. An estimated rebate receivable increases interest income from restricted assets and is recorded as an asset on the Statement of Net Position. All estimated rebates are recorded net.

Pursuant to Section 148 of the Internal Revenue Code of 1986, UOSA was required to make an interim rebate payment, if a liability existed, within 60 days of the end of its fifth bond year. Accordingly, UOSA issued a rebate payment in the amount of $1,800,000 in August 2000 in order to satisfy minimum requirements to reduce its rebate liability. Effective March 2001, bond proceeds were invested in securities with yields lower than the arbitrage rate. As a result, a rebate receivable of $1,800,000 and $1,800,000 has been recorded for the years ended June 30, 2019 and June 30, 2018, respectively.

14. COMMITMENTS AND CONTINGENCIES

(a) Construction

UOSA has a major Capital improvement and expansion program funded by fixed rate revenue bonds. At June 30, 2019, UOSA has outstanding commitments for contracts in progress of approximately $34,859,332.

(b) Litigation

UOSA is contingently liable with respect to lawsuits and other claims that arise in the normal course of its operations. Although the outcome of these matters is not presently determinable, in the opinion of UOSA's management, the resolution of these matters will not have a material, adverse effect on the financial conditions of UOSA.

(c) Letter of Credit

As of June 30, 2019, UOSA had a letter of credit outstanding in the amount of $4,430,488 for landfill closure and $894,903 for 2011B Bond Series Debt Service Reserve.

(d) Operating Costs

UOSA has commitments for natural gas pricing from July 1, 2018 through June 30, 2020 at $3.39 per Dth and for a block of energy at $33.00/MWhr or below plus FTRs of not more than $3.00/MWhr delivered between July 1, 2019 and June 30, 2021.

(e) Bond Issuance

On October 17, 2019, the Board of UOSA approved a resolution authorizing the issuance of up to $56,000,000 of Regional Sewage System Revenue Bonds..


Required Supplementary Information

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Changes in UOSA's Net Pension Liability and Related Ratios

Last 10 Fiscal Years*

Measurement Date	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Total Pension Liability					
Service cost	$ 1,183,395	$ 1,274,456	$ 1,297,203	$ 1,281,686	$ 1,223,948
Interest	4,040,244	3,923,950	3,718,171	3,406,233	3,208,021
Differences between expected and actual experience	802,608	(330,771)	(298,056)	1,380,819	-
Changes of assumptions	-	(1,206,725)	-	-	-
Benefit payments, including refunds of employee contributions	(2,117,578)	(1,881,539)	(1,673,711)	(1,551,242)	(1,649,501)
Net Change in Total Pension Liability	3,908,669	1,779,371	3,043,607	4,517,496	2,782,468
Total pension liability - beginning	58,776,567	56,997,196	53,953,589	49,436,093	46,653,625
Total Pension Liability - Ending (a)	$ 62,685,236	$ 58,776,567	$ 56,997,196	$ 53,953,589	$ 49,436,093
Plan Fiduciary Net Position					
Contributions - employer	$ 1,104,020	$ 1,131,806	$ 1,233,195	$ 1,225,219	$ 1,164,966
Contributions - employee	682,430	720,658	696,937	666,439	650,780
Net investment income	3,893,207	5,751,870	818,981	2,016,563	5,946,776
Benefit payments, including refunds of employee contributions	(2,117,578)	(1,881,539)	(1,673,711)	(1,551,242)	(1,649,501)
Administrative expenses	(33,264)	(32,643)	(28,118)	(26,861)	(31,578)
Other	(3,479)	(5,133)	(343)	(429)	314
Net Change in Plan Fiduciary Net Position	3,525,336	5,685,019	1,046,941	2,329,689	6,081,757
Plan fiduciary net position - beginning	52,526,086	46,841,067	45,794,126	43,464,437	37,382,680
Plan Fiduciary Net Position - Ending (b)	$ 56,051,422	$ 52,526,086	$ 46,841,067	$ 45,794,126	$ 43,464,437
Net Pension Liability - Ending (a) - (b)	$ 6,633,814	$ 6,250,481	$ 10,156,129	$ 8,159,463	$ 5,971,656
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability - End of Year	89.42%	89.37%	82.18%	84.88%	87.92%
Covered Payroll	$ 13,954,694	$ 13,850,680	$ 13,501,791	$ 13,390,415	$ 13,021,097
Net Pension Liability as a Percentage of Covered Payroll	47.54%	45.13%	75.22%	60.94%	45.86%

* *Pension schedules are intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.*

See accompanying notes to required supplementary information.

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of UOSA's Pension Contributions

Last 10 Fiscal Years*

Fiscal Year	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	UOSA's Covered Payroll	Contributions as a Percentage of Covered Payroll
2019	$ 1,077,718	$ 1,077,718	$ -	$ 14,318,372	7.53%
2018	1,144,857	1,144,857	-	13,954,694	8.20
2017	1,131,806	1,131,806	-	13,850,680	8.17
2016	1,233,195	1,233,195	-	13,501,791	9.13
2015	1,225,219	1,225,219	-	13,390,415	9.15
2014	1,164,966	1,164,966	-	13,021,097	8.95

* *Pension schedules are intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.*

See accompanying notes to required supplementary information.

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of Changes in UOSA's Total OPEB Liability and Related Ratios – Health Care Benefit Plan

Last 10 Fiscal Years*

Measurement Date	June 30, 2018	June 30, 2017
Total OPEB Liability		
Service cost	$ 137,586	$ 153,526
Interest	164,933	139,482
Differences between expected and actual expense	(26,956)	-
Changes of assumptions	(18,088)	(347,275)
Benefit payments	(236,523)	(202,074)
Net Change in Total OPEB Liability	20,952	(256,341)
Total OPEB liability - beginning	4,738,816	4,995,157
Total OPEB Liability - Ending	**$ 4,759,768**	**$ 4,738,816**
Covered Payroll	$ 13,954,694	$ 13,850,680
Total OPEB Liability as a Percentage of Covered Payroll	34.11%	34.21%

* *The OPEB schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.*

See accompanying notes to required supplementary information.

REQUIRED SUPPLEMENTARY INFORMATION (Unaudited)

Schedule of UOSA's Proportionate Share of the Net OPEB Liability – VRS Group Life Insurance Program

Last 10 Fiscal Years*

Measurement Date	June 30, 2018	June 30, 2017
UOSA's Proportion of the Net GLI OPEB Liability	0.07337%	0.07512%
UOSA's Proportionate Share of the Net GLI OPEB Liability	$ 1,114,000	$ 1,130,000
Covered Payroll	$ 13,954,694	$ 13,850,680
UOSA's Proportionate Share of the Net GLI OPEB Liability as a Percentage of Covered Payroll	7.98%	8.16%
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	51.22%	48.86%

* *The OPEB schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.*

See accompanying notes to required supplementary information.

Schedule of UOSA's OPEB Contributions – VRS Group Life Insurance Program

Last 10 Fiscal Years*

Fiscal Year	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	UOSA's Covered Payroll	Contributions as a Percentage of Covered Payroll
2019	$ 74,455	$ 74,455	$ -	$ 14,318,372	0.52%
2018	73,010	73,010	-	13,954,694	0.52
2017	72,050	72,050	-	13,850,680	0.52
2016	64,892	64,892	-	13,501,791	0.48
2015	64,274	64,274	-	13,390,415	0.48
2014	62,501	62,501	-	13,021,097	0.48

* *The OPEB schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, UOSA will present information for those years which information is available.*

See accompanying notes to required supplementary information.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
For the Years Ended June 30, 2019 and 2018

A. PENSION TREND DATA – VRS

Note 1 – Changes of Benefit Terms

There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation. The 2014 valuation includes Hybrid Retirement Plan members for the first time. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. Because this is a fairly new benefit and the number of participants was relatively small, the impact on the liabilities as of the measurement date of June 30, 2018 is not material.

Note 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:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table - RP-2014 projected to 2020
Retirement rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability rates	Lowered rates
Salary scale	No change

B. OPEB TREND DATA – HEALTH CARE BENEFIT PLAN

Note 1 – Changes of Assumptions

Changes in assumptions reflect the effects of a change in the discount rate each measurement date. The following are the discount rates used in each fiscal year.

Year Ended June 30	Discount Rate
2018	3.62%
2017	3.58
2016	2.85

C. OPEB TREND DATA – VRS GROUP LIFE INSURANCE PROGRAM

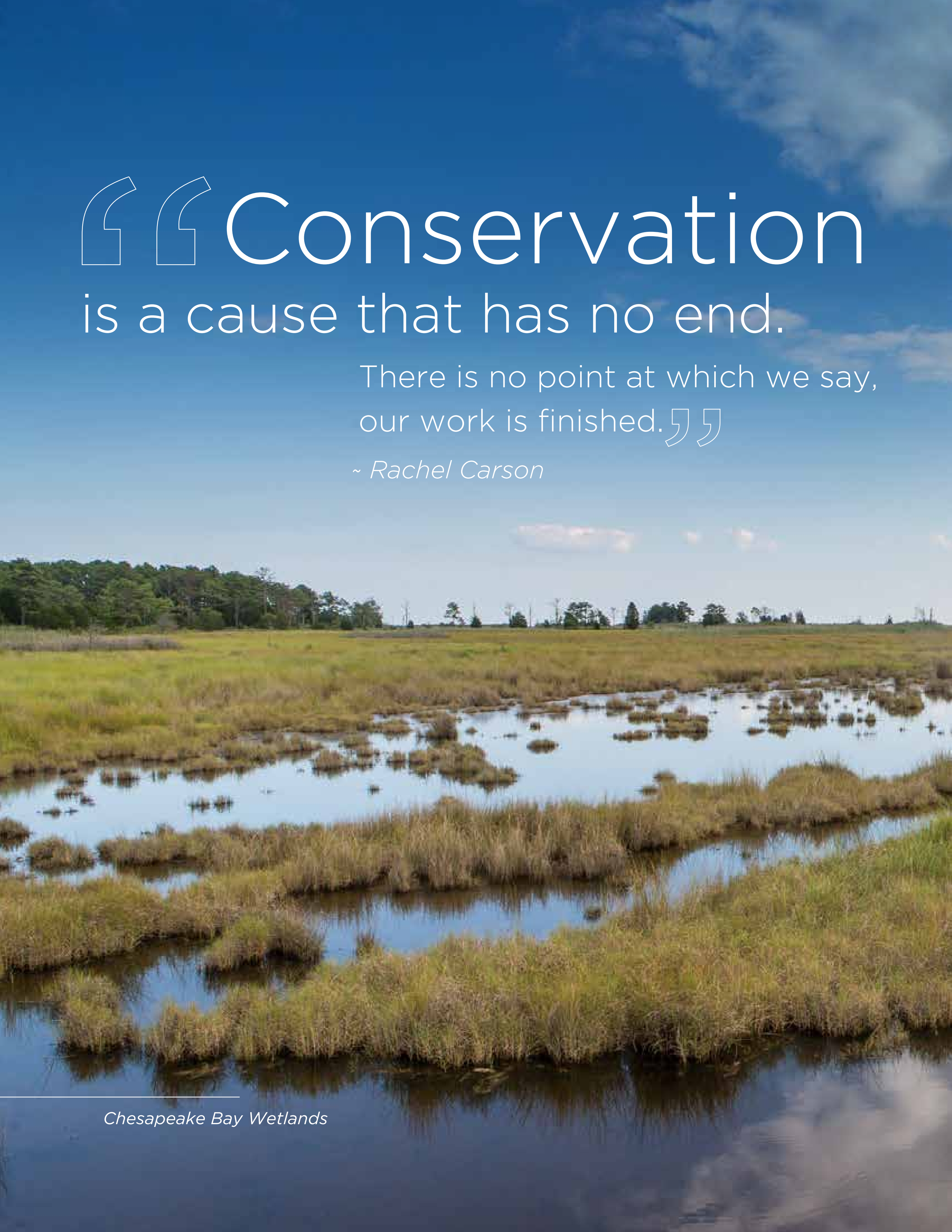
Note 1 – Changes of Benefit Terms

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

Note 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 ending June 30, 2016:

Mortality rates (pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table - RP-2014 projected to 2020
Retirement rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal rates	Adjusted termination rates to better fit experience at each year age and service
Disability rates	Lowered disability rates
Salary scale	No change



> **"Conservation**
> **is a cause that has no end.**
> There is no point at which we say, our work is finished."
>
> *~ Rachel Carson*

Chesapeake Bay Wetlands

STATISTICAL SECTION

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This section of UOSA's CAFR presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about UOSA's overall financial health. This information has not been audited by the independent auditor.

FINANCIAL TRENDS

These schedules contain trend information to help the reader understand how UOSA's financial performance and well-being changed over time.

SCHEDULE 1

Net Position by Component

Last 10 Fiscal Years (unaudited)

	For the Fiscal Years Ended June 30				
	2019	2018	2017	2016	2015
Net (deficit) investment in capital assets	$ (12,317,474)	$ (5,169,318)	$ 4,881,817	$ 17,499,650	$ 12,973,662
Restricted	69,427,481	65,545,482	65,770,178	65,741,986	63,184,498
Unrestricted	(10,259,768)	(9,523,778)	(6,818,044)	(6,092,408)	(7,238,154)
Total Net Position	$ 46,850,239	$ 50,852,386	$ 63,833,951	$ 77,149,228	$ 68,920,006

	For the Fiscal Years Ended June 30				
	2014	2013	2012	2011	2010
Net investment in capital assets	$ 30,369,861	$ 40,722,834	$ 56,169,422	$ 59,932,774	$ 74,958,114
Restricted	53,939,075	48,554,724	39,704,788	35,311,765	29,302,170
Unrestricted	911,546	932,395	881,426	941,360	26,500
Total Net Position	$ 85,220,482	$ 90,209,953	$ 96,755,636	$ 96,185,899	$ 104,286,784

SCHEDULE 2

Changes in Net Position

Last 10 Fiscal Years (unaudited)

Fiscal Year	Operating Revenue	Operating Expenses	Operating Loss	Total Non-Operating Revenues	Loss before Capital Contributions	Capital Contributions	Change in Net Position
2019	$ 30,236,345	$ 57,835,443	$ (27,599,098)	$ 4,900,451	$ (22,698,647)	$ 18,696,500	$ (4,002,147)
2018	28,768,098	58,667,527	(29,899,429)	3,229,382	(26,670,047)	17,830,318	(8,839,729)
2017	28,328,572	59,709,789	(31,381,217)	836,283	(30,544,934)	17,229,657	(13,315,277)
2016	28,916,953	56,011,026	(27,094,073)	4,136,204	(22,957,869)	31,187,091	8,229,222
2015	28,504,352	55,155,801	(26,651,449)	2,353,974	(24,297,475)	16,102,978	(8,194,497)
2014	28,140,951	52,692,746	(24,551,795)	4,722,304	(19,829,491)	14,840,020	(4,989,471)
2013	26,918,771	49,846,103	(22,927,332)	4,011,892	(18,915,440)	12,369,757	(6,545,683)
2012	26,284,637	47,732,629	(21,447,992)	8,953,289	(12,494,703)	13,064,440	569,737
2011	26,550,922	46,964,634	(20,413,712)	2,576,240	(17,837,472)	9,736,587	(8,100,885)
2010	26,184,993	45,484,400	(19,299,407)	9,977,724	(9,321,683)	9,267,684	(53,999)

SCHEDULE 3

Operating Expenses

Last 10 Fiscal Years (unaudited)

	For the Fiscal Years Ended June 30				
	2019	2018	2017	2016	2015
Personnel services	$ 18,815,840	$ 18,591,810	$ 19,297,175	$ 18,376,806	$ 17,722,098
Electrical power	2,763,864	2,412,866	2,314,363	2,453,673	2,580,043
Chemicals	1,962,993	1,655,535	1,601,337	1,916,553	1,953,427
Facilities operations	942,391	925,022	790,495	1,074,751	1,173,670
Facilities maintenance	2,620,559	2,226,367	2,289,798	2,326,757	2,240,440
Contract services	1,871,559	1,686,747	1,686,691	1,527,664	1,466,536
Administration	401,953	390,325	385,789	395,051	382,920
Insurance	405,380	415,034	418,499	378,467	405,243
Miscellaneous	(258,952)	(145,680)	(180,180)	117,320	55,913
Subtotal	29,525,587	28,158,026	28,603,967	28,567,042	27,980,290
Depreciation	28,309,856	30,509,501	31,105,822	27,443,984	27,175,511
Total Operating Expenses	$ 57,835,443	$ 58,667,527	$ 59,709,789	$ 56,011,026	$ 55,155,801

	For the Fiscal Years Ended June 30				
	2014	2013	2012	2011	2010
Personnel services	$ 17,890,568	$ 16,872,777	$ 15,868,094	$ 15,891,902	$ 15,650,309
Electrical power	2,643,539	2,799,685	3,017,320	3,259,211	3,283,934
Chemicals	2,073,878	1,860,699	1,885,644	1,804,369	1,851,984
Facilities operations	930,846	974,686	1,207,874	1,246,139	1,154,530
Facilities maintenance	1,982,630	1,588,756	1,585,748	1,584,499	1,503,285
Contract services	1,722,742	1,795,315	1,628,911	1,605,501	1,587,288
Administration	411,197	334,241	359,296	342,285	363,617
Insurance	424,739	426,111	406,264	425,115	452,829
Miscellaneous	99,697	91,913	140,856	95,532	184,988
Subtotal	28,179,836	26,744,183	26,100,007	26,254,553	26,032,764
Depreciation	24,512,910	23,101,920	21,632,622	20,710,081	19,451,636
Total Operating Expenses	$ 52,692,746	$ 49,846,103	$ 47,732,629	$ 46,964,634	$ 45,484,400

SCHEDULE 4

Non-Operating Revenues and Expenses

Last 10 Fiscal Years (unaudited)

Fiscal Year	Interest Income	Federal Build America Bonds Subsidy	Bond Issuance Costs	Loss on Sale of Assets	Revenue in Excess of Expenses from Restricted Accounts	Other	Total
2019	$ 148,342	$ 1,388,875	$ -	$ (283,851)	$ 3,646,415	$ 670	$ 4,900,451
2018	89,362	1,406,857	-	(111,790)	1,843,961	992	3,229,382
2017	54,239	1,424,065	-	(84,328)	(558,494)	801	836,283
2016	37,019	2,134,567	(780,444)	(40,328)	2,784,490	900	4,136,204
2015	33,252	708,973	(1,236,011)	(205,303)	3,052,192	871	2,353,974
2014	37,389	1,419,476	(146,377)	(968,829)	4,381,535	(890)	4,722,304
2013	42,067	1,463,069	(1,168,995)	(1,470,689)	5,155,455	(9,015)	4,011,892
2012	38,238	2,328,402	(124,557)	(151,628)	6,854,735	8,099	8,953,289
2011	41,404	-	(3,553,003)	(97,101)	6,154,984	29,956	2,576,240
2010	29,154	-	(200,432)	(32,985)	10,177,028	4,959	9,977,724

SCHEDULE 5

Expenses by Function (A) (B)

Last 10 Fiscal Years (unaudited)

Fiscal Year	Operating Expenses (C)	Reserve Maintenance	Expansion Related	Debt Service (D)	Total
2019	$ 29,525,587	$ 663,605	$ 318,057	$ 36,330,006	$ 66,837,255
2018	28,158,026	864,348	6,611	36,510,230	65,539,215
2017	28,603,967	772,750	1,008,923	36,004,088	66,389,728
2016	28,567,042	728,561	-	35,964,261	65,259,864
2015	27,980,290	814,814	-	35,671,346	64,466,450
2014	28,179,836	301,695	171,000	32,227,730	60,880,261
2013	26,744,183	758,762	-	30,488,848	57,991,793
2012	26,100,007	726,002	-	30,439,603	57,265,612
2011	26,254,553	491,018	-	27,335,070	54,080,641
2010	26,032,764	598,901	-	23,450,190	50,081,855

(A) Includes general operations and restricted assets activity.

(B) Excludes landfill closure expense.

(C) Excludes depreciation expense.

(D) Includes bond principal expense and bond interest less capitalized interest portion.

REVENUE CAPACITY INFORMATION

These schedules contain information to help the reader assess UOSA's significant local operating revenues.

SCHEDULE 6

Operating Revenues by Source(A)

Last 10 Fiscal Years (unaudited)

Fiscal Year	Fairfax County	Prince William County	City of Manassas	City of Manassas Park	Other	Total
2019	$ 11,473,594	$ 11,514,448	$ 5,482,680	$ 1,355,151	$ 410,472	$ 30,236,345
2018	10,983,055	11,082,985	5,254,753	1,194,654	252,651	28,768,098
2017	11,042,450	10,504,709	5,324,343	1,182,080	274,990	28,328,572
2016	11,089,622	10,568,321	5,776,403	1,209,924	272,683	28,916,953
2015	10,955,487	10,502,823	5,636,767	1,157,162	252,113	28,504,352
2014	10,967,333	10,096,919	5,582,150	1,188,402	306,147	28,140,951
2013	10,686,168	9,376,374	5,410,249	1,084,151	361,829	26,918,771
2012	10,229,584	9,373,199	5,067,356	1,193,119	421,379	26,284,637
2011	10,630,513	9,214,947	5,124,093	1,109,184	472,185	26,550,922
2010	10,632,369	8,926,834	5,032,485	1,136,632	456,673	26,184,993

(A) Includes operating revenues and unrestricted interest income.

SCHEDULE 7

Sources of Wastewater Flow (MGD)(B)

Average Daily Flow (ADF)(A)

Last 10 Fiscal Years (unaudited)

Fiscal Year	Fairfax County	Prince William County	City of Manassas	City of Manassas Park	Total ADF(A) (MGD)(B)	Total Operating Expenses(C)
2019	14.581	14.534	7.034	1.677	37.826	$ 29,525,587
2018	12.594	12.706	6.038	1.348	32.686	28,158,026
2017	12.010	11.703	5.977	1.313	31.003	28,603,967
2016	12.749	12.205	6.465	1.408	32.827	28,567,042
2015	12.885	12.080	6.536	1.349	32.850	27,980,290
2014	13.533	12.545	6.807	1.457	34.342	28,179,836
2013	12.411	10.944	6.326	1.298	30.979	26,744,183
2012	12.608	11.167	6.206	1.374	31.355	26,100,007
2011	12.654	10.976	6.099	1.319	31.048	26,254,553
2010	13.081	10.985	6.194	1.402	31.662	26,032,764

(A) (ADF) = Average Daily Flow

(B) (MGD) = Million gallons per day

(C) = Excludes depreciation expense

Source: UOSA Internal Documents

SCHEDULE 8

Annual Capital Contributions by Source

Last 10 Fiscal Years (unaudited)

Fiscal Year	Fairfax County	Prince William County	City of Manassas	City of Manassas Park	Other	Total
2019	$ 11,037,600	$ 5,451,251	$ 1,324,969	$ 882,680	$ -	$ 18,696,500
2018	10,721,048	5,086,210	1,196,378	826,682	-	17,830,318
2017	10,417,531	4,939,753	1,084,837	787,536	-	17,229,657
2016	24,608,768	4,768,062	1,049,894	760,367	-	31,187,091
2015	9,619,148	4,587,535	1,021,787	730,997	143,511	16,102,978
2014	8,536,226	4,009,476	858,124	639,330	796,864	14,840,020
2013	6,853,730	2,850,123	502,219	480,291	1,683,394	12,369,757
2012	6,536,431	2,718,247	479,059	458,072	2,872,631	13,064,440
2011	6,244,628	2,596,805	457,553	437,601	-	9,736,587
2010	5,366,183	2,582,191	725,957	593,353	-	9,267,684

DEBT CAPACITY INFORMATION

These schedules present information to help the reader assess the affordability of UOSA's current levels of outstanding debt, and UOSA's ability to issue additional debt in the future.

SCHEDULE 9

Ratios of Outstanding Debt

Last 10 Fiscal Years (unaudited)

Fiscal Year	Revenue Bonds	Premium (Discount) on Revenue Bonds	Virginia Resources Authority Loans	Direct Bank Loan	Total Outstanding Debt	UOSA Service Area Population	Per Capita (A)
2019	$ 418,805,000	$ 23,911,940	$ 14,372,165	$ 18,060,000	$ 475,149,105	351,906	$ 1,350
2018	431,245,000	25,718,377	15,204,983	22,655,000	494,823,360	347,015	1,426
2017	443,170,000	27,503,558	16,017,189	27,165,000	513,855,747	338,606	1,518
2016	454,560,000	29,268,525	16,809,298	31,595,000	532,232,823	300,881	1,769
2015	445,545,000	25,299,583	17,630,983	35,940,000	524,415,566	299,759	1,749
2014	459,530,000	(758,160)	17,631,996	37,735,000	514,138,836	296,601	1,733
2013	505,950,000	245,527	15,801,854	-	521,997,381	294,696	1,771
2012	497,100,000	4,794,626	8,599,273	-	510,493,899	295,000	1,730
2011	506,910,000	5,794,294	-	-	512,704,294	289,000	1,774
2010	431,090,000	6,218,765	-	-	437,308,765	278,000	1,573

(A) Represents the total outstanding debt as a share of the population served by UOSA.

SCHEDULE 10

Revenue Bond Coverage

Last 10 Fiscal Years (unaudited)

Fiscal Year	Gross Revenue(A)	Operating Expenses(B)	Net Revenue Available for Debt Service	Total Debt Service Requirements	Debt Coverage
2019	$ 73,962,842	$ 29,525,587	$ 44,437,255	$ 34,844,247	1.28
2018	69,675,341	28,158,026	41,517,315	34,858,257	1.19
2017	67,774,699	28,603,967	39,170,732	33,794,974	1.16
2016	85,270,955	28,567,042	56,703,913	34,493,702	1.64
2015	69,041,770	27,980,290	41,061,480	29,780,058	1.38
2014	68,917,618	28,179,836	40,737,782	35,082,430	1.16
2013	66,328,560	26,744,183	39,584,377	34,540,736	1.15
2012	70,108,090	26,100,007	44,008,083	34,604,619	1.27
2011	61,246,069	26,254,553	34,991,516	29,907,379	1.17
2010	60,901,779	26,032,764	34,869,015	29,909,254	1.17

(A) Gross revenue includes operating, non-operating, and restricted revenue, except CIP revenue.

(B) Operating expenses include Operations and Maintenance expenses, except depreciation.

DEMOGRAPHIC AND ECONOMIC INFORMATION

These schedules offer demographic and economic indicators to help the reader understand the environment within which UOSA's financial activities take place.

SCHEDULE 11

Principal Employers

Current Year and Nine Years Ago (unaudited)

	Fiscal Year 2018 (1)			Fiscal Year 2009 (1)		
Employer	Number of Employees (2)	Rank	Percentage of Total County Employment (3)	Number of Employees (2)	Rank	Percentage of Total County Employment (3)
Fairfax County Public Schools	24,715	1	3.92%	23,014	1	4.02%
Federal Government	24,080	2	3.82	15,393	2	2.69
Fairfax County Government	12,552	3	1.99	11,393	3	1.99
Inova Health System	7,000-10,000	4	1.35	7,000-10,000	4	1.49
George Mason University	5,000-9,999	5	1.19	-	-	-
Booz-Allen Hamilton	5,000-9,999	6	1.19	7,000-10,000	5	1.49
Federal Home Loan Mortgage	5,000-9,999	7	1.19	4,000-6,999	9	0.96
Capital One	5,000-9,999	8	1.19	-	-	-
General Dynamics	5,000-9,999	9	1.19	1,000-3,999	10	0.44
Northrup Grumman	2,500-4,999	10	0.56	7,000-10,000	6	1.49
Science Applications International Corporation (4)	2,500-4,999	-	-	4,000-6,999	7	0.96
Lockheed Martin	1,000-1,499	-	-	4,000-6,999	8	0.96
Totals			17.59%			16.49%

Source: Fairfax County Economic Development Authority (using Virginia Employment Commission data); Fairfax County Public Schools; Fairfax County Department of Management and Budget

Notes:

(1) Employment information for fiscal year 2018, excluding data for Fairfax County Government and Fairfax County Public Schools, is from the 1st quarter of calendar year 2018 VEC. Employment information for fiscal year 2009 is as was presented in the 2009 Fairfax County CAFR.

(2) Employment estimates for separate facilities of the same firm have been combined to create company totals. Employment ranges for the private sector are given to ensure confidentiality.

(3) Percentages are based on the midpoint of the employment range. Average total County employment for fiscal year 2018 is estimated at 629,698 based on Virginia Employment Commission. Average total County employment for fiscal year 2009 was estimated at 572,000.

(4) Science Applications International Corporation employment reported prior to the September 2013 split into two independent companies (SAIC and Leidos).

SCHEDULE 12

Demographic Statistics

UOSA Service Area Population(A)

Last 10 Years (unaudited)

Fairfax County(B)

Year	Population	Per Capita Income	Average Unemployment(%)
2017	1,142,888	$ 75,978	3.0%
2016	1,138,652	74,923	3.2
2015	1,142,234	75,007	3.1
2014	1,137,538	71,752	3.5
2013	1,130,924	71,607	3.7
2012	1,118,602	68,847	4.4
2011	1,100,692	64,637	4.7
2010	1,081,726	67,094	5.1
2009	1,074,227	69,241	4.9
2008	1,050,315	70,822	2.8

Prince William County(B)

Year	Population	Per Capita Income	Average Unemployment(%)
2018	460,457	$ 54,754	2.9%
2017	456,126	53,969	3.5
2016	449,864	52,546	3.7
2015	441,627	50,315	4.4
2014	433,621	48,545	4.8
2013	425,681	47,296	5.2
2012	418,107	48,234	5.3
2011	410,454	47,994	5.7
2010	402,002	46,562	6.1
2009	392,900	46,006	5.5

City of Manassas(C)

Year	Population	Per Capita Income	Average Unemployment(%)
2018	*	*	2.8%
2017	41,501	$ 52,929	3.4
2016	41,483	51,313	3.4
2015	41,764	50,315	4.1
2014	42,081	48,545	5.0
2013	41,725	47,296	5.4
2012	40,742	48,234	5.6
2011	39,358	47,994	6.1
2010	37,821	46,562	7.0
2009	36,514	46,006	7.3

City of Manassas Park(C)

Year	Population	Per Capita Income	Average Unemployment(%)
2018	16,528	$ 29,641	2.8%
2017	16,591	28,851	3.4
2016	15,827	28,851	3.9
2015	15,625	28,164	4.4
2014	14,992	28,054	4.5
2013	15,125	26,944	5.0
2012	14,409	27,306	4.7
2011	13,759	26,979	5.2
2010	13,195	27,335	5.8
2009	11,410	33,540	6.5

(A) A current population of approximately 351,906 is being served by UOSA's existing water reclamation system.

(B) Represents the entire population of the Counties. UOSA serves only a portion of the population.

(C) Represents the entire population of the Cities. UOSA serves the entire population.

* Not available

Source: Member Jurisdictions

OPERATING INFORMATION

These schedules contain service and infrastructure data to help the reader understand how the information in UOSA's financial report relates to the services UOSA provides and the activities it performs.

SCHEDULE 13

Authorized Full-Time Equivalents by Function

Last 10 Fiscal Years (unaudited)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Treatment Process	69	69	70	70	70	69	69	69	69	69
Finance	19	19	19	17	17	17	17	17	17	17
Operations and Maintenance	55	55	54	54	54	54	54	54	54	54
Executive	7	7	7	8	8	9	9	9	9	9
Technical Services	31	31	31	32	32	32	32	32	32	32
Totals	181	181	181	181	181	181	181	181	181	181

Source: UOSA Operating Budget

SCHEDULE 14

Operating and Capital Indicators

Last 10 Fiscal Years (unaudited)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Wastewater Treatment										
Miles of sewers	24.9	24.9	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Number of treatment plants	1	1	1	1	1	1	1	1	1	1
Number of pumping stations	9	9	9	9	9	9	9	9	9	9
Treatment capacity (MGD)	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Engineering plant capacity (MGD)	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0
Annual engineering maximum plant capacity (millions of gallons)	15,330	15,330	15,330	15,330	15,330	15,330	15,330	15,330	15,330	15,330
Amount treated annually (millions of gallons)	13,821	11,903	11,334	11,983	11,892	12,535	11,308	11,445	11,332	11,560
Unused capacity (millions of gallons)	1,509	3,427	3,996	3,347	3,438	2,795	4,022	3,885	3,998	3,770
Percentage of capacity utilized	90.16%	77.65%	73.93%	78.17%	77.57%	81.77%	73.76%	74.66%	73.92%	75.41%

Source: UOSA Internal Documents

"Water is the driving force of all nature"

~ *Leonardo da Vinci*

In the Prince William County watershed

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PBMares

INDEPENDENT AUDITOR'S REPORT ON
INTERNAL CONTROL OVER FINANCIAL REPORTING
AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS
PERFORMED IN ACCORDANCE WITH
GOVERNMENT AUDITING STANDARDS

To the Board of Directors
Upper Occoquan Service Authority

We have audited, in accordance with the 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, the financial statements of Upper Occoquan Service Authority (UOSA), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise UOSA's basic financial statements, and have issued our report thereon dated November 5, 2019.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered UOSA's internal control over financial reporting (internal control) to determine the audit procedures are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of UOSA's internal control. Accordingly, we do not express an opinion on the effectiveness of UOSA's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility a material misstatement of UOSA's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether UOSA's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of UOSA's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering UOSA's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PBMares, LLP

Harrisonburg, Virginia
November 5, 2019

We all know that water is life.

Humanity cannot exist without clean water, and UOSA is extremely proud to be one of the world's innovators in reclaiming this life giving resource by turning wastewater into drinking water.

~ Charles P. Boepple
Executive Director, UOSA

UPPER OCCOQUAN SERVICE AUTHORITY
Regional Water Reclamation System, Centreville, VA