



JAMES CITY SERVICE AUTHORITY

A Component Unit of the County of James City, Virginia

THE COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2020

James City County, Virginia ▪ jamescitycountyva.gov/jcsa

Prepared by the Department of Financial & Management Services

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)

Comprehensive Annual Financial Report
(With Independent Auditor's Report Thereon)

For the Fiscal Years Ended
June 30, 2020 and 2019

Prepared by:
Department of Financial and Management Services
James City County, Virginia

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INTRODUCTORY SECTION

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JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)

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JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)

Authority Officials
June 30, 2020

Board of Directors

Sue Sadler, Chair
Ruth Larson, Vice-Chair
Michael J. Hipple
Jim Icenhour
John J. McGlennon

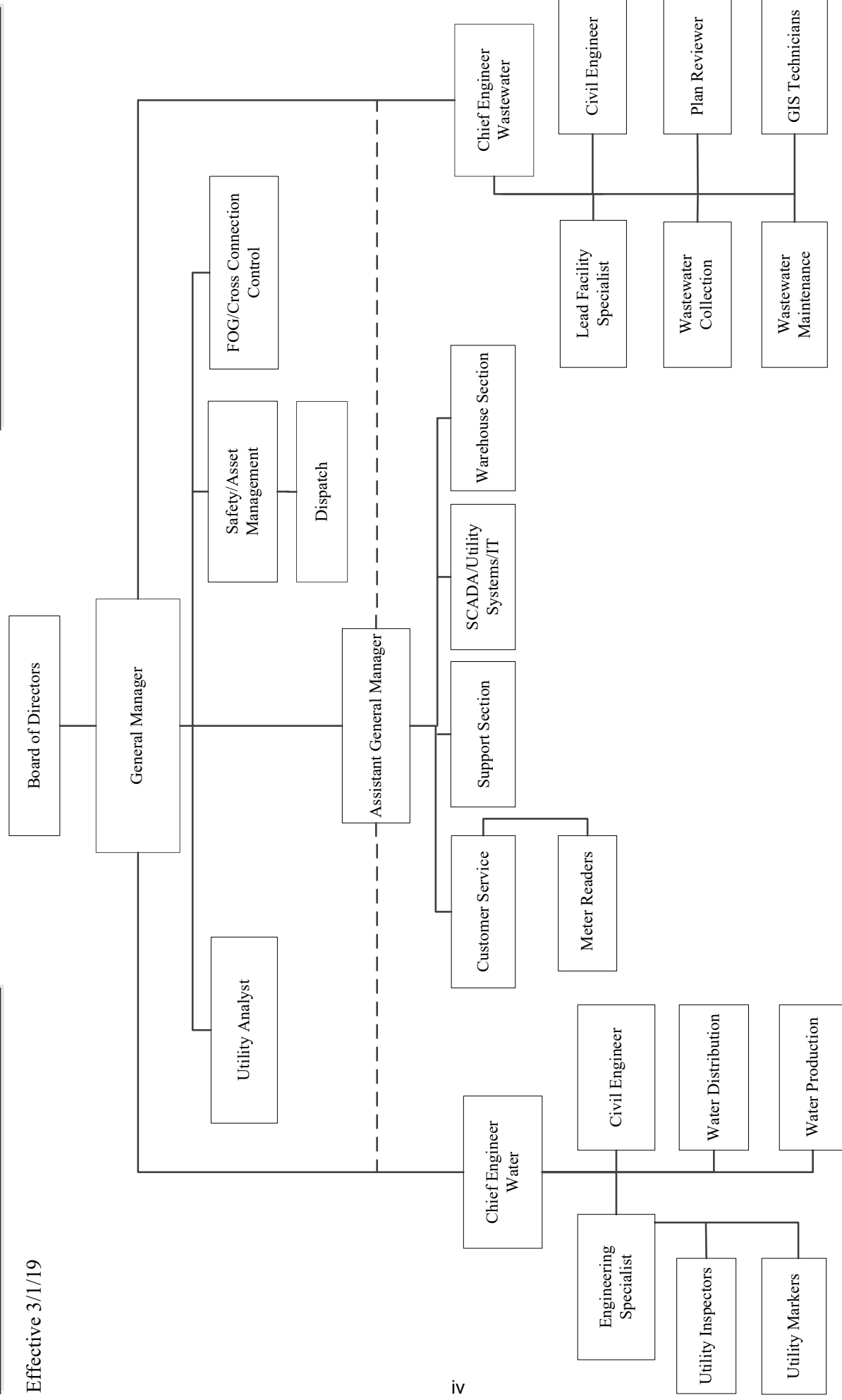
Officials

M. Douglas Powell
General Manager

Stephanie A. Luton
Assistant Manager/Treasurer

JCSA Organizational Chart

Effective 3/1/19





Operations Center
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Williamsburg, VA 23188-2639
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jcsa@jamescitycountyva.gov
jamescitycountyva.gov/jcsa

December 7, 2020

The Members of the Board of Directors and the Citizens of James City County:

The Comprehensive Annual Financial Report of the James City Service Authority, a component unit of the County of James City, Virginia, for the fiscal years ending June 30, 2020 and 2019, is hereby submitted. This report presents the financial position of all fund types of the James City Service Authority (JCSA) and the results of operations for the years then ended.

The JCSA financial records have been audited by Brown, Edwards & Company, LLP. Their opinion and management's accompanying statements comprise the Financial Section of this report. This report was prepared by the JCSA, and responsibility for both the accuracy of the information presented and the completeness and fairness of the presentation, including all disclosures, rests with the JCSA. We believe the information as presented is accurate in all material respects; that it is presented in a manner designed to fairly set forth the financial position and results of operations of the JCSA as measured by the financial activity of its various legal funds; and that all disclosures necessary to enable the reader to gain the maximum understanding of the JCSA's financial activity have been included. The funds included in our Comprehensive Annual Financial Report are controlled solely by the JCSA.

Generally accepted accounting principles require that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. JCSA's MD&A can be found on pages 4-9, immediately following the independent auditors' report.

The Reporting Entity and Its Service

The James City Service Authority is a public body politic and corporate of the Commonwealth of Virginia. The JCSA was created in 1969 by the James City County Board of Supervisors pursuant to the Virginia Water and Sewer Authorities Act (Code of Virginia, 1950, as amended). The JCSA was created to acquire, construct, operate and maintain, to the extent determined by the JCSA to be financially feasible, an integrated water system and an integrated sewer collection system in James City County (County). The Board of Directors is appointed by the Board of Supervisors and, beginning in fiscal year 2019, supervises the JCSA's General Manager. Since 1976, the Board of Supervisors has appointed its members as Directors of the JCSA to more fully coordinate JCSA activities with those of the County in the planning and development of utility systems.

The Board of Supervisors has authorized water and sewer operations for the JCSA within the Primary Service Area (PSA) in the County. With the approval of the County, the JCSA has extended services beyond the PSA to several public sites in the County, including three public schools, Freedom Park and two major planned communities, Greensprings West and Governor's Land. The JCSA also provides water and/or sewer service to limited sections of York County and the City of Williamsburg with the concurrence of the appropriate governing bodies.

The JCSA's water system includes the central water system and Five Forks Water Treatment Plant with 10 water production facilities, and 8 independent water production facilities that are located outside the PSA. There are approximately 414 miles of water transmission and distribution lines throughout the entire system. The water system facilities supply approximately 4.7 million gallons of water per day to 23,116 water customers.

The JCSA's sewer system includes 76 pump stations with approximately 446 miles of sewer collection lines. The sewer system facilities collect and move approximately 5.1 million gallons of sewage per day for 24,863 sewer customers. The JCSA has no sewage treatment facilities. Sewage treatment for areas served by the JCSA, as well as for other Hampton Roads communities, is provided by the Hampton Roads Sanitation District (HRSD).

As of June 30, 2020, the JCSA had 96 full-time employees with the responsibility to operate and maintain its utility facilities and lines. The JCSA's operating funds are self-supporting and the JCSA receives no share of any local or property tax levies. The Board of Directors has the sole power to set water and sewer utility rates and related fees. The Board of Directors adopted an inverted-block or inclining rate structure in 1996 for residential customers which incorporates a unit charge that increases with increasing consumption. The primary objective of the inverted-block rate structure is to promote water conservation, particularly from large-volume residential customers.

Economic Condition and Outlook

The County has a strong, diverse, and growing economic base. The County is located near the Cities of Hampton, Newport News and Williamsburg, and York County. Major employers within commuting distance include Busch Gardens, Anheuser-Busch, Owens-Illinois, Ball Metal, Newport News Shipbuilding, Langley Air Force Base, Fort Eustis, the Colonial Williamsburg Foundation, and the National Aeronautics and Space Administration. The County's population grew 13.3 percent from 2010 to 2019 while the Commonwealth of Virginia's population increased 6.7 percent during the same time period. A historically fast-growing population and expanding commercial base enhances the long-term economic outlook for the Authority.

Major Initiatives

Rate Structure – As a result of a comprehensive water and sewer rate study in fiscal year 2015, the Board of Directors adopted a new rate structure in fiscal year 2016 that included a fixed charge for water and sewer service and proposed incremental service rate increases in subsequent fiscal years to ensure the long-term financial stability of the Authority. The goals of this initiative are to reduce revenue variability and adequately provide for both current water and wastewater operating needs and future capital infrastructure repairs, upgrades and expansion required by asset age and regulations. Fixed charges and service rates increased in fiscal year 2020 in accordance with the plan. The rationale behind the fixed charge is JCSA incurs significant costs to maintain infrastructure regardless of usage and JCSA should not be completely reliant on variable revenue to cover these fixed costs. The water and sewer fixed charges are based on meter size. For a typical residential customer in fiscal year 2020, the quarterly water fixed charge was \$11.99 and the quarterly sewer fixed charge was \$6.01.

The first tier (0-15,000 gallons per quarter) water service rate for a typical single family residential customer increased from \$3.61 per 1,000 gallons to \$4.10. The second tier (15,001-30,000 gallons per quarter) rate increased from \$7.22 per 1,000 gallons to \$8.19, and the third tier (30,000+ gallons per quarter) rate increased from \$16.95 to \$19.24. The water service rate for non-residential and multi-family residential customers increased from \$5.33 per 1,000 gallons to \$6.05. The sewer service rate increased from \$3.08 to \$3.11 per 1,000 gallons of water consumed. The rate changes increased a typical 5,000 gallons per month residential customer's bill by \$3.10 per month from \$38.95 to \$42.05.

Monthly Billing - JCSA's multi-year meter replacement project was completed in fiscal year 2020 with over 22,800 touch-read meters converted to radio read technology. Readings are now collected with a vehicle mounted mobile data collector that has significantly reduced meter reading time. This operational efficiency allowed JCSA to move from quarterly billing to monthly billing in May 2020 to better serve customers and promote water conservation. Monthly billing benefits include more efficient household budgeting, more frequent and timely information about usage, and the ability to detect leaks sooner.

Bond Issue - The Authority issued \$9,135,000 in revenue bonds in May 2020 to fund major portions of two large infrastructure improvement efforts, the White Oaks Area and Kingswood Water Main Replacement Projects. These projects are part of the Authority's repair and replacement program focusing on the replacement of aging and underperforming infrastructure to increase service reliability, minimize service disruptions, and improve operational efficiency. The White Oaks Area Water Main Replacement Project consists of replacing and upsizing approximately 22,000 feet of water main in the water distribution system installed in the early 1970s in the White Oaks, Indigo Park, Jamestown Farms, Paddock Green, Paddock Lane, and Canterbury Hills neighborhoods. Design is underway and construction will start at the end of calendar year 2020 at an estimated cost of \$6.6 million and with an estimated

completion date of June 2022. The Kingswood Water Main Replacement Project consists of replacing and upsizing approximately 14,500 feet of cast iron water main in the 1960-70s era neighborhood water distribution system primarily serving the Kingswood subdivision. Design started in 2020 with construction anticipated to begin in 2021 at an estimated total cost of \$4.675 million and with an estimated completion date of December 2022.

Capital Projects - Major projects completed in fiscal year 2020 include replacement of 22,800 water meters, replacement of variable frequency drives controlling electric motor speed and power for production wells and the reverse osmosis treatment process at the Five Forks Water Treatment Plant, rehabilitation of the 1.25 million gallon Stonehouse elevated water storage tank, upgrading and flood proofing Lift Station 5-4 on Merrimac Trail, replacement of four air ejector lift stations along the Jamestown Road corridor and Lift Station 1-7 on Pocahontas Trail that reached the end of their service lives, and erosion control site improvements at Lift Station 6-6 in Norge.

Major multi-year projects continuing into 2020 and beyond are upgrading the existing Supervisory Control and Data Acquisition (SCADA) communication and control system for 107 remote sites, upgrading computer server hardware and software, asset management program development, future water source alternatives evaluations, design of the College Creek directional drill water main replacement project, corrosion inhibitor equipment upgrades at water production wells and associated distribution systems, design for replacement of the roof and HVAC system at the Five Forks Water Treatment Plant, and design for replacement of the water mains and service lines in the White Oaks area neighborhoods. Wastewater maintenance and rehabilitation projects associated with the Authority's Consent Agreement with the Virginia Department of Environmental Quality (DEQ) continued in fiscal year 2020 and included manhole raising and rehabilitation, extensive easement inspection and clearing, closed circuit television (CCTV) pipeline inspections, repairs to pipe defects identified during the CCTV inspections and design for replacing Lift Station 1-9 in the First Colony neighborhood.

Water - The Authority currently has a groundwater permit for its central water system through 2027 to withdraw up to 8.4 million gallons per day (mgd) to support its residential and commercial customers. The permit is based on a tiered system with varying tiers starting at 6 mgd and increasing to 8.4 mgd based on residential and commercial growth. Facilities currently provide ample resources and treatment capacity through at least 2027. The Virginia Department of Environmental Quality has expressed an interest in reducing the withdrawal of groundwater within the Eastern Virginia Groundwater Management Area, of which the Authority is a part. The Authority is currently evaluating options for alternative sources of water should the groundwater withdrawal permit be reduced after the current permit expires in 2027.

Wastewater - In 2007, the Board of Directors authorized the JCSA to enter into a Consent Agreement with the Virginia DEQ to address sanitary sewer overflows (SSOs). Thirteen other Hampton Roads localities entered into similar agreements during the same timeframe. In February 2014, Hampton Roads Sanitation District (HRSD) and fourteen Hampton Roads localities, including the JCSA on behalf of James City County, entered into a Regional Hybrid Consolidation Plan for meeting Consent Agreement requirements. This regional approach to capital construction is estimated to save approximately \$1 billion regionally compared to the cost of each locality individually fulfilling its Consent Agreement responsibilities. HRSD will fund the work through a regional HRSD rate. In addition, HRSD will also assume liability for wet weather sewer overflows due to inadequate capacity. JCSA keeps ownership and control of its local sewer infrastructure and is still responsible for monitoring and maintaining the local sewer system to Consent Agreement standards and fixing significant defects.

Pandemic Response - The Authority implemented several initiatives in mid-March 2020 in response to the COVID-19 pandemic. An Emergency Staffing Plan was adopted with split shifts and teleworking to maintain service levels and protect employee health. All employees practice social distancing and follow increased disinfection protocols in the workplace. Increased disinfection protocols for custodial services were also implemented at Authority facilities. Authority facilities were closed to the general public and deliveries and essential maintenance activities follow social distancing rules. Customer service operations continue through electronic and drop box methods.

Accounting System and Budgetary Control

The JCSA's accounting records are maintained on a full accrual basis incorporating the principles of enterprise fund accounting. Basically, this approach presents the statements on a profit and loss basis, including a provision for depreciation, which is comparable to private industry.

In developing and evaluating the JCSA's accounting system, consideration is given to the adequacy of internal accounting controls. The controls are designed to provide reasonable, but not absolute, assurance regarding: (1) the safeguarding of assets against loss from unauthorized use or disposition; and, (2) the reliability of financial records for preparing the financial statements.

All internal control evaluations occur within the above framework using the concept of reasonable assurance and recognizing: (1) the cost of control should not exceed the benefits likely to be derived; and (2) the evaluation of costs and benefits requires estimates and judgments by management.

We believe the JCSA's internal accounting controls adequately safeguard assets and provide reasonable assurance of the proper recording of financial transactions.

Budgetary controls are maintained to ensure compliance with the budget adopted by the Board of Directors. Encumbrances are used to reserve a portion of the applicable appropriation for purchase orders, contracts and commitments of the JCSA.

Awards of Achievement

The Government Finance Officers' Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to James City Service Authority for its component unit financial report for the fiscal year ended June 30, 2019. This was the thirty-fifth year that the JCSA has received this prestigious award.

In order to be awarded a Certificate of Achievement, the JCSA must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents conform to program standards. Such reports must satisfy both accounting principles generally accepted in the United States of America and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to conform to Certificate of Achievement Program requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

Acknowledgments

We would like to thank the members of the Board of Directors for their continued support in the planning and implementation of the financial affairs and setting policy for water and sewer development of the JCSA. Also we wish to express our appreciation to the staff of the James City County Department of Financial and Management Services who participated in the preparation of the report.

Sincerely,



M. Douglas Powell
General Manager



Stephanie A. Luton
Assistant General Manager/Treasurer



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**James City Service Authority
Virginia**

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morill

Executive Director/CEO

FINANCIAL SECTION

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INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
James City Service Authority
Williamsburg, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of the James City Service Authority (the "Authority"), a component unit of the County of James City, Virginia, as of and for the years ended June 30, 2020 and 2019, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits 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 *Specifications for Audits of Authorities, Boards and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence, about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity'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 that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities of the James City Service Authority as of June 30, 2020 and 2019, and the respective changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (MD&A) on pages 4 - 9 and the pension and OPEB schedules and related notes on pages 61 - 72 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 audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the James City Service Authority's basic financial statements. The introductory section, schedule of net position – by activity, schedule of revenues, expenses, and changes in net position - by activity, schedule of operating revenues and expenses - budget to actual - by activity, and the statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedule of net position – by activity, schedule of revenues, expenses, and changes in net position - by activity, and schedule of operating revenues and expenses - budget to actual - by activity are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of net position – by activity, schedule of revenues, expenses, and changes in net position - by activity, and schedule of operating revenues and expenses - budget to actual - by activity are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic 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 December 7, 2020, on our consideration of the James City Service Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the James City Service Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the James City Service Authority's internal control over financial reporting and compliance.

Brown, Edwards & Company, L.L.P.

CERTIFIED PUBLIC ACCOUNTANTS

Newport News, Virginia
December 7, 2020

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Management's Discussion and Analysis
June 30, 2020 and 2019

This section of the James City Service Authority's (the Authority or JCSA) comprehensive annual financial report presents management's discussion and analysis of the Authority's financial performance during fiscal years ended June 30, 2020 and 2019. The information presented in this section should be read in conjunction with the letter of transmittal, which begins on page v.

Financial Highlights

- ◆ The Authority's total net position was \$185,764,711 and \$184,466,209 at June 30, 2020 and 2019, respectively.
- ◆ Capital assets decreased by (1.4%) in 2020 from 2019, primarily attributable to current year depreciation expense and fewer utility infrastructure dedications in 2020 compared to 2019. For fiscal year 2020, there was formal acceptance of 1 new water system dedication and 1 new sewer system dedication.

Capital assets increased by 1.7% in 2019 from 2018, primarily attributable to the dedications of water and sewer systems. For fiscal year 2019, there was formal acceptance of 10 new water system dedications and 11 new sewer system dedications.

- ◆ The Authority's total operating expenses before depreciation and amortization increased by 6.0% in 2020 from 2019 and by 3.8% in 2019 from 2018. The changes in 2020 were primarily attributable to an increase in personnel expenses including implementing compensation study recommendations and an increase in pension costs. The changes in 2019 were primarily attributable to an increase in infrastructure maintenance expenses related to the DEQ Consent Agreement and future water source studies and planning.
- ◆ The Authority's total operating revenues increased by 8.3% in 2020 from 2019 and by 0.9% in 2019 from 2018. The increases were primarily attributable to an increase in water and sewer rates.
- ◆ The Authority had a restatement of 2018 beginning net position in fiscal year 2019 as a result of an adjustment to the Authority's capital assets for construction in progress as well as an adjustment to the liability for water meter agreement deposits. Additional information can be found in Note 9 to the basic financial statements.

Overview of the Financial Statements

The Comprehensive Annual Financial Report consists of three sections: introductory, financial, and statistical. The financial section includes the basic financial statements, which are comprised of the statements of net position, statements of revenues, expenses, and changes in net position, statements of cash flows, and notes to the basic financial statements. Required supplementary information is included in addition to the basic financial statements.

Transactions are accounted for under the economic resources measurement focus and the accrual basis of accounting utilizing an enterprise fund. Accordingly, revenues are recognized in the period earned and expenses are recognized when they are incurred. Enterprise funds are used to account for activities that are financed and operated similar to those often found in the private sector.

The *statements of net position* present information on the Authority's (1) assets and deferred outflows of resources and (2) liabilities and deferred inflows of resources as of June 30, 2020 and 2019, with the difference between the two reported as net position.

The *statements of revenues, expenses, and changes in net position* present information showing how the Authority's net position changed during the fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of cash flows.

The *statements of cash flows* supplement the above two statements by presenting the changes in cash position as a result of the Authority's activities over the current year and previous two years.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Management's Discussion and Analysis
June 30, 2020 and 2019

Notes to the financial statements provide additional information that is essential for a full understanding of the data provided in the financial statements. The notes to the financial statements begin on page 14.

In addition to the basic financial statements and accompanying notes, this report also presents certain *required supplementary information* concerning the Authority's progress in funding its obligation to provide pension benefits to its employees. The required supplementary information begins on page 61.

Net position is a financial measure that compares an entity's assets and deferred outflows of resources to its liabilities and deferred inflows of resources. Over time, increases and decreases in net position are one indicator of whether the Authority's financial health is improving or deteriorating. However, it is also important to consider other nonfinancial factors, such as changes in economic conditions, industry trends, population and service area growth, and new or changed legislation.

Financial Analysis

Condensed Statements of Net Position

	6/30/2020	6/30/2019	6/30/2018 (as restated)
Current and other assets	\$ 66,137,146	\$ 55,006,467	\$ 51,034,603
Capital assets	152,582,412	154,679,418	152,112,763
Total assets	218,719,558	209,685,885	203,147,366
Deferred charge on refunding, net	1,510,736	1,586,907	1,663,079
Deferred pension/OPEB outflows	917,623	401,016	410,997
Total assets and deferred outflows	\$ 221,147,917	\$ 211,673,808	\$ 205,221,442
Current liabilities	\$ 3,800,152	\$ 4,046,801	\$ 3,011,072
Noncurrent liabilities	31,206,699	22,675,019	23,455,494
Total liabilities	35,006,851	26,721,820	26,466,566
Deferred pension/OPEB inflows	376,355	485,779	754,495
Net position:			
Net investment in capital assets	132,512,264	134,359,937	131,175,547
Restricted	9,401,879	569,708	567,011
Unrestricted	43,850,568	49,536,564	46,257,823
Total net position	185,764,711	184,466,209	178,000,381
Total liabilities, deferred inflows and net position	\$ 221,147,917	\$ 211,673,808	\$ 205,221,442

The largest portion of the Authority's net position at June 30, 2020 (71.3%), reflects its investment in capital assets, less related outstanding debt used to acquire those assets. The Authority uses these capital assets to provide services to customers; consequently, these assets are not available for future spending. Although the Authority's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources given that the capital assets themselves cannot be used to liquidate these liabilities. The unrestricted portion of net position at June 30, 2020 (23.6%) may be used to meet the Authority's ongoing obligations.

The change in net position can also be determined by reviewing the following condensed statements of revenues, expenses, and changes in net position information.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Management's Discussion and Analysis
June 30, 2020 and 2019

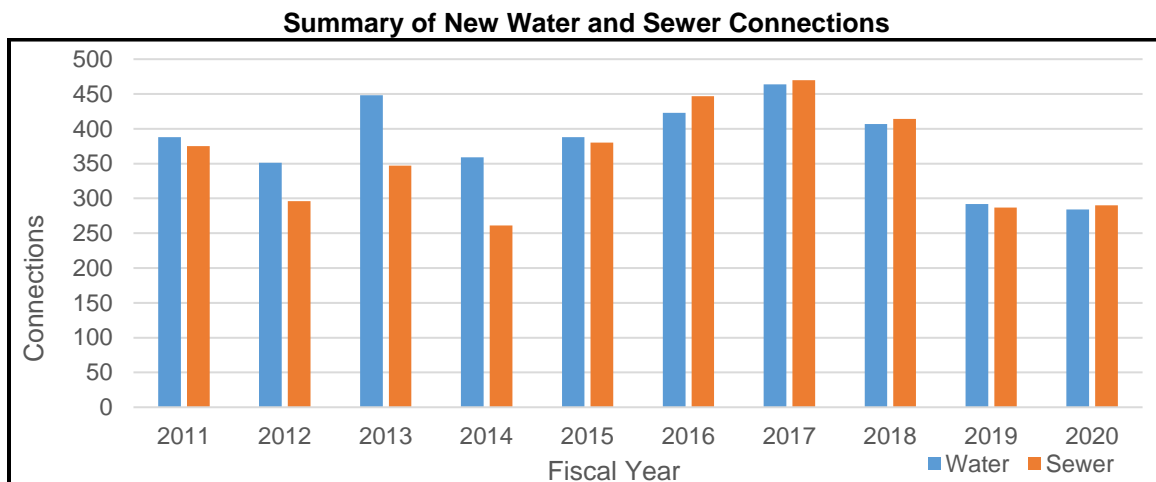
Condensed Statements of Revenues, Expenses and Changes in Net Position
for the Year Ended

	6/30/2020	6/30/2019	6/30/2018 (as restated)
Water and sewer services	\$ 17,692,654	\$ 16,299,006	\$ 15,942,612
Other	484,897	480,685	692,932
Total operating revenues	18,177,551	16,779,691	16,635,544
Operating expenses	12,364,418	11,669,089	11,241,739
Depreciation and amortization	8,115,624	7,922,613	7,992,438
Total expenses	20,480,042	19,591,702	19,234,177
Facility charges	2,386,850	2,949,130	3,581,360
Other non-operating revenue (expenses), net	1,196,818	1,190,884	(875,941)
Total nonoperating revenues, net	3,583,668	4,140,014	2,705,419
Income before capital contributions	1,281,177	1,328,003	106,786
Capital contributions	17,325	5,137,825	796,235
Change in net position	1,298,502	6,465,828	903,021
Net position, beginning of year	184,466,209	178,000,381	177,097,360
Net position, end of year	<u>\$ 185,764,711</u>	<u>\$ 184,466,209</u>	<u>\$ 178,000,381</u>

In fiscal year 2020, water and sewer service revenue increased by 8.6% over 2019, primarily a result of the water and sewer rate increase. The Authority received \$220,804 in proffers from developers to fund capital improvements, which was an increase of 3.3% from the amount received in 2019. There was a decrease in facility charges of (19.1%) during 2020, primarily attributable to pandemic-related economic uncertainty, a 3.2% decrease in the number of new construction sites paying facility fees and a 16.4% decrease in the average facility fees per site.

In fiscal year 2019, water and sewer service revenue increased by 2.2% over 2018, primarily a result of the water and sewer rate increase. The Authority received \$213,825 in proffers from developers to fund capital improvements, which was a decrease of (27.2%) from the amount received in 2018. There was a decrease in facility charges of (17.7%) during 2019, primarily attributable to higher than normal rainfall that delayed new construction.

The Authority's net position increased by \$1,298,502 in 2020 from 2019. This was primarily a result of increases in service revenue. The Authority's net position increased by \$6,465,828 in 2019 from 2018, which was primarily a result of capital asset contributions received.



JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Management's Discussion and Analysis
June 30, 2020 and 2019

Capital Assets

The following table summarizes the Authority's capital assets at June 30, 2020, 2019, and 2018:

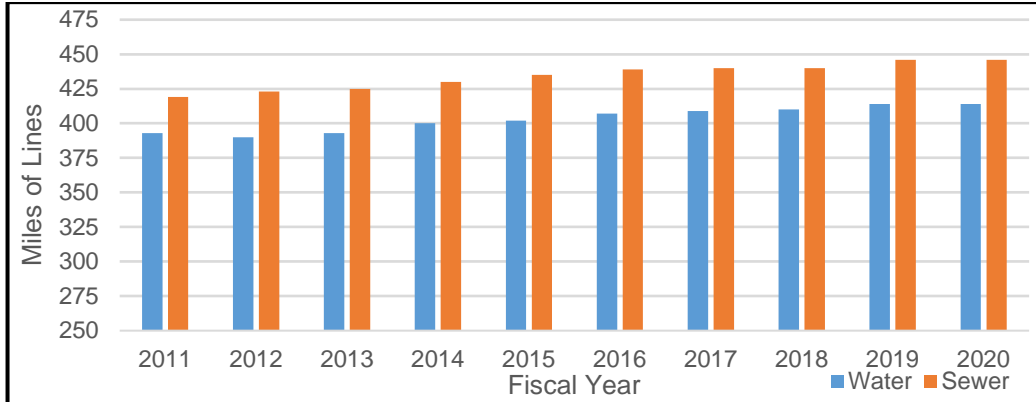
Summary of Capital Assets, Net			
	6/30/2020	6/30/2019	6/30/2018 (as restated)
Utility plant	\$ 268,631,727	\$ 265,265,911	\$ 256,238,922
Nonutility plant	14,236,936	11,690,170	11,272,960
Intangible assets	25,004,570	25,004,570	25,004,570
Construction in progress	3,395,592	3,464,970	2,552,479
Less accum. depreciation and amortization	158,686,413	150,746,203	142,956,168
Net capital assets	<u>\$ 152,582,412</u>	<u>\$ 154,679,418</u>	<u>\$ 152,112,763</u>

At the end of fiscal year 2020, the Authority had invested \$152,582,412 (net of accumulated depreciation and amortization) in a broad range of capital assets. This was a decrease of \$2,097,006 from 2019, which was primarily the result of depreciation expense.

At the end of fiscal year 2019, the Authority had invested \$154,679,418 (net of accumulated depreciation) in a broad range of capital assets. This was an increase of \$2,566,655 from 2018, which was primarily the result of dedications of water and sewer systems.

Further information related to the Authority's capital assets can be found in Note 4 to these financial statements.

Water and Sewer Lines



Debt Administration

In August 2008, the Authority issued revenue bonds totaling \$27,120,000 to finance the purchase from the City of Newport News, Virginia of a "safe yield share" of treated water capacity from the King William Reservoir Project or an alternate water supply source. In April 2016, the Authority issued revenue refunding bonds totaling \$22,595,000 to advance refund the outstanding 2008 revenue bonds. The net proceeds were deposited in an irrevocable trust with an escrow agent to provide funds for the future debt service payments on the refunded bonds. Consequently, the 2008 revenue bonds are considered defeased and the liability for those bonds was removed from the statement of net position. In April 2016, Standard & Poor's upgraded its rating of AA+ to AAA, and Moody's Investors Service upgraded its rating of Aa2 to Aa1 for the Authority's outstanding bonded debt.

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In May 2020, the Authority issued revenue bonds totaling \$9,135,000, to fund major portions of two large infrastructure improvement efforts, the White Oaks Area and Kingswood Water Main Replacement Projects. The White Oaks Area Water Main Replacement Project consists of replacing and upsizing approximately 22,000 feet of water main in the water distribution system installed in the early 1970s in the White Oaks, Indigo Park, Jamestown Farms, Paddock Green, Paddock Lane, and Canterbury Hills neighborhoods. The Kingswood Water Main Replacement Project consists of replacing and upsizing approximately 14,500 feet of cast iron water main in the 1960-70s era neighborhood water distribution system primarily serving the Kingswood subdivision. Construction on both projects is scheduled for completion in calendar year 2022.

At the close of the fiscal years 2020 and 2019, the Authority's total outstanding bonded debt was \$29,055,000 (before premiums) and \$20,575,000, respectively.

Further information on the Authority's outstanding debt can be found in Note 6 to these financial statements.

Economic Factors and Next Year Budgets and Rates

During the current fiscal year, the unrestricted net position increased by \$3,055,601 from 2019, to approximately \$52.6 million.

Starting in fiscal year 2021 JCSA will account for its operations and Capital Improvement Program (CIP) utilizing two separate funds: the Water Fund and the Sewer Fund, which are both supported by user fees. Support services are provided by various County departments in legal, finance, payroll, and general administrative functions on a reimbursable basis.

The fiscal year 2021 budget focuses on obtaining a sustainable long-term water supply and maintaining modern infrastructure and technology. Contributions to the Alternative Water Supply Reserve Fund (found in Unrestricted-Net Position) build dedicated funding for future water sources and reduce future borrowing costs. JCSA's Asset Management program has shown that costs to maintain modern infrastructure and technology will increase significantly in the future as more pipes, wells, and pump stations reach the end of their useful lives. Current CIP projects such as the White Oaks Area and Kingswood Water Main Replacement Projects, SCADA Upgrade and the Repair and Replacement Reserve will allow JCSA to fix aging infrastructure for the foreseeable future.

The fiscal year 2021 Capital Improvements Program budget increased from \$7,247,799 in fiscal year 2020 to \$12,922,855, funded in part by \$9,000,000 of bond proceeds.

The JCSA's Financial Policy requires a comprehensive rate study every five years. The fiscal year 2021 budget implements changes from the fiscal year 2020 rate study that are designed to maintain adequate revenue despite continued decreases in water usage and minimize the impact of rate increases on the customer. The total monthly water and sewer bill for a typical 5,000 gallons per month residential user increases by \$1.79 per month from \$42.05 to \$43.84. The combined bill is the lowest in the region except for the City of Williamsburg.

The rate study developed a multi-year plan with changes to the water rate structure and water rates. The fiscal year 2021 water rate structure change consists of adjusting the number and size of single-family residential tiers to better reflect current usage patterns while promoting water conservation. The new structure contains four tiers sized as follows: Tier 1 (up to 4,000 gallons monthly), Tier 2 (4,001-8,000 gallons monthly), Tier 3 (8,001-12,000 gallons monthly), and Tier 4 (greater than 12,000 gallons monthly). Water service rates for both single-family residential consumption in the first three tiers and commercial/non-single-family residential consumption decrease to offset an increase in the water fixed charge that all customers pay regardless of consumption level. The water fixed charge increase promotes long-term revenue and rate stability and moves the Authority's fixed cost recovery level closer to the range favored by credit rating agencies. No changes were made to the sewer service rate or sewer fixed charge.

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Water and sewer facility fees are also updated as a result of the rate study analysis. Facility fees are charged to new development in the Authority's service area to cover the cost of system expansion. System facility fees are assessed for major backbone infrastructure and local facility fees are assessed for smaller water distribution and sewer collection mains. The new system facility fee structure is based solely on meter size for all connection types and is the industry standard. It is more efficient to administer than the previous calculation method for residential connections that was based on the number of bathroom fixtures. The local facility fee structure remains a fixed charge, but the rates increase to reflect the current cost of service.

Contacting the Authority's Financial Management

This financial report is designed to provide our customers and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the money it receives. Questions concerning this report or requests for additional information should be directed to the James City County Department of Financial and Management Services, 101-F Mounts Bay Road, P.O. Box 8784, Williamsburg, Virginia 23187-8784.

BASIC FINANCIAL STATEMENTS

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Statements of Net Position
June 30, 2020 and 2019

	<u>2020</u>	<u>2019</u>
Assets		
Current assets:		
Cash and cash equivalents (Note 2)	\$ 3,088,624	\$ 1,589,107
Investments (Note 2)	49,828,908	47,930,531
Restricted cash and cash equivalents (Note 2)	9,401,879	569,708
Accounts receivable, customers	2,412,576	3,637,029
Accounts receivable, other	1,044	66,809
Note receivable (Note 3)	1,090	1,090
Interest receivable	293,410	296,438
Inventories	1,109,615	915,755
Total current assets	<u>66,137,146</u>	<u>55,006,467</u>
Noncurrent assets:		
Capital assets (Note 4):		
Non-depreciable	6,111,331	6,180,709
Depreciable	146,471,081	148,498,709
Net capital assets	<u>152,582,412</u>	<u>154,679,418</u>
Total assets	<u>218,719,558</u>	<u>209,685,885</u>
Deferred Outflows of Resources		
Deferred charge on refunding, net (Note 6)	1,510,736	1,586,907
Deferred pension (Note 7)	815,631	338,772
Deferred OPEB group life insurance (GLI) (Note 8)	77,029	38,000
Deferred OPEB health insurance credit (HIC) (Note 8)	11,901	8,467
Deferred OPEB retiree healthcare (Note 8)	13,062	15,777
Total deferred outflows of resources	<u>2,428,359</u>	<u>1,987,923</u>
Total assets and deferred outflows of resources	<u>\$ 221,147,917</u>	<u>\$ 211,673,808</u>

See accompanying notes to basic financial statements.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Statements of Net Position
June 30, 2020 and 2019

	<u>2020</u>	<u>2019</u>
Liabilities		
Current liabilities:		
Accounts payable, trade	\$ 428,901	\$ 1,071,918
Accrued salaries	23,170	12,250
Compensated absences, current portion (Note 6)	356,429	312,373
Due to James City County (Note 11)	494,045	996,066
Deposits	830,721	614,431
Interest payable	328,979	320,856
Bonds payable, current portion (Note 6)	1,337,907	718,907
Total current liabilities	<u>3,800,152</u>	<u>4,046,801</u>
Noncurrent liabilities:		
Advances for construction (Note 5)	32,902	32,902
Compensated absences, net of current portion (Note 6)	118,811	104,124
Bonds payable, net of current portion (Note 6)	28,984,574	21,187,481
Net pension liability (Note 7)	1,265,328	523,170
Net retiree healthcare OPEB liability (Note 8)	381,436	432,970
Net GLI OPEB liability (Note 8)	369,227	340,000
Net HIC OPEB liability (Note 8)	54,421	54,372
Total noncurrent liabilities	<u>31,206,699</u>	<u>22,675,019</u>
Total liabilities	<u>35,006,851</u>	<u>26,721,820</u>
Deferred Inflows of Resources		
Deferred pension (Note 7)	262,425	418,971
Deferred OPEB retiree healthcare (Note 8)	76,605	21,899
Deferred OPEB GLI (Note 8)	25,058	33,000
Deferred OPEB HIC (Note 8)	12,267	11,909
Total deferred inflows of resources	<u>376,355</u>	<u>485,779</u>
Net Position		
Net position:		
Net investment in capital assets	132,512,264	134,359,937
Restricted for:		
Capital projects	8,741,597	-
Debt service	660,282	569,708
Unrestricted	43,850,568	49,536,564
Total net position	<u>185,764,711</u>	<u>184,466,209</u>
Total liabilities, deferred inflows of resources and net position	<u>\$ 221,147,917</u>	<u>\$ 211,673,808</u>

See accompanying notes to basic financial statements.

Exhibit 2**JAMES CITY SERVICE AUTHORITY**

(A Component Unit of the County of James City, Virginia)
 Statements of Revenues, Expenses, and Changes in Net Position
 Years ended June 30, 2020 and 2019

	<u>2020</u>	<u>2019</u>
Operating revenues:		
Water and sewer services	\$ 17,692,654	\$ 16,299,006
Water supply proffers	220,804	213,825
Rental income	127,656	124,964
Other	136,437	141,896
Total operating revenues	<u>18,177,551</u>	<u>16,779,691</u>
Operating expenses:		
Salaries	5,093,032	4,721,993
Fringe benefits	2,075,905	1,436,239
Operating supplies	1,229,827	1,200,220
Maintenance	1,735,381	2,193,410
Utilities	919,745	974,168
Contractual fees	991,478	872,374
Other	319,050	270,685
Total operating expenses	<u>12,364,418</u>	<u>11,669,089</u>
Operating income before depreciation and amortization	5,813,133	5,110,602
Depreciation and amortization (Note 4)	<u>8,115,624</u>	<u>7,922,613</u>
Operating loss	<u>(2,302,491)</u>	<u>(2,812,011)</u>
Nonoperating revenues (expenses):		
Facility charges	2,386,850	2,949,130
Investment income	2,033,417	1,904,327
Gain on disposal of capital assets	17,813	14,522
Interest expense	(854,412)	(727,965)
Net nonoperating revenues	<u>3,583,668</u>	<u>4,140,014</u>
Income before capital contributions	1,281,177	1,328,003
Capital asset contributions	<u>17,325</u>	<u>5,137,825</u>
Changes in net position	1,298,502	6,465,828
Net position, beginning of year, as restated (Note 9)	184,466,209	178,000,381
Net position, end of year	<u>\$ 185,764,711</u>	<u>\$ 184,466,209</u>

See accompanying notes to basic financial statements.

Exhibit 3

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Statements of Cash Flows
Years ended June 30, 2020 and 2019

	2020	2019
Cash flows from operating activities:		
Cash received from customers	\$ 19,133,397	\$ 15,771,723
Other cash receipts	550,662	450,174
Cash payments to suppliers for goods and services	(6,534,379)	(4,466,743)
Cash payments for personnel services	(7,005,405)	(6,463,242)
Facility charges	2,386,850	2,949,130
Net cash provided by operating activities	<u>8,531,125</u>	<u>8,241,042</u>
Cash flows from capital and related financing activities:		
Repayments of debt	(655,000)	(630,000)
Interest paid	(702,050)	(727,250)
Proceeds from bond issuance	9,135,000	-
Bond issuance costs	(131,975)	-
Acquisition and construction of capital assets	(6,020,651)	(5,352,696)
Proceeds from sale of capital assets	37,171	15,775
Net cash provided by (used in) capital and related financing activities	<u>1,662,495</u>	<u>(6,694,171)</u>
Cash flows from investing activities:		
Purchases of investments	(29,239,804)	(34,653,287)
Proceeds from sale of investments	27,346,986	32,101,888
Interest received	2,030,886	1,768,507
Net cash used in investing activities	<u>138,068</u>	<u>(782,892)</u>
Decrease in cash and cash equivalents	10,331,688	763,979
Cash and cash equivalents, beginning of year (including \$569,708 and \$567,011 in restricted accounts at June 30, 2019 and 2018, respectively)	<u>2,158,815</u>	<u>1,394,836</u>
Cash and cash equivalents, end of year (including \$9,401,879 and \$569,708 in restricted accounts at June 30, 2020 and 2019, respectively)	<u><u>\$ 12,490,503</u></u>	<u><u>\$ 2,158,815</u></u>
Reconciliation of operating loss to net cash provided by operating activities:		
Operating loss	\$ (2,302,491)	\$ (2,812,011)
Adjustments to reconcile operating loss to cash provided by operating activities:		
Depreciation and amortization	8,115,624	7,922,613
Facility charges	2,386,850	2,949,130
Change in operating assets and liabilities:		
Accounts receivable, customers	1,224,453	(447,252)
Accounts receivable, others	65,765	(30,511)
Inventories	(193,860)	(42,903)
Accounts payable, trade	(643,017)	710,703
Accrued salaries	10,920	4,416
Compensated absences	58,743	14,502
Due to James City County	(502,021)	376,314
Deposits	216,290	(80,031)
Net OPEB liability and deferred inflow of resources	(14,884)	(10,647)
Net pension liability and related deferred inflow/outflows of resources	108,753	(313,281)
Total adjustments	<u>10,833,616</u>	<u>11,053,053</u>
Net cash provided by operating activities	<u><u>\$ 8,531,125</u></u>	<u><u>\$ 8,241,042</u></u>
Supplemental schedules:		
Noncash capital activities:		
Capital asset contributions	<u><u>\$ 17,325</u></u>	<u><u>\$ 5,137,825</u></u>
Noncash investing activity:		
Unrealized gain from change in fair value of investments	<u><u>\$ 580,156</u></u>	<u><u>\$ 1,149,452</u></u>

See accompanying notes to basic financial statements.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

1) Organization and Summary of Significant Accounting Policies

The James City Service Authority (the Authority) was established on June 30, 1969, by resolution of the Board of Supervisors of James City County, Virginia (the County, or Primary Government), and was chartered by the Commonwealth of Virginia, State Corporation Commission in July 1969 to provide water and sewer service to County residents as permitted under the Code of Virginia (1950), as amended (the Enabling Act).

The Enabling Act authorizes the Authority, among other things, to: a) acquire, construct, improve, extend, operate, and maintain any water, sewer, sewage disposal, or garbage/refuse collection and disposal system; b) issue revenue bonds of the Authority, payable solely from revenues, to pay all or any part of the cost of such systems; c) fix, revise, charge, and collect rates, fees, and charges for the use of and for the services furnished or to be furnished by any system operated by the Authority; and d) enter into contracts with the Commonwealth of Virginia, or with any municipality, county, corporation, individual, or any public authority or unit thereof, relating to the services and facilities of any such system of the Authority. Further, the Enabling Act provides that the Authority is subject in all respects to the jurisdiction of the Department of Environmental Quality – Water Division (DEQ), formerly the State Water Control Board of the Commonwealth of Virginia, under the provision of the State Water Control Law.

The Authority's governing body is appointed by the County's Board of Supervisors, although the Authority is legally separate. The County's Board of Supervisors is the appointed Board of Directors of the Authority. The County cannot impose its will over the Authority, nor does a financial benefit or burden exist between the County and the Authority. The County does not have access to the resources of the Authority, nor does it have responsibility to provide financial support for the debt or other obligations of the Authority. However, the Authority is considered to be financially integrated with the County based on the nature and significance of its relationship with the County. The County's Strategic Plan includes a sustainable long-term water supply as a primary goal, which is to be achieved through the efforts of the Authority. In addition, the Authority has adopted other Strategic Plan goals in developing its initiatives. As a result, the County's Strategic Plan impacts the budgetary and operational decisions of both the County and the Authority and financially integrates these entities.

In prior years, the Authority was presented as a blended component unit of the County, given that the County Administrator had certain operational responsibility for the Authority. The Board of Directors adopted a resolution to appoint the Authority's General Manager as its chief executive officer in 2018, and procedures have been implemented subsequently to remove operational responsibilities over the Authority from the County. The Authority remains financially integrated with the County; therefore, the Authority is included as a discretely presented component unit in the County's financial statements for reporting purposes.

Basis of Accounting and Presentation

The Authority prepares its financial statements in conformity with U.S. generally accepted accounting principles (GAAP) as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The Authority uses the economic resources management focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred. Current assets include cash and amounts convertible to cash during the next normal operating cycle, or one year. Current liabilities include those obligations to be liquidated with current assets. The Authority generally first uses restricted assets for expenses incurred for which both restricted and unrestricted assets are available. The Authority may defer the use of restricted assets based on a review of the specific transaction.

Given that the Authority is only engaged in business-type activities, it is required to present only the financial statements required for enterprise funds. The basic financial statements consist of Statements of Net Position, Statements of Revenues, Expenses and Changes in Net Position, Statements of Cash Flows and Notes to the Financial Statements.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

1) Organization and Summary of Significant Accounting Policies, Continued

Cash Equivalents

For purposes of the statements of cash flows, cash equivalents are defined as short-term, highly liquid investments that are both (a) readily convertible to known amounts of cash, and (b) so near the maturity that they present insignificant risk of changes in value because of changes in interest rates. Generally, the Authority considers investments with original maturities of three months or less to be cash equivalents.

Investments

Investments are reported at fair value except for the position in Virginia's Local Government Investment Pool (LGIP) which in accordance with state law, is reported at amortized cost. The Authority determines fair value in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*. This statement requires the use of valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach, or an income approach. The statement establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. The Authority uses a market approach as the valuation technique for Level 2 inputs. Level 3 inputs are unobservable inputs, such as management's assumption of the default rate among underlying mortgages of a mortgage-backed security. Statement No. 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements.

Allowance for Uncollectible Accounts

The Authority has few uncollectible receivables and does not use an allowance account. State law permits filing of liens against real property for unpaid utility charges. The write-off of bad debts only occurs when the property is sold prior to the lien process being instituted.

Inventories

Inventories are valued at cost and are charged against operations on an average cost basis. They consist of water meters, pipes, and parts required to repair the utility systems.

Capital Assets

All direct costs of water and sewer transmission facilities constructed are capitalized. Interest expense is reduced to the extent of any interest income earned on investment of bond proceeds. Nonutility property is capitalized at cost.

The Authority's policy is to capitalize capital assets with a cost or acquisition value at the date of donation of \$5,000 or greater. The cost of major improvements is capitalized, while the cost of maintenance and repairs, which does not improve or extend the life of an asset, is expensed. The Authority provides for depreciation of capital assets using the straight-line method over their estimated useful lives, as follows:

Sewer systems	40 years
Water systems	30 years
Equipment and other	3-40 years

The Authority has easements and water rights that are considered intangible assets. The water rights are related to an agreement the Authority has with the City of Newport News to purchase and treat water to meet long-term water supply needs. These water rights are amortized using the straight-line method over the life of the agreement.

When capital assets are sold or retired, the related cost and accumulated depreciation are removed from the accounts and any gain or loss is included in the accompanying statements of revenues, expenses, and changes in net position.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

1) Organization and Summary of Significant Accounting Policies, Continued

Unbilled Revenue

The Authority records the amount of accrued but unbilled revenue by prorating actual subsequent billings. Amounts accrued but unbilled were approximately \$1,300,000 and \$2,011,000 at June 30, 2020 and 2019, respectively, and are included in Accounts receivable, customers on the statements of net position. In May 2020, the Authority adjusted its billing cycles so that all billings are now on a monthly basis. This change resulted in a decrease to unbilled revenue for fiscal year 2020, given that only one month needed to be accounted for in subsequent billings under the new monthly process.

Budgetary Policy

Although a budget is not legally required to be adopted, a fiscal year budget is prepared on a modified accrual basis for management and fiscal planning purposes. Any changes to the adopted budget require Board approval. Appropriations lapse at the end of the fiscal year with the exception of capital projects which continue until completed. For the year ended June 30, 2020, there were no supplemental appropriations for various grants. For the year ended June 30, 2019, there was one supplemental appropriation in the amount of \$75,361 for storm costs.

Risk Management

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees, and natural disasters. Property, liability and worker's compensation coverages are provided through a self-insurance pool. The Authority's retention is through deductibles. Deductibles and coverage limits at June 30, 2020 were as follows:

	Deductibles	Liability Coverage Limits
Property insurance:		
Building and contents	\$ 10,000	\$ 46,248,450
Business interruption/extra expense		\$ 3,000,000
Inland marine	\$ 1,000	\$ 1,133,952
Back-up of sewers and drains		\$ 10,000,000
Debris removal		\$ 25,000,000
Pollutant clean-up and removal		\$ 500,000
Newly acquired locations for up to 120 days		\$ 25,000,000
Property in transit		\$ 5,000,000
Utility services time element		\$ 5,000,000
Increased cost of construction/ordinance/demolition		\$ 20,000,000
Earthquake/Flood (outside 100 year flood plain)	\$ 25,000	\$ 100,000,000
Equipment breakdown	\$ 1,000	\$ 125,000,000
General liability		\$ 2,000,000
Public officials liability		\$ 1,000,000
Automobile liability		\$ 2,000,000
Automobile comprehensive/collision	\$ 1,000	\$ 753,527
Crime	\$ 250	\$ 500,000
Excess liability		\$ 7,000,000
Excess public officials liability		\$ 8,000,000
Environmental liability	\$ 25,000	\$ 1,000,000
Cyber risk		\$ 2,000,000

Settled claims have not exceeded the amount of insurance coverage in any of the past three fiscal years.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

1) Organization and Summary of Significant Accounting Policies, Continued

Bond Premiums and Discounts

Bond premiums and discounts are deferred and amortized over the terms of the related issues on a straight-line basis, which approximates the effective interest method.

Operating and Nonoperating Revenue and Expenses Recognition

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses result from providing water and sewer services. Revenues and expenses not meeting the operating definition are reported as nonoperating. These consist mainly of water and sewer facility charges, investment income, interest expense, and gain or loss on disposal of capital assets.

Deferred Outflows and Inflows of Resources

In addition to assets and liabilities, the statements of net position report separate sections for deferred outflows of resources and deferred inflows of resources. Deferred outflows represent a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources until then. Deferred inflows represent an acquisition of net position that is applicable to a future reporting period and, therefore, will not be recognized as an inflow of resources until that time.

The Authority has the following items that qualify for reporting in these categories:

- ***Deferred gain/loss on refunding:*** A deferred amount on refunding is a deferred outflow/inflow which results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt.
- ***Contributions subsequent to the measurement date for pensions and OPEB:*** These contributions are always a deferred outflow, which will be applied to the net pension or OPEB liability in the next fiscal year.
- ***Differences between expected and actual experience for economic/demographic factors in the measurement of the total pension or OPEB liability:*** This difference will be recognized in pension or OPEB expense over the expected average remaining service life of all employees provided with benefits in the plan and may be reported as a deferred inflow or outflow as appropriate.
- ***Differences resulting from a changes in proportion of the collective net pension and OPEB liabilities:*** This difference will be recognized in pension and OPEB expense over the expected average remaining service life of all employees provided with benefits in the plan and may be reported as a deferred inflow or outflow as appropriate.
- ***Difference between projected and actual earnings on pension and OPEB plan investments:*** This difference will be recognized in pension or OPEB expense over the closed five year period and may be reported as a deferred outflow or inflow as appropriate.
- ***Differences resulting from changes in assumptions on pension plan or OPEB investments:*** These differences will be recognized in pension or OPEB expense over the estimated remaining service life of employees subject to the plan.

Estimates

The preparation of financial statements requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates and assumptions.

Reclassification

Certain amounts in the prior year financial presentations in the management's discussion and analysis and statistical sections have been reclassified for comparative purposes to conform to the current year presentation.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

2) Cash, Cash Equivalents, and Investments

The Authority's cash, cash equivalents, and investments at June 30, 2020 and 2019, consisted of the following:

	<u>6/30/2020</u>	<u>6/30/2019</u>
Bank deposits	\$ 1,057,657	\$ 538,085
Petty cash	503	605
Money market	11,432,343	1,620,125
Investments	49,828,908	47,930,531
Total	<u>\$ 62,319,411</u>	<u>\$ 50,089,346</u>

Reconciliation to Statements of Net Position:

Cash and cash equivalents	\$ 3,088,624	\$ 1,589,107
Investments	49,828,908	47,930,531
Restricted cash and cash equivalents	9,401,879	569,708
Total	<u>\$ 62,319,411</u>	<u>\$ 50,089,346</u>

Deposits with banks are fully covered by the Federal Deposit Insurance Corporation (FDIC) or collateralized in accordance with the Virginia Security for Public Deposits Act, Section 2.2-4400 et. seq. of the Code of Virginia.

Restricted investments reflect funds held by a trustee in escrow for future debt service payments and for future capital projects.

The Authority's investments at June 30, 2020 and 2019 were as follows:

<u>Investment Type</u>	<u>Cost</u>	<u>Fair Value</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
<u>6/30/2020:</u>					
U.S. Treasury securities	\$ 23,059,027	\$ 23,754,793	\$ -	\$ 23,754,793	\$ -
Municipal Bond/Note	1,364,047	1,374,408	-	1,374,408	-
Federal agency mortgage security	1,226,230	1,262,893	-	1,262,893	-
Federal agency notes and bonds	9,293,461	9,427,670	-	9,427,670	-
Corporate notes and bonds	6,320,981	6,503,213	-	6,503,213	-
Certificates of deposit	2,775,000	2,815,774	-	2,815,774	-
Commercial paper	494,396	498,840	-	498,840	-
Fed. agency coll. mortgage ob.	4,106,757	4,191,317	-	4,191,317	-
Total	<u>\$ 48,639,899</u>	<u>\$ 49,828,908</u>	<u>\$ -</u>	<u>\$ 49,828,908</u>	<u>\$ -</u>
<u>6/30/2019:</u>					
U.S. Treasury securities	\$ 25,767,853	\$ 26,147,199	\$ -	\$ 26,147,199	\$ -
Federal agency notes and bonds	6,804,207	6,879,843	-	6,879,843	-
Corporate notes and bonds	7,293,211	7,398,423	-	7,398,423	-
Certificates of deposit	4,600,000	4,610,396	-	4,610,396	-
Fed. agency coll. mortgage ob.	2,856,407	2,894,670	-	2,894,670	-
Total	<u>\$ 47,321,678</u>	<u>\$ 47,930,531</u>	<u>\$ -</u>	<u>\$ 47,930,531</u>	<u>\$ -</u>

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

2) Cash, Cash Equivalents, and Investments, Continued

Investment Type	Amount	Investment maturity (in years)		
		Less than 1	1-2	2-10
<u>6/30/2020:</u>				
Commercial paper	\$ 498,840	\$ 498,840	\$ -	\$ -
U.S. Treasury securities	23,754,793	-	15,172,043	8,582,750
Municipal bond	1,374,408	-	502,745	871,663
Federal agency notes and bonds	9,427,670	-	2,948,382	6,479,288
Federal agency mortgage security	1,262,893	-	-	1,262,893
Corporate notes and bonds	6,503,213	1,117,186	2,336,127	3,049,900
Certificate of deposit	2,815,774	1,836,924	-	978,850
Fed. agency coll. mortgage ob.	4,191,317	-	879,479	3,311,838
Total	<u>\$ 49,828,908</u>	<u>\$ 3,452,950</u>	<u>\$ 21,838,776</u>	<u>\$ 24,537,182</u>
<u>6/30/2019:</u>				
U.S. Treasury securities	\$ 26,147,199	\$ -	\$ 13,140,512	\$ 13,006,687
Federal agency notes and bonds	6,879,843	-	3,280,839	3,599,004
Corporate notes and bonds	7,398,423	377,708	3,543,909	3,476,806
Certificate of deposit	4,610,396	2,785,210	1,825,186	-
Fed. agency coll. mortgage ob.	2,894,670	693	-	2,893,977
Total	<u>\$ 47,930,531</u>	<u>\$ 3,163,611</u>	<u>\$ 21,790,446</u>	<u>\$ 22,976,474</u>

Investment Policy

The JCSA Board of Directors adopted an updated Investment Policy on August 13, 2019. In accordance with the *Code of Virginia* and other applicable laws, including regulations, the Authority's Investment Policy (the Policy) permits investments in U.S. government obligations, federal agency obligations, municipal obligations, prime quality commercial paper, bankers' acceptances, corporate notes, negotiable certificates of deposits and bank deposit notes, money market mutual funds, repurchase agreements and pooled investment programs.

The Policy establishes limitations on the holdings of non-U.S. government obligations. The combined amount of bankers' acceptances, commercial paper, negotiable certificates of deposit, and corporate notes shall not exceed forty percent (40%) of the total book value of the portfolio at the date of acquisition. When investing in a pool, the Authority shall limit its investment to ten percent (10%) of the total assets of the pool. The table below summarizes sector limits, issuer limits, ratings requirements and the maximum maturity for the Authority's investments.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Financial Statements
June 30, 2020 and 2019

2) Cash, Cash Equivalents, and Investments, Continued

Permitted Investment	Sector Limit	Issuer Limit¹	Ratings Requirement^{2,3}	Max Maturity⁴
U.S. Treasury Obligations	100%	100%	N/A	5 Years
Federal Agency Obligations	100%	35%	AA or equivalent by at least two NRSROs, which of which will either be Moody's or S&P	5 Years
Federal Agency Mortgage-Backed Securities	25%	25%	AA or equivalent by at least two NRSROs, which of which will either be Moody's or S&P	5 Years WAL
Municipal Obligations	20%	5%	AA (S&P) and Aa (Moody's)	5 Years
Commercial Paper	35%	5%	A-1 or equivalent by at least two NRSROs	270 Days
Bankers' Acceptances	35%	5%	A-1 or equivalent by at least two NRSROs	180 Days
Corporate Notes	30%	5%	AA (S&P) and Aa (Moody's)	5 Years
Negotiable Certificates of Deposit and Bank Deposit Notes	30%	5%	A-1 (S&P) & P-1 (Moody's) if less than one year to maturity; AA (S&P) and Aa (Moody's) if greater than one year to maturity	5 Years
Money Market Mutual Funds	50%	50%	AAAm or equivalent by an NRSRO	N/A
Principal Stability Pools	50%	50%	AAAm or equivalent by an NRSRO	N/A
Short-term Bond Pools	50%	50%	AAf or equivalent by an NRSRO	Maximum duration of 3 years
Repurchase Agreements	50%	25%	Counterparty: AA or the equivalent from an NRSRO	30 days
Collateralized Bank Deposits	100%	100%	Collateralized in accordance with the Security for Public Deposits Act	N/A

1. Issuer Limit refers to the allowable percentage of the entire Portfolio

2. Ratings by Nationally Recognized Statistical Ratings Organizations ("NRSROs") as designated by the Securities and Exchange Commission

3. At time of purchase

4. From transaction settlement date

JAMES CITY SERVICE AUTHORITY
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Notes to Financial Statements
June 30, 2020 and 2019

2) Cash, Cash Equivalents, and Investments, Continued

Credit Risk

As required by state statute, the Policy requires that commercial paper have a short-term debt rating of no less than A-1 (or its equivalent) from at least two of the Nationally Recognized Statistical Rating Organizations (NRSROs). Corporate notes must have a minimum rating of Aa by Moody's Investors Service and AA by Standard & Poor's. Negotiable certificates of deposit and bank deposit notes maturing in less than one year must have a minimum rating of A-1 by Standard & Poor's and P-1 by Moody's Investors Service, and if maturing in over one year, the minimum rating must be AA by Standard & Poor's and Aa by Moody's Investors Service. Although state statute does not impose credit standards on repurchase agreement counterparties, bankers' acceptances, or money market mutual funds, the Authority has established stringent credit standards for these investments to minimize portfolio risk.

As of June 30, 2020 and 2019, the Authority's investments rated by Standard & Poor's were as follows:

	Unrated	AAA	AA+	AA	AA-	A+	A-1+	A-1
6/30/2020:								
Money market funds	\$ 9,401,879	\$ 70,966	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
LGIP	-	1,959,498	-	-	-	-	-	-
Federal agency notes/bonds	-	-	9,427,670	-	-	-	-	-
Corporate notes/bonds	-	-	795,819	2,117,014	3,101,012	489,368	-	-
Certificate of deposit	-	-	-	-	978,850	-	-	1,836,924
Commercial paper	-	-	-	-	-	-	498,840	-
Municipal bond note	-	250,000	256,480	502,745	365,183	-	-	-
Federal agency mrtge. security	-	-	1,262,893	-	-	-	-	-
Fed. agency coll. mrtge. ob.	-	-	4,191,317	-	-	-	-	-
Total	\$ 9,401,879	\$ 2,280,464	\$ 15,934,179	\$ 2,619,759	\$ 4,445,045	\$ 489,368	\$ 498,840	\$ 1,836,924
6/30/2019:								
Money market funds	\$ 569,708	\$ 46,477	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
LGIP	-	1,003,940	-	-	-	-	-	-
Federal agency notes/bonds	-	-	6,879,843	-	-	-	-	-
Corporate notes/bonds	-	180,156	1,160,289	1,751,578	4,306,400	-	-	-
Certificate of deposit	-	-	-	-	1,825,186	-	878,144	1,907,066
Fed. agency coll. mrtge ob.	-	-	2,894,670	-	-	-	-	-
Total	\$ 569,708	\$ 1,230,573	\$ 10,934,802	\$ 1,751,578	\$ 6,131,586	\$ -	\$ 878,144	\$ 1,907,066

Concentration of Credit Risk

The Policy establishes guidelines on portfolio composition by issuer in order to control concentration of credit risk. No more than 5% of the Authority's portfolio will be invested in the securities of any single issuer with the exceptions noted in the table above under "Issuer Limit."

At June 30, 2020 and 2019, the portions of the Authority's portfolio (excluding restricted investments) that exceeded 5% of the total were:

Issuer	% of Portfolio	
	6/30/2020	6/30/2019
U.S. Treasury	45.8%	53.4%
Freddie Mac	12.4%	6.1%
Fannie Mae	11.3%	7.7%
Federal Home Loan Banks	5.1%	6.2%

JAMES CITY SERVICE AUTHORITY
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Notes to Financial Statements
June 30, 2020 and 2019

2) Cash, Cash Equivalents, and Investments, Continued

Interest Rate Risk

As a means of limiting exposure to fair value losses arising from rising interest rates, the Policy limits the investment of short-term operating funds to an average weighted maturity of no more than 180 days, with a portion of the portfolio continuously invested in readily available funds.

The operating fund core portfolio will be invested in permitted investments with a stated maturity of no more than five years from transaction settlement date (with the exception of Agency Mortgage-Backed Securities ("MBS") which must have a weighted average life of no more than 5 years. To control the volatility of the core portfolio, the Authority will determine a duration target, not to exceed three years.

Proceeds from the sale of bonds will be invested in compliance with the specific requirements of the bond covenants and may be invested in securities with longer maturities, so long as the maturity does not exceed the expected disbursement date of those funds.

Custodial Credit Risk

In accordance with the Code of Virginia Section 2.2-4515, the Policy requires that all investment securities purchased by the Authority or held as collateral on deposits or investments shall be held by the Authority or by a third-party custodial agent who may not otherwise be a counter party to the investment transaction. As of June 30, 2020 and 2019, all of the Authority's investments were held in a bank's trust department in the name of James City Service Authority.

3) Note Receivable

In June 2017, the Authority entered into a deferred payment agreement with Franciscus at Promenade, LLC ("Franciscus") under which Franciscus would make installment payments for water and sewer system facility charges related to a construction project. Upon either the completion of the project or December 31, 2021, a final reconciliation of charges and payments will occur, and any outstanding balance owed to the Authority will be due. At June 30, 2020 and 2019, the note receivable balance was \$1,090.

JAMES CITY SERVICE AUTHORITY
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Notes to Financial Statements
June 30, 2020 and 2019

4) Capital Assets

The following is a summary of changes in capital assets for the fiscal years ended June 30, 2020 and 2019:

	Balance July 1, 2019	Increases	Decreases	Balance June 30, 2020
Capital assets not being depreciated:				
Utility plant:				
Land	\$ 955,995	\$ -	\$ -	\$ 955,995
Nonutility plant:				
Land	1,741,991	-	-	1,741,991
Land improvements	13,183	-	-	13,183
Construction in progress	3,464,970	5,843,839	5,913,217	3,395,592
Intangibles - easements	4,570	-	-	4,570
Total capital assets not being depreciated	<u>6,180,709</u>	<u>5,843,839</u>	<u>5,913,217</u>	<u>6,111,331</u>
Capital assets being depreciated:				
Utility plant:				
Water and sewer systems	264,309,916	3,365,816	-	267,675,732
Nonutility plant:				
Land improvements (depreciable)	8,930	-	-	8,930
Central shop	4,435,895	798,941	49,425	5,185,411
Office fixtures and equipment	2,379,905	1,776,153	22,764	4,133,294
Automotive equipment	3,018,468	155,882	122,583	3,051,767
Software	-	10,562	-	10,562
Infrastructure	91,798	-	-	91,798
Intangible - water rights	25,000,000	-	-	25,000,000
Total capital assets being depreciated	<u>299,244,912</u>	<u>6,107,354</u>	<u>194,772</u>	<u>305,157,494</u>
Less accumulated depreciation/amortization:				
Water and sewer systems	139,083,418	6,888,955	-	145,972,373
Land improvements	223	446		669
Central shop	1,286,420	128,687	30,067	1,385,040
Office fixtures and equipment	1,534,952	217,247	22,764	1,729,435
Automotive equipment	2,549,256	263,732	122,583	2,690,405
Infrastructure	3,590	3,060	-	6,650
Intangibles - water rights	6,288,344	613,497	-	6,901,841
Total accumulated depreciation/amortization	<u>150,746,203</u>	<u>8,115,624</u>	<u>175,414</u>	<u>158,686,413</u>
Total capital assets being depr./amort, net	<u>148,498,709</u>	<u>(2,008,270)</u>	<u>19,358</u>	<u>146,471,081</u>
Total capital assets, net	<u>\$ 154,679,418</u>	<u>\$ 3,835,569</u>	<u>\$ 5,932,575</u>	<u>\$ 152,582,412</u>

JAMES CITY SERVICE AUTHORITY
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Notes to Financial Statements
June 30, 2020 and 2019

4) Capital Assets, Continued

	Balance July 1, 2018 As Restated	Increases	Decreases	Balance June 30, 2019
Capital assets not being depreciated:				
Utility plant:				
Land	\$ 955,995	\$ -	\$ -	\$ 955,995
Nonutility plant:				
Land	1,739,491	2,500	-	1,741,991
Land improvements	13,183	-	-	13,183
Construction in progress	2,552,479	5,183,949	4,271,458	3,464,970
Intangibles - easements	4,570	-	-	4,570
Total capital assets not being depreciated	<u>5,265,718</u>	<u>5,186,449</u>	<u>4,271,458</u>	<u>6,180,709</u>
Capital assets being depreciated:				
Utility plant:				
Water and sewer systems	255,282,927	9,026,989	-	264,309,916
Nonutility plant:				
Land improvements (depreciable)	-	8,930	-	8,930
Central shop	4,394,478	41,417	-	4,435,895
Office fixtures and equipment	2,128,725	272,451	21,271	2,379,905
Automotive equipment	2,905,285	225,743	112,560	3,018,468
Intangible - water rights	25,000,000	-	-	25,000,000
Infrastructure	91,798	-	-	91,798
Total capital assets being depreciated	<u>289,803,213</u>	<u>9,575,530</u>	<u>133,831</u>	<u>299,244,912</u>
Less accumulated depreciation/amortization:				
Water and sewer systems	132,330,600	6,752,818	-	139,083,418
Land improvements	-	223	-	223
Central shop	1,160,571	125,849	-	1,286,420
Office fixtures and equipment	1,398,029	157,279	20,356	1,534,952
Automotive equipment	2,391,591	269,887	112,222	2,549,256
Intangibles - water rights	5,674,847	613,497	-	6,288,344
Infrastructure	530	3,060	-	3,590
Total accumulated depreciation/amortization	<u>142,956,168</u>	<u>7,922,613</u>	<u>132,578</u>	<u>150,746,203</u>
Total capital assets being depr./amort, net	<u>146,847,045</u>	<u>1,652,917</u>	<u>1,253</u>	<u>148,498,709</u>
Total capital assets, net	<u>\$ 152,112,763</u>	<u>\$ 6,839,366</u>	<u>\$ 4,272,711</u>	<u>\$ 154,679,418</u>

5) Advances for Construction

Advances for construction consist of two separate agreement types. Funds can be advanced by developers for the construction of specific facilities. These agreements call for rebates, up to the amount advanced, and have no expiration date. Developers can also construct a facility, dedicate it to the Authority, and receive rebates up to the cost of the facility for up to 10 years. The Authority no longer enters into these types of agreements. As of June 30, 2020 and 2019, advances for construction consisted of:

Funds advanced	\$ 27,020
Facilities constructed	5,882
Total	<u>\$ 32,902</u>

JAMES CITY SERVICE AUTHORITY
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Notes to Financial Statements
June 30, 2020 and 2019

6) Long-Term Liabilities

The Authority's long-term debt activity for the fiscal years ended June 30, 2020 and 2019 was as follows:

	Balance 7/1/2019	Increases	Decreases	Balance 6/30/2020	Due within one year
Refunding revenue bonds	\$ 20,575,000	\$ -	\$ 655,000	\$ 19,920,000	\$ 690,000
Revenue bonds	-	9,135,000	-	9,135,000	584,000
Premium, refunding revenue bonds	1,331,388	-	63,907	1,267,481	63,907
Compensated absences	416,497	502,416	443,673	475,240	356,429
Total	<u>\$ 22,322,885</u>	<u>\$ 9,637,416</u>	<u>\$ 1,162,580</u>	<u>\$ 30,797,721</u>	<u>\$ 1,694,336</u>

	Balance 7/1/2018	Increases	Decreases	Balance 6/30/2019	Due within one year
Refunding revenue bonds	\$ 21,205,000	\$ -	\$ 630,000	\$ 20,575,000	\$ 655,000
Premium, refunding revenue bonds	1,395,295	-	63,907	1,331,388	63,907
Compensated absences	401,995	494,841	480,339	416,497	312,373
Total	<u>\$ 23,002,290</u>	<u>\$ 494,841</u>	<u>\$ 1,174,246</u>	<u>\$ 22,322,885</u>	<u>\$ 1,031,280</u>

Revenue Bonds and Refunding Revenue Bonds (including Premium)

In August 2008, the Authority issued revenue bonds totaling \$27,120,000 to finance the purchase from the City of Newport News, Virginia of a "safe yield share" of treated water capacity from the King William Reservoir Project or an alternate water supply source. In April 2016, the Authority issued revenue refunding bonds totaling \$22,595,000 to advance refund the outstanding 2008 revenue bonds. There was a \$1,533,760 premium issued on the new bonds. The interest rate on the bonds ranges from 3% - 5% and the net proceeds were deposited in an irrevocable trust with an escrow agent to provide funds for the future debt service payments on the refunded bonds. Consequently, the outstanding balance for the 2008 revenue bonds in the amount of \$21,075,000 and \$21,730,000 at June 30, 2020 and 2019, respectively, is considered defeased, and the liability for those bonds has been removed from the statements of net position.

The reacquisition price exceeded the carrying value of the old debt by \$1,828,117 ("deferred charge on refunding"), and this amount is being amortized over the life of the new debt. The deferred charge on refunding net of accumulated amortization, was \$1,510,736 and \$1,586,907 at June 30, 2020 and 2019, respectively. The advance refunding reduced its total debt service payments over 24 years by \$6,956,051 to obtain an economic gain of \$3,548,748. The refunding revenue bonds mature in various installments through 2040 with interest payable semiannually.

In May 2020, the Authority issued revenue bonds totaling \$9,135,000 to finance the upgrade, repair, and replacement of a portion of the Authority's water distribution system and pay for the costs of issuance associated with the bonds. The interest rate on the bonds is 2.264%, and the first principal payment for this issuance is due in January 2021. As a result, the full amount of the revenue bonds is outstanding as of June 30, 2020 and is reflected on the statements of net position.

JAMES CITY SERVICE AUTHORITY
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Notes to Financial Statements
June 30, 2020 and 2019

6) Long-Term Liabilities, Continued

Future maturities of principal and interest payments on the Authority's bonds are as follows:

Year Ended		
June 30	Principal	Interest
2021	1,274,000	802,305
2022	1,246,000	826,394
2023	1,283,000	792,886
2024	1,335,000	743,456
2025	1,382,000	691,754
2026-2030	7,609,000	2,762,408
2031-2035	8,716,000	1,654,658
2036-2040	6,210,000	569,700
Total	<u>\$ 29,055,000</u>	<u>\$ 8,843,561</u>

Compensated Absences

Compensated absences consist of earned but unused vacation, sick leave and paid time off. The costs attributable to Authority personnel are paid by the County and reimbursed by the Authority. Upon termination and only after a minimum of 2 years of employment with the Authority, employees are entitled to receive cash payments for sick leave at 25% of accumulated values up to a maximum of \$5,000. At June 30, 2020 and 2019, compensated absences consisted of the following:

	6/30/2020	6/30/2019
Vacation	\$ 339,727	\$ 308,096
Sick	75,082	77,720
Paid-time off	60,431	30,681
Total	<u>\$ 475,240</u>	<u>\$ 416,497</u>

7) 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 the Authority's retirement plan and the additions to/deductions from the Authority's retirement plan's net fiduciary position have been determined on the same basis as they were reported by the 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.

Plan Description

All full-time, salaried permanent employees of the Authority are automatically covered by a VRS retirement plan upon employment. This plan is administered by the 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 duty military service, certain periods of leave and previously refunded service.

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

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Notes to Financial Statements
June 30, 2020 and 2019

7) Pensions, Continued

RETIREMENT PLAN PROVISIONS		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
<p>About Plan 1 Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, service credit and average final compensation at retirement using a formula.</p>	<p>About Plan 2 Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, service credit and average final compensation at retirement using a formula.</p>	<p>About the Hybrid Retirement Plan The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan.</p> <ul style="list-style-type: none"> • The defined benefit is based on a member's age, service credit and average final compensation at retirement using a formula. • The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions. • In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.
<p>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.</p>	<p>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.</p>	<p>Eligible Members Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:</p>

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7) Pensions, Continued

<p><i>Hybrid Opt-In Election</i> VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan, and remain as Plan 1 or ORP.</p>	<p><i>Hybrid Opt-In Election</i> Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan, and remain as Plan 2 or ORP.</p>	<ul style="list-style-type: none"> Political subdivision employees* Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014 <p><i>*Non-Eligible Members</i> Some employees are not eligible to participate in the Hybrid Retirement Plan. They include:</p> <ul style="list-style-type: none"> Political subdivision employees who are covered by enhanced benefits for hazardous duty employees <p>Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable) or ORP.</p>
<p>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.</p>	<p>Retirement Contributions Same as Plan 1.</p>	<p>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.</p>

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7) Pensions, Continued

<p>Service Credit Service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.</p>	<p>Service Credit Same as Plan 1.</p>	<p>Service Credit <i>Defined Benefit Component:</i> Under the defined benefit component of the plan, service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.</p> <p><i>Defined Contributions Component:</i> Under the defined contribution component, service credit is used to determine vesting for the employer contribution portion of the plan.</p>
<p>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 service credit. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund.</p> <p>Members are always 100% vested in the contributions that they make.</p>	<p>Vesting Same as Plan 1.</p>	<p>Vesting <i>Defined Benefit Component:</i> 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 service credit. Plan 1 or Plan 2 members with at least five years (60 months) of service credit who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.</p> <p><i>Defined Contributions Component:</i> Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan.</p>

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7) Pensions, Continued

		<p>Members are always 100% vested in the contributions that they make.</p> <p>Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service.</p> <ul style="list-style-type: none"> • After two years, a member is 50% vested and may withdraw 50% of employer contributions. • After three years, a member is 75% vested and may withdraw 75% of employer contributions. • After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. <p>Distribution is not required by law until age 70½.</p>
<p>Calculating the Benefit</p> <p>The basic benefit is determined using the average final compensation, service credit and plan multiplier. An early retirement reduction is applied to this amount if the member is retiring with a reduced benefit. In cases where the member has elected an optional form of retirement payment, an option factor specific to the option chosen is then applied.</p>	<p>Calculating the Benefit</p> <p>See definition under Plan 1.</p>	<p>Calculating the Benefit</p> <p><i>Defined Benefit Component:</i> See definition under Plan 1.</p> <p><i>Defined Contributions Component:</i> The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.</p>
<p>Average Final Compensation</p> <p>A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.</p>	<p>Average Final Compensation</p> <p>A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.</p>	<p>Average Final Compensation</p> <p>Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.</p>

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7) Pensions, Continued

Service Retirement Multiplier VRS: The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%.	Service Retirement Multiplier VRS: Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members the retirement multiplier is 1.65% for service credit earned, purchased or granted on or after January 1, 2013.	Service Retirement Multiplier <i>Defined Benefit Component:</i> VRS: 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. <i>Defined Contributions Component:</i> Not applicable.
Normal Retirement Age VRS: Age 65.	Normal Retirement Age VRS: Normal Social Security retirement age.	Normal Retirement Age <i>Defined Benefit Component:</i> VRS: Same as Plan 2. <i>Defined Contributions Component:</i> Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Unreduced Retirement Eligibility VRS: Age 65 with at least five years (60 months) of service credit or at age 50 with at least 30 years of service credit.	Earliest Unreduced Retirement Eligibility VRS: Normal Social Security retirement age with at least five years (60 months) of service credit or when their age plus service credit equals 90.	Earliest Unreduced Retirement Eligibility <i>Defined Benefit Component:</i> VRS: Normal Social Security retirement age and have at least five years (60 months) of service credit or when their age plus service credit equals 90. <i>Defined Contributions Component:</i> Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Reduced Retirement Eligibility VRS: Age 55 with at least five years (60 months) of service credit or age 50 with at least 10 years of service credit.	Earliest Reduced Retirement Eligibility VRS: Age 60 with at least five years (60 months) of service credit.	Earliest Reduced Retirement Eligibility <i>Defined Benefit Component:</i> VRS: Age 60 with at least five years (60 months) of service credit. <i>Defined Contributions Component:</i> Members are eligible to receive distributions upon leaving employment, subject to restrictions.

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7) Pensions, Continued

<p>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%.</p> <p><i>Eligibility:</i> For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of service credit, the COLA will go into effect on July 1 after one full calendar year from the retirement date.</p> <p>For members who retire with a reduced benefit and who have less than 20 years of service credit, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.</p> <p><i>Exceptions to COLA Effective Dates:</i> The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:</p> <ul style="list-style-type: none"> • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member retires directly from short-term or long-term disability. • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. 	<p>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%.</p> <p><i>Eligibility:</i> Same as Plan 1.</p> <p><i>Exceptions to COLA Effective Dates:</i> Same as Plan 1.</p>	<p>Cost-of-Living Adjustment (COLA) in Retirement <i>Defined Benefit Component:</i> Same as Plan 2.</p> <p><i>Defined Contributions Component:</i> Not applicable.</p> <p><i>Eligibility:</i> Same as Plan 1 and Plan 2.</p> <p><i>Exceptions to COLA Effective Dates:</i> Same as Plan 1 and Plan 2.</p>
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7) Pensions, Continued

<ul style="list-style-type: none"> • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins. 		
<p>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.</p>	<p>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.</p>	<p>Disability Coverage Employees of political subdivisions (including Plan 1 and Plan 2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides an employer-paid comparable program for its members.</p> <p>Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VLDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.</p>
<p>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 service credit in their plan. Prior service credit 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.</p>	<p>Purchase of Prior Service Same as Plan 1.</p>	<p>Purchase of Prior Service <i>Defined Benefit Component:</i> Same as Plan 1, with the following exceptions:</p> <ul style="list-style-type: none"> • Hybrid Retirement Plan members are ineligible for ported service. <p><i>Defined Contributions Component:</i> Not applicable.</p>

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7) Pensions, Continued

Employees Covered by Benefit Terms

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

	Number
Inactive members or their beneficiaries currently receiving benefits	53
Inactive members:	
Vested	17
Non-vested	19
Active elsewhere in VRS	26
Total inactive members	62
Active members	83
Total	198

Contributions

The contributions 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 political subdivisions by the Virginia General Assembly. Employees are required to contribute 5% of their compensation toward their retirement.

The Authority's contractually required contribution rate for the years ended June 30, 2020 and 2019 was 5.67% and 5.64%, respectively, of covered employee compensation. These rates were based on actuarially determined rates from an actuarial valuation as of June 30, 2017. These rates, when combined with employee contributions, were expected to finance the costs of benefits earned by employee during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the Authority were \$265,027 and \$250,534 for the years ended June 30, 2020 and June 30, 2019, respectively.

Net Pension Liability

The net pension liability (NPL) is calculated separately for each employer and represents that particular employer's total pension liability determined in accordance with GASB Statement No. 68, less that employer's fiduciary net position. For the Authority, the net pension liability for fiscal year 2020 was measured as of June 30, 2019. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2018 rolled forward to the measurement date of June 30, 2019. The net pension liability for fiscal year 2019 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 for fiscal years 2020 and 2019 for general employees in the Authority's retirement plan was based on actuarial valuations as of June 30, 2018 and June 30, 2017, respectively, using the entry age normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2019 and June 30, 2018, respectively.

Inflation	2.50%
Salary increases, including inflation	3.5% – 5.35%
Investment rate of return	
June 30, 2020	6.75%, net of pension plan investment expenses, including inflation*
June 30, 2019	7.00%, net of pension plan investment expenses, including inflation*

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7) Pensions, Continued

**Administrative expenses as a percent of the market value of assets for the last experience studies 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 rates noted above. However, since the difference was minimal, and the more conservative investment return assumptions noted above 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 the rates above to simplify preparation of pension liabilities.*

Mortality rates:

All Others (Non-10 Largest) - Non-Hazardous duty: 15% of deaths are assumed to be service-related

Pre-Retirement:

RP-2014 employee rates to age 80, healthy annuitant rates at age 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, 2018 and 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, except the change in the discount rate for the June 30, 2018 valuation, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

All Others (Non-10 Largest) – Non-Hazardous Duty:

- Updated mortality rates (pre-retirement, post-retirement healthy, and disabled) to a more current mortality table – RP-2014 projected to 2020
- Lowered retirement rates at older ages and changed final retirement from 70 to 75
- Adjusted withdrawal rates to better fit experience at each year age and service through 9 years of service
- Lowered disability rates
- No change in salary scale
- Increase rate of line of duty disability from 14% to 15%
- Decreased discount rate from 7.00% to 6.75% for the June 30, 2018 valuation
- No change in discount rate for the June 30, 2017 valuation

Long-Term Expected Rate of Return

The long-term expected rate of return on pension System investments was determined using a lognormal 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:

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7) Pensions, Continued

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

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

Discount Rate

The discount rate used to measure the total pension liability at June 30, 2020 and 2019 was 6.75% and 7.00%, respectively. 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 for state and teacher employer contributions; political subdivisions were also provided with an opportunity to use an alternate employer contribution rate. For the year ended June 30, 2019, the alternate rate was the employer contribution rate used in fiscal year 2012 or 100% of the actuarially determined employer contribution rate from the June 30, 2017, actuarial valuations, whichever was greater. From July 1, 2019, on, participating employers are assumed to continue to contribute 100% of the actuarially determined contribution rates.

For the year ended June 30, 2018, the alternate rate was the employer contribution rate used in FY 2012 or 90% of the actuarially determined employer contribution rate from the June 30, 2015, actuarial valuations, whichever was greater. From July 1, 2018 on, participating employers are assumed 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.

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7) Pensions, Continued

Changes in Net Pension Liability

	Total pension liability (a)	Plan fiduciary net pension (b)	Net pension liability (a) - (b)
<u>6/30/2020:</u>			
Balances at June 30, 2018	\$ 17,437,059	\$ 16,913,889	\$ 523,170
Changes for the year:			
Service cost	378,585	-	378,585
Interest	1,198,755	-	1,198,755
Change in benefit terms	-		-
Change in assumptions	546,875		546,875
Difference between expected and actual experience	182,506	-	182,506
Contributions - employer	-	235,463	(235,463)
Contributions - employee	-	212,351	(212,351)
Net investment income	-	1,128,516	(1,128,516)
Benefit payments, including refunds of employee contributions	(623,967)	(623,967)	-
Administrative expense	-	(11,054)	11,054
Other changes	-	(713)	713
Net changes	1,682,754	940,596	742,158
Balances at June 30, 2019	<u>\$ 19,119,813</u>	<u>\$ 17,854,485</u>	<u>\$ 1,265,328</u>
<u>6/30/2019:</u>			
Balances at June 30, 2017	\$ 16,499,993	\$ 15,886,353	\$ 613,640
Changes for the year:			
Service cost	379,365	-	379,365
Interest	1,132,686	-	1,132,686
Change in benefit terms	-		-
Change in assumptions	-		-
Difference between expected and actual experience	62,537	-	62,537
Contributions - employer	-	297,525	(297,525)
Contributions - employee	-	204,311	(204,311)
Net investment income	-	1,174,317	(1,174,317)
Benefit payments, including refunds of employee contributions	(637,522)	(637,522)	-
Administrative expense	-	(10,045)	10,045
Other changes	-	(1,050)	1,050
Net changes	937,066	1,027,536	(90,470)
Balances at June 30, 2018	<u>\$ 17,437,059</u>	<u>\$ 16,913,889</u>	<u>\$ 523,170</u>

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

The following presents the net pension liability of the Authority for fiscal year 2020 using the discount rate of 6.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate. In addition, the net pension liability of the Authority for fiscal year 2019 is presented using the discount rate of 7.00%, as well as what the net pension liability would have been if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than that discount rate:

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7) Pensions, Continued

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Net pension liability (asset), as of June 30, 2020	\$ 3,723,268	\$ 1,265,328	\$ (702,029)
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability (asset), as of June 30, 2019	\$ 2,790,320	\$ 523,170	\$ (1,367,365)

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

For the years ending June 30, 2020 and 2019, the Authority recognized pension expense (recovery) of \$358,709 and \$(73,893), respectively. The Authority reported deferred outflows and deferred inflow of resources related to pensions as follows:

	6/30/2020		6/30/2019	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Difference between expected and actual experience	\$ 169,449	\$ 42,704	\$ 88,238	\$ 118,174
Changes of assumptions	381,155	67,086	-	156,533
Net difference between projected and actual earnings on plan investments	-	152,635	-	144,264
Employer contributions subsequent to the measurement date	265,027	-	250,534	-
Total	<u>\$ 815,631</u>	<u>\$ 262,425</u>	<u>\$ 338,772</u>	<u>\$ 418,971</u>

The \$265,027 reported as deferred outflows of resources related to pensions as of June 30, 2020, resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the fiscal year ending June 30, 2021. Other amounts reported as deferred outflows and inflows of resources related to pensions as of June 30, 2020, will be recognized in pension expense (recovery) in future reporting periods as follows:

Year Ended June 30:	
2021	\$ 137,859
2022	77,944
2023	62,601
2024	9,775
Total	<u>\$ 288,179</u>

Pension Plan Data

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

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8) Other Post-Employment Benefits (OPEB)

<i>Multiple Employer Cost-Sharing Plan – Retiree Healthcare</i>
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The Authority provides other post-employment health-care benefits for qualifying retired employees who are not yet eligible for Medicare through an agent, multiple-employer defined benefit plan administered by James City County. The benefits, benefit levels, employee contributions and employer contributions are governed by the Authority and can be amended by the Authority through its personnel manual.

Plan Description

Participants must be eligible to retire under VRS and must be full-time active employees who retire directly from the Authority and are at least 55 years of age with 15 years of service. Each year, retirees participating in the Authority's sponsored plans will be given the opportunity to change plans or drop coverage during an open enrollment period. For fiscal year 2020, the pre-Medicare retirees have a choice of two plans offered by Cigna. Dental plans are available at the retiree's cost and therefore, there is no employer obligation. There is no coverage for post-Medicare retirees.

Funding Policy

The Authority does not intend to establish a trust to pre-fund the obligation. The anticipated growth in the retiree healthcare OPEB liability is based on contributions to the benefit plan on a pay-as-you-go cost basis. The data has been projected into the future based on the assumption that the current active population remains constant. Retirees contribute towards their health insurance premiums based on a blended rate and therefore, the Authority has an implicit rate obligation. The estimated contributions are based on the implicit rate subsidy payments made during the year by the retirees. Retirees pay 100% of the published rates for individual and dependent coverage until age 65.

Actuarial Methods and Assumptions

For the actuarial valuation at January 1, 2020 and July 1, 2017 (measurement dates of June 30, 2019 and 2018, respectively), the entry age normal funding method was used. The goal of this method is that the annual accrual (or normal cost) be a level percent of pay throughout an employee's career. This method requires a salary increase assumption. The normal cost percentage is equal to the present value of benefits divided by the present value of future salary determined when the employee was hired. The actuarial accrued liability is equal to the present value of benefits minus the normal cost percentage times the present value of future salaries at the valuation date.

The actuarial assumptions included calculations based on a discount rate of 3.13% and 3.62% for June 30, 2019 and 2018, respectively, for the unfunded liability. Benefits are discounted based on an index rate for 20-year tax exempt general obligation (GO) municipal bonds with an average rating of AA/Aa or higher.

For the actuarial valuation dated January 1, 2020, the medical trend assumption was changed from the previous valuation to an assumption developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model baseline assumptions. The SOA Model was released in October 2010 and updated in September 2019. The following assumptions were used as input variables into this model:

Inflation	2.50%
Rate of growth in real income/ GDP per capita	1.50%
Extra trend due to technology and other factors	1.10%
Expected health share of GDP in 2029	20.00%
Health share of GDP resistance point	25.00%
Year for limiting cost growth to GDP growth	2075

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8) Other Post-Employment Benefits (OPEB), Continued

For the actuarial valuation dated July 1, 2017, the medical trend assumption was changed from the previous valuation to an assumption developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model baseline assumptions. The SOA Model was released in December 2007 and revised in 2014. The following assumptions were used as input variables into this model:

Inflation	2.20%
Rate of growth in real income/ GDP per capita	1.63%
Income multiplier for health spending	1.30%
Extra trend due to technology and other factors	1.40%
Health share of GDP resistance point	25.00%
Year for limiting cost growth to GDP growth	2075

The SOA Long-Run Medical Cost Trend Model and its baseline projection are based on an econometric analysis of historical U.S. medical expenditures and the judgments of experts in the field. The long-run baseline projection, tolerance ranges and input variables have been developed under the guidance of an SOA Project Oversight Group.

The actuarial assumptions included calculations based on salary increases of 3.15%-1.30% (general) and 2.55%-1.30% (public safety) based on years of service. The valuation assumed that 40% of participants currently with coverage will elect coverage upon retirement, and that 30% of participants electing coverage at retirement will elect coverage for their spouse.

Mortality decrements used in the January 1, 2020, valuation:

- Pre-Retirement
 - General: Pub-2010 General Employees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale
 - LEOS: Pub-2010 Public Safety Employees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale
- Post-Retirement
 - General: Pub-2010 General Retirees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale
 - LEOS: Pub-2010 Public Safety Retirees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale
- Disabled:
 - General: Pub-2010 General Disabled Retirees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale
 - LEOS: Pub-2010 Public Safety Disabled Retirees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale

Mortality decrements used in the July 1, 2017, valuation:

- Pre-Retirement
 - General: RP 2000 Employee Mortality Table Projected with Scale AA to 2020, males set forward 2 years and females set back 3 years
 - LEOS: RP 2000 Employee Mortality Table Projected with Scale AA to 2020, males and females set back 2 years
- Post-Retirement
 - General: RP 2000 Combined Mortality Table Projected with Scale AA to 2020, females back 1 year
 - LEOS: RP 2000 Combined Mortality Table Projected with Scale AA to 2020, males set forward 1 year
- Disabled: RP 2000 Disabled Mortality Table, males set back 3 years not fully generational

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8) Other Post-Employment Benefits (OPEB), Continued

Changes in Assumptions Since Prior Valuation

- Discount rate was updated as required under the GASB 75 standard.
- Decrement and mortality assumptions were updated to the most recent VRS assumptions.
- Medical trend was updated based on most recent actuarial baseline assumptions.

Changes in Assumptions for the July 1, 2017 valuation:

- Discount rate was updated as required under the GASB 75 standard.
- Decrement and mortality assumptions were updated to the most recent VRS assumptions.
- Election rate was decreased from 50% to 40% for participants currently with coverage and 50% to 30% for participants who elect coverage at retirement taking spousal coverage.
- Claims assumption was updated to include the most recent plan experience.

Retiree Healthcare OPEB Liability

At June 30, 2020 and 2019, the Authority reported retiree healthcare OPEB liabilities of \$381,436 and \$432,969, respectively, for its proportionate share of the County's retiree healthcare OPEB liability. The County's June 30, 2020, retiree healthcare OPEB liability was measured as of June 30, 2019, and was determined by an actuarial valuation performed January 1, 2020. The County's June 30, 2019, retiree healthcare OPEB liability was measured as of June 30, 2018, and was determined by an actuarial valuation performed July 1, 2017. The Authority's proportion of the County's retiree healthcare OPEB liability was based on the Authority's projected long-term contribution effort to the OPEB plan as compared to the total projected long-term contribution effort of all contributing entities to determine the Authority's proportion. At June 30, 2020 and 2019, the Authority's proportion of the County's retiree healthcare OPEB liability was 7.30% and 7.35%, respectively.

Sensitivity of the Retiree Healthcare OPEB Liability to Changes in the Discount Rate

The following presents the retiree healthcare OPEB liability for 2020 and 2019 using the discount rates of 3.13% and 3.62%, respectively, as well as what the retiree healthcare OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.13% and 2.62%, respectively) or one percentage point higher (4.13% and 4.62%, respectively) than the current rates:

	1% Decrease (2.13%)	Current Discount Rate (3.13%)	1% Increase (4.13%)
Retiree Healthcare OPEB Liability as of June 30, 2020	\$ 418,056	\$ 381,436	\$ 347,794
	1% Decrease (2.62%)	Current Discount Rate (3.62%)	1% Increase (4.62%)
Retiree Healthcare OPEB Liability as of June 30, 2019	\$ 477,162	\$ 432,969	\$ 392,888

Sensitivity of the Retiree Healthcare OPEB Liability to Changes in the Health Care Cost Trend Rate

The following presents the retiree healthcare OPEB liability for 2020 and 2019 using the health care cost trend rate of 4.00%, as well as what the retiree healthcare OPEB liability would be if it were calculated using a health care cost trend rate that is one percentage point lower (3.00%) or one percentage point higher (5.00%) than the current rate:

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8) Other Post-Employment Benefits (OPEB), Continued

	1% Decrease (3.00%)	Current Discount Rate (4.00%)	1% Increase (5.00%)
Retiree Healthcare OPEB Liability as of June 30, 2020	\$ 336,833	\$ 381,436	\$ 434,028
	1% Decrease (3.00%)	Current Discount Rate (4.00%)	1% Increase (5.00%)
Retiree Healthcare OPEB Liability as of June 30, 2019	\$ 376,756	\$ 432,969	\$ 499,940

Retiree Healthcare OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources

For the years ended June 30, 2020 and 2019, the Authority recognized retiree healthcare OPEB expense of \$28,017 and \$37,604, respectively. Since there was a change in proportionate share between measurement dates, a portion of the retiree healthcare OPEB expense was related to deferred amounts from changes in proportion. At June 30, 2020 and 2019, deferred outflows of resources and deferred inflows of resources related to retiree healthcare OPEB from the following sources were reported:

	6/30/2020		6/30/2019	
	Deferred outflows of resources	Deferred inflows of resources	Deferred outflows of resources	Deferred inflows of resources
Difference between expected and actual experience	\$ 13,002	\$ 40,728	\$ 15,705	\$ -
Changes of assumptions	-	34,509	-	21,899
Change in proportion	60	1,368	72	-
Total	<u>\$ 13,062</u>	<u>\$ 76,605</u>	<u>\$ 15,777</u>	<u>\$ 21,899</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to retiree healthcare OPEB as of June 30, 2020 will be recognized in retiree healthcare OPEB expense (recovery) as follows:

Year Ended June 30	
2021	\$ (13,571)
2022	(13,571)
2023	(13,571)
2024	(13,572)
2025	(9,262)
Thereafter	4
Total	<u>\$ (63,543)</u>

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8) Other Post-Employment Benefits (OPEB), Continued

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

Plan Description

All full-time, salaried permanent employees of the Authority are automatically covered by the VRS Group Life Insurance Program upon employment. This plan is administered by the VRS, along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia.

In addition to the Basic Group Life Insurance Program 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.

The specific information for Group Life Insurance Program OPEB, including eligibility, coverage and benefits is set out below:

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, including the following employers that do not participate in VRS for retirement: City of Richmond, City of Portsmouth, City of Roanoke, City of Norfolk, and Roanoke City School Board. 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 member contributions and accrued interest.

Benefit Amounts: the benefits payable under the Group Life Insurance Program have several components.

- Natural death benefit - equal to the employee's covered compensation rounded to the next highest thousand and then doubled.
- Accidental death benefit - double the natural death benefit.
- Other benefit provisions - the program provides additional benefits provided under specific circumstances. These include:
 - o Accidental dismemberment benefit
 - o Safety belt benefit
 - o Repatriation benefit
 - o Felonious assault benefit
 - o Accelerated death benefit option

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8) Other Post-Employment Benefits (OPEB), Continued

Reduction in benefit amounts: 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 service credit, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at \$8,000 by statute in 2015. This will be increased annually based on the VRS Plan 2 cost-of-living adjustment calculation. The minimum benefit adjusted for the COLA was \$8,463 and \$8,279 as of June 30, 2020 and 2019, respectively.

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, 2020 and 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. Contributions to the Group Life Insurance Program from the Authority were \$24,492 and \$21,000 for the years ended June 30, 2020 and June 30, 2019, respectively.

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

At June 30, 2020 and 2019, the Authority reported a liability of \$369,227 and \$340,000, respectively, for its proportionate share of the Net GLI OPEB liability. The Net GLI OPEB liability as of June 30, 2020 and 2019 was measured as of June 30, 2019 and 2018 respectively and the total GLI OPEB liability used to calculate the Net GLI OPEB liability was determined by an actuarial valuation performed as of June 30, 2018 and 2017, respectively, and rolled forward to the measurement date of June 30, 2019 and 2018, respectively. The Authority's proportion of the Net GLI OPEB liability was based on the Authority's actuarially determined employer contributions to the Group Life Insurance Program for the prior fiscal year relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2019, the Authority's proportion was 0.02269% as compared to 0.02234% at June 30, 2018.

For the years ended June 30, 2020 and 2019, the Authority recognized GLI OPEB expense of \$8,976 and \$4,000, respectively. Given that 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.

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8) Other Post-Employment Benefits (OPEB), Continued

At June 30, 2020 and 2019, the Authority reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

	<u>6/30/2020</u>		<u>6/30/2019</u>	
	<u>Deferred outflows of resources</u>	<u>Deferred inflows of resources</u>	<u>Deferred outflows of resources</u>	<u>Deferred inflows of resources</u>
Difference between expected and actual experience	\$ 24,556	\$ 4,789	\$ 17,000	\$ 6,000
Net difference between projected and actual investment earnings on OPEB Plan investments	-	7,584	-	11,000
Changes of assumptions	23,311	11,134	-	14,000
Changes in proportionate share	4,670	1,551	-	2,000
Employer contributions subsequent to the measurement date	24,492	-	21,000	-
Total	<u>\$ 77,029</u>	<u>\$ 25,058</u>	<u>\$ 38,000</u>	<u>\$ 33,000</u>

The \$24,492 reported as deferred outflows of resources at June 30, 2020, related to the GLI OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB liability in the fiscal year ending June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources at June 30, 2020, related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

<u>Year Ended</u>	
2021	\$ 1,750
2022	1,750
2023	4,962
2024	8,139
2025	8,473
Thereafter	2,405
Total	<u>\$ 27,479</u>

Actuarial Assumptions

The total GLI OPEB liability as of June 30, 2020 and June 30, 2019 was based on actuarial valuations as of June 30, 2018 and June 30, 2017, respectively, 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 dates of June 30, 2019 and June 30, 2018, respectively.

Inflation	2.50%
Salary increases, including inflation	
General state employees	3.50% – 5.35%
Teachers	3.50% – 5.95%
SPORS employees	3.50% – 4.75%
VaLORS employees	3.50% – 4.75%
JRS employees	4.50%
Locality – General employees	3.50% – 5.35%
Locality – Hazardous Duty employees	3.50% – 4.75%
Investment rate of return	
June 30, 2020	6.75%, net of investment expenses, including inflation*
June 30, 2019	7.00%, net of investment expenses, including inflation*

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8) Other Post-Employment Benefits (OPEB), Continued

**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 rates above. However, since the difference was minimal, and the more conservative investment return assumptions above 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 the rates above to simplify preparation of OPEB liabilities.*

Mortality rates:

	<i>Pre-Retirement</i>	<i>Post-Retirement</i>	<i>Post-Disablement</i>
General State Employees	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.	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 set back 1 year with 1.5% increase compounded from ages 70 to 85.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.
Teachers	RP-2014 White Collar Employee Rates to age 80, White Collar Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020.	RP-2014 White Collar Employee Rates to age 49, White Collar Health Annuitant Rates at ages 50 and older projected with scale BB to 2020; males 1% increase compounded from ages 70 to 90; females set back 3 years with 1.5% increase compounded from ages 65 to 70 and 2.0% increase compounded from ages 75 to 90.	RP-2014 Disability Mortality Rates projected with Scale BB to 2020; 115% of rates for males and females
SPORS Employees	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.	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 with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.
VaLORS Employees	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.	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 with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

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8) Other Post-Employment Benefits (OPEB), Continued

	<i>Pre-Retirement</i>	<i>Post-Retirement</i>	<i>Post-Disablement</i>
JRS Employees	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.	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 set back 1 year with 1.5% compounding increase from ages 70 to 85.	RP-2014 Disability Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.
Largest 10 Locality Employers - General Employees	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.	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.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.
Non-Largest 10 Locality Employers - General Employees	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.	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.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.
Largest 10 Locality Employers - Hazardous Duty Employees	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.	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 with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.
Non-Largest 10 Locality Employers - Hazardous Duty Employees	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.	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 with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2018 and 2017 valuations were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the change in the discount rate for the June 30, 2018 valuation, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study are as follows:

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8) Other Post-Employment Benefits (OPEB), Continued

General State Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement age 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	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Teachers:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement age 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	Adjusted rates to better match experience
Salary Scale	No change
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

SPORS Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 85%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

VaLORS Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 50% to 35%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

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8) Other Post-Employment Benefits (OPEB), Continued

JRS Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Largest 10 Locality Employers – General Employees:

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
Line of Duty Disability	Increased rate from 14% to 20%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Non-Largest 10 Locality Employers – General Employees:

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
Line of Duty Disability	Increased rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Largest 10 Locality Employers – Hazardous Duty Employees:

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
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

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8) Other Post-Employment Benefits (OPEB), Continued

Non-Largest 10 Locality Employers – Hazardous Duty Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

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 dates of June 30, 2019 and 2018, NOL amounts for the Group Life Insurance Program are as follows (amounts expressed in thousands):

Group Life Insurance OPEB Program			
		6/30/19	6/30/18
		Measurement	Measurement
		Date	Date
Total GLI OPEB Liability		\$ 3,390,238	\$ 3,113,508
Plan Fiduciary Net Position		1,762,972	1,594,773
Net GLI OPEB Liability (Asset)		<u>\$ 1,627,266</u>	<u>\$ 1,518,735</u>
Plan Fiduciary Net Position as a % of the Total GLI OPEB Liability		52.00%	51.22%

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

Long-Term Expected Rate of Return

The long-term expected rate of return on the VRS'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 VRS'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:

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8) Other Post-Employment Benefits (OPEB), Continued

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

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

Discount Rate

The discount rate used to measure the total GLI OPEB liability at June 30, 2019 and 2018 was 6.75% and 7.0%, respectively. 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 ending June 30, 2019, the rate contributed by the entity for the GLI OPEB will be subject to the portion of the VRS Board certified rates that are funded by the Virginia General Assembly which was 100% of the actuarially determined contribution rate. From July 1, 2019 on, employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the 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.

Sensitivity of the Authority's Proportionate Share of the Net GLI OPEB Liability to Changes in the Discount Rate

The following presents the Authority's proportionate share of the net GLI OPEB liability as of June 30, 2020 and June 30, 2019 using discount rates of 6.75% and 7.00%, respectively, as well as what the Authority's proportionate share of the net GLI OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (5.75% and 6.00%, respectively) or one percentage point higher (7.75% and 8.00%, respectively) than the current discount rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Authority's proportionate share of the Group Life Insurance Plan Net OPEB Liability as of June 30, 2020	\$ 485,062	\$ 369,227	\$ 275,288

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8) Other Post-Employment Benefits (OPEB), Continued

	<u>1% Decrease (6.00%)</u>	<u>Current Discount Rate (7.00%)</u>	<u>1% Increase (8.00%)</u>
Authority's proportionate share of the Group Life Insurance Plan Net OPEB Liability as of June 30, 2019	\$ 444,000	\$ 340,000	\$ 255,000

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 2019 Comprehensive Annual Financial Report (CAFR). A copy of the 2019 VRS CAFR may be downloaded from the VRS website at varetire.org/pdf/publications/2019annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

Agent Multiple Employer Plan – Health Insurance Credit Program

The Political Subdivision Health Insurance Credit Program is a multiple-employer, agent defined benefit plan that provides a credit toward the cost of health insurance coverage for retired political subdivision employees of participating employers. The Political Subdivision Health Insurance Credit Program was established pursuant to §51.1-1400 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. For purposes of measuring the net Political Subdivision Health Insurance Credit Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the Political Subdivision Health Insurance Credit Program OPEB, and the Political Subdivision Health Insurance Credit Program OPEB expense, information about the fiduciary net position of the VRS Political Subdivision Health Insurance Credit Program; and the additions to/deductions from the VRS Political Subdivision Health Insurance Credit Program's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Plan Description

All full-time, salaried permanent employees of participating political subdivisions are automatically covered by the VRS Political Subdivision Health Insurance Credit Program upon employment. This plan is administered by the Virginia Retirement System (the System), along with pension and other OPEB plans, for public employer groups in the Commonwealth of Virginia. Members earn one month of service credit toward the benefit for each month they are employed and for which their employer pays contributions to VRS. The health insurance credit is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against qualified health insurance premiums retirees pay for single coverage, excluding any portion covering the spouse or dependents. The credit cannot exceed the amount of the premiums and ends upon the retiree's death.

The specific information about the Political Subdivision Health Insurance Credit Program OPEB, including eligibility, coverage and benefits is set out below:

Eligible employees: The political subdivision retiree health insurance credit program was established July 1, 1993 for retired political subdivision employees or employers who elect the benefit and who retire with at least 15 years of service credit. Eligible employees of participating are enrolled automatically upon employment. They include full-time permanent salaried employees of the participating political subdivision who are covered under the VRS pension plan.

Benefit amounts: The political subdivision's retiree health insurance credit program provides the following benefits for eligible employees:

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

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8) Other Post-Employment Benefits (OPEB), Continued

Health Insurance Credit Program notes: The monthly health insurance credit benefit cannot exceed the individual premium amount; no health insurance credit for premiums paid and qualified under LODA, however, the employee may receive the credit for premiums paid for other qualified health plans; and employees who retire after being on long-term disability under VLDP must have at least 15 years of service credit to qualify for the health insurance credit as a retiree.

Employees Covered by Benefit Terms

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

	Number
Inactive members or their beneficiaries	
currently receiving benefits	14
Inactive members:	
Vested	-
Non-vested	-
Active elsewhere in VRS	-
Total inactive members	14
Active members	83
Total	97

Contributions

The contribution requirement for active employees is governed by §51.1-1402(E) of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. The Authority's contractually required employer contribution rate for the years ended June 30, 2020 and 2019 was 0.18% and 0.19%, respectively, of covered employee compensation. These rates were based on actuarially determined rates from an actuarial valuation as of June 30, 2017. The actuarially determined rate 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 from the Authority to the Political Subdivision Health Insurance Credit Program were \$8,413 and \$8,467 for the years ended June 30, 2020 and June 30, 2019, respectively.

Net HIC OPEB liability

The Authority's net Health Insurance Credit OPEB liability was measured as of June 30, 2019 and 2018 for fiscal year 2020 and 2019, respectively. The total Health Insurance Credit OPEB liability as of June 30, 2019 and 2018 was determined by an actuarial valuation performed as of June 30, 2018 and 2017, respectively, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement dates of June 30, 2019 and 2018, respectively.

Actuarial Assumptions

The total HIC OPEB liability as of June 30, 2020 and 2019 was based on an actuarial valuation as of June 30, 2018 and 2017, respectively, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2019 and 2018, respectively.

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8) Other Post-Employment Benefits (OPEB), Continued

Inflation	2.50%
Salary increases, including inflation	
Locality – General Employees	3.50% – 5.35%
Investment rate of return	
June 30, 2020	6.75%, net of investment expenses, including inflation*
June 30, 2019	7.00%, 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 rates above. However, since the difference was minimal, and the more conservative investment return assumptions above 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 the rates above to simplify preparation of OPEB liabilities.*

Mortality rates:

Non-Largest 10 Locality Employers – General Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2018 and 2017 valuations were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the change in the discount rate in the June 30, 2018 valuation, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study 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
Line of Duty Disability	Increased rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

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8) Other Post-Employment Benefits (OPEB), Continued

Long-Term Expected Rate of Return

The long-term expected rate of return on the System's investments was determined using a lognormal 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 Rate of Return
Public Equity	34.00%	5.61%	1.91%
Fixed Income	15.00%	0.88%	0.13%
Credit Strategies	14.00%	5.13%	0.72%
Real Assets	14.00%	5.27%	0.74%
Private Equity	14.00%	8.77%	1.23%
MAPS - Multi-Asset Public Strategies	6.00%	3.52%	0.21%
PIP - Private Onvestment Partnership	3.00%	6.29%	0.19%
Total	<u>100.00%</u>		<u>5.13%</u>
	Inflation		<u>2.50%</u>
	* Expected arithmetic nominal return		<u>7.63%</u>

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

Discount Rate

The discount rate used to measure the total HIC OPEB liability as of June 30, 2019 and 2018, was 6.75% and 7.00%, respectively. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the entity for the HIC OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly, which was 100% of the actuarially determined contribution rate. From July 1, 2019, on, employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the HIC OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total HIC OPEB liability.

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8) Other Post-Employment Benefits (OPEB), Continued

Changes in Net HIC OPEB Liability:

	Increase (decrease)		
	Total OPEB liability (a)	Plan fiduciary net position (b)	Net OPEB liability (a) - (b)
Balances at June 30, 2018	\$ 162,155	\$ 107,782	\$ 54,373
Changes for the year:			
Service cost	3,579	-	3,579
Interest	11,031	-	11,031
Changes of Assumptions	4,095	-	4,095
Difference between expected and actual experience	(3,892)	-	(3,892)
Contributions - employer	-	8,002	(8,002)
Net investment income	-	6,922	(6,922)
Benefit payments	(9,131)	(9,131)	-
Administrative expense	-	(151)	151
Other changes	-	(8)	8
Net changes	5,682	5,634	48
Balances at June 30, 2019	\$ 167,837	\$ 113,416	\$ 54,421

	Increase (decrease)		
	Total OPEB liability (a)	Plan fiduciary net position (b)	Net OPEB liability (a) - (b)
Balances at June 30, 2017	\$ 162,592	\$ 100,269	\$ 62,323
Changes for the year:			
Service cost	3,588	-	3,588
Interest	11,121	-	11,121
Difference between expected and actual experience	(7,706)	-	(7,706)
Contributions - employer	-	8,467	(8,467)
Net investment income	-	7,150	(7,150)
Benefit payments	(7,440)	(7,440)	-
Administrative expense	-	(170)	170
Other changes	-	(494)	494
Net changes	(437)	7,513	(7,950)
Balances at June 30, 2018	\$ 162,155	\$ 107,782	\$ 54,373

Sensitivity of the Political Subdivision Health Insurance Credit Net OPEB Liability to Changes in the Discount Rate

The following presents the Political Subdivision Health Insurance Credit Program net HIC OPEB liability as of June 30, 2020 and June 30, 2019 using the discount rates of 6.75% and 7.00%, respectively, as well as what the Authority's net HIC OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (5.75% and 6.00%, respectively) or one percentage point higher (7.75% and 8.00%, respectively) than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Net HIC OPEB liability as of June 30, 2020	\$ 72,530	\$ 54,421	\$ 38,954
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net HIC OPEB liability as of June 30, 2019	\$ 71,742	\$ 54,373	\$ 39,537

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8) Other Post-Employment Benefits (OPEB), Continued

Health Insurance Credit Program OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Health Insurance Credit Program OPEB

For the years ended June 30, 2020 and 2019, the Authority recognized HIC OPEB expense of \$4,920 and \$5,846. At June 30, 2020 and 2019, the Authority reported deferred outflows of resources and deferred inflows of resources related to the Political Subdivision Health Insurance Credit Program from the following sources:

	<u>6/30/2020</u>		<u>6/30/2019</u>	
	<u>Deferred outflows of resources</u>	<u>Deferred inflows of resources</u>	<u>Deferred outflows of resources</u>	<u>Deferred inflows of resources</u>
Difference between expected and actual experience	\$ -	\$ 8,797	\$ -	\$ 6,594
Changes of assumptions	3,488	2,267	-	2,829
Net difference between projected and actual investment earnings on OPEB Plan investments	-	1,203	-	2,486
Employer contributions subsequent to the measurement date	8,413	-	8,467	-
Total	<u>\$ 11,901</u>	<u>\$ 12,267</u>	<u>\$ 8,467</u>	<u>\$ 11,909</u>

The \$8,413 reported as deferred outflows of resources related to the HIC OPEB as of June 30, 2020, resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net HIC OPEB Liability in the fiscal year ending June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the HIC OPEB as of June 30, 2020, will be recognized in the HIC OPEB expense (recovery) in future reporting periods as follows:

<u>Year ended</u>	
2021	\$ (2,349)
2022	(2,350)
2023	(1,550)
2024	(1,530)
2025	(1,023)
Thereafter	23
Total	<u>\$ (8,779)</u>

Health Insurance Credit Program Plan Data

Information about the VRS Political Subdivision Health Insurance Credit Program is available in the separately issued VRS 2019 Comprehensive Annual Financial Report (CAFR). A copy of the 2019 VRS CAFR may be downloaded from the VRS website at varetire.org/pdf/publications/2019annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

OPEB Expense – Aggregate Information

The total amount of expense recognized by the Authority for its OPEB plans is summarized below for the years ended June 30, 2020 and 2019:

	<u>6/30/2020</u>	<u>6/30/2019</u>
Retiree healthcare	\$ 28,017	\$ 37,604
Group life insurance	8,976	4,000
Health insurance credit program	4,920	5,846
Total	<u>\$ 41,913</u>	<u>\$ 47,450</u>

OPEB expense is included in fringe benefits in the Authority's statements of revenues, expenses, and changes in net position.

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9) Restatement

The net position as of the beginning of fiscal year 2019 was restated to reflect an adjustment to the Authority's capital assets for construction in progress as well as an adjustment to the water meter agreement deposit liability as follows:

	6/30/2018 Previously Reported	Restatement	6/30/2018 As Restated
Capital assets - Construction in progress	\$ 3,993,821	\$ (1,441,342)	\$ 2,552,479
Current liabilities - Deposits	\$ (287,962)	\$ (406,500)	\$ (694,462)
Net position - Investment in capital assets	\$ (132,616,889)	\$ 1,441,342	\$ (131,175,547)
Net position - Unrestricted	\$ (46,664,323)	\$ 406,500	\$ (46,257,823)

10) Deferred Compensation Plan

The Authority offers its employees a deferred-compensation plan created in accordance with Internal Revenue Code Section 457. The plan, available to regular part-time and full-time Authority employees, permits them to defer 25% of their gross income up to a maximum of \$19,500 per year. The deferred compensation is not available to employees until termination, retirement, death, or an unforeseeable emergency.

As required by Internal Revenue Code Section 457, all amounts of compensation deferred under the plan, all property and rights purchased with those amounts, and all income attributable to those amounts, property, or rights, are held in trust for the participants. The County acts as trustee for the plan with the choice of investment options being made by the participants.

11) Transactions with Related Parties

Certain financial management, accounting, and other services are provided to the Authority by the County. The charges for these services amounted to \$810,170 and \$831,810 for the years ended June 30, 2020 and 2019, respectively, and are included in the expenses under contractual fees. The Authority also owed the County \$494,045 and \$996,066 at June 30, 2020 and 2019, respectively, which primarily represents payroll expenses and purchase card expenses paid by the County on behalf of the Authority.

In addition, the County has leased space in Authority buildings under long-term leases. Rent revenue from the County was \$85,680 and \$88,463 for years ended June 30, 2020 and 2019, respectively; and is included in rental income. As of June 30, 2020, the County has one lease agreement in effect with the Authority for building space. The term of this lease began in July 2014 and ends in June 2024. Future minimum payments under this lease are as follows:

Year ended	
2021	\$ 85,680
2022	85,680
2023	85,680
2024	85,680
Total	<u>\$ 342,720</u>

12) Commitments and Contingencies

Construction in Progress

At June 30, 2020, the Authority had several major projects under construction which are presented in the accompanying financial statements as construction in progress.

Below are the details for each project:

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12) Commitments and Contingencies, Continued

Project	Budget	Expenditures to date	Balance of contract	Budget balance
Sewer improvements	\$ 3,498,831	\$ 11,303	\$ 401,145	\$ 3,086,383
Water supply	8,872,492	1,955,072	729,325	6,188,095
Water distribution	3,348,507	563,672	248,152	2,536,683
Water transmission	1,252,725	656,559	7,806	588,360
Water storage	185,620	-	-	185,620
Other	2,993,026	208,986	152,161	2,631,879
	<u>\$ 20,151,201</u>	<u>\$ 3,395,592</u>	<u>\$ 1,538,589</u>	<u>\$ 15,217,020</u>

Project Development Agreement - Long Term Water Supply

The Authority entered into a project development agreement with the City of Newport News on March 25, 2008 for long-term water supply. Under the agreement, JCSA has the right to a minimum of 4 million gallons of potable water capacity per day per calendar year for future water demands. The initial term of this agreement ends on January 1, 2050, at which time this agreement shall be automatically renewed for additional terms of 25 years. The Authority paid the City of Newport News \$25 million on December 31, 2008. The optional 2nd installment of \$25 million was not paid in 2019, and water capacity was reduced to 2 million gallons per day. The first installment was considered to be for the purchase of an intangible asset (rights to water supply) and, as such, was capitalized and is being amortized over the remaining life of the agreement (initial term). See note 4 for more information on the intangible asset.

In addition to the installment payments, the Authority agreed to pay variable and fixed operating and maintenance costs to the City of Newport News payable by September 1 each year, based on its safe yield share of 20%. The Authority did not receive any water from the City of Newport News for the years ended June 30, 2020 and 2019. Therefore, the Authority did not make a payment to the City of Newport News for the years ended June 30, 2020 and 2019, for these costs. Further, the Authority agreed that if it receives water from the City of Newport News through this agreement, to pay for the treatment of such water at a cost of \$1.34 per 1,000 gallons for fiscal year ended June 30, 2020 and \$1.30 per 1,000 gallons for fiscal year 2019. For the years ended June 30, 2020 and 2019, the Authority did not receive water from the City of Newport News under this agreement, and, as such, did not incur or pay for water treatment during these fiscal years.

Grinder Pump Maintenance

The Authority entered into a contract with Final Phase Installations, Inc. where they will provide grinder pump maintenance. The initial term of the contract was from October 26, 2016 through October 25, 2017, with the option to renew for up to 4 additional years. The contract has been renewed on an annual basis with the current renewal period ending October 25, 2020. Subsequent to year end, the contract was renewed for another annual period. The contract allows for an increase based on the Consumer Price Index. For the years ended June 30, 2020 and 2019, the Authority paid \$203,174 and \$208,979, respectively, for grinder pump maintenance.

Water Storage Tank Maintenance

The Authority entered into a contract with Superior Industrial Maintenance Company where they will provide water storage tank maintenance. The term of the contract is July 13, 2017 through July 12, 2018, with the option to renew for up to 5 additional years. The contract was renewed on August 24, 2020, for the period July 1, 2020 through June 30, 2021. For the years ended June 30, 2020 and 2019, the Authority paid \$153,826 and \$325,764, respectively, towards this contract.

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12) Commitments and Contingencies, Continued

Regional Hybrid Consolidation Plan

In February 2014, the Authority, HRSD and fourteen Hampton Roads localities entered into a Regional Hybrid Consolidation Plan for meeting Consent Agreement requirements to reduce sewer overflows. Under this plan, HRSD is responsible for major rehabilitation projects to repair deteriorated infrastructure and projects to increase the capacity of HRSD and locality pump stations and pipelines. HRSD will fund the work through a regional HRSD rate. The Authority keeps ownership and control of its local sewer infrastructure and is still responsible for monitoring and maintaining the local sewer system to Consent Agreement standards and fixing significant defects on an ongoing basis. In fiscal year 2018, HRSD proposed an amendment to the Plan to extend the schedule for rehabilitation work and assign HRSD the responsibility and liability for all regional overflows earlier than originally proposed. The purpose of the amendment is to accommodate HRSD's implementation of the SWIFT (Sustainable Water Initiative for Tomorrow) project to treat already highly treated wastewater effluent to drinking water standards and return it to the aquifer.

Other

The Authority is not currently involved in any litigation in which management deems would have a material impact to the financial statements.

13) COVID-19

During fiscal year 2020, the novel coronavirus disease (COVID-19) impacted the operational and financial activities of the Authority. In March 2020, the Authority adopted an Emergency Staffing Plan with split shifts and teleworking to maintain service levels and protect employee health. The Authority also incurred \$66,694 of operational expenses in response to the COVID-19 pandemic as of June 30, 2020, related to the purchase of protective, sanitary, and disinfecting supplies. These costs are included in other operating expenses on the statements of revenues, expenses and changes in net position.

In addition, COVID-19 contributed a loss of revenue for the Authority in fiscal year 2020 resulting from pandemic-related economic uncertainty. This loss is reflected as a reduction to facility charges in the statements of revenues, expenses and changes in net position.

The extent to which COVID-19 may impact the Authority's operations and financial condition in subsequent fiscal years will depend on future developments, which remain uncertain and cannot be predicted due to the evolving nature of this situation. As a result, the Authority cannot reasonably estimate the future impact of COVID-19 at this time.

* * * * *

**REQUIRED SUPPLEMENTARY INFORMATION
OTHER THAN MD&A (Unaudited)**

JAMES CITY SERVICE AUTHORITY
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Schedule of Changes in the Net Pension Liability and Related Ratios
Required Supplementary Information (Unaudited)
Last Ten Fiscal Years (1) *

	2015	2016	2017	2018	2019	2020
Total pension liability						
Service cost	\$ 417,066	\$ 430,269	\$ 404,294	\$ 411,137	\$ 379,364	\$ 378,585
Interest	913,818	978,647	1,032,165	1,104,651	1,132,686	1,198,755
Differences between expected and actual experience	-	(146,331)	128,139	(213,521)	62,537	182,506
Changes in assumptions	-	-	-	(335,427)	-	546,875
Benefit payments, including refunds of employee contributions	(376,365)	(433,146)	(562,945)	(495,181)	(637,522)	(623,967)
Net change in total pension liability	954,519	829,439	1,001,653	471,659	937,065	1,682,754
Total pension liability, beginning	13,242,723	14,197,242	15,026,681	16,028,334	16,499,994	17,437,059
Total pension liability, ending	<u>\$ 14,197,242</u>	<u>\$ 15,026,681</u>	<u>\$ 16,028,334</u>	<u>\$ 16,499,993</u>	<u>\$ 17,437,059</u>	<u>\$ 19,119,813</u>
Plan fiduciary net position						
Contributions - employer	\$ 308,820	\$ 329,381	\$ 336,720	\$ 288,588	\$ 297,525	\$ 235,463
Contributions - employee	197,188	193,349	197,261	210,624	204,311	212,351
Net investment income	1,802,418	612,704	245,617	1,734,000	1,174,317	1,128,516
Benefit payments, including refunds of employee contributions	(376,365)	(433,146)	(562,945)	(495,181)	(637,522)	(623,967)
Administrative expense	(9,511)	(8,173)	(8,604)	(9,804)	(10,045)	(11,054)
Other	95	(130)	(104)	(1,553)	(1,050)	(713)
Net change in plan fiduciary net position	1,922,645	693,985	207,945	1,726,674	1,027,536	940,596
Plan fiduciary net position, beginning	11,335,104	13,257,749	13,951,734	14,159,679	15,886,353	16,913,889
Plan fiduciary net position, ending	<u>\$ 13,257,749</u>	<u>\$ 13,951,734</u>	<u>\$ 14,159,679</u>	<u>\$ 15,886,353</u>	<u>\$ 16,913,889</u>	<u>\$ 17,854,485</u>
Net pension liability	<u>\$ 939,493</u>	<u>\$ 1,074,947</u>	<u>\$ 1,868,655</u>	<u>\$ 613,640</u>	<u>\$ 523,170</u>	<u>\$ 1,265,328</u>
Plan fiduciary net position as a percentage of the total pension liability	93.38%	92.85%	88.34%	96.28%	97.00%	93.38%
Covered payroll	<u>\$ 3,943,666</u>	<u>\$ 3,897,762</u>	<u>\$ 4,026,779</u>	<u>\$ 4,083,082</u>	<u>\$ 4,230,543</u>	<u>\$ 4,445,820</u>
Net pension liability as a percentage of the total covered payroll	23.82%	27.58%	46.41%	15.03%	12.37%	28.46%

(1) This schedule is intended to present 10 years of information. GASB 68 and 71 were implemented in fiscal year 2015, and additional years will be presented as the information becomes available.

* The amounts presented have a measurement date of the previous fiscal year end.

See accompanying notes and independent auditor's report.

Exhibit 5

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Schedule of Employer Pension Contributions
Required Supplementary Information (Unaudited)
Last Ten Fiscal Years (1)

Fiscal year	Contractually required contribution	Contributions in relation to contractually required contribution	Contribution deficiency (excess)	Employer's covered payroll	Contributions as a % of covered payroll
2015	\$ 330,920	\$ 330,920	\$ -	\$ 3,897,762	8.49%
2016	341,874	341,874	-	4,026,779	8.49%
2017	297,668	297,668	-	4,083,082	7.29%
2018	308,672	308,672	-	4,230,543	7.29%
2019	250,534	250,534	-	4,445,820	5.63%
2020	265,027	265,027	-	4,673,979	5.67%

(1) This schedule is intended to present 10 years of information. GASB 68 and 71 were implemented in fiscal year 2015, and additional years will be presented as the information becomes available.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Schedule of Employer's Share of Retiree Healthcare OPEB Liability (1) (2)
 Required Supplementary Information (Unaudited)
 Last Ten Fiscal Years*

Fiscal year ending June 30,	2020	2019	2018
Employer's proportion of the County's Retiree Healthcare OPEB liability	7.30%	7.35%	7.35%
Employer's proportionate share of the County's Retiree Healthcare OPEB liability	\$ 381,436	\$ 432,969	\$ 406,742
Fiduciary net position as a % of total OPEB liability	0.00%	0.00%	0.00%
Expected average remaining service years of all participants	6	7	7

(1) This schedule is intended to present 10 years of information. GASB 75 was implemented in fiscal year 2018; additional years will be presented as the information becomes available.

(2) This OPEB plan does not depend on salary information.

* The amounts presented have a measurement date of the previous fiscal year end.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Schedule of Employer OPEB - Retiree Healthcare Contributions
 Required Supplementary Information (Unaudited)
 Last Ten Fiscal Years (1) (2)

Fiscal year	Actuarially determined contribution	Contributions in relation to actuarially determined contribution	Contribution deficiency (excess)
2018	\$ 27,725	\$ -	\$ 27,725
2019	37,604	-	37,604
2020	28,017	-	28,017

(1) This schedule is intended to present 10 years of information. GASB 75 was implemented in fiscal year 2018; additional years will be presented as the information becomes available.

(2) This OPEB plan does not depend on salary information.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY

Schedule of Changes in the Net OPEB - Health Insurance Credit (HIC) Liability
 Required Supplementary Information (Unaudited)
 Last Ten Fiscal Years (1) *

	2018	2019	2020
Total OPEB - HIC liability			
Service cost	\$ 3,682	\$ 3,588	\$ 3,579
Interest cost	10,769	11,121	11,031
Changes of benefit terms	-	-	-
Differences between expected and actual experience	-	(7,706)	(3,892)
Changes in assumptions	(3,953)	-	4,095
Benefit payments, including refunds of employee contributions	(3,508)	(7,440)	(9,131)
Net change in total OPEB - HIC liability	6,990	(437)	5,682
Total OPEB - HIC liability, beginning	155,602	162,592	162,155
Total OPEB - HIC liability, ending (a)	<u>\$ 162,592</u>	<u>\$ 162,155</u>	<u>\$ 167,837</u>
Plan fiduciary net position - HIC			
Contributions - employer	8,166	8,467	8,002
Contributions - employee	-	-	-
Net investment income	10,122	7,150	6,922
Benefit payments, including refunds of employee contributions	(3,508)	(7,440)	(9,131)
Administrative expense	(170)	(170)	(151)
Other	494	(494)	(8)
Net change in plan fiduciary net position - HIC	15,104	7,513	5,634
Plan fiduciary net position - HIC, beginning	85,165	100,269	107,782
Plan fiduciary net position - HIC, ending (b)	<u>100,269</u>	<u>107,782</u>	<u>113,416</u>
Net OPEB - HIC liability (a) - (b)	<u>\$ 62,323</u>	<u>\$ 54,373</u>	<u>\$ 54,421</u>
Plan fiduciary net position - HIC as a percentage of the total OPEB - HIC liability	61.67%	66.47%	67.58%
Covered payroll	\$ 4,083,082	\$ 4,230,543	\$ 4,445,820
Net OPEB - HIC liability as a percentage of the total covered payroll	1.53%	1.29%	1.22%

(1) This schedule is intended to present 10 years of information. GASB 75 were implemented in fiscal year 2018, and additional years will be presented as the information becomes available.

* The amounts presented have a measurement date of the previous fiscal year end.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY
Schedule of Employer OPEB - Health Insurance Credit Contributions
Required Supplementary Information (Unaudited)
Last Ten Fiscal Years (1)

Fiscal Year	Contractually required contribution	Contributions in relation to contractually required contribution	Contribution deficiency (excess)	Employer's covered payroll	Contributions as a % of covered payroll
2018	\$ 8,461	\$ 8,467	\$ (6)	\$ 4,230,543	0.20%
2019	\$ 8,002	\$ 8,467	\$ (465)	\$ 4,445,820	0.19%
2020	\$ 8,413	\$ 8,413	\$ -	\$ 4,673,979	0.18%

(1) This schedule is intended to present 10 years of information. GASB 75 was implemented in fiscal year 2018, and additional years will be presented as the information becomes available.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY
Schedule of Employer's Share of Net Group Life Insurance (GLI) OPEB Liability (1)
Required Supplementary Information (Unaudited)
Last Ten Fiscal Years*

	<u>2018</u>	<u>2019</u>	<u>2020</u>
Employer's proportion of the net GLI OPEB liability	0.02217%	0.02234%	0.02269%
Employer's proportionate share of the net GLI OPEB liability	\$ 333,000	\$ 340,000	\$ 369,227
Employer's covered payroll	\$ 4,083,082	\$ 4,230,543	\$ 4,445,820
Employer's proportionate share of the net GLI OPEB liability as a percentage of its covered payroll	8.16%	8.04%	8.31%
Plan fiduciary net position as a % of total GLI OPEB liability	48.86%	51.22%	52.00%

(1) This schedule is intended to present 10 years of information. GASB 75 was implemented in fiscal year 2018; additional years will be presented as the information becomes available.

* The amounts presented have a measurement date of the previous fiscal year end.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY
Schedule of Employer OPEB - Group Life Insurance Contributions
Required Supplementary Information (Unaudited)
Last Ten Fiscal Years* (1)

Fiscal Year	Contractually required contribution	Contributions in relation to contractually required contribution	Contribution deficiency (excess)	Employer's covered payroll	Contributions as a % of covered payroll
2018	\$ 21,999	\$ 22,168	\$ (169)	\$ 4,230,543	0.52%
2019	\$ 23,118	\$ 21,000	\$ 2,118	\$ 4,445,820	0.47%
2020	\$ 23,131	\$ 24,492	\$ (1,361)	\$ 4,673,979	0.52%

(1) This schedule is intended to present 10 years of information. GASB 75 was implemented in fiscal year 2018, and additional years will be presented as the information becomes available.

See accompanying notes and independent auditor's report.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Required Supplementary Information (Unaudited)
June 30, 2020 and 2019

1) Pension - Changes of Benefit Terms

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

2) Pension - Changes of Assumptions

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

All Others (Non 10 Largest) - Non-Hazardous Duty:

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 rates to better fit experience at each age and service year through 9 years of service
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75%

3) OPEB Retiree Healthcare - Trust Arrangement and Funding Policy

The Authority does not intend to establish a trust to pre-fund the obligation. The anticipated growth in the net OPEB liability is based on contributions to the benefit plan on a pay-as-you-go cost basis.

4) OPEB Retiree Healthcare - Changes of Benefit Terms

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

5) OPEB Retiree Healthcare - Changes of Assumptions

The following change in actuarial assumptions were made based on the most recent actuarial valuation:

<u>Measurement Date</u>	<u>Discount Rate</u>
June 30, 2017	3.58%
June 30, 2018	3.62%
June 30, 2019	3.13%

6) OPEB Health Insurance Credit and Group Life Insurance - Changes of Benefit Terms

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

7) OPEB Group Life Insurance – Changes of Assumptions

The actuarial assumptions used in the June 30, 2018 and 2017 valuations were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the change in the discount rate for the June 30, 2018 valuation, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study are as follows:

See independent auditors' report.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Required Supplementary Information (Unaudited)
June 30, 2020 and 2019

7) OPEB Group Life Insurance – Changes of Assumptions, Continued

General State Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement age 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	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Teachers:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement age 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	Adjusted rates to better match experience
Salary Scale	No change
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

SPORS Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 85%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

VaLORS Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 50% to 35%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

See independent auditors' report.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Required Supplementary Information (Unaudited)
June 30, 2020 and 2019

7) OPEB Group Life Insurance – Changes of Assumptions, Continued

JRS Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Largest 10 Locality Employers – General Employees:

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
Line of Duty Disability	Increased rate from 14% to 20%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Non-Largest 10 Locality Employers – General Employees:

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
Line of Duty Disability	Increased rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

Largest 10 Locality Employers – Hazardous Duty Employees:

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
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

See independent auditors' report.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Notes to Required Supplementary Information (Unaudited)
June 30, 2020 and 2019

7) OPEB Group Life Insurance – Changes of Assumptions, Continued

Non-Largest 10 Locality Employers – Hazardous Duty Employees:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

8) OPEB Health Insurance Credit – Changes of Assumptions

The actuarial assumptions used in the June 30, 2018 and 2017 valuations were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the change in the discount rate for the June 30, 2018 valuation, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study are as follows:

Non-Largest 10 Locality Employers – General Employees

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
Line of Duty Disability	Increased rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75% for the June 30, 2018 valuation

See independent auditors' report.

SUPPLEMENTARY INFORMATION

See independent auditors' report.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Schedule of Net Position – by Activity
June 30, 2020
(with comparative totals for 2019)

			Totals	
	Water operations	Sewer operations	2020	2019
Assets				
Current assets:				
Cash and cash equivalents	\$ 1,544,563	\$ 1,544,061	\$ 3,088,624	\$ 1,589,107
Investments	23,889,633	25,939,275	49,828,908	47,930,531
Restricted cash and cash equivalents	9,401,879	-	9,401,879	569,708
Accounts receivable, customers	1,509,729	902,847	2,412,576	3,637,029
Accounts receivable, other	1,044	-	1,044	66,809
Note receivable	1,090	-	1,090	1,090
Interest receivable	146,705	146,705	293,410	296,438
Inventories	1,109,615	-	1,109,615	915,755
Total current assets	37,604,258	28,532,888	66,137,146	55,006,467
Noncurrent assets:				
Capital assets:				
Non-depreciable	5,141,839	969,492	6,111,331	6,180,709
Depreciable	84,729,457	61,741,624	146,471,081	148,498,709
Net capital assets	89,871,296	62,711,116	152,582,412	154,679,418
Total assets	127,475,554	91,244,004	218,719,558	209,685,885
Deferred Outflows of Resources				
Deferred charge on refunding, net	1,510,736	-	1,510,736	1,586,907
Deferred pension	407,816	407,815	815,631	338,772
Deferred OPEB group life insurance (GLI)	38,515	38,514	77,029	38,000
Deferred OPEB health insurance credit (HIC)	5,950	5,951	11,901	8,467
Deferred OPEB retiree healthcare	6,531	6,531	13,062	15,777
Total deferred outflows of resources	1,969,548	458,811	2,428,359	1,987,923
Total assets and deferred outflows of resources	\$ 129,445,102	\$ 91,702,815	\$ 221,147,917	\$ 211,673,808
Liabilities				
Current liabilities:				
Accounts payable, trade	\$ 399,204	\$ 29,697	\$ 428,901	\$ 1,071,918
Accrued salaries	20,364	2,806	23,170	12,250
Compensated absences, current portion	356,429	-	356,429	312,373
Due to James City County	456,741	37,304	494,045	996,066
Deposits	830,721	-	830,721	614,431
Interest payable	328,979	-	328,979	320,856
Bond payable, current portion	1,337,907	-	1,337,907	718,907
Total current liabilities	3,730,345	69,807	3,800,152	4,046,801
Noncurrent liabilities:				
Advances for construction	5,882	27,020	32,902	32,902
Compensated absences, net of current portion	118,811	-	118,811	104,124
Bonds payable, net of current portion	28,984,574	-	28,984,574	21,187,481
Net pension liability	632,664	632,664	1,265,328	523,170
Net retiree healthcare OPEB liability	190,718	190,718	381,436	432,970
Net GLI OPEB liability	184,613	184,614	369,227	340,000
Net HIC OPEB liability	27,211	27,210	54,421	54,372
Total noncurrent liabilities	30,144,473	1,062,226	31,206,699	22,675,019
Total liabilities	33,874,818	1,132,033	35,006,851	26,721,820
Deferred Inflows of Resources				
Deferred pension	131,212	131,213	262,425	418,971
Deferred OPEB retiree healthcare	38,303	38,302	76,605	21,899
Deferred OPEB GLI	12,529	12,529	25,058	33,000
Deferred OPEB HIC	6,134	6,133	12,267	11,909
Total deferred inflows of resources	188,178	188,177	376,355	485,779
Net Position				
Net position:				
Net investment in capital assets	69,801,148	62,711,116	132,512,264	134,359,937
Restricted for:				
Capital projects	8,741,597	-	8,741,597	-
Debt service	660,282	-	660,282	569,708
Unrestricted	16,179,079	27,671,489	43,850,568	49,536,564
Total net position	95,382,106	90,382,605	185,764,711	184,466,209
Total liabilities, deferred inflows of resources and net position	\$ 129,445,102	\$ 91,702,815	\$ 221,147,917	\$ 211,673,808

See accompanying independent auditor's report.

Exhibit B

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Schedule of Revenues, Expenses, and Changes in Net Position – by Activity
Year ended June 30, 2020
(with comparative totals for year ended June 30, 2019)

	Water operations	Sewer operations	Totals	
			2020	2019
Operating revenues:				
Water and sewer services	\$ 11,252,713	\$ 6,439,941	\$ 17,692,654	\$ 16,299,006
Other	377,238	107,659	484,897	480,685
Total operating revenues	<u>11,629,951</u>	<u>6,547,600</u>	<u>18,177,551</u>	<u>16,779,691</u>
Operating expenses:				
Salaries	2,715,933	2,377,099	5,093,032	4,721,993
Fringe benefits	1,133,755	942,150	2,075,905	1,436,239
Operating supplies	829,688	400,139	1,229,827	1,200,220
Maintenance	530,527	1,204,854	1,735,381	2,193,410
Utilities	671,046	248,699	919,745	974,168
Contractual fees	531,626	459,852	991,478	872,374
Other	174,444	144,606	319,050	270,685
Total operating expenses	<u>6,587,019</u>	<u>5,777,399</u>	<u>12,364,418</u>	<u>11,669,089</u>
Operating income before depreciation and amortization	5,042,932	770,201	5,813,133	5,110,602
Depreciation and amortization	<u>5,119,420</u>	<u>2,996,204</u>	<u>8,115,624</u>	<u>7,922,613</u>
Operating loss	<u>(76,488)</u>	<u>(2,226,003)</u>	<u>(2,302,491)</u>	<u>(2,812,011)</u>
Nonoperating revenues (expenses):				
Facility charges	1,422,900	963,950	2,386,850	2,949,130
Investment income	1,020,718	1,012,699	2,033,417	1,904,327
Gain on disposal of capital assets	17,813	-	17,813	14,522
Interest expense	<u>(854,412)</u>	<u>-</u>	<u>(854,412)</u>	<u>(727,965)</u>
Net nonoperating revenues	<u>1,607,019</u>	<u>1,976,649</u>	<u>3,583,668</u>	<u>4,140,014</u>
Income before capital contributions	1,530,531	(249,354)	1,281,177	1,328,003
Capital asset contributions	<u>1,000</u>	<u>16,325</u>	<u>17,325</u>	<u>5,137,825</u>
Changes in net position	1,531,531	(233,029)	1,298,502	6,465,828
Net position, beginning of year	91,689,028	92,777,181	184,466,209	178,000,381
Net position, end of year	<u>\$ 93,220,559</u>	<u>\$ 92,544,152</u>	<u>\$ 185,764,711</u>	<u>\$ 184,466,209</u>

See accompanying independent auditor's report.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Schedule of Operating Revenues and Expenses – Budget and Actual – by Activity
Year ended June 30, 2020

	Water operations		Variance favorable (unfavorable)	Sewer operations		Variance favorable (unfavorable)
	Actual	Budget		Actual	Budget	
Operating revenues:						
Water and sewer services	\$ 11,252,713	\$ 10,625,139	\$ 627,574	\$ 6,439,941	\$ 6,207,125	\$ 232,816
Other	377,238	86,500	290,738	107,659	88,000	19,659
Total operating revenues	<u>\$ 11,629,951</u>	<u>\$ 10,711,639</u>	<u>\$ 918,312</u>	<u>\$ 6,547,600</u>	<u>\$ 6,295,125</u>	<u>\$ 252,475</u>
Operating expenses:						
Salaries	\$ 2,715,933	\$ 2,798,206	\$ 82,273	\$ 2,377,099	\$ 2,482,382	\$ 105,283
Fringe benefits	1,133,755	1,103,609	(30,146)	942,150	957,444	15,294
Operating supplies	829,688	1,042,734	213,046	400,139	542,802	142,663
Maintenance *	530,527	1,269,831	739,304	1,204,854	1,504,779	299,925
Utilities	671,046	786,882	115,836	248,699	314,190	65,491
Contractual fees	531,626	643,236	111,610	459,852	541,021	81,169
Other	174,444	186,620	12,176	144,606	128,241	(16,365)
Total operating expenses	<u>\$ 6,587,019</u>	<u>\$ 7,831,118</u>	<u>\$ 1,244,099</u>	<u>\$ 5,777,399</u>	<u>\$ 6,470,859</u>	<u>\$ 693,460</u>

*Includes budget from Capital Improvements Program for expenses related to the Department of Environmental Quality consent order.

See accompanying independent auditor's report.

STATISTICAL SECTION

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Statistical Section Overview

This part of the James City Service Authority's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures and required supplementary information says about the Authority's overall financial health.

Contents

Financial Trends **Tables 1-2**

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

Revenue Capacity **Tables 3-4**

These tables contain information to help the reader assess the factors affecting the Authority's ability to generate its operating revenues.

Debt Capacity **Tables 5-7**

These tables present information to help the reader assess the affordability of the Authority's current level of outstanding debt and its ability to issue additional debt in the future.

Demographic & Economic Information **Tables 8-9**

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

Operation Information **Tables 10-16**

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

Sources: Unless otherwise noted, the information in these tables is derived from the comprehensive annual financial reports for the relevant year.

Table 1

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Net Position
Last Ten Fiscal Years

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Net Position										
Net investment in capital assets	\$ 135,641,623	\$ 134,872,139	\$ 139,966,206	\$ 137,922,955	\$ 137,173,064	\$ 139,312,785	\$ 135,887,432	\$ 131,175,547	\$ 134,359,937	\$ 132,512,264
Restricted for debt service	-	-	-	-	-	729,605	677,614	567,011	569,708	-
Restricted for capital projects	4,740,769	4,876,760	2,620,384	2,601,160	2,716,277	-	-	-	-	-
Unrestricted	<u>34,057,874</u>	<u>34,106,903</u>	<u>29,699,494</u>	<u>29,159,119</u>	<u>32,903,518</u>	<u>37,014,202</u>	<u>40,532,314</u>	<u>46,257,823</u>	<u>49,733,750</u>	<u>43,850,568</u>
Total net position	<u>\$ 174,440,266</u>	<u>\$ 173,855,802</u>	<u>\$ 172,286,084</u>	<u>\$ 169,683,234</u>	<u>\$ 172,792,859</u>	<u>\$ 177,056,592</u>	<u>\$ 177,097,360</u>	<u>\$ 178,000,381</u>	<u>\$ 184,663,395</u>	<u>\$ 176,362,832</u>

Table 2

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Changes in Revenues, Expenses and Net Position
Last Ten Fiscal Years

	2011	2012	2013	2014	2015	2016	2017	2018 (as restated)	2019	2020
Operating revenues:										
Water and sewer services	\$ 12,603,818	\$ 11,718,297	\$ 12,002,533	\$ 11,825,702	\$ 12,588,470	\$ 12,774,840	\$ 14,400,361	\$ 15,942,612	\$ 16,299,006	\$ 17,692,654
Water supply proffers	125,192	26,967	13,362	57,446	450,262	218,987	298,054	293,900	213,825	220,804
Rental income	171,401	144,381	164,875	160,914	325,991	326,377	377,880	354,987	124,964	127,656
Other	190,467	198,025	242,028	285,892	214,104	272,599	158,917	44,045	141,896	136,437
Storm cost reimbursement	-	349,541	-	900	-	-	-	-	-	-
Total operating revenues	<u>13,090,878</u>	<u>12,437,211</u>	<u>12,422,798</u>	<u>12,330,854</u>	<u>13,578,827</u>	<u>13,592,803</u>	<u>15,235,212</u>	<u>16,635,544</u>	<u>16,779,691</u>	<u>18,177,551</u>
Operating expenses:										
Salaries	4,040,543	4,144,696	4,306,155	4,288,721	4,257,924	4,347,283	4,384,445	4,552,923	4,721,993	5,093,032
Fringe benefits	1,585,037	1,584,707	1,636,038	1,337,328	1,546,525	1,583,480	1,799,798	1,511,372	1,436,239	2,075,905
Operating supplies	888,559	899,095	822,882	882,253	836,288	1,094,002	1,045,132	1,150,760	1,200,220	1,229,827
Maintenance	3,193,116	3,065,512	3,364,910	3,501,598	2,067,464	1,670,023	1,913,322	2,013,679	2,193,410	1,735,381
Utilities	813,478	917,498	862,665	875,020	861,074	870,220	899,294	913,104	974,168	919,745
Contractual fees	873,110	882,505	910,491	836,634	915,365	903,463	920,714	877,652	872,374	991,478
Other	697,629	560,671	504,573	496,851	497,803	233,233	215,633	222,249	270,685	319,050
Storm costs	-	359,921	-	-	-	-	-	-	-	-
Total operating expenses	<u>12,091,472</u>	<u>12,414,605</u>	<u>12,407,714</u>	<u>12,218,405</u>	<u>10,982,443</u>	<u>10,701,704</u>	<u>11,178,338</u>	<u>11,241,739</u>	<u>11,669,089</u>	<u>12,364,418</u>
Operating income before depreciation and amortization	999,406	22,606	15,084	112,449	2,596,384	2,891,099	4,056,874	5,393,805	5,110,602	5,813,133
Depreciation and amortization	<u>7,273,473</u>	<u>7,469,016</u>	<u>7,619,431</u>	<u>7,670,391</u>	<u>7,810,808</u>	<u>7,930,632</u>	<u>8,194,083</u>	<u>7,992,438</u>	<u>7,922,613</u>	<u>8,115,624</u>
Operating loss	<u>(6,274,067)</u>	<u>(7,446,410)</u>	<u>(7,604,347)</u>	<u>(7,557,942)</u>	<u>(5,214,424)</u>	<u>(5,039,533)</u>	<u>(4,137,209)</u>	<u>(2,598,633)</u>	<u>(2,812,011)</u>	<u>(2,302,491)</u>
Nonoperating revenues (expenses):										
Facility charges	3,839,702	3,165,330	3,868,654	4,305,728	3,863,650	3,243,535	4,664,316	3,581,360	2,949,130	2,386,850
Investment income (loss)	509,675	351,929	(1,249,111)	267,061	248,207	519,767	90,148	43,940	1,904,327	2,033,417
Gain (loss) on disposal of capital assets	34,324	21,285	(44,507)	15,352	23,497	(193,113)	49,018	(165,655)	14,522	17,813
Insurance recovery	-	-	-	-	-	14,219	1,000	-	-	-
Bond issuance costs	-	-	-	-	-	(402,364)	-	-	#REF!	#REF!
Interest expense	<u>(1,531,715)</u>	<u>(1,478,060)</u>	<u>(1,141,052)</u>	<u>(1,114,130)</u>	<u>(1,095,684)</u>	<u>(744,124)</u>	<u>(778,073)</u>	<u>(754,226)</u>	<u>(727,965)</u>	<u>(854,412)</u>
Net nonoperating revenues	<u>2,851,986</u>	<u>2,060,484</u>	<u>1,433,984</u>	<u>3,474,011</u>	<u>3,039,670</u>	<u>2,437,920</u>	<u>4,026,409</u>	<u>2,705,419</u>	<u>#REF!</u>	<u>#REF!</u>
Income (loss) before contributions	(3,422,081)	(5,385,926)	(6,170,363)	(4,083,931)	(2,174,754)	(2,601,613)	(110,800)	106,786	1,328,003	1,281,177
Capital asset contributions	<u>1,750,073</u>	<u>5,395,362</u>	<u>4,600,645</u>	<u>3,388,700</u>	<u>5,284,379</u>	<u>6,865,346</u>	<u>1,509,214</u>	<u>796,235</u>	<u>5,137,825</u>	<u>17,325</u>
Changes in net position	<u>\$ (1,672,008)</u>	<u>\$ 9,436</u>	<u>\$ (1,569,718)</u>	<u>\$ (695,231)</u>	<u>\$ 3,109,625</u>	<u>\$ 4,263,733</u>	<u>\$ 1,398,414</u>	<u>\$ 903,021</u>	<u>\$ 6,465,828</u>	<u>\$ 1,298,502</u>

Table 3

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Water and Sewer Rates
 Last Ten Fiscal Years

Quarterly Continuing Service Charges for Residential Water Service				
Fiscal Year	Basic Charge	Rate per 1,000 gallons (1)	Quarterly Total (2)	% Change
2011	\$ -	\$2.85 - \$3.45 - \$9.80	\$ 63.45	0.0%
2012	-	2.85 - 3.45 - 9.80	63.45	0.0%
2013	-	2.85 - 3.45 - 9.80	63.45	0.0%
2014	-	2.85 - 3.45 - 9.80	63.45	0.0%
2015	-	2.85 - 3.45 - 9.80	63.45	0.0%
2016	7.22	2.47 - 4.93 - 11.59	73.85	16.4%
2017	8.19	2.80 - 5.60 - 13.15	83.79	13.5%
2018	9.30	3.18 - 6.36 - 14.93	95.16	13.6%
2019	10.56	3.61 - 7.22 - 16.95	108.03	13.5%
2020	11.99	4.10 - 8.19 - 19.24	122.63	13.5%

Quarterly Continuing Service Charges for Residential Sewer Service				
Fiscal Year	Basic Charge	Rate per 1,000 gallons	Quarterly Total (2)	% Change
2011	\$ -	\$ 2.80	\$ 58.80	0.0%
2012	-	2.80	58.80	0.0%
2013	-	3.22	67.62	15.0%
2014	-	3.22	67.62	0.0%
2015	-	3.22	67.62	0.0%
2016	5.66	2.93	67.19	-0.6%
2017	5.77	2.99	68.56	2.0%
2018	5.89	3.05	69.94	2.0%
2019	5.95	3.08	70.63	1.0%
2020	6.01	3.11	71.32	1.0%

(1) Inverted Block Rate Structure:

1st Block based on 0 to 15,000 gallons used per quarter.

2nd Block based on 15,000 to 30,000 gallons used per quarter.

3rd Block based on over 30,000 gallons used per quarter.

(2) Assumes 21,000 gallons average quarterly use.

Source: James City Service Authority Schedule of Rates and Fees

Table 4

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Largest Utility Customers (1)
 Current Year and Nine Years Ago

	2020			2011		
	Gallons Billed	Service Charges	Rank	Gallons Billed	Service Charges	Rank
Historic Powhatan Resort	31,752,668	\$ 274,426	1	N/A	N/A	N/A
Owens-Illinois*	20,443,582	162,914	2	19,329,180	\$ 120,807	2
Williamsburg Landing	16,394,761	148,702	3	N/A	N/A	N/A
Williamsburg Plantation	15,950,038	146,590	4	N/A	N/A	N/A
Country Village Mobile Home Park (sewer only)	14,293,817	44,397	5	16,742,484	46,879	4
Patriots Colony	12,636,434	114,826	6	21,058,270	131,614	1
Greystone*	12,414,664	98,163	7	11,013,000	68,831	8
Escalante Kingsmill Resort (sewer only)	11,818,384	36,928	8	N/A	N/A	N/A
Williamsburg-James City County Schools*	11,432,251	94,321	9	15,946,900	94,457	5
Marriott Ownership Resorts	11,279,896	102,269	10	N/A	N/A	N/A
Eastern State Hospital *	-	-		18,696,500	116,853	3
Windy Hill Trailer (sewer only)	-	-		12,970,320	36,317	6
Platinum Management	-	-		11,115,000	69,469	7
Rolling Meadows	-	-		8,616,700	53,854	9
Oxford-James	-	-		8,425,000	52,659	10
Total	<u>158,416,495</u>	<u>\$ 1,223,537</u>		<u>143,913,354</u>	<u>\$ 791,740</u>	

* Subject to wastewater sub-meter adjustments

(1) Reports implemented in fiscal year 2019 improved identification of customers with numerous individual accounts such as timeshare resorts.

Source: James City Service Authority, Administration Department

Table 5

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Ratio of Outstanding Debt
 Last Ten Fiscal Years

Fiscal year	Revenue bonds	Number of water connections	Debt per water connection
2011	34,469,298	19,719	1,748.0
2012	32,938,175	20,070	1,641.2
2013	25,185,000	20,549	1,225.6
2014	24,660,000	20,858	1,182.3
2015	24,115,000	21,246	1,135.0
2016	24,118,109	21,669	1,113.0
2017	23,269,202	22,133	1,051.3
2018	22,600,295	22,540	1,002.7
2019	21,906,388	22,832	959.5
2020	30,322,481	23,116	1,311.8

Note: The James City Service Authority has no legal debt margin nor overlapping debt.

Source: James City Service Authority, Administration Department

Table 6

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Revenue Bond Coverage
 Last Ten Fiscal Years

Fiscal year	Gross revenue	Direct operating expenses	Net revenue available for debt service	Principal	Interest	Total	Coverage
2011	\$ 17,474,579	\$ 12,091,472	\$ 5,383,107	\$ 1,490,000	\$ 1,537,750	\$ 3,027,750	1.78
2012	15,975,755	12,414,605	3,561,150	1,545,000	1,483,100	3,028,100	1.18
2013	14,997,834	12,407,714	2,590,120	525,000	1,119,306	1,644,306	1.58
2014	16,918,995	12,218,405	4,700,590	545,000	1,100,931	1,645,931	2.86
2015	17,714,181	10,982,443	6,731,738	565,000	1,081,856	1,646,856	4.09
2016	17,370,324	10,701,704	6,668,620	785,000	571,161	1,356,161	4.92
2017	20,128,694	10,904,086	9,224,608	605,000	749,450	1,354,450	6.81
2018	21,633,148	11,241,739	9,019,105	630,000	725,250	1,355,250	6.65
2019	21,647,670	11,669,089	9,978,581	655,000	700,050	1,355,050	7.36
2020	22,615,631	12,364,418	10,251,213	1,274,000	802,305	2,076,305	4.94

Note: The James City Service Authority has no legal debt margin nor overlapping debt.

Table 7

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Outstanding Debt for James City County
 Last Ten Fiscal Years

Fiscal year	General obligation bonds	Capital leases	Lease revenue bonds	Total
2011	\$ 93,283,624	\$ 10,285,522	\$ 104,055,000	\$ 207,624,146
2012	86,134,103	9,235,074	104,472,000	199,841,177
2013	80,004,294	1,098,854	123,034,000	204,137,148
2014	72,164,244	984,528	114,416,000	187,564,772
2015	65,458,589	858,833	103,604,000	169,921,422
2016	49,844,842	728,456	130,451,552	181,024,850
2017	44,155,482	4,195,266	119,855,768	168,206,516
2018	38,348,323	3,183,141	109,069,984	150,601,448
2019	33,966,163	2,146,958	112,183,815	148,296,936
2020	29,479,003	1,086,117	102,028,321	132,593,441

Table 8

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 County Demographic and Economic Statistics
 Last Ten Calendar Years

Calendar year	Population (1)	Personal income (2)	Per capita personal income (2)	Unemployment percentage (1)
2011	68,500	\$ 4,474,583,000	\$ 54,224	6.1%
2012	69,451	4,703,429,000	55,990	5.7%
2013	70,376	4,745,679,000	55,550	5.3%
2014	71,254	4,954,338,000	56,960	4.9%
2015	72,682	5,160,028,000	58,504	4.3%
2016	73,767	5,344,090,000	59,632	4.1%
2017	74,795	5,646,096,000	62,350	3.8%
2018	75,776	5,869,000,000	64,466	2.9%
2019	76,211	6,066,000,000	66,306	2.7%
2020	77,202	**	**	**

Source:

- (1) Planning Division, supplemented by data from Virginia Employment Commission (<http://www.vec.virginia.gov/>)
- (2) Data from the Bureau of Economic Analysis (<http://www.bea.gov/>), and has combined data for James City County and the City of Williamsburg
- ** Statistics not yet available

Table 9

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Principal Employers in James City County
 Current Year and Nine Years Ago

	2020			2011		
	Employees	Rank	Percent of total County employment	Employees	Rank	Percent of total County employment
Williamsburg-James City County Public Schools	1000+	1	5.14%	1000+	2	6.01%
Busch Entertainment	1000+	2	**	1000+	1	13.29%
Wal-Mart Distribution Center	500-999	3	2.84%	500-999	8	1.82%
James City County	500-999	4	2.46%	500-999	5	2.82%
Riverside Regional Medical Center	500-999	5	1.74%			
Eastern State Hospital	500-999	6	1.69%	500-999	4	3.14%
Anheuser-Busch Inbev	500-999	7	1.49%	500-999	6	2.31%
Williamsburg Landing	500-999	8	1.05%			
Owens & Minor/AVID	250-499	9	0.98%			
Jamestown-Yorktown Foundation	250-499	10	0.71%	250-499	10	1.32%
Lumber Liquidators				1000+	3	3.75%
Busch Properties, Inc.				500-999	7	2.27%
Avid Medical				250-499	9	1.46%
			<u>18.10%</u>			<u>38.19%</u>

Source: Economic Development, James City County and Virginia Employment Commission

** Busch Gardens became publicly traded during fiscal year 2013, and information is not available.

Table 10

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Schedule of Insurance in Force
 June 30, 2020

Insurer	Type of coverage	Policy number	Policy period	Annual Premium
Virginia Association of Counties Group Self-Insurance Risk Pool (VACoRP)	General liability, property, automobile, public officials' liability, crime, cyber risk, excess risk	VA-JA-131D-20	7/1/2019 - 7/1/2020	\$ 96,493
Virginia Association of Counties Group Self-Insurance Risk Pool (VACoRP)	Workers' compensation	VA-JA-131D-20	7/1/2019 - 7/1/2020	\$ 70,291

Table 11

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Full-time Employees by Function
 Last Ten Fiscal Years

Function	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Administration	60	63	63	63	63	63	63	63	68	68
Water	15	15	15	15	15	15	15	17	17	17
Sewer	11	11	11	11	11	11	11	11	11	11
Total	86	89	89	89	89	89	89	91	96	96

Source: James City County, Fiscal Year Adopted Budgets

Table 12

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Operating Indicators by Function
Last Ten Fiscal Years

Function	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water:										
New connections	388	351	448	359	388	423	464	407	292	284
Water main breaks	44	31	25	21	26	21	34	25	30	28
Sewer:										
New connections	375	296	347	261	380	447	470	414	287	290

Source: James City Service Authority, Administration Department

Table 13

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Capital Asset Statistics by Function
Last Ten Fiscal Years

Function	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water:										
Water lines (miles)	393	390	393	400	402	407	409	410	414	414
Water customers	19,719	20,070	20,549	20,858	21,246	21,669	22,133	22,540	22,832	23,116
Storage tanks (greater than 250,000 gallons)	7	7	7	7	7	7	7	7	7	7
Average ERCs (1)	20,866	19,200	18,597	18,937	19,415	18,921	20,025	20,220	19,247	18,977
Sewer:										
Sewer lines (miles)	419	423	425	430	435	439	440	440	446	446
Gallons collected (millions)	1,598	1,771	1,739	1,862	1,897	1,863	1,971	1,987	1,898	1,879
Sewer customers	21,127	21,488	21,962	22,575	22,955	23,402	23,872	24,286	24,573	24,863

(1) Equivalent Residential Connections (ERCs) are determined based upon the rated capacity of a water meter (e.g., the average amount of water which can flow through such meter on a continuous basis) as compared to the rated capacity for a typical 5/8" residential water meter.

Source: James City Service Authority, Administration Department

Table 14

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Summary of Historical Flows (MGD)
 Last Ten Fiscal Years

Function	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water:										
Average Day	5.1	4.8	4.7	4.7	4.7	4.7	5.0	5.1	4.8	4.7
Average Day in Month of Maximum Flow	7.4	6.4	6.1	5.9	6.1	5.9	6.4	7.2	6.3	6.0
Month of Maximum Flow	July	July	July	June	July	August	August	July	July	September
Sewer:										
Average Day	4.4	5.0	5.0	5.1	5.1	5.1	5.4	5.4	5.2	5.1

Source: James City Service Authority, Administration Department

Table 15

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Miscellaneous Statistics

Comparison of Area Water Bills
Annual Consumption 60,000 Gallons as of June 2020

Virginia Jurisdiction	Water Service
City of Williamsburg	\$ 381.60
City of Norfolk	491.76
City of Newport News	484.32
City of Virginia Beach	416.28
James City Service Authority	294.00

Source: James City Service Authority

Comparison of Area Sewer Bills
Annual Consumption 60,000 Gallons as of June 2020

Virginia Jurisdiction	Sewer Service *
City of Hampton	\$ 171.60
City of Newport News	330.36
City of Virginia Beach	369.72
City of Norfolk	358.56
York County	312.00
James City Service Authority	210.60

* Rates charged by the municipality. Residents of these municipalities pay a separate wastewater treatment fee to Hampton Roads Sanitation District of \$7.83 per 1,000 gallons.

Source: James City Service Authority

Availability Charges for a Typical Residential Connection (1)
Last Ten Fiscal Years

Fiscal Year	Water	Sewer	Total
2011	4,200	3,360	7,560
2012	4,200	3,360	7,560
2013	4,200	3,360	7,560
2014	4,200	3,360	7,560
2015	4,200	3,360	7,560
2016	4,200	3,360	7,560
2017	4,200	3,360	7,560
2018	4,200	3,360	7,560
2019	4,200	3,360	7,560
2020	4,200	3,360	7,560

(1) A system facilities charge for water service is assessed for each new separate service connection. The purpose of the charge is to defray in part the cost of providing major supply, transmission main, booster pumping and distribution facilities. A similar system facilities charge for sewer service is assessed for each new separate service connection. The current charge for a residential 5/8 inch meter is \$500 per bathroom fixture and has been in effect since 2008. The sewer service connection is also based on the size of the water meter and is \$400 per bathroom fixture and has been in effect since 2009.

Source: James City Service Authority

Table 16

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Rates and Fees

Wastewater Charges

(a) System Facilities Charge

A system facilities charge for wastewater collection service to be furnished through each new separate service connection which is to be made to a public sewer, regardless of who may have paid for the installation of the public sewer to which the connection is to be made, shall be paid by each applicant for service prior to the installation of service, as follows:

Metered Water Service

Commercial, industrial, institutional, multi-family residential and single-family residential:

Meter Size (inches)	Charge
5/8" Residential	\$400 per bathroom fixture
5/8" Nonresidential	2,500
3/4"	3,500
1"	4,000
1 1/2"	7,500
2"	12,000
3"	24,000
4"	37,500
5"	75,000

Nonmetered Water Service

Where water is provided by an unmetered source, the following estimated charges shall be assessed:

Activity, use	Unit	Charge
Single-family residences	Each	\$300 per bathroom fixture
Singe-family mobile homes	Each	1,000
Mobile homes in parks	Each lot	1,000
Two family, apartments and townhouses	Each	300 per bathroom fixture
Schools (with showers)	Student	80
Schools (without showers)	Student	50
Motels and hotels	Room	650 or minimum 2,500
Manufacturing	Msf	300 or minimum 1,200
Warehouses	Msf	100 or minimum 1,200
Service stations	Each	1,200
Camping facilities	Each space	500 or minimum 1,200
Restaurants	Seat	20 or minimum 1,200
Commercial	Msf	minimum 1,500

Activity, use	Unit	Charge
First	30,000 sq. ft.	\$ 500
Next	10,000 sq. ft.	450
Next	10,000 sq. ft.	400
Over	50,000 sq. ft.	350

The purpose of this charge is to defray, in part, the cost of providing force mains, pump stations, transmission mains, booster pumps, and other system facilities.

JAMES CITY SERVICE AUTHORITY
 (A Component Unit of the County of James City, Virginia)
 Rates and Fees

Wastewater Charges

(b) Local Facilities Charge

A local facilities charge of \$1,050 for each separate connection to public sewer shall be paid by each applicant who desires to secure wastewater service therefrom, which charge shall be paid prior to the approval of the application for service; provided, however, in any instance where satisfactory evidence shows that an applicant has paid the cost of installation of the local facility to which the connection is to be made, either by installing the local facility at his expense and then conveying the same to the Authority (or its predecessors) or by reimbursing the Authority (or its predecessors) for the cost of such local facilities, the local facilities charge shall be waived. Additionally, when the Authority does not install or have a rebate agreement, the local facilities charge shall also be waived. In situations where a new wastewater system has been installed by the Authority and whereas any applicant adjacent to this new system that has an existing septic system desires to receive wastewater service therefrom, the local facilities charge shall be waived for a period of 12 months from the completion date of the new wastewater system installation.

The purpose of this charge is to defray in part the cost of installing collection mains which are necessary to provide wastewater collection service to abutting properties and which have been provided at the expense of the Authority or persons, firms, or corporations other than the applicant. The charge shall be paid prior to issuance of a plumbing permit from Building Safety and Permits.

(c) Grinder Pump Installation and Maintenance Charge

Any applicant for a sewer connection requiring a residential grinder pump may purchase the grinder pump (that meets Authority standards and specifications) plus ancillary parts from the Authority at cost if the grinder pump is necessary to replace an existing septic system. In addition, if the connection to the public sewer system is replacing a septic system, the applicant is eligible for the deferred-payment plan discussed in Paragraph G, Section 2 of the James City Service Authority Regulations Governing Utility Service.

An annual grinder pump maintenance charge of \$325 shall be paid for each separate connection to a grinder pump when the operation and maintenance of said residential grinder pump is the responsibility of the Authority. The payment for this charge will be prorated in equal amounts in the customers' utility service charge billing. The Authority shall not maintain nonresidential grinder pumps or other commercial pump stations unless such utility maintenance is deemed by the Authority to be in the interest of the public health or is necessary to protect the integrity of the system, or such facility is located within a designated Reservoir Protection Zone.

(d) Services Connection Charge

A service connection charge shall be paid by each applicant for each new service connection prior to the approval of the application as follows:

<u>Service Installed by</u>	<u>Charge</u>
Developer, applicant	\$10 per connection inspection fee
Utility	Actual cost x 1.25, including overhead

The purpose of this charge is to defray the cost of installation or inspection of a service connection from the public sewer main in the street to the curb or property line. The service connection charge shall be waived provided the applicant has paid a local facilities charge and the sewer service line is not greater than six inches in diameter for a gravity main or two inches in diameter for a force main. In the event that the service connection charge is not waived, the local facilities charge will be applied against the service connection charge. waived provided the applicant has paid a local facilities charge and the sewer service line is not greater than six inches in diameter for a gravity main or two inches in diameter for a force main. In the event that the service connection charge is not waived, the local facilities charge will be applied against the service connection charge.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Rates and Fees

(e) Retail Service Rates

The wastewater service charge shall be based on usage from a metered water source where available. For wastewater service on an unmetered water source, a meter sized equivalent shall be used, based upon an estimated charge.

Metered Water Source

Metered water usage shall be reduced by a metered reading from a landscaping meter or similar device if the landscaping meter or device is approved and utilized under operating regulations adopted by Hampton Roads Sanitation District (HRSD).

A copy of the deduction meter reading provided to HRSD must be received by the Authority within 20 days prior to the end of each billing period. In the event a meter reading is not received within this time, the Authority shall bill based on total water consumption and no refund or billing adjustment shall be made.

Each customer bill shall include a Fixed Charge based upon the size of the meter serving the customer. The Fixed Charge for each billing cycle shall be calculated based on the quarterly fixed charge chart below. This Fixed Charge is for expenses associated with operating and maintaining the wastewater collection system.

Meter Size	Quarterly Fixed Charge
5/8"	\$ 6.01
3/4"	\$ 9.01
1"	\$ 15.02
1 1/2"	\$ 30.02
2"	\$ 48.03
3"	\$ 96.06
4"	\$ 150.10
6"	\$ 300.18
8"	\$ 480.30
10"	\$ 690.43

Charge for all collection and treatment of wastewater:

Volume	Collection
Per 1,000 gallons of water consumed	\$ 3.11
Per 100 cubic feet of water consumed	2.33

Nonmetered Water Source

Where no meter exists or where meter readings are not made available by the water supplier to the Authority, the estimated charges below shall be assessed.

Activity, Use	Unit	Charge
Single-family residences	Each	\$ 42.00
Singe-family mobile homes	Each	42.00
Mobile homes in parks	Each lot	37.25
Duplex, apartments and townhouses	Each	37.25
Schools (with showers)	Student	4.25
Schools (without showers)	Student	2.65
Motels and hotels	Room	18.55 or minimum 186.70
Manufacturing	Msf	11.00 or minimum 35.85
Warehouses	Msf	7.45 or minimum 46.50
Service stations	Each	49.95
Camping facilities	Each space	16.22 or minimum 64.25
Restaurants	Seat	4.95 or minimum 55.85
Commercial	Msf	18.55 or minimum 55.85
Churches	Each	40.65
Swimming pools	Sfe	40.65
Laundromats	Sfe	40.65

Commercial condensate discharge shall be billed annually at the current wastewater collection metered retail service rate. The bill shall be based on a condensate volume estimate prepared by the customer or customer's designated representative and approved by JCSA Engineering.

Others to be established when needed

The purpose of the retail service charge is to defray all other costs of providing wastewater collection, and in certain cases, treatment for domestic, commercial, and industrial uses including replacement, renewals, extensions, and repayment of moneys borrowed to acquire or construct the wastewater collection transmission system.

Table 16, continued

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Rates and Fees

Water Charges**(a) System Facilities Charge**

A system facilities charge for water service to be furnished through each new separate service connection which is to be made to a public water main, regardless of who may have paid for the installation of the public water main to which the connection is to be made, shall be paid by each applicant for service prior to the installation of the water service connection, as follows.

Commercial, industrial, institutional, multi-family residential and single-family residential:

Meter Size	Charge
5/8" Residential	\$500 per bathroom fixture
5/8" Nonresidential	2,500
3/4"	3,500
1"	4,000
1 1/2"	7,500
2"	12,000
3"	24,000
4"	37,000
6"	75,000

The purpose of this charge is to defray in part the cost of providing major supply, transmission main, booster pumping, and distribution storage facilities. The charge shall be paid prior to the issuance of a plumbing permit from Building Safety and Permits.

(b) Local Facilities Charge

A local facilities charge of \$1,300 for each separate connection to an existing water main shall be paid by each applicant who desires to secure water service therefrom, which charge shall be paid prior to the approval of the application for service; provided, however, in any instance where satisfactory evidence shows that an applicant for a connection has paid the cost of installation of the local facility to which the connection is to be made, whether by installing the local facility at his expense and then conveying the same to the Authority (or its predecessors) or by reimbursing the Authority (or its predecessors) for the cost of such local facility, the local facilities charge shall be waived.

The purpose of this charge is to defray, in part, the cost of installing mains, valves, and fire hydrants which are necessary to provide water service to abutting properties and which have been provided at the expense of the Authority or persons, firms, or corporations other than the applicant. The charge shall be paid prior to the issuance of a plumbing permit from Building Safety and Permits.

(c) Service Connection Charge

A service connection charge shall be paid by each applicant for each new service connection and meter installation prior to the approval of the application, as follows:

Installation of Connection by	Collection
Developer	\$10 per meter inspection fee
Utility	Actual cost x 1.25, including overhead

The purpose of this charge is to defray the cost of installation or inspection of a service connection from the water main in the street to the curb or property line and the installation of a meter either at the curb or property line or within the premise.

(d) Retail Service Charge

Each customer bill shall include a Fixed Charge based upon the size of the meter serving the customer. The Fixed Charge for each billing cycle shall be calculated based on the quarterly fixed charge chart below. This Fixed Charge is for expenses associated with operating and maintaining the water distribution system.

Meter Size	Quarterly Fixed Charge
5/8"	\$ 11.99
3/4"	\$ 17.97
1"	\$ 29.94
1 1/2"	\$ 59.87
2"	\$ 95.81
3"	\$ 191.60
4"	\$ 299.37
6"	\$ 598.75
8"	\$ 957.99
10"	\$ 1,377.12

Water service shall be based upon a commodity charge for all consumption, as follows:

Single Family Residential	Quarterly Use		
	Tier 1	Tier 2	Tier 3
	0-15,000	15,001-30,000	30,000+
Rate Per 1,000 Gallons	\$ 4.10	\$ 8.19	\$ 19.24

Multi-Family Residential and Non-Residential

All Meter Sizes	All Use
Rate per 1,000 Gallons	\$ 6.05

The purpose of the retail service charge is to defray all costs of providing water service for domestic, commercial, and industrial uses and for firefighting purposes, including repayment of moneys borrowed to acquire or construct the water system; operation and maintenance; and renewals, replacements and extensions.

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Rates and Fees

Exceptions to Local System Facilities Charges

The provisions of Regulations Governing Utility Service, Section 29 above, shall be observed when there is a conflict between Section 29 and the provisions of Sections 32(b) and 32(c) above.

Billing and Account Charges

The below charges shall be assessed for any customer billed by the Authority.

(a) Account Charges

An account charge of \$10 (\$20 if the meter is read) shall be paid for each applicant for continuing service, whether for a new account or for a transfer of account, for water and/or wastewater service. The purpose of this charge is to defray the cost incurred in clerical and bookkeeping activities, the turning on of services, and/or meter reading required for each new account or transfer of account.

(b) Transaction Charge for Late Payment

A transaction charge for late payment of 1.5% will be assessed on the balance due once the bill is delinquent and then every 30 days thereafter. The late charge will be added to a bill in the event the bill is not paid within 21 days following the date thereof.

(c) Interest Charge for Late Payment with a Lien

An interest charge for late payment of 8% simple interest on the principal (delinquent amount) due, shall be added to any account when a lien has been placed upon real estate. Such lien on any real estate may be discharged by the payment to the Authority of the total lien amount, penalty, and the interest which has accrued to the date of the payment.

(d) Restoration of Service Charge

Where service has been terminated on account of the nonpayment of any bill, a restoration of service charge of \$30 (\$100 for a single service wastewater customer not on metered water service) shall be paid before service is restored, except as defined in Section 17(A)(2).

The purpose of this charge is to defray the expenses of terminating and restoring services, including clerical and bookkeeping activities.

(e) Meter Test Deposit

A test of a water meter shall be done at the request of a water customer upon payment of a meter test deposit as defined in Regulations Governing Utility Service Section I (1). If the meter is found to be 3% or more fast, then the deposit shall be refunded. If inoperable or 25% or more slow, the deposit shall be credited against a revised billing. The deposit shall be determined by meter size, as set out in the following:

Meter Size	Deposit
5/8" to 1"	\$ 75.00
Greater than 1"	100.00

(f) Fire Hydrant Charge

For customer-requested hydrants installed under the provisions of Regulations Governing Utility Service Section 21, there shall be an installation cost of actual cost plus an allowance of 25% for overhead. The applicant shall deposit with the Authority an estimated fee prepared by the Authority, subsequently adjusted at the completion of the installation with costs exceeding the estimate billed or, in case the estimate exceeds the cost, refunded to the applicant.

The purpose of this charge is to assess to the user the cost of installing fire hydrants for the benefit of the applicant.

(g) Temporary Water Service Charge

Under the provisions of Section 22, an applicant for temporary service shall pay, upon application, for the estimated costs of installing, replacing, and removing the facilities which are required to furnish such services plus an allowance of 25% for overhead. The applicant shall receive a refund if the estimate exceeds the actual. The applicant shall also pay service charges and all charges caused by a late payment or nonpayment. The applicant may also be required to post a deposit as described in Regulations Governing Utility Service Section 6.

(h) Fire Connection Detector Check Meter Charge

Fire connection detector check meters shall be read and billed at least annually or on a more frequent basis, as determined by the Authority. Rates governing normal water usage shall be assessed. Fire connection detector check meters monitor nonfire flow usage from a fire connection and there should be little or no water activity.

Table 16, continued

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Rates and Fees

Multiple Charges Bills

All charges and fees above are in addition to charges and fees assessed and owed to Newport News Waterworks, HRSD, or any other private or municipal utility.

No Free Service

There shall be no utility service provided to any customer without the assessment of service charges.

Plan Review Fee

The following are the charges that shall be assessed for the appropriate plan. The purpose of this charge is to defray cost incurred for time used to provide engineer technical review.

Document	Collection
Rezoning:	
5 acres or less	\$ 100
Greater than 5; but less than 10 acres	150
Greater than 10 acres	200
Special use permits:	
General	200
Family subdivision	50
Wireless communication facilities	50
Other	50
Site plans:	
Administrative review:	
Residential structure (multi-family)	300 plus \$5 per unit
Nonresidential structure	300
Mixed use structure	200 plus \$5 per residential unit
Utility easement plat service	300
Planning commission review:	
Residential structure (multi-family)	300 plus \$5 per unit
Nonresidential structure	300
Mixed use structure	300 plus \$5 per residential unit
Utility easement plat service	300
Amendment to an approved plan:	
Residential structure (multi-family)	150 plus \$2 per unit
Nonresidential structure	150
Mixed use structure	150 plus \$2 per residential unit
Utility easement plat service	150
Each additional review after second resubmission	150
Master plan review:	
Initial review	600
Revision of plan	600
Conceptual plan for water and sewer:	
General	100
Master utility plans and modeling	300
Each additional review after second resubmission	150
Subdivision plan review:	
No public improvements required	75
Public improvements required	300 per plan plus \$5 per lot
Wastewater pumping station	2,000
Well facility	3,000
Each additional review after second resubmission	150

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)
Rates and Fees

Inspection

There shall be an inspection fee of \$25 for the third and subsequent inspections for water and sewer service connections. These will include, but are not limited to, water meter box installations, water and sewer service line connections, and grinder pump installations. This charge will be paid prior to the third/or subsequent inspections. The purpose of this fee is to defray the expense of making multiple on-site inspections to correct previously identified deficiencies.

Inspection Fee for Water and Sewer Lines

There shall be a fee for the inspection of public water and sewer installations. Such fee shall be \$2.87 per foot for every foot of water main and sewer main constructed and shall be submitted at the time of filing an application for a land disturbance permit.

Sub-Meter Account Charge

An account charge of \$18 shall be paid annually by each customer who has established a sub-meter account. The payment for this charge will be prorated in equal amounts in the customer utility service charge billing.

COMPLIANCE SECTION

**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
James City Service Authority
Williamsburg, Virginia

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 the James City Service Authority (the "Authority") as of and for the year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the James City Service Authority's basic financial statements, and have issued our report thereon dated December 7, 2020.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the James City Service Authority's internal control over financial reporting (internal control) as a basis for designing the audit procedures that 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 the James City Service Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the James City Service Authority'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 that a material misstatement of the entity'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 that 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 the James City Service Authority's financial statements are free of 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 financial statements. 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 that are 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 the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the James City Service Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purposes.

Brown, Edwards & Company, L.L.P.

CERTIFIED PUBLIC ACCOUNTANTS

Newport News, Virginia
December 7, 2020

JAMES CITY SERVICE AUTHORITY
(A Component Unit of the County of James City, Virginia)

SUMMARY OF COMPLIANCE MATTERS
June 30, 2020

As more fully described in the 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*, we performed tests of the Authority's compliance with certain provisions of the laws, regulations, contracts, and grants shown below.

STATE COMPLIANCE MATTERS

Code of Virginia

- Cash and Investment Laws
- Conflicts of Interest Act
- Local Retirement Systems
- Procurement Laws
- Uniform Disposition of Unclaimed Property Act