Sussex Service Authority

Comprehensive Annual Financial Report

Year Ended June 30, 2019

Creedle, Jones
& Associates, P.C.
Certified Public Accountants

Sussex Service Authority

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Year Ended June 30, 2019

Sussex Service Authority

Board of Directors and Officials

Year Ended June 30, 2019

Board of Directors

Susan Brickhouse, Chairperson
Valerie Ricks, Vice Chairperson
David West, Member
Keith Blowe, Member
Sonda J. Parham, Member
Bobby Morris, Alternate
Mike Easingwood, Alternate
Pam Jones, Alternate
Sam Harrison, Alternate
Raymond Cole, Alternate

Officials

Frank H. Irving, III, Executive Director
Michael P. Kearns, Deputy Director
Beth Stephenson, Secretary

Creedle Jones & Associates
A Professional Corporation

Robin B. Jones, CPA, CFP
Denise C. Williams, CPA, CSEP
Kimberly W. Jackson, CPA

Nadine L. Chase, CPA

Sherwood H. Creedle, Emeritus

Members of
American Institute of Certified Public Accountants
Virginia Society of Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Sussex Service Authority

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of the Sussex Service Authority, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Sussex Service 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 opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and the *Specifications for Audits of Authorities, Boards, and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards and specifications require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the 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.

Opinions

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 Sussex Service Authority, as of June 30, 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.

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Prior-Period Audited Financial Statements

The financial statements for the year ended June 30, 2018, were audited by other accountants, and they have expressed an unmodified opinion on them in their report dated January 22, 2019, but they have not performed any auditing procedures since that date.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and schedules related to pension and OPEB funding on pages 1-3 and 39-46 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Sussex Service Authority's basic financial statements. The other supplementary information and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary information is the responsibility of management and was 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 other supplementary information is fairly stated in all material respects in relation to the basic financial statements as a whole.

The statistical section has 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 it.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated, May 7, 2020 on our consideration of the Sussex 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 Sussex 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 Sussex Service Authority's internal control over financial reporting and compliance.

Creedle, Jones & Associates, P.C.

Creedle, Jones & Associates, P.C.
Certified Public Accountants

South Hill, Virginia
May 7, 2020

Sussex Service Authority

Management's Discussion and Analysis

As of June 30, 2019

Our discussion and analysis of the Sussex Service Authority's financial performance provides an overview of the Authority's financial activities for the fiscal year ended June 30, 2019. Please read this information in conjunction with Sussex Service Authority's basic financial statements.

OVERVIEW OF THE FINANCIAL STATEMENTS

The Sussex Service Authority (the "Authority") presents three basic financial statements. These are: (1) Statement of Net Position; (2) Statement of Revenues, Expenses, and Changes in Net Position; and (3) Statement of Cash Flows.

Our financial position is measured in terms of resources (assets) we own and obligations (liabilities) we owe on a given date. This information is reported on the Statement of Net Position, which reflects our assets in relation to our debt to suppliers, employees, and other creditors. The excess of our assets over liabilities is our equity, or net position.

Information regarding the results of our operation during the year is reported in the Statement of Revenues, Expenses, and Changes in Net Position. This statement shows how much our overall net position increased or decreased during the year as a result of our operations and for other reasons.

Our Statement of Cash Flows discloses the flow of cash resources into and out of the Authority during the year and how we applied those funds.

FINANCIAL SUMMARY

Financial Position

A summary of the Authority's Statement of Net Position for June 30, 2019 and 2018 is presented below:

	2019	2018
Current Assets	$ 728,574	$ 1,079,335
Noncurrent Assets	17,170,439	17,567,271
Other Assets	519,690	427,991
Total Assets	18,418,703	19,074,597
Deferred Outflows of Resources	47,912	82,986
Total Assets and Deferred Outflows of Resources	$ 18,466,615	$ 19,157,583
Current liabilities	$ 1,569,425	$ 1,295,500
Long-term liabilities	10,818,999	12,046,843
Total Liabilities	12,388,424	13,342,343
Deferred Inflows of Resources	80,069	103,216
Net Position		
Net investment in capital assets	1,679,446	1,511,833
Restricted	3,472,889	3,230,833
Unrestricted	845,787	969,358
Total Net Position	5,998,122	5,712,024
Total Liabilities, Deferred Inflows of Resources, and Net Position	$ 18,466,615	$ 19,157,583

Change in Net Position

A summary of the Authority's Statement of Revenues, Expenses, and Changes in Net Position for June 30, 2019 and 2018 is presented below:

Condensed Statements of Revenues, Expenses, and Changes in Net Position

	2019	2018
Operating Revenues	**$ 4,728,176**	$ 4,725,165
Operating Expenses	**4,023,391**	3,842,331
Operating Income	**704,785**	882,834
Nonoperating Revenues (Expenses)	**(418,687)**	(422,640)
Change in Net Position	**$ 286,098**	$ 460,194

During the year, the Authority's net operating income was $704,785. The Authority had nonoperating revenues in the form of interest income from investments, which amounted to $9,651 and nonoperating expenses in the form of interest expense on debt amounting to $428,338. Operating expenses of $4,023,391 included all expenses necessary to operate the Authority's water and sewer facilities. Maintenance cost increases are due to the additional costs related to wastewater received from DOC.

Net position increased $286,098 in 2019 as compared to an increase of $460,194 in 2018.

Cash Flows

A summary of the Authority's Statement of Cash Flows for June 30, 2019 and 2018 is presented below:

Condensed Statements of Cash Flows

	2019	2018
Cash Provided by (Used in)		
Operating activities	**$ 2,087,435**	$ 1,843,647
Capital and related financing activities	**(1,822,450)**	(1,809,695)
Investing activities	**9,651**	14,907
Net Increase in Cash and Cash Equivalents	**274,636**	48,859
Cash and Cash Equivalents - Beginning of Year	**3,459,013**	3,410,154
Cash and Cash Equivalents - End of Year	**$ 3,733,649**	$ 3,459,013

Cash flows from operating activities consist of receipts from customers less operating expenses, creating a positive cash flow.

Cash flows from capital and related financing activities consist of purchases of fixed assets and payments of principal and interest on our debt. These expenses for indebtedness were supplemented by contributions from the Virginia Department of Corrections (VDOC) for their share of the debt for utility plant improvements.

Cash flows from investing activities consist of interest income on investments.

During fiscal year 2019, there was an increase of $274,636 in cash as compared to an increase of $48,859 in 2018.

Capital Assets

As of June 30, 2019, the Authority's net capital assets total $13,589,864 which represents a net decrease of $791,047 or 5.50% over the previous fiscal year.

Change in Capital Assets

	Balance July 1, 2018	Net Additions and Deletions	Balance June 30, 2019
Land and land improvements	$ 90,454	$ -	**$ 90,454**
Construction in progress	62,887	15,798	**78,685**
Buildings and improvements	33,159,806	293,351	**33,453,157**
Machinery and equipment	877,200	10,173	**887,373**
Vehicles	545,671	108,718	**654,389**
Total Capital Assets	34,736,018	428,040	**35,164,058**
Less: Accumulated depreciation	(20,355,107)	(1,219,087)	**(21,574,194)**
Total Capital Assets, Net	$ 14,380,911	$ (791,047)	**$ 13,589,864**

Long-Term Debt

As of June 30, 2019, the Authority's long-term debt totals $12,021,169.

The Authority's long-term debt is presented as follows:

Change in Long-Term Debt

	Balance July 1, 2018	Net Additions and Deletions	Balance June 30, 2019
Long-term notes and bonds	$ 12,869,078	$ (958,660)	**$ 11,910,418**
Compensated absences	114,813	(4,062)	**110,751**
	$ 12,983,891	$ (962,722)	**$ 12,021,169**

REQUESTS FOR INFORMATION

This financial report is designed to provide our citizens, taxpayers, customers, investors, 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 addressed in writing to the Executive Director, Sussex Service Authority, 4385 Beef Steak Road, Waverly, Virginia 23890.

FINANCIAL STATEMENTS

Exhibit A

Sussex Service Authority

Statement of Net Position

As of June 30, 2019

Assets and Deferred Outflows of Resources

Assets		
Current Assets		
Cash and cash equivalents	$	153,074
Accounts receivable, net		572,862
Other receivables		2,638
Total Current Assets		728,574
Noncurrent Assets		
Investment in commercial paper - restricted		3,580,575
Capital assets, net of accumulated depreciation		13,589,864
Total Noncurrent Assets		17,170,439
Other Assets		
Prepaid expenses		23,356
Net pension asset		496,334
Total Other Assets		519,690
Total Assets		18,418,703
Deferred Outflows of Resources		
Deferred outflows - pension		39,136
Deferred outflows - OPEB group life		8,776
Total Deferred Outflows of Resources		47,912
Total Assets and Deferred Outflows of Resources	$	18,466,615

Liabilities, Deferred Inflows of Resources, and Net Position

Liabilities		
Current Liabilities		
Accounts payable	$	131,115
Accrued liabilities		55,454
Compensated absences - current		11,075
Accrued interest payable		107,686
Notes payable - current		19,174
Bonds payable - current		1,244,921
Total Current Liabilities		1,569,425
Long-Term Liabilities		
Compensated absences, net of current portion		99,676
Net OPEB group life liability		73,000
Notes payable, net of current portion		73,299
Bonds payable, net of current portion		10,573,024
Total Long-Term Liabilities		10,818,999
Total Liabilities		12,388,424
Deferred Inflows of Resources		
Deferred inflows - pension		73,069
Deferred inflows - OPEB group life		7,000
Total Deferred Inflows of Resources		80,069
Net Position		
Net investment in capital assets		1,679,446
Restricted		3,472,889
Unrestricted		845,787
Total Net Position		5,998,122
Total Liabilities, Deferred Inflows of Resources, and Net Position	$	18,466,615

The accompanying notes to the financial statements are an integral part of this statement.

Exhibit B

Sussex Service Authority

Statement of Revenues, Expenses, and Changes in Net Position

Year Ended June 30, 2019

Operating Revenues		
Sewer service	$	1,206,452
Water service		128,860
VA Department of Correction fees		2,860,233
Late/reconnection fees		25,448
Management fees		212,350
Miscellaneous other		294,833
Total Operating Revenues		4,728,176
Operating Expenses		
Personnel		1,030,412
Payroll taxes and fringe benefits		310,328
Contractual services		33,099
Other charges		1,430,465
Total Operating Expenses, other than depreciation		2,804,304
Net Operating Income, Before Depreciation		1,923,872
Depreciation		1,219,087
Operating Income		704,785
Non-Operating Revenues (Expenses)		
Interest expense		(428,338)
Interest and investment income		9,651
Net Non-Operating Revenues (Expenses)		(418,687)
Change in Net Position		286,098
Total Net Position - Beginning of Year		5,712,024
Total Net Position - End of Year	$	5,998,122

The accompanying notes to the financial statements are an integral part of this statement.

Exhibit C

Sussex Service Authority

Statement of Cash Flows

Year Ended June 30, 2019

Cash Flows from Operating Activities	
Payments to employees for salaries and benefits	$ (1,385,786)
Payments to suppliers for goods and services	(1,486,137)
Receipts from customers and users	4,959,358
Net Cash Provided by Operating Activities	2,087,435
Cash Flows from Capital and Related Financing Activities	
Purchase and construction of capital assets	(428,040)
Proceeds of capital debt	100,700
Principal paid on capital debt	(1,008,669)
Interest paid on capital debt	(486,441)
Net Cash Used in Capital and Related Financing Activities	(1,822,450)
Cash Flows from Investing Activities	
Interest on investments	9,651
Net Cash Provided by Investing Activities	9,651
Net Increase in Cash and Cash Equivalents	274,636
Cash and Cash Equivalents - Beginning of Year	3,459,013
Cash and Cash Equivalents - End of Year	$ 3,733,649
Reconciliation of Operating Income to Net Cash Provided by Operating Activities	
Operating income	$ 704,785
Adjustments to reconcile operating income to net cash provided by operating activities	
Depreciation	1,219,087
Change in assets and liabilities	
(Increase) Decrease in	
Accounts receivable	231,766
Other receivables and deposits	(584)
Prepaid expenses	(23,356)
Net pension asset	(68,343)
Deferred outflows - pension	39,073
Deferred outflows - OPEB group life	(3,999)
(Decrease) Increase in	
Accounts payable	783
Deferred inflows - pension	(22,147)
Deferred inflows - OPEB group life	(1,000)
Accrued liabilities	13,432
Net OPEB liability	2,000
Compensated absences	(4,062)
Net Cash Provided by Operating Activities	$ 2,087,435

The accompanying notes to the financial statements are an integral part of this statement.

1 Organization, Description of the Entity, and Its Activities

Sussex Service Authority (the Authority) is a public body organized under the provisions of the Virginia Water and Sewer Authority Act and by the governing bodies of the Town of Stony Creek, Virginia; the Town of Wakefield, Virginia; the Town of Waverly, Virginia; and the County of Sussex, Virginia. The Authority was incorporated on November 24, 1997. The purpose of the Authority is to establish and operate a comprehensive county-wide wastewater treatment facility. The Authority is authorized to issue bonds payable solely from revenues to construct a water and sewer system.

The Authority's governing body is composed of one member appointed by each of the three participating jurisdictions, a member selected by the Sussex County Board of Supervisors to serve as the member at large and a fifth member required to be an elected official of the County of Sussex Board of Supervisors. These governmental entities have an ongoing financial responsibility to the Authority because its continued existence depends on continued funding by the participants. The Authority is perpetual and no participating government has access to its resources or surpluses, nor is any participant liable for the Authority's debts or deficits. The Authority also has the ability to finance its capital projects through user charges or the sale of revenue bonds.

Sussex Service Authority has been determined to be a joint venture of the three participating jurisdictions. The Authority is not a component unit of any of the participating governments. There are no component units to be included in the Authority's financial statements.

2 Significant Accounting Policies

Financial Statement Presentation

The financial statements of the Sussex Service Authority have been prepared in conformity with the specifications promulgated by the Auditor of Public Accounts (APA) of the Commonwealth of Virginia and the accounting principles generally accepted in the United States as specified by the Governmental Accounting Standards Board. The more significant of the Authority's accounting policies are described below:

Basis of Accounting

The Authority operates as an enterprise fund, and its accounts are maintained on the accrual basis of accounting. Under this method, revenues are recognized when earned and expenses are recorded as liabilities when incurred, regardless of the timing of related cash flows. The Authority accrues revenue for services rendered but not yet billed at the end of the fiscal year.

The Authority distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services, as well as producing and delivering goods, in connection with the Authority's principal ongoing operations. The principal operating revenues of the Authority are charges to customers for sales and services. Operating expenses include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

Budgets and Budgetary Accounting

Under the Water and Waste Authorities Act, the Authority is not required to adopt a legal budget. Under its bylaws and bond covenants, however, the Authority's Board of Directors must adopt an annual budget before the first day of each fiscal year. A budget is prepared for information, fiscal planning purposes, and to provide the basis for setting user rates. None of the participating entities are required to approve the budget. The budget is prepared by the finance department and serves as the framework for the Authority's financial planning for the year. The budget is adopted by the Authority's Board of Directors as a planning document and is not a legal control on expenses. The Executive Director has authorization from the Board to move funds within the line item budget without additional Board approval. A report of revenues and expenses is presented to the Board each month at a public meeting.

Cash and Cash Equivalents

Cash and cash equivalents include all monies in checking, savings, and money market accounts, as well as highly liquid investments and certificates of deposit with initial maturity dates of less than three months. The carrying value of cash and cash equivalents approximates fair value because of the short maturity dates of those financial instruments.

For purposes of the Statement of Cash Flows, the Authority considers all Certificates of Deposits and U.S. Treasuries to be cash equivalents.

Certain cash and cash equivalents and Certificates of Deposit are reported as Restricted in these financial statements. Restricted funds include a Virginia Department of Corrections (VDOC) Repair and Replacement Reserve Fund, a General Repair and Replacement Reserve Fund, and other Debt Service Reserve Funds held at the direction of the Trustee. These restricted funds are held in accordance with the Master Indenture of Trust dated as of September 1, 1998 between Sussex Service Authority and Suntrust Bank as amended and supplemented for the issuance of revenue bonds for the construction and operation of its water and sewer facilities.

Capital Assets

Capital assets, which include property, plant, equipment, and infrastructure assets (e.g., roads, bridges, sidewalks, and similar items) are reported in the financial statements. Capital assets are defined by the Authority as assets with an initial, individual cost of more than $5,000 (amount not rounded) and an estimated useful life in excess of one year. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend the assets life are not capitalized.

Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital assets of business-type activities is included as part of the capitalized value of the assets constructed. No interest was capitalized during the current or previous fiscal year.

Property, plant, and equipment and infrastructure are depreciated using the straight-line method over the following estimated useful lives:

Buildings and improvements	10-30 years
Vehicles and equipment	3-5 years

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 Political Subdivision's Retirement Plan and the additions to/deductions from the Political Subdivision's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (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.

Other Postemployment Benefits – Group Life

Group Life Insurance

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

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Net Position

Net position is the difference between a) assets and deferred outflows of resources and b) liabilities and deferred inflows of resources. Net investment in capital assets represent capital assets, less accumulated depreciation, less any outstanding debt related to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt are also included in this component of net position.

Net Position Flow Assumption

Sometimes the Authority will fund outlays for a particular purpose from both restricted (e.g. restricted bond or grant proceeds) and unrestricted resources. In order to calculate the amounts to report as restricted – net position and unrestricted – net position in the financial statements, a flow assumption must be made about the order in which the resources are considered to be applied. It is the Authority's policy to consider restricted – net position to have been depleted before unrestricted – net position is applied.

Deferred Outflows/Inflows of Resources

In addition to assets, the Statement of Net Position will sometimes include a separate section for Deferred Outflows of Resources. This represents a consumption of net position applicable to future periods and so will not be recognized as an outflow of resources (expenditures) until then. The Authority has one item that qualifies for reporting in this category. It is comprised of certain items related to the measurement of the net pension liability (asset) and net OPEB liabilities and contributions to the pension and the OPEB plans made during the current year and subsequent to the net pension liability (asset) and net OPEB liability measurement date.

In addition to liabilities, the Statement of Net Position will sometimes include a separate section for Deferred Inflows of Resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position applicable to future period(s) and so will not be recognized as an inflow of resources (revenues) until that time. The Authority has one type of item that qualifies for reporting in this category. Certain items related to the measurement of the net position liability (asset) and net OPEB liability are reported as deferred inflows of resources.

Program Revenues

Rates for residential and commercial customers are established to provide sufficient funds to cover operations and maintenance costs of the Authority's utility plants. In addition, the Authority has a contract with the Virginia Department of Corrections (VDOC) to provide water and sewer services. The Authority receives additional revenue from the VDOC to cover the VDOC's proportionate share of the debt service and repairs/replacement of the Black Swamp water and sewer system.

Concentration of Credit Risk

A significant portion of the Authority's operating and nonoperating revenue is derived from VDOC through a potable water service contract and a sanitary sewage service contract in which the Authority has contractually agreed to provide up to 350,000 gallons per day of potable water to VDOC, as well as provide wastewater treatment in the amount of 350,000 gallons per day to VDOC. In return, VDOC is charged a water fee of $25,808 per month and a sewer fee of $70,192 per month. In addition, VDOC has agreed to share in the financing and the repair/replacement costs of the Black Swamp facility, since this facility was initially constructed for the sole purpose of providing services to VDOC. As such, the Authority receives $33,604 per month for repair and replacement costs and $78,788 per month in debt service income from VDOC. The terms and conditions hereof remain in full force and effect through June 30, 2038. During fiscal year 2018, VDOC renegotiated the contract in which they would pay $65,000 per month for debt service beginning September 1, 2018 through January 1, 2024. All other aspects of the contract remain the same.

Accounts Receivable

Accounts receivable of $645,697 are stated net of allowance for doubtful accounts of $72,835. An estimate is calculated annually for certain accounts over 90 days old as an allowance for bad debts.

Adoption of New GASB Statements

The Authority did not adopt any GASB statements during the fiscal year ended June 30, 2019.

3 Deposits and Investments

Deposits

Deposits with banks are covered by the Federal Deposit Insurance Corporation (FDIC) and collateralized in accordance with the Virginia Security for Public Deposits Act (the "Act"), Section 2.2-400 et.seq. of the Code of Virginia. Under the Act, banks and savings institutions holding public deposits in excess of the amount insured by the FDIC must pledge collateral to the Commonwealth of Virginia Treasury Board. Financial Institutions may choose between two collateralization methodologies and, depending upon that choice, will pledge collateral that ranges in the amounts from 50% to 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

Investments

Statutes authorize the Authority to invest in obligations of the United States or agencies thereof, obligations of the Commonwealth of Virginia or political subdivisions thereof, obligations of the International Bank for Reconstruction and Development (World Bank), the Asian Development Bank, the African Development Bank, "prime quality" commercial paper and certain corporate notes, banker's acceptances, repurchase agreements, and the State Treasurer's Local Government Investment Pool (LGIP). Investments are carried at fair value.

Interest Rate Risk

The Authority held the following investments at June 30, 2019:

Investment Type	Fair Value	Maturity
Commercial Paper	$3,580,575	Less than 1 year

Pursuant to the Virginia Resource Authority Bond Resolution (Bond Resolution) adopted October 15, 1998, and supplemental bond indentures, certain restricted funds are required to be maintained. The assets of these funds can be used only for the purposes specified in the Bond Resolution. Restricted assets were as follows:

Virginia Department of Corrections Repair and Replacement Fund	$1,876,237
General Repair and Replacement Fund	739,978
Debt Service Reserve	964,360
Restricted Assets	$3,580,575
Less: Interest Payable	107,686
Restricted Net Position	$3,472,889

4 Maintenance of Funds

The Bond Resolution provides for the maintenance of certain funds. All revenues, as defined, collected by the Authority are deposited into the revenue fund and transferred first, to the operating fund in order to pay operating expenses, as defined, and then deposited to restricted funds as required by the Bond Resolution. Any funds remaining in the revenue fund at the end of the year, after the above requirements are met, are to be transferred to the general reserve fund, which is available to the Authority for any lawful purpose of the Authority.

The restricted funds required to be maintained under the Bond Resolution are as follows:

Virginia Department of Corrections Repair and Replacement Fund

Pursuant to its utility contracts with the Virginia Department of Corrections, the Authority is required to maintain a repair and replacement fund in order to pay for the Virginia Department of Correction's proportionate share of the costs of major repairs, replacements, or maintenance items of a type not recurring annually to or for the Black Swamp facility and to pay the costs of reconstruction of those portions of the Back Swamp facility that the Authority uses to provide water and sewer service to the Virginia Department of Corrections pursuant to its applicable utility contracts.

General Repair and Replacement Fund

The Authority is required to maintain a balance of at least $100,000 in this fund.

Debt Service Reserve Funds

The Authority is required to maintain debt reserve funds. Amounts in the debt reserve funds are to be used by the Authority in the event the Authority encounters financial difficulties. These funds are also used to accumulated principal and interest payments in order to achieve a proper matching of the Authority's revenues with principal and interest on the Series 2009 bonds each bond year.

Revenue Covenant

The Authority is required to set rates and fees in order to ensure that in each fiscal year net revenues are no less than 1.15 times Senior Debt Service. The Authority is in compliance with this covenant for fiscal year ended June 30, 2019.

5 Capital Assets

The following schedule shows the breakdown of capital assets by category at June 30, 2019:

	Balance July 1, 2018	Acquired (Increased)	Disposed (Decreased)	Balance June 30, 2019
Capital assets not being depreciated				
Land and land improvements	$ 90,454	$ -	$ -	$ 90,454
Construction in progress	62,887	57,848	42,050	78,685
Total Capital Assets Not Being Depreciated	153,341	57,848	42,050	169,139
Capital assets, depreciated				
Buildings and improvements	33,159,806	293,351	-	33,453,157
Machinery and equipment	877,200	10,173	-	887,373
Vehicles	545,671	108,718	-	654,389
Total Capital Assets, Depreciated	34,582,677	412,242	-	34,994,919
Less: Accumulated depreciation for				
Buildings and improvements	19,092,288	1,153,458	-	20,245,746
Machinery and equipment	788,435	30,489	-	818,924
Vehicles	474,384	35,140	-	509,524
Total Accumulated Depreciation	20,355,107	1,219,087	-	21,574,194
Total Capital Assets Depreciated, Net	14,227,570	(806,845)	-	13,420,725
Total Capital Assets, Net	$ 14,380,911	$ (748,997)	$ 42,050	$ 13,589,864

6 Compensated Absences

The Authority accrues the liability arising from compensated absences. All salaried and full-time hourly employees are granted vacation and sick leave benefits at varying rates for each month of service. A maximum of 240 hours of vacation and 1,440 hours of sick leave may be carried over from year to year. Employees who terminate employment with the Authority are paid the balance of their accrued vacation time and up to $2,500 of their accrued sick leave time. The Authority has outstanding accrued vacation and sick pay totaling $110,751.

7 Long-Term Debt

Changes to long-term obligations are as follows:

	Balance July 1, 2018	Increase	Decrease	Balance June 30, 2019	Due Within One Year
Compensated absences	$ 114,813	$ 52,433	$ 56,495	**$ 110,751**	$ 11,075
Bonds payable	12,502,635	-	986,302	**11,516,333**	1,244,921
Bond premiums	352,303	-	50,691	**301,612**	-
Notes payable	14,140	100,700	22,367	**92,473**	19,174
Total Long-Term Debt	$ 12,983,891	$ 153,133	$ 1,115,855	**$ 12,021,169**	$ 1,275,170

Annual requirements to amortize notes and bonds payable and interest are as follows:

	Notes Payable		Bonds Payable	
Fiscal Year	Principal	Interest	Principal	Interest
2020	$ 19,174	$ 4,446	$ 1,244,921	$ 443,145
2021	16,124	3,556	1,323,237	396,942
2022	17,015	2,665	1,217,816	352,069
2023	17,955	1,725	1,137,494	308,462
2024	18,947	733	1,181,611	258,578
2025-2029	3,258	22	4,294,622	1,093,265
2030-2032	-	-	1,116,632	50,153
	92,473	13,147	11,516,333	2,902,614

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Details of Long-Term Obligations

		Total Amount
Bonds Payable		
$670,000 Virginia Resources Authority Series 2001B Water and Sewer System Revenue Bond dated August 31, 2001, due in semi-annual combined principal and interest payments of $12,228 through March 1, 2032, including interest at .50%.	$	307,350
$5,361,466 Virginia Resources Authority Series 2000 Water and Sewer System Revenue Bond dated November 30, 2000, due in semi-annual principal payments of $134,037 through September 1, 2021, bearing no interest.		670,183
$12,790,000 Virginia Resources Authority Series 2009 Water and Sewer System Refunding Bond dated March 17, 2009, due in various annual principal installments each October 1, through 2029, bearing interest at various coupon rates between 1.125% and 5.125%. Interest is paid semi-annually.		8,200,000
$925,000 Virginia Resources Authority Series 2011 Water and Sewer System Refunding Bond dated October 16, 2011, due in various annual principal installments each April 1, through 2032, bearing interest at various coupon rates between 2.125% and 5.125%. Interest is paid semi-annually.		690,000
$2,288,400 Carter Bank Series 2012 Water and Sewer System Revenue Refunding Bond dated July 26, 2012, due in various semi-annual combined principal and interest payments each June 1 and December 1, through 2032, bearing interest at 3.25%.		1,648,800
Total Bonds Payable		11,516,333
Bond Premiums		301,612

	Total Amount
Notes Payable	
$26,000 note payable for a commercial vehicle issued February 20, 2016, due in monthly installments of principal and interest of $751 through January 20, 2019. Interest is fixed at 2.49%.	-
$7,500 note payable for a commercial vehicle issued February 23, 2017, due in monthly installments of principal and interest of $218 through March 7, 2020. Interest is fixed at 3.03%.	1,946
$7,511 note payable for a commercial vehicle issued February 23, 2017, due in monthly installments of principal and interest of $218 through March 7, 2020. Interest is fixed at 3.03%.	1,948
$100,700 note payable for a commercial vehicle issued August 30, 2018, due in monthly installments of principal and interest of $1,640 through August 2024. Interest is fixed at 5.39%.	88,579
Total Notes Payable	92,473
Compensated Absences	110,751
Total Long-Term Obligations	$ 12,021,169

Debt coverage of at least 115% of the debt service payments on annual bonded debt of the Authority is required by the various bond resolutions. For the fiscal year ended June 30, 2019, the Authority met this requirement.

The premium paid on the 2009 Refunding Bond of $740,408 is being amortized over the remaining bond term using the effective interest method. Accumulated amortization at June 30, 2019 was $533,307 and amortization during the year was $45,211.

The premium paid on the 2011 Refunding Bond of $126,700 is being amortized over the remaining bond term using the effective interest method. Accumulated amortization at June 30, 2019 was $32,189 and amortization during the year was $5,479.

8 Net Investment in Capital Assets

The “net investment in capital assets” amount reported on the Statement of Net Position as of June 30, 2019 is determined as follows:

	2019
Net Investment in Capital Assets	
Cost of capital assets	$ 35,164,058
Less: Accumulated depreciation	(21,574,194)
Book value	13,589,864
Less: Capital related debt	(11,910,418)
Net Investment in Capital Assets	$ 1,679,446

9 Litigation

At June 30, 2019, there were no matters of litigation involving the Authority which would materially affect the Authority’s financial position should any court decisions or pending matters not be favorable to the Authority.

10 Pension Plan

Plan Description

All full-time, salaried permanent employees of the Political Subdivision are automatically covered by a VRS Retirement Plan upon employment. This plan is administered by the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the *Code of Virginia*, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

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

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RETIREMENT PLAN PROVISIONS

PLAN 1

About Plan 1

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

Eligible Members

Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken a refund.

Hybrid Opt-In Election

VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.

The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014.

If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.

Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.

PLAN 2

About Plan 2

Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service, and average final compensation at retirement using a formula.

Eligible Members

Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.

Hybrid Opt-In Election

Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.

The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014.

If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.

Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.

HYBRID RETIREMENT PLAN

About the Hybrid Retirement Plan

The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan.

- The defined benefit is based on a member's age, creditable service, and average final compensation at retirement using a formula.
- The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions.
- In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.

Eligible Members

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

- 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

*Non-Eligible Members
Some employees are not eligible to participate in the Hybrid Retirement Plan. They include:

- Political subdivision employees who are covered by enhanced benefits for hazardous duty employees

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.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Retirement Contributions	***Retirement Contributions***	***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.	Same as Plan 1.	A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.
Creditable Service	***Creditable Service***	***Creditable Service***
Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.	Same as Plan 1.	**Defined Benefit Component:** Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit. **Defined Contributions Component:** Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.
Vesting	***Vesting***	***Vesting***
Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.	Same as Plan 1.	**Defined Benefit Component:** Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of creditable service. Plan 1 or Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component. **Defined Contributions Component:** Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan. Members are always 100% vested in the contributions that they make.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
		Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service. •After two years, a member is 50% vested and may withdraw 50% of employer contributions. •After three years, a member is 75% vested and may withdraw 75% of employer contributions. •After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. Distribution is not required by law until age 70 1/2.
Calculating the Benefit The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier, and total service credit at retirement. It is one of the benefit payout options available to a member at retirement. An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.	***Calculating the Benefit*** See definition under Plan 1.	***Calculating the Benefit*** **Defined Benefit Component:** See definition under Plan 1. **Defined Contribution Component:** The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.
Average Final Compensation A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.	***Average Final Compensation*** A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.	***Average Final Compensation*** Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.
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 creditable service earned, purchased, or granted on or after January 1, 2013.	***Service Retirement Multiplier*** **Defined Benefit Component:** **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.
Sheriffs and regional jail superintendents: The retirement multiplier for sheriffs and regional jail superintendents is 1.85%.	**Sheriffs and regional jail superintendents:** Same as Plan 1.	**Sheriffs and regional jail superintendents:** Not applicable.
Political subdivision hazardous duty employees: The retirement multiplier of eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.70% or 1.85% as elected by the employer.	**Political subdivision hazardous duty employees:** Same as Plan 1.	**Political subdivision hazardous duty employees:** Not applicable. **Defined Contribution Component** Not applicable.

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Normal Retirement Age	***Normal Retirement Age***	***Normal Retirement Age***
VRS: Age 65. **Political subdivisions hazardous duty employees:** Age 60.	**VRS:** Normal Social Security retirement age. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Defined Benefit Component:** **VRS:** Same as Plan 2. **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Unreduced Retirement Eligibility	***Earliest Unreduced Retirement Eligibility***	***Earliest Unreduced Retirement Eligibility***
VRS: Age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service. **Political subdivisions hazardous duty employees:** Age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service.	**VRS:** Normal Social Security retirement age with at least five years (60 months) of creditable service or when their age and service equal 90. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Defined Benefit Component:** **VRS:** Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90. **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Reduced Retirement Eligibility	***Earliest Reduced Retirement Eligibility***	***Earliest Reduced Retirement Eligibility***
VRS: Age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service. **Political subdivisions hazardous duty employees:** Age 50 with at least five years of creditable service.	**VRS:** Age 60 with at least five years (60 months) of creditable service. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Defined Benefit Component:** **VRS:** Age 60 with at least five years (60 months) of creditable service. **Political subdivisions hazardous duty employees:** Not applicable **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Cost-of-Living Adjustment (COLA) in Retirement	***Cost-of-Living Adjustment (COLA) in Retirement***	***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%. *Eligibility:* For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date. For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.	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%. *Eligibility:* *Same as Plan 1*	**Defined Benefit Component:** Same as Plan 2 **Defined Contribution Component:** Not applicable *Eligibility:* *Same as Plan 1 and Plan 2*

PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Exceptions to COLA Effective Dates: The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances: • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member retires directly from short-term or long-term disability under the Virginia Sickness and Disability Program (VSDP). • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins.	*Exceptions to COLA Effective Dates:* Same as Plan 1	*Exceptions to COLA Effective Dates:* Same as Plan 1 and Plan 2
Disability Coverage Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.70% on all service, regardless of when it was earned, purchased, or granted.	***Disability Coverage*** Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased, or granted.	***Disability Coverage*** 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. 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.
Purchase of Prior Service Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts towards vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.	***Purchase of Prior Service*** Same as Plan 1	***Purchase of Prior Service*** **Defined Benefit Component:** Same as Plan 1, with the following exceptions: • Hybrid Retirement Plan members are ineligible for ported service. **Defined Contribution Component:** Not applicable

Employees Covered by Benefit Terms

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

	Number
Inactive members or their beneficiaries currently receiving benefits	11
Inactive members:	
Vested	5
Non-vested	11
LTD	-
Active elsewhere in VRS	10
Total inactive members	26
Active members	19
Total covered employees	56

Contributions

The contribution requirement for active employees is governed by §51.1-145 of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement.

If the employer used the certified rate: The political subdivision's contractually required contribution rate for the year ended June 30, 2019 was 2.43% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017.

This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the political subdivision were $22,320 and $40,884 for the years ended June 30, 2019 and June 30, 2018, 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 political subdivisions, the net pension liability was measured as of June 30, 2018. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2017 rolled forward to the measurement date of June 30, 2018.

Actuarial Assumptions – General Employees

The total pension liability for General Employees in the Political Subdivision's Retirement Plan was based on an actuarial valuation as of June 30, 2017, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2018.

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

*Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of pension liabilities.

Mortality rates:

Largest 10 – Non-Hazardous Duty: 20% of deaths are assumed to be service related.

Pre-Retirement:

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

Post-Retirement:

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

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.

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 ages 81 and older projected with scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:

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

Post-Disablement:

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

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Largest 10 – Non-Hazardous Duty:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70-75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increase rate from 14% to 20%

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

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increase rate from 14% to 15%

Long-Term Expected Rate of Return

The long-term expected rate of return on pension System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension System investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
Public Equity	40.00%	4.54%	1.82%
Fixed Income	15.00%	0.69%	0.10%
Credit Strategies	15.00%	3.96%	0.59%
Real Assets	15.00%	5.76%	0.86%
Private Equity	15.00%	9.53%	1.43%
Total	100.00%		4.80%
		Inflation	2.50%
		*Expected arithmetic nominal return	7.30%

*The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Consistent with the phased-in funding provided by the General Assembly 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, 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 continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the Long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

Changes in Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	$ 2,083,409	$ 2,511,400	$ (427,991)
Changes for the Year			
Service cost	94,740	-	94,740
Interest	144,311	-	144,311
Benefit changes	-	-	-
Assumption changes	-	-	-
Differences between expected and actual experience	(35,697)	-	(35,697)
Contributions - employer	-	40,884	(40,884)
Contributions - employee	-	45,110	(45,110)
Net investment income	-	187,423	(187,423)
Benefit payments, including refunds	(43,651)	(43,651)	-
Administrative expenses	-	(1,550)	1,550
Other changes	-	(170)	170
Net Changes	159,703	228,046	(68,343)
Balances at June 30, 2018	$ 2,243,112	$ 2,739,446	$ (496,334)

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

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

	1.00% Decrease (6.00%)	Current Discount Rate (7.00%)	1.00% Increase (8.00%)
Political subdivision's Net Pension Liability	$ (142,914)	$ (496,334)	$ (781,731)

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

For the year ended June 30, 2019, the political subdivision recognized pension expense of $(29,097). At June 30, 2019, the political subdivision reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 16,816	$ 23,718
Change in assumptions	-	24,888
Net difference between projected and actual earnings on pension plan investments	-	24,463
Employer contributions subsequent to the measurement date	22,320	-
Total	$ 39,136	$ 73,069

$22,320 reported as deferred outflows of resources related to pensions resulting from the political subdivision'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, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

Year Ended June 30,	
2020	$ (13,777)
2021	(14,999)
2022	(25,438)
2023	(2,039)
2024	-
Thereafter	-

Pension Plan Data

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

11 Other Post-Employment Benefits - Group Life Insurance Program

Plan Description

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

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

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

<table>
<tr><th>GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS</th></tr>
<tr><td>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
• Roanoke City Schools 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 accumulated retirement member contributions and accrued interest.</td></tr>
<tr><td>Benefit Amounts
The benefits payable under the Group Life Insurance Program have several components.
• Natural Death Benefit – The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled.
• Accidental Death Benefit – The accidental death benefit is double the natural death benefit.
• Other Benefit Provisions – In addition to the basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances. These include:
Accidental dismemberment benefit
Safety belt benefit
Repatriation benefit
Felonious assault benefit
Accelerated death benefit option</td></tr>
<tr><td>Reduction in Benefit Amounts
The benefit amounts provided to members covered under the Group Life Insurance Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.</td></tr>
<tr><td>Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)
For covered members with at least 30 years of creditable service, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at $8,000 by statute. This amount is increased annually based on the VRS Plan 2 cost-of-living statute. This amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and was increased to $8,279 effective July 1, 2018.</td></tr>
</table>

Contributions

The contribution requirements for the Group Life Insurance Program are governed by §51.1-506 and §51.1-508 of the Code of Virginia, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the Group Life Insurance Program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% (1.31% X 60%) and the employer component was 0.52% (1.31% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2019 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contribution to the Group Life Insurance Program from the entity were $4,776 and $4,777 for the years ended June 30, 2019 and June 30, 2018, respectively.

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

At June 30, 2019, the entities reported a liability of $73,000 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2018 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. The covered employer's proportion of the Net GLI OPEB Liability was based on the covered employer's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2018 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2018, the participating employer's proportion was .00483% as compared to .00477% at June 30, 2017.

For the year ended June 30, 2019, the participating employer recognized GLI OPEB expense of $2,000. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

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

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 4,000	$ 2,000
Change in assumptions	-	3,000
Net difference between projected and actual earnings on GLI OPEB program investments	-	2,000
Changes in proportion	-	-
Employer contributions subsequent to the measurement date	4,776	-
Total	$ 8,776	$ 7,000

$4,776 reported as deferred outflows of resources related to the GLI OPEB resulting from the employer's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the Fiscal Year ending June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

Year Ended June 30,		
2020	$	(1,000)
2021		(1,000)
2022		(1,000)
2023		-
2024		-
Thereafter		-

Actuarial Assumptions

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

Inflation	2.5 percent
Salary increases, including inflation -	
General state employees	3.5 percent - 5.35 percent
Teachers	3.5 percent - 5.95 percent
SPORS employees	3.5 percent - 4.75 percent
VaLORS employees	3.5 percent - 4.75 percent
JRS employees	4.5 percent
Locality - General employees	3.5 percent - 5.35 percent
Locality - Hazardous Duty employees	3.5 percent - 4.75 percent
Investment rate of return	7.0 percent, net of investment expenses, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of the OPEB liabilities.

Mortality rates – General State Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70-75
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	Increase rate from 14% to 25%

Mortality rates – Teachers

Pre-Retirement:

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.

Post-Retirement:

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.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with Scale BB to 2020; 115% of rates for males and females.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the four-year period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70-75
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

Mortality rates – SPORS Employees

Pre-Retirement:

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.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

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, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020 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%

Mortality rates – VaLORS Employees

Pre-Retirement:

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.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

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, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020 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%

Mortality rates – JRS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% compounding increase from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of an actuarial experience study for the four-year period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change

Mortality rates – Largest Ten 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, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered 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%

Mortality rates – Non-Largest Ten 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, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered 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%

Mortality rates – Largest Ten Locality Employers – Hazardous Duty Employees

Pre-Retirement:

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.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

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, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered 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%

Mortality rates – Non-Largest Ten Locality Employers – Hazardous Duty Employees

Pre-Retirement:

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.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

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, 2017 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	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%

Net GLI OPEB Liability

The net OPEB liability (NOL) for the Group Life Insurance Program represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of the measurement date of June 30, 2018, NOL amounts for the Group Life Insurance Program are as follows (amounts expressed in thousands):

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

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

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

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total GLI OPEB liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS guidance and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2018, 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, 2018 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 Employer's Proportionate Share of the Net GLI OPEB Liability to Changes in the Discount Rate

The following presents the employer's proportionate share of the net GLI OPEB liability using the discount rate of 7.00%, as well as what the employer'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 (6.00%) or one percentage point higher (8.00%) than the current rate:

	1.00% Decrease (6.00%)	Current Discount Rate (7.00%)	1.00% Increase (8.00%)
Employer's Proportionate Share of the Group Life Insurance Program Net OPEB Liability	$ 96,000	$ 73,000	$ 55,000

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

12 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. The Authority joined the Virginia Municipal Group Self-Insurance Association (Association), a public entity risk pool currently operating as a common risk management and insurance program for member governments. The Authority pays an annual premium to the association for its worker's compensation and general liability insurance. The Agreement for Formation of the Association provides that the Association will be self-sustaining through member premiums. The Authority also participates in the VaRisk2, a group liability self-insurance to the public entity risk pool currently operating as a common risk management and insurance program for participating governments. Settled claims have not exceeded pool coverage in any of the past three fiscal years.

The Authority continues to carry commercial insurance for all other risks of loss including employee health and accident insurance. Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years.

13 Upcoming Pronouncements

Statement No. 83, Certain Asset Retirement Obligations, addresses accounting and financial reporting for certain asset retirement obligations {AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement. This Statement establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for AROs. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018.

Statement No. 84, Fiduciary Activities, establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and {2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018.

Statement No. 87, Leases, increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019.

Statement No. 88, Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements, clarifies which liabilities governments should include when disclosing information related to debt. It defines debt for purposes of disclosure in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established. The Statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance- related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. For notes to financial statements. related to debt, it requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018.

Statement No. 89, Accounting for Interest Cost Incurred Before the End of a Construction Period, enhances the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and simplifies accounting for interest cost incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5-22 of Statement No. 62, Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements, which are superseded by this Statement. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This Statement also reiterates that in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019.

Management is currently evaluating the impact these standards will have on the financial statements when adopted.

14 Commitments and Contingencies

A Consent Special Order was issued under the Authority of Virginia Code 62.1-44.15 between the State Department of Environmental Quality (DEQ) and the Sussex Service Authority for the purpose of resolving certain alleged violations of State Water Control Law and the applicable permit and regulations. Parties have preliminarily agreed to a two-phased Long Term Phosphorus Control Plan (LTPCP) to address the initiative: the first phase is principally a data collection, evaluation and plan development program and the second phase will implement a long-term phosphorus control plan. DEQ has yet to formally approve the LTPCP. The Authority is using a chemical in the system which has drastically reduced the phosphorous. Also, the Authority is working on identifying inflow and infiltration (I & I) issues.

15 Subsequent Events

Management has performed an analysis of the activities and transactions subsequent to June 30, 2019 to determine the need for any adjustments to and/or disclosures within the audited financial statements for the year ended June 30, 2019. Management has performed their analysis through May 7, 2020.

REQUIRED SUPPLEMENTARY INFORMATION

Sussex Service Authority

Schedule of Changes in the Political Subdivision's Net Pension Liability
and Related Ratios

For the Plan Years Ended June 30, 2014-2018

	2018	2017	2016	2015	2014
Total pension liability					
Service cost	$ 94,740	$ 95,867	$ 93,165	$ 92,167	$ 89,701
Interest	144,311	133,196	121,548	107,909	96,950
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	(35,697)	57,834	(7,445)	30,847	-
Changes in assumptions	-	(85,588)	-	-	-
Benefit Payments, including refunds of employee contributions	(43,651)	(41,412)	(40,320)	(31,827)	(28,375)
Net change in total pension liability	159,703	159,897	166,948	199,096	158,276
Total pension liability - beginning	2,083,409	1,923,512	1,756,564	1,557,468	1,399,192
Total pension liability - ending (a)	$ 2,243,112	$ 2,083,409	$ 1,923,512	$ 1,756,564	$ 1,557,468
Plan fiduciary net position					
Contributions - employer	$ 40,884	$ 39,148	$ 38,729	$ 38,213	$ 58,119
Contributions - employee	45,110	43,170	44,760	45,570	44,607
Net investment income	187,423	272,345	38,911	92,432	264,926
Benefit Payments, including refunds of employee contributions	(43,651)	(41,412)	(40,320)	(31,827)	(28,375)
Administrative expense	(1,550)	(1,502)	(1,278)	(1,196)	(1,351)
Other	(170)	(245)	(16)	(20)	14
Net change in plan fiduciary net position	228,046	311,504	80,786	143,172	337,940
Plan fiduciary net position - beginning	2,511,400	2,199,896	2,119,110	1,975,938	1,637,998
Plan fiduciary net position - ending (b)	$ 2,739,446	$ 2,511,400	$ 2,199,896	$ 2,119,110	$ 1,975,938
Political subdivision's net pension liability - ending (a) - (b)	$ (496,334)	$ (427,991)	$ (276,384)	$ (362,546)	$ (418,470)
Plan fiduciary net position as a percentage of the total pension liability	122.13%	120.54%	114.37%	120.64%	126.87%
Covered payroll	$ 918,460	$ 874,228	$ 867,281	$ 849,672	$ 826,731
Political subdivision's net pension liability as a percentage of covered payroll	-54.04%	-48.96%	-31.87%	-42.67%	-50.62%

Sussex Service Authority

Schedule of Employer Contributions

For the Years Ended June 30, 2010 through 2019

Date	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contribution Deficiency (Excess) (3)	Employer's Covered Payroll (4)	Contributions as a % of Covered Payroll (5)
2019	**$ 22,320**	**$ 22,320**	**$ -**	**$ 918,522**	**2.43%**
2018	31,785	40,884	9,099	918,460	4.45%
2017	30,248	39,148	8,900	874,228	4.48%
2016	37,553	39,375	1,822	867,281	4.54%
2015	36,791	38,213	1,422	849,672	4.50%
2014	58,119	58,119	-	826,731	7.03%
2013	57,670	57,670	-	820,335	7.03%
2012	36,050	36,050	-	794,059	4.54%
2011	37,594	37,594	-	828,063	4.54%
2010	29,741	29,741	-	840,143	3.54%

For Reference Only:
Column 1 – Employer contribution rate multiplied by the employer’s covered payroll
Column 2 – Actual employer contribution remitted to VRS
Column 4 – Employer’s covered payroll amount for the fiscal year

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

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

Largest 10 – Non-Hazardous Duty:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70-75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increase rate from 14% to 20%

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

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increase rate from 14% to 15%

Sussex Service Authority

Schedule of Employer's Share of Net OPEB Liability
Group Life Insurance Program

For the Measurement Dates of June 30, 2018 and 2017

	2018	2017
Employer's Proportion of the Net GLI OPEB Liability (Asset)	**0.004830%**	0.004770%
Employer's Proportionate Share of the Net GLI OPEB Liability (Asset)	**$ 73,000**	$ 71,000
Employer's Covered Payroll	**$ 918,640**	$ 879,685
Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) as a Percentage of its Covered Payroll	**7.947%**	8.07%
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	**51.22%**	48.86%

Schedule is intended to show information for 10 years. Since 2018 is the second year of presentation, only two years of data are available. However, additional years will be included as they become available.

For Reference Only:

The Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability for the VRS Group Life Insurance Program for each year is presented on page 121 of the VRS 2018 Comprehensive Annual Financial Report (CAFR).

Sussex Service Authority

Schedule of Employer Contributions for OPEB - Group Life Insurance Program

For the Years Ended June 30, 2010 through 2019

Date	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contribution Deficiency (Excess) (3)	Employer's Covered Payroll (4)	Contributions as a % of Covered Payroll (5)
2019	**$ 4,776**	**$ 4,776**	**$ -**	**$ 918,522**	**0.52%**
2018	4,777	4,777	-	918,640	0.52%
2017	4,574	4,574	-	879,685	0.52%
2016	4,163	4,163	-	867,281	0.48%
2015	4,078	4,078	-	849,672	0.48%
2014	3,985	3,985	-	830,149	0.48%
2013	3,938	3,938	-	820,335	0.48%
2012	2,223	2,223	-	794,059	0.28%
2011	2,324	2,324	-	829,878	0.28%
2010	1,723	1,723	-	840,143	0.21%

For Reference Only:

Column 1 - Employer contribution rate multiplied by the employer's covered payroll.

Column 2 - Actual employer contribution remitted to VRS.

Column 4 - Employer's covered payroll amount for the fiscal year.

Sussex Service Authority

Notes to Required Supplementary Information – GLI OPEB

For the Year Ended June 30, 2019

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

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

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 from 70-75
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	Increase rate from 14% to 25%

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 from 70-75
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

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%

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%

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

Largest Ten 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%

Non-Largest Ten 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%

Largest Ten 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%

Non-Largest Ten 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%

OTHER SUPPLEMENTARY INFORMATION

Schedule 1

Sussex Service Authority

Operating Expenses - Schedule of Other Charges

Year Ended June 30, 2019

Other Charges	
Communication	$ 2,896
Employee development	7,154
Laboratory	74,960
Maintenance	556,847
Minor equipment	19,252
Office	18,791
Professional services	55,568
Specific uses supplies	85,471
Insurance	71,162
Treatment	134,747
Utility Services	351,178
Other	52,439
Total Other Charges	$ 1,430,465

OTHER
STATISTICAL SECTION

Table 1

Sussex Service Authority

Revenue Bond Debt Service Coverage

Last Ten Fiscal Years

Fiscal Years Ended June 30	Gross Revenues*	Direct Operating Expenses**	Net Available	Principal***	Interest	Total Debt	Coverage
2019	**$ 4,737,827**	**$ 2,804,304**	**$ 1,933,523**	**$ 1,008,669**	**$ 428,338**	**$ 1,437,007**	**1.35**
2018	4,725,165	2,618,418	2,106,747	976,855	453,670	1,430,525	1.47
2017	4,393,473	2,561,556	1,831,917	948,690	538,009	1,486,699	1.23
2016	4,259,986	2,309,344	1,950,642	948,317	514,427	1,462,744	1.33
2015	4,213,144	2,211,720	2,001,424	866,429	601,648	1,468,077	1.36
2014	4,110,483	2,383,042	1,727,441	857,898	622,428	1,480,326	1.17
2013	3,972,183	2,170,689	1,801,494	874,005	624,897	1,498,902	1.20
2012	3,984,470	2,229,724	1,754,746	866,958	662,752	1,529,710	1.15
2011	3,926,424	2,103,783	1,822,641	851,997	697,146	1,549,143	1.18
2010	3,838,857	2,045,537	1,793,320	903,664	642,931	1,546,595	1.16

*Operating revenues and interest income.
**Excluding depreciation, interest, and amortization.
***Excludes debt refinancing payoffs.

COMPLIANCE

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
Sussex Service Authority

We have audited, in accordance with the auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, and the *Specifications for Audits of Authorities, Boards, and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia, the financial statements of the business-type activities of the Sussex Service Authority, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Sussex Service Authority's basic financial statements, and have issued our report thereon dated May 7, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Sussex Service Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Sussex Service Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Sussex 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 and therefore, material weaknesses or significant deficiencies may exist that have not been identified. We did identify a deficiency in internal control, described in the accompanying schedule of findings and responses as item 2019-001 that we consider to be a material weakness.

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Compliance and Other Matters

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

Sussex Service Authority's Response to Findings

Sussex Service Authority's response to the findings identified in our audit is described in the accompanying schedule of findings and responses. Sussex Service Authority's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

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 entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Creedle, Jones & Associates, P.C.

Creedle, Jones & Associates, P.C.
Certified Public Accountants

South Hill, Virginia
May 7, 2020

Sussex Service Authority

Schedule of Findings and Responses

Year Ended June 30, 2019

SECTION I - SUMMARY OF AUDITOR'S RESULTS

Financial Statements

Type of auditor's report issued on whether the audited financial statements were prepared in accordance with GAAP (i.e. unmodified opinion, qualified opinion, adverse opinion, or disclaimer of opinion):	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	Yes
Significant deficiency(ies) identified?	None Reported
Noncompliance material to financial statements noted?	No

SECTION II – FINANCIAL STATEMENT FINDINGS

Finding 2019-001 (Repeat Finding 2018-001)

Criteria: Per Statement of Auditing Standards 115, identification of material adjustments to the financial statements that are not detected by the entity's internal controls indicates that a material weakness still exists.

Condition: The Authority's financial statements required material adjustments at the conclusion of audit fieldwork to ensure that such statements complied with Generally Accepted Accounting Principles (GAAP). Audit adjusting entries were proposed to record and correct accounts receivable, accounts payable, the allowance for doubtful accounts, cash balances, beginning net position, revenues, fixed assets, management fees and to correct the posting of certain fringe benefits.

Effect of Condition: There is a reasonable possibility that a material misstatement of the Authority's financial statements will not be prevented by the entity's internal controls over financial reporting.

Cause of Condition: Authority management failed to identify all year end accounting adjustments in a timely manner necessary for the Authority's financial statements to be prepared in accordance with current reporting standards. Authority management does not have proper controls in place to detect all adjustments in closing their year end financial statements and to reconcile financial activity to ensure timely reporting.

Recommendation: Authority management should have procedures in place to properly identify and record year end closing entries to the accounting system in a timely manner.

Management's Recommendation: Management will continue corrective action for FY20 by implementing procedures related to year-end entries.

Sussex Service Authority

Summary Schedule of Prior Audit Findings

Year Ended June 30, 2019

Financial Statements

Findings – Financial Reporting

Finding 2018-001

Condition: The Authority's financial statements required material adjustments at the conclusion of audit fieldwork to ensure that such statements complied with Generally Accepted Accounting Principles (GAAP). Audit adjusting entries were proposed to record and correct accounts receivable, accounts payable, the allowance for doubtful accounts, cash balances, beginning net position, revenues, fixed assets, management fees and to correct the posting of certain fringe benefits.

Recommendation: Authority management should have procedures in place to properly identify and record year-end closing entries to the accounting system in a timely manner.

Current Status: Management is still implementing procedures related to year-end entries.

Finding 2018-002

Condition: There are currently no vehicle logs prepared detailing miles traveled or the business purpose and destination of travel for any of the Authority vehicles. There are four vehicles that are permanently assigned to management. Vehicles are allowed to be taken home and are available for personal use. Internal controls over the use of the gas pump include the user documenting the mileage driven and the gallons pumped in the Fuel Usage Registry log that is physically maintained at the gas pumps. RFC reviewed the Fuel Usage Registry log and noted inconsistencies in the calculations for mileage, gallons pumped, and a page was missing from the Fuel Usage Registry log. There was no documented management review of the Fuel Usage Registry log for compliance and completeness.

Recommendation: Authority management should have procedures in place requiring the preparation of vehicle mileage logs for each Authority vehicle. Management should review these logs for personal usage. The amount of personal usage of the Authority vehicle should be reported as income on the employee's W-2. Additionally, management should review the Fuel Usage Registry log each month to ensure completeness and compare the amounts reported in the log to the actual gallons pumped.

Current Status: Management reviews vehicle logs for inconsistencies, following up with personnel if any inconsistencies are found.

Finding 2018-003

Condition: There is currently no meaningful detailed inventory listing of small equipment and computers that are owned by the Authority. Large equipment valued at over $5,000 is reported as a fixed asset of the Authority. The Authority has a written policy that allows employees to borrow Authority equipment for "personal use" subject to their supervisor's approval.

Recommendation: Authority management should perform a physical inventory of all Authority-owned small equipment and computers. This listing should detail the asset, the purchase date, the cost, location of asset and the disposal date. All inventory items should be physically tagged with the tag number referenced on the inventory listing. This inventory listing should be updated during the year and a physical inventory should be performed every year end to allow accountability over Authority inventory.

Current Status: Due to the immaterial number of items and dollar amount of items, it would not be efficient to track such items.

Finding 2018-004

Condition: There is one employee who continually utilizes the Authority's credit card for personal purchases. When purchases are identified, the payroll clerk reimburses the Authority for the purchase through a payroll deduction from the employee's paycheck. The Authority Employee Handbook states that personal use of the Authority credit card is prohibited.

Recommendation: We recommend that Authority management conduct remedial training for staff and enforce the written credit card policy.

Current Status: Creedle, Jones & Associates, P.C. did not note any personal charges on Authority credit card. Per management, personal use of Authority credit card is prohibited.

Finding 2018-005

Condition: The U.S. Department of Labor Wage and Hour Division requires that all non-exempt employees document hours worked each day, time of day of the week worked and the total number of hours worked each workweek. Non-exempt employees are subject to the provisions of the Fair Labor Standards Act (FLSA) which sets minimum wage, overtime pay and recordkeeping provisions for such employees.

Recommendation: The employee should prepare a timesheet each pay period documenting hours worked in accordance with the provisions of the FLSA.

Current Status: Employee prepares required timesheet.

Finding 2018-006

Condition: No sales tax is paid by the Authority on the purchase of these tires. These purchases are not for the use of the Authority but rather for the use of the employee.

Recommendation: We recommend that the Authority discontinue the practice of allowing employees to purchase tires. This practice comingles business and personal expenses and jeopardizes the tax exempt status of the Authority.

Current Status: Beginning in FY19, the Authority remits sales tax on tire purchases by employees.

Finding 2018-007

Condition: Internal Revenue Service (IRS) regulations require that public officials, elected officials and public officers be issued a Form W-2, Wage and Tax Statement rather than a Form 1099-Misc.

Recommendation: We recommend that the Authority begin compensating Board members and alternate Board members through the payroll system and a Form W-2, Wage and Tax Statement rather than a Form 1099-Misc. at year end.

Current Status: The Authority issued W-2s for 2019 for Board members.