GREENSVILLE COUNTY WATER AND SEWER AUTHORITY (A Component Unit of the County of Greensville, Virginia)
FINANCIAL REPORT
FOR THE YEAR ENDED SEPTEMBER 30, 2019

GREENSVILLE COUNTY WATER AND SEWER AUTHORITY

(A Component Unit of the County of Greensville, Virginia) FINANCIAL REPORT

FOR THE YEAR ENDED SEPTEMBER 30, 2019

Members

Raymond Bryant, Jr, Chairman

Michael Ferguson, Vice-Chairman

Tony Conwell

William B. Cain

Brenda N. Parson, Director

Table of Contents

	Page
Independent Auditors' Report	1-3
<u>Financial Statements</u>	
Statement of Net Position	4
Statement of Revenues, Expenses and Changes in Net Position	5
Statement of Cash Flows	6
Notes to Financial Statements	7-47
Required Supplementary Information	
Schedule of Changes in Net Pension Liability (Asset) and Related Ratios	48
Schedule of Employer Contributions - Pension	49
Notes to Required Supplementary Information - Pension	50
Schedule of Changes in the Authority's Net OPEB Liability and Related Ratios - Health Insurance Credit Program	51
Schedule of Employer Contributions - Health Insurance Credit Program	52
Notes to Required Supplementary Information - Health Insurance Credit Program	53
Schedule of Authority's Share of Net OPEB Liability - Group Life Insurance Program	54
Schedule of Employer Contributions - Group Life Insurance Program	55
Notes to Required Supplementary Information - Group Life Insurance Program	56
Compliance	
Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	57-58
Independent Auditors' Report on Compliance for Each Major Program and on Internal Control over Compliance Required by the Uniform Guidance	59-60
Schedule of Expenditures of Federal Awards	61
Notes to Schedule of Expenditures of Federal Awards	62
Schedule of Findings and Questioned Costs	63



ROBINSON, FARMER, COX ASSOCIATES, PLLC

Certified Public Accountants

Independent Auditors' Report

To the Board of Directors Greensville County Water and Sewer Authority Emporia, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of Greensville County Water and Sewer Authority, a component unit of the County of Greensville, Virginia, as of and for the year ended September 30, 2019, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities*, *Boards*, *and Commissions*, issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards 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 auditors' 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 opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of Greensville County Water and Sewer Authority, as of September 30, 2019, and the changes in financial position, and, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As described in Note 13 to the financial statements, in 2019, the Authority adopted new accounting guidance, GASB Statement No. 88 *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements* and early implemented GASB Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*. Our opinion is not modified with respect to this matter.

Restatement of Beginning Balances

As described in Note 14 to the financial statements, in 2019, the Authority restated beginning balances to reflect amounts due from Greensville County that were not included in the September 30, 2018 Financial Report. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the schedules related to pension and OPEB funding on pages 48-56 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.

Management has omitted management's discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing 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. Our opinion on the basic financial statements is not affected by the missing information.

Supplementary and Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise Greensville County Water and Sewer Authority's basic financial statements. The schedule of expenditures of federal awards is presented for purposes of additional analysis as required by Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and is not a required part of the basic financial statements.

Other Matters: (Continued)

Supplementary and Other Information: (Continued)

The schedule of expenditures of federal awards is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 8, 2020, on our consideration of Greensville County Water and Sewer 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 Greensville County Water and Sewer 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 Greensville County Water and Sewer Authority's internal control over financial reporting and compliance.

Mobinson, farmer, Cox fassociates Charlottesville, Virginia

April 8, 2020



Statement of Net Position At September 30, 2019

ASSETS	_	Water	Sewer		Total
Current assets:					
Cash and cash equivalents	\$	654,029		\$	2,449,138
Cash - restricted		412,586	6,997,615		7,410,201
Accounts receivable		216,677	231,824		448,501
Due from other governments		-	346,852		346,852
Loans receivable, current portion	-	20,420	20,420	-	40,840
Total current assets	\$_	1,303,712	9,391,820	\$_	10,695,532
Noncurrent assets:					
Capital assets:					
Land and land rights	\$	2,171,350	•	\$	2,852,752
Buildings, plant and equipment, net of accumulated depreciation		23,028,128	14,691,096		37,719,224
Construction in progress	_	24,574,703	1,199,937		25,774,640
Total capital assets	\$	49,774,181	16,572,435	\$	66,346,616
Loans receivable, long-term portion	_	227,842	227,842		455,684
Total noncurrent assets	\$_	50,002,023	16,800,277	\$	66,802,300
Total assets	\$_	51,305,735	26,192,097	\$	77,497,832
DEFERRED OUTFLOWS OF RESOURCES					
Pension related items	\$	60,593	81,981	\$	142,574
OPEB related items	_	5,319	7,030		12,349
Total deferred outflows of resources	\$_	65,912	89,011	\$_	154,923
LIABILITIES					
Current liabilities:					
Accounts payable and accrued expenses	\$	1,774,897	345,264	\$	2,120,161
Current portion of long-term obligations	_	3,088,461	309,331		3,397,792
Total current liabilities	\$_	4,863,358	654,595	\$	5,517,953
Noncurrent liabilities:					
Noncurrent portion of long-term obligations	\$_	15,555,052	10,027,785	\$_	25,582,837
Total liabilities	\$_	20,418,410	10,682,380	\$_	31,100,790
DEFERRED INFLOWS OF RESOURCES Pension related items	\$	47,599	64,403	¢	112,002
OPEB related items	, _	7,437	9,833	, 	17,270
Total deferred inflows of resources	\$_	55,036	74,236	\$_	129,272
NET POSITION					
Net investment in capital assets	\$	31,379,121	6,537,147	\$	37,916,268
Restricted - debt service reserve	•	412,586	6,997,615		7,410,201
Unrestricted net position		(893,506)	1,989,730		1,096,224
Total net position	- \$		15,524,492	. . \$	

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

Statement of Revenues, Expenses and Changes in Net Position For the Year Ended September 30, 2019

	_	Water	Sewer	Total
Operating revenues: Metered saleswater User feessewer Penalties Other operating revenues	\$	2,376,974 - 18,224 553,676	\$ - \$ 2,747,090 28,179 71,024	2,376,974 2,747,090 46,403 624,700
Total operating revenues	\$_	2,948,874	\$ 2,846,293 \$	5,795,167
Operating expenses: Administration Authority Board Maintenance Water treatment-Northampton Water treatment-Jarratt Econo lodge well system Jackson Field water system Service laterals Falling run sewage treatment plant Three creek sewage treatment plant Sewage treatment -Emporia/Northampton Sewage treatment-Jarratt Skippers sewage treatment plant Depreciation	\$	159,977 10,985 287,086 335,231 827,543 12,606 3,326 61,129	\$ 242,903 \$ 16,383	402,880 27,368 868,625 335,231 827,543 12,606 3,326 61,129 80,339 693,396 252,991 52,785 123,160 1,177,411
Total operating expenses	\$_	2,356,713		
Operating income	\$_	592,161	\$ 284,216 \$	876,377
Nonoperating revenues (expenses): Interest income Transfers Interest expense	\$	15,983 47,675 (494,921)	\$ 25,091 \$ (47,675) (276,402)	41,074 - (771,323)
Total nonoperating revenues (expenses)	\$_	(431,263)	\$ (298,986) \$	(730,249)
Income (loss) before grants, capital contributions and connection charges	\$_	160,898	\$\$	146,128
Capital grants Federal water grants Connection charges	\$	(2,847,206) 2,894,040 9,540	\$ 524,250 \$ - 12,460	(2,322,956) 2,894,040 22,000
Total grants, capital contributions and connection charges	\$_	56,374	\$ 536,710 \$	593,084
Change in net position Net position - beginning of year, as restated	\$	217,272 30,680,929	\$ 521,940 \$ 15,002,552	739,212 45,683,481
Net position - end of year	\$_	30,898,201	\$ 15,524,492 \$	46,422,693

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

Statement of Cash Flows For the Year Ended September 30, 2019

		Water	Sewer	Total
Cash flows from operating activities: Receipts from customers and users Payments to suppliers of goods and services Payments to and on behalf of employees	\$	3,377,407 \$ (1,134,699) (751,353)	2,525,158 \$ (872,509) (931,434)	5,902,565 (2,007,208) (1,682,787)
Net cash provided by (used for) operating activities	\$	1,491,355 \$	721,215 \$	2,212,570
Cash flows from noncapital financing activities: Transfers	\$_	47,675 \$	(47,675) \$	
Cash flows from capital and related financing activities: Interest paid on debt Connection charges Capital grants and federal water grants received Additions to capital assets and construction in progress Loan proceeds received Retirement of indebtedness	\$	(494,921) \$ 9,540 46,834 (9,186,481) 2,791,017 (434,495)	(276,402) \$ 12,460 524,250 (1,128,776) 7,275,781 (410,590)	(771,323) 22,000 571,084 (10,315,257) 10,066,798 (845,085)
Net cash provided by (used for) capital and related financing activities	\$_	(7,268,506) \$	5,996,723 \$	(1,271,783)
Cash flows from investing activities: Interest earned Principal payments received on loans receivable	\$	15,983 \$ 19,662	25,091 \$ 366,514	41,074 386,176
Net cash provided by (used for) investing activities	\$_	35,645 \$	391,605 \$	427,250
Increase (decrease) in cash and cash equivalents for the year	\$	(5,693,831) \$	7,061,868 \$	1,368,037
Cash and cash equivalents at beginning of year, including \$569,411 of cash in hands of trustee	_	6,760,446	1,730,856	8,491,302
Cash and cash equivalents at end of year, including \$7,410,201 of cash in hands of trustee	\$ __	1,066,615 \$	8,792,724 \$	9,859,339
Reconciliation of operating income (loss) to net cash provided by (used for) operating activities: Operating income	\$	592,161 \$	284,216 \$	876,377
Adjustments to reconcile net income (loss) to net cash provided by (used for) operating activities:				
Depreciation		658,830	518,581	1,177,411
Changes in assets, deferred outflows of resources, liabilities and deferred inflows of resources:		02.072	05 747	40.700
Decrease in accounts receivable Increase in due from other governments		23,073	25,717 (346,852)	48,790 (346,852)
Decrease in grant receivable Increase (decrease) in accounts payable and other accrued liabilities		405,460 (172,421)	- 258,168	405,460 85,747
Increase (decrease) in compensated absences		(4,991)	(4,161)	(9,152)
Increase (decrease) in net pension liability		4,406	5,962	10,368
Decrease in deferred outflows of resources - pension related		9,978	13,502	23,480
Decrease in deferred outflows of resources - OPEB related		(1,628)	(2,152)	(3,780)
Increase in deferred inflows of resources - pension related		(22,091)	(29,887)	(51,978)
Increase in deferred inflows of resources - OPEB related		982	1,298	2,280
(Decrease) in net OPEB liabilities	-	(2,404)	(3,177)	(5,581)
Net cash provided by (used for) operating activities	\$_	1,491,355 \$	721,215 \$	2,212,570

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

Notes to Financial Statements As of September 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

A. Organization and Purpose:

The Greensville County Water and Sewer Authority was created by the Greensville County Board of Supervisors on February 21, 1978, pursuant to the provisions of the Virginia Water and Sewer Authorities Act, Section 15.2-5100 through Section 15.2-5158 of the <u>Code of Virginia</u>, 1950, as amended. The County of Greensville, Virginia serves as the fiscal agent for the Authority.

The bylaws and rules for the business transactions of the Greensville County Water and Sewer Authority are made pursuant to the authority vested in this Authority by Section 15.2-5114(b), <u>Code of Virginia</u>, 1950, as amended and in accordance with the general provisions of the Virginia Water and Sewer Authorities Act.

B. Financial Reporting Entity:

The Greensville County Water and Sewer Authority is reported as a blended component unit of the County of Greensville, Virginia. The Authority is governed by a Board comprised of the County's elected supervisors.

The financial statements of the Authority are prepared as an "enterprise" commercial unit to conform to financial reporting practices as recommended in *Water Utility Accounting* published jointly by the Governmental Finance Officers Association and The American Water Works Association.

C. Basic Financial Statements:

For the Authority, the basic financial statements and required supplementary information consist of:

- Management's discussion and analysis (management has elected to omit this from report)
- Enterprise fund financial statements
 - Statement of Net Position
 - Statement of Revenues, Expenses and Changes in Net Position
 - Statement of Cash Flows
 - Notes to Financial Statements
- Required Supplementary Information
 - Schedule of Changes in Net Pension Liability (Asset) and Related Ratios
 - Schedule of Employer Contributions Pension
 - Notes to Required Supplementary Information Pension
 - Schedule of Changes in the Authority's Net OPEB Liability and Related Ratios
 - Health Insurance Credit Program
 - Schedule of Employer Contributions Health Insurance Credit Program
 - Notes to Required Supplementary Information Health Insurance Credit Program
 - Schedule of Authority's Share of Net OPEB Liability Group Life Insurance Program
 - Schedule of Employer Contributions Group Life Insurance Program
 - Notes to Required Supplementary Information Group Life Insurance Program

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

D. Basis of Accounting:

The accounts of the Authority are accounted for using the economic resources measurement focus and utilize the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred. The accompanying financial statements are prepared in accordance with pronouncements issued by the Governmental Accounting Standards Board. The principles prescribed by GASB represent generally accepted accounting principles applicable to governmental units.

The Authority distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and 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. The Authority also recognizes as operating revenue the portion of availability charges intended to recover the cost of connecting new customers to the system. 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.

E. Cash and Cash Equivalents:

For purposes of the statement of cash flows, the Authority considers all highly liquid investments (including restricted assets) with an original maturity of three months or less from the date of purchase to be cash equivalents.

F. Allowance for Uncollectible Accounts:

The Authority calculates its allowance for specific accounts using historical collection data and, in certain cases, specific account analysis. Historical collection data indicates that any uncollectible amounts would be negligible. Accordingly, no allowance for uncollectible accounts has been established.

G. Capital Assets and Depreciation:

The Authority's capital assets consist of office and computer equipment, transportation equipment and utility plant in service. Capital assets are defined by the Authority as assets with an initial individual cost of more than \$5,000 and an estimated useful life in excess of one year. All additions to utility lines are capitalized. Depreciation expense is computed by the straight—line method using the following estimated useful lives as a basis:

Items	Years
Source of supply structures	50
Water pumping equipment	20
Transmission mains and accessories	50 to 66-2/3
Meters	66-2/3
Hydrant and accessories	5
Other general equipment	3
Motor vehicles	5

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

G. Capital Assets and Depreciation: (Continued)

No depreciation is taken on assets until the first year following the date placed in service.

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 expensed.

H. 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.

I. Compensated Absences:

The Authority has a policy which allows for the accumulation and vesting of limited amounts of vacation leave until termination or retirement.

J. Deferred Outflows/Inflows of Resources:

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense) 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 and net OPEB liabilities and contributions to the net pension and OPEB plans made during the current year and subsequent to the net pension liability and net OPEB liability measurement date. For more detailed information on these items, reference the related notes.

In addition to liabilities, the statement of financial position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. Certain items related to the measurement of the net pension liability and net OPEB liability(ies) are reported as deferred inflows of resources. For more detailed information on these items, reference the related notes.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

K. 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 represents 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.

L. Net Position Flow Assumption:

Sometimes the Authority will fund outlays for a particular purpose from both restricted (e.g., restricted bond) and unrestricted resources. In order to calculate the amounts to report as restricted - net position and unrestricted - net position, 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.

M. Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Authority's Retirement Plan and the additions to/deductions from the Authority's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (VRS). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

N. Other Postemployment Benefits (OPEB):

Group Life Insurance

The Virginia Retirement System (VRS) Group Life Insurance Program 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 Virginia Retirement System (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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

N. Other Postemployment Benefits (OPEB): (Continued)

Health Insurance Credit Program

The Authority Health Insurance Credit (HIC) Program was established pursuant to \$51.1-1400 et seq. of the <u>Code of Virginia</u>, as amended, and which provides the authority under which benefit terms are established or may be amended. For purposes of measuring the net HIC OPEB liability, deferred outflows of resources and deferred inflows of resources related to the HIC OPEB, and the related HIC OPEB expense, information about the fiduciary net position of the Virginia Retirement System (VRS) Political Subdivision HIC Program, and the additions to/deductions from the VRS Political Subdivision HIC Program's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

NOTE 2 - 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 2.2-4400 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).

The Authority has not adopted a formal investment policy as of September 30, 2019.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 2 - DEPOSITS AND INVESTMENTS: (CONTINUED)

Credit Risk of Debt Securities

The Authority's rated debt investments as of September 30, 2019 were rated by <u>Standard & Poor's</u> and the ratings are presented below using Standard & Poor's rating scale.

Authority's Rated Debt Investment Value

Rated Debt Investments	Fair Quality Ratings
	AAAm
Local Government Investment Pool Virginia State Non-Arbitrage Pool	\$ 125,221 461,913
Total	\$ 587,134

Interest Rate Risk

Investment Maturities (in years)

Investment Type	Fair Value	Less Than 1 Year
Local Government Investment Pool Virginia State Non-Arbitrage Pool	\$ 125,221 461,913	\$ 125,221 461,913
Total	\$ 587,134	\$ 587,134

External Investment Pools

The fair value of the positions in the external investment pools (Local Government Investment Pool and State Non-Arbitrage Pool) is the same as the value of the pool shares. As LGIP and SNAP are not SEC registered, regulatory oversight of the pool rests with the Virginia State Treasury. There are no withdrawal limitations or restrictions imposed on participants.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 3 - CAPITAL ASSETS:

A summary of changes in capital assets for the year is presented as follows:

		Balance October 1, 2018	Additions	Deletions	Balance September 30, 2019
Capital assets not being depreciated:	-				
Land and land rights Construction in progress	\$	2,852,752 \$ 15,459,383	- \$ 10,315,257	- \$ 	2,852,752 25,774,640
Total capital assets not being depreciated	\$_	18,312,135 \$	10,315,257 \$	\$	28,627,392
Capital assets being depreciated:					
Buildings and plant Equipment	\$	57,314,540 \$ 1,046,198	- \$ 	- \$ 	57,314,540 1,046,198
Total capital assets being depreciated	\$_	58,360,738 \$	- \$	\$	58,360,738
Accumulated depreciation:					
Buildings, plant, and equipment	\$_	(19,464,103) \$	(1,177,411) \$	\$	(20,641,514)
Total capital assets being depreciated, net	\$_	38,896,635 \$	(1,177,411) \$	\$	37,719,224
Capital assets, net	\$_	57,208,770 \$	9,137,846 \$	\$	66,346,616

Depreciation expense for the year totaled \$1,177,411.

NOTE 4 - CONSTRUCTION IN PROGRESS:

Details of construction work in progress for the fiscal year ended September 30, 2019 are as follows:

	Balance October 1,			Balance September 30,
Project	 2018	Additions	Deletions	2019
Exit 4 Potable Well Integration	\$ 180,765 \$	- \$	- \$	180,765
Skippers Waste Water Treatment	71,162	306,385	-	377,547
Social Services Waste Water Pump Station	-	133,572	-	133,572
Dominion VA Power Water	15,207,456	9,136,416	-	24,343,872
MAMAC Off-Site Waste Water	-	427,983	-	427,983
Moores Ferry Road	-	50,066	-	50,066
Exit 4 Pump Station and Force Main	 	260,835	-	260,835
Total	\$ 15,459,383 \$	10,315,257 \$	\$	25,774,640

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 5 - COMPENSATED ABSENCES:

The Authority has accrued the liability arising from outstanding compensated absences. Authority employees earn vacation and sick leave at the rate of one day for each per month. All accumulated vacation is paid upon termination. 25% of sick leave up to \$5,000 is paid upon termination if employed by the Authority for at least five years. The Authority has outstanding accrued vacation and sick pay totaling \$221,539.

NOTE 6 - LONG-TERM OBLIGATIONS:

The following is a summary of long-term obligation transactions of the Authority for the fiscal year ended September 30, 2019:

			Issuances/ Increases	Retirements/ Decreases	Balance End of Year	Current Portion
Direct borrowings and direct placements:						
Loan payable	\$	76,770 \$	- \$	14,220 \$	62,550 \$	14,722
Interim Financing		-	2,791,017	-	2,791,017	2,791,017
Rural development loan		9,800,000	-	-	9,800,000	-
2014 Revenue Refunding Bonds		1,745,000	-	75,000	1,670,000	80,000
2013 Revenue Refunding Bonds		375,000	-	375,000	-	-
2010 Revenue Refunding Bonds		2,975,000	-	190,000	2,785,000	200,000
2011 Revenue Bonds		1,230,000	-	70,000	1,160,000	70,000
2012 Revenue Bonds		210,000	-	5,000	205,000	5,000
2016 Revenue Bonds		1,955,000	-	40,000	1,915,000	40,000
2019 Revenue Bonds		-	6,790,000	-	6,790,000	105,000
Premiums on bonds payable		841,865	485,781	75,865	1,251,781	69,899
Net OPEB liabilities		114,001	20,317	25,898	108,420	-
Net Pension Liability		209,954	449,788	439,420	220,322	-
Compensated absences	_	230,691	-	9,152	221,539	22,154
Total	\$	19,763,281 \$	10,536,903 \$	51,319,555_\$	28,980,629 \$	3,397,792

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

Annual requirements to amortize long-term obligations and related interest are as follows:

Direct Borrowings and Direct Placements: Water and Sewer Revenue Bonds

ear Ended	2016	6B	2019B 2014				2012B				2011B			
tember 30,	Principal	Interest	Principal	Interest	Principal	_	Interest		Principal	Ir	nterest		Principal	Interest
2020 \$	40,000 \$	73,731 \$	105,000 \$	275,688 \$	80,000	\$	79,038	Ś	5,000	Ś	8,194	Ś	70,000 \$	57,450
2021	40,000	71,931	110,000	270,306	80,000		75,388		10,000		7,938		75,000	54,363
2022	45,000	70,131	120,000	264,669	85,000		71,288		10,000		7,425		80,000	50,519
2023	45,000	67,825	125,000	258,519	95,000		66,931		10,000		6,913		85,000	46,419
2024	50,000	65,519	130,000	252,113	100,000		62,063		10,000		6,400		90,000	42,063
2025	50,000	63,156	140,000	245,450	100,000		56,938		10,000		5,938		95,000	37,450
2026	50,000	61,094	145,000	238,275	105,000		51,813		10,000		5,475		95,000	32,581
2027	55,000	59,031	155,000	230,844	110,000		46,781		10,000		5,038		100,000	27,713
2028	55,000	56,363	160,000	222,900	110,000		41,494		10,000		4,650		110,000	22,588
2029	60,000	53,994	170,000	214,700	115,000		36,156		10,000		4,263		115,000	17,300
2030	60,000	51,369	180,000	205,988	125,000		32,213		10,000		3,875		120,000	11,756
2031	65,000	49,156	185,000	196,763	130,000		26,206		10,000		3,550		125,000	6,006
2032	65,000	46,825	195,000	187,281	140,000		19,944		15,000		3,225		-	-
2033	70,000	44,469	205,000	177,288	145,000		13,169		15,000		2,719		-	-
2034	70,000	41,956	220,000	166,781	150,000		6,188		15,000		2,175		-	-
2035	75,000	39,369	225,000	155,506	-		-		15,000		1,631		-	-
2036	75,000	37,338	235,000	147,775	-		-		15,000		1,088		-	-
2037	80,000	35,231	245,000	139,731	-		-		15,000		544		-	-
2038	80,000	31,806	255,000	131,325	-		-		-		-		-	-
2039	85,000	28,269	265,000	120,806	-		-		-		-		-	-
2040	90,000	24,475	275,000	109,875	-		-		-		-		-	-
2041	95,000	20,363	285,000	100,488	-		-		-		-		-	-
2042	95,000	16,094	295,000	90,763	-		-		-		-		-	-
2043	100,000	13,125	305,000	80,700	-		-		-		-		-	-
2044	105,000	10,000	315,000	70,294	-		-		-		-		-	-
2045	105,000	6,719	325,000	59,550	-		-		-		-		-	-
2046	110,000	3,438	335,000	48,456	-		-		-		-		-	-
2047	-	-	350,000	37,025	-		-		-		-		-	-
2048	-	-	360,000	25,081	-		-		-		-		-	-
2049		<u>-</u>	375,000	12,794	-		-		-		-		-	

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

Annual requirements to amortize long-term obligations and related interest are as follows: (continued)

Direct Borrowings and Direct Placements:

Year Ended		Rural De	vel		,	•	efunding		Loan F	ay	able
September 30,	_	Principal		Interest	-	Principal	Interest	-	Principal		Interest
2020	\$	-	Ş	222,788	Ş	200,000	\$ 133,726	Ş	14,722	ş	2,045
2021		165,090		222,788		205,000	126,226		15,242		1,525
2022		168,843		219,035		220,000	117,854		15,780		987
2023		172,682		215,197		230,000	107,633		16,806		372
2024		176,607		211,271		235,000	96,898		-		-
2025		180,622		207,256		250,000	85,815		-		-
2026		184,729		203,150		265,000	73,940		-		-
2027		188,928		198,950		275,000	61,360		-		-
2028		193,223		194,655		285,000	47,060		-		-
2029		197,616		190,263		300,000	32,240		-		-
2030		202,108		185,770		320,000	16,640		-		-
2031		206,703		181,176		-	-		-		-
2032		211,402		176,477		-	-		-		-
2033		216,208		171,671		-	-		-		-
2034		221,123		166,756		-	-		-		-
2035		226,150		161,729		-	-		-		-
2036		231,291		156,587		-	-		-		-
2037		236,549		151,329		-	-		-		-
2038		241,927		145,952		-	-		-		-
2039		247,426		140,452		-	-		-		-
2040		253,051		134,827		-	-		-		-
2041		258,804		129,074		-	-		-		-
2042		264,688		123,191		-	-		-		-
2043		270,705		117,174		-	-		-		-
2044		276,859		111,020		-	-		-		-
2045		283,153		104,726		-	-		-		-
2046		289,590		98,289		-	-		-		-
2047		296,173		91,705		-	-		-		-
2048		302,906		84,972		-	-		-		-
2049		309,793		78,086		-	-		-		-
2050		316,835		71,043		-	-		-		-
2051		324,038		63,841		-	-		-		-
2052		331,404		56,474		-	-		-		-
2053		338,938		48,940		-	-		-		-
2054		346,644		41,235		-	-		-		-
2055		354,524		33,354		-	-		-		-
2056		362,584		25,295		-	-		-		-
2057		370,826		17,052		-	-		-		-
2058	_	379,258		8,622		-				_	
Total	\$_	9,800,000	\$_	5,162,172	\$	2,785,000	\$ 899,392	\$	62,550	\$_	4,929

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

Details of L	ong-term	Obligations:
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Compensated absences	\$	221,539
	_	
Net OPEB liabilities	\$_	108,420
Interim Financing	\$_	2,791,017
Net Pension Liability	\$_	220,322
Loan Payable:		
\$235,629 Water & Sewer loan payable issued May 30, 2003, due in semi-annual payments of principal and interest of \$8,387, through September 1, 2023, interest		
at 3.50%.	\$_	62,550
Revenue Bonds:		
\$6,790,000 Water & Sewer Revenue Bonds series 2019B issued July 24, 2019, due in various semi-annual payments of principal and interest through October 1, 2049, interest payable semi-annually at 3.43%.	\$	6,790,000
interest payable seriii aiiiidatty at 5.45%.	Ą	0,790,000
Premiums on bonds payable		1,251,781
\$2,175,000 Water & Sewer Refunding Revenue Bonds series 2014C issued November 5, 2014, due in various semi-annual payments of principal and interest through October 1, 2034, interest payable semi-annually at 3.26%.		1,380,000
through october 1, 2001, interest payable serin annually at 3.20%.		1,360,000
\$365,000 Water & Sewer Refunding Revenue Bonds series 2014C issued November 5, 2014, due in various semi-annual payments of principal and interest through October 1, 2034, interest payable semi-annually at 3.50%.		290,000
\$240,000 Water & Sewer Refunding Revenue Bonds series 2012B issued July 12, 2012, due in various semi-annual payments of principal and interest through		
October 1, 2037, interest payable semi-annually at 3.83%.		205,000

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

<u>Details of Long-term Obligations: (continued)</u>

Revenue Bonds: (continued)		
\$1,640,000 Water & Sewer Refunding Revenue Bonds series 2011B issued October 15, 2011, due in various semi-annual payments of principal and interest through October 1, 2031, interest payable semi-annually at 5.5%.	\$	1,160,000
\$2,025,000 Water & Sewer Revenue Bonds series 2016B issued July 27, 2016, due in various semi-annual payments of principal and interest through October 1, 2046, interest payable semi-annually at 3.17%.		1,915,000
\$4,435,000 Water & Sewer Refunding Revenue Bonds series 2010 issued June 16, 2010, due in various semi-annual payments of principal and interest through October 1, 2030, interest payable semi-annually at 3.98%.	_	2,785,000
Total revenue bonds	\$_	15,776,781
\$9,800,000 Rural development loan series 2018A issued September 20, 2018, due in annual payments of principal and interest through September 20, 2058, interest		
payable at 2.25%.	\$_	9,800,000
Total long-term obligations	\$	28,980,629
Less current portion	_	3,397,792
Total noncurrent obligations	\$	25,582,837

NOTE 7 - PENSION PLAN:

Plan Description

All full-time, salaried permanent employees of the Authority are automatically covered by a VRS Retirement Plan upon employment. This is an agent multiple-employer plan 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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Benefit Structures

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, as detailed below.

- a. Employees hired before July 1, 2010, vested as of January 1, 2013, and have not taken a refund, are covered under Plan 1, a defined benefit plan. Non-hazardous duty employees are eligible for an unreduced retirement benefit beginning at age 65 with at least 5 years of creditable service or age 50 with at least 30 years of creditable service. Non-hazardous duty employees may retire with a reduced benefit as early as age 55 with at least 5 years of creditable service or age 50 with at least 10 years of creditable service. Hazardous duty employees (law enforcement officers, firefighters, and sheriffs) are eligible for an unreduced benefit beginning at age 60 with at least 5 years of creditable service or age 50 with at least 25 years of creditable service. Hazardous duty employees may retire with a reduced benefit as early as age 50 with at least 5 years of creditable service.
- b. Employees hired 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 are covered under Plan 2, a defined benefit plan. Non-hazardous duty employees are eligible for an unreduced benefit beginning at their normal social security retirement age with at least 5 years of creditable service or when the sum of their age and service equals 90. Non-hazardous duty employees may retire with a reduced benefit as early as age 60 with at least 5 years of creditable service. Hazardous duty employees are eligible for an unreduced benefit beginning at age 60 with at least 5 years of creditable service. Hazardous duty employees may retire with a reduced benefit as early as age 50 with at least 5 years of creditable service.
- c. Non-hazardous duty employees hired on or after January 1, 2014 are covered by the Hybrid Plan combining the features of a defined benefit plan and a defined contribution plan. Plan 1 and Plan 2 members also had the option of opting into this plan during the election window held January 1 April 30, 2014 with an effective date of July 1, 2014. Employees covered by this plan are eligible for an unreduced benefit beginning at their normal social security retirement age with at least 5 years of creditable service, or when the sum of their age and service equal 90. Employees may retire with a reduced benefit as early as age 60 with at least 5 years of creditable service. For the defined contribution component, members are eligible to receive distributions upon leaving employment, subject to restrictions.

Average Final Compensation and Service Retirement Multiplier

The VRS defined benefit is a lifetime monthly benefit based on a retirement multiplier as a percentage of the employee's average final compensation multiplied by the employee's total creditable service. Under Plan 1, average final compensation is the average of the employee's 36 consecutive months of highest compensation and the multiplier is 1.7% for non-hazardous duty employees, 1.85% for sheriffs and regional jail superintendents, and 1.7% or 1.85% for hazardous duty employees as elected by the employer. Under Plan 2, average final compensation is the average of the employee's 60 consecutive months of highest compensation and the retirement multiplier is 1.65% for non-hazardous duty employees, 1.85% for sheriffs

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Average Final Compensation and Service Retirement Multiplier: (Continued)

and regional jail superintendents, and 1.7% or 1.85% for hazardous duty employees as elected by the employer. Under the Hybrid Plan, average final compensation is the average of the employee's 60 consecutive months of highest compensation and the multiplier 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.

Cost-of-Living Adjustment (COLA) in Retirement and Death and Disability Benefits

Retirees with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service are eligible for an annual COLA beginning July 1 after one full calendar year from the retirement date. Retirees with a reduced benefit and who have less than 20 years of creditable service are eligible for an annual COLA beginning on July 1 after one calendar year following the unreduced retirement eligibility date. Under Plan 1, the COLA cannot exceed 5.00%. Under Plan 2 and the Hybrid Plan, the COLA cannot exceed 3.00%. The VRS also provides death and disability benefits. Title 51.1 of the Code of Virginia, as amended, assigns the authority to establish and amend benefit provisions to the General Assembly of Virginia.

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	7
Inactive members:	
Vested inactive members	3
Non-vested inactive members	1
Inactive members active elsewhere in VRS	7
Total inactive members	11
Active members	24
Total covered employees	42

Contributions

The contribution requirement for active employees is governed by §51.1-145 of the <u>Code of Virginia</u>, 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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Contributions: (Continued)

The Authority's contractually required employer contribution rate for the year ended June 30, 2019 was 5.74% 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 Authority were \$66,065 and \$78,019 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 the Authority, 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 Authority'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%

Salary increases, including inflation 3.5% - 5.35%

Investment rate of return 7.0%, net of pension plan investment

expense, including inflation*

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

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Actuarial Assumptions - General Employees: (Continued)

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 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.

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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Actuarial Assumptions - General Employees: (Continued)

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)	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 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	Increased rate from 14% to 20%

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

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered 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	Increased rate from 14% to 15%

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Actuarial Assumptions - Public Safety Employees with Hazardous Duty Benefits

The total pension liability for Public Safety employees with Hazardous Duty Benefits in the Authority'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%

Salary increases, including inflation 3.5% - 4.75%

Investment rate of return 7.0%, net of pension plan investment

expense, including inflation*

Mortality rates:

Largest 10 - Hazardous Duty: 70% 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 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, 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

^{*} 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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Actuarial Assumptions - Public Safety Employees with Hazardous Duty Benefits

Mortality rates: (Continued)

All Others (Non 10 Largest) - Hazardous Duty: 45% 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 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, 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Mortality Rates 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:

Largest 10 - Hazardous Duty:

Mortality Rates (pre-retirement, post- retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Increased rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

All Others (Non 10 Largest) - Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates, and lowered rates at older
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 fit experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

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 arithme	tic 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; the Authority was also provided with an opportunity to use an alternative 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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

Changes in Net Pension Liability

	_	Increase (Decrease)				
		Total Plan Ne				Net
		Pension		Fiduciary		Pension
		Liability		Net Position		Liability
	_	(a)		(b)	_	(a) - (b)
Balances at June 30, 2017	\$_	4,320,392	\$	4,110,438	\$_	209,954
Changes for the year:						
Service cost	\$	105,214	\$	-	\$	105,214
Interest		297,855		-		297,855
Differences between expected						
and actual experience		43,856		-		43,856
Contributions - employer		-		78,019		(78,019)
Contributions - employee		-		55,485		(55,485)
Net investment income		-		305,916		(305,916)
Benefit payments, including refunds						
of employee contributions		(130,631)		(130,631)		-
Administrative expenses		-		(2,589)		2,589
Other changes		-		(274)		274
Net changes	\$	316,294	\$	305,926	\$	10,368
Balances at June 30, 2018	\$_	4,636,686	\$	4,416,364	\$	220,322

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

The following presents the net pension liability of the Authority using the discount rate of 7.00%, as well as what the Authority'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:

		Rate				
	1	1% Decrease Current Discount			1% Increase	
		(6.00%)		(7.00%)		(8.00%)
Greensville County Water and Sewer Authority's						
Net Pension Liability (Asset)	\$	895,228	\$	220,322	\$	(336, 314)

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 7 - PENSION PLAN: (CONTINUED)

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

For the year ended June 30, 2019, the Authority recognized pension expense of \$47,934. At June 30, 2019, the Authority 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	\$	76,510 \$	-
Change in assumptions		-	71,304
Net difference between projected and actual earnings on pension plan investments		-	40,698
Employer contributions subsequent to the measurement date		66,065	-
Total	\$	142,575 \$	112,002

\$66,065 reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the 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	\$	20,697
2021		(16,319)
2022		(39,945)
2023		75
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, VA 23218-2500.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 8 - 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 together with other local governments in the State to form the Virginia Municipal Group Self Insurance 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 pool for its workers' compensation coverage. The Agreement for Formation of the association provides that the association will be self-sustaining through member premiums.

The Authority continues to carry commercial insurance for all other risks of loss, including general liability and 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.

NOTE 9 - ECONOMIC DEPENDENCY:

For the fiscal year ended September 30, 2019, the Commonwealth of Virginia-Department of Corrections was billed \$1,953,678 for services, which constitutes approximately 34% of total operating revenues. Boar's Head Provisions Company, Inc. was billed \$702,741 for services, which constitutes approximately 12% of total operating revenues.

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS:

Health Insurance Credit (HIC) Program:

Plan Description

The Political Subdivision Health Insurance Credit (HIC) Program was established pursuant to \$51.1-1400 et seq. of the Code of Virginia, as amended, and which provides the authority under which benefit terms are established or may be amended. All full-time, salaried permanent employees of participating political subdivisions are automatically covered by the VRS Political Subdivision HIC Program upon employment. This is an agent multiple-employer plan administered by the Virginia Retirement System (the System), along with pension and other OPEB plans, for public employer groups in the Commonwealth of Virginia. Members earn one month of service credit toward the benefit for each month they are employed and for which their employer pays contributions to VRS. The HIC is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against qualified health insurance premiums retirees pay for single coverage, excluding any portion covering the spouse or dependents. The credit cannot exceed the amount of the premiums and ends upon the retiree's death.

The specific information about the Political Subdivision HIC Program OPEB, including eligibility, coverage and benefits is described below:

Eligible Employees

The Political Subdivision Retiree HIC Program was established July 1, 1993 for retired political subdivision employees of employers who elect the benefit and retire with at least 15 years of service credit. Eligible employees include full-time permanent salaried employees of the participating political subdivision who are covered under the VRS pension plan. These employees are enrolled automatically upon employment.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

Benefit Amounts

The Political Subdivision Retiree HIC Program is a defined benefit plan that provides a credit toward the cost of health insurance coverage for retired political subdivision employees of participating employers. For employees who retire, the monthly benefit is \$1.50 per year of service per month with a maximum benefit of \$45.00 per month. For employees who retire on disability or go on long-term disability under the Virginia Local Disability Program (VLDP), the monthly benefit is \$45.00 per month.

HIC Program Notes

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

Employees Covered by Benefit Terms

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

	Number
Inactive members or their beneficiaries currently receiving benefits	3
Inactive members: Vested inactive members	3
Total inactive members	6
Active members	24
Total covered employees	30

Contributions

The contribution requirements for active employees is governed by §51.1-1402(E) of the <u>Code of Virginia</u>, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. The Authority's contractually required employer contribution rate for the year ended June 30, 2019 was 0.17% 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 was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions from the Authority to the HIC Program were \$2,057 and \$2,628 for the years ended June 30, 2019 and June 30, 2018, respectively.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

Net HIC OPEB Liability

The Authority's net HIC OPEB liability was measured as of June 30, 2018. The total HIC OPEB liability was determined by an actuarial valuation performed as of June 30, 2017, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2018.

Actuarial Assumptions

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

Inflation 2.5%

Salary increases, including inflation:

Locality - General employees 3.5%-5.35% Locality - Hazardous Duty employees 3.5%-4.75%

Investment rate of return 7.0%, net of investment expenses,

including inflation*

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.

^{*}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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

Actuarial Assumptions (Continued)

Mortality Rates - Largest Ten Locality Employers - General Employees (Continued)

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

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

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

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

Mortality Rates (pre-retirement, post- retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%

Long-Term Expected Rate of Return

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

Asset Class (Strategy)	Target Allocation	Arithmetic Long-term Expected Rate of Return	Weighted Average Long-term Expected 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 arithme	tic nominal return	7.30%

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

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

Discount Rate

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

Changes in Net HIC OPEB Liability

		Increase (Decrease)		
	_	Total HIC OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net HIC OPEB Liability (Asset) (a) - (b)
Balances at June 30, 2017	\$_	60,638 \$	41,637 \$	19,001
Changes for the year:				
Service cost	\$	877 \$	- \$	877
Interest		4,171	-	4,171
Differences between expected				-
and actual experience		(1,283)	-	(1,283)
Contributions - employer		-	2,628	(2,628)
Net investment income		-	2,992	(2,992)
Benefit payments		(2,100)	(2,100)	-
Administrative expenses		-	(72)	72
Other changes	_		(202)	202
Net changes	\$	1,665 \$	3,246 \$	(1,581)
Balances at June 30, 2018	\$_	62,303 \$	44,883 \$	17,420

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

Sensitivity of the Authority's HIC Net OPEB Liability to Changes in the Discount Rate

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

			Rate	
	•	Current		
		1% Decrease	Discount	1% Increase
		(6.00%)	(7.00%)	(8.00%)
Net HIC OPEB Liability	\$	24,482 \$	17,420 \$	11,426

HIC Program OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to HIC Program OPEB

For the year ended June 30, 2019, the Authority recognized Health Insurance Credit Program OPEB expense of \$1,327. At June 30, 2019, the Authority reported deferred outflows of resources and deferred inflows of resources related to the Authority's Health Insurance Credit Program from the following sources:

	_	Deferred Outflows of Resources	 Deferred Inflows of Resources
Differences between expected and actual experience	\$	-	\$ 1,073
Net difference between projected and actual earnings on HIC OPEB plan investments		-	1,061
Change in assumptions		-	2,136
Employer contributions subsequent to the measurement date	_	2,057	 <u>-</u>
Total	\$	2,057	\$ 4,270

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance Credit (HIC) Program: (Continued)

HIC Program OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to HIC Program OPEB: (Continued)

\$2,057 reported as deferred outflows of resources related to the HIC OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net HIC 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 HIC OPEB will be recognized in the HIC OPEB expense in future reporting periods as follows:

Year Ended June 30	
2020	\$ (1,071)
2021	(1,071)
2022	(1,073)
2023	(734)
2024	(298)
Thereafter	(23)

HIC Program Plan Data

Information about the VRS Political Subdivision HIC Program 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.

Group Life Insurance (GLI) Program (OPEB Plan):

Plan Description

The Group Life Insurance (GLI) Program was established pursuant to §51.1-500 et seq. of the <u>Code of Virginia</u>, as amended, and which provides the authority under which benefit terms are established or may be amended. All full-time, salaried permanent employees of the state agencies, teachers, and employees of participating political subdivisions are automatically covered by the VRS GLI Program upon employment. This is a cost-sharing multiple-employer plan administered by the Virginia Retirement System (the System), along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Plan Description: (Continued)

In addition to the Basic GLI benefit, members are also eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional GLI 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 GLI Program OPEB.

The specific information for GLI OPEB, including eligibility, coverage and benefits is described below:

Eligible Employees

The GLI Program was established July 1, 1960, for state employees, teachers, and employees of political subdivisions that elect the program. Basic GLI coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their accumulated retirement member contributions and accrued interest.

Benefit Amounts

The GLI Program is a defined benefit plan with several components. The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled. The accidental death benefit is double the natural death benefit. In addition to basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances that include the following: accidental dismemberment benefit, safety belt benefit, repatriation benefit, felonious assault benefit, and accelerated death benefit option. The benefit amounts 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. For covered members with at least 30 years of creditable service, the minimum benefit payable was set at \$8,000 by 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.

Contributions

The contribution requirements for the GLI Program are governed by \$51.1-506 and \$51.1-508 of the <u>Code of Virginia</u>, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the GLI Program was 1.31% of covered employee compensation. This was allocated into an employee and 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. Contributions to the GLI Program from the entity were \$6,292 and \$5,941 for the years ended June 30, 2019 and June 30, 2018, respectively.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

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

At June 30, 2019, the entity reported a liability of \$91,000 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 GLI 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 .00601% as compared to .00633% at June 30, 2017.

For the year ended June 30, 2019, the participating employer did not recognize any GLI OPEB expense.

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	\$	1,000
Net difference between projected and actual earnings on GLI OPEB program investments		-		3,000
Change in assumptions		-		4,000
Changes in proportion		-		5,000
Employer contributions subsequent to the measurement	date _	6,292	. ,	
Total	\$_	10,292	\$	13,000

\$6,292 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	\$ (2,000)
2021	(2,000)
2022	(2,000)
2023	(1,000)
2024	(2,000)
Thereafter	-

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions

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

Inflation 2.	5 %
--------------	------------

Salary increases, including inflation:

General state employees 3.5% - 5.35% Teachers 3.5%-5.95% SPORS employees 3.5%-4.75% VaLORS employees 3.5%-4.75% JRS employees 4.5% Locality - General employees 3.5%-5.35% Locality - Hazardous Duty employees 3.5%-4.75%

Investment rate of return 7.0%, net of investment expenses,

including inflation*

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

^{*}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 OPEB liabilities.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates - Largest Ten Locality Employers - General Employees: (Continued)

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

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
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 Mortality Rates projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates - Non-Largest Ten Locality Employers - General Employees: (Continued)

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

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
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 Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Mortality Rates - Largest Ten Locality Employers - Hazardous Duty Employees: (Continued)

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

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages
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 Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates - Non-Largest Ten Locality Employers - Hazardous Duty Employees: (Continued)

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

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	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 June 30, 2017, NOL amounts for the Group Life Insurance Program is 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.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Long-Term Expected Rate of Return

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

Asset Class (Strategy)	Target Allocation	Arithmetic Long-term Expected Rate of Return	Weighted Average Long-term Expected 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. From July 1, 2018 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 10 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

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:

		Rate					
		1% Decrease	Current D	Discount	1% Increase		
		(6.00%)	(7.00	0%)	(8.00%)		
Authority's proportionate	_						
share of the Group Life							
Insurance Program							
Net OPEB Liability	\$	119,000	\$	91,000 \$	68,000		

GLI Program Fiduciary Net Position

Detailed information about the GLI 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.

NOTE 11 - LOAN TO IDA OF GREENSVILLE, VIRGINIA:

The Authority has made the following loan to the Greensville County Industrial Development Authority:

On July 19, 2010, the Authority entered into a note receivable agreement in the amount of \$825,000 with the Greensville County IDA. The proceeds were used to refinance the note payable agreement dated February 11, 2005 with an outstanding balance of \$820,594. Payments are due monthly in the amount of \$4,913 through November 15, 2029, interest at 3.80%. The outstanding balance of this note at September 30, 2019 was \$496,524.

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 11 - LOAN TO IDA OF GREENSVILLE, VIRGINIA: (CONTINUED)

Annual repayments of principal and interest are as follows:

	_	IDA Refinance				
	_	Principal		Interest		
2020	\$	40,840	\$	18,114		
2021		42,415		16,539		
2022		44,051		14,903		
2023		45,750		13,204		
2024		47,514		11,440		
2025		49,347		9,607		
2026		51,250		7,704		
2027		53,226		5,728		
2028		53,279		3,675		
2029		59,411		1,543		
2030	_	9,441		44		
Total	\$	496,524	\$	102,501		

NOTE 12 - UPCOMING PRONOUNCEMENTS:

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.

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

Notes to Financial Statements As of September 30, 2019 (Continued)

NOTE 13 - ADOPTION OF ACCOUNTING PRINCIPLES:

The Authority implemented the financial reporting provisions of Governmental Accounting Standards Board Statement No. 88, Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements during the fiscal year ended September 30, 2019. This Statement clarifies which liabilities governments should include when disclosing information related to debt. It also requires that additional essential information related to debt be disclosed in notes to financial statements. No restatement was required as a result of this implementation.

The Authority early implemented provisions of Governmental Accounting Standards Board Statement No. 89, Accounting for Interest Cost Incurred Before the End of a Construction Period during the fiscal year ended September 30, 2019. This Statement simplifies accounting for interest cost incurred before the end of a construction period. Interest cost incurred during construction is expensed and no longer capitalized as part of project costs. No restatement was required as a result of this implementation.

NOTE 14 - RESTATEMENT OF BEGINNING NET POSITION:

The Authority restated beginning net position to account for an amount due from Greensville County that was not reported in the September 30, 2018 Financial Report.

	_	Water	Sewer	Total
Net Position as of September 30, 2018, as previously reported	\$	30,680,929 \$	14,655,700 \$	45,336,629
Due from Greensville County, not previously reported	-	<u> </u>	346,852	346,852
Net Position as of October 1, 2018, as restated	\$	30,680,929 \$	15,002,552 \$	45,683,481



Schedule of Changes in Net Pension Liability (Asset) and Related Ratios For the Measurement Dates of June 30, 2014 through June 30, 2018

		2018	2017	2016	2015	2014
Total pension liability		. ,				
Service cost	\$	105,214 \$	104,118 \$	103,433 \$	103,615 \$	115,718
Interest		297,855	284,667	264,821	235,966	217,736
Differences between expected and actual experience		43,856	36,682	6,359	162,821	-
Changes in assumptions		-	(131,732)	-	-	-
Benefit payments, including refunds of employee contributions	_	(130,631)	(80,026)	(102,185)	(78,182)	(67,871)
Net change in total pension liability	\$	316,294 \$	213,709 \$	272,428 \$	424,220 \$	265,583
Total pension liability - beginning		4,320,392	4,106,683	3,834,255	3,410,035	3,144,452
Total pension liability - ending (a)	\$	4,636,686 \$	4,320,392 \$	4,106,683 \$	3,834,255 \$	3,410,035
Plan fiduciary net position						
Contributions - employer	\$	78,019 \$	81,262 \$	78,575 \$	75,055 \$	80,168
Contributions - employee		55,485	57,533	54,998	52,633	51,522
Net investment income		305,916	446,980	63,327	154,360	450,281
Benefit payments, including refunds of employee contributions		(130,631)	(80,026)	(102,185)	(78,182)	(67,871)
Administrative expense		(2,589)	(2,477)	(2,155)	(2,033)	(2,348)
Other	_	(274)	(402)	(26)	(33)	24
Net change in plan fiduciary net position	\$	305,926 \$	502,870 \$	92,534 \$	201,800 \$	511,776
Plan fiduciary net position - beginning		4,110,438	3,607,568	3,515,034	3,313,234	2,801,458
Plan fiduciary net position - ending (b)	\$	4,416,364 \$	4,110,438 \$	3,607,568 \$	3,515,034 \$	3,313,234
Authority's net pension liability - ending (a) - (b)	\$	220,322 \$	209,954 \$	499,115 \$	319,221 \$	96,801
Plan fiduciary net position as a percentage of the total						
pension liability		95.25%	95.14%	87.85%	91.67%	97.16%
Covered payroll	\$	1,142,430 \$	1,168,444 \$	1,106,867 \$	1,052,653 \$	1,030,441
Authority's net pension liability as a percentage of covered payroll		19.29%	17.97%	45.09%	30.33%	9.39%

This schedule is intended to report information for 10 years. Information prior to the 2014 valuation is not available. Additional years will be included when available.

Schedule of Employer Contributions - Pension For the Years Ended June 30, 2010 through June 30, 2019

Fiscal Year	 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	\$ 66,065	\$ 66,065	\$ -	\$ 1,210,019	5.46%
2018	78,019	78,019	-	1,142,430	6.83%
2017	82,375	82,375	-	1,168,444	7.05%
2016	78,920	78,920	-	1,106,867	7.13%
2015	75,054	75,054	-	1,052,653	7.13%
2014	80,168	80,168	-	1,030,441	7.78%
2013	80,556	80,556	-	1,035,420	7.78%
2012	52,825	52,825	-	963,954	5.48%
2011	50,841	50,841	-	927,764	5.48%
2010	53,009	53,009	-	939,870	5.64%

Contributions are from VRS records.

Notes to Required Supplementary Information - Pension 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:

Largest 10 - Non-Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered 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	Increased rate from 14% to 20%

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

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered 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	Increased rate from 14% to 15%

Largest 10 - Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Increased rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

All Others (Non 10 Largest) - Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	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 fit experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%

Schedule of Changes in the Authority's Net OPEB Liability and Related Ratios Health Insurance Credit (HIC) Program For the Measurement Dates of June 30, 2018 and 2017

	2018	2017
Total HIC OPEB Liability		
Service cost	\$ 877	\$ 906
Interest	4,171	4,117
Differences between expected and actual experience	(1,283)	-
Changes in assumptions	-	(3,160)
Benefit payments	(2,100)	(65)
Net change in total HIC OPEB liability	\$ 1,665	\$ 1,798
Total HIC OPEB Liability - beginning	 60,638	 58,840
Total HIC OPEB Liability - ending (a)	\$ 62,303	\$ 60,638
Plan fiduciary net position		
Contributions - employer	\$ 2,628	\$ 2,687
Net investment income	2,992	4,201
Benefit payments	(2,100)	(65)
Administrative expense	(72)	(72)
Other	 (202)	 202
Net change in plan fiduciary net position	\$ 3,246	\$ 6,953
Plan fiduciary net position - beginning	 41,637	 34,684
Plan fiduciary net position - ending (b)	\$ 44,883	\$ 41,637
Authority's net HIC OPEB liability - ending (a) - (b)	\$ 17,420	\$ 19,001
Plan fiduciary net position as a percentage of the total HIC OPEB liability	72.04%	68.66%
Covered payroll	\$ 1,142,430	\$ 1,168,444
Authority's net HIC OPEB liability as a percentage of covered payroll	1.52%	1.63%

Schedule is intended to show information for 10 years. Information prior to the 2017 valuation is not available. However, additional years will be included as they become available.

Schedule of Employer Contributions Health Insurance Credit (HIC) Program For the Years Ended June 30, 2010 through June 30, 2019

Date	 Contractually Required Contribution (1)	 Contributions ir Relation to Contractually Required Contribution (2)	.	Contribution Deficiency (Excess) (3)	_	Employer's Covered Payroll (4)	Contributions as a % of Covered Payroll (5)
2019	\$ 2,057	\$ 2,057	\$	-	\$	1,210,019	0.17%
2018	2,628	2,628		-		1,142,430	0.23%
2017	2,687	2,687		-		1,168,444	0.23%
2016	2,656	2,656		-		1,106,867	0.24%
2015	2,526	2,526		-		1,052,653	0.24%
2014	3,297	3,297		-		1,030,441	0.32%
2013	3,313	3,313		-		1,035,420	0.32%
2012	2,988	2,988		-		963,954	0.31%
2011	2,876	2,876		-		927,764	0.31%
2010	2,820	2,820		-		939,870	0.30%

Contributions are from VRS records.

GREENSVILLE COUNTY WATER AND SEWER AUTHORITY

(A Component Unit of the County of Greensville, Virginia)

Notes to Required Supplementary Information Health Insurance Credit (HIC) Program 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:

Largest Ten Locality Employers - General Employees

	. ,
Mortality Rates (pre-retirement, post-	Updated to a more current mortality table - RP-2014
retirement healthy, and disabled)	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

g,p,	
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%

Schedule of Authority's Share of Net OPEB Liability Group Life Insurance Program For the Measurement Dates of June 30, 2018 and 2017

Date (1)	Employer's Proportion of the Net GLI OPEB Liability (2)	Employer's Proportionate Share of the Net GLI OPEB Liability (3)	Employer's Covered Payroll (4)	Employer's Proportionate Share of the Net GLI OPEB Liability as a Percentage of Covered Payroll (3)/(4) (5)	Plan Fiduciary Net Position as a Percentage of Total GLI OPEB Liability (6)
2018	0.00601% \$, ,	\$ 1,142,430	7.97%	51.22%
2017	0.00633%	95,000	1,168,444	8.13%	48.86%

Schedule is intended to show information for 10 years. Information prior to the 2017 valuation is not available. However, additional years will be included as they become available.

Schedule of Employer Contributions Group Life Insurance Program For the Years Ended June 30, 2010 through June 30, 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	\$ 6,292	\$ 6,292	\$ -	\$ 1,210,019	0.52%
2018	5,941	5,941	-	1,142,430	0.52%
2017	6,076	6,076	-	1,168,444	0.52%
2016	5,313	5,313	-	1,106,867	0.48%
2015	5,053	5,053	-	1,052,653	0.48%
2014	4,946	4,946	-	1,030,441	0.48%
2013	4,970	4,970	-	1,035,420	0.48%
2012	2,699	2,699	-	963,954	0.28%
2011	2,598	2,598	-	927,764	0.28%
2010	1,896	1,896	-	702,249	0.27%

Contributions are from VRS records.

Notes to Required Supplementary Information Group Life Insurance Program 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:

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	Updated to a more current mortality table - RP-2014 projected
healthy, and disabled)	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	Updated to a more current mortality table - RP-2014 projected
healthy, and disabled)	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	Updated to a more current mortality table - RP-2014 projected
healthy, and disabled)	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%





ROBINSON, FARMER, COX ASSOCIATES, PLLC

Certified Public Accountants

Independent Auditors' 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 Greensville County Water and Sewer Authority Emporia, Virginia

We have audited, in accordance with the auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities*, *Boards*, and *Commissions*, issued by the Auditor of Public Accounts of the Commonwealth of Virginia, the financial statements of the business-type activities of Greensville County Water and Sewer Authority as of and for the year ended September 30, 2019, and the related notes to the financial statements, which collectively comprise the Greensville County Water and Sewer Authority's basic financial statements and have issued our report thereon dated April 8, 2020.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered Greensville County Water and Sewer 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 opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Greensville County Water and Sewer Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of Greensville County Water and Sewer Authority's internal control.

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

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

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Greensville County Water and Sewer 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*.

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.

Hobinson, farmer Cox fasociates Charlottesville, Virginia

April 8, 2020



ROBINSON, FARMER, COX ASSOCIATES, PLLC

Certified Public Accountants

Independent Auditors' Report on Compliance for Each Major Program and on Internal Control over Compliance Required by the Uniform Guidance

To the Board of Directors Greensville County Water and Sewer Authority Emporia, Virginia

Report on Compliance for Each Major Federal Program

We have audited the Greensville County Water and Sewer Authority's compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Greensville County Water and Sewer Authority's major federal programs for the year ended September 30, 2019. Greensville County Water and Sewer Authority's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Greensville County Water and Sewer Authority's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance 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 audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements*, *Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Greensville County Water and Sewer Authority's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Greensville County Water and Sewer Authority's compliance.

Opinion on Each Major Federal Program

In our opinion, the Greensville County Water and Sewer Authority complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended September 30, 2019.

Report on Internal Control over Compliance

Management of the Greensville County Water and Sewer Authority is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Greensville County Water and Sewer Authority's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Greensville County Water and Sewer Authority's internal control over compliance.

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

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

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Robinson, farmer, Cox Associates (Charlottesville, Virginia

April 8, 2020

Schedule of Expenditures of Federal Awards For the Year Ended September 30, 2019

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Federal xpenditures
Department of Agriculture			
Direct payments:			
Water and Waste Disposal Systems for Rural Communities	10.760	N/A	\$ 8,728,014
Total expenditures of federal awards			\$ 8,728,014

GREENSVILLE COUNTY WATER AND SEWER AUTHORITY

(A Component Unit of the County of Greensville, Virginia)

Notes to Schedule of Expenditures of Federal Awards For the Year Ended September 30, 2019

Note 1- Basis of Presentation

The accompanying schedule of expenditures of federal awards (the Schedule) includes the federal award activity of Greensville County Water and Sewer Authority under programs of the federal government for the year ended September 30, 2019. The information in this Schedule is presented in accordance with reporting requirements of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance). Because the Schedule presents only a selected portion of operations of Greensville County Water and Sewer Authority, it is not intended to and does not present the financial position, changes in net position, or cash flows of Greensville County Water and Sewer Authority.

Note 2 - Basis of Accounting

- (1) Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement.
- (2) Pass-through entity identifying numbers were not applicable for presentation.

Note 3 - De Minimis Cost Rate

The Authority did not elect to use the ten percent de minimis indirect cost rate allowed under Uniform Guidance.

Note 4 - Subrecipients

No awards were passed through to subrecipients.

Note 5 - Relationship to Financial Statements

Federal expenditures, revenues and capital contributions are reported in the Authority's financial statements as follows:

Loan proceeds 8,728,014

Total federal expenditures per the Schedule of Expenditures of Federal Awards \$ 8,728,014

GREENSVILLE COUNTY WATER AND SEWER AUTHORITY

(A Component Unit of the County of Greensville, Virginia)

Schedule of Findings and Questioned Costs For the Year Ended September 30, 2019

Section I - Summary of Auditors' Results

Financial Statements

Type of auditors' report issued: Unmodified

Internal control over financial reporting:

Material weakness(es) identified?

Significant deficiency(ies) identified?

None reported

Noncompliance material to financial statements noted?

Federal Awards

Internal control over major programs:

Material weakness(es) identified?

Significant deficiency(ies) identified?

None Reported

Type for major programs: Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR section 200.516(a)?

No

Identification of major programs:

CFDA #	Name of Federal Program
10.760	Water and Waste Disposal Systems
	for Rural Communities

Dollar threshold used to distinguish between Type A and Type B programs \$750,000

Auditee qualified as low-risk auditee?

No

Section II - Financial Statement Findings

There are no financial statement findings to report.

Section III - Federal Award Findings and Questioned Costs

There are no federal award findings and questioned costs to report.

Section IV - Prior Year Audit Findings

There were no prior year audit findings.