HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY

FINANCIAL REPORT
YEARS ENDED JUNE 30, 2018 AND 2017

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Independent Auditors' Report

Board of Directors
Harrisonburg-Rockingham Regional Sewer Authority
Mt. Crawford, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the Harrisonburg-Rockingham Regional Sewer Authority, as of and for the years ended June 30, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and 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 Harrisonburg-Rockingham Regional Sewer Authority, as of June 30, 2018 and 2017, and the changes in financial position, and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Change in Accounting Principles

As described in Note 13 to the financial statements, in 2018, the Authority adopted new accounting guidance, GASB Statement Nos. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* 85 *Omnibus 2017, and* 89 *Accounting for Interest Cost Incurred before the End of a Construction Period*. Our opinion is not modified with respect to this matter.

As described in Note 13 to the financial statements, in 2017, the Authority adopted new accounting guidance, GASB Statement Nos. 74, 78 Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans and 80 Blending Requirements for Certain Component Units – an amendment of GASB Statement No. 14. Our opinion is not modified with respect to this matter.

Restatement of Beginning Balances

As described in Note 13 to the financial statements, in 2018, the Authority restated beginning balances to reflect the requirements of GASB Statement No. 75. Our opinion is not modified with respect to this matter.

Comparative Information

As described in Note 13 to the financial statements, GASB Statement No. 75 was implemented prospectively resulting in a restatement of beginning net position. In the year of implementation, comparative information for the net OPEB liability and related information as computed under GASB 75 standards was unavailable. Therefore, the 2017 amounts related to other postemployment benefits have not been restated to reflect the requirements of GASB Statement No. 75. 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 management's discussion and analysis and schedules related to pension and OPEB funding on pages 4-8 and 68-76 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Matters: (Continued)

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Harrisonburg-Rockingham Regional Sewer Authority's basic financial statements. The supporting schedules are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supporting schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supporting schedules are 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 November 8, 2018, on our consideration of Harrisonburg-Rockingham Regional 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 the effectiveness of the Harrisonburg-Rockingham Regional Sewer Authority's internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Harrisonburg-Rockingham Regional 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 the Harrisonburg-Rockingham Regional Sewer Authority's internal control over financial reporting and compliance.

Robinson, Farmer, Cox Associates

Charlottesville, Virginia
November 8, 2018

To the Board of Directors
Harrisonburg-Rockingham Regional Sewer Authority
Mt. Crawford, Virginia

As management of the Harrisonburg-Rockingham Regional Sewer Authority, (the Authority), we offer readers of our financial statements this narrative and overview and analysis of the financial activities of the Authority for the fiscal year ended June 30, 2018.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Authority's basic financial statements. Since the Authority is engaged only in business-type activities, its basic financial statements are comprised of only two components: 1) enterprise fund financial statements and 2) notes to the financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Enterprise fund financial statements. The enterprise fund financial statements are designed to provide readers with a broad overview of the Authority's finances, in a manner similar to a private-sector business.

The statement of net position presents information on the Authority's assets, deferred outflows, liabilities, and deferred inflows with the difference reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

The statement of revenues, expenses and changes in net position presents information showing how the Authority's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of the cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods, (e.g. earned but unused vacation leave).

The basic enterprise fund financial statements can be found on pages 9 through 12 of this report.

Notes to financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes to the financial statements can be found on pages 13 through 67 of this report. Required supplementary information concerning the Authority's progress in funding its obligation to provide pension benefits and OPEB to its employees is located immediately following the notes to the financial statements.

Financial Highlights

- The assets and deferred outflows of resources of the Authority exceeded its liabilities and deferred inflows at the close of the most recent fiscal year by $38,680,763 (net position). Of this amount $4,104,293 (unrestricted net position) may be used to meet the Authority's ongoing obligations to customers and creditors.

- The Authority's total net position increased by $1,746,735.

- The Authority's total debt decreased by $1,884,606 during the current fiscal year. This decrease in debt is due to scheduled principal payments on the Authority’s bonds in excess of new borrowings.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of an Authority's financial position. In the case of the Authority, assets and deferred outflows exceeded liabilities and deferred inflows by $38,680,763 at the close of the most recent fiscal year.

By far the largest portion of the Authority's net position (88 percent) reflects its investment in capital assets, less any related outstanding debt used to acquire those assets. The Authority uses these capital assets to provide services to its customers; consequently, these assets are not available for future spending. Although the Authority's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

	Net Position		
	2018	2017	2016
Current, restricted, and other assets	$ 9,295,784	$ 9,844,695	$ 9,415,087
Capital assets	90,789,855	90,347,561	91,213,797
Total assets	$ 100,085,639	$ 100,192,256	$ 100,628,884
Total deferred outflows of resources	$ 506,030	$ 759,781	$ 594,214
Current liabilities	$ 6,283,879	$ 6,125,012	$ 5,244,713
Long-term liabilities	55,450,783	57,634,432	60,015,875
Total liabilities	$ 61,734,662	$ 63,759,444	$ 65,260,588
Total deferred inflows of resources	$ 176,244	$ 22,652	$ 195,475
Net position:			
Net investment in capital assets	$ 34,176,713	$ 31,674,317	$ 30,216,674
Restricted	399,757	853,317	847,042
Unrestricted	4,104,293	4,642,307	4,703,319
Total net position	$ 38,680,763	$ 37,169,941	$ 35,767,035

Financial Analysis: (continued)

At the end of the current fiscal year, the Authority is able to report positive balances in all categories of net position. The same situation held true for the prior two fiscal years.

	Change in Net Position		
	2018	2017	2016
Revenues:			
Operating revenues	$ 5,197,882	$ 5,249,216	$ 5,458,817
Debt Service revenue	5,770,397	5,624,260	5,541,545
Investment income	76,084	32,863	12,497
Other revenue	58,922	102,712	46,655
Total revenues	$ 11,103,285	$ 11,009,051	$ 11,059,514
Expenses:			
Operating expenses (excluding depreciation)	$ 4,176,134	$ 4,323,977	$ 4,365,420
Depreciation expense	4,263,624	4,409,740	4,737,715
Interest expense	1,586,236	1,589,390	1,702,124
Other	201,564	334,550	376,799
Total expenses	$ 10,227,558	$ 10,657,657	$ 11,182,058
Income (loss) before capital contributions	$ 875,727	$ 351,394	$ (122,544)
Capital contributions	871,008	1,051,512	935,208
Increase (decrease) in net position	$ 1,746,735	$ 1,402,906	$ 812,664
Net position—July 1 (as restated)	36,934,028	35,767,035	34,954,371
Net position—June 30	$ 38,680,763	$ 37,169,941	$ 35,767,035

The Authority's net position increased by $1,746,735 during the current year. Operating revenues decreased by $51,334 while operating expenses decreased $147,843 from FY 2017 levels. Key elements of these changes are explained in greater detail under the Review of Operations section. As further discussed in Note 13, the Authority implemented GASB Statement No. 75 as of July 1, 2017.

Capital Asset and Debt Administration

Capital Assets - The Authority's investment in capital assets as of June 30, 2018 amounts to $90,789,855 (net of accumulated depreciation). Investment in capital assets increased by approximately .5% during the year, due to additions to capital assets in excess of depreciation. Below is a comparison of the items that make up capital assets as of June 30, 2018 with that of June 30, 2017 and 2016.

	2018	2017	2016
Land	$ 193,392	$ 193,392	$ 193,392
Plant	73,612,539	74,899,528	72,863,916
Machinery and equipment	12,530,114	14,021,115	15,737,789
Vehicles and equipment	197,353	143,898	164,079
Construction in progress	4,256,457	1,089,628	2,254,621
Total capital assets	$ 90,789,855	$ 90,347,561	$ 91,213,797

More detailed information on the Authority's capital assets is presented in Note 5 of the Notes to the financial statements.

Capital Asset and Debt Administration: (continued)

Long-Term Debt - At the end of the current fiscal year, the Authority had $59,129,574 in bonds outstanding versus $61,014,180 last year, a decrease of 3.1%. The decrease is due to scheduled payments of debt in excess new borrowings.

Other long-term obligations of the Authority include accrued vacation pay and other postemployment benefits. More detailed information on the Authority's long-term liabilities is presented in Note 6 of the notes to the financial statements.

Operating Revenues: A comparison of FY 2018 actual to budgeted revenue is shown on Schedule 1 – Schedule of Income and Expenses – By Fund. Operating revenues decreased by $51,334 (0.1%) during FY 2018 to $5,197,822. The decrease is due to the member locality credit of $209,401 provided with the October 2017 billing statements for surplus funds received in FY 2017 and a $39,310 reduction in nutrient credit sales due to lower market prices. These reductions were offset by increased revenue from industrial solids and septage treatment which totaled $754,481 as compared to the FY 2017 total of $708,431.

Operating Expenses: A comparison of FY 2018 actual and budgeted expenses is found on Schedule 2 – Schedule of Operating Expenses – Budget and Actual. Operating and Maintenance (O&M) expenses were $909,536 under budget. O&M expense reductions are attributed to lower plant flows for most of FY 2018; lower sewage treatment plant power costs from operation of the peak load generator system; optimization of sewage treatment plant biological and chemical processes and lower biosolids expenses resulting from dewatering improvements and a large amount of stored inventory at the close of the fiscal year that could not be land applied due to saturated soil conditions.

Longer-Term Issues:

FY 2018 Capital Improvement Project Overview: The FY 2018 Capital Improvement Plan (CIP) was adopted by the Authority's Board of Directors on May 1, 2017 and subsequently amended on June 4, 2018. The two most significant projects included in the plan were the Enhanced Biosolids Reuse and Reduction Project (EBRR), which is currently under construction and the Blacks Run and Lower Cooks Creek Improvements (BR-LCC) Project, which is currently in the preliminary design stage. The total value of capital outlay and projects capitalized during FY 2018 was $1,539,088. Construction-in-Progress as of June 30, 2018 totaled $4,256,457, with most of this amount attributed to the EBRR project.

EBRR Project: The Authority commenced construction of the EBRR project on January 15, 2018. The project was one of four components identified during an energy efficiency improvements evaluation of the North River Wastewater Treatment Facility (NRWWTF) that had the potential for considerable energy and other cost savings. The EBRR project objective is to recover excess digester gas, beyond that used to heat the digester, to fuel a sludge dryer to provide additional dewatering of Class B biosolids. The dewatered biosolids have a solids content of approximately 15% solids. After drying, the final product will have greater than 90% solids and meet the EPA definition of Class A Exceptional Quality (EQ) biosolids. In addition to significant cost savings from reduced biosolids hauling, the project is strategically important as the Class A EQ designation greatly increases regulatory options for biosolids disposal and reuse.

Final project plans and specifications were completed by the engineering team of Rummel, Klepper & Kahl (RK&K) and Buchart Horn (BH) on July 28, 2017. The project procurement consisted of a request for proposals (RFP) to construct the dryer equipment (RFP No. HRRSA-2017-02) and an invitation to bid for construction of the dryer building and installation of the dryer and ancillary equipment (ITB No. HRRSA-2017-03). The RFP for the sludge drying equipment was awarded to Komline-Sanderson (K-S) to manufacture a paddle-style biogas dryer system in the amount of $3,800,000. K-S's proposal was included as selected equipment in the invitation to bid documents for the general construction contract. Bids for ITB No. HRRSA-2017-03 were opened on September 26, 2017. MEB General Contractors, Inc. (MEB) of Chesapeake, Virginia was determined to be the apparent low bidder.

Longer-Term Issues: (Continued)

After a value engineering evaluation identified $760,967 in cost savings, the Authority awarded the construction contract to MEB in the amount of $11,222,933 on October 8, 2017. The construction contract was subsequently signed on November 14, 2017. The Authority issued Notice to Proceed on January 15, 2018 following closing on project financing. Under the contract, the project time for substantial completion was 600 days.

The EBRR project is being financed through the VCWRLF program with a principal amount of $12,740,000, 2.25% annual interest and a maturity date of September 1, 2044 (25-year loan). The financing agreement was dated December 1, 2017. Following project completion which is expected to occur on or about September 1, 2019, the first payment of cost of funds (construction interest only) will be due on March 1, 2020. The first of 49 principal and interest payments of $339,637 ($679,274 per year) will be due on September 1, 2020 with final payment on September 1, 2044.

BR-LCC Project: The Authority began planning and development of a phased master plan for upgrades to the Blacks Run and Lower Cooks Creek interceptors during FY 2018. The master plan also included construction of improvements to the NRWWTF due to the increased wet weather peak flows which are anticipated to result from increased interceptor capacity. The phased program is currently envisioned to be constructed in four divisions over a 15 to 20-year time period beginning within the next five years. The improvement program is projected for completion on or around the same timeframe as the next expansion of the NRWWTF, which is currently projected to occur sometime between 2042-2048.

The Authority commissioned a Preliminary Engineering Report (PER) for the Division 1 project from its engineer, Wiley and Wilson. In support of Wiley and Wilson's efforts, an aerial survey of the preliminary sewer alignment for the Division 1 and Division 2 improvements was conducted prior to the emergence of spring foliage in February 2018. A phase 1 environmental assessment of the Division 1 improvements was also conducted in support of the PER during the fiscal year.

As currently proposed, Division 1 consists of upgrading approximately 8,600 linear feet of the Upper Blacks Run Interceptor and constructing flow equalization at the NRWWTF. The Authority has met with multiple stakeholders to provide an overview of the interceptor master plan, preliminary alignment and coordination required for construction of the proposed Division 1 improvements. Division 1 stakeholders include the City of Harrisonburg's Departments of Parks and Recreation, Public Works and Public Utilities. The preliminary alignment was also reviewed with the VDOT residency office for Harrisonburg and Rockingham County. Although there are no VDOT road crossings proposed for Division 1 improvements, close coordination with VDOT will be required for the Division 2 – 4 projects which will require several VDOT road crossings including three crossings of Interstate 81.

Requests for Information

This financial report is designed to provide a general overview of the Authority's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Executive Director, at P.O. Box 8, Mount Crawford, VA 22841.

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- Financial Statements -

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HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY

Statement of Net Position
At June 30, 2018 and 2017

ASSETS		**2018**		**2017**
Current Assets:				
Cash and cash equivalents	$	4,614,200	$	5,050,023
Accounts receivable		602,813		592,437
Other receivables		4,600		-
Prepaid items		45,394		20,599
Total Current Assets	$	5,267,007	$	5,663,059
Noncurrent Assets:				
Restricted Assets (Note 2)				
Cash and temporary investments	$	866,028	$	853,317
Cash and temporary investments held by trustee		2,356,287		2,518,125
Total Restricted Assets	$	3,222,315	$	3,371,442
Other Assets:				
Patronage equities	$	806,462	$	810,194
Total Other Assets	$	806,462	$	810,194
Capital Assets:				
Land	$	193,392	$	193,392
Plant		125,118,326		123,767,451
Machinery, equipment and vehicles		28,715,395		28,626,893
Office furniture and equipment		153,482		153,482
Computer equipment		139,051		139,051
	$	154,319,646	$	152,880,269
Accumulated depreciation		67,786,248		63,622,336
	$	86,533,398	$	89,257,933
Construction in progress		4,256,457		1,089,628
Net Capital Assets	$	90,789,855	$	90,347,561
Total Noncurrent Assets	$	94,818,632	$	94,529,197
Total Assets	$	100,085,639	$	100,192,256
DEFERRED OUTFLOWS OF RESOURCES				
Deferred charge on refunding	$	320,272	$	400,340
Pension related items		177,575		359,441
OPEB related items		8,183		-
Total Deferred Outflows of Resources	$	506,030	$	759,781

HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY

Statement of Net Position
At June 30, 2018 and 2017 (continued)

LIABILITIES	**2018**	**2017**
Current Liabilities:		
Accounts payable	$ 964,560	$ 999,023
Retainage payable	105,523	-
Accrued expenses	39,009	42,668
Current maturities of long-term debt	2,122,287	2,326,495
Compensated absences	229,942	238,701
Total Current Liabilities	$ 3,461,321	$ 3,606,887
Current Liabilities Payable From Restricted Assets:		
Current maturities of long-term debt	$ 2,356,287	$ 2,023,725
Accrued interest payable	466,271	494,400
Total Current Liabilities Payable From Restricted Assets	$ 2,822,558	$ 2,518,125
Noncurrent Liabilities:		
Net OPEB liabilities	$ 300,148	$ 87,153
Net pension liability	445,031	800,190
Revenue bonds (net of unamortized premiums)	54,705,604	56,747,089
Total Noncurrent Liabilities	$ 55,450,783	$ 57,634,432
Total Liabilities	$ 61,734,662	$ 63,759,444
DEFERRED INFLOWS OF RESOURCES		
Pension related items	$ 157,990	$ 22,652
OPEB related items	18,254	-
Total Deferred Inflows of Resources	$ 176,244	$ 22,652
NET POSITION		
Net investment in capital assets	$ 34,176,713	$ 31,674,317
Restricted for debt service and bond covenants	399,757	853,317
Unrestricted	4,104,293	4,642,307
Total Net Position	$ 38,680,763	$ 37,169,941

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

HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY

Statement of Revenues, Expenses and Changes in Net Position
Years Ended June 30, 2018 and 2017

	2018	2017
Operating Revenue:		
Operations and maintenance	$ 4,381,271	$ 4,425,644
Septage/waste treatment	754,841	708,431
Pretreatment	37,634	51,695
Nutrient credit sales	24,136	63,446
Total Operating Revenue	$ 5,197,882	$ 5,249,216
Operating Expenses:		
Power	$ 608,718	$ 635,155
Operations and maintenance	336,198	344,636
Sewage treatment	480,611	437,372
Biosolids expenses	424,232	506,920
Professional expenses	77,935	111,904
Personnel	2,094,354	2,156,599
Administrative	154,086	131,391
Total Operating Expenses	$ 4,176,134	$ 4,323,977
Operating Income Before Depreciation	$ 1,021,748	$ 925,239
Depreciation	4,263,624	4,409,740
Operating income (loss)	$ (3,241,876)	$ (3,484,501)
Nonoperating Revenues (Expenses):		
Debt service revenue	$ 5,770,397	$ 5,624,260
Investment income	76,084	32,863
Patronage refunds and miscellaneous	58,922	102,712
Interest expense and bond fees	(1,586,236)	(1,589,390)
Planning and repair expenses	(201,564)	(334,550)
Nonoperating revenues (expenses)	$ 4,117,603	$ 3,835,895
Income (loss) before capital contributions	$ 875,727	$ 351,394
Capital contributions	871,008	1,051,512
Change in Net Position	$ 1,746,735	$ 1,402,906
Net Position, Beginning of Year, As Restated	36,934,028	35,767,035
Net Position, End of Year	$ 38,680,763	$ 37,169,941

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

HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY

Statement of Cash Flows
Years Ended June 30, 2018 and 2017

		2018		2017
Cash flows from operating activities:				
Receipts from customers and users	$	5,208,106	$	4,804,794
Payments to suppliers		(2,141,038)		(1,798,130)
Payments to and on behalf of employees		(2,157,577)		(2,113,747)
Net cash provided by (used for) operating activities	$	909,491	$	892,917
Cash flows from noncapital financing activities:				
Planning and major repair outlays	$	(201,564)	$	(334,550)
Cash flows from capital and related financing activities:				
Purchase of capital assets	$	(4,600,394)	$	(3,526,175)
Proceeds from localities-debt service revenues		5,770,397		5,624,260
Proceeds from localities-capital contributions		871,008		1,051,512
Proceeds from issuance of bonds		2,466,888		1,551,792
Principal payments on bonds		(4,351,494)		(3,831,754)
Interest and fees paid on bonds		(1,562,822)		(1,579,787)
Net cash provided by (used for) capital and related financing activities	$	(1,406,417)	$	(710,152)
Cash flows from investing activities:				
Interest income	$	76,084	$	32,863
Patronage refunds		37,456		27,840
Net cash provided by (used for) investing activities	$	113,540	$	60,703
Net Increase (Decrease) in cash and cash equivalents	$	(584,950)	$	(91,082)
Cash and cash equivalents, beginning of year (including $3,371,442 and $3,294,315, respectively reported in restricted accounts)		8,421,465		8,512,547
Cash and cash equivalents, end of year (including $3,222,315 and $3,371,442, respectively reported in restricted accounts)	$	7,836,515	$	8,421,465
Reconciliation of operating income (loss) to net cash provided by (used for) operating activities:				
Operating income (loss)	$	(3,241,876)	$	(3,484,501)
Adjustments to reconcile operating income (loss) to net cash provided by operating activities:				
Depreciation		4,263,624		4,409,740
Miscellaneous revenues		20,600		57,280
Changes in operating assets and liabilities:				
(Increase) decrease in accounts receivable		(10,376)		(501,702)
(Increase) decrease in prepaid items		(24,795)		(1,393)
Increase (decrease) in accounts payable		(34,463)		370,641
(Increase) decrease in pension deferred outflows of resources		181,866		(245,635)
(Increase) decrease in OPEB deferred outflows of resources		(8,183)		-
Increase (decrease) in pension deferred inflows of resources		135,338		(172,823)
Increase (decrease) in OPEB deferred inflows of resources		18,254		-
Increase (decrease) in net OPEB liabilities		(22,921)		13,616
Increase (decrease) in net pension liability		(355,159)		437,616
Increase (decrease) in accrued expenses		(3,659)		(7,951)
Increase (decrease) in compensated absences		(8,759)		18,029
Net cash flows from operating activities	$	909,491	$	892,917

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

NOTE 1 - FORMATION OF THE HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY:

The Harrisonburg-Rockingham Regional Sewer Authority ("HRRSA") is a public body politic and corporate organized and existing under the provisions of the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended (the "Enabling Act"), and Chapter 61, 1971 Va. Acts of Assembly (the "HRRSA Enabling Act"). HRRSA was created by concurrent resolutions adopted by the governing bodies of the Member Jurisdictions and was chartered by the State Corporation Commission on July 15, 1970. The SCC charter was extended for fifty years on September 13, 2005. The purpose for which HRRSA was formed is to acquire, finance, construct, operate and maintain facilities for the collection and treatment of sewage within its service area.

The Enabling Act provides that HRRSA is authorized, among other things (a) to acquire, construct, improve, operate and maintain any sewer system or sewage disposal system, (b) to issue revenue bonds of HRRSA, payable solely from revenues, to pay all or any part of the cost of a sewer system or sewage disposal system, (c) to fix, revise, charge and collect rates, fees and charges for the use of and for the services furnished by any system operated by HRRSA, and (d) to enter into contracts with any counties, towns and cities, providing for or relating to the furnishing of services and facilities or to the use of any sewer system or sewage disposal system of HRRSA, including the provision of charges therefore. The Enabling Act also provides that HRRSA is subject in all respects to the jurisdiction of the Virginia State Water Control Board under the provisions of the State Water Control Law.

Financial Reporting Entity:

The member jurisdictions are the City of Harrisonburg, the County of Rockingham and the Towns of Bridgewater, Dayton and Mt. Crawford. These governmental entities have an ongoing financial responsibility to the Authority because a covenant to pay the Authority's rates and charges is included in the service contract.

The Authority's governing body is composed of four members appointed by the City of Harrisonburg and one member each appointed by the other member jurisdictions. Therefore, none of the participants appoints a voting majority of board members.

No participating government has access to the Authority's resources or surpluses, nor is any participant liable for the Authority's debts or deficits. The Authority also has the ability to finance its capital projects through user charges or the sale of revenue bonds.

Based on the above representations, the Harrisonburg-Rockingham Regional Sewer Authority has been determined to be a joint venture of its member jurisdictions. The Authority is not a component unit of any of the participating governments. There are no component units to be included within the Authority's financial statements.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

A. Basis of Accounting:

The Harrisonburg-Rockingham Regional Sewer Authority operates as an enterprise fund or business-type activity and its accounts are maintained on the accrual basis of accounting. Under this method, revenues are recognized when earned, and expenses are recorded as liabilities when incurred, without regard to receipt or payment of cash. The Authority accrues revenue for services rendered but not yet billed at the end of the fiscal year. The Authority follows all applicable Governmental Accounting Standards Board (GASB) pronouncements.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

A. Basis of Accounting: (Continued)

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. 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.

B. Allowance for Doubtful Accounts:

The Authority bills the member jurisdictions for substantially all of its services and consequently no provision for doubtful accounts is considered necessary.

C. Basic Financial Statements:

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

- Management's discussion and analysis

- 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 Components of and Changes in Net Pension Liability and Related Ratios
  - Schedule of Employer Contributions-Pension Plan
  - Notes to Required Supplementary Information-Pension Plan
  - Schedule of Changes in Total OPEB Liability (Asset) and Related Ratios
  - Notes to Required Supplementary Information - Authority OPEB
  - Schedule of Harrisonburg-Rockingham Regional Sewer 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

D. Capital Assets:

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

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

D. Capital Assets: (Continued)

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

Major outlays for capital assets and improvements are capitalized as projects are constructed.

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

Assets	Years
Sewage treatment plant and equipment	10 to 50
Machinery and equipment	3 to 25
Office furniture and equipment	10
Automotive	5

E. Interest on Indebtedness:

Interest expense applicable to that portion of indebtedness, the proceeds of which are used to construct new facilities, was capitalized during the period of construction as part of the cost of such facilities through the year ended June 30, 2017. Other interest costs of the Authority are treated as nonoperating expenses. Such capitalized interest totaled $0 and $145,010 for the years ended June 30, 2018 and 2017, respectively.

F. Cash and Cash Equivalents:

The Authority's cash and cash equivalents consist of demand deposits, investments in the Virginia State Treasurer’s Local Government Investment Pool, and investments in United States Government Securities money market mutual funds, all of which have original maturities of three months or less from the date of acquisition.

G. Investments:

Money market investments, participating interest-earning investment contracts (repurchase agreements) that have a remaining maturity at time of purchase of one year or less, nonparticipating interest-earning investment contracts (nonnegotiable certificates of deposit (CDs)) and external investment pools are measured at amortized cost. All other investments are reported at fair value.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

H. Budgets and Budgetary Accounting:

A budget is prepared for information, fiscal planning purposes, and to provide the basis for setting wholesale rates, in accordance with the requirements of the Service Contract, among the member jurisdictions. Rates are not subjected to regulatory scrutiny but may be changed at any time by the Authority's Board of Directors if necessary in order to adjust revenues. None of the participating entities are required to approve the budget. The budget is adopted as a planning document and is not a legal control on expenses.

I. Inventory:

Consumption of materials and supplies is recorded as an expense when used. No inventory amount is recorded as an asset, as available inventory is not significant.

J. 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.

K. Deferred Outflows/Inflows of Resources:

In addition to assets, the statement of financial 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 several items that qualify for reporting in this category. One item is the deferred charge on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. The other item is comprised of certain items related to the measurement of the net pension liability and the net OPEB liabilities and/or contributions to the 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. The Authority has one type of item that qualifies for reporting in this category. Certain items related to the measurement of the net pension liability and net OPEB liabilities are reported as deferred outflows of resources. For more detailed information on these items, reference the related notes.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

L. 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.

M. Net Position Flow Assumption:

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

N. 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 the benefit terms. Investments are reported at fair value.

O. Other Postemployment Benefits (OPEB)

Group Life Insurance

The Virginia Retirement System (VRS) Group Life Insurance (GLI) Program provides coverage to state employees, teachers, and employees of participating political subdivisions. The GLI 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 GLI 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 GLI Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the GLI OPEB, and GLI OPEB expense, information about the fiduciary net position of the VRS GLI Program OPEB and the additions to/deductions from the VRS GLI 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.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

P. Restricted Assets:

The Authority maintains a number of restricted accounts which are required by contract with the users, by bond resolution, or by the Board of Directors. At June 30, 2018 and 2017 restricted assets consisted of the following:

	2018	2017
Restricted Assets:		
Cash and temporary investments held by Authority:		
O & M Reserve Account	$ 866,028	$ 853,317
Cash and temporary investments held by Trustee:		
Bond Service fund	$ 2,356,287	$ 2,518,125
Total	$ 2,356,287	$ 2,518,125
Restricted asset balance June 30	$ 3,222,315	$ 3,371,442
Board designated accounts, included in current assets:		
Special reserve account	$ 259,809	$ 255,995
Planning and repair account	2,507,839	2,818,152
Capital outlay escrow	62,050	61,139
Total	$ 2,829,698	$ 3,135,286

Special Reserve Account: The purpose of this account is to hold monies in reserve for the financing of special unanticipated repairs, maintenance, additions, and/or improvements as designated by the Board.

Operating and Maintenance (O & M) Reserve Account: This account is required by contract to equal two months of operations and maintenance expenses under the current budget. This fund is to be used for current operations and maintenance if there are insufficient monies in the operation and maintenance account (unrestricted) caused by extraordinary maintenance and repairs and for capital expenditures.

Planning and Repair Account: This account, held by the Authority, may be used to pay costs or expenses related to the construction, replacement, renewal, or improvement of the Authority's sewage disposal system.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

P. Restricted Assets: (Continued)

Bond Service Fund: This account, established by the 1992 and 1998 Bond Resolutions, is held in trust and is to be used by the trustee to pay all interest and principal requirements of the bonds. The Authority covenants that it will pay to the Trustee, on a monthly basis, funds sufficient to service the current interest and principal requirements of the Sewer Revenue Bonds.

Capital Outlay Escrow: This account was established by the Board and is used to accumulate funds for capital outlay purchases, such as vehicles.

Q. Long-Term Obligations:

Bond premiums and discounts are deferred and amortized over the life of the bonds. Bonds payable are reported net of the applicable bond premium or discount.

NOTE 3 - DEPOSITS AND INVESTMENTS:

Deposits

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

The Authority has no formal deposit and investment policy.

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).

NOTE 3 - DEPOSITS AND INVESTMENTS: (CONTINUED)

Credit Risk of Debt Securities

The Authority's rated debt investments as of June 30, 2018 were rated by Standard & Poor's and the ratings are presented below using the Standard & Poor's rating scale.

Authority's Rated Debt Investments' Values

Rated Debt Investments	Fair Quality Ratings AAAm
Local Government Investment Pool	$ 3,954,186
Money market - Federated Automated Money Trust	2,356,287
Total deposits and investments	$ 6,310,473

Interest Rate Risk:

Investment Maturities (in Years)

	Fair Value	Less Than 1 Year
Local Government Investment Pool	$ 3,954,186	$ 3,954,186
Money market - Federated Automated Money Trust	2,356,287	2,356,287
	$ 6,310,473	$ 6,310,473

External Investment Pools

The value of the positions in the external investment pool (Local Government Investment Pool) is the same as the value of the pool shares. As this pool is not SEC registered, regulatory oversight of the pool rests with the Virginia State Treasury. LGIP is an amortized cost portfolio under the provisions of GASB Statement No. 79. There are no withdrawal limitations or restrictions imposed on participants.

NOTE 4 - FAIR VALUE MEASUREMENTS:

Fair value for investments is determined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. The three-level fair value hierarchy prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities.

- Level 2 — Significant observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.

- Level 3 — Significant unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The Authority is providing the following information related to its investments:

		Fair Value Measurements at Reporting Date Using		
	Total June 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
U.S. Treasury & Agency Money Market Funds	$ 2,356,287	$ 2,356,287	$ -	$ -
Total investments measured at fair value	$ 2,356,287	$ 2,356,287	$ -	$ -

NOTE 5 - CAPITAL ASSETS:

Details of changes in capital assets for the year ended June 30, 2018 are as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets not being depreciated:				
Land	$ 193,392	$ -	$ -	$ 193,392
Construction in progress	1,089,628	4,517,704	1,350,875	4,256,457
Total capital assets not being depreciated	$ 1,283,020	$ 4,517,704	$ 1,350,875	$ 4,449,849
Capital assets being depreciated:				
Plant	$ 123,767,451	$ 1,350,875	$ -	$ 125,118,326
Machinery and equipment	28,156,156	78,863	10,095	28,224,924
Vehicles	470,737	109,350	89,616	490,471
Office furniture and equipment	153,482	-	-	153,482
Computer equipment	139,051	-	-	139,051
Total capital assets being depreciated	$ 152,686,877	$ 1,539,088	$ 99,711	$ 154,126,254
Accumulated depreciation:				
Plant	$ (48,867,923)	$ (2,637,864)	$ -	$ (51,505,787)
Machinery and equipment	(14,135,041)	(1,569,865)	(10,095)	(15,694,811)
Vehicles	(401,726)	(29,923)	(89,616)	(342,033)
Office furniture and equipment	(114,019)	(14,744)	-	(128,763)
Computer equipment	(103,627)	(11,227)	-	(114,854)
Total accumulated depreciation	$ (63,622,336)	$ (4,263,623)	$ (99,711)	$ (67,786,248)
Total capital assets, being depreciated, net	$ 89,064,541	$ (2,724,535)	$ -	$ 86,340,006
Total capital assets net	$ 90,347,561	$ 1,793,169	$ 1,350,875	$ 90,789,855

NOTE 5 - CAPITAL ASSETS: (CONTINUED)

Details of changes in capital assets for the year ended June 30, 2017 are as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets not being depreciated:				
Land	$ 193,392	$ -	$ -	$ 193,392
Construction in progress	2,254,621	3,399,393	4,564,386	1,089,628
Total capital assets not being depreciated	$ 2,448,013	$ 3,399,393	$ 4,564,386	$ 1,283,020
Capital assets being depreciated:				
Plant	$ 119,230,016	$ 4,537,435	$ -	$ 123,767,451
Machinery and equipment	28,026,183	129,973	-	28,156,156
Vehicles	446,185	24,552	-	470,737
Office furniture and equipment	153,482	-	-	153,482
Computer equipment	122,514	16,537	-	139,051
Total capital assets being depreciated	$ 147,978,380	$ 4,708,497	$ -	$ 152,686,877
Accumulated depreciation:				
Plant	$ (46,366,100)	$ (2,501,823)	$ -	$ (48,867,923)
Machinery and equipment	(12,288,394)	(1,846,647)	-	(14,135,041)
Vehicles	(366,804)	(34,922)	-	(401,726)
Office furniture and equipment	(99,275)	(14,744)	-	(114,019)
Computer equipment	(92,023)	(11,604)	-	(103,627)
Total accumulated depreciation	$ (59,212,596)	$ (4,409,740)	$ -	$ (63,622,336)
Total capital assets, being depreciated, net	$ 88,765,784	$ 298,757	$ -	$ 89,064,541
Total capital assets net	$ 91,213,797	$ 3,698,150	$ 4,564,386	$ 90,347,561

NOTE 6 - LONG-TERM OBLIGATIONS:

A. Changes in Long-Term Obligations:

The following is a summary of long-term obligations transactions for the year ended June 30, 2018:

	Beginning Balance	Issuances/ Additions	Retirements/ Reductions	Ending Balance	Due Within One Year
Revenue bonds	$ 61,014,180	$ 2,466,888	$ (4,351,494)	$ 59,129,574	$ 4,478,574
Unamortized issuance premiums	83,129	-	(28,525)	54,604	-
Total revenue bonds	$ 61,097,309	$ 2,466,888	$ (4,380,019)	$ 59,184,178	$ 4,478,574
Net OPEB liabilities	87,153	212,995	-	300,148	-
Net pension liability	800,190	-	(355,159)	445,031	-
Compensated absences	238,701	-	(8,759)	229,942	229,942
Totals	$ 62,223,353	$ 2,679,883	$ (4,743,937)	$ 60,159,299	$ 4,708,516

The following is a summary of long-term obligations transactions for the year ended June 30, 2017:

	Beginning Balance	Issuances/ Additions	Retirements/ Reductions	Ending Balance	Due Within One Year
Revenue bonds	$ 63,294,141	$ 1,551,792	$ (3,831,753)	$ 61,014,180	$ 4,350,220
Unamortized issuance premiums	117,377	-	(34,248)	83,129	-
Total revenue bonds	$ 63,411,518	$ 1,551,792	$ (3,866,001)	$ 61,097,309	$ 4,350,220
Net OPEB obligation	73,537	22,846	(9,230)	87,153	-
Net pension liability	362,574	722,527	(284,911)	800,190	-
Compensated absences	220,672	18,029	-	238,701	238,701
Totals	$ 64,068,301	$ 2,315,194	$ (4,160,142)	$ 62,223,353	$ 4,588,921

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

B. Annual Amortization of Long-Term Obligations:

The annual requirements to amortize all long-term obligations outstanding as of June 30, 2018 are as follows:

Year Ending	Revenue Bonds	
June 30,	Principal	Interest
2019	$ 4,478,574	1,427,192
2020	4,599,049	1,385,595
2021	5,376,530	1,201,230
2022	5,521,446	1,056,447
2023	4,443,671	936,137
2024	3,974,996	797,084
2025	4,000,473	700,061
2026	4,099,990	600,544
2027	4,202,066	498,468
2028	4,306,768	393,766
2029	4,414,164	286,369
2030	4,524,326	176,208
2031	2,536,923	63,208
2032	469,326	30,403
2033	474,975	24,755
2034	480,692	19,038
2035	486,477	13,252
2036	492,333	7,397
2037	246,795	1,482
Total	$ 59,129,574	$ 9,618,636

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

C. Details of Long-Term Obligations:

Revenue Bonds:

$12,650,000 Series 2008A Sewer Revenue and Refunding Bonds dated June 19, 2008 bearing interest at rates ranging from 2.95% to 4.8%, principal payable annually on October 1 and interest payable semi-annually on April 1 and October 1, final maturity October 1, 2021.	$	4,424,604
$30,000,000 Series 2007 Sewer Revenue Bond dated December 20, 2007 bearing interest at 2.52%, due in semi-annual installments of combined principal and interest of $984,273, final maturity September 1, 2030.		20,995,747
$33,219,297 Series 2008B Sewer Revenue Bond dated November 25, 2008 bearing interest at 2.72%, due in semi-annual installments of combined principal and interest of $1,116,129, final maturity September 1, 2030.		23,520,538
$8,665,505 Series 2015 Sewer Revenue Bond dated February 27, 2015 with allonge dated September 22, 2015 bearing interest at 1.20%, due in semi-annual installments beginning November 1, 2017 of combined principal and interest of $249,865, final maturity November 1, 2036.		8,267,301
$12,740,000 Series 2017 Sewer Revenue Bond dated December 8, 2017 bearing interest at 2.25%, due in semi-annual installments beginning September 1, 2020 of combined principal and interest of $339,637, final maturity November 1, 2044, amount borrowed to date.		1,975,988
Total Revenue Bonds	$	59,184,178
Net OPEB liabilities		300,148
Net pension liability		445,031
Compensated absences		229,942
Total Long-Term Obligations	$	60,159,299

NOTE 6 - LONG-TERM OBLIGATIONS: (CONTINUED)

D. Presentation of Long-Term Debt:

The following is a summary of long-term debt accounts:

	June 30, 2018	June 30, 2017
Revenue Bonds:		
2008A Series	$ 4,370,000	$ 5,350,000
Unamortized issuance premium	54,604	83,129
Current portion	(1,025,000)	(980,000)
	$ 3,399,604	$ 4,453,129
2007 Series	$ 20,995,747	$ 22,408,444
Current portion	(1,448,521)	(1,412,697)
	$ 19,547,226	$ 20,995,747
2008B Series	$ 23,520,538	$ 25,081,130
Current portion	(1,603,329)	(1,560,592)
	$ 21,917,209	$ 23,520,538
2015 Series	$ 8,267,301	$ 8,174,606
Current portion	(401,724)	(396,931)
	$ 7,865,577	$ 7,777,675
2017 Series	$ 1,975,988	$ -
Current portion	-	-
	$ 1,975,988	$ -
Revenue Bonds	$ 54,705,604	$ 56,747,089

E. Revenue Covenants:

The Authority is required to establish, charge and collect rates and enter into agreements with the Units contracting with the Authority for use of its services and facilities. Under the contracts, net revenues will in each fiscal year be sufficient to provide, together with any other funds available, an amount at least equal to the sum of 100% of the principal and interest requirements on account of all the bonds then outstanding under the Resolution.

NOTE 7 - COMPENSATED ABSENCES:

Effective July 1, 2014, the Authority combined its annual and sick leave plans into a single Paid Time Off (PTO) leave plan. Employee accumulated annual leave balances as of June 30, 2014 were converted to PTO leave and accumulated sick leave was converted to frozen sick leave. As of July 1, 2014, Authority employees earn Paid Time Off (PTO) leave each month in accordance with the years of service. Accumulated unpaid PTO and other compensatory leave amounts are accrued when incurred. Accumulated sick leave which was converted to frozen sick leave was accrued when incurred. At June 30, 2018 and 2017 the liability for accrued leave (including frozen sick leave) was $229,942 and $238,701 respectively.

NOTE 8 - 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.

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

RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
About Plan 1 Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.	**About Plan 2** Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.	**About the Hybrid Retirement Plan** The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. • The defined benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. • The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

<table>
<tr><th colspan="3">RETIREMENT PLAN PROVISIONS (CONTINUED)</th></tr>
<tr><th>PLAN 1</th><th>PLAN 2</th><th>HYBRID RETIREMENT PLAN</th></tr>
<tr><td></td><td></td><td>• In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.</td></tr>
<tr><td>Eligible Members
Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken a refund.

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

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

If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</td><td>Eligible Members
Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.

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

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

If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</td><td>Eligible Members
Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:
• Political subdivision employees*
• Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014.

*Non-Eligible Members
Some employees are not eligible to participate in the Hybrid Retirement Plan. They include:
• Political subdivision employees who are covered by enhanced benefits for hazardous duty employees.</td></tr>
</table>

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Hybrid Opt-In Election (Cont.) Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.	**Hybrid Opt-In Election (Cont.)** Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.	***Non-Eligible Members (Cont.)** Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable) or ORP.
Retirement Contributions Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment.	**Retirement Contributions** Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment.	**Retirement Contributions** A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Creditable Service Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.	**Creditable Service** Same as Plan 1.	**Creditable Service** **Defined Benefit Component:** Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit. **Defined Contributions Component:** Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Vesting Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.	**Vesting** Same as Plan 1.	**Vesting** **Defined Benefit Component:** Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of creditable service. Plan 1 or Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component. **Defined Contributions Component:** Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan. Members are always 100% vested in the contributions that they make.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Vesting (Cont.)	**Vesting (Cont.)**	**Vesting (Cont.)** **Defined Contributions Component: (Cont.)** Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service. • After two years, a member is 50% vested and may withdraw 50% of employer contributions. • After three years, a member is 75% vested and may withdraw 75% of employer contributions. • After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. Distribution is not required by law until age 70½.
Calculating the Benefit The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement.	**Calculating the Benefit** See definition under Plan 1.	**Calculating the Benefit** **Defined Benefit Component:** See definition under Plan 1.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Calculating the Benefit (Cont.) An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.	**Calculating the Benefit (Cont.)**	**Calculating the Benefit (Cont.)** **Defined Contribution Component:** The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.
Average Final Compensation A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.
Service Retirement Multiplier **VRS:** The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%. **Sheriffs and regional jail superintendents:** The retirement multiplier for sheriffs and regional jail superintendents is 1.85%. **Political subdivision hazardous duty employees:** The retirement multiplier of eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.70% or 1.85% as elected by the employer.	**Service Retirement Multiplier** **VRS:** Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members the retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013. **Sheriffs and regional jail superintendents:** Same as Plan 1. **Political subdivision hazardous duty employees:** Same as Plan 1.	**Service Retirement Multiplier** **Defined Benefit Component:** **VRS:** The retirement multiplier for the defined benefit component is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans. **Sheriffs and regional jail superintendents:** Not applicable. **Political subdivision hazardous duty employees:** Not applicable. **Defined Contribution Component:** Not applicable.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Normal Retirement Age **VRS:** Age 65. **Political subdivisions hazardous duty employees:** Age 60.	**Normal Retirement Age** **VRS:** Normal Social Security retirement age. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Normal Retirement Age** **Defined Benefit Component:** **VRS:** Same as Plan 2. **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Unreduced Retirement Eligibility **VRS:** Age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service. **Political subdivisions hazardous duty employees:** Age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service.	**Earliest Unreduced Retirement Eligibility** **VRS:** Normal Social Security retirement age with at least five years (60 months) of creditable service or when their age and service equal 90. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Earliest Unreduced Retirement Eligibility** **Defined Benefit Component:** **VRS:** Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90. **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Reduced Retirement Eligibility **VRS:** Age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service.	**Earliest Reduced Retirement Eligibility** **VRS:** Age 60 with at least five years (60 months) of creditable service.	**Earliest Reduced Retirement Eligibility** **Defined Benefit Component:** **VRS:** Age 60 with at least five years (60 months) of creditable service.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

<table>
<tr><th colspan="3">RETIREMENT PLAN PROVISIONS (CONTINUED)</th></tr>
<tr><th>PLAN 1</th><th>PLAN 2</th><th>HYBRID RETIREMENT PLAN</th></tr>
<tr>
<td>Earliest Reduced Retirement Eligibility (Cont.)

Political subdivisions hazardous duty employees: 50 with at least five years of creditable service.</td>
<td>Earliest Reduced Retirement Eligibility (Cont.)

Political subdivisions hazardous duty employees: Same as Plan 1.</td>
<td>Earliest Reduced Retirement Eligibility (Cont.)

Political subdivisions hazardous duty employees: Not applicable.

<u>Defined Contribution Component:</u>
Members are eligible to receive distributions upon leaving employment, subject to restrictions.</td>
</tr>
<tr>
<td>Cost-of-Living Adjustment (COLA) in Retirement
The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%.

<u>Eligibility:</u>
For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date.

For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.</td>
<td>Cost-of-Living Adjustment (COLA) in Retirement
The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%.

<u>Eligibility:</u>
Same as Plan 1.</td>
<td>Cost-of-Living Adjustment (COLA) in Retirement
<u>Defined Benefit Component:</u>
Same as Plan 2.

<u>Defined Contribution Component:</u>
Not applicable.

<u>Eligibility:</u>
Same as Plan 1 and Plan 2.</td>
</tr>
</table>

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Cost-of-Living Adjustment (COLA) in Retirement (Cont.) **Exceptions to COLA Effective Dates:** The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances: • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member retires directly from short-term or long-term disability under the Virginia Sickness and Disability Program (VSDP). • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins.	**Cost-of-Living Adjustment (COLA) in Retirement (Cont.)** **Exceptions to COLA Effective Dates:** Same as Plan 1.	**Cost-of-Living Adjustment (COLA) in Retirement (Cont.)** **Exceptions to COLA Effective Dates:** Same as Plan 1 and Plan 2.

NOTE 8 - PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Disability Coverage Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.	**Disability Coverage** Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.	**Disability Coverage** Employees of political subdivisions (including Plan 1 and Plan 2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides an employer-paid comparable program for its members. Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VLDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.
Purchase of Prior Service Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.	**Purchase of Prior Service** Same as Plan 1.	**Purchase of Prior Service** **Defined Benefit Component:** Same as Plan 1, with the following exceptions: • Hybrid Retirement Plan members are ineligible for ported service. **Defined Contribution Component:** Not applicable.

NOTE 8 - PENSION PLAN: (CONTINUED)

Pension Plan Data

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

Employees Covered by Benefit Terms

As of the June 30, 2016 actuarial valuation, the following employees were covered by the benefit terms of the pension plan:

	Number
Inactive members or their beneficiaries currently receiving benefits	23
Inactive members:	
Vested inactive members	4
Non-vested inactive members	3
Inactive members active elsewhere in VRS	7
Total inactive members	14
Active members	28
Total covered employees	65

Contributions

The contribution requirement for active employees is governed by §51.1-145 of the Code of Virginia, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement. Prior to July 1, 2012, all or part of the 5.00% member contribution may have been assumed by the employer. Beginning July 1, 2012 new employees were required to pay the 5% member contribution. In addition, for existing employees, employers were required to begin making the employee pay the 5.00% member contribution. This could be phased in over a period of up to 5 years and the employer is required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution.

The Authority's contractually required employer contribution rate for the years ended June 30, 2018 and 2017 was 6.48% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015.

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 $93,875 and $93,647 for the years ended June 30, 2018 and June 30, 2017, respectively.

NOTE 8 - PENSION PLAN: (CONTINUED)

Net Pension Liability

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

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, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

Inflation	2.5%
Salary increases, including inflation	3.5% – 5.35%
Investment rate of return	7.0%, net of pension plan investment expense, including inflation*

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

Mortality rates:

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.

NOTE 8 - PENSION PLAN: (CONTINUED)

Actuarial Assumptions – General Employees (Continued)

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

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

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

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%

NOTE 8 - 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 arithmetic nominal return	7.30%

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

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the employer for the Authority Retirement Plan will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the 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.

NOTE 8 - PENSION PLAN: (CONTINUED)

Changes in Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2016	$ 6,670,327	$ 5,870,137	$ 800,190
Changes for the year:			
Service cost	$ 128,242	$ -	$ 128,242
Interest	456,498	-	456,498
Changes of assumptions	(72,197)	-	(72,197)
Differences between expected and actual experience	3,999	-	3,999
Contributions - employer	-	93,493	(93,493)
Contributions - employee	-	73,333	(73,333)
Net investment income	-	709,648	(709,648)
Benefit payments, including refunds of employee contributions	(297,851)	(297,851)	-
Administrative expenses	-	(4,143)	4,143
Other changes	-	(630)	630
Net changes	$ 218,691	$ 573,850	$ (355,159)
Balances at June 30, 2017	$ 6,889,018	$ 6,443,987	$ 445,031

NOTE 8 - PENSION PLAN: (CONTINUED)

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:

	1% Decrease (6.00%)	Rate Current Discount (7.00%)	1% Increase (8.00%)
Authority			
Net Pension Liability	$ 1,291,710	$ 445,031	$ (263,260)

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

For the year ended June 30, 2018, the Authority recognized pension expense of $55,766. At June 30, 2018, 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	$ 83,700	$ 11,655
Change in assumptions	-	51,628
Net difference between projected and actual earnings on pension plan investments	-	94,707
Employer contributions subsequent to the measurement date	93,875	-
Total	$ 177,575	$ 157,990

NOTE 8 - PENSION PLAN: (CONTINUED)

$93,875 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 year ended June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

Year ended June 30		
2019	$	(54,255)
2020		45,650
2021		(4,986)
2022		(60,699)
Thereafter		-

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS

Medical and Dental Insurance – Pay-as-you Go

The Authority implemented GASB Statement Number 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* for the fiscal year ending June 30, 2018. This Statement replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*.

Plan Description

In addition to the pension benefits described in Note 8, the Authority administers a single-employer defined benefit healthcare plan. The plan provides post-employment health care benefits to all eligible permanent employees who meet the requirements under the Authority's pension plans. The plan does not issue a publicly available financial report.

Benefits Provided

The Authority administers a single-employer healthcare plan ("the Retiree Plan"). The plan provides for participation by eligible retirees of the Authority and their dependents in the health insurance programs available to Authority employees. The Retiree Health Plan will provide retiring employees the option to continue health insurance offered by the Authority. An eligible Authority retiree may receive this benefit until the retiree is eligible to receive Medicare. Participants in the Harrisonburg-Rockingham Regional Sewer Authority (Authority) must meet the eligibility requirements based on service earned with the Authority to be eligible to receive benefits upon retirement. Participants who do not retire directly from active service are not eligible for a benefit. Participants must meet one of the following criteria to be eligible for benefits:

- Participants must attain the age of 50 with at least 30 years of service with the Virginia Retirement System (VRS), have 15 years of service with the Authority and must have participated in the health plan for the last 5 years prior to retirement.

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Medical and Dental Insurance – Pay-as-you Go: (Continued)

Benefits Provided: (Continued)

- Participants must attain the age of 55 with at least 15 years of service with the Authority and must have participated in the health plan for the last 5 years prior to retirement.

Health benefits include medical, dental, and vision coverage. Retirees under the age of 65 may elect the Anthem BCBS (PPO) medical option and a separate dental option. Retirees may elect to cover a spouse until the earliest of any of the following conditions: the retiree reaches age 65; the spouse reaches age 65 or the spouse becomes eligible for Medicare.

Retirees who are aged 65 and older may elect the Medicare supplement offered by Anthem BCBS (PPO). Medicare eligible spouses are not eligible for this supplement.

All benefits cease upon the death of the retiree.

The benefits, employee contributions and the employer contributions are governed by the Board of Directors of the Harrisonburg-Rockingham Regional Sewer Authority and can be amended through Board action. The Retiree Health Plan does not issue a publicly available financial report.

Plan Membership

At June 30, 2018 (measurement date), the following employees were covered by the benefit terms:

Total active employees with coverage	$	29
Total retirees with coverage		2
Total	$	31

Contributions

The Authority does not pre-fund benefits; therefore, no assets are accumulated in a trust fund. The current funding policy is to pay benefits directly from general assets on a pay-as-you-go basis. The funding requirements are established and may be amended by the Authority Board. The amount paid by the Authority for OPEB as the benefits came due during the year ended June 30, 2018 was $23,419.

Total OPEB Liability

The Authority's Total OPEB liability was measured as of June 30, 2018. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of January 1, 2018.

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Medical and Dental Insurance - Pay-as-you Go: (Continued)

Actuarial Assumptions

The total OPEB liability in the January 1, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50% per year as of January 1, 2018
Salary Increases	The salary increase rate starts at 5.35% salary increase for 1 year of service and gradually declines to 3.50% for 20 or more years of service.
Discount Rate	3.50% for accounting and funding disclosures as of June 30, 2017 3.87% for accounting and funding disclosures as of June 30, 2018

Pre-Retirement Mortality Rates

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with Scale BB to 2020; males setback 1 year, 85% of rates; females setback 1 year. 25% of deaths are assumed to be service related.

Post-Retirement Mortality Rates

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

The date of the most recent actuarial experience study for which significant assumptions were based is June 30, 2016.

Discount Rate

The discount rate used when OPEB plan investments are insufficient to pay for future benefit payments is selected from a range of 20-Year Municipal Bond Indices and include the Bond Buyer 11-Bond GO Index, the S&P Municipal Bond 20-Year High Grade Rate Index, and the Fidelity 20-Year GO Municipal Bond Index. The final equivalent single discount rate used for this year's valuation is 6.75% as of the end of the fiscal year.

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Medical and Dental Insurance – Pay-as-you Go: (Continued)

Changes in Total OPEB Liability

		Total OPEB Liability
Balances at June 30, 2017	$	186,066
Changes for the year:		
Service cost		8,876
Interest		6,417
Changes in assumptions		(4,792)
Benefit payments		(23,419)
Net changes		(12,918)
Balances at June 30, 2018	$	173,148

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

The following amounts present the total OPEB liability of the Authority, as well as what the total OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.87%) or one percentage point higher (4.87%) than the current discount rate:

Rate		
1% Decrease (2.87%)	Current Discount Rate (3.87%)	1% Increase (4.87%)
$ 186,371	$ 173,148	$ 160,857

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

The following presents the total OPEB liability of the Authority, as well as what the total OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (2.7% increasing annually to an ultimate rate of 3.2%) or one percentage point higher (4.7% increasing by to an ultimate rate of 5.20%) than the current healthcare cost trend rates:

Rates		
1% Decrease (2.70% increasing to 3.20%)	Healthcare Cost Trend (3.70% increasing to 4.20%)	1% Increase (4.70% increasing to 5.20%)
$ 156,658	$ 173,148	$ 193,316

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Medical and Dental Insurance – Pay-as-you Go: (Continued)

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

For the year ended June 30, 2018, the Authority recognized OPEB expense in the amount of $14,755. At June 30, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resouces	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ -
Changes in assumptions	-	4,254
Net difference between projected and actual earnings on OPEB plan investments	-	-
Employer contributions subsequent to the measurement date	-	-
Total	$ -	$ 4,254

Amounts reported as deferred outflows of resources and deferred inflows of resources will be recognized in OPEB expense in future reporting periods as follows:

Year Ended June 30	
2019	$ 538
2020	538
2021	538
2022	538
2023	538
Thereafter	1,564

Additional disclosures on changes in total OPEB liability and related ratios can be found in the required supplementary information following the notes to the financial statements.

Group Life Insurance (GLI) Program

Plan Description

All full-time, salaried permanent employees of the state agencies, teachers, and employees of participating political subdivisions are automatically covered by the VRS Group Life Insurance Program upon employment. This 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.

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

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

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

GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS

Eligible Employees

The Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program, including the following employers that do not participate in VRS for retirement:

- City of Richmond
- City of Portsmouth
- City of Roanoke
- City of Norfolk
- Roanoke City School Board

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

Benefit Amounts

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

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

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Plan Description: (Continued)

GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS (CONTINUED)
Reduction in Benefit Amounts The benefit amounts provided to members covered under the Group Life Insurance Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.
Minimum Benefit Amount and Cost-of-Living Adjustment (COLA) For covered members with at least 30 years of creditable service, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at $8,000 by statute. The amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and is currently $8,111.

Contributions

The contribution requirements for the Group Life Insurance Program are governed by §51.1-506 and §51.1-508 of the Code of Virginia, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the Group Life Insurance Program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% (1.31% x 60%) and the employer component was 0.52% (1.31% x 40%). Employers may elect to pay all or part of the employee contribution; however, the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2018 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the Group Life Insurance Program from the entity were $8,183 and $8,035 for the years ended June 30, 2018 and June 30, 2017, respectively.

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

At June 30, 2018, the entity reported a liability of $127,000 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2017 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. The covered employer's proportion of the Net GLI OPEB Liability was based on the covered employer's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the participating employer's proportion was .00838% as compared to .00819% at June 30, 2016.

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

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

For the year ended June 30, 2018, the participating employer recognized GLI OPEB expense of $4,000. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2018, 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	$ -	$ 3,000
Net difference between projected and actual earnings on GLI OPEB program investments	-	5,000
Change in assumptions	-	6,000
Employer contributions subsequent to the measurement date	8,183	
Total	$ 8,183	$ 14,000

$8,183 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, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

Year Ended June 30	
2019	$ 3,000
2020	3,000
2021	3,000
2022	3,000
2023	2,000
Thereafter	-

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions

The total GLI OPEB liability was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

Inflation	2.5%
Salary increases, including inflation:	
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*

*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.

Mortality Rates – General State Employees

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – General State Employees: (Continued)

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

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	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%

Mortality Rates – Teachers

Pre-Retirement:
RP-2014 White Collar Employee Rates to age 80, White Collar Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020.

Post-Retirement:
RP-2014 White Collar Employee Rates to age 49, White Collar Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males 1% increase compounded from ages 70 to 90; females set back 3 years with 1.5% increase compounded from ages 65 to 70 and 2.0% increase compounded from ages 75 to 90.

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

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – Teachers: (Continued)

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

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	Adjusted rates to better match experience
Salary Scale	No change

Mortality Rates – SPORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

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

Post-Disablement:

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

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – SPORS Employees: (Continued)

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

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

Mortality Rates – VaLORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

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

Post-Disablement:

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

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – VaLORS Employees: (Continued)

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

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

Mortality Rates – JRS Employees

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – JRS Employees: (Continued)

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

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

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.

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

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

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

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.

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

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

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

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.

NOTE 9 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

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

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

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.

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

Actuarial Assumptions: (Continued)

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

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

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

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

NET GLI OPEB Liability: (Continued)

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

Long-Term Expected Rate of Return

The long-term expected rate of return on the System's investments was determined using a 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%.

NOTE 9 - OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Group Life Insurance (GLI) Program: (Continued)

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, 2019, the rate contributed by the entity for the GLI OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

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

The follow 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 (6.00%)	Current Discount (7.00%)	1% Increase (8.00%)
Authority's proportionate share of the Group Life Insurance Program Net OPEB Liability	$ 164,000	$ 127,000	$ 97,000

Group Life Insurance Program Fiduciary Net Position

Detailed information about the Group Life Insurance Program's Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

NOTE 10 - 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 and other liability insurance coverage. The Agreement for Formation of the association provides that the association will be self-sustaining through member premiums. Settled claims have not exceeded pool coverage in any of the past three fiscal years.

The Authority provides employee health and accident insurance through participation in the City of Harrisonburg's health insurance pool. The Authority pays a monthly premium to the pool for health insurance coverage. Settled claims resulting from these risks have not exceeded pool insurance coverage in any of the past three fiscal years.

NOTE 11 - UPCOMING PRONOUNCEMENTS:

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

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

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

NOTE 11 - UPCOMING PRONOUNCEMENTS: (CONTINUED)

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

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

NOTE 12 - CONSTRUCTION COMMITMENTS:

The Authority has active construction projects as of June 30, 2018. The Enhanced Biosolids Reuse and Reduction Project is funded by the Series 2017 bond issue. The other projects are funded by capital contributions from the member jurisdictions and Planning and Repair Account funds. At year end the Authority's commitments with contractors are as follows:

Project	Spent-to-Date	Remaining Commitment
North River WWTF Primary Clarifier Replacement	$ 754,314	$ 62,466
Enhanced Biosolids Reuse and Reduction Project	1,995,466	9,227,467
Tertiary Filter Equipment	-	769,500
Engineering and Design:		
Enhanced Biosolids Reuse and Reduction Project	968,900	528,449
Various	414,150	163,680

NOTE 13 – ADOPTION OF ACCOUNTING PRINCIPLES:

The Authority implemented the financial reporting provisions of Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* during the fiscal year ended June 30, 2018. This Statement establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures related to postemployment benefits other than pensions (other postemployment benefits or OPEB). Note disclosure and required supplementary information requirements about OPEB are also addressed. The requirements of this Statement will improve accounting and financial reporting by state and local governments for OPEB. In addition, the Authority implemented Governmental Accounting Standards Board Statement No. 85, *Omnibus 2017* during the fiscal year ended June 30, 2018. This Statement addresses practice issues identified during implementation and application of certain GASB statements for a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). Finally, the Authority implemented Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019; however, the Authority has elected to early implement this standard for the year ended June 30, 2018. The implementation of these Statements resulted in the following restatement of net position:

		Amount
Net Position, July 1, 2017, as previously stated	$	37,169,941
OPEB liabilities in accordance with GASB Statement No. 75		(235,913)
Net Position, July 1, 2017, as restated	$	36,934,028

- Required Supplementary Information -

Harrisonburg-Rockingham Regional Sewer Authority

Schedule of Components of and Changes in Net Pension Liability and Related Ratios
Years Ended June 30, 2015 through June 30, 2018

	2017	2016	2015	2014
Total pension liability				
Service cost	$ 128,242	$ 134,331	$ 141,510	$ 140,711
Interest	456,498	427,006	415,446	399,558
Differences between expected and actual experience	3,999	157,464	(44,646)	-
Changes in assumptions	(72,197)	-	-	-
Benefit payments, including refunds of employee contributions	(297,851)	(297,123)	(397,209)	(229,374)
Net change in total pension liability	$ 218,691	$ 421,678	$ 115,101	$ 310,895
Total pension liability - beginning	6,670,327	6,248,649	6,133,548	5,822,653
Total pension liability - ending (a)	$ 6,889,018	$ 6,670,327	$ 6,248,649	$ 6,133,548
Plan fiduciary net position				
Contributions - employer	$ 93,493	$ 113,630	$ 116,681	$ 131,211
Contributions - employee	73,333	70,370	72,522	77,714
Net investment income	709,648	100,911	267,145	800,801
Benefit payments, including refunds of employee contributions	(297,851)	(297,123)	(397,209)	(229,374)
Administrative expense	(4,143)	(3,683)	(3,796)	(4,294)
Other	(630)	(43)	(56)	42
Net change in plan fiduciary net position	$ 573,850	$ (15,938)	$ 55,287	$ 776,100
Plan fiduciary net position - beginning	5,870,137	5,886,075	5,830,788	5,054,688
Plan fiduciary net position - ending (b)	$ 6,443,987	$ 5,870,137	$ 5,886,075	$ 5,830,788
Authority's net pension liability - ending (a) - (b)	$ 445,031	$ 800,190	$ 362,574	$ 302,760
Plan fiduciary net position as a percentage of the total pension liability	93.54%	88.00%	94.20%	95.06%
Covered payroll	$ 1,544,856	$ 1,471,161	$ 1,466,601	$ 1,501,832
Authority's net pension liability as a percentage of covered payroll	28.81%	54.39%	24.72%	20.16%

Schedule is intended to show information for 10 years. Information prior to the 2014 valuation is not available. However, additional years will be included as they become available.

Harrisonburg-Rockingham Regional Sewer Authority

Schedule of Employer Contributions - Pension Plan
Years Ended June 30, 2009 through June 30, 2018

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)
2018	$ 93,875	$ 93,875	$ -	$ 1,573,349	5.97%
2017	93,647	93,647	-	1,544,856	6.06%
2016	113,806	113,806	-	1,471,161	7.74%
2015	116,852	116,852	-	1,466,601	7.97%
2014	129,908	129,908	-	1,501,832	8.65%
2013	120,283	120,283	-	1,390,556	8.65%
2012	40,016	40,016	-	1,238,871	3.23%
2011	37,290	37,290	-	1,154,499	3.23%
2010	48,264	48,264	-	1,143,695	4.22%
2009	47,523	47,523	-	1,126,127	4.22%

Amounts for fiscal years ended June 30, 2015 through 2018 are from Authority records and prior year contributions are from the VRS actuarial valuation performed each year.

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation. The 2014 valuation includes Hybrid Retirement Plan members for the first time. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. Because this was a new benefit and the number of participants was relatively small, the impact on the liabilities as of the measurement date of June 30, 2017 is not material.

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%

Harrisonburg-Rockingham Regional Sewer Authority

Schedule of Changes in Total OPEB Liability (Asset) and Related Ratios - Health Insurance

Year Ended June 30, 2018

		2018
Total OPEB liability		
Service cost	$	8,876
Interest		6,417
Changes in assumptions		(4,792)
Benefit payments		(23,419)
Net change in total OPEB liability	$	(12,918)
Total OPEB liability - beginning		186,066
Total OPEB liability - ending	$	173,148
Covered payroll	$	N/A
Authority's total OPEB liability as a percentage of covered payroll		N/A

Schedule is intended to show information for 10 years. Additional years will be included as they become available.

Valuation Date: 1/1/2018
Measurement Date: 6/30/2018

No assets are accumulated in a trust that meets the criteria in GASB 75 to pay related benefits.

Methods and assumptions used to determine OPEB liability:

Actuarial Cost Method	Entry age normal level % of pay
Discount Rate	3.50% as of June 30, 2017; 3.87% as of June 30, 2018
Inflation	2.50% per year as of June 30, 2017; 2.50% per year as of June 30, 2018
Healthcare Trend Rate	The healthcare trend rate assumption starts at 3.70% in 2017, increases to 7.80% in 2019 and gradually declines to 4.20% by the year 2087
Salary Increase Rates	The salary increase rate starts at 5.35% salary increase for 1 year of service and gradually declines to 3.50% salary increase for 20 or more years of service
Retirement Age	The average age at retirement is 62
Mortality Rates	The mortality rates for active and healthy retirees was calculated using the RP-2014 Total Dataset Mortality Table fully generational using scale MP-2014. The mortality rates for disabled retirees was calculated using the RP-2014 Disabled Mortality Table projected with Scale BB to 2020.

Harrisonburg-Rockingham Regional Sewer Authority

Schedule of Harrisonburg-Rockingham Regional Sewer Authority's Share of Net OPEB Liability
Group Life Insurance Program
Year Ended June 30, 2018

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)
2017	0.00838%	$ 127,000	$ 1,573,349	8.07%	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.

Harrisonburg-Rockingham Regional Sewer Authority

Schedule of Employer Contributions
Group Life Insurance Program
Years Ended June 30, 2009 through June 30, 2018

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)
2018	$ 8,181	$ 8,181	$ -	$ 1,573,349	0.52%
2017	8,035	8,035	-	1,544,856	0.52%
2016	7,798	7,798	-	1,471,403	0.53%
2015	7,774	7,774	-	1,466,818	0.53%
2014	7,960	7,960	-	1,501,832	0.53%
2013	7,392	7,392	-	1,394,710	0.53%
2012	5,468	5,468	-	1,242,800	0.44%
2011	5,080	5,080	-	1,154,499	0.44%
2010	4,117	4,117	-	1,143,695	0.36%
2009	4,054	4,054	-	1,126,127	0.36%

Notes to Required Supplementary Information
Group Life Insurance Program
Year Ended June 30, 2018

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

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

General State Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%

Teachers

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

SPORS Employees

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

VaLORS Employees

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

JRS Employees

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

Largest Ten Locality Employers - General Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

Non-Largest Ten Locality Employers - General Employees

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

Largest Ten Locality Employers - Hazardous Duty Employees

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

Non-Largest Ten Locality Employers - Hazardous Duty Employees

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

- Other Supplementary Information -

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- Supporting Schedules -

HARRISONBURG-ROCKINGHAM REGIONAL SEWER AUTHORITY

Schedule of Income and Expenses - By Fund
Years Ended June 30, 2018 and 2017

	Budgeted Operating	Unrestricted Operating	Special Reserve	Debt Service
Operating Revenue:				
Operations and maintenance	$ 4,590,670	$ 4,381,271	$ -	$ -
Septage/waste treatment	410,000	754,841	-	-
Pretreatment	75,000	37,634	-	-
Nutrient credit sales	10,000	24,136	-	-
Total Operating Revenue	$ 5,085,670	$ 5,197,882	$ -	$ -
Operating Expenses:				
Power	$ 756,250	$ 608,718	$ -	$ -
Operations and maintenance	445,800	336,198	-	-
Sewage treatment	566,500	480,611	-	-
Biosolids expenses	756,000	424,232	-	-
Professional expenses	102,720	77,935	-	-
Personnel	2,300,400	2,094,354	-	-
Administrative	158,000	154,086	-	-
Total Operating Expenses	$ 5,085,670	$ 4,176,134	$ -	$ -
Operating Income Before Depreciation	$ -	$ 1,021,748	$ -	$ -
Depreciation		4,263,624	-	-
Operating income (loss)		$ (3,241,876)	$ -	$ -
Nonoperating Revenues (Expenses):				
Debt service revenue		$ -	$ -	$ 5,770,397
Investment income		4,785	3,813	15,757
Patronage refunds and miscellaneous		58,922	-	-
Transfers		348,420	-	-
Interest expense and bond fees		-	-	(1,586,236)
Planning & repair expenses		-	-	-
Nonoperating revenues (expenses)		$ 412,127	$ 3,813	$ 4,199,918
Income (loss) before capital contributions		$ (2,829,749)	$ 3,813	$ 4,199,918
Capital contributions		871,008	-	-
Change in Net Position		$ (1,958,741)	$ 3,813	$ 4,199,918

O & M Reserve	Planning & Repair	Capital Outlay Escrow	2018 Actual Total	2017 Actual Total
$ -	$ -	$ -	$ 4,381,271	$ 4,425,644
-	-	-	754,841	708,431
-	-	-	37,634	51,695
-	-	-	24,136	63,446
$ -	$ -	$ -	$ 5,197,882	$ 5,249,216
$ -	$ -	$ -	$ 608,718	$ 635,155
-	-	-	336,198	344,636
-	-	-	480,611	437,372
-	-	-	424,232	506,920
-	-	-	77,935	111,904
-	-	-	2,094,354	2,156,599
-	-	-	154,086	131,391
$ -	$ -	$ -	$ 4,176,134	$ 4,323,977
$ -	$ -	$ -	$ 1,021,748	$ 925,239
-	-	-	4,263,624	4,409,740
$ -	$ -	$ -	$ (3,241,876)	$ (3,484,501)
$ -	$ -	$ -	$ 5,770,397	$ 5,624,260
12,711	38,107	911	76,084	32,863
-	-	-	58,922	102,712
-	(348,420)	-	-	-
-	-	-	(1,586,236)	(1,589,390)
-	(201,564)	-	(201,564)	(334,550)
$ 12,711	$ (511,877)	$ 911	$ 4,117,603	$ 3,835,895
$ 12,711	$ (511,877)	$ 911	$ 875,727	$ 351,394
-	-	-	871,008	1,051,512
$ 12,711	$ (511,877)	$ 911	$ 1,746,735	$ 1,402,906

Schedule of Operating Expenses - Budget and Actual
Year Ended June 30, 2018

	Budgeted Amounts Original	Budgeted Amounts Final	Actual	Variance with Final Budget
Power costs:				
Plant	$ 735,000	$ 735,000	$ 587,549	$ 147,451
Bridgewater pumping station	18,700	18,700	19,256	(556)
Metering	2,550	2,550	1,913	637
Total Power Costs	$ 756,250	$ 756,250	$ 608,718	$ 147,532
Operation and Maintenance:				
Sewage treatment equipment	$ 215,000	$ 215,000	$ 175,508	$ 39,492
Generator	87,800	87,800	46,516	41,284
Bridgewater pumping station	9,000	9,000	10,081	(1,081)
Sewer lines	9,000	9,000	6,181	2,819
Buildings	40,000	40,000	29,353	10,647
Grounds	40,000	40,000	36,276	3,724
Vehicles	45,000	45,000	32,283	12,717
Total Operation and Maintenance	$ 445,800	$ 445,800	$ 336,198	$ 109,602
Sewage Treatment:				
Chemicals	$ 425,000	$ 425,000	$ 364,675	$ 60,325
Laboratory	82,000	82,000	81,362	638
Pretreatment	30,000	30,000	16,756	13,244
Lubricants	8,000	8,000	2,255	5,745
Tools/other	6,500	6,500	9,125	(2,625)
Environmental/safety	15,000	15,000	6,438	8,562
Total Sewage Treatment	$ 566,500	$ 566,500	$ 480,611	$ 85,889
Biosolids Expenses:				
Chemicals	$ 180,000	$ 180,000	$ 131,307	$ 48,693
Laboratory	7,000	7,000	7,738	(738)
Vehicle	-	-	1,711	(1,711)
Equipment	24,000	24,000	3,056	20,944
Contract hauling - liquid	80,000	80,000	-	80,000
Contract hauling - dewatered	465,000	465,000	280,420	184,580
Total Biosolids Expenses	$ 756,000	$ 756,000	$ 424,232	$ 331,768
Professional Expenses:				
Board members expense	$ 10,720	$ 10,720	$ 12,426	$ (1,706)
Legal	32,000	32,000	16,512	15,488
Other	60,000	60,000	48,997	11,003
Total Professional Expenses	$ 102,720	$ 102,720	$ 77,935	$ 24,785

Schedule of Operating Expenses - Budget and Actual
Year Ended June 30, 2018 (continued)

	Budgeted Amounts Original	Budgeted Amounts Final	Actual	Variance Favorable (Unfavorable)
Personnel Expenses:				
Salaries	$ 1,706,000	$ 1,706,000	$ 1,636,907	$ 69,093
Payroll taxes	139,000	139,000	124,016	14,984
Virginia Retirement System	121,000	121,000	81,054 *	39,946
Health and disability insurance	298,400	298,400	221,110	77,290
Uniform service	15,000	15,000	16,811	(1,811)
Travel & training	16,000	16,000	11,414	4,586
Miscellaneous	5,000	5,000	3,042	1,958
Total Personnel Expenses	$ 2,300,400	$ 2,300,400	$ 2,094,354	$ 206,046
Administrative:				
Insurance - regular	$ 83,000	$ 83,000	$ 82,270	$ 730
Office supplies	16,000	16,000	13,791	2,209
Dues and subscriptions	20,000	20,000	16,271	3,729
Licenses	20,000	20,000	12,791	7,209
Telephone/internet/security	17,000	17,000	27,371	(10,371)
Advertising	2,000	2,000	1,592	408
Total Administrative	$ 158,000	$ 158,000	$ 154,086	$ 3,914
Total Operating Expenses	$ 5,085,670	$ 5,085,670	$ 4,176,134	$ 909,536

* - Actual employer payments to the Virginia Retirement System were $122,588 during the year.

Insurance Coverage
At June 30, 2018

Insurance Company	Policy Number	Dates	Type	Policy Limits
Virginia Municipal Liability Pool	Member #301	7/1/17-7/1/18	Workmen's Compensation and Employer's Liability	$ 1,000,000
		7/1/17-7/1/18	Automobile Contribution	1,000,000
			Values per policy	178,856,689
			Fidelity/Crime Contribution	100,000
			Comprehensive general liability	1,000,000
			Excess umbrella liability	5,000,000
			Boiler: Machinery Contribution	1,000,000
		7/1/17-7/1/18	Local government liability	1,000,000

Average Daily Flow and Revenue by Locality

	Fiscal Year 2018	Fiscal Year 2017
City of Harrisonburg:		
Average Daily Flow (mgd)	6.086	5.803
Operation & Maintenance Payments	$ 2,324,738	$ 2,653,927
Capital Outlay Payments	141,450	135,667
Pretreatment Payments	25,492	34,200
Projects	323,458	495,529
Debt Service Payments	2,921,354	2,850,472
Total Payments	$ 5,736,492	$ 6,169,795
Town of Dayton:		
Average Daily Flow (mgd)	1.801	1.601
Operation & Maintenance Payments	$ 712,548	$ 571,636
Capital Outlay Payments	42,695	29,185
Pretreatment Payments	356	6,603
Projects	97,632	106,600
Debt Service Payments	718,474	692,199
Total Payments	$ 1,571,705	$ 1,406,223
Town of Bridgewater:		
Average Daily Flow (mgd)	0.746	0.730
Operation & Maintenance Payments	$ 305,108	$ 280,134
Capital Outlay Payments	18,378	14,297
Pretreatment Payments	11,116	9,892
Projects	42,026	52,220
Debt Service Payments	512,569	499,241
Total Payments	$ 889,197	$ 855,784
Rockingham County:		
Average Daily Flow (mgd)	2.825	2.400
Operation & Maintenance Payments	$ 1,028,385	$ 910,442
Capital Outlay Payments	61,853	46,371
Pretreatment Payments	671	999
Projects	141,440	169,373
Debt Service Payments	1,611,468	1,576,441
Total Payments	$ 2,843,817	$ 2,703,626
Town of Mount Crawford:		
Average Daily Flow (mgd)	0.026	0.025
Operation & Maintenance Payments	$ 10,491	$ 9,504
Capital Outlay Payments	632	488
Projects	1,444	1,782
Debt Service Payments	6,532	5,908
Total Payments	$ 19,099	$ 17,682
TOTAL DAILY AVERAGE FLOW (mgd)	11.484	10.559

- Compliance -

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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*

Board of Directors
Harrisonburg-Rockingham Regional Sewer Authority
Mt. Crawford, 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 Harrisonburg-Rockingham Regional Sewer Authority as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise Harrisonburg-Rockingham Regional Sewer Authority's basic financial statements and have issued our report thereon dated November 8, 2018.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Harrisonburg-Rockingham Regional 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 Harrisonburg-Rockingham Regional Sewer Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of Harrisonburg-Rockingham Regional 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 Harrisonburg-Rockingham Regional 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.

Robinson, Farmer, Cox Associates

Charlottesville, Virginia
November 8, 2018

ROBINSON, FARMER, COX ASSOCIATES

A PROFESSIONAL LIMITED LIABILITY COMPANY *CERTIFIED PUBLIC ACCOUNTANTS*

Independent Auditors' Report on Compliance with Bond Covenants

Board of Directors
Harrisonburg-Rockingham Regional Sewer Authority
Mt. Crawford, Virginia

We have audited in accordance with auditing standards generally accepted in the United States of America, the statement of net position of the Harrisonburg-Rockingham Regional Sewer Authority as of June 30, 2018, and the related statements of revenues, expenses and changes in net position, and cash flows for the year then ended, and have issued our report thereon dated November 8, 2018.

In connection with our audits, nothing came to our attention that caused us to believe that the Authority failed to comply with the financial terms, covenants, provisions, or conditions of the Series 2007, Series 2008A, Series 2008B, Series 2015, and Series 2017 bonds insofar as they relate to accounting matters. Also, nothing came to our attention that caused us to believe that the Authority failed to apply monies received in accordance with the provisions of the bond resolution; expenditures for current expenses did not exceed the total amount provided for in the annual budget; and that all operations and maintenance, debt service and other payments required by contract were made. The Authority satisfied the Rate Covenant included in the Series 2007, Series 2008A, Series 2008B, Series 2015, and Series 2017 bonds issued through the Virginia Resources Authority. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance.

This report is intended solely for the information and use of the Board of Directors and management of the Harrisonburg-Rockingham Regional Sewer Authority and is not intended to be and should not be used by anyone other than these specified parties.

Robinson, Farmer, Cox Associates

Charlottesville, Virginia
November 8, 2018