

ROANOKE VALLEY RESOURCE AUTHORITY

Comprehensive Annual Financial Report For the Year Ended June 30, 2018



TINKER CREEK TRANSFER STATION

Roanoke, Virginia

ROANOKE VALLEY RESOURCE AUTHORITY

ROANOKE, VIRGINIA

Comprehensive Annual Financial Report
For The Year Ended June 30, 2018

Prepared by:

Roanoke County Finance Department

ROANOKE VALLEY RESOURCE AUTHORITY

Comprehensive Annual Financial Report For The Year Ended June 30, 2018

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INTRODUCTORY SECTION



ROANOKE VALLEY RESOURCE AUTHORITY

October 10, 2018

To the Honorable Chairman, Members of the Board of Directors of the Roanoke Valley Resource Authority, and Citizens of the Cities of Roanoke and Salem, the County of Roanoke and the Town of Vinton, Virginia:

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Roanoke Valley Resource Authority (Authority) for the fiscal year ended June 30, 2018. This audit was conducted in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and *Specifications for Audits of Authorities, Boards and Commissions*, issued by the Auditor of Public Accounts for the Commonwealth of Virginia.

This report consists of management's representations concerning the finances of the Authority. Consequently, management assumes full responsibility for both the accuracy of the data and the completeness and fairness of the presentations, including all disclosures. Management has established a comprehensive framework of internal control to provide a reasonable basis to make these representations. Because the cost of internal controls should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements. To the best of our knowledge and belief, the enclosed financial data is accurate in all material respects and fairly presents the financial position, results of operations and cash flows of the Authority. All disclosures necessary to enable the reader to gain an understanding of the Authority's financial activities have been included.

The basic financial statements have been audited by our independent auditors, Robinson, Farmer, Cox Associates, who have issued an unmodified (clean) opinion on the financial statements of the Authority for the year ending June 30, 2018. The annual audit was conducted in accordance with professional standards which require that the independent auditors plan and perform the audit to obtain reasonable rather than absolute, assurance about whether the financial statements are free of material misstatement. The independent auditors' report is located at the front of the financial section of this report.

Management's Discussion and Analysis (MD&A) immediately follows the independent auditors' report and provides a narrative introduction, overview, and analysis of the basic financial statements. This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it.

Profile of the Government

The Roanoke Valley Resource Authority (Authority) was established on October 23, 1991, as a tax exempt political subdivision within the Commonwealth of Virginia to acquire and construct a regional sanitary landfill and waste collection and transfer station with related treatment facilities. The charter members are the City of Roanoke, County of Roanoke, and the Town of Vinton. The Authority began its operations in 1993. The City of Salem joined July 1, 2016 and RVRA assumed ownership and operational control of Salem's transfer station on November 1, 2016.

The Authority's Board of Directors consists of nine members; five are appointed by Roanoke County, two are appointed by Roanoke City, one is appointed by Salem City, and one is appointed by the Town of Vinton. Each member is appointed for a four year term. Regular meetings of the Board of Directors are normally held monthly.

The Authority is administered by a Chief Executive Officer (CEO). The CEO has the direct supervision of all employees of the Authority, the responsibility for the operation of the landfill facilities, and the establishment of guidelines for efficient and sound fiscal management.

Residents and businesses in the Roanoke City, the Roanoke County, Salem City and the Town of Vinton generate approximately 240,000 tons of wastes every year with approximately 225,000 tons landfilled. The remaining tonnages are recycled. Each locality collects its own trash using its own equipment. After collection, all but the City of Salem, refuse trucks deliver the trash to the Authority's Tinker Creek Transfer Station (TCTS) in the City of Roanoke. The City of Salem delivers its trash to the Authority's Salem Transfer Station (STS). Wastes received at the STS are currently transported by a contract over-the-road hauler, using RVRA's trailers, to the TCTS. At the TCTS, waste is loaded into specially designed rail cars and covered with watertight lock-down lids. Each rail car holds approximately 65 tons of waste, making them among the largest on the railroad. At the end of the day, all waste that has been collected and loaded into the rail cars is transported 33 miles on the Waste Line Express by Norfolk Southern to Smith Gap Station in the County. Upon arriving at the landfill, the rail cars are uncoupled and positioned for unloading the following day. The train then returns the same day with empty rail cars from the previous day's load.

Additional information on this process including a seven minute video may be gleaned by accessing the Authority's website at www.RVRA.net.

At Smith Gap Station the rail cars are unloaded using one of the largest rotary tippers in the world. The rail cars are rotated upside down to remove the waste. The unloading operation takes place inside the tipper building, where the waste is inspected and loaded into haul trucks for burial in a 1,200 acre, environmentally protected landfill disposal area that meets all state and federal regulations.

Budgetary and Accounting Controls

The Authority is required to prepare and submit an annual operating budget to the Charter Members for approval on or before April 1 of each year for the upcoming fiscal year (July 1 to June 30). The budget is prepared by staff of the Authority and serves as the foundation for the Authority's financial planning and control.

The Authority's accounting records are maintained on an accrual basis under which revenues are recognized when earned and expenses are recognized when incurred. Accounting functions are separated to the extent possible for a small sized staff. The County of Roanoke currently is the fiscal agent for the Authority. The accounting system the Authority is using belongs to the County and County staff has provided support and assistance to the Authority in its accounting operations.

Local Economy

The Authority draws from a regional labor force of approximately 300,000 within a radius of sixty miles. The Roanoke Valley as well as the surrounding communities, are fortunate that their economic indicators are more favorable compared to some of the neighboring localities and to the State, but there remain formidable challenges for the Roanoke Valley; not only in the delivery of local government and authority services, but also in maintaining our traditionally high standard of living and quality of life.

The Economic Development Department of each locality successfully utilizes provisions under the public/private partnership policy that allows businesses to receive assistance from them for qualifying facility expansions and relocations. The expected return on investment in new taxes and employment is a critical measure governing the use of public funds to assist businesses and industries.

Long-Term Financial Planning

The Authority annually reviews the adequacy of the Replacement Reserve Requirements under the current operating conditions, and in comparison with industry standards. The review is done in consultation with a professional engineer familiar with solid waste services, equipment, and facilities as utilized by the Authority. A professional consulting engineer, external to the Authority, reviews the plan every five years. The Authority has defined adequacy to mean that funds exist in amounts equivalent to or exceeding the anticipated expenditures during a period of the next five subsequent fiscal years. The Authority annually makes deposits to replacement reserves for funding future planned expenditures. These reserves allow the Authority to establish and project an orderly increase in tipping fees to prepare for future expenses along with annual operating costs. All funds have been determined to be adequate to address industry costs and planning, thus allowing the reserve funds to reflect future anticipated costs over the next five years.

The Authority has established a "Closure Fund" to cover its future closure and post-closure obligations. Maintenance of this fund enables the Authority to qualify for Financial Assurance using a "Corporate Financial Test," thereby eliminating the need for additional financial commitments from its member communities in the form of a "Local Government Financial Test" or the additional annual cost for a "Letter of Credit" assuring the closure obligations will be met.

Major Initiatives and Accomplishments for FY 2018

- During the year, the Roanoke Valley Resources Authority maintained financial and reserve policies providing for the establishment of and the planned funding level of maintenance and improvement reserve accounts for planned expenditures over a short and long-term planning period.
- The Authority continues to maintain an account for a "Closure Fund" to cover future closure and post-closure obligations. This fund enables the Authority to qualify for

Financial Assurance by using a "Corporate Financial Test," thereby eliminating the need for additional financial commitments from its member communities in the form of a "Local Government Financial Test" or the additional annual cost for a "Letter of Credit" assuring the closure obligations will be met. The Authority continues to maintain adequate funds (cash) to cover anticipated costs required for closure and post closure care of both the Smith Gap and Rutrough Road landfills.

- The Authority continues to maintain and own sufficient land to provide long-term disposal capacity for its members in excess of 100 years which will be developed in phases or cells. The long-term disposal capacity provides the Authority with the flexibility it needs to properly evaluate emerging solid waste technologies and to allow sufficient timing to properly fund and to ultimately transition to one or more of these technologies if feasible.
- Since its inception, the Authority has developed five landfill cells in five construction phases to-date. Phase V provided disposal capacity through FY 2018. Construction of Phase VI began in FY'17 and was completed in FY'18. Other than the initial Phase I, all funding associated with the construction of Phases II-VI has been cash-funded through an established and dedicated reserve account which continues to receive regular contributions from the Authority's tipping fees to cash-fund subsequent cell developments.
- Portions of the Smith Gap Landfill are nearing final construction grade and in accordance with the Authority's permit, are in the process of being closed. The Authority initiated the closure construction for seven acres of filled cells in FY'17 and subsequently completed this construction in FY'18. All funding associated with closure construction has been cash-funded through an established and dedicated reserve account which continues to receive regular contributions from the Authority's tipping fees to cash-fund subsequent cell closures.
- The Authority simultaneous closure construction and the construction of Phase VI projects in FY'17 & FY'18 resulted in a savings on the combined construction activities through one contractor.
- As part of the original closure plan for the Smith Gap Landfill, the Authority installed an active gas collection and control system (GCCS) that began operations in April 2011. All funding for the closure plan, including the GCCS, is funded through an established reserve account which continues to receive regular contributions from tipping fees that will continue to fund subsequent cell closure costs. Although the Authority has no regulatory obligation to install and operate a GCCS at this time, the Authority's GCCS is currently collecting and preventing the annual emissions of approximately 60,000 tons of carbon dioxide equivalent (CO₂e) to the atmosphere, thereby greatly reducing greenhouse gas emissions. The Authority is a registered member of the California Climate Action Registry (CARs) which qualifies the Authority's destruction of greenhouse gases for emission credits which can be sold on the open market to help offset the initial cost of installing the GCCS. In FY 2015, the Authority received third party validation for approximately 93,000 tons of CO₂e emission credits which were sold, after expenses, for approximately \$106,000; in FY 2016 the Authority's CO₂e emission credits sold, after expenses, for approximately \$57,300; in FY 2017 the Authority's CO₂e emission credits sold, after expenses, for approximately \$42,600; in FY 2018 the Authority's CO₂e emission credits sold, after expenses, for approximately \$34,300 for total sale to-date of approximately \$240,200. The Authority anticipates selling some or all of its ongoing and

newly validated credits in FY 2019, the last year the Authority projects to be eligible for these credits.

- The Authority issued \$20M in financing proceeds in FY'17. The debt was issued in association with the Authority's "Facilities Modifications and Improvements Program" ("Program") that includes five distinct projects: the Connector Road Project; the Salem Transfer Station Project; the Tinker Creek Transfer Station Project; the Smith Gap Regional Landfill Project; and the Rail Corridor Conversion Project. The Authority completed its first full year of debt service payments in FY'18.
- The Connector Road Project will ultimately construct a road that may serve as an alternative delivery system (vs. current rail-haul transportation of solid waste) and route for tractor trailers to access the Authority's Smith Gap Landfill directly from the interstate (I-81) in lieu of using public road system. The Connector Road, in and by itself, serves as an effective negotiating tool with the Authority's current service provider to ensure the Authority will not overpay for its transportation services. If utilized, the Connector Road, in conjunction with the Rail Corridor Conversion Project, will provide safe, efficient and effective routing for the Authority's service provider via tractor trailer-hauled solid waste. It will also enable the Authority to entertain the fullest use of one of its most valuable assets, the Smith Gap Landfill, by expanding the Authority's potential customer base which would increase landfill tonnages in order to maximize its economies of scale. Land to construct the Connector Road Project was acquired by the Authority in FY 2017. Construction of the Connector Road began in FY'18 with completion projected for FY'19.
- The Salem Transfer Station (STS) Project, Phase I, constructed two, new top-load hoppers to ultimately replace two compactor units. This conversion provides a more efficient load-out of solid waste into trailers that will be hauled by tractors, to the Authority's Tinker Creek Transfer Station, where the waste will be loaded onto rail cars for transport to the Smith Gap Landfill. The new load-out system will allow acceptance of large, bulky wastes at the STS to better serve the Authority's customers. In the event the Authority transitions from rail-haul transportation to tractor-trailers, deliveries will go directly to the Smith Gap Landfill avoiding the double-handling of its wastes from STS. Additionally, truck deliveries would be a shorter distance to the landfill saving additional operating costs. Phase I construction was initiated in FY'17 and was completed in FY'18.
- The Tinker Creek Transfer Station Project; the Smith Gap Regional Landfill Project; and the Rail Corridor Conversion Project are currently being further evaluated by the Authority in FY'18, the Authority authorized a new five-year transportation contract with Norfolk Southern Corp., effective July 1, 2018 through June 30, 2023. The contract provides the Authority with a cancellation option at the end of any annual term under certain terms and conditions. The Authority will continue to utilize its rail-haul system, at a minimum, until its current transportation contract expires on June 30, 2023, unless that contract is cancelled by the Authority.
- The Authority joined forces with the Western Virginia Water Authority and the Roanoke County Recreation and Parks Department for the design and construction of a Joint Utility Project (JUP). The JUP will construct a water and sewer line contiguous to the Authority's closed Rutrough Road Landfill. The Authority has historically utilized "pump and haul" to dispose of its leachate (wastewater) that is generated at this facility. With the JUP, the Authority will construct a stand-alone lift station and force main that will connect to the JUP's sewer line, effectively terminating the Authority's need to pump and haul its leachate. This project has a 2.5 year ROI and will remove tanker trucks from

public roads. The JUP construction began in FY 2017 and the Authority's portion is scheduled for completion in FY 2019.

Awards and Acknowledgements

The Government Finance Officers Association (GFOA) of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RVRA for its comprehensive annual financial report for the fiscal year ended June 30, 2017. This was the ninth consecutive year that the Authority received this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

We would like to express our appreciation and gratitude to the personnel at the Authority and in the Department of Finance at the County of Roanoke for their dedication and support in producing this report. Appreciation is also extended to the Authority's Board of Directors whose continuing leadership and support is essential to the financial health of the Authority.

Sincerely,



Daniel D. Miles
Chief Executive Officer



Rebecca E. Owens
Treasurer



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**Roanoke Valley Resource Authority
Virginia**

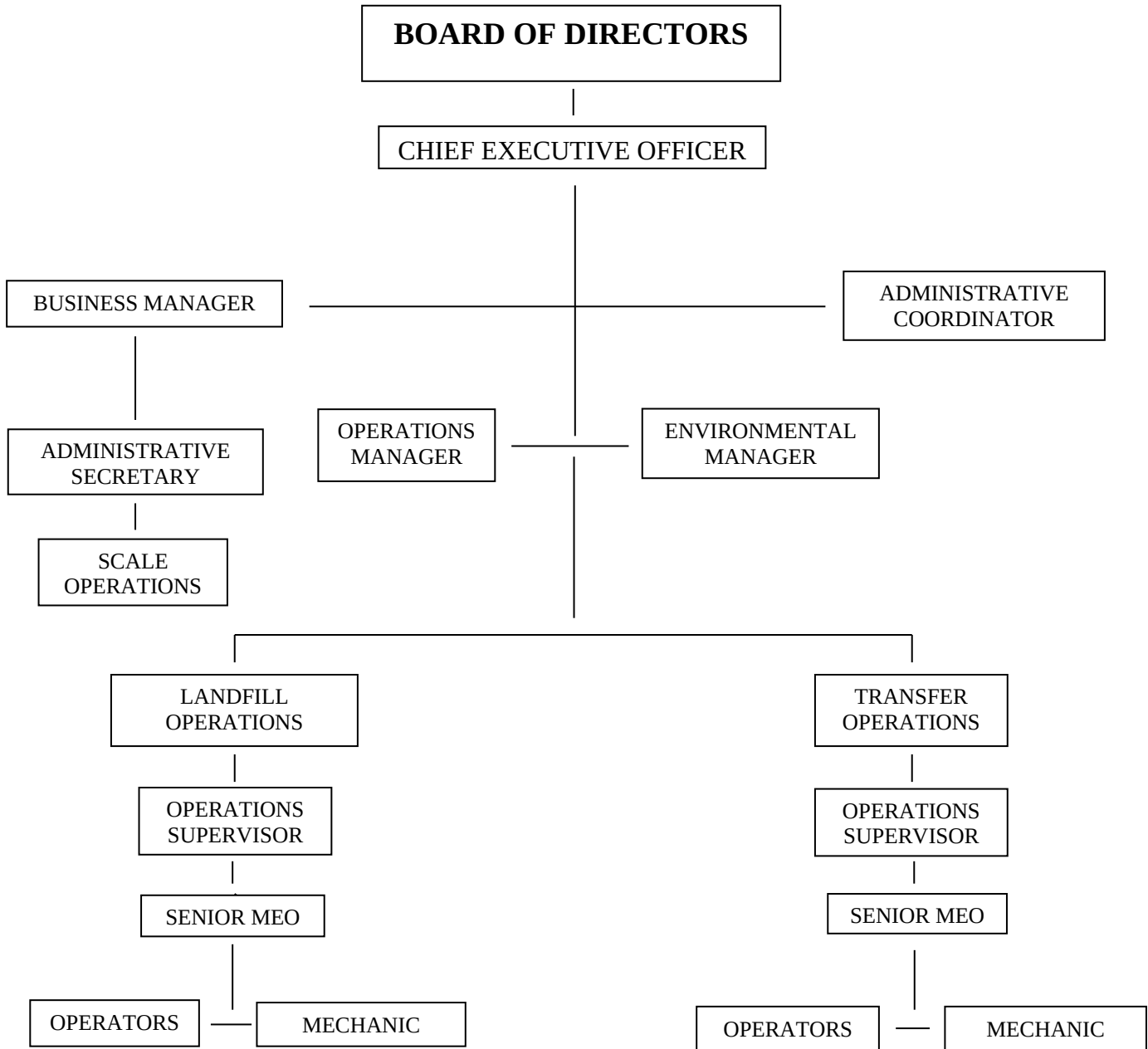
For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2017

Christopher P. Morill

Executive Director/CEO

**ROANOKE VALLEY RESOURCE AUTHORITY
ORGANIZATIONAL CHART**



ROANOKE VALLEY RESOURCE AUTHORITY

**List of Appointed Officials
For The Year Ended June 30, 2018**

(A Governmental organization established October 23, 1991
as a tax exempt political subdivision within the Commonwealth of Virginia)

BOARD MEMBERS

Michael B. Shockley, Chairman

Joey Hines, Vice Chair

Rebecca E. Owens, MBA, Treasurer

Bobby Edwards

Keith Garman

Thomas Gates

Rob Light

Dennis Nalley

Mike Tyler

OFFICIALS

Chief Executive Officer
Operations Manager
Business Manager
Administrative Secretary
Administrative Coordinator
Environmental/Safety Manager
General Counsel

Daniel D. Miles, P.E.
Steven R. Barger, P.E.
Randall Remington
Ollie Tyree
Peggy Bishop
Edward Hacker
Jim H. Gynn, Jr., Esq.

FINANCIAL SECTION

ROBINSON, FARMER, COX ASSOCIATES

A PROFESSIONAL LIMITED LIABILITY COMPANY

CERTIFIED PUBLIC ACCOUNTANTS

Independent Auditors' Report

**To the Members of the Board
Roanoke Valley Resource Authority
Roanoke, Virginia**

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of the Roanoke Valley Resource Authority, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities, Boards, and Commissions*, issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of the Roanoke Valley Resource Authority, as of June 30, 2018, and the changes in financial position, and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As described in Note 15 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.

Restatement of Beginning Balances

As described in Note 15 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.

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 13-17 and 78-86 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Roanoke Valley Resource Authority's basic financial statements. The introductory section and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 10, 2018, on our consideration of the Roanoke Valley Resource Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Roanoke Valley Resource 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 Roanoke Valley Resource Authority's internal control over financial reporting and compliance.

Robinson, Farmer, Cox Associates

Blacksburg, Virginia
October 10, 2018

**Roanoke Valley Resource Authority
Management's Discussion and Analysis
For the Year Ended June 30, 2018**

The management discussion and analysis (MD&A) serves as an introduction to the financial statements of the Roanoke Valley Resource Authority (the Authority) for the year ended June 30, 2018. The MD&A represents management's examination and analysis of the Authority's financial condition and performance and should be read in conjunction with the Authority's basic financial statements which immediately follow this section.

The Management's Discussion and Analysis (MD&A) is an element of the reporting model adopted by the Governmental Accounting Standards Board in their *Statement No. 34 Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments (GASB 34)*.

Financial Highlights

- The total assets of the Authority exceeded its liabilities as of June 30, 2018 by \$12,993,945 (Net Position). Of this amount, \$(1,268,043) is classified as unrestricted net assets, indicating that no funds were available for discretionary purposes.
- During the year, the Authority's total revenues were \$2,847,346 less than the \$16,731,658 of expenses.
- The Authority had outstanding debt of \$19,566,849 at June 30, 2018.

Overview of the Basic Financial Statements

The Authority's financial report includes three financial statements: the Statement of Net Position; the Statement of Revenues, Expenses and Changes in Net Position; and the Statement of Cash Flows. These statements are prepared in accordance with accounting principles generally accepted in the United States of America as promulgated by the Government Accounting Standards Board (GASB).

The financial statements provide information about the Authority as a whole using the accrual basis of accounting, which is the method used by most private-sector enterprises. In addition to the basic financial statements, the report includes Notes to the Basic Financial Statements and Required Supplemental Information.

- The **Statements of Net Position** reports assets and deferred outflows, liabilities and deferred inflows and the difference between them. The entire equity section is combined to report total Net Position and displayed in three broad components – net investment in capital assets; restricted assets; and unrestricted assets.
- The **Statement of Revenues, Expenses and Changes in Fund Position** present the results of the business activities over the course of the fiscal year and information about how the Net Position changed during the year. Revenues and expenses are categorized as either operating or non-operating based upon definitions provided by GASB's 33 and 34. Operating revenue consists of tipping fees and recycling fees. Nonoperating revenues consist of net increase in fair value of investments, interest income, gains on disposals of property and equipment and miscellaneous income.

One of the main goals of these two statements is to report the Authority's net position and changes that affected net position during the fiscal year. The change in the Authority's net position is one way to measure the Authority's financial health, or financial position. Increases and decreases in net position are indicators of whether the Authority's financial health is improving or deteriorating. These statements allow readers to answer the question: "Is the Authority's financial position, as a whole, better or worse as a result of the year's activities?"

- The **Statement of Cash Flows** presents changes in cash and cash equivalents, resulting from operational, financing, and investing activities. This statement presents cash receipts and cash disbursement information without consideration of the earning event, when an obligation arises, or depreciation of capital assets.

Notes to the basic financial statements - The notes to the basic financial statements provide additional information that is essential to a full understanding of the data provided in the basic financial statements. The notes to the basic financial statements can be found beginning on page 22 of this report.

Financial Analysis of the Authority as a Whole

The following comparative condensed Statement of Net Position provides an analysis of the change in financial position from the previous fiscal year.

Statement of Net Position

The following table reflects the condensed Summary of Net Position:

	FY 2018	FY 2017 (as restated)
Current and other assets	\$ 21,678,351	\$ 31,605,016
Capital assets, net	32,364,877	24,986,794
Total assets	54,043,228	56,591,810
Deferred outflows of resources	502,960	413,505
Current liabilities	2,722,143	2,990,046
Noncurrent liabilities	38,603,540	38,060,405
Total Liabilities	41,325,683	41,050,451
Deferred inflows of resources	226,560	113,573
Investment in capital assets	14,261,988	18,957,557
Unrestricted	(1,268,043)	(3,116,266)
Total net position	\$ 12,993,945	\$ 15,841,291

As noted earlier, net position may serve over time as a useful indicator of the Authority's financial position. In the case of the Authority, assets exceed liabilities by \$12,993,945 at the close of fiscal year 2018, an 18.0% decrease from last year's Net Position of \$15,841,291 (as restated). The Authority's change in Net Position is largely due to an increase in the accrued landfill closure liability and an increase in operating costs.

A portion of the Authority's Net Position, 109.76%, reflects its investment in capital assets (e.g. land, buildings, and equipment); less any related debt used to acquire those assets that are outstanding. The Authority uses these capital assets to provide services to customers; consequently, these assets are not available for future spending. The Authority's investment in its capital assets is reported net of related debt, if applicable, and it should be noted that the resources needed to repay any debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

A portion of the Authority's Net Position, (9.76)%, represents resources that are not subject to restrictions on how they may be used. A negative balance indicates that no funds were available for discretionary purposes.

Statement of Revenues, Expenses and Changes in Net Position

The following table shows the revenue and expenses of the Authority:

	FY 2018	FY 2017 (as restated)
Revenues		
Charges for services	\$ 13,718,403	\$ 12,011,736
Nonoperating Revenues:		
Interest income	165,909	158,602
Total revenues	<u>13,884,312</u>	<u>12,170,338</u>
Expenses		
Operating expense		
Salaries and benefits	(2,792,507)	(2,659,354)
Landfill closure costs	(1,976,295)	(1,512,073)
Other operating expenses	(8,157,369)	(6,352,682)
Depreciation	(3,224,611)	(2,610,244)
Non-operating expenses:		
Interest expense	(533,080)	(22,876)
Bond issuance costs	-	(124,683)
Loss on sale of assets	(47,796)	-
Total expenses	<u>(16,731,658)</u>	<u>(13,281,912)</u>
Income before special items:	(2,847,346)	(1,111,574)
Special Items:		
Transfer of the City of Salem operations	-	1,613,859
Asset impairment loss	-	(2,248,715)
Total special items	<u>-</u>	<u>(634,856)</u>
Change in net position	(2,847,346)	(1,746,430)
Total net position at beginning of year, as restated	15,841,291	17,587,721
Total net position at end of year	<u>\$ 12,993,945</u>	<u>\$ 15,841,291</u>

The Authority's total revenues increased over the prior year by 14.1% to \$13,884,312 due primarily to an increase in tipping fee rates. Tipping fees were 14.2% higher than the prior year. Interest income increased by 4.6% as a result of higher investment yields. The expenses for all programs and services increased by 23.0% in FY 2018, due in large part to this being the first full year of operations for the Salem Transfer Station.

Approximately 98.1% of the Authority's Fiscal Year 2018 revenue is from operating revenue consisting of tipping fees, and recycling income; 0.7% is miscellaneous consisting primarily of mulch sales; 1.2% from non-operating revenue consisting of interest income. Operational expenses for FY 2018 account for 96.5% of total expenses, with remaining expenses consisting of interest expense (3.2%) and loss on sale of assets (0.3%).

Capital Assets

As of June 30, 2018, the Authority had invested \$32,364,877, net of accumulated depreciation, in a variety of capital assets including land, landfill development costs, buildings, and equipment. The Authority's investment in capital assets for the current year was \$14,113,705. The majority of this investment was composed of the following:

- The completion of Phase 6 of the Smith Gap Landfill new cell disposal area
- (5) tracts of land purchased in Salem, VA for the Salem Transfer Station
- (15) Walking floor trailers
- (2) Vehicles
- (6) Heavy equipment purchases (e.g. excavator, tractor, street sweeper, etc)

Also included in this year's investment total is construction in progress related to improvements to the Salem Transfer Station, as well as construction related to Connector Road. This activity increased to a level of \$3,534,497.

Additional information on the Authority's capital assets can be found in Note 3 in the notes to the basic financial statements on page 29. Capital assets net of accumulated depreciation are illustrated in the following table:

	FY 2018	FY 2017
Land	\$ 5,535,682	\$ 4,508,691
Landfill and Rail Access	40,113,806	36,770,591
Transfer Station	10,607,242	10,607,242
Equipment	18,953,308	16,251,313
Construction in progress	3,534,497	1,204,791
Subtotal	78,744,535	69,342,628
Accumulated depreciation	(46,379,658)	(44,355,834)
Totals	\$ 32,364,877	\$ 24,986,794

Long -Term Debt

At June 30, 2018, the Authority had \$19,566,849 of bonded debt issues outstanding. This debt was used to support the development of additional capacity due to the 2017 addition of the City of Salem as a member of the Authority. Additional information related to long - term liabilities can be found in Note 4, page 30 in the notes to the basic financial statements.

Factors Influencing Future Budgets

Key factors that are expected to impact future budgets include:

- Uncertainty regarding the economy
- Projected increases in health insurance premiums and retirement contribution rates assessed by the Virginia Retirement System
- Expansion of the open landfill
- Estimated landfill closure costs
- Renewal and replacement needs; costs of plant and equipment
- Closed landfill groundwater monitoring and remediation costs
- Interest rates
- Issuance of debt
- Energy and fuel costs

Requests for Information

This financial report is designed to provide our citizens, taxpayers, customers, potential investors and creditors with a general overview of the Authority's finances and to demonstrate accountability for the resources it receives. If you have questions about this report or need additional financial information, contact the Executive Director, Roanoke Valley Resource Authority, 1020 Hollins Road, Roanoke, VA 24012, telephone (540-857-5055), or visit the Authority's web site at www.rvra.net.

Basic Financial Statements

ROANOKE VALLEY RESOURCE AUTHORITY
Statement of Net Position
June 30, 2018

ASSETS

Current assets:

Cash and cash equivalents	\$ 6,095,160
Investments (note 2)	344,460
Restricted cash and cash equivalents (note 1)	3,997,682
Accounts receivable	1,214,070
Interest receivable	31,426
Inventory	<u>67,042</u>

Total current assets	\$ <u>11,749,840</u>
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Noncurrent assets:

Investments (note 2)	\$ 9,928,511
Non-depreciable capital assets (note 3)	9,070,179
Depreciable capital assets, net of accumulated depreciation (note 3)	<u>23,294,698</u>

Total noncurrent assets	\$ <u>42,293,388</u>
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Total assets	\$ <u>54,043,228</u>
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DEFERRED OUTFLOWS OF RESOURCES

Pension related items	\$ 452,901
OPEB related items	<u>50,059</u>

Total deferred outflows of resources	\$ <u>502,960</u>
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The accompanying notes are an integral part of the basic financial statements.

ROANOKE VALLEY RESOURCE AUTHORITY

Statement of Net Position

June 30, 2018

LIABILITIES

Current liabilities:

Vouchers payable	\$	478,553
Construction and retainage payables		315,868
Accrued payroll		14,250
Accrued interest		158,145
Compensated absences, current portion (note 4)		94,548
Locality compensation payments payable, current portion (note 4)		211,797
Accrued landfill closure, current portion (note 9)		339,091
Capital lease (note 5)		325,774
Revenue bonds payable (note 4)		784,117

Total current liabilities	\$	<u>2,722,143</u>
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Noncurrent liabilities:

Compensated absences, net of current portion (note 4)	\$	242,178
Net OPEB liabilities (note 7 and 8)		313,569
Net pension liabilities (note 6)		1,391,496
Accrued landfill closure, net of current portion (note 9)		16,193,282
Locality compensation payments payable (note 4)		998,082
Capital lease, net (note 5)		682,201
Revenue bonds payable, net (note 4)		18,782,732

Total noncurrent liabilities	\$	<u>38,603,540</u>
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Total liabilities	\$	<u>41,325,683</u>
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DEFERRED INFLOWS OF RESOURCES

Pension related items	\$	196,911
OPEB related items		<u>29,649</u>

Total deferred inflows of resources	\$	<u>226,560</u>
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NET POSITION

Net investment in capital assets	\$	14,261,988
Unrestricted		<u>(1,268,043)</u>
Total net position	\$	<u><u>12,993,945</u></u>

The accompanying notes are an integral part of the basic financial statements.

ROANOKE VALLEY RESOURCE AUTHORITY
Statement of Revenues, Expenses and Changes in Net Position
For the Year Ended June 30, 2018

OPERATING REVENUES

Tipping fees	\$ 13,553,596
Recycling revenue	72,535
Mulch revenue	53,020
Miscellaneous fees	39,252
Total operating revenues	\$ <u>13,718,403</u>

OPERATING EXPENSES

Salaries and benefits	\$ 2,792,507
Landfill closure and post closure costs (note 9)	1,976,295
Other operating expenses	8,157,369
Depreciation	3,224,611
Total operating expenses	\$ <u>16,150,782</u>

Operating income (loss)	\$ <u>(2,432,379)</u>
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NONOPERATING REVENUES (EXPENSES)

Interest income	\$ 165,909
Interest expense	(533,080)
Loss on sale of assets	(47,796)
Total nonoperating revenues (expenses)	\$ <u>(414,967)</u>

Change in net position	\$ (2,847,346)
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Total net position, beginning of year, as restated	15,841,291
Total net position, end of year	\$ <u><u>12,993,945</u></u>

The accompanying notes are an integral part of the basic financial statements.

ROANOKE VALLEY RESOURCE AUTHORITY
Statement of Cash Flows
For Year Ended June 30, 2018

Cash Flows from Operating Activities

Receipts from customers	\$ 13,657,136
Payments to suppliers	(9,585,762)
Payments to employees	(2,759,900)
Net cash provided by (used for) operating activities	<u>\$ 1,311,474</u>

Cash Flows from Capital and Related Financing Activities

Purchase and construction of capital assets	\$ (11,487,361)
Issuance of lease purchase	1,007,975
Proceeds from sales of capital assets	120,000
Principal paid on locality compensation payments	(215,433)
Principal paid on revenue bonds	(433,151)
Interest paid on revenue bonds	(452,274)
Net cash provided by (used for) capital and related financing activities	<u>\$ (11,460,244)</u>

Cash Flows from Investing Activities

Interest income	\$ 172,333
Proceeds from the sale and maturity of investments	(1,112,532)
Net cash provided by (used for) investing activities	<u>\$ (940,199)</u>

Net increase (decrease) in cash and cash equivalents \$ (11,088,969)

Cash and cash equivalents at the beginning of the year, including restricted amounts 21,181,811

Cash and cash equivalents at the end of the year, including restricted amounts \$ 10,092,842

Reconciliation of operating income (loss) to net cash provided by (used for) operating activities:

Operating income (loss)	\$ (2,432,379)
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities:	
Depreciation	3,224,611
Changes in assets, deferred outflows of resources, liabilities and deferred inflows of resources:	
Accounts receivable	(61,267)
Inventory	5,071
Deferred outflows of resources	(88,123)
Vouchers payable	(332,332)
Accrued payroll	5,013
Compensated absences	50,463
Landfill closure liability	875,163
Net OPEB liabilities	(20,619)
Net pension liabilities	(41,895)
Deferred inflows of resources	127,768
Net cash provided by (used for) operating activities	<u>\$ 1,311,474</u>

Noncash items:

During the fiscal year, the fair value of investments decreased by \$6,424.

Assets with a net book value of \$167,796 were sold during the year for \$120,000.

The accompanying notes are an integral part of the basic financial statements.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
as of June 30, 2018

Note 1—Summary of Significant Accounting Policies:

A. Description of Entity

The Roanoke Valley Resource Authority (the Authority) was established on October 23, 1991 as a tax exempt political subdivision within the Commonwealth of Virginia to acquire and construct a regional sanitary landfill and waste collection and transfer station with related treatment facilities. The charter members are the City of Roanoke (the City), County of Roanoke (the County) and the Town of Vinton (the Town).

Prior to October 23, 1991, the operations of the Authority were accounted for as an enterprise fund of the County of Roanoke. As of October 23, 1991, under agreement between the City, the County and the Town, the County transferred all existing assets and liabilities to the Authority.

Under terms of an agreement with the Roanoke Valley Solid Waste Management Board (the Management Board), certain assets and liabilities were transferred to the Authority, effective October 1, 1993. The terms of the agreement call for the Authority to monitor an old landfill site of the Roanoke Valley Regional Solid Waste Management Board during the postclosure care period.

B. Basis of Accounting

The Roanoke Valley Resource Authority operates as an enterprise fund, and its accounts are maintained on the accrual basis of accounting. Under this method, revenues are recognized when earned, and expenses are recorded as liabilities when incurred, 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 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 services. Operating expenses include the cost of services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 1—Summary of Significant Accounting Policies: (Continued)

C. Deferred Outflows/Inflows or 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 one item that qualifies for reporting in this category. It is comprised of certain items related to the measurement of the net pension liabilities and net OPEB liabilities and contributions to the pension and OPEB plans made during the current year and subsequent to the net pension liabilities and net OPEB liabilities 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 liabilities and net OPEB liabilities are reported as deferred inflows of resources. For more detailed information on these items, reference the related notes.

D. Basic Financial Statements

Since the Authority is only engaged in business-type activities, it is required to present only the financial statements required for enterprise funds. 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 the Financial Statements
- Required Supplementary Information
 - Schedules of OPEB and Pension related items

E. Capital Assets

Capital assets are stated at cost or historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation. Depreciation is computed using the straight line method over the estimated useful lives of the respective assets.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 1—Summary of Significant Accounting Policies: (Continued)

E. Capital Assets (Continued)

Maintenance, repairs and minor renewals are charged to expense as incurred, while major renewals and replacements are capitalized. Upon the sale or retirement of a capital asset, the cost and related accumulated depreciation, if applicable, are eliminated from the related accounts, and any resulting gain or loss is included in income.

The Authority defines capital assets as assets with an initial individual cost of more than \$1,000 and an estimated useful life of at least one year. Assets are depreciated over their estimated useful lives. Equipment, furniture and fixtures are depreciated over three to ten years. Buildings and structures, including the transfer station, are depreciated over 35 years. Landfill and rail access assets are depreciated over fifteen to thirty-five years. Landfill cell development costs are depreciated over the expected life of the cell.

F. Interest on Indebtedness

Interest expense applicable to that portion of indebtedness, the proceeds of which are used to construct new facilities, is capitalized during the period of construction as part of the cost of such facilities. Other interest costs of the Authority are treated as nonoperating expenses. No interest was capitalized during the current or prior fiscal year.

G. Cash and Cash Equivalents

Cash and cash equivalents are considered to be cash on hand, demand deposits, and short-term investments with original maturities of three months or less from the date of acquisition.

H. 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.

I. Budgets and Budgetary Accounting

A budget is prepared for information, fiscal planning purposes, and to provide the basis for setting user rates. None of the participating entities are required to approve the budget. The budget is adopted as a planning document and is not a legal control on expenses.

J. Accounts Receivable

Accounts receivable are recorded at the invoiced amount and do not bear interest. Primary customers consist of the City of Roanoke, County of Roanoke, Town of Vinton and their respective citizens, and local businesses. Management does not feel that an allowance of balances is necessary so the direct write off method of accounting for uncollectible accounts is used.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 1— Summary of Significant Accounting Policies: (Continued)

K. Inventory

Inventory is recorded using the first-in, first-out method (FIFO) and is valued at cost. Inventory consists of parts and supplies utilized in the daily operation of the landfill.

L. Use of Estimates

Management uses estimates and assumptions in preparing its financial statements. Those estimates and assumptions affect certain reported amounts of assets and liabilities, the disclosure of contingent liabilities, and reported revenues and expenses. Actual results could differ from those estimates.

M. Net Position

Net position is the difference between assets and deferred outflows of resources and liabilities and deferred inflows of resources. Net position is divided into three components:

- Net investment in capital assets—consist of the historical cost of capital assets less accumulated depreciation and less any debt that remains outstanding that was used to finance those assets plus deferred outflows of resources less deferred inflows of resources related to those assets.
- Restricted —consist of assets that are restricted by the Authority's creditors (for example, through debt covenants), by the state enabling legislation (through restrictions on shared revenues), by grantors (both federal and state), and by other contributors.
- Unrestricted—all other net position is reported in this category.

N. Net Position Flow Assumption

Sometimes the Authority will fund outlays for a particular purpose from both restricted (e.g. restricted bond and 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.

O. Long-Term Obligations

Long-term obligations are reported as liabilities in the statement of net position at face value, net of any applicable premiums and discounts.

P. Compensated Absences

The liability for compensated absences consists of unpaid accumulated vacation and sick leave balances. The liability is based on the sick leave and the vacation leave accumulated at June 30. Limited vacation and sick leave may be accumulated until retirement or termination. Accumulated sick leave is paid at a fixed daily rate and accumulated vacation is paid at the employee's current wage upon retirement or termination.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 1—Summary of Significant Accounting Policies: (Continued)

Q. Accrued Landfill Closure

Accrued landfill closure represents the estimated liability for closure and postclosure costs for the landfill sites. This includes the cost of any equipment and facilities to be installed near or after the date of landfill closure for purposes of closure, the cost of landfill capping, and the cost of monitoring and maintaining the sites during the postclosure period. A total estimate of these expenses is made and updated on a periodic basis and expenses are charged to current period usage of the landfill site. Current cost of landfill closure and postclosure care is an estimate and subject to change resulting from inflation, deflation, technology, or changes in applicable laws or regulations.

R. Funding Requirements

The City, County and the Town are responsible for their pro rata share, based on population, of any year-end operating deficit or capital expenditures, if additional funding is required. The Authority is responsible for paying all outstanding debt.

S. 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 Plans and the additions to/deductions from the Authority's Retirement Plans' net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (VRS) and the City of Roanoke Pension Plan. 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.

T. 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.

U. Restricted Assets

Deposits totaling \$3,997,682 have been restricted by applicable bond agreements for the construction of landfill cell(s), an access road and related items.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 2—Deposits and Investments:

Deposits – The County of Roanoke maintains a cash and investment pool that is available for use by all County funds, component units and entities for which the County is the fiscal agent. The Authority participates in this pool and at June 30, 2018, the carrying value of the Authority's deposits with banks and savings institutions was \$10,092,842. Deposits with banks are covered by Federal depository insurance and collateralized in accordance with the Virginia Security for Public Deposits Act, Section 2.2-4400 et. seq. of the Code of Virginia. Under the Act, banks and savings institutions holding public deposits in excess of the amount insured by the FDIC must pledge collateral to the Commonwealth of Virginia Treasury Board. Financial Institutions may choose between two collateralization methodologies and depending upon that choice, will pledge collateral that ranges in the amounts from 50% to 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

Investments – Statutes authorize local governments and other public bodies 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, bankers' acceptances, repurchase agreements, and the State Treasurer's Local Government Investment Pool (LGIP).

Information related to the County of Roanoke pooled account is presented in the audited financial statements of the County of Roanoke and can be obtained from the Director of Finance, County of Roanoke, 5204 Bernard Drive, Suite 300E, Roanoke, Virginia 24018; telephone 540-772-2020 or visit the County's web site at www.roanokecountyva.gov.

Custodial Credit Risk (Investments)

The Authority's investment policy provides that securities purchased for the Authority shall be held by the Authority Treasurer or by the Treasurer's custodian. If held by a custodian, the securities must be in the Authority's name or in the custodian's name and identifiable on the custodian's books as belonging to the Authority. Further, if held by a custodian, the custodian must be a third party, not a counterparty (buyer or seller) to the transaction. At June 30, 2018 all of the Authority's investments were held in accordance with this policy.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 2—Deposits and Investments: (Continued)**Credit Risk of Debt Securities**

The Authority's investment policy for credit risk is consistent with the investments allowed by statute as detailed above.

The Authority's debt investments as of June 30, 2018 have not been rated as noted below.

Authority's Rated Debt Investments' Values

<u>Rated Debt Investments</u>	<u>Fair Quality Ratings</u>	
	<u>Not rated</u>	
Roanoke County Treasurer's		
Investment Pool	\$	10,272,971
Total	\$	10,272,971

The Roanoke County Investment Pool is not rated; however, underlying investments in the pool are rated. Those ratings along with additional information concerning the pool are presented in the Roanoke County, Virginia Comprehensive Annual Financial Report, a copy of which may be requested from: County of Roanoke, 5204 Bernard Drive, Suite 300E, Roanoke, Virginia 24018; telephone 540-772-2020 or by visiting the County's web site at www.roanokecountyva.gov.

Interest Rate Risk

The Authority's policy with regard to interest rate risk requires that all investments mature within five years of their purchase date. The policy further requires maturity scheduling be timed to anticipated need and scheduled to coincide with projected cash flow needs. All funds shall be considered short-term except those reserved for capital projects. Investment maturities presented below are based on the maturity dates for individual investments held within the pool as allocated based on the Authority's percentage of funds invested in the pool.

Investment Maturities (in years)

<u>Investment Type</u>	<u>Fair Value</u>	<u>1 Year</u>	<u>1-5 Years</u>
Roanoke County Investment Pool	\$ 10,272,971	\$ 344,460	\$ 9,928,511
Totals	\$ 10,272,971	\$ 344,460	\$ 9,928,511

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 2—Deposits and Investments: (Continued)

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Authority has measured fair value of the investments, as reported in Note 2, at the net asset value (NAV). As the Roanoke County Investment Pool is not SEC registered, regulatory oversight of the pool rests with the Roanoke County Board of Supervisors.

Redemption Restrictions

Currently, the County of Roanoke does not impose any redemption restrictions on the Authority.

Note 3—Capital Assets:

Capital asset activity for the year ended June 30, 2018 was as follows:

	Balance July 1, 2017	Increases	Decreases	Balance June 30, 2018
Capital assets not being depreciated:				
Land	\$ 4,508,691	\$ 1,026,991	\$ -	\$ 5,535,682
Construction in Progress	1,204,791	5,672,921	(3,343,215)	3,534,497
Total capital assets not being depreciated	\$ 5,713,482	\$ 6,699,912	\$ (3,343,215)	\$ 9,070,179
Capital assets being depreciated:				
Landfill and Rail Access	\$ 36,770,591	\$ 3,343,215	\$ -	\$ 40,113,806
Transfer Station (Building and Structure)	10,607,242	-	-	10,607,242
Equipment	16,251,313	4,070,578	(1,368,583)	18,953,308
Total capital assets being depreciated	\$ 63,629,146	\$ 7,413,793	\$ (1,368,583)	\$ 69,674,356
Accumulated depreciation:				
Landfill and Rail Access	\$ (31,210,502)	\$ (1,194,502)	\$ -	\$ (32,405,004)
Transfer Station (Building and Structure)	(4,756,987)	(340,947)	-	(5,097,934)
Equipment	(8,388,345)	(1,689,162)	1,200,787	(8,876,720)
Total accumulated depreciation	\$ (44,355,834)	\$ (3,224,611)	\$ 1,200,787	\$ (46,379,658)
Total capital assets being depreciated, net	\$ 19,273,312	\$ 4,189,182	\$ (167,796)	\$ 23,294,698
Total capital assets, net	\$ 24,986,794	\$ 10,889,094	\$ (3,511,011)	\$ 32,364,877

Additions include accounts payable of \$315,868 (\$1,032,739 in prior year) at year end.

Assets with a net book value of \$0 were traded in on the purchase of new assets during the year.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements As of June 30, 2018 (Continued)

Note 4—Long-Term Liabilities:

Changes in long-term liabilities for the year are as follows:

	Balance July 1, 2017, as restated	Additions	Reductions	Balance June 30, 2018	Due Within One Year
Revenue Bonds	\$ 20,000,000	\$ -	\$ (433,151)	\$ 19,566,849	\$ 784,117
Locality Compensation Payments	1,425,312	-	(215,433)	1,209,879	211,797
Capital Lease	-	1,007,975	-	1,007,975	325,774
Compensated Absences	286,263	100,530	(50,067)	336,726	94,548
Accrued Landfill Closure and Postclosure (Note 9)	15,657,210	875,163	-	16,532,373	339,091
Net OPEB Liabilities	334,188	25,696	(46,315)	313,569	-
Net Pension Liabilities	1,433,391	1,093,313	(1,135,208)	1,391,496	-
	<u>\$ 39,136,364</u>	<u>\$ 3,102,677</u>	<u>\$ (1,880,174)</u>	<u>\$ 40,358,867</u>	<u>\$ 1,755,327</u>

All liabilities are liquidated by operating funds.

Details of the Authority's outstanding long-term liabilities at June 30, 2018 are as follows:

Type	Interest Rates	Installment Amounts	Final Maturity Date	Amount of Original Issue	Balance Due	Amount Due Within One Year
<i>Locality Compensation Payments:</i>						
City of Salem 2011 Bond	2.14%	\$189,981-\$219,069 (a+)	10/1/2023	1,644,381	\$ 1,209,879	\$ 211,797
<i>Revenue Bonds:</i>						
Solid Waste Revenue Bond Series 2017A	2.50%	\$42,925-\$69,025 (a+)	7/15/2037	\$ 1,100,000	\$ 1,057,075	\$ 44,012
Solid Waste Revenue Bond Series 2017B	2.65%(v)	\$340,000-\$565,000 (a+)	7/15/2037	8,900,000	8,900,000	340,000
Solid Waste Revenue Bond Series 2016	2.50%	\$390,226-\$627,504 (a+)	11/1/2036	10,000,000	9,609,774	400,105
<i>Total Revenue Bonds</i>					<u>\$ 19,566,849</u>	<u>\$ 784,117</u>
<i>Other Long-Term Obligations:</i>						
Capital lease					\$ 1,007,975	\$ 325,774
Compensated absences					336,726	94,548
Accrued landfill closure liability					16,532,373	339,091
Net pension liability-City of Roanoke					83,299	-
Net pension liability-County of Roanoke					1,308,197	-
Net OPEB liabilities					313,569	-
<i>Total Other Long-Term Obligations</i>					<u>\$ 19,582,139</u>	<u>\$ 759,413</u>
Total Long-Term Obligations Payable					<u>\$ 40,358,867</u>	<u>\$ 1,755,327</u>

(a+)-annual principal installments shown, does not include semi-annual interest installments

(v) - Interest rate to be adjusted on July 15, 2027 to each five year Treasury rate plus 0.25%

City of Salem Bond was issued to purchase the Salem solid waste facilities and equipment. Solid Waste Revenue Bonds were issued for the construction of a landfill, transfer station, and related equipment. The capital lease was issued for equipment.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 4—Long-Term Liabilities: (Continued)

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

Revenue Bonds					
Year Ending June 30	Revenue Bonds		Locality		
	Principal	Interest	Compensation Payments Principal	Interest	
2019	\$ 784,117	\$ 492,465	\$ 211,797	\$ 23,625	
2020	805,360	472,079	208,161	19,132	
2021	826,888	451,143	204,525	14,716	
2022	848,708	429,651	199,980	10,388	
2023	870,827	407,594	195,435	6,157	
2024-2028	4,706,939	1,686,565	189,981	2,033	
2029-2033	5,354,394	1,041,881	-	-	
2034-2038	5,369,616	325,631	-	-	
Total	\$ 19,566,849	\$ 5,307,009	\$ 1,209,879	\$ 76,051	

Note 5—Capital Lease:

The Authority has entered into a capital lease for two dump trucks on June 28, 2018. This lease agreement qualifies as a capital lease for accounting purposes and therefore has been recorded at the present value of future minimum lease payments as of the inception date.

Total capital assets acquired through the capital lease are as follows:

Dump trucks (2)	\$ 1,007,975
Total capital assets	\$ 1,007,975
Accumulated Depreciation	-
Net Book Value of Capital Assets	\$ 1,007,975

Present value of future minimum lease payments:

June 30,	Leases
2019	\$ 354,206
2020	354,206
2021	354,206
Total minimum lease payments	\$ 1,062,618
Less: amount representing interest	(54,643)
Present value of future minimum lease payments	\$ 1,007,975

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans:

Employees of the Roanoke Valley Resource Authority are eligible to participate in one of two pension plans: the Roanoke County Pension Plan or the Roanoke City Pension Plan. Upon creation of the Authority, employees that transferred from the City of Roanoke, Virginia were allowed to remain in the City's Pension Plan; however all other employees and new hires are required to participate in the Roanoke County Pension Plan as administered by the Virginia Retirement System (VRS). Both plans are cost-sharing multiple-employer plans.

The Roanoke County Pension Plan does not issue standalone financial statement; however the pension plan is included in the County of Roanoke, Virginia Comprehensive Annual Financial Report. That report, including required supplementary information, may be obtained from the Director of Finance, County of Roanoke, 5204 Bernard Drive, Suite 300E, Roanoke, Virginia 24018; telephone 540-772-2020 or visit the County's web site at www.roanokecountyva.gov.

The Roanoke City Pension Plan issues a publicly available comprehensive annual financial report that includes financial statements and required supplementary information. A copy of the most recent report may be obtained by writing to the City of Roanoke Retirement Office, Attention: Retirement Administrator, P.O. Box 1220, Roanoke, Virginia, 24006.

Plan Description – Roanoke County Plan

All full-time, salaried permanent employees of the Roanoke Valley Resource Authority, which do not participate in the City of Roanoke Pension Plan, are covered by the Roanoke County Pension Plan. 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 pays 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.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (Continued)

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. • 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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Eligible Members Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken a refund. Hybrid Opt-In Election VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan. Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.	Eligible Members Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013. Hybrid Opt-In Election Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan. Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.	Eligible Members Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes: • Political subdivision employees* • Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014. *Non-Eligible Members Some employees are not eligible to participate in the Hybrid Retirement Plan. They include: • Political subdivision employees who are covered by enhanced benefits for hazardous duty employees. Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable) or ORP.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)*Plan Description – Roanoke County Plan (Continued)*

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
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.	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.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (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 <u>Defined Benefit Component:</u> 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. <u>Defined Contribution Component:</u> Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (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 <u>Defined Benefit Component:</u> 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. <u>Defined Contribution Component:</u> 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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Vesting (Cont.)	Vesting (Cont.)	Vesting (Cont.) <u>Defined Contribution Component: (Cont.)</u> 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 <u>Defined Benefit Component:</u> See definition under Plan 1.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (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.) <u>Defined Contribution Component:</u> 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 <u>Defined Benefit Component:</u> 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. <u>Defined Contribution Component:</u> Not applicable.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (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 <u>Defined Benefit Component:</u> VRS: Same as Plan 2. Political subdivisions hazardous duty employees: Not applicable. <u>Defined Contribution Component:</u> 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 <u>Defined Benefit Component:</u> 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. <u>Defined Contribution Component:</u> 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 <u>Defined Benefit Component:</u> VRS: Age 60 with at least five years (60 months) of creditable service.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Earliest Reduced Retirement Eligibility (Cont.) Political subdivisions hazardous duty employees: 50 with at least five years of creditable service.	Earliest Reduced Retirement Eligibility (Cont.) Political subdivisions hazardous duty employees: Same as Plan 1.	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.
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.	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.	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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	PLAN 2	HYBRID RETIREMENT PLAN
Cost-of-Living Adjustment (COLA) in Retirement (Cont.) <u>Exceptions to COLA Effective Dates:</u> 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.) <u>Exceptions to COLA Effective Dates:</u> Same as Plan 1.	Cost-of-Living Adjustment (COLA) in Retirement (Cont.) <u>Exceptions to COLA Effective Dates:</u> Same as Plan 1 and Plan 2.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke County Plan (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.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Pension Plan Data – Roanoke County Plan

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.

Contributions – Roanoke County Plan

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 Roanoke Valley Resource Authority's contractually required employer contribution rate for the year ended June 30, 2018 was 12.42% 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 Roanoke Valley Resource Authority were \$200,781 and \$181,460 for the years ended June 30, 2018 and June 30, 2017, respectively.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – Roanoke County Plan

At June 30, 2018, the Authority reported a liability of \$1,308,197 for its proportionate share of the net pension liability. The Roanoke Valley Resource 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. The Authority's proportionate share of same was calculated using the average creditable compensation for the 2016 and 2017 fiscal years as a basis for allocation. At June 30, 2017 and 2016, the Authority's proportion was 3.5259% and 2.8980%, respectively.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Actuarial Assumptions - Roanoke County Plan

The total pension liability for employees in the Roanoke Valley Resource 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 expenses, including inflation*

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

Mortality rates:

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

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

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

Pre-Retirement:

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

Post-Retirement:

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

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Actuarial Assumptions - Roanoke County Plan (Continued)

Mortality rates: (Continued)

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

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%

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Long-Term Expected Rate of Return – Roanoke County Plan

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%.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Discount Rate – Roanoke County Plan

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 Roanoke Valley Resource 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.

Sensitivity of the Roanoke Valley Resource Authority's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate – Roanoke County Plan

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

	Rate		
	1% Decrease	Current Discount	1% Increase
	(6.00%)	(7.00%)	(8.00%)
Roanoke Valley Resource Authority			
Net Pension Liability (Asset)	\$ 2,436,795	\$ 1,308,197	\$ 370,597

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – Roanoke County Plan

For the year ended June 30, 2018, the Roanoke Valley Resource Authority's recognized pension expense of \$218,678. Since there was a change in proportionate share between measurement dates, a portion of the pension expense was related to deferred amounts from changes in proportion and from differences between employer contributions and the proportionate share of employer contributions.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – Roanoke County Plan (Continued)

At June 30, 2018, the Roanoke Valley Resource 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	\$ 9,930	\$ 22,450
Changes in assumptions	-	13,538
Changes in proportion and differences between contributions and proportionate share of contributions	237,362	-
Net difference between projected and actual earnings on pension plan investments	-	133,199
Contributions subsequent to the measurement date	200,781	-
Totals	<u>\$ 448,073</u>	<u>\$ 169,187</u>

\$200,781 reported as deferred outflows of resources related to pensions resulting from the Roanoke Valley Resource Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the fiscal 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	\$ (6,386)
2020	94,270
2021	58,777
2022	(68,556)
Total	-

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Plan Description – Roanoke City Plan

Former City employees of the Authority participate in the City of Roanoke, Virginia Pension Plan.

General Information about the Pension Plan – Roanoke City Plan

The Pension Plan is a cost-sharing multiple-employer defined benefit plan established by City Council and is included in the City's basic financial statements as a Pension Trust Fund. The Pension Plan was established by City Ordinance No. 8559 dated May 27, 1946, effective July 1, 1946. The Pension Plan covers substantially all employees of the City, all employees of the Roanoke Regional Airport Commission, and the Roanoke Valley Juvenile Detention Center, as well as certain employees of the City of Roanoke School Board, the Roanoke Valley Resource Authority, and the Western Virginia Water Authority. The City is the major contributor of employer contributions to the Pension Plan. City Council appoints members of the Pension Plan Board of Trustees to administer the Pension Plan. The Pension Plan is not subject to the provisions of the Employee Retirement Income Security Act (ERISA) of 1974.

Effective July 1, 1984, the Pension Plan changed its name from the Employees' Retirement System of the City of Roanoke, Virginia (ERS) to City of Roanoke Pension Plan and incorporated a provision for an Employees' Supplemental Retirement System (ESRS) which modified certain benefits as defined by the ERS. All employees covered under the provisions of the ERS at June 30, 1984, could elect to remain with the ERS or be covered under the provisions of the ESRS. Coverage under the ESRS was mandatory for all employees hired or rehired on or after July 1, 1984. On November 28, 1994, June 1, 1998, November 2, 1998, and June 5, 2000, City Council authorized the Pension Plan to offer members of the ERS an opportunity to transfer to the ESRS. The option was available from February 1, 1995 to May 16, 1995, July 1, 1998 through August 31, 1998, December 1, 1998 through December 31, 1998, and July 1, 2000 through July 31, 2000. Both the ERS and the ESRS share a common trust fund from which all benefits are paid without distinction as to the source of funds and are administered by the Board of Trustees. The Pension Plan provides retirement benefits as well as death and disability benefits.

Effective July 16, 2012, City Council adopted a restatement of the chapter of the City Code governing the Pension Plan. The restated Chapter 22.3, Pensions and Retirement, provides for the introduction of an Internal Revenue Code Section 401(h) health savings account, established as a component of the Pension Plan effective July 1, 2013, and established new benefit tiers effective July 1, 2014. The restated Chapter 22.3 also provides for a defined cost of living adjustment effective July 1, 2013.

Employees who are members of the ERS with 30 years of service or age 60 (normal retirement age) are entitled to an annual retirement benefit equal to 1/70 (1.429%) of their average final compensation (highest consecutive 12 months), excluding overtime, for each year of service. Employees may retire with 20 years of service and receive a reduced retirement benefit. For employees who are married at their retirement date, a joint and survivor annuity is payable monthly. There is no mandatory retirement age.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

General Information about the Pension Plan – Roanoke City Plan (Continued)

Employees who are members of the ESRS, hired prior to July 1, 2014, with 5 years or more of credited service and age 65 or over, general employees who have attained age 50 with age plus service equal to 80, and deputized police officers and firefighters who have attained age 45 with age plus service equal to 70, are entitled to an annual retirement benefit, payable monthly for life in an amount equal to 2.1% of their final average compensation for each year of credited service up to a maximum of 63%. Final average compensation is the employee's average salary, excluding overtime, over the highest 36 consecutive months of credited service. Employees with 5 years of credited service may retire at age 55 and receive a reduced retirement benefit. Employees may elect to receive their retirement benefits in the form of a single life annuity or a joint and survivor annuity payable monthly from retirement. If employees terminate before rendering five years of service, they forfeit the right to receive any Pension Plan benefits. There is no mandatory retirement age.

Employees hired after June 30, 2014 become members of ESRS and choose between participation as a traditional defined benefit ESRS member or as a Hybrid member. Employees hired after June 30, 2014 were required to contribute 5% of earnable compensation to the plan. Effective July 1, 2015, the required contribution of 5% of earnable compensation was extended to employees hired prior to July 1, 2015. Employees have 60 days from their date of hire to make an irrevocable election to participate as either a traditional defined benefit ESRS member or a Hybrid member. Employees electing Hybrid membership participate in ESRS and accrue a lesser defined benefit than traditional defined benefit ESRS members and also participate in a defined contribution plan established under Section 401(a) of the Internal Revenue Code. Employees who make no election participate as traditional defined benefit ESRS members.

ESRS members hired after June 30, 2014, choosing participation as a traditional defined benefit member may retire with 5 years or more of credited service and age 65 or over, general employees who have attained age 55 with age plus service equal to 85, and deputized police officers and firefighters who have attained age 50 with age plus service equal to 75, are entitled to an annual retirement benefit, payable monthly for life in an amount equal to 2.0% of their final average compensation for each year of credited service up to a maximum of 63%. Final average compensation is the employee's average salary, excluding overtime, over the highest 60 consecutive months of credited service. Employees with 15 years of credited service may retire at age 55 (age 50 for deputized police officers and firefighters) and receive a reduced retirement benefit. Employees may elect to receive their retirement benefits in the form of a single life annuity or a joint and survivor annuity payable monthly from retirement. If employees terminate before rendering five years of service, they forfeit the right to receive any Pension Plan benefits. There is no mandatory retirement age. Member contributions for traditional defined benefit participants are invested in the pension trust fund.

Employees choosing participation as Hybrid members participate in ESRS for the defined benefit component of their retirement benefit, subject to the same eligibility criteria as outlined for the traditional defined benefit participants. Hybrid members' defined benefit component is payable monthly for life in an amount equal to 1.0% of their final average compensation for each year of credited service up to a maximum of 63%. Final average compensation is the employee's average salary, excluding overtime, over the highest 60 consecutive months of credited service. Hybrid member contributions are deposited in a defined contribution plan established under Section 401(a) of the Internal Revenue Code. Hybrid members are responsible for the investment of funds in their defined contribution plan account.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

General Information about the Pension Plan – Roanoke City Plan (Continued)

Effective July 1, 2000, an additional monthly supplement equal to the greater of (a) \$159 or (b) 75% of the amount the City contributes toward the cost of a single active employee's health insurance shall be paid for eligible retirees terminating the month in which the retiree attains age 65. Any member of the Pension Plan who was an employee of one of the participating employers of the Pension Plan (not including employees of the School Board) and who retired after earning 20 or more years of creditable service but prior to attaining the age of 65 is eligible for this supplement. This supplement is not available to retirees receiving the early retiree incentive plan supplement granted in 1991. Employees hired after June 30, 2013 are not eligible for this supplement.

The Internal Revenue Code Section 401(h) health savings account operates similarly to a defined contribution plan. Employees eligible to participate in the Pension Plan are required to contribute 1% of earnable compensation in their health savings account. Employees hired after June 30, 2013 and employees hired prior to July 1, 2014, who made an irrevocable election to forego eligibility for the monthly supplemental benefit enacted effective July 1, 2000, receive an employer paid matching contribution equal to 1% of their earnable compensation. Employees vest in the employer paid matching contribution upon the attainment of 5 years of creditable service in the Pension Plan. The Board of Trustees has delegated authority for the oversight of the 401(h) health savings account to the Defined Contribution Board established under the Chapter 22.3 of the City Code. The Defined Contribution Board has contracted with an independent financial services organization for the custody and administration of the 401(h) accounts. Assets accumulated in the individual accounts are available for use upon separation from service for reimbursement of qualified medical expenses, as defined in section 213(d) of the Internal Revenue Code, as a tax-free distribution. Non-vested employer contributions, including earnings thereon, are forfeited upon separation from service. Any balance remaining in the account is forfeited upon death or attainment of maximum age of the last eligible recipient.

Plan Contributions – Roanoke City Plan

Effective July 1, 2015, employees contribute 5% of earnable compensation into the pension trust. Employees hired on or after July 1, 2014, electing participation as a Hybrid plan member, contribute 5% of earnable compensation into a defined contribution plan member account. Employer contributions to the Pension Plan are based on a percentage of the earnable compensation of the active members. The City's contribution rate for the fiscal year ended June 30, 2018 was 17.04%, which, when combined with the required employee contribution of 5%, totaled 22.04%. For fiscal year 2018, the total contribution rate of 22.04% of earnable compensation, actuarially determined as an amount that is expected to finance the cost 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 Roanoke Valley Resource Authority were \$2,495 for fiscal year ended June 30, 2018.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Pension Liabilities, Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – Roanoke City Plan

At June 30, 2018, the Roanoke Valley Resource Authority reported a liability of \$83,299 for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2017 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The Authority's proportion of the net pension liability was based on a projection of the Authority's long-term share of contributions to the pension plan relative to projected contributions of all participants, as actuarially determined. At June 30, 2017, the Authority's proportion of 0.0580% represents a decrease of 0.0059% from its proportion measured as of June 30, 2016 for the funds.

For the year ended June 30, 2018, the Roanoke Valley Resource Authority recognized pension expense of (\$18,964). Pension expense represents the change in the net pension liability during the measurement period, adjusted for actual contributions and the deferred recognition of changes in investment gain/loss, actuarial gain/loss, actuarial assumptions or method, and plan benefits.

At June 30, 2018, the Roanoke Valley Resource Authority's reported deferred outflows of resources and deferred inflows of resources related to this pension from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ 4,404
Changes in assumptions	2,333	-
Changes in proportion and differences between contributions and proportionate share of contributions	-	16,961
Net difference between projected and actual earnings on pension plan investments	-	6,359
Contributions subsequent to the measurement date	2,495	-
Totals	<u>\$ 4,828</u>	<u>\$ 27,724</u>

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Pension Liabilities, Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – Roanoke City Plan (Continued)

\$2,495 reported as deferred outflows of resources related to the pension 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 ending June 30, 2019. Other amounts reported as deferred inflows of resources will be recognized in pension expense in future reporting periods as follows:

<u>Year Ended June 30</u>	
2019	\$ (23,194)
2020	2,951
2021	(1,691)
2022	(3,457)
Total	-

Actuarial Assumptions - Roanoke City Plan

The total pension liability was determined by an actuarial valuation as of June 30, 2016, rolled forward to June 30, 2017 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.25 %
Salary Increases	2.50 %, average, including inflation
Investment Rate of Return	7.25 %, net of investment expenses
Cost of Living Adjustments	1.50 % for eligible participants, based on 2/3 of assumed 2.25% inflation rate

Mortality rates of pre-retirement and healthy annuitants were based on 125% of RP-2000 Combined Healthy Mortality for males and females with generation mortality projection using Scale AA. For Disabled, mortality rates were based on Society of Actuaries RP-2014 Adjusted to 2006 Disabled Retiree Mortality Table.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Investment Rate of Return – Roanoke City Plan

The long-term expected rate of return on Pension Plan investments was determined using projected long-term rates of returns developed for each asset class. The expected long-term rate of return for each asset class as weighted by the Investment Policy target asset allocation was used, to derive the overall expected rate of return for the portfolio. The following table reflected the long-term expected arithmetic real rate of return based upon the defined target allocation for each asset class as defined in the Statement of Investment Policy:

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Weighted Average Long-Term Expected Rate of Return</u>
Equity		
US Equity	48.50%	4.85%
International Equity	22.00%	2.42%
Real Estate	6.00%	0.42%
Fixed Income		
US Fixed Income	23.50%	1.18%
Total	<u>100.00%</u>	<u>8.87%</u>

Discount Rate – Roanoke City Plan

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that contributions will be made at 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 on Pension Plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 6—Pension Plans: (Continued)

Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate – Roanoke City Plan

The following presents the Roanoke Valley Resource Authority's proportionate share of the net pension liability calculated using the discount rate of 7.25%, as well as what the Authority's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate:

	Rate		
	1% Decrease	Current Discout	1% Increase
	(8.25%)	(7.25%)	(8.25%)
Roanoke City Pension Plan			
Net Pension Liability (Asset)	\$ 118,646	\$ 83,299	\$ 53,471

Other Information

The Roanoke City Pension Plan issues a publicly available comprehensive annual financial report that includes financial statements and required supplementary information. A copy of the most recent report may be obtained by writing to the City of Roanoke Retirement Office, Attention: Retirement Administrator, P.O. Box 1220, Roanoke, Virginia, 24006.

Note 7—Roanoke Valley Resource Authority Other Postemployment Benefits:

Plan Description

In addition to the pension benefits described in Note 6, the Authority administers a single-employer defined benefit healthcare plan, The Roanoke Valley Resource Authority Postretirement Benefits Plan. The Plan provides for participation by eligible retirees and their dependents in the health insurance programs available to employees. The Plan does not issue publicly available financial reports.

Benefits Provided

The Plan will provide retiring employees the option to continue health insurance offered by the Authority. Employees are eligible for the program after ten (10) years of service to the Authority. The benefits, employee contributions, and the employer contributions are governed by the Authority's Board and can be amended through Board action.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 7—Roanoke Valley Resource Authority Other Postemployment Benefits: (Continued)

Plan Membership

At June 30, 2016 (valuation date), the following employees were covered by the benefit terms:

Total active employees with coverage	24
Total active employees without coverage	-
Total retirees with coverage	2
Total retirees without coverage	-
Total	<u>26</u>

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's Board. The amount paid by the Authority for OPEB as the benefits came due during the year ended June 30, 2018 was \$4,642.

Total OPEB Liability

The Authority's total OPEB liability was measured as of June 30, 2017. The total OPEB liability was determined by an actuarial valuation performed as of June 30, 2016.

Actuarial Assumptions

The total OPEB liability in the June 30, 2016 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Healthcare cost trend rate	Graded down from 8% to 5% over 6 years (beginning in 2016)
Salary Increases	2.00% per annum
Discount Rate	3.13% per annum

Mortality rates were based on 1994 Group Annuity Tables for males and females with a one year setback.

The date of the most recent actuarial experience study for which significant assumptions were based is not available.

Discount Rate

The discount rate is 3.13% based on the S&P Municipal Bond 20 Year High Grade Rate Index as of June 30, 2017, compared to the prior year Statement No. 45 discount rate of 4.0%.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 7—Roanoke Valley Resource Authority Other Postemployment Benefits: (Continued)

Changes in Total OPEB Liability

		Total OPEB Liability
Balances at June 30, 2016	\$	181,024
Changes for the year:		
Service cost		16,832
Interest		6,048
Difference between expected and actual experience		(18,585)
Benefit payments		(4,642)
Net changes		(347)
Balances at June 30, 2017	\$	180,677

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 (2.13%) or one percentage point higher (4.13%) than the current discount rate:

Rate		
1% Decrease	Current Discount	1% Increase
(2.13%)	(3.13%)	(4.13%)
\$ 190,130	\$ 180,677	\$ 170,823

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 (7.00% decreasing to 4.00% over 6 years) or one percentage point higher (9.00% decreasing to 6.00% over 6 years) than the current healthcare cost trend rates:

Healthcare Cost Trend Rate		
1% Decrease	Current Discount	1% Increase
(7% decreasing to 4% over 6 years)	(8% decreasing to 5% over 6 years)	(9% decreasing to 6% over 6 years)
\$ 157,996	\$ 180,677	\$ 206,793

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 7—Roanoke Valley Resource Authority Other Postemployment Benefits: (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 \$19,163. 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 Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ 14,868
Employer contributions subsequent to the measurement date	25,410	-
Total	\$ 25,410	\$ 14,868

\$25,410 reported as deferred outflows of resources related to OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the fiscal year ended June 30, 2019. 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	\$ (3,717)
2020	(3,717)
2021	(3,717)
2022	(3,717)
2023	-
Thereafter	-

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

Note 8—Group Life Insurance (GLI) Program (OPEB Plan):

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.

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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Plan Description (Continued)

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

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Plan Description (Continued)

GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS (Continued)
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Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)
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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.
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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 \$23,523 and \$21,339 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 \$132,892 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 0.00883% as compared to 0.00875% at June 30, 2016.

For the year ended June 30, 2018, the participating employer recognized GLI OPEB expense of \$1,689. 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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

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

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	\$ -	\$ 2,921
Net difference between projected and actual earnings on GLI OPEB program investments	-	4,997
Change in assumptions	-	6,863
Changes in proportion	1,126	-
Employer contributions subsequent to the measurement date	<u>23,523</u>	<u>-</u>
Total	<u>\$ 24,649</u>	<u>\$ 14,781</u>

\$23,523 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:

<u>Year Ended June 30</u>	
2019	\$ (2,851)
2020	(2,851)
2021	(2,851)
2022	(2,851)
2023	(1,584)
Thereafter	(667)

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions

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

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (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.

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

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions (Continued)

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.

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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Actuarial Assumptions (Continued)

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

The actuarial assumptions used in the June 30, 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.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (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.

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%

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

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)	\$	<u>1,504,840</u>
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability		48.86%

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.

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ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

Long-Term Expected Rate of Return

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

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

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

Discount Rate

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

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 8—Group Life Insurance (GLI) Program (OPEB Plan): (Continued)

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

The 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	Current Discount	1% Increase
	(6.00%)	(7.00%)	(8.00%)
Authority's proportionate share of the Group Life Insurance Program			
Net OPEB Liability	\$ 171,877	\$ 132,892	\$ 101,282

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 9—Accrued Landfill Closure:

The Authority currently has responsibility for closure and postclosure care related to two landfill sites and two transfer stations. The landfills include the old landfill site formerly owned by the Roanoke Valley Regional Solid Waste Management Board closed in 1994 and the new Smith Gap landfill placed in service during 1994. The new landfill has a permitted life of approximately 50 years and remaining life of approximately 37 years. State and Federal laws and regulations require that the Authority place a final cover on its landfills when closed and perform certain maintenance and monitoring functions for a minimum of thirty years after closure.

Closure costs will be paid as closure occurs and postclosure care costs will be paid only near or after the date that the landfills stop accepting waste. The Authority reports a portion of these closure and postclosure care costs as an operating expense in each period based on the landfill capacity of the existing cells used to date (98.8%) of the constructed cells at June 30, 2018 for the Smith Gap landfill and includes anticipated effects of changes in regulations and cost estimates. The total liability recorded at June 30, 2018, is \$16,532,373 and includes \$3,160,290 designated for the old landfill site; \$12,990,069 designated for the new Smith Gap landfill; and \$382,014 for transfer stations. Total closure and postclosure cost for all opened landfill cells is estimated at \$16,730,191, of which 98.8% has been recognized as noted above based on usage. As such, \$197,818 or 1.2% of the total estimated liability will be recognized in future periods as the usage percentage increases. For the year ending June 30, 2018, the Authority's liability for closure and postclosure care increased as a result of a change in estimated closure costs and usage.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 9—Accrued Landfill Closure: (Continued)

The Authority will periodically update these closure and postclosure cost estimates and, as necessary, make revisions to reflect any significant changes in estimates due to inflation or deflation, technology, or changes in applicable laws and regulations.

Closure and postclosure care requirements are mandated under the United States Environmental Protection Agency (EPA) rule, "Solid Waste Disposal Facility Criteria", and are subject to periodic revisions by the EPA.

Federal and state regulations require owners of municipal solid waste landfills to demonstrate financial responsibility for closure care, postclosure care and corrective costs arising from the operations of such facilities. The Authority has demonstrated financial assurance requirements for closure and postclosure care through the submission of a Local Government Financial Test to the Virginia Department of Environmental Quality in accordance with Section 9VAC20-70 of the Virginia Administrative Code.

Note 10—Commitments, Contingencies, and Other Information:

Note 10—Commitments, Contingencies, and Other Information:

Under terms of a transportation contract, a rail carrier will haul waste for a predetermined transportation charge to be adjusted on an annual basis. The original contract term expired on June 30, 2018. A new five year contract began on July 1, 2018. The new contract provides the Authority with the sole option to cancel the contract, under provided terms and conditions, at the end of each year. Expenditures under this contract were approximately \$ 2,525,469 for the year ended June 30, 2018.

From time to time the Authority is involved in litigation in the normal course of operations. It is the opinion of the Authority's management that any adverse outcomes related to litigation would not have a material impact on the financial position or results of operations of the Authority as of and for the year ended June 30, 2018.

The Authority has entered into the following construction contracts as of June 30, 2018:

Contract Purpose	Contractor	Original Contract	Spent to Date	Remaining Contract
Salem Transfer Station Improvements	G & H Contracting	\$ 2,720,252	\$ 2,667,804	\$ 52,448
Smith Gap Landfill Connector Road	Sowers Construction	2,803,656	327,199	2,476,457
Rutrough Road Landfill Drainage Improvements	Hammond-Mitchell	241,466	-	241,466
Rutrough Road Landfill Lift Station & Force Main Project	DLB Enterprises	610,000	-	610,000

Note 11—Arbitrage Rebate Compliance:

As of June 30, 2018 and for the year then ended, the Authority was not liable for any amounts due under current rules governing arbitrage earnings.

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 12—Risk Management:

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees and others; and natural disasters. The Authority participates with other localities in the Virginia Municipal Group Self Insurance public entity risk pool and the Virginia Association of Counties Risk Pool for certain coverage noted below. Each member of these risk pools jointly and severally agrees to assume, pay and discharge any liability. The Authority pays the risk pools contributions and assessments based upon classifications and rates into designated cash reserve funds out of which expenses of the pools, claims and awards are to be paid. In the event of a loss, deficit, or depletion of all available funds and/or excess insurance, each pool may assess all members in the proportion to which the premium of each bears to the total premiums of all members in the year in which such deficit occurs. The Authority carries insurance coverage for all other risk of loss. Settled claims have not exceeded coverage in the current or prior three fiscal years.

Worker's Compensation – Worker's Compensation Insurance is provided through the Virginia Municipal Group Self Insurance Association. During 2017-18, the total premiums paid were \$89,430. Benefits are those afforded through the State of Virginia as outlined in the Code of Virginia Section 65.2-100; premiums are based upon covered payroll, job rates and claims experience.

General Liability and Other - The Authority carries general liability, machinery, property and other insurance through policies administered by the Virginia Association of Counties Risk Pool. General liability and business automobile have a \$1,000,000 combined single limit. Machinery coverage and property insurance are covered as per statement of values. Public officials' liability with a \$1,000,000 limit is covered through a policy with the Commonwealth of Virginia. Total premiums paid for year ended June 30, 2018 were \$39,844.

Healthcare - Healthcare insurance coverage is provided to Authority employees through Roanoke County's self-insured health insurance program. The Authority's employees pay a monthly amount based upon estimates from the claims processor that should cover administrative expenses, stop loss insurance premiums, and claims. An excess coverage insurance policy covers each individual's pooled claims in excess of \$200,000. The Authority has no claims payable as of June 30, 2018.

Note 13—Related Party Transactions:

The following table summarizes approximate tipping fees received and accounts receivable from charter members as of and for the year ended June 30, 2018:

	Tipping Fees	Accounts Receivable
	2018	2018
City of Roanoke	\$ 1,990,012	\$ 182,940
County of Roanoke	1,901,379	178,360
City of Salem	793,978	73,106
Town of Vinton	157,610	13,875
	<u>\$ 4,842,979</u>	<u>\$ 448,281</u>

ROANOKE VALLEY RESOURCE AUTHORITY

Notes to the Financial Statements
As of June 30, 2018 (Continued)

Note 14-Subsequent Event:

The Authority entered a new five year contract with a rail service provider to continue to transport waste to the Smith Gap Landfill via rail. The Authority has issued \$ 20 million in debt that will be used toward engineering, capital and construction costs related to facilities modifications and improvements, including the construction of a road for direct access to the Landfill. The Authority is continuing review of its long term transportation options.

Note 15—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. The Authority also 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)). The implementation of these Statements resulted in the following restatement of net position:

Net Position, July 1, 2017, as previously stated	\$ 16,033,494
GASB 75 implementation	(192,203)
Net Position, July 1, 2017, as restated	<u>\$ 15,841,291</u>

In addition, the Authority implemented the financial reporting provisions of Governmental Accounting Standards Board 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. The implementation of this Statement had no impact on beginning net position.

Note 16— 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.

Note 16-Upcoming Pronouncements: (Continued)

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

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

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

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

Required Supplementary Information

ROANOKE VALLEY RESOURCE AUTHORITY
Schedule of Changes in Net OPEB Liability and Related Ratios
Post Employment Health Coverage
For the Year Ended June 30, 2018

		2018
Total OPEB liability		
Service cost	\$	16,832
Interest		6,048
Differences between expected and actual experience		(18,585)
Benefit payments		(4,642)
Net change in total OPEB liability	\$	(347)
Total OPEB liability - beginning		181,024
Total OPEB liability - ending (a)	\$	180,677
Covered-employee payroll	\$	N/A
Authority's net OPEB liability (asset) as a percentage of covered-employee payroll		N/A

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

ROANOKE VALLEY RESOURCE AUTHORITY
Notes to Required Supplementary Information - OPEB
Post Employment Health Coverage
For the Year Ended June 30, 2018

Valuation Date: 6/30/2016
Measurement Date: 6/30/2017

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 salary
Discount Rate	The discount rate is 3.13% based on the S&P Municipal Bond 20 Year High Grade Rate Index as of June 30, 2017, compared to the prior year Statement No. 45 discount rate of 4.0%.
Inflation	Not applicable
Healthcare Trend Rate	Graded down from 8% to 5% over 6 years (beginning in 2016).
Salary Increase Rates	2.% per annum
Retirement Age	The average age at retirement is 60.
Mortality Rates	Mortality rates were based on 1994 Group Annuity Tables for males and females with a one year setback.

ROANOKE VALLEY RESOURCE AUTHORITY
Schedule of Authority's Share of Net OPEB Liability
Group Life Insurance Program
For the 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	0.00883%	\$ 132,892	\$ 1,630,826	8.15%	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.

ROANOKE VALLEY RESOURCE AUTHORITY
Schedule of Employer Contributions
Group Life Insurance Program
For the Years Ended June 30, 2017 through June 30, 2018

Date	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contributions Deficiency (Excess) (1) - (2) (3)	Employer's Covered Payroll (4)	Contributions as a % of Covered Payroll (2)/(4) (5)
2018	\$ 23,523	\$ 23,523	\$ -	\$ 1,860,564	1.26%
2017	21,339	21,339	-	1,630,826	1.31%

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

ROANOKE VALLEY RESOURCE AUTHORITY
Notes to Required Supplementary Information
Group Life Insurance Program
For the 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%

ROANOKE VALLEY RESOURCE AUTHORITY
Notes to Required Supplementary Information
Group Life Insurance Program
For the Year Ended June 30, 2018 (Continued)

JRS Employees

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

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%

ROANOKE VALLEY RESOURCE AUTHORITY
Schedule of the Authority's Proportionate Share of the Net Pension Liabilities
For the Years Ended June 30, 2015 through June 30, 2018

Roanoke County, Virginia's Pension Plan (a cost-sharing multiple employer plan administered by the VRS)

Date	Proportion of the Net Pension Liability (NPL)	Proportionate Share of the NPL	Covered Employee Payroll	Proportionate Share of the NPL as a Percentage of Covered Payroll (3)/(4)	Pension Plan's Fiduciary Net Position as a Percentage of Total Pension Liability
(1)	(2)	(3)	(4)	(5)	(6)
2017	3.5259%	\$ 1,308,197	\$ 1,630,826	80.22%	84.76%
2016	2.8980%	1,324,942	1,262,032	104.98%	80.43%
2015	2.7704%	970,264	1,178,061	82.36%	84.31%
2014	2.7738%	923,522	1,117,882	82.61%	84.61%

Roanoke City, Virginia's Pension Plan (a cost-sharing multiple employer plan administered by the City of Roanoke, Va)

Date	Proportion of the Net Pension Liability (NPL)	Proportionate Share of the NPL	Covered Employee Payroll	Proportionate Share of the NPL as a Percentage of Covered Payroll (3)/(4)	Pension Plan's Fiduciary Net Position as a Percentage of Total Pension Liability
(1)	(2)	(3)	(4)	(5)	(6)
2017	0.0580%	\$ 83,299	\$ 47,417	175.67%	73.96%
2016	0.0639%	108,449	36,001	301.24%	68.70%
2015	0.0529%	74,132	68,643	108.00%	73.81%
2014	0.0978%	114,803	75,359	152.34%	77.23%

Schedule is intended to show information for 10 years. Since 2015 is the first year for this presentation, no other data is available. However, additional years will be included as they become available.

ROANOKE VALLEY RESOURCE AUTHORITY
Schedule of Employer Contributions
For the Years Ended June 30, 2009 through June 30, 2018

Roanoke County, Virginia's Pension Plan (a cost-sharing multiple employer plan administered by the VRS)

Date	Contractually Required Contribution	Contributions in Relation to Contractually Required Contribution	Contributions Deficiency (Excess) (1) - (2)	Employer's Covered Payroll	Contributions as a % of Covered Payroll (2)/(4)
	(1)	(2)	(3)	(4)	(5)
2018	\$ 200,782	\$ 200,782	\$ -	\$ 1,860,564	10.79%
2017	181,460	181,460	-	1,630,826	11.13%
2016	142,146	142,146	-	1,262,032	11.26%
2015	132,238	132,238	-	1,178,061	11.23%
2014	112,745	112,745	-	1,117,882	10.09%
2013	112,591	112,591	-	1,139,043	9.88%
2012	114,847	114,847	-	763,103	15.05%
2011	149,643	149,643	-	994,306	15.05%
2010	152,302	152,302	-	1,085,545	14.03%
2009	142,990	142,990	-	1,019,173	14.03%

Roanoke City, Virginia's Pension Plan (a cost-sharing multiple employer plan administered by the City of Roanoke, Va)

Actuarial Valuation Date	Contractually Required Contribution	Contributions in Relation to Contractually Required Contribution	Contributions Deficiency (Excess) (1) - (2)	Employer's Covered Payroll	Contributions as a % of Covered Payroll (2)/(4)
	(1)	(2)	(3)	(4)	(5)
2018	\$ 2,495	\$ 2,495	\$ -	\$ 14,642	17.04%
2017	7,416	7,416	-	47,417	15.64%
2016	8,003	8,003	-	36,001	22.23%
2015	12,608	12,608	-	68,643	18.37%
2014	11,793	11,756	-	75,359	15.60%
2013	18,645	18,693	-	103,620	18.04%
2012	17,822	17,072	-	106,834	15.98%
2011	17,352	17,072	-	110,713	15.42%
2010	17,018	17,072	-	110,713	15.42%
2009	16,179	17,072	-	108,531	15.73%

ROANOKE VALLEY RESOURCE AUTHORITY
Notes to Required Supplementary Pension Information
For the Year Ended June 30, 2018

Roanoke County, Virginia's Pension Plan (a cost-sharing multiple employer plan administered by the VRS)

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

Changes of assumptions - For the Roanoke County Retirement Plan, 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%

Roanoke City, Virginia's Pension Plan (a cost-sharing multiple employer plan administered by the City of Roanoke, Va)

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

Changes in assumptions - For the Roanoke City Retirement Plan, the following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study for the System for the five years period ending June 30, 2016.

Interest rate	Decreased to 7.25% from 7.75%
Salary increases	Inflation component of salary increases was reduced from 2.75% to 2.25%.
Mortality rates	Mortality rates for the disabled were changed from the 70% of PBGC Disabled Mortality Table 5A for males and 90% of PBGC Disabled Mortality Table 6A for females to the Society of Actuaries RP-2014 Adjusted to 2006 Disabled Retiree Mortality Table
Payroll Growth Rate	Decreased to an annual rate of 2.50% from 3.0%
COLA Supplement	Decreased to 1.5% annually from 1.83%

STATISTICAL SECTION

Statistical Section

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

Contents

Financial Trends

Page

These schedules contain trend information to help the reader understand how the Authority's financial performance and well-being have changed over time. 87-88

Revenue Capacity

These schedules contain information to help the reader assess the factors affecting the Authority's ability to generate its operating revenue. 89-94

Debt Capacity

These schedules contain information to help the reader assess the affordability of the Authority's current levels of outstanding debt and the Authority's ability to issue additional debt in the future. 95-96

Demographic and Economic Information

These schedules offer demographic and economic indicators to help the reader understand the environment within which the Authority's financial activities take place and to help make comparisons over time and with other authorities. 97-98

Operating Information

These schedules contain information about the Authority's operations and resources to help the reader understand how the Authority's financial information relates to the services the Authority provides and the activities it performs. 99-100

Table 1

Roanoke Valley Resource Authority
Net Position by Component
Last Ten Fiscal Years
(unaudited)
(accrual basis of accounting)

	Fiscal Year									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Net investment in capital assets	\$ 14,261,988	\$ 18,957,557	\$ 16,137,093	\$ 20,016,507	\$ 20,859,509	\$ 22,126,898	\$ 23,579,296	\$ 24,601,591	\$ 17,072,072	\$ 16,599,546
Restricted	-	-	-	-	-	-	-	1,091,000	5,560,294	5,571,982
Unrestricted	(1,268,043)	(3,116,266)	1,450,628	756,182	2,159,326	2,087,537	3,028,633	965,985	5,120,125	6,625,374
Total primary government net position	\$ 12,993,945	\$ 15,841,291	\$ 17,587,721	\$ 20,772,689	\$ 23,018,835	\$ 24,214,435	\$ 26,607,929	\$ 26,658,576	\$ 27,752,491	\$ 28,796,902

The Authority implemented provisions of GASB Statements 63 and 65 during the 2013 fiscal year, and applied all changes required thereof retroactively to statistical information, as necessary.

The Authority implemented provisions of GASB Statement 68 during the 2015 fiscal year and restated beginning net position accordingly. Information relative to GASB Statement 68 was not available for prior fiscal years and therefore provisions of this statement were not applied retroactively in this table.

The Authority implemented provisions of GASB Statement 75 during the 2018 fiscal year and restated beginning net position for 2018 and 2017, accordingly. Information relative to GASB Statement 75 was not available for fiscal years prior to fiscal year 2017 and therefore provisions of this statement were not applied retroactively in this table.

Source: RVRA audited financial statements

Table 2

Roanoke Valley Resource Authority
Changes in Net Position
Last Ten Fiscal Years
(unaudited)
(accrual basis of accounting)

Fiscal Year	Operating Revenues	Operating Expenses	Operating Income (Loss)	Total			Special Items	Change in Net Position
				Nonoperating Revenues/ (Expenses)	Income/(Loss) before Special Items			
2018	\$ 13,718,403	\$ 16,150,782	\$ (2,432,379)	\$ (414,967)	\$ (2,847,346)	\$ -	\$ (2,847,346)	
2017	12,011,736	13,134,353	(1,122,617)	11,043	(1,111,574)	(634,856)	(1,746,430)	
2016	8,743,169	12,034,820	(3,291,651)	106,683	(3,184,968)	-	(3,184,968)	
2015	8,434,037	9,455,022	(1,020,985)	69,368	(951,617)	-	(951,617)	
2014	8,125,576	9,680,144	(1,554,568)	358,968	(1,195,600)	-	(1,195,600)	
2013	7,890,905	10,327,241	(2,436,336)	42,842	(2,393,494)	-	(2,393,494)	
2012	7,561,367	7,660,234	(98,867)	48,220	(50,647)	-	(50,647)	
2011	7,677,198	8,514,962	(837,764)	(256,151)	(1,093,915)	-	(1,093,915)	
2010	8,067,614	8,942,409	(874,795)	(169,616)	(1,044,411)	-	(1,044,411)	
2009	7,872,891	11,364,306	(3,491,415)	(72,120)	(3,563,535)	-	(3,563,535)	

The Authority implemented provisions of GASB Statements 63 and 65 during the 2013 fiscal year, and applied all changes required thereof retroactively to statistical information, as necessary.

The Authority implemented provisions of GASB Statement 68 during the 2015 fiscal year and restated beginning net position accordingly. Information relative to GASB Statement 68 was not available for prior fiscal years and therefore provisions of this statement were not applied retroactively in this table.

The Authority implemented provisions of GASB Statement 75 during the 2018 fiscal year and restated beginning net position for 2018 and 2017, accordingly. Information relative to GASB Statement 75 was not available for fiscal years prior to fiscal year 2017 and therefore provisions of this statement were not applied retroactively in this table.

Source: RVRA audited financial statements

Table 3

Roanoke Valley Resource Authority
Operating Revenue by Source
Last Ten Fiscal Years
(unaudited)
(accrual basis of accounting)

Fiscal Year	Municipal Revenue	Commercial Revenue	Private Revenue	Recycling Revenue	Residential Homeowner Revenue	Miscellaneous Revenue	Total Revenues
2018	\$ 4,842,979	\$ 6,039,663	\$ 2,200,310	\$ 72,535	\$ 470,649	\$ 92,272	\$ 13,718,408
2017	4,698,363	4,987,383	1,758,711	50,922	424,074	92,283	12,011,736
2016	4,035,795	2,760,585	1,372,023	38,775	420,724	115,267	8,743,169
2015	3,928,363	2,578,463	1,315,017	33,491	438,105	140,598	8,434,037
2014	3,962,910	2,221,222	1,499,014	39,970	390,324	12,136	8,125,576
2013	4,061,632	2,050,320	1,351,256	41,062	386,635	-	7,890,905
2012	3,885,701	1,876,495	1,204,215	47,524	397,427	150,005	7,561,367
2011	3,927,059	1,932,618	1,315,910	64,570	433,503	3,538	7,677,198
2010	4,080,939	2,108,682	1,376,333	64,307	436,117	1,236	8,067,614
2009	4,203,257	1,827,458	1,352,746	49,509	436,707	3,215	7,872,892

Source: RVRA audited financial statements

Table 4

Roanoke Valley Resource Authority
Operating Expenses
Last Ten Fiscal Years
(unaudited)
(accrual basis of accounting)

	Fiscal Year									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Salaries and Benefits	\$ 2,792,507	\$ 2,659,354	\$ 1,903,883	\$ 1,859,968	\$ 1,912,552	\$ 1,869,179	\$ 1,772,108	\$ 1,794,891	\$ 1,717,528	\$ 1,647,211
Landfill Closure and Postclosure	1,976,295	1,512,073	438,484	222,415	1,217,034	2,298,948	(164,307)	512,817	1,560,459	3,813,828
Other operating expenses	8,157,369	6,352,682	4,620,424	5,164,825	4,436,385	4,048,933	3,897,231	3,856,292	3,362,015	3,932,881
Depreciation	3,224,611	2,610,244	2,279,094	2,207,814	2,114,173	2,110,181	2,155,202	2,350,962	2,302,407	1,970,386
Total Operating Expenses	\$ 16,150,782	\$ 13,134,353	\$ 9,241,885	\$ 9,455,022	\$ 9,680,144	\$ 10,327,241	\$ 7,660,234	\$ 8,514,962	\$ 8,942,409	\$ 11,364,306

Source: RVRA audited financial statements

Table 5

Roanoke Valley Resource Authority
Nonoperating Revenues and Expenses

Last Ten Fiscal Years

(unaudited)

(accrual basis of accounting)

Fiscal Year	Interest Revenue	Net increase (Decrease) In Fair Value of Investments	Gain (Loss) on Sale of Assets	Interest and Fiscal Charges	Total Non-Operating Income (Expenses)
2018	\$ 165,909	\$ -	\$ (47,796)	\$ (533,080)	\$ (414,967)
2017	158,602	-	-	(147,559)	11,043
2016	106,683	-	-	-	106,683
2015	69,368	-	-	-	69,368
2014	46,812	-	312,156	-	358,968
2013	42,842	-	-	-	42,842
2012	48,220	-	-	-	48,220
2011	95,016	(1,532)	5,270	(354,905)	(256,151)
2010	233,266	(11,490)	68,980	(460,372)	(169,616)
2009	530,440	(15,003)	-	(587,557)	(72,120)

Source: RVRA audited financial statements

Table 6

Roanoke Valley Resource Authority
Annual Tonnage Received
Last Ten Fiscal Years
(unaudited)
(accrual basis of accounting)

<u>Fiscal Year</u>	<u>Municipal Tonnage</u>	<u>Commercial Tonnage</u>	<u>Private Tonnage</u>	<u>Residential Tonnage</u>	<u>Total Tonnage</u>
2018	99,326	103,139	38,854	10,844	252,163
2017	96,459	84,839	29,708	10,158	221,164
2016	84,167	46,854	23,553	9,329	163,903
2015	82,865	44,417	22,916	8,541	158,739
2014	85,773	39,022	26,758	9,020	160,573
2013	92,824	37,399	24,508	10,076	164,807
2012	87,373	34,518	21,142	9,473	152,506
2011	88,183	35,312	23,592	8,796	155,883
2010	91,473	38,637	24,687	9,119	163,916
2009	92,935	34,294	25,649	9,579	162,457

Source: RVRA reports provided by staff

Table 7

**Roanoke Valley Resource Authority
Principal Customers
(unaudited)
(accrual basis of accounting)**

	FY 2018		FY 2009	
	Revenue Amount	Percentage of Total	Revenue Amount	Percentage of Total
City of Roanoke	\$ 1,990,012	14.51%	\$ 2,230,020	28.33%
County of Roanoke	1,901,379	13.86%	1,810,511	23.00%
Waste Management Inc	1,691,487	12.33%	421,271	5.35%
First Piedmont Corporation	1,010,902	7.37%	558,817	7.10%
County Waste	1,433,866	10.45%	N/A	-
City of Salem	793,978	5.79%	N/A	-
Tidy Services	578,511	4.22%	209,340	2.66%
Residential Disposal Program	470,649	3.43%	436,707	5.55%
Allied Waste	412,530	3.01%	50,699	0.64%
Town of Vinton	157,609	1.15%	162,726	2.07%
Subtotal largest customers	10,440,923	76.11%	5,880,091	74.69%
Balance From other Customers	3,277,485	23.89%	1,992,801	25.31%
Grand Totals	\$ 13,718,408	100.00%	\$ 7,872,892	100.00%

Source: RVRA reports provided by staff

Table 8

Roanoke Valley Resource Authority
Disposal Fees Per Ton
Last Ten Fiscal Years
(unaudited)
(accrual basis of accounting)

Fiscal Year	Municipal Rate	Commercial Rate	Private Rate	Residential Rate
2018	\$ 49.50	\$ 59.50	\$ 59.50	\$ 49.50
2017	49.50	59.50	59.50	49.50
2016	49.00	59.00	59.00	49.00
2015	48.00	58.00	58.00	48.00
2014	47.00	57.00	57.00	57.00
2013	45.00	55.00	55.00	45.00
2012	45.00	55.00	55.00	45.00
2011	45.00	55.00	55.00	45.00
2010	45.00	55.00	55.00	45.00
2009	45.00	55.00	55.00	45.00

Source RVRA Budget Book

Table 9

Roanoke Valley Resource Authority
Ratios of Outstanding Debt by Type
Last Ten Fiscal Years
(Unaudited)

Fiscal Year	Revenue Bonds	Roanoke County			Roanoke City			Vinton			City of Salem*		
		Per Capita	As a Share of Personal Income		Per Capita	As a Share of Personal Income		Per Capita	As a Share of Personal Income		Per Capita	As a Share of Personal Income	
2018	\$ 19,566,849	209	0.34%		196	0.46%		2,426	0.34%		757	0.34%	
2017	20,000,000	213	0.35%		201	0.49%		2,444	0.35%		783	0.35%	
2016	-	-	0.00%		-	0.00%		-	0.00%		-	0.00%	
2015	-	-	0.00%		-	0.00%		-	0.00%		-	0.00%	
2014	-	-	0.00%		-	0.00%		-	0.00%		-	0.00%	
2013	-	-	0.00%		-	0.00%		-	0.00%		-	0.00%	
2012	-	-	0.00%		-	0.00%		-	0.00%		-	0.00%	
2011	-	-	0.00%		-	0.00%		-	0.00%		-	0.00%	
2010	7,675,145	85	0.16%		84	0.21%		976	0.16%		-	0.00%	
2009	9,952,124	111	0.24%		108	0.32%		1,279	0.24%		-	0.00%	

Source: Comprehensive Annual Financial Reports from Roanoke County, Roanoke City and Vinton
Population and Personal Income data from the Bureau of Economic Analysis
Audited financial statements Roanoke Valley Resource Authority

Note: The Authority did not have any revenue bonds outstanding as of June 30, 2011 through June 30, 2016.

* The City of Salem joined the RVRA in FY2017

Table 10

Roanoke Valley Resource Authority
Pledged Revenue Coverage
Last Ten Fiscal Years
(Unaudited)

Fiscal Year	Operating Revenues	Investment Income	Miscellaneous Income	Transfer from Reserves	Gross Revenues	Less: Operating Expenses (excluding depreciation)	Principal	Interest	Total Debt Service	Less:		Net Available Revenues
2018	\$ 13,718,403	\$ 165,909	\$ -	\$ -	\$ 13,884,312	\$ 12,926,171	\$ 433,151	\$ 452,274	\$ 885,425	\$ 885,425	\$ -	\$ 72,716
2017	12,011,736	158,602	-	-	12,170,338	10,524,109	219,069	-	219,069	219,069	-	1,427,160
2016*	8,743,169	106,683	-	-	8,849,852	6,962,791	-	-	-	-	-	1,887,061
2015*	8,434,037	69,368	-	-	8,503,405	7,247,208	-	-	-	-	-	1,256,197
2014*	8,125,576	46,812	-	-	8,172,388	7,565,971	-	-	-	-	-	606,417
2013*	7,890,905	42,842	-	-	7,933,747	8,217,060	-	-	-	-	-	(283,313)
2012*	7,411,362	48,220	150,005	-	7,609,587	5,505,032	-	-	-	-	-	2,104,555
2011	7,673,660	95,016	8,808	9,784,603	17,562,087	6,164,000	7,775,000	352,604	8,127,604	8,940,364	-	2,457,723
2010	8,067,614	233,266	68,980	1,982,603	10,352,463	6,640,002	2,355,000	409,146	2,764,146	3,040,561	-	671,900
2009	7,820,167	530,440	52,724	892,020	9,295,351	5,580,092	2,250,000	509,940	2,759,940	3,035,934	-	679,325

Note: The revenue covenant was 110% of debt service prior to 2012 and 100% of debt service in 2017.

*The Authority did not have any debt outstanding from 2012 through 2016.

Source: RVRA financial and budget records.

Table 11

Roanoke Valley Resource Authority
Demographic Information
Last Ten Fiscal Years
(Unaudited)

Fiscal Year	Roanoke County				Roanoke City			
	Population	Personal Income *	Per Capita Income	Unemployment Rate	Population	Personal Income	Per Capita Income	Unemployment Rate
2009	90,867	\$ 4,561,791,000	\$ 39,315	4.6%	94,482	\$ 3,636,678,000	\$ 37,929	7.7%
2010	91,011	4,672,291,000	39,315	6.3%	97,032	3,747,025,000	38,713	7.4%
2011	92,376	4,561,791,000	40,688	5.7%	97,061	3,576,942,000	36,948	6.9%
2012	92,687	4,672,000,000	42,288	5.6%	97,206	3,827,065,000	39,100	6.5%
2013	93,256	4,789,030,000	42,288	5.8%	98,641	3,799,698,000	38,453	6.4%
2014	92,703	4,984,547,000	42,288	5.2%	98,913	3,915,935,000	39,385	5.7%
2015	93,569	5,159,100,000	42,288	4.2%	99,320	3,915,935,000	39,385	5.6%
2016	93,775	5,435,865,000	45,577	3.5%	99,681	3,915,935,000	39,385	4.1%
2017	93,924	5,758,037,000	48,047	3.6%	99,644	4,090,520,000	40,947	4.5%
2018	93,735	5,785,780,000	48,384	3.1%	99,908	4,211,972,000	42,263	3.7%

Fiscal Year	Vinton				City of Salem*			
	Population	Personal Income	Per Capita Income	Unemployment Rate	Population	Personal Income	Per Capita Income	Unemployment Rate
2009	7,876	\$ 4,561,791,000	\$ 39,315	4.6%	-	\$ -	\$ -	-
2010	7,814	4,672,291,000	39,315	6.3%	-	-	-	-
2011	8,098	4,561,791,000	39,315	5.7%	-	-	-	-
2012	8,130	4,672,000,000	39,866	5.7%	-	-	-	-
2013	8,092	4,789,030,000	40,688	5.9%	-	-	-	-
2014	8,151	4,984,547,000	42,288	5.5%	-	-	-	-
2015	8,151	5,159,100,000	43,418	4.5%	-	-	-	-
2016	8,151	5,435,865,000	43,418	3.6%	-	-	-	-
2017	8,185	5,758,037,000	48,047	3.7%	25,549	5,758,037,000	48,047	4.1%
2018	8,065	5,785,780,000	48,384	3.4%	25,862	5,785,780,000	48,384	3.4%

Source: Comprehensive Annual Financial Reports from Roanoke County, Roanoke City and Vinton
Population and Personal Income data from the Bureau of Economic Analysis

* City of Salem joined RVRA in October 2017

Table 12

Roanoke Valley Resource Authority
Principal Employers
(unaudited)
Fiscal Years 2018 and 2009

Employer	2018			2009		
	Rank	Ownership	Number of Employees	Rank	Ownership	Number of Employees
Roanoke County Schools	1	Local Govt.	2,000+	1	Local Govt.	1,000+
Wells Fargo Operations Center (Wachovia division)	2	Private	2,000+	2	Private	1,000+
County of Roanoke	3	Local Govt.	1,000+	4	Local Govt.	1,000+
Kroger	4	Private	500-999	5	Private	500-999
Friendship Manor	5	Private	500-999	6	Private	500-999
Richfield Recovery & Care Center	6	Private	500-999	-	-	-
Allstate Insurance Company	7	Private	500-999	3	Private	1,000+
ITT Exelis-Harris Corporation	8	Private	500-999	10	Private	250-499
Wal-mart	9	Private	250-499	7	Private	250-499
Integrity Windows & Doors	10	Private	250-499	-	-	-
Courtland Health Care Center	-	-	-	8	Private	250-499
Hollins University	-	-	-	9	Private	250-499
Verizon Virginia, Inc.	-	-	-	-	Private	250-499

Source: Roanoke County Economic Development Department

Table 13

Roanoke Valley Resource Authority
Number of Employees by Identifiable Activity
Last Ten Fiscal Years
(unaudited)

	Fiscal Year									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Administration										
General Management	3	3	3	3	3	3	3	3	3	3
Finance	1	1	1	1	1	1	1	1	1	1
Administrative Coordinator	1	1	1	1	1	1	1	1	2	2
Business Supervisor	1	1	1	1	1	1	1	2	-	-
Operating										
Supervisors	3	3	2	2	2	2	2	2	2	2
Scale Operators	3	3	1	1	1	1	1	1	2	2
Equipment Operators	24	24	18	18	16	17	17	16	14	14
Building and General Maintenance	1	1	1	1	1	1	1	1	1	1
Equipment Mechanic	1	1	1	1	1	1	1	1	1	1
Laborer	0	0	0	0	0	0	0	1	3	3
Total Employees	38	38	29	29	27	28	28	29	29	29

Source: RVRA Budget Book

Table 14

Roanoke Valley Resource Authority
Operating and Capital Indicators
Last Ten Fiscal Years
(Unaudited)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Waste Received in tons	252,163	221,164	163,903	158,739	160,573	164,807	152,506	155,883	163,917	162,457
Materials Recycled in tons (equals total above)										
Wood	10,311	10,304	11,344	8,463	11,407	18,720	11,837	10,551	11,294	11,899
Circuit Court Civil Cases Concluded										
Circuit Court Criminal Cases Concluded										
Metal	494	371	262	182	187	170	228	314	416	408
Tires	600	418	299	259	315	238	256	252	405	780
Other (batteries, cardboard, glass, newspapers)	59	46	43	40	47	27	44	2	39	1,877
Landfilled	240,699	210,025	151,955	149,795	148,617	145,652	140,141	144,764	151,763	147,494
Percent Recycled	4.54%	5.03%	7.30%	5.63%	7.45%	11.62%	8.11%	7.13%	7.41%	9.21%
Residential Waste Disposal										
Tonnage	10,846	10,158	9,329	8,541	9,020	10,076	9,472	8,796	9,119	9,579
Tires (Count)	2,289	1,715	1,971	1,505	1,397	1,451	1,893	1,667	1,801	1,521
Transactions	44,355	41,132	37,911	34,500	36,441	40,600	37,284	35,157	36,850	38,493
Disposal Fees	\$ 470,648	\$ 424,074	\$ 420,724	\$ 438,101	\$ 390,324	\$ 386,633	\$ 398,057	\$ 432,871	\$ 436,144	\$ 436,929
Disposal Fees										
Municipal Rate	\$ 49.5	\$ 49.5	\$ 49.5	\$ 49.0	\$ 47.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 45.0
Commercial Rate	\$ 59.5	\$ 59.5	\$ 59.5	\$ 59.0	\$ 57.0	\$ 55.0	\$ 55.0	\$ 55.0	\$ 55.0	\$ 55.0
Private Rate	\$ 59.5	\$ 59.5	\$ 59.5	\$ 59.0	\$ 57.0	\$ 55.0	\$ 55.0	\$ 55.0	\$ 55.0	\$ 55.0
Residential Rate	\$ 49.5	\$ 49.5	\$ 49.5	\$ 49.0	\$ 47.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 45.0
Wood Waste Rate	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0	\$ 35.0
Railcar Waste Transported in tons										
Railcars	3,449	2,979	2,361	2,172	2,258	2,231	2,142	2,216	2,409	2,469
Tonnage	230,434	196,743	150,597	148,908	146,309	145,448	139,066	144,428	151,911	147,980
Average	66.81	66.04	63.79	68.56	64.80	65.19	64.92	65.18	63.06	59.94
Shipping Cost	\$ 2,525,469	\$ 2,194,605	\$ 1,734,373	\$ 1,864,514	\$ 1,935,012	\$ 1,797,827	\$ 1,857,047	\$ 1,687,991	\$ 1,606,684	\$ 2,000,222
Capital Indicators										
Number of Permitted Sites	4	4	3	3	3	3	3	3	3	3
Number of Open Permitted Sites	3	3	2	2	2	2	2	2	2	2
Number of Collection sites	3	3	2	2	2	2	2	2	2	2

Source: Roanoke Valley Resource Authority records

COMPLIANCE SECTION

ROBINSON, FARMER, COX ASSOCIATES

A PROFESSIONAL LIMITED LIABILITY COMPANY

CERTIFIED PUBLIC ACCOUNTANTS

Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

**To the Members of the Board
Roanoke Valley Resource Authority
Roanoke, Virginia**

We have audited, in accordance with the auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities, Boards, and Commissions*, issued by the Auditor of Public Accounts of the Commonwealth of Virginia, the financial statements of the business-type activities of the Roanoke Valley Resource Authority, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Roanoke Valley Resource Authority's basic financial statements and have issued our report thereon dated October 10, 2018.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Roanoke Valley Resource 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 the Roanoke Valley Resource Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Roanoke Valley Resource Authority's internal control.

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

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify certain deficiencies in internal control, described in the accompanying schedule of findings and responses that we consider to be significant deficiencies. (2018-001)

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Roanoke Valley Resource 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*.

Roanoke Valley Resource Authority's Response to Findings

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

Purpose of this Report

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



Blacksburg, Virginia
October 10, 2018

Roanoke Valley Resource Authority

Schedule of Findings and Responses
For the Year Ended June 30, 2018

Section I - Summary of Auditors' Results

Financial Statements

Type of auditors' report issued:	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	No
Significant deficiency(ies) identified?	Yes
Noncompliance material to financial statements noted?	No

Section II - Financial Statement Findings

2018-001

Condition:	The Authority lacks proper segregation of duties over billing and collections.
Criteria:	A key concept of internal controls is the segregation of duties. No one employee should have access to both accounting records and related assets.
Cause:	The Authority's limited number of staff does not allow them to properly segregate duties.
Effect:	There is a reasonable possibility that a material misstatement of the financial statements will not be prevented or detected by the entity's internal controls over financial reporting.
Management's Response:	Limited number of staff has precluded the Roanoke Valley Resource Authority from segregating key duties related to billings and collections. Currently, the Authority does not plan on hiring additional personnel to address the aforementioned condition as same is not considered cost-effective.

Section III - Status of Prior Audit Findings

2017-001 (Significant Deficiency) Recurring in the current year as 2018-001.

2017-002 (Material Weakness)

Condition:	In the prior year, largely due to staff turnover and consistency, adjustments were missed related to capital assets.
Recommendation:	The auditor recommended upon completion of the Authority's fixed asset depreciation schedule, the Authority's accountants meet with management at the Authority and go over useful lives in the depreciation schedule and the possible impairment of capital assets.
Current Status:	The recommendation was adopted in fiscal year 2018. No similar findings were noted in the 2018 audit.