

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Sperryville, Virginia

FINANCIAL REPORT

YEAR ENDED JUNE 30, 2019

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Sperryville, Virginia

FINANCIAL REPORT

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ROBINSON, FARMER, COX ASSOCIATES, PLLC

Certified Public Accountants

INDEPENDENT AUDITORS' REPORT

To the Board of Directors
Rappahannock County Water and Sewer Authority
Sperryville, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of Rappahannock County Water and Sewer Authority, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise Rappahannock County Water and Sewer 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 Rappahannock County Water and Sewer Authority, as of June 30, 2019, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the schedules related to pension and OPEB funding on pages 28-35 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted the Management's Discussion and Analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by the missing information.

Report on Summarized Comparative Information

We have previously audited Rappahannock County Water and Sewer Authority's 2018 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated January 8, 2019. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 17, 2020 on our consideration of Rappahannock County Water and Sewer Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Rappahannock County Water and Sewer Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Rappahannock County Water and Sewer Authority's internal control over financial reporting and compliance.

Robinson Farver Cox Associates

Charlottesville, Virginia
April 17, 2020

- Basic Financial Statements -

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Statement of Net Position As of June 30, 2019 With Comparative Totals for 2018

| | 2019 | 2018 |
|--|------------|------------|
| Assets | | |
| Current assets: | | |
| Cash and cash equivalents (Note 3) | \$ 267,599 | \$ 293,934 |
| Petty cash | 100 | 100 |
| Prepaid Expense | 2,614 | - |
| Accounts receivable, net (Note 4) | 53,655 | 42,663 |
| Total current assets | \$ 323,968 | \$ 336,697 |
| Capital assets, net of accumulated depreciation (Note 5) | \$ 44,683 | \$ 16,700 |
| Total assets | \$ 368,651 | \$ 353,397 |
| Deferred outflows of resources | | |
| Deferred outflows of resources - pension related | \$ 12,543 | \$ 8,213 |
| Deferred outflows of resources - OPEB related | 988 | 274 |
| Total deferred outflows of resources | \$ 13,531 | \$ 8,487 |
| Liabilities | | |
| Current liabilities: | | |
| Accounts payable and accrued expenses | \$ 28,740 | \$ 15,227 |
| Total current liabilities | \$ 28,740 | \$ 15,227 |
| Long-term liabilities: | | |
| Net pension liability | \$ 38,372 | \$ 32,854 |
| Net OPEB liabilities | 17,274 | 15,685 |
| Total long-term liabilities | \$ 55,646 | \$ 48,539 |
| Total liabilities | \$ 84,386 | \$ 63,766 |
| Deferred inflows of resources | | |
| Deferred inflows of resources - pension items | \$ 3,497 | \$ 7,268 |
| Deferred inflows of resources - OPEB items | 1,938 | 1,970 |
| Total deferred inflows of resources | \$ 5,435 | \$ 9,238 |
| Net position | | |
| Investment in capital assets | \$ 44,683 | \$ 16,700 |
| Unrestricted | 247,678 | 272,180 |
| Total net position | \$ 292,361 | \$ 288,880 |

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Statement of Revenues, Expenses and Changes in Net Position Year Ended June 30, 2019 With Comparative Totals for 2018

| | <u>2019</u> | <u>2018</u> |
|--|--------------------------|--------------------------|
| Operating revenue: | | |
| Sewer service charges | \$ 220,490 | \$ 188,591 |
| Other charges | - | 120 |
| Total operating revenue | <u>\$ 220,490</u> | <u>\$ 188,711</u> |
| Operating expenses: | | |
| Salaries and related benefits | \$ 142,275 | \$ 127,580 |
| Bookkeeping/accounting | 11,040 | 17,160 |
| Legal | 4,200 | 4,920 |
| Telephone | 1,223 | 1,542 |
| Electric power | 10,976 | 13,168 |
| Laboratory and management support | 8,722 | 7,857 |
| Plant and system maintenance | 13,108 | 13,862 |
| Miscellaneous and other | 26,119 | 39,431 |
| Casual labor | - | 11,695 |
| Depreciation | 3,954 | 1,270 |
| Total operating expenses | <u>\$ 221,617</u> | <u>\$ 238,485</u> |
| Operating loss | <u>\$ (1,127)</u> | <u>\$ (49,774)</u> |
| Nonoperating revenue: | | |
| Interest income | \$ 4,608 | \$ 4,907 |
| Net nonoperating revenue | <u>\$ 4,608</u> | <u>\$ 4,907</u> |
| Change in net position | \$ 3,481 | \$ (44,867) |
| Net position, beginning of year | <u>288,880</u> | <u>333,747</u> |
| Net position, end of year | <u><u>\$ 292,361</u></u> | <u><u>\$ 288,880</u></u> |

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

**Statement of Cash Flows
Year Ended June 30, 2019
With Comparative Totals for 2018**

| | <u>2019</u> | <u>2018</u> |
|---|-------------------|-------------------|
| Cash flows from operating activities: | | |
| Receipts from customers | \$ 209,497 | \$ 208,463 |
| Payments to suppliers | (64,488) | (110,431) |
| Payments to and for employees | (144,015) | (129,634) |
| Net cash flows provided by (used for) operating activities | \$ 994 | \$ (31,602) |
| Cash flows from capital and related financing activities: | | |
| Capital asset purchases | \$ (31,937) | \$ (5,501) |
| Net cash flows provided by (used for) capital and related financing activities | \$ (31,937) | \$ (5,501) |
| Cash flows from investing activities: | | |
| Interest income | \$ 4,608 | \$ 4,907 |
| Increase (decrease) in cash and cash equivalents | \$ (26,335) | \$ (32,196) |
| Cash and cash equivalents, beginning of year | 294,034 | 326,230 |
| Cash and cash equivalents, end of year | <u>\$ 267,699</u> | <u>\$ 294,034</u> |
| Reconciliation of net operating income (loss) to net cash flows provided by (used for) operating activities: | | |
| Operating loss | \$ (1,127) | \$ (49,774) |
| Adjustments to reconcile operating (loss) to net cash provided by (used for) operating activities: | | |
| Depreciation | 3,954 | 1,270 |
| Increase (decrease) in provision for uncollectible accounts | (1) | - |
| (Increase) decrease in accounts receivable | (10,992) | 42,663 |
| (Increase) decrease in prepaid expenses | (2,614) | - |
| (Increase) decrease in deferred outflows of resources - pension related | (4,330) | 3,115 |
| (Increase) decrease in deferred outflows of resources - OPEB related | (713) | (19) |
| Increase (decrease) in net pension liability | 5,518 | (10,281) |
| Increase (decrease) in net OPEB liabilities | 1,589 | (1,986) |
| Increase (decrease) in accounts payable and accrued expenses | 13,513 | (796) |
| Increase (decrease) in deferred inflows of resources - pension related | (3,771) | 5,147 |
| Increase (decrease) in deferred inflows of resources - OPEB related | (32) | 1,970 |
| Net cash flows provided by (used for) operating activities | \$ 994 | \$ (8,691) |

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019

NOTE 1 - NATURE OF BUSINESS AND REPORTING ENTITY:

Nature of Business:

Rappahannock County Water and Sewer Authority (the Authority) is a Virginia Corporation organized and existing under the provisions of the Virginia Water and Sewer Authorities Act, Sec. 15.1-1239 et seq., *Code of Virginia*, 1950 (as amended). As such, the Authority is in business to acquire, construct, operate and maintain facilities for providing water and sewage treatment services. At June 30, 2019, the Authority was not involved in the treatment and distribution of water. Its sole operations consisted of providing sewage treatment services for the Sperryville Community.

Financial Reporting Entity:

The Authority is considered a related organization of the County of Rappahannock, Virginia for financial reporting purposes. The Authority's Board members are appointed by the County of Rappahannock Board of Supervisors; however, the County exercises no oversight responsibility and the Authority's Board approves its own budget and appoints management. The County accountability for the Authority does not extend beyond making the appointments to the Board. No other entities are included in this report since the Board has no oversight or management control over any other entities.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Financial Reporting:

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

Basis of Accounting:

The accrual basis of accounting is used to account for all funds. Revenues are recognized when earned, and expenses are recorded as liabilities when incurred, regardless of when the related cash flow takes place.

Cash and Cash Equivalents:

For purposes of reporting cash flows, cash and cash equivalents includes cash on hand and in banks and all highly liquid investments with a maturity of three months or less from the date of acquisition to be cash equivalents.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

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

Capital Assets:

Major improvements and additions that equal or exceed \$1,500 are capitalized at cost in the year incurred. Normal repairs and maintenance are expensed as incurred. Any gain or loss on the sale or disposition of property is recognized currently. Projects not in service are carried as construction in progress. Interest is capitalized on construction costs, where applicable. No interest was capitalized in fiscal year 2019. Donated capital assets are recorded at their acquisition value as of the date of donation.

The Authority depreciates property and equipment in service, using the straight-line method, over the following estimated useful lives:

| | |
|------------------------------------|---------------|
| Wastewater treatment facility | 30 Years |
| System improvements and components | 5 to 15 Years |
| Equipment | 5 Years |

Deferred Outflows/Inflows of Resources:

In addition to assets, the statement of financial position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, *deferred outflows of resources*, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense) until then. The Authority has one item that qualifies for reporting in this category. It is comprised of certain items related to the measurement of the net pension liability and net OPEB liabilities and contributions to the pension and OPEB plans made during the current year and subsequent to the net pension liability and net OPEB liability measurement date. For more detailed information on these items, reference the related notes.

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

Operating and Nonoperating Revenues and Expenses:

The Authority distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses consist primarily of charges for sewage treatment services and expenses related to the providing of those services. Charges are billed on a quarterly basis, using a fixed rate which is based on the estimated amount of effluent that the customer discharges. Nonoperating revenues and expenses consist of capital and noncapital and related financing expenses.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

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

Use of Estimates:

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

Comparative Totals:

Comparative totals are presented for informational purposes only. Certain reclassifications of prior year expenses have been made to be comparable to the current year presentation.

Net Position:

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

Net Position Flow Assumption:

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

Pensions:

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

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

Other Postemployment Benefits (OPEB):

Group Life Insurance

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

NOTE 3 - DEPOSITS AND INVESTMENTS:

Deposits:

Deposits with banks are covered by the Federal Deposit Insurance Corporation (FDIC) and collateralized in accordance with the Virginia Security for Deposits Act (the "Act") Section 2.2-4400 et. seq. of the Code of Virginia. Under the Act, banks and savings institutions holding public deposits in excess of the amount insured by the FDIC must pledge collateral to the Commonwealth of Virginia Treasury Board. Financial institutions may choose between two collateralization methodologies and depending upon that choice, will pledge collateral that ranges in the amounts from 50% to 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

Investments:

Statutes authorize the Authority to invest in obligations of the United States or agencies thereof, obligations of the Commonwealth of Virginia or political subdivisions thereof, obligations of the International Bank for Reconstruction and Development (World Bank), the Asian Development Bank, the African Development Bank, "prime quality" commercial paper and certain corporate notes, banker's acceptances, repurchase agreements and the State Treasurer's Local Government Investment Pool (LGIP). The Authority had no investments during the year.

NOTE 4 - ACCOUNTS RECEIVABLE:

Accounts receivable consist of sewage treatment charges due from customers. A provision of \$188 has been made for uncollectible accounts as of June 30, 2019. This allowance is based upon specific account analysis. Liens are being placed on accounts which are substantially in arrears which totaled \$11,690 and \$9,749 at June 30, 2019 and 2018, respectively.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 5 - CAPITAL ASSETS:

Capital assets consist of the following:

| | <u>Balance</u> <u>July 1, 2018</u> | <u>Increases</u> | <u>Decreases</u> | <u>Balance</u> <u>June 30, 2019</u> |
|--|---------------------------------------|------------------|------------------|--|
| Capital assets not being depreciated: | | | | |
| Land | \$ 10,550 | \$ - | \$ - | \$ 10,550 |
| Capital assets being depreciated: | | | | |
| Wastewater treatment facility and system improvements | \$ 1,825,712 | \$ 31,937 | \$ - | \$ 1,857,649 |
| Equipment | 24,379 | - | - | 24,379 |
| Total capital assets being depreciated | \$ 1,850,091 | \$ 31,937 | \$ - | \$ 1,882,028 |
| Accumulated depreciation | | | | |
| Wastewater treatment facility and system improvements | \$ 1,824,513 | \$ 3,404 | \$ - | \$ 1,827,917 |
| Equipment | 19,428 | 550 | - | 19,978 |
| Total accumulated depreciation | \$ 1,843,941 | \$ 3,954 | \$ - | \$ 1,847,895 |
| Net capital assets being depreciated | \$ 6,150 | \$ 27,983 | \$ - | \$ 34,133 |
| Net capital assets | \$ 16,700 | \$ 27,983 | \$ - | \$ 44,683 |

Depreciation expense was \$3,954 and \$1,270 for the years ended June 30, 2019 and 2018, respectively.

NOTE 6 - RISK MANAGEMENT:

The Authority insures for the risk of loss through the purchase of insurance through commercial insurance carriers. The risk of loss is generally confined to the amount of deductibles and co-insurance. There have been no reductions in insurance coverage or settlements in excess of insurance coverage for the past three years.

NOTE 7 - RELATED PARTY TRANSACTIONS:

The Authority reimburses the County of Rappahannock, Virginia for personnel costs incurred in the operation and maintenance of the sewage treatment facility. The amount of these costs for fiscal years 2019 and 2018 totaled \$142,275 and \$127,580, respectively. Amounts owed to Rappahannock County at June 30, 2019 and 2018 were \$12,785 and \$10,648, respectively. Rappahannock County also assumes the cost of the Authority's property and related insurance costs.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN:

Plan Description

All full-time, salaried permanent employees of Rappahannock County Water and Sewer Authority are automatically covered by VRS Retirement Plan upon employment, through the County of Rappahannock, Virginia. 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. However, several entities participate in the VRS plan through the County of Rappahannock, Virginia and the participating entities report their proportionate information on the basis of a cost-sharing plan. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the Code of Virginia, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

Benefit Structures

The System administers three different benefit structures for covered employees - Plan 1, Plan 2 and Hybrid. Each of these benefit structures has different eligibility criteria, as detailed below.

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN: (Continued)

Average Final Compensation and Service Retirement Multiplier

The VRS defined benefit is a lifetime monthly benefit based on a retirement multiplier as a percentage of the employee's average final compensation multiplied by the employee's total creditable service. Under Plan 1, average final compensation is the average of the employee's 36 consecutive months of highest compensation and the multiplier is 1.7% for non-hazardous duty employees, 1.85% for sheriffs and regional jail superintendents. Under Plan 2, average final compensation is the average of the employee's 60 consecutive months of highest compensation and the retirement multiplier is 1.65% for non-hazardous duty employees, 1.85% for sheriffs and regional jail superintendents. Under the Hybrid Plan, average final compensation is the average of the employee's 60 consecutive months of highest compensation and the multiplier is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans.

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

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

Contributions

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

The Authority's contractually required employer contribution rate for the year ended June 30, 2019 was 15.15% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017.

This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the Authority were \$8,485 and \$6,446 for the years ended June 30, 2019 and June 30, 2018, respectively.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN: (Continued)

Net Pension Liability

At June 30, 2019, the Authority reported a liability of \$38,372 for its proportionate share of the net pension liability. The Authority's net pension liability was measured as of June 30, 2018. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2017 and rolled forward to the measurement date of June 30, 2018. The Authority's proportionate share of the same was calculated using creditable compensation as of June 30, 2018 and 2017 as a basis for allocation. At June 30, 2018 and 2017, the Authority's proportion was 1.9074% and 1.8300%, respectively.

Actuarial Assumptions - General Employees

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

| | |
|---------------------------------------|---|
| Inflation | 2.5% |
| Salary increases, including inflation | 3.5% - 5.35% |
| Investment rate of return | 7.0%, net of pension plan investment 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.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN: (Continued)

Actuarial Assumptions - General Employees (Continued)

Mortality rates: (Continued)

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

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

Post-Retirement:

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

Post-Disablement:

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

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

Largest 10 - Non-Hazardous Duty:

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

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

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN: (Continued)

Long-Term Expected Rate of Return

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

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

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

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Consistent with the phased-in funding provided by the General Assembly for state and teacher employer contributions; the Authority was also provided with an opportunity to use an alternative employer contribution rate. For the year ended June 30, 2018, the alternate rate was the employer contribution rate used in FY 2012 or 90% of the actuarially determined employer contribution rate from the June 30, 2015 actuarial valuations, whichever was greater. From July 1, 2018 on, participating employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN: (Continued)

Discount Rate: (Continued)

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 Authority's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the Authority's proportionate share of the net pension liability using the discount rate of 7.00%, 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 (6.00%) or one percentage point higher (8.00%) than the current rate:

| | Rate | | |
|--|-------------|-----------|-------------|
| | 1% Decrease | Current | 1% Increase |
| | 6.00% | 7.00% | 8.00% |
| Authority's proportionate share of the County of Rappahannock Retirement Plan Net Pension Liability | \$ 74,955 | \$ 38,372 | \$ 7,899 |

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

For the year ended June 30, 2019, the Authority recognized pension expense of \$4,005.

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

| | Deferred Outflows of Resources | Deferred Inflows Resources |
|---|--------------------------------------|----------------------------------|
| Differences between expected and actual experience | \$ 4,058 | \$ - |
| Change in assumptions | - | 1,250 |
| Net difference between projected and actual earnings on pension plan investments | - | 2,247 |
| Employer contributions subsequent to the measurement date | 8,485 | - |
| Total | \$ 12,543 | \$ 3,497 |

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 8 - PENSION PLAN: (Continued)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (Continued)

\$8,485 reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ending June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

| Year Ended June 30 | |
|-------------------------------|----------|
| 2020 | \$ 2,407 |
| 2021 | 950 |
| 2022 | (2,588) |
| 2023 | (208) |
| Thereafter | - |

Pension Plan Data

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

NOTE 9 - MAINTENANCE PLAN:

The Authority is in the process of creating a maintenance plan that will document and define the Authority's basic approach to a maintenance philosophy. The plan will be based on the DEQ permitting which runs for five years.

NOTE 10 - MEDICAL, DENTAL, AND LIFE INSURANCE - PAY-AS-YOU-GO (OPEB PLAN):

Plan Description

In addition to the pension benefits described in Note 8, all full-time, salaried permanent employees of Rappahannock County Water and Sewer Authority are covered by OPEB Plan upon employment, through the County of Rappahannock, Virginia. The County of Rappahannock, Virginia administers a single-employer defined benefit healthcare plan and Rappahannock County Water and Sewer Authority reports their proportionate information on the basis of a cost-sharing plan. The plan provides postemployment health care benefits to all eligible permanent employees who meet the requirements under the County's pension plans. The plan does not issue a publicly available financial report.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 10 - MEDICAL, DENTAL, AND LIFE INSURANCE - PAY-AS-YOU-GO (OPEB PLAN): (Continued)

Benefits Provided

Postemployment benefits are provided to eligible retirees include Medical, Dental, and Life insurance. The benefits that are provided for active employees are the same for eligible retirees, spouses and dependents of eligible retirees. All permanent employees of the Authority who meet eligibility requirements of the pension plan are eligible to receive postemployment health care benefits. In addition, the Authority provides a fixed basic death benefit for all retirees.

Contributions

The board 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 Board. The amount paid by the Authority for OPEB as the benefits came due during the year ended June 30, 2019 was \$321.

Total OPEB Liability

The Authority's total OPEB liability was measured as of July 1, 2017. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date. At June 30, 2018, the Authority reported a liability of \$12,887 for its proportionate share of the net OPEB liability. The Authority's proportionate share of the liability was calculated using credible compensation as of June 30, 2018 as a basis for allocation. At June 30, 2018, the Authority's proportion was 1.9074%.

Actuarial Assumptions

The total OPEB liability in the July 1, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

| | |
|------------------|--|
| Inflation | 2.20% per year as of June 30, 2018 |
| Salary Increases | The salary increase rate starts at 3.15% salary increase for 1 year of service and gradually declines to 1.30% salary increase for 20 or more years of service |
| Discount Rate | 3.58% as of June 30, 2017; 3.62% as of June 30, 2018 |

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

Discount Rate

The discount rate used when OPEB plan investments are insufficient to pay for future benefit payments is based on an index rate for 20-Year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher. This rate was 3.62% as of June 30, 2018.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements
As of June 30, 2019 (continued)

NOTE 10 - MEDICAL, DENTAL, AND LIFE INSURANCE - PAY-AS-YOU-GO (OPEB PLAN): (Continued)

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

The following amounts present the Authority's proportionate share of the total OPEB liability using the discount rate of 3.62%, as well as what the Authority's proportionate share of the total OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.62%) or one percentage point higher (4.62%) than the current discount rate:

| Rate | | |
|------------------------|----------------------------------|------------------------|
| 1% Decrease (2.62%) | Current Discount Rate (3.62%) | 1% Increase (4.62%) |
| \$ 15,259 | \$ 12,887 | \$ 11,023 |

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

The following presents the Authority's proportionate share of the total OPEB liability using a healthcare cost trend rate of 3.90%, as well as what the Authority's proportionate share of the total OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (2.90%) or one percentage point higher (4.90%) than the current healthcare cost trend rates:

| Rates | | |
|------------------------|------------------|------------------------|
| Healthcare Cost | | |
| 1% Decrease (2.90%) | Trend (3.90%) | 1% Increase (4.90%) |
| \$ 10,633 | \$ 12,887 | \$ 15,874 |

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

For the year ended June 30, 2019, the Authority recognized OPEB expense in the amount of \$736. At June 30, 2019, 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 | \$ 45 | \$ - |
| Changes in assumptions | - | 1,023 |
| Net difference between projected and actual earnings on OPEB plan investments | - | 266 |
| Employer contributions subsequent to the measurement date | 321 | - |
| Total | \$ 366 | \$ 1,289 |

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 10 - MEDICAL, DENTAL, AND LIFE INSURANCE - PAY-AS-YOU-GO (OPEB PLAN): (Continued)

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources: (Continued)

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

| <u>Year Ended June 30</u> | |
|---------------------------|----------|
| 2019 | \$ (390) |
| 2020 | (391) |
| 2021 | (391) |
| 2022 | (72) |
| 2023 | - |
| Thereafter | - |

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

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN):

Plan Description

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

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

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

Eligible Employees

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

Notes to Financial Statements
As of June 30, 2019 (continued)

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN): (Continued)

Benefit Amounts

The GLI Program is a defined benefit plan with several components. The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled. The accidental death benefit is double the natural death benefit. In addition to basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances that include the following: accidental dismemberment benefit, safety belt benefit, repatriation benefit, felonious assault benefit, and accelerated death benefit option. The benefit amounts are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value. For covered members with at least 30 years of creditable service, the minimum benefit payable was set at \$8,000 by statute. This amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and was increased to \$8,279 effective July 1, 2018.

Contributions

The contribution requirements for the GLI Program are governed by §51.1-506 and §51.1-508 of the 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 GLI Program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% ($1.31\% \times 60\%$) and the employer component was 0.52% ($1.31\% \times 40\%$). Employers may elect to pay all or part of the employee contribution; however, the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2019 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the GLI Program from the entity were \$317 and \$274 for the years ended June 30, 2019 and June 30, 2018, respectively.

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

At June 30, 2019, the entity reported a liability of \$4,387 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2018 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. The covered employer's proportion of the Net GLI OPEB Liability was based on the covered employer's actuarially determined employer contributions to the GLI Program for the year ended June 30, 2018 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2018, the participating employer's proportion was 0.00029% as compared to 0.00028% at June 30, 2017.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN): (Continued)

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

For the year ended June 30, 2019, the participating employer recognized GLI OPEB expense of \$0. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

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

| | <u>Deferred Outflows of Resources</u> | <u>Deferred Inflows of Resources</u> |
|--|---|--|
| Differences between expected and actual experience | \$ 210 | \$ 76 |
| Net difference between projected and actual earnings on GLI OPEB program investments | - | 134 |
| Change in assumptions | - | 191 |
| Changes in proportion | 95 | 248 |
| Employer contributions subsequent to the measurement date | <u>317</u> | <u>-</u> |
| Total | <u>\$ 622</u> | <u>\$ 649</u> |

\$317 reported as deferred outflows of resources related to the GLI OPEB resulting from the employer's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the fiscal year ending June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

| <u>Year Ended June 30</u> | |
|---------------------------|---------|
| 2020 | \$ (96) |
| 2021 | (96) |
| 2022 | (95) |
| 2023 | (57) |
| 2024 | - |
| Thereafter | - |

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN): (Continued)

Actuarial Assumptions

The total GLI OPEB liability was based on an actuarial valuation as of June 30, 2017, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2018. The assumptions include several employer groups as noted below. Mortality rates included herein are for relevant employer groups. Information for other groups can be referenced in the VRS CAFR.

| | |
|--|---|
| 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 - 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.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN): (Continued)

Actuarial Assumptions (Continued)

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

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

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

Mortality Rates - Non-Largest Ten Locality Employers - General Employees

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN): (Continued)

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

Actuarial Assumptions (Continued)

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

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

NET GLI OPEB Liability

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

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

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements As of June 30, 2019 (continued)

NOTE 11 - 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:

| <u>Asset Class (Strategy)</u> | <u>Target Allocation</u> | <u>Arithmetic Long-term Expected Rate of Return</u> | <u>Weighted Average Long-term Expected Rate of Return</u> |
|-------------------------------|------------------------------|---|---|
| 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 | <u>100.00%</u> | | <u>4.80%</u> |
| | | Inflation | <u>2.50%</u> |
| | | *Expected arithmetic nominal return | <u>7.30%</u> |

*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 ended June 30, 2018, the rate contributed by the entity for the GLI OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly which was 100% of the actuarially determined contribution rate. From July 1, 2018 on, employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Financial Statements
As of June 30, 2019 (continued)

NOTE 11 - GROUP LIFE INSURANCE (GLI) PROGRAM (OPEB PLAN): (Continued)

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

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

| | Rate | | |
|---|-------------|------------------|-------------|
| | 1% Decrease | Current Discount | 1% Increase |
| | (6.00%) | (7.00%) | (8.00%) |
| Authority's proportionate share of the Group Life Insurance Program | | | |
| Net OPEB Liability | \$ 5,741 | \$ 4,387 | \$ 3,300 |

GLI Program Fiduciary Net Position

Detailed information about the GLI Program's Fiduciary Net Position is available in the separately issued VRS 2018 Comprehensive Annual Financial Report (CAFR). A copy of the 2018 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2018-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

NOTE 12 - AGGREGATE OPEB TOTALS:

| OPEB Plan | Deferred Outflows | Net OPEB Liability | Deferred Inflows | OPEB Expense |
|--|-------------------|--------------------|------------------|---------------|
| Medical, Dental, and Life Insurance Plan | \$ 622 | \$ 4,387 | \$ 649 | \$ - |
| Group Life Insurance Program | 366 | 12,887 | 1,289 | 736 |
| Total | <u>\$ 988</u> | <u>\$ 17,274</u> | <u>\$ 1,938</u> | <u>\$ 736</u> |

- Required Supplementary Information -

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Schedule of Authority's Proportionate Share of the Net Pension Liability For the Measurement Dates of June 30, 2014 through June 30, 2018

| Date (1) | Proportion of the Net Pension Liability (NPL) (2) | Proportionate Share of the NPL (3) | Covered Payroll (4) | Proportionate Share of the NPL as a Percentage of Covered Payroll (3)/(4) (5) | Pension Plan's Fiduciary Net Position as a Percentage of Total Pension Liability (6) |
|-------------|--|---|---------------------------|--|---|
| 2018 | 1.9074% | \$ 38,372 | \$ 50,000 | 76.74% | 87.21% |
| 2017 | 1.8300% | 32,854 | 50,000 | 65.71% | 87.86% |
| 2016 | 1.7800% | 43,135 | 50,000 | 86.27% | 83.09% |
| 2015 | 1.6200% | 31,825 | 45,525 | 69.91% | 85.75% |
| 2014 | 1.4700% | 25,939 | 44,050 | 58.89% | 86.48% |

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Schedule of Employer Contributions - Pension Plan Years Ended June 30, 2015 through June 30, 2019

| Date | Contributions in Relation to | | | Contributions | |
|------|--|--|---|---|--|
| | Contractually Required Contribution (1) | Contractually Required Contribution (2) | Contribution Deficiency (Excess) (3) | Employer's Covered Payroll (4) | as a % of Covered Payroll (5) |
| 2019 | \$ 8,485 | \$ 8,485 | \$ - | \$ 55,000 | 15.43% |
| 2018 | 6,446 | 6,446 | - | 50,000 | 12.89% |
| 2017 | 5,860 | 5,860 | - | 50,000 | 11.72% |
| 2016 | 6,205 | 6,205 | - | 50,000 | 12.41% |
| 2015 | 5,682 | 5,682 | - | 45,525 | 12.48% |

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.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Required Supplementary Information - Pension Plan Year Ended June 30, 2019

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

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

Largest 10 - Non-Hazardous Duty:

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

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

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Schedule of Authority's Share of Total OPEB Liability
Health Insurance Plan
Year Ended June 30, 2019

| Date (1) | Employer's Proportion of the Total OPEB Liability (Asset) (2) | Employer's Proportionate Share of the Total OPEB Liability (Asset) (3) | Employer's Covered Payroll (4) | Employer's Proportionate Share of the Total OPEB Liability (Asset) as a Percentage of Covered Payroll (3)/(4) (5) | Plan Fiduciary Net Position as a Percentage of Total OPEB Liability (6) |
|-------------|---|---|---|--|---|
| 2018 | 1.9074% | \$ 12,887 | \$ N/A | N/A | N/A |
| 2017 | 1.8300% | 11,610 | N/A | N/A | N/A |

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.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Required Supplementary Information - Health Insurance Year Ended June 30, 2019

Valuation Date: 7/1/2017
Measurement Date: 6/30/2018

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

Methods and assumptions used to determine OPEB liability:

| | |
|-----------------------|---|
| Actuarial Cost Method | Entry age normal level % of salary |
| Discount Rate | 3.85% as of June 30, 2017; 3.62% as of June 30, 2018 |
| Inflation | 2.20% per year as of June 30, 2018 |
| Healthcare Trend Rate | The healthcare trend rate assumption starts at 5.50% in 2017 and gradually declines to 3.90% by the year 2050 |
| Salary Increase Rates | The salary increase rate starts at 3.15% salary increase for 1 year of service and gradually declines to 1.30% salary increase for 20 or more years of service |
| Retirement Age | The average age at retirement is 62 |
| Mortality Rates | The mortality rates for active and healthy retirees was calculated using the RP-2014 Total Dataset Mortality Table fully generational using scale MP-2014. The mortality rates for disabled retirees and calculated using the PRH-2014 Disabled Mortality Table fully generational using scale MP-2014. |

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

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

For the Measurement Dates of June 30, 2018 and 2017

| Date (1) | Employer's Proportion of the Net GLI OPEB Liability (Asset) (2) | Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) (3) | Employer's Covered Payroll (4) | Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) as a Percentage of Covered Payroll (3)/(4) (5) | Plan Fiduciary Net Position as a Percentage of Total GLI OPEB Liability (6) |
|-------------|---|---|---|--|---|
| 2018 | 0.00029% \$ | 4,387 \$ | 50,000 | 8.77% | 51.22% |
| 2017 | 0.00028% | 4,075 | 50,000 | 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.

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Schedule of Employer Contributions

Group Life Insurance Program

Years Ended June 30, 2017 through June 30, 2019

| Date | Contributions in Relation to | | | | | Contributions as a % of Covered Payroll (5) |
|------|--|--|---|---|--|---|
| | Contractually Required Contribution (1) | Contractually Required Contribution (2) | Contribution Deficiency (Excess) (3) | Employer's Covered Payroll (4) | | |
| 2019 | \$ 317 | \$ 317 | \$ - | \$ 55,000 | | 0.52% |
| 2018 | 274 | 274 | - | 50,000 | | 0.52% |
| 2017 | 260 | 260 | - | 50,000 | | 0.52% |

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

RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY

Notes to Required Supplementary Information
Group Life Insurance Program
Year Ended June 30, 2019

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

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

Largest Ten Locality Employers - General Employees

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

Non-Largest Ten Locality Employers - General Employees

| | |
|---|--|
| Mortality Rates (pre-retirement, post-retirement 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% |

- Compliance -



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON
COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS
PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

**TO THE BOARD OF DIRECTORS
RAPPAHANNOCK COUNTY WATER AND SEWER AUTHORITY
SPERRYVILLE, 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 Rappahannock County Water and Sewer Authority, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise Rappahannock County Water and Sewer Authority's basic financial statements and have issued our report thereon dated April 17, 2020.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered Rappahannock County Water and Sewer Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Rappahannock County Water and Sewer Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of Rappahannock County Water and Sewer Authority's internal control.

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

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

Compliance and Other Matters

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

Purpose of this Report

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

Robinson Farn Cox Associates

Charlottesville, Virginia

April 17, 2020