FREDERICK-WINCHESTER
SERVICE AUTHORITY

Winchester, Virginia

FINANCIAL REPORT

JUNE 30, 2021

FREDERICK-WINCHESTER
SERVICE AUTHORITY

DIRECTORY OF PRINCIPAL OFFICIALS
June 30, 2021

DIRECTORS

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Mary Blowe
Perry Eisenach

EXECUTIVE DIRECTOR

Richard S. Helm

INDEPENDENT AUDITORS

Yount, Hyde & Barbour, P.C.

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INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Frederick-Winchester Service Authority
Winchester, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of Frederick-Winchester Service Authority (the Authority), as of and for the years ended June 30, 2021 and 2020, 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.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of Frederick-Winchester Service Authority, as of June 30, 2021 and 2020, and the respective changes in financial position and cash flows for the years 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 Management's Discussion and Analysis, the Schedules of Changes in Employer's Proportionate Share of Net Pension Liability and Related Ratios, Schedules of Employer Pension Contributions, Schedule of Changes in Employer's Proportionate Share of Net OPEB Liability and Related Ratios, Schedule of Changes in Employer's Proportionate Share of Net HIC OPEB Liability and Related Ratios, and Schedules of OPEB Contributions, and related notes to the required supplementary information be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Frederick-Winchester Service Authority's basic financial statements. The supplementary schedules of capital assets and future debt requirements are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supplementary schedules of capital assets and future debt requirements 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 December 10, 2021 on our consideration of the Frederick-Winchester Service Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is 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 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 Frederick-Winchester Service Authority's internal control over financial reporting and compliance.

Yount, Hyde & Barbour, P.C.

Winchester, Virginia
December 10, 2021

FREDERICK-WINCHESTER SERVICE AUTHORITY

Management's Discussion and Analysis
Year Ended June 30, 2021

The following Management's Discussion and Analysis (MD&A) of the Frederick-Winchester Service Authority's (FWSA) financial performance provides the reader with an overview to the financial position and activities of the FWSA for the fiscal year ended June 30, 2021.

As an introduction to the FWSA's activities and purpose, the following narrative provides an overview of the organization and the role that the FWSA plays in providing, to the region, an essential environmental service of wastewater treatment and water reclamation.

Introduction – Frederick-Winchester Service Authority's Purpose

The Frederick-Winchester Service Authority was created in 1974 by action taken by the City of Winchester and the County of Frederick, Virginia. The Authority is a public body existing under the provisions of the Virginia Water and Waste Authorities Act that is part of the Code of Virginia (1950) as amended.

At its inception, the Authority had three distinct purposes for its creation. Those purposes were to provide water production, wastewater treatment, and refuse disposal for the City of Winchester and Frederick County. Those purposes were restricted to exclude water distribution, sewage collection, and garbage and refuse collection. The Authority can be viewed to this day as a "wholesaler" of environmental services. Through addendums made to the original resolution that brought the Frederick-Winchester Service Authority into existence, all responsibilities for supplying drinking water have been eliminated.

Although the City of Winchester and the County of Frederick established the Frederick-Winchester Service Authority, they do not exercise any oversight responsibilities. All policy and financial responsibilities lay in the hands of the Board of the Frederick-Winchester Service Authority.

The Board of the Frederick-Winchester Service Authority is made up of nine members. The Common Council of the City of Winchester and the Board of Supervisors of the County of Frederick make appointments to the Board. Presently the City appoints five members and the County three members. The City and County appoint the ninth member jointly.

The Board may exercise all powers granted to it under the provisions of the Virginia Water and Waste Authorities Act. Some of the significant powers are:

1. Adopt, amend or repeal bylaws, rules and regulations
2. Issue revenue bonds of the authority
3. Fix, charge and collect rates, fees and charges
4. Enter into contracts.

Overview of Activities

Frederick-Winchester Service Authority's activities are greatly influenced by the growth of the region and the need for additional wastewater treatment capacity to accommodate this growth in an environmental responsible manner. Through agreements with the City of Winchester and the Frederick Water, which cover operations of facilities, capital cost recovery and the manner in which the FWSA will provide additional infrastructure, the FWSA serves as the planning agency for wastewater facilities.

To accomplish its set forth purpose, FWSA analyzes capacity needs, undertakes design, and construction of facility improvements and/or expansion to meet needs and regulatory requirements. The FWSA also acquires the financing and sets agreement terms, fees and charges that will provide adequate funds to satisfy debt and operational costs.

Through the foresight of the Frederick-Winchester Service Authority, the City of Winchester and Frederick Water, which is responsible for water and wastewater service for residents, the parties unanimously approved and endorsed undertaking of a state of the art Waste to Energy facility. This undertaking progressed to the construction phase starting in May 2014. The facility became fully operational in April 2018. To fuel the Waste to Energy process, this facility began the acceptance of high strength waste, fats oils and grease wastes along with outside municipal sludge. The receiving capacity for high strength waste was expanded and enhanced in 2021.

The acceptance and treatment of these types of waste is bringing two benefits to reality. FWSA will have created a new outside revenue stream through tipping fees charged. At present, FWSA has entered long term contracts with a number of local and regional businesses which are on course to bring in up to a million dollars in new revenue annually. It is also envisioned that the Waste to Energy Facility will promote economic development for the community and region.

Secondly, the Waste to Energy Project will allow FWSA to treat "green waste" materials outside of the traditional wastewater treatment process. This addition to the Opequon Water Reclamation Facility will allow for the facility to utilize "energy packed" waste to produce electricity and heat energy that will have a significant long-term impact on controlling the operating expense of the treatment facility.

These savings will be derived from reduction heating fuel for processing and in electrical purchases from the electric grid with onsite electrical generation.

After several tumultuous years of operation, the Waste to Energy process approached a welcomed year of "normalcy". A relatively consistent product mix and process experience led to a financial picture that had far fewer concerning trends. The Statement of Revenues and Expenses and Changes in Net Positions show that expenditures for electricity and chemicals were reduced and the landfill fees stabilized.

Financial Analysis – Frederick-Winchester Service Authority

The FWSA Board presents three basic financial statements for the purpose of analyzing the financial position of the FWSA as of June 30, 2021. These are: (1) Statements of Net Position; (2) Statements of Revenues, Expenses and Changes in Net Position; and (3) Statements of Cash Flows. With the implementation of GASB 84 this year, FWSA also presents the Statements of Fiduciary Net Position Other Post-Employment Benefit Trust Fund, and Statements of Changes in Fiduciary Net Position Other Post-Employment Benefit Trust Fund, as it relates to the OPEB Trust Fund established for the Retiree Health Plan.

FWSA's financial position is measured in terms of resources (assets) owned and obligations (liabilities) owed as of June 30. This information is reflected in the Statements of Net Position. It can be seen from the following Summary Statement of Net Position that the FWSA has had a significant investment in facilities and an increase in net position but a major portion of those assets are restricted and will, for years, be reflected in debt obligations of FWSA.

With an environment for growth in the community, FWSA debt obligations will start to be shared by a broader base of existing and new customers that are connecting to the wastewater systems owned and operated by the City of Winchester and Frederick Water. This is an encouraging sign that will turn excess capacity, built during the Chesapeake Bay Initiative, into productive capacity that will bring revenue to the City and County through impact fees that will recover capital investment in the treatment facilities and start the generation of service fees to offset operational expenditures.

Financial Position: A summary of FWSA's Statements of Net Position for fiscal years 2021, 2020 and 2019 is presented below.

	2021	2020	2019
Current assets	$ 5,434,569	$ 5,893,083	$ 3,950,530
Current restricted assets	15,799,409	13,832,966	15,031,172
Noncurrent assets	1,000	1,000	1,000
Noncurrent restricted assets	- -	2,394,256	2,361,105
Capital assets	124,236,178	128,445,492	133,173,098
Deferred outflows	3,554,381	1,452,502	1,437,035
Total assets and deferred outflows	$ 149,025,537	$ 152,019,299	$ 155,953,940
Current liabilities	$ 901,895	$ 928,885	$ 824,284
Current liabilities payable from current restricted assets	6,344,269	6,094,793	6,356,281
Long-term liabilities	91,103,472	95,191,022	100,699,386
Deferred inflows	24,128	60,852	107,007
Total liabilities and deferred inflows	$ 98,373,764	$ 102,275,552	$ 107,986,958
Net Assets:			
Invested in capital assets	$ 31,402,942	$ 29,781,386	$ 28,886,734
Restricted	15,128,078	15,278,712	16,398,935
Unrestricted	4,120,753	4,683,649	2,681,313
Total net assets	$ 50,651,773	$ 49,743,747	$ 47,966,982
Total liabilities, deferred inflows and net assets	$ 149,025,537	$ 152,019,299	$ 155,953,940

The financial position of the FWSA remains strong and stable as of June 30, 2021. With both biological and flow capacities expanded along with enhancements dictated by regulatory requirements the FWSA has put in place adequate capital assets to address system growth over the next 15 years.

Information presented in the Statements of Revenues, Expenses and Changes in Net Position reflects the result of operations during the fiscal years 2021, 2020 and 2019 as reported. This statement reflects total revenues and total expenses for the fiscal years ended June 30, 2021, 2020 and 2019 and reflect excess or deficiency of revenue over expenses for each year.

Revenues, Expenses and Changes in Net Position: A summary of FWSA's Statement of Revenues, Expenses and Changes in Net Position for fiscal years 2021, 2020 and 2019 is presented below.

	2021	2020	2019
Service fees	$ 12,972,918	$ 13,546,616	$ 12,870,861
Operating expenses	11,375,771	11,190,709	11,513,357
Operating income	$ 1,597,147	$ 2,355,907	$ 1,357,504
Net non-operating income (expense)	(689,121)	(579,142)	(627,140)
Change in net position	$ 908,026	$ 1,776,765	$ 730,364

Operating income is generated by providing wastewater treatment services to the City of Winchester and Frederick Water along with collecting revenues from septage hauler fees and industrial surcharges and High Strength Waste customers. High Strength Waste revenue for FY19 was $858,613 and FY20 was $949,871. High Strength Waste billings for FY21 were $877,790.

Although FWSA has been able to contain operating expenses, the FWSA will need to continue to evaluate and improve operational efficiencies and techniques to relieve upward pressure on future rates. Concentrated efforts, both internal and with outside engineering support, are under way to evaluate and improve the use and expense of chemicals, the finished water content of sludge and the optimal level of High Strength Waste that affords financial health while protecting the core operation of the OWRF. The Board continues a thorough review of rates and organizational structure to assure our customers that they are being efficiently served.

Questions concerning information provided in this report or requests for additional financial information should be directed to the FWSA's Executive Director at 540-722-3579 or by mail to Frederick-Winchester Service Authority, P.O. Box 43, Winchester, Virginia 22604.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Net Position

June 30, 2021 and 2020

Assets	**2021**	**2020**
Current Assets		
Cash and cash equivalents	$ 4,627,253	$ 4,376,721
Accounts receivable, net of allowance	801,016	1,510,362
Prepaid expenses	6,300	6,000
Total current assets	$ 5,434,569	$ 5,893,083
Current Restricted Assets		
Bond principal and interest funds held by trustee	$ 14,718,631	$ 12,708,328
Cash and cash equivalents - Parkins Mill reserve fund	1,080,697	930,427
Investments - Parkins Mill reserve fund	- -	193,459
Interest receivable	81	752
Total current restricted assets	$ 15,799,409	$ 13,832,966
Noncurrent Assets, security deposit	$ 1,000	$ 1,000
Noncurrent Restricted Assets		
Cash and investment funds held by trustee:		
Revenue fund	$ 1,284	$ 1,271
Bond interest	3,284,981	1,341,543
Bond principal	2,415,852	4,033,960
Debt service reserve	6,091,332	6,800,934
Improvement and redemption	2,925,182	2,924,876
Total	$ 14,718,631	$ 15,102,584
Less: Amount included in current restricted assets	(14,718,631)	(12,708,328)
Net noncurrent restricted assets	$ - -	$ 2,394,256
Capital Assets		
Land	$ 482,405	$ 482,405
Construction in progress	- -	445,930
Property, plant, and equipment	219,735,416	218,079,552
Total	$ 220,217,821	$ 219,007,887
Less: Accumulated depreciation	(95,981,643)	(90,562,395)
Net capital assets	$ 124,236,178	$ 128,445,492
Total assets	$ 145,471,156	$ 150,566,797
Deferred Outflows of Resources		
Collective deferred outflows related to OPEB	$ 48,550	$ 51,112
Collective deferred outflows related to pension	340,247	200,019
Unamortized amounts from loss on refunding of debt	3,165,584	1,201,371
Total deferred outflows of resources	$ 3,554,381	$ 1,452,502
Total assets and deferred outflows	$ 149,025,537	$ 152,019,299

See Notes to Financial Statements.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Net Position
June 30, 2021 and 2020

Liabilities	**2021**	**2020**
Current Liabilities (payable from current assets)		
Accounts payable	$ 820,614	$ 853,759
Accrued vacation pay	81,281	75,126
Total current liabilities (payable from unrestricted assets)	$ 901,895	$ 928,885
Current Liabilities (payable from restricted assets)		
Bonds payable - current	$ 5,672,938	$ 5,146,283
Interest payable	671,331	948,510
Total current liabilities (payable from restricted assets)	$ 6,344,269	$ 6,094,793
Long-Term Liabilities		
Bonds payable - less current portion	$ 90,325,882	$ 94,719,194
Net pension liability	667,766	360,968
Net other post-employment benefits (OPEB) liability	109,824	110,860
Total long-term liabilities	$ 91,103,472	$ 95,191,022
Total liabilities	$ 98,349,636	$ 102,214,700
Deferred Inflows of Resources		
Collective deferred inflows related to OPEB	$ 20,266	$ 16,787
Collective deferred inflows related to pension	3,862	44,065
Total deferred inflows of resources	$ 24,128	$ 60,852
Net Position		
Invested in capital assets, net of related debt	$ 31,402,942	$ 29,781,386
Restricted	15,128,078	15,278,712
Unrestricted	4,120,753	4,683,649
Total net position	$ 50,651,773	$ 49,743,747
Total liabilities, deferred inflows of resources and net position	$ 149,025,537	$ 152,019,299

See Notes to Financial Statements.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Revenues, Expenses and Changes in Net Position
Years Ended June 30, 2021 and 2020

	2021	2020
Operating Revenues		
Opequon service fees, City of Winchester	$ 6,086,622	$ 6,305,868
Opequon service fees, Frederick Water	5,273,353	5,538,362
Other	1,612,943	1,702,386
Total operating revenues	$ 12,972,918	$ 13,546,616
Operating Expenses		
Personnel compensation	$ 1,354,413	$ 1,393,188
Fringe benefits	523,734	209,809
Repairs and maintenance	1,108,912	1,001,964
Electric power	463,404	376,438
Insurance	15,682	7,428
Property insurance	77,465	75,002
Landfill fees	900,516	815,039
Chemicals	1,097,394	1,179,577
Other operating expenses	263,226	393,434
General and administrative	151,777	323,098
Depreciation expense	5,419,248	5,415,732
Total operating expenses	$ 11,375,771	$ 11,190,709
Operating income	$ 1,597,147	$ 2,355,907
Nonoperating Revenues (Expenses)		
Parkins Mill service fees, Frederick Water	$ 2,493,964	$ 2,493,964
Interest and investment income	4,330	211,246
Realized and unrealized gains on investments, net	- -	16,057
Interest expense, Opequon	(2,435,814)	(2,760,793)
Interest expense, Parkins Mill	(499,024)	(548,361)
Bond issuance expense	(252,577)	- -
Gain on disposal of capital assets	- -	8,745
Total nonoperating (expenses)	$ (689,121)	$ (579,142)
Change in net position	$ 908,026	$ 1,776,765
Net position, beginning of year	49,743,747	47,966,982
Net position, end of year	$ 50,651,773	$ 49,743,747

See Notes to Financial Statements.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Cash Flows

Years Ended June 30, 2021 and 2020

	2021	2020
Cash Flows from Operating Activities		
Cash received from customers	$ 16,176,228	$ 15,970,075
Cash payments to suppliers for goods and services	(4,091,378)	(3,983,974)
Cash payments to employees for services	(1,761,063)	(1,855,787)
Net cash provided by operating activities	$ 10,323,787	$ 10,130,314
Cash Flows from Capital and Related Financing Activities		
Purchase of capital assets	$ (1,209,934)	$ (688,126)
Principal payments on long-term debt	(5,830,870)	(5,362,939)
Proceeds from sale of property, plant and equipment	- -	8,745
Payments of bond issuance costs	(252,577)	- -
Interest on long-term debt	(3,212,017)	(3,613,305)
Net cash (used in) capital and related financing activities	$ (10,505,398)	$ (9,655,625)
Cash Flows from Investing Activities		
Interest and investment income received	$ 5,001	$ 211,967
Net sales of investments	577,412	1,140,625
Net cash provided by investing activities	$ 582,413	$ 1,352,592
Net increase in cash and cash equivalents	$ 400,802	$ 1,827,281
Cash and cash equivalents, beginning of year	5,307,148	3,479,867
Cash and cash equivalents, end of year	$ 5,707,950	$ 5,307,148
Reconciliation of Cash and Cash Equivalents		
Unrestricted	$ 4,627,253	$ 4,376,721
Restricted: Parkins Mill reserve	1,080,697	930,427
Total cash and cash equivalents	$ 5,707,950	$ 5,307,148

See Notes to Financial Statements.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Cash Flows (continued)
Years Ended June 30, 2021 and 2020

	2021	2020
Reconciliation of Operating Income to Net Cash Provided by Operating Activities		
Operating income	$ 1,597,147	$ 2,355,907
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	5,419,248	5,415,732
Nonoperating service fees	2,493,964	2,493,964
Net change in pension related adjustments	(180,431)	(152,562)
Net change in OPEB related adjustments	6,041	(18,174)
Changes in assets and liabilities:		
Decrease (increase) in accounts receivable	709,346	(70,505)
(Increase) in prepaid expenses	(300)	(5,000)
Increase in pension plan liability	306,798	21,561
(Decrease) increase in accounts payable	(33,145)	147,994
Increase (decrease) increase in accrued vacation pay	6,155	(43,393)
(Decrease) in net OPEB liability	(1,036)	(15,210)
Net cash provided by operating activities	$ 10,323,787	$ 10,130,314
Supplemental Schedule of Noncash Capital and Financing Activities, refunding of long-term debt	$ 27,480,000	$ - -

See Notes to Financial Statements.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Fiduciary Net Position
Other Post-Employment Benefit Trust Fund
June 30, 2021 and 2020

Assets	**2021**	**2020**
Investments:		
Money markets	$ 108	$ 95
Domestic equity securities	21,890	15,256
Domestic fixed income securities	16,325	16,683
International equity securities	15,542	7,448
Total investments	$ 53,865	$ 39,482
Net Position		
Net position restricted for OPEB	$ 53,865	$ 39,482

FREDERICK-WINCHESTER SERVICE AUTHORITY

Statements of Changes in Fiduciary Net Position
Other Post-Employment Benefit Trust Fund
For the Fiscal Years Ended June 30, 2021 and 2020

	2021	**2020**
Additions		
Contributions from employer, net of benefits paid to participants	$ 3,511	$ 2,663
Investment income:		
Net increase in fair value of investments	10,172	1,148
Interest and dividends	866	830
Less: investment costs	(166)	(145)
Net investment earnings	$ 10,872	$ 1,833
Total additions	$ 14,383	$ 4,496
Change in net position	14,383	4,496
Net position, beginning of year	39,482	34,986
Net position, end of year	$ 53,865	$ 39,482

Note: Above balances and activity represents Frederick-Winchester Service Authority's proportionate share of the City of Winchester's OPEB Fund.

See Notes to Financial Statements.

Note 1. Nature of Business and Reporting Entity

Nature of Business

The Frederick-Winchester Service Authority (the Authority) is a Virginia corporation organized and existing under the provisions of the Virginia Water and Sewer Authorities Act, (Sec. 15.2-5100) Code of Virginia, 1950, (as amended). As such, the Authority is in the business to acquire, construct, operate and maintain facilities for providing regional sewage treatment and solid waste disposal services.

Reporting Entity

The Authority is considered a related organization of the City of Winchester (the City) and the County of Frederick for financial reporting purposes. The Authority's Board members are appointed by the respective localities; however, the City and County exercise no oversight responsibility and the Authority's Board approves its own budget and appoints management. The City and 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 Statement Presentation

The accompanying financial statements are prepared in accordance with pronouncements issued by the Governmental Accounting Standards Board (GASB). The principles prescribed by GASB represent generally accepted accounting principles applicable to governmental units.

Basis of Accounting

The Authority utilizes the enterprise fund method of accounting for financial reporting purposes. Enterprise fund accounting uses the accrual basis of accounting where revenues are recorded when earned and expenses are recorded when incurred, regardless of when the cash flows occur.

The Authority applies all GASB pronouncements as well as the Financial Accounting Standards Board (FASB) pronouncements issued on or before November 30, 1989 unless these pronouncements conflict with or contradict GASB pronouncements.

Cash and Cash Equivalents

For purposes of reporting cash flows, cash and cash equivalents include unrestricted cash on hand, certificates of deposit, and money market funds.

Investments

Investments are reported at fair value, with changes in fair value recognized as unrealized gains or losses. Fair value is determined by reference to quoted market prices.

Capital Assets

The Authority's land, property, and equipment are capitalized at cost in the year incurred. The Authority utilizes a capitalization threshold of $5,000 for the recording of capital assets. Normal repairs and maintenance are expensed as incurred. Any gain or loss on the sale or disposition of property is recognized in the current period. Projects not in service are carried as construction in progress. Interest is capitalized on construction costs, where applicable. Depreciation is calculated on a straight-line basis over the following estimated useful lives:

	Years
Plant	30-40
Trunk line	40
Facilities plan	20
Design	20
Other engineering fees	20
Structures and improvements	10-20
Equipment, furniture and fixtures	5-7
Vehicles	4-7

Use of Estimates

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

Operating and Nonoperating Revenues and Expenses

Operating revenues and expenses are defined as those items that result from providing services, and include all transactions and events which are not capital and related financing, noncapital financing or investing activities. Nonoperating revenues are defined as grants, investment income and other income. Nonoperating expenses are defined as noncapital related financing and other expenses.

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 Political Subdivision's Retirement Plan and the additions to/deductions from the Political Subdivision's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (VRS). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Fair Value of Financial Instruments

The Authority categorized its fair value measurement within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. See Note 4 for additional fair value detail.

Level 1 – Inputs are quoted prices in active markets for identical assets.

Level 2 – These are quoted market prices for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other than quoted prices that are not observable.

Level 3 – These are unobservable inputs, such as property valuation or an appraisal.

Note 3. Deposits and Investments

Deposits

All cash of the Authority is maintained in accounts collateralized in accordance with the Virginia Security for Public Deposits Act (a multiple financial institution collateral pool), Section 2.2-400 et. seq. of the Code of Virginia or covered by federal depository insurance. Under the Act, banks holding public deposits in excess of the amounts insured by FDIC must pledge collateral in the amount of 50% of excess deposits to a collateral pool in the name of the State Treasury Board. Savings and loan institutions are required to collateralize 100% of deposits in excess of FDIC limits. Deposits covered by the Act are considered insured since the Treasury Board is authorized to make additional assessments.

Investments

The Code of Virginia authorizes 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 acceptance, repurchase agreements and the State Treasurer's Local Government Investment Pool (LGIP).

The Authority's investments are subject to interest rate, credit, concentration of credit, and custodial credit risk as described herein.

Interest Rate Risk

The Authority's restricted investments as of June 30, 2021 and 2020 are classified by interest rate risk as detailed below:

2021

Investment Type	**Fair Value**	**Less Than One Year**	**1-5 Years**
Mutual Funds	$ 14,718,631	$ 14,718,631	$ - -
Reconciliation of Investments			
Investments			
Current restricted assets - funds held by trustee			$ 14,718,631

2020

Investment Type	**Fair Value**	**Less Than One Year**	**1-5 Years**
U.S. Agencies	$ 2,587,715	$ 193,459	$ 2,394,256
Mutual Funds	12,708,328	12,708,328	- -
Total	$ 15,296,043	$ 12,901,787	$ 2,394,256
Reconciliation of Investments			
Investments			
Parkins Mill reserve fund accounts			$ 193,459
Current restricted assets - funds held by trustee			12,708,328
Noncurrent restricted assets - funds held by trustee			2,394,256
Total			$ 15,296,043

Credit Risk of Debt Securities

The Authority's rated debt investments as of June 30, 2021 and 2020 are presented below using Standard and Poor's rating scale. U.S. Treasury securities are not rated.

2021

	Fair Quality Ratings		
Investment Type	**Credit Quality (Rating)**	**Rating Agency(ies)**	**Credit Exposure as a % of Total Investments**
Mutual Funds	AAA/AAAm	S&P	100.00%

* Backed by the full faith and credit of the US government.

2020

	Fair Quality Ratings		
Investment Type	**Credit Quality (Rating)**	**Rating Agency(ies)**	**Credit Exposure as a % of Total Investments**
U.S. Agencies	AAA/AAAm	S&P	16.92%
Mutual Funds	AAA/AAAm	S&P	83.08%
Total			100.00%

* Backed by the full faith and credit of the US government.

Concentration of Credit Risk

The Authority does not have an investment policy regarding the concentration of credit risk.

Investments which were more than 5% of the Authority's total investments at June 30, 2021 and 2020 were:

	2021	**2020**
U.S. Agencies	96.35%	74.14%

Custodial Credit Risk

To protect the Authority against potential fraud, the Authority requires the investment assets of the Authority to be secured through third-party custody and safekeeping procedures.

Note 4. Fair Value Measurements

The following table presents the balance of financial assets measured at fair value on a recurring basis as of June 30, 2021 and 2020:

	Balance as of June 30, 2021	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Levels (Level 2)	Significant Other Unobservable Levels (Level 3)
Mutual Funds	$ 14,718,631	$ 14,718,631	$ - -	$ - -

	Balance as of June 30, 2020	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Levels (Level 2)	Significant Other Unobservable Levels (Level 3)
U.S. Agencies	$ 2,587,715	$ 2,587,715	$ - -	$ - -
Mutual Funds	12,708,328	12,708,328	- -	- -
Total	$ 15,296,043	$ 15,296,043	$ - -	$ - -

Note 5. Accounts Receivable

Accounts receivable consist of the following at June 30, 2021 and 2020:

	2021	2020
City of Winchester	$ 261,630	$ 1,045,663
Frederick Water	166,709	164,388
National Fruit Product Company, Inc.	129,053	106,739
Merritt Sanitation Service	71,550	70,998
Others	222,074	172,574
	$ 851,016	$ 1,560,362
Less: allowance for doubtful accounts	(50,000)	(50,000)
Total	$ 801,016	$ 1,510,362

Note 6. Capital Assets

Capital asset activity was as follows for the years ending June 30, 2021 and 2020:

	Beginning Balance 7/1/2020	Increases/ Transfers	Decreases/ Transfers	Ending Balance 6/30/2021
Capital assets, not being depreciated				
Land	$ 482,405	$ - -	$ - -	$ 482,405
Construction in progress	445,930	- -	(445,930)	- -
Total capital assets, not being depreciated	$ 928,335	$ - -	$ (445,930)	$ 482,405
Capital assets, being depreciated:				
Structures and improvements	$ 203,923,266	$ 1,655,864	$ - -	$ 205,579,130
Plant expansion	12,821,184	- -	- -	12,821,184
Equipment, furniture and fixtures	658,212	- -	- -	658,212
Master plan	190,735	- -	- -	190,735
Vehicles	486,155	- -	- -	486,155
Total capital assets, being depreciated	$ 218,079,552	$ 1,655,864	$ - -	$ 219,735,416
Less: accumulated depreciation	$ 90,562,395	$ 5,419,248	$ - -	$ 95,981,643
Total capital assets	$ 128,445,492	$ (3,763,384)	$ (445,930)	$ 124,236,178

	Beginning Balance 7/1/2019	Increases/ Transfers	Decreases/ Transfers	Ending Balance 6/30/2020
Capital assets, not being depreciated				
Land	$ 482,405	$ - -	$ - -	$ 482,405
Construction in progress	- -	445,930	- -	445,930
Total capital assets, not being depreciated	$ 482,405	$ 445,930	$ - -	$ 928,335
Capital assets, being depreciated:				
Structures and improvements	$ 203,782,101	$ 141,165	$ - -	$ 203,923,266
Plant expansion	12,821,184	- -	- -	12,821,184
Equipment, furniture and fixtures	658,212	- -	- -	658,212
Master plan	190,735	- -	- -	190,735
Vehicles	405,024	101,031	(19,900)	486,155
Total capital assets, being depreciated	$ 217,857,256	$ 242,196	$ (19,900)	$ 218,079,552
Less: accumulated depreciation	$ 85,166,563	$ 5,415,732	$ (19,900)	$ 90,562,395
Total capital assets	$ 133,173,098	$ (4,727,606)	$ - -	$ 128,445,492

Depreciation expense was $5,419,248 and $5,415,732 for the years ended June 30, 2021 and 2020, respectively.

Note 7. Long-Term Obligations

The following is a summary of long-term debt transactions for the years ended June 30, 2021 and 2020:

	2021	2020
Balance, beginning	$ 96,160,876	$ 101,523,815
Add: debt issuance	27,480,000	- -
Deduct: principal payments	(29,576,284)	(5,362,939)
Total outstanding long-term debt	$ 94,064,592	$ 96,160,876
Unamortized premiums and discounts, net	1,934,228	3,704,601
Balance, ending	$ 95,998,820	$ 99,865,477

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

Year Ending June 30,	Principal	Interest	Total
2022	$ 5,672,938	$ 2,695,086	$ 8,368,024
2023	5,831,573	2,547,224	8,378,797
2024	6,022,237	2,347,836	8,370,073
2025	6,234,983	2,139,801	8,374,784
2026	6,449,866	1,918,324	8,368,190
2027-2031	31,287,995	6,840,626	38,128,621
2032-2036	19,465,000	3,350,342	22,815,342
2037-2041	13,100,000	605,705	13,705,705
Total	$ 94,064,592	$ 22,444,944	$ 116,509,536

Details of Long-Term Debt

2007 Virginia Resources Authority Sewer System Revenue Bonds (Parity Indebtedness)

In June 2007, the Authority issued a $39,000,000 Virginia Resources Authority Sewer System Revenue for the construction of the expansion of the Parkins Mill Wastewater Treatment Plant, secured by revenue from the Opequon Wastewater Reclamation Facility. The Authority is only responsible for the amount of bond funds actually received. The final funds were fully drawn in fiscal year 2011 resulting in a final issue amount of $37,930,386. In 2014, the bond was refinanced with semiannual installments of $1,246,982, including interest at 2.77%, through September 2029. The balance of this bond was $18,975,124 and $20,953,447 at June 30, 2021 and 2020, respectively.

2009 Virginia Resources Authority Sewer System Revenue Bonds (Parity Indebtedness)

In May 2009, the Authority issued a $19,870,089 Virginia Resources Authority Sewer System Revenue bond, due in semiannual installments of $658,400 to $698,000, including interest at 2.65% to 3.35% through March 2031, secured by revenue from the Opequon Wastewater Reclamation Facility. The debt proceeds were used to expand and upgrade the facility. The Authority is only responsible for the amount of funds actually received. The balance of this bond was $11,509,468 and $12,502,429 at June 30, 2021 and 2020, respectively.

2014A Virginia Resources Authority Revenue Bonds (Parity Indebtedness)

In April 2014, the Authority issued a $30,110,000 Taxable Regional Sewer System Bond, due in annual installments of $395,000 to $2,085,000, beginning in October 2017, plus interest payable semi-annually ranging from 2.74% and 4.83%, through October 2038, secured by revenue from the Opequon Wastewater Reclamation Facility. The debt proceeds were used for plant upgrades and construction of the Green Waste to Energy Project. The balance of this bond was $17,730,000 and $28,320,000 at June 30, 2021 and 2020, respectively.

2014B Virginia Resources Authority Revenue Bonds (Parity Indebtedness)

In August 2014, the Authority issued a $20,075,000 Taxable Regional Sewer System Bond due in annual installments of $215,000 to $1,425,000, beginning in October 2017, plus interest payable semi-annually ranging between 3.65% and 5.13%, through October 2038, secured by revenue from the Opequon Wastewater Reclamation Facility. The debt proceeds were used for the construction of the Green Waste to Energy Project. The balance of this bond was $6,530,000 and $19,015,000 at June 30, 2021 and 2020, respectively.

2015A Virginia Resources Authority Revenue Refunding Bonds (Parity Indebtedness)

In May 2015, the Authority issued a $12,270,000 Taxable Regional Sewer System Bond due in annual installments of $15,000 to $845,000, plus interest payable semi-annually ranging between 3.13% and 5.16%, through October 2038, secured by revenue from the Opequon Wastewater Reclamation Facility. The debt proceeds were used to refund a portion of the 2008 Virginia Resources Authority Revenue Bonds. The balance of this bond was $8,145,000 and $11,670,000 at June 30, 2021 and 2020, respectively.

2016B Virginia Resources Authority Revenue Refunding Bonds (Parity Indebtedness)

In August 2016, the Authority issued a $3,760,000 Taxable Regional Sewer System Bond due in annual installments of $5,000 to $575,000, plus interest payable semi-annually ranging between 2.71% and 5.16%, through October 2038, secured by revenue from the Opequon Wastewater Reclamation Facility. The debt proceeds were used to refund a portion of the 2008 Virginia Resources Authority Revenue Bonds. The balance of this bond was $3,695,000 and $3,700,000 at June 30, 2021 and 2020, respectively.

2021A Virginia Resources Authority Revenue Refunding Bonds (Parity Indebtedness)

In April 2021, the Authority issued a $27,480,000 Taxable Regional Sewer System Bond due in annual installments of $355,000 to $3,295,000, plus interest payable semi-annually ranging between 0.31% and 2.79%, through October 2038, secured by revenue from the Opequon Wastewater Reclamation Facility. The debt proceeds were used to refund a portion of the 2014A, 2014B, and 2015 Virginia Resources Authority Revenue Bonds. The balance of this bond was $27,480,000 and $0 at June 30, 2021 and 2020, respectively.

Bond Premium

Unamortized bond premium on the 2014A Virginia Resources Authority Revenue Bond issue in the original amount of $2,042,899 is amortized over the life of the bond issue using the effective interest method. Amortization of the premium amounted to $116,763 and $124,252 for the years ended June 30, 2021 and 2020, respectively. The balance of the unamortized premium was $742,368 and $1,264,194 at June 30, 2021 and 2020, respectively.

Unamortized bond premium on the 2014B Virginia Resources Authority Revenue Bond issue in the original amount of $2,187,908 is amortized over the life of the bond issue using the effective interest method. Amortization of the premium amounted to $123,365 and $132,513 for the years ended June 30, 2021 and 2020, respectively. The balance of the unamortized premium was $436,084 and $1,361,332 at June 30, 2021 and 2020, respectively.

Unamortized bond premium on the 2015A Virginia Resources Authority Revenue Bond issue in the original amount of $1,416,461 is amortized over the life of the bond issue using the effective interest method. Amortization of the premium amounted to $89,576 and $94,707 for the years ended June 30, 2021 and 2020, respectively. The balance of the unamortized premium was $536,686 and $826,391 at June 30, 2021 and 2020, respectively.

Unamortized bond premium on the 2016B Virginia Resources Authority Revenue Refunding Bond issue in the original amount of $320,662 is amortized over the life of the bond issue using the effective interest method. Amortization of the premium amounted to $16,937 and $16,960 for the years ended June 30, 2021 and 2020, respectively. The balance of the unamortized premium was $235,746 and $252,684 at June 30, 2021 and 2020, respectively.

Bond Discount

Unamortized bond discount on the 2021A Virginia Resources Authority Revenue Refunding Bond issue in the original amount of $16,656 is amortized over the life of the bond issue using the effective interest method. There was no amortization of the bond discount for the year ended June 30, 2021. The balance of the unamortized premium was $16,656 and $0 at June 30, 2021 and 2020, respectively.

Note 8. Deferred Outflows of Resources

The loss on refunding in fiscal year 2015 totaled $1,535,978. This cost has been deferred and is amortized over 24 years. Amortization is based on the principal retirements of the refunding bond issue, and amounted to $88,679 and $91,822 for the years ended June 30, 2021 and 2020, respectively. The unamortized balance at June 30, 2021 and 2020 was $855,081 and $943,760, respectively, and is reflected as a deferred outflow of resources on the Statement of Net Position.

The loss on refunding in fiscal year 2017 totaled $326,914. This cost has been deferred and is amortized over 22 years. Amortization is based on the principal retirements of the refunding bond issue, and amounted to $17,268 and $17,291 for the years ended June 30, 2021 and 2020, respectively. The unamortized balance at June 30, 2021 and 2020 was $240,343 and $257,611, respectively, and is reflected as a deferred outflow of resources on the Statement of Net Position.

The loss on refunding in fiscal year 2021 totaled $2,083,970. This cost has been deferred and is amortized over 18 years. Amortization is based on the principal retirements of the refunding bond issue, and amounted to $13,810 and $0 for the years ended June 30, 2021 and 2020, respectively. The unamortized balance at June 30, 2021 and 2020 was $2,070,160 and $0, respectively, and is reflected as a deferred outflow of resources on the Statement of Net Position.

Note 9. Major Customers and Related Party Transactions

The Authority entered into an agreement with the City of Winchester and Frederick Water on September 12, 1983 for the construction of the Opequon Water Reclamation Facility. This agreement provided for the financing, operation and maintenance of the facilities treating sewage delivered by the City and Frederick Water. This agreement was amended on June 22, 1998 and April 17, 2008 to provide for the expansion and upgrade of the Opequon facility to accommodate additional treatment capacity. The amended Intermunicipal Agreement established ownership of the facility treatment capacity and apportioning of the existing and new debt based on ownership. The agreement also established the manner in which operational costs would be recovered from the City and Frederick Water based on the quantity and strength of sewage delivered to the Opequon facility.

The Authority has agreements with the City of Winchester and Frederick Water which provide for the operation of its facilities. The total charges to the Authority by the City amounted to $5,945,410 and $5,598,665 for the years ending June 30, 2021 and 2020, respectively. The Authority owed the City $767,736 and $664,045 at June 30, 2021 and 2020, respectively.

Frederick Water, under the Parkins Mill Agreement, assumes all operating costs and pays the Service Authority rental and administrative fees for the use of the facility. The operating agreement for Parkins Mill is in full force unless terminated by concurrent approval of the parties.

Note 10. Leases

On May 16, 2019, the Authority entered into a multi-year lease agreement for office space through May 31, 2021. After the initial term, the lease was extended on a month to month basis. Total rent expense was $12,050 and $12,000 for the years ended June 30, 2021 and 2020, respectively.

Note 11. Risk Management

The Authority contracts with private insurance carriers to provide against the risk of loss from property damage and related liability coverages. The Authority's risk of loss is generally limited to settlements in excess of insured coverages and policy deductibles. There have been no settlements in excess of insurance coverages in the last three years.

Note 12. Commitments and Contingencies

Line of Credit

The Authority has a line of credit in the amount of $5 million with Truist Bank. Interest is accrued and payable monthly on the outstanding balance. Interest is calculated at the Daily Simple SOFR plus 2%, with a minimum rate of 3%. The line of credit was renewed on August 17, 2021 through February 7, 2023. As of June 30, 2021 and 2020, there were no amounts outstanding on the line of credit.

Note 13. Upcoming Accounting Pronouncements

GASB Statement No. 87, Leases, is designed to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement 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. Statement 87 will be effective for the Authority beginning with its fiscal year ending June 30, 2022.

GASB Statement No. 91, Conduit Debt Obligations, seeks to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. Statement 91 will be effective for the Authority for fiscal year ending June 30, 2023.

GASB Statement No. 93, Replacement of Interbank Offered Rates, is to address accounting and financial reporting implications that result from the replacement of an interbank offered rate (IBOR). Guidelines related to lease guidance under GASB 87 and to the removal of LIBOR as an appropriate benchmark interest rate are effective for the fiscal year ending June 20, 2022. The remaining requirements of Statement 93 will be effective for the Authority for fiscal year ending June 30, 2023.

GASB Statement No. 94, Public-Private and Public-Public Partnerships and Availability Payment Arrangements, aims to improve financial reporting by addressing issues related to public-private and public-public partnership arrangements. This Statement also provides guidance for accounting and financial reporting for availability payment arrangements. Statement 94 will be effective for the Authority for fiscal year ending June 30, 2023.

GASB Statement No. 96, Subscription-Based Information Technology Arrangements, is to provide guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITAs) for government end users (governments). This Statement (1) defines a SBITA; (2) establishes that a SBITA results in a right-to-use subscription asset—an intangible asset—and a corresponding subscription liability; (3) provides the capitalization criteria for outlays other than subscription payments, including implementation costs of a SBITA; and (4) requires note disclosures regarding a SBITA. To the extent relevant, the standards for SBITAs are based on the standards established in Statement No. 87, Leases, as amended. Statement 96 will be effective for the Authority for fiscal year ending June 30, 2023.

GASB Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plan – An Amendment of GASB Statements No. 14 and No. 84 and a Supersession of GASB Statement No. 32*, (1) increases consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board and the primary government performs the duties that a governing board typically would perform; (2) mitigates costs associated with the reporting of certain defined contribution pension plans, defined contribution other postemployment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans (other employee benefit plans) as fiduciary component units in fiduciary fund financial statements; and (3) enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans (Section 457 plans) that meet the definition of a pension plan and for benefits provided through those plans. Statement 97 will be effective for the Authority for fiscal year ending June 30, 2022.

GASB Statement No. 98, The Annual Comprehensive Financial Report, establishes the term annual comprehensive financial report and its acronym ACFR. That new term and acronym replace instances of comprehensive annual financial report and its acronym in generally accepted accounting principles for state and local governments. This Statement will be effective for the year ending June 30, 2022.

Management has not yet determined the effect these Statements will have on its financial statements.

Note 14. Other Post-Employment Benefits

RETIREE HEALTH PLAN

Other post-employment benefits (OPEB) provided by the Authority through the City of Winchester (the City) include a retiree health plan. The Authority’s portion of the City’s OPEB plan was 0.84% for each of the years ended June 30, 2021 and 2020. Separate financial statements for the City of Winchester may be obtained from City Hall at 15 N. Cameron Street, Winchester, VA 22601.

Plan Description and Benefits Provided

The City of Winchester administers a cost-sharing defined benefit healthcare plan (the "Retiree Health Plan"). The Plan provides healthcare insurance for eligible retirees and coverage ceases at age 65. Retirees under age 65 have the option of choosing three medical plans including a prescription program for retail and a mail order program. Retirees can continue the same medical coverage they had (including dependent coverage) as active employees. The Plan was established under the authority of the City of Winchester's Council. Management of the Plan is vested in the City's OPEB Finance Board, which is comprised of the City's CFO, Treasurer, and a citizen representative.

The Authority's membership in the Plan as of the last valuation was 23 active employees and 0 (zero) retirees. The Plan was closed to new participants hired on or after July 1, 2017.

Contributions

The Authority establishes employer contribution rates for plan participants. The Authority has chosen to fund the medical benefits on a pay as you go basis.

Actuarial Assumptions and Other Inputs

In the January 1, 20210 actuarial valuation, the entry age normal cost method was used. The actuarial assumptions include a 6.50% investment rate of return (net of administrative expenses), which is the expected long-term investment returns on the Plan's investments calculated based on the funded level of the Plan at the valuation date.

The following additional simplifying assumptions were made:

Coverage Status and Age of Spouse – Actual coverage status is used; females assumed to be three years younger than male spouse. Employees with individual coverage are assumed to elect individual coverage in retirement; those with spouse/family coverage assumed to continue this coverage at retirement.

Election Rate – 90% of actives currently enrolled in the City's health care plan will continue in the Plan upon retiring or becoming disabled.

Demographic Assumptions – Demographic assumptions mirror those used for the pension plan, with adjustments made for actual experience of City employees. All employees are assumed to participate in the Virginia Retirement System.

Economic Assumptions – The medical trend assumption was changed from developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model baseline assumptions. The updated SOA Model was released in April 2010 and updated September 2019. The following assumptions were used as input variables into this model:

- Rate of Inflation 2.50%
- Rate of Growth in Real Income / GNP per capita 1.50%
- Extra Trend due to Technology and other factors 1.10%
- Health Share of GDP Resistance Point 25.00%
- Year for Limiting Cost Growth to GDP Growth 2075

Payroll is assumed to increase at 2.50% per annum. This assumption is used to determine the level percentage of payroll amortization factor. Inflation in assumed to be 2.50% per annum.

Long-Term Expected Rate of Return

The long-term expected rate on OPEB investments was determined using an economic building block approach that projects economic and corporate profit growth and takes into consideration the fundamental factors driving long-term real economic growth, the expectation for inflation of 2.50%, productivity, and labor force growth.

Asset Class (Strategy)	Target Allocation	Capital Market Assumptions	Expected Long-Term Return (Net of Inflation
Domestic Equity	39.00 %	7.50 %	5.00 %
International Developed Equity	15.00	7.60	5.10
International Emerging Markets Equity	6.00	7.90	5.40
Core Fixed	20.00	3.80	1.30
Investment Grade Corporate Debt	10.00	4.20	1.70
Emerging Markets Debt	5.00	6.10	3.60
High Yield	5.00	6.00	3.50
Total	100.00 %		
	Inflation		2.50 %

Discount Rate

The discount rate used to measure the net OPEB liability was 6.50%. The projection of cash flows used to determine the discount rate assumed that contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB 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 OPEB liability.

Changes in Net OPEB Liability

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balances at June 30, 2020	$ 74,864	$ 39,483	$ 35,381
Increase (decrease) for the year:			
Service cost	$ 2,045	$ - -	$ 2,045
Interest	4,760	- -	4,760
Experience losses/(gains)	(64)	- -	(64)
Contributions - employer	- -	6,712	(6,712)
Net investment income	- -	10,872	(10,872)
Change in assumptions	- -	- -	- -
Benefit payments (net of retiree contributions)	(3,201)	(3,201)	- -
Changes in annual allocation	(1)	(1)	- -
Net changes	$ 3,539	$ 14,382	$ (10,843)
Balances at June 30, 2021	$ 78,403	$ 53,865	$ 24,538

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

The following presents the Net OPEB liability of the Authority using the discount rate of 6.50%, as well as what the Authority's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (5.50%) or one percentage point higher (7.50%) than the current rate:

	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Authority's net OPEB liability	$ 33,245	$ 24,538	$ 16,872

The following presents the Net OPEB liability of the Authority using the health care cost trend rate of 4.04%, as well as what the Authority's net OPEB liability would be if it were calculated using a health care cost trend rate that is one percentage point lower (3.04%) or one percentage point higher (5.04%) than the current rate:

	1% Decrease (3.04%)	Medical Trend Rate (4.04%)	1% Increase (5.04%)
Authority's net OPEB liability	$ 14,623	$ 24,538	$ 36,399

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

For the fiscal year ended June 30, 2021, the Authority recognized an OPEB expense of $5,264. At June 30, 2021, the Authority reported deferred outflows of resources and deferred inflows of resources related to the Plan from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 15,087	$ 67
Change in assumptions	- -	3,620
Change in Proportion	2,395	2,590
Net difference between projected and actual earnings on OPEB plan investments	- -	6,099
Employer contributions subsequent to the measurement date	- -	- -
Total	$ 17,482	$ 12,376

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the OPEB will be recognized in the OPEB expense in future reporting periods as follows:

Year Ended June 30:	
2022	$ 1,140
2023	962
2024	980
2025	877
2026	1,157
Thereafter	(10)

Information about the RMI Contribution Plan OPEB is available in the separately issued City of Winchester Comprehensive Annual Financial Report (Annual Report). A copy of the 2021 City of Winchester Annual Report may be downloaded from the City of Winchester website at https://www.winchesterva.gov/finance/budget-and-cafr, or by writing to the City's Chief Financial Officer at 15 North Cameron Street, Winchester, VA, 22601.

Health Insurance Credit Program and Plan Provisions

Plan Description

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

Eligible Employees

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

Benefit Amounts

The political subdivision's Retiree HIC Program provides the following benefits for eligible employees:

At Retirement – For employees who retire, the monthly benefit is $1.50 per year of service per month with a maximum benefit of $45.00 per month.

Disability Retirement – For employees who retire on disability or go on long-term disability under the Virginia Local Disability Program (VLDP), the monthly benefit is $45.00 per month.

Health Insurance Credit Program Notes

The monthly HIC benefit cannot exceed the individual premium amount.

Contributions

The contribution requirement for active employees is governed by §51.1-1402(E) 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. The Authority's contractually required employer contribution rate for the year ended June 30, 2021 was 0.09% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2019. The actuarially determined rate was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions from the Authority to the Political Subdivision HIC Program were $1,094 and $1,380 for the years ended June 30, 2021 and June 30, 2020, respectively.

Net HIC OPEB Liability

The Authority's net HIC OPEB liability was measured as of June 30, 2020. The total HIC OPEB liability was determined by an actuarial valuation performed as of June 30, 2019, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2020.

Actuarial Assumptions

The total HIC OPEB liability was based on an actuarial valuation as of June 30, 2019, 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, 2020.

Inflation	2.50%
Salary increases, including inflation	3.50% – 5.35%
Investment rate of return	6.75%, net of pension plan investment expense, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 6.75% 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 6.75% to simplify preparation of the OPEB liabilities.

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

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016 except the change in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action 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 changed final retirement 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	Increase rate from 14% to 15%
Discount Rate	Decrease from 7.00% to 6.75%

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	34.00%	4.65%	1.58%
Fixed Income	15.00%	0.46%	0.07%
Credit Strategies	14.00%	5.38%	0.75%
Real Assets	14.00%	5.01%	0.70%
Private Equity	14.00%	8.34%	1.17%
MAPS - Multi-Asset Public Strategies	6.00%	3.04%	0.18%
PIP - Private Investment Partnership	3.00%	6.49%	0.19%
Total	100.00%		4.64%
	Inflation		2.50%
	* Expected arithmetic nominal return		7.14%

* The above allocation provides a one-year return of 7.14%. 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 7.11%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75% which is roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation. More recent capital market assumptions compiled for the FY2020 actuarial valuations, provide a median return of 6.81%.

Discount Rate

The discount rate used to measure the total HIC OPEB liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2020, the rate contributed by the entity for the HIC OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2020, on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the HIC OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total HIC OPEB liability.

Changes in Net HIC OPEB Liability

	Increase (Decrease)		
	Total HIC OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net HIC OPEB Liability (a) - (b)
Balances at June 30, 2019	$ 22,798	$ 19,010	$ 3,788
Increase (decrease) for the year:			
Service cost	$ 741	$ - -	$ 741
Interest	1,668	- -	1,668
Changes of assumptions	- -	- -	- -
Differences between expected and actual experience	(901)	- -	(901)
Contributions - employer	- -	1,209	(1,209)
Contributions - employee	- -	- -	- -
Net investment income	- -	426	(426)
Benefit payments	(1,701)	(1,701)	- -
Administrative expenses	- -	(40)	40
Other changes	- -	- -	- -
Changes in annual allocation	2,759	2,301	458
Net changes	$ 2,566	$ 2,195	$ 371
Balances at June 30, 2020	$ 25,364	$ 21,205	$ 4,159

Sensitivity of the Political Subdivision Health Insurance Credit Net OPEB Liability to Changes in the Discount Rate

The following presents the Political Subdivision HIC Program Net HIC OPEB liability of the Authority using the discount rate of 6.75%, as well as what the Authority's net HIC OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Authority's net HIC OPEB liability	$ 7,312	$ 4,159	$ 1,512

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

For the year ended June 30, 2021, the Authority recognized Health Insurance Credit Program OPEB expense of $467. At June 30, 2021, the Authority reported deferred outflows of resources and deferred inflows of resources related to Political Subdivision HIC Program from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ - -	$ 3,382
Change in assumptions	521	470
Net difference between projected and actual earnings on HIC OPEB plan investments	858	166
Employer contributions subsequent to the measurement date	1,094	- -
Total	$ 2,473	$ 4,018

The Authority reported $1,094 as deferred outflows of resources related to the HIC OPEB resulting from the Authority's contributions subsequent to the measurement date which will be recognized as a reduction of the Net HIC OPEB Liability in the Fiscal Year ending June 30, 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the HIC OPEB will be recognized in the HIC OPEB expense in future reporting periods as follows:

Year Ended June 30		
2022	$	(561)
2023		(407)
2024		(401)
2025		(411)
2026		(486)
Thereafter		(373)

Information about the VRS OPEB plan fiduciary net position is available in the separately issued VRS 2020 Annual Report. A copy of the 2020 VRS Annual Report may be downloaded from the VRS website at https://www.varetire.org/Pdf/Publications/2020-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

GROUP LIFE INSURANCE (GLI) PROGRAM AND PLAN PROVISIONS

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 GLI Program upon employment. This plan is administered by the Virginia Retirement System (the System), along with pensions and other OBEB plans, for public employer groups in the Commonwealth of Virginia and is a multiple employer, cost-sharing plan.

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 GLI Program OPEB.

Specific Information for GLI is available at www.varetire.org/members/benefits/life-insurance/basic-group-life-insurance.asp"

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 1.34% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.80% (1.34% X 60%) and the employer component was 0.54% (1.34% 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, 2021 was 0.54% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2019. 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 $14,825 and $15,555 for the years ended June 30, 2021 and June 30, 2020, 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, 2021, the Authority reported a liability of $81,127 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2020 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation performed as of June 30, 2019 and rolled forward to the measurement date of June 30, 2020. 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, 2020, relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2020, the Authority's proportion was 0.0049% as compared to 0.0044% at June 30, 2019.

For the year ended June 30, 2021, the Authority recognized GLI OPEB expense of $1,972. 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, 2021, 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	$ 5,204	$ 729
Change in assumptions	4,057	1,694
Change in proportion	2,072	1,450
Investment experience	2,437	
Net difference between projected and actual earnings on GLI OPEB plan investments	- -	- -
Employer contributions subsequent to the measurement date	14,825	- -
Total	$ 28,595	$ 3,872

$14,825 reported as deferred outflows of resources related to the GLI OPEB resulting from the employer's contributions subsequent to the measurement date which will be recognized as a reduction of the Net GLI OPEB Liability in the Fiscal Year ending June 30, 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

Year Ended June 30	
2021	$ 1,344
2022	2,032
2023	2,784
2024	2,991
2025	722
Thereafter	25

Actuarial Assumptions

The total GLI OPEB liability was based on an actuarial valuation as of June 30, 2019, 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, 2020.

Inflation	2.50%
Salary increases, including inflation	3.50% – 5.35%
Investment rate of return	6.75%, net of pension plan investment expense, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 6.75% 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 6.75% to simplify preparation of the OPEB liabilities.

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

Pre-Retirement:

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

Post-Retirement:

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

Post-Disablement:

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

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action 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 changed final retirement 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	Increase rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75%

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, 2020, NOL amounts for the GLI Program is as follows (amounts expressed in thousands):

	GLI OPEB Program
Total GLI OPEB Liability	$ 171,309
Plan Fiduciary Net Position	90,182
Employers' Net OPEB Liability	$ 81,127
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	52.64%

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

Long-Term Expected Rate of Return

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

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
Public Equity	34.00%	4.65%	1.58%
Fixed Income	15.00%	0.46%	0.07%
Credit Strategies	14.00%	5.38%	0.75%
Real Assets	14.00%	5.01%	0.70%
Private Equity	14.00%	8.34%	1.17%
MAPS - Multi-Asset Public Strategies	6.00%	3.04%	0.18%
PIP - Private Investment Partnership	3.00%	6.49%	0.19%
Total	100.00%		4.64%
	Inflation		2.50%
	* Expected arithmetic nominal return		7.14%

* The above allocation provides a one-year return of 7.14%. 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 7.11%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75%, which is roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation. More recent capital market assumptions compiled for the FY2020 actual valuations, provide a median return of 6.81%.

Discount Rate

The discount rate used to measure the total GLI OPEB liability was 6.75%. 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, 2020, 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, 2020 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

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

The following presents the Authority's proportionate share of the net GLI OPEB liability using the discount rate of 6.75%, as well as what the Authority'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 (5.75%) or one percentage point higher (7.75%) than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Authority's net GLI OPEB liability	$ 106,647	$ 81,127	$ 60,402

Note 15. Defined Benefit Pension Plan

Plan Description

All full-time, salaried permanent employees of the Authority are automatically covered by a VRS Retirement Plan upon employment. This plan is administered by the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer 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.

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 available at:

- https://www.varetire.org/members/benefits/defined-benefit/plan1.asp,
- https://www.varetire.org/members/benefits/defined-benefit/plan2.asp,
- https://www.varetire.org/hybrid.html.

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 contribution rate for the year ended June 30, 2021 was 8.94% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2019.

This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employee during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the Authority were $113,339 and $106,906 for the years ended June 30, 2021 and 2020, respectively.

Net Pension Liability

The net pension liability (NPL) is calculated separately for each employer and represents that particular employer's total pension liability determined in accordance with GASB Statement No. 68, less that employer's fiduciary net position. For the Authority, the net pension liability was measured as of June 30, 2020. The total pension liability used to calculation the net pension liability was determined by an actuarial valuation performed as of June 30, 2019 rolled forward to the measurement date of June 30, 2020.

Actuarial Assumptions

The total pension liability for employees in the Authority's Retirement Plan was based on an actuarial valuation as of June 30, 2019, 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, 2020.

Inflation	2.50%
Salary increases, including inflation	3.50% – 5.35%
Investment rate of return	6.75%, net of pension plan investment expense, including inflation*

*Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 6.75% 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 6.75% to simplify preparation of pension liabilities.

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 1.00% 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, 2019 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study are as follows:

Non 10 Largest – Non-Hazardous Duty:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increase rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75%

Long-Term Expected Rate of Return

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

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
Public Equity	34.00%	4.65%	1.58%
Fixed Income	15.00%	0.46%	0.07%
Credit Strategies	14.00%	5.38%	0.75%
Real Assets	14.00%	5.01%	0.70%
Private Equity	14.00%	8.34%	1.17%
MAPS - Multi-Asset Public Strategies	6.00%	3.04%	0.18%
PIP - Private Investment Partnership	3.00%	6.49%	0.19%
Total	100.00%		4.64%
	Inflation		2.50%
	* Expected arithmetic nominal return		7.14%

*The above allocation provides a one-year return of 7.14%. 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 7.11%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75%, which is roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation. More recent capital market assumptions compiled for the FY 2020 actuarial valuations, provide a median return of 6.81%.

Discount Rate

The discount rate used to measure the total pension liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Consistent with the phased-in funding provided by the General Assembly for state and teacher employer contributions; political subdivisions were also provided with an opportunity to use an alternate employer contribution rate. For the year ended June 30, 2020, the alternate rate was the employer contribution rate used in FY 2012 or 100% of the actuarially determined employer contribution rate from the June 30, 2017, actuarial valuations, whichever was greater. From July 1, 2020 on, participating employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

Changes in Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2019	$ 3,410,236	$ 3,049,268	$ 360,968
Increase (decrease) for the year:			
Service cost	$ 103,292	$ - -	$ 103,292
Interest	258,635	- -	258,635
Changes of assumptions	- -	- -	- -
Differences between expected	- -	- -	
and actual experience	82,273	- -	82,273
Contributions - employer	- -	80,068	(80,068)
Contributions - employee	- -	46,609	(46,609)
Net investment income	- -	66,921	(66,921)
Benefit payments, including refunds	- -	- -	- -
of employee contributions	(174,493)	(174,493)	
Administrative expenses	- -	(2,276)	2,276
Other changes	- -	(79)	79
Changes in annual allocation	508,645	454,805	53,840
Net changes	$ 778,353	$ 471,555	$ 306,798
Balances at June 30, 2020	$ 4,188,589	$ 3,520,823	$ 667,766

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

The following presents the net pension liability of the Authority using the discount rate of 6.75%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
Authority's net pension (asset)/ liability	$ 1,241,944	$ 667,766	$ 196,015

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

For the year ended June 30, 2021, the Authority recognized pension expense of $166,343. At June 30, 2021, the political subdivision reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 70,798	$ 3,862
Change in assumptions	51,162	- -
Net difference between projected and actual earnings on pension plan investments	104,948	- -
Employer contributions subsequent to the measurement date	113,339	- -
Total	$ 340,247	$ 3,862

$166,343 reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the fiscal year ending June 30, 2022. 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		
2022	$	66,696
2023		78,103
2024		44,665
2025		33,582
2026		- -
Thereafter		- -

Information about the VRS Political Subdivision Retirement Plan's is also available in the separately issues VRS 2020 Annual Report. A copy of the 2020 VRS Annual Report may be downloaded from the VRS website at https://www.varetire.org/Pdf/Publications/2020-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

Note 16. Uncertainties Related to the Global Pandemic

During the year ended June 30, 2020, local, U.S. and world governments encouraged self-isolation to curtail the spread of the global pandemic, coronavirus disease (COVID-19), by mandating temporary work stoppage in many sectors and imposing limitations on travel, size and duration of group meetings. Most industries have, and continue to, experience disruption to business operations and the impact of reduced consumer spending, including the Authority. There is unprecedented uncertainty surrounding the duration of the pandemic, its potential economic ramifications, and any government actions to mitigate them. Accordingly, while it is difficult to quantify the effects on the Authority, is reasonably possible that there could be an effect on the Authority's operations in fiscal year 2022 and beyond.

Note 17. Subsequent Events

The Authority has evaluated all subsequent events through December 10, 2021 the date the financial statements were available to be issued.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedules of Capital Assets
Years Ended June 30, 2021 and 2020

2021	**Opequon**	**Parkins Mill**	**Stephens Run**	**Crooked Run**	**Total**
Land	$ 442,943	$ 31,000	$ 8,462	$ - -	$ 482,405
Structures and improvements	142,133,839	58,268,272	677,019	4,500,000	205,579,130
Equipment	658,212	- -	- -	- -	658,212
Vehicles	486,155	- -	- -	- -	486,155
Master plan	190,735	- -	- -	- -	190,735
Plant expansion - design costs and construction	12,821,184	- -	- -	- -	12,821,184
Total	156,733,068	58,299,272	685,481	4,500,000	220,217,821
Accumulated depreciation	(63,576,071)	(28,578,553)	(677,019)	(3,150,000)	(95,981,643)
Net capital assets	$ 93,156,997	$ 29,720,719	$ 8,462	$ 1,350,000	$ 124,236,178

2020	**Opequon**	**Parkins Mill**	**Stephens Run**	**Crooked Run**	**Total**
Land	$ 442,943	$ 31,000	$ 8,462	$ - -	$ 482,405
Structures and improvements	140,477,975	58,268,272	677,019	4,500,000	203,923,266
Equipment	658,212	- -	- -	- -	658,212
Vehicles	486,155	- -	- -	- -	486,155
Master plan	190,735	- -	- -	- -	190,735
Construction in progress	445,930	- -	- -	- -	445,930
Plant expansion - design costs and construction	12,821,184	- -	- -	- -	12,821,184
Total	155,523,134	58,299,272	685,481	4,500,000	219,007,887
Accumulated depreciation	(60,059,921)	(26,900,455)	(677,019)	(2,925,000)	(90,562,395)
Net capital assets	$ 95,463,213	$ 31,398,817	$ 8,462	$ 1,575,000	$ 128,445,492

See Independent Auditor's Report.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedule of Future Debt Requirements
At June 30, 2021

Fiscal Year Ending June 30	Principal			
	Opequon	Parkins Mill	Energy Project	Total
2022	$ 1,924,447	$ 2,028,491	$ 1,720,000	$ 5,672,938
2023	1,951,642	2,079,931	1,800,000	5,831,573
2024	2,004,562	2,132,675	1,885,000	6,022,237
2025	2,073,226	2,186,757	1,975,000	6,234,983
2026	2,132,655	2,242,211	2,075,000	6,449,866
2027-2031	16,322,936	8,305,059	6,660,000	31,287,995
2032-2036	14,450,000	- -	5,015,000	19,465,000
2037-2041	9,970,000	- -	3,130,000	13,100,000
Total	$ 50,829,468	$ 18,975,124	$ 24,260,000	$ 94,064,592

Fiscal Year Ending June 30	Interest			
	Opequon	Parkins Mill	Energy Project	Total
2022	$ 1,311,237	$ 465,474	$ 918,375	$ 2,695,086
2023	1,294,515	414,034	838,675	2,547,224
2024	1,234,975	361,289	751,572	2,347,836
2025	1,172,460	307,207	660,134	2,139,801
2026	1,106,567	251,754	560,003	1,918,324
2027-2031	4,306,217	423,815	2,110,594	6,840,626
2032-2036	2,417,251	- -	933,091	3,350,342
2037-2041	475,561	- -	130,144	605,705
Total	$ 13,318,783	$ 2,223,573	$ 6,902,588	$ 22,444,944

See Independent Auditor's Report.

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

To the Board of Directors
Frederick-Winchester Service Authority
Winchester, Virginia

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Frederick-Winchester Service Authority, which comprise the statement of net position as of June 30, 2021, and the related statements of revenues, expenses and changes in net position, and cash flows for the year then ended, and the related notes to the financial statements, which collectively comprise Frederick-Winchester Service Authority's basic financial statements, and have issued our report thereon dated December 10, 2021.

Internal Control Over Financial Reporting

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

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

> The Authority's accounting department currently does not prepare its financial statements, including the notes to the financial statements, in accordance with accounting principles generally accepted in the United States of America. Accordingly, the Authority is unable to, and has not established internal controls over the preparation of financial statements. We are required to report this deficiency. The standards do not provide exceptions to reporting deficiencies that are adequately mitigated with non-audit services rendered by the auditor or deficiencies for which the remedy would be cost prohibitive. Because prudent management requires that the potential benefit from an internal control must exceed its cost, it may not be practical to correct all the deficiencies an auditor reports. Accordingly, you may decide that curing the deficiency described above would not be cost effective and take no action.

Compliance and Other Matters

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

Purpose of this Report

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

Yount, Hyde & Barbour, P.C.

Winchester, Virginia
December 10, 2021

REQUIRED SUPPLEMENTARY INFORMATION

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedules of Changes in Employer's Proportionate Share of Net Pension Liability and Related Ratios

	Plan Years Ended June 30,					
	2020	**2019**	**2018**	**2017**	**2016**	**2015**
Total pension liability						
Service cost	$ 103,292	$ 83,897	$ 119,189	$ 127,542	$ 121,838	$ 115,052
Interest	258,635	213,827	297,138	294,497	274,980	260,937
Differences between expected and actual experience	82,273	26,224	(26,709)	(28,344)	(12,125)	(122,978)
Changes in assumptions	- -	104,283	- -	(34,250)	- -	- -
Benefit payments, including refunds of employee contributions	(174,493)	(145,325)	(194,332)	(185,331)	(180,751)	(162,373)
Changes in annual allocation	508,645	(1,409,949)	(131,883)	77,999	118,330	(129,631)
Net change in total pension liability	$ 778,353	$ (1,127,042)	$ 63,403	$ 252,113	$ 322,272	$ (38,993)
Total pension liability - beginning	3,410,236	4,537,278	4,473,875	4,221,762	3,899,490	3,938,483
Total pension liability - ending (a)	$ 4,188,589	$ 3,410,236	$ 4,537,278	$ 4,473,875	$ 4,221,762	$ 3,899,490
Plan fiduciary net position						
Contributions - employer	$ 80,068	$ 68,234	$ 100,128	$ 101,586	$ 124,051	$ 117,022
Contributions - employee	46,609	41,738	52,042	54,767	53,588	49,873
Net investment income	66,921	193,254	292,081	446,445	62,811	150,361
Benefit payments, including refunds of employee contributions	(174,493)	(145,325)	(194,332)	(185,331)	(180,751)	(162,373)
Administrative expense	(2,276)	(1,903)	(2,508)	(2,557)	(2,174)	(2,025)
Other	(79)	(122)	(261)	(398)	(29)	(32)
Changes in annual allocation	454,805	(1,304,479)	(119,998)	66,325	104,059	(111,480)
Net change in plan fiduciary net position	$ 471,555	$ (1,148,603)	$ 127,152	$ 480,837	$ 161,555	$ 41,346
Plan fiduciary net position - beginning	3,049,268	4,197,871	4,070,719	3,589,882	3,428,327	3,386,981
Plan fiduciary net position - ending (b)	$ 3,520,823	$ 3,049,268	$ 4,197,871	$ 4,070,719	$ 3,589,882	$ 3,428,327
Political subdivision's net pension liability - ending (a) - (b)	$ 667,766	$ 360,968	$ 339,407	$ 403,156	$ 631,880	$ 471,163
Plan fiduciary net position as a percentage of the total pension liability	84.06%	89.42%	92.52%	90.99%	85.03%	87.92%
Covered-employee payroll	$ 1,294,549	$ 1,273,663	$ 1,180,078	$ 1,281,165	$ 1,221,609	$ 1,281,165
Net pension liability as a percentage of covered-employee payroll	51.58%	28.34%	28.76%	31.47%	51.73%	36.78%

Note: This data will be presented prospectively until ten years are accumulated.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedule of Employer Pension Contributions

Date	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contribution Deficiency (Excess) (3)	Employer's Covered Employee Payroll (4)	Contributions as a % of Covered Employee Payroll (5)
2021	$ 113,339	$ 113,339	$ - -	$ 1,268,264	8.94%
2020	$ 106,906	$ 106,906	$ - -	$ 1,294,549	8.26%
2019	$ 97,207	$ 97,207	$ - -	$ 1,273,663	7.63%
2018	$ 96,443	$ 96,443	$ - -	$ 1,180,078	8.17%
2017	$ 98,201	$ 98,201	$ - -	$ 1,281,165	7.66%
2016	$ 126,469	$ 126,469	$ - -	$ 1,221,609	10.35%

Note: This data will be presented prospectively until ten years are accumulated.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedule of Changes in Employer's Proportionate Share of Net OPEB Liability and Related Ratios June 30, 2021

Retiree Health Plan - Total for FWSA		
Total OPEB Liability		
Service cost	$	2,045
Interest on total OPEB liability		4,760
Difference between expected and actual experience		(64)
Changes in assumptions		- -
Benefit payments, including refunds of employee contributions		(3,202)
Net change in total OPEB liability	$	3,539
Total OPEB liability - beginning		74,864
Total OPEB liability - ending	$	78,403
Plan fiduciary net position		
Contributions - employer	$	6,712
Net investment income		10,872
Benefit payments		(3,202)
Net change in plan fiduciary net position	$	14,382
Plan fiduciary net position - beginning		39,483
Plan fiduciary net position - ending	$	53,865
Net OPEB liability	$	24,538
Plan fiduciary net position as a percentage of total OPEB liability		69%
Covered payroll	$	1,268,264
Net OPEB liability as a percentage of covered payroll		1.9%
Schedule of Investment Returns		
Annual money-weighted rate of return, net of investment expense		26.22%

This schedule is intended to show inforamtion for 10 years. Fiscal year 2021 is the first year for this presentation. Additional years will be included as they become available.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedule of Changes in Employer's Proportionate Share of Net HIC OPEB Liability and Related Ratios

	Plan Year Ended			
	2020	2019	2018	2017
Total Health Insurance Credit (HIC) OPEB liability				
Service cost	$ 741	$ 647	$ 860	$ 912
Interest	1,668	1,582	2,176	2,144
Differences between expected and actual experience	(901)	(2,137)	- -	- -
Changes in assumptions	- -	626	(1,611)	(1,170)
Changes in annual allocation	2,759	(8,563)	(229)	- -
Benefit payments, including refunds of employee contributions	(1,701)	(1,039)	(1,644)	(772)
Net change in total HIC OPEB liability	$ 2,566	$ (8,884)	$ (448)	$ 1,114
Total HIC OPEB liability - beginning	22,798	31,682	32,130	31,016
Total HIC OPEB liability - ending (a)	$ 25,364	$ 22,798	$ 31,682	$ 32,130
Plan fiduciary net position				
Contributions - employer	$ 1,209	$ 1,040	$ 1,397	$ 1,448
Contributions - employee	- -	- -	- -	- -
Net investment income	426	1,157	1,652	2,395
Benefit payments, including refunds of employee contributions	(1,701)	(1,039)	(1,644)	(772)
Administrative expense	(40)	(25)	(39)	(40)
Changes in annual allocation	2,301	(6,622)	(167)	- -
Other	- -	(1)	(117)	118
Net change in plan fiduciary net position	$ 2,195	$ (5,490)	$ 1,082	$ 3,149
Plan fiduciary net position - beginning	19,010	24,500	23,418	20,269
Plan fiduciary net position - ending (b)	$ 21,205	$ 19,010	$ 24,500	$ 23,418
Political subdivision's net HIC OPEB liability - ending (a) - (b)	$ 4,159	$ 3,788	$ 7,182	$ 8,712
Plan fiduciary net position as a percentage of the total HIC OPEB liability	83.60%	83.38%	77.30%	72.89%
Covered-employee payroll	$ 1,294,549	$ 1,273,663	$ 1,180,078	$ 1,281,165
Net HIC OPEB liability as a percentage of covered-employee payroll	0.32%	0.30%	0.61%	0.68%

Note: This data will be presented prospectively until ten years are accumulated.

FREDERICK-WINCHESTER SERVICE AUTHORITY

Schedules of OPEB Contributions

Date	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contribution Deficiency (Excess) (3)	Employer's Covered Employee Payroll (4)	Contributions as a % of Covered Employee Payroll (5)
Net Retiree Health Plan					
2021	$ 15,636	$ 15,636	$ - -	$ 1,268,264	1.23%
Net Group Life Insurance (GLI) Program OPEB Plan					
2021	$ 14,825	$ 14,825	$ - -	$ 1,268,264	1.17%
2020	$ 15,555	$ 15,555	$ - -	$ 1,294,549	1.20%
2019	$ 14,167	$ 14,167	$ - -	$ 1,273,663	1.11%
2018	$ 13,176	$ 13,176	$ - -	$ 1,281,165	1.03%
Net Health Insurance Credit (HIC) Program OPEB Plan					
2021	$ 1,094	$ 1,094	$ - -	$ 1,268,264	0.09%
2020	$ 1,380	$ 1,380	$ - -	$ 1,294,549	0.11%
2019	$ 1,297	$ 1,297	$ - -	$ 1,273,663	0.10%
2018	$ 1,306	$ 1,306	$ - -	$ 1,281,165	0.10%

Note: This data will be presented prospectively until ten years are accumulated.

1. <u>Changes of Benefit Terms – Net Pension Liability</u>:

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

2. <u>Changes in Assumptions – Net Pension Liability</u>:

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial study for the period from July 1, 2012 through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Non 10 Largest – Non-Hazardous Duty:

Mortality Rates	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No Change
Line of Duty Disability	Increase rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75%

3. Changes of Benefit Terms – Net HIC OPEB Liability:

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

4. Changes in Assumptions – Net HIC OPEB Liability:

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial study for the period from July 1, 2012 through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Non-Largest Ten Locality Employers – General Employees:

Mortality Rates	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement 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	Increase rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75%

5. Changes of Benefit Terms – Net GLI OPEB Liability:

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

6. Changes in Assumptions – Net GLI OPEB Liability:

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial study for the period from July 1, 2012 through June 30, 2016, except the change in discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Non-Largest Ten Locality Employers – General Employees:

Mortality Rates	Update to a more current mortality table – RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service through 9 years of services
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increase rate from 14% to 25%
Discount Rate	Decrease rate from 7.00% to 6.75%