FREDERICK WATER

FINANCIAL REPORT

June 30, 2020

FREDERICK WATER

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INTRODUCTORY SECTION

FREDERICK WATER

DIRECTORY OF PRINCIPAL OFFICIALS
June 30, 2020

DIRECTORS

Gary Oates – Chairman
J. Stanley Crockett – Vice Chairman
Martha Dilg – Secretary/Treasurer

Tom Simon   Henry F. Sliwinski

EXECUTIVE DIRECTOR

Eric Lawrence, AICP

INDEPENDENT AUDITORS

Brown, Edwards & Company, L.L.P.

ATTORNEYS

McGuireWoods LLP

FINANCIAL SECTION

The Financial Section contains Management's Discussion and Analysis and the Basic Financial Statements

BROWN EDWARDS
certified public accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Frederick Water
Winchester, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of Frederick Water (the "Authority"), as of and for the year ended June 30, 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 an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and *Specifications for Audits of Authorities, Boards and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the 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 financial position of the Authority as of June 30, 2020, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

1909 Financial Drive • Harrisonburg, VA 22801 • 540-434-6736 • Fax: 540-434-3097 • www.BEcpas.com

Other Matters

Required Supplementary Information

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

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Authority's basic financial statements. The introductory and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Report on Comparative Information

We have previously audited the Authority's 2019 financial statements, and our report dated October 10, 2019, expressed an unmodified opinion on those financial statements. The 2019 financial information is provided for comparative purposes only. In our opinion, the comparative information presented herein as of and for the year ended June 30, 2019, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 27, 2020 on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

Brown, Edwards & Company, L.L.P.

CERTIFIED PUBLIC ACCOUNTANTS

Harrisonburg, Virginia
October 27, 2020

MANAGEMENT'S DISCUSSION AND ANALYSIS

Introduction

The Frederick County Sanitation Authority dba Frederick Water is a Virginia corporation created under the Virginia Water and Waste Authorities Act on August 1, 1967, for the purpose of "acquiring, constructing, operating, and maintaining (a) an integrated water supply and distribution system in Frederick County and (b) an integrated sewer system for Frederick County." Frederick Water is a public body, politic and corporate, deemed to be an instrumentality exercising public and essential governmental functions to provide for the public health and welfare.

Frederick Water is empowered: to acquire, construct, operate, and maintain water supply and distribution systems and sewer collection systems; operate wastewater treatment plants; to finance its projects through issuance of revenue bonds; and to fix and prescribe rates, fees, and charges for services rendered. Although Frederick Water was established by the Frederick County Board of Supervisors, the County exercises no oversight responsibility and has no accountability for Frederick Water's fiscal matters. Frederick Water is governed by a five-member board. Each member of the Board is appointed by the Frederick County Board of Supervisors and serves a four year term. The Board of Supervisors designates where Frederick Water can provide service within the County through the Sewer and Water Service Area (SWSA) in the County's Comprehensive Plan.

Overview of Financial Statements

This discussion and analysis is intended as an introduction to Frederick Water's basic financial statements. Frederick Water's basic financial statements are comprised of two components: (1) enterprise fund financial statements and (2) notes to the financial statements.

Enterprise fund financial statements. Since Frederick Water engages only in business-type activities, the *enterprise fund financial statements* and *notes* are prepared in a manner similar to a private-sector business. Frederick Water uses the accrual method to account for and report financial transactions. Revenues are recognized as they are earned and expenses are recognized as they are incurred, regardless of the timing of related cash receipts and disbursements. All assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are measurable and probable are included in the financial statements. The full acquisition costs of all capital assets are included in the Statement of Net Position and are depreciated over their estimated useful life.

The ***statement of net position*** presents information on Frederick Water's assets, deferred outflows of resources, liabilities, and deferred inflows of resources as of June 30, 2020 and June 30, 2019, with the difference reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of Frederick Water is improving or deteriorating.

The ***statement of revenues, expenses, and changes in fund net position*** presents information showing how Frederick Water's net position changed between fiscal years 2020 and 2019. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of cash flows. Thus, some of the revenues and expenses that are reported in this statement will only affect cash flows in future fiscal periods (e.g., earned but unused paid time off).

The ***statement of cash flows*** supplements the above two statements by presenting the changes in cash position as a result of Frederick Water's activities over the last two fiscal years.

Notes to the financial statements. The notes provide additional information that is essential for a full understanding of the data provided in the financial statements.

Overview of Operations

Frederick Water's operations are influenced by the area's economic growth. There were 503 new water connections during the fiscal year, representing an increase of 3.1%, bringing the number of water customers serviced to over 16,900. There were 496 new sewer connections during the fiscal year, representing an increase of 3.1%, bringing the number of sewer customers serviced to over 16,380. New connections were better than expected and indications are the economy in our area will remain strong over the next several years. Frederick Water continues its efforts to improve operations, perform infrastructure maintenance, and provide additional sources of water and wastewater treatment capacity to be prepared for future growth.

Frederick Water is utilizing mobile devices in the field for staff to have access to engineering drawings through a mobile application. The GIS staff have scanned and geo-referenced a majority of Frederick Water's paper drawings through a third-party vendor. Frederick Water continues the consolidation of its SCADA systems to a secure, easier-to-access system and have begun segmenting SCADA traffic to a separate network for additional security. Frederick Water currently utilizes social media platforms and its website to inform customers of service disruptions.

Financial Highlights

Frederick Water's financial position increased by $9,360,150 for the fiscal year ended June 30, 2020. The assets and deferred outflows exceeded liabilities and deferred inflows by $142,765,766. Frederick Water had $111,515,916 invested in capital assets and $31,249,850 of unrestricted net position available to meet ongoing obligations. Frederick Water's total assets and deferred outflows increased by .9% or $2,082,421, while total liabilities and deferred inflows decreased 7.3% or $7,277,729.

In 2020, Frederick Water completed the ball fields as required under a cost sharing arrangement with one of our water supply sources as a result of the displacement of existing ball fields due to mining activities. Over the previous three years, Frederick Water has incurred total expenditures of $3,902,247, and received interest forgiveness of $657,083 of Long-term interest payable to Frederick County upon completion of the ball fields, for a net total cost of $3,245,164 for the replacement ball fields.

In 2020, Frederick Water entered into lease agreements with a water supply source. One agreement allows for unlimited water extraction in various pits, the use of the James T. Anderson Water Treatment Plant, and various ground wells for six years at an annual fixed amount. Another agreement allows for unlimited water extraction from one or two pits at an annual fixed amount with all payments applied towards the purchase price of either pit at a future date.

In 2020, obligations under an Abrams Creek West Water and Sewer agreement from 2005 for the Willow Run Service Area were identified which had not been recorded in our books. In order to properly account for this agreement, Frederick Water recorded a $2,351,832 liability equal to amounts paid over the years under the agreement for future connections. As well, Frederick Water's obligations under two Route 11 North Industrial Service Area Grant In Aid of Construction agreements have been met. The revenue to be recorded for these two agreements is $388,132, for a net prior period adjustment of $1,963,700. Beginning net position has been restated as discussed in Note 11, and this has had an impact on Frederick Water's net position.

In 2019, Frederick Water entered into a settlement agreement with a water supply source and wholesale customer. The agreement conveyed to Frederick Water three tracts of real property including two water supply sources (quarries) in exchange for discounted water and sewer rates in perpetuity and release from all unpaid water and wastewater charges and unpaid debt service charges incurred and not paid up to the closing date of the agreement. The non-operating revenues recorded related to the settlement agreement during 2019 were $1,839,679. Frederick Water was required to pay $50,000 as part of the agreement which has been capitalized as part of the land acquisition costs.

Financial Highlights (Continued)

Results of Operations

Frederick Water's revenues for the fiscal year ended June 30, 2020, decreased 3.2% or $1,306,629 from the previous fiscal year. A large increase of 17.9% or $4,421,809 over the prior year was attributable to Water and Sewer Service revenue. The increase is the result of a 20% base rate increase for sewer for residential customers and relative increases for larger meter sizes as well as a 25% increase on consumption rates for usage in excess of 50,000 gallons, both effective July 1, 2019. This increase was offset by decreases in Capital Contributions, Other Nonoperating Revenues, and Availability Fees. Capital Contributions decreased 75.2% or $2,322,423 from the prior year. Nonoperating revenues decreased 98.4% or $1,809,743 from the prior year as the prior year included $1,829,762 attributable to the real estate tracts (quarries) received under the Settlement agreement with the water supply source and wholesale customer. Availability Fees decreased 15.8% or $1,506,108 from the prior year.

Frederick Water Changes in Net Position

	2020	2019
Revenues:		
Charges for service	$ 29,111,069	$ 24,689,260
Capital contributions	767,657	3,090,080
Availability Fees	8,046,904	9,553,012
Other operating revenues	364,208	472,365
Investment earnings	1,488,651	1,474,230
Other nonoperating revenues	33,508	1,839,679
Total revenues	39,811,997	41,118,626
Expenses:		
Source of water supply	2,944,662	3,596,470
Water transmission and distribution	1,946,362	1,765,312
Wastewater collection	731,531	757,543
Wastewater treatment	3,686,694	3,738,090
Maintenance and operations	990,071	912,025
Customer accounting and collections	795,577	705,998
Engineering and planning	1,083,031	879,140
General and administration	3,801,047	2,819,251
Depreciation	11,023,300	10,920,040
Contractual obligation – ballfields cost sharing	5,335	739,828
(Gain) loss on sale of assets	10,599	(2,186)
Interest expense	2,634,071	2,857,477
Other nonoperating expenses	799,567	35,166
Total expense	30,451,847	29,724,154
Increase in net position	9,360,150	11,394,472
Net position beginning of year (as restated)	133,405,616	122,011,144
Net position end of year	$ 142,765,766	$ 133,405,616

Results of Operations (Continued)

Frederick Water's expenses for the fiscal year ended June 30, 2020, increased 2.4% or $727,693 from the previous fiscal year.

Source of water supply expenses for the fiscal year ended June 30, 2020, decreased 18.1% or $651,808. The decrease is attributable to a 27% reduction in gallons of water purchased from the City of Winchester, offset by a 10% increase in the average rate paid per thousand gallons, compared to the previous year, contributing $501,748 to the decrease. As a result of new lease agreements with our other water supply source, a reduction of $150,060 from the prior year was achieved.

General and administrative expenses for the fiscal year ended June 30, 2020, increased 34.8% or $981,796 from the prior year. Legal and professional services, incurred primarily for litigation with a developer increased $559,700 from the prior year due an approaching trial date in conjunction with legal assistance on other contract negotiations and engineering services. Pension costs increased $199,573 and Health care costs increased $115,031 from the prior year.

Frederick Water's single largest expense is depreciation. Depreciation accounted for 36.2 % of total operating expenses for the fiscal year ended June 30, 2020. Frederick Water owns $312 million in fixed assets that are subject to annual depreciation. Straight line depreciation is used over the life expectancy of the asset which ranges from 3 to 40 years.

Contractual obligation – ball fields cost sharing expenses for the fiscal year ended June 30, 2020, decreased 99.3% or $734,493 from the prior year. This expense represents Frederick Water's cost to construct ball fields to replace those being displaced by one of our water supply sources (quarry). The ball fields were completed in fiscal year 2020 which contributed to this decrease.

Other nonoperating expenses for the fiscal year ended June 30, 2020, increased 2173.7% or $764,401 from the prior year. A settlement agreement with a major customer as a result of a water event contributed $729,805 of the increase.

Capital Contributions and Assets

This area of Frederick Water's operations had significant activity during fiscal year 2020. During the fiscal year June 30, 2020, Frederick Water invested funds in the following:

- began design and construction of a raw water pump station and lines to provide water to our Diehl Water Treatment Plant,
- began upgrade to water mains along Route 277 in Stephens City area,
- began design and construction of an upgrade to an existing Sewer Pump station along Route 50 East
- continuing design for the Opequon Initiative which includes; a new water treatment plant, creek intake and well exploration,
- completed construction of a Water Loop to connect the north and south ends of our water system,
- completed construction of an upgrade to an existing Water Booster Pump Station,
- completed construction of an Elevated Storage Tank and continued design of a filtration plant in the Lake Frederick service area,

Capital Contributions and Assets (Continued)

- completed construction of the Frederick County Ball fields,
- completed construction of 2nd floor office space in the Administrative Office building,
- continuing design of sewer line improvements to redirect flows to the Parkins Mill Wastewater Treatment plant, and
- routine purchases for manhole rehabilitation, meters, fire hydrant replacements, as well as equipment and vehicle replacements.

Capital contributions, representing the value of assets deeded to Frederick Water by developers, were $767,657 for the fiscal year ended June 30, 2020.

Assets and Deferred Outflows of Resources

Frederick Water's total assets and deferred outflows of resources increased during the fiscal year ended June 30, 2020, .9% or $2,082,421.

Liabilities and Deferred Inflows of Resources

Frederick Water's total liabilities and deferred inflows of resources decreased during the fiscal year ended June 30, 2020, 7.3 % or $7,277,729. This decline is attributable to decreasing bond obligation balances as a result of scheduled principal payments.

Debt

Frederick Water had total bonded debt of $13,882,940 and obligations and leases payable of $62,938,591 as of June 30, 2020. Overall, debt decreased by $5,645,677, net of deferred amounts. A bond refunding occurred during the fiscal year contributing $505,560 to the reduced indebtedness over the term of the bond, an estimated $370,200 net present value or 9.5% savings of the refunded bonds.

Frederick Water Net Position

	2020	2019
Current and other assets	$ 44,784,941	$ 48,395,584
Capital assets	189,023,932	183,713,327
Total assets	233,808,873	232,108,911
Deferred outflows of resources	1,224,520	842,061
Current liabilities	16,083,120	16,096,098
Long-term liabilities	75,668,262	82,725,961
Total liabilities	91,751,382	98,822,059
Deferred inflows of resources	516,245	723,297
Net position:		
Net investment in capital assets	111,515,916	101,198,250
Unrestricted	31,249,850	32,207,366
Total net position	$ 142,765,766	$ 133,405,616

Requests for Information

Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Executive Director at P. O. Box 1877, Winchester, Virginia 22604.

BASIC FINANCIAL STATEMENTS

Exhibit 1

FREDERICK WATER
STATEMENT OF NET POSITION
June 30, 2020
(With Comparative Amounts as of June 30, 2019)

	2020	2019
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents, unrestricted (Note 2)	$ 9,132,750	$ 10,641,469
Cash and cash equivalents, restricted (Note 2)	1,710	371
Investments (Note 2)	29,776,264	32,890,940
Accounts receivable, net (Note 3)	5,144,971	4,318,451
Prepaid and other assets	186,629	164,856
Inventories	542,617	379,497
Total current assets	44,784,941	48,395,584
NONCURRENT ASSETS		
Capital assets, net (Note 4)	189,023,932	183,713,327
Total noncurrent assets	189,023,932	183,713,327
Total assets	233,808,873	232,108,911
DEFERRED OUTFLOWS OF RESOURCES		
Deferred charge on refunding	630,935	612,468
Deferred outflows related to pensions (Note 6)	501,835	166,328
Deferred outflows related to other postemployment benefits (Note 7)	91,750	63,265
Total deferred outflows of resources	1,224,520	842,061
LIABILITIES		
CURRENT LIABILITIES		
Accounts payable, contracts payable and accrued expenses	2,753,936	3,707,112
Accrued interest	714,718	815,241
Unearned revenue	6,396,743	5,508,625
Current portion of compensated absences (Note 5)	580,713	478,357
Current portion of bonds, notes, and other obligations payable (Note 5)	5,637,010	5,586,763
Total current liabilities	16,083,120	16,096,098
NONCURRENT LIABILITIES		
Contracts payable	583,844	-
Customer deposits	1,310,823	1,362,193
Accrued interest (Note 5)	-	657,083
Compensated absences (Note 5)	387,142	183,545
Contractual obligation (Note 10)	-	2,549,695
Net pension liability (Note 6)	538,343	113,202
Net other postemployment benefit liability (Note 7)	346,169	319,461
Other long term liabilities (Note 5)	72,501,941	77,540,782
Total noncurrent liabilities	75,668,262	82,725,961
Total liabilities	91,751,382	98,822,059
DEFERRED INFLOWS OF RESOURCES		
Deferred inflows related to pensions (Note 6)	493,337	692,761
Deferred inflows related to other postemployment benefits (Note 7)	22,908	30,536
Total deferred inflows of resources	516,245	723,297
NET POSITION		
Net investment in capital assets	111,515,916	101,198,250
Unrestricted	31,249,850	32,207,366
Total net position	$ 142,765,766	$ 133,405,616

The Notes to Financial Statements are an integral part of this statement.

Exhibit 2

FREDERICK WATER
STATEMENT OF REVENUES, EXPENSES, AND CHANGES
IN FUND NET POSITION
For the Year Ended June 30, 2020
(With Comparative Amounts for the Year Ended June 30, 2019)

	2020	2019
OPERATING REVENUES		
Charges for services:		
Water service	$ 13,589,927	$ 11,590,618
Sewer service	15,141,163	12,369,087
Contract water and sewer services (expense), net	(38,340)	35,018
Penalties and surcharges	253,639	454,127
Connection fees	164,680	240,410
Miscellaneous	364,208	472,365
Total operating revenues	29,475,277	25,161,625
OPERATING EXPENSES		
Source of water supply (Note 8)	2,944,662	3,596,470
Water transmission and distribution	1,946,362	1,765,312
Wastewater collection	731,531	757,543
Wastewater treatment	3,686,694	3,738,090
Maintenance and operations	990,071	912,025
Customer accounting and collecting	795,577	705,998
Engineering and planning	1,083,031	879,140
General and administrative	3,801,047	2,819,251
Depreciation (Note 4)	11,023,300	10,920,040
Total operating expenses	27,002,275	26,093,869
Operating income (loss)	2,473,002	(932,244)
NONOPERATING REVENUES (EXPENSES)		
Investment earnings	1,488,651	1,474,230
Availability fees	8,046,904	9,553,012
Gain on settlement agreement	29,936	1,839,679
Insurance proceeds	3,572	-
Contractual obligation expense (Note 10)	(5,335)	(739,828)
(Loss) gain on disposal of capital assets	(10,599)	2,186
Interest expense	(2,634,071)	(2,857,477)
Other nonoperating expenses	(799,567)	(35,166)
Total nonoperating revenues (expenses), net	6,119,491	9,236,636
Income before capital contributions	8,592,493	8,304,392
CAPITAL CONTRIBUTIONS	767,657	3,090,080
Change in net position	9,360,150	11,394,472
NET POSITION AT JULY 1, AS RESTATED (NOTE 11)	133,405,616	122,011,144
NET POSITION AT JUNE 30	$ 142,765,766	$ 133,405,616

The Notes to Financial Statements are an integral part of this statement.

FREDERICK WATER
STATEMENT OF CASH FLOWS
For the Year Ended June 30, 2020
(With Comparative Amounts for the Year Ended June 30, 2019)

	2020	2019
OPERATING ACTIVITIES		
Receipts from customers	$ 28,597,387	$ 24,694,092
Payments to suppliers	(17,310,987)	(12,350,947)
Payments to employees	(3,288,501)	(3,400,836)
Net cash provided by operating activities	7,997,899	8,942,309
CAPITAL AND RELATED FINANCING ACTIVITIES		
Acquisition and construction of capital assets and water rights	(14,700,388)	(6,232,619)
Availability fees	8,935,022	11,192,071
Proceeds from sale of capital assets	3,247	8,621
Proceeds from debt refunding	4,001,000	-
Payment to escrow agent on bond refunding	(3,987,873)	-
Principal payments on long-term liabilities	(5,525,701)	(5,088,646)
Interest payments on long-term obligations	(2,837,485)	(3,007,911)
Insurance proceeds	3,572	-
Net cash used in capital and related financing activities	(14,108,606)	(3,128,484)
INVESTING ACTIVITIES		
Proceeds from investments	12,876,875	6,664,482
Purchases of investments	(9,059,675)	(12,190,000)
Investment earnings	786,127	891,965
Net cash provided by (used in) investing activities	4,603,327	(4,633,553)
Net increase (decrease) in cash and cash equivalents	(1,507,380)	1,180,272
CASH AND CASH EQUIVALENTS		
Beginning at July 1	10,641,840	9,461,568
Ending at June 30	$ 9,134,460	$ 10,641,840
RECONCILIATION TO STATEMENT OF NET POSITION		
Cash and cash equivalents, unrestricted	$ 9,132,750	$ 10,641,469
Cash and cash equivalents, restricted	1,710	371
	$ 9,134,460	$ 10,641,840

(Continued)

FREDERICK WATER
STATEMENT OF CASH FLOWS
For the Year Ended June 30, 2020
(With Comparative Amounts for the Year Ended June 30, 2019)

	2020	2019
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED BY OPERATING ACTIVITIES:		
Operating income (loss)	$ 2,473,002	$ (932,244)
Adjustments to reconcile operating income (loss) to net cash provided by operating activities:		
Depreciation	11,023,300	10,920,040
Excess of employer contributions over pension expense	(109,790)	(305,126)
Excess of employer contributions over other postemployment benefits expense	(9,405)	(12,797)
Other nonoperating expenses included in operating activities	(4,011,680)	(725,299)
(Increase) decrease in:		
Accounts receivable	(826,520)	(437,033)
Prepaids and other assets	(21,773)	9,765
Inventories	(163,120)	(65,282)
Contract receivable	-	25,630
Increase (decrease) in:		
Accounts payable, contracts payable and accrued expenses	(610,698)	525,808
Customer deposits	(51,370)	(56,130)
Compensated absences	305,953	(5,023)
Net cash provided by operating activities	$ 7,997,899	$ 8,942,309
NONCASH CAPITAL AND RELATED FINANCING		
Developer contributed capital improvements	$ 767,657	$ 3,090,080
Debt incurred for acquisition of capital assets	$ 608,404	$ 6,000
Capital assets acquired through accounts payable	$ 296,914	$ 2,232,753

The Notes to Financial Statements are an integral part of this statement.

Note 1. Summary of Significant Accounting Policies

Reporting entity

Frederick Water (the "Authority") is a Virginia Corporation organized under the provisions of the Virginia Water and Waste Authorities Act (Sec. 15.2-5100 *et. seq.* of the *Code of Virginia*, 1950, as amended). The Authority's purpose is to acquire, construct, operate, and maintain an integrated water and sewer system for Frederick County, Virginia.

The Authority is financed and operated in a manner similar to private business enterprises. The intent of the governing body is that the costs (expenses, including depreciation) of providing services to the general public on a continuing basis be financed or recovered primarily through user charges. The accounting policies of the Authority conform to generally accepted accounting principles as applicable to governments.

Measurement focus and basis of accounting

The Authority's financial statements are reported using the *accrual basis of accounting*. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

The Authority distinguishes *operating* revenues and expenses from *nonoperating* items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the principal ongoing operations. The principal operating revenues are charges to customers for sales and services. Operating expenses include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is the Authority's policy to use restricted resources first, then unrestricted resources as they are needed.

Cash and cash equivalents

Cash and cash equivalents are considered to be demand deposits as well as certificates of deposit and short-term investments with original maturities three months or less from the date of acquisition.

Accounts receivable

Charges for services are determined generally through bi-monthly billings to customers. Charges for services earned but unbilled are accrued based on the last billing.

Accounts receivable are stated net of an allowance for doubtful accounts of $75,000. Bad debt expense was approximately $35,000.

(Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Inventories

Inventories are valued at first-in/first-out historical cost.

Capital assets

Capital assets, which are recorded at cost if purchased or constructed, include property, plant, equipment, infrastructure, and contractual rights to long-term assets. Contributed assets, principally water and sewer lines, are recorded at an amount which approximates the contributor's cost. The costs of major improvements and additions are capitalized. Normal repairs and maintenance are expensed. Any gain or loss on the sale or disposition of capital assets is recognized currently. Projects not in service are carried as construction in progress.

Capital assets are depreciated using the straight-line method over the following estimated useful lives:

	Years
Water source of supply	7-40
Water and sewage pumping	5-40
Water transmission and distribution	15-40
Sewage collection and transmission	5-40
General plant	3-40
FWSA treatment plant rights	20
Water rights	6

The estimated useful lives of the treatment plant rights and water rights are based on the shorter of useful lives of the underlying assets or management's expectation regarding renewals of the agreements. Failure to renew these agreements may result in a loss of any unamortized cost of the treatment plant rights. Contractual rights for water sources of supply are based on the terms of the underlying agreements.

Deferred outflows and inflows of resources

In addition to assets, the statement which presents financial position reports a separate section for deferred outflows of resources. These items represent a consumption of net position that applies to future periods and so will *not* be recognized as an outflow of resources (expense) until then.

(Continued)

Note 1. Summary of Significant Accounting Policies (Continued)

Deferred outflows and inflows of resources (Continued)

In addition to liabilities, the statement which presents financial position reports a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to future periods and so will *not* be recognized as an inflow of resources (revenue) until that time.

The Authority has the following items that qualify for reporting as deferred inflows or outflows:

- Deferred charge on refunding. A deferred loss on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. Due to the relationship with outstanding debt, these deferred outflows are included in the calculation of net position, net investment in capital assets.
- Contributions subsequent to the measurement date for pensions and OPEB; these will be applied to the net pension or OPEB liability in the next fiscal year.
- Differences between expected and actual experience for economic/demographic factors and changes of assumptions in the measurement of the total pension or OPEB liability. This difference will be recognized in pension or OPEB expense over the expected average remaining service life of all employees provided with benefits in the plan and may be reported as a deferred inflow or outflow as appropriate.
- Changes in proportion and differences between the Authority's contributions and its proportionate share of contributions for OPEB are deferred and amortized over the average expected remaining service lives of all employees provided with group life insurance benefits, and may be reported as a deferred inflow or outflow as appropriate
- Differences between projected and actual earnings on pension and OPEB plan investments. These differences will be recognized in pension or OPEB expense over the closed five year period and may be reported as a deferred outflow or inflow as appropriate.

Unearned revenue

The Authority has entered various agreements to provide availability to water and sewer systems. Fees collected in exchange for these contracts are unearned until the availability is provided.

Compensated absences

The Authority allows its employees to accumulate personal time off based on years of service. Personal time off hours in excess of the maximum at December 31 is forfeited. Upon termination or retirement, the Authority pays accumulated personal time off subject to the maximum accrual. As a result of the COVID-19 pandemic, the Authority extended the allowable PTO carryover amount until December 31, 2021 and also added 80 additional hours of COVID-19 leave time for each employee.

Note 1. Summary of Significant Accounting Policies (Continued)

Pensions and Other Postemployment Benefits (OPEB)

For purposes of measuring all financial statement elements related to pension and OPEB plans, information about the fiduciary net position of the Authority's Plans and the additions to/deductions from the Authority's 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.

Net position

Net position is the difference between assets and deferred outflows of resources, liabilities, and deferred inflows of resources. Net investment in capital assets represents capital assets, less accumulated depreciation, less any outstanding debt related to those assets. Restricted net position includes amounts which are set aside for the repayment of bond principal and interest, and potential future deficiencies in accordance with applicable bond covenants.

Estimates

Management uses estimates and assumptions in preparing its financial statements. Actual results could differ from those estimates.

Fair value measurement

The Authority categorizes its fair value measurements 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. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. Level 2 investments are valued using a matrix pricing technique, which is based on the investments' benchmark quoted prices.

Note 2. Cash and Investments

Deposits

Deposits with banks are covered by the Federal Deposit Insurance Corporation (FDIC) and collateralized in accordance with the Virginia Security for Public Deposits Act (the "Act") Section 2.20440 et seq. of the *Code of Virginia*. Under the Act, banks and savings institutions holding public deposits in excess of the amount insured by the FDIC must pledge collateral to the Commonwealth of Virginia Treasury Board. Financial institutions may choose between two collateralization methodologies and, depending upon that choice, pledge collateral that ranges between 50% and 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

(Continued)

Note 2. Cash and Investments

Deposits (Continued)

For the purposes of this disclosure, deposits include cash and cash equivalents as well as nonnegotiable certificates of deposit with original maturities of more than three months.

Investments

Statutes authorize local governments and other public bodies to invest in obligations of the United States or agencies thereof, obligations of the Commonwealth of Virginia or political subdivisions thereof, obligations of the International Bank for Reconstruction and Development (World Bank), the Asian Development Bank, the African Development Bank, "prime quality" commercial paper and certain corporate notes, which include banker's acceptances, repurchase agreements, and the Virginia Investment Pool (VIP). The VIP is not registered with the SEC but is overseen by the Treasurer of Virginia and the State Treasury Board. The fair value of the Authority's position in the pool is the same as the value of the pool shares.

The Authority's policy limits investments to instruments specified in Section 26-40 of the *Code of Virginia*.

The Authority holds deposits in the VIP which has a Standard and Poor's pool rating of AA+f/S1. The VIP invests in various security types, including U.S. Treasury notes and U.S. government agency securities, corporate bonds, and commercial paper that are typically rated 'AA-' or higher and have an average maturity of approximately one to three years. The 'AA+f/S1' rating reflects the high safety level of the invested principal and the fund's capacity to maintain a stable net asset value.

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. As of June 30, 2020, the Authority's investments in corporate bonds and notes were valued using Level 2 inputs.

For the purposes of this disclosure, investments include unrestricted investments, and exclude nonnegotiable certificates of deposit with original maturities of more than three months.

(Continued)

Note 2. Cash and Investments (Continued)

Investments (Continued)

The Authority's investments consisted of the following:

Investment Type	Fair Value	S&P Credit Rating	Weighted Average Maturity *
Corporate bonds and notes	$ 509,997	AA to AAA	1.18
Virginia Investment Pool	14,302,297	AA+f/S1	1.81
Total investments	$ 14,812,294		

* Average maturity in years

Cash and cash equivalents	$ 9,133,717
Long-term certificates of deposit	14,964,713
Total deposits	24,098,430
Total deposits and investments	$ 38,910,724

Reconciliation of deposits and investments to Exhibit 1:

Cash and cash equivalents, unrestricted	$ 9,132,750
Cash and cash equivalents, restricted	1,710
Investments	29,776,264
	$ 38,910,724

Restricted assets

Cash and cash equivalents, restricted includes amounts which are set aside for the final payment of administrative fees under the refunded bonds. They are maintained in separate accounts.

Note 3. Accounts Receivable

Accounts receivable consisted of the following:

Billed	$ 2,811,551
Unbilled	2,262,600
Other	70,820
	$ 5,144,971

Note 4. Capital Assets

Capital asset activity for the year ended June 30, 2020 was as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets not being depreciated				
Land	$ 6,561,016	$ 247,177	$ 5,375	$ 6,802,818
Construction in progress	9,090,509	18,822,735	13,194,505	14,718,739
Total capital assets, not being depreciated	15,651,525	19,069,912	13,199,880	21,521,557
Capital assets being depreciated				
Water source of supply	7,866,250	-	-	7,866,250
Water pumping	15,340,934	271,149	3,824	15,608,259
Sewage pumping	3,253,781	72,991	10,028	3,316,744
Water transmission and distribution	72,221,282	8,258,527	341,565	80,138,244
Sewage collection and transmission	82,903,996	890,332	61,999	83,732,329
General plant	10,223,984	381,561	121,180	10,484,365
Water rights	-	603,159	-	603,159
FWSA treatment plant rights	111,145,338	-	-	111,145,338
Total capital assets being depreciated	302,955,565	10,477,719	538,596	312,894,688
Less accumulated depreciation for:				
Other capital assets	85,831,299	5,943,068	524,750	91,249,617
Water rights	-	16,754	-	16,754
FWSA treatment plant rights	49,062,464	5,063,478	-	54,125,942
Total accumulated depreciation	134,893,763	11,023,300	524,750	145,392,313
Total capital assets being depreciated, net	168,061,802	(545,581)	13,846	167,502,375
Total capital assets, net	$ 183,713,327	$ 18,524,331	$ 13,213,726	$ 189,023,932

(Continued)

Note 4. Capital Assets (Continued)

Frederick-Winchester Service Authority (FWSA) treatment plant rights

As described in Note 5, the Authority and the FWSA have entered into agreements for the Authority to operate certain wastewater treatment plants of the FWSA. The Authority is not authorized to hold legal title to these assets, and thus, the FWSA holds title to these assets. Through long-term contracts, the risks and benefits of operating and maintaining the assets have been transferred to the Authority, and represent intangible capital assets. The Authority is responsible for a portion of the debt incurred for these facilities.

During 2007, a developer contributed a $4,500,000 wastewater treatment plant to the FWSA. Based on a 2001 agreement between the FWSA and the Authority, the Authority operates this plant, resulting in additional treatment plant rights. Ninety-five percent of availability fees collected for use of capacity for this system will be paid to the developer until certain capacity thresholds are met or 15 years after conveyance.

During 2008, the FWSA issued debt for the upgrade and expansion of the Parkins Mill Wastewater Treatment Plant. During 2010, this project was completed and the Authority assumed responsibility for the operations of this plant as well as the related debt service in the approximate amount of $37,930,000.

During 2008 and 2009, the FWSA issued debt for the upgrade and expansion of the Opequon Water Reclamation Facility. During 2011, this project was completed and the Authority assumed responsibility for a portion of the related debt service in the approximate amount of $25,230,000. During 2016, the FWSA issued new debt to refund a significant portion of the 2008 issuance. The Authority’s responsibility for a portion of the new debt amounted to approximately $2,400,000.

During 2015, the FWSA issued refunding debt to reduce future debt service requirements and the Authority assumed its responsibility for a portion of the related debt service in the approximate amount of $7,840,000.

In November 2013, the Authority, along with the FWSA, the County of Frederick, and the City of Winchester, approved the Green Energy Project (the “Project”) for the purpose of implementing a series of capacity and efficiency improvements to the Opequon Water Reclamation Facility. To finance this project, the FWSA authorized the issuance of $53,000,000 in bonds. In late fiscal year 2017, the Project began accepting waste. The Authority has assumed responsibility for a portion of the related debt service in the approximate amount of $25,092,500.

(Continued)

Note 5. Long-Term Liabilities

The following is a summary of changes in long-term liabilities:

	Beginning Balance	Increases	Decreases	Ending Balance	Due Within One Year
Obligations payable – FWSA	$ 66,365,424	$ -	$ 3,933,995	$ 62,431,429	$ 3,773,994
Revenue bonds	15,254,197	4,001,000	5,372,257	13,882,940	1,596,004
Capital leases/other obligations	13,207	608,404	114,449	507,162	95,830
Issuance premiums	1,494,717	-	177,297	1,317,420	171,182
	83,127,545	4,609,404	9,597,998	78,138,951	5,637,010
Compensated absences	661,902	619,441	313,488	967,855	580,713
Total long-term liabilities	$ 83,789,447	$ 5,228,845	$ 9,911,486	$ 79,106,806	$ 6,217,723

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

	Obligations Payable – FWSA		Revenue Bonds		Capital Leases/Other Obligations		Totals	
Fiscal Year	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
2021	$ 3,773,994	$ 2,113,483	$ 1,596,004	$ 505,744	$ 95,830	$ 19,055	$ 5,465,828	$ 2,638,282
2022	3,891,368	1,993,016	1,599,771	473,939	98,811	15,435	5,589,950	2,482,390
2023	4,022,550	1,865,764	1,654,912	399,314	101,636	11,696	5,779,098	2,276,774
2024	4,151,610	1,732,060	1,089,292	332,837	104,211	7,884	5,345,113	2,072,781
2025	4,294,569	1,593,327	1,143,791	279,486	106,674	3,986	5,545,034	1,876,799
2026-2030	22,433,277	5,745,195	4,550,873	658,141	-	-	26,984,150	6,403,336
2031-2035	10,571,921	2,993,497	1,048,337	252,140	-	-	11,620,258	3,245,637
2036-2039	9,292,140	869,398	1,199,960	94,942	-	-	10,492,100	964,340
	$ 62,431,429	$ 18,905,740	$ 13,882,940	$ 2,996,543	$ 507,162	$ 58,056	$ 76,821,531	$ 21,960,339

Note 5. Long-Term Liabilities (Continued)

Details of long-term indebtedness are as follows:

	Issue Date	Maturity Date	Authorized and Issued	Interest Rate	Amount Outstanding
Obligations Payable – FWSA					
2010 FWSA Parkins Mill Expansion	03/01/2010	09/01/2029	$ 37,930,386	2.52 %	$ 20,953,447
2011 FWSA Opequon Facility Expansion II	03/01/2009	03/01/2031	12,613,293	2.65	7,989,052
2015 FWSA Refunding Debt	05/28/2015	10/01/2038	7,840,530	3.22-5.13	7,457,130
FWSA Series 2014A	05/07/2014	10/01/2038	15,055,000	3.13-4.83	14,160,000
FWSA Series 2014B	07/29/2014	10/01/2038	10,037,500	3.65-5.13	9,507,500
FWSA Series 2016B	07/27/2017	10/01/2038	2,402,640	2.71-5.13	2,364,300
					$ 62,431,429
Revenue Bonds					
Virginia Water Facilities Revolving Fund	03/16/2001	09/01/2021	$ 649,352	1.50 %	$ 56,940
Virginia Infrastructure Revenue Bonds	11/14/2010	10/01/2022	5,460,000	3.10-5.10	1,755,000
Virginia Water and Sewer Refunding Bonds	05/28/2015	10/01/2027	6,020,000	3.13-5.13	5,030,000
Virginia Infrastructure Refunding Bonds	11/18/2015	10/01/2028	4,045,000	3.08-5.13	3,040,000
VML/VACO Lease Revenue Refunding Bonds	6/18/2020	2/15/2040	4,001,000	2.72	4,001,000
					$ 13,882,940
Capital Lease/Other Obligations					
Water rights agreement	06/09/2020	05/05/2025	603,159	3.75 %	493,159
Lease for equipment	10/01/2015	01/01/2021	5,950	4.62	$ 630
Lease for equipment	11/01/2017	02/01/2023	8,450	4.89	4,294
Lease for equipment	02/01/2019	05/01/2024	6,000	4.62	4,431
Lease for equipment	12/01/2019	02/01/2025	5,245	4.69	4,648
					$ 507,162

See Note 10 for additional details regarding the obligation for water rights.

Accrued interest

During 2009, certain notes with Frederick County dated 1976 and 1987 were satisfied in exchange for availability fees. Long-term interest payable of $657,083 related to those notes was forgiven in 2020 as a part of the ballfields project as described in Note 10.

Note 5. Long-Term Liabilities (Continued)

Current defeasance of debt

In 2020, the Authority issued a revenue bond with a face value of $4,001,000 with a coupon rate of 2.72% to refund $3,895,000 in outstanding 2010 bonds. The proceeds were placed in trust to fund all future debt service payments. The liability for the refunded bonds has been replaced with the liability from the new debt with the difference between the reacquisition price and the net carrying amount of the old debt being deferred and amortized over the life of the new debt in proportion to the stated interest due on the new debt.

The Authority refunded these bonds to reduce its total debt service over the next 20 years by $505,560 and to obtain an economic gain (the difference between the present values of the debt service payments on the old and new debt) of approximately $370,200.

Prior defeasance of debt

In prior years, the Authority defeased certain outstanding revenue bonds payable. The proceeds were placed in trust to fund all future debt service payments. Accordingly, the trust account assets and liabilities for the defeased bonds are not included in the Authority's financial statements. At June 30, 2020, the following bonds are considered defeased:

	Beginning Balance	Increases	Decreases	Ending Balance
VPFP Series 2005C	$ 3,760,000	$ -	$ 305,000	$ 3,455,000
VPFP Series 2007B	5,810,000	-	535,000	5,275,000
	$ 9,570,000	$ -	$ 840,000	$ 8,730,000

FWSA obligations

The Authority and the FWSA have entered multiple agreements for the Authority to operate certain sewage treatment facilities owned by the FWSA (See Note 4).

Note 6. Defined Benefit Pension Plan

Plan Description

All full-time, salaried permanent employees of the Authority, (the "Political Subdivision") are automatically covered by the VRS Retirement Plan upon employment. This multi-employer agent 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 pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the *Code of Virginia*, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

The System administers three different benefit structures for covered employees – Plan 1, Plan 2, and Hybrid. Each of these benefit structures has a 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.varetirement.org/hybrid.html.

Employees Covered by Benefit Terms

As of the June 30, 2018 actuarial valuation, the following employees were covered by the benefit terms of the pension plan:

	Number
Inactive members or their beneficiaries currently receiving benefits	25
Inactive members:	
Vested inactive members	5
Non-vested inactive members	7
Inactive members active elsewhere in VRS	2
Total inactive members	14
Active members	69
Total covered employees	108

(Continued)

Note 6. Defined Benefit Pension Plan (Continued)

<u>Contributions</u>

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 political subdivision's contractually required contribution rate for the year ended June 30, 2020 was 4.9% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017.

This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employee during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the political subdivision were $170,565 and $166,328 for the years ended June 30, 2020 and 2019, respectively.

<u>Net Pension Liability</u>

The net pension liability 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 political subdivisions, the net pension liability was measured as of June 30, 2019. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2018 rolled forward to the measurement date of June 30, 2019.

(Continued)

Note 6. Defined Benefit Pension Plan (Continued)

Actuarial Assumptions – General Employees

The total pension liability for General Employees in the Political Subdivision's Retirement Plan was based on an actuarial valuation as of June 30, 2018, 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, 2019.

Inflation	2.50%
General Employees – 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 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.

Mortality rates: General employees – 15 to 20% of deaths are assumed to be service related. Mortality is projected using the applicable RP-2014 Mortality Table Projected to 2020 with various set backs or set forwards for both males and females.

The actuarial assumptions used in the June 30, 2018 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 are as follows:

General Employees – Largest 10 – Non-Hazardous Duty and All Others (Non 10 Largest): Update mortality table; lowered retirement rates at older ages, changed final retirement from 70 to 75; adjusted withdrawal rates to better fit experience at each year age and service through 9 years of service; lowered disability rates, no change to salary scale, increased rate of line of duty disability from 14% to 20% (Largest 10) or 15% (All Others), and decreased discount rate from 7.00% to 6.75%.

Note 6. Defined Benefit Pension Plan (Continued)

Long-Term Expected Rate of Return

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

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
Public Equity	34.00 %	5.61 %	1.91 %
Fixed Income	15.00	0.88	0.13
Credit Strategies	14.00	5.13	0.72
Real Assets	14.00	5.27	0.74
Private Equity	14.00	8.77	1.23
MAPS – Multi-Asset Public Strategies	6.00	3.52	0.21
PIP – Private Investment Partnership	3.00	6.29	0.19
Total	100.00 %		5.13 %
	Inflation		2.50 %
	*Expected arithmetic nominal return		7.63 %

* The above allocation provides for a one-year return of 7.63%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected rate of 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 2.5%. 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 allocation.

(Continued)

Note 6. Defined Benefit Pension Plan (Continued)

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, 2019, the alternate rate was the employer contribution rate used in the FY 2012 or 100% of the actuarially determined employer contribution rate from the June 30, 2017 actuarial valuations, whichever is greater. From July 1, 2019 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, 2018	$ 10,365,042	$ 10,251,840	$ 113,202
Changes for the year:			
Service cost	326,178	-	326,178
Interest	709,818	-	709,818
Differences between expected and actual experience	106,510	-	106,510
Changes of assumptions	305,557	-	305,557
Contributions – employer	-	166,328	(166,328)
Contributions – employee	-	178,102	(178,102)
Net investment income	-	685,645	(685,645)
Benefit payments, including refunds of employee contributions	(449,563)	(449,563)	-
Administrative expenses	-	(6,721)	6,721
Other changes	-	(432)	432
Net changes	998,500	573,359	425,141
Balances at June 30, 2019	$ 11,363,542	$ 10,825,199	$ 538,343

Note 6. Defined Benefit Pension Plan (Continued)

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

The following presents the net pension liability of the political subdivision using the discount rate of 6.75%, as well as what the political subdivision'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:

	1.00% Decrease (5.75%)	Current Discount Rate (6.75%)	1.00% Increase (7.75%)
Political subdivision's net pension liability (asset)	$ 1,878,135	$ 538,343	$ (535,454)

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

For the year ended June 30, 2020, the political subdivision recognized pension expense of $60,775. At June 30, 2020, 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	$ 85,626	$ (311,398)
Changes of assumptions	245,644	(87,217)
Net difference between projected and actual earnings on pension plan investments	-	(94,722)
Employer contributions subsequent to the measurement date	170,565	-
Total	$ 501,835	$ (493,337)

Note 6. Defined Benefit Pension Plan (Continued)

The Authority reported deferred outflows of resources related to pensions resulting from the Political Subdivision's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ending June 30,	Increase (Reduction) to Pension Expense
2021	$ (123,439)
2022	(147,635)
2023	18,410
2024	82,515
2025	8,082
Thereafter	-

Pension Plan Data

Information about the VRS Political Subdivision Retirement Plans is also available in the separately issued VRS 2019 Comprehensive Annual Financial Report (CAFR). A copy of the 2019 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2019-annual-report.pdf or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans

In addition to their participation in the pension plans offered through the Virginia Retirement System (VRS), the Authority also participates in various cost-sharing and agent multi-employer other postemployment benefit plans, described as follows.

Plan Descriptions

Group Life Insurance Program

All full-time teachers and employees of political subdivisions are automatically covered by the VRS Group Life Insurance (GLI) Program upon employment.

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 the GLI is available at https://www.varetire.org/members/benefits/life-insurance/basic-group-life-insurance.asp

The GLI plan is administered by the VRS, along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia. This plan is considered a multiple employer, cost sharing plan.

General Employee Health Insurance Credit Program

The General Employee Health Insurance Credit Program (HIC) is available for all full time, salaried employees of local government entities other than Teachers. The General Employee HIC provides all the same benefits as the Teacher HIC, except that this plan is considered a multi-employer agent plan.

(Continued)

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

Plan Descriptions (Continued)

General Employee Health Insurance Credit Program (Continued)

As of the June 30, 2018 actuarial valuation, the following employees were covered by the benefit terms of the General Employee Health Insurance Credit Program:

	Number
Inactive members or their beneficiaries currently receiving benefits	12
Active members	69
Total covered employees	81

Contributions

Contributions to the VRS OPEB programs were based on actuarially determined rates from actuarial valuations as of June 30, 2017. The actuarially determined rates were expected to finance the cost of benefits earned by employees during the year, with an additional amount to fund any unfunded accrued liability. Specific details related to the contributions for the VRS OPEB programs are as follows:

Group Life Insurance Program

Governed by:	*Code of Virginia* 51.1-506 and 51.1-508 and may be impacted as a result of funding provided to school divisions and governmental agencies by the Virginia General Assembly.
Total rate:	1.31% of covered employee compensation. Rate allocated 60/40; 0.79% employee and 0.52% employer. Employers may elect to pay all or part of the employee contribution.
June 30, 2020 Contribution	$20,304
June 30, 2019 Contribution	$19,445

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

Contributions (Continued)

General Employee Health Insurance Credit Program

Governed by:	*Code of Virginia* 51.1-1402(E) and may be impacted as a result of funding provided to governmental agencies by the Virginia General Assembly.
Total rate:	0.14% of covered employee compensation.
June 30, 2020 Contribution	$5,485
June 30, 2019 Contribution	$5,230

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

The net OPEB liabilities were measured as of June 30, 2019 and the total OPEB liabilities used to calculate the net OPEB liabilities were determined by actuarial valuations as of that date. The covered employer's proportion of the net OPEB liabilities were based on the covered employer's actuarially determined employer contributions for the year ended June 30, 2019 relative to the total of the actuarially determined employer contributions for all participating employers.

Group Life Insurance Program

June 30, 2020 proportionate share of liability	$310,482
June 30, 2019 proportion	0.01908%
June 30, 2018 proportion	0.01884%
June 30, 2020 expense	$12,307

Since there was a change in proportionate share between measurement dates, a portion of the OPEB expense above was related to deferred amount from changes in proportion.

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

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

General Employee Health Insurance Credit Program

Changes in net OPEB liability of the General Employee Health Insurance Credit Program were as follows:

	Increase (Decrease)		
	Total OPEB Liability (a)	**Plan Fiduciary Net Position (b)**	**Net OPEB Liability (a) – (b)**
Balances at June 30, 2018	$ 102,584	$ 70,123	$ 32,461
Changes for the year:			
Service cost	2,523	-	2,523
Interest	7,012	-	7,012
Differences between expected and actual experience	839	-	839
Changes of assumptions	2,535	-	2,535
Contributions – employer	-	5,230	(5,230)
Net investment income	-	4,559	(4,559)
Benefit payments, including refunds of employee contributions	(4,815)	(4,815)	-
Administrative expenses	-	(100)	100
Other changes	-	(6)	6
Net changes	8,094	4,868	3,226
Balances at June 30, 2019	$ 110,678	$ 74,991	$ 35,687

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

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

At June 30, 2020, the Authority reported deferred outflows of resources and deferred inflows of resources related to the Group Life Insurance Program OPEB from the following sources.

Group Life Insurance Program

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 20,649	$ (4,027)
Changes of assumptions	19,602	(9,362)
Net difference between projected and actual earnings on OPEB plan investments	-	(6,378)
Changes in proportionate share	20,685	-
Employer contributions subsequent to the measurement date	20,304	-
Total	$ 81,240	$ (19,767)

For the year ended June 30, 2020, the political subdivision recognized OPEB expense of $4,626 related to the General Employee Health Insurance Credit Program. At June 30, 2020, the political subdivision reported deferred outflows of resources and deferred inflows of resources related to the General Employee Health Insurance Credit Program OPEB from the following sources:

General Employee Health Insurance Credit Program

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 2,863	$ -
Changes of assumptions	2,162	(2,269)
Net difference between projected and actual earnings on OPEB plan investments	-	(872)
Employer contributions subsequent to the measurement date	5,485	-
Total	$ 10,510	$ (3,141)

The deferred outflows of resources related to OPEB resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

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

Group Life Insurance Program

Year Ending June 30,	Increase (Reduction) to OPEB Expense
2021	$ 6,230
2022	6,231
2023	8,932
2024	10,037
2025	7,764
Thereafter	1,975

General Employee Health Insurance Credit Program

Year Ending June 30,	Increase (Reduction) to OPEB Expense
2021	$ (95)
2022	(96)
2023	449
2024	474
2025	760
Thereafter	392

Actuarial Assumptions and Other Inputs

The total OPEB liability was determined using the following assumptions based on an actuarial valuation date of June 30, 2018, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2019:

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

<u>Actuarial Assumptions and Other Inputs</u> (Continued)

Inflation	2.5%
Salary increases, including inflation:	
• Locality- general employees	3.5 – 5.35%
Investment rate of return, net of expenses, including inflation*	GLI & HIC: 6.75%

* 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 rate for GASB purposes of slightly more than the assumed percent above. However, since the difference was minimal, and a more conservative 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 the percent noted above to simplify preparation of OPEB liabilities.

Mortality rates used for the various VRS OPEB plans are the same as those used for the actuarial valuations of the VRS pension plans. The mortality rates are discussed in detail at Note 6.

<u>Net OPEB Liabilities</u>

The net OPEB liabilities represent each program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2019, net OPEB liability amounts for the various VRS OPEB programs are as follows (amounts expressed in thousands):

	Group Life Insurance Program
Total OPEB Liability	$ 3,390,238
Plan fiduciary net position	$ 1,762,972
Employers' net OPEB liability (asset)	$ 1,627,266
Plan fiduciary net position as a percentage of total OPEB liability	52.00%

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

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

Long-Term Expected Rate of Return

Group Life Insurance and Health Insurance Credit Programs

The long-term expected rate of return on VRS 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 OPEB 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 %	5.61 %	1.91 %
Fixed Income	15.00	0.88	0.13
Credit Strategies	14.00	5.13	0.72
Real Assets	14.00	5.27	0.74
Private Equity	14.00	8.77	1.23
MAPS – Multi-Asset Public Strategies	6.00	3.52	0.21
PIP – Private Investment Partnership	3.00	6.29	0.19
Total	100.00 %		5.13 %
	Inflation		2.50 %
	*Expected arithmetic nominal return		7.63 %

* The above allocation provides for a one-year return of 7.63%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected rate of 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.

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

Discount Rate

The discount rate used to measure the GLI and HIC OPEB liabilities 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 Guidance and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the employer for the OPEB liabilities will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the OPEB plans' 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.

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

The following presents the net OPEB liabilities of the Authority, as well as what the Authority's net OPEB liabilities would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current discount rate:

	1.00% Decrease (5.75%)	Current Discount Rate (6.75%)	1.00% Increase (7.75%)
GLI Net OPEB liability	$ 407,888	$ 310,482	$ 231,489
General Employee HIC Net OPEB Liability	$ 46,888	$ 35,687	$ 26,108

OPEB Plan Fiduciary Net Position

Information about the various VRS OPEB plan fiduciary net position is available in the separately issued VRS 2019 Comprehensive Annual Financial Report (CAFR). A copy of the 2019 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2019-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Note 7. Other Postemployment Benefits Liability – Virginia Retirement System Plans (Continued)

Summary of Other Postemployment Benefit Elements

Deferred outflows of resources - OPEB		
Differences between expected and actual experience		
VRS- Group Life Insurance	$	20,649
VRS- General Employee Health Insurance Credit Program		2,863
Changes in proportion		
VRS- Group Life Insurance		20,685
Employer contributions subsequent to the measurement date		
VRS- Group Life Insurance		20,304
VRS- General Employee Health Insurance Credit Program		5,485
Changes of assumptions		
VRS- Group Life Insurance		19,602
VRS- General Employee Health Insurance Credit Program		2,162
Total deferred outflows of resources - OPEB	$	91,750
Net OPEB liability		
VRS- Group Life Insurance	$	310,482
VRS- General Employee Health Insurance Credit Program		35,687
Total net OPEB liability	$	346,169
Deferred inflows of resources - OPEB		
Differences between expected and actual experience		
VRS- Group Life Insurance	$	4,027
Changes of assumptions		
VRS- Group Life Insurance		9,362
VRS- General Employee Health Insurance Credit Program		2,269
Net difference between projected and actual earnings on plan investments		
VRS- Group Life Insurance		6,378
VRS- General Employee Health Insurance Credit Program		872
Total deferred inflows of resources – OPEB	$	22,908
OPEB Expense		
VRS- Group Life Insurance	$	12,307
VRS- General Employee Health Insurance Credit Program		4,626
Total OPEB Expense	$	16,933

(Continued)

Note 8. Water Contracts

The Authority obtains water from the City of Winchester under a 1971 contract most recently amended in 2002. The amended contract expires April 30, 2022, and includes rate adjustments, subject to certain limitations. The Authority also obtains water from Carmeuse Lime & Stone under a 2013 contract that expired in 2020. Purchases amounted to $2,944,662 for 2020.

Note 9. Risk Management

The Authority is exposed to various risks of loss related to torts, theft of, damage to, and destruction of assets; errors and omissions; and natural disasters. The Authority participates with other localities in the Virginia Association of Counties Liability Pool, a public entity risk pool for its coverage of general liability, auto insurance, and workers' compensation. Each member of this risk pool jointly and severally agrees to assume, pay, and discharge any liability. The Authority pays the contributions and assessments based upon classification and rates into a designated cash reserve fund out of which expenses of the pool, claims and awards are to be paid. In the event of a loss deficit and depletion of all available excess insurance, the pool may assess all members in the proportion in which the premium of each bears to the total premiums of all members in the year in which such deficit occurs. The Authority carries commercial insurance for all other risks of loss. Settled claims resulting from these risks have not exceeded commercial coverage in the past three years and there have not been any significant reductions in coverage from the previous year.

Note 10. Commitments and Contingencies

Availability Agreements

The Authority has entered various agreements to provide availability to water and sewer systems. Fees collected in exchange for these contracts are unearned until the availability is provided.

Settlement and Lease Agreements

During 2013, the Authority entered into a settlement agreement with a water supply source (quarry) which was effective for at least seven years and replaced an existing lease which had provided water rights at three separate locations. The agreement provided the Authority with a minimum of 2.2 million gallons of water per day (subject to force majeure) and requires the Authority to purchase water for at least seven years at annually increasing rates and a minimum of 1.8 million gallons of water per day on an annual average. The Authority was required to pay $4,000,000 as part of the agreement and has capitalized these costs as an intangible water right. A new agreement was entered into during 2020 as described below.

(Continued)

Note 10. Commitments and Contingencies (Continued)

Settlement and Lease Agreements (Continued)

Additionally, the agreement above included a cost sharing arrangement for the construction of ball fields. Per the agreement, in the event mining activities result in the displacement of existing ball fields within the time period during which the Authority purchases water or for a period of ten years from April 24, 2013 (whichever occurs later), Frederick County may require the Authority pay the cost of construction of new ball fields, excluding land costs. The displacement of existing ball fields occurred during 2019, and as a result, the Authority was required to have the ball fields ready for use in the spring of 2020. Construction of the ballfields was completed in 2020. As a result of this displacement, the Authority was contractually obligated to construct the new ball fields with a total cost of $3,902,247, which was recorded as a liability and an expense in prior years and also a portion in 2020. At project completion, the ballfields were transferred to Frederick County. In addition, accrued interest payable related $657,083 due to Frederick County was also forgiven, resulting in a net cost to the Authority of $3,245,164. The net expense to the Authority in 2020 was $5,335.

During 2020, the Authority entered into a new agreement with the same entity to lease quarry pits, land on which the James T. Anderson Water Treatment Plant is located, various wells, and land associated with a water tank, collectively referred to as the "Northern Lease." The initial term of the agreement is for a period of six years commencing May 1, 2020 and expiring April 30, 2026, with annual rent of $110,000 per year. The agreement can be extended for an additional six years with a starting lease rate of $130,000, increasing annually at a rate of three percent. The Authority has recorded an intangible asset related to the initial term of the agreement and a corresponding liability, as disclosed in Note 5.

Grant In Aid Construction Agreement

In accordance with an October 2018 agreement, in exchange for Graystone Corporation and Stephenson Associates completing construction of a sewer facility, the Authority will collect sewer availability fees for new connections using these facilities and pay Graystone quarterly payments of 90% of the connection payments received. Payments are to not exceed the Authority's contribution, and will cease after ten years and three months from completion of the facility. Amounts owed to Graystone are included in contracts payable at year end. The Authority is also required to contribute 37.5% of the cost of the facility, with a cap of $1,500,000. Following year end but prior to the date of this report, Frederick Water received the Bill of Sale and Affidavit and Waiver of Lien documents related to this agreement. These documents are dated October 5, 2020, and were executed by the Board on October 20, 2020. Since the Authority took legal possession of its portion of the improvements totaling $1,500,000 subsequent to year end, the liability and offsetting asset will be included as activity in 2021.

Note 10. Commitments and Contingencies (Continued)

Litigation

The Authority has an arrangement with a developer to pay 95% of availability fees collected related to the Shenandoah/Crooked Run service area. Amounts owed to the developer are included in contracts payable at year end. Additionally, the Authority is the defendant in a lawsuit relating to a claim with the developer seeking reimbursement for the costs of a water line upgrade it performed, as well as challenging the methodology the Authority uses to derive its availability fees. A partial summary judgment was reached dismissing the claims challenging the methodology the Authority uses to derive its availability fees. The Authority has filed counterclaims against the developer. The developer's claim relating to the installation of the water line upgrade, and the Authority's counterclaims have been set for trial beginning on June 28, 2021. Management and legal counsel are of the opinion that an outcome of the case cannot be reasonably determined.

Construction Commitments

The Authority has active construction projects related to various items. At year end, commitments with contractors on the projects are as follows:

	Total Contracts	Total Payments	Future Amounts to be Expended
Orchard View Well & Pipeline	$ 4,741,007	$ 4,321,313	$ 419,694
Route 50 East Pump Station Replacement	1,536,344	138,153	1,398,191
Total	$ 6,277,351	$ 4,459,466	$ 1,817,885

Note 11. Restatement of Net Position

Certain previously unrecorded liabilities related to availability fees were identified during fiscal year 2020. In order to properly account for these agreements, the Authority has restated the following items as of July 1, 2018 and 2019. Additionally, the Authority identified certain unearned revenues that should be reflected as earned in 2018 and 2019.

Net position, July 1, 2018, as previously reported	$ 124,112,409
Recognition of unearned revenue related to availability fees	(2,214,304)
Recognition of earned availability fees	113,039
Net position, July 1, 2018, as restated	$ 122,011,144

Net position, July 1, 2019, as previously reported	$ 135,369,316
Recognition of unearned revenue related to availability fees	(2,214,304)
Recognition of 2018 earned availability fees	113,039
Reduction of 2019 availability fees revenue	(137,528)
Recognition of 2019 earned availability fees	275,093
Net position, July 1, 2019, as restated	$ 133,405,616

Note 12. COVID-19 Impact

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 outbreak as a pandemic, based on the rapid increase in exposure globally.

The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude the pandemic will have on the Authority's financial condition, liquidity, and future results of operations. Management is actively monitoring the impact of the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. Given the daily evolution of the COVID-19 outbreak and the global responses to curb its spread, the Authority is not able to estimate the effects of the COVID-19 outbreak on its results of operations, financial condition, or liquidity for fiscal year 2021.

Note 13. New Accounting Standards

The Governmental Accounting Standards Board (GASB) has issued the following Statements which are not yet effective. The effective dates below are updated based on **Statement No. 95**, *Postponement of the Effective Dates of Certain Authoritative Guidance* due to the COVID-19 pandemic.

In January 2017, the GASB issued **Statement No. 84**, *Fiduciary Activities*. This Statement establishes standards of accounting and financial reporting for fiduciary activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019.

(Continued)

Note 13. New Accounting Standards (Continued)

In June 2017, The GASB issued **Statement No. 87**, *Leases*. This Statement establishes standards of accounting and financial reporting for leases by lessees and lessors. The requirements of this Statement are effective for fiscal years beginning after June 15, 2021.

In March 2018, the GASB issued **Statement No. 88**, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. This Statement improves the information disclosed in the notes to government financial statements related to debt. The requirements of this Statement are effective for fiscal years beginning after June 15, 2019.

In January 2020, the GASB issued **Statement No. 92**, *Omnibus*. This Statement enhances comparability in accounting and financial reporting and improves the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. Certain requirements of this Statement are effective immediately and others for reporting periods beginning after June 15, 2021.

In March 2020, the GASB issued **Statement No. 93**, *Replacement of Interbank Offered Rates*. This Statement addresses accounting and financial reporting implications that result from the replacement of an IBOR. The removal of LIBOR as an appropriate benchmark interest rate is effective for reporting periods ending after December 31, 2022. All other requirements of this Statement are effective for reporting periods beginning after June 15, 2021.

In March 2020, the GASB issued **Statement No. 94**, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*. This Statement improves financial reporting by addressing issues related to public-private and public-public partnership arrangements (PPPs). The requirements of this Statement are effective for reporting periods beginning after June 15, 2022.

In May 2020, the GASB issued **Statement No. 96**, *Subscription-Based Information Technology Arrangements*. This Statement provides guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITAs) for government end users (governments). The requirements of this Statement are effective for reporting periods beginning after June 15, 2022.

In June 2020, the GASB issued **Statement No. 97**, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans – an Amendment of GASB Statements No. 14 and No. 84, and a Supersession of GASB Statement No. 32*. This Statement provides a more consistent financial reporting of defined contribution pension plans, defined contribution OPEB plans, and other employee benefit plans, while mitigating the costs associated with reporting those plans. Certain requirements of this Statement are effective immediately and others for reporting periods beginning after June 15, 2021.

Management has not determined the effects these new GASB Statements may have on prospective financial statements.

REQUIRED
SUPPLEMENTARY INFORMATION

Exhibit 4

FREDERICK WATER

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
June 30, 2020

	Plan Year Ended June 30,					
	2019	**2018**	**2017**	**2016**	**2015**	**2014**
Total Pension Liability						
Service cost	$ 326,178	$ 317,218	$ 318,484	$ 294,234	$ 287,609	$ 286,002
Interest on total pension liability	709,818	680,160	675,153	651,099	643,148	610,394
Difference between expected and actual experience	106,510	(125,527)	(282,765)	(159,986)	(383,245)	-
Changes of assumptions	305,557	-	(196,240)		-	-
Benefit payments, including refunds of employee contributions	(449,563)	(446,768)	(439,431)	(444,009)	(423,840)	(433,133)
Net change in total pension liability	998,500	425,083	75,201	341,338	123,672	463,263
Total pension liability – beginning	10,365,042	9,939,959	9,864,758	9,523,420	9,399,748	8,936,485
Total pension liability – ending	11,363,542	10,365,042	9,939,959	9,864,758	9,523,420	9,399,748
Plan Fiduciary Net Position						
Contributions – employer	166,328	221,893	211,875	281,381	267,322	277,708
Contributions – employee	178,102	171,738	161,565	150,593	143,454	138,417
Net investment income	685,645	710,922	1,053,419	151,265	374,931	1,112,963
Benefit payments, including refunds of employee contributions	(449,563)	(446,768)	(439,431)	(444,009)	(423,840)	(433,133)
Administrative expenses	(6,721)	(6,065)	(6,035)	(5,224)	(5,062)	(5,963)
Other	(432)	(636)	(938)	(63)	(77)	58
Net change in plan fiduciary net position	573,359	651,084	980,455	133,943	356,728	1,090,050
Plan fiduciary net position – beginning	10,251,840	9,600,756	8,620,301	8,486,358	8,129,630	7,039,580
Plan fiduciary net position – ending	10,825,199	10,251,840	9,600,756	8,620,301	8,486,358	8,129,630
Net pension liability – ending	$ 538,343	$ 113,202	$ 339,203	$ 1,244,457	$ 1,037,062	$ 1,270,118
Plan fiduciary net position as a percentage of total pension liability	95%	99%	97%	87%	89%	86%
Covered payroll	$ 3,736,155	$ 3,581,847	$ 3,322,990	$ 3,068,409	$ 2,891,892	$ 2,780,545
Net pension liability as a percentage of covered payroll	14%	3%	10%	41%	36%	46%

The plan years above are reported in the entity's financial statements in the fiscal year following the plan year - i.e., plan year 2014 was presented in the entity's fiscal year 2015 financial report.

This schedule is intended to show information for 10 years. Since fiscal year 2015 (plan year 2014) was the first year for this presentation, no earlier data is available. Additional years will be included as they become available.

The Notes to Required supplementary Information are an integral part of this schedule.

FREDERICK WATER

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF PENSION CONTRIBUTIONS
June 30, 2020

Entity Fiscal Year Ended June 30,	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2020	$ 170,565	$ 170,565	$ -	$ 3,918,606	4.35 %
2019	166,328	166,328	-	3,736,155	4.45
2018	221,893	221,893	-	3,581,847	6.19
2017	211,875	211,875	-	3,322,990	6.38
2016	281,381	281,381	-	3,068,409	9.17
2015	267,322	267,322	-	2,891,892	9.24

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

The covered payroll amounts above are for the Authority’s fiscal year - i.e., the covered payroll on which required contributions were based for the same year.

FREDERICK WATER

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN NET OPEB LIABILITY AND RELATED RATIOS
June 30, 2020

	Plan Year Ended June 30,		
VRS Health Insurance Credit – General Employees	**2019**	**2018**	**2017**
Total OPEB Liability			
Service cost	$ 2,523	$ 2,546	$ 2,588
Interest on total OPEB liability	7,012	6,546	6,514
Difference between expected and actual experience	839	3,032	-
Changes of assumptions	2,535	-	(3,883)
Benefit payments	(4,815)	(6,102)	(3,422)
Net change in total OPEB liability	8,094	6,022	1,797
Total OPEB liability – beginning	102,584	96,562	94,765
Total OPEB liability – ending	110,678	102,584	96,562
Plan Fiduciary Net Position			
Contributions – employer	5,230	5,014	4,652
Net investment income	4,559	4,746	6,878
Benefit payments	(4,815)	(6,102)	(3,422)
Administrative expenses	(100)	(111)	(114)
Other	(6)	(343)	343
Net change in plan fiduciary net position	4,868	3,204	8,337
Plan fiduciary net position – beginning	70,123	66,919	58,582
Plan fiduciary net position – ending	74,991	70,123	66,919
Net OPEB liability – ending	$ 35,687	$ 32,461	$ 29,643
Plan fiduciary net position as a percentage of total OPEB liability	68%	68%	69%
Covered payroll	$ 3,736,155	$ 3,581,847	$ 3,322,990
Net OPEB liability as a percentage of covered payroll	1%	1%	1%

The plan years above are reported in the entity's financial statements in the fiscal year following the plan year – i.e., plan year 2018 was presented in the entity's fiscal year 2019 financial report.

This schedule is intended to show information for 10 years. Since fiscal year 2018 (plan year 2017) is the first year for this presentation, no earlier data is available. Additional years will be included as they become available.

The Notes to Required Supplementary Information are an integral part of this schedule.

FREDERICK WATER

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER'S SHARE OF NET OPEB LIABILITY
June 30, 2020

Plan Year Ended June 30,	Employer's Proportion of the Net OPEB Liability (Asset)	Employer's Proportionate Share of the Net OPEB Liability (Asset)	Employer's Covered Payroll	Employer's Proportionate Share of the Net OPEB Liability (Asset) as a Percentage of its Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
Virginia Retirement System – Group Life Insurance – General Employees					
2019	0.01908 %	$ 310,482	$ 3,739,485	8.30 %	52.00 %
2018	0.01884	287,000	3,581,847	8.01	51.22
2017	0.01805	272,000	3,322,990	8.19	48.86

The plan years above are reported in the entity's financial statements in the fiscal year following the plan year – e.g., plan year 2018 information was presented in the entity's fiscal year 2019 financial report.

Schedule is intended to show information for 10 years. Since 2018 was the first year for this presentation, no earlier data is available. However, additional years will be included as they become available.

The Notes to Required Supplementary Information are an integral part of this schedule.

Exhibit 8

FREDERICK WATER

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF OPEB CONTRIBUTIONS
June 30, 2020

Entity Fiscal Year Ended June 30,	Contractually Required Contribution	Contributions in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a Percentage of Covered Payroll
VRS Health Insurance Credit – General Employees					
2020	$ 5,485	$ 5,485	$ -	$ 3,918,606	0.14 %
2019	5,230	5,230	-	3,736,155	0.14
2018	5,014	5,014	-	3,581,847	0.14
VRS Group Life Insurance – General Employees					
2020	$ 20,304	$ 20,304	$ -	$ 3,918,606	0.52
2019	19,445	19,445	-	3,739,485	0.52
2018	18,626	18,626	-	3,581,847	0.52

Schedule is intended to show information for 10 years. Since 2018 was the first year for this presentation, no earlier data is available. However, additional years will be included as they become available.

The covered payroll amounts above are for the Authority's fiscal year – i.e., the covered payroll on which required contributions were based for the same year.

The Notes to Required Supplementary Information are an integral part of this schedule.

Note 1. Changes of Benefit Terms

Pension

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

Other Postemployment Benefits (OPEB)

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

Note 2. Changes of Assumptions

The actuarial assumptions used in the June 30, 2018, 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:

Largest 10 – Non-Hazardous Duty:
- Update mortality table to RP-2014 projected to 2020
- Lowered rates at older ages and extended final retirement age from 70 to 75
- Update withdrawal rates to better fit experience at each age and service year
- Lowered rates of disability retirement
- No changes to salary rates
- Increase Line of Duty Disability rates from 14% to 20%
- Decrease discount rate from 7.00% to 6.75%
- Applicable to: Pension, GLI OPEB, and HIC OPEB

All Others (Non 10 Largest) – Non-Hazardous Duty:
- Update mortality table to RP-2014 projected to 2020
- Lowered rates of retirement at older ages and changed final retirement from 70 to 75
- Update withdrawal rates to better fit experience at each age and service year
- Lowered disability rates
- No changes to salary rates
- Increased Line of Duty disability rate from 14% to 15%
- Decreased discount rate from 7.00% to 6.75%
- Applicable to: Pension, GLI OPEB, and HIC OPEB

STATISTICAL SECTION

The statistical section of the Authority's financial report presents detailed information as a context for understanding what the information presented in the financial statements, note disclosures and required supplementary information say about the Authority's overall financial health. This information has not been audited by the independent auditor.

Contents

Sources: Unless otherwise noted, the information in these schedules is derived from the Financial Report for the relevant year.

FREDERICK WATER
PLEDGED-REVENUE COVERAGE
Last Ten Fiscal Years

Table 1

Fiscal Year	Gross Revenues	Less: Operating Expenses	Net Available Revenues For Debt	Debt Service including FWSA Principal	Debt Service including FWSA Interest	Coverage
2011	$ 18,887,124	$ 9,052,353	$ 9,834,771	$ 4,684,192	$ 4,207,638	1.11
2012	19,095,503	8,995,605	10,099,898	5,337,050	3,609,318	1.13
2013	21,512,426	9,079,261	12,433,165	5,906,181	3,480,449	1.32
2014	22,089,931	10,333,119	11,756,812	5,200,070	3,186,630	1.40
2015	23,370,533	11,437,995	11,932,538	5,431,404	2,942,253	1.43
2016	25,456,411	12,811,269	12,645,142	5,054,891	2,667,292	1.64
2017	27,283,489	14,459,824	12,823,665	6,822,919	2,790,391	1.33
2018	32,388,528	16,415,262	15,973,266	4,807,438	3,171,744	2.00
2019	37,893,167	15,173,829	22,719,338	5,088,646	3,007,911	2.81
2020	39,044,340	15,978,975	23,065,365	5,525,701	2,837,485	2.76

Details regarding Frederick Water's outstanding debt can be found in the notes to the financial statements. Gross revenues include operating revenues, interest and investment earnings and availability fees. Operating expenses do not include depreciation or amortization.

COMPLIANCE SECTION

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 Water
Winchester, Virginia

We have audited, in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States, and *Specifications for Audits of Authorities, Boards, and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia, the financial statements of Frederick Water (the "Authority"), as of and for the year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements, and have issued our report thereon dated October 27, 2020.

Internal Control over Financial Reporting

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

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

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

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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 that are required to be reported under *Government Auditing Standards*.**

Purpose of this Report

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

Brown, Edwards & Company, L.L.P.

CERTIFIED PUBLIC ACCOUNTANTS

Harrisonburg, Virginia
October 27, 2020

FREDERICK WATER

SUMMARY OF COMPLIANCE MATTERS
June 30, 2020

As more fully described in the 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*, we performed tests of the Authority's compliance with certain provisions of laws, regulations, contracts, and grants shown below:

STATE COMPLIANCE MATTERS

Code of Virginia:
Cash and Investment Laws
Conflicts of Interest Act
Debt Provisions
Local Retirement Systems
Procurement Laws
Uniform Disposition of Unclaimed Property Act