



Comprehensive Annual Financial Report

For the Fiscal Years Ended
June 30, 2020 and 2019

*Hampton Roads Sanitation District
(A Component Unit of the Commonwealth of Virginia)*





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HAMPTON ROADS SANITATION DISTRICT

**COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE FISCAL YEARS ENDED JUNE 30, 2020 AND 2019**

PREPARED BY THE FINANCE DEPARTMENT



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Introductory Section





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November 20, 2020

Hampton Roads Sanitation District Commission
Virginia Beach, Virginia

Dear Commissioners:

Political subdivisions of the Commonwealth of Virginia are required to publish a complete set of audited financial statements. This report fulfills that requirement for the fiscal year ended June 30, 2020.

Hampton Roads Sanitation District's (HRSD) management assumes full responsibility for the completeness and reliability of the information contained in this report, based on a comprehensive framework of internal control it has established for this purpose. Because the cost of internal control should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of material misstatements.

Cherry Bekaert LLP, Certified Public Accountants, has issued an unmodified ("clean") opinion on HRSD's financial statements for the year ended June 30, 2020. The independent auditors' report is located at the front of the financial section of this report.

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

PROFILE OF HRSD

HRSD is an independent political subdivision of the Commonwealth of Virginia (the Commonwealth) created by referendum on November 5, 1940. HRSD was established to abate water pollution in the Hampton Roads area by providing a system of interceptor mains and wastewater treatment plants.

Approximately 1.7 million individuals, more than one-fifth of Virginia's population, reside in HRSD's service area, which is located in the southeastern corner of the Commonwealth. HRSD's territory of approximately 3,100 square miles encompasses nine cities, nine counties and several large military facilities. A brief history of HRSD is provided on page 7. HRSD is required by its Enabling Act to meet its obligations by charging user fees for its wastewater treatment services; no taxing authority is authorized by the Enabling Act. Currently, HRSD provides service and bills to approximately 478,000 service connections.

A board of eight commissioners (the Commission), appointed by the Governor of Virginia, governs HRSD. Commission members, who serve four-year staggered terms, can be reappointed without limitation and may be suspended or removed by the Governor at his pleasure. The Commission appoints a General Manager, who appoints the senior staff.

HRSD owns and operates 16 treatment plants. The nine major plants in Hampton Roads have design capacities ranging in size from 15 to 54 million gallons per day (MGD). Five of the major plants are located south of the James River and four are north of the James River (see map on page 6). The combined capacity of these nine plants is approximately 249 MGD. HRSD's seven small rural treatment plants have a combined capacity of one MGD.

HRSD maintains 541 miles of pipelines ranging from six inches to 66 inches in diameter. Interceptor pipelines, along with 88 pump stations in Hampton Roads, interconnect into two independent systems, one south of the James River and one north of the James River. The system allows some flow diversions to provide for maintenance or emergency work. HRSD owns and maintains 42 pump stations in the Small Communities.

PO Box 5915, Virginia Beach, VA 23471-0911 • 757.460.7003

Commissioners: Frederick N. Elofson, CPA, Chair • Maurice P. Lynch, PhD, Vice-Chair • Vishnu K. Lakdawala, PhD
Michael E. Glenn • Stephen C. Rodriguez • Willie Levenston, Jr. • Elizabeth A. Taraski, PhD • Molly Joseph Ward
www.hrsd.com

Local Economy

HRSD's service area includes nearly all the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area (MSA). It is the ninth largest MSA in the southeastern United States and the thirty-seventh largest in the nation. Unlike many metropolitan areas, Hampton Roads' population nucleus is not confined to one central city. Instead, the approximately 1.7 million residents are spread among several cities and counties. Virginia Beach is the most populous city in the Commonwealth, with Norfolk and Chesapeake second and third, respectively. Suffolk is the largest city by land area. Unemployment rates remain below national averages in the region, which has a civilian labor force of 859,200 as of June 2019.

The regional economy is supported by one of the highest military concentrations in the nation, diverse manufacturing and service sectors, shipbuilding and repair work, international port activities and tourism. Several state and private colleges and a large healthcare infrastructure also lend stability to the region.

A diverse customer base allows HRSD to maintain stable revenues. The ten largest customers account for only 10.0 percent of wastewater revenues for fiscal year 2020. In addition, HRSD's 2020 revenues contained only limited reliance (1.9 percent) on new customer connections.

Long-Term Financial Planning

HRSD's Financial Policy helps it maintain its solid fiscal health. Budgetary principles include using ongoing revenues to pay for ongoing expenses and establishing annual cash contribution goals of at least 15 percent of budgeted capital costs. Under the Financial Policy, senior debt service coverage and total adjusted debt service coverage ratios should not be less than 1.5 and 1.4 times annual debt service, respectively with a goal of maintaining 2.0. Operating and ten-year capital improvement budgets are adopted annually. Included in the operating budget is a long-range financial forecast, which is guided by projections of operating and capital needs and the aforementioned Financial Policy requirements.

Major Initiatives

HRSD continues its ambitious \$2.9 billion, ten-year Capital Improvement Program. Regulatory requirements to reduce nutrient discharges, initiatives to ensure appropriate wet weather capacity exists within the regional sanitary sewer system, major plant upgrades and replacements of interceptor pipelines drive the capital program. Major projects are currently under construction at the Army Base Treatment Plant and the Virginia Initiative Plant. To minimize the impacts of its capital investments on ratepayers, HRSD continues to pursue grant and joint venture opportunities when available.

AWARDS and Acknowledgments

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to HRSD for its comprehensive annual financial report (CAFR) for the fiscal year ended June 30, 2019. This was the 37th consecutive year that HRSD has received this prestigious award. In order to be awarded a Certificate of Achievement, HRSD must publish an easily readable and efficiently organized CAFR that satisfies both generally accepted accounting principles and applicable legal requirements.

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

The preparation of this CAFR was made possible by the dedicated service of the entire Department of Finance staff. All members of the department have our sincere appreciation for their contributions to the preparation of this report. Credit must also be given to the Commission for their support for maintaining the highest standard of professionalism in the management of HRSD's finances.

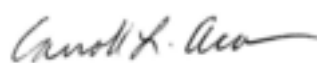
Respectfully submitted,



Edward Henifin, P.E.
General Manager



Jay A. Bernas, P.E.
Director of Finance



Carroll L. Acors, CPA
Chief of Accounting



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Hampton Roads Sanitation District
Virginia**

For its Comprehensive Annual
Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Merrill

Executive Director/CEO

Principal Officials

June 30, 2020

COMMISSIONERS

Frederick N. Elofson, CPA, Chair

Maurice P. Lynch, PhD, Vice-Chair

Michael E. Glenn

Vishnu K. Lakdawala, PhD

Willie Levenston, Jr.

Stephen C. Rodriguez

Elizabeth A. Taraski, PhD

Molly J. Ward

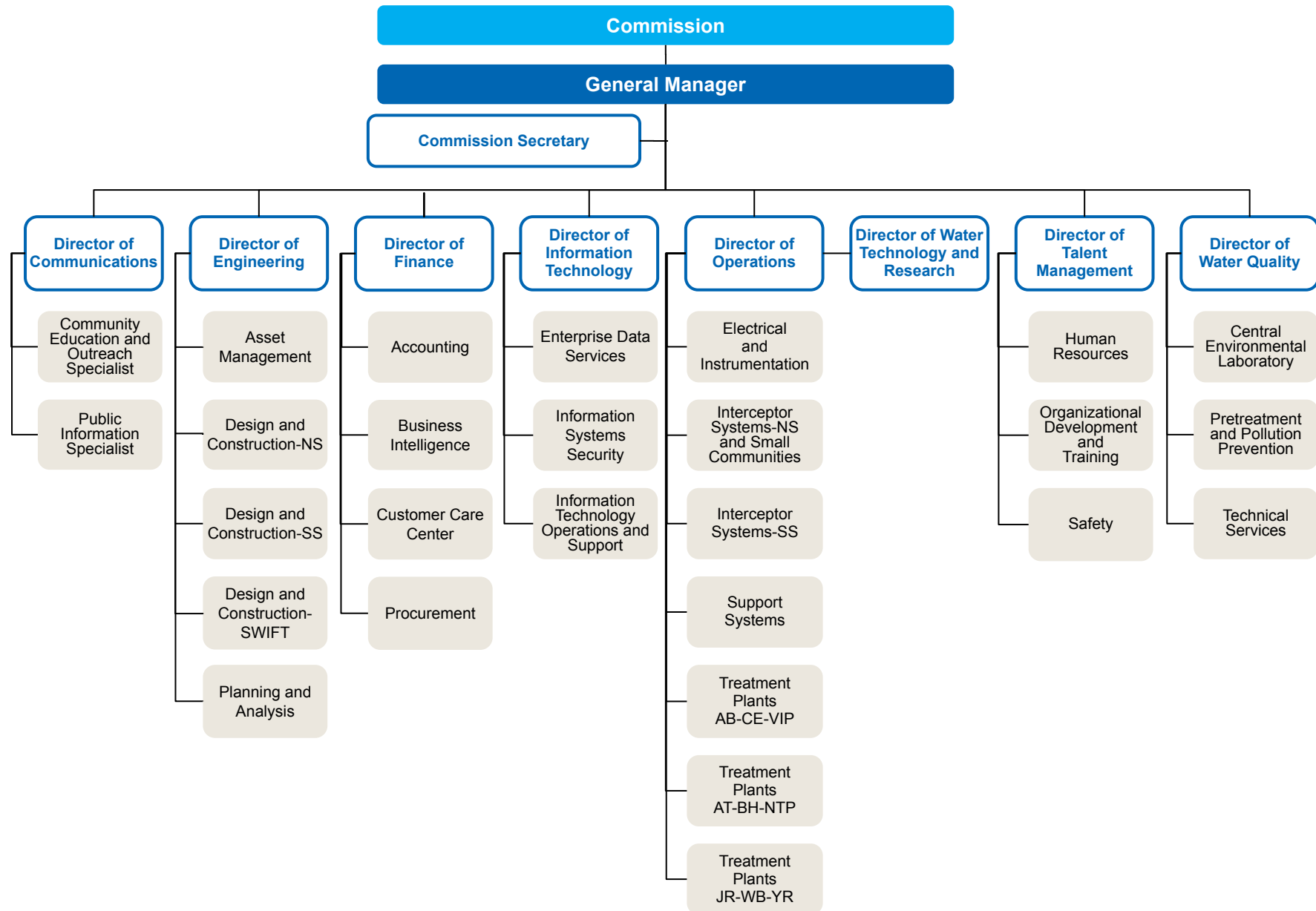
COMMISSION SECRETARY

Jennifer L. Cascio

SENIOR STAFFEdward G. Henifin, PE
General ManagerJay A. Bernas, PE
Director of Finance and
TreasurerCharles B. Bott, PhD, PE
Director of Water Technology And
ResearchDonald C. Corrado
Director of Information
TechnologySteven G. de Mik, CPA
Director of OperationsPaula A. Hogg
Director of Talent ManagementBruce W. Husselbee, PE
Director of EngineeringJames J. Pletl, PhD
Director of Water QualityLeila E. Rice, APR
Director of Communications**COUNSEL**Kellam, Pickrell, Cox & Anderson, PC
General CounselJones, Blechman, Woltz & Kelly, PC
Associate CounselAquaLaw, PLC
Special CounselNorton Rose Fulbright US, LLP
Bond Counsel

HRSD Organization Chart

June 30, 2020



Facilities include the following:

1. Atlantic, Virginia Beach
2. Chesapeake-Elizabeth, Va. Beach
3. Army Base, Norfolk
4. Virginia Initiative, Norfolk
5. Nansemond, Suffolk
6. Lawnes Point, Smithfield
7. County of Surry
8. Town of Surry
9. Boat Harbor, Newport News

10. James River, Newport News
11. Williamsburg, James City County
12. York River, York County
13. West Point, King William County
14. King William, King William County
15. Central Middlesex, Middlesex County
16. Urbanna, Middlesex County

Serving the Cities of
Chesapeake, Hampton,
Newport News, Norfolk,
Poquoson, Portsmouth, Suffolk,
Virginia Beach, Williamsburg and the
Counties of Gloucester,
Isle of Wight, James City,
King and Queen, King William,
Mathews, Middlesex, Surry* and York
*Excluding the Town of Clarendon



History of HRSD

June 30, 2020

HRSD can trace its beginnings to 1925 when the Virginia Department of Health condemned a large oyster producing area in Hampton Roads. The closure resulted in the Virginia General Assembly creating in 1927 a “Commission to Investigate and Survey the Seafood Industry of Virginia.” Other studies recommended a public body to construct and operate a sewage system in the area. HRSD was named after Hampton Roads, a ship anchorage used for five centuries located near the convergence of the James, Elizabeth and Nansemond Rivers, before they flow into the Chesapeake Bay in southeastern Virginia.

In 1934, the Virginia General Assembly created the Hampton Roads Sanitation Disposal Commission with instructions to plan the elimination of pollution in Hampton Roads. Recommendations were made to the General Assembly, which resulted in the Sanitary Districts Law of 1938, along with “an Act to provide for and create the Hampton Roads Sanitation District.” This Act required the qualified voters within HRSD to decide in a general election on November 8, 1938, if they favored creation of such a District. This referendum failed to gain a majority by about 500 votes out of nearly 20,000 votes cast. This led to a revision of the Act and another referendum was held on November 5, 1940, which resulted in a majority vote for the creation of the Hampton Roads Sanitation District.

The Enabling Act provides for HRSD to operate as a political subdivision of the Commonwealth of Virginia for the specific purpose of water pollution abatement in Hampton Roads by providing a system of interceptor mains and wastewater treatment plants. Its affairs are controlled by a Commission of eight members appointed by the Governor for four-year terms. Administration is under the direction of a General Manager, supported by department directors and their staffs.

HRSD began operations on July 1, 1946, using facilities acquired from the United States Government. The Warwick County Trunk Sewer, HRSD’s first construction project, began on June 26, 1946, and was funded by HRSD’s \$6.5 million Primary Pledge Sewer Revenue Bonds, dated March 1, 1946. The first treatment plant, the Army Base Plant, began operation on October 14, 1947. Since that time, the facilities of HRSD have grown to provide sanitary sewer service to all major population centers in southeastern Virginia. The population served has increased from nearly 288,000 in 1940 to about 1.7 million in 2020.

Throughout its rich history HRSD has earned many of its industry’s most prestigious awards. This tradition continued as the National Association of Clean Water Agencies (NACWA) presented Peak Performance Awards for outstanding compliance with National Pollutant Discharge Elimination System (NPDES) permits to the following HRSD treatment plants during the year ended June 30, 2020: Atlantic—Platinum Award (5 consecutive years of compliance), Boat Harbor—Platinum (18 consecutive years), James River—Platinum (6 consecutive years), Nansemond—Platinum (18 consecutive years), Virginia Initiative Plant—Platinum (24 consecutive years), Williamsburg—Platinum (25 consecutive years) and York River—Platinum (12 consecutive years).

Additional awards and honors received during the year ended June 30, 2020 include NACWA National Environmental Achievement Awards in the categories of Public Information and Education, and Workforce Development. HRSD also received the 2019 Oracle Construction and Engineering Excellence Award for Systems Integration in Public Infrastructure. The Virginia Initiative Plant was awarded the Virginia 2020 Pinnacle Award from the American Council of Engineering Companies for the plant’s Nutrient Reduction Improvements Project. HRSD was also awarded a Design-Build Institute of America National Award in the “Water/Wastewater” Category and an Honorable Mention in the “Best in Process” Category for the SWIFT Research Center. The SWIFT Program and SWIFT Research Center also earned the 2019 Engineering Achievement Award from the Engineers Club of Hampton Roads.



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A photograph of an industrial facility, possibly a refinery or chemical plant, featuring a complex network of steel pipes, walkways, and structural beams. The scene is captured from a low angle, looking up and along a walkway. A large, semi-transparent teal overlay covers the left side of the image, creating a modern, corporate aesthetic. The sky is clear and blue, and the overall lighting is bright, suggesting a sunny day.

Financial Section



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Report of Independent Auditor

To the Commissioners
Hampton Roads Sanitation District

Report on the Financial Statements

We have audited the accompanying financial statements of the Hampton Roads Sanitation District (hereafter referred to as "HRSD"), as of and for the years ended June 30, 2020 and 2019, and the related notes to the financial statements, which collectively comprise HRSD'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 audits. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and the *Specifications for Audits of Authorities, Boards, and Commissions*, issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards and specifications 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 HRSD, as of June 30, 2020 and 2019, and the changes in its financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information, as listed in the table 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.

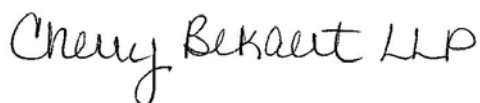
Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise HRSD's basic financial statements. The Introductory, Statistical and Other Supplemental Sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Introductory, Statistical and Other Supplemental Sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 18, 2020, on our consideration of HRSD's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of HRSD's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering HRSD's internal control over financial reporting and compliance.

A handwritten signature in cursive script that reads "Cherry Bekaert LLP".

Virginia Beach, Virginia
November 20, 2020

MANAGEMENT'S DISCUSSION AND ANALYSIS (Unaudited)

This narrative overview and analysis of the financial activities of the Hampton Roads Sanitation District (HRSD) for the fiscal years ended June 30, 2020 and 2019, is provided by HRSD's management. Readers of the accompanying financial statements are encouraged to consider this information in conjunction with that furnished in the transmittal letter, which can be found on pages 1 through 2 of this report.

FINANCIAL HIGHLIGHTS

- Total net position increased by \$88.2 million, or 11.3 percent, in 2020 as a result of this year's operations.
- Total revenues increased by \$15.7 million, or 4.9 percent. This increase is primarily attributable to higher wastewater revenue as a result of rate increases, offset by lower investment income due to market volatility and reduced cash balances.
- Operating expenses increased by \$9.2 million, or 4.3 percent, principally due to a \$3.3 million increase in personal services, a \$3.1 million increase in fringe benefits, a \$1.6 million increase in contractual services, and a \$1.2 million increase in bond cost of issuance.
- Restricted cash and cash equivalents decreased \$14.7 million, or 34.4 percent, primarily due to capital construction activity. Unrestricted cash and cash equivalents and investments decreased \$43.9 million, or 15.4 percent, primarily due to utilizing cash instead of bond proceeds to fund capital construction.
- Net Property, Plant and Equipment increased \$99.6 million, or 7.3 percent, primarily due to expansion of treatment plants and interceptor systems.

OVERVIEW OF FINANCIAL STATEMENTS

HRSD's Basic Financial Statements are comprised of the financial statements and the notes to the financial statements. This report also contains required supplementary information and other supplementary information in addition to the Basic Financial Statements.

The Basic Financial Statements, found on pages 19 through 22 of this report, are designed to provide readers with a broad overview of HRSD's finances in a manner similar to a private sector business.

The Statements of Net Position, found on pages 19 and 20 of this report, present information on all of HRSD's assets, deferred outflows of resources, liabilities, and deferred inflows of resources; the difference between these components is reported as net position. Over time, changes in net position may serve as a useful indicator of whether the financial position of HRSD is improving or deteriorating.

The Statements of Revenues, Expenses and Changes in Net Position, found on page 21 of this report, present all of HRSD's revenues and expenses, showing how HRSD's net position changed during the year. All changes in net position are reported as soon as the underlying event takes place, thus giving rise to the changes, regardless of the timing of the cash flows. Thus, revenues and expenses are reported for some items that will only result in cash flows in future fiscal periods.

The Notes to Financial Statements, found on pages 23 through 55 of this report, provide additional information that is essential to a full understanding of the data provided in the financial statements.

In addition to the Basic Financial Statements and the related notes, this report also presents certain required supplementary information concerning HRSD's progress in funding its obligations to provide pension and other postemployment benefits to its employees.

Required Supplementary Information can be found beginning on page 59 of this report.

FINANCIAL ANALYSIS

As noted earlier, net position may serve over time as a useful indicator of HRSD's financial position. Total assets and deferred outflows of resources exceeded total liabilities and deferred inflows of resources by \$869.9 million at June 30, 2020 and by \$781.7 million at June 30, 2019.

By far, the largest portion of HRSD's net position (74.3 percent and 63.3 percent at June 30, 2020 and 2019, respectively) reflects its net investment in capital assets (e.g. land, buildings, machinery and equipment) less any related debt used to acquire those assets still outstanding, net of unspent bond proceeds. HRSD uses these capital assets to provide services to its customers; consequently, these assets are not available for future spending. Although HRSD's net investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, because the capital assets themselves cannot be liquidated to reduce these liabilities.

HRSD's net position is summarized in the following condensed Statements of Net Position as of June 30:

HRSD's Condensed Statements of Net Position

(in thousands)				2020 vs. 2019	
	2020	2019	2018	Dollars	Percent
Capital assets	\$ 1,457,955	\$ 1,358,327	\$ 1,321,644	\$ 99,628	7.3%
Current and noncurrent assets	337,233	399,840	357,699	(62,607)	(15.7%)
Total assets	\$ 1,795,188	\$ 1,758,167	\$ 1,679,343	\$ 37,021	2.1%
Deferred outflows of resources	\$ 37,592	\$ 21,442	\$ 20,762	\$ 16,150	75.3%
Long-term liabilities	\$ 791,705	\$ 847,928	\$ 850,928	\$ (56,223)	(6.6%)
Current liabilities	157,752	140,564	139,914	17,188	12.2%
Total liabilities	\$ 949,457	\$ 988,492	\$ 990,842	\$ (39,035)	(3.9%)
Deferred inflows of resources	\$ 13,416	\$ 9,412	\$ 11,634	\$ 4,004	42.5%
Net investment in capital assets	\$ 646,505	\$ 494,779	\$ 512,398	\$ 151,726	30.7%
Restricted for debt service	28,155	28,553	27,799	(398)	(1.4%)
Unrestricted	195,247	258,373	157,432	(63,126)	(24.4%)
Total net position	\$ 869,907	\$ 781,705	\$ 697,629	\$ 88,202	11.3%

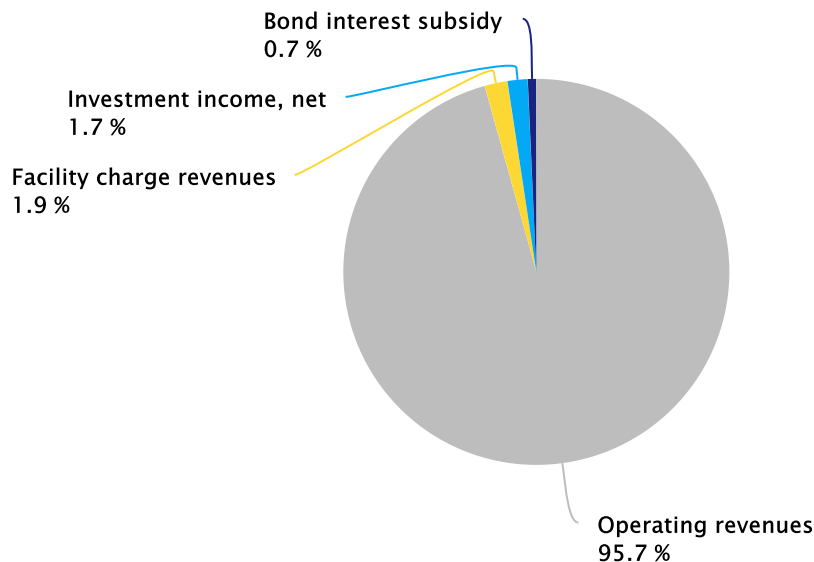
At June 30, 2019 HRSD retained \$14.3 million in unspent bond proceeds. As of June 30, 2020, there were no unspent bond proceeds. The increase in capital assets and the corresponding decreases in current and noncurrent assets is primarily due to an increase in the utilization of cash to fund and complete capital improvement projects in fiscal year 2020.

The changes in HRSD's net position can be determined by reviewing the following condensed Statements of Revenues, Expenses and Changes in Net Position:

HRSD's Condensed Statements of Revenues, Expenses and Changes in Net Position

(in thousands)	2020		2019		2018		2020 vs. 2019	
							Dollars	Percent
Revenues:								
Operating revenues	\$	322,032	\$	303,121	\$	279,043	\$ 18,911	6.2%
Facility charge revenues		6,444		6,662		6,673	(218)	(3.3%)
Investment income, net		5,876		8,719		2,272	(2,843)	(32.6%)
Bond interest subsidy		2,205		2,308		2,330	(103)	(4.5%)
Total revenues		336,557		320,810		290,318	15,747	4.9%
Operating expenses:								
Wastewater treatment		122,393		117,189		116,982	5,204	4.4%
General and administrative		46,949		41,121		40,480	5,828	14.2%
Depreciation and amortization		51,383		53,225		52,349	(1,842)	(3.5%)
Total operating expenses		220,725		211,535		209,811	9,190	4.3%
Non-operating expenses:								
Bond issuance costs		1,290		53		1,061	1,237	2334.0%
Capital distributions to localities		-		-		311	-	-%
Disposal of capital assets		739		-		-	739	100.0%
Interest expense		26,179		27,964		20,226	(1,785)	(6.4%)
Total non-operating expenses		28,208		28,017		21,598	191	0.7%
Total expenses		248,933		239,552		231,409	9,381	3.9%
Income before capital contributions		87,624		81,258		58,909	6,366	7.8%
Capital contributions		578		2,818		4,626	(2,240)	(79.5%)
Change in net position		88,202		84,076		63,535	4,126	4.9%
Total net position - beginning		781,705		697,629		634,094	84,076	12.1%
Total net position - ending	\$	869,907	\$	781,705	\$	697,629	\$ 88,202	11.3%

Revenues by Source



Operating revenues increased by \$18.9 million, or 6.2 percent, in 2020 and by \$24.1 million, or 8.6 percent, in 2019. The majority of these increases in both years are attributable to various rate increases in metered public wastewater services. Net Investment income decreased \$2.8 million in 2020, or 32.6 percent, primarily due to FY20 market volatility and reduced cash balances, compared to \$6.4 million increase, or 283.8 percent, in 2019, which was primarily due to higher interest rates and better investment returns on higher cash and investment balances.

Operating expenses increased by \$9.2 million, or 4.3 percent in 2020 and by \$1.7 million, or 0.8 percent, in 2019. Increases in 2020 were principally due to a \$1.6 million increase in contractual services, a \$3.3 million increase

in personal services, \$3.1 million increase in fringe benefits and a \$1.2 million increase in bond cost of issuance. Increases in 2019 were principally due to a \$2.0 million increase in contractual services and a \$1.3 million increase in major repairs, which was partially offset by a \$1.6 million decline in retirement expenses from the annual VRS Reconciliation.

In 2020 and 2019, HRSD received \$0.6 million and \$2.8 million, respectively, in capital contributions to help finance its capital improvement program.

CAPITAL ASSETS AND DEBT ADMINISTRATION

Capital Assets

At the end of 2020 and 2019, HRSD had approximately \$1.5 billion and \$1.4 billion, respectively, invested in a broad range of capital assets, including land, wastewater treatment plants, interceptor systems, pump stations, administrative and maintenance buildings, equipment and software. These amounts represent a net increased \$99.6 million, or 7.3 percent in 2020 and a net increase of \$36.7 million, or 2.8 percent in 2019.

The following summarizes HRSD's capital assets, net of accumulated depreciation, as of June 30:

HRSD's Capital Assets

(in thousands)	2020	2019	2018
Land	\$ 12,229	\$ 12,174	\$ 12,174
Treatment plants	654,809	549,645	572,942
Interceptor systems	447,372	440,236	442,376
Buildings	27,305	29,617	31,186
Small community facilities	16,672	17,222	17,718
Office equipment	754	1,513	2,555
Automotive	1,716	1,941	2,092
Other equipment	4,309	6,007	8,171
Software and intangible assets	2,204	5,441	10,147
	1,167,370	1,063,796	1,099,361
Construction in progress	290,585	294,531	222,283
Net property, plant and equipment	\$ 1,457,955	\$ 1,358,327	\$ 1,321,644

The following summarizes the changes in capital assets for the years ended June 30:

(in thousands)	2020	2019	2018
Balance at beginning of year	\$ 1,358,327	\$ 1,321,644	\$ 1,255,952
Additions	156,518	17,661	143,807
Transfers/Retirements	(1,819)	(1,050)	-
Depreciation and amortization	(51,383)	(53,226)	(52,349)
Accumulated depreciation retired	258	1,050	-
Net increase (decrease) in construction in progress	(3,946)	72,248	(25,766)
Balance at end of year	\$ 1,457,955	\$ 1,358,327	\$ 1,321,644

The largest increase in capital assets in the past two years has been in treatment plant construction and interceptor system construction, which includes pipeline replacements, pump station rehabilitations and other improvements to the infrastructure. HRSD's total capital expenditures were \$161.1 million during 2020 and \$95.7 million during 2019. The largest increase in FY20 was the completion of the Virginia Initiative Treatment Plant Nutrient Reduction project and improvements to the Nansemond interceptor system. During 2019, HRSD invested significant funds in improvements to the Atlantic and Virginia Initiative treatment plants, the Atlantic and Chesapeake-Elizabeth interceptor systems, and the SWIFT program planning and development.

LongTerm Debt

At June 30, 2020, HRSD had a total of \$835.5 million in revenue bonds outstanding versus \$891.6 million in 2019. The decrease in total outstanding revenue bonds is primarily due to \$14 million reduction in principal and approximately \$36 million reduction in bond premium due to bond refunding in fiscal year 2020.

The following summarizes HRSD's outstanding debt principal at June 30:

HRSD's Outstanding Debt

(in thousands, net of premium)

	2020	2019	2018
Senior revenue bonds	\$ 214,212	\$ 313,340	\$ 332,141
Subordinate revenue bonds	597,745	512,168	485,468
Total outstanding debt	\$ 811,957	\$ 825,508	\$ 817,609

HRSD's financial strengths are reflected in its high credit ratings listed below:

Ratings Agency	Senior Debt	Subordinate Long-term	Subordinate Short-term
Standard & Poor's	AA+	AA	A-1+
Fitch Ratings	AA+	AA	F1+
Moody's Investors Service	Aa1	Aa2	n/a

The development of HRSD's Capital Improvement Program and its related debt programs are governed by revenue Trust Agreements. The Senior Trust agreement requires the senior debt coverage to be 1.2 times maximum annual debt service and total debt service coverage of 1.0 times maximum annual debt service, both on a Generally Accepted Accounting Principles basis. The Amended and Subordinate Trust agreement was amended in 2016 to account for future Consent Decree expenses related to Locality wet weather improvements that HRSD will not own. In the Amended Trust, Operating Expenses were redefined as shown below for the purposes of calculating an "Adjusted" debt service coverage on a cash basis:

"Operating Expenses" as defined by the Enabling Act and as used in the Senior Trust Agreement, operating expenses includes the cost of maintaining, repairing and operating such system or systems or sewer improvements and to provide such reserves therefore as may be provided in the resolution providing for the issuance or such revenue bonds or in the trust agreement securing the same. As defined in the Subordinate Trust Agreement, Operating Expenses includes those expenses required to pay the cost of maintaining, repairing and operating the Wastewater System, including, but not limited to, reasonable and necessary usual expenses of administration, operation, maintenance and repair, costs for billing and collecting the rates, fees and other charges for the use of or the services furnished by the Wastewater System, insurance premiums, credit enhancement and liquidity support fees, legal, engineering, auditing and financial advisory expenses, expenses and compensation of the Trustee, and deposits into a self-insurance program. Operating Expenses shall exclude allowance for depreciation and amortization and expenditures for extraordinary maintenance or repair or improvements. Operating Expenses shall also exclude expenses for improvements that will not be owned by HRSD but which will, in the reasonable determination of the Commission, as evidenced by a resolution thereof, maintain or improve the integrity of the Wastewater System.

The Amended and Subordinate Trust agreement requires total debt service coverage to be 1.2 times current year debt service on an Adjusted basis. HRSD's Financial Policy and operating and capital improvement plans were developed with the intent to maintain coverage ratios in excess of these requirements. HRSD's Financial Policy requires senior debt service coverage to be 1.5 times and total debt service coverage to be 1.4 times.

	Senior Debt Service Coverage		Total Debt Service Coverage	
	GAAP	Adjusted	GAAP	Adjusted
Senior Trust Agreement	1.20x (MADS)	None	1.00x (MADS)	None
Amended Subordinate Trust Agreement	None	None	None	1.20x (Current Year)
Financial Policy	None	1.50x (Current Year)	None	1.40x (Current Year)

More detailed information regarding HRSD's capital assets and long-term debt is presented in Notes 5 and 9, respectively.

ECONOMIC FACTORS AND RATES

The five-year rolling average billed consumption has decreased over the last three fiscal years from approximately 112 million gallons per day (MGD) to approximately 110 MGD. HRSD's experience, primarily resulting from water conservation efforts throughout the region, is consistent with national trends.

Wastewater treatment rates for the 2020 fiscal year were increased by approximately 9 percent at the beginning of the year for the vast majority of HRSD customers. The increases are necessary to meet growing capital improvement needs and the increased cost of treatment operations. Facility charge revenues continued to decrease in 2020 primarily due to decrease in new construction activity across the region. Facility charge revenues comprised only 1.9 percent of HRSD's total revenues in 2020.

The planned 9 percent regional wastewater rate increase that would have taken effect on July 1, 2020 was eliminated in consideration of the economic stresses created by the COVID-19 pandemic on ratepayers. Holding rates at the 2020 level will be accommodated through reprioritizing some planned investments, obtaining relief from Federal and state regulatory schedules, taking advantage of historically low interest rates and the judicious use of reserves previously set aside for unexpected needs. HRSD will continue to monitor the COVID-19 impact on our ratepayers and make further adjustments to investment plans should the economic conditions warrant.

CONTACTING HRSD'S FINANCIAL MANAGEMENT

This financial report is designed to provide a general overview of HRSD's finances for all those with an interest. Questions concerning the information provided in this report or any requests for additional information should be addressed to the Director of Finance, 1434 Air Rail Avenue, Virginia Beach, Virginia 23455.

STATEMENTS OF NET POSITION AS OF JUNE 30, 2020 AND 2019

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

(in thousands)

	2020	2019
CURRENT ASSETS		
Cash and cash equivalents	\$ 175,210	\$ 155,453
Cash and cash equivalents - restricted	28,155	42,888
Accounts receivable, net	39,178	42,977
Other current assets	2,933	3,105
TOTAL CURRENT ASSETS	245,476	244,423
NON-CURRENT ASSETS		
Cash and cash equivalents	64,900	128,530
Inventory	26,857	26,887
	91,757	155,417
NET PROPERTY, PLANT AND EQUIPMENT		
Land	12,229	12,174
Treatment plants	1,384,293	1,248,897
Interceptor systems	638,150	619,068
Buildings	48,081	49,132
Small community facilities	25,625	25,625
Office equipment	44,613	44,613
Automotive	19,127	18,540
Other equipment	37,517	36,887
Software and intangible assets	40,074	40,074
	2,249,709	2,095,010
Less: Accumulated depreciation and amortization	1,082,339	1,031,214
	1,167,370	1,063,796
Construction in progress	290,585	294,531
NET PROPERTY, PLANT AND EQUIPMENT	1,457,955	1,358,327
TOTAL NON-CURRENT ASSETS	1,549,712	1,513,744
TOTAL ASSETS	1,795,188	1,758,167
DEFERRED OUTFLOWS OF RESOURCES		
Deferred loss on debt refunding, net	24,029	13,745
Differences between expected and actual experience:		
OPEB plans	2,894	3,154
Pension plan	1,268	1,251
Changes of assumption:		
OPEB plans	312	-
Pension plan	5,764	-
Change in proportion, OPEB plans	41	51
Contributions subsequent to the measurement date:		
OPEB plans	387	375
Pension plan	2,897	2,866
TOTAL DEFERRED OUTFLOWS OF RESOURCES	37,592	21,442
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$ 1,832,780	\$ 1,779,609

(continued)

See Accompanying Notes to Financial Statements

**STATEMENTS OF NET POSITION
AS OF JUNE 30, 2020 AND 2019**

LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION

(in thousands)

	2020	2019
CURRENT LIABILITIES		
Trade and contracts payable	\$ 37,454	\$ 25,526
Contract retention	7,626	4,164
Accrued salaries and wages	3,154	2,703
Current portion of bonds payable	35,906	34,950
Variable rate demand bonds	50,000	50,000
Current portion of compensated absences	6,160	5,888
Debt interest payable	8,875	11,402
Other liabilities	8,577	5,931
TOTAL CURRENT LIABILITIES	157,752	140,564
LONG-TERM LIABILITIES		
Compensated absences	2,410	2,201
Net OPEB liability	10,664	18,744
Net pension liability	29,058	20,304
Bonds payable	749,573	806,679
TOTAL LONG-TERM LIABILITIES	791,705	847,928
TOTAL LIABILITIES	949,457	988,492
DEFERRED INFLOWS OF RESOURCES		
Differences between expected and actual experience:		
OPEB plans	6,343	71
Pension plan	1,281	2,951
Changes of assumptions:		
OPEB plans	1,852	1,610
Pension plan	1,388	2,250
Net difference between projected and actual earnings on:		
OPEB plan investments	703	828
Pension plan investments	1,848	1,702
Change in proportion, OPEB plans	1	-
TOTAL DEFERRED INFLOWS OF RESOURCES	13,416	9,412
NET POSITION		
Net investment in capital assets	646,505	494,779
Restricted for debt service	28,155	28,553
Unrestricted	195,247	258,373
TOTAL NET POSITION	869,907	781,705
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	\$ 1,832,780	\$ 1,779,609

See Accompanying Notes to Financial Statements

**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE FISCAL YEARS ENDED JUNE 30, 2020 and 2019**

(in thousands)

	2020	2019
OPERATING REVENUES		
Wastewater treatment charges	\$ 318,585	\$ 299,323
Miscellaneous	3,447	3,798
TOTAL OPERATING REVENUES	322,032	303,121
 OPERATING EXPENSES		
Wastewater treatment	122,393	117,189
General and administrative	46,949	41,121
Depreciation and amortization	51,383	53,225
TOTAL OPERATING EXPENSES	220,725	211,535
 OPERATING INCOME	101,307	91,586
 NON-OPERATING REVENUES (EXPENSES)		
Wastewater facility charges	6,444	6,662
Investment income	5,876	8,719
Bond interest subsidy	2,205	2,308
Bond issuance costs	(1,290)	(53)
Disposal of capital assets	(739)	-
Interest expense	(26,179)	(27,964)
NET NON-OPERATING EXPENSES	(13,683)	(10,328)
 INCOME BEFORE CAPITAL CONTRIBUTIONS	87,624	81,258
 CAPITAL CONTRIBUTIONS		
State capital grants received	-	2,444
Other capital contributions	578	374
CAPITAL CONTRIBUTIONS	578	2,818
 CHANGE IN NET POSITION	88,202	84,076
 TOTAL NET POSITION - Beginning	781,705	697,629
 TOTAL NET POSITION - Ending	\$ 869,907	\$ 781,705

See Accompanying Notes to Financial Statements

STATEMENTS OF CASH FLOWS
FOR THE FISCAL YEARS ENDED JUNE 30, 2020 and 2019

(in thousands)	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers	\$ 320,147	\$ 301,230
Other operating revenues	3,447	3,798
Cash payments to suppliers for goods and services	(105,554)	(108,500)
Cash payments to employees for services	(58,734)	(56,424)
Net cash provided by operating activities	159,306	140,104
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Wastewater facility charges	6,444	6,662
Acquisition and construction of property, plant and equipment	(136,586)	(92,514)
Proceeds from capital debt	29,238	35,040
Bond interest subsidy	2,205	2,308
Principal paid on capital debt	(28,743)	(27,141)
Funds for cash defeasance	(65,352)	-
State capital grants	-	2,444
Other capital contributions	578	374
Bond issuance costs	(1,290)	(53)
Fees paid on interim financing	(14)	-
Interest paid on capital debt	(30,268)	(34,764)
Net cash used in capital and related financing activities	(223,788)	(107,644)
CASH FLOWS FROM INVESTING ACTIVITIES		
Sales and maturities of investments	-	124,090
Interest and dividends on investments	5,876	9,166
Net cash provided by investing activities	5,876	133,256
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS		
AND CASH AND CASH EQUIVALENTS - RESTRICTED	(58,606)	165,716
CASH AND CASH EQUIVALENTS, AND CASH AND CASH		
EQUIVALENTS - RESTRICTED, AT BEGINNING OF YEAR	326,871	161,155
CASH AND CASH EQUIVALENTS, AND CASH AND CASH		
EQUIVALENTS - RESTRICTED, AT END OF YEAR	\$ 268,265	\$ 326,871
Reconciliation of Operating Income to Net Cash Provided by Operating Activities		
(in thousands)		
Operating income	\$ 101,307	\$ 91,586
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	51,383	53,225
(Increase) decrease in operating assets:		
Accounts receivable	3,799	(1,069)
Inventory	30	630
Net change in other current assets	172	(523)
Increase (decrease) in operating liabilities:		
Trade and contracts payable	226	1,128
Accrued salaries and wages	451	227
Compensated absences	481	(315)
Net change in other liabilities	2,645	466
OPEB liabilities	(1,744)	(1,269)
Pension liabilities	556	(3,982)
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ 159,306	\$ 140,104
Noncash Capital and Related Financing Activities:		
Proceeds of refunding debt principal	\$ 205,675	\$ -
Refunding of debt principal	(219,721)	-
Accrual for capital expenditures	11,703	2,576
Amortization of premium	(42,599)	(7,712)
Amortization of deferred loss on bond refunding	(10,284)	(1,173)
Loss on disposal of asset	(739)	-

See Accompanying Notes to Financial Statements

NOTES TO FINANCIAL STATEMENTS

NOTE 1 - GENERAL INFORMATION

Organization and Administration

The Hampton Roads Sanitation District (HRSD) was created by the Virginia General Assembly in 1940, as a political subdivision of the Commonwealth of Virginia (the Commonwealth), to construct, maintain, and operate a wastewater treatment system in the Hampton Roads area. The Hampton Roads Sanitation District Commission (the Commission) is HRSD's governing body and consists of eight members, appointed by the Governor. The Commission's functions were updated by Chapter 66 of the Acts of the Assembly of Virginia of 1960, as amended. The administration of HRSD is under the direction of a General Manager, supported by eight department directors.

Regulatory Oversight

HRSD's operations are subject to regulations established by the United States Environmental Protection Agency and the Virginia Department of Environmental Quality. HRSD currently meets all of its permit requirements. Changes in these regulations could require HRSD to modify its treatment processes and require additional capital investment and/ or incur additional costs.

Purpose of HRSD

HRSD was created for the specific purpose of abating pollution in the Hampton Roads area through the interception of wastewater outfalls, installation of interception service into new areas as necessary and providing treatment facilities. HRSD provides points of interception throughout the region. The responsibility of providing lateral sewers and subtrunk facilities to carry sewage from industries, residences and businesses is generally the responsibility of the local municipal governments.

Corporate Limits of HRSD

The geographical limits of HRSD include:

City of Chesapeake	City of Suffolk	King and Queen County
City of Hampton	City of Virginia Beach	King William County
City of Newport News	City of Williamsburg	Mathews County
City of Norfolk	Gloucester County	Middlesex County
City of Poquoson	Isle of Wight County	Surry County*
City of Portsmouth	James City County	York County

*Excluding the Town of Claremont

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

HRSD is a political subdivision of the Commonwealth and a government instrumentality. The Commission is granted corporate powers by the *Code of Virginia*. The Governor of the Commonwealth appoints the Commission members, who serve at his pleasure. HRSD is reported in the Commonwealth's Comprehensive Annual Financial Report as a discretely presented component unit. The Commonwealth is not obligated to repay HRSD's debt. HRSD derives its revenues primarily from charges for wastewater treatment services. HRSD has no taxing authority.

Basis of Accounting

The accompanying financial statements report the financial position and results of operations of HRSD in accordance with accounting principles generally accepted in the United States of America (GAAP). Because HRSD is a political subdivision of the Commonwealth, the preparation of HRSD's financial statements are governed by the pronouncements of the Governmental Accounting Standards Board (GASB). These statements are prepared on an enterprise fund basis and present HRSD's operating revenues and expenses in a manner similar to a private

NOTES TO THE FINANCIAL STATEMENTS

business, where the costs, including depreciation, of providing services to the general public on a continuing basis are financed or recovered primarily through user charges.

An enterprise fund, a proprietary fund type, is accounted for on an economic resources measurement focus. All assets and liabilities, whether current or noncurrent, associated with its activities are included on its Statements of Net Position. Proprietary fund type operating statements present increases (revenues) and decreases (expenses) in fund equity. The financial statements are presented using the accrual basis of accounting, whereby revenues are recognized when earned and expenses are recognized when incurred.

Budgetary Accounting and Control

HRSD operates in accordance with annual operating and capital budgets prepared on a basis of accounting that is different from generally accepted accounting principles. The operating budget is adopted by department, with budgetary controls exercised administratively by management at the department level. The General Manager is authorized to transfer funds among departments without further approval by the Commission. The Capital Budget represents a ten-year plan. Funds for the Capital Budget are appropriated throughout a fiscal year on a project basis. Transfers among projects require approval by the Commission. Appropriations for these budgets continue until the purpose of the appropriation has been fulfilled.

Cash Equivalents

All short-term investments that are highly liquid are considered to be cash equivalents. Cash equivalents are readily convertible to cash, and at the day of purchase, have an original maturity date of no longer than three months. Current restricted cash and cash equivalents are for debt service payments payable within the next year. Money market investments include the VACo/VML Virginia Investment Pool's (VIP) 1-3 Year High Quality Bond Fund and Stable NAV Liquidity Pool, which are recorded at amortized cost, which approximates fair value. See Note 3 and Note 13 for additional discussion of cash and cash equivalent and investment valuations.

Investments

Investments, which consist of U.S. government obligations including agencies, FDIC-guaranteed corporate notes, other corporate notes and bonds, and municipal bonds, are reported at fair value. HRSD's investment practices are governed by its formal investment policy.

Allowance for Uncollectible Accounts

HRSD provides an allowance for estimated uncollectible accounts receivable based on its bad debt experience. The balance in the allowance for uncollectible accounts is considered by management to be sufficient to cover anticipated losses on reported receivable balances.

Inventory

Inventory is carried at the lower of cost or market value and consists primarily of operating and maintenance materials.

Property, Plant and Equipment

HRSD funds its capital improvement program through the issuance of debt and its own resources. The proceeds of debt are reported as restricted assets. Generally, for projects funded with both debt proceeds and other resources, it is HRSD's policy to use available debt proceeds to pay project expenditures prior to using its own resources.

Property, plant and equipment purchased or constructed are reported at cost, including interest cost on funds borrowed to finance the construction of major capital additions. The capitalization threshold is \$5,000. Donated assets are reported at acquisition value at the date of donation. Property, plant and equipment are depreciated using the straight-line method over the following estimated useful lives:

Treatment plants, buildings and facilities	30 years
Interceptor systems	50 years
Office furniture and equipment	5-10 years
Software and intangible assets	5-7 years
Automotive	5 years

Depreciation and amortization recognized on property, plant and equipment is an operating expense.

Deferred Outflows and Inflows of Resources

In addition to assets, the Statements of Net Position reports a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expenses) until then. HRSD has eight items that qualify for reporting in this category. The first is the deferred loss on refunding reported in the Statements of Net Position. 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. The second through sixth amounts are: differences between expected and actual experience on the OPEB and pension plans; changes of OPEB and pension assumptions; and the change in proportion for OPEB plans. These differences will be recognized in pension expense in future reporting periods. The seventh and eighth deferred charges are for OPEB and pension contributions to the Virginia Retirement System (VRS) made subsequent to the measurement dates of June 30, 2019 and 2018. These contributions will be recognized as reductions of the Net OPEB and Net Pension Liabilities during the years ended June 30, 2021 and 2020, respectively.

In addition to liabilities, the Statements of Net Position reports a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. HRSD has seven items that qualify for reporting in this category: the differences between expected and actual experience for OPEB and pension plans; the changes of OPEB and pension assumptions; the net difference between projected and actual earnings on OPEB and pension plan investments; and change in proportion for OPEB investments. These items will be recognized in pension expense in future reporting periods.

Revenue Recognition

Generally, wastewater treatment charges are computed based on a user's water consumption. These charges are recognized as revenue when billed. Revenues earned but unbilled through June 30 of each fiscal year are accrued at year-end. Wastewater facility charges are computed based on a new connection's water meter size and potential for high strength pollutant discharges, and are recognized as revenue prior to the issuance of a building or operating permit.

Operating and Non-operating Revenues and Expenses Recognition

HRSD distinguishes operating revenues and expenses from non-operating items. Operating revenues and expenses result from providing services and producing and delivering goods in connection with HRSD's principal service of providing wastewater treatment. The majority of operating revenues are from wastewater treatment, but other associated miscellaneous income from other related services and charges are also included. Revenues and expenses not meeting the operating definition are reported as non-operating. These consist mainly of wastewater facility charges, investment income, capital contributions and interest expense.

Compensated Absences

All permanent employees earn leave upon starting a full-time position. The amount and type of leave earned is based upon the employee's date of hire and years of service and is expensed as employees earn the right to these benefits.

Permanent employees hired prior to January 1, 2014 earn from 15 to 27 days of annual leave per year. The maximum annual leave an employee may accumulate at year-end varies by the years of service, with the maximum being 54 days. An employee has a vested right to their annual leave when earned. These employees also earn eight hours per month of sick leave regardless of the number of years of service. The amount of sick leave that may be accumulated is unlimited. After five years of service with HRSD, an employee has vested rights to 35 percent of accumulated sick leave to a maximum of \$10,000. For these employees, long-term disability (LTD) insurance is an optional employee paid benefit that replaces part of their income if the employee suffers a serious illness or injury and can't work for an extended period of time.

Permanent employees hired after January 1, 2014 earn 8 hours of paid time off for each two-week pay period. Employees may use accumulated paid time off for any type of absence from work, subject to supervisor approval. The maximum paid time off an employee may accumulate at year-end is 208 hours. After five years of service with HRSD, an employee has vested rights to 50 percent of their accumulated paid time off at separation. For these employees, HRSD also provides a state mandated long-term disability (LTD) benefit since these employees are not eligible for disability retirement benefits through VRS. The long-term disability benefit provides income replacement for employees who become disabled and unable to work for an extended period of time due to a non work-related or

NOTES TO THE FINANCIAL STATEMENTS

work-related condition (as determined under the Virginia Workers' Compensation Act). Long-term disability benefits begin at the expiration of an additional state mandated employer paid short-term disability (STD) benefit period of 125 days.

Postemployment Benefits Other Than Pensions (OPEB)

HRSD employees participate in three postemployment benefits other than pensions (other postemployment benefits or OPEB) plans:

The HRSD Retiree Health Plan (RHP) is a single employer, defined benefit plan that provides health and dental benefit plans for eligible members through a self-funded plan administered by a third-party vendor. HRSD administers the Plan through the Hampton Roads Sanitation District Retiree Health Trust. For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the RHP and additions to/deductions from the plan's fiduciary net position have been determined on the same basis as they are reported by the RHP. For this purpose, the RHP recognizes benefit payments when due and payable in accordance with the benefit terms.

The VRS Political Subdivision Health Insurance Credit Program (HIC) is a multiple-employer, agent defined benefit plan that provides a credit toward the cost of health insurance coverage for retired political subdivision employees of participating employers. The Political Subdivision HIC Program was established pursuant to §51.1-1400 et seq. of the Code of Virginia, as amended, and which provides the authority under which benefit terms are established or may be amended. For purposes of measuring the net HIC OPEB liability, deferred outflows of resources and deferred inflows of resources related to the HIC OPEB, and the HIC OPEB expense, information about the fiduciary net position of the VRS HIC; and the additions to/deductions from the VRS HIC's fiduciary net position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

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

Pensions

HRSD employees participate in an agent multiple-employer defined benefit pension plan administered by the VRS, which acts as a common investment and administrative agent for political subdivisions in the Commonwealth. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of HRSD's Retirement Plan and the additions to or deductions from HRSD's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported to HRSD by VRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms.

Use of Estimates

The preparation of these financial statements requires management to make estimates and assumptions. These estimates affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from management's estimates.

New Accounting Pronouncement

During the fiscal year ended June 30, 2019, HRSD adopted GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, effective July 1, 2018. This Statement establishes accounting requirements for interest cost incurred before the end of a construction period, and replaces the requirements of GASB Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, which are superseded by this Statement. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in

which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of this Statement are applied prospectively, so no adjustment to net position was required.

Also during the fiscal year ended June 30, 2019, HRSD adopted GASB Statement No. 88, *Certain Disclosures Related to Debt*, including Direct Borrowings and Direct Placements, effective July 1, 2018. This Statement defines debt for purposes of disclosure in notes to financial statements and establishes additional financial statement note disclosure requirements related to debt obligations of governments, including direct borrowings (for example, a government entering into a loan agreement with a lender) and direct placements (for example, a government issuing a debt security directly to an investor). Direct borrowings and direct placements have terms negotiated directly with the investor or lender and are not offered for public sale. The requirements of this Statement apply to the financial statements of all state and local governments.

NOTE 3 DEPOSITS AND INVESTMENTS

Deposits

Custodial Credit Risk. This risk is associated with the inability of a governmental entity to recover deposits from a financial institution in the event of a failure. At June 30, 2020 and 2019, the carrying values of HRSD's deposits were \$24,703,000 and \$20,346,000, respectively, and the bank balances were \$21,883,000 and \$29,940,000, respectively. All of the bank balances at June 30, 2020 were covered by federal depository insurance or collateralized in accordance with the Virginia Security for Public Deposits Act (the Act). In accordance with the Act, the depository institution pledged collateral in the form of federal obligations with a fair value equal to 110 percent of HRSD's deposits with a third party trustee in the name of the Treasurer of the Commonwealth. In the event that the banking institution fails, the Treasurer will take possession of the collateral, liquidate it and reimburse HRSD up to the value of its deposits. The State Treasury Board is responsible for monitoring compliance with the collateralization and reporting requirements of the Act and for notifying local governments of compliance by banks.

Credit Risk. HRSD invests in VACo/VML Virginia Investment Pool's (VIP) 1-3 Year High Quality Bond Fund and Stable NAV Liquidity Pool. Oversight is provided by the VACo/VML Board of Trustees. HRSD's investments in the VIP 1-3 Year High Quality Bond Fund and the VIP Stable NAV Liquidity Pool were rated AA+f/S1 and AAAm, respectively, by Standard & Poor's.

Investments

All HRSD funds were held as cash and cash equivalents as of June 30, 2020 and 2019.

The components of restricted cash and cash equivalents and investments at June 30 are as follows:

(in thousands)	2020	2019
Debt service	\$ 28,155	\$ 28,553
Revenue bond construction funds - current	-	14,335
Total cash and cash equivalents - restricted	\$ 28,155	\$ 42,888

NOTES TO THE FINANCIAL STATEMENTS
HRSD OPEB Trust Investments

The HRSD OPEB Trust has investments in mutual funds, cash, and cash equivalents on deposit with its trustee, US Bank. Investments are reported at fair value. HRSD's OPEB investment practices are governed by its formal investment policy.

The plan had the following investments and maturities at June 30:

(in thousands)	2020	2019
Domestic equity	\$ 21,315	\$ 20,355
International equity	10,605	10,896
Other growth	1,424	-
Fixed income	20,969	19,428
Other income	2,412	1,175
Money market	187	171
Total Investments	\$ 56,912	\$ 52,025

Fixed income investments have an average maturity of 7.74 years and an average credit quality of A. Other investments do not have a stated maturity or credit rating.

Custodial Credit Risk. For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, HRSD will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. HRSD's policy is to utilize its Trustee, U.S. Bank Trust Department, for its OPEB investments as recipient of all investment transactions on a delivery versus pay basis. The Trustees may not be a counterparty to the investment transaction. At June 30, 2020, the Trust Department of the U.S. Bank held \$56,845,000 in investments in the Trustee's name for HRSD. The difference between reported and U.S. Bank Trust valuation is the value of the Boyd Watterson security. U.S. Bank Trust value is lagging as they update those funds when they receive notice.

NOTE 4 - ALLOWANCE FOR UNCOLLECTIBLE ACCOUNTS

An analysis of the allowance for uncollectible accounts for the years ended June 30:

(in thousands)	2020	2019
Balance, beginning of year	\$ 2,689	\$ 2,180
Add: Current provision for uncollectible accounts	2,237	2,976
Less: Charge-off of uncollectible accounts	(2,104)	(2,467)
Balance, end of year	\$ 2,822	\$ 2,689

HRSD's collection ratios for the years ended June 30, 2020 and 2019 were 99.3% and 99.2% percent, respectively.

NOTE 5 - PROPERTY, PLANT AND EQUIPMENT

Analysis of property, plant and equipment activity for years ended June 30:

(in thousands)	Balance 2018	Additions	Transfers/ Retirements	Balance 2019	Additions	Transfers/ Retirements	Balance 2020
Non-Depreciable Capital Assets							
Land	\$ 12,174	\$ -	\$ -	\$ 12,174	\$ 55	\$ -	\$ 12,229
Construction in progress	222,283	89,225	(16,977)	294,531	152,253	(156,199)	290,585
Depreciable Capital Assets							
Treatment plants	1,242,191	6,706	-	1,248,897	135,700	(304)	1,384,293
Interceptor systems	609,416	9,652	-	619,068	19,546	(464)	638,150
Buildings	49,132	-	-	49,132	-	(1,051)	48,081
Small community facilities	25,549	76	-	25,625	-	-	25,625
Office equipment	44,613	-	-	44,613	-	-	44,613
Automotive	18,986	603	(1,049)	18,540	587	-	19,127
Other equipment	36,589	298	-	36,887	630	-	37,517
Software and intangible assets	39,749	325	-	40,074	-	-	40,074
Total	\$ 2,300,682	\$ 106,885	\$ (18,026)	\$ 2,389,541	\$ 308,771	\$ (158,018)	\$ 2,540,294
Less accumulated depreciation and amortization							
Treatment plants	(669,249)	(30,003)	-	(699,252)	(30,232)	-	(729,484)
Interceptor systems	(167,040)	(11,792)	-	(178,832)	(11,946)	-	(190,778)
Buildings	(17,946)	(1,569)	-	(19,515)	(1,519)	258	(20,776)
Small community facilities	(7,831)	(572)	-	(8,403)	(550)	-	(8,953)
Office equipment	(42,058)	(1,042)	-	(43,100)	(759)	-	(43,859)
Automotive	(16,894)	(754)	1,049	(16,599)	(812)	-	(17,411)
Other equipment	(28,418)	(2,462)	-	(30,880)	(2,328)	-	(33,208)
Software and intangible assets -amortization	(29,602)	(5,031)	-	(34,633)	(3,237)	-	(37,870)
Total	(979,038)	(53,225)	1,049	(1,031,214)	(51,383)	258	(1,082,339)
Net property, plant and equipment	\$ 1,321,644	\$ 53,660	\$ (16,977)	\$ 1,358,327	\$ 257,388	\$ (157,760)	\$ 1,457,955

NOTE 6 - COMPENSATED ABSENCES

Analysis of liability for vested annual, sick, paid time off and compensatory leave for years ended June 30:

(in thousands)	Balance 2018	Earned	Taken	Balance 2019	Earned	Taken	Balance 2020
Annual leave	\$ 4,889	\$ 3,409	\$ (3,454)	\$ 4,844	\$ 3,721	\$ (3,300)	\$ 5,265
Sick leave	2,829	1,408	(1,398)	2,839	1,747	(1,543)	3,043
Paid time off	686	756	(1,036)	406	1,173	(1,317)	262
Total	8,404	\$ 5,573	\$ (5,888)	8,089	\$ 6,641	\$ (6,160)	8,570
Less: Current liability	5,541			5,888			6,160
Long-term liability	\$ 2,863			\$ 2,201			\$ 2,410

NOTES TO THE FINANCIAL STATEMENTS
NOTE 7 – POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB)
Plan Description

As discussed in Note 2, HRSD provides postemployment benefits other than pensions (OPEB) for its employees through three OPEB plans: the Hampton Roads Sanitation District RHP, a single employer defined benefit plan, and two plans administered by VRS, the GLI, a multiple employer cost sharing plan, and the HIC, a multiple-employer, agent defined benefit plan.

RHP

The RHP was established and may be amended by the Commission. HRSD administers the RHP through the Hampton Roads Sanitation District Retiree Health Trust (the Trust), an irrevocable trust to be used solely for providing benefits to eligible retired employees and their beneficiaries (members) in the RHP. HRSD's contributions to the Trust are dedicated irrevocably to providing post-retirement health benefits, the RHP assets are exclusively dedicated to providing benefits to members, and the RHP assets of the Trust are not subject to the claims of HRSD creditors or the Plan administrator. Employer contributions are recorded in the year they are made. Investments are reported at market value based on published prices and quotations. The RHP does not issue stand-alone financial statements.

Eligible Employees

HRSD employees are eligible for benefits upon retirement provided the employee has 15 years of service with HRSD or 10 years of service with HRSD plus 10 years of service with another VRS employer with a retiree health plan; are qualified for unreduced retirement benefits from VRS; and are enrolled in the HRSD Health Insurance Plan prior to retirement. Participating beneficiaries may continue coverage under the plan after the death of the retiree. Medicare eligible participants are required to enroll in both Medicare Part A and Part B, and may participate in a Medicare supplement plan. Members not eligible for Medicare may participate in a high deductible health plan.

Benefits provided

The RHP health plan provides medical and prescription services using both in network and out of network providers through a self-funded plan administered by a third-party vendor. Members may elect to purchase dental and vision benefit plans at their own expense.

GLI

All full-time, salaried permanent employees of participating political subdivisions are automatically covered by the VRS GLI upon employment. This plan is administered by the VRS, along with pensions and other OBEB plans, for public employer groups in the Commonwealth of Virginia.

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

The specific information for GLI Program OPEB, including eligibility, coverage and benefits follows:

Eligible Employees

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

Benefit Amounts

The benefits payable under the GLI Program have several components.

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

- Safety belt benefit
- Repatriation benefit
- Felonious assault benefit
- Accelerated death benefit option

Reduction in Benefit Amounts

The benefit amounts provided to members covered under the GLI Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.

Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)

For covered members with at least 30 years of creditable service, there is a minimum benefit payable under the GLI Program. The minimum benefit was set at \$8,000 by statute. This amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and was increased to \$8,463 effective June 30, 2020.

HIC

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

The specific information about the Political Subdivision HIC Program OPEB, including eligibility, coverage and benefits follows:

Eligible Employees

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

Benefit Amounts

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

- At Retirement – For employees who retire, the monthly benefit is \$1.50 per year of service per month with a maximum benefit of \$45.00 per month.
- Disability Retirement – For employees who retire on disability or go on long-term disability under the Virginia Local Disability Program (VLDP), the monthly benefit is \$45.00 per month.

HIC Program Notes:

- The monthly HIC benefit cannot exceed the individual premium amount.
- No health insurance credit for premiums paid and qualified under the VRS Line of Duty Act Program (LODA), however, the employee may receive the credit for premiums paid for other qualified health plans.
- Employees who retire after being on long-term disability under VLDP must have at least 15 year of service credit to qualify for the health insurance credit as a retiree.

NOTES TO THE FINANCIAL STATEMENTS
Employees Covered by Benefit Terms

As of the June 30, 2019 and 2018 actuarial valuation dates the following employees were covered by the benefit terms of the RHP:

	2019	2018
Beneficiaries currently receiving benefit payments	170	163
Active employees	734	719
Total	904	882

There are no inactive employees entitled to but not yet receiving plan benefits.

As of the June 30, 2018 and 2017 actuarial valuation dates the following employees were covered by the benefit terms of the HIC:

	2018	2017
Inactive members or their beneficiaries currently receiving benefit payments	240	229
Vested	-	6
Total Inactive Members	240	235
Active employees	790	780
Total	1,030	1,015

Contributions

RHP contribution requirements are actuarially determined. Funding is subject to approval by the Commission. Medicare-eligible members contribute \$45 per month for retiree-only coverage and from \$442 to \$460 per month for retiree and dependent coverage. Members not eligible for Medicare contribute \$120 per month for retiree-only coverage and from \$517 to \$535 per month for retiree and dependent coverage. HRSD funds the cost of coverage under the RHP by paying the difference between the contributions it requires retirees to make and the actuarially determined contribution (ADC). The current employer contribution rate is approximately 5 percent of annual covered payroll. HRSD contributed \$2,730,000 and \$2,993,000 to the RHP for the years ended June 30, 2020 and 2019, respectively.

The GLI contribution requirements for the GLI Program are governed by §51.1-506 and §51.1-508 of the Code of Virginia, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the GLI Program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% (1.31% X 60%) and the employer component was 0.52% (1.31% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the years ended June 30, 2020 and 2019 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions from HRSD to the GLI Program were \$276,000 and \$267,000 for the years ended June 30, 2020 and June 30, 2019, respectively.

The HIC contribution requirement for active employees is governed by §51.1-1402(E) of the Code of Virginia, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. HRSD's contractually required employer contribution rate for the years ended June 30, 2020 and 2019 was 0.21% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2017. The actuarially determined rate was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions from HRSD to the Political Subdivision HIC Program were \$111,000 for year ended June 30, 2020 and \$108,000 for year ended June 30, 2019.

RHP OPEB Expenses and Deferred Outflows of Resources Related to RHP OPEB

HRSD recognized RHP OPEB expense of \$1,158,000 and \$1,966,000 for the years ended June 30, 2020 and 2019. HRSD reported deferred inflows of resources related to OPEB from the following sources:

(in thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Year ended June 30, 2020:		
Differences between expected and actual experience	\$ 2,568	\$ 6,288
Changes in assumptions	-	1,711
Net difference between projected and actual earnings on plan investments	-	604
	<u>\$ 2,568</u>	<u>\$ 8,603</u>
Year ended June 30, 2019:		
Differences between expected and actual experience	\$ 2,936	\$ -
Changes in assumptions	-	1,428
Net difference between projected and actual earnings on plan investments	-	677
	<u>\$ 2,936</u>	<u>\$ 2,105</u>

HRSD's measurement date is its fiscal year end so there are no deferred outflows of resources resulting from contributions subsequent to the measurement date. Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense in future reporting periods as follows:

(in thousands)	2020	2019
Years Ended June 30,		
2020	\$ -	\$ (24)
2021	(903)	(24)
2022	(903)	(24)
2023	(730)	149
2024	(690)	188
2025	(655)	-
Thereafter	(2,154)	566
	<u>\$ (6,035)</u>	<u>\$ 831</u>

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

At June 30, 2020 and 2019, HRSD reported liabilities of \$4,265,000 and \$3,981,000, respectively, for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liabilities were measured as of June 30, 2019 and June 30, 2018 and the total GLI OPEB liabilities used to calculate the Net GLI OPEB Liability were determined by actuarial valuations as of those dates. The covered employer's proportion of the Net GLI OPEB Liability was based on HRSD's actuarially determined employer contributions to the Group Life Insurance Program for the years ended June 30, 2019 and 2018 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2019 and 2018, HRSD's proportion was 0.26208% and 0.26214%, respectively. For the years ended June 30, 2020 and 2019, HRSD recognized GLI OPEB expenses of \$109,000 and \$49,000, respectively. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

NOTES TO THE FINANCIAL STATEMENTS

At June 30, 2020 and 2019, HRSD reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

(in thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Year ended June 30, 2020:		
Differences between expected and actual experience	\$ 284	\$ 55
Net difference between projected and actual earnings on GLI OPEB program investments	-	88
Change in assumptions	269	129
Changes in proportion	41	1
Employer contributions subsequent to the measurement date	276	-
Total	<u>\$ 870</u>	<u>\$ 273</u>
Year ended June 30, 2019:		
Differences between expected and actual experience	\$ 195	\$ 71
Net difference between projected and actual earnings on GLI OPEB program investments	-	130
Change in assumptions	-	166
Changes in proportion	51	-
Employer contributions subsequent to the measurement date	267	-
Total	<u>\$ 513</u>	<u>\$ 367</u>

HRSD reported \$276,000 and \$267,000 as of June 30, 2020 and 2019, respectively, as deferred outflows of resources related to the GLI OPEB resulting from the HRSD's contributions subsequent to the measurement date which will be recognized as a reduction of the Net GLI OPEB Liability in the Fiscal Years ending June 30, 2021 and 2020, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

(in thousands)	2020	2019
Years ended June 30,		
2020	\$ -	\$ (49)
2021	25	(49)
2022	26	(49)
2023	63	(12)
2024	94	20
2025	90	-
Thereafter	23	18
	<u>\$ 321</u>	<u>\$ (121)</u>

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

For the years ended June 30, 2020 and 2019, HRSD recognized HIC Program OPEB expense of \$106,000 and \$96,000, respectively. HRSD reported deferred outflows of resources and deferred inflows of resources related to the Political Subdivision HIC Program from the following sources:

(in thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Year ended June 30, 2020:		
Differences between expected and actual experience	\$ 42	\$ -
Net difference between projected and actual earnings on HIC OPEB program investments	-	11
Change in assumptions	43	12
Employer contributions subsequent to the measurement date	111	-
Total	<u>\$ 196</u>	<u>\$ 23</u>
Year ended June 30, 2019:		
Differences between expected and actual experience	\$ 23	\$ -
Net difference between projected and actual earnings on HIC OPEB program investments	-	21
Change in assumptions	-	16
Employer contributions subsequent to the measurement date	108	-
Total	<u>\$ 131</u>	<u>\$ 37</u>

HRSD reported \$111,000 for FY 2020 and \$108,000 for FY 2019 as deferred outflows of resources related to the HIC OPEB resulting from HRSD's contributions subsequent to the measurement date which will be recognized as a reduction of the Net HIC OPEB Liability in the Fiscal Year ending June 30, 2021 and 2020, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the HIC OPEB will be recognized in the HIC OPEB expense in future reporting periods as follows:

(in thousands)		
Years ended June 30,	2020	2019
2020	\$ -	\$ (6)
2021	6	(6)
2022	6	(6)
2023	13	1
2024	15	1
2025	14	-
Thereafter	8	2
	<u>\$ 62</u>	<u>\$ (14)</u>

NOTES TO THE FINANCIAL STATEMENTS
Actuarial Methods and Assumptions

The total RHP OPEB liabilities were based on actuarial valuations as of June 30, 2019 and 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 dates of June 30, 2020 and 2019.

Year Ended June 30, 2020:

Inflation	2.5 percent
Salary increases, including inflation	2.5 percent
Investment rate of return	6.0 percent, net of investment expenses, including inflation*

Mortality rates for the RHP are as follows:

Healthy Retirees	Pub-2010 General Retirees Headcount-weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale.
Disabled Retirees	Pub-2010 General Disabled Retirees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale.
Active Retirees	Pub-2010 General Employees Headcount-Weighted Mortality Projected with Fully Generational MP2019 Mortality Improvement Scale.

Year Ended June 30, 2019:

Inflation	2.2 percent
Salary increases, including inflation	3.5 percent - 5.35 percent
Investment rate of return	7.0 percent, net of investment expenses, including inflation*

Mortality rates for the RHP are as follows:

Healthy Retirees	RP-2014 Mortality Table, Fully Generational, Projected with Scale MP-2014.
Disabled Retirees	RP-2014 Mortality Table, Fully Generational, Projected with Scale MP-2014.

The total GLI and HIC OPEB liabilities were based on actuarial valuations 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:

Year Ended June 30, 2019:

Inflation	2.5 percent
Salary increases, including inflation *	3.5 percent - 5.35 percent
Investment rate of return	6.75 percent, net of investment expenses, including inflation*

Mortality tables and assumptions for GLI and HIC are as follows:

Pre-Retirement:	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.
Post-Retirement:	RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.
Post-Disablement:	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

Year Ended June 30, 2018:

Inflation	2.5 percent
Salary increases, including inflation *	3.5 percent - 5.35 percent
Investment rate of return	7.0 percent, net of investment expenses, including inflation*

Mortality tables and assumptions for GLI and HIC are as follows:

Pre-Retirement:	RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.
Post-Retirement:	RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.
Post-Disablement:	RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 6.75%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 6.75% to simplify preparation of the OPEB liabilities.

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

Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75.
Withdrawal Rates	Adjusted terminations rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%
Discount Rate	Decrease rate from 7.00% to 6.75%
Mortality rates are as follows:	
Pre-retirement, post-retirement healthy, and disabled	Updated to a more current mortality table - RP2014 projected to 2020

NOTES TO THE FINANCIAL STATEMENTS
Long-Term Expected Rate of Return

The long-term expected rate of return on RHP investments was determined using an economic building block approach that projects economic and corporate profit growth and takes into consideration the fundamental factors driving long-term real economic growth, our expectation for inflation, productivity, and labor force growth. The returns presented here are geometric return projections based on long-term capital market assumptions. The asset target allocations are governed by its formal investment policy. The best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

Year Ended June 30, 2020

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Arithmetic Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return</u>
Domestic Equity	39.00%	7.40%	2.89%
International Developed Equity	15.00%	7.30%	1.10%
International Emerging Markets Equity	6.00%	7.40%	0.44%
Core Fixed	20.00%	4.90%	0.98%
Investment Grade Corporate Debt	10.00%	5.80%	0.58%
Emerging Markets Debt	5.00%	6.50%	0.33%
High Yield	5.00%	6.40%	0.32%
Total	100.00%		6.64%
		Inflation	2.50%
		* Expected arithmetic nominal return	9.14%

* The above allocation provides a one-year return of 9.14%. However, one-year returns do not take into account the volatility present in each of the asset classes so a rate of 6.0% is used.

Year Ended June 30, 2019

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Arithmetic Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return</u>
Domestic Equity	39.00%	7.50%	2.93%
International Developed Equity	15.00%	7.40%	1.11%
International Emerging Markets Equity	6.00%	7.50%	0.45%
Core Fixed	20.00%	5.10%	1.02%
Investment Grade Corporate Debt	10.00%	6.10%	0.61%
Emerging Markets Debt	5.00%	6.70%	0.34%
High Yield	5.00%	6.60%	0.33%
Total	100.00%		6.79%
		Inflation	2.50%
		* Expected arithmetic nominal return	9.29%

* The above allocation provides a one-year return of 9.29%. However, one-year returns do not take into account the volatility present in each of the asset classes so a rate of 6.0% is used.

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

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
Public Equity	34.00%	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 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 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.

Discount Rates

The discount rate used to measure the total OPEB liability for the RHP, as of June 30, 2020, was 6.0%. The projection of cash flows used to determine the discount rate assumes that HRSD contributions will be made in accordance with the funding plan established by an independent actuarial review.

The discount rate used to measure the total GLI and HIC liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS guidance and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the entity for the GLI and HIC will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly which was 100% of the actuarially determined contribution rate. From July 1, 2019 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI and HIC fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI and HIC liability.

NOTES TO THE FINANCIAL STATEMENTS
Change in Net OPEB Liability

HRSD's net RHP OPEB liability was measured as of June 30, 2020 using a June 30, 2019 valuation, which has been rolled forward to the June 30, 2020 measurement date.

RHP

(in thousands)

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balances at June 30, 2018	\$ 60,276	\$ 47,103	\$ 13,173
Changes for the year - Increase (Decrease):			
Service cost	1,300	-	1,300
Interest	3,571	-	3,571
Changes of assumptions	(1,607)	-	(1,607)
Difference between expected and actual experience	3,302	-	3,302
Contributions - employer	-	2,993	(2,993)
Net investment income	-	3,078	(3,078)
Benefit payments, including refunds of employee contributions	(1,149)	(1,149)	-
Net changes	5,417	4,922	495
Balances at June 30, 2019	\$ 65,693	\$ 52,025	\$ 13,668
Changes for the year - Increase (Decrease):			
Service cost	1,345	-	1,345
Interest	3,883	-	3,883
Changes of assumptions	(518)	-	(518)
Difference between expected and actual experience	(7,074)	-	(7,074)
Contributions - employer	-	2,730	(2,730)
Net investment income	-	3,343	(3,343)
Benefit payments, including refunds of employee contributions	(1,186)	(1,186)	-
Net changes	(3,550)	4,887	(8,437)
Balances at June 30, 2020	\$ 62,143	\$ 56,912	\$ 5,231

HRSD's net HIC OPEB liability was measured as of June 30, 2019. The total HIC OPEB liability was determined by an actuarial valuation performed as of June 30, 2018, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2019.

HIC	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
(in thousands)			
Balances at June 30, 2017	\$ 1,931	\$ 870	\$ 1,061
Changes for the year - Increase (Decrease):			
Service cost	26	-	26
Interest	130	-	130
Difference between expected and actual experience	27	-	27
Contributions - employer	-	95	(95)
Net investment income	-	60	(60)
Benefit payments, including refunds of employee contributions	(133)	(133)	-
Administrative expense	-	(1)	1
Other changes	-	(5)	5
Net changes	50	16	34
Balances at June 30, 2018	\$ 1,981	\$ 886	\$ 1,095
Changes for the year - Increase (Decrease):			
Service cost	26	-	26
Interest	134	-	134
Changes of assumptions	50	-	50
Difference between expected and actual experience	26	-	26
Contributions - employer	-	108	(108)
Net investment income	-	56	(56)
Benefit payments, including refunds of employee contributions	(124)	(124)	-
Administrative expense	-	(1)	1
Net changes	112	39	73
Balances at June 30, 2019	\$ 2,093	\$ 925	\$ 1,168

The net GLI OPEB liability represents the program's total OPEB liability determined in accordance with GAAP, less the associated fiduciary net position. As of the measurement dates of June 30, 2019 and 2018, net OPEB liability amounts for the GLI Program are as follows:

(in thousands)	2019	2018
Total GLI OPEB Liability	\$ 3,390,238	\$ 3,113,508
Plan Fiduciary Net Position	1,762,972	1,594,773
Net GLI OPEB Liability	<u>\$ 1,627,266</u>	<u>\$ 1,518,735</u>
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability:	52.00%	51.22%

The total GLI OPEB liability is calculated by the VRS's actuary, and each plan's fiduciary net position is reported in the VRS's financial statements. The net GLI OPEB liability is disclosed in accordance with the requirements of GAAP in the VRS's notes to the financial statements and required supplementary information.

NOTES TO THE FINANCIAL STATEMENTS
Sensitivity of the Net OPEB Liabilities to Changes in the Discount Rate and Healthcare Cost Trend Rate

The following table presents the net RHP OPEB liability if it is calculated using a discount rate that is one percentage point lower (5.00%) or one percentage point higher (7.00%) than the current discount rate:

<u>RHP Discount Rate</u>	1% Decrease (5.00%)	Current Discount Rate (6.0%)	1% Increase (7.00%)
Net RHP OPEB Liability (in thousands)			
Year ended June 30, 2020	\$ 16,184	\$ 5,231	\$ (3,471)
Year ended June 30, 2019	25,007	13,668	4,617

The following table presents the net RHP OPEB liability if it is calculated using a healthcare cost trend rate that is one percentage point lower (3.00%) or one percentage point higher (5.00%) than the current healthcare cost trend rate:

<u>RHP Ultimate Trend</u>	1% Decrease (3.00%)	Healthcare Cost Trend Rate (4.00%)	1% Increase (5.00%)
Net RHP OPEB Liability (in thousands)			
Year ended June 30, 2020	\$ (4,764)	\$ 5,231	\$ 18,151
Year ended June 30, 2019	3,236	13,668	27,102

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

<u>GLI Discount Rate</u>	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
GLI Net OPEB Liability (in thousands)			
Year ended June 30, 2020	\$ 5,603	\$ 4,265	\$ 3,180
Year ended June 30, 2019	5,202	3,981	2,989

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

<u>HIC Discount Rate</u>	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
HIC Net OPEB Liability (in thousands)			
Year ended June 30, 2020	\$ 1,391	\$ 1,168	\$ 979
Year ended June 30, 2019	1,306	1,095	916

GLI Fiduciary Net Position and HIC Plan Data

GLI Fiduciary Net Position and HIC Plan Data is available in the separately issued VRS 2019 and 2018 Comprehensive Annual Financial Reports (CAFR). A copy of the 2019 VRS CAFR may be downloaded from the VRS website <http://www.varetire.org/Pdf/Publications/2019-annual-report.pdf>. A copy of the 2018 VRS CAFR may be downloaded from the VRS website <http://www.varetire.org/Pdf/Publications/2018-annual-report.pdf>. Both files can be received by requesting a copy in writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

NOTE 8 – DEFINED BENEFIT PENSION PLANPlan Description

HRSD employees participate in an agent multiple-employer defined benefit pension plan administered by VRS. All full time, salaried permanent employees of HRSD are automatically covered by the Plan upon employment. 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.

VRS administers three different benefit structures for covered employees – Plan 1, Plan 2 and the Hybrid Retirement Plan (HRP). The specific information for each plan is set out below:

- Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. Employees are eligible for Plan 1 if their membership date is before July 1, 2010 and they were vested as of January 1, 2013. Non-hazardous duty members are eligible for an unreduced retirement benefit beginning at age 65 with at least five years of service credit or at age 55 with at least 30 years of service credit. They may retire with a reduced benefit as early as age 55 with at least five years of service credit or age 50 with at least 10 years of service credit.
- Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. Employees are eligible for Plan 2 if their membership date is on or after July 1, 2010, and they were not vested as of January 1, 2013. Non-hazardous duty members are eligible for an unreduced benefit beginning at their normal Social Security retirement age with at least five years of service credit or when the sum of their age and service equals 90. They may retire with a reduced benefit as early as age 60 with at least five years of service credit.
- The Hybrid Retirement Plan (HRP) combines the features of a defined benefit plan and a defined contribution plan. Most members hired on or after January 1, 2014 are in this plan, as well as Plan 1 and Plan 2 members who were eligible and opted into the plan during a special election window from January 1 through April 30, 2014. The employee's retirement benefit is funded through mandatory and voluntary contributions made by the employee and HRSD to both the defined benefit and the defined contribution components of the plan. Non-hazardous duty members are eligible for an unreduced benefit beginning at their normal Social Security retirement age with at least five years of service credit or when the sum of their age and service equals 90. They may retire with a reduced benefit as early as age 60 with at least five years of service credit.

Members in Plan 1 and Plan 2 contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. HRSD makes a separate actuarially determined contribution to VRS for all covered employees. The retirement benefit for members in the HRP is funded through mandatory and voluntary contributions made by the member and HRSD to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.

Members in Plan 1 and Plan 2 earn creditable service for each month they are employed in a covered position, and vest when they have at least five years (60 months) of creditable service. Members in the HRP earn one month of service credit for each month they are employed in a covered position for the defined benefit component, and service credits are used to determine vesting for the employer contribution portion of the plan. HRP members are always 100% vested in the defined contributions they make, and upon retirement or leaving covered employment are eligible to withdraw employer contributions of 50%, 75%, or 100% after two, three, or four years of service, respectively.

The VRS Basic Benefit for Plan 1 and Plan 2 members, and the defined benefit component for HRP members, is a lifetime monthly benefit based on a retirement multiplier as a percentage of the member's average final compensation multiplied by the member's total service credit. Under Plan 1, average final compensation is the average of the member's 36 consecutive months of highest compensation. Under Plan 2 and the HRP, average final compensation is the average of the member's 60 consecutive months of highest compensation. The retirement multiplier for non-hazardous duty members in Plan 1 is 1.7%; in Plan 2 the multiplier is 1.7% for service earned, purchased or granted prior to January 1, 2013 and 1.65% after that date. The multiplier is 1% for members in the HRP. At retirement, members can elect the Basic Benefit, the Survivor Option, a Partial Lump-Sum Option Payment (PLOP) or the

NOTES TO THE FINANCIAL STATEMENTS

Advance Pension Option. A retirement reduction factor is applied to the Basic Benefit amount for members electing the Survivor Option, PLOP or Advance Pension Option or those retiring with a reduced benefit.

Retirees are eligible for an annual cost-of-living adjustment (COLA) effective July 1 of the second calendar year of retirement. Under Plan 1, the COLA cannot exceed 5%; under Plan 2 and for the HRP defined benefit component, the COLA cannot exceed 3%. During years of no inflation or deflation there is no COLA adjustment. The VRS also provides death and disability benefits.

VRS issues a publicly available comprehensive annual financial report that includes financial statements and required supplementary information for VRS. A copy of that report may be downloaded from their website at <http://www.varetire.org/publications/index.asap> or obtained by writing to VRS at P.O. Box 2500, Richmond, Virginia 23218-2500.

Employees Covered by Benefit Terms

As of the June 30, 2018 and 2017 actuarial valuation dates, the following employees were covered by the benefit terms of the pension plan:

	2018	2017
Inactive Members or Their Beneficiaries Currently Receiving Benefits	385	369
Inactive Members		
Vested	97	105
Non-Vested	150	138
Active Elsewhere in VRS	78	80
Total Inactive Members	325	323
Active Members	790	780
Total	1,500	1,472

Contributions

The contribution requirement for active employees is governed by Section 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% of their compensation toward their retirement. Prior to July 1, 2012, all or part of the 5% member contribution may have been assumed by the employer. Beginning July 1, 2012, new employees were required to pay the 5% member contribution. In addition, for existing employees, employers were required to begin making the employee pay the 5% member contribution. This could be phased in over a period of up to 5 years and the employer is required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution. HRSD's contractually required contribution rate for the year ended June 30, 2020 was 6.02% of covered compensation. This rate is based on actuarially determined rates from actuarial valuations as of June 30, 2017.

These rates, when combined with employee contributions, are expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Employer contributions to the pension plan were \$2,897,000 and \$2,866,000 for the years ended June 30, 2020 and 2019, respectively.

Net Pension Liability

The net pension liability (NPL) is calculated separately for each employer and represents that particular employer's total pension liability determined in accordance with GAAP, less that employer's fiduciary net position. For HRSD, 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.

Actuarial Assumptions

The total pension liability as of June 30, 2020 for employees in HRSD's retirement plan was based on actuarial valuations 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. The actuarial valuations as of June 30, 2020 use the following assumptions:

Inflation	2.5%
Salary increases, including inflation	3.5% to 5.35%
Investment rate of return	6.75%, net of pension plan investment expenses, including inflation*
Cost of living adjustments	2.25% to 2.50%

* 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 return rate for GAAP 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.

The actuarial valuation uses the following mortality assumptions:

- Mortality rates: 15% of deaths are assumed to be service related.
- Pre Retirement, RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.
- Post Retirement, RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.
- Post Disablement, RP-2014 Disability Mortality Rates projected with Scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2018 valuations were based on the results of an actuarial experience study for the period July 1, 2012 through June 30, 2016, except the change in the discount rate, which was based on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

- Mortality rates – Updated to a more current mortality table – RP-2014 projected to 2020.
- Retirement rates – Lowered rates at older ages and changed final retirement from 70 to 75.
- Withdrawal rates – Adjusted rates to better fit experience at each year age and service through 9 years of service.
- Disability rates – Lowered rates.
- Salary scale – No change.
- Line of duty disability – Increase rate from 14% to 20%.
- Discount Rate – Decrease rate from 7% to 6.75 %

Long-Term Expected Rate of Return

The long-term expected rate of return on pension system investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected 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.

NOTES TO THE FINANCIAL STATEMENTS

The asset target 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 - Strategies	6.00%	3.52%	0.21%
PIP	3.00%	6.29%	0.19%
Total	<u>100.00%</u>		<u>5.13%</u>
		Inflation	2.50%
		* Expected arithmetic nominal return	<u>7.63%</u>

* The above allocation provides 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 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.

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 FY 2012 or 100% of the actuarially determined employer contribution rate from the June 30, 2017, actuarial valuations, whichever was 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

(in thousands)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	\$ 218,232	\$ 196,157	\$ 22,075
Changes for the year - Increase (Decrease):			
Service cost	3,825	-	3,825
Interest	14,952	-	14,952
Difference between expected and actual experience	(101)	-	(101)
Contributions - employer	-	3,710	(3,710)
Contributions - employee	-	2,424	(2,424)
Net investment income	-	14,451	(14,451)
Benefit payments, including refunds of employee contributions	(9,249)	(9,249)	-
Administrative expense	-	(125)	125
Other changes	-	(13)	13
Net changes	9,427	11,198	(1,771)
Balances at June 30, 2018	\$ 227,659	\$ 207,355	\$ 20,304
Changes for the year - Increase (Decrease):			
Service cost	3,946	-	3,946
Interest	15,598	-	15,598
Changes of assumptions	7,378	-	7,378
Difference between expected and actual experience	760	-	760
Contributions - employer	-	2,866	(2,866)
Contributions - employee	-	2,468	(2,468)
Net investment income	-	13,739	(13,739)
Benefit payments, including refunds of employee contributions	(9,655)	(9,655)	-
Administrative expense	-	(137)	137
Other changes	-	(8)	8
Net changes	18,027	9,273	8,754
Balances at June 30, 2019	\$ 245,686	\$ 216,628	\$ 29,058

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

Pension Discount Rate	1% Decrease (5.75%)	Current Discount (6.75%)	1% Increase (7.75%)
Net Pension Liability (in thousands)			
Year ended June 30, 2019	\$ 62,624	\$ 29,058	\$ 2,307
Year ended June 30, 2018	51,048	20,304	(5,194)

NOTES TO THE FINANCIAL STATEMENTS

Pension Expenses and Deferred Outflows of Resources and Deferred Outflows of Resources Related to Pensions

HRSD recognized pension expense of \$3,454,000 and \$1,040,000 for the years ended June 30, 2020 and 2019, respectively. At June 30, 2020 and 2019, HRSD reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

(in thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Year ended June 30, 2020:		
Differences between expected and actual experience	\$ 1,268	\$ 1,281
Changes of assumptions	5,764	1,388
Net difference between projected and actual earnings on plan investments	-	1,848
Employer contributions subsequent to the measurement date	2,897	-
Total	<u>\$ 9,929</u>	<u>\$ 4,517</u>
Year ended June 30, 2019:		
Differences between expected and actual experience	\$ 1,251	\$ 2,951
Changes of assumptions	-	2,250
Net difference between projected and actual earnings on plan investments	-	1,702
Employer contributions subsequent to the measurement date	2,866	-
Total	<u>\$ 4,117</u>	<u>\$ 6,903</u>

HRSD reported \$2,897,000 and \$2,866,000 as of June 30, 2020 and 2019, respectively, as deferred outflows of resources resulting from HRSD's contributions subsequent to the measurement date, which will be recognized as reductions of the Net Pension Liability in the years ended June 30, 2021 and 2020, respectively. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

(in thousands)	2020	2019
Years ended June 30,		
2020	\$ -	\$ (1,314)
2021	625	(1,280)
2022	(974)	(2,878)
2023	1,725	(180)
2024	1,139	-
	<u>\$ 2,515</u>	<u>\$ (5,652)</u>

NOTE 9 – LONG-TERM DEBT

HRSD issues revenue bonds for various capital improvements including but not limited to wastewater treatment plants and interceptor system improvements. In addition to HRSD's publicly issued revenue bonds, HRSD is indebted for bond issues payable to the Virginia Resources Authority (VRA) as administrator of the Virginia Water Facilities Fund. HRSD is required to adhere to and is in compliance with the rebate and reporting requirements of the federal regulations pertaining to arbitrage.

In fiscal year 2020, HRSD issued \$205,675,000 in subordinate wastewater revenue bonds, Series 2019A, along with \$66,355,000 in cash to partially refund a total of \$219,721,000 debt for Series 2014A, Series 2016A, Series 2017A and Series 2018A. The transaction resulted in a loss on refunding of \$11,689,000 which will be amortized over 19 years, which is the life of the new debt.

HRSD closed on a 22 year, \$100 million loan, VRA - Group Loan, at 1.15 percent interest from Virginia Clean Water Revolving Loan Fund on June 11, 2020,. This is the first programmatic loan in the history of the program, which funds a number of approved projects that provide substantial water quality benefits as opposed to an individual loan for each project.

HRSD has \$50 million outstanding in subordinate variable rate demand bonds, Series 2016B, to partially finance its capital improvement plan. The bonds bear interest in either a Weekly Period or a Long-term Period, as defined. The bonds were initially issued in a Weekly Interest Period and bear interest at a varying interest rate until, at HRSD's option, they are converted to the Long-term Period. Liquidity to pay the purchase price of the bonds that are tendered and not remarketed is provided by HRSD. Maturities of the principal and interest for these bonds are shown in the following table as if held to maturity. The bonds are subject to optional redemption by HRSD prior to their maturity. Through June 30, 2020, the bonds have been successfully remarketed by the Remarketing Agent. The interest rate for the bonds at June 30, 2020 and 2019 was 1.27% and 1.52%, respectively. The 2020 rate was used to calculate interest maturity amounts shown below.

All bonds are secured by the revenues of HRSD and are payable over the duration of that issue. A summary of activity for the years ended June 30:

(in thousands)	Balance at 6/30/18	Additions	Deductions	Balance at 6/30/19	Additions	Deductions	Transfer	Balance at 6/30/20	Due within One year
Series-2019A	\$ -	\$ -	\$ -	\$ -	\$ 205,675	\$ -	\$ -	\$ 205,675	\$ 2,985
Series-2018A	63,185	-	(470)	62,715	-	(42,230)	-	20,485	1,035
Series-2017A	83,485	-	-	83,485	-	(11,430)	-	72,055	-
Series-2016A	233,490	-	(2,520)	230,970	-	(134,175)	-	96,795	4,160
Series-2016B VR	50,000	-	-	50,000	-	-	-	50,000	50,000
Series-2014A	111,345	-	(5,500)	105,845	-	(41,305)	-	64,540	6,080
Series-2012A	8,450	-	(2,680)	5,770	-	(2,815)	-	2,955	2,955
Series-2012	905	-	(305)	600	-	(310)	-	290	290
Series-2011FR	2,990	-	(1,465)	1,525	-	(1,525)	-	-	-
Series-2009B	123,940	-	(3,800)	120,140	-	(3,915)	-	116,225	4,040
Virginia Resources Authority									
Senior bonds	85,416	-	(5,356)	80,060	-	(2,405)	(47,163)	30,492	2,467
Subordinate bonds	54,403	35,040	(5,045)	84,398	29,238	(8,354)	47,163	152,445	8,174
	817,609	35,040	(27,141)	825,508	234,913	(248,464)	-	811,957	82,186
Unamortized bond premiums	73,833	-	(7,712)	66,121	-	(42,599)	-	23,522	3,720
Total	\$ 891,442	\$ 35,040	\$ (34,853)	\$ 891,629	\$ 234,913	\$ (291,063)	\$ -	\$ 835,479	\$ 85,906

Senior bonds outstanding at June 30, 2020:

(in thousands)	Issue Amount	Principal Outstanding			Interest to Maturity	Interest Rates	Duration of Issue	Final Maturity
		Total	Current	Long-Term				
Series-2014A	\$ 111,345	\$ 64,540	\$ 6,080	\$ 58,460	\$ 10,944	5.00%	15 years	Jul 1, 2025
Series-2012A	130,480	2,955	2,955	-	148	5.00%	9 years	Jan 1, 2021
Series-2009B	134,725	116,225	4,040	112,185	76,127	4.71% - 5.87%	30 years	Nov 1, 2039
VRA - Metering	9,989	6,327	503	5,824	1,008	2.65%	20 years	Mar 1, 2031
VRA - WTP	5,727	3,622	297	3,325	442	2.05%	20 years	Mar 1, 2031
VRA - NTP	19,395	12,253	973	11,280	1,953	2.65%	20 years	Mar 1, 2031
VRA - JRTP	13,431	8,290	694	7,596	1,261	2.65%	20 years	Sep 1, 2030
Total		\$ 214,212	\$ 15,542	\$ 198,670	\$ 91,883			

NOTES TO THE FINANCIAL STATEMENTS

Maturities of senior bond principal and interest as of June 30, 2020:

(in thousands)		Principal	Interest
June 30,			
2021	\$	15,542	\$ 10,543
2022		14,771	9,778
2023		18,727	9,005
2024		19,539	8,110
2025		20,408	7,156
2026 - 2030		53,648	25,796
2031 - 2035		33,901	15,805
2036 - 2040		37,676	5,690
2041 - 2045		-	-
	\$	214,212	\$ 91,883

Subordinate revenue bonds outstanding at June 30, 2020:

(in thousands)	Issue Amount	Principal Outstanding			Interest to Maturity	Interest Rates	Duration of Issue	Final Maturity
		Total	Current	Long-term				
Series-2019A	\$ 205,675	\$ 205,675	\$ 2,985	\$ 202,690	\$ 62,211	1.69-2.78%	20 Years	Feb 1, 2039
Series-2018A	63,185	20,485	1,035	19,450	7,995	5.00%	15 years	Oct 1, 2033
Series-2017A	83,485	72,055	-	72,055	45,883	3.50-5.00%	26 years	Oct 1, 2043
Series-2016A	246,845	96,795	4,160	92,635	35,678	3.00-5.00%	20 years	Aug 1, 2036
Series-2012	22,680	290	290	-	3	1.77-1.92%	8 years	Oct 1, 2020
VRA - BH Odor	2,380	241	160	81	8	3.50%	20 years	Sep 1, 2021
VRA - York River Reuse	2,476	377	150	227	10	1.70%	20 years	Sep 1, 2022
VRA - AB Aeration	1,759	283	112	171	7	1.70%	20 years	Oct 1, 2022
VRA - Ches-Eliz Off Gas	1,070	207	67	140	14	3.75%	20 years	Mar 1, 2023
VRA - AB Generator	1,235	445	70	375	29	2.00%	20 years	Apr 1, 2026
VRA - Atlantic Expansion	7,340	3,060	410	2,650	246	2.10%	20 years	Feb 1, 2027
VRA - Ches-Eliz Expan	40,330	16,730	2,243	14,487	1,347	2.10%	20 years	Jun 1, 2027
VRA - Williamsburg PS	1,605	710	89	621	61	2.10%	20 years	Jul 1, 2027
VRA - York River Expan	29,683	18,757	1,484	17,273	3,072	2.72%	20 years	Mar 1, 2031
VRA - Rodman	1,096	1,032	35	997	291	2.25%	25 years	Jun 1, 2043
VRA - Atlantic	-	49,467	-	49,467	15,094	2.25%	30 years	Mar 1, 2046
VRA - Ferguson	866	824	28	796	269	2.70%	25 years	Mar 1, 2042
VRA - Lucas	2,949	2,858	86	2,772	1,030	2.65%	27 years	Oct 1, 2044
VRA - BHTP Switchgear	-	6,025	-	6,025	1,034	1.85%	20 years	Dec 1, 2040
VRA - Orcutt Ave	-	6,409	100	6,309	3,961	2.85%	30 years	Feb 1, 2049
VRA - TP Dewatering	-	67	-	67	1	1.20%	20 years	Oct 1, 2040
VRA - Deep Creek IFM	-	13	-	13	-	1.20%	20 years	Dec 1, 2040
VRA - Huxley	-	801	-	801	32	1.20%	20 years	Aug 1, 2040
VRA - Group Loan	-	51	-	51	2	1.15%	22 years	Mar 1, 2042
VRA - ABTP *	50,000	34,675	2,460	32,215	4,809	2.05%	20 years	Sep 1, 2032
VRA - ATP *	6,318	4,540	300	4,240	808	2.51%	20 years	Feb 1, 2033
VRA - BHTP *	7,584	4,873	380	4,493	622	2.05%	20 years	Sep 1, 2031
Total Fixed Rate Bonds		547,745	16,644	531,101	184,517			
						Variable (1.27% at June 30,2020)		
Series-2016B VR	50,000	50,000	50,000	-	16,576		30 years	Aug 1, 2046
Total		\$ 597,745	\$ 66,644	\$ 531,101	\$ 201,093			

The VRA bonds that do not show an issue amount have not closed as of June 30, 2020, therefore, the principal amounts reflected represent draws through that date. The total eligible loan amount on these Subordinate VRA bonds is \$121,063,971, of which \$113,723,000 is available at June 30, 2020.

* Debt was converted from Senior Debt to Subordinate debt in FY20.

Maturities of subordinate bond principal and interest as of June 30, 2020:

(in thousands)

June 30,	Principal	Interest
2021	\$ 66,644	\$ 16,958
2022	20,065	16,401
2023	18,236	15,841
2024	18,488	15,329
2025	19,011	14,802
2026 - 2030	150,247	62,675
2031 - 2035	167,256	37,708
2036 - 2040	107,185	15,342
2041 - 2045	30,613	5,297
2046 - 2050	-	740
	<u>\$ 597,745</u>	<u>\$ 201,093</u>

HRSD defeased certain revenue bonds by placing the proceeds of new bonds in an irrevocable trust to provide for all future debt service payments on the old bonds. Accordingly, the trust account assets and the liability for the defeased bonds are not included in the fund's financial statements. At June 30, 2020, the following defeased bonds from advance refunding are still outstanding:

Defeased In	Original Issue	Amount	Redemption
2014	Series 2012A	\$ 14,731,674	01/01/21
2016	Series 2012A	18,224,479	01/01/21
2017	Series 2012A	83,417,423	01/01/21
2017	Series 2016A	8,619,513	08/01/26
2019	Series 2014A	43,085,916	07/01/24
2019	Series 2016A	29,673,380	08/01/26
2019	Series 2016A	139,263,261	08/01/26
2019	Series 2017A	14,726,423	10/01/27
2019	Series 2018A	14,893,915	10/01/27
2019	Series 2018A	38,393,784	10/01/27
		<u>\$ 405,029,768</u>	

NOTE 10 – NET POSITION

Restricted Portion of Net Position

Restricted for debt service. HRSD's Trust Agreement requires that funds be set aside for its revenue bond debt service. At June 30, 2020 and 2019, \$ 28,155,000 and \$ 28,553,000 , respectively, were contained in the unrestricted net position.

Unrestricted Portion of Net Position

Reserved for Improvement. HRSD's Master Trust Agreement requires a reserve for improvements. There is no specific funding mechanism established by the Trust Agreement. At June 30, 2020 and 2019, \$267,000 and \$157,000, respectively, was contained in the unrestricted net position. HRSD was in compliance with all funding requirements of this reserve during the fiscal years ended June 30, 2020 and 2019.

Reserved for Construction. A reserve for the construction program is based on funds designated by HRSD's Commission for such purposes. At June 30, 2020 and 2019, \$22,210,000 and \$86,280,000, respectively, was contained in the unrestricted net position.

NOTES TO THE FINANCIAL STATEMENTS

NOTE 11 - RISK MANAGEMENT

HRSD is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; employee dishonesty; injuries to employees; and natural disasters. HRSD purchases commercial insurance for specific types of coverage including property, liability, auto, crime, public officials and workers' compensation. There were no significant reductions in insurance coverage from the prior year. Claim settlements and judgments not covered by commercial insurance are covered by operating resources. The amount of settlements did not exceed insurance coverage for each of the past three years. Claim expenditures and liabilities are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated.

HRSD has a self-insured health, dental and vision care benefits program for all employees. Claims processing and payments for all health care claims are made through third-party administrators. HRSD uses the information provided by the third-party administrators and a health care benefits consultant to aid in the determination of self-insurance reserves.

(in thousands)	Beginning of Fiscal Year	Estimated Claims Incurred	Claims Paid	End of Fiscal Year
2019	\$ 4,216	\$ 12,875	\$ (12,801)	\$ 4,290
2020	4,290	12,148	(11,848)	4,590

NOTE 12 – COMMITMENTS AND CONTINGENCIES

Consent Decree

On December 19, 2014, the Commonwealth of Virginia entered into a long-term State Consent Agreement (the "2014 Consent Agreement") with 14 of the localities that HRSD serves. The 2014 Consent Agreement requires the localities to perform long-term management, operations and maintenance of their sewer systems in support of HRSD's efforts to provide long-term regional wet weather wastewater capacity. HRSD is not a party to the 2014 Consent Agreement. Instead, HRSD's obligation to provide regional wet weather sewer capacity is now solely imposed through its federal consent decree (the "Consent Decree"). HRSD entered into the Consent Decree with the Commonwealth and the United States Environmental Protection Agency ("EPA").

The Consent Decree was entered by the federal district court for the Eastern District of Virginia (the "District Court") on February 23, 2010. The Consent Decree has been amended four times, most recently on February 21, 2017 (the "Amended Consent Decree").

The Amended Consent Decree has two major operative requirements. First, it requires HRSD to develop a Regional Wet Weather Management Plan ("RWWMP") to control capacity-related sewer overflows within the 14 localities. However, through the third and fourth amendments, HRSD has now assumed responsibility for planning (in consultation with the 14 affected localities), designing, funding, and implementing the controls in both the localities' systems and the HRSD system that will be contained in the approved RWWMP. Through this approach, HRSD estimates the regional ratepayers will achieve significantly reduced program costs than if each locality sought to address peak wet weather wastewater flows on its own. To facilitate these regional cost savings, the Amended Consent Decree extended the RWWMP submission deadline to October 1, 2017. To further facilitate this approach, the 14 affected localities entered into a Memorandum of Agreement with HRSD in 2014 in which they agreed to (1) cooperate with HRSD, (2) facilitate the construction of and accept ownership of any improvements which HRSD may need to construct in the localities' systems, and (3) maintain the integrity of their systems to industry standards.

The Amended Consent Decree also requires HRSD to implement a total of 45 projects from its ten-year CIP. These 45 projects total approximately \$306 million. Accordingly, HRSD has timely and fully satisfied the requirement of the Amended Consent Decree to implement these 45 early action projects.

The Amended Consent Decree authorizes HRSD to submit the RWWMP as part of an Integrated Management Plan ("IMP"). HRSD intends to use the IMP approach to facilitate the timing and financing of both its RWWMP and its SWIFT Program. The SWIFT Program will assist the Commonwealth to meet its Chesapeake Bay nutrient reduction commitments and save HRSD's 14 localities approximately \$1 to \$2 billion in avoided Chesapeake Bay-related stormwater control costs.

HRSD has agreed to a fifth amendment to its ongoing federal consent decree with the United States Environmental Protection Agency ("USEPA") and the Commonwealth of Virginia ("Commonwealth"). The fifth amendment is expected to be lodged with the federal court in late 2020 and entered by the court in early 2021. The fifth amendment

includes a schedule for wastewater system improvements that accommodates the SWIFT program. That schedule requires that HRSD implement \$200 million worth of sewer overflow control projects between 2020 and 2030 and then another \$200 million in sewer overflow control projects between 2030 and 2040. These two sets of projects reflect further priority system improvements that HRSD is to implement along with the Project. The fifth amendment gives HRSD until 2032 to complete the SWIFT program. Finally, the fifth amendment provides that if HRSD does not fully implement the Project or delays full implementation past 2032 then EPA can require HRSD to accelerate some or all of the second group (\$200 million worth) of sewer overflow control projects to offset the avoided investment in the SWIFT program.

During FY-2018 HRSD paid \$15 million for a non-revocable option to purchase a parcel of land to construct one of the SWIFT facilities. The option must be exercised no earlier than January 1, 2023 and no later than December 31, 2023. An additional payment of \$15 million, adjusted from the date of the agreement to the date of settlement by the Consumer Price Index for All Urban Consumers, will be due at that time. Failure to exercise the option will result in forfeiture of the option fee.

Litigation

In 2018, oystermen leasing oyster beds in the Nansemond River filed a petition for declaratory judgment against the City of Suffolk and the Borrower alleging that they had intentionally designed and operated their storm water system (Suffolk) and sanitary sewers (both) to discharge contaminants onto the oystermen's oyster beds (leased from the Virginia Marine Resources Commission), resulting in condemnation of their oysters by the Virginia Department of Health. In September 2019, the Suffolk Circuit Court granted demurrers filed by Suffolk and the Borrower and dismissed the oystermen's petition. On May 18, 2020, the Supreme Court of Virginia agreed to hear the oystermen's appeal. Briefing was completed by late July 2020, oral arguments are estimated to occur in late 2020.

Capital Commitments

HRSD has a major capital improvement and expansion program funded through the issuance of debt and its own resources. As of June 30, 2020, HRSD has outstanding commitments for contracts in progress of approximately \$195,784,000.

NOTE 13 – FAIR VALUE MEASUREMENTS

HRSD categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on 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. Level 3 inputs are significant unobservable inputs.

Debt securities reported as investments are classified in Level 2 of the fair value hierarchy and are valued using the following approaches:

- U.S. Treasury securities are valued using quoted prices for identical or similar securities.
- All other investments are valued based on matrix pricing using observable data of securities with similar attributes.

Investments reported as cash and cash equivalents are not included of the fair value hierarchy and are valued using the following approaches:

- SNAP Fund – money market mutual funds. HRSD's holdings of the PFM Prime Series (SNAP) fund units are valued at NAV, which is used as a practical expedient for fair value. There are no imposed redemption restrictions and the plan does not have any contractual obligations to further invest in the fund. The underlying investments of the fund are primarily short-term, high quality debt instruments including U.S. Treasuries, U.S. Agencies, U.S. Municipals, and repurchase agreements secured by U.S. Government Obligations. Underlying investments are measured at amortized cost, which approximates fair value. Underlying investments are measured at amortization cost, which approximates fair value. HRSD's total investment in SNAP as of June 30, 2020 was zero and \$14,335,000 as of June 30, 2019.

NOTES TO THE FINANCIAL STATEMENTS

- The Virginia Investment Pool Trust Fund (the “Trust” or “VIP”) is an Internal Revenue Code Section 115 governmental trust fund created under the Joint Exercise of Powers statute of the Commonwealth of Virginia to provide political subdivisions with an investment vehicle to pool their funds and to invest such funds into two or more investment portfolios under the direction and daily supervision of a professional fund manager. The Trust was established and created by the City of Chesapeake, Virginia, and the City of Roanoke, Virginia (the “Founding Participants”) and operates under the Trust Agreement as amended September 23, 2016. All deposits to VIP initially go into the Stable NAV Liquidity Pool, which serves both as a liquidity pool and as a sweep account for the 1-3 Year High Quality Bond Fund. HRSD’s total investment in VIP is \$64,900,000 (valued at amortized cost) in the 1-3 Year High Quality Bond Fund and \$178,660,000 in the Stable NAV Liquidity Pool as of June 30, 2020.

HRSD OPEB Trust Investments

The HRSD OPEB Trust has investments in mutual funds, cash, and cash equivalents on deposit with its trustee, U.S. Bank. HRSD categorizes its fair value measurements within the fair value hierarchy consistent with the approach described above.

Balance at June 30, 2020 (in thousands)	Fair Value	Level 1	Level 2	Level 3
Investments by Fair Value Level				
Mutual Funds - Equity	\$ 31,920	\$ 5,018	\$ 26,902	\$ -
Mutual Funds - Fixed Income	22,393	5,963	16,430	-
Other Income	2,412	-	-	2,412
Total Investments by Fair Value Level	<u>\$ 56,725</u>	<u>\$ 10,981</u>	<u>\$ 43,332</u>	<u>\$ 2,412</u>

Cash Equivalents Measured at Net Asset Value

First American Government Obligation	<u>187</u>
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Fiduciary Net Position of HRSD’s OPEB

Plan as of June 30, 2020	<u>\$ 56,912</u>
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Balance at June 30, 2019 (in thousands)	Fair Value	Level 1	Level 2	Level 3
Investments by Fair Value Level				
Mutual Funds - Equity	\$ 31,251	\$ 2,630	\$ 28,648	\$ -
Mutual Funds - Fixed Income	19,428	-	19,428	-
Other Income	1,175	-	-	1,175
Total Investments by Fair Value Level	<u>\$ 51,854</u>	<u>\$ 2,630</u>	<u>\$ 48,076</u>	<u>\$ 1,175</u>

Cash Equivalents Measured at Net Asset Value

First American Government Obligation	<u>171</u>
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Fiduciary Net Position of HRSD’s OPEB

Plan as of June 30, 2019	<u>\$ 52,025</u>
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Additional information about HRSD’s OPEB Plan is in Notes 3 and 7.

Note 14 - Change in Accounting Principle

As discussed in Note 2, HRSD adopted GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, effective July 1, 2018. The requirements of this Statement are applied prospectively, so no adjustment to net position was required.

Note 15 - Subsequent Events

The Water Infrastructure Finance and Innovation Act (WIFIA) program, managed by the Environmental Protection Agency (EPA), accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects. WIFIA loans allow borrowers to lock-in a rate equivalent to the US Treasury rate plus one basis point at closing. HRSD submitted a Letter of Interest in 2019 and was approved to apply for the SWIFT program. Due to the long duration of the SWIFT program, a Master Financing Agreement (MFA) was required to allow for multiple loans (tranches). Each tranche will be a group of projects that have met environmental requirements. On September 28, 2020, HRSD executed an MFA that outlines the terms and conditions of the loans and caps the amount borrowed at \$1.048 billion. In addition, HRSD closed on the first tranche, which was \$225 million for approximately 34 years at a rate of 1.42 percent.

HRSD filed a petition in the Circuit Court for the County of Northampton and County of Accomack pursuant to Section 48 of the Enabling Act seeking the Court's approval to add the counties to HRSD's territory. The Court held a public hearing on October 2, 2020 to receive and hear any objections and subsequently entered the order to add both counties to HRSD. The reasoning was: both counties were in support; no incorporated towns objected; regionalization of other services (solid waste, broadband) have been successful on the Shore; and HRSD had the ability to attract and retain talent needed to operate modern wastewater systems. In the coming months, HRSD will negotiate agreements with the towns and counties and develop a phased plan to consolidate the wastewater flow.



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The background image shows a large-scale water treatment facility. In the foreground, a large circular concrete tank is filled with water, showing ripples. In the middle ground, another similar circular tank is visible, surrounded by metal walkways and railings. The background features a clear blue sky with some light clouds and distant industrial structures. A large, semi-transparent teal graphic element, consisting of several overlapping curved shapes, is positioned on the left side of the image, partially covering the text.

Required Supplementary Information (Unaudited)



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SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

(in thousands)	2019	2018	2017	2016	2015	2014
Total pension liability						
Service cost	\$ 3,946	\$ 3,825	\$ 4,145	\$ 4,025	\$ 4,115	\$ 3,943
Interest	15,598	14,953	14,750	13,872	13,559	12,906
Changes in assumptions	7,378	-	(3,975)	-	-	-
Differences between expected and actual experience	760	(101)	(3,175)	2,980	(4,910)	-
Benefit payments, including refunds of employee contributions	(9,655)	(9,250)	(8,475)	(8,161)	(8,446)	(6,607)
Net change in total pension liability	18,027	9,427	3,270	12,716	4,318	10,242
Total pension liability - beginning	227,659	218,232	214,962	202,246	197,928	187,686
Total pension liability - ending (a)	\$ 245,686	\$ 227,659	\$ 218,232	\$ 214,962	\$ 202,246	\$ 197,928
Plan fiduciary net position						
Contributions - employer	\$ 2,866	\$ 3,710	\$ 3,609	\$ 4,083	\$ 4,099	\$ 4,114
Contributions - employee	2,468	2,424	2,351	2,286	2,314	2,267
Net investment income	13,739	14,451	21,526	3,062	7,807	23,313
Benefit payments, including refunds of employee contributions	(9,655)	(9,250)	(8,475)	(8,161)	(8,446)	(6,607)
Administrative expense	(137)	(125)	(124)	(109)	(107)	(125)
Other	(8)	(12)	(19)	(1)	(2)	1
Net change in plan fiduciary net position	9,273	11,198	18,868	1,160	5,665	22,963
Plan fiduciary net position - beginning	207,355	196,157	177,289	176,129	170,464	147,501
Plan fiduciary net position - ending (b)	\$ 216,628	\$ 207,355	\$ 196,157	\$ 177,289	\$ 176,129	\$ 170,464
Net pension liability - ending (a) - (b)	\$ 29,058	\$ 20,304	\$ 22,075	\$ 37,673	\$ 26,117	\$ 27,465
Plan fiduciary net position as a percentage of the total pension liability (b)/(a)	88.17%	91.08%	89.88%	82.47%	87.09%	86.12%
Covered payroll (c)	\$ 51,336	\$ 50,874	\$ 49,286	\$ 47,838	\$ 47,674	\$ 46,096
Net pension liability as a percentage of the covered payroll ((a)-(b))/(c)	56.60%	39.91%	44.79%	78.75%	54.78%	59.58%

This schedule is presented to show information for 10 years. However, until a full ten-year trend is compiled, HRSD will present information for those years for which information is available.

**SCHEDULE OF EMPLOYER PENSION CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2011 THROUGH 2020**

Date	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 2,897,000	\$ 2,897,000	\$ -	\$ 53,085,000	5.46%
2019	2,866,000	2,866,000	-	51,336,000	5.58%
2018	3,635,000	3,635,000	-	50,874,000	7.15%
2017	4,326,000	4,326,000	-	49,286,000	8.78%
2016	4,222,000	4,222,000	-	47,838,000	8.83%
2015	4,207,000	4,207,000	-	47,674,000	8.82%
2014	4,107,000	4,107,000	-	46,096,000	8.91%
2013	4,075,000	4,075,000	-	45,044,000	9.05%
2012	4,580,000	4,580,000	-	42,166,000	10.86%
2011	4,438,000	4,438,000	-	40,462,000	10.97%

Notes to Required Supplementary Information For the Year Ended June 30, 2020:

Changes of benefit terms -

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

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:

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

Information pertaining to Pensions can be found in Notes 2 and 8 to the financial statements.

SCHEDULE OF CHANGES IN NET RHP OPEB LIABILITY AND RELATED RATIOS

(in thousands)

	2020	2019	2018	2017
Total OPEB liability				
Service cost	\$ 1,345	\$ 1,300	\$ 1,260	\$ 1,188
Interest	3,883	3,571	3,391	3,208
Changes in assumptions	(518)	(1,607)	-	-
Differences between expected and actual experience	(7,074)	3,302	-	-
Benefit payments, including refunds of employee contributions	(1,186)	(1,149)	(1,791)	(892)
Net change in total OPEB liability	(3,550)	5,417	2,860	3,504
Total OPEB liability - beginning	65,693	60,276	57,416	53,913
Total OPEB liability - ending (a)	\$ 62,143	\$ 65,693	\$ 60,276	\$ 57,417
Plan fiduciary net position				
Contributions - employer	\$ 2,730	\$ 2,993	\$ 2,729	\$ 2,558
Contributions - retirees	-	-	303	-
Net investment income	3,343	3,078	3,450	3,957
Benefit payments, including refunds of employee contributions	(1,186)	(1,149)	(1,791)	(892)
Administrative expense	-	-	(114)	(495)
Net change in plan fiduciary net position	4,887	4,922	4,577	5,128
Plan fiduciary net position - beginning	52,025	47,103	42,526	37,398
Plan fiduciary net position - ending (b)	\$ 56,912	\$ 52,025	\$ 47,103	\$ 42,526
Net OPEB liability - ending (a) - (b)	\$ 5,231	\$ 13,668	\$ 13,173	\$ 14,891
Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a)	91.58%	79.19%	78.15%	74.07%
Covered payroll (c)	\$ 54,799	\$ 52,070	\$ 50,874	\$ 49,286
Net OPEB liability as a percentage of the covered payroll ((a)-(b))/(c)	9.55%	26.25%	25.89%	30.21%

This schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, HRSD will present information for those years for which information is available.

Notes to Required Supplementary Information For the Year Ended June 30, 2020:

Benefit changes:		None
Changes of assumptions:	Mortality	Updated to the latest Society of Actuaries (SOA) public sector experience study rates.
	Medical Trend	Developed using the SOA Long-Run Medical Cost Trend Model baseline assumption. The prior valuations used the SOA model as updated in November 2016 and included the impact of the Cadillac Tax. The current valuation uses the model as updated in September 2019 and does not include the impact of the Cadillac Tax.
Discount rate:	6/30/2019	6.00%

Unaudited – See accompanying independent auditors' report and notes to required supplementary information

**SCHEDULE OF RHP OPEB CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2011 THROUGH 2020**

Date	Actuarially Determined Contribution	Contribution in Relation to the Actuarially Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 2,730,000	\$ 2,730,000	\$ -	\$ 54,799,000	4.98%
2019	2,993,000	2,993,000	-	52,070,000	5.75%
2018	2,729,000	2,729,000	-	50,874,000	5.36%
2017	2,558,000	2,558,000	-	49,286,000	5.19%
2016	2,178,000	2,178,000	-	47,838,000	4.55%
2015	2,177,000	2,177,000	-	47,674,000	4.57%
2014	2,244,000	2,244,000	-	46,096,000	4.87%
2013	2,102,000	2,102,000	-	45,032,000	4.67%
2012	2,231,000	2,231,000	-	43,213,000	5.16%
2011	2,196,000	2,196,000	-	40,553,000	5.42%

Actuarial cost method	Entry age normal
Amortization method	Level percent of pay, closed
Amortization period	An experience gain/loss base is created each year and amortized over a 15 year period
Asset valuation	Smoothed market value with phase-in, using a 5-year smoothing period
Assumed rate of inflation	2.20%
Medical cost trend :	
Pre Medicare	5.3%, stable at 5.3% after 3 years and decreasing to 3.6% after 53 years
Post Medicare	5.3%, stable at 5.3% after 3 years and decreasing to 3.4% after 53 years
Salary increase rate	2.50%
Investments rate of return	6.00%
Mortality rates:	
Healthy	RP-2014 Mortality Table, Fully Generational, Projected with Scale MP-2014
Pre Medicare	5.3%, stable at 5.3% after 3 years and decreasing to 3.6% after 53 years

**SCHEDULE OF EMPLOYER'S SHARE OF
NET GLI OPEB LIABILITY AND RELATED RATIOS
FOR THE MEASUREMENT DATES OF JUNE 30, 2017 THROUGH 2019**

(in thousands)	2019	2018	2017
Employer's Proportion of the Net GLI OPEB Liability	0.26208%	0.26214%	0.26016%
Employer's Proportionate Share of the Net GLI OPEB Liability	\$ 4,265	\$ 3,981	\$ 3,915
Employer's Covered Payroll	51,376	49,846	47,987
Employer's Proportionate Share of the Net GLI OPEB Liability as a Percentage of its Covered Payroll	8.30%	7.99%	8.16%
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	52.00%	51.22%	48.86%

This schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, HRSD will present information for those years for which information is available.

In accordance with GAAP, Net Liability is reported using the measurement date, which is one year prior to the reporting date.

**SCHEDULE OF EMPLOYER GLI OPEB CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2011 THROUGH 2020**

Date	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 276,000	\$ 276,000	\$ -	\$ 53,126,000	0.52%
2019	267,000	267,000	-	51,376,000	0.52%
2018	259,000	259,000	-	49,846,000	0.52%
2017	250,000	250,000	-	47,987,000	0.52%
2016	246,000	223,000	23,000	46,417,000	0.53%
2015	244,000	221,000	23,000	46,082,000	0.53%
2014	240,000	217,000	23,000	45,283,000	0.53%
2013	238,000	215,000	23,000	44,839,000	0.53%
2012	183,000	117,000	66,000	41,681,000	0.44%
2011	177,000	113,000	64,000	40,252,000	0.44%

Notes to Required Supplementary Information For the Year Ended June 30, 2020:

Changes of benefit terms -

There have been no actuarially material changes to the VRS benefit provisions.

Changes of assumptions -

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

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75.
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14 to 15%
Discount Rate	Decreased rate from 7.00% to 6.75%

Information pertaining to OPEB can be found in Notes 2 and 7 to the financial statements.

SCHEDULE OF CHANGES IN NET HIC OPEB LIABILITY AND RELATED RATIOS

(in thousands)

	2019	2018	2017
Total OPEB liability			
Service cost	\$ 26	\$ 26	\$ 27
Interest	134	130	129
Changes in assumptions	50	-	(22)
Differences between expected and actual experience	26	27	-
Benefit payments, including refunds of employee contributions	(124)	(133)	(94)
Net change in total OPEB liability	112	50	40
Total OPEB liability - beginning	1,981	1,931	1,891
Total OPEB liability - ending (a)	<u>\$ 2,093</u>	<u>\$ 1,981</u>	<u>\$ 1,931</u>
Plan fiduciary net position			
Contributions - employer	\$ 108	\$ 95	\$ 91
Net investment income	56	60	90
Benefit payments, including refunds of employee contributions	(124)	(133)	(94)
Administrative expense	(1)	(1)	(1)
Other	-	(5)	4
Net change in plan fiduciary net position	39	16	90
Plan fiduciary net position - beginning	886	870	780
Plan fiduciary net position - ending (b)	<u>\$ 925</u>	<u>\$ 886</u>	<u>\$ 870</u>
Net OPEB liability - ending (a) - (b)	\$ 1,168	\$ 1,095	\$ 1,061
Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a)	44.19%	44.72%	45.05%
Covered payroll (c)	\$ 51,336	\$ 49,821	\$ 47,987
Net OPEB liability as a percentage of the covered payroll ((a)-(b))/(c)	2.28%	2.20%	2.21%

This schedule is intended to show information for 10 years. However, until a full ten-year trend is compiled, HRSD will present information for those years for which information is available.

**SCHEDULE OF EMPLOYER HIC OPEB CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2011 THROUGH 2020**

Date	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2020	\$ 111,000	\$ 111,000	\$ -	\$ 53,085,000	0.21%
2019	108,000	108,000	-	51,336,000	0.21%
2018	95,000	95,000	-	49,821,000	0.19%
2017	91,000	91,000	-	47,987,000	0.19%
2016	74,000	74,000	-	46,417,000	0.16%
2015	74,000	74,000	-	46,076,000	0.16%
2014	86,000	86,000	-	45,283,000	0.19%
2013	85,000	85,000	-	44,835,000	0.19%
2012	100,000	100,000	-	41,634,000	0.24%
2011	97,000	97,000	-	40,282,000	0.24%

Notes to Required Supplementary Information For the Year Ended June 30, 2020:

Changes of benefit terms -

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

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:

Mortality Rates (Pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75.
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14 to 15%
Discount Rate	Decreased rate from 7.00% to 6.75%

Information pertaining to OPEB can be found in Notes 2 and 7 to the financial statements.



Statistical Section (Unaudited)



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INDEX TO STATISTICAL SECTION

COMPREHENSIVE ANNUAL FINANCIAL REPORT / HAMPTON ROADS SANITATION DISTRICT

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

Contents	Page
Demographic and Economic Information	71
This schedule offers demographic and economic indicators to help the reader understand the environment within which HRSD's financial activities take place and to help make comparisons over time and with other governments.	
Financial Trends	72
These schedules contain trend information to help the reader understand how HRSD's financial performance and well-being have changed over time.	
Debt Capacity	75
This schedule presents information to help the reader assess the affordability of HRSD's current levels of outstanding debt and HRSD's ability to issue additional debt in the future.	
Revenue Capacity	76
These schedules contain information to help the reader assess the factors affecting HRSD's ability to generate revenue from rate payers.	
Operating Information	78
These schedules contain information about the HRSD's operations and resources to help the reader understand how the HRSD's financial information relates to the services HRSD provides and the activities it performs.	

Sources: Unless otherwise noted the information in these schedules is derived from the comprehensive annual financial reports and accounting records for the relevant year.

Unaudited – See accompanying independent auditors' report



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DEMOGRAPHIC AND OTHER MISCELLANEOUS STATISTICS

June 30, 2020

Date of Incorporation - 1940	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Area in Square Miles (1)	3,087	3,087	3,087	3,087	2,808	2,808	2,808	2,808	2,808	2,808
Present Service Area in Square Miles (1)	758	758	758	758	672	672	672	672	672	672
Treatment Plants (Major)	9	9	9	9	9	9	9	9	9	9
Plant Capacity (Millions of Gallons per Day)										
Army Base Plant, Norfolk	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Atlantic Plant, Virginia Beach	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Boat Harbor Plant, Newport News	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Chesapeake-Elizabeth Plant, Virginia Beach	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
James River Plant, Newport News	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Nansemond Plant, Suffolk	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Virginia Initiative Plant, Norfolk	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Williamsburg Plant, James City County	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
York River Plant, York County	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Treatment Plants (Major) Capacity	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5
Small Communities Treatment Plants	7	7	7	5	4	4	4	4	5	5
Small Communities Plant Capacity (Millions of Gallons per Day)										
Central Middlesex, Middlesex County	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.030	0.030
King William Plant, King William County	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Lawnes Point, Isle of Wight County (2)	0.050	0.050	0.050	0.050	-	-	-	-	-	-
Mathews Plant, Mathews County (3)	-	-	-	-	-	-	-	-	0.100	0.100
Surry County (4)	0.065	0.065	0.065	-	-	-	-	-	-	-
Town of Surry (4)	0.060	0.060	0.060	-	-	-	-	-	-	-
Urbanna Plant, Middlesex County	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
West Point Plant, King William County	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600	0.600
Total Small Communities Treatment Plants Capacity	1.000	1.000	1.000	0.875	0.825	0.825	0.830	0.830	0.930	0.930
Miles of Interceptor Systems (5)	541	541	542	540	536	532	531	531	532	528
Interceptor Pump Stations	88	87	88	89	88	83	83	83	83	82
Small Communities Pump Stations (5)	42	41	34	38	33	33	33	29	29	29
Maintenance Facilities	2	2	2	2	2	2	2	2	2	2
Number of Service Connections (in thousands)	478	476	473	470	467	465	462	460	458	457
Daily Average Treatment in Millions of Gallons	141	153	145	153	155	152	154	158	147	144
Bond Rating: Moody's										
Senior	Aa1	Aa1	Aa1	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2
Subordinate Long-term	Aa1	Aa2	Aa2	-	-	-	-	-	-	-
Bond Rating: Standard & Poor's										
Senior	AA+	AA+	AA+	AA+	AA+	AA+	AAA	AAA	AAA	AAA
Subordinate Long-term	AA+	AA+	AA	AA	AA	AA	AA+	AA+	AA+	-
Subordinate Short-term	A-1+	A-1+	A-1+	A-1+	A-1+	A-1+	A-1+	A-1+	A-1+	-
Bond Rating: Fitch										
Senior	AA+	AA+	AA+	AA+	AA+	AA+	AA+	AA+	AA+	AA+
Subordinate Long-term	AA	AA	AA	AA	AA	AA	AA	AA	AA	-
Subordinate Short-term	F1+	F1+	F1+	F1+	F1+	F1+	F1+	F1+	F1+	-

(1) HRSD added additional service areas in the counties of Isle of Wight and Surry

(2) Lawnes Point was acquired during the year ended June 30, 2017.

(3) The Mathews Treatment Plant has been closed. Wastewater from the area is now handled by the York River Treatment Plant.

(4) The Surry Plants were acquired during the year ended June 30, 2018.

(5) HRSD conducted evaluations of the system during the years ended June 30, 2009 and 2011 and revised the miles of pipes and the number of small community pump stations.

Unaudited – See accompanying independent auditors' report

**SCHEDULE OF OPERATING REVENUES, EXPENSES, NET POSITION BY COMPONENT
AND DEBT SERVICE EXPENDITURES LAST TEN FISCAL YEARS**

(in thousands)

	2020	2019	2018	(adjusted) 2017	2016
OPERATING REVENUES					
Wastewater treatment charges	\$ 318,585	\$ 299,323	\$ 275,539	\$ 254,961	\$ 234,020
Miscellaneous	3,447	3,798	3,504	3,669	3,861
TOTAL OPERATING REVENUES	322,032	303,121	279,043	258,630	237,881
OPERATING EXPENSES					
Wastewater treatment	122,393	117,189	116,982	113,100	106,575
General and administrative	46,949	41,121	40,480	40,287	40,026
Depreciation	51,383	53,225	52,349	49,311	45,670
TOTAL OPERATING EXPENSES	220,725	211,535	209,811	202,698	192,271
OPERATING INCOME	101,307	91,586	69,232	55,932	45,610
NON-OPERATING REVENUES (EXPENSES)					
Wastewater facility charges	6,444	6,662	6,673	7,511	6,699
Investment income	5,876	8,719	3,654	2,287	1,563
Bond interest subsidy	2,205	2,308	2,330	2,275	2,399
Change in fair value of investments	-	-	(1,382)	(1,119)	750
Capital distributions to localities	-	-	(311)	(138)	(3,287)
Bond issuance costs	(1,290)	(53)	(1,061)	(42)	(1,713)
Disposal of capital assets	(739)	-	-	-	-
Interest expense	(26,179)	(27,964)	(20,226)	(22,630)	(21,631)
NET NON-OPERATING EXPENSES	(13,683)	(10,328)	(10,323)	(11,856)	(15,220)
INCOME (LOSS) BEFORE CONTRIBUTIONS	87,624	81,258	58,909	44,076	30,390
CAPITAL CONTRIBUTIONS					
State capital grants	-	2,444	2,502	7,462	14,389
Other capital contributions	578	374	2,124	1,136	-
CHANGE IN NET POSITION	\$ 88,202	\$ 84,076	\$ 63,535	\$ 52,674	\$ 44,779
NET POSITION					
Net Investment in capital assets	\$ 646,505	\$ 494,779	\$ 512,398	\$ 428,670	\$ 410,287
Restricted for debt service	28,155	28,553	27,799	22,701	23,798
Restricted for debt service reserve fund	-	-	-	-	-
Unrestricted	195,247	258,373	157,432	202,907	167,519
TOTAL NET POSITION	\$ 869,907	\$ 781,705	\$ 697,629	\$ 654,278	\$ 601,604
DEBT SERVICE EXPENDITURES					
Senior debt	\$ 28,595	\$ 33,592	\$ 36,488	\$ 35,837	\$ 38,198
Subordinate debt	\$ 30,416	\$ 28,313	\$ 20,633	\$ 23,603	\$ 17,068
Senior Debt Service Coverage (GAAP)	5.80	4.84	3.59	3.10	2.56
Subordinate Debt Service Coverage (GAAP)	5.46	5.74	6.36	5.09	5.72
Total Debt Service Coverage (GAAP)	2.81	2.62	2.03	1.93	1.77
Total Debt (Adjusted Cash Basis)	\$ 59,011	\$ 61,905	\$ 57,171	\$ 57,988	\$ 54,643
Total Debt Service Coverage (Adjusted Cash Basis)	2.81	2.62	2.30	2.00	1.85

Notes:

FY2016 - HRSD is showing Debt Service Coverage on both a GAAP basis and an Adjusted Cash basis to account for distributions to localities in accordance with its Amended Subordinate Trust Agreement Section 705(a) enacted in March 2016.

FY2018 - HRSD implemented GASB Statement 75 effective July 1, 2017, which requires recording net OPEB assets or liabilities and related deferred outflows and inflows of resources.

FY2019 - HRSD implemented GASB Statement 89 effective July 1, 2018, establishes accounting requirements for interest cost incurred before the end of a construction period.

(Continued)

**SCHEDULE OF OPERATING REVENUES, EXPENSES, NET POSITION BY COMPONENT
AND DEBT SERVICE EXPENDITURES LAST TEN FISCAL YEARS**

(in thousands)

	2015	(adjusted) 2014	(adjusted) 2013	2012	2011
OPERATING REVENUES					
Wastewater treatment charges	\$ 221,626	\$ 211,538	\$ 199,318	\$ 194,817	\$ 183,526
Miscellaneous	3,935	3,643	3,297	2,996	3,890
TOTAL OPERATING REVENUES	225,561	215,181	202,615	197,813	187,416
OPERATING EXPENSES					
Wastewater treatment	114,137	109,149	86,973	110,783	103,225
General and administrative	38,678	33,012	31,410	31,163	28,622
Depreciation	41,871	42,761	45,414	41,250	36,191
TOTAL OPERATING EXPENSES	194,686	184,922	163,797	183,196	168,038
OPERATING INCOME	30,875	30,259	38,818	14,617	19,378
NON-OPERATING REVENUES (EXPENSES)					
Wastewater facility charges	7,428	6,640	5,851	6,276	5,083
Investment income	1,695	1,872	1,705	1,681	1,699
Bond interest subsidy	2,444	2,364	2,602	2,602	2,602
Change in fair value of investments	(286)	(422)	(714)	(224)	(19)
Capital distributions to localities	-	-	-	-	-
Bond issuance costs	(768)	-	(658)	(2,206)	-
Disposal of capital assets	-	-	(1,649)	-	-
Interest expense	(22,958)	(25,650)	(24,330)	(22,760)	(20,516)
NET NON-OPERATING EXPENSES	(12,445)	(15,196)	(17,193)	(14,631)	(11,151)
INCOME (LOSS) BEFORE CONTRIBUTIONS	18,430	15,063	21,625	(14)	8,227
CAPITAL CONTRIBUTIONS					
State capital grants	16,519	13,888	10,172	14,806	16,097
Other capital contributions	3,000	-	-	-	-
CHANGE IN NET POSITION	\$ 37,949	\$ 28,951	\$ 31,797	\$ 14,792	\$ 24,324
NET POSITION					
Net Investment in capital assets	\$ 385,597	\$ 351,191	\$ 337,342	\$ 348,407	\$ 351,618
Restricted for debt service	22,070	24,064	23,843	15,736	14,896
Restricted for debt service reserve fund	44,118	45,207	-	-	-
Unrestricted	105,040	134,485	164,811	130,056	110,688
TOTAL NET POSITION	\$ 556,825	\$ 554,947	\$ 525,996	\$ 494,199	\$ 477,202
DEBT SERVICE EXPENDITURES					
Senior debt	\$ 43,842	\$ 47,331	\$ 37,574	\$ 33,023	\$ 28,257
Subordinate debt	\$ 13,091	\$ 14,112	\$ 11,243	\$ 13,694	\$ 10,640
Senior Debt Service Coverage (GAAP)	1.90	1.76	2.48	1.94	2.30
Subordinate Debt Service Coverage (GAAP)	6.36	5.92	8.27	4.67	6.10
Total Debt Service Coverage (GAAP)	1.46	1.36	1.91	1.37	1.67
Total Debt (Adjusted Cash Basis)	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt Service Coverage (Adjusted Cash Basis)	-	-	-	-	-

Notes:

FY2013 - HRSD implemented GASB Statement 65 effective July 1, 2012, which requires expensing bond issuance costs in the year incurred.
- HRSD adjusted the financial records to include inventory assets.

FY2014 - HRSD implemented GASB Statements 68 and 71 effective July 1, 2014, which requires recording net pension assets or liabilities and related deferred outflows and inflows of resources.

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENDITURES
FOR OPERATIONS - LAST TEN FISCAL YEARS**

(in thousands)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Personal Services	\$ 59,666	\$ 56,336	\$ 55,160	\$ 53,401	\$ 51,801	\$ 52,357	\$ 50,538	\$ 49,361	\$ 47,319	\$ 44,284
Fringe Benefits	21,417	18,235	20,275	19,106	17,974	18,249	20,170	20,039	17,800	17,692
Repairs and Maintenance (1)	17,419	13,786	16,763	19,933	22,824	31,451	22,320	23,075	26,057	21,234
Materials and Supplies	9,364	9,314	8,865	8,310	7,843	4,343	5,764	5,700	6,143	8,381
Transportation	1,194	1,423	1,271	1,386	1,537	1,297	1,417	1,376	1,319	1,196
Utilities	12,584	12,749	11,968	11,523	11,249	10,503	11,126	12,295	12,027	11,026
Chemical Purchases	8,760	8,746	8,750	8,020	7,512	7,119	7,752	7,892	8,587	8,084
Contractual Services	33,748	32,123	30,165	26,977	21,573	15,127	14,222	13,993	12,312	11,118
Miscellaneous Expense	2,953	2,622	2,509	2,329	1,842	2,880	1,274	1,172	1,324	1,148
General (2)	2,237	2,976	1,736	2,402	2,446	9,489	7,578	6,487	6,852	7,684
Subtotal, Expense before Depreciation	169,342	158,310	157,462	153,387	146,601	152,815	142,161	141,390	139,740	131,847
Depreciation	51,383	53,225	52,349	49,311	45,670	41,871	42,761	45,414	41,250	36,191
Total Operating Expenses	\$ 220,725	\$ 211,535	\$ 209,811	\$ 202,698	\$ 192,271	\$ 194,686	\$ 184,922	\$ 186,804	\$ 180,990	\$ 168,038

(1) Includes Capital Improvement Program items expensed

(2) Includes bad debt expense

Unaudited – See accompanying independent auditors' report

RATIOS OF OUTSTANDING DEBT BY TYPE
June 30, 2020

(in thousands)

As of June 30,	No. Of Service Connections	Senior Revenue Bonds	Subordinate Revenue Bonds	Total Outstanding Debt	Debt Per Service Connection
2020	478,000	\$ 219,776	\$ 615,703	\$ 835,479	\$ 1,748
2019	476,000	326,531	565,098	891,629	1,873
2018	473,000	349,313	542,129	891,442	1,885
2017	470,000	458,255	388,529	846,784	1,802
2016	467,000	476,734	402,560	879,294	1,883
2015	465,000	649,202	99,195	748,397	1,609
2014	462,000	656,503	109,850	766,353	1,659
2013	460,000	670,272	120,231	790,503	1,718
2012	458,000	510,951	128,335	639,286	1,396
2011	457,000	450,335	110,661	560,996	1,228

Note: Unamortized bond premiums are included in both senior and subordinate revenue bonds.

**RATE SCHEDULE
WASTEWATER TREATMENT CHARGES
LAST TEN FISCAL YEARS**

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<u>Residential - Metered</u>										
Per CCF * (single step)	\$ 5.86	\$ 5.37	\$ 4.92	\$ 4.51	\$ 4.13	\$ 3.83	\$ 3.55	\$ 3.29	\$ 3.05	\$ 2.82
First 30 CCF* per 30-day period	-	-	-	-	-	-	-	-	-	-
In excess of 30 CCF* per 30-day period	-	-	-	-	-	-	-	-	-	-
Minimum Charges										
Per day	0.30	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.25	0.25
2 CCF* or less per 30-day period	-	-	-	-	-	-	-	-	-	-
<u>Residential - Unmetered per 30-day period</u>										
Flat rate accounts	48.64	34.91	31.98	29.32	26.32	26.32	26.32	26.32	24.40	22.56
First toilet	-	-	-	-	-	-	-	-	-	-
Second toilet	-	-	-	-	-	-	-	-	-	-
Additional, each	-	-	-	-	-	-	-	-	-	-
<u>Non-Residential - Special Category</u>										
Biochemical Oxygen Demand (BOD)										
Excess over 282 mg/liter										
Per mg/liter per CCF	0.000129	0.000104	0.000091	0.000206	0.000485	0.000612	0.001558	0.002451	-	-
Per Hundred Pounds	-	-	-	-	-	-	-	-	46.77	39.71
Total Suspended Solids (TSS)										
Excess over 261 mg/liter										
Per mg/liter per CCF	0.000630	0.000592	0.000520	0.000454	0.000448	0.000417	0.001244	0.001865	-	-
Per Hundred Pounds	-	-	-	-	-	-	-	-	36.70	34.73
Total Phosphorus (TP)										
Excess over 6 mg/liter										
Per mg/liter per CCF	0.009871	0.009535	0.011569	0.011642	0.004361	0.004344	0.011714	0.012790	-	-
Per Hundred Pounds	-	-	-	-	-	-	-	-	300.57	300.57
Total Kjeldahl Nitrogen (TKN)										
Excess over 47 mg/liter										
Per mg/liter per CCF	0.003378	0.003595	0.003156	0.001660	0.000917	0.000756	0.001752	0.002085	-	-
Per Hundred Pounds	-	-	-	-	-	-	-	-	74.51	63.39
Unusual wastes not covered by this schedule may be assigned a special rate.										
<u>Septic Tank Waste</u>										
Per gallon	0.1717	0.1697	0.1300	0.1366	0.1362	0.1267	0.1258	0.1146	-	-
Per each 500 gallons or part thereof	-	-	-	-	-	-	-	-	48.57	44.46

*CCF = 100 Cubic Feet (Approx. 748 gallons)

Note: Rates can be adjusted by the Commission.

**RATE SCHEDULE
WASTEWATER FACILITY CHARGES
LAST TEN FISCAL YEARS**

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Residential	\$ 1,905	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,715
Commercial/Industrial										
Volume based facility charges:										
5/8" Meter	\$ 1,905	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,715
3/4" Meter	4,210	4,830	4,830	4,830	4,830	4,830	4,830	4,510	2,885	2,605
1" Meter	7,410	8,170	8,170	8,170	8,170	8,170	8,170	7,630	5,370	4,850
1 1/2" Meter	16,645	17,260	17,260	17,260	17,260	17,260	17,260	16,130	13,035	11,780
2" Meter	30,505	30,510	30,510	30,510	29,420	29,420	29,420	27,490	24,420	22,065
3" Meter	73,810	70,800	70,800	70,800	67,350	63,600	62,270	58,180	59,140	53,440
4" Meter	138,445	128,660	128,660	128,660	122,400	115,580	106,060	99,110	110,860	100,175
6" Meter	36,960	298,610	298,610	298,610	284,070	268,250	224,650	209,920	268,675	242,780
8" Meter	634,710	542,680	542,680	542,680	516,260	487,510	382,670	357,580	503,350	454,835
10" Meter	1,038,525	862,550	862,550	862,550	820,560	774,860	587,820	540,610	819,310	740,340
12" Meter	1,554,120	1,259,520	1,259,520	1,259,520	1,198,210	1,131,490	-	-	-	-
14" Meter	2,186,505	1,734,700	1,734,700	1,734,700	1,650,250	1,558,360	-	-	-	-
16" Meter	2,940,135	2,289,010	2,289,010	2,289,010	2,177,580	2,056,330	-	-	-	-
Strength based facility charges: (per permitted pound)										
Biochemical Oxygen Demand (BOD) Excess over 250 mg/liter	-	-	-	-	-	\$ 728	\$ 987	\$ 928	-	-
Total Suspended Solids (TSS) Excess over 250 mg/liter	-	-	-	-	-	424	624	587	-	-
Total Phosphorus (TP) Excess over 6 mg/liter	-	-	-	-	-	8,420	5,846	5,502	-	-
Total Kjeldahl Nitrogen (TKN) Excess over 35 mg/liter	-	-	-	-	-	3,812	1,313	1,235	-	-

Notes:

One charge per connection.

HRSD eliminated strength based facility charges effective 7/1/2015.

Unaudited – See accompanying independent auditors' report

TREATMENT PLANT OPERATING SUMMARY
LAST TEN FISCAL YEARS
(Average Quantity per Day)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Total										
Flow (MGD)	140.9	152.6	145.2	152.9	155.1	152.2	154.0	157.9	147.1	144.4
Influent (1,000 lbs.)										
BOD	252.4	281.9	285.1	288.2	282.5	286.0	288.6	274.4	254.6	273.1
TSS	226.2	211.4	215.8	215.9	228.8	198.6	204.7	198.1	200.3	205.9
TP	6.6	6.6	6.8	7.0	6.9	8.6	6.8	6.6	6.7	7.0
TKN	47.0	47.6	47.2	46.4	45.7	45.8	47.9	48.9	48.3	49.8
Effluent (1,000 lbs.)										
BOD	8.0	8.2	7.5	8.9	9.8	9.9	9.6	9.3	7.5	9.3
TSS	7.1	7.4	6.7	9.4	9.3	8.9	9.1	9.3	10.5	9.2
TP	0.7	0.8	0.7	0.9	0.9	1.0	1.1	1.0	1.1	1.0
TKN	8.4	8.5	7.3	7.7	8.0	9.8	11.2	12.0	10.1	12.3
Army Base Plant										
Flow (MGD)	10.4	11.1	10.0	9.5	9.6	9.9	10.7	11.8	10.2	10.0
Influent (1,000 lbs.)										
BOD	16.0	16.6	16.3	13.2	13.3	16.4	19.0	18.5	17.4	16.9
TSS	16.9	13.9	14.0	11.7	13.3	12.5	14.2	14.4	13.7	12.9
TP	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4
TKN	3.3	3.3	3.1	2.7	2.7	2.9	3.5	3.7	3.5	3.2
Effluent (1,000 lbs.)										
BOD	0.2	0.3	0.2	0.3	0.3	0.8	0.8	0.8	0.9	0.8
TSS	0.3	0.4	0.3	0.4	0.5	0.6	0.8	0.9	0.8	1.0
TP	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TKN	0.1	0.1	0.1	0.1	0.1	2.1	2.6	2.8	2.5	2.3
Atlantic Plant										
Flow (MGD)	24.5	28.1	26.1	28.2	27.2	30.9	25.7	26.7	29.0	29.7
Influent (1,000 lbs.)										
BOD	49.3	58.2	56.7	53.2	55.6	66.6	52.7	51.3	56.0	58.6
TSS	35.5	39.3	36.6	38.7	38.5	42.9	37.3	36.4	43.8	46.9
TP	1.3	1.4	1.3	1.4	1.4	1.5	1.3	1.3	1.5	1.8
TKN	10.7	11.9	11.2	11.0	10.9	11.4	10.4	10.5	11.7	12.3
Effluent (1,000 lbs.)										
BOD	3.0	2.5	2.4	2.3	2.7	3.0	2.2	2.6	2.0	3.0
TSS	1.5	1.6	1.6	1.9	1.9	2.4	2.0	1.9	1.8	2.0
Boat Harbor Plant										
Flow (MGD)	13.6	15.8	14.2	13.9	15.6	14.4	14.9	15.5	13.6	12.6
Influent (1,000 lbs.)										
BOD	18.4	20.6	19.2	17.4	18.3	20.0	19.2	19.3	19.9	19.4
TSS	16.0	18.0	16.6	15.7	18.1	16.3	16.7	16.0	16.9	15.6
TP	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5
TKN	4.0	4.2	3.9	3.8	3.8	3.6	3.7	3.7	3.7	3.8
Effluent (1,000 lbs.)										
BOD	0.6	0.9	0.6	0.6	1.0	0.7	0.7	0.7	0.6	0.6
TSS	0.8	1.0	0.7	0.7	0.9	0.6	0.8	0.8	0.9	0.7
TP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TKN	2.0	2.5	1.3	1.2	1.8	2.2	2.4	2.9	3.0	2.8

Unaudited – See accompanying independent auditors' report

TREATMENT PLANT OPERATING SUMMARY
LAST TEN FISCAL YEARS
(Average Quantity per Day)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Chesapeake-Elizabeth Plant										
Flow (MGD)	17.7	17.4	17.6	18.7	18.0	16.3	19.1	18.4	15.2	16.3
Influent (1,000 lbs.)										
BOD	32.5	38.1	37.2	35.4	35.2	30.2	38.7	32.1	24.8	30.1
TSS	26.5	24.6	26.8	26.6	26.1	22.9	26.6	25.1	21.0	22.6
TP	0.8	0.8	0.8	0.8	0.8	2.7	0.8	0.8	0.7	0.7
TKN	7.0	6.9	6.8	6.6	6.4	5.1	6.7	6.4	5.4	6.1
Effluent (1,000 lbs.)										
BOD	2.2	2.2	2.0	2.8	2.3	2.0	2.5	2.2	1.5	1.8
TSS	2.3	2.0	1.9	3.2	2.3	1.8	1.9	2.1	1.8	1.9
TP	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2
TKN	4.7	4.4	4.1	4.5	4.1	3.6	4.5	4.2	3.2	3.9
James River Plant										
Flow (MGD)	12.4	13.9	13.0	12.3	13.2	12.7	13.6	14.3	12.9	12.2
Influent (1,000 lbs.)										
BOD	24.0	25.8	26.8	25.5	24.4	25.7	27.5	25.5	25.3	26.2
TSS	17.4	18.7	19.3	17.4	17.8	18.0	19.4	19.2	19.0	19.8
TP	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6
TKN	4.7	4.7	4.8	4.3	4.2	4.0	4.2	4.4	4.4	4.4
Effluent (1,000 lbs.)										
BOD	0.5	0.4	0.3	0.4	0.4	0.3	0.5	0.7	0.7	0.9
TSS	0.4	0.4	0.4	0.4	0.5	0.4	0.6	0.8	0.8	0.9
TP	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TKN	0.5	0.3	0.4	0.5	0.4	0.4	0.2	0.6	0.5	2.3
Nansemond Plant										
Flow (MGD)	15.9	16.9	17.5	18.8	18.5	16.6	16.9	17.1	16.2	15.9
Influent (1,000 lbs.)										
BOD	32.5	33.0	31.9	40.7	35.8	28.5	29.0	27.0	23.7	27.9
TSS	46.5	37.2	33.4	40.3	38.4	21.9	23.1	22.9	22.6	22.6
TP	1.0	1.0	1.2	1.5	1.5	1.1	1.1	1.1	1.0	1.0
TKN	6.9	6.7	7.1	7.4	7.0	5.6	5.8	5.9	6.0	6.1
Effluent (1,000 lbs.)										
BOD	0.6	0.7	0.7	0.8	0.7	0.8	0.9	0.6	0.6	0.8
TSS	0.6	0.8	0.7	0.8	0.9	0.9	1.1	0.8	0.9	1.1
TP	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
TKN	0.3	0.4	0.4	0.5	0.5	0.6	0.5	0.3	0.3	0.5
Virginia Initiative Plant										
Flow (MGD)	26.2	27.6	26.7	30.9	31.7	30.5	30.7	31.9	29.8	28.5
Influent (1,000 lbs.)										
BOD	37.0	40.4	47.5	50.1	50.4	47.5	45.8	45.8	42.3	42.8
TSS	35.4	23.2	30.0	31.3	32.0	30.2	30.6	31.6	32.3	31.8
TP	1.1	0.9	1.0	1.0	1.0	1.1	1.2	1.1	1.1	1.1
TKN	7.1	6.8	7.0	7.3	7.4	7.1	7.4	7.5	7.6	7.3
Effluent (1,000 lbs.)										
BOD	0.5	0.6	0.8	1.2	1.7	1.9	1.4	0.9	0.8	0.7
TSS	1.0	0.7	0.7	1.4	1.9	1.6	1.7	1.4	1.5	1.1
TP	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1
TKN	0.3	0.4	0.6	0.4	0.7	0.8	0.6	0.5	0.5	0.4

Unaudited – See accompanying independent auditors' report

TREATMENT PLANT OPERATING SUMMARY
LAST TEN FISCAL YEARS
(Average Quantity per Day)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Williamsburg Plant										
Flow (MGD)	7.5	8.6	7.7	8.0	8.6	8.4	9.2	8.9	9.1	8.6
Influent (1,000 lbs.)										
BOD	28.8	33.4	32.6	36.1	33.2	34.7	40.4	37.7	33.5	37.5
TSS	17.1	21.2	24.1	19.1	27.9	16.2	19.9	16.8	16.7	19.0
TP	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6
TKN	3.4	3.6	3.5	3.3	3.6	3.2	3.3	3.3	3.4	3.5
Effluent (1,000 lbs.)										
BOD	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
TSS	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.3
TP	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
TKN	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2
York River Plant										
Flow (MGD)	12.6	13.2	12.6	12.6	12.7	12.6	13.2	13.3	11.2	10.8
Influent (1,000 lbs.)										
BOD	13.8	15.8	16.8	16.7	16.3	18.2	17.9	17.2	13.3	15.5
TSS	14.7	15.4	15.0	15.1	16.7	16.9	16.4	15.7	14.1	14.3
TP	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
TKN	3.9	3.7	3.6	3.6	3.5	3.5	3.6	3.5	3.2	3.6
Effluent (1,000 lbs.)										
BOD	0.2	0.5	0.3	0.3	0.4	0.4	0.4	0.5	0.2	0.5
TSS	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.3
TP	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
TKN	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.1	0.1

Unaudited – See accompanying independent auditors' report

**TEN LARGEST CUSTOMERS
CURRENT YEAR AND NINE YEARS AGO**

(in thousands)

<u>Customer</u>	<u>Type</u>	2020		2011	
		Amount	Percent	Amount	Percent
U.S. Navy - Norfolk Naval Base	Military Facility	\$ 8,834	2.8%	\$ 4,730	2.6%
Smithfield Foods	Meat Processor	4,153	1.3%	2,973	1.6%
Anheuser - Busch, Inc.	Brewery	3,393	1.1%	5,160	2.8%
Norfolk Redevelopment & Housing Authority	Housing Authority	2,740	0.9%	1,202	0.7%
Norfolk Naval Shipyard	Military Ship Repair	2,602	0.8%	-	-
City of Norfolk	Municipality	2,270	0.7%	1,561	0.9%
Huntington Ingalls Industries (formerly Northrop Grumman Newport News/ Newport News Shipbuilding and Drydock)	Shipbuilding	2,267	0.7%	1,291	0.7%
U.S. Navy - Little Creek Amphibious Base	Military Facility	1,862	0.6%	925	0.5%
Oceana Naval Air Station / Dam Neck	Military Facility	1,671	0.5%	-	-
U.S. Air Force - Langley Air Force Base	Military Facility	2,064	0.6%	869	0.5%
U.S. Army - Fort Eustis	Military Facility	-	-	911	0.5%
City of Virginia Beach	Municipality	-	-	603	0.3%
Total		\$ 31,856	10.0%	\$ 20,225	11.1%

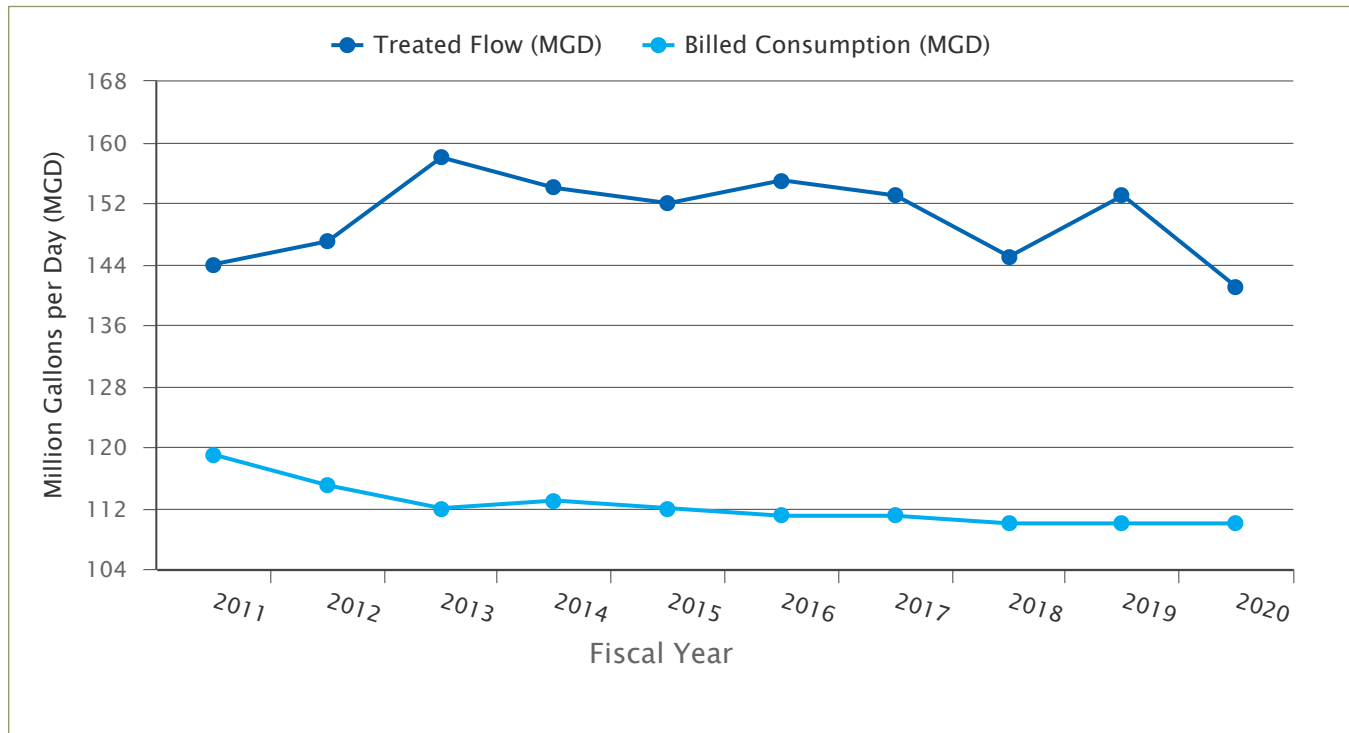
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**WASTEWATER TREATMENT CHARGES
TEN LARGEST EMPLOYERS
CURRENT YEAR AND NINE YEARS AGO**

<u>Employer</u>	<u>Type</u>	2020			2011		
		Number of Employees	Rank	Percent of Regional Employment	Number of Employees	Rank	Percent of Regional Employment
Naval Station Norfolk	Military Facility	67,000	1	6.9%	68,000	1	7.3%
Oceana Naval Air Station	Military Facility	33,600	2	3.5%	9,300	8	1.0%
Joint Base Langley-Eustis	Military Facility	24,300	3	2.5%	11,000	5	1.2%
Huntington Ingalls Industries	Shipbuilding and Repair	24,000	4	2.5%	19,000	3	2.0%
Sentara Healthcare	Health Care Network	22,000	5	2.3%	17,000	4	1.8%
Joint Expeditionary Base Little Creek - Fort Story	Military Facility	14,400	6	1.5%	20,100	2	2.2%
Virginia Beach Public Schools	Public Schools	10,600	7	1.1%	10,000	6	1.1%
Norfolk Naval Shipyard	Military Ship Repair	8,500	8	0.9%	9,600	7	1.0%
Riverside Health System	Health Care Network	8,000	9	0.8%	6,500	10	0.7%
Virginia Beach City	Municipal Government	7,000	10	0.7%	-		-%
Naval Support Activity/ Naval Medical Center	Military Facility	-		-%	8,700	9	0.9%
Total		219,400		22.7%	179,200		19.2%

Sources:
 Hampton Roads Economic Development Alliance
 Hampton Roads Statistical Digest
 Hampton Roads Business
 Confirmation with employers

COMPARISON OF TREATED FLOW TO BILLED FLOW LAST TEN FISCAL YEARS



Year ended June 30,	Treated Flow (MGD)	Billed Consumption (MGD)
2011	144	119
2012	147	115
2013	158	112
2014	154	113
2015	152	112
2016	155	111
2017	153	111
2018	145	110
2019	153	110
2020	141	110

Unaudited – See accompanying independent auditors' report

**NUMBER OF EMPLOYEES BY IDENTIFIABLE ACTIVITY
LAST TEN FISCAL YEARS**

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<u>General Management</u>										
General Manager	1	1	2	3	3	3	3	3	4	4
Support Staff	1	1	1	1	1	1	1	1	1	1
Total General Management	2	2	3	4	4	4	4	4	5	5
<u>Communications</u>										
Communications	1	1	1	-	-	-	-	-	-	-
Support Staff	2	2	1	-	-	-	-	-	-	-
Total Communications	3	3	2	-	-	-	-	-	-	-
<u>Talent Management</u>										
Human Resources	6	6	6	6	5	5	5	5	5	6
Safety	3	3	3	3	3	-	-	-	-	-
Training	3	3	2	2	2	2	2	2	2	2
Support Staff	4	4	4	4	4	3	3	3	3	3
Total Talent Management	16	16	15	15	14	10	10	10	10	11
<u>Finance</u>										
Accounting & Finance	12	12	11	10	10	10	10	10	10	10
Customer Care Center	77	77	77	77	77	69	69	68	69	69
Procurement	10	10	10	10	10	9	9	9	7	7
Support Staff	3	3	3	3	2	3	3	3	3	3
Total Finance	102	102	101	100	99	91	91	90	89	89
<u>Information Technology</u>										
Information Technology	48	43	48	47	45	39	35	35	33	33
Support Staff	2	2	2	1	1	1	1	1	2	2
Total Information Technology	50	45	50	48	46	40	36	36	35	35
<u>Operations</u>										
Army Base Treatment Plant	34	34	34	34	31	32	32	32	32	32
Atlantic Base Treatment Plant	35	35	35	35	32	33	33	33	32	32
Boat Harbor Treatment Plant	35	35	35	35	32	33	33	33	33	33
Chesapeake-Elizabeth Treatment Plant	32	32	32	32	31	32	32	32	32	32
Interceptor System Maintenance	119	119	118	117	115	120	120	120	121	122
James River Treatment Plant	22	22	22	22	20	21	21	21	21	21
Maintenance Shops	74	73	71	70	83	86	86	86	86	86
Nansemond Treatment Plant	32	32	32	32	30	31	31	31	30	30
Virginia Initiative Plant	34	34	33	33	30	31	31	31	31	31
Williamsburg Treatment Plant	29	29	29	29	28	29	29	29	31	31
York River Treatment Plant	24	24	24	24	22	23	23	23	23	23
Small Communities Division	23	23	23	23	21	17	17	17	17	17
Support Staff	23	23	23	23	24	25	25	25	24	24
Total - Operations	516	515	511	509	499	513	513	513	513	514
<u>Engineering</u>										
Design and Construction	31	30	26	25	25	21	19	19	17	15
Support Staff	13	13	13	14	14	14	14	14	14	14
Total Engineering	44	43	39	39	39	35	33	33	31	29
<u>Water Quality</u>										
Pretreatment & Pollution Prevention	28	27	27	26	26	25	24	24	24	24
Technical Services	34	31	31	29	28	25	23	21	21	21
Laboratory	47	47	46	45	42	40	38	38	38	38
Support Staff	5	5	5	6	6	6	6	6	3	3
Total Water Quality	114	110	109	106	102	96	91	89	86	86
<u>Total Employees</u>	847	836	830	821	803	789	778	775	769	769

Unaudited – See accompanying independent auditors' report



Other Supplemental Section (Unaudited)



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SUMMARY OF PRIMARY BONDED DEBT SERVICE
June 30, 2020

(in thousands)

As of June 30,	Senior Bonds			Subordinate	Total Debt
	Principal	Interest	Debt Service	Bonds Debt Service	
2021	\$ 15,542	\$ 10,543	\$ 26,085	\$ 83,602	\$ 109,687
2022	14,771	9,778	24,549	36,466	61,015
2023	18,727	9,005	27,732	34,077	61,809
2024	19,539	8,110	27,649	33,817	61,466
2025	20,408	7,156	27,564	33,813	61,377
2026	20,649	6,159	26,808	34,112	60,920
2027	7,842	5,476	13,318	47,354	60,672
2028	8,107	5,107	13,214	43,915	57,129
2029	8,383	4,725	13,108	43,857	56,965
2030	8,667	4,329	12,996	43,684	56,680
2031	8,501	3,918	12,419	44,679	57,098
2032	5,995	3,523	9,518	42,602	52,120
2033	6,225	3,165	9,390	40,771	50,161
2034	6,465	2,793	9,258	38,784	48,042
2035	6,715	2,406	9,121	38,128	47,249
2036	6,975	2,005	8,980	32,231	41,211
2037	7,245	1,588	8,833	31,984	40,817
2038	7,525	1,155	8,680	31,815	40,495
2039	7,815	705	8,520	17,107	25,627
2040	8,116	237	8,353	9,390	17,743
2041	-	-	-	9,387	9,387
2042	-	-	-	9,371	9,371
2043	-	-	-	9,315	9,315
2044	-	-	-	7,178	7,178
2045	-	-	-	659	659
2046	-	-	-	633	633
2047	-	-	-	107	107
Total	\$ 214,212	\$ 91,883	\$ 306,095	\$ 798,838	\$ 1,104,933

Unaudited – See accompanying independent auditors' report

BUDGETARY COMPARISON SCHEDULE
June 30, 2020

(in thousands)

	<u>Budget</u>			Variance under Amended Budget	Percent Variance
	Adopted	Amended	Actual		
OPERATING BUDGET EXPENSES					
General Management	\$ 460	\$ 503	\$ 480	\$ 23	4.6%
Communications	444	445	384	61	13.7%
Finance	14,567	14,832	13,934	898	6.1%
Information Technology	15,855	16,847	13,999	2,848	16.9%
Talent Management	2,515	2,549	2,320	229	9.0%
Operations	103,821	110,531	98,245	12,286	11.1%
Engineering	7,690	8,732	7,288	1,444	16.5%
Water Quality	14,778	15,707	14,577	1,130	7.2%
General	5,179	10,661	6,307	4,354	40.8%
Debt Service	63,895	60,205	60,301	(96)	-0.2%
TOTAL	229,204	241,012	217,835	<u>\$ 23,177</u>	9.6%
Transfer to CIP	108,341	108,341			
Transfer to Risk Management	260	260			
	<u>\$ 337,805</u>	<u>\$ 349,613</u>			
Add:					
Unbudgeted Depreciation and Amortization			51,383		
Unbudgeted Bad Debt Expense			2,237		
Capital Improvement Program Items Expensed			9,876		
Less:					
Capitalized Assets			305		
Debt Service			60,301		
TOTAL OPERATING EXPENSES			<u>\$ 220,725</u>		

NOTES TO BUDGETARY COMPARISON SCHEDULE JUNE 30, 2020

BUDGETARY HIGHLIGHTS

HRSD's Commission adopts an Annual Operating Budget that contains the day-to-day operating expenses of the District. The Operating Budget as adopted for FY 2020 was \$229,203,660 and contains personnel costs, fringe benefits, material and supplies, electricity, chemicals, insurance, contractual services, debt service and other miscellaneous expenses. There were several modifications to the Operating Budget during the year to reflect changes in spending patterns. All adjustments to the Annual Budget were from encumbrances carried forward or from transfers within or among departments.

NOTE 1 – BUDGETARY ACCOUNTING AND CONTROL Budget Preparation

HRSD prepares its Annual Budget under the provisions of its enabling legislation, used to establish rates, fees and other charges, and of Section 3.12 of the Master Trust Indenture, dated December 1, 1993, and the Trust Agreement, dated March 1, 2008. In accordance with those provisions, the following process is used to adopt the Annual Budget.

The process begins in late December with the issuance of the Annual Budget Instructions by the General Manager. Each department completes its Operating and Improvement Budgets by March 1 for the General Manager's review.

The HRSD Commission appoints a Finance Committee consisting of two Commissioners. The two Commissioners meet in early April to review the Budgets, which are presented by staff at the April Commission meeting. HRSD's Commission reviews these budgets at that meeting.

The final Annual Budget, which incorporates the Operating and Capital Budgets, is presented at the May Commission meeting for adoption. The Commission simultaneously adopts the budget and any resulting wastewater rate schedule. All rate adjustments must be publicly advertised four consecutive weeks before they can take effect.

The HRSD Commission approves any budget amendments during the ensuing year.

The 2008 Trust Agreement requires Debt Service Coverage of 1.20 times for senior and 1.00 times for total debt based on maximum annual debt service. The 2008 Subordinate Trust Agreement was amended in 2016 to account for Consent Decree expenses related to Locality wet weather improvements that HRSD will not own and requires total debt service coverage to be 1.2 times on an adjusted cash basis. The HRSD Commission has a policy of providing senior revenue and total revenue bonded debt service coverage ratios of not less than 1.5 and 1.4 times annual debt service on an adjusted cash basis, respectively.

Budget Accounting

The Annual Budget is prepared on a basis of accounting consistent with accounting principles generally accepted in the United States of America. No provision is provided, however, for non-cash items such as depreciation and bad debt expense. The FY 2020 Annual Budget consists of two parts: an operating budget that covers day-to-day operations and a capital budget that identifies all major capital project requirements over the next ten years. All operating budget amounts lapse at year-end. The Commission annually adopts only the first year of the capital budget. HRSD's Commission separately approves all contracts that are awarded under the capital budget.



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**SCHEDULE OF REVENUES, EXPENDITURES AND
DEBT SERVICE FOR OPERATIONS - ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2020**

(in thousands)

	Actual	Amended Budget	Variance Favorable/ (Unfavorable)	Budget Variance Percentage
OPERATING REVENUES				
Wastewater Treatment Charges	\$ 318,585	\$ 323,395	\$ (4,810)	(1%)
Miscellaneous	3,447	1,850	1,597	86%
TOTAL OPERATING REVENUES	322,032	325,245	(3,213)	1%
CURRENT EXPENDITURES				
General Management	480	503	23	5%
Communications	384	445	61	14%
Finance	13,934	14,832	898	6%
Information Technology	13,999	16,847	2,848	17%
Talent Management	2,320	2,549	229	9%
Operations	98,245	110,531	12,286	11%
Engineering	7,288	8,732	1,444	17%
Water Quality	14,577	15,707	1,130	7%
General	6,307	10,661	4,354	41%
TOTAL CURENT EXPENDITURES	157,534	180,807	23,273	13%
EXCESS OF OPERATING REVENUES OVER EXPENDITURES	164,498	144,438	20,060	14%
NON-OPERATING REVENUES				
Wastewater Facility Charge	6,444	6,160	284	5%
Interest Income	5,876	4,000	1,876	47%
Bond Interest Subsidy	2,205	2,400	(195)	(8%)
TOTAL NON-OPERATING REVENUES	14,525	12,560	1,965	16%
INCOME BEFORE CAPITAL CONTRIBUTIONS	179,023	156,998	22,025	14%
CAPITAL CONTRIBUTIONS				
State Capital Grants	578	-	578	100%
AMOUNT AVAILABLE FOR DEBT	179,601	156,998	22,603	14%
DEBT EXPENDITURES				
Principal & Interest	59,011	59,855	844	1%
Cost of Issuance	1,290	350	(940)	(269%)
TOTAL DEBT EXPENDITURES	60,301	60,205	(96)	(0%)
AMOUNT AVAILABLE TO REINVEST	\$ 119,300	\$ 96,793	\$ 22,507	23%

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENDITURES
FOR OPERATIONS - ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2020**

(in thousands)

	General Management	Communications	Finance	Information Technology	Talent Management	Operations
Personal Services	\$ 353	\$ 248	\$ 5,728	\$ 4,439	\$ 1,487	\$ 34,757
Fringe Benefits	78	89	2,377	1,451	580	14,791
Materials & Supplies	8	18	78	1,030	62	6,402
Transportation	6	8	7	10	25	1,087
Utilities	-	-	261	1,261	-	10,588
Chemical Purchases	-	-	-	-	-	8,760
Contractual Services	12	18	5,339	4,759	16	14,010
Major Repairs	-	-	-	830	-	6,653
Capital Assets	-	-	-	-	-	305
Miscellaneous Expense	23	3	144	219	150	892
	<u>\$ 480</u>	<u>\$ 384</u>	<u>\$ 13,934</u>	<u>\$ 13,999</u>	<u>\$ 2,320</u>	<u>\$ 98,245</u>

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENDITURES
FOR OPERATIONS - ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2020**

(in thousands)

	Engineering	Water Quality	General	Total	Percent of Total	FY2020 Amended Budget	Variance Favorable/ (Unfavorable)
Personal Services	\$ 3,966	\$ 7,648	\$ 1,040	\$ 59,666	28%	\$ 59,170	\$ (496)
Fringe Benefits	1,415	3,059	(2,423)	21,417	10%	24,732	3,315
Materials & Supplies	26	1,675	65	9,364	4%	8,840	(524)
Transportation	20	31	-	1,194	1%	1,579	385
Utilities	-	1	473	12,584	6%	12,774	190
Chemical Purchases	-	-	-	8,760	4%	10,979	2,219
Contractual Services	1,765	1,620	6,209	33,748	15%	45,970	12,222
Major Repairs	-	60	-	7,543	3%	11,268	3,725
Capital Assets	-	-	-	305	0%	459	154
Miscellaneous Expense	96	483	943	2,953	1%	5,036	2,083
	<u>\$ 7,288</u>	<u>\$ 14,577</u>	<u>\$ 6,307</u>	<u>\$ 157,534</u>	<u>72%</u>	<u>\$ 180,807</u>	<u>\$ 23,273</u>
Debt Service				59,011	27%	59,855	844
Cost of Issuance				1,290	1%	350	(940)
Total Debt Expenditures				<u>\$ 60,301</u>	<u>28%</u>	<u>\$ 60,205</u>	<u>\$ (96)</u>
Total Department and Debt Expenditures				<u>\$ 217,835</u>	<u>100%</u>	<u>\$ 241,012</u>	<u>\$ 23,177</u>

Unaudited – See accompanying independent auditors' report

**DEPARTMENT SUMMARY OF EXPENDITURES
ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2020**

(in thousands)

	Actual	Amended Budget	Variance Favorable/ (Unfavorable)
General Management			
Personal Services	\$ 353	\$ 357	\$ 4
Fringe Benefits	78	81	3
Materials & Supplies	8	10	2
Transportation	6	7	1
Contractual Services	12	27	15
Miscellaneous Expense	23	21	(2)
	<u>480</u>	<u>503</u>	<u>23</u>
Communications			
Personal Services	\$ 248	\$ 236	\$ (12)
Fringe Benefits	89	88	(1)
Materials & Supplies	18	46	28
Transportation	8	12	4
Contractual Services	18	33	15
Miscellaneous Expense	3	30	27
	<u>384</u>	<u>445</u>	<u>61</u>
Finance			
Personal Services	\$ 5,728	\$ 6,067	\$ 339
Fringe Benefits	2,377	2,630	253
Materials & Supplies	78	71	(7)
Transportation	7	12	5
Utilities	261	304	43
Contractual Services	5,339	5,475	136
Miscellaneous Expense	144	273	129
	<u>13,934</u>	<u>14,832</u>	<u>898</u>
Information Technology			
Personal Services	\$ 4,439	\$ 4,429	\$ (10)
Fringe Benefits	1,451	1,554	103
Materials & Supplies	1,030	1,287	257
Transportation	10	22	12
Utilities	1,261	1,205	(56)
Contractual Services	4,759	7,391	2,632
Major Repairs	830	665	(165)
Miscellaneous Expense	219	294	75
	<u>13,999</u>	<u>16,847</u>	<u>2,848</u>

(Continued)

**DEPARTMENT SUMMARY OF EXPENDITURES
ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2020**

(in thousands)

	Actual	Amended Budget	Variance Favorable/ (Unfavorable)
Talent Management			
Personal Services	\$ 1,487	\$ 1,530	\$ 43
Fringe Benefits	580	616	36
Materials & Supplies	62	59	(3)
Transportation	25	28	3
Contractual Services	16	54	38
Miscellaneous Expense	150	262	112
	<u>2,320</u>	<u>2,549</u>	<u>229</u>
Operations			
Personal Services	\$ 34,757	\$ 34,503	\$ (254)
Fringe Benefits	14,791	15,418	627
Materials & Supplies	6,402	5,711	(691)
Transportation	1,087	1,448	361
Utilities	10,588	10,757	169
Chemical Purchases	8,760	10,979	2,219
Contractual Services	14,010	19,582	5,572
Major Repairs	6,653	10,532	3,879
Capital Assets	305	459	154
Miscellaneous Expense	892	1,142	250
	<u>98,245</u>	<u>110,531</u>	<u>12,286</u>
Engineering			
Personal Services	\$ 3,966	\$ 3,983	\$ 17
Fringe Benefits	1,415	1,480	65
Materials & Supplies	26	24	(2)
Transportation	20	20	-
Contractual Services	1,765	3,041	1,276
Miscellaneous Expense	96	184	88
	<u>7,288</u>	<u>8,732</u>	<u>1,444</u>
Water Quality			
Personal Services	\$ 7,648	\$ 7,815	\$ 167
Fringe Benefits	3,059	3,199	140
Materials & Supplies	1,675	1,614	(61)
Transportation	31	30	(1)
Utilities	1	3	2
Contractual Services	1,620	2,357	737
Major Repairs	60	71	11
Miscellaneous Expense	483	618	135
	<u>14,577</u>	<u>15,707</u>	<u>1,130</u>
General			
Personal Services	\$ 1,040	\$ 250	\$ (790)
Fringe Benefits	(2,423)	(334)	2,089
Materials & Supplies	65	18	(47)
Utilities	473	505	32
Contractual Services	6,209	8,010	1,801
Miscellaneous Expense	943	2,212	1,269
	<u>6,307</u>	<u>10,661</u>	<u>4,354</u>

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HRSD
Cleaning wastewater every day for a better Bay.

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