



COMMISSION MEETING MINUTES  
October 24, 2023

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The Commission Chair called the meeting to order at 9:01 a.m.

Name	Title	Present for Item Nos.
Rodriguez, Stephen C.	Commission Chair	1-17
Elofson, Frederick N.	Commission Vice-Chair	1-17
Glenn, Michael E.	Commissioner	1-17
Lakdawala, Vishnu K.	Commissioner	1-17
Levenston, Jr., Willie	Commissioner	1-17
Stern, Nancy J.	Commissioner	1-17
Taraski, Elizabeth	Commissioner	1-17
Templeman, Ann	Commissioner	1-17

In accordance with Virginia Code § 2.2-3708.3 (B) and the HRSD Remote Participation Commission Adopted Policy Commissioner Lakdawala requested approval to participate in today’s meeting from Virginia Beach, VA due to a medical condition that prevents the Commissioner’s physical attendance. In additional Commissioner Stern requested approval to participate in today’s meeting from Belle Haven, VA due to the Commissioner’s principal residence is more than 60 miles from the meeting location identified in the required notice for such meeting;

**Moved:** Frederick Elofson  
**Seconded:** Michael Glenn

**Ayes:** 6  
**Nays:** 0  
(Excludes Remote Participant)

1. **Awards And Recognition**

**Action:** No action required.

a. **Service Awards**

The Commission Chair presented a service award to Ms. Jamie Hobor who marked her 20<sup>th</sup> year of service with HRSD on September 2, 2023. Jamie was hired in September 2003 as a Utility Clerk at South Shore Operations, transferred to PPM Administrative Assistant in March 2004, and was then promoted to Computerized Maintenance Management System (CMMS) Coordinator in March of 2005, and lastly reclassified to a CMMS Analyst in July of 2008.

Jamie graduated in May 2009 with a bachelor’s degree in business administration from Old Dominion University. Jamie has experience in system integration and administration, database management, and data analysis.

Jamie has been instrumental in implementing HRSD’s CMMS in 2007 and its evolution and enhancement since then. She serves on the User Advisory Board for Hexagon Enterprise Asset Management and actively presents in webinars and conferences.



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Jamie has served in many HRSD volunteer roles such as the Quality Facilitators, SharePoint Governance, Operations Challenge judge, and numerous Clean the Bay Day and other industry outreach events. She has also been involved with several community and non-profit organizations. Jamie has also been recognized by Red Cross and received the Power Pint Award in 2010/2011.

**b. Other Awards**

- (1) Mr. Ryan Radspinner, Business Process Engineer in the Finance Department, was recently inducted into the VWEA 5-S (Select Society of Sanitary Sludge Shovelers). As an honorary society, individuals are nominated and selected by society members based on the contributions of the individual. The criterion for selection is a significant and repeated effort toward making VWEA a better association through activities such as presenting papers at meetings, serving as an instructor at various workshops, serving as an officer or as the chair of a productive committee, and other significant contributions to VWEA.

Ryan was hired in 2009 as a Hydraulic Analysis Manager in the Planning and Analysis Division and was then promoted to Business Process Engineer in the Capital Finance Division. In Ryan's current position, he is responsible for developing long-term financial analyses of engineered alternatives that support the region's wastewater needs. He also led the internal business case evaluation team that ensures new ideas from across the organization are evaluated consistently. Ryan holds bachelor's and master's degrees in Civil Engineering from Virginia Tech and an MBA from William & Mary. He is a licensed Professional Engineer and is an active participant in the Virginia Water Environment Association.

- (2) Mr. David Ewing, Atlantic Treatment Plant Superintendent, was recognized by VWEA with the William D. Hatfield Award. The Hatfield Award is presented to operators of wastewater treatment plants for outstanding performance and professionalism. The award was established in honor of **Dr. William D. Hatfield**, Superintendent of the Decatur, Illinois Sanitary District, who was President of the Central States Sewage Works Association in 1944 -1945 and served as President of the Federation in 1958-1959.

David was hired on May 30, 1995 as a summer intern at the Atlantic Treatment Plant and was then promoted to Plant Operator Assistant in February of 1996, Plant Operator in 1997, Lead Operator at Chesapeake-Elizabeth Treatment Plant in 2009 and Superintendent at the Atlantic Treatment Plant in 2016. David oversees the daily operation of the Atlantic Treatment Plant. He holds a Class 1 Virginia Wastewater license and is an active participant in the Virginia Water Environment Association (VWEA) and the Water Environment Federation (WEF).



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- (3) Mr. Shawn Heselton, Chief of South Shore Interceptor Operations was honored with the Water Environment Federation (WEF) **Arthur Sidney Bedell** award. The award is named for WEF's second president for his long devotion and service. This award was established to acknowledge extraordinary personal service to a Member Association. General criteria include organizational leadership, administrative service, membership activity, stimulation of technical functions, or similar participation.

Shawn Heselton was hired on June 1, 2005, as a Project Manager in the Engineering Department/Design and Construction, South Shore division and was then promoted to Chief of Interceptor Operations, South Shore in the Operations Department/Interceptor Operations, South Shore division. In Shawn's current position, he leads staff that operate and maintain the interceptor system of South Hampton Roads. Shawn holds a bachelor's degree in civil engineering from Old Dominion University; a master's degree in business administration from the College of William and Mary; and is a licensed Professional Engineer. Shawn is an active participant in the Virginia Water Environment Association (VWEA), the Water Environment Federation (WEF), and the Roc Solid Foundation.

- (4) Water Resources Utility of the Future Today - HRSD was honored by the Water Environment Federation as a Water Resources Utility of the Future Today award winner. This award recognized HRSD for exceptional performance and innovative and forward-thinking practices that are providing sustainable, efficient and value-added services to our region. This is the third time HRSD has been honored since the inception of the program.

- (5) Virginia Municipal League Innovation Award – Forty-seven years ago, the Virginia Municipal League launched the "Achievement Awards" to recognize outstanding work being done by local governments across Virginia. The program went on to become Virginia's highest honor in local government creativity. In 2017, the name was changed to "Innovation Awards." York County and HRSD won in the Environmental Quality category for the first full-scale deammonification plant in world and our patented Partial Denitrification Anammox (PdNA) process at our York River Treatment Plant. Here's what the judges had to say: *"Even someone without a background in wastewater management would be able to tell that this has innovative, significant benefits for the county's residents."*





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2. **Public Comments Not Related to Agenda – None**



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3. **Consent Agenda**

**Action:** Approve the items listed in the Consent Agenda.

**Moved:** Frederick Elofson **Ayes:** 8  
**Seconded:** Michael Glenn **Nays:** 0

**Brief:**

- a. Approval of minutes from previous meeting.
- b. Contract Awards (>\$200,000)
  - 1. [Interceptor System Valve Improvements Phase I](#)

Contract Award	\$3,780,000
Task Order	\$622,402
Regulatory Required CIP Additional Appropriation	\$1,709,583
  - 2. [Retirement Plan Consulting Services](#) \$225,000
  - 3. [Waste Collection, Hauling and Disposal Services](#) \$5,784,090
- c. Regulatory Capital Improvement Project – Initial or Additional Appropriation <\$10,000,000
  - 1. [Lucas Creek Pump Station Replacement](#) \$737,928
  - 2. [Treatment Plant Fire Suppression System Upgrades](#) \$1,800,000

**Item(s) Removed for Discussion:** None

**Public Comment:** None



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4. **Fiscal Year 2023 Annual Comprehensive Financial Report (ACFR)**

**Action: Accept the Finance Committee's Report on the ACFR.**

**Brief:** Political subdivisions of the Commonwealth of Virginia are required to publish a complete set of audited financial statements. HRSD is also required by its Trust Agreement to prepare and distribute its financial statements within 150 days following the close of the fiscal year.

The Department of Finance is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States. The financial statements were audited by Cherry Bekaert LLP who will deliver their opinion on them on October 24. Staff expects the auditors to provide an unmodified (clean) opinion on that date.

The Government Finance Officers Association of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to HRSD for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2022. This was the 40<sup>th</sup> consecutive year that HRSD received this prestigious award and reflects the commitment and dedication of the Accounting Division in the Department of Finance.

The Finance Committee, along with Commission Chair and Commissioner Templeman met with staff to review the [draft report](#) on October 12, 2023. The Finance Committee provided their comments to the full Commission. Staff provided a brief overview the [financial statements](#).

**Public Comment:** None



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5. **Customer Engagement Portal Solution Implementation and Support  
Contract Award (>\$200,000)**

**Action:** Award a contract to Meridian Integration, LLC in the amount of \$241,913 for one year with four renewal options and an estimated cumulative value of \$1,018,169.

**Moved:** Ann Templeman **Ayes:** 8  
**Seconded:** Elizabeth Taraski **Nays:** 0

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Negotiation

A Public Notice was issued on July 20, 2023. Seven firms submitted proposals on August 15, 2023, and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the Professional Services Selection Committee (Committee) and to the requirements in the Request for Proposals. Four firms were short-listed, interviewed, and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
Meridian Integration, LLC	94	1
Red Clay Consulting, Inc.	78	2
Vertex U.S. Holdings, Inc. DBA Vertexone Software, LLC	64	3
ETECH-360 Inc. DBA 360S2G	56	4

The Committee recommends award to Meridian Integration, LLC, whose professional qualifications and proposed services best serve the interest of HRSD. Meridian is offering a robust, straightforward web based and mobile application solution to support all HRSD jurisdictions with custom branding to enrich customer experience.

**HRSD Estimate:** \$250,000

**Contract Description:** This contract is for software, implementation and annual support services of a customer engagement portal solution for the Customer Care Center. The portal will interface with multiple HRSD peripheral programs such as Customer Care and Billing system, InvoiceCloud and Fiserv. The portal will be a significant customer service enhancement by providing a modern, seamless and comprehensive end user experience for all HRSD customers.



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**Analysis of Cost:** The cost was determined to be fair and reasonable based on proposals received and direct negotiations with the final two ranked Offerors. The annual maintenance and support from Meridian is fixed for the entire five-year contract term. Additional annual recurring costs include charges for SMS and Live Chat features within the solution.

Total Cost-plus Implementation = \$241,913  
Annual Recurring Costs (minus implementation) = \$203,633  
Five Year Total Annual Costs (minus implementation) = \$1,018,169

This work is in accordance with the Commission Adopted Procurement Policy.

Staff provided a [briefing](#) during the meeting.

**Public Comment:** None



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6. **Dental, Vision, Supplemental Health Coverage and COBRA and Flexible Spending Account Services Contract Award (>\$200,000)**

**Action:** Award a contract to Metropolitan Life Insurance Company in the amount of \$242,083 for one year with nine renewal options and an estimated cumulative value of \$2,420,830.

**Moved:** Michael Glenn **Ayes:** 8  
**Seconded:** Willie Levenston **Nays:** 0

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Negotiation

A Public Notice was issued on May 1, 2023. Fourteen firms submitted proposals on June 16, 2023, and eight firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the Selection Committee (Committee) and to the requirements in the Request for Proposals. Firms were short-listed, interviewed, and technically ranked as listed below:

Dental Coverage Proposers	Technical Points*	Recommended Selection Ranking
Metropolitan Life Insurance Company	78	1
Anthem Health Plans of Va Inc dba Anthem Blue Cross and Blue Sheild	72	2
Cigna Health and Life Insurance Company	69	3
Delta Dental of Virginia	67	4
United Concordia Companies, Inc	67	4

\*85 total available points

Vision Coverage Proposers	Technical Points*	Recommended Selection Ranking
Metropolitan Life Insurance Company	75	1
Anthem Health Plans of Va Inc dba Anthem Blue Cross and Blue Shield	70	2
Cigna Health and Life Insurance Company	63	3
United Concordia Companies, Inc	54	4

\*85 total available points



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<b>Supplemental Health Coverage Proposers</b>	<b>Technical Points*</b>	<b>Recommended Selection Ranking</b>
Metropolitan Life Insurance Company	54	1
Cigna Health and Life Insurance Company	41	2
Standard Insurance Company	39	3
Anthem Health Plans of Va Inc dba Anthem Blue Cross and Blue Shield	37	4

\*65 total available points

<b>COBRA &amp; Flexible Spending Account Proposers</b>	<b>Technical Points*</b>	<b>Recommended Selection Ranking</b>
Metropolitan Life Insurance Company	55	1
Webster Bank, N.A. dba HSA Bank	47	2

\*65 total available points

The Committee recommends award to Metropolitan Life Insurance Company, whose professional qualifications and proposed services best serve the interest of HRSD.

**Contract Description:** This contract is for multiple lines of insurance coverage including, self-insured dental, fully insured vision, hospital indemnity, critical illness and accidental health as well as COBRA and flexible spending account services offered as a benefit for HRSD employees and their dependents.

**Analysis of Cost:** The cost is determined to be fair and reasonable based on, competitive pricing, benefit consultant analysis and previous contract pricing. Costs are estimated based on a per employee per month premium.

This work is in accordance with the Commission Adopted Procurement Policy.

Staff provided a [briefing](#) during the meeting.

**Public Comment:** None



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7. **Medical and Pharmaceutical Coverage and Health Savings Account Services  
Contract Award (>\$200,000)**

**Action:** Award a contract to Sentara Health Plans Inc. in the amount of \$537,000 for one year with nine renewal options and an estimated cumulative value of \$5,370,000.

**Moved:** Willie Levenston **Ayes:** 8  
**Seconded:** Frederick Elofson **Nays:** 0

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Negotiation

A Public Notice was issued on May 1, 2023. Fourteen firms submitted proposals on June 16, 2023, and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the Selection Committee (Committee) and to the requirements in the Request for Proposals. Three firms were short-listed, interviewed, and technically ranked as listed below:

Proposers	Technical Points*	Recommended Selection Ranking
Sentara Health Plans Inc	154	1
Cigna Health and Life Insurance Company	146	2
Anthem Health Plans of Va Inc dba Anthem Blue Cross and Blue Shield	123	3

\*165 total available points

The Committee recommends award to Sentara Health Plans, Inc., whose professional qualifications and proposed services best serve the interest of HRSD.

**Contract Description:** This contract is for self-insured medical, pharmaceutical insurance coverage with health savings account services offered as a benefit for HRSD employees and their dependents.

**Analysis of Cost:** The cost is determined to be fair and reasonable based on, competitive pricing, benefit consultant analysis and previous contract pricing. Costs are estimated based on a per employee per month premium.

This work is in accordance with the Commission Adopted Procurement Policy.

Staff provided a [briefing](#) during the meeting.

**Public Comment:** None



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8. **Diversity Procurement Report**

**Action:** No action required.

**Brief:** The goal of HRSD’s Diversity Procurement Policy is to promote business opportunities for small businesses and businesses owned by women, minorities and service-disabled veterans (SWaM). The objectives of the policy are to identify goods and services provided by SWaM businesses; increase competition through a diverse source of contractors and suppliers; and maintain and strengthen the overall competitiveness of HRSD procurements.

A few of the higher value contracts for commodities and services awarded to SWaM businesses this past fiscal year included engineering and construction services, electrical services, coating services, and technology services.

Capital Improvement SWaM subcontractor spend increased by \$37.5 million, from \$7 million in FY-2022 to \$44.5 million in FY-2023. The increase is largely due to the James River Treatment SWIFT project.

Although SWaM spending is up for FY-2023 when compared to FY-2022, total operating spend is down due to increased chemical costs and contracts awarded to non-SWaM suppliers, such as fuel, and a few suppliers that did not renew their SWaM status.

The following is a comparison of fiscal years 2021 to 2023 on total spend for Operating Contracts; Corporate VISA Card Transactions; and Capital Improvement Program (CIP) Agreements and Contracts compared to total spend with SWaM businesses:

Three Year Comparison of Spend Activity with SWaM Contractors and Suppliers			
Payment Type	Percentage SWaM Spend of Total Spend		
	FY-2021	FY-2022	FY-2023
Operating	18%	23%	18%
Corporate VISA Card	6%	6%	4%
Capital Improvement Program	40%	35%	36%
<i>Total</i>	35%	30%	32%

A [summary](#) of activities and [transaction charts](#) for the period of July 1, 2022 through June 30, 2023 are attached.

**Public Comment:** None



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9. **High Priority Inflow and Infiltration Reduction Program  
Alternative Project Delivery**

**Action:** Approve the PPEA project delivery method for multiple inflow and infiltration reduction projects.

**Moved:** Ann Templeman **Ayes:** 8  
**Seconded:** Elizabeth Taraski **Nays:** 0

**CIP Projects:** AT014301, AT014302, JR013700, NP013901, NP013902, VP019300, WB013200

**Regulatory Requirement:** Integrated Plan - HPP1 (2030 Completion)

**Brief:** HRSD's Integrated Plan includes two Rounds of High Priority Projects. These projects include a combination of capacity improvements (i.e., pump stations, tanks, and pipelines) and inflow and infiltration reduction, which collectively will eliminate 69 percent of the baseline modeled sanitary sewer overflow volume. HRSD has recently proposed to the U.S. EPA that all inflow and infiltration reduction work occur during the first round of High Priority work to ensure that the remaining capacity improvements are properly selected and sized during the second round of work. This first round of projects must be completed by 2030 and is anticipated to reduce overflow volumes by 47 percent. The second round of projects must be completed by 2040 and is anticipated to eliminate an additional 22 percent of the overflow volume.

HRSD's Consent Decree also includes an adaptive management check-in point, currently scheduled for the first quarter of 2030. At this time, HRSD may propose alternate projects or scenarios that will satisfy the requirement to attain at least a 69 percent reduction in the baseline modeled sanitary sewer overflow volume. To be prepared for this adaptive management conversation in 2030, however, HRSD must have completed, or have made significant progress with, the inflow and infiltration program to confidently determine the correct alternate projects or scenarios necessary to satisfy the 69 percent overflow volume reduction requirements.

The inflow and infiltration program consists of nine separate CIP projects (two of which are already under contract). The remaining seven projects are located in four different localities and will rehabilitate and replace approximately \$130 million in locality-owned sanitary sewers.

Inflow and infiltration projects tend to require extensive field investigation due to the unknown location and severity of defects that allow the extraneous stormwater and groundwater into the sanitary sewer system. They also tend to be long-duration and iterative in nature, as predicting the success of any rehabilitation activities is not possible due to the rather "fluid" nature of surface and groundwater in that they can migrate within a basin to find unfixed defects. Thus, these projects also typically involve multiple cycles of investigation, rehabilitation, and verification.

Given the relatively short period over which this \$130 million in inflow and infiltration work must be completed and the iterative nature of these projects, staff believes that combining the



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remaining projects into a single alternative delivery contract is the best path forward. However, the inability to properly define the scope of the work ahead of releasing the request for qualifications makes traditional design-build unrealistic. Therefore, utilizing the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) gives us the flexibility to hire a firm (or firms) qualified in this type of work, and allows us to collaboratively develop the scope of work through multiple task orders. In addition, since the type, location, and amount of construction activities cannot be predicted at this time, the alternative delivery team should be led by an engineering firm that can directly contract with construction firms, as necessary, to complete these projects. In this way, the single engineering firm will also have more complete control over the relatively limited pool of contractors that are equipped to do the type of rehabilitation activities likely to be heavily utilized on these projects.

Staff provided a [briefing](#) during the meeting.

<b><u>Schedule:</u></b>	Begin RFQ/RFP process	January 2024
	Selection of firm	July 2024
	Design	September 2024
	Construction	January 2025
	Project Completion	December 2028

**Discussion Summary:** Staff described a study completed on three concurrent projects using three types of delivery methods. A flexible approach using design-build allows for changed field conditions or information to be added during the design process to achieve the desired outcome. Staff also described incentive clauses and how those may be used for this contract. Challenges for this project will be obtaining flow meter data to measure success of project.

**Public Comment:** None



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10. **Capital Improvement Program (CIP)  
Quarterly Update**

**Action:** No action required.

**Brief:** Implementing the CIP continues to be a significant challenge as we address numerous regulatory requirements, SWIFT Program implementation and the need to replace aging infrastructure.

**Discussion Summary:** Staff provided a [briefing](#) describing the status of the CIP, financial projections, Consent Decree/Sewer Rehabilitation Plan project updates, projects of significance, and other issues affecting the program. An update on the Asset Management Program included staffing, dashboard examples, interceptor condition assessments, Consent Decree program assessments, force main failures, treatment plant condition assessments, prompt repair program, maintenance costs, and CIP support. The Program is 80% preventive maintenance versus 20% reactionary maintenance for failures.

**Public Comment:** None



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11. **New Business – None**

12. **Unfinished Business – None**

13. **Commissioner Comments**

Chair Rodriguez commented on the WEFTEC Conference, and the recognition received from peers throughout the nation and internationally. He continues to be very proud to be a part of this organization, what we do at HRSD, the innovative and cost-effective way HRSD operates, and the employees who make it all happen.

14. **Informational Items**

**Action:** No action required.

**Brief:** The items listed below were presented for information.

- a. [Management Reports](#)
- b. [Strategic Measures Summary](#)
- c. Emergency Declarations
  - (1) [Atlantic Treatment Plant Thermal Hydrolysis Process System Repairs](#)
  - (2) [Nansemond Treatment Plant Emergency Generator Repairs](#)

**Public Comment:** None



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15. **Closed Meeting**

**Action:** Approve a motion to go into closed meeting for briefing and consultation to consider acquisition of real property for a public purpose of publicly held real property located in the City of Suffolk as provided for in Code of Virginia §2.2-3711A3.

**Moved:** Michael Glenn **Ayes:** 8  
**Seconded:** Willie Levenston **Nays:** 0

**Exemption Description:** Discussion or consideration of the acquisition of real property for a public purpose, or of the disposition of publicly held real property, where discussion in an open meeting would adversely affect the bargaining position or negotiating strategy of the public body.

16. **Reconvened Meeting**

**Certification of Proceedings:** Pursuant to Section 2.2-3712.D of the Code of Virginia, a roll call vote was conducted to certify that to the best of each Commission member's knowledge: (i) only public business matters lawfully exempted from open meeting requirements under this chapter, and (ii) only such public business matters as were identified in the motion by which the closed meeting was convened were heard, discussed or considered. Any Commissioner who believes there was a departure from these two requirements shall so state prior to the vote, indicating the substance of the departure.

**Roll Call Vote:** **Ayes:** 8  
**Nays:** 0



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17. **Boat Harbor Transmission Force Main Land Acquisition Agreement**

**Action:** Approve the terms and conditions of the Agreement with Tidewater Community College Real Estate Foundation, Inc. and associated costs in the amount of \$837,000 in accordance with the terms and conditions of the negotiated agreement and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

**Moved:** Willie Levenston **Ayes:** 8  
**Seconded:** Frederick Elofson **Nays:** 0

**CIP Project:** GN016346

**Regulatory Requirement:** Integrated Plan – SWIFT

Budget	\$3,000,000
Previous Expenditures and Encumbrances	(\$1,026,025)
Available Balance	\$1,973,975

**Project Description:** This project consists of the land acquisition to support the Boat Harbor Treatment Plant Transmission Force Main Section 2 (Land) project BH015720. This easement is needed for the force main in BH015720 which will connect the subaqueous force main Section 1 (separate project under BH015710) to the Nansemond Treatment Plant. This project also includes the land acquisition for the piping to and from the managed aquifer recharge wells in BH015720 including the SWIFT Water and backflush piping from the future Nansemond SWIFT Facility to each of the proposed well sites.

Additional agreements will be needed for easements at the remaining sites located at other properties for which the negotiations are currently underway.

**Project Justification:** This project will allow HRSD to reduce the amount of nutrients contributed to the James River basin. Construction efforts are currently underway at the Boat Harbor Treatment Plant and for the James River pipeline crossing efforts. This acquisition is needed to allow connection and conveyance from the north shore (Boat Harbor Treatment Plant flows) under the James River and to the south shore and subsequent treatment efforts at the Nansemond Treatment Plant.

**Agreement Description:** The Agreement between HRSD and Tidewater Community College Real Estate Foundation, Inc. are the combined efforts to bring to resolution, by a negotiated agreement, the acquisition of easements for the above-mentioned project. The Agreement was reviewed by HRSD staff and general legal counsel.

**Public Comment:** None



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**Next Commission Meeting Date: November 28, 2023** at the HRSD South Shore Operations Complex, 1434 Air Rail Avenue, Virginia Beach, VA 23455

**Meeting Adjourned:** 11:38 am

SUBMITTED:

APPROVED:

\_\_\_\_\_  
Jennifer L. Cascio  
Commission Secretary

\_\_\_\_\_  
Stephen C. Rodriguez  
Commission Chair

HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #1

3. Consent Agenda

## CONSENT AGENDA ITEM 3.b.1. – October 24, 2023

**Subject:** Interceptor System Valve Improvements Phase I  
Contract Award (>\$200,000), Task Order (>\$200,000), and Regulatory Required Capital Improvement Project Additional Appropriation (<\$10,000,000)

**Recommended Actions:**

- a. Award a contract to Bridgeman Civil, Inc. in the amount of \$3,780,000.
- b. Approve a task order with RK&K, LLP in the amount of \$622,402.
- c. Appropriate additional funding in the amount of \$1,709,583.

**CIP Project: GN015300****Regulatory Requirement:** Rehab Action Plan Phase 2 (2025 Completion)

Budget	\$3,259,305
Previous Expenditures and Encumbrances	(\$377,486)
Available Balance	\$2,881,819
Proposed Contract to Contractor	(\$3,780,000)
Proposed Task Order to Engineer	(\$622,402)
Proposed Contingency	(\$189,000)
Project Shortage/Requested Additional Funding	(\$1,709,583)
Revised Total Project Authorized Funding	\$4,968,888

<b>Contract Status with Task Orders:</b>	<b>Amount</b>
Original Contract with Engineer	\$70,643
Total Value of Previous Task Orders	\$306,842
Requested Task Order	\$622,402
Total Value of All Task Orders	\$929,244
Revised Contract Value	\$999,887
Engineering Services as % of Construction	26.5%

**Type of Procurement:** Competitive Bid

In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised on August 24, 2023, and two bids were received on September 28, 2023, as listed below:

<b>Bidder</b>	<b>Bid Amount</b>
Bridgeman Civil, Inc.	\$3,780,000
Tidewater Utility Construction, Inc.	\$7,212,240

**HRSD/Engineer Estimate:** \$2,610,736

The design engineer, RK&K LLP, evaluated the bids based upon the requirements in the invitation for bid and recommends award to the lowest responsive and responsible bidder Bridgeman Civil, Inc. in the amount of \$3,780,000.

**Project Description:** This project will address multiple valves assessed to be at material risk of failure during the Condition Assessment Program. This project includes valves in James City County, York County, Newport News and Hayes.

The attached [map](#) depicts the project location.

**Project Justification:** This project is necessary due to condition assessment activities and/or preventative maintenance reviews suggesting that these assets are either at material risk of failure, in need of replacement or in need of repair.

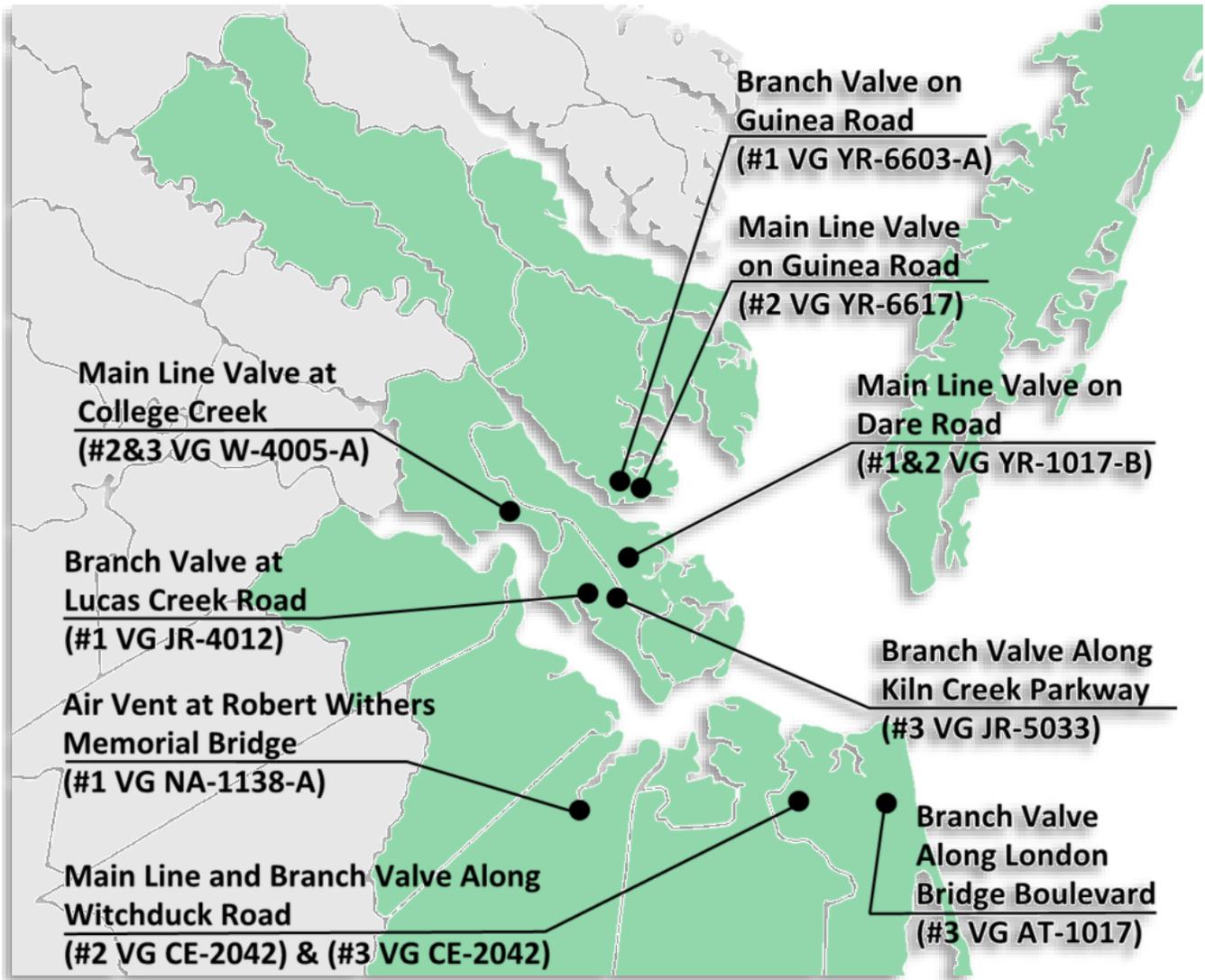
**Contract Description and Analysis of Cost:** This contract is for an agreement for the replacement of multiple valves in the HRSD force main in several localities. The contract will include lump sum and unit price items.

**Task Order Description and Analysis of Cost:** This task order will provide the required construction administration and inspection services. A fee of \$620,652 was negotiated with RK&K, LLP, and is approximately 15% of the construction cost. The fee proposal is comparable to other projects of similar size and complexity.

**Funding Description:** The original CIP project estimate did not foresee the current market conditions as they relate to inflation, labor shortages and long lead times for materials. Additionally, the Engineer's Estimate, though a review of the published cost indices and current heavy utility construction market conditions in Southeastern Virginia was completed in preparing the final estimate, did not adequately account for the saturated construction market conditions and a limited pool of qualified contractors. Further, though the estimate was based on plan material quantities, estimated labor requirements, supplier and vendor costs, average unit prices bid on recent similar projects and published cost data, the greatest deviation between the low bid and the Engineer's Estimate is attributed to the two largest valve sites. This deviation accounts for approximately 59% of the difference between the apparent low bid and the Engineer's Estimate and is believed to be attributable to the large diameter line stop isolation and bypass systems that are required for this effort. This request includes a 5% contingency to accommodate any unforeseen conditions. Additional appropriation is being requested for construction contract award and construction administration and inspection services. The amount for this work exceeds the balance available by \$1,707,833.

<b><u>Schedule:</u></b>	Construction	December 2023
	Project Completion	March 2025

Interceptor System Valve Improvements Phase I- Location Map



## CONSENT AGENDA ITEM 3.b.2. – October 24, 2023

**Subject:** Retirement Plan Consulting Services  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to AndCo Consulting LLC in the amount of \$45,000 for one year with four renewal options and an estimated cumulative value of \$225,000.

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Negotiation

A Public Notice was issued on July 26, 2023. Four firms submitted proposals on August 18, 2023, and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the selection committee and to the requirements in the Request for Proposals. Two firms were short-listed, interviewed, and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
AndCo Consulting LLC	91	1
Gallagher Benefit Services Inc	89	2

The Committee recommends an award to AndCo Consulting LLC, whose professional qualifications and proposed services best serve the interest of HRSD.

**Contract Description:** This contract is for the purpose of providing consulting services for both the Retiree Health Plan (RHP) and the 457(b) deferred compensation and Roth 457 (b) savings plans (Voluntary Savings Plans). Initially, the consultant will help formalize an internal governance structure over the plans, provide ongoing fiduciary based education for the governance team, re-negotiate fees with the existing record keeper for the Voluntary Savings Plans, assist in a request for proposal process and selection of a record keeper, facilitate quarterly meetings and perform an asset liability study for the RHP.

**Analysis of Cost:** The cost was determined to be fair and reasonable based on proposals received and previous contract pricing.

This work is in accordance with the Commission Adopted Procurement Policy.

## CONSENT AGENDA ITEM 3.b.3. – October 24, 2023

**Subject:** Waste Collection, Hauling and Disposal Services  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Waste Management of Virginia, Inc. in the amount of \$1,156,818 for one year with four renewal options and an estimated cumulative value of \$5,784,090.

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Bid

In accordance with HRSD's competitive sealed bidding procedures, the Procurement Department advertised and solicited bids directly from potential bidders. The project was advertised on September 11, 2023, and one bid was received on October 11, 2023, as listed below:

<b>Bidder</b>	<b>Bid Amount</b>
Waste Management of Virginia, Inc.	\$1,156,818

**HRSD Estimate:** \$1,077,292

**Contract Description:** This contract is for waste collection, hauling, disposal, and recycling services for all HRSD facilities. This contract also includes complete residual disposal services (container rental service, front-end service, and roll off container service) and the disposal of ash from Army Base Treatment Plant, Boat Harbor Treatment Plant, Virginia Initiative Plant, and Williamsburg Treatment Plant to Bethell Landfill.

**Analysis of Cost:** This is an estimated use contract. The HRSD Estimate is based on current estimated annual usage. Costs are determined to be fair and reasonable based on past purchase history of similar services.

This work is in accordance with the Commission Adopted Procurement Policy.

## CONSENT AGENDA ITEM 3.c.1. – October 24, 2023

**Subject:** Lucas Creek Pump Station Replacement  
Regulatory Required Capital Improvement Project Additional Appropriation (<\$10,000,000)

**Recommended Action:** Appropriate additional funding in the amount of \$737,928.

**CIP Project:** JR013500

**Regulatory Requirement:** Rehab Action Plan Phase 2 (2025 Completion)

Budget	\$22,324,564
Previous Expenditures and Encumbrances	(\$22,014,562)
Available Balance	\$310,002
Proposed Change Order No. 4 to Contractor	(\$747,930)
Proposed Contingency	(\$300,000)
Project Shortage/Requested Additional Funding	(\$737,928)
Revised Total Project Authorized Funding	\$23,062,492

Contract Status with Change Orders:	Amount	Cumulative % of Contract
Original Contract with Contractor	\$19,285,068	
Total Value of Previous Change Orders	\$445,588	2.3%
Requested Change Order	\$747,930	
Total Value of All Change Orders	\$1,193,518	6.2%
Revised Contract Value	\$20,478,586	
Time (Additional Calendar Days)		164 to Substantial Completion

**Project Description:** This project includes the replacement of the existing Lucas Creek Pump Station to include all yard piping and an addition of two flow meters and vaults. After evaluating several alternatives and taking into consideration cost projections, it was determined that replacement of the pump station was the optimal solution to address conditional and operational issues.

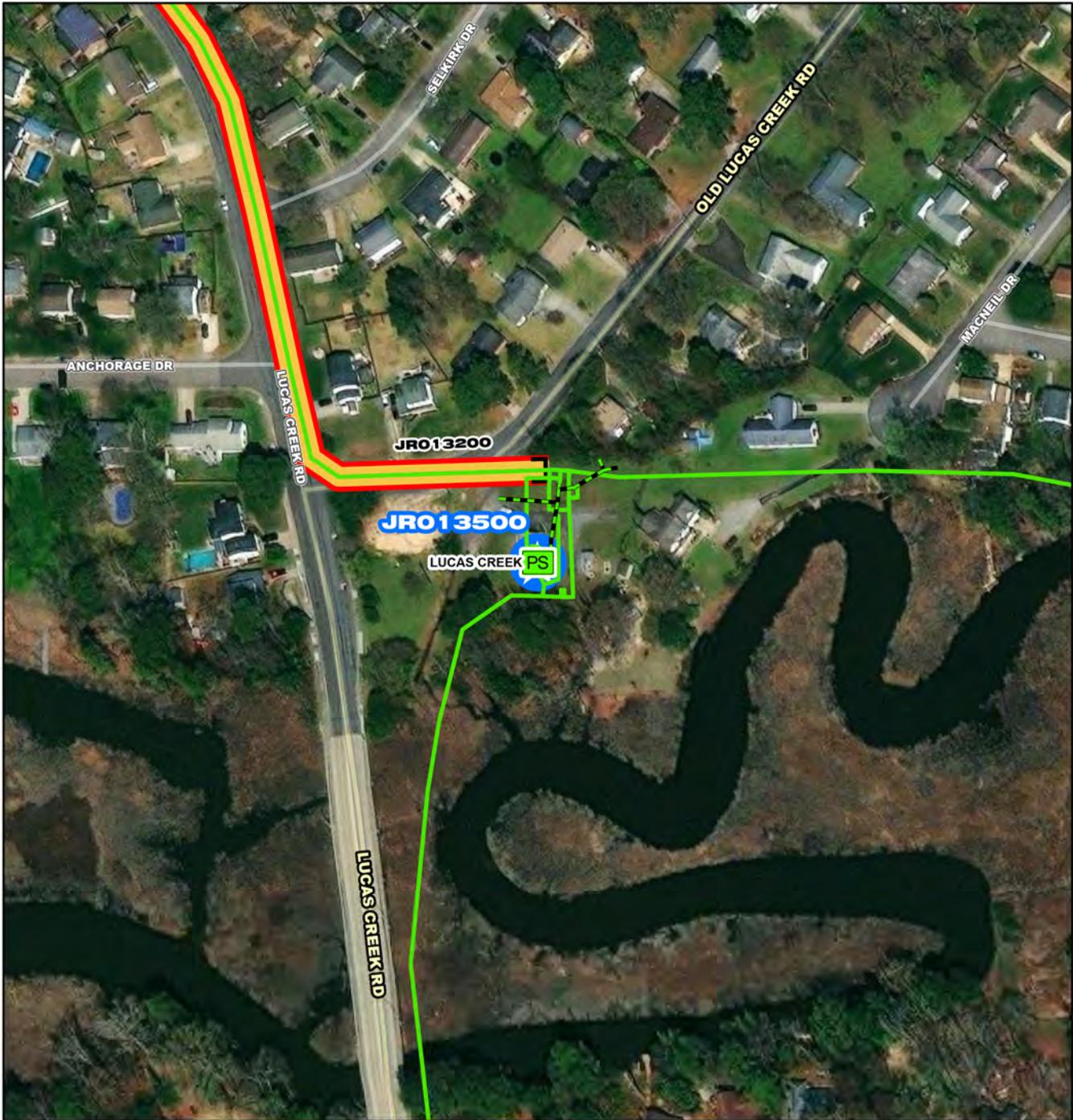
The attached [map](#) depicts the project location.

**Project Justification:** This project is required in order to provide expanded operational flexibility in the North Shore system. The new Kiln Creek Interceptor Force Main (IFM) and Route 171 IFM, in conjunction with upgrades to Lucas Creek, will reduce system pressures during wet weather events.

**Analysis of Cost:** The cost for this change order is based on actual, known changes to the construction contract scope and price. Changes included in the current proposed change order include extended overhead and a time extension for utility relocation delays necessary to begin pump station construction. The cost is based on Engineer's opinions of probable cost as well as negotiated change order proposals.

**Funding Description:** This request includes a 1.6% contingency based on the original contract price with the Contractor. The amount for this work exceeds the available project balance by \$737,928.

**Schedule:** Project Completion May 2025



**JRO 13500**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- CIP Interceptor Point
- CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

Feet

0    55    110    220    330    440

## JRO 13500

### Lucas Creek Pump Station Replacement

**CIP Location**

CONSENT AGENDA ITEM 3.c.2. – October 24, 2023

**Subject:** Treatment Plant Fire Suppression System Upgrades  
Regulatory Required Capital Improvement Project Initial Appropriation (<\$10,000,000)

**Recommended Action:** Appropriate total project funding in the amount of \$1,800,000.

**CIP Project:** GN020200

**Regulatory Requirement:** None

**Project Description:** This new project will address plant methanol facilities with replacement of per- and polyfluoroalkyl substances (PFAS) containing Alcohol Resistant Aqueous Film-Forming Foam (AR-AFFF). This project will work to replace the existing methanol fire suppression systems at Army Base Treatment Plant, Nansemond Treatment Plant, Virginia Initiative Plant, and York River Treatment Plant with non-PFAS fluorine free foam. Facilities Maintenance staff will manage this while Procurement advertises for competitive bid for the services.

**Project Justification:** The current methanol fire suppression systems use PFAS containing AR-AFFF foam, this product is no longer supported. Some facilities have experienced false alarms and equipment malfunctions causing activation of the AR-AFFF systems. This item was brought to the HRSD QST Meeting on September 11, 2023, and agreed to be an out of cycle CIP.

**Schedule:** Construction November 2023  
Project Completion November 2024

HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #2

4. Fiscal Year 2023 Annual Comprehensive Financial Report (ACFR)



**HRSD**

Fiscal Year – 2023  
Annual Comprehensive Financial Report  
Commission Meeting

October 24, 2023



- Awarded 40 Consecutive Years
- Disclosures and requirements becoming more complex and burdensome
- Dedication of service from the entire Department of Finance, especially the Accounting Division

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## Summary of Auditor Comments

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- Unmodified (clean) opinion
- No disagreements with management
- No significant difficulties in performing audit

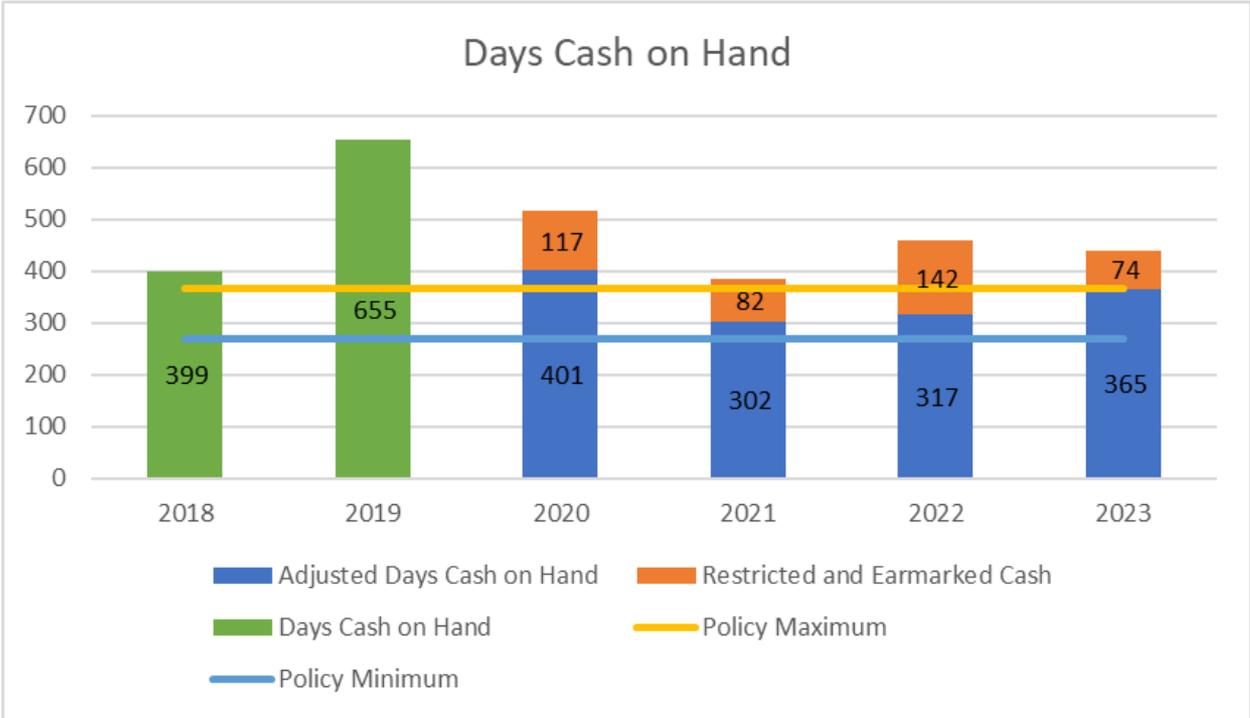
- Liquidity indicates financial flexibility to pay near-term obligations and margin of safety
- Adjusted Days Cash on Hand (ADCOH)
  - Excludes reserves and PAYGO for CIP
- How many days can you operate with available cash if no revenue is coming in?

$$\text{ADCOH} = \frac{\text{Unrestricted Cash and Investments}}{\text{Operating Expenses} \div 365 \text{ days}}$$

(EXCLUDES RESERVES AND PAYGO FOR CIP)

*HRSD POLICY - Min = 270 ADCOH, Max = 365 ADCOH*

# Adjusted Days Cash on Hand (DCOH)



AA Rated Medians	
S&P	Fitch
584	621

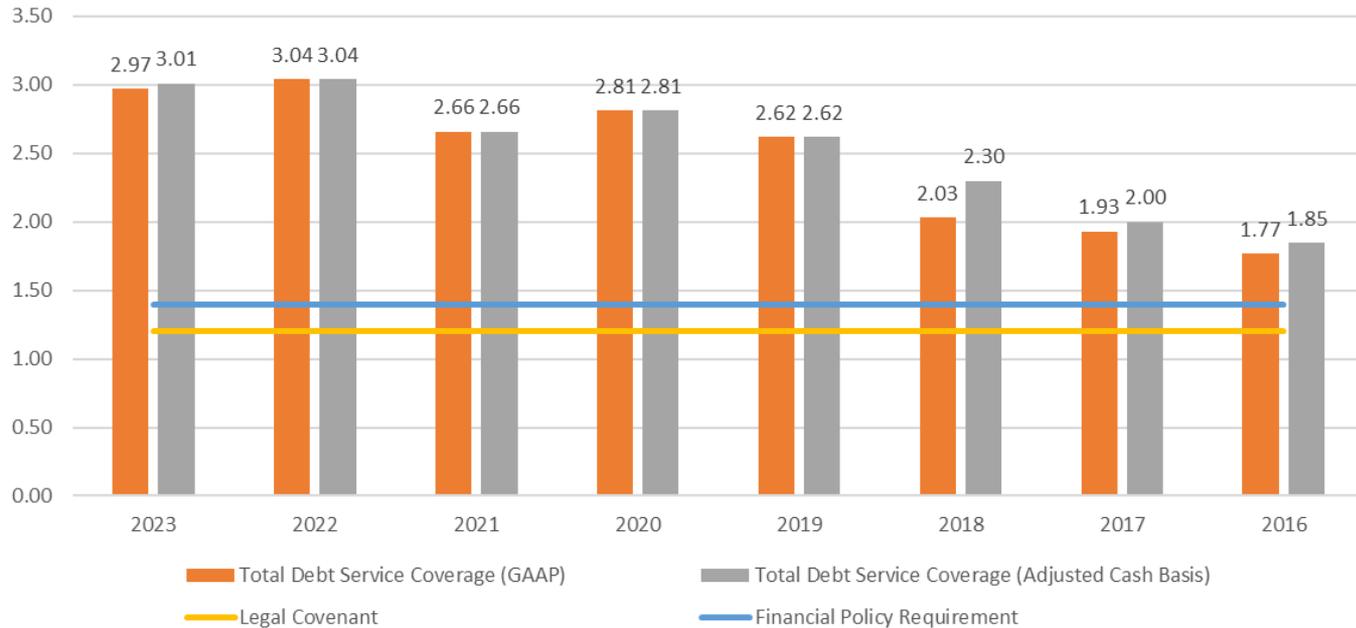
HRSD Ratings	Senior	Subordinate
Moody's	Aa1	Aa1
S&P	AA+	AA+
Fitch	AA+	AA

$$\text{Debt Service Coverage Ratio} = \frac{\text{REVENUES} - \text{EXPENSES}}{\text{Principal} + \text{Interest}}$$

- *How much income will you have to pay Debt Service (principal + interest)?*
- *Measure of sufficiency of revenues and rates to meet obligations*
- *Quantifies **RISK** - Likelihood bond investors get paid back?*

# Debt Service Coverage

Subordinate Trust Agreement

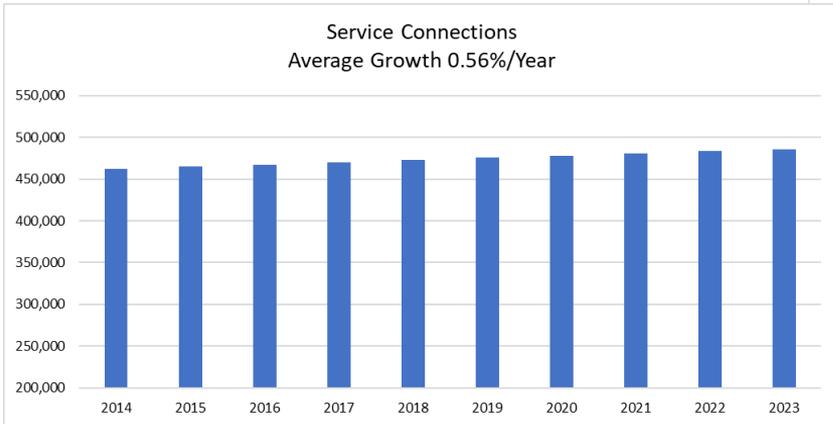
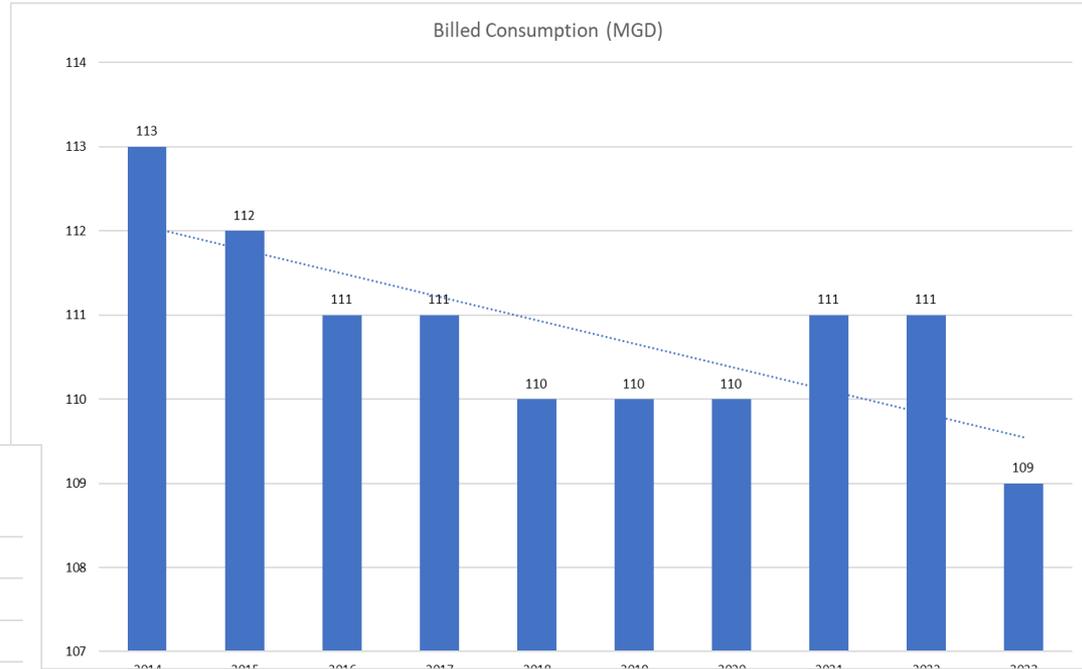


AA Rated Medians	
S&P	Fitch
2.3	2.4

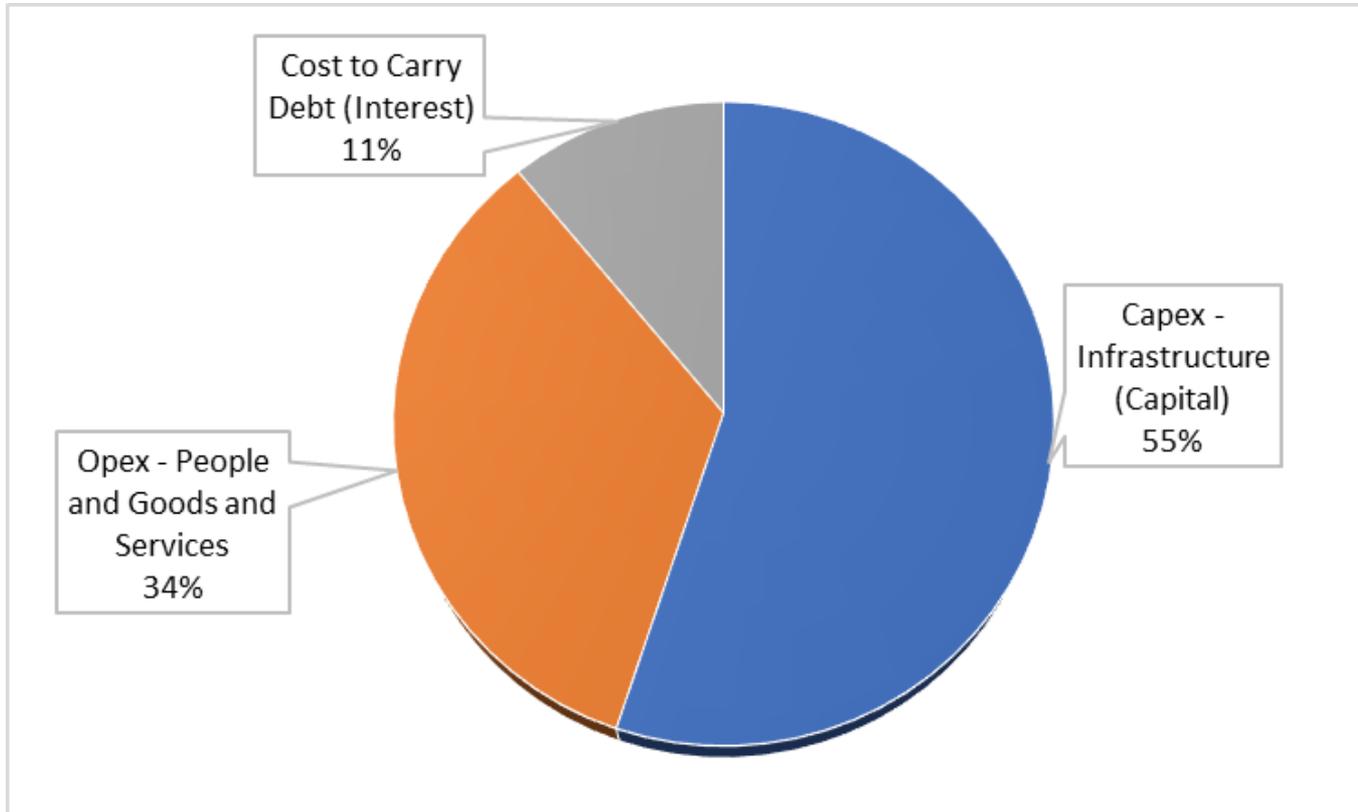
HRSD Ratings	Senior	Subordinate
Moody's	Aa1	Aa1
<b>S&amp;P</b>	<b>AA+</b>	<b>AA+</b>
Fitch	AA+	AA

# Wastewater Treatment Changes

- 95% of all revenues are Wastewater Treatment Charges



## Where do we spend our money?



## Cost Increases by Category

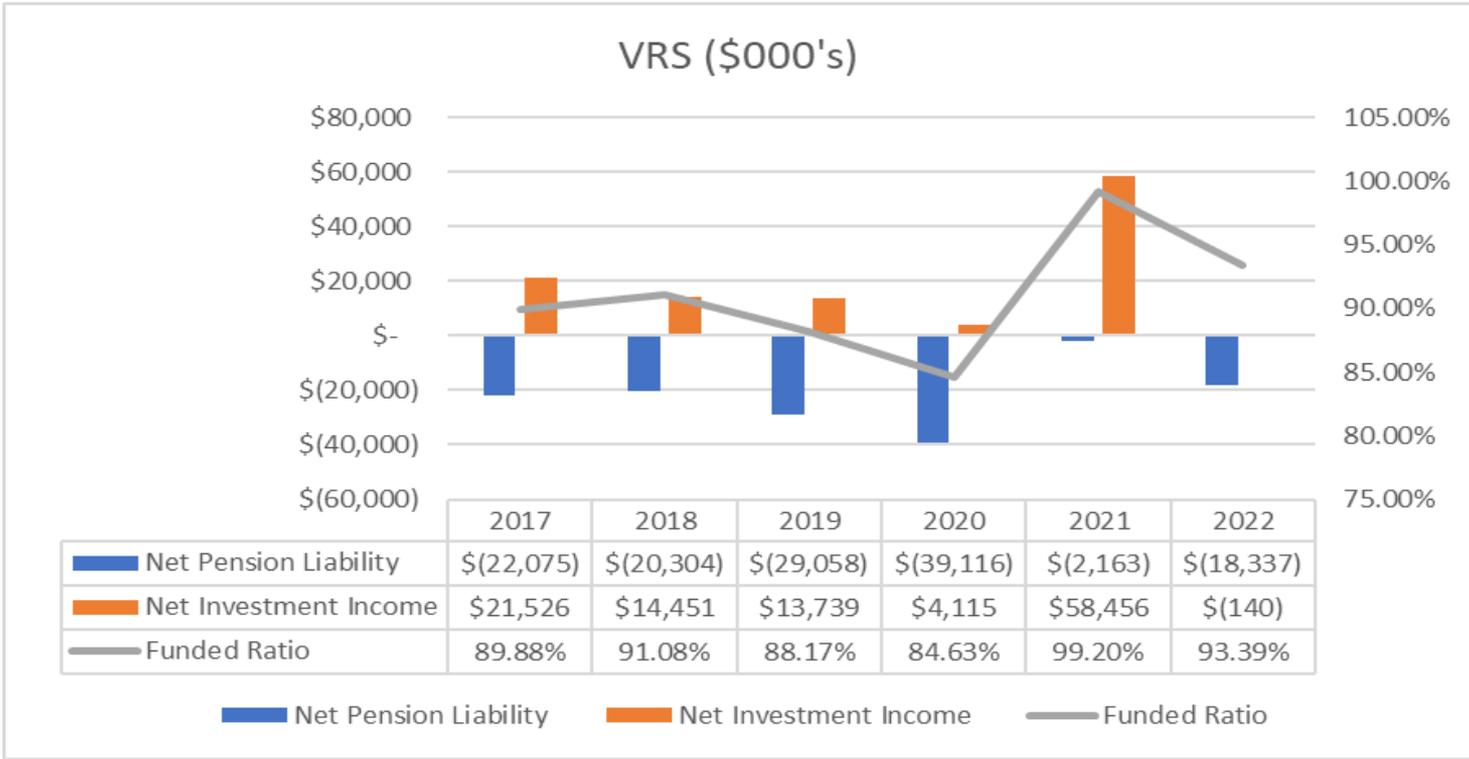
Operating Expenses	2023 vs 2022						
	2023	2022	2021	\$ Change	% Change		
Personal Services	\$ 65,549	\$ 61,157	\$ 60,250	\$ 4,392	7%	Inflationary salary increases and new positions	
Fringe Benefits	23,772	20,467	23,879	3,305	16%	Inflationary salary increases and new positions	
Materials and Supplies	12,641	9,495	11,413	3,146	33%	Inflationary pressures	
Transportation	1,672	1,380	1,100	292	21%	Inflationary pressures	
Utilities	17,044	13,762	12,947	3,282	24%	Inflationary pressures	
Chemical Purchases	13,890	10,044	8,719	3,846	38%	Inflationary pressures	
Contractual Services	42,934	41,904	37,278	1,030	2%		
Major Repairs	5,974	8,853	6,758	(2,879)	-33%		
Capital Assets	1,758	2,029	1,567	(271)	-13%		
Miscellaneous	2,864	2,385	2,685	479	20%		
	<u>\$ 188,098</u>	<u>\$ 171,476</u>	<u>\$ 166,596</u>	<u>\$ 16,622</u>	<u>10%</u>		

## Pension and Other Post-Employee Benefits (OPEB)

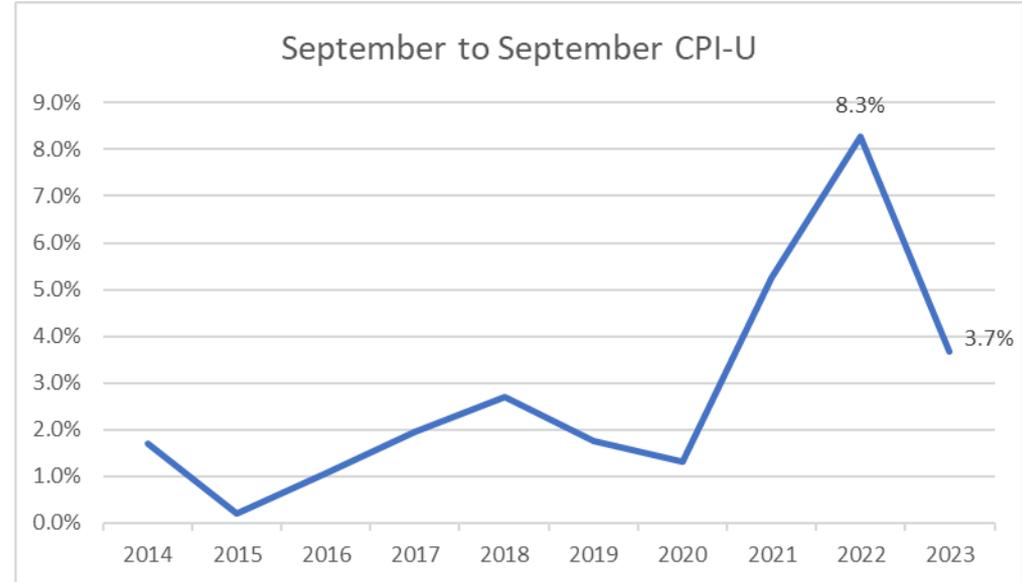
- Pension and OPEB plans are pre-funded trusts where money is set aside to pay for benefits promised
- Financial statement impacts
  - When assets=liabilities = No financial statement impact
  - When assets>liabilities = Net asset on financial statements
  - When assets<liabilities = Net liability on financial statements

June 30,	<b>Virginia Retirement System</b>			<b>HRSD</b>	
	2022			2023	
	<b>Pension</b>	<b>OPEB</b>			
	<b>VRS 1 &amp; 2, Hybrid Plan</b>	<b>Group Term Life</b>	<b>Health Insurance Credit</b>	<b>Retiree Health Plan (RHP)</b>	<b>Total OPEB</b>
Total Liability	\$ (277,575)	\$ (3,035)	\$ (2,241)	\$ (76,476)	\$ (81,752)
Fiduciary Net Position (MVA)	259,238		1,108	67,423	68,531
Net Asset (Liability)	(18,337)	(3,035)	(1,133)	(9,053)	(13,221)
Funded Ratio	93.39%	67.21%	49.44%	88.16%	

# Virginia Retirement System



- Financial health is sound, but headwinds exist
  - Future water consumption trends
  - Expenses are impacted by rising inflation, supply chain issues
    - Inflation has moderated, but remains relatively high from a historical perspective
  - Capital Plan remains largely regulatorily driven and expansive but moderates after 2028



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# Questions

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# Annual Comprehensive Financial Report

For the Fiscal Years Ended June 30, 2023 and 2022  
Hampton Roads Sanitation District  
(A Component Unit of the Commonwealth of Virginia)





Photos used for this publication feature the Grand Opening of Woodstock Park in Virginia Beach, Virginia. HRSD and Virginia Beach Parks & Recreation (VBPR) entered a mutually beneficial partnership aligning parks and recreation planning with wastewater utility infrastructure needs. This partnership culminated in a multiuse facility that serves the Virginia Beach community while also meeting important regional infrastructure demands. The Woodstock Park Project consisted of a 5.2-million-gallon offline storage tank designed to help reduce the risk of wet-weather-related sanitary sewer overflows, topped by an integrated green roof and cutting-edge, 30,000-sq.-ft. skatepark for the wheeled sport community. The partnership also allowed VBPR to accelerate their planned renovations and improvements throughout Woodstock Park, including new pavilions, pickleball courts, restrooms, and other park amenities. Interpretive elements have also been installed around the park to engage visitors to learn more about the storage tank and how it operates, the skatepark features, and the function of the park's unique stormwater management facilities.



# HAMPTON ROADS SANITATION DISTRICT

ANNUAL COMPREHENSIVE FINANCIAL REPORT  
FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND 2022

PREPARED BY THE FINANCE DEPARTMENT



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# Introductory Section





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October 23, 2023

To the Hampton Roads Sanitation District (HRSD) Board of Commissioners and Our Customers:

We are pleased to submit this Annual Comprehensive Financial Report for the fiscal year ended June 30, 2023. Political subdivisions of the Commonwealth of Virginia are required to publish a complete set of audited financial statements. This report fulfills that requirement.

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, 2023. 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 1.9 million individuals, more than one-fifth of Virginia’s population, reside in HRSD’s service area, which is in the southeastern corner of the Commonwealth. HRSD’s territory of approximately 5,000 square miles encompasses nine cities, eleven 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 486,000 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 at the Governor’s pleasure. The Commission appoints a General Manager, who appoints the senior staff.

HRSD owns and operates 16 treatment plants. The eight major plants in Hampton Roads have design capacities ranging in size from 15 to 54 million gallons per day (MGD). Four of the major plants are located south of the James River and four are north of the James River. The combined capacity of these eight plants is approximately 225 MGD. HRSD’s six small rural treatment plants have a combined capacity of 1.75 MGD.

HRSD maintains 538 miles of pipelines ranging from six inches to 66 inches in diameter. Interceptor pipelines, along with 89 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 44 pump stations in the Small Communities.

PO Box 5911, Virginia Beach, VA 23471-0911 • 757.460.7003

**Commissioners:** Stephen C. Rodriguez, Chair • Frederick N. Elofson, CPA, Vice-Chair • Vishnu K. Lakdawala, PhD  
Michael E. Glenn • Willie Levenston, Jr. • Elizabeth A. Taraski, PhD • Nancy J. Stern • Ann W. Templeman  
[www.hrsd.com](http://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 eighth largest MSA in the southeastern United States and the 37th largest in the nation. Unlike many metropolitan areas, Hampton Roads' population nucleus is not confined to one central city. Instead, the approximately 1.9 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 approximately 850,000 as of June 2023.

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 7.6 percent of wastewater revenues for fiscal year 2023. In addition, HRSD's 2023 revenues contained only limited reliance (1.8 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 \$3.7 billion, 10 year Capital Improvement Program. Regulatory requirements as part of the Chesapeake Bay restoration to reduce nutrient discharges and, Clean Water Act compliance 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 James River, and Nansemond Treatment Plants. To minimize the impacts of its capital investments on ratepayers, HRSD continues to pursue grant and low-interest loan 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 annual comprehensive financial report (Annual Report) for the fiscal year ended June 30, 2022. This was the 40<sup>th</sup> 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 Annual Report 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 Annual Report continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

The preparation of this Annual Report 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,



Jay A. Bernas, P.E.  
General Manager



Steven G. de Mik, CPA  
Deputy General Manager/CFO



Kassandra Pagan  
Chief of Accounting



Government Finance Officers Association

Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting

Presented to

**Hampton Roads Sanitation District  
Virginia**

For its Annual Comprehensive  
Financial Report  
For the Fiscal Year Ended

June 30, 2022

*Christopher P. Morill*

Executive Director/CEO

**Principal Officials  
June 30, 2023**

**COMMISSIONERS**

Stephen C. Rodriguez, Chair

Frederick N. Elofson, CPA, Vice-Chair

Michael E. Glenn

Vishnu K. Lakdawala, PhD

Willie Levenston, Jr.

Nancy J. Stern

Elizabeth A. Taraski, PhD

Ann W. Templeman

**COMMISSION SECRETARY**

Jennifer L. Cascio

**ASSISTANT COMMISSION SECRETARY**

Elizabeth I. Scott

**SENIOR STAFF**

Jay A. Bernas, PE  
General Manager

Steven G. de Mik, CPA  
Deputy General Manager/CFO

Eddie Abisaab, PE, PMP, ENV SP  
Director of Operations

Charles B. Bott, PhD, PE, BCEE  
Director of Water Technology And  
Research

Donald C. Corrado  
Director of Information Technology

Bruce W. Husselbee, PhD,  
PE, DBIA  
Director of Engineering

Jamie Heisig-Mitchell  
Director of Water Quality

Dorissa Pitts-Paige, PHR,  
IPMA-SCP, SHRM-SCP  
Director of Talent Management

Leila E. Rice, APR  
Director of Communications

**COUNSEL**

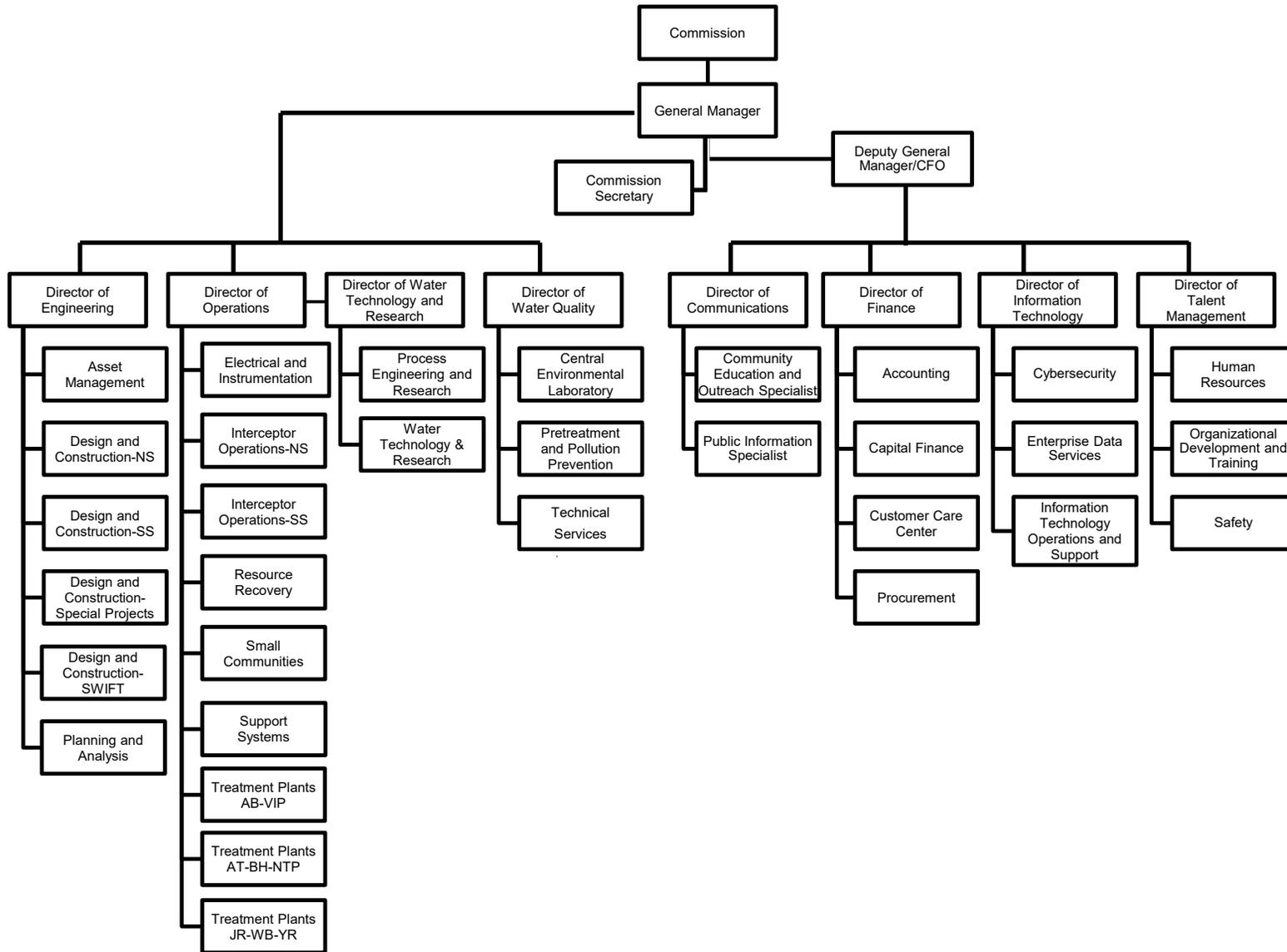
Sands Anderson, PC  
General Counsel

AquaLaw, PLC  
Special Counsel

Norton Rose Fulbright US, LLP  
Bond Counsel

## HRSD Organization Chart

June 30, 2023



### HRSD Service Area June 30, 2023



## HRSD History

### June 30, 2023

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 staff.

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 1.9 million in 2023.

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, 2023: Treatment plants receiving Gold awards for achieving perfect compliance for an entire year: Army Base, Central Middlesex, Onancock and Urbanna. King William, Nassawadox Riverside and West Point treatment plants each earned a Silver award for having no more than five permit violations in the calendar year. Our Platinum award winners this year were Atlantic (8 consecutive years of compliance), Boat Harbor (21 consecutive years), James River (9 consecutive years), Nansemond (21 consecutive years), Virginia Initiative Plant (27 consecutive years), Williamsburg (28 consecutive years) and York River (15 consecutive years).

Additional awards and honors received during the year ended June 30, 2023 include NACWA National Environmental Achievement Awards for Research and Technology, Public Information and Education and Workforce Development. The Providence Road Offline Storage Facility and Woodstock Park Improvements Project earned several honors, including the Build America Merit Award, the 2022 Water Environment Federation Project Excellence Award, the Design-Build Institute of America (DBIA) Merit Award and Award of Excellence in the Water/Wastewater sector and 2022 DBIA Mid-Atlantic Region Honor Award for Best Design-Build Project. The HRSD Finance Department was also recognized by the Environmental Protection Agency (EPA), receiving the 2022 George F. Ames PISCES award for Innovative Finance.



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# Financial Section





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## Report of Independent Auditor

To the Commissioners  
Hampton Roads Sanitation District

### Report on the Audit of the Financial Statements

#### **Opinions**

We have audited the accompanying financial statements of the major fund and the aggregate remaining fund information of the Hampton Roads Sanitation District, a component unit of the Commonwealth of Virginia ("HRSD"), as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise HRSD's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the major fund and the aggregate remaining fund information of HRSD, as of June 30, 2023 and 2022, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

#### **Basis for Opinions**

We conducted our audits 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 (the "Specifications"). Our responsibilities under those standards and Specifications are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are required to be independent of HRSD, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### **Responsibilities of Management for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about HRSD's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

#### **Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Specifications will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Specifications, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 HRSD 's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the HRSD 's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

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

#### ***Supplementary Information***

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise HRSD's basic financial statements. The accompanying other supplementary information, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining custodial fund financial statements are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

**Other Information**

Management is responsible for the other information included in the annual report. The other information comprises the Introductory, Statistical, and Other Supplemental Sections, but does not include the basic financial statements and our auditor's report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated October 23, 2023, 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.



Virginia Beach, Virginia  
October 23, 2023

## 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, 2023 and 2022, 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 \$117.5 million, or 11.1 percent, in 2023 as a result of fiscal year 2023 operations. Total net position increased by \$108.7 million, or 11.4 percent in fiscal year 2022.
- Fiscal year 2023 total revenues increased by \$37.9 million, or 10.4 percent, mainly due to a \$30.0 million increase in operating revenues generated from an increase in wastewater treatment rates and a \$7.7 million increase in investment income primarily due to higher interest rates. Fiscal year 2022 reflected a total revenues increase of \$25.6 million, or 7.5 percent. This increase was mainly due to a \$28.2 million increase in operating revenues generated from an increase in wastewater treatment rates with a slight offset of \$2.1 million decrease in investment income primarily due to market volatility and the effect of rising interest rates on fixed income securities.
- Operating expenses increased by \$23.8 million, or 10.2 percent in fiscal year 2023. Inflationary pressures drove increases of \$3.8 million in chemical expenses, \$3.1 million in utility costs, \$1.8 million in bad debt expense, \$3.0 million in general materials, and \$5.1 million in major repair expenses. Wage and position increases created a \$5.2 million increase in salary and benefits. For fiscal year 2022, operating expenses decreased by \$0.6 million, or 0.3 percent, due to a \$3.0 million decrease in general operating expenses offsetting a \$1.3 million increase in wastewater treatment expenses and a \$1.1 million increase in depreciation and amortization.
- Restricted cash and cash equivalents increased \$0.7 million, or 2.1 percent, in fiscal year 2023 due to an increase in cash restricted for debt service. Unrestricted cash and cash equivalents decreased \$14.6 million, or 6.5 percent, primarily due to the utilization of cash funds to support capital construction projects. Fiscal year 2022 reflected an increase in restricted cash and cash equivalents of \$2.7 million, or 8.8 percent, due to an increase in cash restricted for debt service. Unrestricted cash and cash equivalents increased \$35.1 million, or 18.4 percent, primarily due to utilizing debt to fund capital construction projects in FY22.
- Net Property, Plant and Equipment increase of \$297.2 million, or 17.3 percent, due to \$284.7 million net increase in capital projects in progress, \$8.0 million increase in land acquisitions, and a \$4.6 million increase in net depreciable assets for fiscal year 2023. Fiscal year 2022 reflected a net Property, Plant and Equipment increase of \$110.3 million, or 6.9 percent, due to \$25.3 million net increase in depreciable assets, \$12.5 million increase in land purchases and \$72.5 million increase in capital improvement projects in process.

### 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 20 through 25 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 20 and 21 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 22 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 Statements of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position, found on pages 24 and 25, provide information on the control of assets for which HRSD has a fiduciary responsibility and the beneficiaries

with whom a fiduciary responsibility exists. These statements are required by accounting principles generally accepted in the United States of America (GAAP), as discussed in Notes 2 and 14.

The Notes to Financial Statements, found on pages 26 through 58 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 62 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 \$1.18 billion at June 30, 2023 and by \$1.06 billion at June 30, 2022.

By far, the largest portion of HRSD's net position (83.4 percent and 78.6 percent at June 30, 2023 and 2022, 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. 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

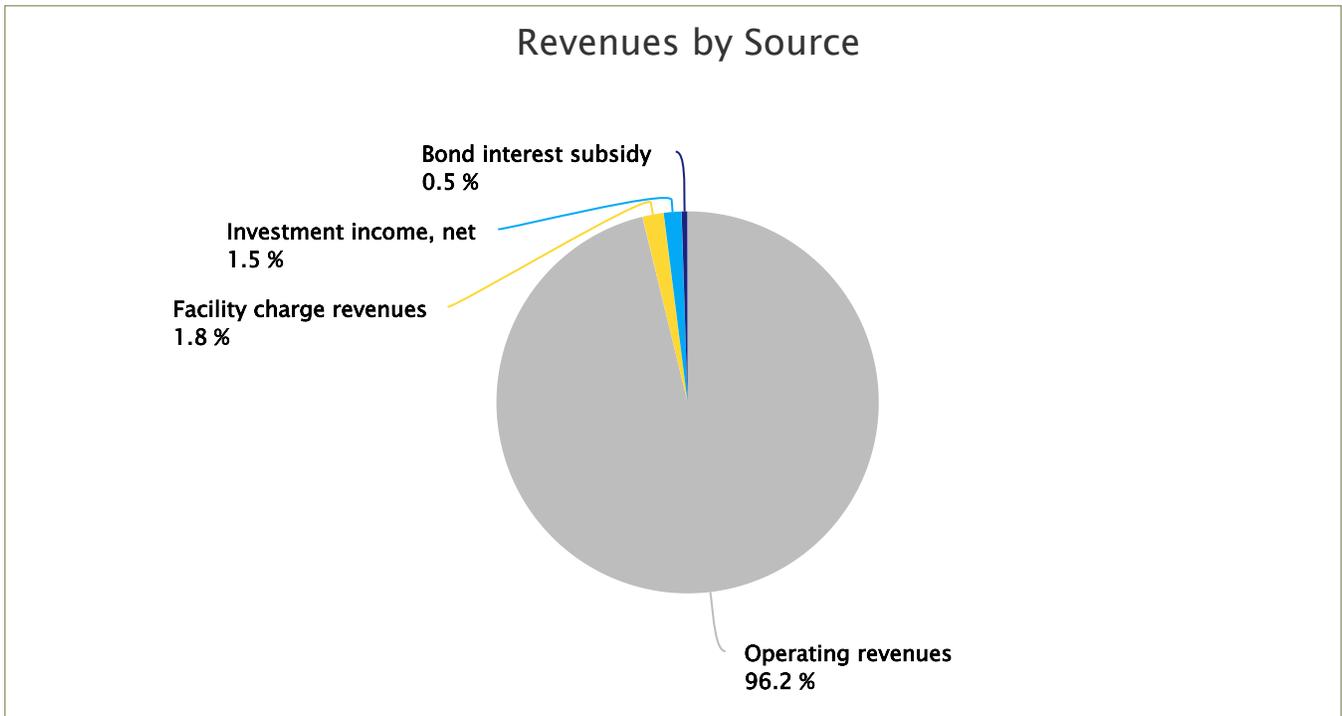
(in thousands)	2023	2022	2021	2023 vs. 2022	
				Dollars	Percent
Capital assets	\$ 2,012,351	\$ 1,715,108	\$ 1,604,841	\$ 297,243	17.3%
Current and noncurrent assets	334,314	346,767	311,141	(12,453)	(3.6%)
<b>Total assets</b>	<b>2,346,665</b>	<b>2,061,875</b>	<b>1,915,982</b>	<b>284,790</b>	<b>13.8%</b>
<b>Deferred outflows of resources</b>	<b>37,522</b>	<b>42,611</b>	<b>42,277</b>	<b>(5,089)</b>	<b>(11.9%)</b>
Long-term liabilities	917,223	796,272	794,371	120,951	15.2%
Current liabilities	271,225	211,670	195,162	59,555	28.1%
<b>Total liabilities</b>	<b>1,188,448</b>	<b>1,007,942</b>	<b>989,533</b>	<b>180,506</b>	<b>17.9%</b>
<b>Deferred inflows of resources</b>	<b>18,717</b>	<b>37,060</b>	<b>17,902</b>	<b>(18,343)</b>	<b>(49.5%)</b>
Net investment in capital assets	981,437	832,427	776,253	149,010	17.9%
Restricted for debt service	33,830	33,134	30,455	696	2.1%
Unrestricted	161,755	193,923	144,116	(32,168)	(16.6%)
<b>Total net position</b>	<b>\$ 1,177,022</b>	<b>\$ 1,059,484</b>	<b>\$ 950,824</b>	<b>\$ 117,538</b>	<b>11.1%</b>

The increase in capital assets is primarily due to the significant increase in construction in progress, most noticeably for major expansion projects at two of HRSD's treatment plants in both fiscal years 2023 and 2022.

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)	2023	2022	2021	2023 vs. 2022	
				Dollars	Percent
<b>Revenues:</b>					
Operating revenues	\$ 387,935	\$ 357,946	\$ 329,769	\$ 29,989	8.4%
Facility charge revenues	7,293	7,072	7,379	221	3.1%
Investment income, net	6,068	(1,651)	471	7,719	467.5%
Bond interest subsidy	2,015	2,052	2,167	(37)	(1.8%)
<b>Total revenues</b>	<b>403,311</b>	<b>365,419</b>	<b>339,786</b>	<b>37,892</b>	<b>10.4%</b>
<b>Operating expenses:</b>					
Wastewater treatment	149,532	134,135	132,820	15,397	11.5%
General and administrative	53,995	45,673	48,691	8,322	18.2%
Depreciation and amortization	54,469	54,357	53,278	112	0.2%
<b>Total operating expenses</b>	<b>257,996</b>	<b>234,165</b>	<b>234,789</b>	<b>23,831</b>	<b>10.2%</b>
<b>Non-operating expenses:</b>					
Bond issuance costs	98	311	682	(213)	(68.5%)
Capital distributions to localities	2,422	13	376	2,409	18530.8%
Interest expense	27,132	25,007	25,339	2,125	8.5%
<b>Total non-operating expenses</b>	<b>29,652</b>	<b>25,331</b>	<b>26,397</b>	<b>4,321</b>	<b>17.1%</b>
<b>Total expenses</b>	<b>287,648</b>	<b>259,496</b>	<b>261,186</b>	<b>28,152</b>	<b>10.8%</b>
Income before capital contributions	115,663	105,923	78,600	9,740	9.2%
Capital contributions	1,875	2,737	2,317	(862)	(31.5%)
Change in net position	117,538	108,660	80,917	8,878	8.2%
Total net position - beginning	1,059,484	950,824	869,907	108,660	11.4%
<b>Total net position - ending</b>	<b>\$ 1,177,022</b>	<b>\$ 1,059,484</b>	<b>\$ 950,824</b>	<b>\$ 117,538</b>	<b>11.1%</b>



Operating revenues increased by \$30.0 million, or 8.4 percent, in 2023 and by \$28.2 million, or 8.5 percent, in 2022. The primary increases were due to wastewater rate increases each year of approximately 9.0%. Net Investment income increased \$7.7 million in 2023, or 467.5 percent, primarily due to higher interest rates, compared to a \$2.1 million decrease, or 450.5 percent, in 2022.

Operating expenses increased by \$23.8 million, or 10.2 percent in 2023 and decreased \$0.6 million, or (0.3) percent, in 2022. For the fiscal year ending June 30, 2023, inflationary pressures drove increases of \$3.8 million in chemical expenses, \$3.1 million in utility costs, \$1.8 million in bad debt expense, \$3.0 million in general materials, and \$5.1 million in major repair expenses. Wage and position increases created a \$5.2 million increase in salary and benefits. Decreases in fiscal year 2022 were due to a \$1.3 million increase in wastewater treatment expenses, a \$1.1 million increase in depreciation and amortization, and \$3.0 million decrease in general and administrative expenses.

In 2023 and 2022, HRSD received \$1.9 million and \$2.7 million, respectively, in capital contributions to help finance its capital improvement program.

## CAPITAL ASSETS AND DEBT ADMINISTRATION

### Capital Assets

At the end of 2023 and 2022, HRSD had approximately \$2.0 billion and \$1.7 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 increase of \$297.2 million, or 17.3 percent in 2023 and a net increase of \$110.3 million, or 6.9 percent in 2022.

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

#### HRSD's Capital Assets

(in thousands)	2023	2022	2021
Land	\$ 64,198	\$ 56,170	\$ 43,658
Treatment plants	644,214	666,215	696,176
Interceptor systems	561,916	537,431	522,400
Buildings	44,022	43,553	26,021
Small community facilities	15,474	15,882	16,123
Office equipment	569	787	788
Automotive	3,481	1,368	1,715
Other equipment	38,158	38,116	13,999
Software and intangible assets	71	-	815
	1,372,103	1,359,522	1,321,695
Construction in progress	640,248	355,586	283,146
<b>Net property, plant and equipment</b>	<b>\$ 2,012,351</b>	<b>\$ 1,715,108</b>	<b>\$ 1,604,841</b>

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

(in thousands)	2023	2022	2021
Balance at beginning of year	\$ 1,715,108	\$ 1,604,841	\$ 1,457,955
Additions	67,050	92,184	207,603
Transfers/Retirements	-	(1,460)	-
Depreciation and amortization	(54,469)	(54,357)	(53,278)
Accumulated depreciation retired	-	1,460	-
Net increase (decrease) in construction in progress	284,662	72,440	(7,439)
<b>Balance at end of year</b>	<b>\$ 2,012,351</b>	<b>\$ 1,715,108</b>	<b>\$ 1,604,841</b>

HRSD's total capital expenditures were \$366.6 million during 2023 and \$171.7 million during 2022. The continued capital improvements efforts for a transmission pipeline to serve the communities of the Eastern Shore of Virginia and the expansion projects at the James River and Nansemond Treatment Plants were the largest contributors to the increase in expenses. Similarly, fiscal year 2022 expenses were largely attributed to the same projects and the York River Treatment Plant Nutrient Reduction project.

**Long Term Debt**

The balance for HRSD’s bonds outstanding (excluding unamortized bond premium) was \$966.0 million at June 30, 2023, versus \$851.9 million at fiscal year end 2022, a 13.39% increase year over year. Draws on existing approved bonds, or loans for which a liability is not recognized until utilized, in the amount of \$153.7 million, were offset by payments on existing senior and subordinate debt, in the amount of \$39.6 million. Unamortized bond premium as of June 30, 2023, was \$13.7 million versus \$16.5 million at fiscal year end 2022.

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

**HRSD’s Outstanding Debt**

(in thousands, excluding unamortized bond premiums)

	2023	2022	2021
Senior revenue bonds	\$ 165,093	\$ 183,899	\$ 198,670
Subordinate revenue bonds	800,930	668,031	616,533
<b>Total outstanding debt</b>	<b>\$ 966,023</b>	<b>\$ 851,930</b>	<b>\$ 815,203</b>

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	Aa1	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 wet weather-related infrastructure improvements that HRSD will not own; generally, these assets will be owned by the localities that HRSD serves. 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

Average billed consumption continues to moderately decline most years as more efficient home appliances and industrial processes are utilized throughout the region. Billed consumption increased in 2021 during the pandemic but declined slightly in 2023 to a level comparable to 2018.

HRSD implemented a wastewater treatment rate increase for the 2023 fiscal year to fund its operations and capital investments. As HRSD continues to implement its \$3.7 billion, 10-year capital improvement program, it seeks to maximize federal and state subsidized low interest borrowing programs and grant opportunities to lower costs to our customers.

## 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 Deputy General Manager/CFO, 1434 Air Rail Avenue, Virginia Beach, Virginia 23455.

**STATEMENTS OF NET POSITION  
AS OF JUNE 30, 2023 AND 2022**

**ASSETS AND DEFERRED OUTFLOWS OF RESOURCES**

(in thousands)

	2023	2022
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 148,295	\$ 163,051
Cash and cash equivalents - restricted	33,830	33,134
Accounts receivable, net	60,081	59,493
Other current assets	3,029	2,860
<b>TOTAL CURRENT ASSETS</b>	<b>245,235</b>	<b>258,538</b>
<b>NONCURRENT ASSETS</b>		
Cash and cash equivalents	63,074	62,932
Inventory	26,005	25,297
	<b>89,079</b>	<b>88,229</b>
<b>NET PROPERTY, PLANT AND EQUIPMENT</b>		
Land	64,198	56,170
Treatment plants	1,474,641	1,464,740
Interceptor systems	793,863	754,692
Buildings	69,759	67,266
Small community facilities	26,094	25,936
Office equipment	45,353	45,353
Automotive	21,694	18,801
Other equipment	79,329	75,004
Software and intangible assets	40,155	40,074
	<b>2,615,086</b>	<b>2,548,036</b>
Less: Accumulated depreciation and amortization	1,242,983	1,188,514
	<b>1,372,103</b>	<b>1,359,522</b>
Construction in progress	640,248	355,586
<b>NET PROPERTY, PLANT AND EQUIPMENT</b>	<b>2,012,351</b>	<b>1,715,108</b>
<b>TOTAL NONCURRENT ASSETS</b>	<b>2,101,430</b>	<b>1,803,337</b>
<b>TOTAL ASSETS</b>	<b>2,346,665</b>	<b>2,061,875</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>		
Deferred loss on debt refunding, net	17,409	19,513
Differences between expected and actual experience:		
OPEB plans	8,582	6,518
Pension plan	127	261
Changes of assumptions:		
OPEB plans	215	208
Pension plan	4,064	7,406
Net difference between projected and actual earnings on:		
OPEB plans investments	3,037	4,778
Change in proportion, OPEB plans	54	75
Contributions subsequent to the measurement date:		
OPEB plans	442	411
Pension plan	3,592	3,441
<b>TOTAL DEFERRED OUTFLOWS OF RESOURCES</b>	<b>37,522</b>	<b>42,611</b>
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	<b>\$ 2,384,187</b>	<b>\$ 2,104,486</b>

See Accompanying Notes to Financial Statements

## STATEMENTS OF NET POSITION AS OF JUNE 30, 2023 AND 2022

### LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION

(in thousands)

	2023	2022
<b>CURRENT LIABILITIES</b>		
Trade and contracts payable	\$ 62,660	\$ 53,237
Contract retention	17,105	5,859
Accrued salaries and wages	1,393	3,536
Current portion of bonds payable	45,561	42,609
Variable rate demand bonds	50,000	50,000
Notes payable	68,580	33,721
Current portion of compensated absences	8,611	6,495
Debt interest payable	8,492	8,602
Other liabilities	8,823	7,611
<b>TOTAL CURRENT LIABILITIES</b>	<b>271,225</b>	<b>211,670</b>
<b>LONG-TERM LIABILITIES</b>		
Compensated absences	1,484	1,723
Net OPEB liability	13,221	16,523
Net pension liability	18,337	2,163
Bonds payable	884,181	775,863
<b>TOTAL LONG-TERM LIABILITIES</b>	<b>917,223</b>	<b>796,272</b>
<b>TOTAL LIABILITIES</b>	<b>1,188,448</b>	<b>1,007,942</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Differences between expected and actual experience:		
OPEB plans	4,101	4,739
Pension plan	459	761
Changes of assumptions, OPEB plans	5,925	1,663
Net difference between projected and actual earnings on:		
OPEB plans investments	219	843
Pension plan investments	7,857	29,013
Change in proportion, OPEB plans	156	41
<b>TOTAL DEFERRED INFLOWS OF RESOURCES</b>	<b>18,717</b>	<b>37,060</b>
<b>NET POSITION</b>		
Net investment in capital assets	981,437	832,427
Restricted for debt service	33,830	33,134
Unrestricted	161,755	193,923
<b>TOTAL NET POSITION</b>	<b>1,177,022</b>	<b>1,059,484</b>
<b>TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</b>	<b>\$ 2,384,187</b>	<b>\$ 2,104,486</b>

See Accompanying Notes to Financial Statements

**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION  
FOR THE FISCAL YEARS ENDED JUNE 30, 2023 and 2022**

(in thousands)

	2023	2022
<b>OPERATING REVENUES</b>		
Wastewater treatment charges	\$ 383,115	\$ 352,414
Miscellaneous	4,820	5,532
<b>TOTAL OPERATING REVENUES</b>	<u>387,935</u>	<u>357,946</u>
<b>OPERATING EXPENSES</b>		
Wastewater treatment	149,532	134,135
General and administrative	53,995	45,673
Depreciation and amortization	54,469	54,357
<b>TOTAL OPERATING EXPENSES</b>	<u>257,996</u>	<u>234,165</u>
<b>OPERATING INCOME</b>	<u>129,939</u>	<u>123,781</u>
<b>NON-OPERATING REVENUES (EXPENSES)</b>		
Wastewater facility charges	7,293	7,072
Investment income	6,068	(1,651)
Bond interest subsidy	2,015	2,052
Bond issuance costs	(98)	(311)
Capital distributions to localities	(2,422)	(13)
Interest expense	(27,132)	(25,007)
<b>NET NON-OPERATING EXPENSES</b>	<u>(14,276)</u>	<u>(17,858)</u>
<b>INCOME BEFORE CAPITAL CONTRIBUTIONS</b>	<u>115,663</u>	<u>105,923</u>
<b>CAPITAL CONTRIBUTIONS</b>		
State capital grants received	234	200
Other capital contributions	1,641	2,537
<b>CAPITAL CONTRIBUTIONS</b>	<u>1,875</u>	<u>2,737</u>
<b>CHANGE IN NET POSITION</b>	117,538	108,660
<b>TOTAL NET POSITION - Beginning</b>	<u>1,059,484</u>	<u>950,824</u>
<b>TOTAL NET POSITION - Ending</b>	<u><b>\$ 1,177,022</b></u>	<u><b>\$ 1,059,484</b></u>

See Accompanying Notes to Financial Statements

**STATEMENTS OF CASH FLOWS**  
**FOR THE FISCAL YEARS ENDED JUNE 30, 2023 and 2022**

(in thousands)

	2023	2022
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Cash received from customers	\$ 379,539	\$ 337,432
Cash received from CARES and ARPA	-	11,409
Other operating revenues	4,820	5,532
Cash payments to suppliers for goods and services	(138,487)	(120,651)
Cash payments to employees for services	(65,813)	(61,703)
Net cash provided by operating activities	<u>180,059</u>	<u>172,019</u>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>		
Capital distributions to localities	(2,422)	(13)
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Wastewater facility charges	7,293	7,072
Acquisition and construction of property, plant and equipment	(329,699)	(173,292)
Proceeds from capital debt	188,540	90,377
Bond interest subsidy	2,015	2,052
Principal paid on capital debt	(39,588)	(35,228)
State capital grants	234	-
Other capital contributions	1,641	2,737
Bond issuance costs	(98)	(311)
Fees paid on interim financing	(1,159)	(202)
Interest paid on capital debt	(26,802)	(25,790)
Net cash used in capital and related financing activities	<u>(197,623)</u>	<u>(132,585)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Interest and dividends on investments	6,068	(1,651)
<b>NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS AND CASH AND CASH EQUIVALENTS - RESTRICTED</b>	<u>(13,918)</u>	<u>37,770</u>
<b>CASH AND CASH EQUIVALENTS, AND CASH AND CASH EQUIVALENTS - RESTRICTED, AT BEGINNING OF YEAR</b>	<u>259,117</u>	<u>221,347</u>
<b>CASH AND CASH EQUIVALENTS, AND CASH AND CASH EQUIVALENTS - RESTRICTED, AT END OF YEAR</b>	<u>\$ 245,199</u>	<u>\$ 259,117</u>
<b>Reconciliation of Operating Income to Net Cash Provided by Operating Activities</b>		
Operating income	\$ 129,939	\$ 123,781
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	54,469	54,357
(Increase) decrease in operating assets:		
Accounts receivable	(588)	(2,363)
Inventory	(708)	(265)
Other current assets	(169)	1,759
Increase (decrease) in operating liabilities:		
Trade and contracts payable	(1,343)	1,930
Accrued salaries and wages	(2,143)	141
Compensated absences	1,877	(686)
Other liabilities	1,212	(309)
OPEB liabilities and related deferred inflows and outflows	(527)	(870)
Pension liabilities and related deferred inflows and outflows	(1,960)	(5,456)
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<u>\$ 180,059</u>	<u>\$ 172,019</u>
<b>Noncash Capital and Related Financing Activities:</b>		
Accrual for capital expenditures	\$ 10,767	\$ (5,749)
Amortization of premium	(2,822)	(3,261)
Amortization of deferred loss on bond refunding	2,104	2,204

See Accompanying Notes to Financial Statements

**STATEMENTS OF FIDUCIARY NET POSITION  
AS OF JUNE 30, 2023 and 2022**

(in thousands)	OPEB (RHP) Trust Fund		Custodial Funds	
	2023	2022	2023	2022
<b>ASSETS</b>				
Cash and cash equivalents	\$ 195	\$ 4,189	\$ 4	\$ -
Investments at fair value				
Domestic equity	26,791	21,186	-	-
International equity	13,616	9,179	-	-
Fixed income	24,016	19,965	-	-
Other income	2,805	3,985	-	-
Real return	-	3,633	-	-
Total investments	67,228	57,948	-	-
<b>TOTAL ASSETS</b>	<b>\$ 67,423</b>	<b>\$ 62,137</b>	<b>\$ 4</b>	<b>\$ -</b>
<b>NET POSITION</b>				
Restricted for:				
Postretirement benefits for OPEB	67,423	62,137	-	-
Individuals, organizations and others	-	-	4	-
<b>TOTAL NET POSITION</b>	<b>\$ 67,423</b>	<b>\$ 62,137</b>	<b>\$ 4</b>	<b>\$ -</b>

See Accompanying Notes to Financial Statements

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE FISCAL YEARS ENDED JUNE 30, 2023 and 2022**

(in thousands)

	OPEB (RHP) Trust Fund		Custodial Funds	
	2023	2022	2023	2022
<b>ADDITIONS:</b>				
Contribution from HRSD	\$ 2,467	\$ 2,260	\$ -	\$ -
Custodial Fund Additions	-	-	4	10,729
Net investment income (loss)	5,148	(9,730)	-	-
<b>Total Additions (Deductions)</b>	<b>7,615</b>	<b>(7,470)</b>	<b>4</b>	<b>10,729</b>
<b>DEDUCTIONS:</b>				
Benefit payments for participants	2,191	1,902	-	-
Investment related expenses	138	157	-	-
Payments for customers	-	-	-	12,271
<b>Total Deductions</b>	<b>2,329</b>	<b>2,059</b>	<b>-</b>	<b>12,271</b>
Change in Net Position	5,286	(9,529)	4	(1,542)
Net Position - Beginning	62,137	71,666	-	1,542
<b>NET POSITION - ENDING</b>	<b>\$ 67,423</b>	<b>\$ 62,137</b>	<b>\$ 4</b>	<b>\$ -</b>

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 Virginia Beach	King William County
City of Hampton	City of Williamsburg	Mathews County
City of Newport News	Accomack County	Middlesex County
City of Norfolk	Gloucester County	Northampton County
City of Poquoson	Isle of Wight County	Surry County*
City of Portsmouth	James City County	York County
City of Suffolk	King and Queen 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 Annual Comprehensive 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. The Retiree Health Plan, as further described under Postemployment Benefits Other Than Pensions in this note and in Note 7, is reported in the fiduciary fund financial statements and, since HRSD has assumed responsibility to make contributions to the plan, it is also reported as a fiduciary component unit.

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 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.

#### Fiduciary Activities

The accompanying financial statements for the fiscal years ended June 30, 2023 and 2022 include information on the Retiree Health Plan (RHP), one of HRSD's three postemployment benefits other than pensions (other postemployment benefits, or OPEB) plans, information on funds held by HRSD to apply toward customer accounts under the Coronavirus Aid, Relief, and Economic Securities Act (CARES), and information on funds held by HRSD to apply toward customer accounts under the American Recovery Plan Act (ARPA). The RHP plan is discussed in Note 7, and the CARES and the ARPA are discussed in Note 14.

#### 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. The HRSD Retiree Health Plan (RHP) investments consist of domestic equity, international equity, fixed income, other income, real return funds and money market instruments. See Notes 3 and 7 for additional information on RHP investments.

#### 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 \$20,000. Donated

NOTES TO THE FINANCIAL STATEMENTS

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

Deferred outflows of resources represent a consumption of net assets that applies to a future period and as such will not be recognized as an expense until then. HRSD has two types of deferred outflows reported: deferred outflows of resources from a deferred refunding, and deferred outflows of resources from pension and OPEB activities. The deferred outflows of resources relating to the deferred refunding is the amount by which the principal and premium of a refunding bond exceed the net carrying amount of the refunded debt. Deferred outflow related to debt is being amortized over the remaining life of the refunded debt or the life of the new debt, whichever is shorter.

Deferred inflows of resources represents an acquisition of net assets that applies to a future period and as such will not be recognized as a revenue until then. The HRSDs deferred inflows of resources consist of pension and OPEB activities.

Deferred outflows of resources and deferred inflows of resources related to pension and OPEB activity will be recognized in pension and OPEB expenses 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 480 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, as required by state law, HRSD also provides a 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 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 RHP is a single employer, defined benefit plan that provides health benefits for eligible members. HRSD administers the RHP 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 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 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

HRSD implemented GASB Statement No. 96, *Subscription-Based Information Technology Arrangements* (SBITAs) effective July 1, 2022. The requirements of this Statement provides guidance on the accounting and financial

NOTES TO THE FINANCIAL STATEMENTS

reporting for SBITAs for government end users (governments). This Statement (1) defines a SBITA; (2) establishes that a SBITA results in a right-to-use subscription asset-intangible asset- and a corresponding subscription liability; (3) provides the capitalization criteria for outlays other than subscription payments, included implementation costs of a SBITA; and (4) requires note disclosures regarding a SBITA. Upon review, HRSD concluded that SBITAs are immaterial and do not warrant disclosure.

**NOTE 3 - DEPOSITS AND INVESTMENTS**

Deposits and investments

*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, 2023 and 2022, the carrying values of HRSD's deposits were \$52,614,000 and \$51,917,000. All of the bank balances at June 30, 2023 and 2022 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.

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

(in thousands)	2023	2022
Current cash and cash equivalents:		
Cash deposits - unrestricted	\$ 52,614	\$ 51,917
VIP Stable NAV Liquidity - unrestricted	95,681	111,134
Total current cash and cash equivalents - unrestricted	148,295	163,051
VIP Stable NAV Liquidity - restricted	33,830	33,134
Noncurrent cash and cash equivalents:		
VIP 1-3 Year High Quality Bond Fund - unrestricted	63,074	62,932
Total cash and cash equivalents, and cash and cash equivalents - restricted	\$ 245,199	\$ 259,117
Total VIP Stable NAV Liquidity	\$ 129,511	\$ 144,268

## 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)	2023	2022
Domestic equity	\$ 26,791	\$ 21,186
International equity	13,616	9,179
Fixed income	24,016	19,965
Other income	2,805	3,985
Real return	-	3,633
Money market	195	4,189
<b>Total investments, cash and cash equivalents</b>	<b>\$ 67,423</b>	<b>\$ 62,137</b>

Fixed income investments had an average maturity of 8.2 years and 7.74 years as of June 30, 2023 and 2022, respectively. The average credit quality was AA as of June 30, 2023, which was an increase from the average credit quality of A as of June 30, 2022. 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. The Trust Department of the U.S. Bank held \$67.06 million and \$61.84 million in investments in the Trustee's name for HRSD at June 30, 2023 and 2022, respectively. Differences between value reported and U.S. Bank Trust valuation is a single security, Boyd Watterson. 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)	2023	2022
Balance, beginning of year	\$ 2,407	\$ 2,684
Add: Current provision for uncollectible accounts	2,819	1,210
Less: Charge-off of uncollectible accounts	(2,670)	(1,487)
Balance, end of year	<b>\$ 2,556</b>	<b>\$ 2,407</b>

HRSD's collection ratios for the years ended June 30, 2023 and 2022 were 99.3% and 99.6%, respectively.

NOTES TO THE FINANCIAL STATEMENTS

**NOTE 5 - PROPERTY, PLANT AND EQUIPMENT**

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

(in thousands)	Balance 2021			Balance 2022			Balance 2023
	Balance	Additions	Transfers/ Retirements	Balance	Additions	Transfers/ Retirements	Balance
<b>Non-Depreciable Capital Assets:</b>							
Land	\$ 43,658	\$ 12,512	\$ -	\$ 56,170	\$ 8,028	\$ -	\$ 64,198
Construction in progress	283,146	162,594	(90,154)	355,586	335,317	(50,655)	640,248
<b>Depreciable Capital Assets:</b>							
Treatment plants	1,460,238	4,502	-	1,464,740	9,901	-	1,474,641
Interceptor systems	725,600	29,092	-	754,692	39,171	-	793,863
Buildings	48,236	19,030	-	67,266	2,493	-	69,759
Small community facilities	25,625	311	-	25,936	158	-	26,094
Office equipment	45,049	304	-	45,353	-	-	45,353
Automotive	19,933	328	(1,460)	18,801	2,893	-	21,694
Other equipment	48,899	26,105	-	75,004	4,325	-	79,329
Software and intangible assets	40,074	-	-	40,074	81	-	40,155
<b>Total</b>	<b>\$ 2,740,458</b>	<b>\$ 254,778</b>	<b>\$ (91,614)</b>	<b>\$ 2,903,622</b>	<b>\$ 402,367</b>	<b>\$ (50,655)</b>	<b>\$ 3,255,334</b>
<b>Less Accumulated Depreciation and Amortization:</b>							
Treatment plants	\$ (764,062)	\$ (34,463)	\$ -	\$ (798,525)	\$ (31,902)	\$ -	\$ (830,427)
Interceptor systems	(203,200)	(14,061)	-	(217,261)	(14,686)	-	(231,947)
Buildings	(22,215)	(1,498)	-	(23,713)	(2,024)	-	(25,737)
Small community facilities	(9,502)	(552)	-	(10,054)	(566)	-	(10,620)
Office equipment	(44,261)	(305)	-	(44,566)	(218)	-	(44,784)
Automotive	(18,218)	(675)	1,460	(17,433)	(780)	-	(18,213)
Other equipment	(34,900)	(1,988)	-	(36,888)	(4,283)	-	(41,171)
Software and intangible assets -amortization	(39,259)	(815)	-	(40,074)	(10)	-	(40,084)
<b>Total</b>	<b>(1,135,617)</b>	<b>(54,357)</b>	<b>1,460</b>	<b>(1,188,514)</b>	<b>(54,469)</b>	<b>-</b>	<b>(1,242,983)</b>
<b>Net Property, Plant and Equipment</b>	<b>\$ 1,604,841</b>	<b>\$ 200,421</b>	<b>\$ (90,154)</b>	<b>\$ 1,715,108</b>	<b>\$ 347,898</b>	<b>\$ (50,655)</b>	<b>\$ 2,012,351</b>

**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 2021			Balance 2022			Balance 2023
	Balance	Earned	Taken	Balance	Earned	Taken	Balance
Annual leave	\$ 5,663	\$ 2,645	\$ (3,011)	\$ 5,297	\$ 3,348	\$ (3,005)	\$ 5,640
Sick leave	2,864	1,263	(1,658)	2,469	2,240	(1,665)	3,044
Paid time off	377	1,901	(1,826)	452	3,299	(2,340)	1,411
<b>Total</b>	<b>\$ 8,904</b>	<b>\$ 5,809</b>	<b>\$ (6,495)</b>	<b>\$ 8,218</b>	<b>\$ 8,887</b>	<b>\$ (7,010)</b>	<b>\$ 10,095</b>
Current liability	\$ 5,765			\$ 6,495			\$ 8,611
Long-term liability	\$ 3,139			\$ 1,723			\$ 1,484

**NOTE 7 – POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB)**

Plan Description

As discussed in Note 2, HRSD provides OPEB for its employees through three 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 OPEB plans.

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
  - Seatbelt 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 retirement. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of the total life insurance benefit value at retirement.

### *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 in 2015. This will be increased annually based on the VRS Plan 2 cost-of-living adjustment calculation. The minimum benefit adjusted for inflation was \$8,722 as of June 30, 2022.

NOTES TO THE FINANCIAL STATEMENTS

**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 HIC 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 HIC as a retiree.

**Employees Covered by Benefit Terms**

As of the June 30, 2022 and 2021 actuarial valuation dates the following employees were covered by the benefit terms of the RHP:

	2022	2021
Beneficiaries currently receiving benefit payments	240	149
Active employees	702	743
Total	942	892

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

As of the June 30, 2021 and 2020 actuarial valuation dates the following employees were covered by the benefit terms of the HIC:

	2021	2020
Inactive members or their beneficiaries currently receiving benefit payments	267	261
Active employees	816	806
Total	1,083	1,067

### 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 \$2,467,000 and \$2,260,000 to the RHP for the years ended June 30, 2023 and 2022, 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 1.34% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.80% (1.34% X 60%) and the employer component was 0.54% (1.34% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2023 was 0.54% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2021. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the GLI from HRSD were \$318,000 and \$296,000 for the years ended June 30, 2023 and June 30, 2022, 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 year ended June 30, 2023 was 0.21% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2021. 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 \$124,000 and \$115,000 for the years ended June 30, 2023, and June 30, 2022, respectively.

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

HRSD recognized RHP OPEB expense of \$2,274,000 and \$1,569,000 for the years ended June 30, 2023 and 2022, respectively. HRSD reported deferred outflows of resources and deferred inflows of resources related to RHP OPEB from the following sources:

(in thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Year ended June 30, 2023:		
Differences between expected and actual experience	\$ 8,313	\$ 3,930
Changes in assumptions	-	5,627
Net diff between projected and actual earnings on plan investments	3,037	-
Total	<u>\$ 11,350</u>	<u>\$ 9,557</u>
Year ended June 30, 2022:		
Differences between expected and actual experience	\$ 6,129	\$ 4,716
Changes in assumptions	-	1,239
Net diff between projected and actual earnings on plan investments	4,778	-
Total	<u>\$ 10,907</u>	<u>\$ 5,955</u>

NOTES TO THE FINANCIAL STATEMENTS

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 RHP OPEB will be recognized in OPEB expense in future reporting periods as follows:

(in thousands)	2023	2022
Years Ended June 30		
2023	\$ -	\$ 566
2024	114	606
2025	149	641
2026	2,306	2,798
2027	(533)	(42)
2028	(439)	-
Thereafter	196	383
	<u>\$ 1,793</u>	<u>\$ 4,952</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, 2023 and 2022, HRSD reported liabilities of \$3,035,000 and \$3,058,000, respectively, for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liabilities were measured as of June 30, 2022 and June 30, 2021 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, 2022 and 2021 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2022 and 2021, HRSD's proportion was 0.2521% and 0.2626%, respectively. For the years ended June 30, 2023 and 2022, HRSD recognized GLI OPEB expenses of \$86,000 and \$135,000, 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.

At June 30, 2023 and 2022, 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, 2023:		
Differences between expected and actual experience	\$ 240	\$ 122
Net diff bet projected and actual earnings on program investments	-	190
Change in assumptions	113	296
Changes in proportion	54	156
Employer contributions subsequent to the measurement date	318	-
Total	<u>\$ 725</u>	<u>\$ 764</u>
Year ended June 30, 2022:		
Differences between expected and actual experience	\$ 349	\$ 23
Net diff bet projected and actual earnings on program investments	-	730
Change in assumptions	168	418
Changes in proportion	75	41
Employer contributions subsequent to the measurement date	296	-
Total	<u>\$ 888</u>	<u>\$ 1,212</u>

HRSD reported \$318,000 and \$296,000 as of June 30, 2023 and 2022, 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, 2024 and 2023, 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)		2023	2022
Years ended June 30			
2023		\$ -	(141)
2024		(67)	(109)
2025		(71)	(113)
2026		(177)	(223)
2027		5	(34)
2028		(47)	-
		<u>\$ (357)</u>	<u>(620)</u>

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

For the years ended June 30, 2023 and 2022, HRSD recognized HIC Program OPEB expense of \$96,000 and \$95,000, 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, 2023:		
Differences between expected and actual experience	\$ 29	\$ 49
Net diff bet projected and actual earnings on program investments	-	29
Change in assumptions	102	2
Employer contributions subsequent to the measurement date	124	-
Total	<u>\$ 255</u>	<u>\$ 80</u>
Year ended June 30, 2022:		
Differences between expected and actual experience	\$ 40	\$ -
Net diff bet projected and actual earnings on program investments	-	113
Change in assumptions	40	6
Employer contributions subsequent to the measurement date	115	-
Total	<u>\$ 195</u>	<u>\$ 119</u>

NOTES TO THE FINANCIAL STATEMENTS

HRSD reported \$124,000 for FY 2023 and \$115,000 for FY 2022 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, 2024 and 2023, 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)	2023	2022
<u>Years ended June 30</u>		
2023	\$ -	(8)
2024	13	(6)
2025	13	(7)
2026	(2)	(22)
2027	24	4
2028	3	-
	<u>\$ 51</u>	<u>\$ (39)</u>

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

For the years ended June 30, 2023 and 2022, HRSD reported deferred outflows of resources and deferred inflows of resources related to the RHP, GLI and HIC OPEB plans from the following sources:

(in thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Year ended June 30, 2023:		
Differences between expected and actual experience	\$ 8,582	\$ 4,101
Net diff bet projected and actual earnings on program investments	3,037	219
Changes in proportion	54	156
Change in assumptions	215	5,925
Employer contributions subsequent to the measurement date	442	-
Total	<u>\$ 12,330</u>	<u>\$ 10,401</u>
Year ended June 30, 2022:		
Differences between expected and actual experience	\$ 6,518	\$ 4,739
Net diff bet projected and actual earnings on program investments	4,778	843
Change in assumptions	75	41
Changes in proportion	208	1,663
Employer contributions subsequent to the measurement date	411	-
Total	<u>\$ 11,990</u>	<u>\$ 7,286</u>

HRSD reported \$442,000 for FY 2023 and \$411,000 for FY 2022 as deferred outflows of resources related to the OPEB plans resulting from HRSD's contributions subsequent to the measurement date which will be recognized as a reduction of the net OPEB Liability in the Fiscal Year ending June 30, 2024 and 2023, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the OPEB plans will be recognized in HRSD's OPEB expense in future reporting periods as follows:

(in thousands)		
Years ended June 30	2023	2022
2023	\$ -	\$ 417
2024	60	491
2025	91	521
2026	2,127	2,553
2027	(504)	(72)
2028	(483)	383
Thereafter	196	-
	<u>\$ 1,487</u>	<u>\$ 4,293</u>

HRSD reported \$2,456,000 for FY 2023 and \$1,799,000 for FY 2022 as combined OPEB expenses related to the RHP, GI and HIC OPEB plans as follows:

(in thousands)		
Years ended June 30	2023	2022
RHP	2,274	1,569
GLI	86	135
HIC	96	95
Total OPEB	<u>\$ 2,456</u>	<u>\$ 1,799</u>

### Actuarial Methods and Assumptions

The total RHP OPEB liabilities were based on actuarial valuations as of June 30, 2022 and 2021, 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, 2023 and 2022.

#### Year Ended June 30, 2023:

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 MP2021 Mortality Improvement Scale.
Disabled Retirees	Pub-2010 General Disabled Retirees Headcount-Weighted Mortality Projected with Fully Generational MP2021 Mortality Improvement Scale.
Active Retirees	Pub-2010 General Employees Headcount-Weighted Mortality Projected with Fully Generational MP2021 Mortality Improvement Scale.

#### Year Ended June 30, 2022:

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.

NOTES TO THE FINANCIAL STATEMENTS

The total GLI and HIC OPEB liabilities were based on actuarial valuations as of June 30, 2021, 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, 2022:

Year Ended June 30, 2022:

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:	Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years.
Post-Retirement:	Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set forward 3 years.
Post-Disablement:	Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years.
Beneficiaries and Survivors	Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years.
Mortality Improvement Scale	Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates.

Year Ended June 30, 2021:

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.
Beneficiaries and Survivors	Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years.
Mortality Improvement Scale	Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates.

The actuarial assumptions used in the June 30, 2021, valuation were based on the results of an actuarial experience study for the period from July 1, 2016, through June 30, 2020, 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	Update to PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020
Pre-retirement, post-retirement healthy, and disabled	Adjusted rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/Hybrid; changed final retirement age from 75 to 80 for all
Retirement Rates	Adjusted rates to better fit experience at each age and service decrement through 9 years of service
Withdrawal Rates	No change
Disability Rates	No change
Salary Scale	No change
Line of Duty Disability	No change
Discount Rate	No change

## 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 tables:

Year Ended June 30, 2023

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Geometric Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return</u>
Domestic Equity	39.00%	7.67%	2.99%
International Developed Equity	15.00%	7.52%	1.13%
International Emerging Markets Equity	6.00%	7.51%	0.45%
Core Fixed	20.00%	3.99%	0.80%
Investment Grade Corporate Debt	10.00%	5.03%	0.50%
Emerging Markets Debt	5.00%	5.24%	0.26%
High Yield	5.00%	5.66%	0.28%
Total	<u>100.00%</u>		<u>6.41%</u>
		Inflation	2.50%
		* Expected arithmetic nominal return	<u>8.91%</u>

\* The above allocation provides a one-year return of 8.91%. 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, 2022

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Geometric Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return</u>
Domestic Equity	39.00%	7.60%	2.96%
International Developed Equity	15.00%	7.30%	1.10%
International Emerging Markets Equity	6.00%	7.70%	0.46%
Core Fixed	20.00%	3.90%	0.78%
Investment Grade Corporate Debt	10.00%	3.90%	0.39%
Emerging Markets Debt	5.00%	4.90%	0.25%
High Yield	5.00%	5.00%	0.25%
Total	<u>100.00%</u>		<u>6.19%</u>
		Inflation	2.50%
		* Expected arithmetic nominal return	<u>8.69%</u>

\* The above allocation provides a one-year return of 8.69%. 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.

NOTES TO THE FINANCIAL STATEMENTS

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 GLI and HIC'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 tables:

Year Ended June 30, 2023

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Arithmetic Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return *</u>
Public Equity	34.00%	5.71%	1.94%
Fixed Income	15.00%	2.04%	0.31%
Credit Strategies	14.00%	4.78%	0.67%
Real Assets	14.00%	4.47%	0.63%
Private Equity	14.00%	9.73%	1.36%
MAPS - Multi-Asset Public Strategies	6.00%	3.73%	0.22%
PIP-Private Investment Partnership	3.00%	6.55%	0.20%
Total	100.00%		5.33%
		Inflation	2.50%
	** Expected arithmetic nominal return		7.83%

\* The above allocation provides a one-year return of 7.83%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the System, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.72%, including expected inflation of 2.50%.

\*\* On October 10, 2019, the VRS Board elected a long-term rate of return of 6.75%, which was roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation at that time, providing a median return of 7.11%, including expected inflation of 2.5%.

Year Ended June 30, 2022

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Arithmetic Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return *</u>
Public Equity	34.00%	5.00%	1.70%
Fixed Income	15.00%	0.57%	0.09%
Credit Strategies	14.00%	4.49%	0.63%
Real Assets	14.00%	4.76%	0.67%
Private Equity	14.00%	9.94%	1.39%
MAPS - Multi-Asset Public Strategies	6.00%	3.29%	0.20%
PIP-Private Investment Partnership	3.00%	6.84%	0.21%
Total	100.00%		4.89%
		Inflation	2.50%
	** Expected arithmetic nominal return		7.39%

\* The above allocation provides a one-year return of 7.39%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the System, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.72%, including expected inflation of 2.50%.

\*\* On October 10, 2019, the VRS Board elected a long-term rate of return of 6.75%, which was roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation at that time, providing a median return of 7.11%, including expected inflation of 2.5%.

Discount Rates

The discount rate used to measure the total OPEB liability for the RHP, as of June 30, 2023 and 2022, 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 OPEB liability was 6.75% as of June 30, 2023 and 2022. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made in accordance with the VRS funding policy and at rates equal to the actuarially determined contribution rates adopted by the VRS Board of Trustees. Through the fiscal years ending June 30, 2022 and 2021, the rate contributed by the entity for the GLI and HIC OPEB will be subject to the portion of the VRS Board certified rates that are funded by the Virginia General Assembly which was 100% of the actuarially determined contribution rate. From July 1, 2021

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

### Change in Net OPEB Liability (Asset)

HRSD's net RHP OPEB liability (Asset) was measured as of June 30, 2023 and 2022, using a June 30, 2022 and 2021 valuation, which has been rolled forward to the June 30, 2023 and 2022 measurement dates.

RHP (in thousands)	Total RHP OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net RHP OPEB Liability (Asset) (a) - (b)
<b>RHP OPEB Liability (Asset) Balances at June 30, 2021</b>	<b>\$ 68,653</b>	<b>\$ 71,666</b>	<b>\$ (3,013)</b>
Changes for the year - Increase (Decrease):			
Service cost	1,435	-	1,435
Interest	4,052	-	4,052
Difference between expected and actual experience	2,303	-	2,303
Contributions - employer	-	2,260	(2,260)
Net investment income	-	(9,887)	9,887
Benefit payments, including refunds of employee contributions	(1,902)	(1,902)	-
Net changes	5,888	(9,529)	15,417
<b>RHP OPEB Liability Balances at June 30, 2022</b>	<b>\$ 74,541</b>	<b>\$ 62,137</b>	<b>\$ 12,404</b>
Changes for the year - Increase (Decrease):			
Service cost	1,534	-	1,534
Interest	4,398	-	4,398
Changes of assumptions	(5,285)	-	(5,285)
Difference between expected and actual experience	3,617	-	3,617
Contributions - employer	-	2,467	(2,467)
Net investment income	-	5,148	(5,148)
Benefit payments, including refunds of employee contributions	(2,329)	(2,329)	-
Net changes	1,935	5,286	(3,351)
<b>RHP OPEB Liability Balances at June 30, 2023</b>	<b>\$ 76,476</b>	<b>\$ 67,423</b>	<b>\$ 9,053</b>

RHP fiduciary net position as a percentage of the total RHP OPEB liability was 88.16% and 83.36% as of June 30, 2023 and 2022, respectively.

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, 2022 and 2021, net OPEB liability amounts for the GLI Program are as follows:

### GLI

(in thousands)	2022	2021
Total GLI OPEB Liability	\$ 3,672,085	\$ 3,577,346
Plan Fiduciary Net Position	2,467,989	2,413,074
Net GLI OPEB Liability	<u>\$ 1,204,096</u>	<u>\$ 1,164,272</u>
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability:	67.21%	67.45%

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

NOTES TO THE FINANCIAL STATEMENTS

HRSD's net HIC OPEB liability was measured as of June 30, 2022. The total HIC OPEB liability was determined by an actuarial valuation performed as of June 30, 2021, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2022.

HIC (in thousands)	Total HIC OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net HIC OPEB Liability (a) - (b)
<b>HIC OPEB Liability Balances at June 30, 2020</b>	<b>\$ 2,145</b>	<b>\$ 923</b>	<b>\$ 1,222</b>
Changes for the year - Increase (Decrease):			
Service cost	28	-	28
Interest	140	-	140
Changes of assumptions	15	-	15
Difference between expected and actual experience	5	-	5
Contributions - employer	-	114	(114)
Net investment income	-	238	(238)
Benefit payments, including refunds of employee contributions	(137)	(137)	-
Administrative expense	-	(3)	3
Net changes	51	212	(161)
<b>HIC OPEB Liability Balances at June 30, 2021</b>	<b>\$ 2,196</b>	<b>\$ 1,135</b>	<b>\$ 1,061</b>
Changes for the year - Increase (Decrease):			
Service cost	22	-	22
Interest	145	-	145
Changes of assumptions	88	-	88
Difference between expected and actual experience	(59)	-	(59)
Contributions - employer	-	115	(115)
Net investment income	-	2	(2)
Benefit payments, including refunds of employee contributions	(151)	(151)	-
Administrative expense	-	(2)	2
Other changes	-	9	(9)
Net changes	45	(27)	72
<b>HIC OPEB Liability Balances at June 30, 2022</b>	<b>\$ 2,241</b>	<b>\$ 1,108</b>	<b>\$ 1,133</b>

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 (asset) 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:

RHP Discount Rate	1% Decrease (5.00%)	Current Discount Rate (6.0%)	1% Increase (7.00%)
Net RHP OPEB Liability/(Asset) (in thousands)			
Year ended June 30, 2023	\$ 20,800	\$ 9,053	\$ (435)
Year ended June 30, 2022	25,533	12,404	1,989

The following table presents the net RHP OPEB liability (asset) 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:

RHP Ultimate Trend	1% Decrease (3.00%)	Healthcare Cost Trend Rate (4.00%)	1% Increase (5.00%)
Net RHP OPEB Liability/(Asset) (in thousands)			
Year ended June 30, 2023	\$ (1,772)	\$ 9,053	\$ 22,739
Year ended June 30, 2022	491	12,404	27,823

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:

GLI Discount Rate	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
GLI Net OPEB Liability (in thousands)			
Year ended June 30, 2023	\$ 4,417	\$ 3,035	\$ 1,919
Year ended June 30, 2022	4,467	3,058	1,919

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:

HIC Discount Rate	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
HIC Net OPEB Liability (in thousands)			
Year ended June 30, 2023	\$ 1,373	\$ 1,133	\$ 929
Year ended June 30, 2022	1,300	1,061	858

#### GLI Fiduciary Net Position and HIC Plan Data

Information about the VRS Political Subdivision Health Insurance Credit Program and Group Life Insurance Program's Fiduciary Net Position are available in the separately issued VRS 2022 *Annual Comprehensive Financial Report*. A copy of the 2022 VRS Annual Report may be downloaded from the VRS website at [varetire.org/pdf/publications/2022-annual-report.pdf](http://varetire.org/pdf/publications/2022-annual-report.pdf), or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

## **NOTE 8 – DEFINED BENEFIT PENSION PLAN**

### Plan 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 50 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.

## NOTES TO THE FINANCIAL STATEMENTS

- 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 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.

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2021 Annual Report. A copy of the 2021 VRS Annual Report may be downloaded from the VRS website at [varetire.org/pdf/publications/2021-annual-report.pdf](http://varetire.org/pdf/publications/2021-annual-report.pdf), or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

Employees Covered by Benefit Terms

As of the June 30, 2021 and 2020 actuarial valuation dates, the following employees were covered by the benefit terms of the pension plan:

	2021	2020
Number of:		
Retirees and Beneficiaries	434	418
Inactive Members Vested	112	108
Inactive Members Nonvested	161	160
Active Elsewhere in VRS	78	79
Active Employees	816	806
Total	<u>1,601</u>	<u>1,571</u>

Contributions

The contribution requirement for active employees is governed by § 51.1-145 of the Code of Virginia, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement. HRSD's contractually required employer contribution rate for the year ended June 30, 2023 was 7.06% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2021.

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. Contributions to the pension plan from HRSD were \$3,592,000 and \$3,441,000 for the years ended June 30, 2023 and 2022, 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, 2022. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2021, rolled forward to the measurement date of June 30, 2022.

NOTES TO THE FINANCIAL STATEMENTS

Actuarial Methods and Assumptions

The total pension liability for employees in HRSD’s retirement plan was based on actuarial valuations as of June 30, 2021, 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, 2022.

Year Ended June 30, 2022	
Inflation	2.5 percent
Salary increases, including inflation	3.5 percent to 5.35 percent
Investment rate of return	6.75%, net of pension plan investment expenses, including inflation
Mortality:	
Mortality rates:	
Pre-Retirement	Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years
Post-Retirement	Pub-2010 Amount Weighted Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set back 3 years.
Post-Disablement	Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years
Beneficiaries and Survivors	Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years
Mortality Improvement	Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

The actuarial assumptions used in the June 30, 2021, valuation were based on the results of an actuarial experience study for the period from July 1, 2016, through June 30, 2020, 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	Update to PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020.
Retirement Rates	Adjusted rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/Hybrid; changed final retirement age
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	No change
Salary Scale	No change
Line of Duty Disability	No change
Discount Rate	No change

### 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.

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)	Long-Term Target Asset Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return *
Public equity	34.00%	5.71%	1.94%
Fixed income	15.00%	2.04%	0.31%
Credit strategies	14.00%	4.78%	0.67%
Real assets	14.00%	4.47%	0.63%
Private equity	14.00%	9.73%	1.36%
MAPS - Multi-Asset Public Strategies	6.00%	3.73%	0.22%
PIP - Private Investment Partnership	3.00%	6.55%	0.20%
Total	<u>100.00%</u>		<u>5.33%</u>
		Inflation	2.50%
		** Expected arithmetic nominal return	<u>7.83%</u>

\* The above allocation provides a one-year return of 7.83%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.72%, including expected inflation of 2.50%.

\*\* On October 10, 2019, the VRS Board elected a long-term rate of return of 6.75%, which was roughly at the 40th percentile of expected long-term results of the VRS fund asset allocation at that time, providing a median return of 7.11%, including expected inflation of 2.50%.

### 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, 2023, 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, 2021, actuarial valuations, whichever was greater. From July 1, 2022, 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.

NOTES TO THE FINANCIAL STATEMENTS

Changes in Net Pension Liability

(in thousands)	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
<b>Pension Liability Balances at June 30, 2020</b>	<b>\$ 254,451</b>	<b>\$ 215,335</b>	<b>\$ 39,116</b>
Changes for the year - Increase (Decrease):			
Service cost	4,264	-	4,264
Interest	16,787	-	16,787
Changes of assumptions	6,599	-	6,599
Difference between expected and actual experience	(266)	-	(266)
Contributions - employer	-	3,453	(3,453)
Contributions - employee	-	2,569	(2,569)
Net investment income	-	58,456	(58,456)
Benefit payments, including refunds of employee contributions	(11,512)	(11,512)	-
Administrative expense	-	(147)	147
Other changes	-	6	(6)
Net changes	15,872	52,825	(36,953)
<b>Pension Liability Balances at June 30, 2021</b>	<b>\$ 270,323</b>	<b>\$ 268,160</b>	<b>\$ 2,163</b>
Changes for the year - Increase (Decrease):			
Service cost	3,833	-	3,833
Interest	18,012	-	18,012
Difference between expected and actual experience	44	-	44
Contributions - employer	-	3,440	(3,440)
Contributions - employee	-	2,578	(2,578)
Net investment income	-	(140)	140
Benefit payments, including refunds of employee contributions	(14,637)	(14,637)	-
Administrative expense	-	(169)	169
Other changes	-	6	(6)
Net changes	7,252	(8,922)	16,174
<b>Pension Liability Balances at June 30, 2022</b>	<b>\$ 277,575</b>	<b>\$ 259,238</b>	<b>\$ 18,337</b>

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

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

Net Pension Liability (in thousands)	1% Decrease (5.75%)	Current Discount (6.75%)	1% Increase (7.75%)
Pension Discount Rate			
Year ended June 30, 2022	\$ 57,843	\$ 18,337	\$ (13,498)
Year ended June 30, 2021	39,990	2,163	(28,835)

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

HRSD recognized pension expense/(income) of \$1,631,000 and (\$2,015,000) for the years ended June 30, 2023 and 2022, respectively. At June 30, 2023 and 2022, 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, 2023:		
Differences between expected and actual experience	\$ 127	\$ 459
Changes of assumptions	4,064	-
Net diff bet projected and actual earnings on program investments	-	7,857
Employer contributions subsequent to the measurement date	3,592	-
Total	<u>\$ 7,783</u>	<u>\$ 8,316</u>
Year ended June 30, 2022:		
Differences between expected and actual experience	\$ 261	\$ 761
Changes of assumptions	7,406	-
Net diff bet projected and actual earnings on program investments	-	29,013
Employer contributions subsequent to the measurement date	3,441	-
Total	<u>\$ 11,108</u>	<u>\$ 29,774</u>

HRSD reported \$3,592,000 and \$3,441,000 as of June 30, 2023 and 2022, 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, 2024 and 2023, 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)		
Years ended June 30	2023	2022
2023	\$ -	(3,594)
2024	(580)	(4,180)
2025	(1,909)	(5,510)
2026	(5,224)	(8,823)
2027	3,588	-
	<u>\$ (4,125)</u>	<u>\$ (22,107)</u>

### Pension Plan Data

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2022 Annual Report. A copy of the 2022 VRS Annual Report may be downloaded from the VRS website at [varetire.org/pdf/publications/2022-annual-report.pdf](http://varetire.org/pdf/publications/2022-annual-report.pdf), or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

## **NOTE 9 – NOTES PAYABLE AND BONDS**

### Notes Payable

As of October 30, 2015, the District entered into a Credit Agreement with Bank of America, N.A. (the "Bank") to provide a revolving line of credit to provide interim financing or refinancing for costs of projects. Since that time, the Credit Agreement has been extended and amended, most recently as of June 30, 2022. As of June 30, 2023 and 2022, the District's revolving line of credit had a maximum commitment amount of \$100,000,000. The June 30, 2022 line of credit matures June 30, 2025. The District may request the Bank to increase the maximum commitment on the line of credit to up to \$300,000,000, subject to the Bank's approval, in its sole discretion. The District's obligation

## NOTES TO THE FINANCIAL STATEMENTS

to make payments under the Credit Agreement is a Junior Obligation within the meaning of the District's Trust Agreement, dated as of October 1, 2011, as amended and supplemented, between the District and The Bank of New York Mellon Trust Company, N.A., as trustee, and is expressly subordinate and junior to the Lien on Net Revenues Available for Debt Service (as defined in the Trust Agreement).

Interest on advances is payable monthly at a fluctuating rate per annum. Tax-exempt projects are payable at an interest rate equal to 80% of the Bloomberg Short-Term Bank Yield (BSBY) rate (for a one-month, three-month, or six-month period) plus 0.39% per annum. Taxable projects are payable at an interest rate equal to 100% of the BSBY rate plus 0.50% per annum.

At June 30, 2023 and 2022, HRSD owed \$68,580,000 and \$33,721,000 against the line of credit, respectively. At June 30, 2023 and 2022, HRSD had \$31,420,000 and \$66,279,000, respectively, available under the line of credit agreement. The agreement provides for certain actions to be taken in events of default including acceleration of payment of the line of credit balance, termination of the lender's commitment to make further advances, and increasing the interest rate in effect to a higher default rate until paid in full. The line of credit is recorded as Notes Payable in the Current Liabilities section of the Statements of Net Position.

### Bonds

HRSD issues revenue bonds for various capital improvements including but not limited to wastewater treatment plants and interceptor system improvements. HRSD's principal outstanding balance (including unamortized bond premium) as of June 30, 2023 and 2022 was \$575,134,000 and \$601,587,000, respectively.

Included in the total outstanding bond balance, HRSD has \$50 million outstanding in subordinate variable rate demand bonds, Series 2016B, utilized to partially finance its capital improvement plan. The bonds bear interest in either a Weekly Period or a Long-term Period. 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, 2023, the bonds have been successfully remarketed by the Remarketing Agent. The interest rate for the bonds at June 30, 2023 and 2022 was 2.21% and 0.67%, respectively. The 2023 rate was used to calculate interest maturity amounts shown below.

### Virginia Resources Authority (VRA)

HRSD is indebted for bond issues payable to the 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. HRSD's principal outstanding balance as of June 30, 2023 and 2022, was \$324,428,000 and \$266,885,000, respectively.

### Water Infrastructure Finance and Innovation Act (WIFIA)

The Water Infrastructure Finance and Innovation Act of 2014 (WIFIA) established the WIFIA program, a federal credit program administered by EPA for eligible water and wastewater infrastructure projects. The WIFIA implementation rule outlines the eligibility and other requirements for prospective borrowers. The construction completion eligibility timeline required HRSD to enter into a Master Financing Agreement (MFA) with the WIFIA program. The MFA sets all the requirement conditions of the projects that will be funded under this program. To comply with the construction schedule completion requirements, the program will be funded in multiple tranches. Each tranche will have terms determined at the time of closing. To date HRSD has closed Tranche 1 for \$225,867,000 at 1.42% and Tranche 2 for \$476,582,000 at 1.95%. The remaining balance of the MFA, \$306,284,000, is planned to close in FY26. A liability is recognized when funds are drawn to reimburse HRSD for eligible expenses. During fiscal year 2023, HRSD has only drawn on WIFIA Tranche 1. The principal outstanding balance as of June 30, 2023, was \$80,180,000. There was no outstanding balance as of June 30, 2022.

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 6/30/2021	Additions	Deductions	Balance at 6/30/2022	Additions	Deductions	Balance at 6/30/2023	Due within One year
<b>Bonds</b>								
Series-2019A	\$ 202,690	\$ -	\$ (3,225)	\$ 199,465	\$ -	\$ (3,275)	\$ 196,190	\$ 3,335
Series-2018A	19,450	-	(1,090)	18,360	-	(1,145)	17,215	1,205
Series-2017A	72,055	-	-	72,055	-	-	72,055	-
Series-2016A	92,635	-	(5,875)	86,760	-	(3,080)	83,680	3,235
Series-2016B VR	50,000	-	-	50,000	-	-	50,000	50,000
Series-2014A	58,460	-	(8,070)	50,390	-	(11,825)	38,565	12,430
Series-2009B	112,185	-	(4,170)	108,015	-	(4,305)	103,710	4,445
<b>WIFIA</b>								
WIFIA-Tranche1	-	-	-	-	80,180	-	80,180	-
<b>VRA</b>								
Senior bonds	28,025	-	(2,531)	25,494	-	(2,676)	22,818	2,725
Subordinate bonds	179,703	71,955	(10,267)	241,391	73,501	(13,282)	301,610	15,823
	815,203	71,955	(35,228)	851,930	153,681	(39,588)	966,023	93,198
Unamortized bond premiums	19,803	-	(3,261)	16,542	-	(2,822)	13,719	2,363
	835,006	71,955	(38,489)	868,472	153,681	(42,410)	979,742	95,561
Notes Payable	15,299	18,422	-	33,721	34,859	-	68,580	68,580
<b>Total</b>	<b>\$ 850,305</b>	<b>\$ 90,377</b>	<b>\$ (38,489)</b>	<b>\$ 902,193</b>	<b>\$ 188,540</b>	<b>\$ (42,410)</b>	<b>\$ 1,048,322</b>	<b>\$ 164,141</b>

#### Senior bonds outstanding at June 30, 2023:

(in thousands)	Issue Amount	Principal Outstanding			Interest to Maturity	Interest Rates	Duration of Issue	Final Maturity
		Total	Current	Long-Term				
Series-2014A	\$ 111,345	\$ 38,565	\$ 12,430	\$ 26,135	\$ 2,924	5.00%	15 years	July 1, 2025
Series-2009B	134,725	103,710	4,445	99,265	57,086	5.81% - 5.87%	30 years	November 1, 2039
VRA - Metering	13,431	6,126	770	5,356	450	1.80%	20 years	September 1, 2030
VRA - WTP	19,395	9,219	1,081	8,138	721	1.80%	20 years	March 1, 2031
VRA - NTP	9,989	4,760	559	4,201	372	1.80%	20 years	March 1, 2031
VRA - JRTP	5,727	2,713	315	2,398	242	2.05%	20 years	March 1, 2031
<b>Total</b>		<b>\$ 165,093</b>	<b>\$ 19,600</b>	<b>\$ 145,493</b>	<b>\$ 61,795</b>			

#### Maturities of senior bond principal and interest as of June 30, 2023:

(in thousands) June 30,	Principal		Interest	
2024	\$ 19,600	\$ 7,942		
2025	20,450	7,007		
2026	20,671	6,030		
2027	7,843	5,368		
2028	8,086	5,021		
2029 - 2033	37,588	19,541		
2034 - 2038	34,925	9,947		
2039 - 2043	15,930	939		
	<b>\$ 165,093</b>	<b>\$ 61,795</b>		

NOTES TO THE FINANCIAL STATEMENTS

Subordinate revenue bonds outstanding at June 30, 2023:

(in thousands)	Issue Amount	Principal Outstanding			Interest to Maturity	Interest Rates	Duration of Issue	Final Maturity
		Total	Current	Long-term				
Series-2019A	\$ 205,675	\$ 196,190	\$ 3,335	\$ 192,855	\$ 47,527	1.81% - 2.78%	20 Years	February 1, 2039
Series-2018A	63,185	17,215	1,205	16,010	5,162	5.00%	15 years	October 1, 2033
Series-2017A	83,485	72,055	-	72,055	36,534	3.50% - 5.00%	26 years	October 1, 2043
Series-2016A	246,845	83,680	3,235	80,445	25,033	3.00% - 5.00%	20 years	August 1, 2036
VRA - AB Generator	1,235	229	75	154	8	2.00%	20 years	April 1, 2026
VRA - Atlantic Expan	7,340	1,792	441	1,351	41	1.00%	20 years	February 1, 2027
VRA - Ches-Eliz Expan	40,330	9,790	2,411	7,379	222	1.00%	20 years	June 1, 2027
VRA - Williamsburg PS	1,605	437	95	342	11	1.00%	20 years	July 1, 2027
VRA - York River Expan	29,683	14,182	1,610	12,572	1,695	2.72%	20 years	March 1, 2031
VRA - BHTP	7,584	3,710	404	3,306	351	2.05%	20 years	September 1, 2031
VRA - ABTP	50,000	27,141	2,616	24,525	2,867	2.05%	20 years	September 1, 2032
VRA - Atlantic	6,318	3,592	341	3,251	221	1.15%	20 years	February 1, 2033
VRA - Huxley	3,868	3,500	183	3,317	386	1.20%	20 years	August 1, 2040
VRA - TP Dewatering	3,498	3,165	164	3,001	352	1.20%	20 years	October 1, 2040
VRA - BHTP Switchgear	7,619	6,871	384	6,487	1,069	1.85%	20 years	December 1, 2040
VRA - Deep Creek IFM	4,989	4,529	234	4,295	506	1.20%	20 years	December 1, 2040
VRA - Ferguson	866	736	31	705	205	2.70%	25 years	March 1, 2042
VRA - Group Loan	100,000	97,692	4,629	93,063	11,342	1.15%	22 years	March 1, 2042
VRA - Rodman	1,096	923	38	885	224	2.25%	25 years	June 1, 2043
VRA - ES*	-	18,008	-	18,008	3,862	1.30%	20 years	October 1, 2043
VRA - 2022 Projects*	-	40,868	-	40,868	12,064	1.30%	20 years	December 1, 2043
VRA - Lucas	2,949	2,593	93	2,500	811	2.65%	27 years	October 1, 2044
VRA - ATP	57,149	54,463	1,836	52,627	15,639	2.25%	30 years	March 1, 2046
VRA - Orcutt Ave	7,968	7,389	238	7,151	2,584	2.85%	30 years	February 1, 2049
WIFIA-Tranche 1*	-	80,180	-	80,180	90,192	1.40%	40 years	April 1, 2060
<b>Total Fixed Rate Bonds</b>		<b>750,930</b>	<b>23,598</b>	<b>727,332</b>	<b>258,908</b>			
						Variable (2.21% at June 30, 2023)		
Series-2016B VR	50,000	50,000	50,000	-	25,610		30 years	August 1, 2046
<b>Total</b>		<b>\$ 800,930</b>	<b>\$ 73,598</b>	<b>\$ 727,332</b>	<b>\$ 284,518</b>			

\*These VRA and WIFIA bonds do not show an issue amount because the eligible loan balance has not been fully drawn as of June 30, 2023. The principal amounts reflected represent total draws as of June 30, 2023. The total eligible loan amount on these Subordinate VRA and WIFIA bonds is \$325,866,000, of which \$238,297,000 is available at June 30, 2023.

Maturities of subordinate bond principal and interest as of June 30, 2023:

(in thousands)	Principal	Interest
June 30, 2024	\$ 73,598	\$ 21,460
2025	30,090	20,279
2026	31,141	20,680
2027	45,213	19,919
2028	42,956	18,832
2029 - 2033	226,050	76,683
2034 - 2038	188,625	45,605
2039 - 2043	72,362	27,296
2044 - 2048	16,136	19,679
2049 - 2053	74,759	14,085
	<b>\$ 800,930</b>	<b>\$ 284,518</b>

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, 2023, the following defeased bonds from advance refunding are still outstanding:

Defeased In	Original Issue	Amount	Redemption
2017	Series 2016A	\$ 8,091,000	08/01/26
2019	Series 2014A	36,260,000	07/01/24
2019	Series 2016A	24,389,000	08/01/26
2019	Series 2016A	111,328,000	08/01/26
2019	Series 2017A	11,772,000	10/01/27
2019	Series 2018A	11,906,000	10/01/27
2019	Series 2018A	30,882,000	10/01/27
		<u>\$ 234,628,000</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, 2023 and 2022, \$33,830,000 and \$33,134,000, respectively, were contained in the unrestricted net position.

### Reserved Portion of Unrestricted 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, 2023 and 2022, \$194,000 and \$178,000, 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, 2023 and 2022.

*Reserved for construction.* A reserve for the construction program is based on funds designated by HRSD's Commission for such purposes. At June 30, 2023 and 2022, \$3,115,000 and \$32,535,000, respectively, was contained in the unrestricted net position.

## 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. Hospitalization Reserve is included in Other Liabilities in the Current Liabilities section of the Statements of Net Position.

(in thousands)	Beginning of Fiscal Year	Estimated Claims Incurred	Claims Paid	End of Fiscal Year
2022	\$ 4,777	\$ 16,503	\$ (16,644)	\$ 4,636
2023	4,636	16,390	(15,929)	5,097

## NOTES TO THE FINANCIAL STATEMENTS

**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 memorialized in 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 five times, most recently on February 8, 2022 (the “Amended Consent Decree”). A sixth amendment, which is expected to reorder and/or revise certain projects (with no change in overall program cost) is expected to be entered by December 31, 2023.

The Amended Consent Decree has two major operative requirements. First, it requires HRSD to implement its approved Regional Wet Weather Management Plan (“RWWMP”) to control 69 percent of the capacity-related sewer overflow volume predicted to occur in a five-year storm event. Because HRSD has assumed responsibility for planning (in consultation with the 14 affected localities), designing, funding, and implementing the controls (high priority projects) in both the localities’ systems and the HRSD system contained in the approved RWWMP, 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 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 includes a schedule for wastewater system improvements that expressly accommodates HRSD’s SWIFT program. That schedule requires that HRSD implement \$200 million worth of High Priority Project 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 SWIFT project. The Amended Consent Decree gives HRSD until 2032 to invest \$1.1 billion in the SWIFT program. Finally, the Amended Consent Decree provides that if HRSD will not make the full \$1.1 billion investment in the SWIFT Project by 2032 then EPA can require HRSD to accelerate some or all of the second group (\$200 million worth) of High Priority sewer overflow control projects to offset the avoided investment in the SWIFT program.

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, 2023, HRSD has outstanding commitments for contracts in progress of approximately \$1.3 billion.

**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:

- 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 1-3 Year High Quality Bond Fund was \$63.07 million (valued at amortized cost) and \$62.93 million, as of June 30, 2023 and 2022, respectively. HRSD’s total investment in VIP’s Stable NAV Liquidity Pool (valued at amortized cost) was \$129.51 million and \$144.27 million as of June 30, 2023 and 2022, respectively. See Note 3 for additional information.

### 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.

(in thousands)

	Fair Value	Level 1	Level 2	Level 3
<b>Balance at June 30, 2023</b>				
<b>Investments by Fair Value Level</b>				
Mutual Funds - Equity	\$ 40,407	\$ 34,319	\$ 6,088	\$ -
Mutual Funds - Fixed Income	24,016	4,760	19,256	-
Other Income	2,805	-	-	2,805
Total Investments by Fair Value Level	\$ 67,228	\$ 39,079	\$ 25,344	\$ 2,805
<b>Cash Equivalents Measured at Net Asset Value</b>				
First American Government Obligation	195			
<b>Fiduciary Net Position of HRSD’s OPEB</b>	\$ 67,423			
<b>Balance at June 30, 2022</b>				
<b>Investments by Fair Value Level</b>				
Mutual Funds - Equity	\$ 32,190	\$ 25,807	\$ 6,383	\$ -
Mutual Funds - Fixed Income	21,204	3,836	17,368	-
Miscellaneous	1,811	-	1,811	-
Other Income	2,743	-	-	2,743
Total Investments by Fair Value Level	\$ 57,948	\$ 29,643	\$ 25,562	\$ 2,743
<b>Cash Equivalents Measured at Net Asset Value</b>				
First American Government Obligation	4,189			
<b>Fiduciary Net Position of HRSD’s OPEB</b>	\$ 62,137			

Additional information about HRSD’s OPEB Plan is in Notes 3 and 7.

## NOTES TO THE FINANCIAL STATEMENTS

**NOTE 14 - FIDUCIARY ACTIVITIES**

As discussed in Note 2, HRSD has prepared fiduciary fund financial statements for the fiscal years ended June 30, 2023 and 2022. The statements include information on HRSD's Retiree Health Plan (RHP), one of HRSD's three postemployment benefits other than pensions (other postemployment benefits, or OPEB) plans, and information on funds held by HRSD to apply toward customer accounts.

Retiree Health Plan

Detailed information related to HRSD's Retiree RHP is included in Notes 2, 3, 7 and 13 and in the Required Supplementary Information section of the Annual Comprehensive Financial Report. The RHP meets the requirements of GAAP for inclusion in the fiduciary fund financial statements. HRSD's other two OPEB plans are administered by VRS so do not qualify for inclusion. The RHP had total assets of \$67.4 million and \$62.1 million as of June 30, 2023 and 2022, respectively, which are restricted to providing postretirement benefits for plan participants.

Coronavirus Aid, Relief, and Economic Securities Act

In response to the COVID-19 pandemic disaster, the United States federal government enacted the Coronavirus Aid, Relief, and Economic Securities Act of 2020 (CARES Act) to provide funding for numerous programs to address the COVID-19 pandemic disaster, providing assistance to states, local, territorial, and tribal governments for direct impacts of the COVID-19 pandemic disaster through the establishment of the Coronavirus Relief Fund (CRF). Consistent with the CARES Act, the Commonwealth of Virginia established a COVID-19 Utility Relief Program (Program) to provide direct assistance to utility customers with accounts over 30 days in arrears.

HRSD had no remaining federal CARES Act funds to be distributed in the fiscal year ended June 30, 2023. During the fiscal year ending June 30, 2022, HRSD applied \$1.6 million funds received from federal CARES Act to the accounts of customers who qualified for relief under the terms of the Program. The City of Norfolk, Virginia, and James City Service Authority (the partner localities) served as pass-through agents for funds distributed through the Commonwealth of Virginia's State Corporation Commission.

American Recovery Plan Act

In further response to the COVID-19 pandemic disaster, the United States federal government enacted the American Recovery Plan Act of 2021 (ARPA) to provide funding for numerous programs to address the COVID-19 pandemic disaster, providing assistance to states, local, territorial, and tribal governments for direct impacts of the COVID-19 pandemic disaster through the establishment of the Coronavirus Relief Fund (CRF). Consistent with ARPA, the Commonwealth of Virginia established the State and Local Fiscal Recovery Funds (SLFRF) of ARPA to provide direct assistance to utility customers with accounts over 60 days in arrears.

During the fiscal year ended June 30, 2023, HRSD did not receive any additional federal SLFRF-ARPA funds but, in accordance with regulations, recorded funds that were returned to the fund, \$4 thousand, that had been previously distributed. As of June 30, 2022, HRSD had applied \$10.3 million to the accounts of customers who qualified for relief under the terms of the Program. HRSD returned \$0.4 million of unexpended funds to the Commonwealth in a timely manner in accordance with SLFRF-ARPA Rules. The City of Norfolk, Virginia, (the partner locality) served as the pass-through agent for funds distributed through the Commonwealth of Virginia's State Corporation Commission.

**NOTE 15 - SUBSEQUENT EVENTS**

In October 2015, HRSD entered into a line of credit (LOC) agreement with a bank for \$90 million. Pursuant to the First Amendment to the Second Amended and Restated Credit Agreement, dated August 31, 2023 the maximum outstanding authorization on the LOC was increased to \$200 million. As of June 30, 2023, there was \$68,580,000 outstanding on this credit facility.

# Required Supplementary Information (Unaudited)





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# INDEX TO REQUIRED SUPPLEMENTARY INFORMATION

ANNUAL COMPREHENSIVE FINANCIAL REPORT / HAMPTON ROADS SANITATION DISTRICT

In accordance with the Governmental Accounting Standards Board, the following information is required to accompany the Basic Financial Statements.

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Schedule of Changes in Net Pension Liability and Schedule of Employer Pension Contributions	
<b>OPEB</b>	<b>64</b>
Schedule of Changes in Net Liability and Schedule of Employer OPEB Contributions for each of HRSD's three OPEB plans: RHP, GLI, and HIC	

Unaudited – See accompanying independent auditors' report

**SCHEDULE OF CHANGES IN  
NET PENSION LIABILITY AND RELATED RATIOS**

(in thousands)	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>									
Service cost	\$ 3,833	\$ 4,264	\$ 4,229	\$ 3,946	\$ 3,825	\$ 4,145	\$ 4,025	\$ 4,115	\$ 3,943
Interest	18,012	16,787	16,223	15,598	14,953	14,750	13,872	13,559	12,906
Changes of benefit terms	-	6,599	-	-	-	-	-	-	-
Changes in assumptions	-	-	-	7,378	-	(3,975)	-	-	-
Difference between expected and actual experience	44	(266)	(991)	760	(101)	(3,175)	2,980	(4,910)	-
Benefit payments, including refunds of employee contributions	(14,637)	(11,512)	(10,696)	(9,655)	(9,250)	(8,475)	(8,161)	(8,446)	(6,607)
<b>Net change in total pension liability</b>	<b>7,252</b>	<b>15,872</b>	<b>8,765</b>	<b>18,027</b>	<b>9,427</b>	<b>3,270</b>	<b>12,716</b>	<b>4,318</b>	<b>10,242</b>
<b>Total pension liability - beginning</b>	<b>270,323</b>	<b>254,451</b>	<b>245,686</b>	<b>227,659</b>	<b>218,232</b>	<b>214,962</b>	<b>202,246</b>	<b>197,928</b>	<b>187,686</b>
<b>Total pension liability - ending (a)</b>	<b>\$ 277,575</b>	<b>\$ 270,323</b>	<b>\$ 254,451</b>	<b>\$ 245,686</b>	<b>\$ 227,659</b>	<b>\$ 218,232</b>	<b>\$ 214,962</b>	<b>\$ 202,246</b>	<b>\$ 197,928</b>
<b>Plan fiduciary net position</b>									
Contributions - employer	\$ 3,440	\$ 3,453	\$ 2,897	\$ 2,866	\$ 3,710	\$ 3,609	\$ 4,083	\$ 4,099	\$ 4,114
Contributions - employee	2,578	2,569	2,538	2,468	2,424	2,351	2,286	2,314	2,267
Net investment income	(140)	58,456	4,115	13,739	14,451	21,526	3,062	7,807	23,313
Benefit payments, including refunds of employee contributions	(14,637)	(11,512)	(10,696)	(9,655)	(9,250)	(8,475)	(8,161)	(8,446)	(6,607)
Administrative expense	(169)	(147)	(142)	(137)	(125)	(124)	(109)	(107)	(125)
Other	6	6	(5)	(8)	(12)	(19)	(1)	(2)	1
<b>Net change in plan fiduciary net position</b>	<b>(8,922)</b>	<b>52,825</b>	<b>(1,293)</b>	<b>9,273</b>	<b>11,198</b>	<b>18,868</b>	<b>1,160</b>	<b>5,665</b>	<b>22,963</b>
<b>Plan fiduciary net position - beginning</b>	<b>268,160</b>	<b>215,335</b>	<b>216,628</b>	<b>207,355</b>	<b>196,157</b>	<b>177,289</b>	<b>176,129</b>	<b>170,464</b>	<b>147,501</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 259,238</b>	<b>\$ 268,160</b>	<b>\$ 215,335</b>	<b>\$ 216,628</b>	<b>\$ 207,355</b>	<b>\$ 196,157</b>	<b>\$ 177,289</b>	<b>\$ 176,129</b>	<b>\$ 170,464</b>
<b>Net pension liability - ending (a) - (b)</b>	<b>\$ 18,337</b>	<b>\$ 2,163</b>	<b>\$ 39,116</b>	<b>\$ 29,058</b>	<b>\$ 20,304</b>	<b>\$ 22,075</b>	<b>\$ 37,673</b>	<b>\$ 26,117</b>	<b>\$ 27,465</b>
<b>Plan fiduciary net position as a percentage of the total pension liability (b)/(a)</b>	<b>93.39%</b>	<b>99.20%</b>	<b>84.63%</b>	<b>88.17%</b>	<b>91.08%</b>	<b>89.88%</b>	<b>82.47%</b>	<b>87.09%</b>	<b>86.12%</b>
<b>Covered payroll ( c )</b>	<b>\$ 54,750</b>	<b>\$ 54,107</b>	<b>\$ 53,085</b>	<b>\$ 51,336</b>	<b>\$ 50,874</b>	<b>\$ 49,286</b>	<b>\$ 47,838</b>	<b>\$ 47,674</b>	<b>\$ 46,096</b>
<b>Net pension liability as a percentage of the covered payroll ((a)-(b))/( c )</b>	<b>33.49%</b>	<b>4.00%</b>	<b>73.69%</b>	<b>56.60%</b>	<b>39.91%</b>	<b>44.79%</b>	<b>78.75%</b>	<b>54.78%</b>	<b>59.58%</b>

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, 2014 THROUGH 2023**

Date	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2023	\$ 3,592,000	\$ 3,592,000	\$ -	\$ 58,965,000	6.09%
2022	3,441,000	3,441,000	-	54,750,000	6.28%
2021	3,453,000	3,453,000	-	54,107,000	6.38%
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%

**Notes to Required Supplementary Information For the Year Ended June 30, 2023:**

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, 2021, valuation were based on the results of an actuarial experience study for the period from July 1, 2016, through June 30, 2020, 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	Update to PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020.
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Retirement Rates	Adjusted rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/ Hybrid; changed final retirement age
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	No change
Salary Scale	No change
Line of Duty Disability	No change
Discount Rate	No change

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

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

**SCHEDULE OF CHANGES IN  
NET RHP OPEB LIABILITY (ASSET) AND RELATED RATIOS**

(in thousands)

	2023	2022	2021	2020	2019	2018	2017
<b>Total OPEB liability</b>							
Service cost	\$ 1,534	\$ 1,435	\$ 1,333	\$ 1,345	\$ 1,300	\$ 1,260	\$ 1,188
Interest	4,398	4,052	3,672	3,883	3,571	3,391	3,208
Changes in assumptions	(5,285)	-	-	(518)	(1,607)	-	-
Differences between expected and actual experience	3,617	2,303	2,930	(7,074)	3,302	-	-
Benefit payments, including refunds of employee contributions	(2,329)	(1,902)	(1,425)	(1,186)	(1,149)	(1,791)	(892)
<b>Net change in total OPEB liability</b>	1,935	5,888	6,510	(3,550)	5,417	2,860	3,504
<b>Total OPEB liability - beginning</b>	74,541	68,653	62,143	65,693	60,276	57,416	53,913
<b>Total OPEB liability - ending (a)</b>	\$ 76,476	\$ 74,541	\$ 68,653	\$ 62,143	\$ 65,693	\$ 60,276	\$ 57,417
<b>Plan fiduciary net position</b>							
Contributions - employer	\$ 2,467	\$ 2,260	\$ 1,963	\$ 2,730	\$ 2,993	\$ 2,729	\$ 2,558
Contributions - retirees	-	-	-	-	-	303	-
Net investment income	5,148	(9,887)	14,216	3,343	3,078	3,450	3,957
Benefit payments, including refunds of employee contributions	(2,329)	(1,902)	(1,425)	(1,186)	(1,149)	(1,791)	(892)
Administrative expense	-	-	-	-	-	(114)	(495)
<b>Net change in plan fiduciary net position</b>	5,286	(9,529)	14,754	4,887	4,922	4,577	5,128
<b>Plan fiduciary net position - beginning</b>	62,137	71,666	56,912	52,025	47,103	42,526	37,398
<b>Plan fiduciary net position - ending (b)</b>	\$ 67,423	\$ 62,137	\$ 71,666	\$ 56,912	\$ 52,025	\$ 47,103	\$ 42,526
<b>Net OPEB liability (asset) - ending (a) - (b)</b>	\$ 9,053	\$ 12,404	\$ (3,013)	\$ 5,231	\$ 13,668	\$ 13,173	\$ 14,891
<b>Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a)</b>	88.16%	83.36%	104.39%	91.58%	79.19%	78.15%	74.07%
<b>Covered payroll (c)</b>	\$ 58,965	\$ 55,853	\$ 55,731	\$ 54,799	\$ 52,070	\$ 50,874	\$ 49,286
<b>Net OPEB liability (asset) as a percentage of the covered payroll ((a)-(b))/(c)</b>	15.35%	22.21%	(5.41%)	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, 2023:**

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 EMPLOYER RHP OPEB CONTRIBUTIONS  
FOR THE YEARS ENDED JUNE 30, 2014 THROUGH 2023**

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
2023	\$ 1,606,000	\$ 2,467,000	\$ (861,000)	\$ 58,965,000	2.72%
2022	1,828,000	2,260,000	(432,000)	55,853,000	3.27%
2021	1,858,000	1,963,000	(105,000)	55,731,000	3.33%
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%

**Notes to Required Supplementary Information For the Year Ended June 30, 2023:**

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 2022**

(in thousands)	2022	2021	2020	2019	2018	2017
Employer's Proportion of the Net GLI OPEB Liability	0.2521%	0.2626%	0.25814%	0.26208%	0.26214%	0.26016%
Employer's Proportionate Share of the Net GLI OPEB Liability	\$ 3,035	\$ 3,058	\$ 4,307	\$ 4,265	\$ 3,981	\$ 3,915
Employer's Covered Payroll	\$ 54,835	\$ 54,222	\$ 53,126	\$ 51,376	\$ 49,846	\$ 47,987
Employer's Proportionate Share of the Net GLI OPEB Liability as a Percentage of its Covered Payroll	5.53%	5.64%	8.11%	8.30%	7.99%	8.16%
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability	67.21%	67.45%	52.64%	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, 2014 THROUGH 2023**

Date	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2023	\$ 318,000	\$ 318,000	\$ -	\$ 58,965,000	0.54%
2022	296,000	296,000	-	54,835,000	0.54%
2021	293,000	293,000	-	54,222,000	0.54%
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%

**Notes to Required Supplementary Information For the Year Ended June 30, 2023:**

Changes of benefit terms

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

Changes of assumptions

The actuarial assumptions used in the June 30, 2021, valuation were based on the results of an actuarial experience study for the period from July 1, 2016, through June 30, 2020, 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	Update to PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020
Retirement Rates	Adjusted rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/ Hybrid; changed final retirement age from 75 to 80 for all
Withdrawal Rates	Adjusted rates to better fit experience at each age and service decrement through 9 years of service
Disability Rates	No change
Salary Scale	No change
Line of Duty Disability	No change
Discount Rate	No change

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

**SCHEDULE OF CHANGES IN  
NET HIC OPEB LIABILITY (ASSET) AND RELATED RATIOS**

(in thousands)

	2022	2021	2020	2019	2018	2017
<b>Total OPEB liability</b>						
Service cost	\$ 22	\$ 28	\$ 28	\$ 26	\$ 26	\$ 27
Interest	145	140	137	134	130	129
Changes in assumptions	88	15	-	50	-	(22)
Differences between expected and actual experience	(59)	5	16	26	27	-
Benefit payments, including refunds of employee contributions	(151)	(137)	(129)	(124)	(133)	(94)
<b>Net change in total OPEB liability</b>	45	51	52	112	50	40
<b>Total OPEB liability - beginning</b>	2,196	2,145	2,093	1,981	1,931	1,891
<b>Total OPEB liability - ending (a)</b>	\$ 2,241	\$ 2,196	\$ 2,145	\$ 2,093	\$ 1,981	\$ 1,931
<b>Plan fiduciary net position</b>						
Contributions - employer	\$ 115	\$ 114	\$ 111	\$ 108	\$ 95	\$ 91
Net investment income	2	238	18	56	60	90
Benefit payments, including refunds of employee contributions	(151)	(137)	(129)	(124)	(133)	(94)
Administrative expense	(2)	(3)	(2)	(1)	(1)	(1)
Other	9	-	-	-	(5)	4
<b>Net change in plan fiduciary net position</b>	(27)	212	(2)	39	16	90
<b>Plan fiduciary net position - beginning</b>	1,135	923	925	886	870	780
<b>Plan fiduciary net position - ending (b)</b>	\$ 1,108	\$ 1,135	\$ 923	\$ 925	\$ 886	\$ 870
<b>Net OPEB liability - ending (a) - (b)</b>	\$ 1,133	\$ 1,061	\$ 1,222	\$ 1,168	\$ 1,095	\$ 1,061
<b>Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a)</b>	49.44%	51.68%	43.03%	44.19%	44.72%	45.05%
<b>Covered payroll ( c )</b>	\$ 54,750	\$ 54,107	\$ 53,085	\$ 51,336	\$ 49,821	\$ 47,987
<b>Net OPEB liability as a percentage of the covered payroll ((a)-(b))/(c)</b>	2.07%	1.96%	2.30%	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, 2014 THROUGH 2023**

Date	Contractually Required Contribution	Contribution in Relation to Contractually Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
2023	\$ 124,000	\$ 124,000	\$ -	\$ 58,965,000	0.21%
2022	115,000	115,000	-	54,750,000	0.21%
2021	114,000	114,000	-	54,107,000	0.21%
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%

**Notes to Required Supplementary Information For the Year Ended June 30, 2023:**

Changes of benefit terms

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

Changes of assumptions

The actuarial assumptions used in the June 30, 2021, valuation were based on the results of an actuarial experience study for the period from July 1, 2016, through June 30, 2020, 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: actuarial assumptions as a result of the experience study are as follows:

Mortality rates:

Pre-retirement, post-retirement healthy, and disabled	Update to PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020
Retirement Rates	Adjusted rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/ Hybrid; changed final retirement age from 75 to 80 for all
Withdrawal Rates	Adjusted rates to better fit experience at each age and service decrement through 9 years of service
Disability Rates	No change
Salary Scale	No change
Line of Duty Disability	No change
Discount Rate	No change

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



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# Other Supplementary Information





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# INDEX TO OTHER SUPPLEMENTARY INFORMATION

ANNUAL COMPREHENSIVE FINANCIAL REPORT / HAMPTON ROADS SANITATION DISTRICT

In accordance with Governmental Accounting Standards Board, the following information is required to accompany the Basic Financial Statements.

**Contents**

**Page**

**Fiduciary Reports - Custodial Funds**

**74**

Combining statements for HRSD's custodial funds: CARES and ARPA.

See accompanying independent auditors' report

**COMBINING STATEMENTS OF FIDUCIARY NET POSITION  
AS OF JUNE 30, 2023 AND 2022**

(in thousands)

	CARES Fund		ARPA Fund		Total Custodial Funds	
	2023	2022	2023	2022	2023	2022
<b>ASSETS</b>						
Cash and cash equivalents	\$ -	\$ -	\$ 4	\$ -	\$ 4	\$ -
<b>NET POSITION</b>						
Restricted for Individuals, Organizations and Others	\$ -	\$ -	\$ 4	\$ -	\$ 4	\$ -

**COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
FOR FISCAL YEARS ENDED JUNE 30, 2023 AND 2022**

(in thousands)

	CARES Fund		ARPA Fund		Total Custodial Funds	
	2023	2022	2023	2022	2023	2022
<b>ADDITIONS</b>						
Custodial Fund Additions	\$ -	\$ 51	\$ 4	\$ 10,678	\$ 4	\$ 10,729
Total Additions	-	51	4	10,678	4	10,729
<b>DEDUCTIONS</b>						
Custodial Funds Disbursed to Customers	-	1,593	-	10,265	-	11,858
Custodial Funds Refunded	-	-	-	413	-	413
Total Deductions	-	1,593	-	10,678	-	12,271
Net change fiduciary net position	-	(1,542)	4	-	4	(1,542)
Net position - beginning	-	1,542	-	-	-	1,542
<b>NET POSITION - ENDING</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 4</b>	<b>\$ -</b>	<b>\$ 4</b>	<b>\$ -</b>



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# Statistical Section

(Unaudited)





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# INDEX TO STATISTICAL SECTION

ANNUAL COMPREHENSIVE FINANCIAL REPORT / HAMPTON ROADS SANITATION DISTRICT

This section of HRSD's annual comprehensive 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.

<b>Contents</b>	<b>Page</b>
<b>Demographic and Economic Information</b>	<b>81</b>
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.	
<b>Financial Trends</b>	<b>82</b>
These schedules contain trend information to help the reader understand how HRSD's financial performance and well-being have changed over time.	
<b>Debt Capacity</b>	<b>85</b>
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.	
<b>Revenue Capacity</b>	<b>86</b>
These schedules contain information to help the reader assess the factors affecting HRSD's ability to generate revenue from rate payers.	
<b>Operating Information</b>	<b>88</b>
These schedules contain information about HRSD's operations and resources to help the reader understand how 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 annual comprehensive financial reports and accounting records for the relevant year.

Unaudited – See accompanying independent auditors' report



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**DEMOGRAPHIC AND OTHER MISCELLANEOUS STATISTICS  
FOR THE LAST TEN FISCAL YEARS**

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Date of Incorporation - 1940										
Area in Square Miles (1)	4,998	4,998	4,998	3,087	3,087	3,087	3,087	2,808	2,808	2,808
Present Service Area in Square Miles (1)	766	766	766	758	758	758	758	672	672	672
Treatment Plants (Major) (2)	8	9	9	9	9	9	9	9	9	9
Treatment Plant Capacity (MGD)										
Army Base, Norfolk	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Atlantic, Virginia Beach	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Boat Harbor, Newport News	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Chesapeake-Elizabeth, Virginia Beach (2)	-	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
James River, Newport News	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Nansemond, Suffolk	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Virginia Initiative, Norfolk	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Williamsburg, 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, 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	224.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5
Small Communities Treatment Plants	8	8	7	7	7	7	5	4	4	4
Small Communities Plant Capacity (MGD)										
Central Middlesex, Middlesex County	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
King William, 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 (3)	0.050	0.050	0.050	0.050	0.050	0.050	0.050	-	-	-
Onancock, Accomack County(4)	0.750	0.750	-	-	-	-	-	-	-	-
Surry County, (5)	0.065	0.065	0.065	0.065	0.065	0.065	-	-	-	-
Town of Surry (5)	0.060	0.060	0.060	0.060	0.060	0.060	-	-	-	-
Urbanna, Middlesex County	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
West Point, 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	1.750	1.750	1.000	1.000	1.000	1.000	0.875	0.825	0.825	0.830
Miles of Interceptor Systems	561	538	540	541	541	542	540	536	532	531
Interceptor Pump Stations	90	89	90	88	87	88	89	88	83	83
Small Communities Pump Stations	46	44	42	42	41	34	38	33	33	33
Maintenance Facilities	2	2	2	2	2	2	2	2	2	2
Number of Service Connections (in thousands)	486	484	481	478	476	473	470	467	465	462
Daily Average Treatment in Millions of Gallons	135	132	154	141	153	145	153	155	152	154
Bond Rating: Moody's										
Senior	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa2	Aa2	Aa2	Aa2
Subordinate Long-term	Aa1	Aa1	Aa1	Aa1	Aa2	Aa2	-	-	-	-
Bond Rating: Standard & Poor's										
Senior	AA+	AAA								
Subordinate Long-term	AA+	AA+	AA+	AA+	AA+	AA	AA	AA	AA	AA+
Subordinate Short-term	A-1+									
Bond Rating: Fitch										
Senior	AA+									
Subordinate Long-term	AA									
Subordinate Short-term	F1+									

(1) HRSD added additional service areas in the counties of Isle of Wight and Surry during the year ended June 30, 2017 and the Eastern Shore of Virginia during the year ended June 30, 2021.

(2) The Chesapeake-Elizabeth Treatment Plant was closed on December 31, 2021. Wastewater from the area was redirected to the Atlantic Treatment Plant.

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

(4) The Onancock Plant was acquired during the year ended June 30, 2022.

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

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

(in thousands)	2023	2022	2021	2020	2019
<b>OPERATING REVENUES</b>					
Wastewater treatment charges	\$ 383,115	\$ 352,414	\$ 325,817	\$ 318,585	\$ 299,323
Miscellaneous	4,820	5,532	3,952	3,447	3,798
<b>TOTAL OPERATING REVENUES</b>	<b>387,935</b>	<b>357,946</b>	<b>329,769</b>	<b>322,032</b>	<b>303,121</b>
<b>OPERATING EXPENSES</b>					
Wastewater treatment	149,532	134,135	132,820	122,393	117,189
General and administrative	53,995	45,673	48,691	46,949	41,121
Depreciation	54,469	54,357	53,278	51,383	53,225
<b>TOTAL OPERATING EXPENSES</b>	<b>257,996</b>	<b>234,165</b>	<b>234,789</b>	<b>220,725</b>	<b>211,535</b>
<b>OPERATING INCOME</b>	<b>129,939</b>	<b>123,781</b>	<b>94,980</b>	<b>101,307</b>	<b>91,586</b>
<b>NON-OPERATING REVENUES (EXPENSES)</b>					
Wastewater facility charges	7,293	7,072	7,379	6,444	6,662
Investment income	6,068	(1,651)	471	5,876	8,719
Bond interest subsidy	2,015	2,052	2,167	2,205	2,308
Change in fair value of investments	-	-	-	-	-
Capital distributions to localities	(2,422)	(13)	(376)	-	-
Bond issuance costs	(98)	(311)	(682)	(1,290)	(53)
Disposal of capital assets	-	-	-	(739)	-
Interest expense	(27,132)	(25,007)	(25,339)	(26,179)	(27,964)
<b>NET NON-OPERATING EXPENSES</b>	<b>(14,276)</b>	<b>(17,858)</b>	<b>(16,380)</b>	<b>(13,683)</b>	<b>(10,328)</b>
<b>INCOME BEFORE CONTRIBUTIONS</b>	<b>115,663</b>	<b>105,923</b>	<b>78,600</b>	<b>87,624</b>	<b>81,258</b>
<b>CAPITAL CONTRIBUTIONS</b>					
State capital grants	234	200	-	-	2,444
Other capital contributions	1,641	2,537	2,317	578	374
<b>CHANGE IN NET POSITION</b>	<b>\$ 117,538</b>	<b>\$ 108,660</b>	<b>\$ 80,917</b>	<b>\$ 88,202</b>	<b>\$ 84,076</b>
<b>NET POSITION</b>					
Net investment in capital assets	\$ 981,437	\$ 832,427	\$ 776,253	\$ 646,505	\$ 494,779
Restricted for debt service	33,830	33,134	30,455	28,155	28,553
Restricted for debt service reserve fund	-	-	-	-	-
Unrestricted	161,755	193,923	144,116	195,247	258,373
<b>TOTAL NET POSITION</b>	<b>\$ 1,177,022</b>	<b>\$ 1,059,484</b>	<b>\$ 950,824</b>	<b>\$ 869,907</b>	<b>\$ 781,705</b>
Net Revenues Available for Debt Service (GAAP)	197,264	185,300	157,593	165,925	162,447
Add Back: Operating Expenses on Improvements Not Owned by HRSD *	2,422	13	376	-	-
<b>Net Revenues Available for Debt Service (Adjusted)</b>	<b>\$ 199,686</b>	<b>\$ 185,313</b>	<b>\$ 157,969</b>	<b>\$ 165,925</b>	<b>\$ 162,447</b>
<b>DEBT SERVICE</b>					
Senior debt	\$ 27,624	\$ 24,549	\$ 26,085	\$ 28,595	\$ 33,592
Subordinate debt	38,767	36,468	33,128	30,416	28,313
<b>Total Debt Service</b>	<b>\$ 66,391</b>	<b>\$ 61,017</b>	<b>\$ 59,213</b>	<b>\$ 59,011</b>	<b>\$ 61,905</b>
<b>Debt Service Coverage</b>					
Senior Debt Service Coverage (GAAP)	7.14	7.55	6.03	5.80	4.84
Total Debt Service Coverage (GAAP)	2.97	3.04	2.66	2.81	2.62
Total Debt Service Coverage (Adjusted Cash Basis)	3.01	3.04	2.66	2.81	2.62

Notes:

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

\* Operating Expenses on Improvements Not Owned by HRSD are funded through HRSD's Capital Improvement Plan from sources which may include cash, debt, grants, and other sources. Such expenses are excluded from the definition of Operating Expenses under the Subordinate Trust Agreement.

(Continued)

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

(in thousands)

	2018	2017	2016	2015	2014
<b>OPERATING REVENUES</b>					
Wastewater treatment charges	\$ 275,539	\$ 254,961	\$ 234,020	\$ 221,626	\$ 211,538
Miscellaneous	3,504	3,669	3,861	3,935	3,643
<b>TOTAL OPERATING REVENUES</b>	<b>279,043</b>	<b>258,630</b>	<b>237,881</b>	<b>225,561</b>	<b>215,181</b>
<b>OPERATING EXPENSES</b>					
Wastewater treatment	116,982	113,100	106,575	114,137	109,149
General and administrative	40,480	40,287	40,026	38,678	33,012
Depreciation	52,349	49,311	45,670	41,871	42,761
<b>TOTAL OPERATING EXPENSES</b>	<b>209,811</b>	<b>202,698</b>	<b>192,271</b>	<b>194,686</b>	<b>184,922</b>
<b>OPERATING INCOME</b>	<b>69,232</b>	<b>55,932</b>	<b>45,610</b>	<b>30,875</b>	<b>30,259</b>
<b>NON-OPERATING REVENUES (EXPENSES)</b>					
Wastewater facility charges	6,673	7,511	6,699	7,428	6,640
Investment income	3,654	2,287	1,563	1,695	1,872
Bond interest subsidy	2,330	2,275	2,399	2,444	2,364
Change in fair value of investments	(1,382)	(1,119)	750	(286)	(422)
Capital distributions to localities	(311)	(138)	(3,287)	-	-
Bond issuance costs	(1,061)	(42)	(1,713)	(768)	-
Disposal of capital assets	-	-	-	-	-
Interest expense	(20,226)	(22,630)	(21,631)	(22,958)	(25,650)
<b>NET NON-OPERATING EXPENSES</b>	<b>(10,323)</b>	<b>(11,856)</b>	<b>(15,220)</b>	<b>(12,445)</b>	<b>(15,196)</b>
<b>INCOME BEFORE CONTRIBUTIONS</b>	<b>58,909</b>	<b>44,076</b>	<b>30,390</b>	<b>18,430</b>	<b>15,063</b>
<b>CAPITAL CONTRIBUTIONS</b>					
State capital grants	2,502	7,462	14,389	16,519	13,888
Other capital contributions	2,124	1,136	-	3,000	-
<b>CHANGE IN NET POSITION</b>	<b>\$ 63,535</b>	<b>\$ 52,674</b>	<b>\$ 44,779</b>	<b>\$ 37,949</b>	<b>\$ 28,951</b>
<b>NET POSITION</b>					
Net investment in capital assets	\$ 512,398	\$ 428,670	\$ 410,287	\$ 385,597	\$ 351,191
Restricted for debt service	27,799	22,701	23,798	22,070	24,064
Restricted for debt service reserve fund	-	-	-	44,118	45,207
Unrestricted	157,432	202,907	167,519	105,040	134,485
<b>TOTAL NET POSITION</b>	<b>\$ 697,629</b>	<b>\$ 654,278</b>	<b>\$ 601,604</b>	<b>\$ 556,825</b>	<b>\$ 554,947</b>
Net Revenues Available for Debt Service (GAAP)	133,177	117,274	100,228	83,545	83,896
Add Back: Operating Expenses on Improvements Not Owned by HRSD *	311	138	3,287	-	-
<b>Net Revenues Available for Debt Service (Adjusted)</b>	<b>\$ 133,488</b>	<b>\$ 117,412</b>	<b>\$ 103,515</b>	<b>\$ 83,545</b>	<b>\$ 83,896</b>
<b>DEBT SERVICE</b>					
Senior debt	\$ 36,488	\$ 35,837	\$ 38,198	\$ 43,842	\$ 47,331
Subordinate debt	20,633	23,603	17,068	13,091	14,112
<b>Total Debt Service</b>	<b>\$ 57,121</b>	<b>\$ 59,440</b>	<b>\$ 55,266</b>	<b>\$ 56,933</b>	<b>\$ 61,443</b>
<b>Debt Service Coverage</b>					
Senior Debt Service Coverage (GAAP)	3.59	3.10	2.56	1.90	1.76
Total Debt Service Coverage (GAAP)	2.03	1.93	1.77	1.46	1.36
Total Debt Service Coverage (Adjusted Cash Basis)	2.30	2.0	1.85	-	-

**Notes:**

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.

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.

\* Operating Expenses on Improvements Not Owned by HRSD are funded through HRSD's Capital Improvement Plan from sources which may include cash, debt, grants, and other sources. Such expenses are excluded from the definition of Operating Expenses under the Subordinate Trust Agreement.

Unaudited – See accompanying independent auditors' report

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

(in thousands)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Personal Services	\$ 65,549	\$ 61,157	\$ 60,250	\$ 59,666	\$ 56,336	\$ 55,160	\$ 53,401	\$ 51,801	\$ 52,357	\$ 50,538
Fringe Benefits	23,772	20,467	23,879	21,417	18,235	20,275	19,106	17,974	18,249	20,170
Repairs and Maintenance *	20,174	18,004	21,207	17,419	13,786	16,763	19,933	22,824	31,451	22,320
Materials and Supplies	12,641	9,495	11,413	9,364	9,314	8,865	8,310	7,843	4,343	5,764
Transportation	1,672	1,380	1,100	1,194	1,423	1,271	1,386	1,537	1,297	1,417
Utilities	17,044	13,762	12,947	12,584	12,749	11,968	11,523	11,249	10,503	11,126
Chemical Purchases	13,890	10,044	8,719	8,760	8,746	8,750	8,020	7,512	7,119	7,752
Contractual Services	42,934	41,904	37,278	33,748	32,123	30,165	26,977	21,573	15,127	14,222
Miscellaneous Expense	2,864	2,385	2,685	2,953	2,622	2,509	2,329	1,842	2,880	1,274
General **	2,987	1,210	2,033	2,237	2,976	1,736	2,402	2,446	9,489	7,578
Subtotal, Expense before Depreciation	203,527	179,808	181,511	169,342	158,310	157,462	153,387	146,601	152,815	142,161
Depreciation	54,469	54,357	53,278	51,383	53,225	52,349	49,311	45,670	41,871	42,761
Total Operating Expenses	\$ 257,996	\$ 234,165	\$ 234,789	\$ 220,725	\$ 211,535	\$ 209,811	\$ 202,698	\$ 192,271	\$ 194,686	\$ 184,922

Notes:

\* Includes Capital Improvement Program items expensed

\*\* Includes bad debt expense

**RATIOS OF OUTSTANDING DEBT BY TYPE  
FOR THE YEARS ENDED JUNE 30, 2014 THROUGH 2023**

As of June 30,	No. Of Service Connections	(in thousands)			Debt Per Service Connection
		Senior Revenue Bonds	Subordinate Revenue Bonds	Total Outstanding Debt	
2023	486,000	\$ 166,268	\$ 813,474	\$ 979,742	\$ 2,016
2022	484,000	186,227	682,245	868,472	1,794
2021	481,000	202,486	632,520	835,006	1,736
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

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

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
<u>Residential - Metered</u>										
Per CCF * (single step)	\$ 6.97	\$ 6.39	\$ 5.86	\$ 5.86	\$ 5.37	\$ 4.92	\$ 4.51	\$ 4.13	\$ 3.83	\$ 3.55
Minimum Charges Per day	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.25	0.25	0.25
<u>Residential - Unmetered per 30-day period</u>										
Flat rate accounts	57.90	52.20	48.64	48.64	34.91	31.98	29.32	26.32	26.32	26.32
<u>Non-Residential - Special Category</u>										
Biochemical Oxygen Demand (BOD)										
Per mg/liter per CCF										
Excess over 282 mg/liter	-	-	0.000129	0.000129	0.000104	0.000091	0.000206	0.000485	0.000612	0.001558
Excess over 297 mg/liter	0.000185	0.000176	-	-	-	-	-	-	-	-
Total Suspended Solids (TSS)										
Per mg/liter per CCF										
Excess over 261 mg/liter	-	-	0.000630	0.000630	0.000592	0.000520	0.000454	0.000448	0.000417	0.001244
Excess over 282 mg/liter	0.000611	0.000584	-	-	-	-	-	-	-	-
Total Phosphorus (TP)										
Per mg/liter per CCF										
Excess over 6 mg/liter	-	-	0.009871	0.009871	0.009535	0.011569	0.011642	0.004361	0.004344	0.011714
Excess over 7 mg/liter	0.009531	0.010050	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen (TKN)										
Per mg/liter per CCF										
Excess over 47 mg/liter	-	-	0.003378	0.003378	0.003595	0.003156	0.001660	0.000917	0.000756	0.001752
Excess over 57 mg/liter	0.002705	0.002660	-	-	-	-	-	-	-	-
<u>Hauled Wastewater (Indirect Discharge Water)</u>										
Tank Truck Waste (per gallon)	-	-	0.1717	0.1717	0.1697	0.1300	0.1366	0.1362	0.1267	0.1258
Fats, Oils, and Grease (FOG)	0.3339	0.2737	-	-	-	-	-	-	-	-
Other Approved Hauled Wastes	0.1812	0.1717	-	-	-	-	-	-	-	-

Notes:

Rates can be adjusted by the Commission.

Unusual wastes not covered by this schedule may be assigned a special rate.

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

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Residential	\$ 2,285	\$ 2,055	\$ 1,905	\$ 1,905	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895
Commercial/Industrial										
Volume based facility charges:										
5/8" Meter	\$ 2,285	\$ 2,055	\$ 1,905	\$ 1,905	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895	\$ 1,895
3/4" Meter	4,210	4,210	4,210	4,210	4,830	4,830	4,830	4,830	4,830	4,830
1" Meter	7,410	7,410	7,410	7,410	8,170	8,170	8,170	8,170	8,170	8,170
1 1/2" Meter	17,590	16,645	16,645	16,645	17,260	17,260	17,260	17,260	17,260	17,260
2" Meter	34,415	31,465	30,505	30,505	30,510	30,510	30,510	29,420	29,420	29,420
3" Meter	88,570	80,405	73,810	73,810	70,800	70,800	70,800	67,350	63,600	62,270
4" Meter	173,245	156,530	138,445	138,445	128,660	128,660	128,660	122,400	115,580	106,060
6" Meter	445,910	400,625	336,960	336,960	298,610	298,610	298,610	284,070	268,250	224,650
8" Meter	872,130	780,840	634,710	634,710	542,680	542,680	542,680	516,260	487,510	382,670
10" Meter	1,467,435	1,310,665	1,038,525	1,038,525	862,550	862,550	862,550	820,560	774,860	587,820
12" Meter	2,244,900	2,001,460	1,554,120	1,554,120	1,259,520	1,259,520	1,259,520	1,198,210	1,131,490	-
14" Meter	3,215,910	2,863,155	2,186,505	2,186,505	1,734,700	1,734,700	1,734,700	1,650,250	1,558,360	-
16" Meter	4,390,660	3,904,635	2,940,135	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)										
BOD	-	-	-	-	-	-	-	-	728	987
Excess over 250 mg/liter										
TSS	-	-	-	-	-	-	-	-	424	624
Excess over 250 mg/liter										
TP	-	-	-	-	-	-	-	-	8,420	5,846
Excess over 6 mg/liter										
TKN	-	-	-	-	-	-	-	-	3,812	1,313
Excess over 35 mg/liter										

## 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)**

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total</b>										
Flow (MGD)	135.1	132.3	154.4	140.9	152.6	145.2	152.9	155.1	152.2	154.0
Influent (1,000 lbs.)										
BOD	284.4	263.5	269.1	252.4	281.9	285.1	288.2	282.5	286.0	288.6
TSS	253.4	203.4	215.4	226.2	211.4	215.8	215.9	228.8	198.6	204.7
TP	6.4	6.3	6.5	6.6	6.6	6.8	7.0	6.9	8.6	6.8
TKN	50.3	45.0	46.7	47.0	47.6	47.2	46.4	45.7	45.8	47.9
Effluent (1,000 lbs.)										
BOD	8.8	7.4	9.2	8.0	8.2	7.5	8.9	9.8	9.9	9.6
TSS	7.7	6.3	9.0	7.1	7.4	6.7	9.4	9.3	8.9	9.1
TP	0.5	0.5	0.7	0.7	0.8	0.7	0.9	0.9	1.0	1.1
TKN	4.3	5.1	8.1	8.4	8.5	7.3	7.7	8.0	9.8	11.2
<b>Army Base Plant</b>										
Flow (MGD)	8.4	8.2	11.1	10.4	11.1	10.0	9.5	9.6	9.9	10.7
Influent (1,000 lbs.)										
BOD	18.1	17.4	16.6	16.0	16.6	16.3	13.2	13.3	16.4	19.0
TSS	19.0	21.8	19.0	16.9	13.9	14.0	11.7	13.3	12.5	14.2
TP	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
TKN	2.9	2.9	3.2	3.3	3.3	3.1	2.7	2.7	2.9	3.5
Effluent (1,000 lbs.)										
BOD	0.2	0.2	0.6	0.2	0.3	0.2	0.3	0.3	0.8	0.8
TSS	0.3	0.4	0.9	0.3	0.4	0.3	0.4	0.5	0.6	0.8
TP	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1
TKN	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	2.1	2.6
<b>Atlantic Plant</b>										
Flow (MGD)	42.8	35.9	27.4	24.5	28.1	26.1	28.2	27.2	30.9	25.7
Influent (1,000 lbs.)										
BOD	85.9	74.4	58.5	49.3	58.2	56.7	53.2	55.6	66.6	52.7
TSS	73.0	51.9	39.6	35.5	39.3	36.6	38.7	38.5	42.9	37.3
TP	2.1	1.8	1.4	1.3	1.4	1.3	1.4	1.4	1.5	1.3
TKN	17.2	15.2	11.4	10.7	11.9	11.2	11.0	10.9	11.4	10.4
Effluent (1,000 lbs.)										
BOD	5.4	3.5	2.9	3.0	2.5	2.4	2.3	2.7	3.0	2.2
TSS	4.7	2.9	2.5	1.5	1.6	1.6	1.9	1.9	2.4	2.0
<b>Boat Harbor Plant</b>										
Flow (MGD)	10.7	11.7	15.2	13.6	15.8	14.2	13.9	15.6	14.4	14.9
Influent (1,000 lbs.)										
BOD	17.8	17.7	20.0	18.4	20.6	19.2	17.4	18.3	20.0	19.2
TSS	12.7	13.2	16.1	16.0	18.0	16.6	15.7	18.1	16.3	16.7
TP	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
TKN	3.5	3.6	3.8	4.0	4.2	3.9	3.8	3.8	3.6	3.7
Effluent (1,000 lbs.)										
BOD	0.6	0.9	1.0	0.6	0.9	0.6	0.6	1.0	0.7	0.7
TSS	0.6	0.7	1.0	0.8	1.0	0.7	0.7	0.9	0.6	0.8
TP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TKN	2.5	2.2	2.1	2.0	2.5	1.3	1.2	1.8	2.2	2.4

Unaudited – See accompanying independent auditors' report

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Chesapeake-Elizabeth Plant *</b>										
Flow (MGD)	-	10.1	16.8	17.4	17.6	18.7	18.0	16.3	19.1	18.4
Influent (1,000 lbs.)										
BOD	-	20.2	30.5	38.1	37.2	35.4	35.2	30.2	38.7	32.1
TSS	-	14.0	23.0	24.6	26.8	26.6	26.1	22.9	26.6	25.1
TP	-	0.5	0.7	0.8	0.8	0.8	0.8	2.7	0.8	0.8
TKN	-	4.0	6.1	6.9	6.8	6.6	6.4	5.1	6.7	6.4
Effluent (1,000 lbs.)										
BOD	-	1.2	2.5	2.2	2.0	2.8	2.3	2.0	2.5	2.2
TSS	-	0.9	1.9	2.0	1.9	3.2	2.3	1.8	1.9	2.1
TP	-	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2
TKN	-	2.0	3.9	4.4	4.1	4.5	4.1	3.6	4.5	4.2
<b>James River Plant</b>										
Flow (MGD)	12.1	12.7	14.7	12.4	13.9	13.0	12.3	13.2	12.7	13.6
Influent (1,000 lbs.)										
BOD	35.5	24.9	23.1	24.0	25.8	26.8	25.5	24.4	25.7	27.5
TSS	46.4	17.5	18.1	17.4	18.7	19.3	17.4	17.8	18.0	19.4
TP	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.6
TKN	5.2	4.7	5.0	4.7	4.7	4.8	4.3	4.2	4.0	4.2
Effluent (1,000 lbs.)										
BOD	0.6	0.6	0.5	0.5	0.4	0.3	0.4	0.4	0.3	0.5
TSS	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.6
TP	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
TKN	0.6	0.6	0.5	0.5	0.3	0.4	0.5	0.4	0.4	0.2
<b>Nansemond Plant</b>										
Flow (MGD)	15.3	15.5	17.4	15.9	16.9	17.5	18.8	18.5	16.6	16.9
Influent (1,000 lbs.)										
BOD	30.1	29.9	33.8	32.5	33.0	31.9	40.7	35.8	28.5	29.0
TSS	27.7	25.9	36.0	46.5	37.2	33.4	40.3	38.4	21.9	23.1
TP	0.9	0.8	0.9	1.0	1.0	1.2	1.5	1.5	1.1	1.1
TKN	6.4	6.2	6.8	6.9	6.7	7.1	7.4	7.0	5.6	5.8
Effluent (1,000 lbs.)										
BOD	0.5	0.4	0.6	0.6	0.7	0.7	0.8	0.7	0.8	0.9
TSS	0.8	0.5	0.8	0.6	0.8	0.7	0.8	0.9	0.9	1.1
TP	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
TKN	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.6	0.5
<b>Virginia Initiative Plant</b>										
Flow (MGD)	24.7	23.5	29.1	26.2	27.6	26.7	30.9	31.7	30.5	30.7
Influent (1,000 lbs.)										
BOD	42.3	39.1	39.4	37.0	40.4	47.5	50.1	50.4	47.5	45.8
TSS	37.3	33.2	31.5	35.4	23.2	30.0	31.3	32.0	30.2	30.6
TP	1.0	1.0	1.0	1.1	0.9	1.0	1.0	1.0	1.1	1.2
TKN	7.2	6.5	6.7	7.1	6.8	7.0	7.3	7.4	7.1	7.4
Effluent (1,000 lbs.)										
BOD	0.9	0.7	0.6	0.5	0.6	0.8	1.2	1.7	1.9	1.4
TSS	0.5	0.4	0.7	1.0	0.7	0.7	1.4	1.9	1.6	1.7
TP	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
TKN	0.4	0.3	0.4	0.3	0.4	0.6	0.4	0.7	0.8	0.6

\* The Chesapeake-Elizabeth Plant was closed December 31, 2021.

Unaudited – See accompanying independent auditors' report

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Williamsburg Plant</b>										
Flow (MGD)	8.7	8.3	9.0	8.6	7.7	8.0	8.6	8.4	9.2	8.9
Influent (1,000 lbs.)										
BOD	36.7	33.3	32.5	33.4	32.6	36.1	33.2	34.7	40.4	37.7
TSS	21.5	17.4	18.0	21.2	24.1	19.1	27.9	16.2	19.9	16.8
TP	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5
TKN	4.0	3.6	3.7	3.6	3.5	3.3	3.6	3.2	3.3	3.3
Effluent (1,000 lbs.)										
BOD	0.4	0.3	0.4	0.2	0.2	0.2	0.3	0.3	0.3	0.3
TSS	0.2	0.2	0.6	0.2	0.2	0.2	0.3	0.3	0.3	0.4
TP	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
TKN	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
<b>York River Plant</b>										
Flow (MGD)	11.6	11.6	13.9	13.2	12.6	12.6	12.7	12.6	13.2	13.3
Influent (1,000 lbs.)										
BOD	18.0	16.7	14.6	15.8	16.8	16.7	16.3	18.2	17.9	17.2
TSS	15.8	15.5	14.1	15.4	15.0	15.1	16.7	16.9	16.4	15.7
TP	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
TKN	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.5	3.6	3.5
Effluent (1,000 lbs.)										
BOD	0.2	0.1	0.2	0.5	0.3	0.3	0.4	0.4	0.4	0.5
TSS	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2
TP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
TKN	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.4

Unaudited – See accompanying independent auditors' report

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

(in thousands)

<u>Customer</u>	<u>Type</u>	2023		2014	
		Amount	Percent	Amount	Percent
U.S. Navy - Norfolk Naval Base	Military Facility	\$ 6,711	1.8%	\$ 4,026	1.9%
Anheuser - Busch, Inc.	Brewery	4,015	1.0%	4,457	2.1%
Huntington Ingalls Industries	Shipbuilding	2,891	0.8%	1,661	0.80%
U.S. Air Force - Langley Air Force Base	Military Facility	2,492	0.7%	-	-
Norfolk Naval Shipyard	Military Ship Repair	2,449	0.6%	1,249	0.6%
Norfolk Redevelopment & Housing Authority	Housing Authority	2,361	0.6%	1,479	0.7%
City of Norfolk	Municipality	2,183	0.6%	1,686	0.8%
Joint Expeditionary Base Little Creek-Fort Story	Military Facility	2,031	0.5%	1,384	0.7%
Oceana Naval Air Station / Dam Neck	Military Facility	1,812	0.5%	-	-
City of Virginia Beach	Municipality	1,777	0.5%	-	-
Smithfield Foods	Meat Processor	-	-	3,327	1.6%
U.S. Army - Fort Eustis	Military Facility	-	-	1,076	0.5%
Sentara Healthcare	Healthcare	-	-	1,019	0.5%
Total		\$ 28,722	7.6%	\$ 21,364	10.2%

Unaudited – See accompanying independent auditors' report

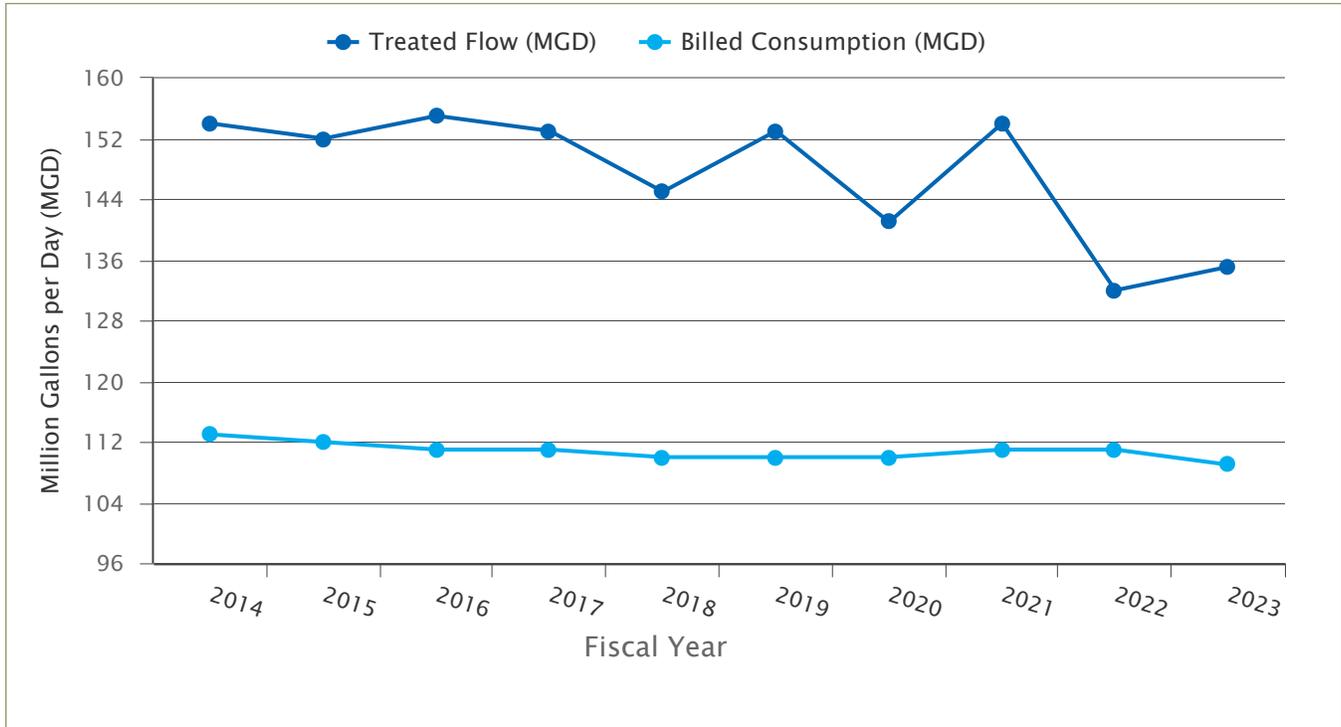
**TEN LARGEST EMPLOYERS  
CURRENT YEAR AND NINE YEARS AGO**

Employer	Type	2023			2014		
		Number of Employees	Rank	Percent of Regional Employment	Number of Employees	Rank	Percent of Regional Employment
Naval Station Norfolk	Military Facility	82,000	1	9.6%	57,379	1	6.1%
Huntington Ingalls Industries	Shipbuilding and Repair	42,000	2	4.9%	24,000	2	2.6%
Sentara Healthcare	Health Care Network	30,000	3	3.5%	20,000	4	2.1%
Joint Expeditionary Base Little Creek - Fort Story	Military Facility	15,000	4	1.8%	19,841	5	2.1%
Virginia Beach Public Schools	Public Schools	14,162	5	1.7%	10,000	8	1.1%
Naval Support Activity/ Naval Medical Center	Military Facility	12,300	6	1.4%	-	-	-
Norfolk Naval Shipyard	Military Ship Repair	12,000	7	1.4%	12,486	7	1.3%
Oceana Naval Air Station	Military Facility	10,500	8	1.2%	15,547	6	1.7%
Joint Base Langley-Eustis	Military Facility	9,000	9	1.1%	23,090	3	2.5%
Riverside Health System	Health Care Network	9,000	10	1.1%	7,050	9	0.8%
Norfolk City Public Schools	Public Schools	-	-	-	6,527	10	0.7%
<b>Total</b>		<u>235,962</u>		<u>27.7%</u>	<u>195,920</u>		<u>21.0%</u>

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)
2014	154	113
2015	152	112
2016	155	111
2017	153	111
2018	145	110
2019	153	110
2020	141	110
2021	154	111
2022	132	111
2023	135	109

Unaudited – See accompanying independent auditors' report

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

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>General Management</b>										
General Manager	1	1	1	1	1	2	3	3	3	3
Support Staff	1	1	1	1	1	1	1	1	1	1
Total General Management	2	2	2	2	2	3	4	4	4	4
<b>Communications</b>										
Communications	1	1	1	1	1	1	-	-	-	-
Support Staff	3	2	2	2	2	1	-	-	-	-
Total Communications	4	3	3	3	3	2	-	-	-	-
<b>Talent Management</b>										
Human Resources	6	5	6	6	6	6	6	5	5	5
Safety	5	5	4	3	3	3	3	3	-	-
Training	4	4	4	3	3	2	2	2	2	2
Support Staff	3	3	3	4	4	4	4	4	3	3
Total Talent Management	18	17	17	16	16	15	15	14	10	10
<b>Finance</b>										
Accounting	15	15	15	12	12	11	10	10	10	10
Customer Care Center	63	65	71	77	77	77	77	77	69	69
Procurement	11	12	11	10	10	10	10	10	9	9
Capital Finance	9	6	-	-	-	-	-	-	-	-
Support Staff	5	4	5	3	3	3	3	2	3	3
Total Finance	103	102	102	102	102	101	100	99	91	91
<b>Information Technology</b>										
Information Technology	52	49	48	48	43	48	47	45	39	35
Support Staff	2	2	2	2	2	2	1	1	1	1
Total Information Technology	54	51	50	50	45	50	48	46	40	36
<b>Operations</b>										
Army Base Treatment Plant	31	29	32	34	34	34	34	31	32	32
Atlantic Treatment Plant	36	36	37	35	35	35	35	32	33	33
Boat Harbor Treatment Plant	33	34	32	35	35	35	35	32	33	33
Chesapeake-Elizabeth Treatment Plant	-	25	31	32	32	32	32	31	32	32
Interceptor System Maintenance	111	112	121	119	119	118	117	115	120	120
James River Treatment Plant	24	24	24	22	22	22	22	20	21	21
Maintenance Shops	114	112	85	74	73	71	70	83	86	86
Nansemond Treatment Plant	32	30	35	32	32	32	32	30	31	31
Virginia Initiative Plant	33	33	32	34	34	33	33	30	31	31
Williamsburg Treatment Plant	30	28	28	29	29	29	29	28	29	29
York River Treatment Plant	24	23	23	24	24	24	24	22	23	23
Small Communities Division	29	27	23	23	23	23	23	21	17	17
Support Staff	27	20	23	23	23	23	23	24	25	25
Total Operations	524	533	526	516	515	511	509	499	513	513
<b>Engineering</b>										
Design and Construction	51	43	31	31	30	26	25	25	21	19
Support Staff	2	2	13	13	13	13	14	14	14	14
Total Engineering	53	45	44	44	43	39	39	39	35	33
<b>Water Quality</b>										
Pretreatment & Pollution Prevention	27	27	27	28	27	27	26	26	25	24
Technical Services	35	34	36	34	31	31	29	28	25	23
Laboratory	53	52	50	47	47	46	45	42	40	38
Support Staff	5	6	5	5	5	5	6	6	6	6
Total Water Quality	120	119	118	114	110	109	106	102	96	91
<b>Total Employees</b>	<b>878</b>	<b>872</b>	<b>862</b>	<b>847</b>	<b>836</b>	<b>830</b>	<b>821</b>	<b>803</b>	<b>789</b>	<b>778</b>

Unaudited – See accompanying independent auditors' report

# Other Supplemental Section (Unaudited)





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# INDEX TO OTHER SUPPLEMENTAL SECTION

ANNUAL COMPREHENSIVE FINANCIAL REPORT / HAMPTON ROADS SANITATION DISTRICT

In accordance with Governmental Accounting Standards Board, the following information is required to accompany the Basic Financial Statements.

<b>Contents</b>	<b>Page</b>
<b>Debt Service</b>	<b>98</b>
This schedule presents information pertaining to HRSD's primary bonded debt service. It covers both senior and subordinate debt service payments projected for fiscal years ending from June 30, 2024 through June 30, 2053.	
<b>Budgetary Information</b>	<b>99</b>
These schedules contain information about HRSD's budget and resources to help the reader understand HRSD's budgeting process.	

Unaudited – See accompanying independent auditors' report

**SUMMARY OF PRIMARY BONDED DEBT SERVICE**  
**June 30, 2023**

(in thousands)

As of June 30,	Senior Bonds			Subordinate	Total Debt
	Principal	Interest	Debt Service	Bonds Debt Service	
2024	\$ 19,600	\$ 7,942	\$ 27,542	\$ 95,058	\$ 122,600
2025	20,450	7,007	27,457	50,369	77,826
2026	20,671	6,030	26,701	51,821	78,522
2027	7,843	5,368	13,211	65,132	78,343
2028	8,086	5,021	13,107	61,788	74,895
2029	8,340	4,661	13,001	61,727	74,728
2030	8,600	4,289	12,889	61,551	74,440
2031	8,428	3,903	12,331	62,543	74,874
2032	5,995	3,523	9,518	60,463	69,981
2033	6,225	3,165	9,390	56,449	65,839
2034	6,465	2,793	9,258	50,846	60,104
2035	6,715	2,406	9,121	50,187	59,308
2036	6,975	2,005	8,980	44,384	53,364
2037	7,245	1,588	8,833	44,505	53,338
2038	7,525	1,155	8,680	44,308	52,988
2039	7,815	705	8,520	27,886	36,406
2040	8,115	234	8,349	19,873	28,222
2041	-	-	-	19,447	19,447
2042	-	-	-	19,117	19,117
2043	-	-	-	13,335	13,335
2044	-	-	-	13,295	13,295
2045	-	-	-	7,995	7,995
2046	-	-	-	7,620	7,620
2047	-	-	-	3,546	3,546
2048	-	-	-	3,359	3,359
2049	-	-	-	5,660	5,660
2050	-	-	-	12,925	12,925
2051	-	-	-	19,865	19,865
2052	-	-	-	23,877	23,877
2053	-	-	-	26,517	26,517
<b>Total</b>	<b>\$ 165,093</b>	<b>\$ 61,795</b>	<b>\$ 226,888</b>	<b>\$ 1,085,448</b>	<b>\$ 1,312,336</b>

Unaudited – See accompanying independent auditors' report

## BUDGETARY COMPARISON SCHEDULE

### June 30, 2023

(in thousands)

	Budget		Actual	Variance	Percent
	Adopted	Amended		under Amended Budget	
<b>OPERATING BUDGET EXPENSES</b>					
General Management	\$ 456	\$ 508	\$ 457	\$ 51	10.0%
Communications	641	769	567	202	26.3%
Finance	15,846	16,496	15,853	643	3.9%
Information Technology	17,783	19,872	17,402	2,470	12.4%
Talent Management	2,615	3,131	2,682	449	14.3%
Operations	117,539	132,371	120,705	11,666	8.8%
Engineering	8,117	8,981	7,663	1,318	14.7%
Water Quality	16,577	17,604	16,302	1,302	7.4%
General	8,569	9,693	6,465	3,228	33.3%
Debt Service	70,033	67,620	67,648	(28)	0.0%
TOTAL	<u>258,176</u>	<u>277,045</u>	<u>255,744</u>	<u>\$ 21,301</u>	<u>7.7%</u>
Transfer to CIP	129,413	129,413			
Transfer to Risk Management	260	260			
	<u>\$ 387,849</u>	<u>\$ 406,718</u>			
<b>Add:</b>					
Unbudgeted Depreciation and Amortization			54,469		
Unbudgeted Bad Debt Expense			2,987		
Capital Improvement Program Items Expensed			16,624		
<b>Less:</b>					
Capitalized Assets			1,758		
Debt Service			67,648		
Capital Distributions to Localities			<u>2,422</u>		
TOTAL OPERATING EXPENSES			<u>\$ 257,996</u>		

Unaudited – See accompanying independent auditors' report

## NOTES TO BUDGETARY COMPARISON SCHEDULE JUNE 30, 2023

### 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 2023 was \$258,176,000 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 2023 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 10 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.

**SCHEDULE OF REVENUES, EXPENSES AND  
DEBT SERVICE FOR OPERATIONS - ACTUAL TO BUDGET  
FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

(in thousands)

	Actual	Amended Budget	Variance Favorable/ (Unfavorable)	Budget Variance Percentage
<b>OPERATING REVENUES</b>				
Wastewater Treatment Charges	\$ 383,115	\$ 374,842	\$ 8,273	2%
Miscellaneous	4,820	1,439	3,381	235%
<b>TOTAL OPERATING REVENUES</b>	<b>387,935</b>	<b>376,281</b>	<b>11,654</b>	<b>1%</b>
<b>CURRENT EXPENSES</b>				
General Management	457	508	51	10%
Communications	567	769	202	26%
Finance	15,853	16,496	643	4%
Information Technology	17,402	19,872	2,470	12%
Talent Management	2,682	3,131	449	14%
Operations	120,705	132,371	11,666	9%
Engineering	7,663	8,981	1,318	15%
Water Quality	16,302	17,604	1,302	7%
General	6,465	9,693	3,228	33%
<b>TOTAL CURRENT EXPENSES</b>	<b>188,096</b>	<b>209,425</b>	<b>21,329</b>	<b>10%</b>
<b>EXCESS OF OPERATING REVENUES OVER EXPENSES</b>	<b>199,839</b>	<b>166,856</b>	<b>32,983</b>	<b>20%</b>
<b>NON-OPERATING REVENUES</b>				
Wastewater Facility Charge	7,293	7,150	143	2%
Interest Income	6,068	1,570	4,498	286%
Bond Interest Subsidy	2,015	2,026	(11)	(1%)
<b>TOTAL NON-OPERATING REVENUES</b>	<b>15,376</b>	<b>10,746</b>	<b>4,630</b>	<b>43%</b>
<b>INCOME BEFORE CAPITAL CONTRIBUTIONS</b>	<b>215,215</b>	<b>177,602</b>	<b>37,613</b>	<b>21%</b>
<b>CAPITAL CONTRIBUTIONS</b>				
Other Capital Contributions	1,875	-	1,875	100%
<b>AMOUNT AVAILABLE FOR DEBT</b>	<b>217,090</b>	<b>177,602</b>	<b>39,488</b>	<b>22%</b>
<b>DEBT SERVICE</b>				
Principal and Interest	67,550	67,120	(430)	(1%)
Cost of Issuance	98	500	402	80%
<b>TOTAL DEBT SERVICE</b>	<b>67,648</b>	<b>67,620</b>	<b>(28)</b>	<b>(0%)</b>
<b>AMOUNT AVAILABLE TO REINVEST</b>	<b>\$ 149,442</b>	<b>\$ 109,982</b>	<b>\$ 39,460</b>	<b>36%</b>

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENSES  
FOR OPERATIONS - ACTUAL TO BUDGET  
FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

(in thousands)

	General Management	Communications	Finance	Information Technology	Talent Management	Operations
Personal Services	\$ 340	\$ 292	\$ 6,673	\$ 5,323	\$ 1,655	\$ 37,380
Fringe Benefits	84	98	2,652	1,707	587	15,297
Materials & Supplies	1	60	58	2,398	72	8,140
Transportation	12	12	21	12	20	1,532
Utilities	-	-	262	1,341	-	14,798
Chemical Purchases	-	-	-	-	-	13,890
Contractual Services	4	99	6,007	5,313	20	22,160
Major Repairs	-	-	-	1,001	-	4,931
Capital Assets	-	-	-	81	-	1,677
Miscellaneous Expense	16	6	180	226	328	900
	\$ 457	\$ 567	\$ 15,853	\$ 17,402	\$ 2,682	\$ 120,705

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENSES  
FOR OPERATIONS - ACTUAL TO BUDGET  
FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

(in thousands)

	Engineering	Water Quality	General	Total	Percent of Total	Amended Budget	Variance Favorable/ (Unfavorable)
Personal Services	\$ 4,665	\$ 8,838	\$ 383	\$ 65,549	26%	\$ 63,417	\$ (2,132)
Fringe Benefits	1,578	3,566	(1,797)	23,772	9%	26,569	2,797
Materials & Supplies	25	1,868	19	12,641	5%	13,742	1,101
Transportation	25	38	-	1,672	1%	1,799	127
Utilities	-	1	642	17,044	7%	15,556	(1,488)
Chemical Purchases	-	-	-	13,890	5%	13,776	(114)
Contractual Services	1,230	1,557	6,544	42,934	17%	58,308	15,374
Major Repairs	-	41	-	5,973	2%	12,404	6,431
Capital Assets	-	-	-	1,758	1%	626	(1,132)
Miscellaneous Expense	140	393	674	2,863	1%	3,228	365
	<u>\$ 7,663</u>	<u>\$ 16,302</u>	<u>\$ 6,465</u>	<u>\$ 188,096</u>	<u>74%</u>	<u>\$ 209,425</u>	<u>\$ 21,329</u>
Debt Service							
Principal and Interest				67,550	26%	67,120	(430)
Cost of Issuance				98	0%	500	402
Total Debt Service				<u>\$ 67,648</u>	<u>26%</u>	<u>\$ 67,620</u>	<u>\$ (28)</u>
Total Department and Debt Service				<u>\$ 255,744</u>	<u>100%</u>	<u>\$ 277,045</u>	<u>\$ 21,301</u>

Unaudited – See accompanying independent auditors' report

**DEPARTMENT SUMMARY OF EXPENSES  
ACTUAL TO BUDGET  
FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

(in thousands)

	Actual	Amended Budget	Variance Favorable/ (Unfavorable)
<b>General Management</b>			
Personal Services	\$ 340	\$ 305	\$ (35)
Fringe Benefits	84	79	(5)
Materials & Supplies	1	60	59
Transportation	12	12	-
Contractual Services	4	21	17
Miscellaneous Expense	16	31	15
	457	508	51
<b>Communications</b>			
Personal Services	292	359	67
Fringe Benefits	98	122	24
Materials & Supplies	60	155	95
Transportation	12	9	(3)
Contractual Services	99	114	15
Miscellaneous Expense	6	10	4
	567	769	202
<b>Finance</b>			
Personal Services	6,673	6,545	(128)
Fringe Benefits	2,652	2,573	(79)
Materials & Supplies	58	109	51
Transportation	21	8	(13)
Utilities	262	332	70
Contractual Services	6,007	6,673	666
Miscellaneous Expense	180	256	76
	15,853	16,496	643
<b>Information Technology</b>			
Personal Services	5,323	5,464	141
Fringe Benefits	1,707	1,778	71
Materials & Supplies	2,398	1,593	(805)
Transportation	12	39	27
Utilities	1,341	1,348	7
Contractual Services	5,313	7,115	1,802
Major Repairs	1,001	2,161	1,160
Capital Assets	81	-	(81)
Miscellaneous Expense	226	374	148
	17,402	19,872	2,470

(Continued)

**DEPARTMENT SUMMARY OF EXPENSES  
ACTUAL TO BUDGET  
FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

(in thousands)

	Actual	Amended Budget	Variance Favorable/ (Unfavorable)
<b>Talent Management</b>			
Personal Services	\$ 1,655	\$ 1,843	\$ 188
Fringe Benefits	587	635	48
Materials & Supplies	72	68	(4)
Transportation	20	23	3
Contractual Services	20	275	255
Miscellaneous Expense	328	287	(41)
	<u>2,682</u>	<u>3,131</u>	<u>449</u>
<b>Operations</b>			
Personal Services	37,380	36,510	(870)
Fringe Benefits	15,297	15,008	(289)
Materials & Supplies	8,140	9,695	1,555
Transportation	1,532	1,665	133
Utilities	14,798	13,348	(1,450)
Chemical Purchases	13,890	13,776	(114)
Contractual Services	22,160	30,592	8,432
Major Repairs	4,931	10,141	5,210
Capital Assets	1,677	626	(1,051)
Miscellaneous Expense	900	1,010	110
	<u>120,705</u>	<u>132,371</u>	<u>11,666</u>
<b>Engineering</b>			
Personal Services	4,665	5,111	446
Fringe Benefits	1,578	1,782	204
Materials & Supplies	25	26	1
Transportation	25	15	(10)
Contractual Services	1,230	1,815	585
Miscellaneous Expense	140	232	92
	<u>7,663</u>	<u>8,981</u>	<u>1,318</u>
<b>Water Quality</b>			
Personal Services	8,838	8,740	(98)
Fringe Benefits	3,566	3,448	(118)
Materials & Supplies	1,868	2,010	142
Transportation	38	28	(10)
Utilities	1	3	2
Contractual Services	1,557	2,649	1,092
Major Repairs	41	102	61
Miscellaneous Expense	393	624	231
	<u>16,302</u>	<u>17,604</u>	<u>1,302</u>
<b>General</b>			
Personal Services	383	(1,460)	(1,843)
Fringe Benefits	(1,797)	1,144	2,941
Materials & Supplies	19	26	7
Utilities	642	525	(117)
Contractual Services	6,544	9,054	2,510
Miscellaneous Expense	674	404	(270)
	<u>6,465</u>	<u>9,693</u>	<u>3,228</u>
<b>TOTAL DEPARTMENTAL EXPENSES</b>	<u>\$ 188,096</u>	<u>\$ 209,425</u>	<u>\$ 21,329</u>

Unaudited – See accompanying independent auditors' report



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The background of the entire page is a photograph of industrial machinery, likely a water treatment plant. It features several large vertical pipes, horizontal pipes, and mechanical components. A prominent feature is a large, circular, green-painted metal cover or hatch on a metal grating platform. A semi-transparent green circular overlay is positioned in the upper left and center of the image, partially covering the machinery. The overall scene is brightly lit, suggesting an indoor industrial environment.

**HRSD**

1434 Air Rail Avenue  
Virginia Beach, VA 23455  
[www.hrsd.com](http://www.hrsd.com)

*Photos used for this publication feature the  
Grand Opening of Woodstock Park in Virginia Beach, Virginia.  
Printed on recycled paper using environmentally friendly ink.*

HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #3

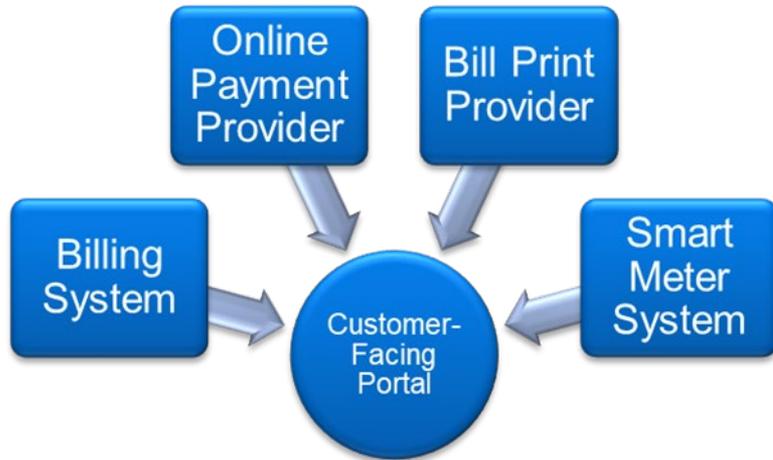
5. Customer Engagement Portal Solution Implementation and Support Contract Award



HRSD

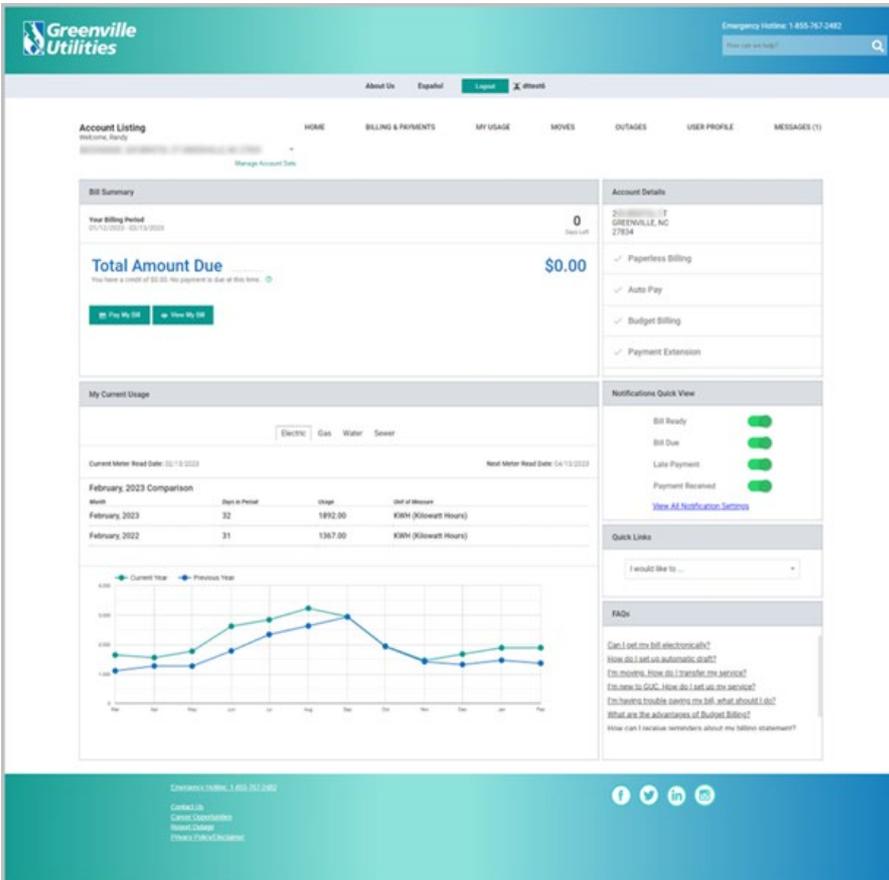
Customer Engagement Portal  
Commission Meeting

October 24, 2023



- Significant customer enhancement
- Provides a modern, seamless and comprehensive user experience
- Makes customer experience more in-line with other on-line experiences
- Aligns with Strategic Plan to provide value and customer engagement
- A one-stop shop empowering customers to self-service their accounts
- Customer-facing platform interacting with multiple systems
- Should reduce call volume to customer care center

# Selected Customer Engagement Portal Functionality



Customer Service Need	Current Method
Electronic Payment	Online Payment Provider
Auto Pay	Online Payment Provider
Paperless Bill Designation	Online Payment Provider
Billing/Usage History	Online Payment Provider
Pay Plan (1 <sup>st</sup> /2 <sup>nd</sup> Time)	HRSD website/Call Center
Pay Extension (1 <sup>st</sup> /2 <sup>nd</sup> Time)	HRSD website/Call Center
Address Change	Call Center
Start/Stop Service	Locality
Report Leak	Locality
Field Service Link Request	Locality
Refund Request	Call Center
Billing/Usage Histogram	Not available
Budget Plan	Not available
Receive High Bill/Leak Alert	Not available

- More efficient education and variable messaging tool to customers
- Functionality will vary by jurisdiction and billing model
- Model 3 jurisdictions will experience most comprehensive unified customer experience
  - Provides a more seamless approach from meter to discharge

- Award contract to Meridian
  - 15+ years integration experience with Oracle Utilities applications
  - Solution provides real-time integration with billing system
  - Project timeline 9-12 months

HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #4

6. Dental, Vision, Supplemental Health Coverage and COBRA and Flexible Spending Account Services  
Contract Award
  
7. Medical and Pharmaceutical Coverage and Health Savings Account Services  
Contract Award



HRSD

HRSD Benefit Evaluation  
Commission Meeting

October 24, 2023

## Bundled Comprehensive RFP

Service Area	Current Provider	New Provider
Employee Medical	Cigna	Sentara Health Plan
Health Savings Account Banking	HSA Bank	Sentara Health Plan
Basic Vision	Cigna	Sentara Health Plan
Dental	Delta Dental	Metlife
Premium Vision	Cigna	MetLife
Voluntary Accident, Critical Illness and Hospitalization	Cigna	MetLife
Flexible Spending Accounts and COBRA	P&A Administrators	MetLife

- Annual contract with renewal for a total of 10 years
- Issued RFP May 1, 2023
- Long lead time given complexities of bid and change requirements
- Coverage effective July 1

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## Sentara Health - Health and HSA

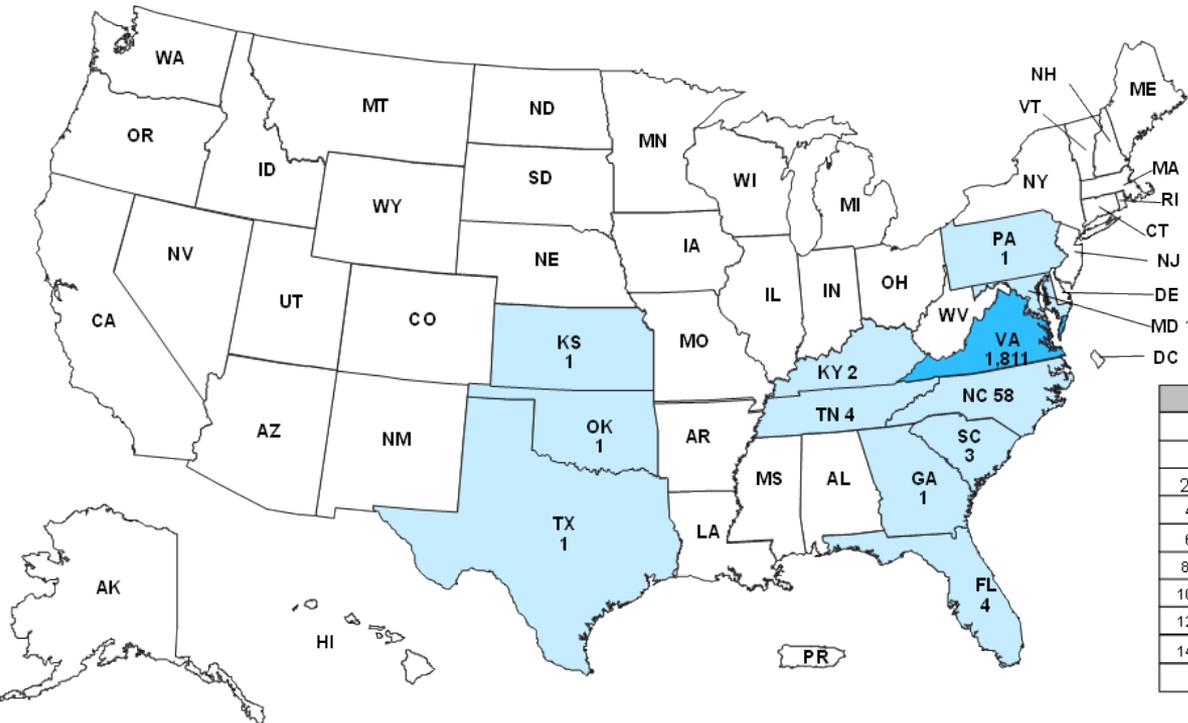
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# FY2025 Marketing Analysis – Member Locations

Geographic Distribution Summary

State	Actives	Pre-65 Retirees	Total Members
Virginia	1,669	145	1,811
North Carolina	53	5	58
All Other States	14	14	28
<b>Total</b>	<b>1,736</b>	<b>161</b>	<b>1,897</b>

Scale	
0	
1-202	
203-404	
405-606	
607-808	
809-1010	
1011-1212	
1213-1414	
1415-1616	
1617+	



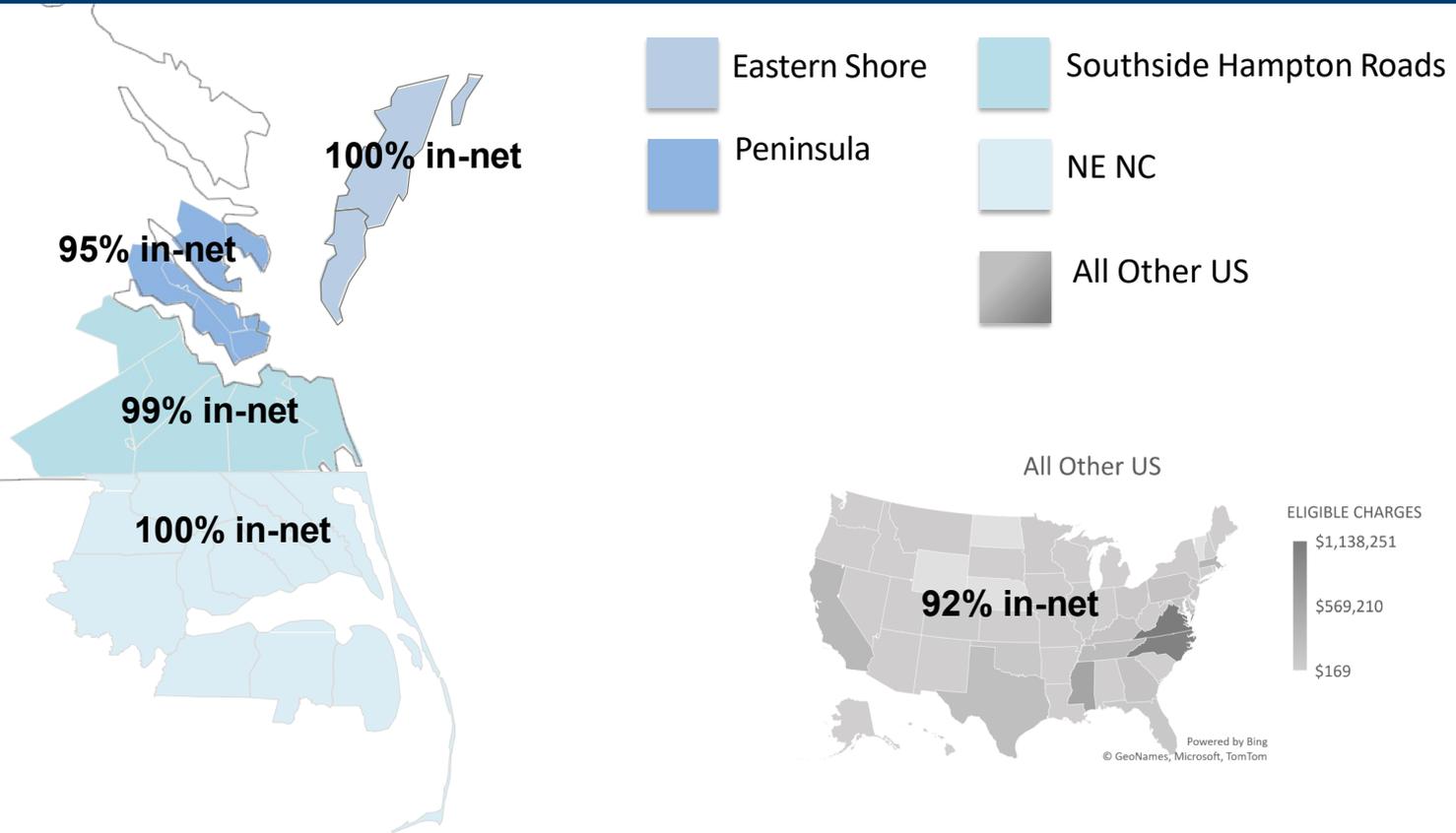
- Projected cost savings largely driven by network discounts as well as improvements to pharmacy rebates
  - Discount guarantee has been provided
- Strong provider network – both locally and nationally
- Strong integrated partnership with Health Equity (HSA)
- Embarc Gene Therapy Protection will continue under the Sentara Health arrangement
- Strong tenured account team
- Local presence and a significant amount of the government business in the region
- Impressive customer service

## Medical Cost Analysis

	Cigna - FY2024 Budget	Cigna - FY2025 Proposal	Optima - FY2025 Proposal
Employees	774	774	774
Medical Claims	\$1,117.89	\$1,161.06	\$1,034.09
Pharmacy Claims	\$365.07	\$383.97	\$393.54
Medical Administration Fees	\$52.06	\$38.42	\$42.99
Pharmacy Rebates	(\$75.75)	(\$132.29)	(\$137.48)
<b>Total PEPM</b>	<b>\$1,459.27</b>	<b>\$1,451.16</b>	<b>\$1,333.14</b>
<b>Total Annual Cost</b>	<b>\$13,553,744</b>	<b>\$13,478,377</b>	<b>\$12,382,184</b>
<b>Additional Cost/(Savings)</b>	<b>-</b>	<b>(\$75,367)</b>	<b>\$1,171,560</b>
<b>Difference from Cigna Proposal</b>	<b>-</b>	<b>-</b>	<b>\$1,096,193</b>

# Provider Match Results

Eligible Charges\*



\* Includes Facility IP, Facility OP, Professional. Excludes "Other Medical Services"

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MetLife – Dental, Vision, Other

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## Per Employee Per Month (PEPM) and Total Spend

	Delta - FY2024 Budget	Delta - FY2025 Budget	MetLife - FY2025 Proposal
Enrolled	786	786	786
Admin Fee	\$4.35	\$4.35	\$3.80
Claims	\$56.47	\$58.91	\$50.91
<b>Total PEPM</b>	<b>\$60.82</b>	<b>\$63.26</b>	<b>\$54.71</b>
<b>Total Annual Cost</b>	<b>\$573,654</b>	<b>\$596,635</b>	<b>\$516,017</b>
<b>Additional Cost/(Savings)</b>		<b>\$22,980</b>	<b>-\$57,637</b>
<b>Percent Cost/(Savings)</b>		<b>4.0%</b>	<b>-10.0%</b>
<b>Difference from Delta Proposal</b>			<b>-\$80,617</b>

## Per Employee Per Month (PEPM) and Total Spend

	Cigna - FY2024 Budget	Cigna - FY2025 Proposal	MetLife: FI Buy-Up VSP Network
Voluntary Base Vision Enr	398	398	Included in the Sentara Health Plan
Voluntary Base Vision Admin Fee	\$0.40	\$0.41	
Voluntary Base Vision Claims	\$1.40	\$1.50	
<b>Total Base PEPM Cost</b>	<b>\$1.80</b>	<b>\$1.91</b>	
<b>Annual Base Cost</b>	<b>\$8,604</b>	<b>\$9,143</b>	
	Cigna - FY2024 Budget	Cigna - FY2025 Proposal	MetLife: FI Buy-Up VSP Network
Voluntary Buy-Up Vision Enr	366	366	366
Voluntary Buy-Up Vision Admin Fee	\$1.10	\$1.13	Fully Insured Tiered Rates EE Only \$5.40/ EE + Family \$15.14
Voluntary Buy-Up Vision Claims	\$8.64	\$9.22	
<b>Total Buy-UP PEPM Cost</b>	<b>\$9.74</b>	<b>\$10.35</b>	
<b>Annual Buy-Up Cost</b>	<b>\$42,785</b>	<b>\$45,465</b>	<b>\$48,262</b>
<b>Additional Cost/(Savings)</b>		<b>\$2,680</b>	<b>\$5,476</b>

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# Questions

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HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #5

8. Diversity Procurement Report

## HRSD DIVERSITY PROCUREMENT REPORT FISCAL YEAR 2023

PAYMENT TYPE	TOTAL OF ALL PAYMENT TRANSACTIONS <sup>1</sup>				TOTAL PAYMENTS MADE TO SWaM CONTRACTORS COMPARED TO HRSD's TOTAL PAYMENTS	
	ALL BUSINESS TYPES		SMALL, WOMEN-OWNED AND MINORITY-OWNED BUSINESSES (SWaM)		NO.	SPEND
	NO.	SPEND	NO.	SPEND		
<b>OPERATING</b>	6,690	\$66,247,897	800	\$11,731,555	12%	18%
<b>CORPORATE VISA CARD</b>	27,442	\$16,219,601	808	\$712,530	3%	4%
<b>CAPITAL IMPROVEMENT PROGRAM</b>	2,167	\$344,750,706	416	\$124,999,947 <sup>2</sup>	19%	36%
<b>TOTAL</b>	36,299	\$427,218,205	2,024	\$137,444,032	6%	32%

<sup>1</sup>Excludes expenses for utilities, rent, easements, municipal expenditures, personal services, professional development, etc.

<sup>2</sup>Includes payments of \$44,523,861 made to SWaM subcontractors, as reported by HRSD's prime contractors.

### DIVERSITY PROCUREMENT PROGRAM ACTIVITIES

HRSD participated in several outreach opportunities throughout the year including:

- 2022 NIGP (The Institute for Public Procurement) Forum
- 2022 Christopher Newport University SWaMFair
- SWIFT Industry Outreach Day 2023
- Virginia Association of Governmental Purchasing Spring Conference 2023
- Virginia Association of State College and University Purchasing Professionals (VASCUUP®) SWaMfest 2022
- Water Environment Federation WEFTEC 2022

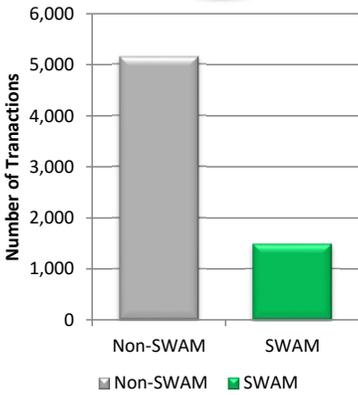
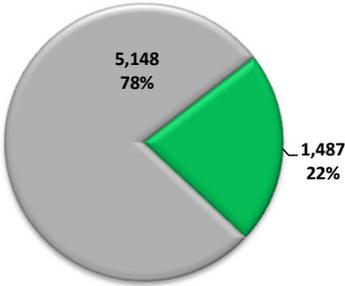
HRSD uses the Virginia Department of Purchases and Supply eProcurement Portal, eVA to advertise HRSD business opportunities to Suppliers, including SWaM businesses that have registered to do business with the Commonwealth of Virginia.

HRSD uses the Virginia Department of Small Business and Supplier Diversity (SBSD) as a resource to identify and locate SWaM businesses for HRSD bid opportunities. SBSB promotes access to the Commonwealth of Virginia's contracting opportunities by providing SWaM businesses a certification program, access to state-wide bid opportunities and other resources.

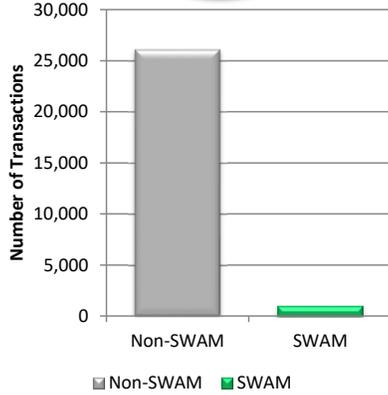
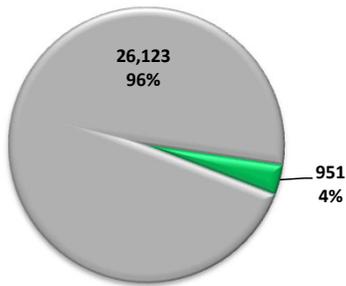
HRSD is a member of the Carolinas-Virginia Minority Supplier Development Council (CVMSDC). The CVMSDC certifies Minority Business Enterprises (MBEs), serves as a resource for corporations and government agencies searching for qualified suppliers, and sponsors networking and outreach events. The CVMSDC also offers training programs and business assistance for MBEs.

FY2023 Transaction Charts

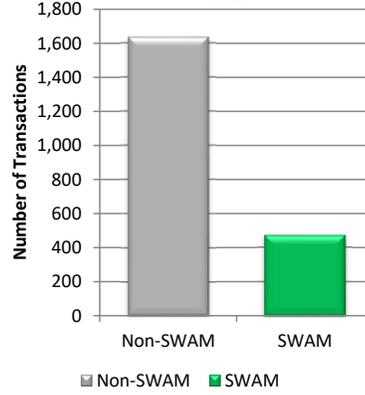
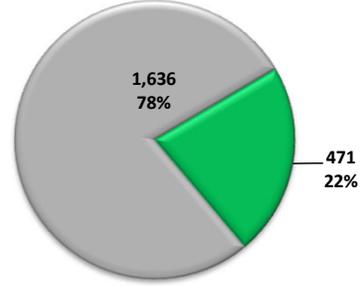
OPERATING



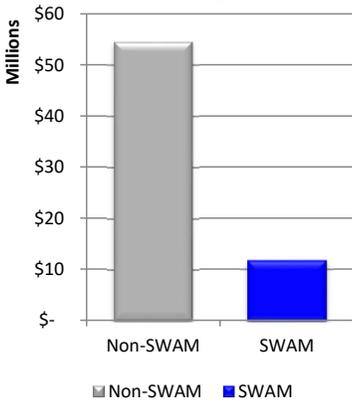
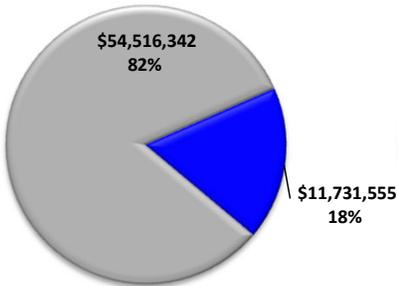
CORPORATE VISA CARD



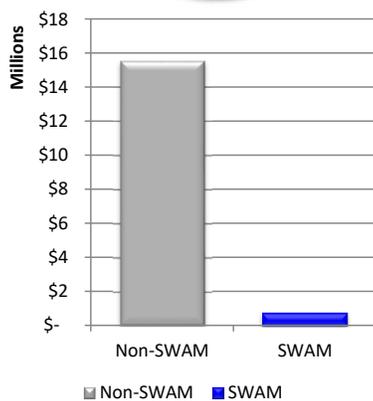
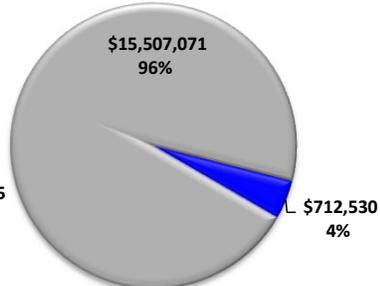
CAPITAL IMPROVEMENT PROGRAM



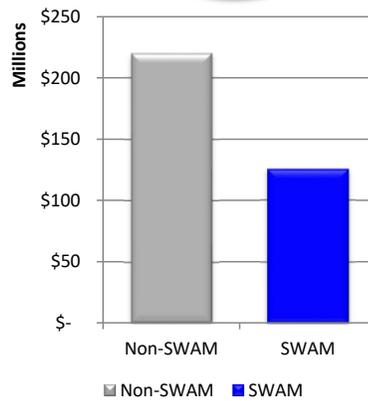
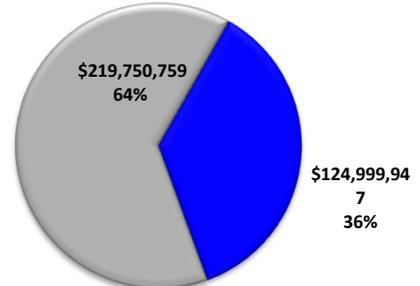
OPERATING



CORPORATE VISA CARD



CAPITAL IMPROVEMENT PROGRAM



HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #6

9. High Priority Inflow and Infiltration Reduction Program  
Alternative Project Delivery



HRSD

High Priority Inflow and Infiltration  
Reduction Program

October 24, 2023

- Approve the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) project delivery method for multiple inflow and infiltration reduction projects

# HRSD's High Priority Projects

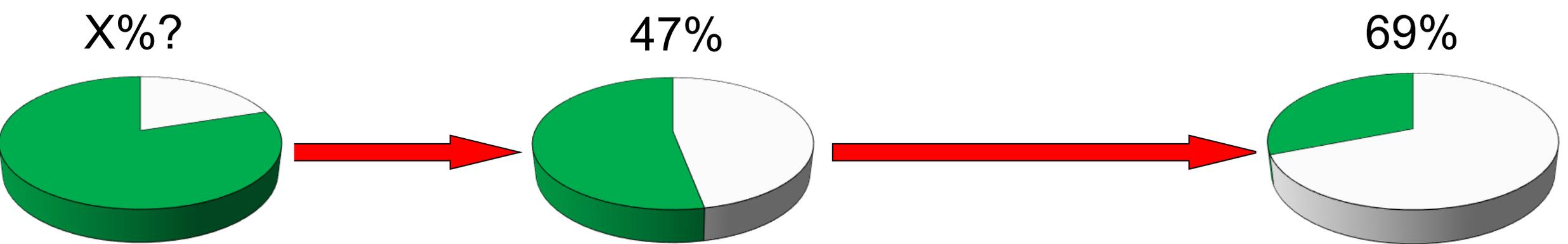
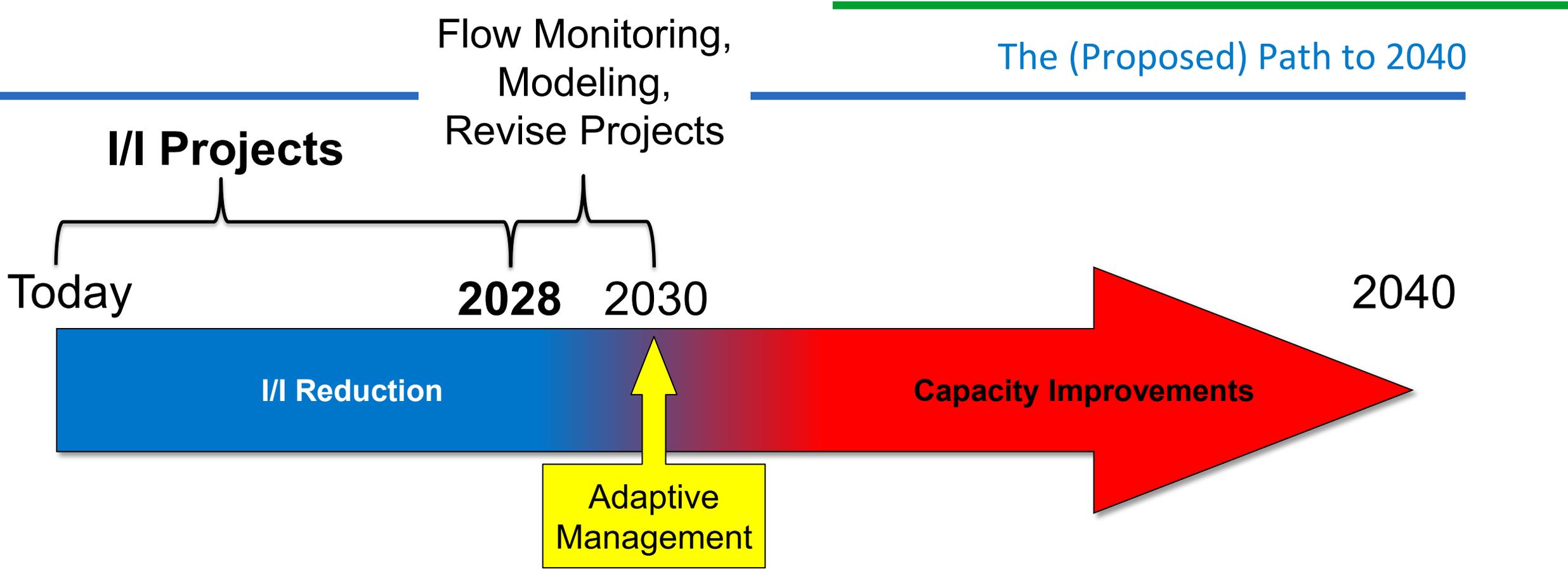
**Table 3-2. Round 1 Selected High-Priority Projects**

Round 1 Project	High-Priority Project Group ID	TP	Location	General Description
1	VIP-05_06_07	VIP	Portsmouth	Camden Ave PS and GM Improvements; Portsmouth I/I Reduction; Locality PS Upgrades
2	NA-01	NA	Suffolk	Wilroy PRS and Storage
3	NA-08	NA	Chesapeake	Chesapeake I/I Reduction; Jumper FM
4	AT-02	AT	Chesapeake	Chesapeake I/I Reduction; Locality PS and FM Upgrades
5	BH-02_S	BH	Newport News/ Hampton	Claremont Ave GM, PS, and Siphon Improvements; 14th St Storage
6	VIP-11	VIP	Norfolk	State St PRS and Storage

**Table 3-3. Round 2 Selected High-Priority Projects**

Round 2 Project	High-Priority Project Group ID	TP	Location	General Description
1	WB-04	WB	Williamsburg	Williamsburg Crossing PRS, Force Main and Storage Tank
	WB-13	WB	York County	York County I/I Reduction; Lodge Rd Extended wet well
	WB-03	WB	York County	York County I/I Reduction
2	AT-05	AT	Virginia Beach	Birdneck - General Booth Blvd. Force Main Improvements
3	BH-04	BH	Newport News	58th St Storage Tank
	BH-05	BH	Newport News/ Hampton	Newmarket Creek PS Upgrade and Gravity Main improvements
4	VIP-21	VIP	Norfolk	Norfolk I/I Reduction
	VIP-29	VIP	Norfolk	Norfolk I/I Reduction
5	VIP-08	VIP	Norfolk	May Ave. Storage Tank
	VIP-09	VIP	Norfolk	Willoughby Ave PS Upgrade; Victoria Ave FM; Norfolk PS149 Upgrade
6	JR-06	JR	Newport News	Newport News I/I Reduction
7	JR-04	JR	Newport News	Lucas Creek PRS Upgrade
8	NA-03	NA	Portsmouth	Cedar Lane Gravity Main Improvement; Cedar Lane PS Upgrade
	NA-04	NA	Chesapeake	Western Branch PRS; Chesapeake I/I Reduction
9	YR-04	YR*	York County	Tabb PRS and Storage

\* Project modeled to send flow to YR instead of final RWWMP valving to JR

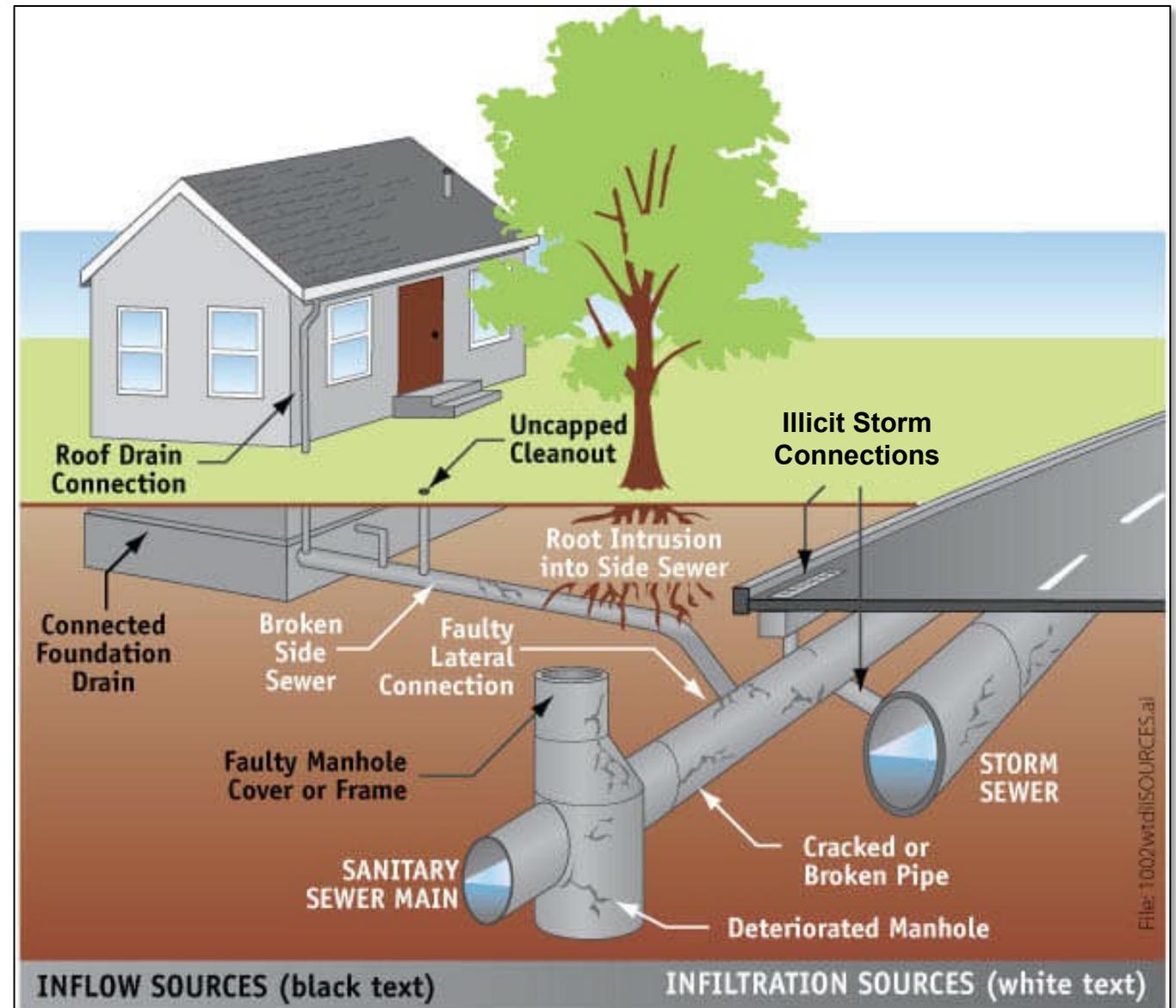


## Why are I/I Projects Different?

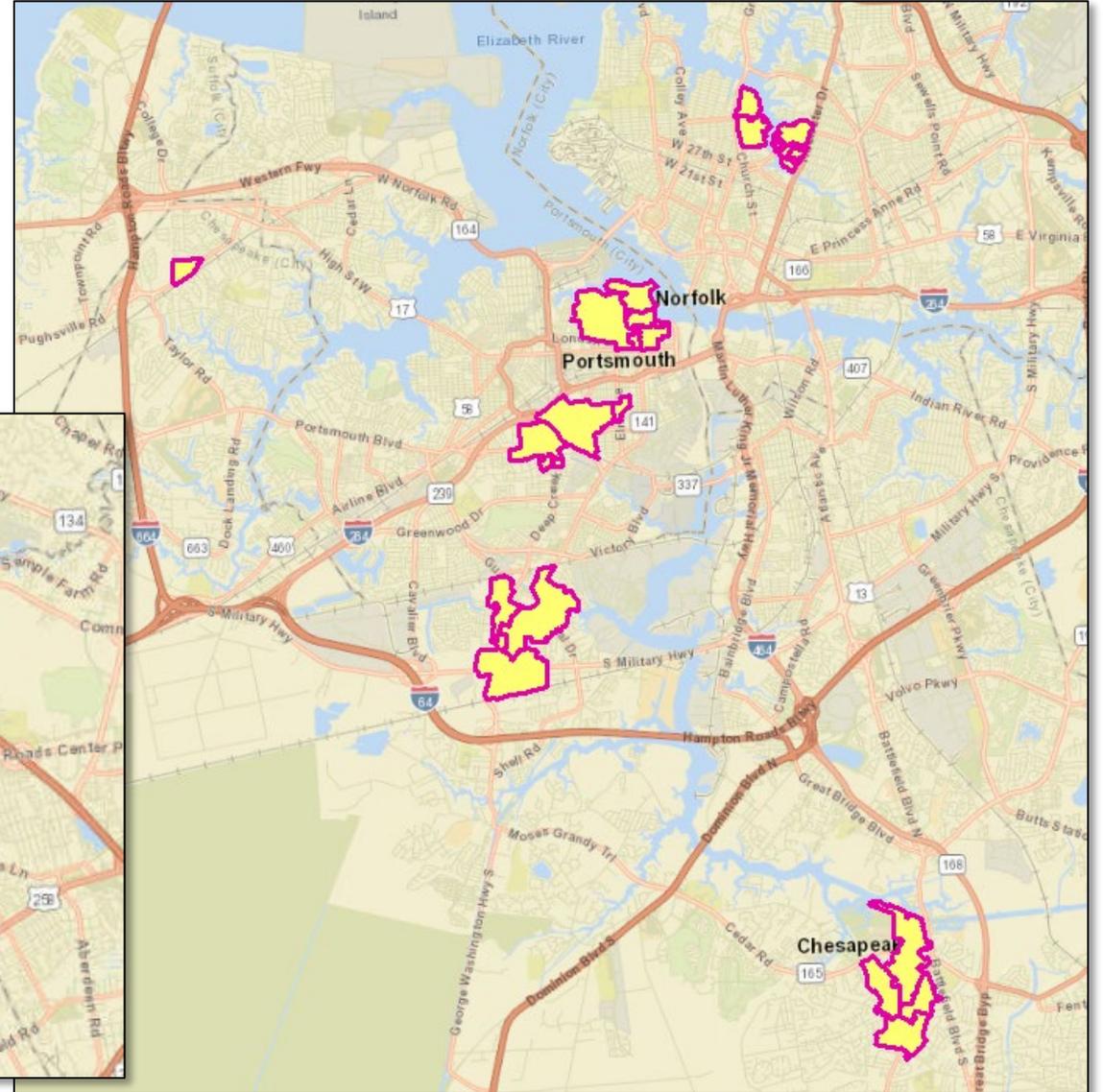
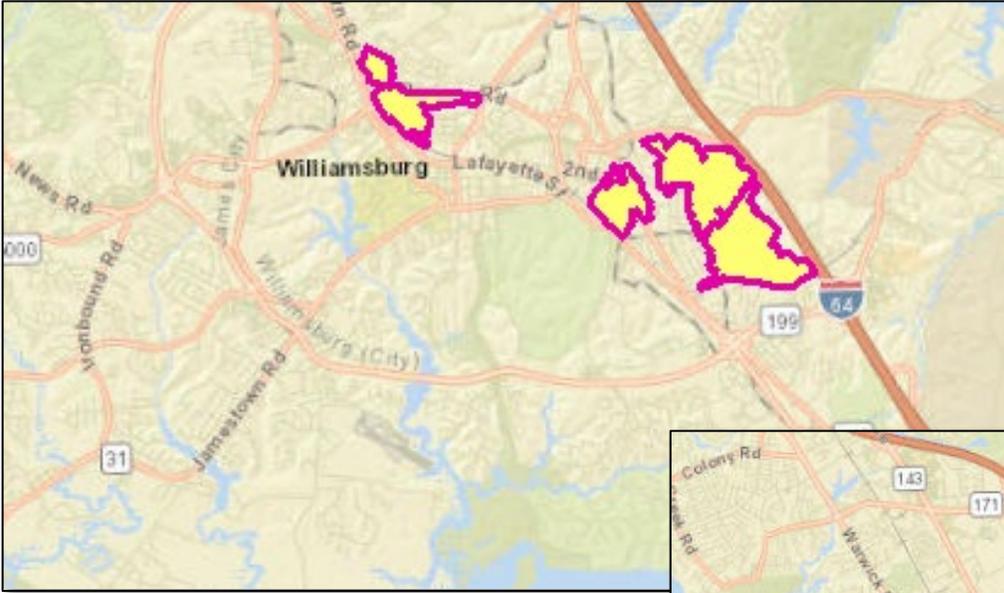
Infiltration and inflow (I/I) is groundwater and stormwater that enters sewers through defects or illicit connections.

### I/I work is unique:

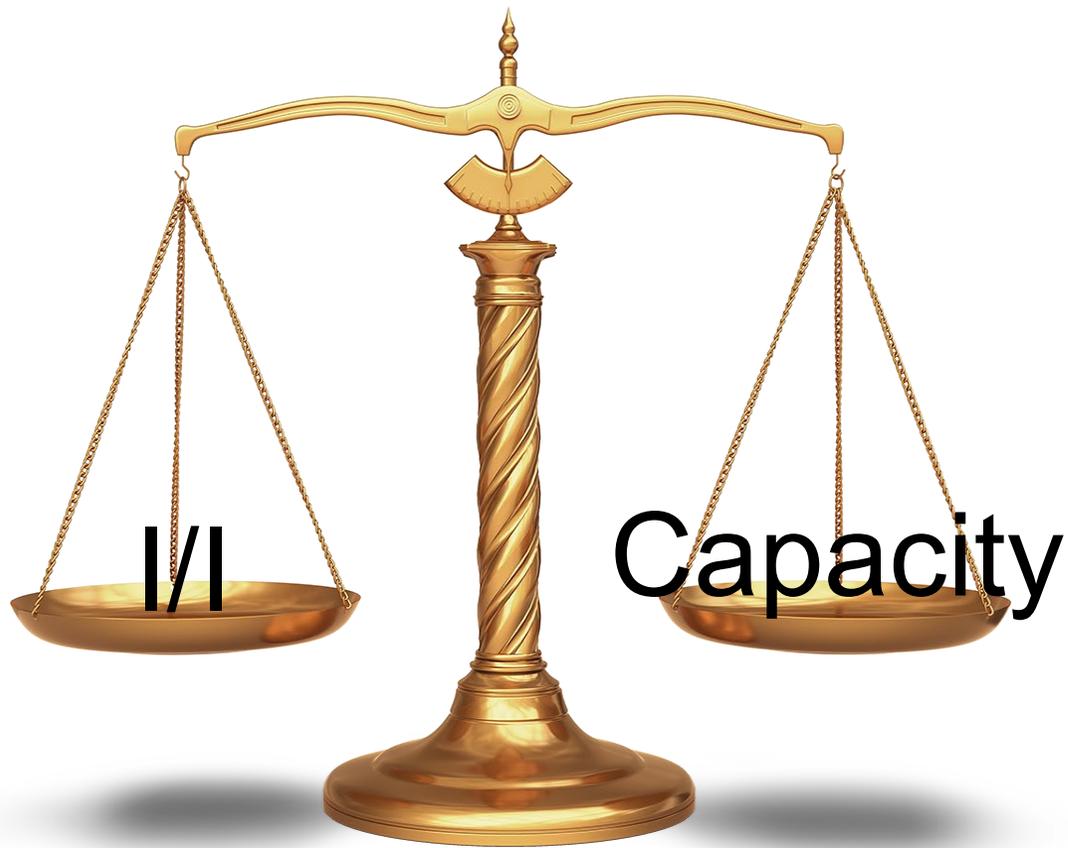
- Location is unknown
- Iterative process
- Takes time
- Results not guaranteed
- Not on HRSD assets



## Multiple Localities Involved



# I/I vs. Capacity



- Determine overflow reduction to date
- Coordinate efforts between all projects
- Track progress in real-time
- Standardize evaluation criteria/outputs
- Maximize time for I/I work to happen
- Deliver projects in a way that encourages success

## Typical Project Delivery Options

Design-Bid-Build	Design-Build	Construction Manager
Multiple firms and approaches ❌	One approach/entity ✓	Possibly one approach, two or more entities ❌
Slow ❌	Faster ✓	Slow ❌
Limited flexibility ❌	Nimble ✓	Slightly Nimble ✓
Projects will compete for resources ❌	GMP not possible ❌	Difficult to offer incentives ❌
	Can incentivize performance ✓	

- AKA: Public-Private Education Facilities and Infrastructure Act of 2002
- Allows localities/HRSD to form partnerships with the private sector to complete major educational and infrastructure projects



- HRSD Offices (Air Rail and G Ave)
- City of Virginia Beach Sports Center
- Hampton Aquatic Center
- HRT Southside Bus Maintenance, Operations, and Admin Facility
- City of Petersburg Poor Creek Pump Station
- Tazwell Cavitt Creek/Lake Witten Wastewater Treatment System

- Follow the requirements of:
  - Code of Virginia Title 56, Chapter 22.1
  - HRSD Procurement Policy and Appendix F
- Similar procurement process to Design-Build projects
- Added requirements for a public hearing and notification to affected localities
- Solicited proposal with copies available upon request

Flow Monitoring,  
Modeling,  
Revise Projects

## The (Proposed) Path to 2040

I/I Projects

Today

2028

2030

2040

I/I Reduction

Capacity Improvements

Adaptive  
Management

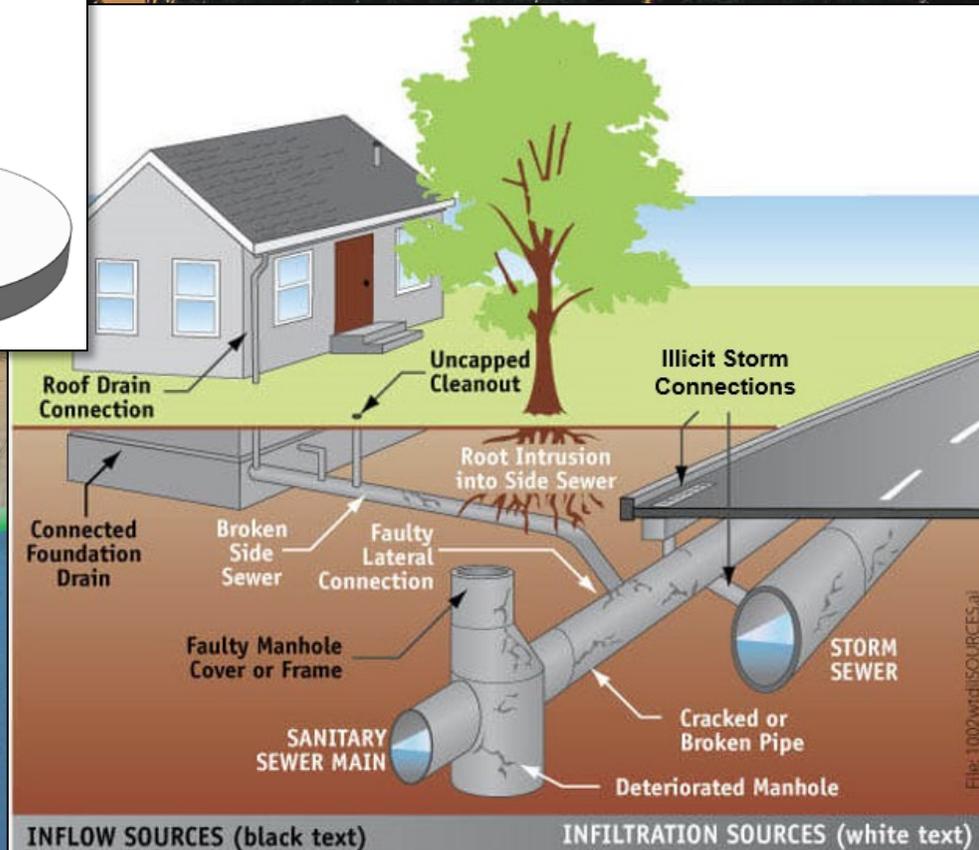
X%?

47%

69%



# Questions?



HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #7

10. Capital Improvement Program (CIP)  
Quarterly Update



**HRSD**

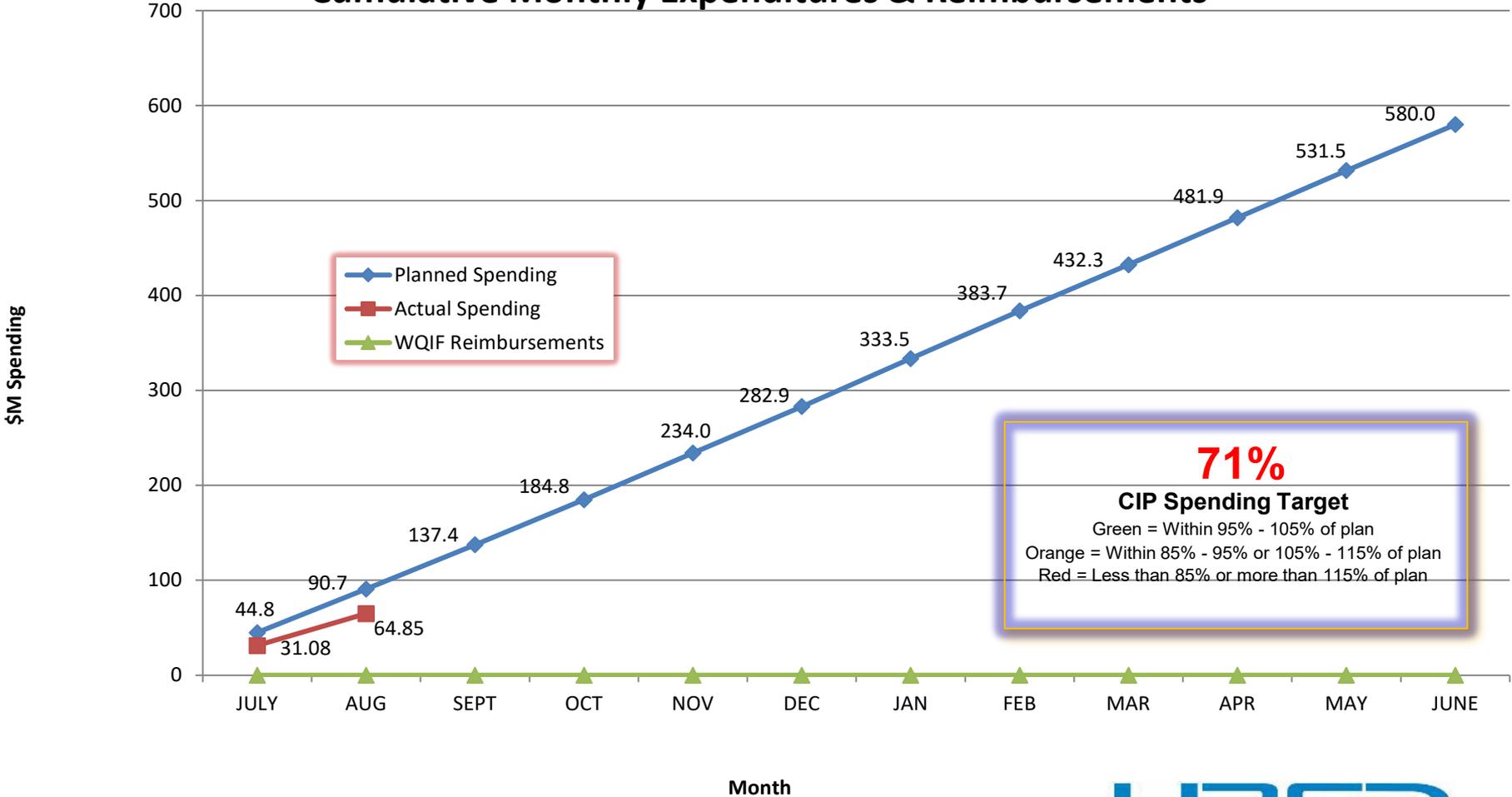
Capital Improvement Program  
Commission Briefing

October 24, 2023

- CIP Expenditures for FY-2024
- Consent Decree/Sewer Rehabilitation Plan – Project Status
- Significant Project Updates
- SWIFT Program Update
- Challenges with Park Avenue Pump Station Replacement Project
- Focus – Asset Management Program Update (Anas Malkawi)

# CIP Expenditures for FY-2024

## FY2024 Capital Improvement Program Cumulative Monthly Expenditures & Reimbursements



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## Consent Decree/Sewer Rehabilitation Plan – Project Updates

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- Consent Decree Condition Assessment Program (CAP) identified condition defects in the regional sanitary sewer system.
- EPA/VDEQ approved the Rehabilitation Action Plan (RAP) in May 2015.
- RAP addresses improvements to gravity mains, force mains, pump stations and associated system compounds.
- RAP will be implemented in three phases:
  - Phase 0 (June 2017)
  - Phase 1 (May 2021)
  - Phase 2 (May 2025)

## Consent Decree/Sewer Rehabilitation Plan Project Updates (Phase 2)

CIP	Project Name	Project Status	Total CIP Cost
AB010500	Section W Force Main Replacement	Design	\$27,343,000
AT011510	Shipps Corner Interim Pressure Reducing Station	Complete	\$3,691,148
AT011520	Shipps Corner Pressure Reducing Station Modifications	<b>Construction</b>	\$1,826,426
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement***	Design	\$11,915,000
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	Construction	\$12,188,492
AT013010	Washington District Pump Station Replacement**	Design	\$9,400,000
AT013100	South Norfolk Area Gravity Sewer Improvements Phase 1	Complete	\$968,005
AT013110	South Norfolk Area Gravity Sewer Improvements Phase 2	Design	\$10,566,000
AT015400	Dozier's Corner Pump Station Replacement**	Design	\$17,121,868
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	Construction	\$4,404,011
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	<b>Construction</b>	\$2,243,200
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	Construction	\$12,178,333
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	Construction	\$4,644,400
BH015900	Bloxoms Corner Force Main Replacement	Construction	\$6,391,596
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	Design	\$1,702,700
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	Design	\$2,262,394
CE012000	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements (I-264 VDOT Betterment)	Complete	\$233,180
GN010730	Horizontal Valve Replacement Phase III	Complete	\$0
GN014900	North Shore Gravity Sewer Improvements Phase I	Construction	\$13,095,613

## Consent Decree/Sewer Rehabilitation Plan Project Updates (Phase 2)

CIP	Project Name	Project Status	Total CIP Cost
GN015000	South Shore Gravity Sewer Improvements Phase I	Design	\$942,804
GN015300	Interceptor System Valve Improvements Phase I	Design	\$3,259,305
GN015400	South Shore Aerial Crossing Improvements	Design	\$290,758
JR013500	Lucas Creek Pump Station Replacement	Construction	\$23,401,243
NP010620	Suffolk Pump Station Replacement**	Design	\$12,049,000
NP012400	Western Branch Sewer System Gravity Improvements	Design	\$5,100,000
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	Complete	\$1,230,006
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	<b>Construction</b>	\$5,271,121
VP014010	Ferebee Avenue Pump Station Replacement*	Design	\$5,852,747
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24-Inch & 18-Inch Gravity Replacement	Design	\$7,179,000
VP014021	Sanitary Sewer Project 1950 FM Replacement Part 1	Complete	\$4,380,265
VP014022	Sanitary Sewer Project 1950 FM Replacement Part 2	Construction	\$20,833,818
VP014700	Ingleside Road Pump Station Replacement	Design	\$3,810,449
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	Design	\$4,081,470
VP015320	Larchmont Area Sanitary Sewer Improvements**	Design	\$38,734,000
VP015400	Lafayette Norview-Estabrook Pump Station Replacements**	Design	\$18,495,895
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	<b>Construction</b>	\$5,400,927
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	<b>Construction</b>	\$4,222,901
VP017110	Central Norfolk Area Gravity Sewer Improvements Phase I	Complete	\$136,403
VP017120	Central Norfolk Area Gravity Sewer Improvements Phase II*	Design	\$7,160,000
VP018000	Park Avenue Pump Station Replacement	Construction	\$15,366,578
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	<b>Construction</b>	\$6,503,310

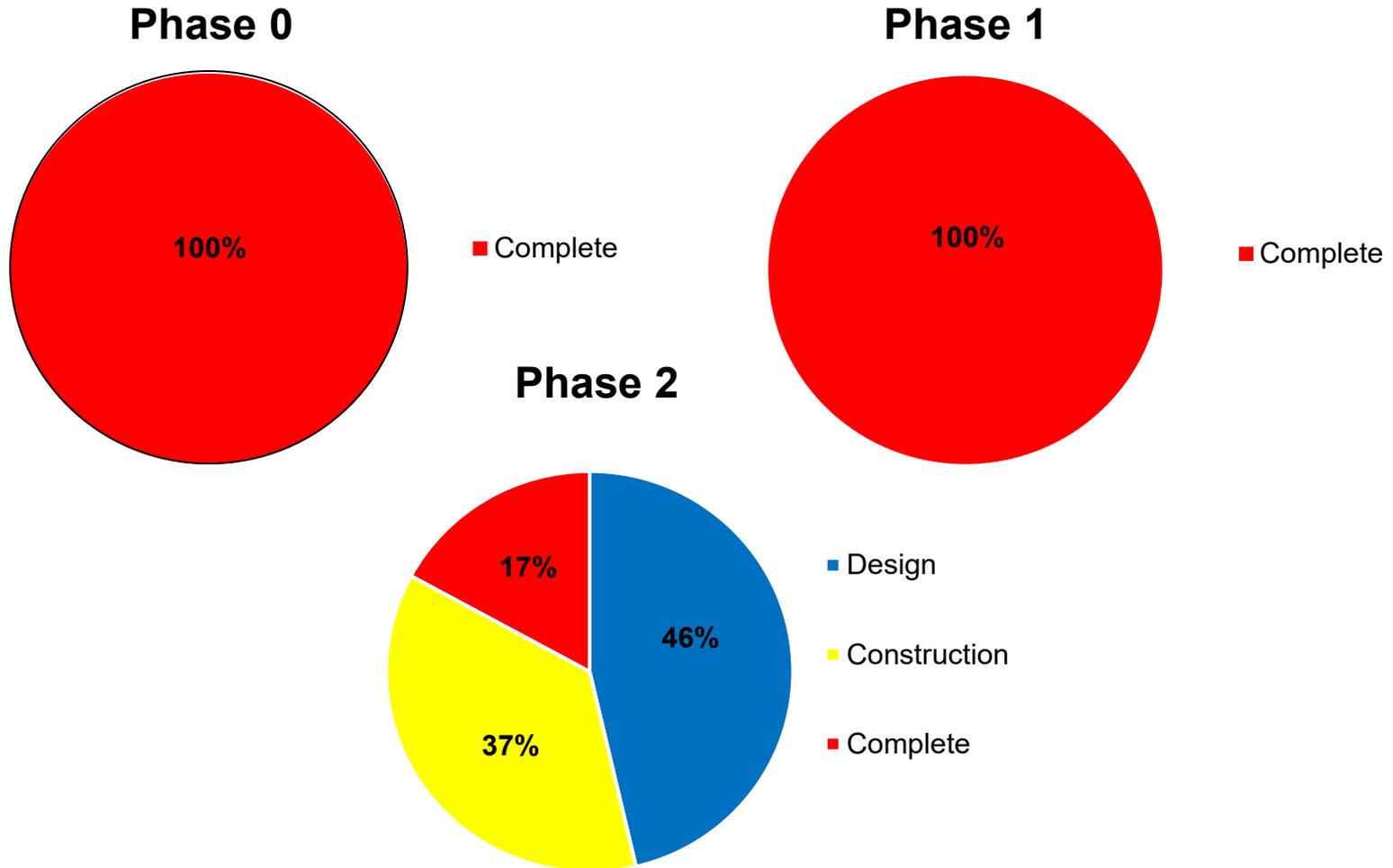
**\$395,329,344**

\* Projects approved by the USEPA with one-year time extension

\*\* Projects approved by the USEPA with two-year time extension

\*\*\*Project delayed due to emergency declaration. Time extension requested.

# Consent Decree / Sewer Rehabilitation Plan – Project Updates



## Nansemond Advanced Nutrient Reduction Improvements Phase II

### Owner's Consultant:

AECOM with Hazen and Sawyer

### Design-Build Team:

Garney with Tetra Tech

**Schedule Completion:** April 2026

**Project Value:** \$318M

**Funding:** WIFIA, VRLF, WQIF



Primary Effluent Equalization Tanks

# James River SWIFT and Advanced Nutrient Reduction Improvements

## Owner's Consultant:

AECOM with Hazen and Sawyer

## Design-Build Team:

Ulliman & Schutte-Alberici  
with HDR and Black & Veatch

**Schedule Completion:** Oct. 2026

**Project Value:** \$579M

**Funding:** WIFIA, VRLF, WQIF



## Boat Harbor Treatment Plant Subaqueous Crossing

### Owner's Consultant:

AECOM with Hazen & Sawyer

### Design-Build Team:

Garney with Dewberry

**Schedule Completion:** Dec. 2025

**Project Value:** \$168M

**Funding:** WIFIA, VRLF, WQIF



# Four Large SWIFT Program Projects are Underway

## Boat Harbor Pump Station & Sitework

Current Phase: Construction  
Total Project Complete: 8%



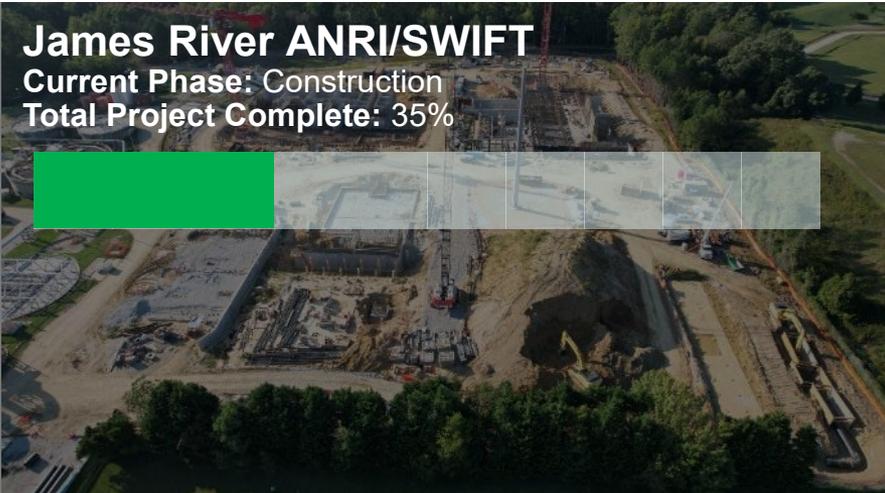
## Boat Harbor Force Main Section 1

Current Phase: Construction  
Total Project Complete: 13%



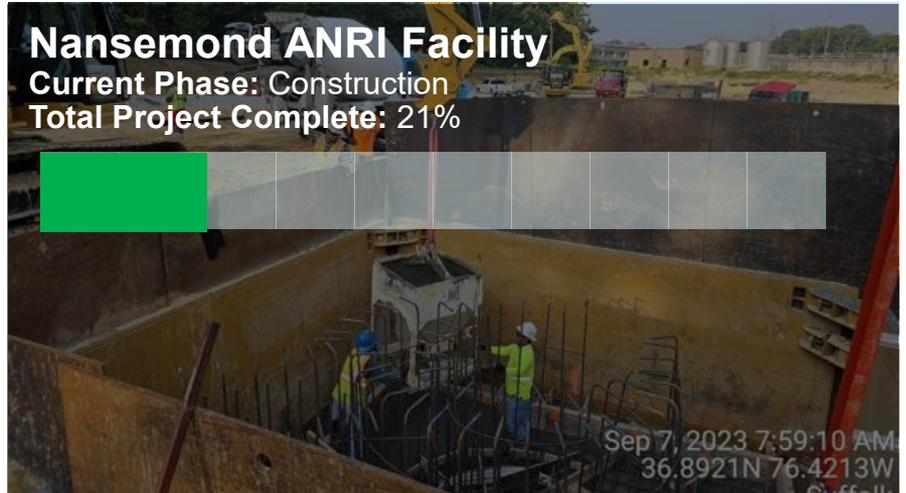
## James River ANRI/SWIFT

Current Phase: Construction  
Total Project Complete: 35%



## Nansemond ANRI Facility

Current Phase: Construction  
Total Project Complete: 21%



\* Percent of contract value is shown

# Making a Difference in Our Community



## WAVY News 10 Operation School Earth Data Incorporated

- School supply drive to support schools in Hampton Roads
- Materials donated included notebooks, pencils, crayons, scissors, glue, and backpacks



## Elizabeth River Project – Build a Wetland Garney Construction

- Installed 120 oyster castles and moved 500 additional castles to the nearby staging area to assist with future volunteer events



## Donate H2O Earth Data Incorporated

- Community-based program for low-income households



# Making a Difference in Our Community



## Living Shoreline Sand Installation and Grading

**MEB**

- Worked to install a 718-foot living shoreline which includes 400 tons of sand, 1,150 bushels of loose oyster shells, 2,500 wetland plant plugs, 100+ saltbushes



## Oyster Bagging

**MEB**

- Cured and bagged 224 bags of oysters as part of a restoration process



## Welcome Back to School for BC Charles Elem.

**US-A**

- Prepared thank you breakfast for teachers and volunteered on the first day of school to welcome students and parents



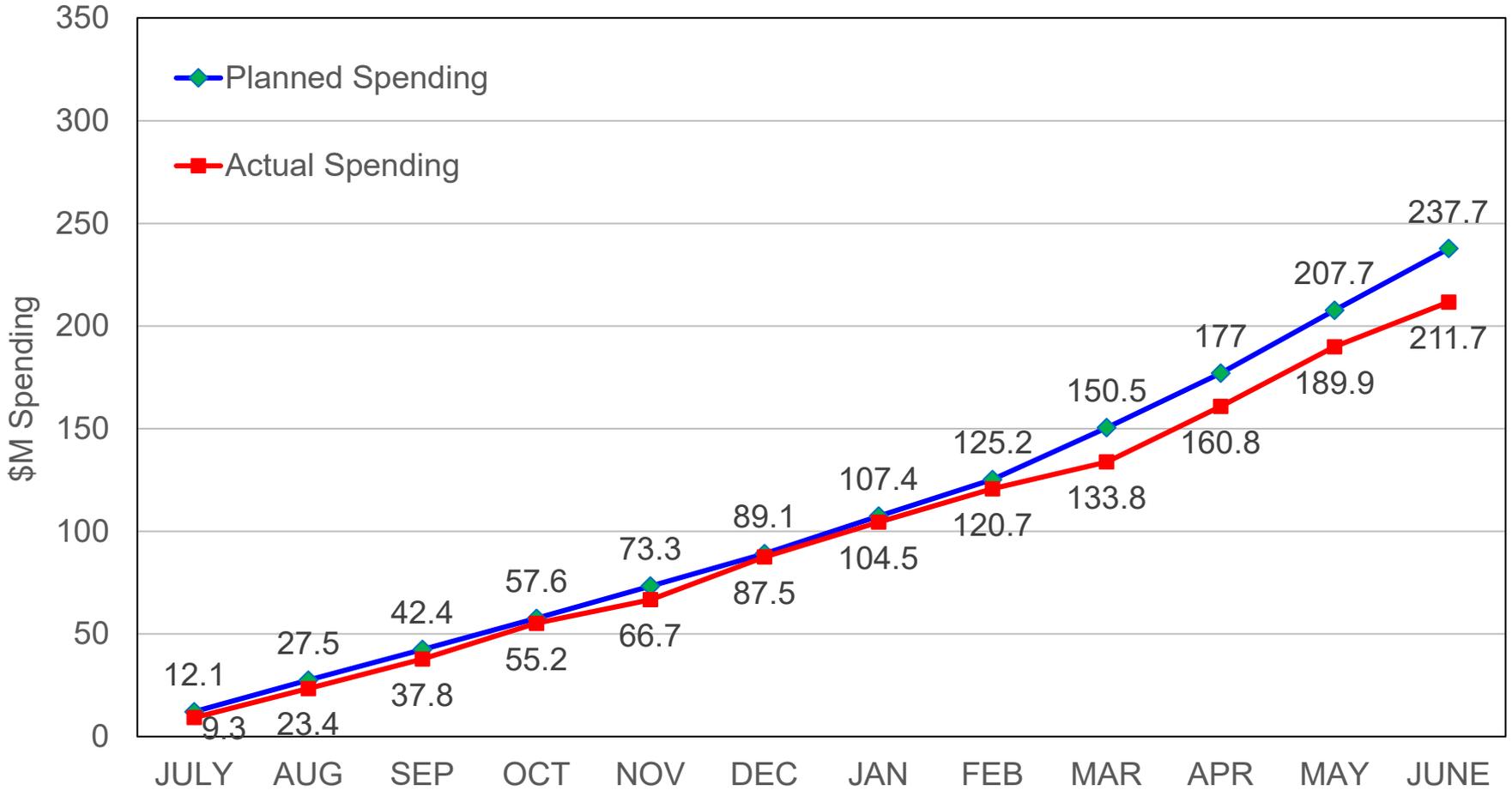
## School Supply Drive for BC Charles Elementary

**US-A**

- Donated school supplies

# FY 23 Expenditures were 90% of Planned Spending

## SWIFT Program (FSIP) Planned vs. Actual Spending for FY 2023



\* Actual spending amounts are paid to date as of June 2023



# Challenges with Park Avenue Pump Station Replacement Project

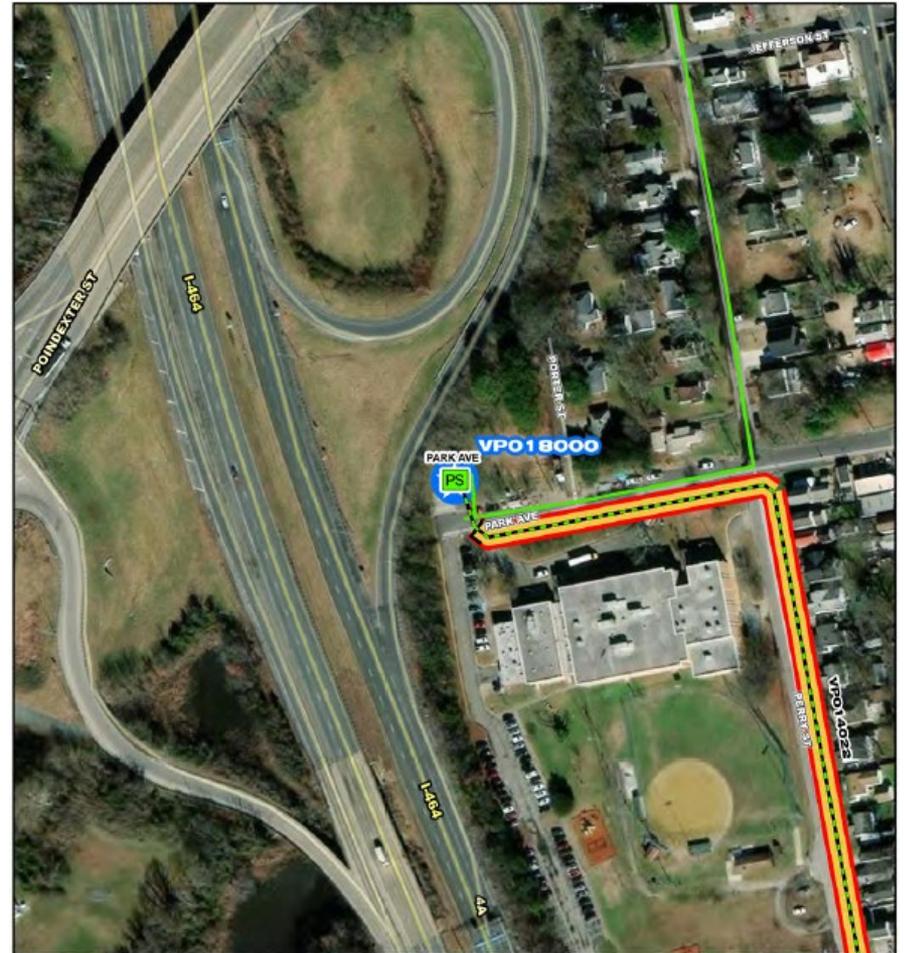
**Engineer:** Gannett Fleming

**Contractor:** Shaw Construction

**Notice to Proceed:** June 2022

**Project Value:** \$13.8M

**Regulatory Deadline:** May 2025



# Challenges with Park Avenue Pump Station Replacement Project

## Sequence of Events:

Jan. 2023 – Failure of sheeting system

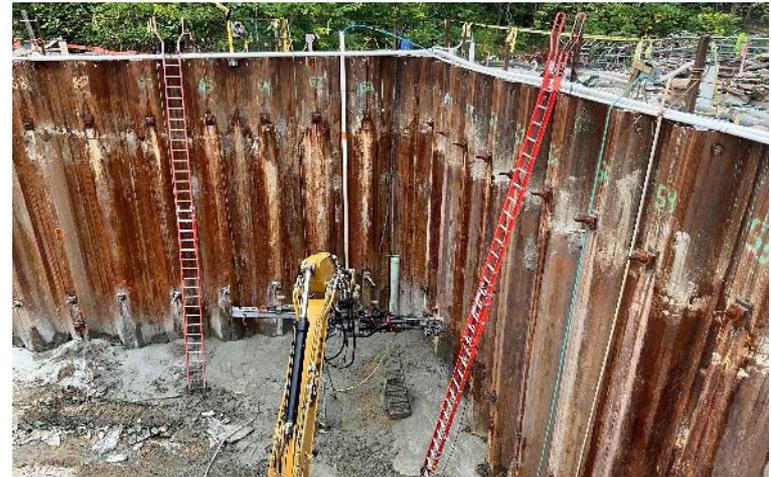
Mar. 2023 – HRSD issues stop work order

Mar. to Aug. 2023 – Redesign and approval of improved sheeting and cofferdam system

Oct. 2023 – Stop work order lifted and construction is progressing



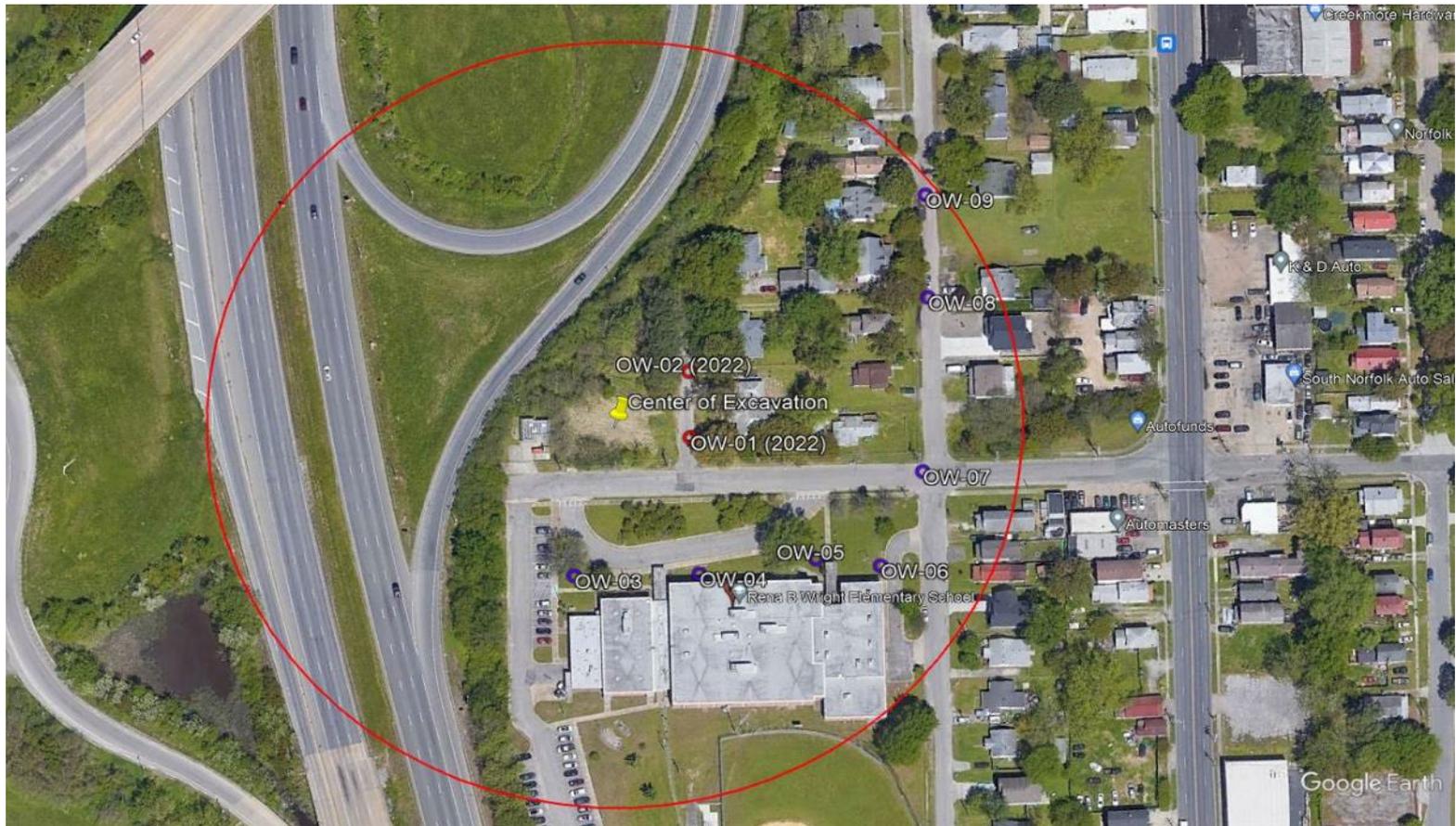
Failed Sheetting System Jan. 2023



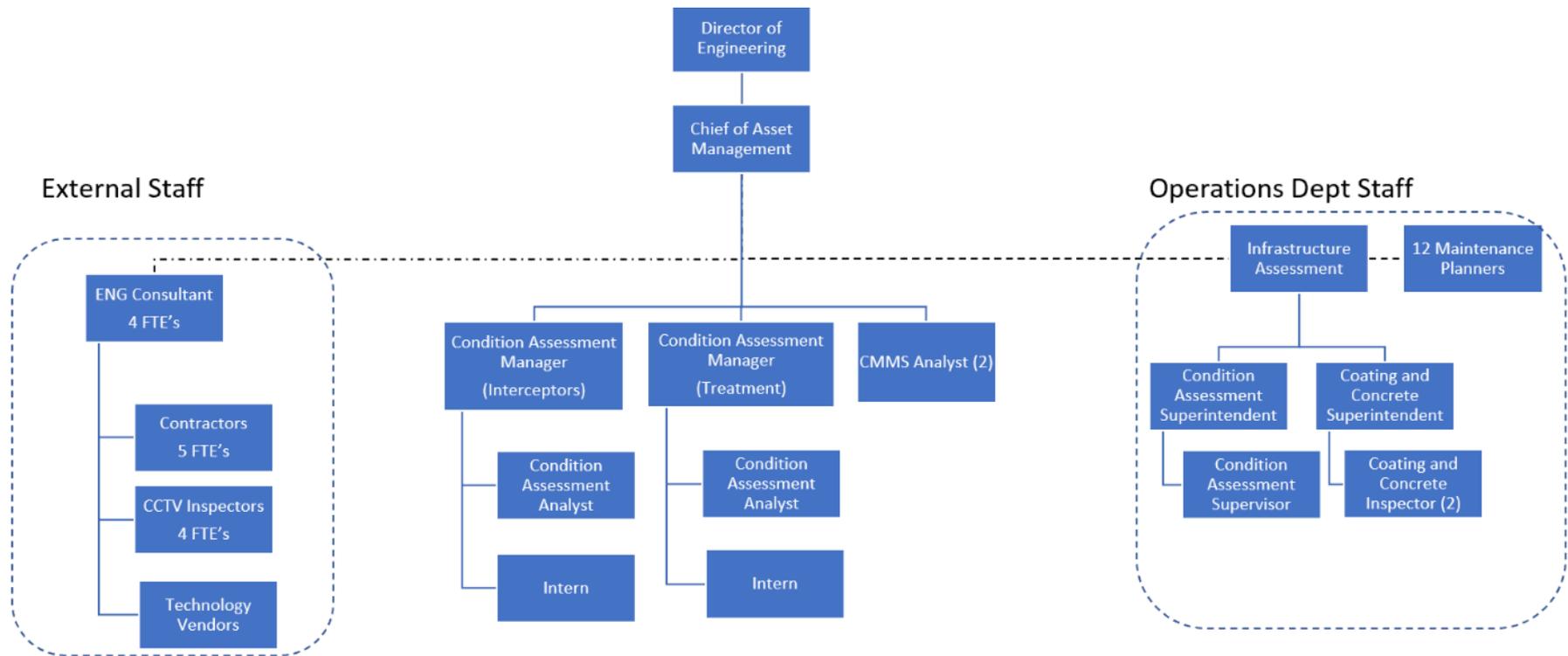
Modified Sheetting System Oct. 2023

# Challenges with Park Avenue Pump Station Replacement Project

## Settlement & Vibration Monitoring Program



# Asset Management Org Chart



# Asset Management Plan

If you have any questions, please contact [Power BI Support](#) or [AMP Support](#)



## Asset Management Plan

"Making the Right Investment at the Right Time"

HRSD

Treatment Plants

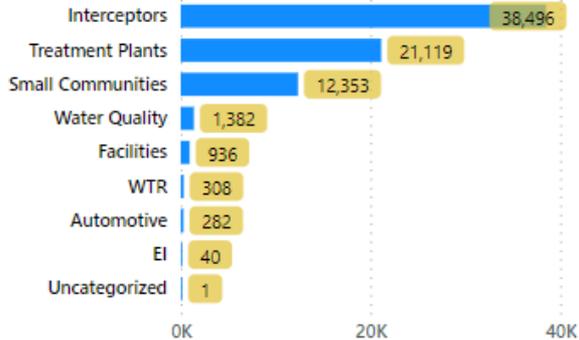
Small Communities

Automotive

Facilities

Interceptors

Asset Counts by Work Group



Replacement Cost by Work Group



74,917

Asset Count

\$4,852,750,958

Replacement Value

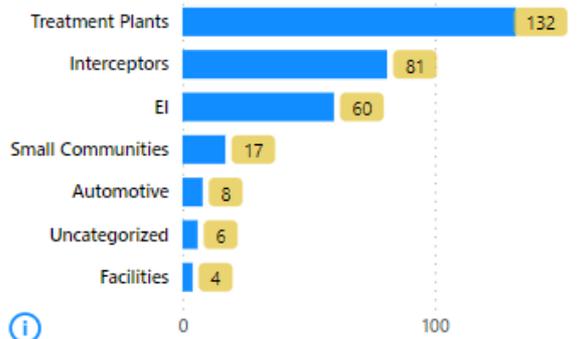
307

Maintenance Staff Count

Risk Profile

Risk Level	Replacement Value	Asset Count
Low	\$1,578,768,978	23,032
Medium	\$2,767,921,968	13,586
High	\$140,975,894	551
Severe	\$8,264,362	8
<b>Total</b>	<b>\$4,495,931,202</b>	<b>37,177</b>

Maintenance Staff by Work Group



National Condition Score

D+

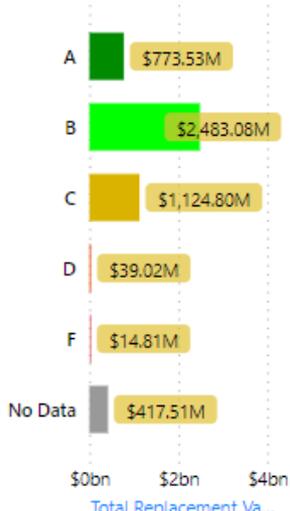
HRSD Condition Score

B

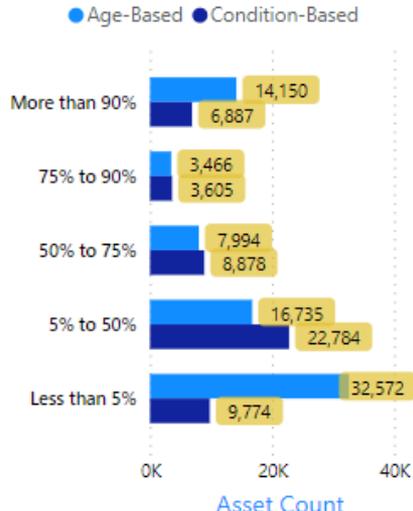
Average Condition Score by Work Group

Work Group	Grade	Score
Interceptors	B	1.68
Treatment Plants	B	1.76
Small Communities	B	1.81
Automotive	B-	2.00
<b>HRSD Avg Condition Score</b>	<b>B</b>	<b>1.70</b>

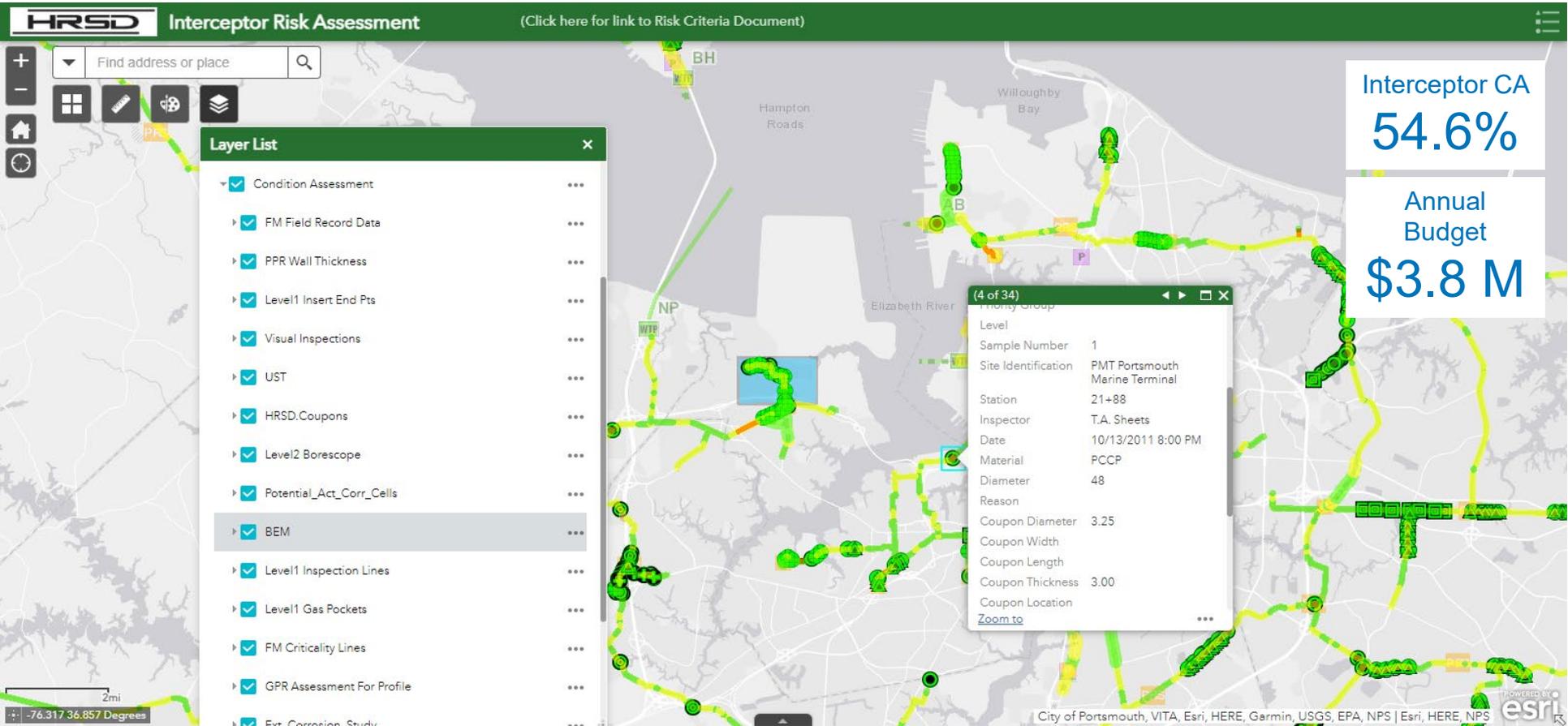
Condition Grade



Percent of Service Life

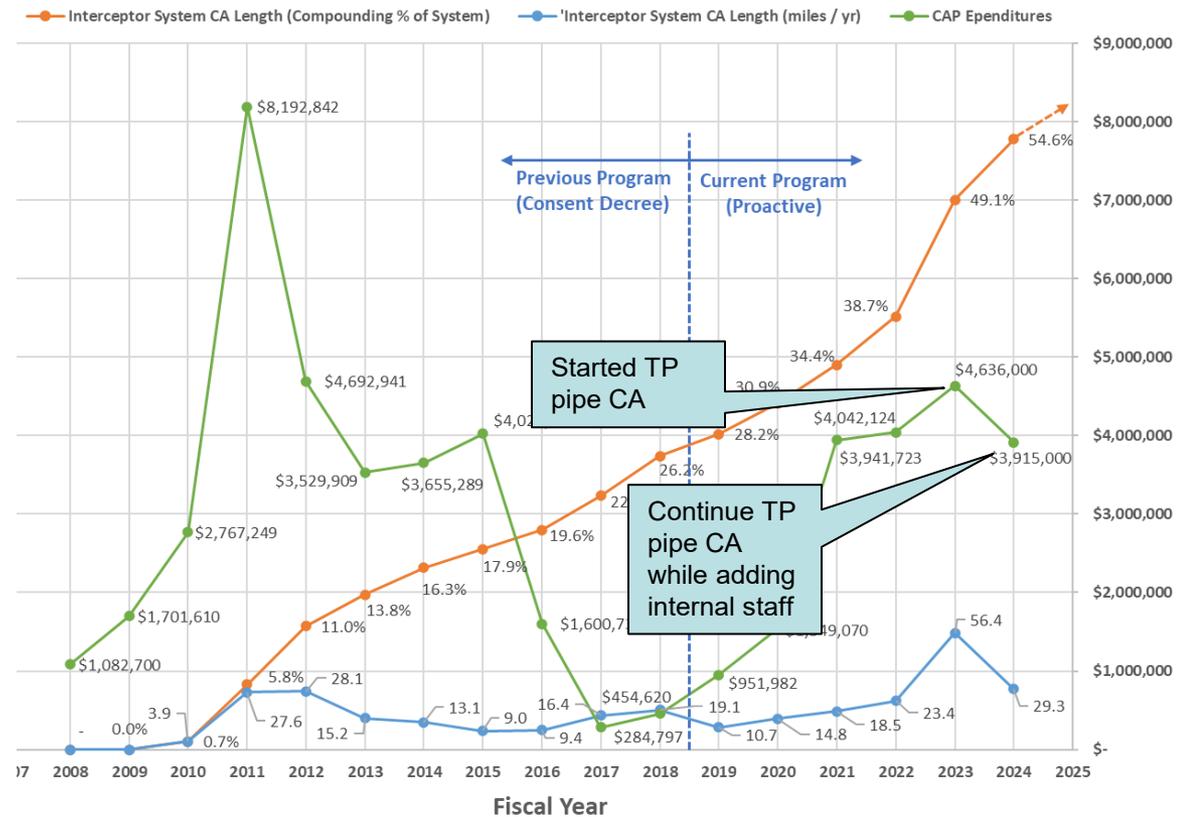


# Interceptor Condition Assessment



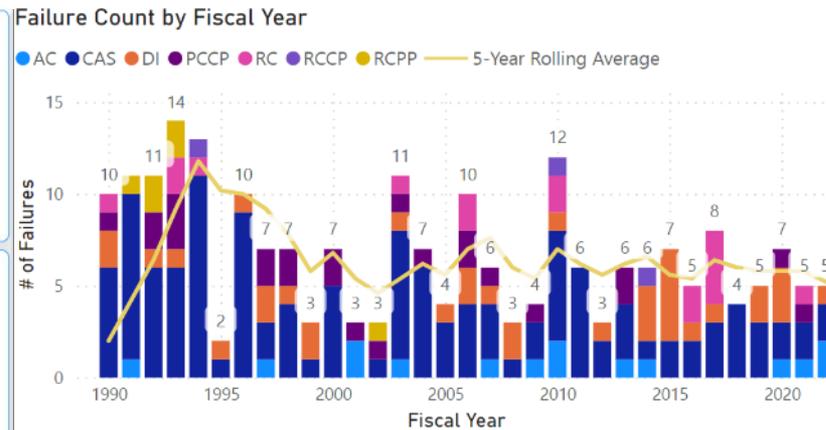
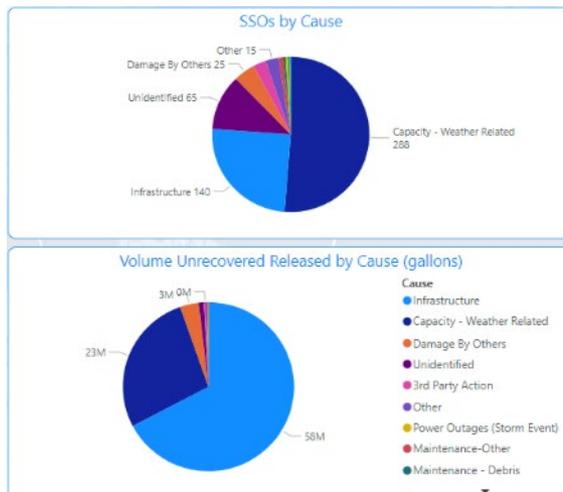
# Condition Assessment Program (CAP)

- Consent Decree CAP focused on Interceptor System in metro area
- Current CAP expanded to WWTP's and Small Communities
- Majority of cost is in the Interceptor system due to challenges with traffic control, deep excavations, flow control, etc.



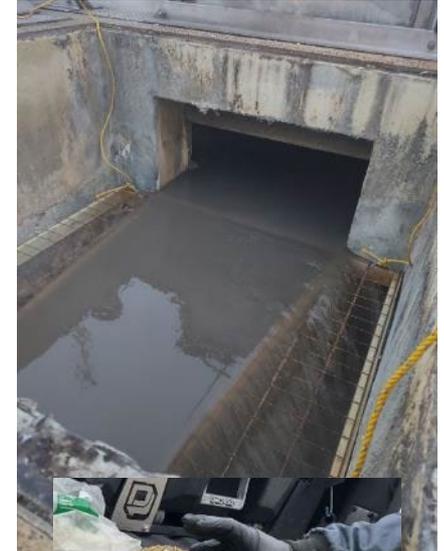
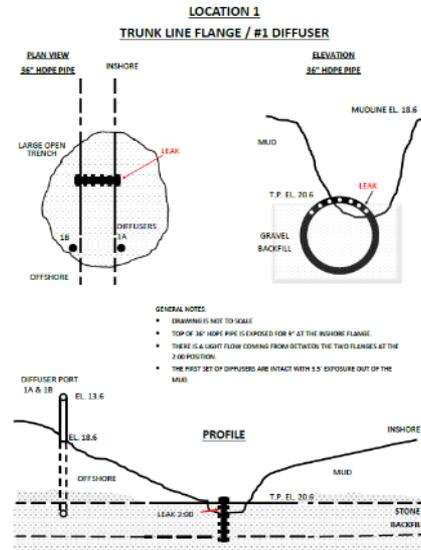
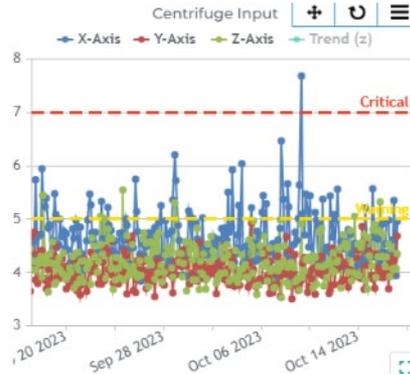
# Force Main Failures

- Corroded Repair Clamps on AC pipe (Tyler Ave, NN)
- Deflection on AC pipe causing leak (Shore Dr, VB)
- Unvented High Point on a segment that wasn't critical for CA (Wythe Creek Rd, PQ)
- Failure right before CIP (Chesapeake Ave, NN; Shell Rd, Ches)



# Treatment Plant Condition Assessment

- Vibration Monitoring
  - 285 sensors on 61 assets
- Outfall Inspections
  - 3-5 year cycle (possibly increasing w/ SWIFT)
- Yard Piping



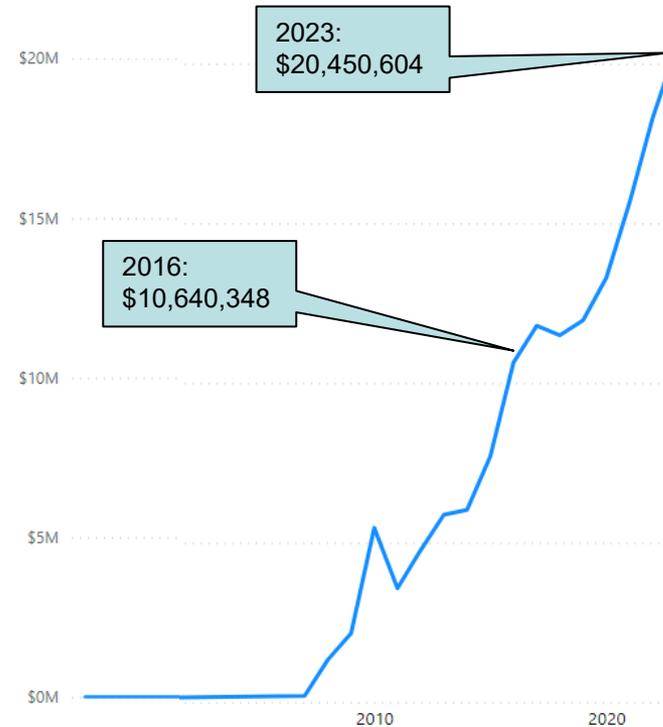
## Prompt Repair Program

- Annual Budget (\$500k)



# Maintenance Costs

- Benefits of accurate Maintenance Costs
  - Rate projections
    - actual historical O&M costs vs. assumptions
  - Staffing projections
    - FTE evaluations
    - Currently evaluating FTE's for BHPS and NTP
  - Life cycle cost analysis
    - design support
    - Material selection





## Renewal Planning Model

[RPM Procedure Manual](#)  
[Condition Assessment Manual](#)

If you have any questions, please contact  
[Power BI Support](#) or [AMP Support](#)

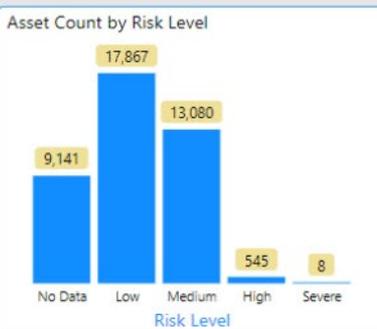
**% of Assets with Risk Scores**

**77.51%**

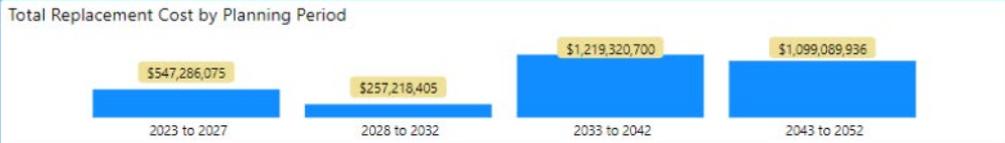
**RPM Annual Investment Projections**



**Asset Count by Risk Level**



**Total Replacement Cost by Planning Period**



*Right Click in the table to drill to Asset Explorer report*

Replacement Year	Asset Code	Description	Class	Manufacturer	Work Center	CoF Score	LoF Score	Risk Level	Asset Age	Effective Age	Service Life	Maintenance / Replacement	Replacement Cost
2053	131677	SF-268-6980 / 306 LF / 30"DIP / Elizabeth River Crossing - Land Portion (Water*)	MAIN		South Shore Interceptors	4	4	Severe	20	20	50	0.04%	
2041	135374	SF-175-12063 / 1049 LF / 54"PCCP / Dam Neck Force Main	MAIN		South Shore Interceptors	4	4	Severe	47	47	65	0.00%	\$2,223,962
2041	136930	SF-175-9261 / 418 LF / 54"PCCP / Dam Neck Force Main	MAIN		South Shore Interceptors	4	4	Severe	47	47	65	0.01%	\$1,084,893
2041	138372	SF-027-6674 / 324 LF / 36"DIP / Bowers Hill Inter FM Section I	MAIN		South Shore Interceptors	4	5	Severe	32	32	50	2.01%	\$561,286
2041	141010	SF-175-0263 / 556 LF / 54"PCCP /	MAIN		South Shore	4	4	Severe	47	47	65	0.00%	\$1,467,114

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Questions?

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HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #8

14. Informational Items

a. Management Reports

- (1) [General Manager](#)
- (2) [Communications](#)
- (3) [Engineering](#)
- (4) [Finance](#)
- (5) [Information Technology](#)
- (6) [Operations](#)
- (7) [Talent Management](#)
- (8) [Water Quality](#)
- (9) [Report of Internal Audit Activities](#)

b. [Strategic Planning Metrics Summary](#)

c. Emergency Declarations

- (1) [Atlantic Treatment Plant Thermal Hydrolysis Process System Repairs](#)
- (2) [Nansemond Treatment Plant Emergency Generator Repairs](#)

October 17, 2023

Re: General Manager's Report



## Environmental Responsibility

**Treatment Compliance and System Operations:** There was one SSO at the King William pump station due to an equipment issue. Approximately 240 gallons were spilled into Jackpen Creek.

There was one treatment plan exceedance as we were in the process of shutting down the Nassawadox treatment plant as it is now connected to the Eastern Shore Transmission Force Main.

**Water Quality:** A \$4,000 civil penalty was issued to Controls Corporation of America – Virginia Beach for several technical violations.



## Financial Stewardship

The Governor signed the Virginia state budget on September 14. Staff are working closely with the Department of Environmental Quality on Water Quality Improvement Fund (WQIF) grants that were included in the approved budget. Once we know more, we will adjust our Plan of Finance accordingly and present any changes to the Commission.

Standard and Poors (S&P) reaffirmed HRSD's Senior and Subordinate rating at AA+. S&P highlighted HRSD's strong financial policies and risk management practices as favorable. They noted our Capital Improvement Project (CIP) spend over the next five years as an item for them to watch. In addition, their downside scenario highlighted our ability to raise rates as a risk in the future. This is the exact scenario that we envisioned when developing our Strategic Plan and making Community Engagement a key priority.



## Talent

The compensation study continues moving forward. Our consultant, Mercer, is finalizing our compensation philosophy, which is structured around five key elements. Defining pay structure design and job architecture are the next steps.

Several staff were recognized at the Virginia Water Environment Association (VWEA) and Virginia Section of the American Water Works Association's (VA AWWA) Joint Annual Meeting (WaterJAM) Conference held in Virginia Beach from September 11-14.

Stacie Crandall, Chief of Central Environmental Laboratory, was presented with the Meritorious Service Award, which has only been given out a handful of times. This award is intended to recognize Association members who have provided extraordinary personal service, devotion and sacrifice to the Association over an extended period.

David Ewing, Plant Superintendent at Atlantic Treatment Plant, was presented the Water Environment Federation (WEF) William D. Hatfield award which recognizes operators of wastewater treatment plants for outstanding performance and professionalism.

Shawn Heselton, Chief of SS Interceptor Operations, South Shore, was presented the WEF Arthur Sidney Bedell award which acknowledges extraordinary personal service to a Member Association.

I participated in the following meetings/activities with HRSD personnel:

1. Held a town hall-style meeting with South Shore Interceptors staff
2. Met with Customer Care on their five-year roadmap
3. Attended a meeting on the potential for aquaculture at HRSD
4. Attended the Central Environmental Lab partnering meeting with the consultant and contractor
5. Met with staff on the Boat Harbor closure planning
6. Attended the Regional Granular Activated Carbon workshop
7. Participated in the rebranding kick-off



## **Community Engagement**

HRSD successfully went live with the City of Chesapeake as a Model 3 jurisdiction. This means that they are fully embedded in HRSD's Customer Care and Billing (CC&B) system. A significant amount of planning, implementation and testing were involved on both sides to make this happen.

As we learned from our most recent customer survey, most of our ratepayers do not know who we are or what we do, which presents a huge risk to our organization. This month, we kicked-off our rebranding effort with the largest local advertising agency, Meridian Group. The primary goal is to ensure that our ratepayers understand the value they receive when they pay their bill.

HRSD is embarking on a revised pilot Financial Wellness program in the Newport News Waterworks service area to address the continued high level of past due arrearages after the pandemic. More details are provided in the Finance monthly report.

I participated in the following external meetings/activities:

1. Presented at a Water Environment Federation (WEF) webinar on HRSD's Integrated Plan
2. Attended the regional Directors of Utilities Committee monthly meeting
3. Met with Dr. Marcia Conston and Philip Page on our proposed easement on the Tidewater Community College Real Estate Foundation's property
4. Kery Murakami, Route 50 reporter, interviewed me about our experience with the Low Income Household Water Assistance Program (LIHWAP)
5. Met with Doug Beaver, City of Norfolk Acting Deputy City Manager, on Lambert's Point
6. Attended the Virginia Local Government Investment Conference and the Virginia Investment Pool board meeting
7. Attended a hearing at Suffolk Circuit Court regarding a temporary injunction filed to block HRSD's taking of TCC Real Estate Foundation property for the Boat Harbor Transmission force main
8. Met with my mentee, Brandon Cooper – Greeley-Hansen in person at WaterJAM, as part of the Virginia Water Environment Association's mentoring program



## Innovation

Staff have been working closely with the Bethel landfill on reducing their 1, 4-dioxane concentrations that discharge to the James River Treatment Plant (JRTP). After a successful pilot was performed using Tetrahydrofuran to cometabolize and biodegrade 1, 4-dioxane, this was expanded to their entire pretreatment system which resulted in significantly reduced concentrations. As a result, staff were able to eliminate an entire treatment process at the JRTP SWIFT facility savings millions of dollars.

Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth, and the environment.

**I look forward to seeing you in person in Newport News at 9:00 a.m. on Tuesday, October 24, 2023.**

Respectfully submitted,

Jay Bernas, P.E.  
General Manager

TO: General Manager  
FROM: Director of Communications  
SUBJECT: Monthly Report for September 2023  
DATE: October 11, 2023

A. Publicity and Promotion

1. HRSD and Sustainable Water Initiative For Tomorrow (SWIFT) were mentioned or featured in eight stories this month, largely within industry publications such as *Informed Infrastructure*, *Treatment Plant Operator Magazine* and *WaterWorld*. Topics included:
  - a. HRSD's work related to indirect potable reuse (SWIFT)
  - b. Recognition as industry and community leaders in solving water challenges
  - c. Regional partnership for oyster habitat restoration
  - d. Utility of the Future Today honoree
  - e. HRSD General Manager provided comment to The Epoch Times about Pandemic Water Assistance Program
2. Analysis of media coverage

What are the key results for September?

Mentions

Compared to last period

**9** ↑ 800%  
Previous Value: 1

Total Potential News Reach

Compared to last period

**10.9M** ↑  
Previous Value: 0

Sentiment

Compared to last period

**11** ↑  
Previous Value: 0

# What is the top performing news content?

## Top Article by Reach



The Epoch Times · Matt McGregor  
Editorial | US | Sep 25 · 4:14 PM

### Pandemic Water Assistance Program Not Expected to Be Renewed in Congressional Budget Negotiations

... the local community." Jay Bernas, the general manager for **Hampton Roads Sanitation District** (HRSD), praised the program's assistance dur...

Social Echo 1 3 0  
9.17M Reach

Neutral

## Top Article by Reach and Volume



The Epoch Times · Matt McGregor  
Editorial | US | Sep 25 · 4:14 PM

### Pandemic Water Assistance Program Not Expected to Be Renewed in Congressional Budget Negotiations

... the local community." Jay Bernas, the general manager for **Hampton Roads Sanitation District** (HRSD), praised the program's assistance dur...

Social Echo 1 3 0  
9.17M Reach

Neutral

## Top Article by Social Echo



WTKR-TV · Brendan Ponton  
Editorial | US | Sep 11 · 6:14 PM

### Owner of former 'Seaview Lofts' still owes Newport News thousands of dollars, city says

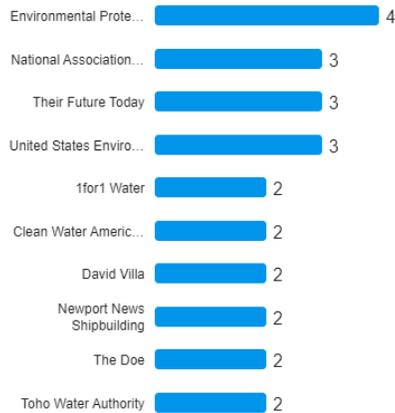
In addition to the hotel expenses, the city and **Hampton Roads Sanitation District** say the owner owes them for unpaid utility bills. In ...

Social Echo 12 1 0  
669k Reach

Neutral

# What are the top entities and keywords?

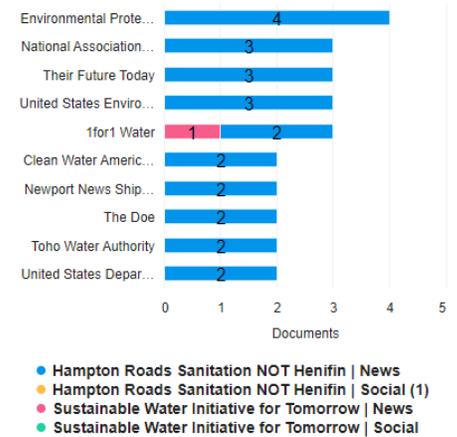
## Top Entities



## Top Keywords

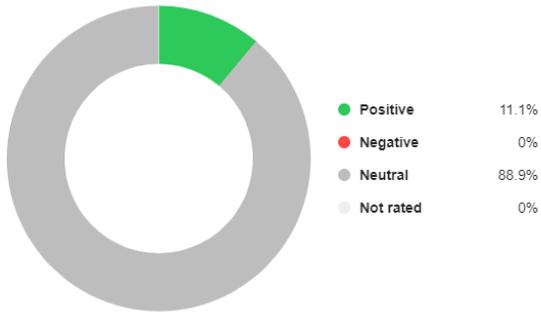


## Top Organizations

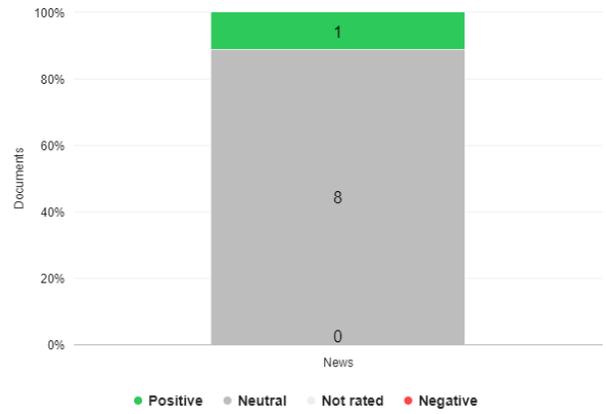


# How favorable is the content?

Sentiment Share of Voice

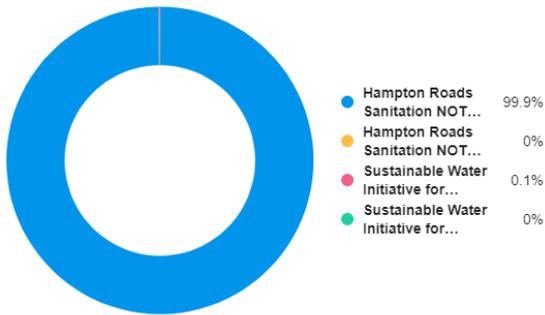


Sentiment by Source Type

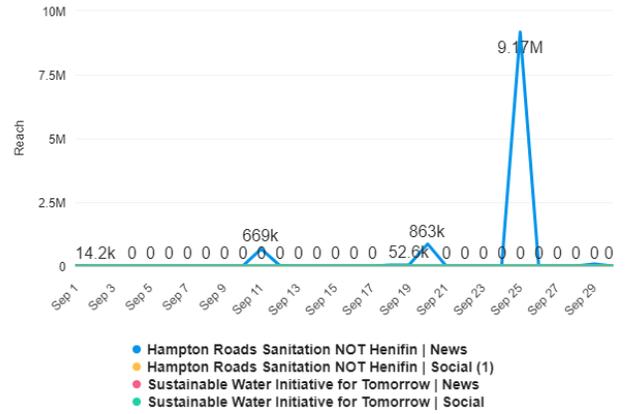


# What is the potential reach?

Share of Voice by Reach



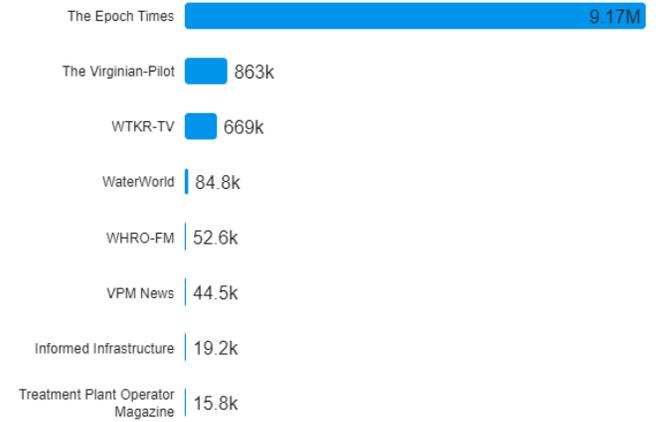
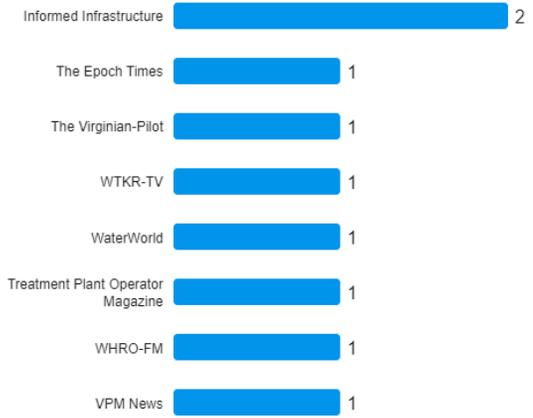
Potential News Reach



# What are the top publishers?

Top Publications by Volume

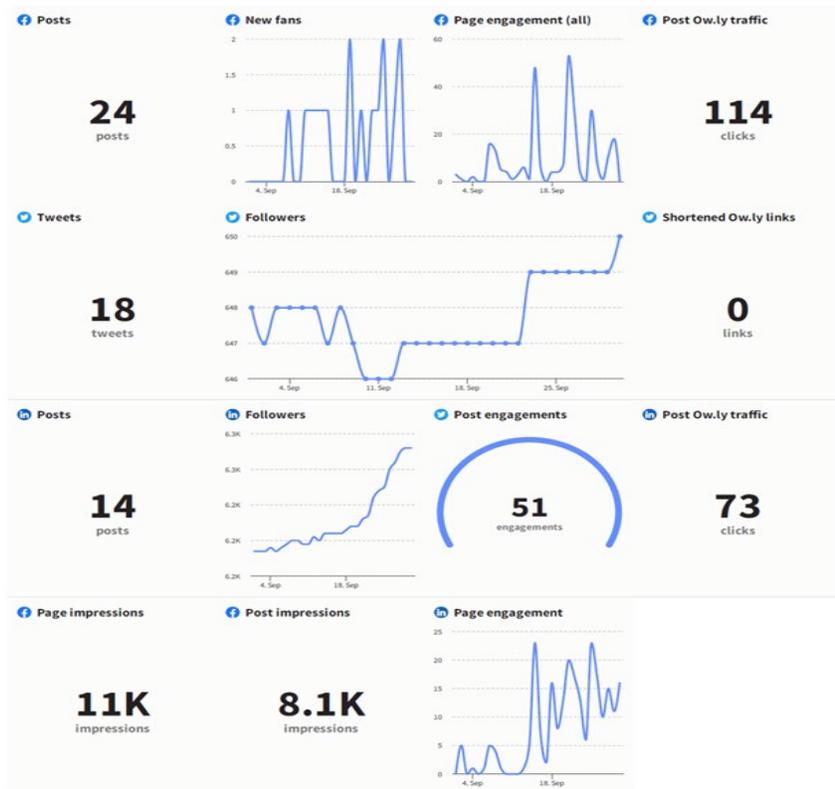
Top Publications by Reach



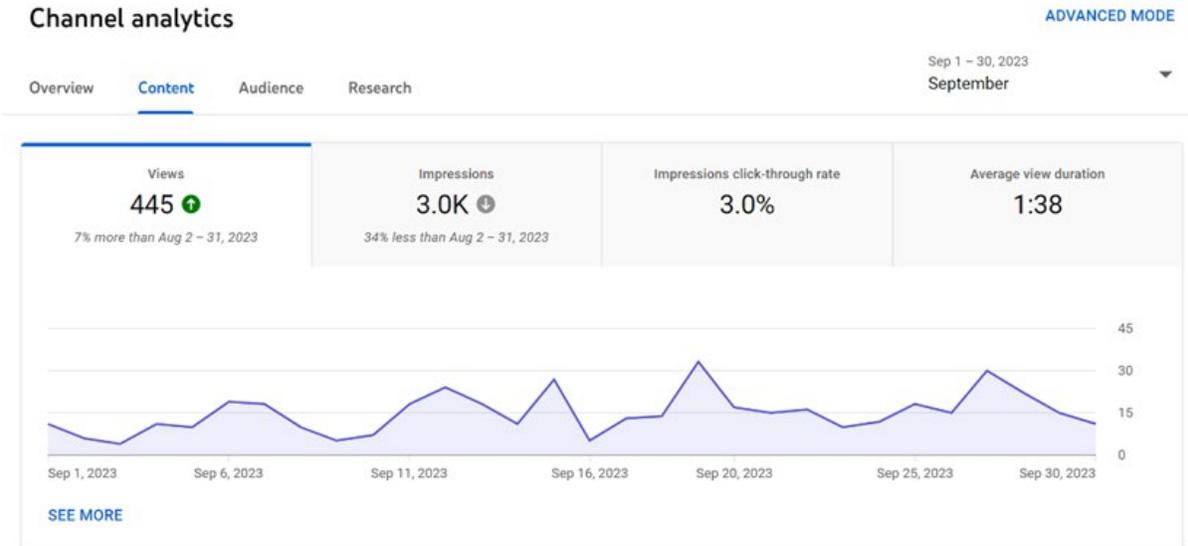
## Community Engagement

### B. Social Media and Online Engagement

#### 1. Metrics – Facebook, Twitter and LinkedIn



## 2. YouTube



## 3. Top posts on Facebook, Twitter, and YouTube

### a. Top Facebook post



b. Top Tweet



c. Top YouTube Videos

- (1) [The Wastewater Treatment Process](#) (158 views)
- (2) [SWIFT Research Center: What Is the Potomac Aquifer](#)(54 views)
- (3) [HRSD Employee Testimonials - Robert](#) (42 views)
- (4) [What Is Asset Management? Celebrating Infrastructure Week at HRSD](#) (24 views)
- (5) [Virtual Tour of HRSD's Virginia Initiative Plant Nutrient Reduction](#) (13 views)

4. Website and Social Media Impressions and Visits

a. Facebook:

- (1) 10,531 page impressions
- (2) 8,116 post impressions reaching 7,688 users
- (3) Facebook Engagement of 278 (231 reactions, 31 shares, and 16 comments)

b. X (Formerly known as Twitter): 1,896 post impressions, 2.4% engagement rate

c. HRSD.com: unable to obtain this information as Information Technology (IT) department is experiencing problems capturing this number from the new Google Analytics system. ITD continues to research this problem.

d. LinkedIn Impressions:

- (1) 8,390 page impressions

- (2) 7,959 post impressions
- e. YouTube: 445 views
- f. Next Door unique impressions: 17,186 post impressions from 13 targeted neighborhood postings and one region-wide posting shared with 628,898 total residents
- g. Blog Posts: [3 Animals that Depend on a Clean Chesapeake Bay: Wildlife in the Chesapeake Bay](#)
- h. Construction Project Page Visits – 1,730 total visits (not including direct visits from home page, broken down as follows:
  - (1) 1467 visits to individual pages
  - (2) 263 to the status page

#### C. Education and Outreach Activities

Director, together with the Communications and Nansemond Treatment Plant (NTP) staff provided HRSD's contracted branding consultant tours of NTP and the SWIFT Research Center to introduce them to HRSD and its role in the community as we embark on a review and workshop of the HRSD brand and possibly making updates to better align with our Strategic Plan and goals of building value with our customers.

The department launched its HRSD Ambassador Program in collaboration with the Talent Management department in August, and we have seen tremendous interest so far. We reached our goal of initial participants who have begun training and have several more who have expressed interest. The goal of the program is to create a team of HRSD employees who can confidently provide outreach and education activities and recruitment/career events throughout the region. This program aligns with our efforts to build value within our community and with our ratepayers through education about HRSD and the impact it has on protecting public health and the environment.

Project notices were distributed to 330 customers for nine different projects across the service area this month and the department issued and posted three traffic advisories and 10 construction notices to the HRSD.com Newsroom.

There were four SWIFT Tours given over the course of the month to a total of 41 people. Virtual tour information is not available currently due to changes in Google Analytics. We continue to research this and hope to find a resolution in the next month.

Outreach planning began for participation in the upcoming Newport News Fall-O-Ween Festival as well as the next SWIFT Industry Outreach Day.

#### D. Internal Communications

Director participated in the following internal meetings and events:

- SWIFT Industry Day planning meetings

- Meeting with Customer Care to discuss Eastern Shore communications related to future billing
- Atlantic Treatment Plant (ATP) Progress Farm land conversion timeline meeting
- Boat Harbor (BH) conversion/closure kickoff meeting
- Website refresh planning meetings
- Crisis communications plan development meeting
- Meetings with UNIFIED Council officers to talk about mission and vision development
- Compensation study update meeting
- Bi-weekly GM briefings
- Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and HRSD QST meetings
- Check-in meetings with Deputy General Manager (DGM)

Director also conducted biweekly Communications department status meetings and weekly one-on-one check-in meetings.

Staff participated in 10 project progress and outreach development meetings with various project managers.



## **Talent**

The department's newest hire continued with community outreach and education training this month and began leading tours and outreach activities alongside another staff member to ensure correct messaging and understanding. The department also continues to provide regular employee tours of the SWIFT Research Center and are looking for more ways to promote these events. There are planned SWIFT Water™ tasting and tour sign-up opportunities at both the North Shore (NS) and South Shore (SS) administrative offices for "Imagine A Day without Water" on October 19.

Professional development and training by staff included completion of Virginia Department of Emergency Management Public Information Basics training by our public information specialists and Environmental Education Certification training by our community educator.

Respectfully,

Leila Rice, APR  
Director of Communications

TO: General Manager  
FROM: Director of Engineering  
SUBJECT: Engineering Monthly Report for September 2023  
DATE: October 13, 2023



### Environmental Responsibility

At each treatment plant, an outfall pipeline conveys treated flow to various water bodies in the region. At the end of each outfall pipe, a diffuser is used to distribute this flow back into the local waterbody. The outfall pipe is typically buried below the mudline while the diffuser is exposed to allow the treated water back into the environment. The diffusers have the potential to be damaged, buried or impacted by shellfish. Occasional underwater inspections are conducted on these diffuser structures to assess their condition and make any needed repairs. This year, a local underwater diving firm was hired to conduct inspections at the Atlantic, James River, Williamsburg and York River Treatment Plant outfall diffusers. Work has been completed at the Williamsburg Treatment Plant outfall diffuser and will continue at the remaining sites over the next few months.

Staff are collaborating with Old Dominion University and the Department of Energy on a study to forecast sanitary sewer overflows. This study will use a novel approach including Machine Learning to predict overflows at sewer pump stations. This prediction model could be used to better design future pump stations and mitigate against future overflows.



### Financial Stewardship

Capital Improvement Program (CIP) spending for the second month of FY2024 was below the planned spending target.

CIP Spending (\$M):

	Current Period August 2023	FYTD
Actual	33.77	64.85
Plan	45.90	90.70

An in-house team has been formed to study the option of creating a Project Management Office (PMO) at HRSD. This “office” would not be a physical space but a concept to better align Engineering, Finance and Operations to deliver Capital Improvement Program (CIP) projects. The PMO study will include benchmarking with other large utilities. The study will also recommend ways to improve the CIP and assure compliance as we continue to grow the size of the projects and complexity of the program.



## Talent

Staff retention and recruitment remain significant priorities for the Engineering Department. Two positions are needed to fully staff the Engineering Department. r. Adam Nowitzky was recently hired to fill the newly created Engineering Assessment Engineer position. Interviews are underway to fill one of the two remaining open positions and we hope to fill this opening later this Fall.

The Engineering Department employs interns to augment staff duties and provide a training ground for potential employees. Interns in the Engineering Department typically work 20 hours per week and assist both the Asset Management Division and the Planning & Analysis Division. Most of these interns are Sophomores or Juniors at Old Dominion University. As these interns graduate from college, they often take permanent jobs with the consulting engineering firms doing work for HRSD. We are always looking for new interns as existing interns move on to other opportunities. We currently have two open intern positions and plan to interview candidates in the coming month.



## Community Engagement

HRSD has had a long and productive relationship with the United Way of South Hampton Roads and the Peninsula. Staff in the Engineering Department took a leadership role in coordinating the latest United Way Day of Caring events. In addition to coordinating HRSD's many volunteers, staff participated at the Children's Harbor event in Chesapeake.

Staff are often involved in the many educational tours that are provided at the SWIFT Research Center. A recent tour was given to a group from both the U.S. EPA and the U.S. Army Corps of Engineers. These groups were in town to celebrate the recent redevelopment of a brownfield site in Suffolk. This collaborative effort helped to redevelop the land adjacent to the Nansemond Treatment Plant which is known as the Former Naval Ordnance Facility (FNOD). Since HRSD's Nansemond Treatment Plant is adjacent to the FNOD, we have worked closely with the many stakeholders included in the FNOD Program.



## Innovation

Staff had significant involvement in many aspects of the recent WaterJAM Conference held in Virginia Beach. This conference is sponsored by the Virginia Water Environment Association and the Virginia Section of the American Water Works Association. Engineering Department staff presented on many technical topics during the conference including:

- Collaborative Project Delivery – The Basics
- An Owner's Application of Envision Principles on Collection and Treatment Projects
- Leveraging Asset Management Technologies
- Less Trench Results in More Efficient Construction in Congested Urban Settings
- An Ounce of Prevention is Worth a Pound of Cure: How an Ungreased Bearing Led to Nearly \$2M in Damages.

*Bruce W. Husselbee*

Bruce W. Husselbee, PhD, P.E., BCEE, DBIA

TO: General Manager  
FROM: Director of Finance  
SUBJECT: Monthly Report for September 2023  
DATE: October 18, 2023



## Financial Stewardship

S&P Global Ratings affirmed its AA+ long-term rating of the HRSD senior and subordinate lien wastewater bonds. In its report, S&P report noted HRSD's strong financial policies and risk management practices but also noted that the high Capital Improvement Project (CIP) spend over the next five years as an item for them to watch. HRSD's long-term ratings are noted below:

HRSD Ratings	Senior	Subordinate
Moody's	Aa1	Aa1
<b>S&amp;P</b>	<b>AA+</b>	<b>AA+</b>
Fitch	AA+	AA

Staff participated in the 2023 American Water Works Association (AWWA) Water Infrastructure Conference in Philadelphia, PA. Staff presented HRSD's experience in managing both Water Infrastructure Finance & Innovation Act (WIFIA) and State Clean Water funding sources.

Interest income revenues are likely to exceed budget estimates significantly this year as investments and monthly yields remain high.

Accounts Receivable over 30 days past due rose by almost one percent during the month of September 2023. Staff continues to address the past due account process flow and explore options for non-severance accounts, including outbound contact.

Field staff delivered 3,291 warning door tags and disconnected water service to 2,409 accounts during September 2023. The Debt Solutions team continues to advance assistance initiatives such as the Low-Income Household Water Assistance Program (LIHWAP), pay plans and Help to Others.



## Community Engagement

A revised version of the HRSD Financial Wellness Program will resume in October/November to address the continued high level of past due arrearages after the pandemic. HRSD will be piloting the revised program in the Newport News Waterworks service area due to 13 percent higher volume of past due accounts as compared to the rest of the HRSD service area.

The revised program requires a customer to make a year-long commitment of on-time payments for current charges plus a monthly payment arrangement for the past due amount for the first six months. As long as the customer pays on-time and for the full amount, the customer will no longer be subject to disconnection, will not incur any late charges and will receive up to half off the past due arrearage during the last six months. Broken arrangements or returned payments at any time voids the program benefit and the full past due balance is due immediately, resulting in resuming late fees and subject to service disconnection.

A. Interim Financial Report

1. Operating Budget for the Period Ended September 30, 2023

	Amended Budget	Current YTD	Current YTD as % of Budget (25% Budget to Date)	Prior YTD as % of Prior Year Budget
<b>Operating Revenues</b>				
Wastewater	\$ 405,832,000	\$ 107,362,851	26%	27%
Surcharge	1,600,000	351,453	22%	23%
Indirect Discharge	4,400,000	1,226,576	28%	35%
Fees	2,894,000	870,754	30%	30%
Municipal Assistance	800,000	292,952	37%	22%
Miscellaneous	1,295,000	617,884	48%	14%
<b>Total Operating Revenue</b>	<b>416,821,000</b>	<b>110,722,470</b>	<b>27%</b>	<b>27%</b>
<b>Non Operating Revenues</b>				
Facility Charge	6,095,000	1,950,605	32%	23%
Interest Income	3,000,000	2,847,155	95%	-8%
Build America Bond Subsidy	1,954,000	-	0%	0%
Other	620,000	70,661	11%	94%
<b>Total Non Operating Revenue</b>	<b>11,669,000</b>	<b>4,868,421</b>	<b>42%</b>	<b>16%</b>
<b>Total Revenues</b>	<b>428,490,000</b>	<b>115,590,891</b>	<b>27%</b>	<b>27%</b>
Transfers from Reserves	17,120,789	4,280,197	25%	25%
<b>Total Revenues and Transfers</b>	<b>\$ 445,610,789</b>	<b>\$ 119,871,088</b>	<b>27%</b>	<b>27%</b>
<b>Operating Expenses</b>				
Personal Services	\$ 70,450,193	\$ 15,936,128	23%	27%
Fringe Benefits	28,487,963	6,243,382	22%	22%
Materials & Supplies	16,073,465	2,389,270	15%	18%
Transportation	2,003,573	405,715	20%	19%
Utilities	16,843,498	3,569,734	21%	21%
Chemical Purchases	17,688,997	3,982,441	23%	20%
Contractual Services	53,541,285	8,366,162	16%	16%
Major Repairs	13,696,912	1,404,529	10%	17%
Capital Assets	1,258,970	118,361	9%	2%
Miscellaneous Expense	3,938,563	923,653	23%	21%
<b>Total Operating Expenses</b>	<b>223,983,419</b>	<b>43,339,375</b>	<b>19%</b>	<b>21%</b>
<b>Debt Service and Transfers</b>				
Debt Service	76,150,000	31,547,018	41%	40%
Transfer to CIP	145,217,370	36,304,343	25%	25%
Transfer to Risk management	260,000	65,001	25%	25%
<b>Total Debt Service and Transfers</b>	<b>221,627,370</b>	<b>67,916,362</b>	<b>31%</b>	<b>30%</b>
<b>Total Expenses and Transfers</b>	<b>\$ 445,610,789</b>	<b>\$ 111,255,737</b>	<b>25%</b>	<b>26%</b>

## 2. Notes to Interim Financial Report

The Interim Financial Report summarizes the results of HRSD's operations on a basis of accounting that differs from generally accepted accounting principles. **Revenues are recorded on an accrual basis, whereby they are recognized when billed,** and expenses are generally recorded on a cash basis. No provision is made for non-cash items such as depreciation and bad debt expense.

This interim report does not reflect financial activity for capital projects contained in HRSD's CIP.

Transfers represent certain budgetary policy designations as follows:

- a. Transfer to CIP: represents current period's cash and investments that are designated to partially fund HRSD's capital improvement program.
- b. Transfers to Reserves: represents the current period's cash and investments that have been set aside to meet HRSD's cash and investments policy objectives.

## 3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended September 30, 2023

### HRSD - RESERVE AND CAPITAL ACTIVITY

September 30, 2023

	General Reserve				Capital	
	General	CARES - ARPA	Debt Service	Risk Mgmt Reserve	Paygo	
	Unrestricted	Restricted	Restricted	Unrestricted	Unrestricted	
<b>Beginning - July 1, 2021</b>	<b>\$ 203,718,301</b>	<b>\$ 4,406</b>	<b>\$ 33,830,226</b>	<b>\$ 4,539,551</b>	<b>\$ 3,115,384</b>	
<b>Current Year Sources of Funds</b>						
Current Receipts	112,373,689					
Line of Credit					31,420,145	
VRA Draws					15,952,724	
WIFIA Draws					83,611,664	
CARES Transfer In	730,692					
Days Cash on Hand Transfer In						
Transfers In	-			65,001	36,304,343	
<b>Sources of Funds</b>	<b>113,104,381</b>	<b>-</b>	<b>-</b>	<b>65,001</b>	<b>167,288,876</b>	
<b>Total Funds Available</b>	<b>\$ 316,822,682</b>	<b>\$ 4,406</b>	<b>\$ 33,830,226</b>	<b>\$ 4,604,552</b>	<b>\$ 170,404,260</b>	
<b>Current Year Uses of Funds</b>						
Cash Disbursements	83,509,057				113,444,170	
CARES Transfer Out		4,406				
Days Cash on Hand Transfer Out	-					
Transfers Out	36,369,344					
<b>Uses of Funds</b>	<b>119,878,401</b>	<b>4,406</b>	<b>-</b>	<b>-</b>	<b>113,444,170</b>	
<b>End of Period - September 30, 2023</b>	<b>\$ 196,944,281</b>	<b>\$ -</b>	<b>\$ 33,830,226</b>	<b>\$ 4,604,552</b>	<b>\$ 56,960,089</b>	
Unrestricted Funds	<b>\$ 258,508,922</b>					

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended September 30, 2023

**HRSD - PROJECT ANALYSIS** September 30, 2023

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2023	Expenditures Year to Date FY2024	Total Project Expenditures	Encumbrances	Available Funds
Administration	77,238,240	30,147,734	1,434,103	31,581,837	4,652,110	41,004,293
Army Base	163,448,800	125,866,880	52,982	125,919,862	594,740	36,934,198
Atlantic	240,329,164	83,457,057	2,458,434	85,915,491	16,431,717	137,981,956
Boat Harbor	516,527,824	93,175,955	26,080,882	119,256,837	322,890,646	74,380,341
Ches-Eliz	183,518,801	121,933,822	793,789	122,727,611	1,861,657	58,929,533
Eastern Shore	63,122,892	26,927,768	7,796,881	34,724,649	9,139,827	19,258,416
James River	364,960,717	106,257,591	23,426,569	129,684,160	206,540,507	28,736,050
Middle Peninsula	103,916,303	29,052,916	2,287,351	31,340,267	8,024,987	64,551,049
Nansemond	499,893,169	98,383,735	26,633,584	125,017,319	293,099,184	81,776,666
Surry	60,391,465	41,079,533	1,422,221	42,501,754	9,858,099	8,031,612
VIP	194,552,174	36,717,151	4,849,725	41,566,876	50,579,622	102,405,676
Williamsburg	69,835,758	25,152,268	116,273	25,268,541	195,149	44,372,068
York River	85,846,330	21,386,479	3,538,314	24,924,793	18,159,675	42,761,862
General	1,160,212,275	257,322,171	35,640,505	292,962,676	287,869,560	579,380,039
	3,783,793,912	1,096,861,060	136,531,613	1,233,392,673	1,229,897,480	1,320,503,759

5. Active Capital Grants

Active Capital Grants Activities						
Grant Name	Funder	Project	CIP#	Application Submitted	Amount Requested	HRSD Award Amount
American Rescue Plan Act	VDEQ	Eastern Shore Infrastructure Improvements - Transmission Force Main Phase II (Accomac Sewer Collection System)	ES010200	11/28/2022	\$ 8,367,000	\$ 4,183,500
American Rescue Plan Act	VDEQ	James River Treatment Plant Advanced Nutrient Reduction Improvements	JR013400	10/7/2022	\$ 50,000,000	\$ 16,940,000
American Rescue Plan Act	VDEQ	Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II	NP013820	10/7/2022	\$ 50,000,000	\$ 14,640,000
FY2024 Congressionally Directed Funding Warner-Kaine	CDF FY24	Eastern Shore Wastewater Improvements	ES010100	3/9/2023	\$ 9,677,112	\$ -
Water Quality Improvement Fund, Conveyance	VDEQ	Chesapeake-Elizabeth Treatment Plant Conveyance	Multiple	2/7/2023	\$ 100,647,746	\$ -
Water Quality Improvement Fund, Conveyance	VDEQ	Eastern Shore TFM Phase 1	ES010100	5/2/2022	\$ 4,900,000	\$ -
Water Quality Improvement Fund, Nutrient Reduction	VDEQ	James River SWIFT - Advanced Nutrient Reduction Improvements	JR013400	3/23/2023	\$ 344,741,547	\$ -
					<b>\$ 568,333,405</b>	<b>\$ 35,763,500</b>

## 6. Debt Management Overview

HRSD - Debt Outstanding (\$000's)				September 30, 2023	
	Principal Aug 2023	Principal Payments	Principal Draws	Principal Sep 2023	Interest Payments
<b>Fixed Rate</b>					
Senior	152,663	(1,357)	-	151,306	(209)
Subordinate	809,483	(5,537)	37,129	841,075	(1,695)
<b>Variable Rate</b>					
Subordinate	50,000	-	-	50,000	(150)
<b>Line of Credit</b>	100,000			100,000	(397)
<b>Total</b>	<b>\$ 1,112,146</b>	<b>\$ (6,894)</b>	<b>\$ 37,129</b>	<b>\$ 1,142,381</b>	<b>\$ (2,451)</b>

HRSD- Series 2016VR Bond Analysis			September 29, 2023
	SIFMA Index	HRSD	Spread to SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.93%	0.71%	-0.22%
Minimum	0.01%	0.01%	0.00%
As of 09/29/23	3.98%	4.00%	0.02%

\* Since October 20, 2011 HRSD has averaged 71 basis points on Variable Rate Debt

Subsidised Debt Activity						
Source	Funder	Loan Amount	Current Drawn Total	% Remain	Initial Draw Date - Projected	
WIFIA Tranche 1	EPA	\$ 225,865,648	\$ 120,905,149	46%	Ongoing	
WIFIA Tranche 2	EPA	\$ 476,581,587	\$ 60,534,000	87%	Ongoing	
WIFIA Tranche 3	EPA	\$ 346,069,223	\$ -	100%	July 2025	
Clean Water Program 2022	DEQ	\$ 100,000,000	\$ 57,220,761	43%	Ongoing	
Clean Water Program 2023	DEQ	\$ 50,000,000	\$ -	100%	March 2024	

## 7. Financial Performance Metrics for the Period Ended September 30, 2023

### HRSD - UNRESTRICTED CASH

Can be used for any purpose since it is not earmarked for a specific use and is extremely liquid

		Days Cash on Hand	Adjusted Days Cash on Hand
<b>Total Unrestricted Cash</b>	<b>\$ 258,508,922</b>		<b>421</b>
Risk Management Reserve	\$ (4,604,552)	(7)	414
Capital (PAYGO only)	\$ (56,960,089)	(93)	321
<b>Adjusted Days Cash on Hand</b>	<b>\$ 196,944,281</b>		<b>321</b>

Risk Management Reserve as a % of Projected Claims Cost is 25% YTD compared to 25% Policy Minimum  
Adjusted Days Cash on Hand Policy Minimum is 270-365 days.

### HRSD - SOURCES OF FUNDS

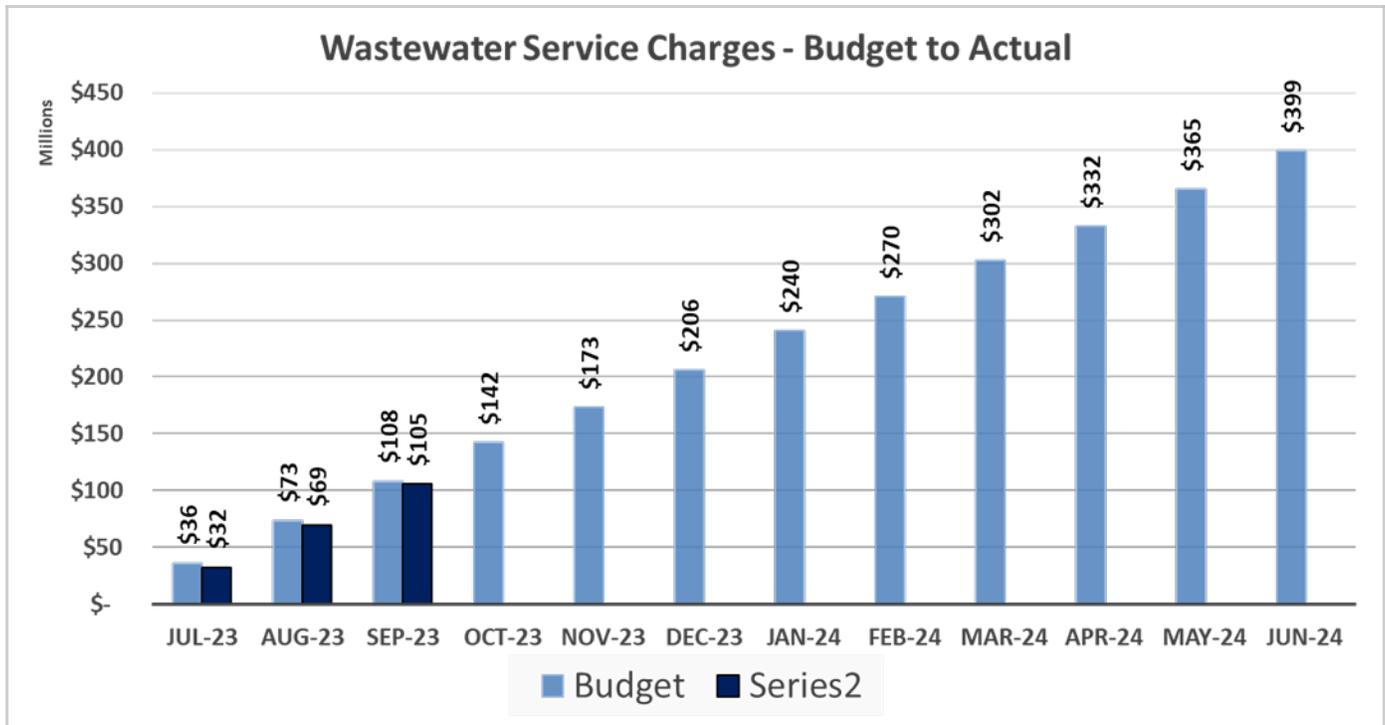
September 30, 2023

Primary Source	Beginning	YTD	YTD	YTD	Ending	Allocation of	Credit Quality
	Market Value				Market Value		
	July 1, 2023	Contributions	Withdrawals	Income Earned	September 30, 2023		
BOA Corp Disbursement Account	30,761,730	255,377,388	244,198,818	259,338	42,199,638	19.7%	N/A
VIP Stable NAV Liquidity Pool	129,511,237	60,000,000	20,000,000	2,064,640	171,575,877	80.3%	AAAm
<b>Total Primary Source</b>	<b>\$ 160,272,967</b>	<b>\$ 315,377,388</b>	<b>\$ 264,198,818</b>	<b>\$ 2,323,978</b>	<b>\$ 213,775,515</b>	<b>100.0%</b>	

Secondary Source	Beginning	YTD	YTD	YTD	Ending	Ending Cost	LTD
	Market Value				Market Value		
	July 1, 2023	Contributions	Withdrawals	Income Earned & Realized G/L	September 30, 2023		
VIP 1-3 Year High Quality Bond Fund	63,074,075	-	3,190	504,471	63,525,043	65,390,123	(1,865,080)
<b>Total Secondary Source</b>	<b>\$ 63,074,075</b>	<b>\$ -</b>	<b>\$ 3,190</b>	<b>\$ 504,471</b>	<b>\$ 63,525,043</b>	<b>\$ 65,390,123</b>	<b>\$ (1,865,080)</b>

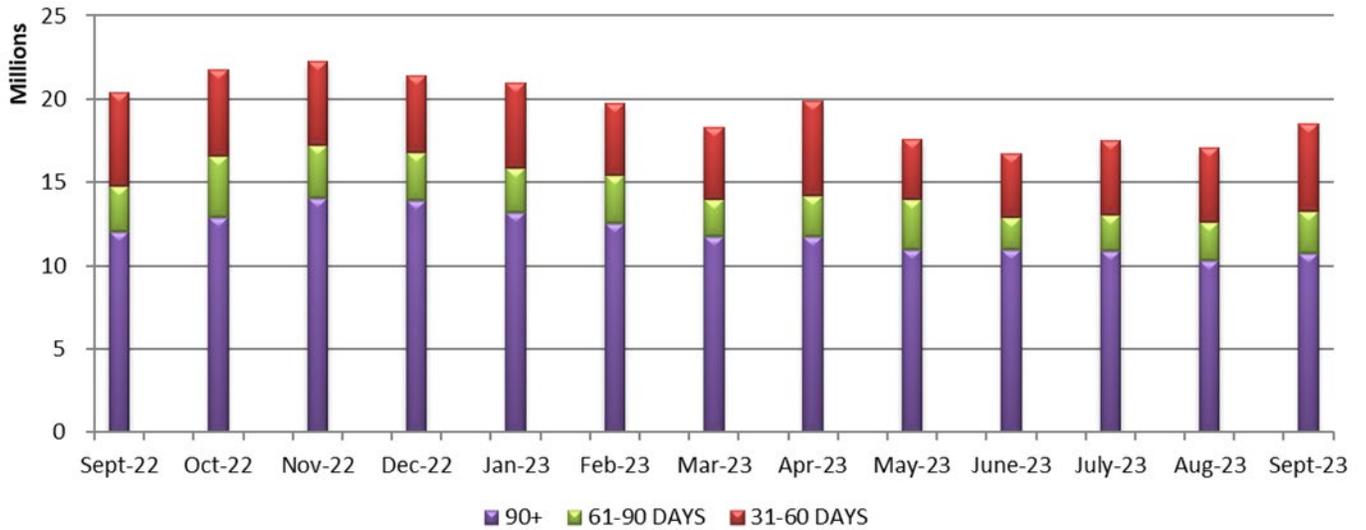
	Total	Fund Alloc
Total Primary Source	\$ 213,775,515	77.1%
Total Secondary Source	\$ 63,525,043	22.9%
<b>TOTAL SOURCES</b>	<b>\$ 277,300,558</b>	<b>100.0%</b>

8. Summary of Billed Consumption



Month	FY2024 Cumulative Budget Estimate	FY2024 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2023 Actual	From FY2023	Cumulative 3 Year Average	From 3 Year Average
July	4,678	4,504	-3.7%	4,682	-3.8%	4,803	-6.2%
Aug	9,644	9,432	-2.2%	9,652	-2.3%	9,543	-1.2%
Sept	14,196	13,965	-1.6%	14,208	-1.7%	14,297	-2.3%
Oct	18,663	-	N/A	18,680	N/A	18,863	N/A
Nov	22,756	-	N/A	22,777	N/A	22,307	N/A
Dec	27,109	-	N/A	27,133	N/A	27,430	N/A
Jan	31,641	-	N/A	31,669	N/A	32,004	N/A
Feb	35,568	-	N/A	35,601	N/A	35,952	N/A
March	39,770	-	N/A	39,807	N/A	40,351	N/A
Apr	43,694	-	N/A	43,735	N/A	44,473	N/A
May	48,027	-	N/A	48,072	N/A	48,548	N/A
June	52,500	-	N/A	52,549	N/A	53,329	N/A

## HRSD Accounts Receivable Aging +30 Days



### B. Customer Care Center

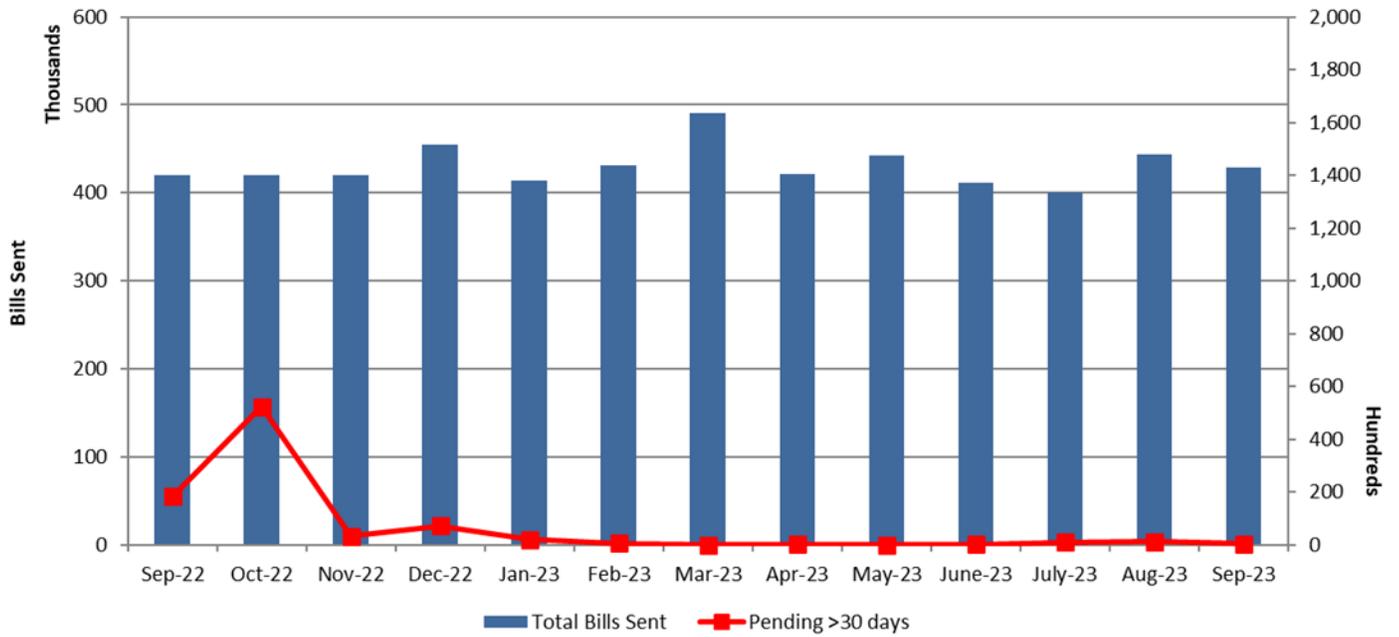
#### 1. Accounts Receivable Overview

### Delinquent & Late Payment Fees

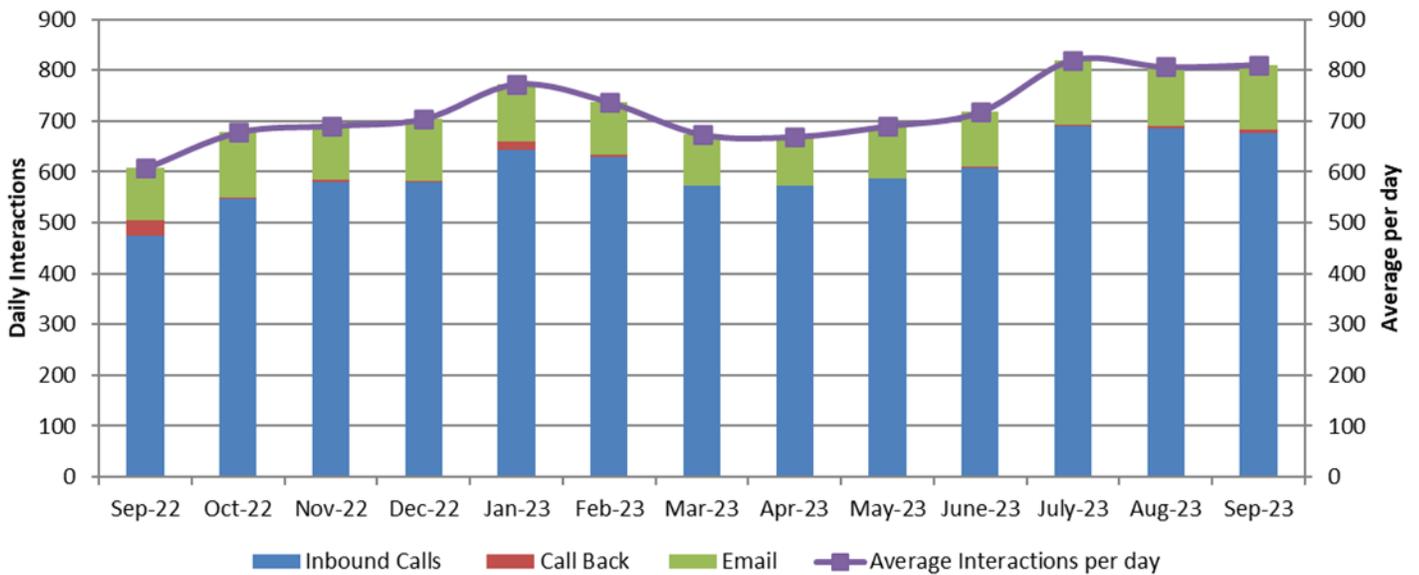


Apr 20-Feb 22 Field Activity was suspended late March 2020 in response to COVID-19

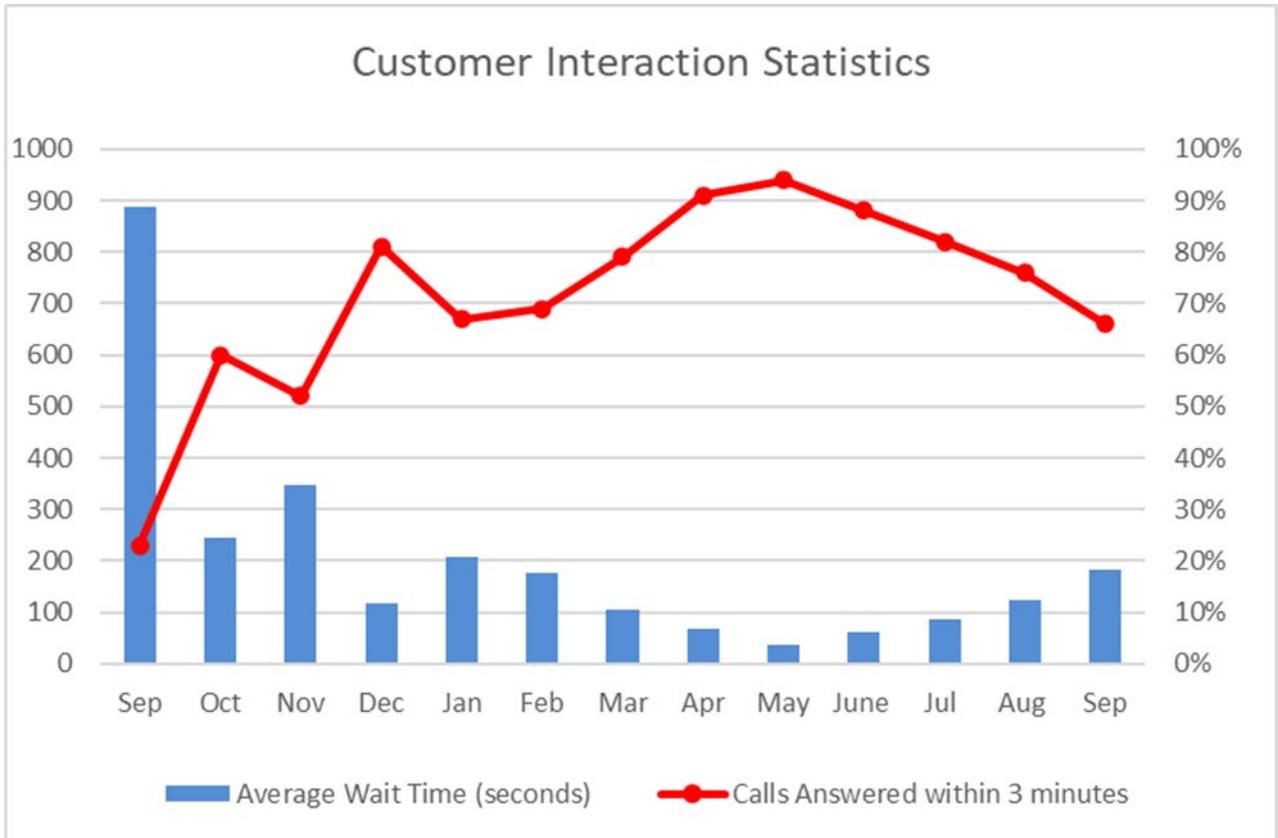
## Billing Summary



## Call Center Interactions (per day)

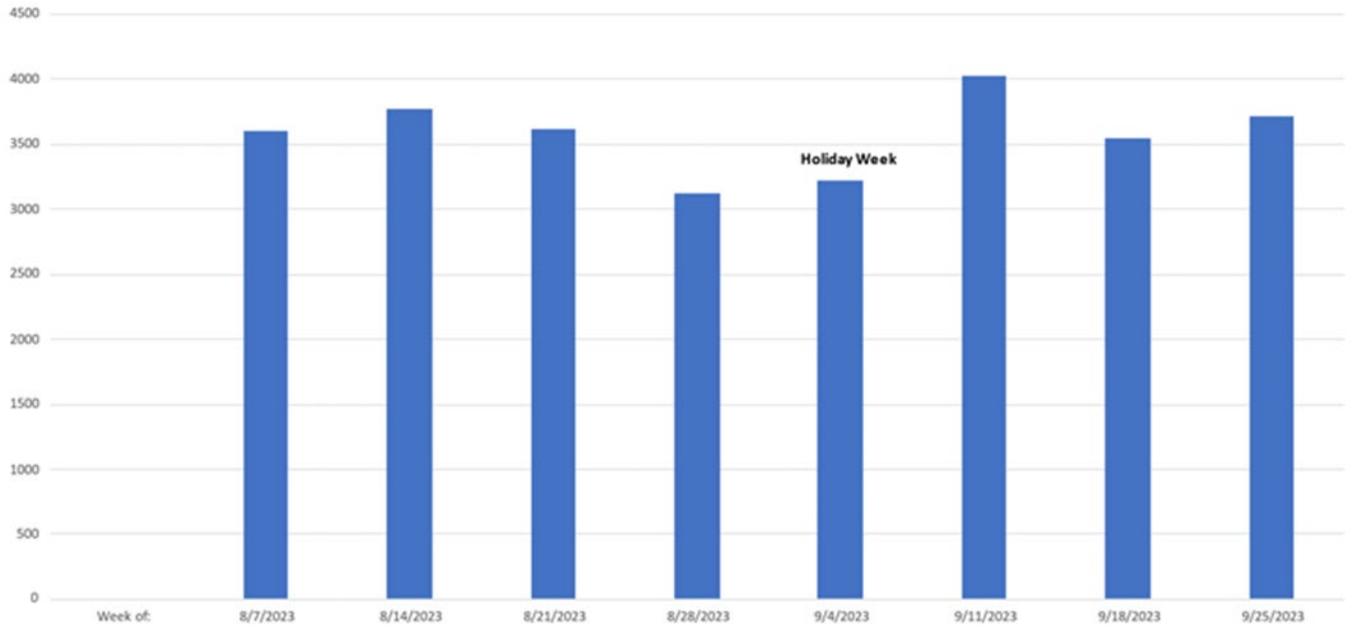


## 2. Customer Care Center Statistics



Customer Interaction Statistics	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep
Calls Answered within 3 minutes	23%	60%	52%	81%	67%	69%	79%	91%	94%	88%	82%	76%	66%
Average Wait Time (seconds)	887	246	347	117	206	177	105	66	37	60	87	122	183
Calls Abandoned	31%	14%	18%	8%	12%	11%	7%	5%	4%	5%	7%	8%	11%

Total Calls Received by Week



C. Procurement Statistics

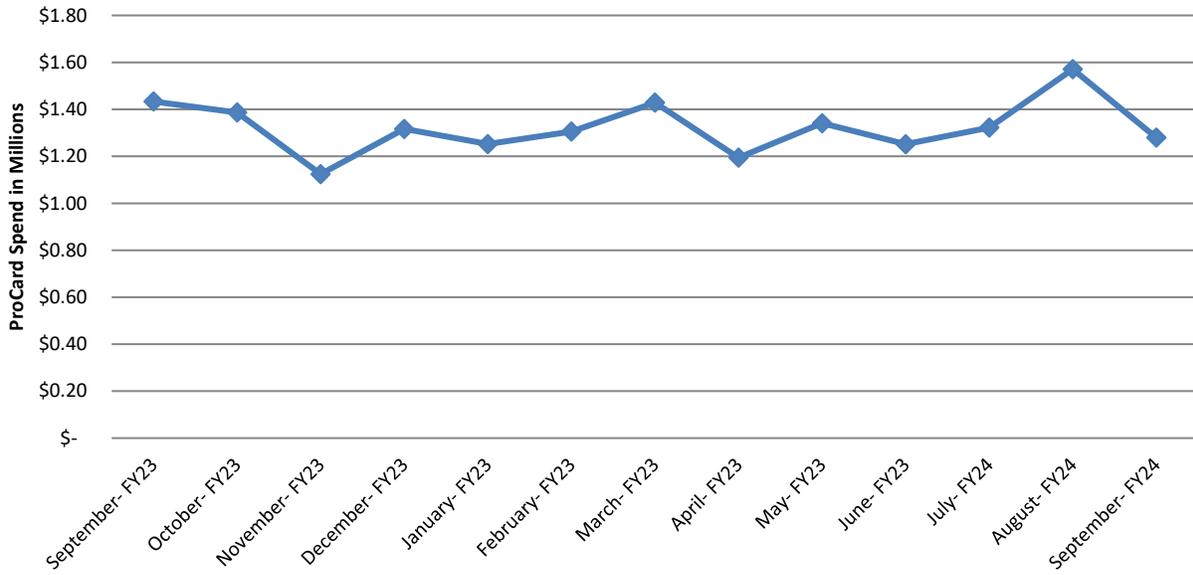
Savings	Current Period	*FYTD
Competitive Savings <sup>1</sup>	\$70,000	\$218,063
Negotiated Savings <sup>2</sup>	\$5,504	\$7,977
Salvage Revenues	\$9,843	\$13,146
Corporate VISA Card - Estimated Rebate	\$19,068	\$62,179

\*Adjusted FYTD totals to reflect corrected amounts.

<sup>1</sup> Competitive savings are those savings obtained through the informal/formal bidding process. All bids received (except for the lowest responsive/responsible bid) added together and averaged. The average cost is subtracted from the apparent low responsive/responsible bidder.

<sup>2</sup> Negotiated savings are savings obtained during a Request for Proposal process, or if all bids received exceed the budgeted amount, or if only one bid is received.

## ProCard Spend FY24



Respectfully,

*Steven G. de Mik*

Steven G. de Mik  
Deputy General Manager/CFO

TO: General Manager  
FROM: Director of Information Technology  
SUBJECT: Information Technology Department Report for September 2023  
DATE: October 11, 2023



## Innovation

All hardware has been received for the upcoming Surface Pro refresh, and the upgrade from Windows 10 to Windows 11 is covered by our Microsoft Enterprise Licensing Agreement. Testing efforts and finalizing the rollout schedule are ongoing.

ITD staff completed preparations for the upgrade of HRSD's financial management software, Oracle Hyperion. The upgrade is scheduled to occur next month.

The IT Help Desk processed 370 work orders and requests for assistance in September, ensuring availability of computing resources to those working locally and remotely.

Staff continue pre-implementation code reviews and security configuration testing for the implementation of a new customer contact platform. As the new software interfaces with several other billing-related applications, and is also cloud-based, cybersecurity concerns must be addressed prior to putting the customer contact system into production. The "go-live" is scheduled to occur in December.



## Community Engagement

Following two-plus years of planning, coding, and testing, the City of Chesapeake "went live" as a model 3 jurisdiction. That means that Chesapeake no longer uses their own billing system to support their utility billing efforts. Instead, they now use HRSD's billing system, CC&B, as their own. This partnership saves ratepayers in Chesapeake millions of dollars as we work together to achieve our common objectives. Successful implementation of a project of this magnitude could only have been completed because of the tireless work of staff at both HRSD and the City of Chesapeake.

Five members from ITD participated in the Hampton Roads Datathon event, hosted by the CivicLab Norfolk. The Datathon was created as a catalyst for data sharing in the region, and to promote regionalism in Hampton Roads. They presented information on visualizing COVID data through wastewater surveillance, with an emphasis on the technical nuances and capabilities using ESRI's ArcGIS products.

Respectfully,

*Don Corrado*

TO: General Manager  
FROM: Director of Operations  
SUBJECT: Operations Monthly Report for September 2023  
DATE: October 11, 2023



## Environmental Responsibility

### **Treatment and Interceptor System Spills and Sanitary Sewer Overflows (SSO):**

There was one Interceptor system spill in September.

1. North Shore (NS) Interceptors had no SSOs. On September 23, staff were able to utilize remote access through the new Supervisory Control and Data Acquisition (SCADA) system to make Pump Station (PS) control changes and avoid an SSO after a high wet well alarm was triggered at the Claremont Avenue PS in Hampton.
2. South Shore (SS) Interceptors had no SSOs.
3. Small Communities Division (SCD) had one SSO. King William PS in King William; Approximately 240 gallons released to Jackpen Creek.

There were no reportable spill events for the treatment plants in September.

### **Permit Compliance:**

There was one treatment plant permit exceedance in September.

On September 29, a clarifier at the Nassawadox Treatment Plant developed a leak allowing non-disinfected effluent to be released through the outfall pipe. Effluent discharge was ceased on September 27 and influent flow was being held in the equalization basin before being plumbed to the new Nassawadox (PS). The Ultra-Violet (UV) system was turned off to prevent damage, but upon discovery of the leak the system put back online. Water was pumped out of the aeration basin to lower the tank level. Approximately 1,100 gallons were discharged through the outfall to Warehouse Creek, but only 376 gallons were discharged prior to UV being reinstated.

### **Internal Air and Odor Compliance:**

The following Odor Complaints and/or Exceptions occurred:

1. Interceptor Operations, NS received an odor complaint near the intersection of Avenue of Arts and Kingstowne Road in Newport News. Staff responded and found that it was a locality issue.
2. Interceptor Operations, SS received an odor complaint near the intersection of Grove Avenue and Holland Road in Suffolk. Staff were bleeding an inordinate amount of air from an air vent as part of the weekly preventative maintenance. Staff will utilize a mobile air scrubber unit if the future maintenance is a problem.

3. Atlantic Treatment Plant (ATP) received 13 odor complaints in September.
4. Boat Harbor Treatment Plant (BHTP) had five odor control exceptions:
  - a. On September 5, 20 and 27, staff completed planned maintenance on the odor control scrubber towers and non-potable water used for recirculation water requiring a full shutdown of the odor control scrubber system.
  - b. On September 16, staff found a leak on the caustic chemical line used to control pH; staff shut down the system to fix the issue. The follow day, staff operated the odor control system in a single stage operation however, the volume of sulfides coming in could not be fully removed which caused an exception.
5. James River Treatment Plant (JRTP) had five odor control exceptions:
  - a. Staff found a failed odor scrubber recirculation pump.
  - b. The remaining four exceptions were due to a loss of odor scrubber recycle water after a non-potable water line break.
6. Williamsburg Treatment Plant (WBTP) had one exception for odor control scrubber exhaust reading over five parts per million caused during efforts to optimize the system.

#### **Air Compliance Summary:**

1. The following deviations from continuous emission monitoring (100 ppm THC) occurred during September.
  - a. BHTP's Total Hydrocarbons (THC) unit failed calibration.
  - b. Army Base Treatment Plant's (ABTP) THC unit failed calibration. Electrical and Instrumentation (E&I) staff reset and manually calibrated.
  - c. WBTP had six occasions the THC unit failed to record two valid readings per hour due to calibration issues.
2. The following deviation from the required Code of Federal Regulations (CFR) 129 Sewage Sludge Incineration Rule minimum operating parameters occurred in September:

ABTP staff found the minimum three-hour average scrubber pH was not adhered to. Staff corrected the issue by rotating the incinerators.
3. The following Multiple Hearth Incinerator (MHI) scrubber bypass event occurred during the month of September:

ABTP had one total use of the bypass stack due to an instrumentation error.

## Additional Topics for Compliance:

E&I staff discovered a section of the UV Disinfection System was inoperable at Onancock Plant. While troubleshooting, they determined the main power supply board was blowing fuses, due to wiring insulation damage between a sensor and the power supply. Staff performed temporary repairs to restore UV system operation and scheduled a service representative to install new components and inspect the entire system.



### Financial Stewardship

1. Eastern Shore staff set up the West Point Dewatering Trailer at the Onancock Treatment Plant (OTP) and processed over 100,000 gallons of sludge in September. Staff received a quote of \$80,000 from a contractor to perform the same level of effort.
2. King William Treatment Plant (KWTP) staff implemented programming changes with the equalization tanks along with more routine membrane maintenance thus increasing plant performance. Staff continue to optimize overall treatment plant performance.
3. A new Jarbalyzer was installed in the last reaeration phase of Biological Nutrient Removal (BNR) Tanks at ABTP. This equipment will replace aging Hach analyzers, improve process control, and reduce maintenance costs.



### Talent

Several staff were recognized at the Virginia Water Environment Association (VWEA) and Virginia Section of the American Water Works Association's (VA AWWA) Joint Annual Meeting (WaterJAM) Conference held in Virginia Beach from September 11-14:

1. David Ewing, Atlantic Treatment Plant Superintendent, was presented the Water Environment Federation (WEF) William D. Hatfield award which recognizes operators of wastewater treatment plants for outstanding performance and professionalism.
2. Shawn Heselton, Chief of SS Interceptor Operations, was presented the WEF Arthur Sidney Bedell award which acknowledges extraordinary personal service to a Member Association.



### Community Engagement

1. Plant Tours
  - a. On September 19, staff gave Old Dominion University's Aquatic Pollution class a tour of Virginia Initiative Plant (VIP).
  - b. On September 21, staff gave the Meridian Group a tour of Nansemond Treatment Plant (NTP).

## 2. Presentations

### a. WaterJAM

- (1) On September 9, Chris Wilson presented a workshop titled “Biosolids Basics - Fundamentals of Anaerobic Digestion: Process, Design and Operation”.
- (2) On September 11, Dana Gonzalez presented in the One Water Look at Per-and-poly-fluoroalkyl Substances (PFAS) workshop. The talk title was “Evaluation of PFAS in Biosolids Before and After Implementation of Thermal Hydrolysis at HRSD’s Atlantic Plant”.
- (3) On September 13, David Ewing presented “Planning, Preparation and Practice minimizes downtime – Lessons learned from three years of THP shutdowns”.

### b. Other

- (1) On September 7, Jeremiah Burford gave a presentation to the West Point Rotary Club on HRSD’s mission and vision, current active Capital Improvement Program (CIP) and future CIP in West Point, and updates to initiatives like SWIFT.
  - (2) On September 26, Jeff Sparks gave a presentation at the International Water Association (IWA) Watermatex Conference in Quebec City, Quebec, Canada titled “Full Scale Digital Twin with Integrated Hybrid Model Predictive Controller for Ammonia Based Aeration Control”.
3. On September 15, staff participated in the United Way Day of Caring in Chesapeake, Virginia Beach, Williamsburg and Newport News. Staff helped with facility beautification, sorting of donations, and general clean-up.
  4. On September 20, NS Interceptor Operations, held their annual locality coordination meeting to discuss system issues, facility coordination, and other common interests. The meeting is used to not only discuss better operation, but also form better relationships with the locality partners.
  5. On September 21, Chris Stephan with NS Interceptor Operations, took part in the Virginia Living Museum Board of Trustees meeting.



## Innovation

1,4-Dioxane is a probable human carcinogen that is found in many commercial products, including shampoos, detergents, anti-freeze and brake fluids. The contaminant is commonly found in drinking water, wastewater and landfill leachate. The expected future maximum contaminant limit for 1,4-dioxane in drinking water is 0.35 µg/L. Industrial discharger sampling showed that Bethel Landfill, operated by Waste Management (WM), was a significant contributor to the 1,4-dioxane load coming into JRTP. 1,4-Dioxane is difficult and costly to treat, conventionally requiring an Advanced Oxidation Process (AOP), such as ozone or UV/hydrogen peroxide.

The SWIFT facility at JRTP would have required two AOP treatment steps to meet 1,4-dioxane treatment goals. Instead, HRSD partnered with WM to collaboratively develop an innovative treatment method that has significantly decreased Bethel Landfill's 1,4-dioxane contribution to JRTP. Cometabolism is a phenomenon where bacteria, in the presence of an auxiliary compound, will biodegrade a recalcitrant target compound. This has been reported with 1,4-dioxane, where in the presence of Tetrahydrofuran (THF), a structural analog of 1,4-dioxane, biodegradation of both 1,4-dioxane and THF will occur.

The current pretreatment system at Bethel Landfill consists of two Moving Bed Biofilm Reactors (MBBRs). WM agreed to pilot the process modification on one of their two MBBRs, where THF was added to the influent leachate. The pilot period was successful, with 1,4-dioxane removal in the test MBBR being improved from on average 38% to 77%. THF was then supplemented to both MBBRs. Treatment at Bethel Landfill has resulted in significantly lower concentrations and associated loads of 1,4-dioxane at JRTP. This partnership provided a large cost savings to HRSD and Bethel Landfill. Bethel Landfill needed to make only minor upgrades to support THF feed, and the chemical cost for THF is quite low. Decreased loads of 1,4-dioxane from the Bethel leachate allowed HRSD to remove an UV/hydrogen peroxide AOP step from the currently under construction JRTP SWIFT Facility.

Respectfully submitted,

Shawn Heselton, PE  
Acting Director of Operations

Attachment: [MOM Reporting Numbers](#)



TO: General Manager  
FROM: Director of Talent Management  
SUBJECT: Talent Management Monthly Report for September 2023  
DATE: October 11, 2023



## Talent

Staff retention and recruitment remain significant priorities for the Talent Management Department. A contingent offer of employment was made and accepted for the vacant Talent Acquisition Specialist and Apprenticeship Program Administer. We are looking forward to adding new staff members to our department soon.

**Human Resources (HR):** HR staff along with representatives from all departments continue working on the large compensation project with Mercer. Meetings with the core group, extended project group and Senior Leadership all took place throughout the month. HRSD has selected a new vendor to handle our Medicare coverage for our retirees and eligible dependents. The new vendor, AETNA, was approved by the Commission in September and work will begin on implementation immediately as this benefit will begin January 1, 2024. The remaining benefits and selections will be presented to the Commission in October and will begin coverage July 1, 2024. Our HR Business Analyst will be heavily involved with the creation of any new interface files as well as any benefit plan changes needing to be updated in ERP. Staff continues to work with Information Technology (IT) staff on updates to system notifications.

Participation in HRSD's Wellness Program continues to increase. The Wellness Specialist conducted onsite visits, virtual lunch and learns, emailed informational flyers, and facilitated virtual guided meditation sessions.

**Organization Development and Training (ODT):** Several sessions of Strength Finders and Emotional Intelligence were conducted by HRSD's facilitators and our consultant Hick-Carter-Hicks (HCH). Staff held mandatory Your Role in Quality (YRIQ) training and the Division Leaders Forum.

**Safety:** Staff conducted required safety trainings and medical monitoring. Weekly, monthly and quarterly safety inspections, testing and monitoring were performed at various work centers and construction sites. There were four reported work-related injuries requiring medical attention and one auto/property damage accident.



## Community Engagement

Staff provided outreach at career events. This outreach was focused on the variety of careers fields represented at HRSD. We shared information about our open positions and our Apprenticeship Program, how we positively impact the local waterways and our generous benefits. We explained how to apply for a position at HRSD and answered questions about what it's like to work at HRSD.

Respectfully submitted,

*Dorissa Pitts-Paige*

Director of Talent Management

TO: General Manager  
FROM: Director of Water Quality (DWQ)  
SUBJECT: Monthly Report for September 2023  
DATE: October 11, 2023



## Environmental Responsibility

### 1. HRSD's Regulatory Activities:

- a. The monthly Discharge Monitoring Report (DMR) Summary and Items of Interest: [Effluent and Air Emissions Summary](#).
- b. The Central Environmental Laboratory (CEL) continues to prepare an extensive data submission to the Division of Consolidated Laboratory Services (DCLS) in preparation for the Virginia Environmental Laboratory Accreditation Program (VELAP) on-site assessment schedules for February 2024. The data submission request includes quality assurance documentation and analytical records for 21 methods covering quality control trending, training records, analytical reports and bench sheets.

### 2. Pretreatment and Pollution Prevention (P3) Program Highlights:

One civil penalty was issued by the P3 Division in September to Controls Corporation of America – Virginia Beach.

An Enforcement Order was issued to Controls Corporation of America, a compressed gas and welding equipment manufacturer in Virginia Beach, for several technical violations. The Enforcement Order included a \$4,000 civil penalty invoice. Violations included one permit exceedance for copper in January and three copper and zinc exceedances in May 2023. Another technical violation was the result of a failure to sample and analyze required parameters for the semi-annual monitoring period ending June 30, 2023.

A Show Cause meeting was held where the permittee explained the causes of non-compliance and outlined the steps that they are taking to correct the issues. The permittee will no longer be pretreating industrial wastewater through their pretreatment system. Instead, the permittee will be purchasing and installing a larger vacuum distillation system which will be closed loop, recycling product for reuse or hauling waste away for disposal. Currently, contents of the pretreatment system and wastewater in multiple drums is being hauled away for treatment and disposal. The Enforcement Order was accepted, and the civil penalty was paid in full on September 25, 2023.

### 3. Environmental and Regulatory Advocacy

- a. The Sustainability Environment Advocacy (SEA) Group reported no activities for the month of September.
- b. Jack Denby presented on HRSD's Online Total Residual Chlorine Alternative Test Procedure for a workshop sponsored by the Standard Methods Online Analyzer Task Group, along with instrument manufacturers as part of gathering data for development of protocols for regulatory use of this type of technology.
- c. Director participated in the following advocacy and external activities:
  - (1) Attended the National Association of Clean Water Agency's (NACWA) briefing on the results of its per- and polyfluoroalkyl substances (PFAS) cost survey. Costs at this time were difficult to assess given the low survey response and the relatively limited implementation of biosolids PFAS regulations throughout the country. The survey did appear to indicate that diversification in management options results in an overall reduction in biosolids management costs. HRSD has a long history of diversification in its biosolids management.
  - (2) Participated in the Virginia Association of Municipal Wastewater Agencies (VAMWA) board meeting to discuss Association initiatives such as legislative strategies for the upcoming general assembly session. Also participated in the quarterly membership meeting.
  - (3) Attended the Chesapeake Bay Program's Water Quality Goal Implementation Team meeting.
  - (4) Completed abstract review for the Environment Virginia Symposium.
  - (5) Attended a hard hat tour of the Elizabeth River Project's Ryan Resiliency Lab and learned more about the City of Norfolk's strategy for establishing emergency hubs within local communities to aid in delivering information and supplies for local disaster response.
  - (6) Attended the Hampton Roads Planning District Commission's (HRPDC) Regional Environmental Committee (REC) meeting at Fort Monroe.
  - (7) Attended the Virginia Forever Executive Board meeting and received a briefing on the recently finalized state budget as well as the organization's Natural Resource Investment Plan for the next four-year period, advocating for full funding of Virginia's land conservation and water quality protection programs. This includes a request for full funding of the Water Quality Improvement Fund (WQIF) based on The Department of Environmental Quality's (DEQ) needs survey.

- (8) Attended the Environmental Protection Agency (EPA) Science Advisory Board's (SAB) review of the recent report from the ad hoc committee evaluating the EPA's biosolids chemical prioritization and risk assessment process. The ad hoc committee's comments aligned with many of NACWA's key comments regarding concerns about compounding conservatism, unrealistic exposure scenarios, and the importance of considering unique biosolids characteristics when evaluating the mobility of chemical contaminants. The SAB itself appeared to agree with these concerns. This is likely to yield a more defensible chemical risk assessment process for biosolids.



## Financial Stewardship

Supported the generation of high-quality data for use in permitting and environmental management decisions through our Municipal Assistance Program (MAP), which offers services to other municipal and regional authorities throughout the state. HRSD costs for this program are reimbursed by the customer. Below are program highlights for the month.

1. HRSD provided sampling and analytical services to the following to support monitoring required for their respective VPDES permits:
  - a. Hanover County
  - b. Northumberland County
  - c. Spotsylvania County
  - d. Westmoreland County
2. [MAP Billed Reimbursements](#) for service provided from July 1 to September 30, 2023.
3. [MAP Invoice Summary](#) for the third Quarter 2023 calendar year.



## Talent

1. P3 filled three Technician positions. Marcus Adams and Iris Abreu were hired externally on the South Shore (SS). Molly Guenther was hired on the North Shore (NS) from the Boater Education program.
2. The CEL Promoted Dylan Caverly to Laboratory Specialist.
3. Corban McCullough completed the 2022-2023 Virginia Water Environment Association/ Virginia Section American Water Works Association (VWEA/VAAWWA) Leadership

Academy and participated in associated activities at WaterJAM. Catherine Svingos began her participation for the 2023-2024 class.



## Community Engagement

Supported Microbial Source Tracking (MST) investigations in partnership with Hampton Roads' localities. This work is required as part of HRSD's Integrated Plan. Sampling and analytical services were provided for the localities and projects identified below:

1. City of Chesapeake (Southern Branch)
2. City of Hampton (New Market Creek)
3. City of Newport News (Southeast Newport News)
4. City of Norfolk (Mason Creek)
5. City of Suffolk (downtown)
6. City of Virginia Beach (Thalia Creek)
7. James City County



## Innovation

1. The CEL continued working on development of capabilities to analyze for Perfluorooctanoic Acid (PFOA) to be able to provide quick data turn around to the SWIFT group.
2. P3 staff presented at the quarterly WQ Lunch & Learn on a pilot project involving 1,4-dioxane reduction at the Waste Management landfill discharging to the James River Treatment Plant (JRTP).

Respectfully submitted,

*Jamie Heisig-Mitchell*

Director of Water Quality

**EFFLUENT SUMMARY FOR SEPTEMBER 2023**

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	CONTACT TANK EX
ARMY BASE	9.76	54%	2	3.6	2	<1	1.8	0.86	5.4	4.3	9
ATLANTIC	43.84	81%	13	7.3	6	2	NA	NA	NA	NA	9
BOAT HARBOR	10.72	43%	15	3.2	2	3	1.1	0.64	15	23	2
CENT. MIDDLESEX	0.011	44%	<2	1.1	<1	<1	NA	NA	NA	NA	NA
JAMES RIVER	11.17	56%	5	4.7	2	1	0.27	0.42	8.7	10	16
KING WILLIAM	0.086	86%	<2	<1.0	NA	<1	0.056	0.085	3.1	2.1	NA
NANSEMOND	16.31	54%	3	4.2	2	1	1.6	0.80	3.4	4.0	10
NASSAWADOX	0.015	15%	<2	8.2	<1	<1	1.0	0.59	16	16	NA
ONANCOCK	0.159	21%	<2	<1.0	1	1	0.45	0.30	5.5	2.3	NA
URBANNA	0.071	71%	4	15	3	3	6.6	5.0	21	15	NA
VIP	29.61	74%	0	1.1	2	<1	0.26	0.40	4.0	3.8	0
WEST POINT	0.312	52%	22	5.4	1	4	3.9	3.2	19	18	0
WILLIAMSBURG	8.14	36%	4	4.6	9	4	0.97	0.89	2.9	3.0	18
YORK RIVER	10.59	71%	2	1.9	2	2	0.31	0.27	4.4	4.6	14
	<u>140.79</u>										

**Tributary Summary**

	% of Capacity
North Shore	49%
South Shore	70%
Small Communities*	38%

Tributaries	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY23	YTD	Projection	CY23
	%	Lbs	%	%	Lbs	%
James River	40%	1,927,967	54%	38%	220,432	69%
York River	50%	206,353	72%	53%	14,644	76%
Rappahannock	65%	NA	NA	79%	NA	NA

**Rainfall (inch)**

	<u>North</u> <u>Shore</u> <u>(PHF)</u>	<u>South</u> <u>Shore</u> <u>(ORF)</u>	<u>Small</u> <u>Communities</u> <u>(FYJ)</u>
--	--	--	--

Permit Exceedances: Total Possible Exceedances, FY24 to Date: 3:14,132  
Pounds of Pollutants Removed in FY24 to Date: 53,836,175  
Pollutant Lbs Discharged/Permitted Discharge FY24 to Date: 14%

Month	5.84"	2.89"	3.21"
Normal for Month	5.38"	5.70"	4.29"
Year to Date Total	37.48"	40.56"	30.85"
Normal for YTD	40.57"	39.37"	37.79"

\*Small Communities includes Eastern Shore

### AIR EMISSIONS SUMMARY FOR SEPTEMBER 2023

	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	Temp 12 hr ave (F)	Venturi(s) PD 12 hr ave (in. WC)	Precooler Flow 12 hr ave (GPM)	Spray Flow 12 hr ave (GPM)	Venturi Flow 12 hr ave (GPM)	Tray/PBs Flow 12 hr ave (GPM)	Scrubber pH 3 hr ave	Any Bypass Stack Use	THC Mo. Ave (PPM)	THC DC (%)	BZ Temp Daily Ave Days >Max
MHI PLANT											
ARMY BASE	0	1	0	0	0	0	1	1	57	79	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	10	100	0
VIP	0	0	0	n/a	0	0	0	0	22	99	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	0	43	83	0

#### ALL OPERATIONS

DEQ Reportable Air Incidents:	1
DEQ Request for Corrective Action:	0
DEQ Warning Letter:	0
DEQ Notice of Violation:	0
Other Air Permit Deviations:	0
Odor Complaints Received:	14
HRSD Odor Scrubber H2S Exceptions:	8

## Items of Interest – September 2023

### **MULTIPLE HEARTH INCINERATION (MHI)**

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all four MHI plants (Army Base, Boat Harbor, Virginia Initiative, and Williamsburg) with a THC continuous emissions monitoring (CEM) valid data captured of greater than 79%.

The MHIs had two (2) deviations from the required 129 SSI rule minimum operating parameters and one (1) major bypass events (>60 minute). Army Base had a use of the MHI bypass stack that lasted more than one hour due to a failure of the ID fan. The event lasted 1-hour and 55 minutes during which E&I was called in to fix and restore the ID fan. The event was reported to DEQ accordingly.

### **AIR PERMITS and ODOR CONTROL.**

DEQ put Williamsburg's Title V permit to 30 day public notice September 12, 2023.

There were eight (8) odor control scrubber system hydrogen sulfide (H<sub>2</sub>S) exceptions in August.

Atlantic Plant received thirteen (13) odor complaints from Ocean Lakes neighbors during August. Plant Staff and TSD responded to all complaints and followed up with our neighbors with investigation results.

South Shore Operations received one (1) odor complaint from a Suffolk resident located near a force main pressure release vent. Annual preventative maintenance force main gas venting lasted 31 minutes that resulted in our neighbor's complaint about the odor. This complaint came from a PRV location that is also bled weekly with no previous complaints as the venting is much shorter in duration. Future longer duration gas venting events like with annual maintenance will employ the odor scrubbing trailer.

### **SYSTEM/TREATMENT, SMALL COMMUNITIES, AND EASTERN SHORE**

#### King William

On September 29, KW Main Pump Station pump #2 tripped from over temperature; pump #1 could not keep up with the incoming flow, and the fuel level was not adequate for the portable standby pump to operate causing an overflow at a low rim manhole. Once the standby pump was refueled and restarted the team cleaned up the affected areas and applied lime. Approximately 240 gallons of raw wastewater were released to the ground/Jackpen Creek.

#### Nassawadox

Effluent discharge from the plant was ceased on September 27 and influent flow was being held in the EQ basin before being plumbed to the new Nassawadox Pump Station. On September 29, clarifier #2 developed a leak allowing non-disinfected effluent to be released through the outfall pipe. The UV system had been turned off to prevent damage, but upon discovery of the leak the system put back online. Water was pumped out of aeration basin #2 to lower the tank level. Approximately 1,124 gallons were discharged through the outfall, but only 376 gallons were discharged prior to UV being reinstated.

### 2023 Metals, Ammonia, and TKN

		Limit	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Central Middlesex	Ammonia	0.56	0.02	NA	NA	0.06	NA	NA	<0.02	NA	NA			
	TKN	3.0	NA	<0.50	NA	1.7	NA	NA	0.72	NA	NA			
King William	Zinc	*	54	NA	NA	35	NA	NA	NA	52	NA			
	TKN	3.0	1.9	1.1	1.6	0.76	0.61	0.53	0.47	0.89	0.61			
Nassawadox Riverside	Cadmium	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			
	Copper	23	<5.0	<5.0	<5.0	5.2	<5.0	<5.0	<5.0	5.8	5.4			
	Nickel	38	14	18	14	<10	<10	<10	<10	<10	<10			
	Zinc	150	<50	<50	<50	<50	<50	<50	<50	<50	<50			
	Ammonia	1.7	0.31	0.67	0.44	0.14	0.19	0.09	0.08	0.13	0.04			
Onancock	Copper	12	2.2	NA	NA	0.80	NA	NA	0.52	NA	NA			
	Ammonia	0.90, 2.0	0.04	0.03	0.03	0.08	0.04	0.77	0.07	0.41	0.07			
Surry County	Copper	5.9	2.0	NA										
	Zinc	56	24	NA										
	Ammonia	0.77	NA											
	TKN	3.0	NA											
Urbanna	Ammonia	3.83, 9.08	0.04	0.16	0.02	0.02	0.92	0.05	0.05	0.05	0.08			

\*No limit. Treatment objective 53 ug/L  
 Units: TKN, Ammonia: mg/L. Metals: ug/L

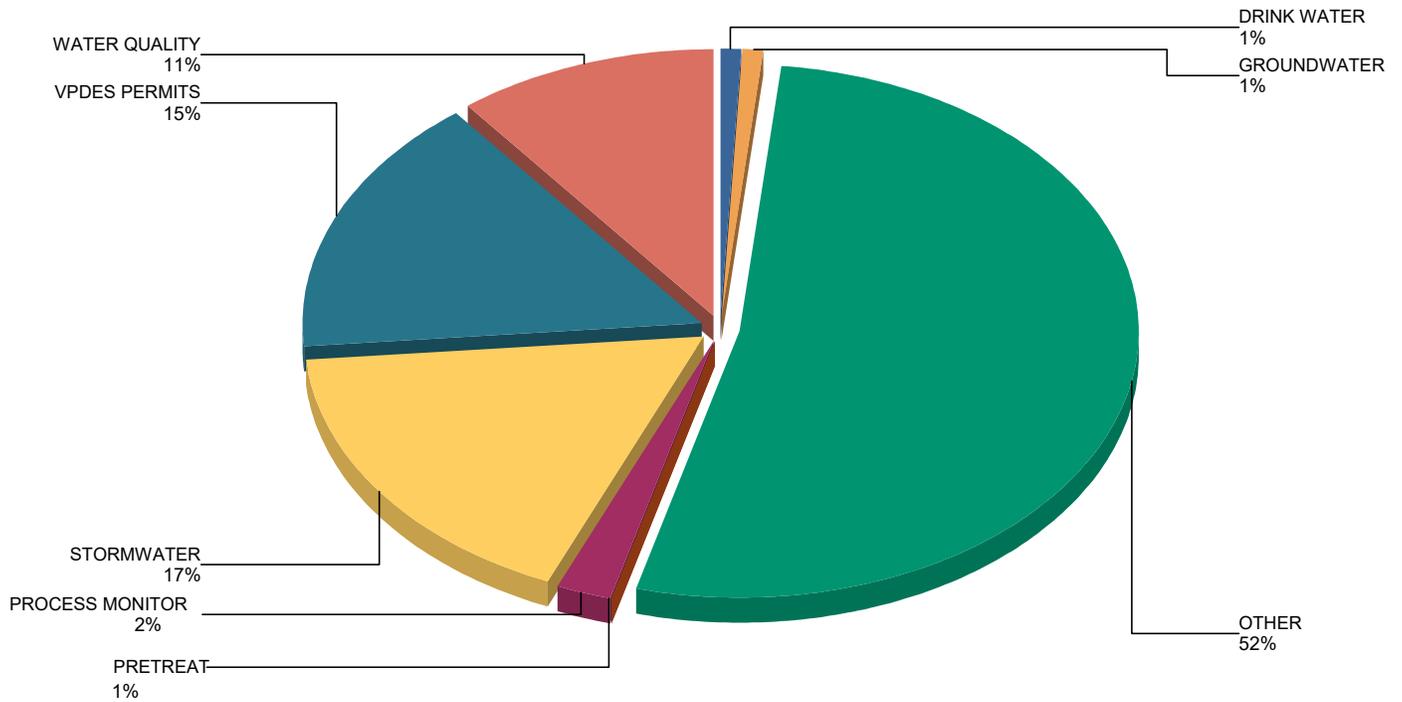
**2023 MONTHLY FLOW AVERAGES**

	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR AVG	FY AVG
Army Base	9.10	9.87	9.09	8.47	8.46	9.28	10.86	10.35	9.76				9.47	10.32
Atlantic	44.58	46.31	43.65	41.11	41.28	44.62	47.18	45.58	43.84				44.24	45.53
Boat Harbor	11.60	12.95	11.16	10.39	10.31	12.27	11.88	11.55	10.72				11.43	11.39
C.Middlesex	0.013	0.013	0.013	0.010	0.010	0.011	0.014	0.011	0.011				0.012	0.012
James River	12.46	13.31	11.87	12.13	12.03	12.42	11.78	11.46	11.17				12.07	11.47
King William	0.070	0.065	0.058	0.062	0.076	0.083	0.082	0.084	0.086				0.074	0.084
Lawnes Point	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000	0.000
Nansemond	15.97	16.61	15.77	15.59	15.75	15.38	16.76	16.13	16.31				16.03	16.40
Nassawadox	0.016	0.015	0.013	0.013	0.014	0.015	0.018	0.018	0.015				0.015	0.017
Onancock	0.170	0.194	0.207	0.208	0.197	0.207	0.235	0.209	0.159				0.198	0.201
Surry, County	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.001	0.000
Surry, Town	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000				0.000	0.000
Urbanna	0.035	0.039	0.046	0.050	0.056	0.063	0.067	0.061	0.071				0.054	0.066
VIP	27.26	30.12	27.54	27.47	27.99	29.68	31.37	31.51	29.61				29.17	30.83
West Point	0.466	0.470	0.389	0.359	0.373	0.330	0.423	0.329	0.312				0.383	0.355
Williamsburg	7.73	8.09	7.96	8.48	7.76	8.59	8.41	8.27	8.14				8.16	8.27
York River	12.69	13.74	12.00	12.37	12.31	12.67	11.37	11.02	10.59				12.08	11.00
North Shore	44.47	48.09	42.99	43.36	42.42	45.95	43.44	42.31	40.63				43.74	42.13
South Shore	96.91	102.91	96.06	92.64	93.47	98.95	106.16	103.56	99.51				98.91	103.08
Small Communities	0.78	0.80	0.73	0.70	0.72	0.71	0.84	0.71	0.65				0.74	0.73
TOTAL	142.16	151.79	139.78	136.70	136.62	145.61	150.44	146.58	140.79				143.39	145.94

*Bold values indicate monthly plant flow average >95% of permitted design flow*

# Municipal Assistance Billed Reimbursements per Service From 07/01/2023 to 09/30/2023

## Attachment 1



*Notes: Other = Equipment purchase, consultation, validation studies, boater pump-out program, etc.*

# Municipal Assistance Invoice

## From 7/1/2023 - 9/30/2023

<b>Municipality</b>	<b>Reimbursements</b>
Accomack County	\$2,892.99
Buckingham County	\$314.96
City of Chesapeake	\$2,684.01
City of Emporia	\$242.61
City of Franklin	\$1,755.46
City of Hampton	\$2,630.41
City of Norfolk	\$5,836.77
City of Norfolk-Dept of Utilities	\$324.87
City of Portsmouth	\$2,655.25
City of Roanoke	\$1,350.00
City of Suffolk	\$2,821.49
City of Virginia Beach	\$5,761.05
Exmore WWTP	\$1,267.44
HRPDC	\$50,500.62
Henrico County	\$1,974.93
Hopewell RWTF	\$5,141.86
James City County Service Authority	\$1,289.70
Lynnhaven River NOW	\$449.55
New Kent County	\$10,019.22
Northampton County WWTP	\$1,049.94
Northumberland Co. - Callao WWTP	\$796.61
Rivanna Water and Sewer Authority	\$1,327.47
St Brides Corr Ctr WWTP	\$9,827.11
Town of Cape Charles	\$9,206.79
Upper Occoquan Service Authority	\$5,736.52
Virginia Aquarium & Marine Science Ctr	\$21,709.68
Virginia Department of Health	\$142,458.74
Westmoreland County	\$1,086.41
<b>Totals:</b>	<b><u>\$293,112.46</u></b>



The following Internal Audit Status document has been prepared by SC&H for the HRSD Commission. Below is a summary of projects in process, upcoming projects, and the status of current management action plan monitoring.

## ***I. Projects in Process***

---

### **Design and Construction Estimating**

- **Upcoming Tasks (October 2023)**
  - Conduct preliminary audit procedures.
  - Begin audit.

### **Accounts Payable and ProCards**

- **Tasks Completed (September 2023)**
  - Finalized planning documentation.
  - Drafted fieldwork audit program.
- **Upcoming Tasks (October 2023)**
  - Conduct data analytics.
  - Commence fieldwork procedures.

### **Personally Identifiable Information**

- **Tasks Completed (September 2023)**
  - Received management feedback for report.
- **Upcoming Tasks (October 2023)**
  - Finalize report and submit to the Commission.

### **Remote Access**

- **Tasks Completed (September 2023)**
  - Continued to follow up on the request list items.
- **Upcoming Tasks (October 2023)**
  - Continue following up on requests.
  - Continue to try and schedule meetings to gather evidence.
  - Document testing when requested documentation is obtained.

## ***II. Upcoming Projects***

---

- IT audit: November 2023
- Risk assessment: November/December 2023



**III. Management Action Plan Status**

SC&H performs on-going management action plan (MAP) monitoring for completed internal audits/projects. SC&H begins MAP follow-up approximately one year following the completion of each audit and periodically follows up until conclusion.

For each recommendation noted in an audit report, SC&H gains an understanding of the steps performed to address the action plan and obtains evidence to confirm implementation, when available.

The following describes the current project monitoring status. This listing does not include audits which were determined by HRSD Management and the Commission to include confidential or sensitive information.

Audit	Next Follow-up	Recommendations		
		Closed	Open	Total
Succession Planning	January 2024	2	2	4
Safety Division	October 2023	2	1	3
Freedom of Information Act	December 2023	0	1	1
Family Medical Leave Act (FMLA)	April 2024	0	4	4
D&C: CIP Project Management	Closed	13	0	13
HR Benefits	Closed	15	0	15
Inventory	Closed	5	0	5
Procurement/ProCard	Closed	11	0	11
Engineering Procurement	Closed	8	0	8
Corporate Governance: Ethics Function	Closed	5	0	5
Treatment Plant Operations	Closed	9	0	9
Permitting	Closed	2	0	2
Payroll	Closed	3	0	3
Customer Care Division	Closed	4	0	4
Pollution Source Control	Closed	8	0	8
Fleet Services	Closed	17	0	17
Biosolids Recycling	Closed	8	0	8
Unifier/ERP Integration	Closed	4	0	4
Emergency Repairs	Closed	3	0	3
SWIFT Program	Closed	12	0	12
<b>Totals</b>		131	8	139

Strategic Measures  
September 2023

FY-24		Jul-23	Aug-23	Sep-23	FY-24
Item	Strategic Planning Measure				
SM1	Capacity Related Overflows (Reported Quarterly)	0	3		3
SM2	Educational and Outreach Events	18	14	19	51
SM3	Number of Community Partners	22	22	8	52
SM4	Revenue vs. Budget	\$0	\$1	\$1	\$1
SM5	Wastewater Expenses vs. Budget	\$1	\$0	\$0	\$0
SM6	General Reserves	111%	105%	103%	106%
SM7	Liquidity	355	327	321	334
SM8	Accounts Receivable (HRSD)	\$37,355,090	\$41,211,627	\$48,632,916	\$42,399,878
SM9	Aging Accounts Receivable	29.20%	24.90%	22.00%	25.37%
SM10	Monthly CIP Spending	\$31,367,068	\$33,772,242		\$32,569,655
SM11	Turnover Rate wo Retirements	0.84%	0.24%	0.60%	0.14%
SM12	Turnover Rate w Retirements	1.32%	0.36%	0.84%	0.21%
SM13	Avg Time to Hire	2 months 26 days	3 months 3 days	3 months 9 days	3 months 3 days
SM14	Number of Vacancies	73	66	67	69
SM15	Affordability	0.00			
SM16	Number of Technical Presentations	2	2	6	10
SM17	TONS OF CARBON: Tons of carbon produced per million gallons of wastewater treated. Energy consumed (gas (scfm) and electricity (kWh)) per million gallons of wastewater treated.	*	*	*	
SM18	GAS CONSUMPTION: Tons of carbon produced per million gallons of wastewater treated. Energy consumed (gas (scfm) and electricity (kWh)) per million gallons of wastewater treated.	*	*	*	
SM19	ELECTRICITY CONSUMPTION: Tons of carbon produced per million gallons of wastewater treated. Energy consumed (gas (scfm) and electricity (kWh)) per million gallons of wastewater treated.	*	*	*	
SM20	System Failures (Reported Quarterly)	0			
H11	Total number of applicants per position	7.96	5.90	6.00	7
H12	Percentage of positions filled with internal applicants.	42.30%	30.00%	19.05%	30.45%
H13	Recruitment source Return on Investment.	0.00			0.00
H14	Avg Time to Hire	2 months 26 days	3 months 3 days	3 months, 9 days	3 months 3 days
H18	Quantity of expenditures (\$) allocated to Information Technology per 1,000 HRSD customers (commercial and residential).	0.00			0.00
H20	Percentage of CIP projects that are completed within budget.	0.00%			0.00%

# Strategic Measures September 2023

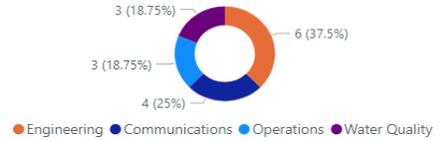


## Educational Outreach Events Community Engagement

If you have any questions, please contact [Power BI Support](#)

### Metric Definition

Educational and outreach events in which HRSD is educating the public.



### Educational Outreach Events

Date	Department	Event
09/01/2023	Operations	(i) Virginia Living Museum – Board of Trustees Meeting
09/01/2023	Operations	Tour of the Nansemond Treatment Plant to Nerea Uri Carreño from VCS Denmark
09/06/2023	Communications	SWIFT Employee Tour
09/06/2023	Communications	SWIFT Tour
09/08/2023	Water Quality	Water Quality representatives worked with the Virginia Beach Public Schools to complete development of the curriculum for Advanced Environment Student Partnering
09/11/2023	Communications	Communications Outreach presentation at WaterJAM
09/11/2023	Engineering	WaterJAM One Water PFAS Workshop
09/11/2023	Engineering	WaterJAM workshop on upcoming Design & Construction Projects
09/13/2023	Engineering	SWIFT Tour to staff from JXN Water
09/14/2023	Engineering	WaterJAM Technology Workshop
09/15/2023	Engineering	United Way Day of Caring
09/15/2023	Water Quality	United Way Day of Caring
09/21/2023	Communications	SWIFT Tour to Meridian Group
09/21/2023	Operations	SWIFT Tour to Meridian Group
09/22/2023	Engineering	SWIFT Tour to Staff from L.S. Caldwell
09/22/2023	Water Quality	TSD Staff worked with the Virginia Biosolids Council at the VA State Fair promoting the use of biosolids land application in agriculture

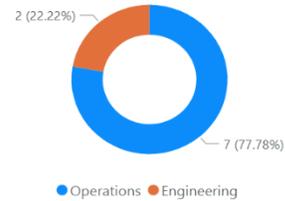


## Community Partners Community Engagement

If you have any questions, please contact [Power BI Support](#)

### Metric Definition

# of community organizations that HRSD works with (based on criteria in focus area) that are residents in Hampton Roads



### Community Partners

Month	Department	Event
September 2023	Operations	Accomack County
September 2023	Operations	DOE Jefferson Lab
September 2023	Operations	Eastern Shore Communities
September 2023	Operations	ODU
September 2023	Operations	Riverside Eastern Shore
September 2023	Operations	Town of Nassawadox
September 2023	Operations	Town of Onancock
September 2023	Engineering	United Way - Day of Caring - service at Children's Harbor in Chesapeake
September 2023	Engineering	WEF - 3-year term as House of Delegate Member that concluded on September 30

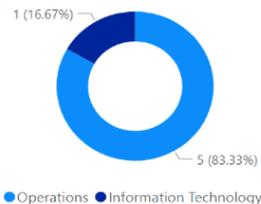


# Technical Presentations Innovation

If you have any questions, please contact [Power BI Support](#)

### Metric Definition

# of presentations given at national or local conference as well as technical presentations and panel discussions given to those external to HRSD excluding presentations given at community or education outreach events



### Technical Presentations

Date	Department	Presenter	Presentation
September 2023	Operations	Jeff Sparks	Full Scale Digital Twin with Integrated Hybrid Model Predictive Controller for Ammonia Based Aeration Control
September 2023	Operations	Jeremiah Burford	HRSD Presentation to West Point Rotary Club
September 2023	Operations	Chris Wilson	Biosolids Basics - Fundamentals of Anaerobic Digestion: Process, Design and Operation
September 2023	Operations	Dana Gonzalez	Evaluation of PFAS in Biosolids Before and After Implementation of Thermal Hydrolysis at HRSD's Atlantic Plant
September 2023	Operations	David Ewing	Planning, Preparation and Practice minimizes downtime- Lessons learned from three years of THP shutdowns
September 2023	Information Technology	C. McCormick, B. Odom, M. Sargent, A. Tribfelner	Wastewater Surveillance - A New Way of Looking at Existing Data - CivicLab Norfolk/HR Datathon

AGENDA ITEM. 14.c.1. – October 24, 2023

**Subject:** Atlantic Treatment Plant Thermal Hydrolysis Process System Repairs  
Emergency Declaration

**Recommended Action:** No action is required.

**Regulatory Requirement:** None

**Brief:** An emergency declaration was authorized on September 29, 2023 to replace the steam regulator on the main steam line for the Thermal Hydrolysis Process (THP) system.

The regulator is a safety feature on the main steam line to prevent pipe rupture from over pressurization. Due to the regulator failing, steam was venting out. Should the regulator fail completely, the plant would not be able to process any solids. The Atlantic Treatment Plant has limited solids storage making repairs to THP system critically necessary.

**Analysis of Cost:** The estimated cost of this work is \$21,830 and includes all materials and labor. Cost is determined to be fair and reasonable compared to orders for similar services.

This work is in accordance with the Commission Adopted Procurement Policy.

AGENDA ITEM 14.c.2. – October 24, 2023

**Subject:** Nansemond Treatment Plant Emergency Generator Repairs  
Emergency Declaration

**Recommended Action:** No action is required.

**Regulatory Requirement:** None

**Brief:** An emergency declaration was authorized on September 15, 2023 due to failed turbos on Emergency Generator #2. The problem arose when the generator began making noises and smoking during a rain event in August. The repair company, Carter Machinery Inc., determined that the turbos had completely failed. Emergency Generator #3 was checked due to the age of both being the same and it was determined Emergency Generator #3 could wait for the next budget cycle and go through the procurement process.

**Analysis of Cost:** The estimated cost of this work is \$26,000 and will be funded by the plant's operations budget. The price is for parts and labor to replace all four turbos on Emergency Generator #2. Cost is determined to be fair and reasonable based on review of similar items and services received.

This work is in accordance with the Commission Adopted Procurement Policy.

HRSD Commission Meeting Minutes  
October 24, 2023  
Attachment #10

17. Boat Harbor Transmission Force Main Land Acquisition Agreement

forthcoming