



COMMISSION MEETING MINUTES
October 22, 2024

No. Topic

[Call to Order](#)

1. [Awards and Recognition](#)
2. [Public Comments Not Related to the Agenda](#)
3. [Consent Agenda](#)
4. [Great Bridge Interceptor Force Main Emergency Replacement \(SF-180\)
Public Hearing on Determination of Public Need for Easement Acquisition and Easement
Acquisition Resolution](#)
5. [Annual Comprehensive Financial Report](#)
6. [Financial Policy
Biennial Update](#)
7. [Diversity Procurement Report](#)
8. [Adjustable Gas Siphon \(MINIONs Big Bubble Mixing\)
License Agreement](#)
9. [Bethel-Poquoson Force Main Part IV Replacement-Wythe Creek Exposed Crossing
Additional Appropriation – Non-Regulatory \(>\\$1,000,000\) and Contract Change Order \(>25% of
original contract value or \\$50,000, or whichever is greater\)](#)
10. [Cybersecurity
Briefing](#)
11. [Capital Improvement Program \(CIP\)
Update](#)
12. [New Business](#)
13. [Unfinished Business](#)
14. [Commissioner Comments](#)
15. [Informational Items](#)



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The Commission Chair called the meeting to order at 9:00 a.m.

| Name | Title | Present for Item Nos. |
|------------------------|-----------------------|-----------------------|
| Rodriguez, Stephen C. | Commission Chair | 1-15 |
| Levenston, Jr., Willie | Commission Vice-Chair | 1-15 |
| Elofson, Frederick N. | Commissioner | 1-15 |
| Glenn, Michael E. | Commissioner | 1-15 |
| Lakdawala, Vishnu K. | Commissioner | 1-15 |
| Stern, Nancy J. | Commissioner | 1-15 (Remote) |
| Taraski, Elizabeth | Commissioner | 1-15 |
| Templeman, Ann | Commissioner | 1-15 |

In accordance with Virginia Code § 2.2-3708.3 (B) and the HRSD Remote Participation Commission Adopted Policy Commissioner Stern requested approval to participate in today's meeting from Belle Haven, Virginia due to the Commissioner's principal residence is more than 60 miles from the meeting location identified in the required notice for the meeting.

Moved: Vishnu Lakdawala
Seconded: Willie Levenston

Ayes: 7
Nays: 0
(Excludes Remote Participant)

1. **Awards And Recognition**

Action: No action required.

Brief: HRSD is pleased to announce the receipt of the following awards:

a. **Virginia Water Environment Association (VWEA) WaterJAM 2024**

- (1) **Delegate Service Award – Lauren Zuravnsky, Director of Design & Construction-SWIFT.** In recognition of the outstanding work by Member Association Delegates.
- (2) **Facility Maintenance Award, Operations & Maintenance awarded to the Atlantic Treatment Plant.** The purpose of the VWEA Facility Maintenance Award is to recognize outstanding performance, professionalism, and dedication specific to the maintenance of wastewater treatment equipment and processes.
- (3) **Laboratory Analyst Award - Megan Pennington-Boggio, Laboratory Supervising Chemist.** Recognizes individuals for outstanding performance, professionalism and contributions to the water quality analysis profession.



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- b. **Water Environment Federation Technical Exhibition and Conference (WEFTEC) 2024**
- (1) **Water Environment Federation's 2024 Morgan Operational Solutions Award – Alexandria "Ali" Gagnon.** The Morgan Operational Solutions Award recognizes valuable contributions to the in-facility study and solution of operational problems.
 - (2) **Intelligent Water Systems Challenge –** Jeff Sparks, Black & Veatch and Kansas State University joined forces in the Leaders Innovation Forum for Technology (LIFT) program challenge. Their submission for a new Chlorine Dosage Controller for Disinfection took 2nd place out of 60 submissions.
 - (3) **Operations Challenge –** Team HRSD placed 8th overall in the Division II Operations Challenge. However, their outstanding performance earned 3rd place in the Laboratory event, 4th in Pump Maintenance event, and 5th in the Safety event.
 - (4) **Water Environment Federation Education Awards – Student Chapter of the Year Award** presented to Old Dominion University Environmental Engineering Student Association.

Public Comment: None

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: | Vishnu Lakdawala | Ayes: | 8 |
| Seconded: | Frederick Elofson | Nays: | 0 |

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Awards (>\$200,000)
 - 1. [Electrical Services](#) \$8,000,000
 - 2. [Fleet Management \(FY-2025\) - Road Tractor for Biosolids Hauling](#) \$909,616
 - 3. [Mobile Workforce Database License Maintenance and Support](#) \$256,186
 - 4. [Organizational Development Consulting and Training Services](#) \$1,275,000
 - 5. [South Shore Gravity Sewer Improvements Phase One](#) \$759,755
[Contract Award \(>\\$200,000\) and Task Order \(>\\$200,000\)](#) \$291,130
- c. Task Orders (>\$200,000)
 - 1. [Army Base 24-Inch and 20-Inch Transmission Main Replacements](#) \$499,621

Item(s) Removed for Discussion: None

Public Comment: None



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4. **Great Bridge Interceptor Force Main Emergency Replacement (SF-180)
Public Hearing on Determination of Public Need for Easement Acquisition and Easement
Acquisition Resolution**

Actions:

- a. Conduct public hearing.
- b. Adopt a Resolution approving the public use determination and directing acquisition by condemnation, or other means, of temporary construction easement for the Great Bridge Interceptor Force Main Emergency Replacement (SF-180).

Moved: Willie Levenston
Seconded: Michael Glenn

Ayes: 8
Nays: 0

Regulatory Requirement: None

| | |
|--|------------------|
| Budget | \$6,000,000 |
| Previous Expenditures and Encumbrances | (\$5,729,956) |
| Available Balance | <u>\$270,044</u> |

Project Description: This project will replace the damaged 20-inch 1968 cast iron force main located within the Intracoastal Waterway via horizontal direction drill (HDD) parallel to the existing in-service City of Chesapeake water main and remove the failed abandoned water main and force main underneath the Waterway. The attached [map](#) depicts the project location.

Project Justification: The SF-180 failure was on a 20-inch 1968 ductile iron force main that was caused by a dredge vessel spud. An emergency declaration was authorized on March 13, 2023. Although the failure was isolated, the project remains under an emergency declaration due to Elbow Road Pressure Reducing Station (PRS) operating continuously and the Great Bridge Interceptor Extension 16-inch Replacement (CIP Project No. AT011900), a Rehabilitation Action Plan Phase 2 project, requiring this section of pipeline in service for construction.

As part of the project, HRSD anticipates a total of three (3) temporary and permanent easements. At this time, two easements are yet to be acquired.

A public hearing will be held to review the scope of the project, to define the public need of the project and identify the specific impact to the property where condemnation may be considered and to receive public input. Attempts to reach an agreement with the property from the owner have been unsuccessful. While a purchase is still possible, condemnation may likely be necessary to keep the project on schedule. The attached [resolution](#) meets the requirements of the Code of Virginia should condemnation be necessary. The resolution has been reviewed by HRSD legal counsel.



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Staff provided a short [overview](#) for the Commission and the public immediately prior to the Public Hearing.

| | | |
|-------------------------|-----------------------|----------------------|
| <u>Schedule:</u> | Emergency Declaration | March 2023 |
| | PER | March 2023 |
| | Design | May 2023 |
| | Construction | March 2025 |
| | Project Completion | Unknown at this time |

Public Comment: None



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5. **Fiscal Year 2024 Annual Comprehensive Financial Report (ACFR)**

Action: Receive the Finance Committee's Report regarding 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 Division 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. Cherry Bekaert LLP provided an unmodified (clean) opinion on the financial statements dated October 21, 2024.

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 Annual Comprehensive Financial Report for the fiscal year ended June 30, 2023. This was the 41st consecutive year that HRSD received this prestigious award and reflects the commitment and dedication of the Accounting Department.

The Finance Committee, along with Commissioner Elofson, met with staff to review the draft report on October 15, 2024. The Finance Committee provided their [report](#) to the Commission and staff provided a brief [overview](#) of the financial statements. A copy of the [ACFR](#) was provided during the meeting.

Public Comment: None



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6. **Financial Policy
Biennial Update**

Action: Approve the revised Financial Policy.

Moved: Michael Glenn
Seconded: Ann Templeman

Ayes: 8
Nays: 0

Brief: HRSD's Financial Policy is a comprehensive policy designed to help guide its financial operations. The policy was originally drafted in 2009 and most recently revised in 2023. The policy requires the Deputy General Manager/Chief Financial Officer, Bond Counsel and HRSD's Financial Advisor to review the policy every two years.

The Financial Policy is the primary document that places financial parameters on management and defines financial management practices that are acceptable to HRSD. The Policy covers reserves; budgetary principles, practices, and controls; key financial metrics; internal controls; risk management practices; debt affordability; and debt, derivative, and investment management practices. The Policy also covers fiduciary responsibility and investment parameters associated with the Retiree Health Plan Trust.

Although the recommended changes to the policy are mostly administrative in nature whereby definitions are updated and clarified and some redundancies are eliminated, some changes specifically to note include:

- Changes throughout the document necessitated by discharging and extinguishing all senior obligation debt as a result of the 2024A revenue bond refunding transaction;
- Minor changes to the investment asset allocation for the Retiree Health Plan and certain changes necessitated by HRSD's change from a discretionary investment advisor to a non-discretionary investment advisor; and
- Changes throughout the document to recognize organizational title changes.

The attached [Financial Policy](#) was prepared by staff, and HRSD's bond counsel, financial advisor and investment advisor.

The proposed changes to the Financial Policy were also reviewed with the Finance Committee at their October meeting.

Public Comment: None



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7. **Diversity Procurement Report**

Action: No action is 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, technology services and gravity flow monitoring, cleaning and inspections.

Overall total spend has increased in FY-2024 with the largest gains in Capital Improvement Program SWaM spend from the previous fiscal year. This increase is driven mostly by SWIFT related contracts and subcontractor payments.

The following is a comparison of fiscal years 2022 to 2024 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-2022 | FY-2023 | FY-2024 |
| Operating | 23% | 18% | 14% |
| Corporate VISA Card | 6% | 4% | 6% |
| Capital Improvement Program | 35% | 36% | 47% |
| <i>Total</i> | 30% | 32% | 43% |

A [summary](#) of activities and [transaction charts](#) for the period of July 1, 2023 through June 30, 2024 are attached.

Public Comment: None



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8. **Adjustable Gas Siphon (MINIONS Big Bubble Mixing)
License Agreement**

Action: Approve the terms and conditions of the exclusive license agreement with ARA Consult GmbH and NEWhub Holding Company for the commercialization of the adjustable gas siphon (MINIONS big bubble mixing) line of technologies as developed through the family of patents shown in the 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.

| | | | |
|-------------------------|-------------------|---------------------|---|
| <u>Moved:</u> | Vishnu Lakdawala | <u>Ayes:</u> | 8 |
| <u>Seconded:</u> | Elizabeth Taraski | <u>Nays:</u> | 0 |

Brief: Over the period from 2017 through 2018, HRSD Treatment Process Engineer, Mike Parsons, invented, developed, and first deployed a novel big bubble mixing system at the Williamsburg Treatment Plant. This technology is simple, cost-effective, adaptable, and easily deployed. The most common version of the HRSD big bubble mixer was named [MINIONS](#) by several plant staff at York River Treatment plant, and the name stuck. Since the original development, MINIONS mixers have been installed in various iterations and applications at six HRSD treatment plants, upgrades to include MINIONS are in planning stages at several other plants, and MINIONS are being installed as part of several capital projects.

Other utilities and several consulting engineering firms have been very interested in this technology, but it is hard for them to access, because no vendors are producing this technology, and construction contractors have been hesitant to fabricate them as part of a project. Some engineering firms are uncertain about designing and specifying them without vendor engineering input. With so much interest in MINIONS and with several novel aspects and modifications of the technology in development, HRSD staff decided to file a provisional patent application. This is an important aspect of commercialization, and technology providers can then offer MINIONS to other utilities through a traditional procurement and installation process.

With this [license agreement](#), ARA Consult GmbH and NEWhub Holding Company are authorized to develop partnerships to sublicense this technology to a worldwide network of technology providers. For North American sales, the royalty payments will be directed to The Water Research Foundation to support research efforts on topics relevant the water sector. For royalties obtained from projects and technology providers outside of North America, as well as all sublicense consideration, the payments will be made directly to HRSD. This approach is consistent with the previous commercialization of the AvN, inDENSE, and Anammox Biofilm lines of technologies. The North American sublicensee will be World Water Works (WWW). WWW will also have a sublicense to provide this technology in several other parts of the world as well. The license agreement has been developed working with the HRSD Intellectual Property attorneys and purposely do not obligate HRSD in any way. The agreements also shield HRSD from liability associated with the technology not performing as expected.

Public Comment: None



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9. **Bethel-Poquoson Force Main Part IV Replacement-Wythe Creek Exposed Crossing Additional Appropriation – Non-Regulatory (>\$1,000,000) and Contract Change Order (>25% of original contract value or \$50,000, or whichever is greater)**

Actions:

- a. **Appropriate additional funding in the amount of \$249,749.**
- b. **Approve a change order to the contract with Bridgeman Civil, Inc. in the amount of \$490,327.**

Moved: Michael Glenn
Seconded: Ann Templeman

Ayes: 8
Nays: 0

CIP Project: YR014600

Regulatory Requirement: None

| | |
|--|---------------|
| Budget | \$4,068,204 |
| Previous Expenditures and Encumbrances | (\$3,627,626) |
| Available Balance | \$440,578 |
| Proposed Change Order No. 5 to Bridgeman Civil, Inc. | (\$490,327) |
| Proposed Contingency | (\$200,000) |
| Project Shortage/Requested Additional Funding | (\$249,749) |
| Revised Total Project Authorized Funding | \$4,317,953 |

| Contract Status with Change Orders: | Amount | Cumulative % of Contract |
|--|---------------|---------------------------------|
| Original Contract with Bridgeman Civil, Inc. | \$2,978,796 | |
| Total Value of Previous Change Orders | \$455,404 | 15.3% |
| Requested Change Order | \$490,327 | |
| Total Value of All Change Orders | \$945,731 | 31.7% |
| Revised Contract Value | \$3,924,527 | |

| | |
|---------------------------------|----------|
| Time (Additional Calendar Days) | 295 days |
|---------------------------------|----------|

Project Description: This project will replace approximately 1,600 linear feet (LF) of 20-inch prestressed concrete cylinder pipe (PCCP) and approximately 1,600 LF of 18-inch high-density polyethylene (HDPE) pipe running above the marsh adjacent to the Wythe Creek Bridge. The existing cantilever beams will be removed, and the original pile bents will be replaced for the new 20-inch HDPE pipe. A new stringer support system will be added in between the existing bents to support the new 20-inch HDPE pipe. The attached [map](#) depicts the project location.



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Project Justification: In 2009, a temporary 18-inch HDPE force main was installed along the existing aerial crossing of New Market Creek on Wythe Creek Road in Hampton. This pipe was installed due to the failure of the adjacent 20-inch PCCP that was installed in the 1970s. At that time, the new HDPE pipe was installed on the original aerial support system. This aerial support was utilized by extending wooden cantilever beams from the existing pile bents adjacent to the 20-inch PCCP. In December 2019, Collins Engineers, Inc. performed an inspection of the aerial crossing supports and found deterioration and defects along several pile supports and bents. The cantilevers have had numerous repairs over the last decade and need repair again. The existing 18-inch HDPE pipe also requires the counterbalance weight of the PCCP pipeline to support the cantilever, thus requiring the old 20-inch PCCP to remain in place as long as this cantilever system exists. This project will remove the 20-inch PCCP along with the 18-inch HDPE pipelines, make repairs to the aerial crossing supports, and install a new 20-inch HDPE pipeline across Wythe Creek.

The project received a Stop Work Order from the City of Hampton on April 8, 2024 due to erosion and sedimentation control concerns. The Stop Work Order was lifted on July 24, 2024 upon issuance of the Land Disturbance Permit.

The Bethel-Poquoson Force Main Part III Replacement (YR011900) CIP project will be replacing the existing 20-inch force main to the south of this section of pipe. YR011900 is being performed as part of the VDOT roadway widening project on Wythe Creek Road.

Change Order Description: This change order includes additional cost of the erosion and sedimentation controls needed to lift the Stop Work Order; clearing the site and removing the vegetation upon remobilization after the Stop Work Order; an additional 80 LF of ductile iron pipe (DIP) for the north end tie-in; and an additional 100 LF of DIP and two plug valves for the south end tie-in.

Analysis of Cost: The value of Bridgeman Civil's Change Order No. 5 is \$490,327. When combined with Change Order Nos. 1 through 4, the cumulative change order amount is above the Commission approval threshold of 25% above the original contract value. This change order has been reviewed by Collins Engineers, Inc. and is determined to be reasonable for the additional construction activities related to the Stop Work Order and design modifications. Since the project is approximately 70% complete at this time, a \$200,000 contingency is being requested to accommodate unforeseen conditions for the remainder of construction.

Schedule: Project Completion January 2025

Discussion Summary: Staff discussed steps that can be taken to ensure all necessary permits and approvals are received on a project and limit the chance for this situation from occurring the future.

Public Comment: None



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10. **Cybersecurity Briefing**

Action: No action is required.

Brief: Staff presented a [Cybersecurity briefing](#) which aligns with HRSD policy and industry best practices to empower attendees in maintaining safety and security within the digital environment. Three factsheets are provided to support the briefing:

- [Social Engineering-Factsheet](#). Outlines methods for recognizing and safeguarding against this type of attack.
- [Social Engineering-Types Of Attacks-Factsheet](#). Details different manipulation tactics to watch out for.
- [Seven-signs-of-phishing-factsheet](#). Emphasizes the seven key indicators of a phishing email.

Public Comment: None

11. **Capital Improvement Program (CIP) Update**

Action: No action is 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. Staff provided a [briefing](#) describing the status of the CIP, expenditures and performance metrics, financial projections, Consent Decree/Sewer Rehab project status, SWIFT Program update and projects of significance.

Public Comment: None

12. **New Business – None**

13. **Unfinished Business – None**

14. **Commissioner Comments**

Several Commissioners commented on their experiences at the recent Water Environment Federation Technical Exhibit and Conference (WEFTEC). They said HRSD has a great presence there, is well known and respected, and is the gold standard for the industry. This is a great tribute to the caliber of employees at HRSD. The Commissioners are proud of the work that employees do and are proud to be part of such a great organization. They also enjoyed meeting contractors and vendors and learning about the equipment used in HRSD's CIP projects.



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15. **Informational Items**

Action: No action required.

Brief: The items listed below were presented for information.

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 Measures Summary](#)

Discussion Summary: The General Manager discussed building partnerships that would make HRSD the anchor for a water technology innovation ecosystem. The Commission Chair asked for a white paper on this idea that the Commission can use to be ambassadors for HRSD.

Staff also provided details on the recent emergency designation for a potential force main failure at the intersection of Great Bridge Boulevard and Boxer Drive in Chesapeake. Additional details will be provided once the investigation is completed.

Public Comment: None

Next Commission Meeting Date: November 19, 2024 at the HRSD South Shore Operations Complex, 1434 Air Rail Avenue, Virginia Beach, VA 23455

Meeting Adjourned: 11:04 a.m.

SUBMITTED:

Jennifer Cascio

Jennifer L. Cascio
Commission Secretary

APPROVED:

Stephen C. Rodriguez

Stephen C. Rodriguez
Commission Chair

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #1

3. Consent Agenda

a. Approval of Minutes - The draft minutes of the previous Commission Meeting were distributed electronically prior to the meeting.

b. Contract Awards (>\$200,000)

| | | |
|----|---|-------------|
| 1. | Electrical Services | \$8,000,000 |
| 2. | Fleet Management (FY-2025) - Road Tractor for Biosolids Hauling | \$909,616 |
| 3. | Mobile Workforce Database License Maintenance and Support | \$256,186 |
| 4. | Organizational Development Consulting and Training Services | \$1,275,000 |
| 5. | South Shore Gravity Sewer Improvements Phase One | \$759,755 |
| | Contract Award (>\$200,000) and Task Order (>\$200,000) | \$291,130 |

c. Task Orders (>\$200,000)

| | | |
|----|--|-----------|
| 1. | Army Base 24-Inch and 20-Inch Transmission Main Replacements | \$499,621 |
|----|--|-----------|

CONSENT AGENDA ITEM 3.b.1. – October 22, 2024

Subject: Electrical Services
Contract Award (>\$200,000)

Recommended Actions:

- a. Award a contract to Saunders Contracting Services, Inc. in the amount of \$1,000,000 for one year with three renewal options and an estimated cumulative value of \$4,000,000.
- b. Award a contract to REW Corporation in the amount of \$1,000,000 for one year with three renewal options and an estimated cumulative value of \$4,000,000.

Regulatory Requirement: None

Type of Procurement: Competitive Negotiation

A Public Notice was issued on July 5, 2024. Three firms submitted proposals on August 20, 2024, and two 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. Two firms were interviewed and technically ranked as listed below:

| Proposers | Technical Points | Recommended Selection Ranking |
|-------------------------------------|-------------------------|--------------------------------------|
| Saunders Contracting Services, Inc. | 86 | 1 |
| REW Corporation | 74 | 2 |

The Committee recommends award to Saunders Contracting Services, Inc., and REW Corporation whose professional qualifications and proposed services best serve the interest of HRSD. Both contractors held the previous five-year term contracts. As with the previous term, it is in HRSD's best interest to have two contractors for the entire service area. The required personnel qualifications and availability of equipment will help with redundancy on critical projects.

HRSD Estimate:

\$1,835,000/yr

Contract Description: This contract is an agreement for various electrical services on an as needed basis through scheduled requests and/or emergency response for use by the Electrical and Instrumentation Department. Contractors will provide all necessary labor, equipment, materials and supervision to perform services related to high technical and/or critical project-based requests. Services include but are not limited to repairs and/or installations of switchgear, motor control centers, transformers, panel boards, motors, and generators.

This is a Task Order based estimated use contract with individual task orders limited to \$1,000,000. All task orders will be issued based on the unit prices submitted with the proposals.

Analysis of Cost: The HRSD Estimate reflects the past five-year term spend between both contractors. Detailed rate costs from both contractors were evaluated, negotiated and found to be in line with industry standards.

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

CONSENT AGENDA ITEM 3.b.2. – October 22, 2024

Subject: Fleet Management (FY-2025)
Road Tractor for Biosolids Hauling
Contract Award (>\$200,000)

Recommended Action: Award a contract to Peterbilt of Richmond Inc dba The Pete Store - Chesapeake in the amount of \$909,616.

CIP Project: GN020400

Regulatory Requirement: None

| | |
|--|--------------------|
| Budget | \$4,432,780 |
| Previous Expenditures and Encumbrances | (\$2,052,109) |
| Available Balance | <u>\$2,380,671</u> |

Type of Procurement: Use of Existing Contract Vehicle

HRSD Estimate: \$909,616

Project Description: This project will provide for replacement of aging fleet vehicles and purchase of additional vehicles to meet the needs of the organization. An itemized list of vehicles to be replaced or added is maintained by the Support Systems Division.

Project Justification: Replacement of aging vehicles will result in lower repair costs and the purchase of additional vehicles will provide for increased staff efficiency.

Contract Description: This contract is for the purchase of four Peterbilt 567 Day Cab Road Tractors for Biosolids Hauling. The tractors include a Cummins X15 450HP motor, Allison 4,000RDS disc brakes, and 30-40 GPM installed hydraulic wet line kits.

Upon evaluation of the Sourcwell Contract 032824-PMC terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to Peterbilt of Richmond Inc dba The Pete Store – Chesapeake.

Analysis of Cost: By utilizing the Sourcwell Contract 032824-PMC for Cab and Chassis, Vocational and Medium-duty Trucks, class 6, 7, and 8, HRSD is receiving a twenty-five percent cost savings.

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

CONSENT AGENDA ITEM 3.b.3. – October 22, 2024

Subject: Mobile Workforce Database License Maintenance and Support
Contract Award (>\$200,000)

Recommended Action: Award a contract to Mythics, Inc. in the amount of \$44,885 for one year with four renewal options and an estimated cumulative value of \$256,186.

Regulatory Requirement: None

Type of Procurement: Use of Existing Contract Vehicle

Contract Description: This contract is for mobile workforce database license maintenance and support for use by the Information Technology Department. This is an Oracle enterprise database license for technical support for various existing software updates and continuous support during the contractual term.

Upon evaluation of the Virginia Information Technology Agency agreement VITA-VA-230503-MYTH terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to Mythics, Inc.

Analysis of Cost: This is an estimated use contract. By utilizing the Virginia Information Technology Agency agreement VITA-VA-230503-MYTH for Oracle Software, HRSD is receiving fixed renewal pricing for years one through three with years four and five estimated to be at the typical Oracle annual renewal percent increase.

This work is in accordance with the Commission Adopted Procurement Policy

CONSENT AGENDA ITEM 3.b.4 – October 22, 2024

Subject: Organizational Development Consulting and Training Services
Contract Award (>\$200,000)

Recommended Action: Award a contract for Organizational Development Consulting and Training Services to Hicks Carter Hicks, LLC in the estimated amount of \$255,000 for one year with four annual renewal options and an estimated cumulative value in the amount of \$1,275,000.

Regulatory Requirement: None

Type of Procurement: Competitive Negotiation

A Public Notice was issued on June 17, 2024. Sixteen firms submitted proposals on July 12, 2024, and 11 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 |
|---|-------------------------|--------------------------------------|
| Hicks-Carter-Hicks, LLC | 95 | 1 |
| Dr. Maria Church International, LLC | 87 | 2 |
| The SAB Group, LLC DBA Prism Leadership Group | 79 | 3 |
| iSuccess Consulting, Inc. | 77 | 4 |

HRSD Estimate: \$259,000/yr

The Committee recommends award to Hicks Carter Hicks, LLC, whose professional qualifications and proposed services best serve the interest of HRSD. Hicks-Carter-Hicks, LLC served as the organizational development and training consultant for the previous contract period.

Contract Description: This contract is for organizational development consulting and training services to be used by the Learning & Development Department. Services include supervisor and employee training curriculum development, instruction, coaching, organizational needs assessments and other services as required.

Analysis of Cost: This is an estimated use contract. The costs were compared to industry standards, previous contract rates with the same supplier, and results from the competitive negotiation. Rates were negotiated and determined to be fair and reasonable.

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

CONSENT AGENDA ITEM 3.b.5. – October 22, 2024

Subject: South Shore Gravity Sewer Improvements Phase One
Contract Award (>\$200,000) and Task Order (>\$200,000)

Recommended Actions:

- a. Award a contract to Tidewater Utility Construction, Inc. in the amount of \$759,755.
- b. Approve a task order with Gannett Fleming, Inc. in the amount of \$291,130.

CIP Project: GN015000

Regulatory Requirement: Rehab Action Plan Phase 2 (5/5/2025 Completion)

| | |
|--|---------------|
| Budget | \$3,751,057 |
| Previous Expenditures and Encumbrances | (\$1,776,090) |
| Available Balance | \$1,974,967 |

| Contract Status with Task Orders: | Amount |
|---|---------------|
| Original Contract with Engineer | \$61,262 |
| Total Value of Previous Task Orders | \$414,130 |
| Requested Task Order | \$291,130 |
| Total Value of All Task Orders | \$705,260 |
| Revised Contract Value | \$765,522 |
| Engineering Services as % of Construction | 38% |

Type of Procurement: Competitive Bid

In accordance with HRSD's competitive sealed bidding procedures, the Engineering Division advertised and solicited bids directly from potential bidders. The project was advertised on August 23, 2024, and two bids were received on September 18, 2024, as listed below:

| Bidder | Bid Amount |
|--------------------------------------|-------------------|
| Tidewater Utility Construction, Inc. | \$759,755.00 |
| Bridgeman Civil, Inc. | \$1,380,200.00 |

Engineer Estimate: \$1,394,777.50

The design engineer, Gannett Fleming, Inc., evaluated the bids based upon the requirements in the invitation for bid and recommends award to the lowest responsive and responsible bidder Tidewater Utility Construction, Inc. in the amount of \$759,755.

Project Description: This project will rehabilitate and/or replace gravity sewer segments at four locations in the South Shore Interceptor System. Project locations include Arctic Avenue Pump Station, Seay Avenue Pump Station, Elmhurst Lane Pump Station, and Bolling Avenue in between Powhatan Avenue and Studeley Avenue. The attached [map](#) depicts the project locations.

Project Justification: Condition assessment activities indicate that assets at these four project locations present a material risk of failure due to physical condition defects and Inflow and Infiltration (I/I).

Contract Description: This contract is for the Bolling Avenue project location only. Work at this location includes installation of approximately 360 linear feet of 12-inch diameter PVC sanitary sewer pipe and service laterals as well as abandonment of the existing 10-inch diameter clay sewer pipe.

Task Order Description: This task order will provide construction administration and construction inspection services at the two remaining project locations (Seay Avenue Pump Station and Bolling Avenue). HRSD and the design engineer, Gannett Fleming, negotiated a fee in the amount of \$291,130 based on subcontractor costs and an estimation of hours required for this effort. The Bolling Avenue construction administration fee is a high percentage of the overall construction costs due to the pre-construction field surveys and construction activity vibration and groundwater monitoring programs that will be utilized on this relatively small project.

Analysis of Cost: The cost for the construction contract has been reviewed by Gannett Fleming and has been determined to be reasonable and award is recommended to the low bidder. Although the bid price amounted to 63% of the Engineer's Opinion of Probable Construction Cost (OPCC), the bid item pricing was determined to be appropriate and aligns with current market conditions. Gannett Fleming prepared the OPCC using HRSD annual services contract pricing, as well as project pricing received for two HRSD projects in the same locality having similar scopes of work as the proposed project. The OPCC included a 15% contingency and was based on an interpolation of both cost estimates. Using the annual services contract pricing lead to a higher OPCC since that contract is reserved for smaller projects (under \$500,000 value) as well as emergency projects that are time sensitive.

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

| | | |
|-------------------------|--------------------|---------------|
| <u>Schedule:</u> | Construction | November 2024 |
| | Project Completion | March 2025 |

South Shore Gravity Sewer Improvements Phase I (GN015000)



CONSENT AGENDA ITEM 3.c.1. – October 22, 2024

Subject: Army Base 24-Inch and 20-Inch Transmission Main Replacements
Task Order (>\$200,000)

Recommended Action: Approve a task order with Bridgeman Civil Inc. in the amount of \$499,621.

CIP Project: AB010000

Regulatory Requirement: Rehab Action Plan Phase 2 (5/5/2025 Completion)

| | |
|--|---------------|
| Budget | \$27,343,000 |
| Previous Expenditures and Encumbrances | (\$3,146,962) |
| Available Balance | \$24,196,038 |

| Contract Status with Task Orders: | Amount |
|---|---------------|
| Original Contract with Engineer | \$0 |
| Total Value of Previous Task Orders | \$ 19,907,282 |
| Requested Task Order | \$499,621 |
| Total Value of All Task Orders | \$20,406,903 |
| Revised Contract Value | \$20,406,903 |
| Engineering Services as % of Construction | NA |

Project Description: This project is to study, design and construct a replacement interceptor for Line SF-004, 24-inch cast iron pipe and 20-inch cast iron pipe and Line SF-005, 20-inch reinforced concrete pipe from Baker Street to Newport Avenue, approximately 4,650 linear feet (LF). A single line is planned to replace these twin lines along the current alignment. This single pipeline is planned to be 36-inch in the Regional Wet Weather Management Plan. The original scope of the CIP included an additional 13,000 LF of pipeline replacement from Newport Avenue to Simons Drive. At this time, condition assessment of this additional pipe is only planned in an effort to prioritize funds on the highest risk assets. This project also includes abandoning a portion of line SG-003, a section of gravity pipe from MH-SG-003-3889 to MH-SG003-3747 at the intersection of Baker Street and Hampton Boulevard that is not in service and is deteriorating. The EPA Rehabilitation Phase II portion of this original project has been addressed. This project is now in delay.

Project Justification: This project will address specific sections of SF-004 that was designed and built in 1956 according to the plans inherited from the City of Norfolk. The same plans show an existing 20-inch concrete line, now HRSD line number SF-005. Since SF-005 was turned over to HRSD in 1956, it is at least 50 years old. Both lines have multiple repairs installed by HRSD and repair history prior to HRSD ownership is unknown. Multiple branch valves along this alignment are 1948 or 1956 valves that are difficult to repair or get replacement parts. The valve guide AB-2005 area will be included in the condition assessment portion of the CIP. This area has several valves indicated as inoperable and an abandoned dead-end section of pipe. These lines are the main interceptors conveying wastewater from the City of Norfolk to the Army Base Treatment Plant. This project also includes abandoning the gravity line SF-002. Flow is currently bypassing this section of pipe, and the pipe is in poor condition from tuberculation and infiltration.

Task Order Description: This task order will include a 20" valve replacement and force main condition assessment. The existing 20" gate valve (AB1006-9) falls under Rehabilitation Action Plan Phase 2 with a completion deadline of May 5, 2025; therefore, the valve replacement work is a priority. The CIP project originally included full replacement of SF-004 and SF-005. However, due to

funding limitations, Condition Assessment Phase I was performed in 2022. The extents of the condition assessment included east of the proposed Section W (AB010500) tie-in location. The results of the 2022 condition assessment showed that the force mains were in good condition and had estimated remaining useful lives of 30+ years. Condition Assessment Phase II will include the remainder of SF-004 and SF-005—to the west of the proposed Section W tie-in location.

Analysis of Cost: The cost for this task order is based on the pre-negotiated rates under the Annual Sewer Repair and Condition Assessment Services Agreement.

This work is in accordance with the Commission Adopted Procurement Policy

| | | |
|-------------------------|--------------------|--------------|
| <u>Schedule:</u> | Design | March 2021 |
| | Bid | January 2027 |
| | Construction | April 2027 |
| | Project Completion | April 2029 |

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #2

4. Great Bridge Interceptor Force Main Emergency Replacement (SF-180)
Public Hearing on Determination of Public Need for Easement Acquisition and Easement
Acquisition Resolution



Determination of Public Need
Great Bridge Interceptor Force Main Emergency
Replacement (SF-180)
CIP# AT016400

October 22, 2024

Project Description:

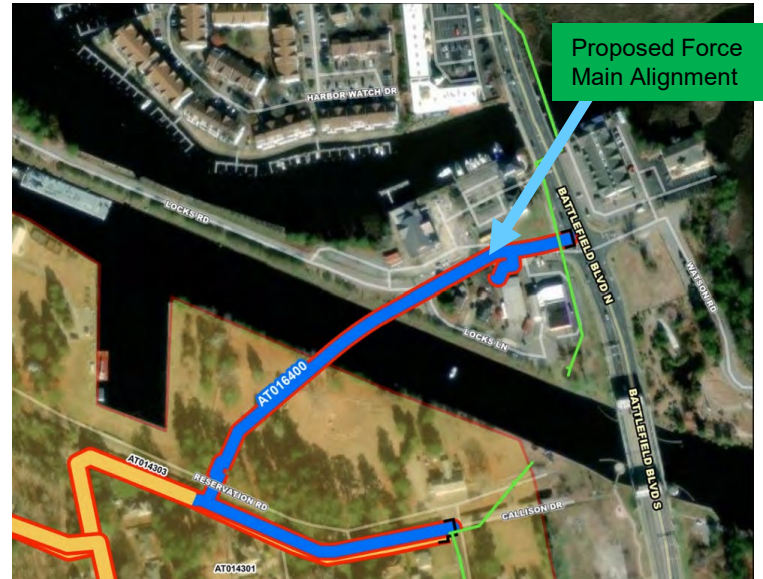
This project will replace the damaged 20-inch diameter cast iron force main located within the Intracoastal Waterway via horizontal directional drill (HDD) parallel to the existing in-service City of Chesapeake water main and remove the failed abandoned water main and force main underneath the Waterway.

As part of the project, HRSD anticipates a total of two temporary and two permanent easements with three property owners.



Project Easements

- 4 total easements
 - 2 Permanent
 - 2 Temporary



Project Alignment and Design

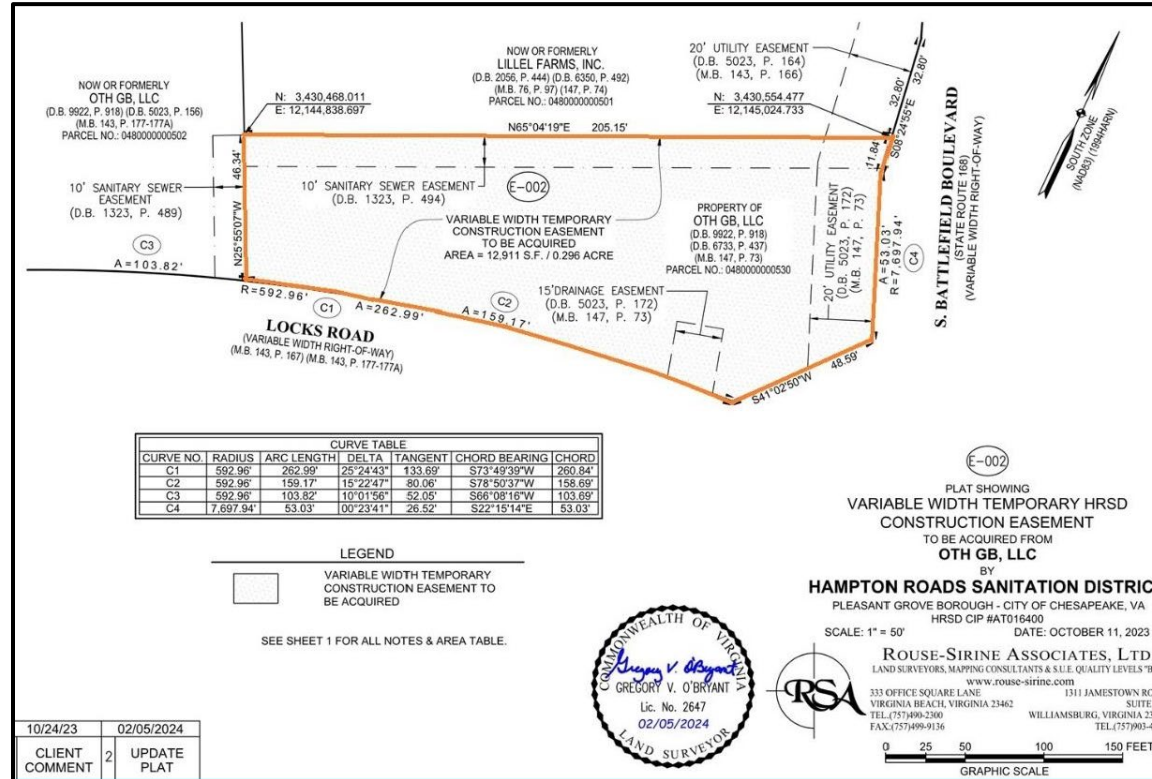
Several alignments were considered during the preliminary engineering design. The selected alignment limits impacts to private property and was the most feasible and cost-effective option.

- Cost and schedule
- Easement/property acquisition
- Permitting and easements with U.S. Army Corps of Engineers
- Historical project location
- Limiting impacts to adjacent property owners

Status of Easement Acquisitions

| <u>Number</u> | <u>Address</u> | <u>Tax ID Number</u> | <u>Name</u> | <u>Type</u> | <u>Status</u> |
|---------------|--|-------------------------------|------------------------------|--|---|
| 1P / 1T | Albemarle and Chesapeake Canal Historic Way Locks Rd, Locks Ln, and Reservation Rd Chesapeake, VA 23320 and 23322 | 470000000870 490000000280, | U.S. Army Corps of Engineers | 50-Year Utility Easement 25,303 SF Temporary Construction Easement 33,781 SF | Pending final permitting approval from U.S. Army Corps of Engineers |
| 2T | 124 Battlefield Blvd N Chesapeake, VA 23320 | 480000000530 | OTH GB LLC, Carpinelli | Temporary Construction Easement 12,922 SF | Negotiations ongoing |
| 3P | 108 Locks Ln Chesapeake, VA 23320 | 480000000542 | Martin | Permanent Utility Easement 171 SF | Easement agreement executed 6/13/2024 |

124 Battlefield Blvd Chesapeake, VA 23320



124 Battlefield Blvd
Chesapeake, VA 23320

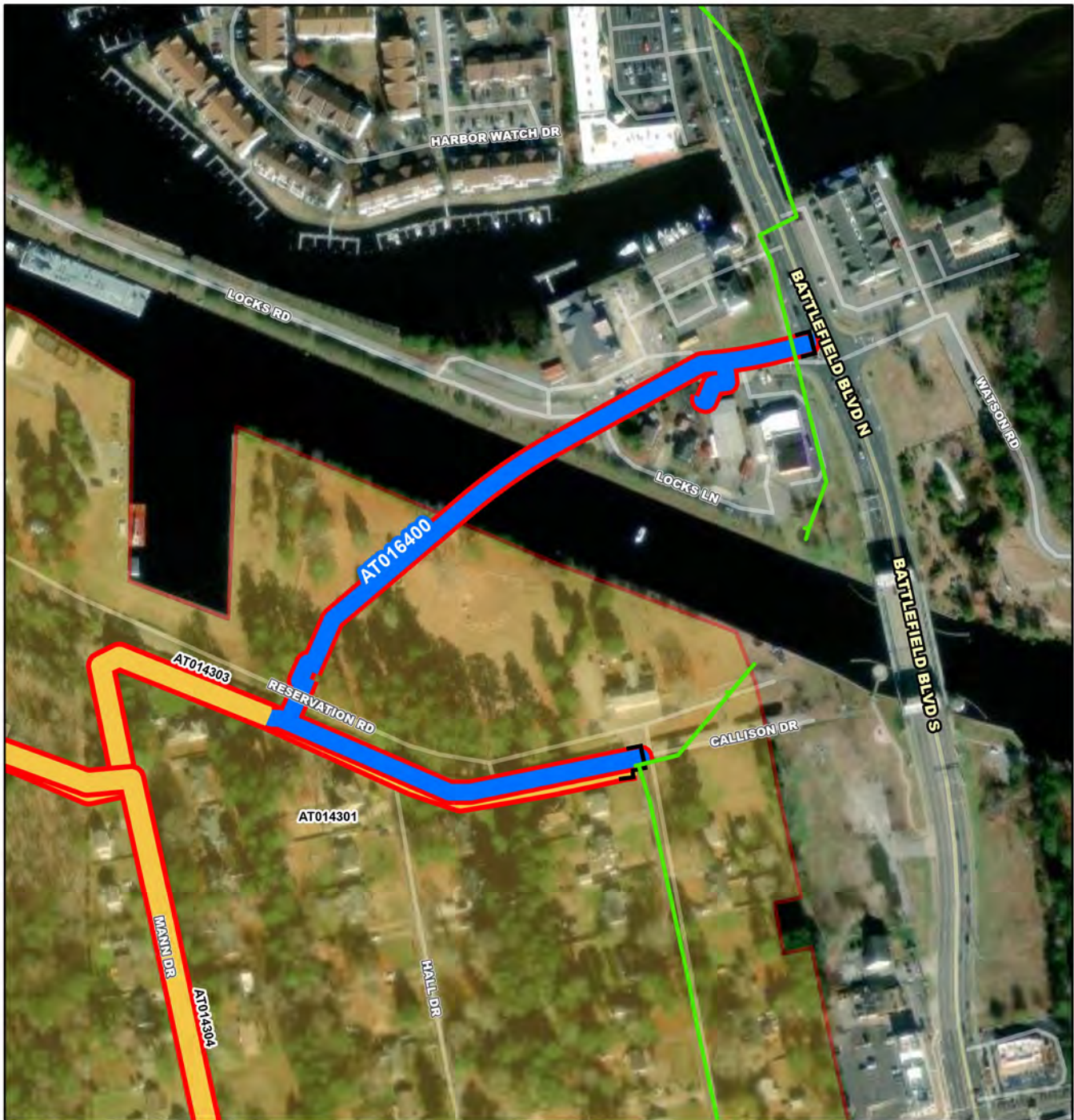
View of property from Locks Rd



View of property from Battlefield Blvd



Questions?



AT016400

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

Legend

- ★ CIP Interceptor Point
- ☆ CIP Pump Station Point
- Project 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

0 95 190 380 570 760 Feet

AT016400

Great Bridge Interceptor Force Main Emergency Replacement (SF-180)

HRSD

N
W E
S

CIP Location



RESOLUTION

***Providing for the acquisition by condemnation, if necessary,
of parcels and/or easements with respect to
Great Bridge Interceptor Force Main Emergency Replacement (SF-180)
CIP No. AT016400***

WHEREAS, Hampton Roads Sanitation District (hereinafter "HRSD"), as part of its Capital Improvement Program, is proceeding with the project known as Great Bridge Interceptor Force Main Emergency Replacement Project (SF-180) (CIP No. AT016400) (the "Project"); and

WHEREAS, as a part of said Project, HRSD has determined that it is necessary to acquire certain property and easements (the "Property") by condemnation (or other means); and

WHEREAS, HRSD provided proper public notice, duly published in newspapers of general circulation in the City of Chesapeake, and held a public hearing on this matter at HRSD Commission Meeting, 2389 G Avenue, Newport News, Virginia on October 22; and

WHEREAS, at the public hearing, HRSD allowed for public input with respect to the proposed condemnation, as well as considered information provided by HRSD staff, and considered whether the proposed use is a public use and whether the acquisition of the said Property by condemnation (or other means) should be authorized by HRSD; and

WHEREAS, after holding a public hearing on the matter, HRSD has determined that a public necessity exists for the acquisition of the Property for the Project is in the public interest;

NOW, THEREFORE, BE IT RESOLVED, on the 22nd day of October, by the HRSD Commission that:

1. The Project is approved as a public use, necessary for the construction of said Project within HRSD's system; and said Project is further declared to be in the public interest;
2. The acquisition of the Property by purchase or condemnation is necessary for the installation and operation of said Project and is hereby approved;
3. The Property will be used by HRSD in furtherance of its public functions pursuant to the Virginia Code, and that that the acquisition of the Property for that public use: (i) will serve only public interests which dominate any private gain; (ii) are sought for the primary purpose of serving public interests and not private financial gain, private benefit, or an increase in employment; and (iii) otherwise complies with §1-219.1 of the Virginia Code;
4. HRSD previously has made bona fide efforts to acquire the Property from the landowners, but, to date, those efforts have been ineffectual;

5. HRSD authorizes its staff and counsel, respectively, to take all actions for and on behalf of HRSD which are or may be appropriate or necessary for HRSD to acquire the Property through the exercise of its power of eminent domain, including but not limited to, the filing of any papers or pleadings with the applicable circuit court, and other actions related to the initiation of any legal proceedings necessary or appropriate to acquire the Property by eminent domain, *provided, however*, that nothing in this Resolution shall be construed as preventing the continued negotiation by HRSD, its staff, and/or counsel for the acquisition by purchase or other means of the Property before the initiation of any such eminent domain proceedings; and
6. This resolution shall take effect immediately upon its adoption.

The undersigned further certifies that the foregoing has been properly approved and adopted in accordance with all applicable requirements of the HRSD Commission.



Stephen C. Rodriguez
HRSD Commission Chair

[HRSD Seal]



HRSD Commission Meeting Minutes
October 22, 2024
Attachment #3

5. Annual Comprehensive Financial Report



HRSD

Annual Comprehensive Financial Report (ACFR)
Commission Meeting

October 22, 2024



- Awarded 41 Consecutive Years
- Disclosures and requirements becoming more complex and burdensome
- Dedication of service from the entire Division of Finance, especially the Accounting Department

Cherry Bekaert Advisory LLC

Fiscal Year 2024

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

Indicators of Financial Strength:

- Net Position - \$1.4b, a \$174.6m increase (14.8%) over FY23
- Adjusted Days Cash on Hand – 386 Days
- Debt Service Coverage ratio – 2.85

Summary of Revenues, Expenses, and Changes in Net Position , For The Years Ended June 30

| (In Thousands) | <i>2024 vs 2023</i> | | | |
|-------------------------------------|---------------------|-------------------|------------------|------------|
| | 2024 | 2023 | \$ Change | % Change |
| Revenues | | | | |
| Wastewater Treatment Charges | \$ 422,784 | \$ 383,115 | \$ 39,669 | 9% |
| Facility Charges | 7,153 | 7,233 | (140) | -2% |
| Investment Income | 13,673 | 6,068 | 7,605 | 56% |
| Bond Interest Subsidy | 1,622 | 2,015 | (393) | -24% |
| Other | 4,157 | 4,820 | (663) | -16% |
| Total Revenues | 449,389 | 403,311 | 46,078 | 10% |
| Expenses | | | | |
| Wastewater Treatment | 167,327 | 149,532 | 17,795 | 11% |
| General and Administrative | 60,152 | 53,995 | 6,157 | 10% |
| Depreciation and Amortization | 57,053 | 54,469 | 2,584 | 5% |
| Interest Expense | 33,642 | 27,132 | 6,510 | 19% |
| Capital Distributions to Localities | 2,005 | 2,422 | (417) | -21% |
| Other | 1,000 | 98 | 902 | 90% |
| Total Expenses | 321,179 | 287,648 | 33,531 | 10% |
| Capital Contributions | | | | |
| State Capital Grants | 34,183 | 234 | 33,949 | 99% |
| Other Capital Contributions | 12,242 | 1,641 | 10,601 | 87% |
| Total Capital Contributions | 46,425 | 1,875 | 44,550 | 96% |
| Change in Net Position | \$ 174,635 | \$ 117,538 | \$ 57,097 | 33% |

Cost Increases by Category

Operating Expenses

| <u>Operating Expenses</u> | | <u>2024 vs 2023</u> | | | |
|---------------------------|------------|---------------------|-----------|----------|--|
| | 2024 | 2023 | \$ Change | % Change | |
| (in Thousands) | | | | | |
| Personal Services | \$ 71,682 | \$ 65,547 | \$ 6,135 | 9.4% | 28 new positions, adjusted salaries by 6.5%, and merit increases |
| Fringe Benefits | 28,496 | 23,773 | 4,723 | 19.9% | Benefit increases follow salary increases and pension expense increased |
| Materials and Supplies | 13,728 | 12,641 | 1,087 | 8.6% | Continued inflationary pressures in 2024 |
| Transportation | 1,777 | 1,672 | 105 | 6.3% | |
| Utilities | 18,046 | 17,045 | 1,001 | 5.9% | Continued inflationary pressures in 2024 |
| Chemical Purchases | 15,500 | 13,890 | 1,610 | 11.6% | Continued inflationary pressures in 2024 |
| Contractual Services | 42,257 | 42,934 | (677) | (1.6%) | Internal Project's Team - Estimated savings \$600k to \$1m by doing some projects internally |
| Major Repairs | 6,381 | 5,973 | 408 | 6.8% | Continued inflationary pressures in 2024 |
| Miscellaneous | 3,044 | 2,863 | 181 | 6.3% | |
| Total Operating Expenses | \$ 200,911 | \$ 186,338 | \$ 14,573 | 7.8% | |

- 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?

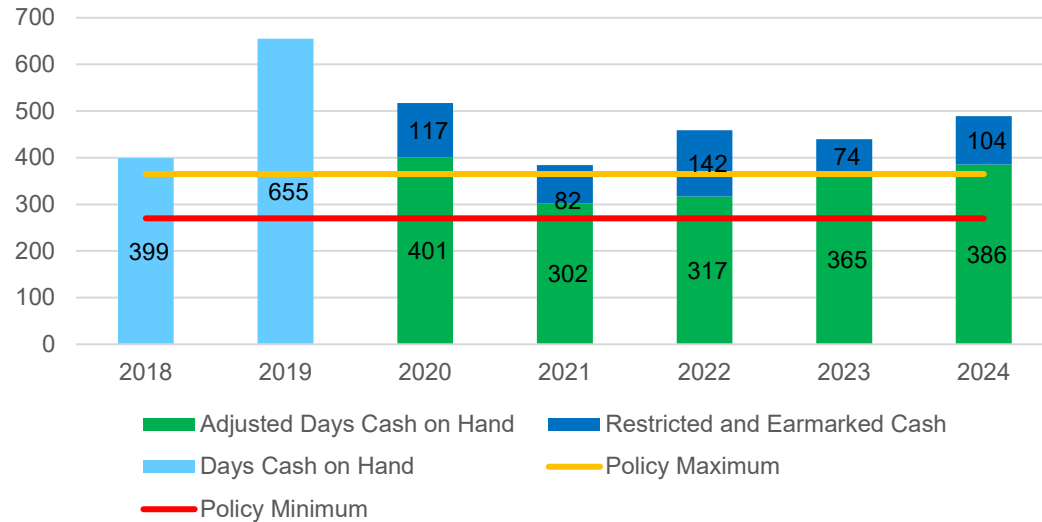
$$\text{ADCOH} = \frac{\text{Unrestricted Cash and Investments}}{\text{Operating Expenses} \div 365 \text{ days}}$$

(EXCLUDES RESERVES AND PAYGO FOR CIP)

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

Adjusted Days Cash on Hand (DCOH)

Days Cash on Hand



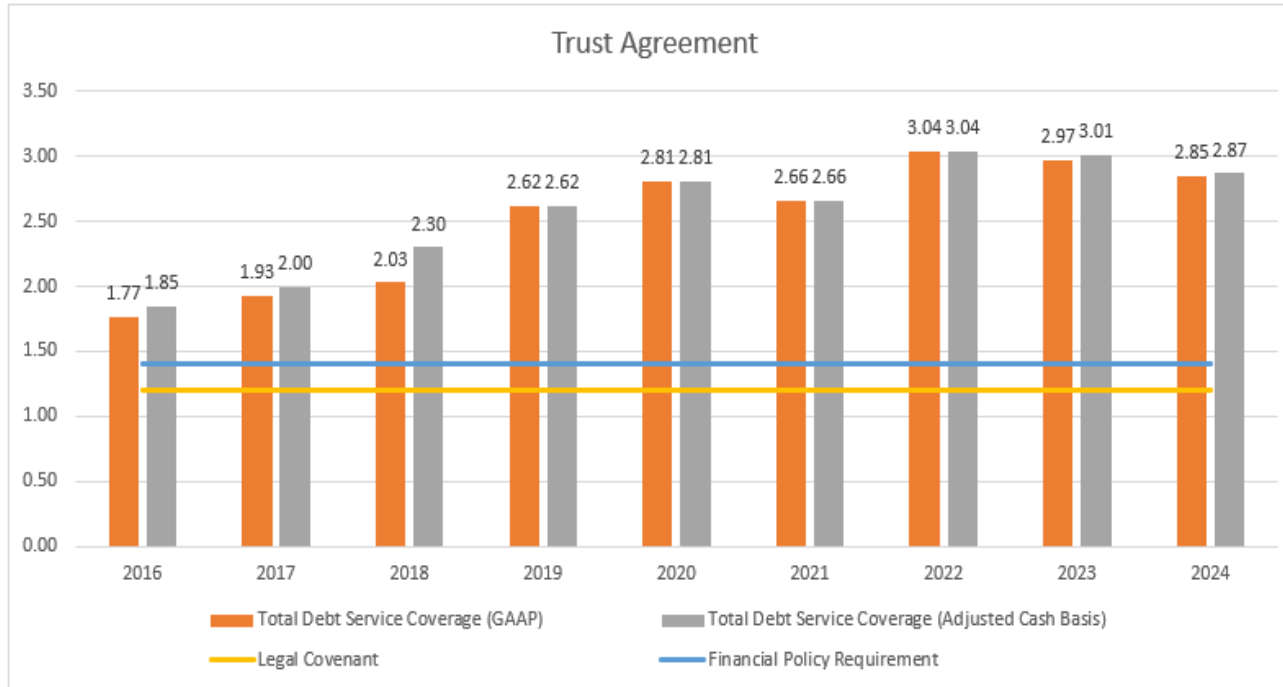
| AA Rated Medians | | Large Utilities |
|------------------|-------|-----------------|
| S&P | Fitch | Fitch |
| 584 | 577 | 471 |

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



| AA Rated Medians | | Large Utilities |
|------------------|-------|-----------------|
| S&P | Fitch | Fitch |
| 2.3 | 2.5 | 1.5 |

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

Questions?



Finance Committee Report
October 22, 2024

I'm pleased to provide this report of the Finance Committee.

The Committee met in-person on October 15, 2024.

- The following Commissioners were in attendance in-person: my fellow Committee members, Willie Levenston and Commissioner Lakdawala. Commissioner Rick Elofson attended virtually.
- A vote was taken and approved for Elizabeth Taraski, Ph.D. as chair of the Finance Committee. Thank you to all for your participation.
- The independent audit firm, Cherry Bekaert, presented the preliminary results of their audit. Ms. Laura Hardin, Audit Director and Hailey Kadisevskis, Audit Manager presented the results of the audit and explained the audit process. No reportable deficiencies were identified, and an unmodified (clean) audit opinion has been provided.
- Steve de Mik provided a high-level overview of the draft Annual Comprehensive Financial Report and also provided a summary of the changes from the bi-annual review of the Financial Policy, noting that most of the changes in the policy are generally administrative in nature.

I want to thank the staff of HRSD for another great year. I am also pleased to report the receipt of the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting for the 41st year in a row. FY-2024 financial results remain strong.

That is the report of the Finance Committee, does anyone have any questions?

Elizabeth Taraski, Ph.D.
Finance Committee Chair



ANNUAL COMPREHENSIVE FINANCIAL REPORT

for the Fiscal Years Ended June 30, 2024 and 2023

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





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HAMPTON ROADS SANITATION DISTRICT

ANNUAL COMPREHENSIVE FINANCIAL REPORT
FOR THE FISCAL YEARS ENDED JUNE 30, 2024 AND 2023

PREPARED BY THE FINANCE DEPARTMENT



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INTRODUCTORY SECTION



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October 21, 2024

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, 2024. 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, 2024. 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 488,000 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 14 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.

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 2024.

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 8.0 percent of wastewater revenues for fiscal year 2024. In addition, HRSD's 2024 revenues contained only limited reliance (1.6 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, adjusted debt service coverage ratios should not be less than 1.4 times annual debt service. 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, 2023. This was the 41st 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/CEO



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



Kassandra Pagan
Director 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, 2023

Executive Director/CEO

Principal Officials

June 30, 2024

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Vishnu K. Lakdawala, PhD

Willie Levenston, Jr.

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Elizabeth A. Taraski, PhD

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Jennifer L. Cascio

ASSISTANT COMMISSION SECRETARY

Elizabeth I. Scott

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Jay A. Bernas, PE
General Manager

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

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

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PE, DBIA
Director of Engineering

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Director of Water Quality

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

Leila E. Rice, APR
Director of Communications

COUNSEL

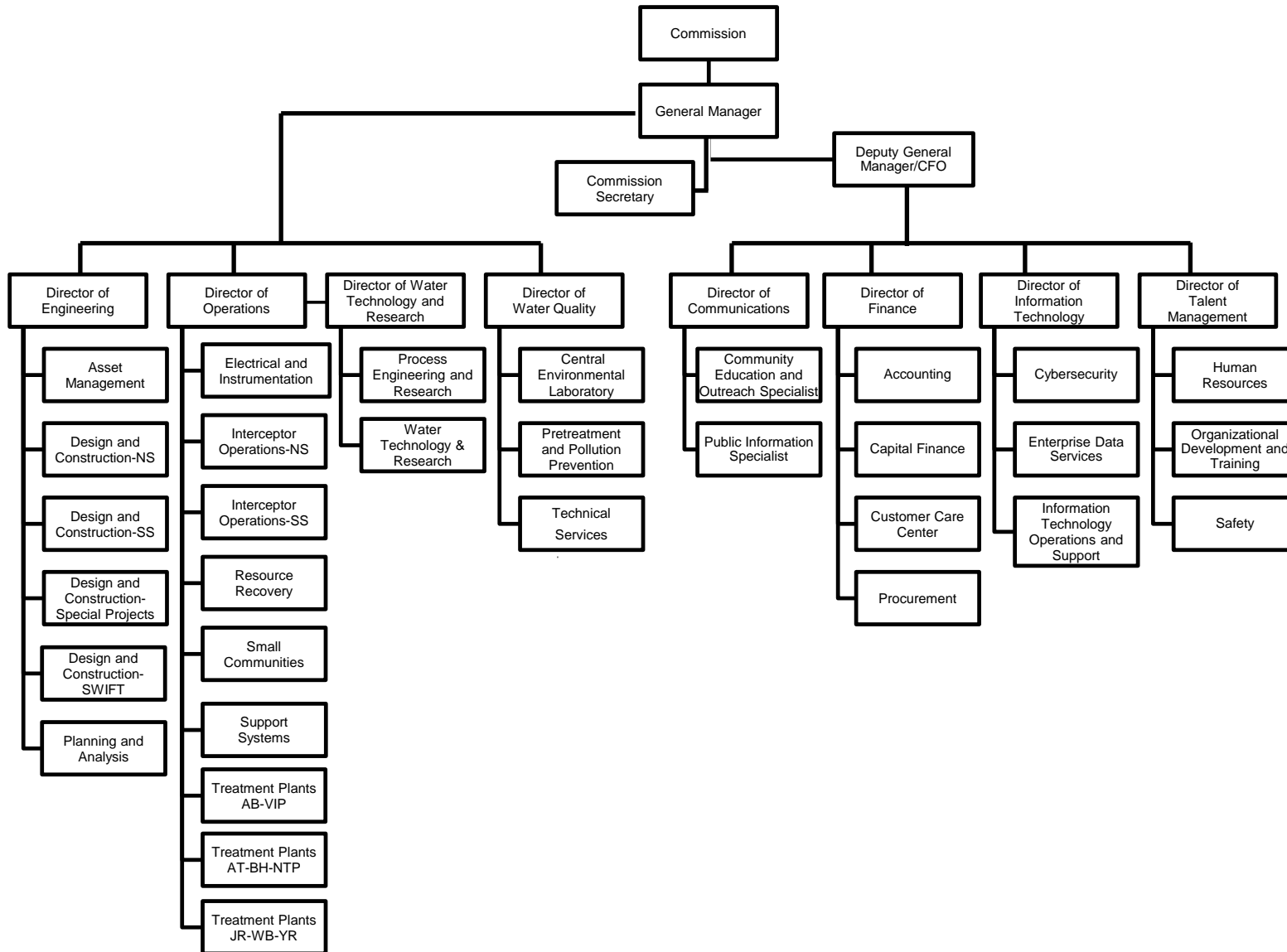
Sands Anderson, PC
General Counsel

AquaLaw, PLC
Special Counsel

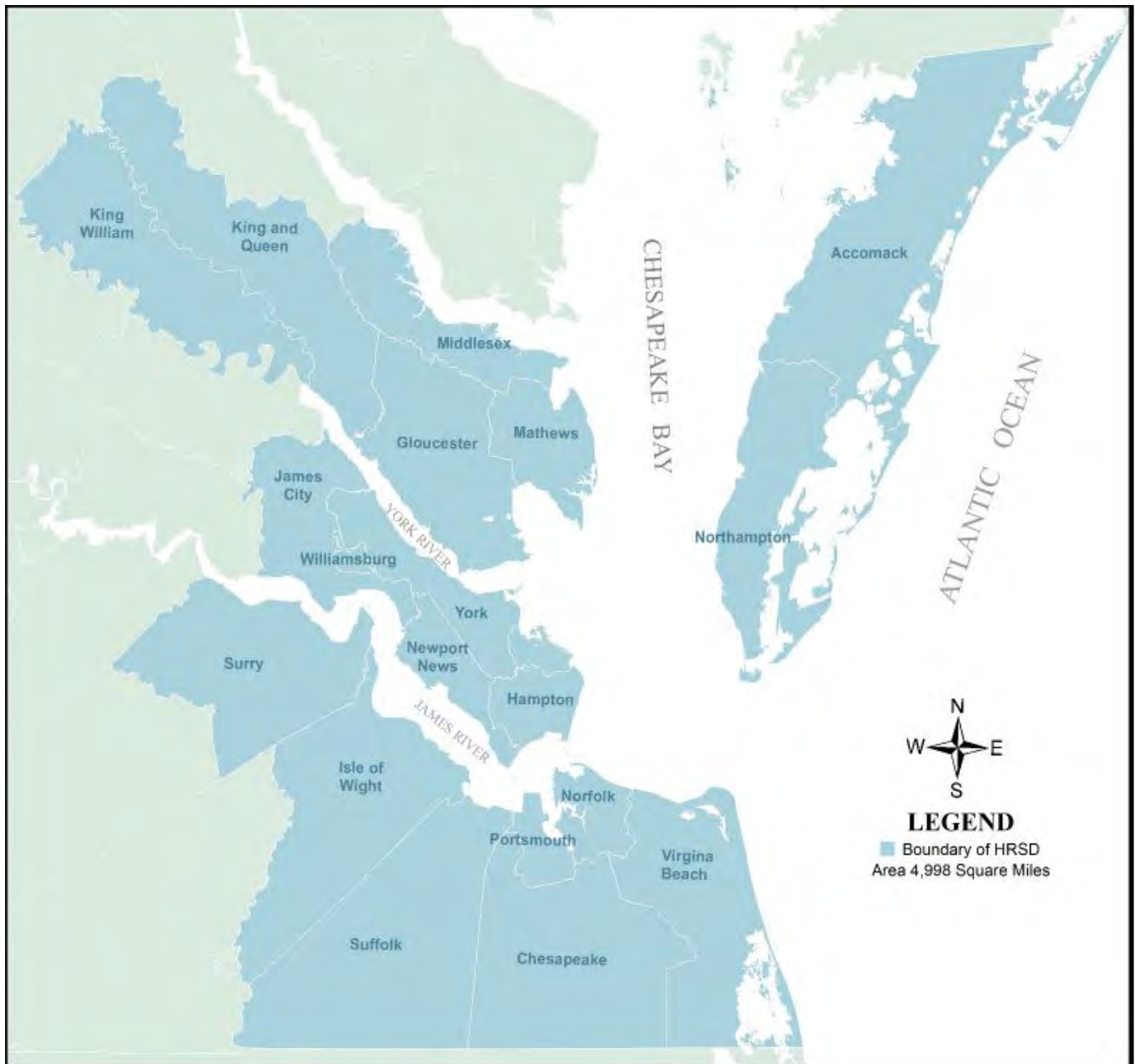
Norton Rose Fulbright US, LLP
Bond Counsel

HRSD Organization Chart

June 30, 2024



HRSD Service Area June 30, 2024



HRSD History

June 30, 2024

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

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

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

HRSD began operations on July 1, 1946, using facilities acquired from the United States Government. The Warwick County Trunk Sewer, HRSD’s first construction project, began on June 26, 1946, and was funded by HRSD’s \$6.5 million Primary Pledge Sewer Revenue Bonds, dated March 1, 1946. The first treatment plant, the Army Base Treatment 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 2024.

Throughout its rich history HRSD has earned many of its industry’s most prestigious awards. This tradition continued as HRSD received the Water Resources Utility of the Future Today award from the Water Environment Federation as well as the Virginia Municipal League Innovation Award with locality partner, York County, for the first full-scale deammonification plant in the world and HRSD’s patented Partial Denitrification Anammox (PdNA) process at York River Treatment Plant.

Additional awards and honors received during the year ended June 30, 2024 include the 2024 National Association of Clean Water Agencies National Environmental Achievement Award in the Public Information and Education Video Category for its “National Infrastructure Week: James River Treatment Plant SWIFT Improvements” video. The HRSD Finance Department also earned the George F. Ames PISCES award in the Innovative Finance category from the Environmental Protection Agency (EPA).



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The background of the page is a composite image. The top portion shows two red industrial valves, likely fire hydrants, mounted on a concrete wall. The valves have 'KENNEDY' and 'USA' embossed on them. Below this, there are several horizontal wooden planks. The bottom half of the page is a solid blue color with a pattern of white water droplets of various sizes. A large, wavy green shape separates the top image from the blue background.

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 ("HRSD"), a component unit of the Commonwealth of Virginia, as of and for the years ended June 30, 2024 and 2023, 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, 2024 and 2023, 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 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 the 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.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Introductory Section, Statistical Section, and Other Supplemental Section, as listed in the table of contents, 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 21, 2024, 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 21, 2024

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, 2024 and 2023, 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 \$174.6 million, or 14.8 percent, in 2024 as a result of fiscal year 2024 operations. Total net position increased by \$117.5 million, or 11.1 percent in fiscal year 2023.
- Fiscal year 2024, total revenues increased by \$46.1 million, or 11.4 percent, mainly due to a \$39.0 million increase in operating revenues generated from a 9 percent increase in wastewater treatment rates and a \$7.6 million increase in investment income primarily due to elevated interest rates. Similarly, total revenues increased \$37.9 million, or 10.4 percent in fiscal year 2023. This increase was 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.
- Operating expenses increased by \$26.5 million, or 10.3 percent in fiscal year 2024. Most of this increase was attributable to a \$10.9 million increase in salaries and fringe benefits, a \$7.5 million increase in major repairs and improvements, a \$2.3 million increase in bad debt expense, and \$3.7 million increase in general materials, utilities and chemical purchases. For fiscal year 2023, operating expenses increased by \$23.8 million, or 10.2 percent mainly due to inflationary pressures which 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.
- Cash and cash equivalents restricted for debt service decreased \$11.5 million, or 34.1 percent, in fiscal year 2024. Unrestricted cash and cash equivalents increased \$68.3 million, or 46.1 percent, primarily due to the utilization of debt proceeds, the receipt of grant funds for capital construction projects, and the reduction in the amount of restricted cash and cash equivalents. Fiscal year 2023 reflected an increase in restricted cash and cash equivalents of \$0.7 million, or 2.1 percent, 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 receipt of debt proceeds to fund capital construction projects.
- Net Property, Plant and Equipment's increase of \$499.3 million, or 24.8 percent, was mostly due to a \$465.6 million increase in construction in progress associated with three large capital projects. Fiscal year 2023 reflected a similar increase of \$297.2 million, or 17.3 percent, due to a \$284.7 million net increase in construction in progress, and a \$8.0 million increase in land acquisitions.

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 and are discussed in Notes 2 and 14.

The Notes to Financial Statements, found on pages 26 through 60 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 66 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 \$1.35 billion as of June 30, 2024 and by \$1.18 billion as of June 30, 2023.

By far, the largest portion of HRSD's net position (82.2 percent and 83.4 percent as of June 30, 2024 and 2023, 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

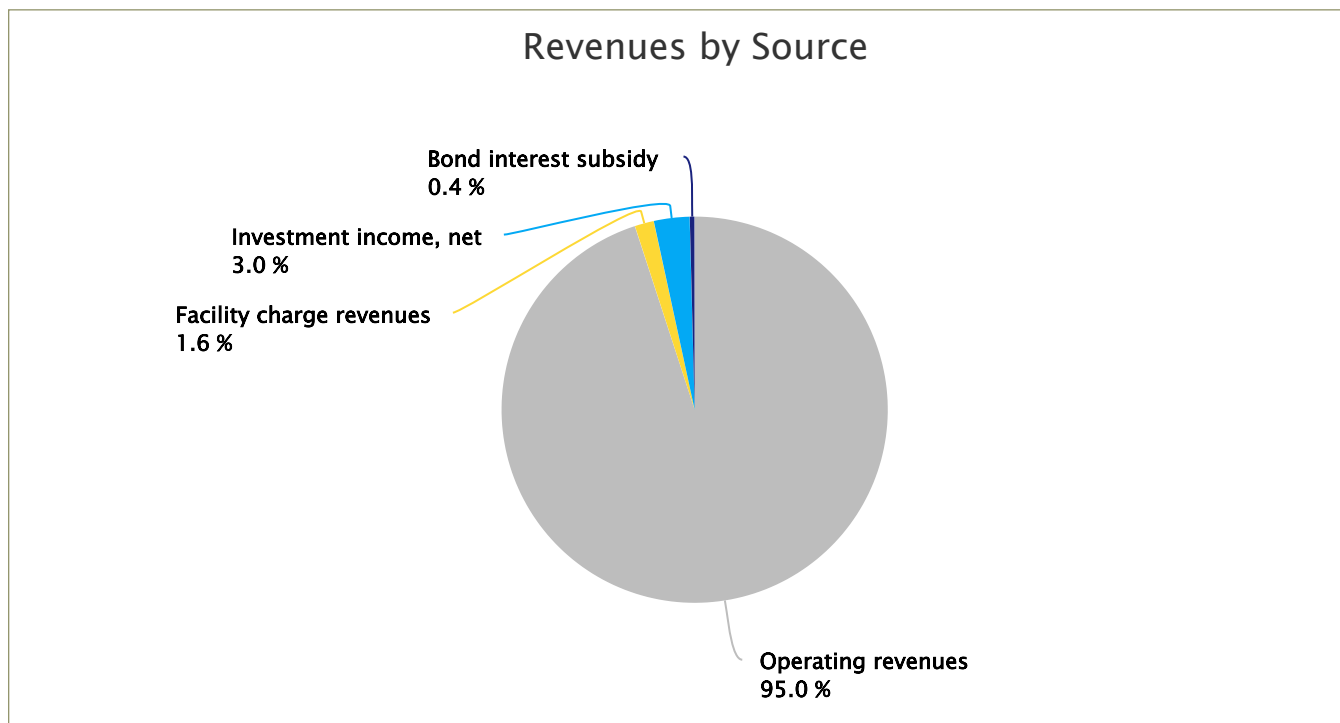
| (in thousands) | | | | 2024 vs. 2023 | |
|---------------------------------------|---------------------|---------------------|---------------------|-------------------|----------------|
| | 2024 | 2023 | 2022 | Dollars | Percent |
| Capital assets | \$ 2,511,633 | \$ 2,012,351 | \$ 1,715,108 | \$ 499,282 | 24.8% |
| Current and noncurrent assets | 406,262 | 334,314 | 346,767 | 71,948 | 21.5% |
| Total assets | 2,917,895 | 2,346,665 | 2,061,875 | 571,230 | 24.3% |
| Deferred outflows of resources | 39,373 | 37,522 | 42,611 | 1,851 | 4.9% |
| Long-term liabilities | 1,252,524 | 917,223 | 796,272 | 335,301 | 36.6% |
| Current liabilities | 336,462 | 271,225 | 211,670 | 65,237 | 24.1% |
| Total liabilities | 1,588,986 | 1,188,448 | 1,007,942 | 400,538 | 33.7% |
| Deferred inflows of resources | 16,625 | 18,717 | 37,060 | (2,092) | (11.2%) |
| Net investment in capital assets | 1,110,507 | 981,437 | 832,427 | 129,070 | 13.2% |
| Restricted for debt service | 22,307 | 33,830 | 33,134 | (11,523) | (34.1%) |
| Unrestricted | 218,843 | 161,755 | 193,923 | 57,088 | 35.3% |
| Total net position | \$ 1,351,657 | \$ 1,177,022 | \$ 1,059,484 | \$ 174,635 | 14.8% |

The increase in capital assets is primarily due to the significant increase in construction in progress, most notably for major expansion projects at two of HRSD's treatment plants in both fiscal years 2024 and 2023.

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) | 2024 | 2023 | 2022 | 2024 vs. 2023 | |
|-------------------------------------|---------------------|---------------------|---------------------|-------------------|--------------|
| | | | | Dollars | Percent |
| Revenues: | | | | | |
| Operating revenues | \$ 426,941 | \$ 387,935 | \$ 357,946 | \$ 39,006 | 10.1% |
| Facility charge revenues | 7,153 | 7,293 | 7,072 | (140) | (1.9%) |
| Investment income, net | 13,673 | 6,068 | (1,651) | 7,605 | 125.3% |
| Bond interest subsidy | 1,622 | 2,015 | 2,052 | (393) | (19.5%) |
| Total revenues | 449,389 | 403,311 | 365,419 | 46,078 | 11.4% |
| Operating expenses: | | | | | |
| Wastewater treatment | 167,327 | 149,532 | 134,135 | 17,795 | 11.9% |
| General and administrative | 60,152 | 53,995 | 45,673 | 6,157 | 11.4% |
| Depreciation and amortization | 57,053 | 54,469 | 54,357 | 2,584 | 4.7% |
| Total operating expenses | 284,532 | 257,996 | 234,165 | 26,536 | 10.3% |
| Non-operating expenses: | | | | | |
| Bond issuance costs | 1,000 | 98 | 311 | 902 | 920.4% |
| Capital distributions to localities | 2,005 | 2,422 | 13 | (417) | (17.2%) |
| Interest expense | 33,642 | 27,132 | 25,007 | 6,510 | 24.0% |
| Total non-operating expenses | 36,647 | 29,652 | 25,331 | 6,995 | 23.6% |
| Total expenses | 321,179 | 287,648 | 259,496 | 33,531 | 11.7% |
| Income before capital contributions | 128,210 | 115,663 | 105,923 | 12,547 | 10.8% |
| Capital contributions | 46,425 | 1,875 | 2,737 | 44,550 | 2376.0% |
| Change in net position | 174,635 | 117,538 | 108,660 | 57,097 | 48.6% |
| Total net position - beginning | 1,177,022 | 1,059,484 | 950,824 | 117,538 | 11.1% |
| Total net position - ending | \$ 1,351,657 | \$ 1,177,022 | \$ 1,059,484 | \$ 174,635 | 14.8% |



Operating revenues increased by \$39.0 million, or 10.1 percent, in 2024 and by \$30.0 million, or 8.4 percent, in 2023. The primary increases were due to wastewater rate increases each year of approximately 9.0 percent. Net Investment income increased \$7.6 million in 2024, or 125.3 percent, primarily due to higher interest rates, compared to a \$7.7 million increase, or 467.5 percent, in 2023.

Operating expenses increased by \$26.5 million, or 10.3 percent in 2024 and increased \$23.8 million, or 10.2 percent, in 2023. For the fiscal year ending June 30, 2024, salaries and fringe benefits increased \$10.9 million because of salary increases and increases in authorized staffing levels. Major repairs and improvements increased \$7.5 million mainly attributed to \$6.2 million in land improvements associated with the James River SWIFT project. Bad debt expense increased \$2.3 million, attributed to a combination of the increase in the general wastewater rate and the reduction of available low income assistance programs for customers. General materials, utilities and chemical purchases increased \$3.7 million primarily as a result of inflationary pressures. Depreciation and amortization expenses increased \$2.6 million. Increases in fiscal year 2023 were due to inflationary pressures which 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.

In 2024 and 2023, HRSD received \$46.4 million and \$1.9 million, respectively, in capital contributions to help pay for its capital improvement program.

CAPITAL ASSETS AND DEBT ADMINISTRATION

Capital Assets

At the end of 2024 and 2023, HRSD had approximately \$2.5 billion and \$2.0 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 \$499.3 million, or 24.8 percent in 2024 and a net increase of \$297.2 million, or 17.3 percent in 2023.

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

HRSD's Capital Assets

| (in thousands) | 2024 | 2023 | 2022 |
|--|---------------------|---------------------|---------------------|
| Land | \$ 64,198 | \$ 64,198 | \$ 56,170 |
| Treatment plants | 627,956 | 644,214 | 666,215 |
| Interceptor systems | 598,700 | 561,916 | 537,431 |
| Buildings | 42,076 | 44,022 | 43,553 |
| Small community facilities | 14,928 | 15,474 | 15,882 |
| Office equipment | 930 | 569 | 787 |
| Automotive | 5,890 | 3,481 | 1,368 |
| Other equipment | 50,894 | 38,158 | 38,116 |
| Software and intangible assets | 214 | 71 | 0 |
| | 1,405,786 | 1,372,103 | 1,359,522 |
| Construction in progress | 1,105,847 | 640,248 | 355,586 |
| Net property, plant and equipment | \$ 2,511,633 | \$ 2,012,351 | \$ 1,715,108 |

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

| (in thousands) | 2024 | 2023 | 2022 |
|---|---------------------|---------------------|---------------------|
| Balance at beginning of year | \$ 2,012,351 | \$ 1,715,108 | \$ 1,604,841 |
| Additions | 90,736 | 67,050 | 92,184 |
| Transfers/Retirements | (941) | - | (1,460) |
| Depreciation and amortization | (57,053) | (54,469) | (54,357) |
| Accumulated depreciation retired | 941 | - | 1,460 |
| Net increase (decrease) in construction in progress | 465,599 | 284,662 | 72,440 |
| Balance at end of year | \$ 2,511,633 | \$ 2,012,351 | \$ 1,715,108 |

HRSD's total capital expenditures were \$577.4 million during 2024 and \$366.6 million in 2023. The continued capital improvement efforts for treatment plant expansion projects at the James River and Nansemond Treatment Plants and the Boat Harbor sub-aqueous transmission forcemain and pump station projects were the largest contributors to the increase in expenses. Similarly, fiscal year 2023 was largely attributed to the same projects.

Long Term Debt

The balance for HRSD's total bonds outstanding including bond premium was \$1.3 billion as of June 30, 2024, versus \$979.7 million at fiscal year end 2023, a 34.47 percent increase year over year. Outstanding notes payable increased to \$100.0 million at fiscal year end 2024 from \$68.6 million at fiscal year end 2023, a 45.82 percent increase year over year. To achieve interest rate savings, HRSD issued Wastewater Revenue Bonds, Series 2024A in the amount of \$115.5 million to refund \$99.3 million in outstanding principal of its Build America Bonds Wastewater Revenue Bonds, Series 2009B and \$26.1 million in outstanding principal of its Wastewater Revenue Bonds, Series 2014A. This issuance resulted in a present value savings of \$3.8 million. With HRSD's issuance of Wastewater Revenue Bond, Series 2024A, HRSD fully discharged all debt previously identified as senior lien obligations. With no debt priority, all debt is now identified as senior obligations.

Draws on existing approved bonds, or loans for which a liability is not recognized until utilized, in the amount of \$386.3 million, were offset by payments on existing debt, in the amount of \$48.1 million. Unamortized bond premium as of June 30, 2024, was \$23.1 million versus \$13.7 million at fiscal year end 2023.

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

HRSD's Outstanding Debt

| (in thousands) | 2024 | 2023 | 2022 |
|--|---------------------|---------------------|-------------------|
| Senior revenue bonds (including Bond Premium) | \$ 1,317,445 | \$ 166,268 | \$ 186,226 |
| Subordinate revenue bonds (including Bond Premium) | - | 813,474 | 682,246 |
| Notes Payable | 100,000 | 68,580 | 33,721 |
| Total outstanding debt | \$ 1,417,445 | \$ 1,048,322 | \$ 902,193 |

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

| Ratings Agency | Senior Debt |
|---------------------------|-------------|
| Standard & Poor's | AA+ |
| Fitch Ratings | AA+ |
| Moody's Investors Service | Aa1 |

The development of HRSD's Capital Improvement Program and its related debt programs are governed by its Trust Agreement. The Trust Agreement, as amended, requires a minimum debt service coverage of 1.2 times maximum annual debt service on an "Adjusted" debt service coverage basis. The "adjusted" debt service coverage permits certain expenses to be excluded from the calculation of debt service coverage. These adjustments are permitted for certain wet weather capacity related infrastructure capital improvements that HRSD makes on assets owned by the localities that HRSD serves.

"Operating Expenses" as defined by the Enabling Act and the Trust Agreement, 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 exclude depreciation and amortization and expenditures for extraordinary maintenance or repair or improvements. Additionally, Operating Expenses shall 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.

HRSD's Financial Policy requires the adjusted debt service coverage ratio to be a minimum of 1.4 times annual debt service. HRSD's operating and capital improvement plans were developed with the intent to maintain coverage ratios in excess of this requirement.

| | Senior Debt Service Coverage | | Total Debt Service Coverage | |
|------------------------|------------------------------|-------------------------|-----------------------------|-------------------------|
| | GAAP | Adjusted | GAAP | Adjusted |
| Senior Trust Agreement | 1.20x (MADS) | None | 1.00x (MADS) | None |
| 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. In 2024, billed consumption was flat and did not decline when compared to 2023.

HRSD implemented a wastewater treatment rate increase for the 2024 fiscal year to fund its operations and capital investments. As HRSD continues to implement its expansive \$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/Chief Financial Officer, 1434 Air Rail Avenue, Virginia Beach, Virginia 23455.

**STATEMENTS OF NET POSITION
AS OF JUNE 30, 2024 AND 2023**

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

(in thousands)

| | 2024 | 2023 |
|--|---------------------|---------------------|
| CURRENT ASSETS | | |
| Cash and cash equivalents | \$ 216,611 | \$ 148,295 |
| Cash and cash equivalents - restricted | 22,307 | 33,830 |
| Accounts receivable, net | 70,524 | 60,081 |
| Other current assets | 4,616 | 3,029 |
| TOTAL CURRENT ASSETS | 314,058 | 245,235 |
| NONCURRENT ASSETS | | |
| Investments | 65,916 | 63,074 |
| Inventory | 26,288 | 26,005 |
| | 92,204 | 89,079 |
| NET PROPERTY, PLANT AND EQUIPMENT | | |
| Land | 64,198 | 64,198 |
| Treatment plants | 1,490,990 | 1,474,641 |
| Interceptor systems | 846,052 | 793,863 |
| Buildings | 69,835 | 69,759 |
| Small community facilities | 26,094 | 26,094 |
| Office equipment | 45,881 | 45,353 |
| Automotive | 24,655 | 21,694 |
| Other equipment | 96,844 | 79,329 |
| Software and intangible assets | 40,332 | 40,155 |
| | 2,704,881 | 2,615,086 |
| Less: Accumulated depreciation and amortization | 1,299,095 | 1,242,983 |
| | 1,405,786 | 1,372,103 |
| Construction in progress | 1,105,847 | 640,248 |
| NET PROPERTY, PLANT AND EQUIPMENT | 2,511,633 | 2,012,351 |
| TOTAL NONCURRENT ASSETS | 2,603,837 | 2,101,430 |
| TOTAL ASSETS | 2,917,895 | 2,346,665 |
| DEFERRED OUTFLOWS OF RESOURCES | | |
| Deferred loss on debt refunding, net | 16,319 | 17,409 |
| Differences between expected and actual experience: | | |
| OPEB plans | 7,282 | 8,582 |
| Pension plan | 7,483 | 127 |
| Changes of assumptions: | | |
| OPEB plans | 2,414 | 215 |
| Pension plan | 1,416 | 4,064 |
| Net difference between projected and actual earnings on: | | |
| OPEB plans investments | - | 3,037 |
| Change in proportion, OPEB plans | 35 | 54 |
| Contributions subsequent to the measurement date: | | |
| OPEB plans | 496 | 442 |
| Pension plan | 3,928 | 3,592 |
| TOTAL DEFERRED OUTFLOWS OF RESOURCES | 39,373 | 37,522 |
| TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | \$ 2,957,268 | \$ 2,384,187 |

See Accompanying Notes to Financial Statements

STATEMENTS OF NET POSITION AS OF JUNE 30, 2024 AND 2023

LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION

(in thousands)

| | 2024 | 2023 |
|--|---------------------|---------------------|
| CURRENT LIABILITIES | | |
| Trade and contracts payable | \$ 70,836 | \$ 62,660 |
| Contract retention | 33,380 | 17,105 |
| Accrued salaries and wages | 1,955 | 1,393 |
| Current portion of bonds payable | 53,642 | 45,561 |
| Variable rate demand bonds | 50,000 | 50,000 |
| Notes payable | 100,000 | 68,580 |
| Current portion of compensated absences | 8,402 | 8,611 |
| Debt interest payable | 7,090 | 8,492 |
| Other liabilities | 11,157 | 8,823 |
| TOTAL CURRENT LIABILITIES | 336,462 | 271,225 |
| LONG-TERM LIABILITIES | | |
| Compensated absences | 2,092 | 1,484 |
| Net OPEB liability | 8,021 | 13,221 |
| Net pension liability | 28,608 | 18,337 |
| Bonds payable | 1,213,803 | 884,181 |
| TOTAL LONG-TERM LIABILITIES | 1,252,524 | 917,223 |
| TOTAL LIABILITIES | 1,588,986 | 1,188,448 |
| DEFERRED INFLOWS OF RESOURCES | | |
| Differences between expected and actual experience: | | |
| OPEB plans | 6,311 | 4,101 |
| Pension plan | 169 | 459 |
| Changes of assumptions, OPEB plans | 4,938 | 5,925 |
| Net difference between projected and actual earnings on: | | |
| OPEB plans investments | 837 | 219 |
| Pension plan investments | 4,230 | 7,857 |
| Change in proportion, OPEB plans | 140 | 156 |
| TOTAL DEFERRED INFLOWS OF RESOURCES | 16,625 | 18,717 |
| NET POSITION | | |
| Net investment in capital assets | 1,110,507 | 981,437 |
| Restricted for debt service | 22,307 | 33,830 |
| Unrestricted | 218,843 | 161,755 |
| TOTAL NET POSITION | 1,351,657 | 1,177,022 |
| TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION | \$ 2,957,268 | \$ 2,384,187 |

See Accompanying Notes to Financial Statements

**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
FOR THE FISCAL YEARS ENDED JUNE 30, 2024 and 2023**

(in thousands)

| | 2024 | 2023 |
|--|---------------------|---------------------|
| OPERATING REVENUES | | |
| Wastewater treatment charges | \$ 422,784 | \$ 383,115 |
| Miscellaneous | 4,157 | 4,820 |
| TOTAL OPERATING REVENUES | 426,941 | 387,935 |
| OPERATING EXPENSES | | |
| Wastewater treatment | 167,327 | 149,532 |
| General and administrative | 60,152 | 53,995 |
| Depreciation and amortization | 57,053 | 54,469 |
| TOTAL OPERATING EXPENSES | 284,532 | 257,996 |
| OPERATING INCOME | 142,409 | 129,939 |
| NON-OPERATING REVENUES (EXPENSES) | | |
| Wastewater facility charges | 7,153 | 7,293 |
| Investment income | 13,673 | 6,068 |
| Bond interest subsidy | 1,622 | 2,015 |
| Bond issuance costs | (1,000) | (98) |
| Capital distributions to localities | (2,005) | (2,422) |
| Interest expense | (33,642) | (27,132) |
| NET NON-OPERATING EXPENSES | (14,199) | (14,276) |
| INCOME BEFORE CAPITAL CONTRIBUTIONS | 128,210 | 115,663 |
| CAPITAL CONTRIBUTIONS | | |
| Capital grants received | 34,183 | 234 |
| Other capital contributions | 12,242 | 1,641 |
| CAPITAL CONTRIBUTIONS | 46,425 | 1,875 |
| CHANGE IN NET POSITION | 174,635 | 117,538 |
| TOTAL NET POSITION - Beginning | 1,177,022 | 1,059,484 |
| TOTAL NET POSITION - Ending | \$ 1,351,657 | \$ 1,177,022 |

See Accompanying Notes to Financial Statements

STATEMENTS OF CASH FLOWS **FOR THE FISCAL YEARS ENDED JUNE 30, 2024 and 2023**

(in thousands)

| | 2024 | 2023 |
|--|--------------------------|--------------------------|
| CASH FLOWS FROM OPERATING ACTIVITIES | | |
| Cash received from customers | \$ 407,016 | \$ 379,539 |
| Other operating revenues | 4,157 | 4,820 |
| Cash payments to suppliers for goods and services | (149,158) | (138,487) |
| Cash payments to employees for services | (70,721) | (65,813) |
| Net cash provided by operating activities | <u>191,294</u> | <u>180,059</u> |
| CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES | | |
| Capital distributions to localities | <u>(2,005)</u> | <u>(2,422)</u> |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES | | |
| Wastewater facility charges | 7,153 | 7,293 |
| Acquisition and construction of property, plant and equipment | (532,696) | (329,699) |
| Proceeds from capital debt | 417,673 | 188,540 |
| Bond interest subsidy | 1,622 | 2,015 |
| Principal paid on capital debt | (48,138) | (39,588) |
| Funds from debt defeasance | 806 | - |
| Capitalized interest expense | (1,713) | - |
| Capital grants | 34,183 | 234 |
| Other capital contributions | 12,242 | 1,641 |
| Bond issuance costs | (1,000) | (98) |
| Interest paid on interim financing | (4,661) | (1,159) |
| Interest paid on capital debt | (28,798) | (26,802) |
| Net cash used in capital and related financing activities | <u>(143,327)</u> | <u>(197,623)</u> |
| CASH FLOWS FROM INVESTING ACTIVITIES | | |
| Interest and dividends on investments | <u>10,831</u> | <u>5,926</u> |
| NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS AND CASH AND CASH EQUIVALENTS - RESTRICTED | 56,793 | (14,060) |
| CASH AND CASH EQUIVALENTS, AND CASH AND CASH EQUIVALENTS - RESTRICTED, AT BEGINNING OF YEAR | <u>182,125</u> | <u>196,185</u> |
| CASH AND CASH EQUIVALENTS, AND CASH AND CASH EQUIVALENTS - RESTRICTED, AT END OF YEAR | <u>\$ 238,918</u> | <u>\$ 182,125</u> |
| Reconciliation of Operating Income to Net Cash Provided by Operating Activities | | |
| Operating income | \$ 142,409 | \$ 129,939 |
| Adjustments to reconcile operating income to net cash provided by operating activities: | | |
| Depreciation and amortization | 57,053 | 54,469 |
| (Increase) in operating assets: | | |
| Accounts receivable | (10,443) | (588) |
| Inventory | (283) | (708) |
| Other current assets | (1,587) | (169) |
| Increase (decrease) in operating liabilities: | | |
| Trade and contracts payable | 812 | (1,343) |
| Accrued salaries and wages | 562 | (2,143) |
| Compensated absences | 399 | 1,877 |
| Other liabilities | 2,334 | 1,212 |
| OPEB liabilities and related deferred inflows and outflows | (1,272) | (527) |
| Pension liabilities and related deferred inflows and outflows | 1,310 | (1,960) |
| NET CASH PROVIDED BY OPERATING ACTIVITIES | <u>\$ 191,294</u> | <u>\$ 180,059</u> |
| Noncash Capital and Related Financing Activities: | | |
| Proceeds of refunding debt principal | \$ 115,585 | \$ - |
| Refunding of debt principal | (125,400) | - |
| Accrual for capital expenditures | 7,365 | 10,767 |
| Amortization of premium | 9,403 | (2,822) |
| Amortization of deferred loss on bond refunding | 1,090 | 2,104 |

See Accompanying Notes to Financial Statements

STATEMENTS OF FIDUCIARY NET POSITION
AS OF JUNE 30, 2024 and 2023

(in thousands)

| | OPEB (RHP) Trust Fund | | Custodial Funds (ARPA) | |
|---------------------------------------|-----------------------|------------------|------------------------|-------------|
| | 2024 | 2023 | 2024 | 2023 |
| ASSETS | | | | |
| Cash and cash equivalents | \$ 818 | \$ 195 | \$ - | \$ 4 |
| Investments at fair value | | | | |
| Domestic equity | 31,220 | 26,791 | - | - |
| International equity | 15,465 | 13,616 | - | - |
| Fixed income | 25,608 | 24,016 | - | - |
| Other income | 2,646 | 2,805 | - | - |
| Total investments | 74,939 | 67,228 | - | - |
| TOTAL ASSETS | \$ 75,757 | \$ 67,423 | \$ - | \$ 4 |
| NET POSITION | | | | |
| Restricted for: | | | | |
| Postretirement benefits for OPEB | 75,757 | 67,423 | - | - |
| Individuals, organizations and others | - | - | - | 4 |
| TOTAL NET POSITION | \$ 75,757 | \$ 67,423 | \$ - | \$ 4 |

See Accompanying Notes to Financial Statements

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE FISCAL YEARS ENDED JUNE 30, 2024 and 2023**

(in thousands)

| | OPEB (RHP) Trust Fund | | Custodial Funds (ARPA) | |
|-----------------------------------|-----------------------|------------------|------------------------|-------------|
| | 2024 | 2023 | 2024 | 2023 |
| ADDITIONS: | | | | |
| Contribution from HRSD | \$ 1,914 | \$ 2,467 | \$ - | \$ - |
| Custodial Fund Additions | - | - | - | 4 |
| Net investment income | 8,270 | 5,148 | - | - |
| Investment related expenses | (64) | (138) | - | - |
| Total Additions | 10,120 | 7,477 | - | 4 |
| DEDUCTIONS: | | | | |
| Benefit payments for participants | 1,786 | 2,191 | - | - |
| Payments for customers | - | - | 4 | - |
| Total Deductions | 1,786 | 2,191 | 4 | - |
| Change in Net Position | 8,334 | 5,286 | (4) | 4 |
| Net Position - Beginning | 67,423 | 62,137 | 4 | - |
| NET POSITION - ENDING | \$ 75,757 | \$ 67,423 | \$ - | \$ 4 |

See Accompanying Notes to Financial Statements

NOTES TO THE 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 (RHP), 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, 2024 and 2023 include information on the 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 American Recovery Plan Act (ARPA). The RHP plan is discussed in Note 7, and ARPA is 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. Investments in the Virginia Investment Pool (VIP) Stable NAV Liquidity Pool provide HRSD an investment vehicle that offers daily liquidity at a stable net asset value (NAV). Investments in the VIP Liquidity Pool are recorded at fair value approximating NAV. Fair value is determined daily. See Notes 3 and 13 for additional discussion of cash and cash equivalent and investment valuations.

Investments

HRSD changed the classification of its investment in the VIP 1-3 Year High Quality Bond Fund from Noncurrent Assets - Cash and cash equivalents to Noncurrent Assets - Investments. The VIP 1-3 Year High Quality Bond Fund has an average effective duration period of 1.78 years and although the funds are easily convertible into cash, the intention of HRSD is to hold the funds as an investment.

Investments in VIP 1-3 Year High Quality Bond Fund consist of U.S. government obligations including agencies, FDIC-guaranteed corporate notes, other corporate notes and bonds, and municipal bonds, which are reported at fair value, approximating NAV. The HRSD RHP investments consist of domestic equity, international equity, fixed income, other income, and money market instruments. HRSD's investment practices are governed by its Financial Policy. See Notes 3, 7 and 13 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 fair value and consists primarily of operating and maintenance materials.

NOTES TO THE FINANCIAL STATEMENTS
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 asset capitalization threshold is \$20,000. Donated assets are reported at acquisition value at the date of donation. Property, plant and equipment are depreciated using the straight-line method over the following estimated useful lives:

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

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

Deferred Outflows and Inflows of Resources

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 debt refunding, and deferred outflows of resources from pension and OPEB activities. The deferred outflows of resources relating to the debt 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 recorded as an expense 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.

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

Pensions

HRSD employees participate in an agent multiple-employer defined benefit pension plan administered by 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

NOTES TO THE FINANCIAL STATEMENTS

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.

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, 2024 and 2023, the carrying values of HRSD's deposits were \$60,129,000 and \$52,614,000. All of the bank balances at June 30, 2024 and 2023 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) | 2024 | 2023 |
|---|------------|------------|
| Cash and cash equivalents - unrestricted: | | |
| Cash deposits - unrestricted | \$ 60,129 | \$ 52,614 |
| VIP Stable NAV Liquidity - unrestricted | 156,482 | 95,681 |
| Total cash and cash equivalents - unrestricted | 216,611 | 148,295 |
| Cash and cash equivalents - restricted: | | |
| VIP Stable NAV Liquidity - restricted | 22,307 | 33,830 |
| Total cash and cash equivalents - unrestricted and restricted | \$ 238,918 | \$ 182,125 |

The components of investments at June 30 are as follows:

| | | |
|-------------------------------------|-----------|-----------|
| VIP 1-3 Year High Quality Bond Fund | \$ 65,916 | \$ 63,074 |
|-------------------------------------|-----------|-----------|

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 Financial Policy.

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

| (in thousands) | 2024 | 2023 |
|---|------------------|------------------|
| Domestic equity | \$ 31,220 | \$ 26,791 |
| International equity | 15,465 | 13,616 |
| Fixed income | 25,608 | 24,016 |
| Other income | 2,646 | 2,805 |
| Money market | 818 | 195 |
| Total investments, cash and cash equivalents | \$ 75,757 | \$ 67,423 |

Fixed income investments had an average maturity of 8.0 years and 8.2 years as of June 30, 2024 and 2023, respectively. The average credit quality was AA as of June 30, 2024 and 2023. 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.

NOTE 4 - ALLOWANCE FOR UNCOLLECTIBLE ACCOUNTS

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

| (in thousands) | 2024 | 2023 |
|---|-----------------|-----------------|
| Balance, beginning of year | \$ 2,282 | \$ 2,407 |
| Add: Current provision for uncollectible accounts | 5,325 | 2,987 |
| Less: Charge-off of uncollectible accounts | (4,697) | (3,112) |
| Balance, end of year | \$ 2,910 | \$ 2,282 |

HRSD's collection ratios for the years ended June 30, 2024 and 2023 and were 98.9% and 99.2%, 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 2022 | Additions | Transfers/ Retirements | Balance 2023 | Additions | Transfers/ Retirements | Balance 2024 |
|--|-----------------|-------------|---------------------------|-----------------|-------------|---------------------------|-----------------|
| Non-Depreciable Capital Assets: | | | | | | | |
| Land | \$ 56,170 | \$ 8,028 | \$ - | \$ 64,198 | \$ - | \$ - | \$ 64,198 |
| Construction in progress | 355,586 | 335,317 | (50,655) | 640,248 | 562,250 | (96,651) | 1,105,847 |
| Depreciable Capital Assets: | | | | | | | |
| Treatment plants | 1,464,740 | 9,901 | - | 1,474,641 | 16,349 | - | 1,490,990 |
| Interceptor systems | 754,692 | 39,171 | - | 793,863 | 52,189 | - | 846,052 |
| Buildings | 67,266 | 2,493 | - | 69,759 | 76 | - | 69,835 |
| Small community facilities | 25,936 | 158 | - | 26,094 | - | - | 26,094 |
| Office equipment | 45,353 | - | - | 45,353 | 528 | - | 45,881 |
| Automotive | 18,801 | 2,893 | - | 21,694 | 3,902 | (941) | 24,655 |
| Other equipment | 75,004 | 4,325 | - | 79,329 | 17,515 | - | 96,844 |
| Software and intangible assets | 40,074 | 81 | - | 40,155 | 177 | - | 40,332 |
| Total | \$ 2,903,622 | \$ 402,367 | \$ (50,655) | \$ 3,255,334 | \$ 652,986 | \$ (97,592) | \$ 3,810,728 |
| Less Accumulated Depreciation and Amortization: | | | | | | | |
| Treatment plants | \$ (798,525) | \$ (31,902) | \$ - | \$ (830,427) | \$ (32,607) | \$ - | \$ (863,034) |
| Interceptor systems | (217,261) | (14,686) | - | (231,947) | (15,405) | - | (247,352) |
| Buildings | (23,713) | (2,024) | - | (25,737) | (2,022) | - | (27,759) |
| Small community facilities | (10,054) | (566) | - | (10,620) | (546) | - | (11,166) |
| Office equipment | (44,566) | (218) | - | (44,784) | (167) | - | (44,951) |
| Automotive | (17,433) | (780) | - | (18,213) | (1,493) | 941 | (18,765) |
| Other equipment | (36,888) | (4,283) | - | (41,171) | (4,779) | - | (45,950) |
| Software and intangible assets | - | - | - | - | - | - | - |
| -amortization | (40,074) | (10) | - | (40,084) | (34) | - | (40,118) |
| Total | (1,188,514) | (54,469) | - | (1,242,983) | (57,053) | 941 | (1,299,095) |
| Net Property, Plant and Equipment | \$ 1,715,108 | \$ 347,898 | \$ (50,655) | \$ 2,012,351 | \$ 595,933 | \$ (96,651) | \$ 2,511,633 |

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 2022 | Earned | Taken | Balance 2023 | Earned | Taken | Balance 2024 |
|---------------------|-----------------|----------|------------|-----------------|----------|------------|-----------------|
| Annual leave | \$ 5,297 | \$ 3,348 | \$ (3,005) | \$ 5,640 | \$ 3,729 | \$ (3,525) | \$ 5,844 |
| Sick leave | 2,469 | 2,240 | (1,665) | 3,044 | 1,425 | (1,604) | 2,865 |
| Paid time off | 452 | 3,299 | (2,340) | 1,411 | 3,327 | (2,953) | 1,785 |
| Total | \$ 8,218 | \$ 8,887 | \$ (7,010) | \$ 10,095 | \$ 8,481 | \$ (8,082) | \$ 10,494 |
| Current liability | \$ 6,495 | | | \$ 8,611 | | | \$ 8,402 |
| Long-term liability | \$ 1,723 | | | \$ 1,484 | | | \$ 2,092 |

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 fair 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 employer participating in the VRS 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 the state agencies, teachers and employees of participating political subdivisions are automatically covered by the VRS GLI Program upon employment. This plan is administered by the VRS, along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia.

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

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

For covered members with at least 30 years of service credit, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at \$8,000 by statute in 2015. This will be increased annually

NOTES TO THE FINANCIAL STATEMENTS

based on the VRS Plan 2 cost-of-living adjustment calculation. The minimum benefit adjusted for the COLA was \$9,254 as of June 30, 2024.

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

RHP

As of the June 30, 2023 and 2022 actuarial valuation dates the following employees were covered by the benefit terms of the RHP:

| | 2023 | 2022 |
|--|------|------|
| Beneficiaries currently receiving benefit payments | 248 | 240 |
| Active employees | 734 | 702 |
| Total | 982 | 942 |

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

HIC

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

| | 2022 | 2021 |
|--|-------|-------|
| Inactive members or their beneficiaries currently receiving benefit payments | 420 | 267 |
| Active employees | 774 | 816 |
| Total | 1,194 | 1,083 |

ContributionsRHP

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 \$1,914,000 and \$2,467,000 to the RHP for the years ended June 30, 2024 and 2023, respectively.

GLI

The contribution requirements for the GLI Program are governed by § 51.1-506 and § 51.1-508 of the Code of Virginia, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the GLI Program was 1.34% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.80% (1.34% X 60%) and the employer component was 0.54% (1.34% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2024, was 0.54% of covered employee compensation. This rate was the final approved General Assembly rate which 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 \$357,000 and \$318,000 for the years ended June 30, 2024 and June 30, 2023, respectively.

In June 2023, the Commonwealth made a special contribution of approximately \$10.1 million to the GLI plan. This special payment was authorized by Chapter 2 of the Acts of Assembly of 2022, Special Session I, as amended by Chapter 769, 2023 Acts of Assembly Reconvened Session, and is classified as a special employer contribution. HRSD's proportionate share is reflected in the Deferred Outflow of Resources section of the financial statements.

HIC

The HIC contribution requirement for active employees is governed by §51.1-1402(E) of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. HRSD's contractually required employer contribution rate for the years ended June 30, 2024 and 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 \$139,000 and \$124,000 for the years ended June 30, 2024, and June 30, 2023, respectively.

NOTES TO THE FINANCIAL STATEMENTS

OPEB Expenses and Deferred Outflows of Resources and Deferred Inflows of Resources

RHP

HRSD recognized RHP OPEB expense of \$921,000 and \$2,274,000 for the years ended June 30, 2024 and 2023, 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, 2024: | | |
| Differences between expected and actual experience | \$ 6,880 | \$ 6,182 |
| Changes in assumptions | 2,274 | 4,730 |
| Net diff between projected and actual earnings on plan investments | - | 705 |
| Total | <u>\$ 9,154</u> | <u>\$ 11,617</u> |
| 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> |

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) | | |
|---------------------|-------------------|-----------------|
| Years Ended June 30 | 2024 | 2023 |
| 2024 | \$ - | \$ 114 |
| 2025 | (805) | 149 |
| 2026 | 1,352 | 2,306 |
| 2027 | (1,487) | (533) |
| 2028 | (1,392) | (439) |
| 2029 | 296 | - |
| Thereafter | (427) | 196 |
| | <u>\$ (2,463)</u> | <u>\$ 1,793</u> |

GLI

At June 30, 2024, HRSD reported a liability of \$3,002,000 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2023 and the total GLI OPEB Liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation performed as of June 30, 2022, and rolled forward to the measurement date of June 30, 2023. HRSD's proportion of the Net GLI OPEB Liability was based on the HRSD's actuarially determined employer contributions to the GLI Program for the year ended June 30, 2023, relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2023, HRSD's proportion was 0.2503%.

At June 30, 2023, HRSD reported a liability of \$3,035,000 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2022 and the total GLI OPEB Liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation performed as of June 30, 2021, and rolled forward to the measurement date of June 30, 2022. The covered employer's proportion of the Net GLI OPEB Liability was based on the covered employer's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2022, relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2022, the participating employer's proportion was 0.2521%.

For the years ended June 30, 2024 and 2023, HRSD recognized GLI OPEB expenses of \$116,000 and \$86,000, 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, 2024 and 2023, 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, 2024: | | |
| Differences between expected and actual experience | \$ 300 | \$ 91 |
| Net diff bet projected and actual earnings on program investments | - | 121 |
| Change in assumptions | 64 | 208 |
| Changes in proportion | 35 | 140 |
| Employer contributions subsequent to the measurement date | 357 | - |
| Total | <u>\$ 756</u> | <u>\$ 560</u> |
| 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> |

HRSD reported \$357,000 and \$318,000 as of June 30, 2024 and 2023, 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, 2025 and 2024, 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) | 2024 | 2023 |
|----------------------------|-----------------|--------------|
| <u>Years ended June 30</u> | | |
| 2024 | \$ - | (67) |
| 2025 | (46) | (71) |
| 2026 | (150) | (177) |
| 2027 | 31 | 5 |
| 2028 | (22) | (47) |
| 2029 | 26 | - |
| | <u>\$ (161)</u> | <u>(357)</u> |

HIC

HRSD recognized HIC Program OPEB expense of \$130,000 and \$96,000 for the years ended June 30, 2024 and 2023, respectively. HRSD reported deferred outflows of resources and deferred inflows of resources related to the Political Subdivision HIC Program from the following sources:

| HIC (in thousands) | Deferred Outflows of Resources | Deferred Inflows of Resources |
|---|--------------------------------------|-------------------------------------|
| Year ended June 30, 2024: | | |
| Differences between expected and actual experience | \$ 102 | \$ 38 |
| Net diff bet projected and actual earnings on program investments | - | 11 |
| Change in assumptions | 76 | - |
| Employer contributions subsequent to the measurement date | 139 | - |
| Total | <u>\$ 317</u> | <u>\$ 49</u> |

NOTES TO THE FINANCIAL STATEMENTS

| HIC (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> |

HRSD reported \$139,000 for FY 2024 and \$124,000 for FY 2023 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, 2025 and 2024, 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) | 2024 | 2023 |
|----------------------------|---------------|--------------|
| <u>Years ended June 30</u> | | |
| 2024 | \$ - | 13 |
| 2025 | 37 | 13 |
| 2026 | 21 | (2) |
| 2027 | 47 | 24 |
| 2028 | 24 | 3 |
| | <u>\$ 129</u> | <u>\$ 51</u> |

Combined OPEB RHP, GLI and HIC

For the years ended June 30, 2024 and 2023, 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, 2024: | | |
| Differences between expected and actual experience | \$ 7,282 | \$ 6,311 |
| Net diff bet projected and actual earnings on program investments | - | 837 |
| Changes in proportion | 35 | 140 |
| Change in assumptions | 2,414 | 4,938 |
| Employer contributions subsequent to the measurement date | 496 | - |
| Total | <u>\$ 10,227</u> | <u>\$ 12,226</u> |
| 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 |
| Change in assumptions | 54 | 156 |
| Changes in proportion | 215 | 5,925 |
| Employer contributions subsequent to the measurement date | 442 | - |
| Total | <u>\$ 12,330</u> | <u>\$ 10,401</u> |

HRSD reported \$496,000 for FY 2024 and \$442,000 for FY 2023 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, 2025 and 2024, 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 | 2024 | 2023 |
| 2024 | \$ - | \$ 60 |
| 2025 | (814) | 91 |
| 2026 | 1,223 | 2,127 |
| 2027 | (1,409) | (504) |
| 2028 | (1,390) | (483) |
| 2029 | 322 | - |
| Thereafter | (427) | 196 |
| | <u>\$ (2,495)</u> | <u>\$ 1,487</u> |

HRSD reported \$1,167,000 for FY 2024 and \$2,456,000 for FY 2023 as combined OPEB expenses related to the RHP, GLI and HIC OPEB plans as follows:

| (in thousands) | | |
|---------------------|-----------------|-----------------|
| Years ended June 30 | 2024 | 2023 |
| RHP | 921 | 2,274 |
| GLI | 116 | 86 |
| HIC | 130 | 96 |
| Total OPEB | <u>\$ 1,167</u> | <u>\$ 2,456</u> |

Actuarial Methods and Assumptions

RHP

The total RHP OPEB liabilities were based on actuarial valuations as of June 30, 2023 and 2022, 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, 2024 and 2023.

Year Ended June 30, 2024:

| | |
|---------------------------------------|--|
| 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 | SOA Pub-2010 General Retirees Headcount-Weighted Mortality Table projected on a fully generational basis with mortality improvement scale MP-2021 |
| Disabled Retirees | SOA Pub-2010 General Disabled Retirees Headcount-Weighted Mortality Table projected on a fully generational basis with mortality improvement scale MP-2021 |
| Active Retirees | SOA Pub-2010 General Employees Headcount-Weighted Mortality Table projected on a fully generational basis with mortality improvement scale MP-2021 |

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. |

NOTES TO THE FINANCIAL STATEMENTS

The total GLI OPEB Liability was based on an actuarial valuation as of June 30, 2022, 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, 2023.

Year Ended June 30, 2023:

| | |
|---------------------------------------|---|
| 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 are as follows:

| | |
|-----------------------------|--|
| Pre-Retirement: | Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males set forward 2 years; 105% of rates for females set forward 3 years. |
| Post-Retirement: | Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 95% of rates for males set forward 2 years; 95% of rates for females set forward 1 year. |
| Post-Disablement: | Pub-2010 Amount Weighted General Disabled Rates projected generationally; 110% of rates for males set forward 3 years; 110% of rates for females set forward 2 years. |
| Beneficiaries and Survivors | Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally. |
| Mortality Improvement Scale | Rates projected generationally with Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates. |

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 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. |

The actuarial assumptions used in the June 30, 2022, 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, 2021. Changes to the actuarial assumptions as a result of the experience study and VRS Board action for Years ended June 30, 2023 and June 30, 2022 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 |

HIC

The total HIC OPEB liability was based on an actuarial valuation as of June 30, 2022, 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, 2023.

Year Ending June 30, 2023:

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

Note: Assumptions for measurement date June 30, 2022 were the same as June 30, 2023.

The actuarial assumptions used in the June 30, 2022, 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, 2021. 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 |

Note: Assumptions for measurement date June 30, 2022 were the same as June 30, 2023.

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

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 Financial 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, 2024

| <u>Asset Class (Strategy)</u> | <u>Target Allocation</u> | <u>Arithmetic Long-Term Expected Rate of Return</u> | <u>Weighted Average Long-Term Expected Rate of Return</u> |
|---------------------------------------|------------------------------|---|---|
| Domestic Equity | 39.00% | 5.96% | 2.32% |
| International Developed Equity | 19.00% | 8.08% | 1.54% |
| International Emerging Markets Equity | 2.00% | 8.27% | 0.17% |
| Core Fixed | 32.00% | 2.69% | 0.86% |
| Short-Term Fixed | 2.00% | 1.41% | 0.03% |
| High Yield | 2.00% | 4.33% | 0.09% |
| Core Real Estate | 4.00% | 5.52% | 0.22% |
| Total | 100.00% | | 5.23% |
| | | Inflation | 2.50% |
| | | * Expected arithmetic nominal return | 7.73% |

* The above allocation provides a one-year return of 7.73%. 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, 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 | 100.00% | | 6.41% |
| | | Inflation | 2.50% |
| | | * Expected arithmetic nominal return | 8.91% |

* 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.

GLI and HIC

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, 2024

| <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% | 6.14% | 2.09% |
| Fixed Income | 15.00% | 2.56% | 0.38% |
| Credit Strategies | 14.00% | 5.60% | 0.78% |
| Real Assets | 14.00% | 5.02% | 0.70% |
| Private Equity | 16.00% | 9.17% | 1.47% |
| MAPS - Multi-Asset Public Strategies | 4.00% | 4.50% | 0.18% |
| PIP-Private Investment Partnership | 2.00% | 7.18% | 0.14% |
| Cash | 1.00% | 1.20% | 0.01% |
| Total | 100.00% | | 5.75% |
| | | Inflation | 2.50% |
| | | * Expected arithmetic nominal return | 8.25% |

* The above allocation provides a one-year return of 8.25%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the System, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 7.14%, including expected inflation of 2.50%.

On June 15, 2023, the VRS Board elected a long-term rate of return of 6.75%, which was roughly at the 45th percentile of expected long-term results of the VRS fund asset allocation at that time, providing a median return of 7.14%, including expected inflation of 2.50%.

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. These 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%.

NOTES TO THE FINANCIAL STATEMENTS
Discount Rates
RHP

The discount rate used to measure the total OPEB liability for the RHP, as of June 30, 2024 and 2023, 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.

GLI and HIC

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, 2023 and 2022, 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 113% and 100% for June 30, 2023 and June 30, 2022 respectively, of the actuarially determined contribution rate. From July 1, 2022 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
RHP

HRSD's net RHP OPEB liability was measured as of June 30, 2024 and 2023, using a June 30, 2023 and 2022 valuation, which has been rolled forward to the June 30, 2024 and 2023 measurement date.

| (in thousands) | Total RHP OPEB Liability (a) | Plan Fiduciary Net Position (b) | Net RHP OPEB Liability (a) - (b) |
|---|------------------------------------|---------------------------------------|--|
| RHP OPEB Liability Balances at June 30, 2022 | \$ 74,541 | \$ 62,137 | \$ 12,404 |
| 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) |
| RHP OPEB Liability Balances at June 30, 2023 | \$ 76,476 | \$ 67,423 | \$ 9,053 |
| Changes for the year - Increase (Decrease): | | | |
| Service cost | 1,274 | - | 1,274 |
| Interest | 4,533 | - | 4,533 |
| Changes of assumptions | 2,599 | - | 2,599 |
| Difference between expected and actual experience | (3,472) | - | (3,472) |
| Contributions - employer | - | 1,914 | (1,914) |
| Net investment income | - | 8,270 | (8,270) |
| Benefit payments, including refunds of employee contributions | (1,850) | (1,850) | - |
| Net changes | 3,084 | 8,334 | (5,250) |
| RHP OPEB Liability Balances at June 30, 2024 | \$ 79,560 | \$ 75,757 | \$ 3,803 |

RHP fiduciary net position as a percentage of the total RHP OPEB liability was 95.22% and 88.16% as of June 30, 2024 and 2023, respectively.

GLI

HRSD's 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, 2023 and 2022, net OPEB liability amounts for the GLI Program are as follows:

| | | |
|-----------------------------|---------------------|---------------------|
| (in thousands) | 2023 | 2022 |
| Total GLI OPEB Liability | \$ 3,907,052 | \$ 3,672,085 |
| Plan Fiduciary Net Position | 2,707,739 | 2,467,989 |
| Net GLI OPEB Liability | <u>\$ 1,199,313</u> | <u>\$ 1,204,096</u> |

| | | |
|--|--------|--------|
| Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability: | 69.30% | 67.21% |
|--|--------|--------|

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 GASB Statement No. 74 in VRS's notes to the financial statements and required supplementary information.

HIC

HRSD's net HIC OPEB liability was measured as of June 30, 2023 and 2022. The total HIC OPEB liability was determined by an actuarial valuation performed as of June 30, 2022 and 2021, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2023 and 2022.

| | | | |
|---|------------------------------------|---------------------------------------|--|
| (in thousands) | Total HIC OPEB Liability (a) | Plan Fiduciary Net Position (b) | Net HIC OPEB Liability (a) - (b) |
| HIC OPEB Liability Balances at June 30, 2021 | \$ 2,196 | \$ 1,135 | \$ 1,061 |
| 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 |
| HIC OPEB Liability Balances at June 30, 2022 | \$ 2,241 | \$ 1,108 | \$ 1,133 |
| Changes for the year - Increase (Decrease): | | | |
| Service cost | 18 | - | 18 |
| Interest | 147 | - | 147 |
| Difference between expected and actual experience | 106 | - | 106 |
| Contributions - employer | - | 124 | (124) |
| Net investment income | - | 65 | (65) |
| Benefit payments, including refunds of employee contributions | (161) | (161) | - |
| Administrative expense | - | (1) | 1 |
| Net changes | 110 | 27 | 83 |
| HIC OPEB Liability Balances at June 30, 2023 | \$ 2,351 | \$ 1,135 | \$ 1,216 |

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

The following table presents the net RHP OPEB liability (asset) using the discount rate of 6.0%, as well as what the liability (asset) would be if it is calculated using a discount rate that is one percentage point lower (at 5.00%) or one percentage point higher (at 7.00%) than the current discount rate:

| <u>RHP Discount Rate</u> | RHP Discount Rate | | |
|---|----------------------|-----------------------|----------------------|
| | 1% Decrease 5.00% | Current Rate 6.00% | 1% Increase 7.00% |
| Net RHP OPEB Liability/(Asset) (in thousands) | | | |
| Year ended June 30, 2024 | \$ 16,411 | \$ 3,803 | \$ (6,350) |
| Year ended June 30, 2023 | 20,800 | 9,053 | (435) |

The following table presents the net RHP OPEB liability (asset) using the Trend rate of 3.94%, as well as what the liability (asset) would be if it is calculated using a healthcare cost trend rate that is one percentage point lower (at 2.94%) or one percentage point higher (at 4.94%) than the current healthcare cost trend rate:

| <u>RHP Ultimate Trend</u> | RHP - Healthcare Cost Trend Rate | | |
|---|----------------------------------|-----------------------|----------------------|
| | 1% Decrease 2.94% | Current Rate 3.94% | 1% Increase 4.94% |
| Net RHP OPEB Liability/(Asset) (in thousands) | | | |
| Year ended June 30, 2024 | \$ (7,724) | \$ 3,803 | \$ 18,423 |
| Year ended June 30, 2023 | (1,772) | 9,053 | 22,739 |

GLI

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 (at 5.75%) or one percentage point higher (at 7.75%) than the current rate:

| <u>GLI Discount Rate</u> | GLI Discount Rate | | |
|---------------------------------------|----------------------|-----------------------|----------------------|
| | 1% Decrease 5.75% | Current Rate 6.75% | 1% Increase 7.75% |
| GLI Net OPEB Liability (in thousands) | | | |
| Year ended June 30, 2024 | \$ 4,450 | \$ 3,002 | \$ 1,832 |
| Year ended June 30, 2023 | 4,417 | 3,035 | 1,919 |

HIC

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 (at 5.75%) or one percentage point higher (at 7.75%) than the current rate:

| <u>HIC Discount Rate</u> | HIC Discount Rate | | |
|---------------------------------------|----------------------|-----------------------|----------------------|
| | 1% Decrease 5.75% | Current Rate 6.75% | 1% Increase 7.75% |
| HIC Net OPEB Liability (in thousands) | | | |
| Year ended June 30, 2024 | \$ 1,461 | \$ 1,216 | \$ 1,008 |
| Year ended June 30, 2023 | 1,373 | 1,133 | 929 |

GLI Fiduciary Net Position and HIC Plan Data

Information about the VRS Political Subdivision HIC Program and GLI Program Fiduciary Net Position are available in the separately issued VRS 2023 *Annual Comprehensive Financial Report*. A copy of the 2023 VRS Annual Report may be downloaded from the VRS website at <https://employers.varetire.org/media/shared/pdf/publications/2023-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

Pensions

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

Plan Description

All full-time, salaried permanent employees of HRSD are automatically covered by a VRS Retirement Plan upon employment. This plan is administered by the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the Code of Virginia, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

The System administers three different benefit structures for covered employees – Plan 1, Plan 2, and Hybrid. Each of these benefit structures has different eligibility criteria. The specific information for each plan and the eligibility for covered groups within each plan are set out in the table below:

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

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

NOTES TO THE FINANCIAL STATEMENTS

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 2023 Annual Report. A copy of the 2023 VRS Annual Report may be downloaded from the VRS website at <https://employers.varetire.org/media/shared/pdf/publications/2023-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, 2022 and 2021 actuarial valuation dates, the following employees were covered by the benefit terms of the pension plan:

| | 2022 | 2021 |
|----------------------------|-------|-------|
| Number of: | | |
| Retirees and Beneficiaries | 491 | 434 |
| Inactive Members Vested | 120 | 112 |
| Inactive Members Nonvested | 177 | 161 |
| Active Elsewhere in VRS | 81 | 78 |
| Active Employees | 774 | 816 |
| Total | 1,643 | 1,601 |

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, 2024 was 7.01% 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 \$3,928,000 and \$3,592,000 for the years ended June 30, 2024 and 2023, respectively.

Net Pension Liability

LiabilityThe net pension liability (NPL) is calculated separately for each employer and represents that particular employer's total pension liability determined in accordance with GASB Statement No. 68, less that employer's fiduciary net position. For HRSD, the net pension liability was measured as of June 30, 2023. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2022, rolled forward to the measurement date of June 30, 2023.

Actuarial Methods and Assumptions

The total pension liability for General Employees in the Political Subdivision's Retirement Plan was based on an actuarial valuation as of June 30, 2022, 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, 2023.

Year Ended June 30, 2023

| | |
|---------------------------------------|---|
| 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 |

Note: Assumptions for measurement date June 30, 2022 were the same as June 30, 2023.

The actuarial assumptions used in the June 30, 2022, 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, 2021. Changes to the actuarial assumptions as a result of the experience study and VRS Board action are as follows:

Year Ended June 30, 2023

| | |
|--|--|
| 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 |

Note: Assumptions for measurement date June 30, 2022 were the same as June 30, 2023.

NOTES TO THE FINANCIAL STATEMENTS
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:

Year Ended June 30, 2023

| 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% | 6.14% | 2.09% |
| Fixed income | 15.00% | 2.56% | 0.38% |
| Credit strategies | 14.00% | 5.60% | 0.78% |
| Real assets | 14.00% | 5.02% | 0.70% |
| Private equity | 16.00% | 9.17% | 1.47% |
| MAPS - Multi-Asset Public Strategies | 4.00% | 4.50% | 0.18% |
| PIP - Private Investment Partnership | 2.00% | 7.18% | 0.14% |
| Cash | 1.00% | 1.20% | 0.01% |
| Total | 100.00% | | 5.75% |
| | | Inflation | 2.50% |
| | | ** Expected arithmetic nominal return | 8.25% |

*The above allocation provides a one-year expected return of 8.25%. 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. These results provide a range of returns over various time periods that ultimately provide a median return of 7.14%, including expected inflation of 2.50%.

** On June 15, 2023, the VRS Board elected a long-term rate of return of 6.75%, which was roughly at the 45th percentile of expected long-term results of the VRS fund asset allocation at that time, providing a median return of 7.14%, including expected inflation of 2.50%.

Year Ended June 30, 2022

| 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 | 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 2.50%.

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, 2022, actuarial valuations, whichever was greater. From July 1, 2023, on, participating employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

Changes in Net Pension Liability

| (in thousands) | Total Pension Liability (a) | Plan Fiduciary Net Position (b) | Net Pension Liability (a) - (b) |
|---|-----------------------------------|---------------------------------------|---------------------------------------|
| Pension Liability Balances at June 30, 2021 | \$ 270,323 | \$ 268,160 | \$ 2,163 |
| 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 |
| Pension Liability Balances at June 30, 2022 | \$ 277,575 | \$ 259,238 | \$ 18,337 |
| Changes for the year - Increase (Decrease): | | | |
| Service cost | 4,081 | - | 4,081 |
| Interest | 18,537 | - | 18,537 |
| Difference between expected and actual experience | 10,377 | - | 10,377 |
| Contributions - employer | - | 3,592 | (3,592) |
| Contributions - employee | - | 2,787 | (2,787) |
| Net investment income | - | 16,506 | (16,506) |
| Benefit payments, including refunds of employee contributions | (14,069) | (14,069) | - |
| Administrative expense | - | (168) | 168 |
| Other changes | - | 7 | (7) |
| Net changes | 18,926 | 8,655 | 10,271 |
| Pension Liability Balances at June 30, 2023 | \$ 296,501 | \$ 267,893 | \$ 28,608 |

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

The following presents HRSD's net pension liability/(asset) 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 (at 5.75%) or one percentage point higher (at 7.75%) than the current rate:

| Net Pension Liability/(Asset) (in thousands) | 1% Decrease 5.75% | Current Discount 6.75% | 1% Increase 7.75% |
|--|----------------------|---------------------------|----------------------|
| Pension Discount Rate | | | |
| Year ended June 30, 2023 | \$ 69,805 | \$ 28,608 | \$ (4,899) |
| Year ended June 30, 2022 | 57,843 | 18,337 | (13,498) |

NOTES TO THE FINANCIAL STATEMENTS
Pension Expenses and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

HRSD recognized pension expense of \$5,239,000 and \$1,631,000 for the years ended June 30, 2024 and 2023, respectively. At June 30, 2024 and 2023, 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, 2024: | | |
| Differences between expected and actual experience | \$ 7,483 | \$ 169 |
| Changes of assumptions | 1,416 | - |
| Net diff bet projected and actual earnings on program investments | - | 4,230 |
| Employer contributions subsequent to the measurement date | 3,928 | - |
| Total | <u>\$ 12,827</u> | <u>\$ 4,399</u> |
| 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> |

HRSD reported \$3,928,000 and \$3,592,000 as of June 30, 2024 and 2023, 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, 2025 and 2024, 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 | 2024 | 2023 |
| 2024 | \$ - | (580) |
| 2025 | 1,151 | (1,909) |
| 2026 | (2,163) | (5,224) |
| 2027 | 5,367 | 3,588 |
| 2028 | 145 | - |
| | <u>\$ 4,500</u> | <u>\$ (4,125)</u> |

Pension Plan Data

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2023 Annual Report. A copy of the 2023 VRS Annual Report may be downloaded from the VRS website at <https://employers.varetire.org/media/shared/pdf/publications/2023-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, HRSD entered into a Credit Agreement with Bank of America, N.A. (BoFA) to provide a revolving line of credit (LOC) for interim financing or refinancing of capital project costs. HRSD entered into a Second Amended and Restated Credit Agreement, dated as of June 30, 2022, which BoFA provided a revolving LOC in the aggregate principal amount of up to \$100,000,000. Pursuant to the Second Amendment to the Second Amended and Restated Credit Agreement, dated as of April 9, 2024, the maximum outstanding authorization on the LOC was increased to \$300,000,000.

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 Secured Overnight Financing Rate (SORF) rate (for a daily or a one-month term) plus 0.47% per annum. Taxable projects are payable at an interest rate equal to 100% of the SOFR rate plus 0.60% per annum.

At June 30, 2024 and 2023, the principal balance in the BOA line of credit was \$100,000,000 and \$68,580,000, respectively. The remaining available balance at June 30, 2024 and 2023, respectively was \$200,000,000 and \$31,420,000. 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, 2024 and 2023 was \$526,950,000 and \$561,415,000, respectively. Senior debt has higher priority for repayment in bankruptcy or liquidation, while subordinated debt is paid out only if funds remain after senior debt is settled. With HRSD's issuance of Wastewater Revenue Bond, Series 2024A, in fiscal year 2024, HRSD fully discharged all debt previously identified as senior lien obligations. With no debt priority, all debt is now identified as senior obligations.

Included in the total outstanding bond balance, HRSD has \$50 million outstanding in 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, 2024, the bonds have been successfully remarketed by the Remarketing Agent. The interest rate for the bonds at June 30, 2024 and 2023 was 3.45% and 2.21%, respectively. The 2024 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, 2024 and 2023, was \$366,890,000 and \$324,428,000, 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%. A liability is recognized when funds are drawn to reimburse HRSD for eligible expenses. The principal outstanding WIFIA balance as of June 30, 2024, was \$400,483,000 and \$80,180,000 as of June 30, 2023.

NOTES TO THE FINANCIAL STATEMENTS

All bonds are secured by the revenues of HRSD and are payable over the duration of that issue. Summary of activity:

| (in thousands) | Balance at 6/30/2022 | | | Balance at 6/30/2023 | | | Balance at 6/30/2024 | | Due within One year |
|------------------------------|-------------------------|------------|-------------|-------------------------|------------|--------------|-------------------------|------------|------------------------|
| | | Additions | Deductions | | Additions | Deductions | | | |
| BONDS | | | | | | | | | |
| Series-2009B | \$ 108,015 | - | \$ (4,305) | \$ 103,710 | - | \$ (103,710) | \$ - | \$ - | - |
| Series-2014A | 50,390 | - | (11,825) | 38,565 | - | (38,565) | - | - | - |
| Series-2016A | 86,760 | - | (3,080) | 83,680 | - | (3,235) | 80,445 | 3,405 | |
| Series-2016B VR | 50,000 | - | - | 50,000 | - | - | 50,000 | 50,000 | |
| Series-2017A | 72,055 | - | - | 72,055 | - | - | 72,055 | - | |
| Series-2018A | 18,360 | - | (1,145) | 17,215 | - | (1,205) | 16,010 | 1,265 | |
| Series-2019A | 199,465 | - | (3,275) | 196,190 | - | (3,335) | 192,855 | 3,390 | |
| Series-2024A | - | - | - | - | 115,585 | - | 115,585 | 17,315 | |
| WIFIA | | | | | | | | | |
| WIFIA-Tranche 1 | - | 80,180 | - | 80,180 | 118,553 | - | 198,733 | 90 | |
| WIFIA-Tranche 2 | - | - | - | - | 201,750 | - | 201,750 | - | |
| VRA | | | | | | | | | |
| VRA - York River Reuse | 77 | - | (77) | - | - | - | - | - | |
| VRA - Ches-Eliz Off Gas | 71 | - | (71) | - | - | - | - | - | |
| VRA - AB Aeration | 58 | - | (58) | - | - | - | - | - | |
| VRA - AB Generator | 302 | - | (73) | 229 | - | (75) | 154 | 76 | |
| VRA - Atlantic Expansion | 2,229 | - | (437) | 1,792 | - | (442) | 1,350 | 446 | |
| VRA - Ches-Eliz Expansion | 12,177 | - | (2,387) | 9,790 | - | (2,411) | 7,379 | 2,435 | |
| VRA - Williamsburg PS | 532 | - | (95) | 437 | - | (95) | 342 | 96 | |
| VRA - York River Expansion | 15,749 | - | (1,567) | 14,182 | - | (1,610) | 12,572 | 1,654 | |
| VRA - JRTP | 6,882 | - | (756) | 6,126 | - | (770) | 5,356 | 784 | |
| VRA - NTP | 10,281 | - | (1,062) | 9,219 | - | (1,081) | 8,138 | 1,101 | |
| VRA - Metering | 5,308 | - | (548) | 4,760 | - | (558) | 4,202 | 568 | |
| VRA - ABTP | 29,704 | - | (2,563) | 27,141 | - | (2,616) | 24,525 | 2,670 | |
| VRA - WTP | 3,022 | - | (309) | 2,713 | - | (315) | 2,398 | 322 | |
| VRA - BHTP | 4,106 | - | (396) | 3,710 | - | (404) | 3,306 | 412 | |
| VRA - ATP | 3,929 | - | (337) | 3,592 | - | (341) | 3,251 | 345 | |
| VRA - Rodman | 960 | - | (37) | 923 | - | (38) | 885 | 39 | |
| VRA - BHTP Switchgear | 7,248 | - | (377) | 6,871 | - | (384) | 6,487 | 392 | |
| VRA - Lucas | 2,683 | - | (90) | 2,593 | - | (93) | 2,500 | 95 | |
| VRA - Ferguson | 766 | - | (30) | 736 | - | (31) | 705 | 32 | |
| VRA - Huxley | 3,542 | - | (42) | 3,500 | - | (183) | 3,317 | 186 | |
| VRA - Atlantic | 56,185 | - | (1,722) | 54,463 | - | (1,839) | 52,624 | 1,877 | |
| VRA - Deep Creek IFM | 4,760 | - | (231) | 4,529 | - | (234) | 4,295 | 237 | |
| VRA - Orcutt Ave and Mercury | 7,620 | - | (231) | 7,389 | - | (238) | 7,151 | 245 | |
| VRA - TP Dewatering | 3,319 | - | (154) | 3,165 | - | (164) | 3,001 | 166 | |
| VRA - ES* | 4,902 | 13,106 | - | 18,008 | 6,975 | (4,937) | 20,046 | 1,182 | |
| VRA - Group Loan | 80,251 | 19,749 | (2,308) | 97,692 | - | (4,629) | 93,063 | 4,682 | |
| VRA - 2022 Projects | 222 | 40,646 | - | 40,868 | 58,904 | - | 99,772 | 4,537 | |
| VRA - 2024 Projects | - | - | - | - | 71 | - | 71 | - | |
| Total | 851,930 | 153,681 | (39,588) | 966,023 | 501,838 | (173,538) | 1,294,323 | 100,044 | |
| Unamortized Bond Premium | 16,542 | - | (2,822) | 13,719 | 12,463 | (3,060) | 23,122 | 3,598 | |
| Total Bonds Payable | 868,472 | 153,681 | (42,410) | 979,742 | 514,301 | (176,598) | 1,317,445 | 103,642 | |
| Notes Payable | 33,721 | 34,859 | - | 68,580 | 31,420 | - | 100,000 | 100,000 | |
| Total Outstanding Debt | \$ 902,193 | \$ 188,540 | \$ (42,410) | \$ 1,048,322 | \$ 545,721 | \$ (176,598) | \$ 1,417,445 | \$ 203,642 | |

Senior bonds outstanding at June 30, 2024:

| (in thousands) | Issue | Principal Outstanding | | | Interest to | Interest | Duration | Final Maturity |
|---------------------------------|------------|-----------------------|------------|--------------|-------------|---------------------------------|----------|-------------------|
| | Amount | Total | Current | Long-Term | Maturity | Rates | of Issue | |
| Series-2016A | \$ 246,845 | \$ 80,445 | \$ 3,405 | \$ 77,040 | \$ 21,875 | 3.00% - 5.00% | 20 years | August 1, 2036 |
| Series-2017A | 83,485 | 72,055 | - | 72,055 | 33,417 | 3.50% - 5.00% | 26 years | October 1, 2043 |
| Series-2018A | 63,185 | 16,010 | 1,265 | 14,745 | 4,331 | 5.00% | 15 years | October 1, 2033 |
| Series-2019A | 205,675 | 192,855 | 3,390 | 189,465 | 42,743 | 1.86% - 2.78% | 20 years | February 1, 2039 |
| Series-2024A | 115,585 | 115,585 | 17,315 | 98,270 | 41,051 | 5.00% | 15 years | November 1, 2039 |
| WIFIA-Tranche 1 * | 225,866 | 198,733 | 90 | 198,643 | 77,474 | 1.40% | 40 years | April 1, 2060 |
| WIFIA-Tranche 2 * | 476,582 | 201,750 | - | 201,750 | 87,734 | 1.95% | 40 years | April 1, 2060 |
| VRA - AB Generator | 1,235 | 154 | 76 | 78 | 4 | 2.00% | 20 years | April 1, 2026 |
| VRA - Atlantic Expansion | 7,340 | 1,350 | 446 | 904 | 24 | 1.00% | 20 years | February 1, 2027 |
| VRA - Ches-Eliz Expansion | 40,330 | 7,379 | 2,435 | 4,944 | 130 | 1.00% | 20 years | June 1, 2027 |
| VRA - Williamsburg PS | 1,605 | 342 | 96 | 246 | 7 | 1.00% | 20 years | July 1, 2027 |
| VRA - York River Expansion | 29,683 | 12,572 | 1,654 | 10,918 | 1,320 | 2.72% | 20 years | March 1, 2031 |
| VRA - JRTP | 13,431 | 5,356 | 784 | 4,572 | 344 | 1.80% | 20 years | September 1, 2030 |
| VRA - NTP | 19,395 | 8,138 | 1,101 | 7,037 | 560 | 1.80% | 20 years | March 1, 2031 |
| VRA - Metering | 9,989 | 4,202 | 568 | 3,634 | 289 | 1.80% | 20 years | March 1, 2031 |
| VRA - ABTP | 50,000 | 24,525 | 2,670 | 21,855 | 2,324 | 2.05% | 20 years | September 1, 2032 |
| VRA - WTP | 5,727 | 2,398 | 322 | 2,076 | 188 | 2.05% | 20 years | March 1, 2031 |
| VRA - BHTP | 7,584 | 3,306 | 412 | 2,894 | 277 | 2.05% | 20 years | September 1, 2031 |
| VRA - ATP | 6,318 | 3,251 | 345 | 2,906 | 180 | 1.15% | 20 years | February 1, 2033 |
| VRA - Rodman | 1,096 | 885 | 39 | 846 | 204 | 2.25% | 25 years | June 1, 2043 |
| VRA - BHTP Switchgear | 7,619 | 6,487 | 392 | 6,095 | 944 | 1.85% | 20 years | December 1, 2040 |
| VRA - Lucas | 2,949 | 2,500 | 95 | 2,405 | 743 | 2.65% | 27 years | October 1, 2044 |
| VRA - Ferguson | 866 | 705 | 32 | 673 | 185 | 2.70% | 25 years | March 1, 2042 |
| VRA - Huxley | 3,868 | 3,317 | 186 | 3,131 | 345 | 1.20% | 20 years | August 1, 2040 |
| VRA - Atlantic | 57,149 | 52,624 | 1,877 | 50,747 | 14,421 | 2.25% | 30 years | March 1, 2046 |
| VRA - Deep Creek IFM | 4,989 | 4,295 | 237 | 4,058 | 452 | 1.20% | 20 years | December 1, 2040 |
| VRA - Orcutt Ave and Mercury | 7,968 | 7,151 | 245 | 6,906 | 2,465 | 2.85% | 30 years | February 1, 2046 |
| VRA - TP Dewatering | 3,498 | 3,001 | 166 | 2,835 | 315 | 1.20% | 20 years | October 1, 2040 |
| VRA - ES * | 26,063 | 20,046 | 1,182 | 18,864 | 3,353 | 1.30% | 20 years | October 1, 2043 |
| VRA - Group Loan | 100,000 | 93,064 | 4,682 | 88,382 | 10,232 | 1.15% | 22 years | March 1, 2042 |
| VRA - 2022 Projects | 100,000 | 99,771 | 4,537 | 95,234 | 13,533 | 1.30% | 20 years | December 1, 2043 |
| VRA - 2024 Projects * | 80,000 | 71 | - | 71 | 2 | 2.20% | 20 years | December 1, 2045 |
| Total Fixed Bonds Payable | | 1,244,323 | 50,044 | 1,194,279 | 361,466 | | | |
| Unamortized Bonds Premium | | 23,122 | 3,598 | 19,524 | - | | | |
| Total | | 1,267,445 | 53,642 | 1,213,803 | 361,466 | | | |
| Series-2016B VR | | 50,000 | 50,000 | - | 38,215 | Variable 3.45% June 30, 2024 | 30 years | August 1, 2046 |
| Total Bonds Payable | | 1,317,445 | 103,642 | 1,213,803 | 399,681 | | | |
| Notes Payable | | 100,000 | 100,000 | - | - | Variable 4.73% June 30, 2024 | | |
| Total Outstanding Debt | | \$ 1,417,445 | \$ 203,642 | \$ 1,213,803 | \$ 399,681 | | | |

* These VRA and WIFIA bonds are still in the draw down phase of the loan.

NOTES TO THE FINANCIAL STATEMENTS

Maturities of senior bond principal and interest as of June 30, 2024:

| (in thousands) | | | | |
|--------------------------|--------------|------------|--------------|--|
| June 30, | Principal | Interest | Total | |
| 2025 | \$ 200,044 | \$ 26,817 | \$ 226,861 | |
| 2026 | 51,039 | 25,633 | 76,672 | |
| 2027 | 52,266 | 24,292 | 76,558 | |
| 2028 | 50,195 | 22,937 | 73,132 | |
| 2029 | 51,557 | 24,846 | 76,403 | |
| 2030 - 2034 | 261,382 | 102,271 | 363,653 | |
| 2035 - 2039 | 233,797 | 67,222 | 301,019 | |
| 2040 - 2044 | 100,757 | 43,815 | 144,572 | |
| 2045 - 2049 | 44,498 | 31,698 | 76,196 | |
| 2050 - 2054 | 130,303 | 21,364 | 151,667 | |
| 2055 - 2059 | 196,604 | 8,578 | 205,182 | |
| 2060 - 2064 | 21,881 | 208 | 22,089 | |
| Total | 1,394,323 | 399,681 | 1,794,004 | |
| Unamortized Bond Premium | 23,122 | - | 23,122 | |
| Total | \$ 1,417,445 | \$ 399,681 | \$ 1,817,126 | |

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, 2024, the following defeased bonds from advance refunding are still outstanding:

| Defeased in | Original Issue | Amount | Redemption |
|-------------|----------------|----------------|------------|
| 2017 | Series 2016A | \$ 7,907,000 | 08/01/26 |
| 2019 | Series 2014A | 36,048,000 | 07/01/24 |
| 2019 | Series 2016A | 24,226,000 | 08/01/26 |
| 2019 | Series 2016A | 110,253,000 | 08/01/26 |
| 2019 | Series 2017A | 11,659,000 | 10/01/27 |
| 2019 | Series 2018A | 11,791,000 | 10/01/27 |
| 2019 | Series 2018A | 30,525,000 | 10/01/27 |
| 2024 | Series 2014A | 26,632,000 | 07/01/25 |
| Total | | \$ 259,041,000 | |

NOTE 10 – NET POSITIONRestricted 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, 2024 and 2023, \$22,307,000 and \$33,830,000, 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, 2024 and 2023, \$1,306,000 and \$194,000, respectively, was contained in the unrestricted net position. The \$1.1 million increase in the fiscal year 2024 reserve for improvements was mainly due to planned improvements in the liquid polymer activation mix system and loader and aerator processes. HRSD was in compliance with all funding requirements of this reserve during the fiscal years ended June 30, 2024 and 2023.

Reserved for Construction. A reserve for the construction program is based on funds designated by HRSD's Commission for such purposes. At June 30, 2024 and 2023, \$37,469,000 and \$3,115,000, 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 |
|----------------|-----------------------------|------------------------------|-------------|-----------------------|
| 2023 | \$ 4,636 | \$ 16,390 | \$ (15,929) | \$ 5,097 |
| 2024 | 5,097 | 15,624 | (13,189) | 7,532 |

NOTE 12 – COMMITMENTS AND CONTINGENCIESConsent 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 six times, most recently on January 19, 2024 (the "Amended Consent Decree"). The sixth amendment reorders and/or revises certain projects (with no change in overall program cost).

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

NOTES TO THE FINANCIAL STATEMENTS

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 Sustainable Water Initiative for Tomorrow (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 prioritize 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, 2024 and 2023, HRSD has outstanding commitments for contracts in progress of approximately \$1.6 billion and \$1.3 billion, respectively.

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.

The 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 \$65.92 million (valued at NAV) and \$63.07 million, as of June 30, 2024 and 2023, respectively. HRSD's total investment in VIP's Stable NAV Liquidity Pool (valued at NAV) was \$178.79 million and \$129.51 million as of June 30, 2024 and 2023, 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)

Balance at June 30, 2024**Investments by Fair Value Level**

| | Fair Value | Level 1 | Level 2 | Level 3 |
|---------------------------------------|------------|-----------|-----------|----------|
| Mutual Funds - Equity | \$ 46,685 | \$ 41,130 | \$ 5,555 | - |
| Mutual Funds - Fixed Income | 25,608 | 6,501 | 19,107 | - |
| Other Income | 2,646 | - | - | 2,646 |
| Total Investments by Fair Value Level | \$ 74,939 | \$ 47,631 | \$ 24,662 | \$ 2,646 |

Cash Equivalents Measured at Net Asset Value

| | |
|--------------------------------------|-----|
| First American Government Obligation | 818 |
|--------------------------------------|-----|

Fiduciary Net Position of HRSD's OPEB

\$ 75,757

Balance at June 30, 2023**Investments by Fair Value Level**

| | Fair Value | Level 1 | Level 2 | Level 3 |
|---------------------------------------|------------|-----------|-----------|----------|
| 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 |

Cash Equivalents Measured at Net Asset Value

| | |
|--------------------------------------|-----|
| First American Government Obligation | 195 |
|--------------------------------------|-----|

Fiduciary Net Position of HRSD's OPEB

\$ 67,423

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

NOTE 14 - FIDUCIARY ACTIVITIES

As discussed in Note 2, HRSD has prepared fiduciary fund financial statements for the fiscal years ended June 30, 2024 and 2023. The statements include information on HRSD's 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 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 \$75.8 million and \$67.4 million as of June 30, 2024 and 2023, respectively, which are restricted to providing postretirement benefits for plan participants.

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 years ended June 30, 2024 and 2023, HRSD did not receive any additional federal SLFRF-ARPA funds.

NOTES TO THE FINANCIAL STATEMENTS
NOTE 15 - SUBSEQUENT EVENTS

On July 23, 2024, HRSD conducted a successful sale of the Wastewater Revenue Bonds, Series 2024B, raising \$268 million to fund capital projects, including HRSD's SWIFT projects. The bonds were sold at an overall interest rate of 4.15% and will be repaid through 2054. The bonds were sold via a negotiated sale process with Bank of America Securities, Inc. as the senior managing underwriter. Prior to the bond sale, Moody's Investors Service and S&P Global Ratings affirmed HRSD's bond ratings of Aa1 and AA+, respectively. As part of the credit review process, the rating agencies carefully evaluated the HRSD's system size and capacity, service area, finances, debt, and management, among other factors.

On September 30, 2024, HRSD entered into a new MFA with the WIFIA program and closed on Tranche 3 for \$268,088,000. The remaining balance of the MFA, \$353,176,000 is planned to close in fiscal year 2026.



**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.

| Contents | Page |
|--|-------------|
| Pension | 65 |
| Schedule of Employer Pension Contributions and Schedule of Changes in Net Pension Liability | |
| OPEB | 68 |
| Schedule of Employer OPEB Contributions and Schedule of Changes in Net Liability for each of HRSD's three OPEB plans: RHP, GLI and HIC | |

Unaudited – See accompanying independent auditors' report



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SCHEDULE OF EMPLOYER PENSION CONTRIBUTIONS FOR THE YEARS ENDED JUNE 30, 2015 THROUGH 2024

| Date | Contractually Required Contribution | Contribution in Relation to Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
|------|---|---|--|-------------------------------|--|
| 2024 | \$ 3,928,000 | \$ 3,928,000 | \$ - | \$ 66,051,000 | 5.95% |
| 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% |

Notes to Required Supplementary Information For the Year Ended June 30, 2024:

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, 2022, 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, 2021. 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 |

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

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

| (in thousands) | 2023 | 2022 | 2021 | 2020 | 2019 |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total pension liability | | | | | |
| Service cost | \$ 4,081 | \$ 3,833 | \$ 4,264 | \$ 4,229 | \$ 3,946 |
| Interest | 18,537 | 18,012 | 16,787 | 16,223 | 15,598 |
| Changes of benefit terms | - | - | 6,599 | - | - |
| Changes in assumptions | - | - | - | - | 7,378 |
| Difference between expected and actual experience | 10,377 | 44 | (266) | (991) | 760 |
| Benefit payments, including refunds of employee contributions | (14,069) | (14,637) | (11,512) | (10,696) | (9,655) |
| Net change in total pension liability | 18,926 | 7,252 | 15,872 | 8,765 | 18,027 |
| Total pension liability - beginning | 277,575 | 270,323 | 254,451 | 245,686 | 227,659 |
| Total pension liability - ending (a) | \$ 296,501 | \$ 277,575 | \$ 270,323 | \$ 254,451 | \$ 245,686 |
| Plan fiduciary net position | | | | | |
| Contributions - employer | \$ 3,592 | \$ 3,440 | \$ 3,453 | \$ 2,897 | \$ 2,866 |
| Contributions - employee | 2,787 | 2,578 | 2,569 | 2,538 | 2,468 |
| Net investment income | 16,506 | (140) | 58,456 | 4,115 | 13,739 |
| Benefit payments, including refunds of employee contributions | (14,069) | (14,637) | (11,512) | (10,696) | (9,655) |
| Administrative expense | (168) | (169) | (147) | (142) | (137) |
| Other | 7 | 6 | 6 | (5) | (8) |
| Net change in plan fiduciary net position | 8,655 | (8,922) | 52,825 | (1,293) | 9,273 |
| Plan fiduciary net position - beginning | 259,238 | 268,160 | 215,335 | 216,628 | 207,355 |
| Plan fiduciary net position - ending (b) | \$ 267,893 | \$ 259,238 | \$ 268,160 | \$ 215,335 | \$ 216,628 |
| Net pension liability - ending (a) - (b) | \$ 28,608 | \$ 18,337 | \$ 2,163 | \$ 39,116 | \$ 29,058 |
| Plan fiduciary net position as a percentage of the total pension liability (b)/(a) | 90.35% | 93.39% | 99.20% | 84.63% | 88.17% |
| Covered payroll (c) | \$ 58,965 | \$ 54,750 | \$ 54,107 | \$ 53,085 | \$ 51,336 |
| Net pension liability as a percentage of the covered payroll ((a)-(b))/(c) | 48.52% | 33.49% | 4.00% | 73.69% | 56.60% |

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

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

(in thousands)

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

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

**SCHEDULE OF EMPLOYER RHP OPEB CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2015 THROUGH 2024**

| 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 |
|------|-------------------------------------|---|----------------------------------|----------------------------|---|
| 2024 | \$ 1,558,000 | \$ 1,914,000 | \$ (356,000) | \$ 65,575,000 | 2.38% |
| 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% |

Notes to Required Supplementary Information For the Year Ended June 30, 2024:

| | |
|----------------------------|--|
| Actuarial cost method | Entry age normal |
| Amortization method | Level percentage of projected payroll |
| Amortization period | An experience gain/loss base is created each year and amortized over a 15 year period |
| Asset valuation | The asset valuation method is the smoothed market value with phase-in method, using a smoothing period of 5 years, as described in paragraph 3.11 of IRS Revenue Procedure 2000-40. |
| Assumed rate of inflation | 2.50% |
| Healthcare cost trend: | Society of Actuaries (SOA) 2022 Getzen Long-Term Healthcare Cost Trend Model with baseline assumptions. This model is designed to estimate the trend after 2024. The trend rate for 2023 and 2024 was set to 7.5%. |
| Salary increase rate | 2.50% |
| Investments rate of return | 6.00% |
| Mortality rates: | |
| Active Employees | SOA Pub-2010 General Employees Headcount-Weighted Mortality Table projected on a fully generational basis with mortality improvement scale MP-2021 |
| Healthy Retirees | SOA Pub-2010 General Retirees Headcount-Weighted Mortality Table projected on a fully generational basis with mortality improvement scale MP-2021 |
| Disabled Retirees | SOA Pub-2010 General Disabled Retirees Headcount-Weighted Mortality Table projected on a fully generational basis with mortality improvement scale MP-2021 |

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

(in thousands)

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|--|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|
| Total OPEB liability | | | | | | | | |
| Service cost | \$ 1,274 | \$ 1,534 | \$ 1,435 | \$ 1,333 | \$ 1,345 | \$ 1,300 | \$ 1,260 | \$ 1,188 |
| Interest | 4,533 | 4,398 | 4,052 | 3,672 | 3,883 | 3,571 | 3,391 | 3,208 |
| Changes in assumptions | 2,599 | (5,285) | - | - | (518) | (1,607) | - | - |
| Differences between expected and actual experience | (3,472) | 3,617 | 2,303 | 2,930 | (7,074) | 3,302 | - | - |
| Benefit payments, including refunds of employee contributions | (1,850) | (2,329) | (1,902) | (1,425) | (1,186) | (1,149) | (1,791) | (892) |
| Net change in total OPEB liability | 3,084 | 1,935 | 5,888 | 6,510 | (3,550) | 5,417 | 2,860 | 3,504 |
| Total OPEB liability - beginning | 76,476 | 74,541 | 68,653 | 62,143 | 65,693 | 60,276 | 57,416 | 53,913 |
| Total OPEB liability - ending (a) | \$ 79,560 | \$ 76,476 | \$ 74,541 | \$ 68,653 | \$ 62,143 | \$ 65,693 | \$ 60,276 | \$ 57,417 |
| Plan fiduciary net position | | | | | | | | |
| Contributions - employer | \$ 1,914 | \$ 2,467 | \$ 2,260 | \$ 1,963 | \$ 2,730 | \$ 2,993 | \$ 2,729 | \$ 2,558 |
| Contributions - retirees | - | - | - | - | - | - | 303 | - |
| Net investment income | 8,270 | 5,148 | (9,887) | 14,216 | 3,343 | 3,078 | 3,450 | 3,957 |
| Benefit payments, including refunds of employee contributions | (1,850) | (2,329) | (1,902) | (1,425) | (1,186) | (1,149) | (1,791) | (892) |
| Administrative expense | - | - | - | - | - | - | (114) | (495) |
| Net change in plan fiduciary net position | 8,334 | 5,286 | (9,529) | 14,754 | 4,887 | 4,922 | 4,577 | 5,128 |
| Plan fiduciary net position - beginning | 67,423 | 62,137 | 71,666 | 56,912 | 52,025 | 47,103 | 42,526 | 37,398 |
| Plan fiduciary net position - ending (b) | \$ 75,757 | \$ 67,423 | \$ 62,137 | \$ 71,666 | \$ 56,912 | \$ 52,025 | \$ 47,103 | \$ 42,526 |
| Net OPEB liability (asset) - ending (a) - (b) | \$ 3,803 | \$ 9,053 | \$ 12,404 | \$ (3,013) | \$ 5,231 | \$ 13,668 | \$ 13,173 | \$ 14,891 |
| Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a) | 95.22% | 88.16% | 83.36% | 104.39% | 91.58% | 79.19% | 78.15% | 74.07% |
| Covered payroll (c) | \$ 65,575 | \$ 58,965 | \$ 55,853 | \$ 55,731 | \$ 54,799 | \$ 52,070 | \$ 50,874 | \$ 49,286 |
| Net OPEB liability (asset) as a percentage of the covered payroll ((a)-(b))/(c) | 5.80% | 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, 2024:

| | |
|-------------------------|--|
| 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 GLI OPEB CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2015 THROUGH 2024**

| Date | Contractually Required Contribution | Contribution in Relation to Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
|------|--|--|-------------------------------------|-------------------------------|--|
| 2024 | \$ 357,000 | \$ 357,000 | \$ - | \$ 66,079,000 | 0.54% |
| 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% |

Notes to Required Supplementary Information For the Year Ended June 30, 2024:

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, 2022, 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, 2021. 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 EMPLOYER'S SHARE OF
NET GLI OPEB LIABILITY AND RELATED RATIOS
FOR THE MEASUREMENT DATES OF JUNE 30, 2017 THROUGH 2023**

(in thousands)

| | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Employer's Proportion of the Net GLI OPEB Liability | 0.2503% | 0.2521% | 0.2626% | 0.25814% | 0.26208% | 0.26214% | 0.26016% |
| Employer's Proportionate Share of the Net GLI OPEB Liability | \$ 3,002 | \$ 3,035 | \$ 3,058 | \$ 4,307 | \$ 4,265 | \$ 3,981 | \$ 3,915 |
| Employer's Covered Payroll | \$ 58,965 | \$ 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 | 5.09% | 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 | 69.30% | 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 HIC OPEB CONTRIBUTIONS
FOR THE YEARS ENDED JUNE 30, 2015 THROUGH 2024**

| Date | Contractually Required Contribution | Contribution in Relation to Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
|------|--|--|-------------------------------------|-------------------------------|--|
| 2024 | \$ 139,000 | \$ 139,000 | \$ - | \$ 66,051,000 | 0.21% |
| 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% |

Notes to Required Supplementary Information For the Year Ended June 30, 2024:

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, 2022, 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, 2021. 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.

SCHEDULE OF CHANGES IN NET HIC OPEB LIABILITY AND RELATED RATIOS

(in thousands)

| | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total OPEB liability | | | | | | | |
| Service cost | \$ 18 | \$ 22 | \$ 28 | \$ 28 | \$ 26 | \$ 26 | \$ 27 |
| Interest | 147 | 145 | 140 | 137 | 134 | 130 | 129 |
| Changes in assumptions | - | 88 | 15 | - | 50 | - | (22) |
| Differences between expected and actual experience | 106 | (59) | 5 | 16 | 26 | 27 | - |
| Benefit payments, including refunds of employee contributions | (161) | (151) | (137) | (129) | (124) | (133) | (94) |
| Net change in total OPEB liability | 110 | 45 | 51 | 52 | 112 | 50 | 40 |
| Total OPEB liability - beginning | 2,241 | 2,196 | 2,145 | 2,093 | 1,981 | 1,931 | 1,891 |
| Total OPEB liability - ending (a) | \$ 2,351 | \$ 2,241 | \$ 2,196 | \$ 2,145 | \$ 2,093 | \$ 1,981 | \$ 1,931 |
| Plan fiduciary net position | | | | | | | |
| Contributions - employer | \$ 124 | \$ 115 | \$ 114 | \$ 111 | \$ 108 | \$ 95 | \$ 91 |
| Net investment income | 65 | 2 | 238 | 18 | 56 | 60 | 90 |
| Benefit payments, including refunds of employee contributions | (161) | (151) | (137) | (129) | (124) | (133) | (94) |
| Administrative expense | (1) | (2) | (3) | (2) | (1) | (1) | (1) |
| Other | - | 9 | - | - | - | (5) | 4 |
| Net change in plan fiduciary net position | 27 | (27) | 212 | (2) | 39 | 16 | 90 |
| Plan fiduciary net position - beginning | 1,108 | 1,135 | 923 | 925 | 886 | 870 | 780 |
| Plan fiduciary net position - ending (b) | \$ 1,135 | \$ 1,108 | \$ 1,135 | \$ 923 | \$ 925 | \$ 886 | \$ 870 |
| Net OPEB liability - ending (a) - (b) | \$ 1,216 | \$ 1,133 | \$ 1,061 | \$ 1,222 | \$ 1,168 | \$ 1,095 | \$ 1,061 |
| Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a) | 48.28% | 49.44% | 51.68% | 43.03% | 44.19% | 44.72% | 45.05% |
| Covered payroll (c) | \$58,965 | \$54,750 | \$54,107 | \$53,085 | \$51,336 | \$49,821 | \$47,987 |
| Net OPEB liability as a percentage of the covered payroll ((a)-(b))/(c) | 2.06% | 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.



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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.

| Contents | Page |
|---|-------------|
| Demographic and Economic Information | 79 |
| This schedule offers demographic and economic indicators to help the reader understand the environment within which HRSD's financial activities take place and to help make comparisons over time and with other governments. | |
| Financial Trends | 80 |
| These schedules contain trend information to help the reader understand how HRSD's financial performance and well-being have changed over time. | |
| Debt Capacity | 83 |
| This schedule presents information to help the reader assess the affordability of HRSD's current levels of outstanding debt and HRSD's ability to issue additional debt in the future. | |
| Revenue Capacity | 84 |
| These schedules contain information to help the reader assess the factors affecting HRSD's ability to generate revenue from rate payers. | |
| Operating Information | 86 |
| 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

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Date of Incorporation - 1940 | | | | | | | | | | |
| Area in Square Miles (1) | 4,998 | 4,998 | 4,998 | 4,998 | 3,087 | 3,087 | 3,087 | 3,087 | 2,808 | 2,808 |
| Present Service Area in Square Miles (1) | 766 | 766 | 766 | 766 | 758 | 758 | 758 | 758 | 672 | 672 |
| Treatment Plants (Major) (2) | 8 | 8 | 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 |
| 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 | 224.5 | 248.5 | 248.5 | 248.5 | 248.5 | 248.5 | 248.5 | 248.5 | 248.5 |
| Small Communities Treatment Plants | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 5 | 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 | 0.050 | - | - |
| Onancock, Accomack County(4) | 0.750 | 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 | 1.625 | 1.750 | 1.750 | 1.000 | 1.000 | 1.000 | 1.000 | 0.875 | 0.825 | 0.825 |
| Miles of Interceptor Systems | 557 | 561 | 538 | 540 | 541 | 541 | 542 | 540 | 536 | 532 |
| Interceptor Pump Stations | 92 | 90 | 89 | 90 | 88 | 87 | 88 | 89 | 88 | 83 |
| Small Communities Pump Stations | 47 | 46 | 44 | 42 | 42 | 41 | 34 | 38 | 33 | 33 |
| Maintenance Facilities | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Number of Service Connections (in thousands) | 488 | 486 | 484 | 481 | 478 | 476 | 473 | 470 | 467 | 465 |
| Daily Average Treatment in Millions of Gallons | 146 | 135 | 132 | 154 | 141 | 153 | 145 | 153 | 155 | 152 |
| Bond Rating: Moody's | | | | | | | | | | |
| Senior | Aa1 | Aa1 | Aa1 | Aa1 | Aa1 | Aa1 | Aa1 | Aa2 | Aa2 | Aa2 |
| Subordinate Long-term | | Aa1 | Aa1 | Aa1 | Aa1 | Aa2 | Aa2 | - | - | - |
| Bond Rating: Standard & Poor's | | | | | | | | | | |
| Senior | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ |
| Subordinate Long-term | | AA+ | AA+ | AA+ | AA+ | AA+ | AA | AA | AA | AA |
| Subordinate Short-term | | A-1+ | A-1+ | A-1+ | A-1+ | A-1+ | A-1+ | A-1+ | A-1+ | A-1+ |
| Bond Rating: Fitch | | | | | | | | | | |
| Senior | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ |
| Subordinate Long-term | | AA | AA | AA | AA | AA | AA | AA | AA | AA |
| Subordinate Short-term | | F1+ | F1+ | F1+ | F1+ | F1+ | F1+ | F1+ | F1+ | F1+ |

(1) HRSD added additional service areas in the counties of Isle of Wight and Surry 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 and closed in fiscal year 2024.

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

| (in thousands) | 2024 | 2023 | 2022 | 2021 | 2020 |
|--|---------------------|---------------------|---------------------|-------------------|-------------------|
| OPERATING REVENUES | | | | | |
| Wastewater treatment charges | \$ 422,784 | \$ 383,115 | \$ 352,414 | \$ 325,817 | \$ 318,585 |
| Miscellaneous | 4,157 | 4,820 | 5,532 | 3,952 | 3,447 |
| TOTAL OPERATING REVENUES | 426,941 | 387,935 | 357,946 | 329,769 | 322,032 |
| OPERATING EXPENSES | | | | | |
| Wastewater treatment | 167,327 | 149,532 | 134,135 | 132,820 | 122,393 |
| General and administrative | 60,152 | 53,995 | 45,673 | 48,691 | 46,949 |
| Depreciation | 57,053 | 54,469 | 54,357 | 53,278 | 51,383 |
| TOTAL OPERATING EXPENSES | 284,532 | 257,996 | 234,165 | 234,789 | 220,725 |
| OPERATING INCOME | 142,409 | 129,939 | 123,781 | 94,980 | 101,307 |
| NON-OPERATING REVENUES (EXPENSES) | | | | | |
| Wastewater facility charges | 7,153 | 7,293 | 7,072 | 7,379 | 6,444 |
| Investment income | 13,673 | 6,068 | (1,651) | 471 | 5,876 |
| Bond interest subsidy | 1,622 | 2,015 | 2,052 | 2,167 | 2,205 |
| Change in fair value of investments | - | - | - | - | - |
| Capital distributions to localities | (2,005) | (2,422) | (13) | (376) | - |
| Bond issuance costs | (1,000) | (98) | (311) | (682) | (1,290) |
| Disposal of capital assets | - | - | - | - | (739) |
| Interest expense | (33,642) | (27,132) | (25,007) | (25,339) | (26,179) |
| NET NON-OPERATING EXPENSES | (14,199) | (14,276) | (17,858) | (16,380) | (13,683) |
| INCOME BEFORE CONTRIBUTIONS | 128,210 | 115,663 | 105,923 | 78,600 | 87,624 |
| CAPITAL CONTRIBUTIONS | | | | | |
| State capital grants | 34,183 | 234 | 200 | - | - |
| Other capital contributions | 12,242 | 1,641 | 2,537 | 2,317 | 578 |
| CHANGE IN NET POSITION | \$ 174,635 | \$ 117,538 | \$ 108,660 | \$ 80,917 | \$ 88,202 |
| NET POSITION | | | | | |
| Net investment in capital assets | \$ 1,110,507 | \$ 981,437 | \$ 832,427 | \$ 776,253 | \$ 646,505 |
| Restricted for debt service | 22,307 | 33,830 | 33,134 | 30,455 | 28,155 |
| Restricted for debt service reserve fund | - | - | - | - | - |
| Unrestricted | 218,843 | 279,293 | 193,923 | 144,116 | 195,247 |
| TOTAL NET POSITION | \$ 1,351,657 | \$ 1,294,560 | \$ 1,059,484 | \$ 950,824 | \$ 869,907 |
| Net Revenues Available for Debt Service (GAAP) | 218,905 | 197,264 | 185,287 | 157,217 | 165,925 |
| Add Back: Operating Expenses on Improvements Not Owned by HRSD * | 2,005 | 2,422 | 13 | 376 | 0 |
| Net Revenues Available for Debt Service (Adjusted) | \$ 220,910 | \$ 199,686 | \$ 185,300 | \$ 157,593 | \$ 165,925 |
| DEBT SERVICE | | | | | |
| Senior debt | \$ 76,894 | \$ 27,624 | \$ 24,549 | \$ 26,085 | \$ 28,595 |
| Subordinate debt | - | 38,767 | 36,468 | 33,128 | 30,416 |
| Total Debt Service | \$ 76,894 | \$ 66,391 | \$ 61,017 | \$ 59,213 | \$ 59,011 |
| Debt Service Coverage | | | | | |
| Senior Debt Service Coverage (GAAP) ** | 2.85 | 7.14 | 7.55 | 6.03 | 5.80 |
| Total Debt Service Coverage (GAAP) | 2.85 | 2.97 | 3.04 | 2.66 | 2.81 |
| Total Debt Service Coverage (Adjusted Cash Basis) | 2.87 | 3.01 | 3.04 | 2.66 | 2.81 |

* 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 Trust Agreement.

** In fiscal year 2024, HRSD fully discharged all debt previously identified as senior lien obligations. With no debt priority, all debt is now identified as senior obligations. Additional information pertaining to Outstanding Debt can be found in Note 9 to the financial statements.

(Continued)

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

(in thousands)

| | 2019 | 2018 | 2017 | 2016 | 2015 |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| OPERATING REVENUES | | | | | |
| Wastewater treatment charges | \$ 299,323 | \$ 275,539 | \$ 254,961 | \$ 234,020 | \$ 221,626 |
| Miscellaneous | 3,798 | 3,504 | 3,669 | 3,861 | 3,935 |
| TOTAL OPERATING REVENUES | 303,121 | 279,043 | 258,630 | 237,881 | 225,561 |
| OPERATING EXPENSES | | | | | |
| Wastewater treatment | 117,189 | 116,982 | 113,100 | 106,575 | 114,137 |
| General and administrative | 41,121 | 40,480 | 40,287 | 40,026 | 38,678 |
| Depreciation | 53,225 | 52,349 | 49,311 | 45,670 | 41,871 |
| TOTAL OPERATING EXPENSES | 211,535 | 209,811 | 202,698 | 192,271 | 194,686 |
| OPERATING INCOME | 91,586 | 69,232 | 55,932 | 45,610 | 30,875 |
| NON-OPERATING REVENUES (EXPENSES) | | | | | |
| Wastewater facility charges | 6,662 | 6,673 | 7,511 | 6,699 | 7,428 |
| Investment income | 8,719 | 3,654 | 2,287 | 1,563 | 1,695 |
| Bond interest subsidy | 2,308 | 2,330 | 2,275 | 2,399 | 2,444 |
| Change in fair value of investments | - | (1,382) | (1,119) | 750 | (286) |
| Capital distributions to localities | - | (311) | (138) | (3,287) | - |
| Bond issuance costs | (53) | (1,061) | (42) | (1,713) | (768) |
| Disposal of capital assets | - | - | - | - | - |
| Interest expense | (27,964) | (20,226) | (22,630) | (21,631) | (22,958) |
| NET NON-OPERATING EXPENSES | (10,328) | (10,323) | (11,856) | (15,220) | (12,445) |
| INCOME BEFORE CONTRIBUTIONS | 81,258 | 58,909 | 44,076 | 30,390 | 18,430 |
| CAPITAL CONTRIBUTIONS | | | | | |
| State capital grants | 2,444 | 2,502 | 7,462 | 14,389 | 16,519 |
| Other capital contributions | 374 | 2,124 | 1,136 | - | 3,000 |
| CHANGE IN NET POSITION | \$ 84,076 | \$ 63,535 | \$ 52,674 | \$ 44,779 | \$ 37,949 |
| NET POSITION | | | | | |
| Net investment in capital assets | \$ 494,779 | \$ 512,398 | \$ 428,670 | \$ 410,287 | \$ 385,597 |
| Restricted for debt service | 28,553 | 27,799 | 22,701 | 23,798 | 22,070 |
| Restricted for debt service reserve fund | - | - | - | - | 44,118 |
| Unrestricted | 258,373 | 157,432 | 202,907 | 167,519 | 105,040 |
| TOTAL NET POSITION | \$ 781,705 | \$ 697,629 | \$ 654,278 | \$ 601,604 | \$ 556,825 |
| Net Revenues Available for Debt Service (GAAP) | 162447 | 133177 | 117274 | 100228 | 83545 |
| Add Back: Operating Expenses on Improvements Not Owned by HRSD * | 0 | 311 | 138 | 3287 | 0 |
| Net Revenues Available for Debt Service (Adjusted) | \$ 162,447 | \$ 133,488 | \$ 117,412 | \$ 103,515 | \$ 83,545 |
| DEBT SERVICE | | | | | |
| Senior debt | \$ 33,592 | \$ 36,488 | \$ 35,837 | \$ 38,198 | \$ 43,842 |
| Subordinate debt | 28,313 | 20,633 | 23,603 | 17,068 | 13,091 |
| Total Debt Service | \$ 61,905 | \$ 57,121 | \$ 59,440 | \$ 55,266 | \$ 56,933 |
| Debt Service Coverage | | | | | |
| Senior Debt Service Coverage (GAAP) | 4.84 | 3.59 | 3.10 | 2.56 | 1.90 |
| Total Debt Service Coverage (GAAP) | 2.62 | 2.03 | 1.93 | 1.77 | 1.46 |
| Total Debt Service Coverage (Adjusted Cash Basis) | 2.62 | 2.30 | 2.00 | 1.85 | - |

Notes:

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

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

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

* 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 Trust Agreement.

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

(in thousands)

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|---------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Personal Services | \$ 71,682 | \$ 65,549 | \$ 61,157 | \$ 60,250 | \$ 59,666 | \$ 56,336 | \$ 55,160 | \$ 53,401 | \$ 51,801 | \$ 52,357 |
| Fringe Benefits | 28,496 | 23,772 | 20,467 | 23,879 | 21,417 | 18,235 | 20,275 | 19,106 | 17,974 | 18,249 |
| Repairs and Maintenance * | 27,625 | 20,174 | 18,004 | 21,207 | 17,419 | 13,786 | 16,763 | 19,933 | 22,824 | 31,451 |
| Materials and Supplies | 13,728 | 12,641 | 9,495 | 11,413 | 9,364 | 9,314 | 8,865 | 8,310 | 7,843 | 4,343 |
| Transportation | 1,776 | 1,672 | 1,380 | 1,100 | 1,194 | 1,423 | 1,271 | 1,386 | 1,537 | 1,297 |
| Utilities | 18,045 | 17,044 | 13,762 | 12,947 | 12,584 | 12,749 | 11,968 | 11,523 | 11,249 | 10,503 |
| Chemical Purchases | 15,500 | 13,890 | 10,044 | 8,719 | 8,760 | 8,746 | 8,750 | 8,020 | 7,512 | 7,119 |
| Contractual Services | 42,257 | 42,934 | 41,904 | 37,278 | 33,748 | 32,123 | 30,165 | 26,977 | 21,573 | 15,127 |
| Miscellaneous Expense | 3,045 | 2,864 | 2,385 | 2,685 | 2,953 | 2,622 | 2,509 | 2,329 | 1,842 | 2,880 |
| General ** | 5,325 | 2,987 | 1,210 | 2,033 | 2,237 | 2,976 | 1,736 | 2,402 | 2,446 | 9,489 |
| Subtotal, Expense before Depreciation | 227,479 | 203,527 | 179,808 | 181,511 | 169,342 | 158,310 | 157,462 | 153,387 | 146,601 | 152,815 |
| Depreciation | 57,053 | 54,469 | 54,357 | 53,278 | 51,383 | 53,225 | 52,349 | 49,311 | 45,670 | 41,871 |
| Total Operating Expenses | \$ 284,532 | \$ 257,996 | \$ 234,165 | \$ 234,789 | \$ 220,725 | \$ 211,535 | \$ 209,811 | \$ 202,698 | \$ 192,271 | \$ 194,686 |

Notes:

* Includes Capital Improvement Program items expensed

** Includes bad debt expense

**RATIOS OF OUTSTANDING DEBT BY TYPE
FOR THE YEARS ENDED JUNE 30, 2015 THROUGH 2024**

| As of June 30, | No. Of Service Connections | (in thousands) | | | | | Debt Per Service Connection |
|-------------------|----------------------------------|------------------|------------------|------------------|---------------------|----------|-----------------------------------|
| | | Senior | Subordinate | | Total | | |
| | | Revenue Bonds | Revenue Bonds | Notes Payable | Outstanding Debt | | |
| 2024 | 488,000 | \$ 1,317,445 | \$ - | \$ 100,000 | \$ 1,417,445 | \$ 2.905 | |
| 2023 | 486,000 | 166,268 | 813,474 | 68,580 | 1,048,322 | 2.157 | |
| 2022 | 484,000 | 186,227 | 682,245 | 33,721 | 902,193 | 1.864 | |
| 2021 | 481,000 | 202,486 | 632,520 | 15,299 | 850,305 | 1.768 | |
| 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 | |

Notes:

Unamortized bond premiums are included in Senior and Subordinate Revenue Bonds.

In fiscal year 2024, HRSD fully discharged all debt previously identified as senior lien obligations. With no debt priority, all debt is now identified as senior obligations. Additional information pertaining to Outstanding Debt can be found in Note 9 to the financial statements.

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

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <u>Residential - Metered</u> | | | | | | | | | | |
| Per CCF * (single step) | \$ 7.60 | \$ 6.97 | \$ 6.39 | \$ 5.86 | \$ 5.86 | \$ 5.37 | \$ 4.92 | \$ 4.51 | \$ 4.13 | \$ 3.83 |
| Minimum Charges Per day | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.25 | 0.25 |
| <u>Residential - Unmetered per 30-day period</u> | | | | | | | | | | |
| Flat rate accounts | 60.00 | 57.90 | 52.20 | 48.64 | 48.64 | 34.91 | 31.98 | 29.32 | 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 |
| Excess over 297 mg/liter | 0.000185 | 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 |
| Excess over 282 mg/liter | 0.000612 | 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 |
| Excess over 7 mg/liter | 0.009258 | 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 |
| Excess over 57 mg/liter | 0.002784 | 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 |
| Fats, Oils, and Grease (FOG) | 0.3517 | 0.3339 | 0.2737 | - | - | - | - | - | - | - |
| Other Approved Hauled Wastes | 0.1812 | 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)

Source: HRSD's Yearly Rate Schedule Publications

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

| | | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Residential | | \$ 2,420 | \$ 2,285 | \$ 2,055 | \$ 1,905 | \$ 1,905 | \$ 1,895 | \$ 1,895 | \$ 1,895 | \$ 1,895 | \$ 1,895 |
| Commercial/Industrial | | | | | | | | | | | |
| Volume based facility charges: | | | | | | | | | | | |
| 5/8" Meter | | \$ 2,420 | \$ 2,285 | \$ 2,055 | \$ 1,905 | \$ 1,905 | \$ 1,895 | \$ 1,895 | \$ 1,895 | \$ 1,895 | \$ 1,895 |
| 3/4" Meter | | 4,210 | 4,210 | 4,210 | 4,210 | 4,210 | 4,830 | 4,830 | 4,830 | 4,830 | 4,830 |
| 1" Meter | | 7,410 | 7,410 | 7,410 | 7,410 | 7,410 | 8,170 | 8,170 | 8,170 | 8,170 | 8,170 |
| 1 1/2" Meter | | 18,395 | 17,590 | 16,645 | 16,645 | 16,645 | 17,260 | 17,260 | 17,260 | 17,260 | 17,260 |
| 2" Meter | | 35,825 | 34,415 | 31,465 | 30,505 | 30,505 | 30,510 | 30,510 | 30,510 | 29,420 | 29,420 |
| 3" Meter | | 91,665 | 88,570 | 80,405 | 73,810 | 73,810 | 70,800 | 70,800 | 70,800 | 67,350 | 63,600 |
| 4" Meter | | 178,485 | 173,245 | 156,530 | 138,445 | 138,445 | 128,660 | 128,660 | 128,660 | 122,400 | 115,580 |
| 6" Meter | | 456,620 | 445,910 | 400,625 | 336,960 | 336,960 | 298,610 | 298,610 | 298,610 | 284,070 | 268,250 |
| 8" Meter | | 889,185 | 872,130 | 780,840 | 634,710 | 634,710 | 542,680 | 542,680 | 542,680 | 516,260 | 487,510 |
| 10" Meter | | 1,491,070 | 1,467,435 | 1,310,665 | 1,038,525 | 1,038,525 | 862,550 | 862,550 | 862,550 | 820,560 | 774,860 |
| 12" Meter | | 2,274,730 | 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 | | 3,251,050 | 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 | | 4,429,645 | 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 |
| Excess over 250 mg/liter | | | | | | | | | | | |
| TSS | | - | - | - | - | - | - | - | - | - | 424 |
| Excess over 250 mg/liter | | | | | | | | | | | |
| TP | | - | - | - | - | - | - | - | - | - | 8,420 |
| Excess over 6 mg/liter | | | | | | | | | | | |
| TKN | | - | - | - | - | - | - | - | - | - | 3,812 |
| Excess over 35 mg/liter | | | | | | | | | | | |

Notes:

One charge per connection.

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

Source: HRSD's Yearly Rate Schedule Publications

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

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total | | | | | | | | | | |
| Flow (MGD) | 145.8 | 135.1 | 132.3 | 154.4 | 140.9 | 152.6 | 145.2 | 152.9 | 155.1 | 152.2 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 273.6 | 284.4 | 263.5 | 269.1 | 252.4 | 281.9 | 285.1 | 288.2 | 282.5 | 286.0 |
| TSS | 228.3 | 253.4 | 203.4 | 215.4 | 226.2 | 211.4 | 215.8 | 215.9 | 228.8 | 198.6 |
| TP | 6.3 | 6.4 | 6.3 | 6.5 | 6.6 | 6.6 | 6.8 | 7.0 | 6.9 | 8.6 |
| TKN | 49.4 | 50.3 | 45.0 | 46.7 | 47.0 | 47.6 | 47.2 | 46.4 | 45.7 | 45.8 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 8.5 | 8.8 | 7.4 | 9.2 | 8.0 | 8.2 | 7.5 | 8.9 | 9.8 | 9.9 |
| TSS | 7.8 | 7.7 | 6.3 | 9.0 | 7.1 | 7.4 | 6.7 | 9.4 | 9.3 | 8.9 |
| TP | 0.6 | 0.5 | 0.5 | 0.7 | 0.7 | 0.8 | 0.7 | 0.9 | 0.9 | 1.0 |
| TKN | 3.7 | 4.3 | 5.1 | 8.1 | 8.4 | 8.5 | 7.3 | 7.7 | 8.0 | 9.8 |
| Army Base Plant | | | | | | | | | | |
| Flow (MGD) | 10.6 | 8.4 | 8.2 | 11.1 | 10.4 | 11.1 | 10.0 | 9.5 | 9.6 | 9.9 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 14.3 | 18.1 | 17.4 | 16.6 | 16.0 | 16.6 | 16.3 | 13.2 | 13.3 | 16.4 |
| TSS | 12.1 | 19.0 | 21.8 | 19.0 | 16.9 | 13.9 | 14.0 | 11.7 | 13.3 | 12.5 |
| TP | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.4 |
| TKN | 2.8 | 2.9 | 2.9 | 3.2 | 3.3 | 3.3 | 3.1 | 2.7 | 2.7 | 2.9 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 0.3 | 0.2 | 0.2 | 0.6 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.8 |
| TSS | 0.4 | 0.3 | 0.4 | 0.9 | 0.3 | 0.4 | 0.3 | 0.4 | 0.5 | 0.6 |
| TP | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| TKN | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 2.1 |
| Atlantic Plant | | | | | | | | | | |
| Flow (MGD) | 44.8 | 42.8 | 35.9 | 27.4 | 24.5 | 28.1 | 26.1 | 28.2 | 27.2 | 30.9 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 85.9 | 85.9 | 74.4 | 58.5 | 49.3 | 58.2 | 56.7 | 53.2 | 55.6 | 66.6 |
| TSS | 79.5 | 73.0 | 51.9 | 39.6 | 35.5 | 39.3 | 36.6 | 38.7 | 38.5 | 42.9 |
| TP | 2.2 | 2.1 | 1.8 | 1.4 | 1.3 | 1.4 | 1.3 | 1.4 | 1.4 | 1.5 |
| TKN | 16.9 | 17.2 | 15.2 | 11.4 | 10.7 | 11.9 | 11.2 | 11.0 | 10.9 | 11.4 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 4.3 | 5.4 | 3.5 | 2.9 | 3.0 | 2.5 | 2.4 | 2.3 | 2.7 | 3.0 |
| TSS | 3.5 | 4.7 | 2.9 | 2.5 | 1.5 | 1.6 | 1.6 | 1.9 | 1.9 | 2.4 |
| Boat Harbor Plant | | | | | | | | | | |
| Flow (MGD) | 12.0 | 10.7 | 11.7 | 15.2 | 13.6 | 15.8 | 14.2 | 13.9 | 15.6 | 14.4 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 16.9 | 17.8 | 17.7 | 20.0 | 18.4 | 20.6 | 19.2 | 17.4 | 18.3 | 20.0 |
| TSS | 12.6 | 12.7 | 13.2 | 16.1 | 16.0 | 18.0 | 16.6 | 15.7 | 18.1 | 16.3 |
| TP | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| TKN | 3.4 | 3.5 | 3.6 | 3.8 | 4.0 | 4.2 | 3.9 | 3.8 | 3.8 | 3.6 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 0.8 | 0.6 | 0.9 | 1.0 | 0.6 | 0.9 | 0.6 | 0.6 | 1.0 | 0.7 |
| TSS | 0.8 | 0.6 | 0.7 | 1.0 | 0.8 | 1.0 | 0.7 | 0.7 | 0.9 | 0.6 |
| TP | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| TKN | 1.6 | 2.5 | 2.2 | 2.1 | 2.0 | 2.5 | 1.3 | 1.2 | 1.8 | 2.2 |

Unaudited – See accompanying independent auditors' report

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

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|--|------|------|------|------|------|------|------|------|------|------|
| Chesapeake-Elizabeth Plant * | | | | | | | | | | |
| Flow (MGD) | - | - | 10.1 | 16.8 | 17.4 | 17.6 | 18.7 | 18.0 | 16.3 | 19.1 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | - | - | 20.2 | 30.5 | 38.1 | 37.2 | 35.4 | 35.2 | 30.2 | 38.7 |
| TSS | - | - | 14.0 | 23.0 | 24.6 | 26.8 | 26.6 | 26.1 | 22.9 | 26.6 |
| TP | - | - | 0.5 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 2.7 | 0.8 |
| TKN | - | - | 4.0 | 6.1 | 6.9 | 6.8 | 6.6 | 6.4 | 5.1 | 6.7 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | - | - | 1.2 | 2.5 | 2.2 | 2.0 | 2.8 | 2.3 | 2.0 | 2.5 |
| TSS | - | - | 0.9 | 1.9 | 2.0 | 1.9 | 3.2 | 2.3 | 1.8 | 1.9 |
| TP | - | - | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| TKN | - | - | 2.0 | 3.9 | 4.4 | 4.1 | 4.5 | 4.1 | 3.6 | 4.5 |
| * The Chesapeake-Elizabeth Plant was closed December 31, 2021. | | | | | | | | | | |
| James River Plant | | | | | | | | | | |
| Flow (MGD) | 11.8 | 12.1 | 12.7 | 14.7 | 12.4 | 13.9 | 13.0 | 12.3 | 13.2 | 12.7 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 24.1 | 35.5 | 24.9 | 23.1 | 24.0 | 25.8 | 26.8 | 25.5 | 24.4 | 25.7 |
| TSS | 18.6 | 46.4 | 17.5 | 18.1 | 17.4 | 18.7 | 19.3 | 17.4 | 17.8 | 18.0 |
| TP | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |
| TKN | 4.4 | 5.2 | 4.7 | 5.0 | 4.7 | 4.7 | 4.8 | 4.3 | 4.2 | 4.0 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 |
| TSS | 0.8 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 |
| TP | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| TKN | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.3 | 0.4 | 0.5 | 0.4 | 0.4 |
| Nansemond Plant | | | | | | | | | | |
| Flow (MGD) | 16.6 | 15.3 | 15.5 | 17.4 | 15.9 | 16.9 | 17.5 | 18.8 | 18.5 | 16.6 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 33.6 | 30.1 | 29.9 | 33.8 | 32.5 | 33.0 | 31.9 | 40.7 | 35.8 | 28.5 |
| TSS | 29.1 | 27.7 | 25.9 | 36.0 | 46.5 | 37.2 | 33.4 | 40.3 | 38.4 | 21.9 |
| TP | 0.8 | 0.9 | 0.8 | 0.9 | 1.0 | 1.0 | 1.2 | 1.5 | 1.5 | 1.1 |
| TKN | 7.0 | 6.4 | 6.2 | 6.8 | 6.9 | 6.7 | 7.1 | 7.4 | 7.0 | 5.6 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 0.7 | 0.5 | 0.4 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 | 0.7 | 0.8 |
| TSS | 0.9 | 0.8 | 0.5 | 0.8 | 0.6 | 0.8 | 0.7 | 0.8 | 0.9 | 0.9 |
| TP | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| TKN | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.6 |
| Virginia Initiative Plant | | | | | | | | | | |
| Flow (MGD) | 30.0 | 24.7 | 23.5 | 29.1 | 26.2 | 27.6 | 26.7 | 30.9 | 31.7 | 30.5 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 42.4 | 42.3 | 39.1 | 39.4 | 37.0 | 40.4 | 47.5 | 50.1 | 50.4 | 47.5 |
| TSS | 32.9 | 37.3 | 33.2 | 31.5 | 35.4 | 23.2 | 30.0 | 31.3 | 32.0 | 30.2 |
| TP | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 |
| TKN | 7.2 | 7.2 | 6.5 | 6.7 | 7.1 | 6.8 | 7.0 | 7.3 | 7.4 | 7.1 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 1.0 | 0.9 | 0.7 | 0.6 | 0.5 | 0.6 | 0.8 | 1.2 | 1.7 | 1.9 |
| TSS | 1.1 | 0.5 | 0.4 | 0.7 | 1.0 | 0.7 | 0.7 | 1.4 | 1.9 | 1.6 |
| TP | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| TKN | 0.5 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.6 | 0.4 | 0.7 | 0.8 |

Unaudited – See accompanying independent auditors' report

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

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|
| Williamsburg Plant | | | | | | | | | | |
| Flow (MGD) | 8.1 | 8.7 | 8.3 | 9.0 | 8.6 | 7.7 | 8.0 | 8.6 | 8.4 | 9.2 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 38.2 | 36.7 | 33.3 | 32.5 | 33.4 | 32.6 | 36.1 | 33.2 | 34.7 | 40.4 |
| TSS | 27.4 | 21.5 | 17.4 | 18.0 | 21.2 | 24.1 | 19.1 | 27.9 | 16.2 | 19.9 |
| TP | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| TKN | 3.7 | 4.0 | 3.6 | 3.7 | 3.6 | 3.5 | 3.3 | 3.6 | 3.2 | 3.3 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 0.4 | 0.4 | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| TSS | 0.3 | 0.2 | 0.2 | 0.6 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |
| TP | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| TKN | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 |
| York River Plant | | | | | | | | | | |
| Flow (MGD) | 12.0 | 11.6 | 11.6 | 13.9 | 13.2 | 12.6 | 12.6 | 12.7 | 12.6 | 13.2 |
| Influent (1,000 lbs.) | | | | | | | | | | |
| BOD | 18.0 | 18.0 | 16.7 | 14.6 | 15.8 | 16.8 | 16.7 | 16.3 | 18.2 | 17.9 |
| TSS | 16.2 | 15.8 | 15.5 | 14.1 | 15.4 | 15.0 | 15.1 | 16.7 | 16.9 | 16.4 |
| TP | 0.4 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| TKN | 3.9 | 3.9 | 3.8 | 3.8 | 3.7 | 3.6 | 3.6 | 3.5 | 3.5 | 3.6 |
| Effluent (1,000 lbs.) | | | | | | | | | | |
| BOD | 0.3 | 0.2 | 0.1 | 0.2 | 0.5 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |
| TSS | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 |
| TP | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| TKN | 0.4 | 0.3 | 0.3 | 0.4 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |

Unaudited – See accompanying independent auditors' report

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

(in thousands)

| Customer | Type | 2024 | | | 2015 | | |
|--|----------------------|-------------------|------|--|-------------------|------|--|
| | | Annual Billing | Rank | Percent of Wastewater Treatment Revenue | Annual Billing | Rank | Percent of Wastewater Treatment Revenue |
| U.S. Navy - Norfolk Naval Base | Military Facility | \$ 9,776 | 1 | 2.3% | \$ 4,614 | 1 | 2.1% |
| Anheuser - Busch, Inc. | Brewery | 4,010 | 2 | 0.9% | 3,240 | 3 | 1.5% |
| Huntington Ingalls Industries | Shipbuilding | 3,001 | 3 | 0.7% | 1,288 | 8 | 0.6% |
| Norfolk Naval Shipyard | Military Ship Repair | 2,963 | 4 | 0.7% | 1,843 | 4 | 0.8% |
| U.S. Air Force - Langley Air Force Base | Military Facility | 2,551 | 5 | 0.6% | - | - | - |
| Joint Expeditionary Base Little Creek-Fort Story | Military Facility | 2,519 | 6 | 0.6% | 1,606 | 7 | 0.7% |
| City of Norfolk | Municipality | 2,437 | 7 | 0.6% | 1,792 | 5 | 0.8% |
| Norfolk Redevelopment & Housing Authority | Housing Authority | 2,432 | 8 | 0.6% | 1,614 | 6 | 0.7% |
| City of Virginia Beach | Municipality | 1,964 | 9 | 0.5% | 1,164 | 9 | 0.5% |
| Oceana Naval Air Station / Dam Neck | Military Facility | 1,903 | 10 | 0.5% | - | - | - |
| Smithfield Foods | Meat Processor | - | - | - | 3,281 | 2 | 1.5% |
| Sentara Healthcare | Healthcare | - | - | - | 1,076 | 10 | 0.5% |
| Total | | \$ 33,556 | | 8.0% | \$ 21,518 | | 9.7% |

Unaudited – See accompanying independent auditors' report

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

| <u>Employer</u> | <u>Type</u> | 2024 | | | 2015 | | |
|---|-------------------------|------------------------|------|--------------------------------------|------------------------|------|--------------------------------------|
| | | 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% | 64,384 | 1 | 7.1% |
| Huntington Ingalls Industries | Shipbuilding and Repair | 44,000 | 2 | 5.2% | 24,000 | 2 | 2.6% |
| Naval Support Activity/ Naval Medical Center | Military Facility | 12,300 | 3 | 1.4% | | | |
| Sentara Healthcare | Health Care Network | 11,554 | 4 | 1.4% | 20,000 | 4 | 2.2% |
| Norfolk Naval Shipyard | Military Ship Repair | 12,000 | 5 | 1.4% | 10,488 | 7 | 1.2% |
| Virginia Beach Public Schools | Public Schools | 10,675 | 6 | 1.3% | 10,000 | 8 | 1.1% |
| Naval Air Station Oceana-Dam Neck | Military Facility | 10,227 | 7 | 1.2% | 16,408 | 5 | 1.8% |
| Joint Base Langley-Eustis | Military Facility | 9,000 | 8 | 1.1% | 21,332 | 3 | 2.4% |
| Riverside Health System | Health Care Network | 9,000 | 9 | 1.1% | 7,050 | 9 | 0.8% |
| Joint Expeditionary Base Little Creek - Fort Story | Military Facility | 5,020 | 10 | 0.6% | 15,666 | 6 | 1.7% |
| Norfolk City Public Schools | Public Schools | | | | 6,527 | 10 | 0.7% |
| Total | | 205,776 | | 24.2% | 131,471 | | 6.0% |

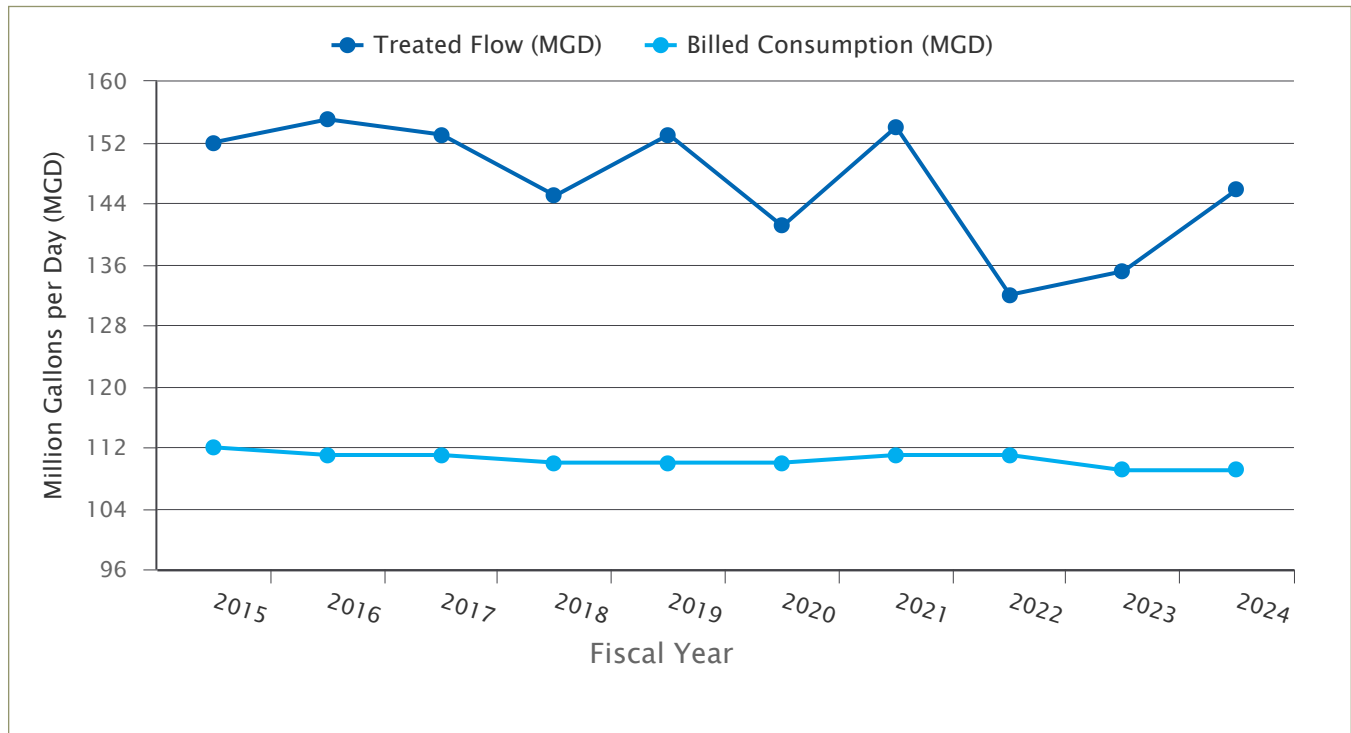
Sources:

Hampton Roads Economic Development Alliance

Hampton Roads PDC

Hampton Roads Business

COMPARISON OF TREATED FLOW TO BILLED FLOW LAST TEN FISCAL YEARS



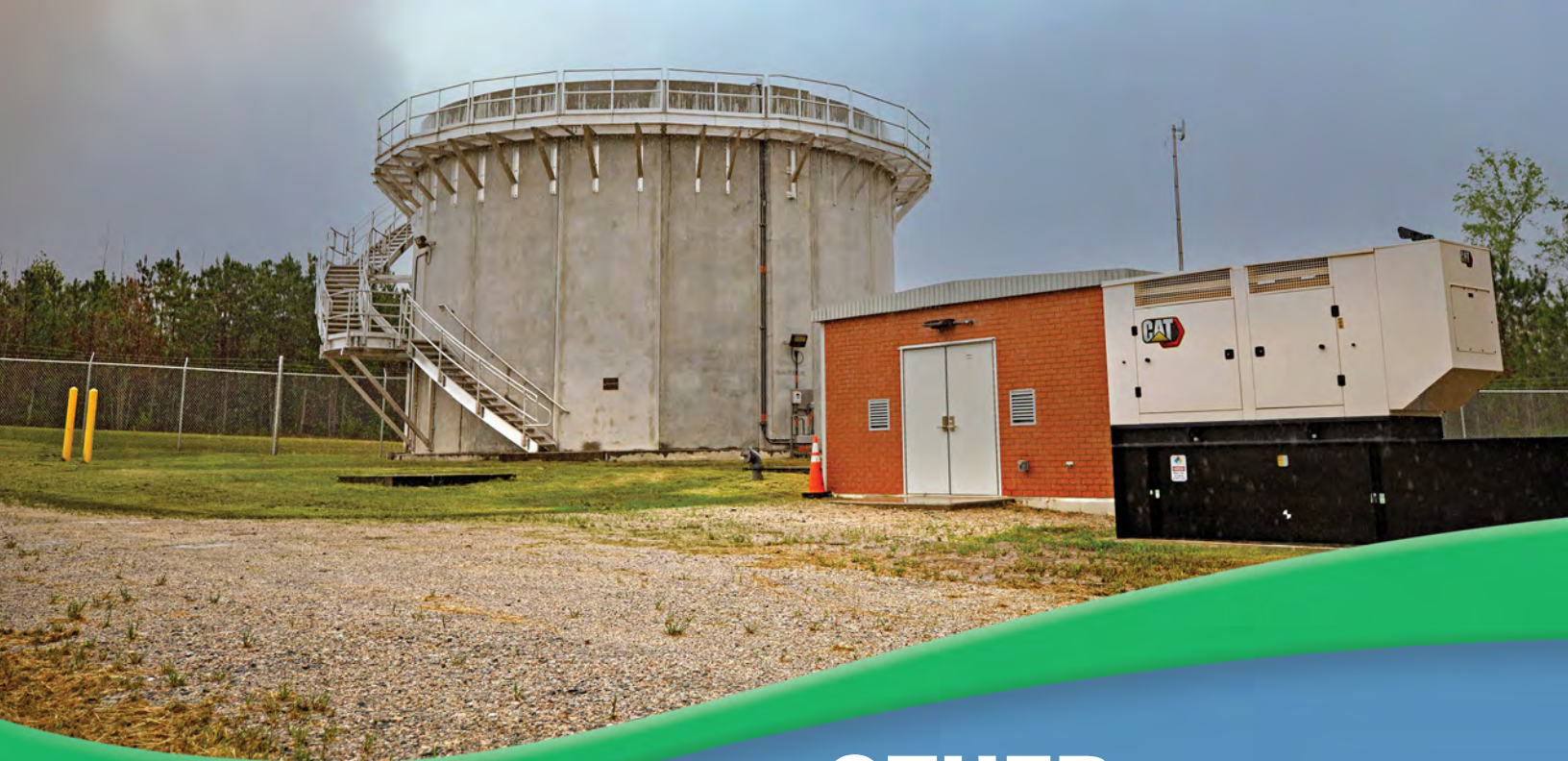
| Year ended June 30, | Treated Flow (MGD) | Billed Consumption (MGD) |
|------------------------|-----------------------|-----------------------------|
| 2015 | 152 | 112 |
| 2016 | 155 | 111 |
| 2017 | 153 | 111 |
| 2018 | 145 | 110 |
| 2019 | 153 | 110 |
| 2020 | 141 | 110 |
| 2021 | 154 | 111 |
| 2022 | 132 | 111 |
| 2023 | 135 | 109 |
| 2024 | 146 | 109 |

Unaudited – See accompanying independent auditors' report

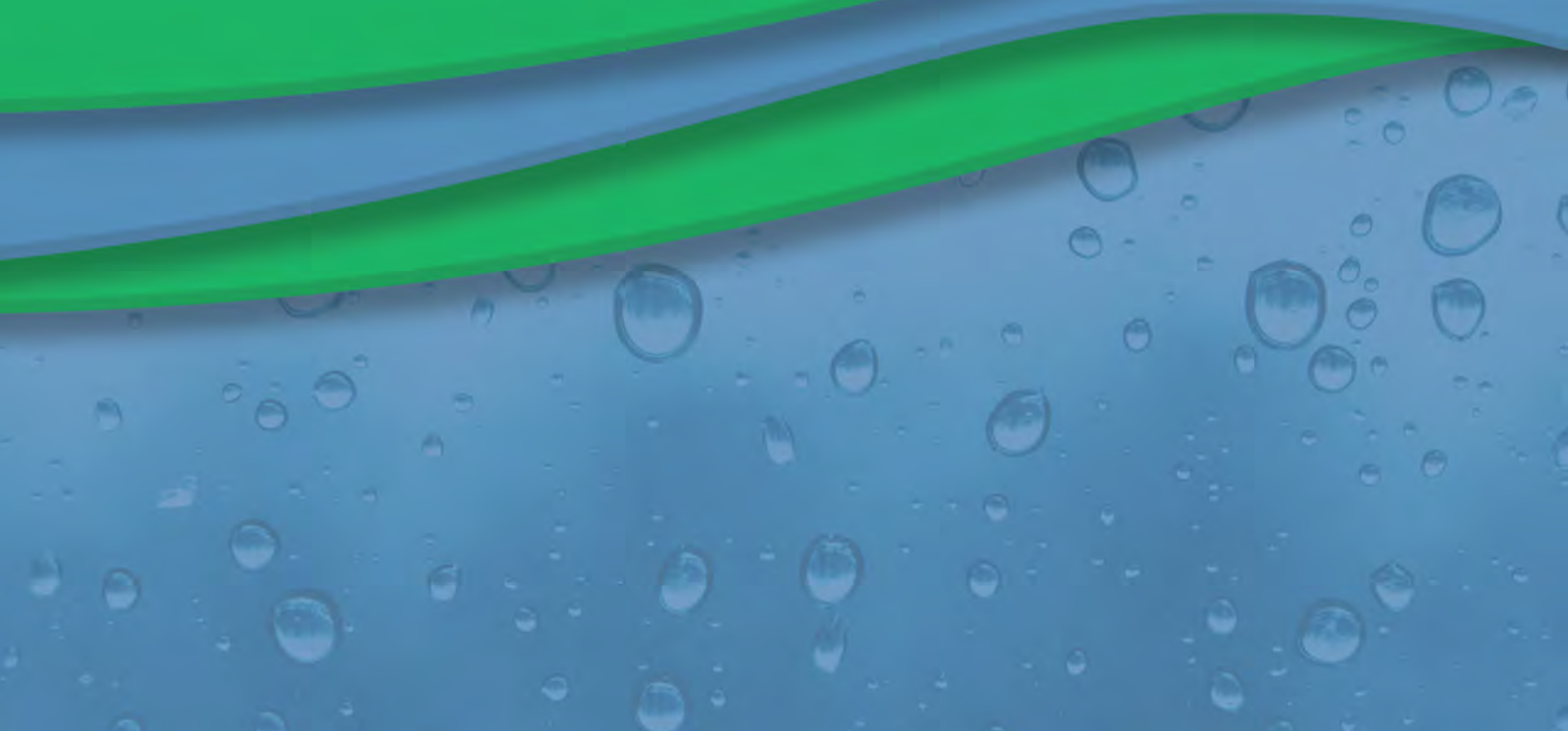
**NUMBER OF EMPLOYEES BY IDENTIFIABLE ACTIVITY
LAST TEN FISCAL YEARS**

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <u>General Management</u> | | | | | | | | | | |
| General Manager | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 |
| Support Staff | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total General Management | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 4 | 4 |
| <u>Communications</u> | | | | | | | | | | |
| Communications | 1 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - |
| Support Staff | 3 | 3 | 2 | 2 | 2 | 2 | 1 | - | - | - |
| Total Communications | 4 | 4 | 3 | 3 | 3 | 3 | 2 | - | - | - |
| <u>Talent Management</u> | | | | | | | | | | |
| Human Resources | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 5 |
| Safety | 5 | 5 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | - |
| Training | 6 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 2 |
| Support Staff | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 |
| Total Talent Management | 21 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 10 |
| <u>Finance</u> | | | | | | | | | | |
| Accounting | 15 | 15 | 15 | 15 | 12 | 12 | 11 | 10 | 10 | 10 |
| Customer Care Center | 64 | 63 | 65 | 71 | 77 | 77 | 77 | 77 | 77 | 69 |
| Procurement | 11 | 11 | 12 | 11 | 10 | 10 | 10 | 10 | 10 | 9 |
| Capital Finance | 9 | 9 | 6 | - | - | - | - | - | - | - |
| Support Staff | 6 | 5 | 4 | 5 | 3 | 3 | 3 | 3 | 2 | 3 |
| Total Finance | 105 | 103 | 102 | 102 | 102 | 102 | 101 | 100 | 99 | 91 |
| <u>Information Technology</u> | | | | | | | | | | |
| Information Technology | 58 | 52 | 49 | 48 | 48 | 43 | 48 | 47 | 45 | 39 |
| Support Staff | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Total Information Technology | 59 | 54 | 51 | 50 | 50 | 45 | 50 | 48 | 46 | 40 |
| <u>Operations</u> | | | | | | | | | | |
| Army Base Treatment Plant | 31 | 31 | 29 | 32 | 34 | 34 | 34 | 34 | 31 | 32 |
| Atlantic Treatment Plant | 36 | 36 | 36 | 37 | 35 | 35 | 35 | 35 | 32 | 33 |
| Boat Harbor Treatment Plant | 33 | 33 | 34 | 32 | 35 | 35 | 35 | 35 | 32 | 33 |
| Chesapeake-Elizabeth Treatment Plant | - | - | 25 | 31 | 32 | 32 | 32 | 32 | 31 | 32 |
| Interceptor System Maintenance | 111 | 111 | 112 | 121 | 119 | 119 | 118 | 117 | 115 | 120 |
| James River Treatment Plant | 24 | 24 | 24 | 24 | 22 | 22 | 22 | 22 | 20 | 21 |
| Maintenance Shops | 125 | 114 | 112 | 85 | 74 | 73 | 71 | 70 | 83 | 86 |
| Nansemond Treatment Plant | 32 | 32 | 30 | 35 | 32 | 32 | 32 | 32 | 30 | 31 |
| Virginia Initiative Plant | 33 | 33 | 33 | 32 | 34 | 34 | 33 | 33 | 30 | 31 |
| Williamsburg Treatment Plant | 30 | 30 | 28 | 28 | 29 | 29 | 29 | 29 | 28 | 29 |
| York River Treatment Plant | 24 | 24 | 23 | 23 | 24 | 24 | 24 | 24 | 22 | 23 |
| Small Communities Division | 33 | 29 | 27 | 23 | 23 | 23 | 23 | 23 | 21 | 17 |
| Technology | 5 | - | - | - | - | - | - | - | - | - |
| Support Staff | 20 | 27 | 20 | 23 | 23 | 23 | 23 | 23 | 24 | 25 |
| Total Operations | 537 | 524 | 533 | 526 | 516 | 515 | 511 | 509 | 499 | 513 |
| <u>Engineering</u> | | | | | | | | | | |
| Design and Construction | 57 | 51 | 43 | 31 | 31 | 30 | 26 | 25 | 25 | 21 |
| Support Staff | 2 | 2 | 2 | 13 | 13 | 13 | 13 | 14 | 14 | 14 |
| Total Engineering | 59 | 53 | 45 | 44 | 44 | 43 | 39 | 39 | 39 | 35 |
| <u>Water Quality</u> | | | | | | | | | | |
| Pretreatment & Pollution Prevention | 28 | 27 | 27 | 27 | 28 | 27 | 27 | 26 | 26 | 25 |
| Technical Services | 39 | 35 | 34 | 36 | 34 | 31 | 31 | 29 | 28 | 25 |
| Laboratory | 52 | 53 | 52 | 50 | 47 | 47 | 46 | 45 | 42 | 40 |
| Support Staff | 4 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| Total Water Quality | 123 | 120 | 119 | 118 | 114 | 110 | 109 | 106 | 102 | 96 |
| Total Employees | 910 | 878 | 872 | 862 | 847 | 836 | 830 | 821 | 803 | 789 |

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.

Contents

Page

Debt Service

96

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, 2025 through June 30, 2060.

Budgetary Information

97

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, 2024

| (in thousands) As of June 30, | Senior Bonds - Excluding Bond Premium and LOC | | |
|----------------------------------|---|------------|--------------|
| | Principal | Interest | Debt Service |
| 2025 | \$ 100,044 | \$ 26,817 | \$ 126,861 |
| 2026 | 51,039 | 25,633 | 76,672 |
| 2027 | 52,266 | 24,292 | 76,558 |
| 2028 | 50,195 | 22,937 | 73,132 |
| 2029 | 51,557 | 24,846 | 76,403 |
| 2030 | 52,860 | 23,363 | 76,223 |
| 2031 | 54,784 | 21,979 | 76,763 |
| 2032 | 51,428 | 20,559 | 71,987 |
| 2033 | 51,287 | 18,859 | 70,146 |
| 2034 | 51,023 | 17,511 | 68,534 |
| 2035 | 51,625 | 16,235 | 67,860 |
| 2036 | 47,325 | 14,717 | 62,042 |
| 2037 | 48,809 | 13,338 | 62,147 |
| 2038 | 49,787 | 12,172 | 61,959 |
| 2039 | 36,251 | 10,760 | 47,011 |
| 2040 | 28,358 | 9,740 | 38,098 |
| 2041 | 20,506 | 9,112 | 29,618 |
| 2042 | 19,980 | 8,714 | 28,694 |
| 2043 | 17,290 | 8,321 | 25,611 |
| 2044 | 14,623 | 7,928 | 22,551 |
| 2045 | 8,753 | 7,665 | 16,418 |
| 2046 | 8,820 | 7,480 | 16,300 |
| 2047 | 6,885 | 5,872 | 12,757 |
| 2048 | 9,893 | 5,437 | 15,330 |
| 2049 | 10,147 | 5,244 | 15,391 |
| 2050 | 14,712 | 5,030 | 19,742 |
| 2051 | 22,894 | 4,734 | 27,628 |
| 2052 | 26,484 | 4,337 | 30,821 |
| 2053 | 30,181 | 3,887 | 34,068 |
| 2054 | 36,032 | 3,376 | 39,408 |
| 2055 | 34,599 | 2,803 | 37,402 |
| 2056 | 34,208 | 2,251 | 36,459 |
| 2057 | 33,152 | 1,703 | 34,855 |
| 2058 | 51,901 | 1,169 | 53,070 |
| 2059 | 42,744 | 652 | 43,396 |
| 2060 | 21,881 | 208 | 22,089 |
| Total | \$ 1,294,323 | \$ 399,681 | \$ 1,694,004 |

Unaudited – See accompanying independent auditors' report

BUDGETARY COMPARISON SCHEDULE June 30, 2024

(in thousands)

(in thousands)

| | Budget | | | Variance Favorable/ (Unfavorable) | Percent |
|--|------------|------------|------------|---|----------|
| | Adopted | Amended | Actual | Amended Budget | Variance |
| OPERATING BUDGET EXPENSES | | | | | |
| General Management | \$ 538 | \$ 639 | \$ 621 | \$ 18 | 2.8% |
| Communications | 600 | 775 | 721 | 54 | 7.0% |
| Finance | 17,365 | 17,952 | 17,065 | 887 | 4.9% |
| Information Technology | 18,642 | 20,800 | 18,320 | 2,480 | 11.9% |
| Talent Management | 3,071 | 3,446 | 3,158 | 288 | 8.4% |
| Operations | 134,937 | 145,341 | 129,602 | 15,739 | 10.8% |
| Engineering | 9,206 | 10,102 | 8,803 | 1,299 | 12.9% |
| Water Quality | 18,299 | 19,357 | 17,949 | 1,408 | 7.3% |
| General | 3,605 | 4,971 | 6,844 | (1,873) | (37.7%) |
| Debt Service - Including COI | 76,750 | 76,750 | 82,555 | (5,805) | (7.6%) |
| TOTAL | 283,013 | 300,133 | 285,638 | \$ 14,495 | 4.8% |
| Transfer to CIP | 145,217 | 145,217 | | | |
| Transfer to Risk Management | 260 | 260 | | | |
| | \$ 428,490 | \$ 445,610 | | | |
| Add: | | | | | |
| Unbudgeted Depreciation and Amortization | | | 57,053 | | |
| Unbudgeted Bad Debt Expense | | | 5,325 | | |
| Capital Improvement Program Items Expensed | | | 23,250 | | |
| Less: | | | | | |
| Capitalized Assets | | | 2,174 | | |
| Debt Service | | | 82,555 | | |
| Capital Distributions to Localities | | | 2,005 | | |
| TOTAL OPERATING EXPENSES | | | \$ 284,532 | | |

Unaudited – See accompanying independent auditors' report

NOTES TO BUDGETARY COMPARISON SCHEDULE JUNE 30, 2024

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 2024 was \$428,490,000 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 amendments 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 the Trust Agreement. 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 three Commissioners. The three 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.

HRSD's Trust Agreement requires the adjusted debt service coverage ratio to be a minimum of 1.2 times annual debt service. The HRSD Commission has a policy of maintaining adjusted debt service coverage ratios of not less than 1.4 times annual debt service. HRSD's operating and capital improvement plans were developed with the intent to maintain coverage ratios in excess of this requirement.

Budget Accounting

The Annual Budget is prepared on a basis of accounting generally 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 and principal payments on outstanding debt are considered an operating expense. The FY 2024 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. Funds for the capital budget are appropriated throughout the fiscal year on a project basis and continue until the purpose of the project has been fulfilled.

**SCHEDULE OF REVENUES, EXPENSES AND
DEBT SERVICE FOR OPERATIONS - ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2024**

(in thousands)

| | Actual | Amended Budget | Variance Favorable/ (Unfavorable) | Budget Variance Percentage |
|---|-------------------|-------------------|---|----------------------------------|
| OPERATING REVENUES | | | | |
| Wastewater Treatment Charges | \$ 422,784 | \$ 411,501 | \$ 11,283 | 3% |
| Miscellaneous | 4,157 | 1,470 | 2,687 | 183% |
| TOTAL OPERATING REVENUES | 426,941 | 412,971 | 13,970 | 1% |
| CURRENT EXPENSES | | | | |
| General Management | 621 | 639 | 18 | 3% |
| Communications | 721 | 775 | 54 | 7% |
| Finance | 17,065 | 17,952 | 887 | 5% |
| Information Technology | 18,320 | 20,800 | 2,480 | 12% |
| Talent Management | 3,158 | 3,446 | 288 | 8% |
| Operations | 129,602 | 145,341 | 15,739 | 11% |
| Engineering | 8,803 | 10,102 | 1,299 | 13% |
| Water Quality | 17,949 | 19,357 | 1,408 | 7% |
| General | 6,844 | 4,971 | (1,873) | (38%) |
| TOTAL CURRENT EXPENSES | 203,083 | 223,383 | 20,300 | 9% |
| EXCESS OF OPERATING REVENUES OVER EXPENSES | 223,858 | 189,588 | 34,270 | 18% |
| NON-OPERATING REVENUES | | | | |
| Wastewater Facility Charge | 7,153 | 6,095 | 1,058 | 17% |
| Interest Income | 13,673 | 3,000 | 10,673 | 356% |
| Bond Interest Subsidy | 1,622 | 1,954 | (332) | (17%) |
| TOTAL NON-OPERATING REVENUES | 22,448 | 11,049 | 11,399 | 103% |
| INCOME BEFORE CAPITAL CONTRIBUTIONS | 246,306 | 200,637 | 45,669 | 23% |
| CAPITAL CONTRIBUTIONS | | | | |
| Other Capital Contributions | 46,425 | - | 46,425 | 100% |
| AMOUNT AVAILABLE FOR DEBT | 292,731 | 200,637 | 92,094 | 46% |
| DEBT SERVICE | | | | |
| Principal and Interest | 81,555 | 76,150 | (5,405) | (7%) |
| Cost of Issuance | 1,000 | 600 | (400) | (67%) |
| TOTAL DEBT SERVICE | 82,555 | 76,750 | (5,805) | (8%) |
| AMOUNT AVAILABLE TO REINVEST | \$ 210,176 | \$ 123,887 | \$ 86,289 | 70% |

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENSES
FOR OPERATIONS - ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2024**

(in thousands)

| | General Management | Communications | Finance | Information Technology | Talent Management | Operations |
|-----------------------|-----------------------|----------------|------------------|---------------------------|----------------------|-------------------|
| Personal Services | \$ 389 | \$ 425 | \$ 7,446 | \$ 6,205 | \$ 1,818 | \$ 41,667 |
| Fringe Benefits | 88 | 136 | 2,901 | 1,973 | 630 | 16,834 |
| Materials & Supplies | 4 | 82 | 76 | 1,539 | 82 | 10,106 |
| Transportation | 12 | 14 | 24 | 13 | 21 | 1,621 |
| Utilities | - | - | 257 | 1,696 | - | 15,388 |
| Chemical Purchases | - | - | - | - | - | 15,500 |
| Contractual Services | 108 | 48 | 6,168 | 5,382 | 419 | 20,204 |
| Major Repairs | - | - | - | 559 | - | 5,763 |
| Capital Assets | - | - | - | 705 | - | 1,469 |
| Miscellaneous Expense | 20 | 16 | 193 | 248 | 188 | 1,050 |
| | <u>\$ 621</u> | <u>\$ 721</u> | <u>\$ 17,065</u> | <u>\$ 18,320</u> | <u>\$ 3,158</u> | <u>\$ 129,602</u> |

Unaudited – See accompanying independent auditors' report

**OBJECTIVE CLASSIFICATION OF DEPARTMENTAL EXPENSES
FOR OPERATIONS - ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2024**

(in thousands)

| | Engineering | Water Quality | General | Total | Percent of Total | Amended Budget | Variance Favorable/ (Unfavorable) |
|-----------------------------------|-----------------|------------------|-----------------|-------------------|---------------------|-------------------|---|
| Personal Services | \$ 5,707 | \$ 9,694 | \$ (1,669) | \$ 71,682 | 25% | \$ 70,450 | \$ (1,232) |
| Fringe Benefits | 1,898 | 3,887 | 149 | 28,496 | 10% | 28,488 | (8) |
| Materials & Supplies | 41 | 1,779 | 19 | 13,728 | 5% | 16,073 | 2,345 |
| Transportation | 34 | 37 | - | 1,776 | 1% | 2,004 | 228 |
| Utilities | - | 1 | 703 | 18,045 | 6% | 16,843 | (1,202) |
| Chemical Purchases | - | - | - | 15,500 | 5% | 17,689 | 2,189 |
| Contractual Services | 885 | 2,060 | 6,983 | 42,257 | 15% | 53,541 | 11,284 |
| Major Repairs | - | 59 | - | 6,381 | 2% | 13,697 | 7,316 |
| Capital Assets | - | - | - | 2,174 | 1% | 1,259 | (915) |
| Miscellaneous Expense | 238 | 432 | 659 | 3,044 | 1% | 3,339 | 295 |
| | <u>\$ 8,803</u> | <u>\$ 17,949</u> | <u>\$ 6,844</u> | <u>\$ 203,083</u> | <u>71%</u> | <u>\$ 223,383</u> | <u>\$ 20,300</u> |
| Debt Service | | | | | | | |
| Principal and Interest | | | | 81,555 | 29% | 76,150 | (5,405) |
| Cost of Issuance | | | | 1,000 | 0% | 600 | (400) |
| Total Debt Service | | | | <u>\$ 82,555</u> | <u>29%</u> | <u>\$ 76,750</u> | <u>\$ (5,805)</u> |
| Total Department and Debt Service | | | | <u>\$ 285,638</u> | <u>100%</u> | <u>\$ 300,133</u> | <u>\$ 14,495</u> |

Unaudited – See accompanying independent auditors' report

**DEPARTMENT SUMMARY OF EXPENSES
ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2024**

(in thousands)

| | Actual | Amended Budget | Variance Favorable/ (Unfavorable) |
|------------------------|---------------|-------------------|---|
| General Management | | | |
| Personal Services | \$ 389 | \$ 373 | \$ (16) |
| Fringe Benefits | 88 | 92 | 4 |
| Materials & Supplies | 4 | 10 | 6 |
| Transportation | 12 | 12 | - |
| Contractual Services | 108 | 121 | 13 |
| Miscellaneous Expense | 20 | 31 | 11 |
| | <u>621</u> | <u>639</u> | <u>18</u> |
| Communications | | | |
| Personal Services | 425 | 401 | (24) |
| Fringe Benefits | 136 | 135 | (1) |
| Materials & Supplies | 82 | 98 | 16 |
| Transportation | 14 | 14 | - |
| Contractual Services | 48 | 123 | 75 |
| Miscellaneous Expense | 16 | 4 | (12) |
| | <u>721</u> | <u>775</u> | <u>54</u> |
| Finance | | | |
| Personal Services | 7,446 | 7,822 | 376 |
| Fringe Benefits | 2,901 | 3,104 | 203 |
| Materials & Supplies | 76 | 103 | 27 |
| Transportation | 24 | 23 | (1) |
| Utilities | 257 | 302 | 45 |
| Contractual Services | 6,168 | 6,285 | 117 |
| Major Repairs | - | 5 | 5 |
| Miscellaneous Expense | 193 | 308 | 115 |
| | <u>17,065</u> | <u>17,952</u> | <u>887</u> |
| Information Technology | | | |
| Personal Services | 6,205 | 6,506 | 301 |
| Fringe Benefits | 1,973 | 2,086 | 113 |
| Materials & Supplies | 1,539 | 1,801 | 262 |
| Transportation | 13 | 23 | 10 |
| Utilities | 1,696 | 1,458 | (238) |
| Contractual Services | 5,382 | 6,767 | 1,385 |
| Major Repairs | 559 | 1,800 | 1,241 |
| Capital Assets | 705 | - | (705) |
| Miscellaneous Expense | 248 | 359 | 111 |
| | <u>18,320</u> | <u>20,800</u> | <u>2,480</u> |

(Continued)

**DEPARTMENT SUMMARY OF EXPENSES
ACTUAL TO BUDGET
FOR THE FISCAL YEAR ENDED JUNE 30, 2024**

(in thousands)

| | Actual | Amended Budget | Variance Favorable/ (Unfavorable) |
|------------------------------------|-------------------|-------------------|---|
| Talent Management | | | |
| Personal Services | \$ 1,818 | \$ 1,942 | \$ 124 |
| Fringe Benefits | 630 | 692 | 62 |
| Materials & Supplies | 82 | 79 | (3) |
| Transportation | 21 | 15 | (6) |
| Contractual Services | 419 | 365 | (54) |
| Miscellaneous Expense | 188 | 353 | 165 |
| | <u>3,158</u> | <u>3,446</u> | <u>288</u> |
| Operations | | | |
| Personal Services | 41,667 | 42,081 | 414 |
| Fringe Benefits | 16,834 | 16,943 | 109 |
| Materials & Supplies | 10,106 | 11,798 | 1,692 |
| Transportation | 1,621 | 1,850 | 229 |
| Utilities | 15,388 | 14,503 | (885) |
| Chemical Purchases | 15,500 | 17,689 | 2,189 |
| Contractual Services | 20,204 | 26,257 | 6,053 |
| Major Repairs | 5,763 | 11,849 | 6,086 |
| Capital Assets | 1,469 | 1,259 | (210) |
| Miscellaneous Expense | 1,050 | 1,112 | 62 |
| | <u>129,602</u> | <u>145,341</u> | <u>15,739</u> |
| Engineering | | | |
| Personal Services | 5,707 | 5,774 | 67 |
| Fringe Benefits | 1,898 | 1,963 | 65 |
| Materials & Supplies | 41 | 35 | (6) |
| Transportation | 34 | 26 | (8) |
| Contractual Services | 885 | 2,070 | 1,185 |
| Miscellaneous Expense | 238 | 234 | (4) |
| | <u>8,803</u> | <u>10,102</u> | <u>1,299</u> |
| Water Quality | | | |
| Personal Services | 9,694 | 9,790 | 96 |
| Fringe Benefits | 3,887 | 3,821 | (66) |
| Materials & Supplies | 1,779 | 2,123 | 344 |
| Transportation | 37 | 41 | 4 |
| Utilities | 1 | 3 | 2 |
| Contractual Services | 2,060 | 2,920 | 860 |
| Major Repairs | 59 | 43 | (16) |
| Miscellaneous Expense | 432 | 616 | 184 |
| | <u>17,949</u> | <u>19,357</u> | <u>1,408</u> |
| General | | | |
| Personal Services | (1,669) | (4,239) | (2,570) |
| Fringe Benefits | 149 | (348) | (497) |
| Materials & Supplies | 19 | 26 | 7 |
| Utilities | 703 | 577 | (126) |
| Contractual Services | 6,983 | 8,633 | 1,650 |
| Miscellaneous Expense | 659 | 322 | (337) |
| | <u>6,844</u> | <u>4,971</u> | <u>(1,873)</u> |
| TOTAL DEPARTMENTAL EXPENSES | <u>\$ 203,083</u> | <u>\$ 223,383</u> | <u>\$ 20,300</u> |

Unaudited – See accompanying independent auditors' report



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Virginia Beach, VA 23455
www.hrsd.com

Printed on recycled paper using environmentally friendly ink.

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #4

6. Financial Policy
Biennial Update

COMMISSION ADOPTED POLICY
Financial Policy



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1.0 PURPOSE AND NEED

Hampton Roads Sanitation District (HRSD) was created in 1940 by the Virginia General Assembly as a political subdivision of the Commonwealth of Virginia and was established as a governmental instrumentality to provide for the public health and welfare. HRSD was created for the specific purpose of abating pollution in the Hampton Roads area of Virginia through the interception of existing wastewater outfalls, the construction of wastewater treatment facilities and the installation of interceptors throughout the service area.

HRSD operates under the direction of the Hampton Roads Sanitation District Commission (the Commission) comprised of eight members appointed by the Governor for staggered terms of four years.

Regulatory requirements to reduce nutrients, hydraulic expansion, aging infrastructure renewals and replacements, and increased treatment capacity are addressed through HRSD's Capital Improvement Program (CIP).

HRSD recognizes that adherence to formal financial policies is critical to sound financial management. This sentiment is echoed by bond rating agencies, investors and the Government Finance Officers Association.

This Financial Policy (Policy) is designed to help protect HRSD's financial resources by:

- a. Promoting sound financial management;
- b. Ensuring the legal and prudent use of HRSD's debt issuance authority; and
- c. Guiding HRSD and its managers in policy, investment and debt issuance decisions.

2.0 DEFINITIONS

2.1 Adjusted Days Cash on Hand. Days Cash on Hand that excludes accrued debt service, the Risk Reserve, the Renewal and Replacement Reserve, and cash set aside for the CIP (i.e., Pay-go).

2.2 Actuarial Determined Contribution (ADC). The annual contribution requirement determined by an actuary for a defined benefit plan.

2.3 Arbitrage. The simultaneous purchase and sale of an asset in order to profit from a difference in the price. It is a trade that profits by exploiting price differences of identical or similar financial instruments in different markets or in

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different forms. For the purposes of this Policy, Arbitrage refers to the difference between the interest paid on the tax-advantaged securities and the interest earned by investing the security proceeds in higher-yielding taxable securities. The IRS Code governs arbitrage on the proceeds of or security for the repayment of tax-advantaged municipal securities.

- 2.4 Asset Allocation.** An investment strategy that attempts to balance risk versus reward by adjusting the percentage of each asset in an investment portfolio according to the investor's risk tolerance, goals and investment time frame.
- 2.5 Balloon Maturity.** As defined in the Trust Agreements, a maturity that contains twenty-five percent (25%) or more of the original principal amount of an issue and that is not required to be amortized by redemption prior to maturity.
- 2.6 Bankers' Acceptance.** A draft or bill or exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill, as well as the issuer.
- 2.7 Basis Swap.** An agreement between two parties to exchange interest payments based on different variable-rate indices, e.g. SIFMA vs. SOFR; a floating-to-floating swap.
- 2.8 Benchmark.** A comparative base for measuring the performance or risk tolerance of an investment portfolio. A benchmark should represent a close correlation to the level of risk and the average duration of the portfolio's investments.
- 2.9 Bond Anticipation Notes.** Notes which are generally repaid from the proceeds of the issuance of long-term indebtedness.
- 2.10 Bond Insurance.** Credit Enhancement provided by a bond insurer that insures the payment of the principal of and interest on one or more maturities of Bonds.
- 2.11 Broker.** Matches buyers and sellers of securities for a commission.
- 2.12 Bullet Maturity.** A maturity within an issue of bonds for which there are no sinking fund payments prior to the stated maturity date.
- 2.13 Call Provisions.** The term of a bond giving the issuer the right to redeem all or a portion of such bond prior to its stated maturity at a specific price, usually at or above par.
- 2.14 Capital Appreciation Bond.** A municipal security on which the interest accruing on an initial principal amount is not paid currently but accrued at a stated

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compounding rate until maturity. At maturity the investor receives a single payment (the “maturity value”) representing both the initial principal amount and the accrued, compounded interest.

- 2.15 Capital Asset.** A unit of property purchased by, constructed by or donated to HRSD that (1) was acquired or produced and has a value of \$20,000 or more and (2) has an economic useful life of a minimum of 60 months. Capital Assets must be capitalized and depreciated for financial statement purposes.
- 2.16 Capital Improvement Program (CIP).** HRSD’s planned program of capital projects (generally, greater than \$100,000), such as property, plant and equipment and related engineering, legal and construction services, and may consist of Capital Assets and Locality Assets.
- 2.17 Capitalized Interest.** A portion of the proceeds of a bond issue which is set aside to pay interest on one or more bond issues for a specific period of time. Interest capitalized for the construction period of the project is typically treated as a capital cost under the IRS Code.
- 2.18 Certificate of Deposit (CD).** A time deposit with a specific maturity evidenced by a certificate. Large-denomination CDs are typically negotiable.
- 2.19 Collateral.** Securities, evidence of deposit or other property, which a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public money.
- 2.20 Commercial Paper (CP).** Short-term, unsecured promissory notes issued by corporations or governments to finance receivables for a maturity specified by the purchaser that ranges from three days to 270 days. Notes are generally sold at a discount and carry credit ratings issued by a Nationally Recognized Statistical Rating Organization (NRSRO).
- 2.21 Competitive Sale.** A sale/auction of securities by an issuer in which underwriters or syndicates of underwriters submit bids to purchase the securities.
- 2.22 Constant Maturity Swap.** An interest rate swap that is predicated upon the shape of the forward implied yield curve whereby counterparties exchange interest rate payments based on an anticipated future interest rate and a variable swap index rate. The interest rate on one leg of the swap is reset periodically but with reference to a market swap rate rather than an index such as SOFR or a substitute. The other leg of the swap is generally a market index, such as SOFR or a substitute.

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- 2.23 Continuing Disclosure.** The principle that accurate and complete information material to an issuer of securities be made available on an ongoing basis. Pursuant to SEC Rule 15c2-12, underwriters of HRSD's bonds are generally obligated to obtain a Continuing Disclosure Agreement (CDA) from HRSD prior to underwriting such bonds.
- 2.24 Corporate Notes.** Unsecured promissory notes issued by corporations to raise capital for a maturity that is longer than 270 days. Corporate Notes are generally sold at a discount and carry credit ratings issued by an NRSRO.
- 2.25 Credit Enhancement.** Credit support purchased by the issuer to raise the credit rating of a debt issue. The most common credit enhancements consist of Bond Insurance, direct or standby Letters of Credit, and Lines of Credit.
- 2.26 Credit Support Annex.** A legal document that regulates credit support (collateral) for derivative transactions.
- 2.27 Days Cash on Hand.** Measured by current and non-current unrestricted cash and investments, plus any restricted cash and investments, if available for general system purposes, divided by Operating Expenses, divided by 365.
- 2.28 Dealer.** Acts as a principal in securities transactions, buying and selling for its own account.
- 2.29 Debt Service Coverage Ratio – GAAP.** Calculated in accordance with HRSD's Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service on Senior Obligations (as defined in the Trust Agreement) [Note-VRA obligations are Senior Obligations but not issued under the Trust Agreement]. In such calculation, funds spent on Locality Assets are considered an expense. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).
- 2.30 Debt Service Coverage Ratio - Adjusted.** Calculated in accordance with HRSD's Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets may be excluded from the calculation of Net Revenues under the circumstances described within the definitions of Net Revenues and Operating Expenses. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).
- 2.31 Debt Service Reserve Fund.** The fund in which money is placed that may be used to pay debt service if revenues available for debt service, are insufficient to pay debt service on HRSD's bonds secured by a Debt Service Reserve Fund as it becomes due and payable.

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- 2.32 Delivery versus Payment.** Delivery of securities with an exchange of money for the securities.
- 2.33 Derivative.** A financial product whose value is derived from some underlying asset value.
- 2.34 Designation Policies.** Outline how an investor's order is filled when a bond's maturity is oversubscribed when there is an underwriting syndicate. The senior managing underwriter and issuer decide how the bonds will be allocated among the syndicate. There are three primary classifications of orders which form the designation policy: Group Net orders; Net Designated orders and Member orders.
- 2.35 Discount.** A bond that is issued for less than its par (or face) value, or a bond currently trading for less than its par value in the secondary market.
- 2.36 Diversification.** A process of investing assets among a variety of security types by sector, maturity and quality rating.
- 2.37 Enabling Act.** HRSD's Enabling Act is Chapter 66 of the Acts of Assembly of Virginia of 1960, as amended.
- 2.38 Encumbrances.** Commitments related to unperformed contracts for goods and services (i.e., purchase orders, contracts and commitments). Encumbrance accounting is utilized to the extent necessary to assure effective budgetary control and accountability and to facilitate effective cash planning and control.
- 2.39 Escrow.** A fund established to hold money pledged and to be used to pay debt service on one or more maturities of HRSD's defeased bonds or other indebtedness.
- 2.40 Federal Agency.** Government sponsored/owned entity created by the U.S. Congress, generally for the purpose of acting as a financial intermediary by borrowing in the marketplace and directing proceeds to specific areas of the economy considered to otherwise have restricted access to credit markets, also referred to as Government Sponsored Enterprises (GSEs). The largest GSEs are Government National Mortgage Association (Ginnie Mae), Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), Federal Home Loan Bank (FHLB), Federal Farm Credit System (FFCS), and Tennessee Valley Authority (TVA).

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- 2.41 Federal Funds Rate.** The rate of interest at which Federal Funds are traded. This rate is currently set by the Federal Reserve through open-market operations.
- 2.42 Federal Funds.** Funds placed in Federal Reserve Banks by depository institutions in excess of current reserve requirements, and frequently loaned or borrowed on an overnight basis between depository institutions.
- 2.43 FINRA.** The Financial Industry Regulatory Authority.
- 2.44 Fitch.** Fitch Ratings is an NRSRO.
- 2.45 Forward Swap.** A swap executed today, the exchange of interest payments on which starts at some future date (the Effective Date), based on rates and terms determined and agreed upon today. On the Effective Date of a Forward swap begin net exchange of swap payments. On the Trade Date of the swap:
- Enter into Forward swap agreement
 - Set terms of the swap
 - Pay commitment fees for swap and bond insurance (if done in conjunction with a synthetic forward refunding of bonds)
- 2.46 Interest Rate Cap.** An option that pays its holder when and if the floating interest rate index is above the pre-determined fixed rate (strike price).
- 2.47 Interest Rate Collar.** The simultaneous purchase and sale of an Interest Rate Cap and an Interest Rate Floor on a floating index.
- 2.48 Interest Rate Floor.** An option that pays its holder when and if the floating interest rate index is below the pre-determined fixed rate (strike price).
- 2.49 Interest Rate Swap.** A contract between two parties, referred to as “counterparties”, to exchange interest rate payments at specified dates in the future. One party under the swap contract normally makes payments based on a fixed rate while the other party makes payments based on a variable (floating) rate.
- 2.50 Internal Controls.** Systematic measures (such as reviews, checks and balances, methods and procedures) instituted by an organization to: conduct its business in an orderly and efficient manner; safeguard its assets and resources; deter and detect errors, fraud, and theft; ensure accuracy and completeness of its accounting data; produce reliable and timely financial and management information; and ensure adherence to its policies and plans. An important

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concept in establishing appropriate internal controls is that the cost of the controls should not exceed their anticipated benefits.

- 2.51 IRS Code.** The Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.
- 2.52 Knock-in Option.** An option the existence of which is conditional upon a pre-set trigger price trading before the option's designated maturity. If the trigger is not touched before maturity, then the option is deemed not to exist.
- 2.53 Letter of Credit.** A bank facility wherein the bank agrees to deliver funds to a third party for the benefit of the account party, upon the presentation of the documents described in the Letter of Credit. A Letter of Credit may be used as Credit Enhancement or a Liquidity Facility for HRSD's indebtedness.
- 2.54 Line of Credit.** A bank facility wherein the bank permits the borrower to access funds at any time, subject to a maximum loan balance. A Line of Credit may also be used as Credit Enhancement or a Liquidity Facility for HRSD's indebtedness.
- 2.55 Liquidity.** The ability of ease with which an asset can be converted into cash without a substantial loss of value. May also refer to unrestricted cash or investments of an issuer.
- 2.56 Liquidity Facility.** A type of bank credit facility wherein the bank agrees to purchase securities, typically variable rate debt with a tender option feature, that cannot be immediately remarketed to investors. The Liquidity Facility provider purchases the securities until they can be remarketed.
- 2.57 Locality Assets.** Assets constructed and paid for by HRSD and subsequently transferred to a locality. A resolution of the HRSD Commission is required to exclude these costs from the calculation of the Operating Expenses for purposes of the calculation of the Debt Service Coverage Ratio – Adjusted.
- 2.58 Management Fee.** The fixed percentage of the gross spread which is paid to the senior managing underwriter for structuring a bond issue.
- 2.59 Market Value.** The price at which a security is trading and could presumably be purchased or sold.
- 2.60 Master Repurchase Agreement.** A written contract covering future transactions between the parties to repurchase/reverse repurchase agreements that establishes each party's rights in the transactions. A master agreement will often specify, among other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller borrower.

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- 2.61 Maturity.** The date upon which the principal or stated value of an investment becomes due and payable.
- 2.62 Members.** Underwriters in a syndicate other than the senior underwriter.
- 2.63 Moody's.** Moody's Investors Service, Inc., is an NRSRO.
- 2.64 Nationally Recognized Statistical Rating Organization (NRSRO).** A credit rating agency registered with the SEC that issues credit ratings that the SEC permits other financial firms to use for certain regulatory purposes. Examples include Moody's, Fitch and S&P.
- 2.65 Negotiated Sale.** A method of selling bonds in which the issuer chooses an underwriter to negotiate terms pursuant to which such underwriter will purchase and market the bonds.
- 2.66 Net Revenues.** All revenues received by HRSD less Operating Expenses.
- 2.67 Nominal Interest Rate.** The interest rate before taking inflation into account. Generally, it is the stated or quoted rate in a loan or deposit agreement.
- 2.68 Normal Cost.** The annual current cost of a member's future retirement benefit.
- 2.69 Operating Expenses.** 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 expenses 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.
- 2.70 Original Issue Discount.** In general, the amount by which the original par amount of a bond or an issue exceeds its public offering price at the time it is originally offered to an investor.
- 2.71 Portfolio.** Collection of securities held by an investor.

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- 2.72 Premium.** The difference between the higher price paid for a fixed-income security and the security's face amount at issue.
- 2.73 Present Value.** The current value of a future cash flow.
- 2.74 Primary Dealer.** A group of government securities dealers who submit daily reports of market activity and positions and monthly financial statements to the Federal Reserve Bank of New York and are subject to its informal oversight. Primary dealers include SEC-registered securities broker-dealers, banks, and a few unregulated firms.
- 2.75 Private Placement.** The placement of an issue of indebtedness directly with one or more qualified or institutional investors.
- 2.76 Prudent Person Rule.** An investment standard outlining the fiduciary responsibilities of public funds invested relating to investment practices.
- 2.77 Rate Lock.** An interest rate hedge that is cash-settled at maturity based on the prevailing level of an agreed upon underlying index. (e.g. the SIFMA 'AAA' scales)
- 2.78 Rate of Return.** The yield obtainable on a security based on its purchase price or its current market price. This may be the amortized yield to maturity on a bond or the current income return.
- 2.79 Rebate.** A requirement imposed by the IRS Code whereby the issuer of tax - exempt bonds must, under certain circumstances, pay the United States Treasury an amount equal to its profit earned from investment of tax-exempt bond proceeds at yields exceeding the tax-exempt borrowing yield. The tax-exempt borrowing rate (or bond yield) is calculated pursuant to the IRS Code..
- 2.80 Repurchase Agreement (RP or REPO).** An agreement under which the holder of securities sells them to an investor with a contract to repurchase the securities at a fixed price on a fixed date. The security "buyer" in effect lends the "seller" money for the period of the agreement, and the terms of the agreement are structured to compensate the buyer for this.
- 2.81 Revenue Bonds.** Bonds issued by HRSD secured by Net Revenues.
- 2.82 Revenue Anticipation Notes.** Notes issued in anticipation of receiving revenues at a future date.

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- 2.83 Safekeeping.** A service to customers rendered by banks for a fee whereby securities and valuables of all types and descriptions are held in the bank's vaults for protection.
- 2.84 Secured Overnight Financing Rate (SOFR).** SOFR is a benchmark interest rate in the taxable bond market. SOFR represents a secured interbank overnight interest rate. SOFR is also available in certain longer terms (e.g., 1-month, 3-month, 6-month).
- 2.85 Securities and Exchange Commission (SEC).** Agency created by Congress to protect investors in securities transactions by administering securities legislation.
- 2.86 Securities Industry and Financial Markets Association Index (SIFMA).** SIFMA is a high-grade market index of 7-day variable rate demand notes that is produced by Municipal Market Data. SIFMA is the benchmark swap floating index in the tax-exempt swap market.
- 2.87 Self-Liquidity.** A term used in connection with variable rate bond financings whereby the issuer agrees to repurchase, with its own capital, bonds that have been tendered but not yet remarketed without procuring a third-party Liquidity Facility. In this instance, the issuer uses its own funds to purchase securities.
- 2.88 Selling Group.** A group of securities dealers that participate in an offering not as underwriters but rather receiving securities less a selling concession from the managing underwriter for distribution at the public offering price.
- 2.89 Serial Bond.** A bond that matures on one date with no mandatory sinking fund redemptions that is part of an issue containing multiple Serial Bonds.
- 2.90 S&P.** S&P Global Ratings is an NRSRO.
- 2.91 Stripped Security.** Securities for which the rights to receive principal and interest payments have been decoupled and separately sold.
- 2.92 Swaption.** An option on a forward swap. The purchaser of a swaption (counterparty) has the right, but not the obligation, to compel the swaption seller (usually an issuer) to enter into a pre-negotiated swap agreement at some future date (exercise date). In exchange for this right, the swaption purchaser pays the swaption seller a premium amount. This amount can be paid up front, at some future date, or as an annuity over time.
- 2.93 Syndicate Policies.** The contractual obligations placed on the underwriting group relating to distribution, price limitations and market transactions.

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- 2.94 Term Bond.** A Bond whose principal is amortized based on sinking fund redemption.
- 2.95 Termination Payment Risk.** The risk that an issuer is forced to liquidate a swap when it owes a termination payment to its counterparty.
- 2.96 Treasury Bills.** A non-interest bearing discount security issued at a discount by the U.S. Treasury to finance the national debt. Most Treasury Bills are issued to mature in three months, six months, or one year.
- 2.97 Treasury Bonds.** Long-term interest-bearing U.S. Treasury securities issued as direct obligations of the U.S. Government and having initial maturities of more than 10 years.
- 2.98 Treasury Inflation Protected Security (TIPS).** The principal of a TIPS increases with inflation and decreases with deflation, as measured by the Consumer Price Index. When a TIPS matures, the adjusted principal or original principal, whichever is greater, is paid.
- 2.99 Treasury Notes.** Medium-term interest-bearing U.S. Treasury securities issued as direct obligations of the U.S. Government and having initial maturities from one to 10 years.
- 2.100 Trust Agreement.** The Trust Agreement, dated October 1, 2011, as amended and restated as of March 1, 2016, and further amended and restated as of July 1, 2024, as amended and supplemented from time to time, between HRSD and a trustee. The Trust Agreement secures HRSD's Senior Revenue Bonds and VRA Obligations.
- 2.101 Underwriter.** A dealer that purchases new issues of municipal securities from the Issuer and resells them to investors.
- 2.102 Underwriter's Discount.** The difference between the price at which bonds are bought by the Underwriter from the Issuer and the price at which they are offered to investors.
- 2.103 Underwriter's Expenses.** Compensates senior managers for out-of-pocket expenses, generally including underwriter's counsel DTC charges, travel, syndicate expenses, dealer fees, communication expenses, CUSIP fees and postage. Underwriter's expenses are subject to negotiation and can vary from transaction to transaction.
- 2.104 Uniform Net Capital Rule.** SEC requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of

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indebtedness to liquid capital, also called net capital rule or net capital ratio. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities, one reason new public issues are often spread among members of underwriting syndicates. Liquid capital includes cash and assets easily converted into cash.

2.105 Variable Rate Debt (VRD). An interest rate on a security that changes at intervals according to an index or a formula or other standard of measurement or that changes in connection with a mandatory tender and remarketing or where interest is not set to maturity.

2.106 VRA Master Financing Agreement. The Amended and Restated Master Financing Agreement, as amended and supplemented from time to time, between Virginia Resources Authority and HRSD.

2.107 Water Infrastructure Finance and Innovation Act (WIFIA). - The Water Infrastructure Finance and Innovation Act of 2014, as amended (WIFIA), established the WIFIA, a federal credit program administered by EPA for eligible water and wastewater infrastructure projects. The WIFIA program provides long-term, low-cost supplemental loans for up to 49% of the total cost of an eligible project.

2.108 WIFIA Agreements. Means the WIFIA Master Agreement, dated as of September 28, 2020, as amended and restated, between the EPA and HRSD, and each of the loan agreements entered into thereunder from time to time

2.109 Yield. The rate of annual income return on an investment, expressed as a percentage. Income/current yield is obtained by dividing the current dollar income by the current market price for the security. Net yield or yield to maturity is the current income yield minus any premium above par or plus any discount from par in purchase price, with the adjustment spread over the period from the date of purchase to the date of maturity of the bond. In addition, Yield may, for certain purposes, be calculated in accordance with the IRS Code.

3.0 GUIDING PRINCIPLES

3.1 RESERVES. An important metric of HRSD's financial flexibility is its liquidity position as measured by available cash and investments. Setting a minimum liquidity position for known risks and obligations helps provide funding in emergency or other unexpected situations as they arise. The reserves represent an earmarking, for budgetary and policy purposes, of cash and liquid investments (current and non-current). These reserves are in addition to existing reserves, if any, required by the Trust Agreement, if any, and any funds earmarked for debt service, capital improvements or budget carryover amounts.

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3.1.1 General Reserve. HRSD will maintain sufficient liquidity to ensure adequate working capital for HRSD's operations. These funds are intended to help HRSD cover unanticipated expenses that cannot be paid from the current fiscal year's budgetary resources. Liquidity will be determined in terms of Days Cash on Hand and Adjusted Days Cash on Hand. Adjusted Days Cash on Hand at the end of a fiscal year should not be less than 270 days or greater than 365 days.

In the event the cash and investments are used to provide funding for unanticipated expenses and the Adjusted Days Cash on Hand falls below the 270-day minimum, the General Manager/Chief Executive Officer will submit a plan in writing to the Commission that will restore it to the policy level over a period not to exceed five fiscal years.

3.1.2 Risk Reserve. HRSD maintains a self-insurance program for some of its risk exposures.

A. HRSD will maintain a Risk Reserve as of the end of the fiscal year of not less than 25 percent of projected annual self-insured claims costs for known, retained risks.

B. In the event the Risk Reserve is used and reduced to a level that is less than the 25 percent minimum to provide funding of unanticipated self-insured expenses, the General Manager/Chief Executive Officer will submit a plan in writing to the Commission that will restore the reserve to the policy level over a period not to exceed five fiscal years.

3.1.3 Renewal and Replacement Reserve. As permitted by the Enabling Act, HRSD's Trust Agreement establishes a reserve to finance "anticipated renewals, replacements, extensions, additions and extraordinary repairs" to wastewater system the extent needed. Under the Trust Agreement, the funding of the Renewal and Replacement Reserve is discretionary.

3.2 BUDGETARY PRINCIPLES.

3.2.1 Long-Range Financial Forecast. Each fiscal year the General Manager/Chief Executive Officer will submit to the Commission a 20-year financial forecast of anticipated annual revenues and expenses and capital improvements.

This forecast will serve as the foundation for the General Manager/Chief Executive Officer's annual budget proposal to the Commission.

3.2.2 Annual Operating Budget. The Commission is required to adopt an operating budget no later than June 30 each fiscal year.

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The Commission will adopt an operating budget that:

- A. Is structurally balanced whereby current budgetary revenues are sufficient to meet current budgetary expenses (those that are ongoing in nature);
- B. Considers the affordability of rates within the context of local wealth and income indicators;
- C. Is at a level necessary to ensure the adequate maintenance and operations of the wastewater system and ensure material compliance with all applicable regulatory requirements;
- D. Is sufficient to meet Actuarially Determined Contribution (ADC) requirements for HRSD's defined benefit plans;
- E. Includes amounts necessary to maintain the required reserves in amounts at least equal to the minimum balances as defined in this Policy;
- F. Enables HRSD to meet the debt service coverage targets defined in this Policy and the covenants contained in its Trust Agreement; and
- G. Annually funds at least 15 percent of its capital improvement program in cash.

3.2.3 Capital Improvement Program (CIP). Each year HRSD will adopt a ten-year CIP that identifies capital projects to be undertaken over the next ten years to meet projected needs for regulatory compliance, infrastructure renewal, expansion, replacing old or new facilities, principally Capital Assets and Locality Assets.

3.2.4 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.

- A. The operating budget is adopted by department, with budgetary controls exercised administratively by management at the division level. The General Manager/Chief Executive Officer is authorized to transfer funds among divisions without further approval by the Commission. Appropriations lapse at the end of the fiscal year. Valid, outstanding encumbrances (those for which performance under a contract is expected in the next year) are re-appropriated without further approval by the Commission and become part of the subsequent fiscal year's budget.

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B. The capital budget is a ten-year plan of CIP spending based on estimated project costs and prioritized schedules. Prior to beginning a capital project, however, the Commission must appropriate funding for the total project cost. If a project is expected to exceed its approved budget, staff must seek additional funding from the Commission through a supplemental appropriation.

3.3 DEBT SERVICE COVERAGE. HRSD will comply with the debt service coverage ratio included in its Trust Agreement. Beyond the Trust Agreement's minimum, HRSD will adopt operating and capital budgets that it projects will enable HRSD to maintain a Debt Service Coverage Ratio – Adjusted at a minimum of 1.4 times.

3.4 DERIVATIVES. The Derivatives section outlined herein is intended to provide general direction regarding the use, procurement and execution of Derivatives by HRSD. The Policy is intended to relate to the use of various interest rate hedging techniques, including the contractual exchange of different fixed and variable rate payment streams through interest rate swap agreements. The Policy is not intended to relate to other derivative products, such as hedges for fuel or other commodities that HRSD may consider for hedging exposures other than to interest rates.

3.5 ACCOUNTING AND FINANCIAL REPORTING. HRSD will prepare its annual financial reports in accordance with accounting principles generally accepted in the United States of America (GAAP). For purposes of calculating debt service coverage, as permitted by the Trust Agreement, HRSD may present, or cause to be presented, certain calculations that reflect certain adjustments that are not in accordance with GAAP.

HRSD will maintain a comprehensive framework of internal controls, and policies and procedures.

Over a period of not more than every five years, HRSD under the direction of the Finance Committee of the Commission will seek proposals from qualified firms of certified public accountants, including its current auditors if their performance has been satisfactory, to perform an annual audit of HRSD's financial statements. If such an evaluation does not result in a change in auditors, HRSD may require that auditor senior engagement staff, such as engagement partners and senior managers, be rotated to provide a fresh perspective.

3.6 RISK MANAGEMENT. HRSD will make diligent efforts to protect and preserve HRSD assets through a risk management program that generally transfers risk (purchase insurance) for high severity-low frequency exposures and retains risk (self-insurance) for low severity-high frequency exposures.

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3.7 INTERNAL AUDIT. HRSD or its designee will conduct internal audits using a risk-based approach. Such audit efforts will be approved and directed by the Finance Committee of the Commission.

4.0 PROCEDURES

4.1 DEBT MANAGEMENT. HRSD's debt management program represents an effort to smooth out the fiscal impact of major capital investments while aligning the costs of utility service with the payment of those who will use the service.

The proceeds of long-term indebtedness will not be used to finance current operations or expenses for normal maintenance. Long-term indebtedness will be structured such that financial obligations do not exceed the aggregate expected useful lives of the assets financed. Short-term borrowing may be utilized for the temporary funding of operational cash flow deficits or interim construction requirements.

The most appropriate instrument for a proposed sale of debt shall be determined considering financing needs and expected market conditions at the time of sale.

4.1.1 Permitted Debt by Type.

- A. **Lease Financing.** HRSD may use leasing for facilities or equipment if (1) it can be demonstrated that this is the most cost effective or appropriate way to secure financing, or (2) on small projects that do not warrant entry into the bond market.
- B. **Installment Purchases or Conditional Sale Contracts.** HRSD may utilize installment purchase or conditional sale contracts having an original term of one year or less.
- C. **Bond Anticipation Notes, Commercial Paper (CP) and Lines of Credit.** Each are typically short duration debt instruments issued to provide interim financing and, due to their short duration, expose HRSD to interest rate risk and market access risk upon renewal. Bond Anticipation Notes, Commercial Paper and Lines of Credit may be used
 - (1) to provide interim financing designed to reduce the frequency of bond sales, thereby reducing cost of issuance;
 - (2) during times of high interest rates and when the expectation is that interest rates will stabilize in the future or trend downward;

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- (3) when market conditions are such that a Bond Anticipation Notes, Commercial Paper or Lines of Credit may be more readily received in the market than long-term debt; or
- (4) as an interim financing tool during the construction period for a project(s) until the project(s) is placed into service and / or HRSD sells long-term debt or is reimbursed through a clean water revolving loan or WIFIA loan.

- D. **Long-Term Revenue Bonds.** HRSD may issue long-term revenue bonds to fund Capital Assets and Locality Assets.
- E. **Revenue Anticipation Notes.** May be issued to meet HRSD's operational cash flow needs.

4.1.2 Guidelines on Debt Issuance.

- A. **Trust Agreement, VRA Master Financing Agreement and WIFIA Agreements.** HRSD will abide by the covenants contained in its Trust Agreement, the VRA Master Financing Agreement and the WIFIA Agreements. As a matter of prudence, HRSD considers its financial covenants to be minimum requirements to be exceeded.
- B. **Authorization.** Prior to the issuance of debt, the Commission will pass a resolution authorizing the financing arrangements and setting appropriate limits and parameters for the anticipated financing.
- C. **Lowest Cost Financing.** Generally, HRSD intends to pursue the lowest cost of financing within the parameters of this Policy, the Trust Agreement, the VRA Master Financing Agreement, the WIFIA Agreements and the Enabling Act.
- D. **Cash Financing from Available Sources.** HRSD intends to contribute at least 15 percent of each year's CIP in cash.
- E. **Project Costs Prior to Debt Issue.** If project costs are expected to be incurred prior to the issuance of debt, the Commission will pass a resolution documenting its intent to be reimbursed from bond proceeds. As a general practice, the Commission will consider and adopt a reimbursement resolution in connection with the adoption of each fiscal year's CIP.
- F. **Variable Rate Debt and Bond Anticipation Notes.** VRD and Bond Anticipation Notes carry inherent interest rate risk. Such securities typically have interest rates lower than fixed rate securities and offer the

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potential for lower debt service costs over the term of the bond issue without regard to the cost of Credit Enhancement. HRSD will consider using VRD when it improves matching of assets and liabilities, potentially lowers debt service costs, adds flexibility to HRSD's capital structure, or diversifies HRSD's investor base.

(1) Debt service on VRD will be budgeted at a conservative rate based on historical fluctuations in interest activity and current market assumptions. Before issuing VRD, HRSD will determine how potential volatility in the debt service will be funded and consider the impact of various interest rate scenarios on its financial position and on various debt ratios.

(2) HRSD does not intend to issue VRD in excess of 15 percent of its total debt portfolio. This limitation, however does not apply to debt issued as part of an interim financing program (e.g. Bond Anticipation Notes, Lines of Credit, Commercial Paper) nor does it apply to hedged variable rate debt. In addition, if HRSD can demonstrate historical and projected sufficiency of offsetting principal and interest coverage from short-term and variable rate investment assets held in unrestricted, non-operating accounts, these assets may be netted from variable rate liabilities.

- G. **Derivative Products.** HRSD recognizes that the use of Derivatives may aid HRSD in reducing the cost of capital and gaining flexibility in structuring its debt portfolio. The use of such products is governed by the Derivatives section of this policy.
- H. **Method of Sale.** HRSD will select a method of sale it believes is the most appropriate and economically advantageous considering financial, market, transaction-specific and HRSD-related conditions. Acceptable methods of sale may include a competitive sale, a negotiated sale, a private placement, or a direct institutional investor purchase.
- I. **Duration of Debt.** HRSD will not issue debt for a period longer than the weighted useful lives of the projects being financed. Pursuant to the Enabling Act, HRSD cannot issue debt with a final maturity more than 40 years from its issuance date. Factors to be considered when determining the final maturity of debt include the average life of the assets being financed, relative level of interest rates, and HRSD's overall outstanding debt service.

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4.1.3 Debt Structure

- A. **Interest Rate Structure.** HRSD may make use of both VRD and fixed-rate debt in accordance with limitations set forth in this Policy.
- B. **Tax Status.** Tax-exempt debt will be used whenever possible and appropriate.
- C. **Maturity Structure.** HRSD's long-term debt may include serial and term bonds. Other maturity structures may also be considered when demonstrated to be advantageous to HRSD.
- D. **Coupon Structure.** Fixed-rate debt may include par, discount, and premium bonds, and may include current interest bonds and Capital Appreciation Bonds.
- E. **Call Provisions.** To preserve flexibility and refinancing opportunities, HRSD debt shall generally be issued with Call Provisions. HRSD may consider Call Provisions that are shorter than traditional or non-callable debt or debt with yield maintenance features when warranted by market conditions. For each transaction, various call option scenarios will be evaluated so that the most beneficial can be utilized.
- F. **Credit Enhancement.** HRSD may use Credit Enhancement when it is economically advantageous to do so.
 - (1) When considering the use of Bond Insurance, HRSD will perform a maturity-by-maturity analysis. The economic feasibility of Bond Insurance will be analyzed based on the value of insurance as priced to the earlier of each maturity's first applicable call date and the maturity date of such maturity. Bond Insurance will be used when present value savings result or when such use permits HRSD to incorporate less restrictive covenants into a transaction which results in greater flexibility or lower user charges. HRSD may insure bonds in maturities that are borderline from an economic feasibility standpoint if warranted by other factors (e.g., use of insurance to attract investor interest where certain bond maturities might otherwise be difficult to sell).
 - (2) When considering the use of a Letter of Credit or Line of Credit as a Credit Enhancement or Liquidity Facility, HRSD will examine the economic feasibility thereof by considering the trading spread, the cost of the Letter of Credit or Liquidity Facility and the effect on interest costs of HRSD's debt.

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- G. **Debt Service Reserve Fund.** The Trust Agreement permits, but does not require, the funding of a Debt Service Reserve Fund.
- H. **Capitalized Interest.** Capitalized Interest increases the amount of debt that is issued. If HRSD capitalizes interest on one or more series of indebtedness, it will do so only for the period prior to the project being financed is expected to be placed in service.
- I. **Refinancing of Debt.** HRSD will refinance debt from time to time to achieve debt service savings as market opportunities arise or if it determines that it is beneficial for another compelling business reason. To refinance debt, HRSD may use a range of financing tools including but not limited to tax-exempt current refundings, taxable advance refundings, and forward delivery bonds. HRSD's Chief Financial Officer will determine the appropriate financing tool based on tax law, market conditions and the risks associated with each tool (in addition to present value savings and refunding efficiency considerations).
- When a refinancing is undertaken to achieve debt service savings, HRSD will target minimum net present value savings of three percent of the amount refinanced. As set forth above, HRSD may refinance debt that does not meet this threshold for another compelling business reason. In addition, HRSD may consider the efficiency of a proposed refinancing transaction and any changes to the callability of debt after such refinancing. In any refinancing of long-term debt, HRSD maintains a bias to not extend maturities.
- J. **Escrow Structuring.** HRSD will utilize the least costly securities available in structuring refinancing escrows. Unless State and Local Government Securities (SLGS) are used, a certificate will be provided by a third-party agent stating that the securities were procured through an arms-length, competitive bid process (in the case of open market securities), and that the price paid for the securities was reasonable within federal guidelines. Under no circumstances will an underwriter, agent or financial advisor sell escrow securities to HRSD from its own account. HRSD will consult with Bond Counsel in connection with any defeasance escrows.
- K. **Hiring of Professionals.** All key members of the financial advisory team including underwriter, financial advisor, bond counsel, and other professionals will be selected in a manner consistent with HRSD's procurement policy for professional services.

4.1.4 Underwriter Selection.

- A. **Senior Manager Selection.** HRSD will select a senior manager for any proposed negotiated sale. The selection criteria will include but not be limited to the following:
- (1) The firm's ability and experience in managing transactions similar to that contemplated by HRSD;
 - (2) Prior knowledge and experience with HRSD;
 - (3) The firm's ability and willingness to risk capital and demonstration of the firm's capital availability and underwriting of unsold balances;
 - (4) Quality and experience of personnel assigned to HRSD's engagement;
 - (5) Financing plan presented; and
 - (6) Cost, including underwriting fees and anticipated pricing.
- B. **Co-Manager Selection.** Co-managers may be selected on the same basis as the senior manager with the exception of underwriting fees, which are determined by the senior manager. In addition to their qualifications, co-managers appointed to specific transactions will be a function of transaction size and the necessity to ensure maximum distribution of HRSD's bonds.
- C. **Selling Groups.** HRSD may establish selling groups in certain transactions. To the extent that selling groups are used, HRSD may make appointments to selling groups, as the transaction dictates.
- D. **Underwriter's Counsel.** In any negotiated sale of HRSD debt in which the underwriter desires legal counsel, the appointment will be made by the senior managing underwriter.
- E. **Underwriter's Discount.** HRSD will evaluate the proposed underwriter's discount against other proposals and/or comparable issues in the market. Any additional expenses payable to an underwriter and paid out of the Underwriter's Discount must be substantiated.
- F. **Evaluation of Underwriter Performance.** HRSD will evaluate each bond sale after completion to assess the following: costs of issuance including underwriters' compensation, pricing of the bonds in terms of the overall interest cost and on a maturity-by-maturity basis, the distribution of bonds

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and sales credits, and the use of capital by the underwriters to take down bonds.

- G. **Syndicate Policies.** For each negotiated transaction, HRSD will establish syndicate policies that will describe the priority of orders and designation policies governing the upcoming sale.
- H. **Designation Policies.** To encourage the pre-marketing efforts of each member of the underwriting team, orders for HRSD's bonds will be net designated, unless otherwise expressly stated. HRSD shall require the senior manager to:
- (1) Fairly allocate bonds to other managers and the selling group.
 - (2) Comply with the Municipal Securities Rulemaking Board's (MSRB) regulations governing the priority of orders and allocations.
 - (3) Within 10 working business days after the sale date, submit to HRSD a detail of orders, allocations and other relevant information pertaining to HRSD's sale.

4.1.5 Consultants.

- A. **Financial Advisor.** HRSD will select a financial advisor (or advisors) to assist in its debt issuance and debt administration processes. Such financial advisor(s) will be an Independent Registered Municipal Advisor within the meaning of the Securities Exchange Act of 1934, as amended. Selection of HRSD's financial advisor(s) will be based on, but not limited to, the following criteria:
- (1) Experience in providing consulting services to entities similar to HRSD;
 - (2) Knowledge and experience in structuring and analyzing bond issues;
 - (3) Experience and reputation of assigned personnel; and
 - (4) Fees and expenses.
- B. **Bond Counsel.** HRSD debt will include a written opinion by legal counsel affirming that HRSD is authorized to issue the proposed debt, that HRSD has met all legal requirements necessary for issuance, and, if the interest on the debt to be issued is to be exempt under the IRS Code, a determination consistent therewith. The approving opinion and other

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documents relating to the issuance of debt will be prepared by counsel with extensive experience in public finance and tax issues. The Bond Counsel will be selected by HRSD.

- C. **Conflicts of Interest.** HRSD requires that its consultants and advisors provide objective advice and analysis, maintain the confidentiality of HRSD financial plans, and be free from any conflict of interest. In no case will HRSD's financial advisor be permitted to underwrite any portion of HRSD's bond issues, whether sold competitively or negotiated.
- D. **Disclosure by Financing Team Members.** All financing team members will be required to provide full and complete disclosure, relative to agreements with other financing team members and outside parties. The extent of disclosure may vary depending on the nature of the transaction. However, in general terms, no agreements will be permitted which could compromise the firm's ability to provide independent advice which is solely in HRSD's best interest or which could reasonably be perceived as a conflict of interest.

4.1.6 Communication and Disclosure.

- A. **Rating Agencies [NRSROs].** HRSD seeks to maintain the highest credit ratings it believes appropriate for its debt without compromising the delivery of its basic core services. The Chief Financial Officer will manage relationships with the rating analysts assigned to HRSD by the NRSROs.
- B. **Investors, Bond Insurers, Liquidity Providers.** The Chief Financial Officer will manage relationships using both informal and formal methods to disseminate information.
- C. **Continuing Disclosure.** HRSD recognizes that ongoing disclosure is imperative to maintaining the high credit quality of its debt and its reputation in the credit markets. HRSD will comply with all of its contractual obligations and applicable law and will meet such disclosure requirements in a timely and thorough manner.
- D. **Arbitrage Compliance.** HRSD will maintain a system of record keeping and reporting in order to comply with the Arbitrage Rebate Compliance Requirements of the IRS Code.
- E. **Post-Issuance Compliance Procedures.** Separate from this policy, HRSD will maintain and follow post-issuance compliance procedures. Such procedures will include provisions regarding continuing disclosure and arbitrage and private use compliance, among others.

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4.2 DERIVATIVES.

4.2.1 Approach and Objectives. Interest Rate Swaps and options (swaps) are Derivatives that can help HRSD meet important financial objectives. Properly used, these instruments can increase HRSD's financial flexibility, provide opportunities for interest rate savings or enhanced investment yields, and help HRSD manage its balance sheet through better matching of assets and liabilities.

A. **Specific Objectives for Using Interest Rate Swaps.** HRSD may consider the use of specific Interest Rate Swaps if they meet one or more of the benefits previously described in this Policy or if they:

- (1) Result in an expected lower net borrowing cost than traditional debt alternatives;
- (2) Result in an improved capital structure (e.g., altered pattern of debt service payments or to create variable rate exposure) or better asset/liability matching;
- (3) Cap, limit, or hedge HRSD's exposure to changes in interest rates on a particular financial transaction; or
- (4) Provide a specific benefit not otherwise available.
- (5) Swaps must not be speculative or create unreasonable risk. Each swap will be reviewed on a case-by-case basis to determine whether or not the level of risk is appropriate for HRSD. Examples of swaps that HRSD considers speculative, and which create unreasonable risk include, without limitation:
 - Basis Swaps;
 - Constant Maturity Swaps;
 - Knock-in Options on Swaps;
 - Interest Rate Swaps that including a floating index multiplier greater than 1.0 (e.g., three times SIFMA); and
 - Interest Rate Swaps that are not associated with a specific bond issue.
- (6) HRSD prefers Swaps that meet the the effectiveness criteria for Interest Rate Swaps as defined by the Governmental Accounting Standards Board in Statement #53: Accounting and Financial Reporting for Derivative Instruments as amended by Statement #64.

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B. Prohibited Interest Rate Swap Features. HRSD will not use Interest Rate Swaps that:

- (1) Are speculative or create extraordinary leverage or risk;
- (2) Lack adequate liquidity to terminate without incurring a significant bid/ask spread;
- (3) Provide insufficient price transparency to allow reasonable valuation; or
- (4) Are not reasonably uniform to the risk evaluation criteria by this Policy.

C. Legal Authority. As stated in Section 29 of HRSD's Enabling Act, as amended by the Virginia General Assembly on March 11, 2008,

"With respect to contracts concerning interest rates, currency, cash flow and other basis, the District may enter into any contract that the Commission determines to be necessary or appropriate to place any obligation or investment of the District, as represented by bonds or the investment of their proceeds, in whole or in part, on the interest rate, cash flow or other basis desired by the Commission. Such contracts may include, without limitation, contracts commonly known as interest rate swap agreements, rate locks, forward purchase agreements and futures or contracts providing for payments based on levels of, or changes in, interest rates. Such contracts or arrangements may be entered into by the District in connection with, or incidental to, entering into or maintaining any (i) agreement that secures bonds or (ii) investment, or contract providing for investment, otherwise authorized by law. These contracts and arrangements may contain such payment, security, default, remedy, and other terms and conditions as determined by the Commission, after giving due consideration to the creditworthiness of the counterparty or other obligated party, including any rating by any nationally recognized rating agency."

All Derivative contracts require Commission approval prior to execution.

D. Permitted Instruments. HRSD may utilize the following financial products on a current or forward basis, after identifying the objective(s) to be realized and assessing the attendant risks.

- (1) Interest Rate Swaps, including fixed and floating rate swaps.

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- (2) Options, including Swaptions, Interest Rate Caps, Interest Rate Floors, and Interest Rate Collars.

HRSD prefers Interest Rate Swaps that have strong price transparency and which are of a type referred to as “plain vanilla,” e.g., a fixed to floating rate SIFMA -based or SOFR-based Interest Rate Swap.

Interest Rate Swaps will be subject to the legal provisions set forth in HRSD’s Trust Agreement, applicable debt documents, and statutory requirements.

- E. **Procedure for Submission and Execution.** HRSD may consider Interest Rate Swaps that are either presented as proposals or that are developed by HRSD in consultation with its swap advisor and legal counsel. HRSD will give detailed consideration only to proposals that HRSD, in its sole discretion, believes will offer the projected savings or other benefits and will have the ability to meet one or more of the objectives outlined herein.

- (1) When feasible, Interest Rate Swaps should be competitively procured either under a competitive sealed bid or competitive negotiation (e.g., initiated via RFP). On a product-by-product basis, HRSD will have authority to negotiate the procurement of financial instruments that have customized or specific attributes designed for HRSD.
- (2) For both competitive and negotiated procurements, the execution of any Interest Rate Swap transaction will be subject to receipt of a fairness opinion from HRSD’s swap advisor, finding that the terms and conditions of the swap reflect a fair market value of such transaction as of the date and time of its execution.
- (3) The execution of all Interest Rate Swaps will be subject to receipt of an opinion from a law firm with extensive experience in public finance and tax issues that the contract is a legal, valid and binding obligation of HRSD that complies with applicable law and has no adverse effect on the tax status of any related bonds.

- F. **Interest Rate Swap Analysis and Participant Requirements.** In connection with any Interest Rate Swap, HRSD, its swap advisor and legal counsel will review the proposed transaction and outline considerations associated with the transaction. Such a review will include the following:

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- (1) The identification of the proposed benefit and potential risks, which will include, but not necessarily be limited to, those risks outlined in this Policy;
- (2) Analysis of potential savings and stress testing of the proposed transaction;
- (3) Fixed versus variable rate, basis and Interest Rate Swap exposure;
- (4) To the extent HRSD deems relevant, any rating reports or criteria regarding Interest Rate Swaps by rating agencies; and
- (5) Legal constraints.

G. **Interest Rate Swap Risks.** In reviewing proposed or possible Interest Rate Swaps, HRSD will consider at a minimum each of the following types of risks, as applicable:

- (1) **Counterparty Risk.** The risk of a payment default on an Interest Rate Swap by a counterparty.
- (2) **Termination Risk.** The risk that an Interest Rate Swap has a negative value and HRSD owes a “breakage” fee if the contract has to be terminated.
- (3) **Tax Risk.** A mismatch between changes in the rate or price on HRSD’s underlying debt and the Interest Rate Swap caused by a reduction or elimination in the benefits of the tax exemption for municipal bonds, e.g., a tax cut that results in an increase in the ratio of tax-exempt to taxable yields.
- (4) **Basis Risk.** A mismatch between the rate on HRSD’s underlying debt and the rate paid under the Interest Rate Swap (for example, an issue of tax-exempt Variable Rate Debt that bears interest at a variable rate equal to the weekly remarketing rate approximated by SIFMA while HRSD receives 67% of SOFR under the swap).
- (5) **Liquidity/Remarketing Risk.** The risk that HRSD cannot secure a cost-effective renewal of a Letter or Line of Credit or suffers a failed remarketing with respect to its Variable Rate Debt.
- (6) **Rollover Risk.** The risk that the maturity of an Interest Rate Swap does not match maturity of the related debt or asset. In no case should the maturity of the Interest Rate Swap be longer than the maturity of the related debt or asset.

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H. **Counterparty Risk Assessment.** HRSD will only enter into an Interest Rate Swap with highly rated financial institutions. Credit criteria for financial institutions are as follows:

- (1) The institutions' long-term, unsecured and unsubordinated obligations are rated at the time of execution of the Interest Rate Swap by at least two rating agencies at least "A2" by Moody's or "A" by S&P; or
- (2) The institutions' obligations under the Interest Rate Swap and the Credit Support Annex are unconditionally guaranteed by a bank or non-bank financial institution the long-term, unsecured and unsubordinated obligations of which are rated at the time of execution of the swap by at least two credit agencies at least "A2" by Moody's or "A" by S&P or "A" by Fitch.

In the event of downgrade of an Interest Rate Swap counterparty below the minimal rating standard set forth above, the counterparty will be required to:

- a. Provide a substitute guarantor or assign the swap contract to an acceptable counterparty meeting the rating criteria, or
- b. Provide collateral as described in the Collateral section of this Policy.

I. **Benefit Expectation.** Financial transactions using Interest Rate Swaps or other Derivatives related to a debt issue should generate greater projected debt service savings and/or additional financial flexibility than a traditional debt alternative. Such analysis will include, where applicable, the consideration of the probability (based on historical interest rate indices, where applicable, or other accepted analytic techniques) of the realization of savings for the Derivative structure. The savings/flexibility analysis is intended to reflect the complexity and risk of derivative financial instruments and should include a risk adjustment for other factors. For example, if the underlying debt is callable and the Interest Rate Swap is not, then the analysis should include a risk adjustment for this factor.

In determining any benefit in implementing an Interest Rate Swap, the cost of remarketing, in addition to the cost of credit enhancement or liquidity fees, will be added to the projected variable rate. Such a calculation should consider the trading performance of comparable indebtedness and any trading premium resulting from a specific form of

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credit enhancement or liquidity and/or any impact related to broader industry trends.

- J. **Hedging Derivatives.** When utilizing a Derivative to cap, limit or hedge HRSD's exposure to changes in interest rates, HRSD will evaluate various interest rate scenarios and the estimated impact on projected wastewater rates.
- K. **Legal and Contractual Requirements.** HRSD will use standard International Swap and Derivatives Association, Inc. swap documentation, including the Schedule to the Master Agreement and a Credit Support Annex, and related protocols. HRSD may use additional documentation if the product is proprietary or HRSD deems in its sole discretion that such documentation is otherwise in its interest. The Interest Rate Swap agreement between HRSD and each counterparty will include payment, term, security, collateral, default, remedy, termination, and other terms, conditions, provisions and safeguards as HRSD, in consultation with its swap advisor and legal counsel, deems necessary or desirable.
- L. **Legal Terms of Swaps.** Terms and conditions of any Interest Rate Swap agreement will be negotiated by HRSD and its swap advisor in the best interests of HRSD. Swap documentation and terms should include the following:
- (1) Downgrade provisions triggering termination based on HRSD's credit rating will in no event be less advantageous than those permitting termination based on a downgrade of the counterparty.
 - (2) Governing law for swaps will be New York law to the extent permitted by law, but should reflect that HRSD's authorization of the related agreement is governed by Virginia law.
 - (3) The specified debt related to credit events in any swap agreement should be narrowly drafted and refers only to specific debt.
 - (4) Collateral thresholds will be set on a sliding scale reflective of credit ratings (see Collateral Section).
 - (5) Eligible collateral will be as set forth in the Collateral Section.
 - (6) Termination value will be established by "market quotation" methodology, which involves the solicitation of quotations from unrelated brokers regarding the valuation of the swaps.

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- M. **Notional Amount.** HRSD will limit the aggregate notional amount of derivatives to an amount not to exceed 20 percent of aggregate outstanding debt.

To the extent that HRSD is party to multiple derivatives contracts at any given time, HRSD will seek to diversify its counterparty credit risk by limiting its credit exposure to any single counterparty.

- N. **Final Maturity.** The final maturity of any Interest Rate Swap will not extend beyond the earlier of the final maturity date of HRSD's related debt and the expiration date of any Letter of Credit or Liquidity Facility on the related bonds unless HRSD has the right to cancel the swap agreement without cost on such expiration date.

- O. **Termination Provisions.** Interest Rate Swaps will contain provisions granting HRSD the right to optionally terminate an Interest Rate Swap at any time over its term. Such a provision will be required even if the termination is at market. In general, exercising the right to terminate an agreement should produce a benefit to HRSD, either through the receipt of a payment from a termination or, if the termination payment is made by HRSD, in conjunction with the conversion of the related indebtedness to a more beneficial interest rate mode or mitigates a risk to HRSD, as will be determined by HRSD in its sole discretion.

Any termination payment will be established by a "market quotation" methodology, unless HRSD deems an alternate methodology to be appropriate. HRSD's Chief Financial Officer will provide a written report to the Commission with respect to any termination, including the reason(s) why the swap was terminated.

- P. **Collateral.** As part of any swap, HRSD will require collateralization or other forms of credit enhancement to secure any or all swap payment obligations. As appropriate, HRSD, in consultation with its swap advisor and legal counsel, will require collateral or other credit enhancement to be posted by each swap counterparty as follows:

- (1) Each counterparty to HRSD will be required to post collateral if the long-term credit rating of the counterparty or its guarantor falls below the requirements outlined in the Counterparty Risk Assessment section of this Policy. Additional collateral for further decreases in credit ratings of a counterparty will be posted by the counterparty in accordance with the provisions contained in the related Collateral Support Annex. Threshold amounts for collateral posting will be determined by HRSD on a case-by-case basis.

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- (2) In determining maximum uncollateralized exposure, HRSD will consider financial exposure that it may have to the same corporate entities through other forms of financial dealings, such as commercial paper investments.
- (3) Collateral will be deposited with a third-party trustee, or as mutually agreed upon between HRSD and the counterparty.
- (4) A list of acceptable securities that may be posted as collateral and the valuation of such collateral will be determined and mutually agreed upon during negotiation of the swap agreement with each swap counterparty. A complete list of acceptable securities and valuation percentages is included in the Acceptable Collateral section of the Policy.
- (5) The market value of the collateral will be determined on at least a weekly basis, or more frequently if HRSD determines it is in its best interest given the specific collateral.

Q. **Ongoing Management.** HRSD will seek to maximize the benefits and minimize the risks it carries by actively managing its Interest Rate Swap program. This will entail frequent monitoring of market conditions for emergent opportunities and risks. Active management may require modification of existing positions including, for example:

- Early full or partial termination;
- Shortening or lengthening the term of Interest Rate Swaps; or
- Sale or purchase of options.

Legal modification to an existing swap will require approval from the Commission. In modifying any swap, HRSD will fulfill all terms of this Policy and refer to the original procurement and execution procedures outlined in this Policy.

R. **Ongoing Reporting Requirements.** HRSD will take steps to ensure that there is full and complete disclosure of all Swaps to the Commission, to Rating Agencies and to EMMA. HRSD will also present a summary description of its swaps in its disclosure documents.

HRSD will provide a written report regarding the status of all Swap agreements to the Commission at least on a semi-annual basis and will include the following:

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- (1) A description of all outstanding swap agreements, including, if and when applicable, bond series, type of Swap, rates paid and received by HRSD, total notional amount, average life of each swap agreement, remaining term of each Swap agreement and covenant compliance;
- (2) Highlights of all material changes to swap agreements or new swap agreements entered into by HRSD since the last report;
- (3) The credit rating of each Swap counterparty and credit enhancer insuring swap payments, if any;
- (4) A summary of Swap agreements that were terminated or that have expired;
- (5) A mark-to-market valuation of swap agreements and the source of the valuation, which HRSD may use for financial reporting purposes; and
- (6) A summary of Collateral postings.

S. Acceptable Collateral.

| <u>Security</u> | Collateral Requirement | |
|--|-------------------------------------|--|
| | <u>Valuation Percentage*</u> | <u>Example: \$ Value Based on \$1.0 Million</u> |
| Cash | 100% | \$1.0 million |
| (x) Negotiable debt obligations issued by the U.S. Treasury Department having a remaining maturity of: | | |
| • one year or less | 98% | \$1.02 million |
| • greater than one year | 95% | \$1.05 million |

*To calculate the dollar amount required to satisfy the collateral requirement, divide the collateral requirement by the valuation percentage shown above.

T. Conformance with Dodd-Frank Act. It is the intent of HRSD to conform to the requirements relating to legislation and regulations for over-the-counter derivatives transactions under Title VII of the Dodd-Frank Wall Street Transparency and Accountability Act of 2010, as amended from time to time, and the regulations promulgated thereunder (herein collectively referred to as Dodd-Frank). It is the policy of HRSD that (i)

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each swap advisor engaged or to be engaged by HRSD will function as the designated qualified investment representative of HRSD (Designated Qualified Independent Representative or QIR); (ii) each swap advisor agree to meet and meets the requirements specified in the Commodity Futures Trading Commission Regulation 23.450(b)(1) or any successor regulation thereto (hereinafter referred to as the QIR Regulation); (iii) each swap advisor provide a written certification to HRSD to the effect that such swap advisor agrees to meet and meets the requirements specified in the QIR Regulation; (iv) HRSD monitor the performance of each swap advisor consistent with the requirements specified in the QIR regulation; (v) HRSD exercise independent judgment in consultation with its swap advisor in evaluating all recommendations, if any presented by any counterparty with respect to transactions authorized pursuant to this Financial Policy; (vi) HRSD rely on the advice of its swap advisor with respect to transactions authorized pursuant to this Financial Policy and not rely on recommendations, if any, presented by any counterparty with respect to transactions authorized pursuant to this Financial Policy; and (vii) HRSD comply with all recordkeeping reporting and certification requirements for end-users as applicable under the Commodity Exchange Act.

4.3 INVESTMENT

4.3.1 Ethics and Conflicts of Interest. The Chief Financial Officer and other employees involved in the investment process will comply with the Code of Virginia Section 2.2-3100 et seq., the State and Local Government Conflict of Interests Act (the "Conflict of Interests Act").

A. Specifically, no officer or employee will:

- (1) Solicit or accept any money, loan, gift, favor, service, or business or professional opportunity that reasonably tends to influence him in the performance of his official duties;
- (2) Solicit or accept any business or professional opportunity when he knows there is a reasonable likelihood that the opportunity is being afforded to influence him in the performance of his official duties; or
- (3) Violate any of the provision of the Conflict of Interests Act.

B. All employees involved in the investment process will refrain from personal business activity that could conflict with the proper execution and management of the investment program, or that could impair their ability to make impartial decisions.

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- C. All employees involved in the investment process will disclose in writing to the Chief Financial Officer and the General Manager/Chief Executive Officer any material interest in financial institutions with which they conduct business. They will further disclose in writing any personal financial or investment positions that could be related to the performance of the investment portfolio.
- D. All employees involved in the investment process will refrain from undertaking personal investment transactions with the same individual with whom business is conducted on behalf of HRSD.

4.3.2 Operating Funds

- A. **Scope.** Except for funds maintained in trust for retirement and health and welfare benefits for employees and/or retirees, this Policy applies to all HRSD's cash and investments (the Investment Portfolio). The Policy will apply to such money from the time of receipt until the time the money leaves HRSD's accounts. Although these assets may be pooled for investment purposes, they may be segregated as necessary for accounting and budgetary reporting purposes.
- B. **Objectives.**
 - (1) All investments will be in compliance with the Code of Virginia Sections 2.2-4400 et seq. (the Virginia Security of Public Deposits Act) and 2.2-4500 et seq. (the Investment of Public Funds Act) and the Trust Agreements.
 - (2) The cash management and investment activities of HRSD will be conducted in a manner that is consistent with applicable law and prevailing prudent business practices that may be applied by other public organizations of similar size and financial resources.
 - (3) The Investment Portfolio will be managed to accomplish the following fundamental goals:
 - a. **Safety of Principal.** The single most important objective of the investment program is the preservation of principal of those funds within the Investment Portfolio.
 - b. **Maintenance of Liquidity.** The Investment Portfolio will be always managed with sufficient Liquidity to meet all daily and seasonal needs, to fund special projects and other operational requirements that are either known or which

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might reasonably be anticipated, and to provide adequate Self-Liquidity, if applicable.

- c. **Maximizing Return.** The Investment Portfolio will be managed to maximize the return on investments subject to the safety and liquidity objectives above.

- C. **Standard of Prudence.** Public funds held and invested by HRSD are held for the benefit of its ratepayers, and any investment of such funds will be made solely in the interest of the ratepayers and with the care, skill, prudence, and diligence under the circumstances then prevailing that a person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

The Chief Financial Officer and other HRSD employees acting in accordance with written procedures, including this Policy and exercising due diligence will be relieved of personal responsibility for an individual security's performance, provided that deviations from expectations are reported in a timely fashion to the Commission.

- D. **General Account Structure.** In order to meet HRSD's general objectives, the Investment Portfolio is divided into three major investment strategies: an Operating Liquidity Strategy, a Total Return Strategy and a Capital Investment Strategy.

- (1) The **Operating Liquidity Strategy** consists of funds that are expected to provide for HRSD's day-to-day disbursement and operational needs. As such, Liquidity is the emphasis in this strategy. This strategy will be funded to meet all known operating needs. Selection of investment maturities will be consistent with the cash requirements of HRSD in order to minimize the forced sale of securities prior to maturity. It is expected that a portion of the Operating Liquidity Strategy will be invested in highly liquid funds such as money market funds, overnight repurchase agreements, bank deposit accounts, or other short-term investment vehicles. Funds invested pursuant to this strategy may be utilized to provide Self-Liquidity on debt financings.

- (2) The **Total Return Strategy** consists of operating funds that are not expected to be a major source of HRSD's day-to-day disbursement requirements and operational needs. The Total Return Strategy may therefore be invested in longer-term securities in order to generate an investment return, which, over time, is higher than the total return of the Operating Liquidity Strategy. Funds invested

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pursuant to this strategy may be utilized to provide Self-Liquidity on debt financings.

- (3) The **Capital Investment Strategy** is the source for capital improvement disbursements. The strategy will consist of unspent debt proceeds and unspent HRSD cash contributions to its CIP. It is anticipated that investments will be made in the Capital Investment Strategy with maturity dates matching the anticipated expenditures or invested in highly liquid funds such as money market funds, overnight repurchase agreements, bank deposits or other short-term investment vehicles.

E. **Authorized Investments.** Under the Trust Agreement, the Chief Financial Officer may invest in such of the following securities that are in compliance with the Investment of Public Funds Act (Code of Virginia Section 2.2-4500 et seq.), the Government Non-Arbitrage Investment Act (Code of Virginia Section 2.2-4700 et seq.) and any successor statutes as from time to time amended. The Chief Financial Officer, however, may impose additional requirements and restrictions in order to ensure that HRSD's goals are met.

- (1) **U.S. Treasury Obligations.** Treasury Bills, Treasury Notes and Treasury Bonds, and any other obligation or security issued by or backed by the full faith and credit of the United States of America. TIPS are also permitted, provided HRSD carefully reviews the related risks. The final maturity will not exceed a period of five years from the time of purchase.
- (2) **Federal Agency Obligation.** Bonds, notes and other obligations of Federal Agencies, provided that such investments must be rated in one of the two highest rating categories by at least one NRSRO and or the have the same rating as those of U.S. Treasury obligations. The final maturity will not exceed a period of five years from the time of purchase.
- (3) **Municipal Obligations.** Bonds, notes and other general obligation indebtedness, upon which there is no default, with a rating of at least "AA" from S&P and "Aa" from Moody's, maturing within five years of the date of purchase, and otherwise meeting the requirements of Code of Virginia Section 2.2-4501. However, HRSD is prohibited from purchasing its own debt for the purpose of investing its Operating Funds. Please see the *Self-Liquidity* section of this policy for important information related to Self-Liquidity and HRSD's purchase of its own debt.

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- (4) **Commercial Paper.** Commercial Paper issued by domestic corporations (corporations organized and operating under the laws of the United States or any state thereof) provided that the issuing corporation, or its guarantor, has a short-term debt rating of no less than "A-1" (or its equivalent) from at least two of the NRSROs.
- (5) **Bankers' Acceptances.** Issued by domestic banks or a federally chartered office of a foreign bank, which are eligible for purchase by the Federal Reserve System with a maturity of 180 days or less. The issuing corporation, or its guarantor, must have a short-term debt rating of no less than "A-1" (or its equivalent) from at least two of the NRSROs.
- (6) **Corporate Notes.** Corporate Notes that have received at least two of the following ratings: at least "Aa" by Moody's, at least "AA" by S&P, or at least AA by Fitch. The final maturity will not exceed a period of five years from the time of purchase.
- (7) **Negotiable Certificates of Deposit and Bank Deposit Notes.** Negotiable CDs and negotiable bank deposit notes of domestic banks and domestic offices of foreign banks for maturities of one year or less with at least two of the following ratings: at least "A-1" by S&P, at least P-1 by Moody's, or at least F-1 by Fitch; for maturities over one year with at least two of the following ratings: at least "AA" by S&P, at least "Aa" by Moody's, or at least AA by Fitch,. The final maturity may not exceed a period of five years from the time of purchase.
- (8) **Money Market Mutual Funds (Open-Ended Investment Funds).** Shares in open-end, no-load investment funds provided such funds are registered under the Federal Investment Company Act of 1940, provided that the fund is rated "AAAm" or the equivalent by an NRSRO. The mutual fund must comply with the diversification, quality and maturity requirements of SEC Rule 2(a)-7, or any successor rule, provided the investments by such funds are restricted to investments otherwise permitted by the Code of Virginia for political sub-divisions.
- (9) **Local Government Investment Pool.** A specialized fund pursuant to Code of Virginia Section 2.2-4000 et seq. designed to offer a convenient, liquid, and cost-effective investment vehicle for public entities. The Fund is administered by the Treasury Board of the Commonwealth of Virginia.

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- (10) **State Non-Arbitrage Pool Fund.** The pooled investment vehicle established for the investment of bond proceeds under the Government Non-Arbitrage Investment Act (Virginia Code Section 2.2-4700 et seq.).
- (11) **Repurchase Agreements.** In overnight, term and open repurchase agreements provided that the following conditions are met:
- a. The contract is fully secured by deliverable U.S. Treasury Bills, Bonds or Notes or Federal Agency obligations as described in paragraph 1 and 2 above (with a maximum maturity of five years), having a market value at all times of at least 102 percent of the amount of the contract;
 - b. A Master Repurchase Agreement or specific written Repurchase Agreement governs the transaction;
 - c. The securities are free and clear of any lien and held by an independent third-party custodian acting solely as agent for HRSD, provided such third party is not the seller under the Repurchase Agreement;
 - d. A perfected first security interest under the Uniform Commercial Code in accordance with book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities is created for the sole benefit of HRSD;
 - e. For Repurchase Agreements with terms to maturity of greater than one day, HRSD will value the collateral securities daily and require that if additional collateral is required then that collateral must be delivered within one business day (if a collateral deficiency is not corrected within this time frame, the collateral securities will be liquidated); and
 - f. The counterparty is a:
 - (1) Primary government securities dealer that reports daily to the Federal Reserve Bank of New York; or
 - (2) A bank, savings and loan association, or diversified securities broker-dealer having at least \$5 billion in

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assets and \$500 million in capital and subject to regulation of capital standards by any state or federal regulatory agency; and

- (3) The counterparty meets the following criteria: A long-term credit rating of at least 'AA' or the equivalent from an NRSRO; has been in operation for at least five years; is reputable among market participants.
- (12) **Collateralized Bank Deposits.** CDs and other evidence of deposit as permitted by Section 2.2.4400 et seq. of the Code of Virginia.
- (13) **U.S. Dollar Denominated Supra Sovereign Agency Bonds.** Bonds and other obligations issued, guaranteed or assumed by the International Bank for Reconstruction and Development, by the Asian Development Bank or by the African Development Bank, provided that the obligation is rated by an NRSRO no less than the higher of "AA" and the long-term rating on U.S. Treasury obligations.
- (14) **Virginia Investment Pool Trust Fund (VIP) Stable NAV Liquidity Pool.** This pool supports the cash management needs of municipalities, other governmental agencies and political subdivisions in Virginia that must manage investments conservatively. The objective of the fund is to obtain a competitive market yield on available financial assets consistent with the constraints imposed by the safety objectives, cash flow considerations and the laws of the Commonwealth of Virginia that govern the placement of public funds while facilitating daily liquidity and the maintenance of a stable Net Asset Value, with the price of shares in the portfolio targeted to maintain a value of \$1.00. The fund is governed by the Board of Trustees of the VIP.
- (15) **VIP 1-3 Year High-Quality Bond Fund.** This fund is a fixed income investment portfolio designed to provide another pooled investment alternative to those Participants that have excess funds and that have an investment horizon greater than that of money market instruments, typically one year or longer. The investment objective is to:
 - a. Exceed the return of the Bank of America Merrill Lynch One-to Three-Year U.S. Corporate & Government Index over three-year periods

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b. Preserve capital

The VIP 1-3 Year High Quality Bond Fund will generally invest in securities with greater potential returns and risk than those offered by money market type instruments. The fund is governed by the Board of Trustees of the VIP.

- E. **Portfolio Diversification.** The Investment Portfolio will be diversified by security type and institution. The maximum percentage of the portfolio permitted in each eligible security is as follows:

| <u>Permitted Investment</u> | <u>Sector Limit</u> | <u>Issuer Limit</u> |
|---------------------------------------|---------------------|---------------------|
| Treasury Bonds, Notes and Bills | 100% | 100% |
| Federal Agency Obligations | 100% | 35% |
| Municipal Obligations | 15% | 5% |
| Commercial Paper | 25% | 5% |
| Bankers' Acceptances | 25% | 5% |
| Corporate Notes | 25% | 3% |
| Negotiable CDs and Bank Deposit Notes | 25% | 3% |

| <u>Permitted Investment</u> | <u>Sector Limit</u> | <u>Issuer Limit</u> |
|-------------------------------------|---------------------|---------------------|
| Money Market Mutual Funds | 100% | 100% |
| LGIP | 100% | 100% |
| SNAP Fund (bond proceeds only) | 100% | 100% |
| Repurchase Agreements | 35% | 35% |
| Collateralized Bank Deposits | 100% | 100% |
| Supra Sovereign Agency Bonds | 15% | 10% |
| VIP Stable NAV Liquidity Pool | 100% | 100% |
| VIP 1-3 Year High-Quality Bond Fund | 100% | 100% |

The Sector Limit and Issuer Limit will be applied to the total Investment Portfolio value at the date of acquisition of a particular investment.

- F. **Maximum Maturity.** Maintenance of adequate Liquidity to meet the cash flow needs of HRSD is essential. Accordingly, to the extent possible, the investment portfolio will be structured in a manner that ensures sufficient cash is available to meet anticipated Liquidity needs. Whenever practical, selection of investment maturities will be consistent with the known cash requirements of HRSD in order to minimize the forced sale of securities prior to maturity. For the purposes of the Investment Policy:

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- (1) The Funds Invested under the **Operating Liquidity Strategy** will be invested in short-term investments maturing in 12 months or less. Because of the difficulties inherent in accurately forecasting all cash flow requirements, at least 25 percent of the funds invested under this strategy will be continuously invested in readily available funds such as bank deposit accounts, money market funds and overnight repurchase agreements and at least 75 percent of this strategy will be invested in securities with maturities less than 180 days.
 - (2) The Funds Invested in pursuant to **Total Return Strategy** will be invested in permitted investments with a stated maturity of not more than five years from the date of purchase. To manage volatility, the Chief Financial Officer will from time-to-time determine an investment duration target which will not exceed three years and which will be comparable to the selected performance standards as identified under the Performance Standards section of this Policy.
 - (3) The Funds invested under the **Capital Investment Strategy** will be invested in compliance with the specific requirements of the Trust Agreements. However, in no case will bond proceeds, or funds set aside for capital projects, be invested in securities with a term to maturity that exceeds the expected disbursement date of such money.
 - (4) Accounts credited to Debt Service Reserve funds with longer term investment horizons may be invested in securities exceeding five years, provided that such investments will mature no later than the first call date for the related bonds.
- G. **Security Downgrades.** If any security held in the Investment Portfolio is downgraded below "AA" or equivalent rating by any NRSRO, the security will be sold within 180 days of such downgrade.
- H. **Self-Liquidity.** In the event that HRSD determines to provide Self-Liquidity for any issuance of CP, VRDs, or related indebtedness, funds invested under the Operating Liquidity Strategy and the Total Return Strategy may be used to support such obligations, if necessary, provided that HRSD will not be legally obligated to pledge such funds for such purpose. The investments identified to provide Self-Liquidity coverage will be sufficient to meet the quality, volatility, liquidity, and maturity guidelines of the NRSRO's then providing ratings on HRSD's debt obligations. If needed, HRSD is permitted to purchase its own debt on a temporary basis or for the retirement of the debt. Such purchase will not be limited to the

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sector and issuer diversification limits as set forth in the Portfolio Diversification section of this policy or the maximum maturity requirement as set forth in the Capital Investment Strategy section of this Policy.

- I. **Investment of Bond Proceeds.** HRSD intends to comply with all applicable sections of the Internal Revenue Code as it relates to Arbitrage Rebate and the investment of bond proceeds. All investment records will be maintained to ensure compliance with all regulations.
- J. **Collateralization of Bank Deposits.** All bank deposits of HRSD should be considered Public Deposits as defined by Code of Virginia Security for Public Deposits Act (Section 2.2-4400 et seq.) and all deposits must be made with Qualified Public Depositories within the meaning of such law.
- K. **Selection of Broker/Dealers.** All broker/dealers that desire to provide investment services to HRSD will be provided with current copies of HRSD's Financial Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Financial Policy.
 - (1) At the request of the Chief Financial Officer, broker/dealers will supply HRSD with information sufficient to adequately evaluate their financial capacity and creditworthiness. The following information will be provided:
 - (a) Audited financial statements;
 - (b) Regulatory reports on financial condition;
 - (c) Proof of Financial Institution Regulatory Authority (FINRA) certification and of state registration;
 - (d) A sworn statement by an authorized representative of the broker/dealer pledging to adhere to Capital Adequacy Standards established by the Federal Reserve Bank and acknowledging the broker/dealer understands that HRSD has relied upon this pledge; and
 - (e) Any additional information requested by the Chief Financial Officer in evaluating the creditworthiness of the institution.
 - (2) Only firms meeting the following requirements will be eligible to serve as broker/dealers for HRSD:

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- (a) “Primary” dealers and regional dealers that qualify under SEC Rule 15c3-1 (Uniform Net Capital Rule);
- (b) Unrestricted Capital of at least \$10,000,000;
- (c) Registered as a dealer under the Securities Exchange Act of 1934;
- (d) Member of the FINRA;
- (e) Registered to sell securities in the Commonwealth of Virginia; and
- (f) Engaged in the business of effecting transactions in U.S. government and agency obligations for at least five consecutive years.

(3) HRSD will designate broker/dealers on an annual basis.

L. **Competitive Selection of Investment Instruments.** All securities purchases and sales will be transacted only with designated broker/dealers through a formal and competitive process requiring the solicitation and evaluation of at least three bids/offers, taking into consideration current market conditions and any applicable provisions of the IRS Code. Electronic bids will be accepted. HRSD will accept the bid which, in the sole judgment of the Chief Financial Officer or his/her designee: (1) can be accepted under applicable provisions of the IRS Code; (2) offers the highest rate of return within the maturity required; and (3) optimizes the investment objective of the overall investment portfolio, including diversification requirements. When selling a security, HRSD will select the bid that generates the highest sale price, consistent with the diversification requirements and any applicable provisions of the IRS Code.

M. **Safekeeping and Custody.** All investment securities purchased by HRSD or held as collateral on deposits or investments will be held by HRSD or by a third-party custodial agent that may not otherwise be counterparty to the investment transaction.

- (1) All securities in HRSD’s investment portfolio will be held in the name of HRSD and will be free and clear of any lien. Further, all investment transactions will be conducted on a delivery versus payment basis. On a monthly basis, the custodial agent will provide

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reports that list all securities held for HRSD, the book value of holdings, and the market value as of month-end.

- (2) HRSD officials and representatives of the custodial agent responsible for, or in any manner involved with, the safekeeping and custody process of HRSD will be bonded in such a manner as to protect HRSD from losses from malfeasance and misfeasance.
- (3) Confirming copies of all other investment transactions must be delivered to HRSD or its custodial agent.

- N. **Internal Controls.** The Chief Financial Officer will establish a framework of internal controls governing the administration and management of HRSD's investment portfolio, and these controls will be documented in writing. Such controls will be designed to prevent and control losses of HRSD money arising from fraud, employee error, and misrepresentation by third parties, unanticipated changes in financial markets, or imprudent actions by any personnel. The internal control structure will be designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived, and (2) the valuation of costs and benefits requires estimates and judgments by management.
- O. **Records and Reports.** The Chief Financial Officer will prepare an investment report on at least a quarterly basis for the Commission.
- P. **Performance Standards.** The investment portfolio will be designed to obtain at least a market level rate of return, given budgetary and economic cycles, commensurate with HRSD's investment risk and cash flow needs. HRSD's portfolio management approach will be active, allowing periodic restructuring of the investment portfolio to take advantage of current and anticipated interest rate movements.
 - (1) The returns on HRSD's investments will be compared on a quarterly basis to indices of U.S. Treasury securities having similar maturities or to other appropriate benchmarks.

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- (2) The applicable benchmarks for each of HRSD's three major Investment strategies are listed below:

| <u>Fund</u> | <u>Benchmark</u> |
|---------------------|--|
| Operating Liquidity | 3-Month Treasury Bill or Effective Federal Funds rate |
| Total Return | Merrill Lynch 1-3 Year U.S. Corporate & Government Index over three-year periods |
| Capital Investment | 3-Month Treasury Bill, Effective Federal Funds rate, Virginia LGIP or similar index appropriate to the duration of the expected cash flows |

Q. **Engagement of Investment Managers.** The Chief Financial Officer may engage one or more qualified firms to provide discretionary investment management services in compliance with this Policy for HRSD. All investment management firms that desire to provide investment services to HRSD will be provided with current copies of HRSD's Investment Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Investment Policy. The Chief Financial Officer will conduct appropriate due diligence in the selection of qualified investment management firms and will periodically confirm a manager's qualifications by visiting that manager's operational facilities that provide services to HRSD.

- (1) Only firms meeting the following requirements will be eligible to serve as investment manager for HRSD:
- (a) Must be registered with the SEC under the Investment Advisers Act of 1940;
 - (b) Must provide to HRSD an annual updated copy of Form ADV, Part II;
 - (c) Must be registered to conduct business in the Commonwealth of Virginia; and
 - (d) Must have proven experience in providing investment management services under Code of Virginia Sections 2.2-4500 et seq.

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- (2) Any firm engaged by HRSD to provide investment services will:
 - (a) Maintain a list of approved security brokers/dealers selected by creditworthiness who are authorized to provide investment services in the Commonwealth of Virginia;
 - (b) Provide monthly reports of transactions and holdings to the Chief Financial Officer;
 - (c) Provide performance reports, at least quarterly, that display investment performance in comparison to HRSD's investment benchmarks; and
 - (d) Not collect any soft dollar fees from any broker/dealer or other financial firm in relation to services provided to HRSD.

4.3.3 Retiree Health Plan Trust

- A. **Background.** HRSD established the Hampton Roads Sanitation District Retiree Health Plan Trust (the Trust) originally effective July 1, 2002, and amended and restated effective January 22, 2008 and November 25, 2008. The Trust provides for funding of non-pension and Other Post-Employment Benefits (OPEB), for employees who meet the age and service requirements outlined in the Hampton Roads Sanitation District Health Benefits Plan (the Plan) originally effective July 1, 2002, as it may be amended from time to time.
- B. **Purpose.** The main investment objective of the Trust is to achieve long-term growth of Trust assets by maximizing long-term rate of return on investments and minimizing risk of loss in order to fulfill HRSD's current and long-term OPEB obligations. The purpose of the Policy is to achieve the following:
 - (1) Document investment objectives, performance expectations and investment guidelines for Trust assets.
 - (2) Establish an appropriate investment strategy for managing all Trust assets, including an investment time horizon, risk tolerance ranges and asset allocation to provide sufficient diversification and overall return over the long-term time horizon of the Trust.
 - (3) Establish investment guidelines to control overall risk and liquidity.

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- (4) Establish periodic performance and cost reporting requirements that will effectively monitor investment results and ensure that the investment policy is being followed.
- (5) Comply with all fiduciary, prudence, due diligence and legal requirements for Trust assets.

C. **Investment Authority.** HRSD, as Plan Administrator (the Administrator), has oversight authority of certain policies and procedures related to the operation and administration of the Trust. Pursuant to the terms of the Trust, the Trustee is to hold title to the trust assets held for the Plan and to operate exclusively in the capacity as a directed Trustee. HRSD, as the named Administrator, has the authority not only to direct the Trustee but to appoint one or more investment managers. The Administrator will have authority to implement the investment policy and guidelines in the best interest of the Trust to best satisfy the purposes of the Trust.

- (1) The Administrator has a fiduciary duty to the Trust and the participants and beneficiaries, which requires integrity and competence. Integrity requires management of the Trust and the assets for the exclusive benefit of the Trust's participants and beneficiaries. The required level of competence is that of a prudent person acting in like capacity and familiar with such matters would act. This standard of competence extends to the retention and supervision of expert investment advice and all other areas of Trust's management.
- (2) In implementing this Policy, the Administrator, in accord with the provisions of the Trust, may delegate certain functions to:
 - (a) An investment advisor (the Investment Advisor) to assist the Administrator in the investment process and to maintain compliance with this Policy. The Investment Advisor may assist the Administrator in establishing investment policy objectives and guidelines. The Investment Advisor will advise on the asset allocation for the Trust subject to the guidelines and limitations set forth in this Policy. The Investment Advisor will also advise on the selection of investment managers (Managers) and strategies consistent with its role as a fiduciary for the Trust. The investment vehicles allowed may include mutual funds, commingled trusts, separate accounts, limited partnerships and other investment vehicles deemed to be appropriate on the advice of the Investment Advisor. The Investment Advisor is also

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responsible for monitoring and reviewing investment managers; measuring and evaluating performance; and other tasks as deemed appropriate in its role as Advisor for Trust assets. The Investment Advisor may also advise on the selection of investment managers with discretion to purchase, sell, or hold specific securities, such as Exchange Traded Funds, that will be used to meet the Trust's investment objectives. The Investment Advisor shall never take possession of securities, cash or other assets of the Trust, all of which shall be held by the custodian. The Investment Advisor must be registered with the SEC. The Chief Financial Officer will conduct appropriate due diligence in the selection of the Investment Advisor and will periodically confirm the Investment Advisor's qualifications by visiting its operational facilities that provide services to the Trust and HRSD.

- (b) A custodian to physically maintain possession of securities owned by the Trust, collect dividend and interest payments, redeem maturing securities, and effect receipt and delivery following purchases and sales, among other things. The custodian may also perform regular accounting of all assets owned, purchased, or sold, as well as movement of assets into and out of the Trust.
 - (c) A trustee appointed by the Trust, such as a bank trust department, if the Trust does not have its own Trustees, to assume fiduciary responsibility for the administration of Trust assets; provided, however, that if the Administrator shall have appointed an investment advisor, then any trustee appointed under this paragraph shall have no authority with respect to selection of investments.
 - (d) Specialists such as attorneys, auditors, actuaries and, retirement plan consultants to assist the Administrator in meeting its responsibilities and obligations to administer Trust assets prudently.
- (3) HRSD Commissioners, staff, investment advisors, consultants and managers will refrain from engaging in any activity that impairs (or has the potential to impair) their ability to make impartial investment decisions for the Trust. Persons who nevertheless engage in such conduct will immediately disclose the conduct to the Administrator. HRSD members, staff, investment managers and advisers will also

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immediately disclose to the Administrator any activity engaged in by their respective firms, employers, employees and agents which conflicts (or has the potential to conflict) with the execution of HRSD's investment program for the Trust.

D. Statement of Investment Objectives. The investment objectives of the Trust are as follows:

- (1) **Funding.** The primary objective of the Administrator is to maintain the assets of the Trust at the funding level necessary to provide a pool of funds to be used to provide post-retirement welfare benefits to Plan participants. To obtain this objective the Administrator will diversify Trust assets and adopt an investment strategy consistent with the Trust's investment objectives.
- (2) **Safety.** In order to maintain the safety of Trust assets the Administrator will:
 - (a) Invest assets of the Trust in a manner consistent with the following fiduciary standards: all transactions undertaken must be for the sole interest of Trust beneficiaries and defray reasonable expenses in a prudent manner, and assets are to be diversified in order to minimize the impact of large losses in individual investments.
 - (b) Conserve and enhance the value of Trust assets in real terms through asset appreciation and income generation, while maintaining a moderate investment risk profile.
 - (c) Minimize principal fluctuations over the Time Horizon (as defined below).
 - (d) Achieve a long-term level of return commensurate with contemporary economic conditions and equal to or exceeding the investment objective set forth in this policy under the Performance Expectations section of the Policy.
- (3) **Liquidity.** The Trust's Investment Portfolio in combination with the projected net cash flows will provide sufficient Liquidity to enable the Plan to meet all operating requirements which may be reasonably anticipated.

E. Investment Guidelines. Within this section of the Policy, several terms will be used to articulate various investment concepts. The descriptions

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are meant to be general and may share investments otherwise considered to be in the same asset class. They are:

- (1) Growth Assets - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on capital appreciation. Investments within this category can include income and risk mitigating characteristics, so long as the predominant investment risk and return characteristic is capital appreciation. Examples of such investments or asset classes are: domestic and international equities or equity funds, private or leveraged equity, certain real estate investments, and hedge funds focused on equity risk mitigation or equity-like returns.
- (2) Income Assets - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on income generation. Investments within the Income Assets category can include capital appreciation and risk mitigating characteristics, so long as the primary investment risk and return characteristic is income generation. Examples of such investments or asset classes are: fixed income securities, guaranteed investment contracts, certain real estate investments, and hedge funds focused on interest rate risk mitigation or income investment-like returns.
- (3) Real Return Assets - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on real returns after inflation. Investments within this category can include inflation protected securities, commodities, certain real estate investments and hedge funds.

F. **Time Horizon.** The Trust's investment objectives are based on a market-cycle investment horizon so that interim fluctuations should be viewed with appropriate perspective. HRSD has adopted a long-term investment horizon such that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets.

G. **Liquidity and Diversification.** Trust will hold an adequate amount of protected liquidity needs for benefit payments and expenses in cash or cash equivalents, as determined necessary. The liquidity assets will be invested in accordance with statutory requirements applicable to liquid assets, as determined by the Administrator. The remaining assets will be invested in longer-term securities.

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Investments will be diversified with the intent to minimize the risk of long-term investment losses. The total portfolio will be constructed and maintained to provide prudent diversification with regard to the concentration of holdings in individual issues, issuers, countries, governments or industries.

- H. **Asset Allocation.** The Administrator recognizes that asset allocation is one of the most important investment decisions that an investor makes. The Administrator upon advice of the Investment Advisor, as appropriate, will allocate Trust assets in keeping with the Prudent Person Rule. The Administrator upon advice of the Investment Advisor has determined that to achieve the greatest likelihood of meeting the applicable investment objectives and achieving the best balance between risk and return for optimal diversification, the Trust should allocate assets into two broad classes called Investment Assets and Liquidity Assets.
- (1) The Investment Assets will be invested in accordance with the targets for each asset class as follows to achieve an average total annual rate of return that is equal to or greater than the Trust's actuarial discount rate as described in the Section titled "Performance Expectations." The Liquidity Assets will be held in cash equivalent investments and used to pay for benefits and expenses of the Trust.
- (2) The Administrator, upon advice of the Investment Advisor, or the Managers will have discretion to temporarily invest a portion of the assets in cash reserves according to the investment policy and guidelines when they deem it appropriate. However, the Investment Advisor and each Manager will be evaluated against their peers on the performance of the total funds under their direct management.

INVESTMENT ASSETS

| <u>Asset Classes</u> | <u>Asset Range</u> | <u>Weightings Target</u> |
|-----------------------------|--------------------|--------------------------|
| Growth Assets | | |
| Domestic Equity | 38% - 58% | 48% |
| International Equity | 7% - 17% | 12% |
| Other | 0% - 10% | 0% |
| Income Assets | | |
| Core/Core Plus Fixed Income | 19% - 39% | 29% |
| High Yield Fixed Income | 0% - 7.5% | 5% |
| Other | 0% - 10% | 0% |

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Real Return Assets

| | | |
|------------------|---------|----|
| Core Real Estate | 0% - 7% | 4% |
|------------------|---------|----|

Cash Equivalents

| | |
|---------|----|
| 0% - 5% | 0% |
|---------|----|

LIQUIDITY ASSETS

| <u>Asset Classes</u> | <u>Asset Range</u> | <u>Weightings Target</u> |
|----------------------|--------------------|--------------------------|
| Cash Equivalents | 0% - 100% | 100% |

- I. **Rebalancing Philosophy.** The asset allocation range established by this Policy represents a long-term perspective. For that reason, rapid unanticipated market shifts or changes in economic conditions may cause the asset mix to fall outside the Policy range. When these divergences occur, the Administrator upon advice from the Investment Advisor, as appropriate, will rebalance the asset mix to its appropriate targets and ranges. Rebalancing will typically occur on at least a quarterly basis, unless the divergence is deemed an appropriate tactical strategy by the Administrator or Investment Advisor. Similarly, if the cash requirement to handle liquidity needs falls to a level at which near-term distributions (over the following six months or less) cannot be met and no contributions are anticipated, the Administrator upon advice from the Investment Advisor will rebalance the fund to its appropriate targets and ranges.

Regarding allocating contributions to the Trust, the Administrator or Investment Advisor will review the Trust allocation and fill the liquidity allocation first and the remaining investment allocations last.

- J. **Risk Tolerance.** The Trust will be managed in a style that seeks to minimize principal fluctuations over the established Time Horizon and that is consistent with the Trust's investment objectives.
- K. **Performance Expectations.** Over the long-term, a rolling five-year period, the performance objective for Trust assets will be to achieve an average total annual rate of return that is equal to or greater than the Trust's current actuarial discount rate. Additionally, it is expected that the annual rate of return on Trust assets will be commensurate with the then prevailing investment environment. Measurement of this return expectation will be judged by reviewing returns in the context of industry standard benchmarks, peer universe comparisons for individual Trust investments and blended benchmark comparisons for the Trust in its entirety. Costs will be reviewed by the Administrator and Investment

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Advisor to determine that they are minimized to the extent possible and are reasonable when compared to benchmarks.

- (1) **Total Fund Policy Benchmark.** The Total Fund's long-term returns shall be measured against a benchmark with constituents that are appropriate based on the asset allocation, asset class composition, strategy, style and risk characteristics. Peer results and rankings shall be measured against an appropriate Universe as generally representative of the Plan's objectives, operating structure and asset allocation.
- (2) **Asset Class Benchmarks.** Individual asset class components shall be measured against appropriate indices and peer Universes as indicative of the characteristics the respective broad asset classes.
- (3) **Manager Benchmarks.** Individual managers shall be measured against appropriate benchmarks and peer universes as indicative of their individual asset class, strategy, style and risk characteristics.

L. **Selection of Investment Managers.** The Administrator upon advice of the Investment Advisor will prudently select appropriate investment managers to manage the assets of the Trust. Managers must meet the following criteria:

- (1) The investment manager must be a bank, insurance company, or investment adviser as defined by the Investment Advisers Act of 1940.
- (2) With respect to Trust assets invested in a mutual fund, the investment manager must provide historical quarterly performance data for the mutual fund compliant with SEC and FINRA standards.
- (3) The investment manager must provide historical quarterly performance data compliant with Global Investment Performance Standards, SEC, FINRA or industry recognized standards, as appropriate, calculated on a time-weighted basis, based on a composite of all fully discretionary accounts of similar investment style and reported net of fees.
- (4) The investment manager must provide detailed information on history of the firm, key personnel, key clients, fee schedule (including most favored nation clauses) and support personnel.

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- (5) The investment manager must clearly articulate the investment strategy that will be followed and document that the strategy has been successfully adhered to over time.
- (6) The investment professionals making the investment decisions must have a minimum of three years of experience managing similar strategies either at their current or at previous firms.
- (7) The investment manager for portfolios other than Pooled Vehicles (see the following Guidelines for Portfolio Holdings) must confirm that it has received, understands and will adhere to this policy and any manager specific policies by signing a consent form.

M. **Guidelines for Portfolio Holdings.** The Administrator will make every effort to prudently select funds that follow the guidelines listed below.

- (1) Until the Trust reaches a size for which investment in separate accounts is viable and appropriate, the Trust will invest in pooled vehicles such as commingled and/or mutual funds. Pooled vehicles are regulated by either the Office of the Comptroller of the Currency (OCC) or the SEC and provide the Trust the ability to appropriately diversify its holdings in a cost-effective manner. Inherent within the Pooled Vehicle structure is the limitation on customizing the underlying security selection based on Trust specific economic or other screens. Pooled vehicles normally operate according to guidelines outlined in a prospectus, offering memorandum or other applicable legal documents that normally may not be amended by the Administrator. As such, every effort will be made to select pooled investments with guidelines that are in line with the guidelines outlined in this Policy.
- (2) **Direct Investments.** Every effort shall be made, to the extent practical, prudent and appropriate, to select investments that have investment objectives and policies that are consistent with this Policy (as outlined in the following sub-sections of the Guidelines for Portfolio Holdings). However, given the nature of the investments, it is recognized that there may be deviations between this Policy and the objectives of these investments.
- (3) **Limitations on Investment Manager's Portfolios.**

It is recognized that certain diversified pooled vehicles that otherwise adhere to the guidelines within this policy, may have prospectus or other legal guidelines that are not consistent with the

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guidelines of this policy. While every effort shall be made to select polled vehicles with guidelines that adhere to this policy, certain deviations may occur

(a) **Growth Assets.**

Equities. Not more than five percent or weighting in the relevant index (Russell 3000 Index for U.S. issues and MSCI All Country World Index (ACWI) ex-U.S. for non-U.S. issues) of the total equity portfolio valued at market may be invested in the common stock of any one corporation. MSCI is a publicly traded company that is an independent provider of research-driven insights and tools for institutional investors. The MSCI ACWI is an index that captures all sources of equity returns in most of the major developed and emerging markets. Ownership of the shares of one company will not exceed two percent of those outstanding. Not more than 25 percent of stock valued at market may be held in any one sector, as defined by the Global Industry Classification Standard.

(1) **Domestic Equities.** Other than these constraints, there are no quantitative guidelines suggested as to issues, industry or individual security diversification. However, prudent diversification standards should be developed and maintained by the investment manager(s).

(2) **International Equities.** The overall non-U.S. equity allocation, if any, should include a diverse global mix that is comprised of the equity of companies from multiple countries, regions and sectors.

(b) **Income Assets.**

Fixed Income. Fixed income securities, other than U.S. Treasury Bonds/Note/Bills or Federal Agency issues, of any one issuer or obligation will not exceed five percent of the total bond portfolio at time of purchase. The five percent limitation does not apply to issues of the U.S. Treasury.

The overall weighted rating of the fixed income assets will be at least "A", based upon the ratings of such assets from a NRSRO.

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For separately managed portfolios, If the credit quality of any one issue should drop below investment grade (as defined by at least two of the following three NRSROs – Fitch, Moody’s and S&P), the investment manager should notify the Administrator and Investment Advisor immediately detailing a plan of action regarding the security

(c) Other Assets (Growth and Income Assets).

Other Assets (Alternatives). Alternatives may consist of non-traditional asset classes such as real estate and commodities, when deemed appropriate. The total allocation to this category may not exceed 10 percent of the overall portfolio.

Portfolio Risk Hedging. Portfolio investments designed to hedge various risks including volatility risk, interest rate risk, etc. are allowed to the extent that the investments are not used for the sole purpose of leveraging Trust assets. One example of a hedge vehicle is an Exchange Traded Fund (“ETF”) which takes short positions.

(d) Real Return Assets.

Real Estate. Consists of publicly traded Real Estate Investment Trust (REIT) securities and/or non-publicly traded private real estate and shall be diversified across a broad array of property types and geographic locations. Investments of this type are designed to provide a stable level of income combined with potential for price appreciation, particularly in periods of unexpected inflation. For private real estate, the illiquid, long-term nature should be considered. For purposes of asset allocation targets and limitations, publicly traded REITs will be categorized as “Other” under the Growth Assets category. Depending on the investment characteristics of a private real estate fund, the fund will be categorized as “Other” under either the Income Assets category, for example, a core real estate fund, or under the Growth Assets category, for example, an opportunistic real estate fund where capital gains are expected to make up a significant portion of the total return.

Inflation Hedge. Shall consist of pooled vehicles holding among other assets: TIPS, commodities or commodity

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contracts, index-linked derivative contracts, certain real estate or real property funds and the equity of companies in businesses thought to hedge inflation. Inflation hedge assets will be reported in the Real Return Assets category.

(e) **Cash Equivalents.** Liquidity and temporary cash equivalent reserves will be invested according to the provisions of Code of Virginia Sections 2.2-4500 through 2.2-4518 applicable to liquid assets.

(f) **Additional Limitations.**

(1) **Prohibited Investments.** Except for purchase within authorized investments and pooled funds that otherwise comply with this Policy, the following investments and transactions are not authorized and will not be purchased:

- Letter stock and other unregistered securities,
- Direct commodities or commodity contracts,
- Short sales,
- Margin transactions,
- Private placements (with the exception of Rule 144A securities),
- Venture capital funds,
- Private equity,
- Hedge funds;
- Cryptocurrencies

Further, derivatives, options or futures for the sole purpose of portfolio leveraging (portfolio leveraging refers specifically to investments which can lead to losses in excess of 100 percent of initial invested capital) are also prohibited. Direct ownership of real estate, natural resource properties such as oil, gas or timber and the purchase of collectibles is also prohibited.

(2) **Safekeeping.** All securities will be held by a third-party custodian selected through a public procurement process by the Administrator, pursuant to contract approval, for safekeeping. The custodian will produce statements monthly listing the name and value of all assets held, and the dates and nature of

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all transactions. Assets of the Trust held as liquidity or investment reserves will, at all times, be invested in interest-bearing accounts. Investments and portfolio securities may not be loaned.

(g) **Control Procedures.**

- (1) **Legal Requirements, Controls, and Investment Policy Statement Review.** At all times the Administrator will comply with all State, and federal reporting requirements. The Administrator will establish, maintain and review prudent internal controls for the assets of the Trust, including those used by HRSD staff, and the Trust's Investment Advisor and custodian. The Administrator will provide for annual review of the adequacy and compliance of these control procedures.
- (2) The Administrator will review the Financial Policy no less than annually and provide documentation to HRSD when their review is complete. Specifically, the investment component of the Financial Policy will be reviewed when any one of the following occurs:
 - Change in investment advisors
 - Initial use of investment vehicles other than mutual funds
 - Significant change in Trust assets
 - Significant change in funded status
 - Significant change in market conditions
- (3) **Review of Investment Objectives.** The Administrator will review annually the appropriateness of this Policy for achieving the Trust's stated objectives. It is not expected that the Policy will change frequently. In particular, short-term changes in the financial markets should not require an adjustment in the investment policy.
- (4) **Review of Investment Performance.** The Administrator, on a quarterly basis, will review the total Trust investment performance, including all fees and costs and provide a report to the Commission. In addition, should investment functions be delegated,

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the Investment Advisor will be responsible for keeping the Administrator advised of any material change in investment strategy, investment managers, and other pertinent information potentially affecting performance of the Trust.

The Administrator will compare the investment results, including all fees and costs, on a quarterly basis to appropriate benchmarks, as well as to market index returns in both equity and debt markets as outlined in this Policy. Examples of benchmarks and indexes that will be used include the:

- Russell 3000 Index for broad U.S. equity strategies;
- S&P 500 Index for large cap U.S. equities,
- Russell 2000 Index for small cap U.S. equities,
- MSCI ACWI ex-U.S. Index for broad based non-U.S. equity strategies;
- MSCI Europe, Australasia, and Far East (EAFE) Index for developed markets international equities,
- Barclays Capital Aggregate Bond Index for fixed income securities, and
- U.S. 91 Day Treasury Bill for cash equivalents
- Russell 3000 Index will be used to benchmark the U.S. equities portfolio;
- MSCI ACWI ex-U.S. Index will be used to benchmark the non-U.S. equities portfolio;
- Barclays U.S. Aggregate Bond Index will be used to benchmark the fixed income portfolio.

The categories "Other" will be benchmarked against appropriate indices depending on the specific characteristics of the strategies and funds used. The Administrator will also compare investment results with the Virginia Retirement System at the end of each fiscal year.

- (5) **Voting of Proxies.** The Administrator recognizes that proxies are a significant and valuable tool in corporate governance. The voting rights of individual stocks held in separate accounts or collective, common, or pooled funds will be exercised by the

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investment managers in accordance with their own proxy voting policies. The voting rights of funds will be exercised by the Investment Advisor.

Investment manager(s) are expected to be aware of corporate provisions that may adversely affect stockholdings, including but not limited to "golden parachutes," "super majorities," "poison pills," "fair price" provisions, staggered boards of directors, and other tactics. Proxies should be vigorously voted with the interest of preserving or enhancing the security's value.

The investment manager(s) of a commingled trust or mutual fund that holds the assets of the Trust along with assets of other funds with conflicting proxy voting policies must reconcile the conflicting policies to the extent possible, and, if necessary, to the extent legally permissible, vote the proxies to reflect the policies in proportion to each fund's interest in the pooled fund.

(6) **Review of Actuarial Data.** The Administrator will review the Trust's actuarial data at least once every two years or more frequently if deemed necessary, to determine whether any substantive change in the investment policy is appropriate. The Administrator will provide for an actuarial valuation in compliance with GAAP, at least every two years.

(h) **Cure period.** Investments that fall outside of the guidelines as prescribed herein shall be brought back into compliance, removed or rebalanced as appropriate to maintain compliance within 180 days of the date of non-compliance.

4.4 ASSET CAPITALIZATION

4.4.1 Notifications. Accounting must be notified when any Capital Asset is placed in service or is in the process of disposal to ensure accurate asset records are kept.

A. Cost.

(1) Property, plant and equipment purchased, donated or constructed is recorded at historical cost as of the date acquired.

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- (2) Cost includes capitalized interest borrowed to finance the construction of major capital additions.
- (3) 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.
- (4) Assets costing below the \$20,000 threshold amount are recorded as an expense in HRSD's financial statements.
- (5) Routine repairs and maintenance are expensed as incurred.
- (6) Vehicles, office furniture, equipment, software and intangible assets are reviewed monthly to determine whether the asset meets the capitalization threshold.
- (7) Assets that are constructed over a period of time, such as capital projects, treatment plants, buildings and facilities, and interceptor systems, are reviewed at completion to determine the appropriate capitalization value, which may include interest costs.

B. Useful Life.

- (1) Assets with an economic useful life of less than 60 months are required to be expensed for financial statement purposes, regardless of the acquisition or production cost.
- (2) Major repairs that substantially extend the life of an asset or expand its service capacity may be capitalized. For example, if a roof repair or coating is expected to extend the asset's useful life 20 years or beyond, the cost may be capitalized.
- (2) The service lives for Capital Assets are as follows:

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

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5.0 RESPONSIBILITY AND AUTHORITY

These financial policies were created after much study and evaluation and were specifically adopted by the Commission. They were developed subject to the requirements of HRSD's Trust Agreement, the VRA Master Financing Agreement, the WIFIA Agreements, the Enabling Act and the Code of Virginia. Any changes and exceptions to these policies will be made in writing and approved by the Commission.

HRSD's General Manager/Chief Executive Officer and Chief Financial Officer are the designated administrators of these policies. The Chief Financial Officer shall have the day-to-day responsibility and authority for implementing the provisions of these policies.

HRSD understands that changes in the capital markets or other unforeseen circumstances may from time to time produce situations that are not covered by the Policy and will require modifications or exceptions to achieve the Policy goals. In these cases, HRSD's management flexibility is appropriate provided specific authorization from the Commission is obtained. This Policy is not a contract or other obligation of HRSD, and no party shall have any right or standing to enforce any provision of this Policy. Failure to comply in any manner with this Policy will not result in any liability on the part of HRSD to any party.

HRSD, together with HRSD's financial advisor and legal counsel, will no less than every two years review the Policy and recommend appropriate changes.

Approved: _____


Stephen C. Rodriguez
Commission Chair


Date

Attest: _____


Jennifer L. Cascio
Commission Secretary


Date



HRSD Commission Meeting Minutes
October 22, 2024
Attachment #5

7. Diversity Procurement Report

HRSD DIVERSITY PROCUREMENT REPORT FISCAL YEAR 2024

| PAYMENT TYPE | TOTAL OF ALL PAYMENT TRANSACTIONS¹ | | | | 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 |
| OPERATING | 6,594 | \$64,126,481 | 784 | \$9,009,291 | 12% | 14% |
| CORPORATE VISA CARD | 28,919 | \$17,259,628 | 928 | \$1,036,437 | 3% | 6% |
| CAPITAL IMPROVEMENT PROGRAM | 2,326 | \$564,780,738 | 543 | \$265,303,714 ² | 23% | 47% |
| TOTAL | 37,839 | \$646,166,848 | 2,255 | \$275,349,443 | 6% | 43% |

¹Excludes expenses for utilities, rent, easements, municipal expenditures, personal services, professional development, etc.
²Includes payments of \$97,830,531 made to SWaM subcontractors, as reported by HRSD's prime contractors.

DIVERSITY PROCUREMENT PROGRAM ACTIVITIES

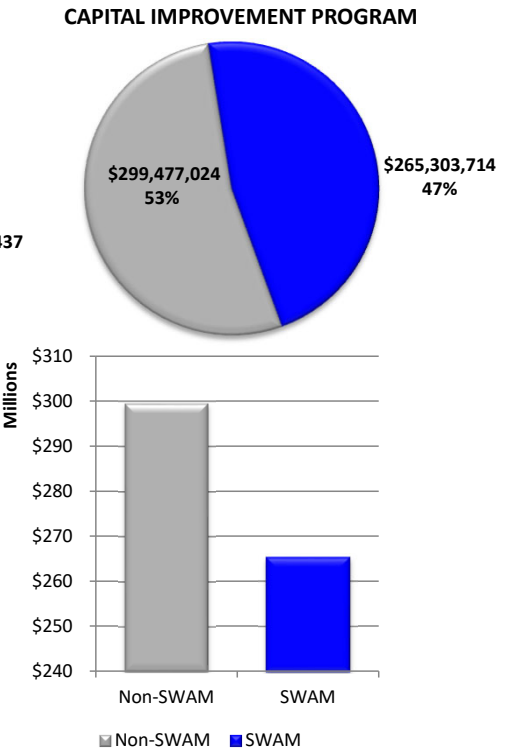
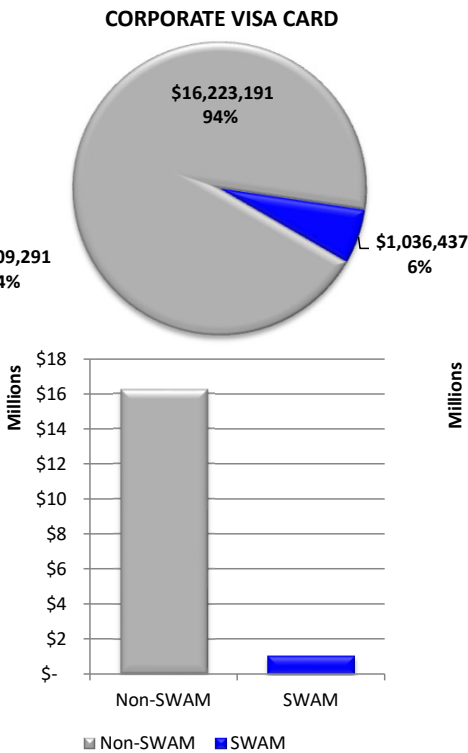
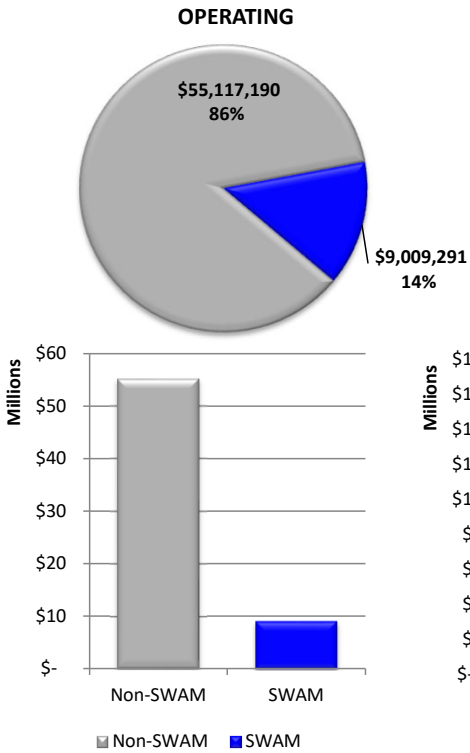
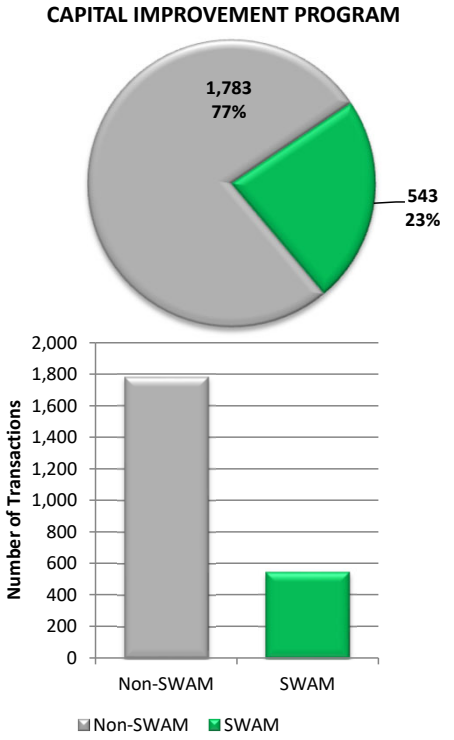
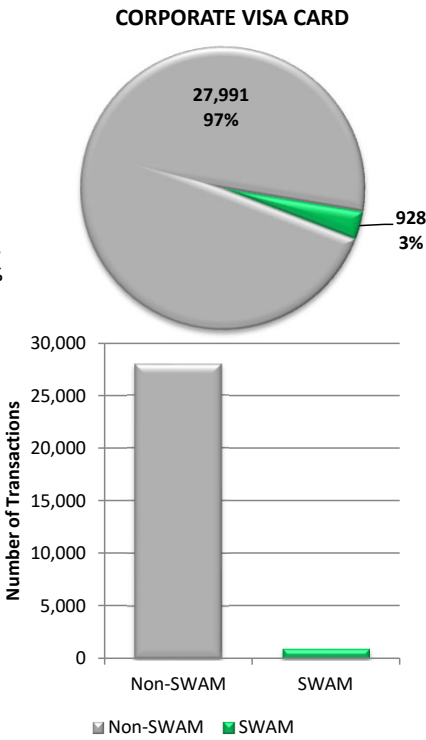
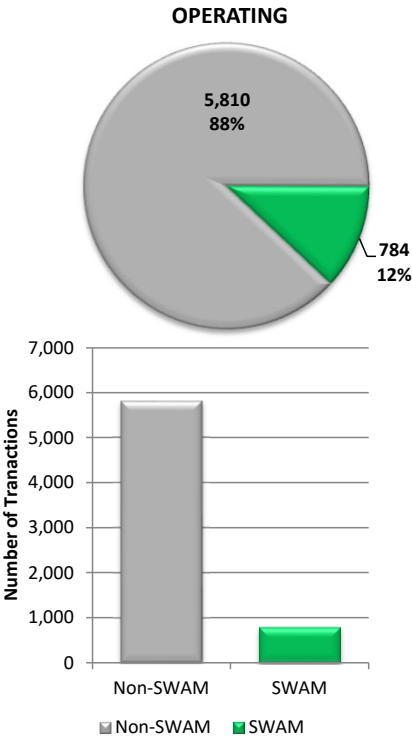
HRSD participated in several outreach opportunities throughout the year including:

- 2023 Christopher Newport University SWaMFair
- 2023 NIGP (The Institute for Public Procurement) Forum
- 2023 Virginia Beach Minority Business Council Expo
- SWIFT Industry Outreach Day 2024
- Virginia Water Environment Association WaterJAM 2023
- Water Environment Federation WEFTEC 2023

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. SBSD 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.

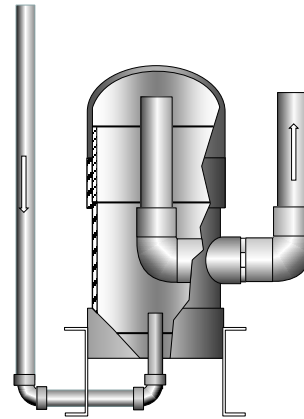
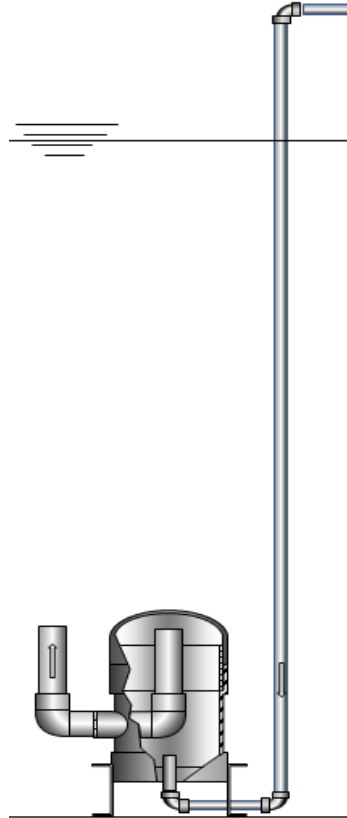
FY2024 Transaction Charts



HRSD Commission Meeting Minutes
October 22, 2024
Attachment #6

8. Adjustable Gas Siphon (MINIONS Big Bubble Mixing)
License Agreement

HRSD MINIONs Big Bubble Mixer



HRSD

ADJUSTABLE GAS SIPHON EXCLUSIVE PATENT LICENSE AGREEMENT

This Adjustable Gas Siphon Exclusive Patent License Agreement (“**Agreement**”) is made and entered into effective as of October 22, 2024 (“**Effective Date**”) by and between ARA Consult GmbH (“**ARA**”), an Austrian company, NEWhub Holding Company (“**NEWhub**”), a Virginia corporation, and the Hampton Roads Sanitation District (“**HRSD**”), a political subdivision of the Commonwealth of Virginia. ARA, NEWhub, and HRSD, each are referred to in this Agreement individually as a “**Party**” and collectively as the “**Parties**.”

RECITALS

WHEREAS, HRSD desires to serve its industry through services and technologies for the benefit of water quality, future technology development, and global utility financial and resource sustainability;

WHEREAS, HRSD is the assignee of the Patents (as defined below), possessing all rights, title, and interest in and to the Patents, including all discoveries and inventions described therein;

WHEREAS, HRSD desires to have the Patents developed and commercialized to benefit the public and is willing to grant a license hereunder to the extent of the Field (as defined below) and the Territory (as defined below);

WHEREAS, ARA and NEWhub are each a provider of certain services and goods relating to design, development, construction, and operation of water and wastewater treatment plants, and ARA and NEWhub have represented to HRSD, to induce HRSD to enter into this Agreement, that ARA and NEWhub will each commit itself to a thorough, vigorous and diligent program of exploiting the Patents so that public and non-public utilization will result therefrom; and

WHEREAS, ARA and NEWhub each desire to obtain an exclusive license under the Patents upon the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

ARTICLE ONE (DEFINITIONS)

1.1 **Definitions.** In this Agreement, the following terms have the meanings set forth below, which will be equally applicable to both the singular and the plural form, except where indicated otherwise:

| | |
|--------------------|--|
| “Affiliate” | means, with respect to a Party, any corporation, firm, partnership or other entity that directly or indirectly controls, is controlled by, or is under common control with such Party. A business entity or Party will be regarded as in control of another business entity if it owns, or directly or indirectly controls at least fifty percent (50%) (or such |
|--------------------|--|

lesser percentage which is the maximum allowed to be owned by a foreign entity in a particular jurisdiction) of the voting stock, income interest or other ownership interest of the other entity, or if it directly or indirectly possesses the power to direct or cause the direction of the management and policies of the other entity by any lawful means whatsoever.

| | |
|---------------------------|---|
| “Agreement” | has the meaning set forth in the introductory paragraph, and includes all exhibits, attachments, schedules, addenda and other appendices (all of which are incorporated herein by reference) and any amendments to any of the foregoing made as provided herein or therein. |
| “ARA” | has the meaning set forth in the introductory paragraph. |
| “Coinventor” | means each of Chandler Johnson, Sudhir Murthy, Bernhard Wett, or Eugenio Giraldo. |
| “Effective Date” | has the meaning set forth in the introductory paragraph. |
| “Extra-Territory” | means the entire world except for and excluding Europe and North America. |
| “Field” | means all processes and technologies for treating water and wastewater that use adjustable gas siphon for mixing in any tank, vessel, container, and natural or manmade structure intended to treat or remove a pollutant. |
| “HRSD” | has the meaning set forth in the introductory paragraph. |
| “Indemnitees” | has the meaning set forth in <u>Section 8.1</u> . |
| “Licensed Product” | means any and all devices, products and processes that fall within the Field and the Territory and that are covered by, used in, or include subject matter that (a) but for the license granted pursuant to this Agreement, would constitute a misappropriation, or infringe, or contribute to or induce the infringement of a claim of any issued, unexpired patent in the Patents, or (b) is covered by a claim in a pending patent application in the Patents. “Covered by a claim in a pending patent application” means that use, practice, manufacture, sale, or offer for sale or import into the Territory of a device, product, or process that would, but for the license granted pursuant to this Agreement, constitute infringement, contributory infringement, or inducement of infringement, of such claim if such claim were issued. |
| “Licensee” | means (i) both ARA and NEWhub as co-exclusive licensees in the Field and the Extra-Territory and (ii) ARA alone as exclusive |

licensee in the Field and all of Europe, and (iii) NEWhub alone as exclusive licensee in the Field and all of North America. The Extra-Territory will be actively managed in a manner to allow either Licensee to license the Licensed Product in the Extra-Territory in a manner that such Licensee may pursue and manage following written notification by such Licensee to the other Licensee.

| | |
|--------------------------------|---|
| “Licensor” | means HRSD. |
| “NEWhub” | has the meaning set forth in the introductory paragraph. |
| “North America” | means the United States and its territories and Canada. |
| “Notice Date” | has the meaning set forth in <u>Section 13.3(a)</u> . |
| “Patents” | means the patents and applications for patents listed in <u>Appendix A</u> (Adjustable Gas Siphon Patents), including all divisions, continuations, continuations-in-part, renewals, substitutes, extensions, reexaminations, and reissues thereof, and including all inventions and discoveries described therein. |
| “Patent Challenge” | means a challenge to the validity, patentability, enforceability or non-infringement of any of the Patents or otherwise opposing any of the Patents. |
| “Party” | has the meaning set forth in the introductory paragraph. |
| “Parties” | has the meaning set forth in the introductory paragraph. |
| “Person” | means an individual, corporation, partnership, joint venture, limited liability company, governmental authority, unincorporated organization, trust, association, or other entity. |
| “Reimbursable Expenses” | has the meaning set forth in <u>Article Four</u> . |
| “Remedy” | has the meaning set forth in <u>Section 7.4</u> . |
| “Reporting Period” | means annually with the period of time beginning on January 1 st of each calendar year and ending on December 31 st of such calendar year. |
| “Reserve Account” | has the meaning set forth in <u>Article Four</u> . |
| “Reserve Amount” | has the meaning set forth in <u>Article Four</u> . |
| “Royalties” | has the meaning set forth in <u>Article Four</u> . |
| “Sell, Sale or Sold” | means any performance, service, maintenance, provision, transfer or other disposition of Licensed Product for which consideration is |

received by Licensee, Sublicensor or Sublicensee. A Sale will be deemed completed at the time such consideration is received by Licensee, Sublicensor or Sublicensee.

- “Sublicense Agreement”** means any agreement or arrangement pursuant to which Licensee or Sublicensor grants to any Person any rights to use any of the Patents or any other rights or licenses granted under this Agreement.
- “Sublicensee Breach”** has the meaning set forth in Section 2.3(f).
- “Sublicense Consideration”** means any revenue or payment, other than Royalties or Remedy, received by the Licensee from any Person in exchange for a sublicense under the Patents. For avoidance of doubt, Sublicense Consideration does not include any Royalties or Remedy, or revenue or payment received as consideration unrelated to any sublicense under the Patents.
- “Sublicense Term”** means the period of time during which a Sublicense Agreement is effective, beginning with the effective date and ending upon the date of termination of such Sublicense Agreement.
- “Sublicensee”** means any sublicensee of the rights granted Licensee under Section 2.1.
- “Sublicensor”** means a Sublicensee that is granted a right to grant to a Person a further sublicense under the Patents.
- “Term”** has the meaning set forth in Section 12.1.
- “Territory”** means (i) all of Europe for ARA alone, (ii) all of North America for NEWhub alone, and (iii) the Extra-Territory for ARA and NEWhub together.
- “WRF”** means The Water Research Foundation, a 501(c)(3) nonprofit research organization.
- “WRF Fund”** means that research fund or account established by Licensor and WRF.

ARTICLE TWO (GRANT OF RIGHTS)

- 2.1 License Grant. Subject to the terms of this Agreement, Licensor hereby grants to:
- (a) ARA and NEWhub jointly, as co-exclusive licensees in the Field and to the extent of the Extra-Territory, a royalty-bearing license for the Term under the Patents to (i) make, have made, use, sell, offer to sell, and import Licensed Products, (ii) sue

for present and future damages, and (iii) collect damages for infringement of the Patents; and

- (b) ARA, as exclusive licensee in Europe and to the extent of the Field, a royalty-bearing license for the Term under the Patents to (i) make, have made, use, sell, offer to sell, and import Licensed Products, (ii) sue for present and future damages, and (iii) collect damages for infringement of the Patents; and
- (c) NEWhub, as exclusive licensee in North America and to the extent of the Field, a royalty-bearing license for the Term under the Patents to (i) make, have made, use, sell, offer to sell, and import Licensed Products, (ii) sue for present and future damages, and (iii) collect damages for infringement of the Patents.

The license granted hereunder does not include the right to sue or collect for damages prior to the Effective Date.

2.2 Exclusivity. Except as otherwise provided for in this Agreement, the license granted to Licensee under the Patents in Section 2.1 is exclusive and nontransferable except to the extent permitted under Section 10.1.

2.3 Sublicenses. Licensee has the right to grant sublicenses (which right will include the right to grant further sublicenses through multiple tiers) under any or all of the rights and licenses granted in Section 2.1 to any Person; provided that any and all granted sublicenses and Sublicense Agreements under the Patents are consistent with the terms of this Agreement, and are subject to the following:

- (a) Each Sublicense Agreement will include a Sublicense Term and will include terms and conditions sufficient to enable Licensee to comply with this Agreement. Each Sublicense Agreement will require that in the event that any Person granted a sublicense under such Sublicense Agreement, or any Affiliate of such Person, brings a Patent Challenge, or assists another party in bringing a Patent Challenge then Licensee may terminate such Sublicense Agreement. For the avoidance of doubt, no license or sublicense will exceed the scope of the rights and licenses granted to Licensee under Section 2.1 of the Agreement.
- (b) All sublicenses granted under the licenses granted to Licensee hereunder must be in writing and be subject to and consistent with the applicable terms and conditions of this Agreement. Any sublicense granted by a Sublicensor to any Person under this Section 2.3 will prohibit such Person from further sublicensing without the prior written consent of such Sublicensor.
- (c) Each Sublicense Agreement that grants to a Sublicensee a sublicense with the right to grant further sublicenses under the Patents will require such Sublicensee to provide to Licensee or Sublicensor, whichever is applicable under such Sublicense Agreement: (i) written notice prior to granting a sublicense under the Patents to any Person; and (ii) within fifteen (15) days of execution, a copy of the fully executed written Sublicense Agreement granting such sublicense to such Person(s).

- (d) Each Sublicense Agreement will set royalties, royalty fees or other payment requirements that, calculated on an equivalent or comparable basis, are not less than the Royalties in Article Four of this Agreement.
- (e) Licensee will keep Licensor informed of each sublicense granted to a Person, specifying the name of the sublicensee and the material terms (including duration) of the sublicense. At the request of Licensor, Licensee will provide, within thirty (30) days of such request, a fully executed, complete, and accurate copy written in the English language of each Sublicense Agreement. Receipt of such Sublicense Agreement by Licensor will not constitute a waiver of any of Licensor's rights or Licensee's obligations under this Agreement.
- (f) Notwithstanding any Sublicense Agreement, Licensee will remain primarily liable to Licensor for all of the Licensee's duties and obligations contained in this Agreement. Any act or omission of a Sublicensor or Sublicensee that would be a material breach of this Agreement if performed by Licensee will be deemed to be a material breach by Licensee of this Agreement. Each Sublicense Agreement will contain (i) a right of termination by Licensee or Sublicensor, as applicable, in the event that the sublicensee materially breaches the payment obligations under such Sublicense Agreement (a "**Sublicensee Breach**") and, (ii) in the event of a Sublicensee Breach, and if after a reasonable opportunity to cure as provided in any such Sublicense Agreement, such sublicensee fails to cure such Sublicensee Breach, then the Licensee or Sublicensor, as applicable, will terminate the Sublicense Agreement.

2.4 Retained Rights. Licensor reserves and retains the right (and the rights granted to Licensee in this Agreement will be limited accordingly), and Licensee hereby grants to Licensor a fully-paid-up royalty-free nonexclusive nontransferable nonassignable license under the Patents to make, have made, import, have imported, use and have used Licensed Products (i) for operation of treatment plants belonging to, operated by, or operated under direct guidance of HRSD and (ii) to grant royalty-free nonexclusive nontransferable nonassignable licenses to any of the foregoing rights to educational and non-profit institutions for educational and research purposes, including without limitation, any sponsored research performed for or on behalf of commercial entities and including publication and other communication of any research results. Except for Royalties and Sublicense Consideration received under this Agreement, Licensor will not receive any payment or consideration for any license granted under the Patents.

2.5 Use of Licensor Name. In publicizing anything made, used, offered for sale, sold, or imported under this Agreement, Licensee may disclose that part of the sales proceeds will go to the WRF Fund to be used in support of clean water initiatives. Any other use of the name of HRSD and references to any organization related to HRSD requires the prior written approval of Licensor.

2.6 No Additional Rights. Nothing in this Agreement will be construed to confer any rights upon Licensee by implication, estoppel, or otherwise as to any intellectual property (including, patents, trademarks, copyrights, trade secrets and know-how) of HRSD other than the Patents.

ARTICLE THREE (LICENSEE DILIGENCE OBLIGATIONS)

3.1 Diligence Requirements. Licensee will use diligent efforts to develop and commercialize Licensed Products in the Territory. In order to induce Licensor to enter into this Agreement, Licensee represents and covenants to Licensor that it has the capacity and expertise to duly observe and perform its obligations under this Agreement. Licensee accepts its appointment as exclusive licensee under the Patents to the extent of the Field and the Territory and will observe all the terms, conditions and provisions, and perform all of the obligations contained in this Agreement. In the event that Licensor determines that Licensee has failed to fulfill any of the material obligations under this Section 3.1, then such failure may be treated as a material breach in accordance with Section 12.4(b).

ARTICLE FOUR (SALES TARGET, ROYALTIES AND PAYMENT TERMS)

This Agreement includes Appendix B (Royalties and Payment Terms), which is hereby incorporated herein in its entirety in this Article Four. The Parties will meet within twelve (12) months of the Effective Date and annually thereafter to review and assess sales targets, royalty rates, royalty base(s), and royalty structure and to determine whether to modify this Agreement, including Appendix B.

ARTICLE FIVE (REPORTS AND RECORDS)

5.1 Frequency of Reports.

- (a) Before First Commercial Sale. Prior to the first commercial Sale of any Licensed Product, Licensee will deliver reports to Licensor biannually, within thirty (30) days of the end of each Reporting Period, containing information concerning the immediately preceding Reporting Period.
- (b) Upon First Commercial Sale. Licensee will report to Licensor the date of first commercial Sale of a Licensed Product within thirty (30) days of occurrence in each country.
- (c) After First Commercial Sale. After the first commercial Sale of a Licensed Product, Licensee will deliver reports to Licensor within thirty (30) days of the end of each Reporting Period, containing information concerning the immediately preceding Reporting Period.

5.2 Content of Reports and Payments. Each report delivered by Licensee to Licensor will contain at least the following information for the immediately preceding Reporting Period:

- (a) the number of Licensed Products Sold in each country (including the total number of Licensed Products Sold by Licensee, Sublicensors and Sublicensees), and, if applicable, the number of Licensed Products used by Licensee, Sublicensors and Sublicensees in the provision of services in each country;

- (b) the number of gas discharge outlets sold for each Licensed Product;
- (c) total Royalties payable on Sales for Licensed Products in U.S. dollars, together with the exchange rates used for conversion; and
- (d) the number of Sublicense Agreements entered into for the Patents and Licensed Products.

If no amounts are due to for any Reporting Period, the report will so state.

5.3 Records. Licensee will maintain, and will cause its Affiliates and Sublicensees to maintain, complete and accurate records relating to the rights and obligations under this Agreement and any amounts payable to Licensors in relation to this Agreement, which records will contain sufficient information to permit Licensors to confirm the accuracy of any reports delivered to Licensors and compliance in other respects with this Agreement. Licensee will retain such records for at least five (5) years following the end of the calendar year to which they pertain, during which time Licensors, or Licensors's appointed agent, will have the right, at Licensors's expense, to inspect such records during normal business hours to verify any reports and payments made or compliance in other respects under this Agreement. In the event that any audit performed under this Section 5.3 reveals an underpayment in excess of five percent (5%), Licensee will bear the full cost of such audit and will remit any amounts due to Licensors within thirty (30) days of receiving notice thereof from Licensors.

ARTICLE SIX (MANAGEMENT OF PATENTS)

6.1 Prosecution of Patents. Licensors will have the sole and exclusive right to file, prosecute, and maintain the Patents, and to determine whether or not, and where, to file patent applications, to abandon the prosecution of any patents or patent applications, or to discontinue the maintenance of any patents or patent applications. Licensors will notify Licensee within sixty (60) days of any patent being granted that includes the Patents. Licensors will notify Licensee sixty (60) days prior to abandoning any patent application in the Patents or discontinuing the maintenance of any patent in the Patents. Licensee may, at Licensee's sole option and expense, choose to assume responsibility for maintaining and paying all expenses (including, but not limited to, all professional fees and costs, all government fees and costs, and all administrative costs) associated with prosecuting and maintaining such patent application or patent in the applicable Territory for the remaining duration of this Agreement; provided that Licensee gives Licensors written notice within fifteen (15) days of receiving notice of Licensors's intent to abandon such application or discontinue maintenance of such patent. All patent applications, patents and any future improvements associated with the Patents will be held in the name of Licensors. Licensors will have sole responsibility for retaining and instructing patent counsel.

6.2 Fees/Costs Related to Patents. Unless otherwise agreed to in writing, Licensors agrees to pay patent counsel, including all reasonable expenses incurred in connection with searching, filing, prosecuting and maintaining U.S. and foreign patent applications and patents defined as Patents, as well as any continuations, continuations-in-part, divisions, reissues, reexaminations, renewals or substituted applications thereof. Licensors will pay all patent expenses associated with the Patents for those territories Licensors determines are economically reasonable

to pursue patent protection, for as long as this Agreement is effective, regardless of whether such expenses are incurred with U.S. or with foreign patent filings.

ARTICLE SEVEN (INFRINGEMENT)

7.1 **Notification of Infringement.** Each Party agrees to provide written notice to the other parties promptly after becoming aware of any infringement of the Patents in the Field in the Territory.

7.2 **Right to Prosecute Infringements.**

- (a) **Licensee Right to Prosecute.** So long as Licensee is the exclusive licensee of the Patents in the Field in the Territory, Licensee, to the extent permitted by law, will have the right, under its own control and at its own expense, to prosecute any infringement of the Patents in the Field in the Territory, subject to Section 7.4. For the avoidance of doubt, for purposes of this Article Seven, the retention or exercise of any rights by Licensor pursuant to Section 2.4 will not preclude Licensee from being considered an exclusive licensee. If required by law, Licensor may permit any action under this Section 7.2 to be brought in its name, including being joined as party-plaintiff, provided that Licensee will hold Licensor harmless from, and indemnify Licensor against, any costs, expenses, or liability that Licensor incurs in connection with such action. Licensee's selection of counsel (to represent Licensee and Licensor in such an action) will be subject to Licensor's approval, which will not be unreasonably withheld. Prior to commencing any such action, Licensee will consult with Licensor and will consider the views of Licensor regarding the advisability of the proposed action and its effect on the public interest.
- (b) **Licensor Right to Prosecute.** In the event that Licensee is unsuccessful in persuading the alleged infringer to desist or fails to have initiated an infringement action within six (6) months after Licensee first becomes aware of the basis for such action, Licensor will have the right, and the Parties will grant all rights and licenses to Licensor necessary for Licensor to prosecute such infringement under the control and at the expense of the Licensor, and any recovery obtained will belong solely to Licensor.

7.3 **Declaratory Judgment Actions.** In the event that a Patent Challenge is brought against Licensor or any Affiliate of Licensor, or relating in any way to the Patents, by any Person, Licensor, at its sole option, will have the right within twenty (20) days after commencement of such action to take over the sole defense of the action at Licensor's own expense and the Parties will grant all rights and licenses to Licensor necessary to, at Licensor's sole discretion, carry out such defense under Licensor's sole control and at Licensor's sole expense, and any recovery obtained will belong solely to Licensor. If Licensor does not exercise this right, Licensee may take over the sole defense of the action at Licensee's sole expense as exclusive licensee of the Patents, subject to Section 7.4.

7.4 Recovery. Any recovery obtained in an action brought by Licensee under Section 7.2 or Section 7.3 (“**Remedy**”) will be distributed as follows: (i) each Party will be reimbursed for any expenses incurred in the action, (ii) as to ordinary damages, Licensee will receive an amount equal to its lost profits or a reasonable royalty on the infringing sales, or whichever measure of damages the court will have applied, and Licensee will pay to Licensor based upon such amount a reasonable approximation of the Royalties and other amounts that Licensee would have paid under this Agreement if Licensee had sold the infringing products, processes and services rather than the infringer, and (iii) as to special or punitive damages, the Parties will share in any award according to the percentages set forth in the royalty distribution in Article Four.

7.5 Cooperation. For any action under this Article Seven that is controlled by Licensor, Licensee agrees to cooperate with Licensor in such action, provided that Licensor reimburses Licensee for any costs and expenses incurred by Licensee in connection with providing such assistance. For any action under this Article Seven that is controlled by Licensee, Licensor agrees to cooperate with Licensee in such action, provided Licensee reimburses Licensor for any costs and expenses incurred by Licensor with providing such assistance.

7.6 Right to Sublicense. So long as Licensee is the exclusive licensee of the Patents in the Field in the Territory, Licensee will have the right to sublicense any alleged infringer in the Field in the Territory for use of the Patents in accordance with the terms and conditions of this Agreement relating to sublicenses. Any upfront fees and other revenues to Licensee pursuant to such sublicense will be treated as Sublicense Consideration under Article Four.

ARTICLE EIGHT (INDEMNIFICATION)

8.1 Indemnification by Licensee. Licensee will indemnify, defend, and hold harmless Licensor and its officers, directors, agents, employees and Affiliates (the “**Indemnitees**”) at Licensee’s expense, from and against any and all claims, demands, actions, costs, expenses, liabilities, judgments, causes of action, proceedings, suits, losses and damages of any nature, which are threatened or brought against, or are suffered or incurred by Indemnitees or any such person resulting from any acts or omissions of Licensee, Licensee’s Affiliates or Sublicensees relating to this Agreement.

8.2 Procedures. Licensor agrees to provide Licensee with written notice of any claim, suit, action, demand, or judgment for which indemnification is sought under this Agreement. Licensee agrees, at its own expense, to provide attorneys reasonably acceptable to Licensor to defend against any such claim. The Indemnitees will cooperate fully with Licensee in such defense and will permit Licensee to conduct and control such defense and the disposition of such claim, suit, or action (including all decisions relative to litigation, appeal, and settlement). Licensee agrees to keep Licensor informed of the progress in the defense and disposition of such claim and to consult with Licensor with regard to any proposed settlement.

ARTICLE NINE (REPRESENTATIONS AND WARRANTIES)

9.1 LICENSOR MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE PATENTS OR THE LICENSED PRODUCTS, AND HEREBY

DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF LICENSOR OR THIRD PARTIES, VALIDITY, ENFORCEABILITY AND SCOPE OF PATENTS, WHETHER ISSUED OR PENDING, AND THE ABSENCE OF LATENT OR OTHER DEFECTS, WHETHER OR NOT DISCOVERABLE.

9.2 IN NO EVENT WILL LICENSOR OR ITS OFFICERS, DIRECTORS, AGENTS, EMPLOYEES, OR AFFILIATES BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ECONOMIC DAMAGES OR INJURY TO PROPERTY AND LOST PROFITS, REGARDLESS OF WHETHER LICENSOR WILL BE ADVISED, SHALL HAVE OTHER REASON TO KNOW, OR IN FACT WILL KNOW OF THE POSSIBILITY OF THE FOREGOING.

ARTICLE TEN (ASSIGNMENT)

10.1 This Agreement is specific to Licensee and no rights or obligations may be assigned by Licensee without the prior written consent of Licensor. Licensee may not assign or otherwise transfer this Agreement or the licenses granted to Licensee herein, except to Licensee's Affiliates. Licensee may not delegate any of its rights, duties, or obligations under this Agreement, including any transfer due to the merger, consolidation, or sale of substantially all of its assets, to any party without the prior written consent of Licensor, which will not be unreasonably withheld. Any attempted or purported assignment or other transfer not complying with the foregoing will be null and void. This Agreement will inure to the benefit of the successors and assigns of Licensor and any successors and permitted assigns of Licensee, and will be binding upon the successors and assigns of the Parties.

ARTICLE ELEVEN (GENERAL COMPLIANCE WITH LAWS)

11.1 Compliance with Laws. Licensee will use reasonable commercial efforts to comply with all commercially material local, state, federal, and international laws and regulations relating to the development, manufacture, use, and sale of Licensed Products.

11.2 Patent Marking. To the extent commercially feasible and consistent with prevailing business practices, Licensee will mark, and will cause its Affiliates and Sublicensees to mark, all Licensed Products that are manufactured or sold under this Agreement with the number of each issued patent under the Patents that applies to such Licensed Product.

11.3 Governmental Approval or Registration. If this Agreement or any associated transaction is required by the law of any nation to be either approved or registered with any governmental agency, Licensee will assume all legal obligations to do so. Licensee will notify Licensor if Licensee becomes aware that this Agreement is subject to a United States or foreign government reporting or approval requirement. Licensee will make all necessary filings and pay all costs, including fees, penalties, and all other out-of-pocket costs, associated with such reporting or approval process.

ARTICLE TWELVE (TERM AND TERMINATION)

12.1 Term. This Agreement will be effective on the Effective Date and will continue and remain in effect until the expiration or abandonment of all issued patents and filed patent applications within the Patents, unless earlier terminated in accordance with the provisions of this Agreement (the “**Term**”).

12.2 Cessation of Business. If Licensee ceases to carry on its business related to this Agreement, Licensors will have the right to terminate this Agreement immediately upon written notice to Licensee; provided that all Sublicense Agreements will be assigned to and assumed by Licensors.

12.3 Termination upon Bankruptcy. Upon the filing of a petition in bankruptcy, insolvency or reorganization against or by Licensee, or Licensee making an assignment for the benefit of its creditors, or Licensee going into receivership or otherwise becoming insolvent, this Agreement may be terminated by Licensors by giving written notice of termination to Licensee, such termination immediately effective upon the giving of such notice of termination; provided that all Sublicense Agreements will be assigned to and assumed by Licensors.

12.4 Termination for Default.

- (a) Nonpayment. In the event Licensee fails to pay any amounts due and payable to Licensors hereunder, and fails to make such payments within thirty (30) days after receiving written notice of such failure, Licensors may terminate this Agreement immediately upon written notice to Licensee.
- (b) Material Breach. In the event Licensee commits material breach of its obligations under this Agreement, except for breach as described in Section 12.5(a), and fails to cure that breach within thirty (30) days after receiving written notice thereof, Licensors may terminate this Agreement immediately upon written notice to Licensee.

12.5 Termination as a Consequence of Patent Challenge.

- (a) By Licensee. If Licensee or any of its Affiliates brings a Patent Challenge or assists others in bringing a Patent Challenge, then Licensors may immediately terminate this Agreement.
- (b) By Sublicensee. If a Sublicensee brings a Patent Challenge or assists another party in bringing a Patent Challenge, then Licensors may send a written demand to Licensee to terminate such sublicense. If such Patent Challenge is not terminated, or if Licensee fails to so terminate such sublicense within thirty (30) days after Licensors’ demand, Licensors may immediately terminate this Agreement.

12.6 Disputes regarding Termination. If Licensee disputes any termination by Licensors under this Article Twelve, Licensee will notify Licensors in writing of the nature of such dispute and the proposed manner in which to resolve the dispute within ten (10) days of receipt of

notification of breach or notification of termination by Licensor, whichever is sooner. If the parties do not resolve such dispute within ten (10) days of such notification, then Licensee will be required to initiate the dispute resolution procedures outlined in Section 13.3 immediately. If Licensee does not do so, Licensee will be considered to have waived its rights to dispute the termination.

12.7 Effect of Termination.

- (a) Survival. Expiration or termination of this Agreement will not relieve the Parties of any obligations accruing before the effective date of expiration or termination. Any right, obligation, or required performance of the Parties under this Agreement that by its express terms or nature and context is intended to survive expiration or termination of this Agreement will survive any such expiration or termination, including the rights, obligations or required performance of the Parties set forth in the following provisions of the Agreement:
 - Article 1 (Definitions);
 - Article 8 (Indemnification);
 - Article 9 (Representations and Warranties);
 - Article 13 (Dispute Resolution);
 - Article 14 (Miscellaneous);
 - Section 5.2 (Content of Reports and Payments);
 - Section 5.3 (Records);
 - Section 11.1 (Compliance With Laws);
 - Section 12.6 (Disputes Regarding Termination); and
 - Section 12.7 (Effect of Termination).
- (b) Pre-termination Obligations. In no event will termination of this Agreement release Licensee, its Affiliates or Sublicensees from the obligation to pay any amounts that became due on or before the effective date of termination.
- (c) Reversion of rights. In case of termination of this Agreement the Patents will revert to the Licensor, including all rights, titles and interests.
- (d) Reserve Amount Distribution. Upon termination of this Agreement the Reserve Amount together with all interest will be paid to Licensor, within twelve months, pursuant to the royalty distribution in Article Four.
- (e) Disposition of Licensed Products upon Termination. Termination of this Agreement will be without prejudice to any rights or obligations that accrued to the benefit of any Party prior to such termination. Upon termination of this Agreement, and for a period of twelve months after such termination, Licensee may complete the making of any partially made Licensed Products and may sell, offer to sell, import, or export any Licensed Products that were in possession of Licensee or a sublicensee on the

effective date of such termination; provided that all Sales will be subject to the terms of this Agreement including, but not limited to, the payment of Royalties and Sublicense Consideration.

ARTICLE THIRTEEN (DISPUTE RESOLUTION)

13.1 **Mandatory Procedures.** Any dispute arising out of or relating to this Agreement will be resolved solely by means of the procedures set forth in this Article Thirteen, and such procedures constitute legally binding obligations on the Parties. If any Party fails to observe the procedures of this Article Thirteen, as may be modified by the Parties' written agreement, the other parties may bring an action for specific performance of these procedures in any court of competent jurisdiction.

13.2 **Equitable Remedies.** Although the procedures specified in this Article Thirteen are the sole and exclusive procedures for the resolution of disputes arising out of or relating to this Agreement, a Party may seek a preliminary injunction or other provisional equitable relief if, in its reasonable judgment, such action is necessary to avoid irreparable harm to itself or to preserve its rights under this Agreement.

13.3 **Dispute Resolution Procedures.**

- (a) **Mediation.** In the event of any dispute arising out of or relating to this Agreement, any Party may initiate mediation upon written notice to the other parties ("**Notice Date**"), whereupon all Parties will be obligated to engage in a mediation proceeding. The mediation will commence within forty-five (45) days of the Notice Date. The mediation will be conducted by a single mediator in Richmond, Virginia. The Party requesting mediation will designate two (2) or more nominees for mediator in its notice. The other parties may accept one of the nominees or may designate their own nominees by notice addressed to the American Arbitration Association (AAA) and copied to the requesting party. If within, fifteen (15) days following the request for mediation, the Parties have not selected an unanimously acceptable mediator, a mediator will be appointed by the AAA according to the Commercial Mediation Rules. The mediator will attempt to facilitate a negotiated settlement of the dispute, but will have no authority to impose any settlement terms on the Parties. The expenses of the mediation will be borne equally by all Parties, but each Party will be responsible for its own counsel fees and expenses.
- (b) **Good Faith Efforts to Resolve Disputes.** Upon the appointment of mediator, the Parties will make good faith efforts to resolve any claim, dispute or controversy between the Parties arising out of or relating to this Agreement, including but not limited to those arising out of or related to the breach, termination, or invalidity of this Agreement.
- (c) **Trial Without Jury.** If the dispute is not resolved by mediation within forty-five (45) days after commencement of mediation, each Party will have the

right to pursue any other remedies legally available to resolve the dispute, provided, however, that the Parties expressly waive any right to a jury trial in any legal proceeding under this Article.

13.4 Performance to Continue. Each Party will continue to perform its undisputed obligations under this Agreement pending final resolution of any dispute arising out of or relating to this Agreement; provided, however, that a Party may suspend performance of its undisputed obligations during any period in which the other parties fail or refuse to perform their undisputed obligations. Nothing in this Article Thirteen is intended to relieve Licensee from its obligation to make undisputed payments pursuant to this Agreement.

13.5 Statute of Limitations. The Parties agree that all applicable statutes of limitation and time-based defenses (including, but not limited to, estoppel and laches) will be tolled while the procedures set forth in Sections 13.3(a) are pending. The Parties will cooperate in taking any actions necessary to achieve this result.

ARTICLE FOURTEEN (MISCELLANEOUS)

14.1 Notice. Any notices required or permitted under this Agreement will be in writing, will specifically refer to this Agreement, and will be sent by hand, recognized national overnight courier, confirmed facsimile transmission, confirmed electronic mail, or registered or certified mail, postage prepaid, return receipt requested, to the following addresses or facsimile numbers of the Parties:

| | |
|--------------------------|---|
| If to ARA (Licensee): | ARA Consult GmbH Unterbergerstr.1, A-6020 Innsbruck Attn: Bernhard Wett, CEO Email: Bernhard.wett@araconsult.at |
| If to NEWhub (Licensee): | NEWhub Holding Company 12602 Denmark Dr. Oak Hill, VA 20171 Attn: Maureen O'Shaughnessy Email: maureen@oshaughnessywater.com |
| If to HRSD (Licensor): | Hampton Roads Sanitation District 1434 Air Rail Avenue Virginia Beach, VA 23455 Attn: Jay Bernas, General Manager Email: jbernas@hrsd.com |

All such notices, consents, waivers and other communications will (i) if delivered personally in the manner and to the address provided in this Section 14.1, be deemed given upon delivery, (ii) if delivered by facsimile transmission or electronic mail in the manner and to the facsimile number or e-mail address provided in this Section 14.1, be deemed given on the earlier of receipt or the first business day after transmission, (iii) if delivered by mail in the manner, and to the address

provided in this Section 14.1, be deemed given on the earlier of the fourth business day following mailing or upon receipt, and (iv) if delivered by overnight courier in the manner and to the address provided in this Section 14.1, be deemed given on the earlier of receipt or the first business day following the date sent by such overnight courier.

14.2 Governing Law; Venue. The Parties hereto agree that this Agreement, and any controversy arising pursuant to this Agreement, will be governed by the laws of the Commonwealth of Virginia. Subject to Article Thirteen (Dispute Resolution), the Parties hereto irrevocably and unconditionally submit to the exclusive jurisdiction of the federal or state courts in Virginia. The Parties hereto irrevocably and unconditionally waive any objection to the laying of venue of any such suit, action or proceeding brought in any such court and any claim that such suit, action or proceeding brought in any such court has been brought in an inconvenient forum.

14.3 Force Majeure. No Party will be liable to the other parties for delays in any performance or failure to render any performance when such delay or failure is beyond the reasonable control of, and without intentional wrongdoing or bad faith of, the Party asserting the claim of force majeure, including but not limited to acts of God, strikes, terrorist attacks, lockouts or other labor disputes, industrial or civil disturbances, material shortages, and acts, directives or binding orders of any court or government authority or agencies.

14.4 Waiver. Any waiver of any rights or failure to act in a specific instance will relate only to such instance and will not be construed as an agreement to waive any rights or fail to act in any other instance, whether or not similar. Except as provided in this Agreement, no delay or failure on the part of a Party in exercising any right, power, or privilege hereunder will operate as a waiver thereof, nor will any waiver on the part of any Party of any such right, power, or privilege, nor any single or partial exercise thereof, preclude any other or further exercise thereof or the exercise of any other right, power, or privilege hereunder.

14.5 Severability. In the event that any provision of this Agreement will be held invalid or unenforceable for any reason, such invalidity or unenforceability will not affect any other provision of this Agreement, and the Parties will negotiate in good faith to modify this Agreement to preserve (to the extent possible) their original intent. If the Parties fail to reach a modified agreement within thirty (30) days after the relevant provision is held invalid or unenforceable, then the dispute will be resolved in accordance with the procedures set forth in Article Thirteen (Dispute Resolution). While the dispute is pending resolution, this Agreement will be construed as if such provision were deleted by agreement of the Parties.

14.6 Binding Effect. This Agreement will be binding upon and inure to the benefit of the Parties and their respective permitted successors and assigns.

14.7 Third-Party Beneficiaries. Except as set forth in Article Four, Sections 4.3, 4.4, 4.5, and 4.8, the Parties do not confer any rights or remedies upon any Person other than the Parties and their respective successors and permitted assigns. The Parties hereby designate each Coinventor as a third-party beneficiary of Article Four, Sections 4.3, 4.4, 4.5, and 4.8.

14.8 Entire Agreement. This Agreement constitutes and contains the complete and final understanding and agreement of the Parties relating to the subject matter of this Agreement. Any

and all prior negotiations, correspondences, understandings and agreements, whether oral or written, between the Parties respecting the subject matter hereof will henceforth not be binding on any Party except to the extent expressly set forth in this Agreement. Nothing in this Agreement, express or implied, is intended to confer upon any party, other than the Parties and their respective successors and assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. This Agreement may not be amended, modified or supplemented except by a writing executed by all Parties.

14.9 Further Assurances. The Parties hereto will do and perform or cause to be done and performed all such further acts and things and will execute and deliver all such other documents as any Party may reasonably request from time to time in order to carry out the intent and purpose of this Agreement contemplated hereby. No Party will voluntarily undertake any course of action inconsistent with satisfaction of the requirements applicable to them set forth in this Agreement and each Party will promptly do all such acts and take all such measures as may be appropriate to enable them to perform as early as practicable the obligations herein required to be performed by them.

14.10 Facsimile; Counterparts. This Agreement may be executed in one or more counterpart copies, each of which will be deemed to be an original copy of this Agreement and all of which, when taken together, will be deemed to constitute one and the same agreement. The exchange of copies of this Agreement and of signature pages by facsimile, email, or other electronic transmission will constitute effective execution and delivery of this Agreement as to the Parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by facsimile or electronic transmission will be deemed to be their original signatures for all purposes.

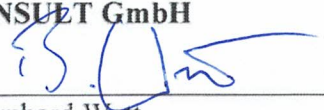
14.11 Relationship of Parties. Nothing in this Agreement will be deemed to constitute any Party a partner, joint venturer, co-owner or employee of the other parties. No Party is, or will represent itself to be, an agent or legal representative of any of the other parties. No Party will have the authority to bind the other parties or to assume or create any liability or obligation, express or implied, on behalf of the other parties.

14.12 Captions; Rules of Construction. The titles to the Articles and Sections of this Agreement are solely for the convenience of the Parties and will not be used to explain, modify, simplify or aid in the interpretation of the provisions of this Agreement. Any reference in this Agreement to any Article or Section refers to the corresponding Article or Section of this Agreement. Any reference in this Agreement to any Appendix refers to the corresponding Appendix attached to this Agreement and all such Appendices are incorporated herein by reference. The word “including” in this Agreement means “including without limitation.” This Agreement will be construed as if drafted by all of the Parties and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of the authorship of any provision in this Agreement.

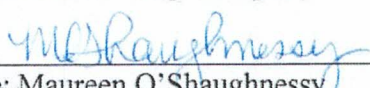
[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the Effective Date.

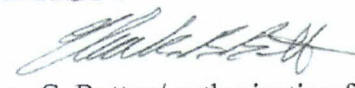
ARA CONSULT GmbH

By: 
Name: Bernhard Wett
Title: CEO
Date: 24 October, 2024

NEWHUB Holding Company

By: 
Name: Maureen O'Shaughnessy
Title: President
Date: 24 October, 2024

**HAMPTON ROADS SANITATION
DISTRICT**


By: C. Bott w/ authorization from J. Bernas
Name: Jay Bernas
Title: General Manager & CEO
Date: 23 October, 2024

[Signature Page]

APPENDIX A
(ADJUSTABLE GAS SIPHON PATENTS)

| <u>Country</u> | <u>Application No.</u> | <u>Filing Date</u> | <u>Patent / Pub. No.</u> | <u>Grant Date</u> |
|-----------------------|-------------------------------|---------------------------|---------------------------------|--------------------------|
| US | 63/593,585 | October 27, 2023 | N/A | N/A |
| US | 18/____,____ | _____, 2024 (UNFILED) | N/A | N/A |
| WO | PCT/US2024/_____ | _____, 2024 (UNFILED) | N/A | N/A |

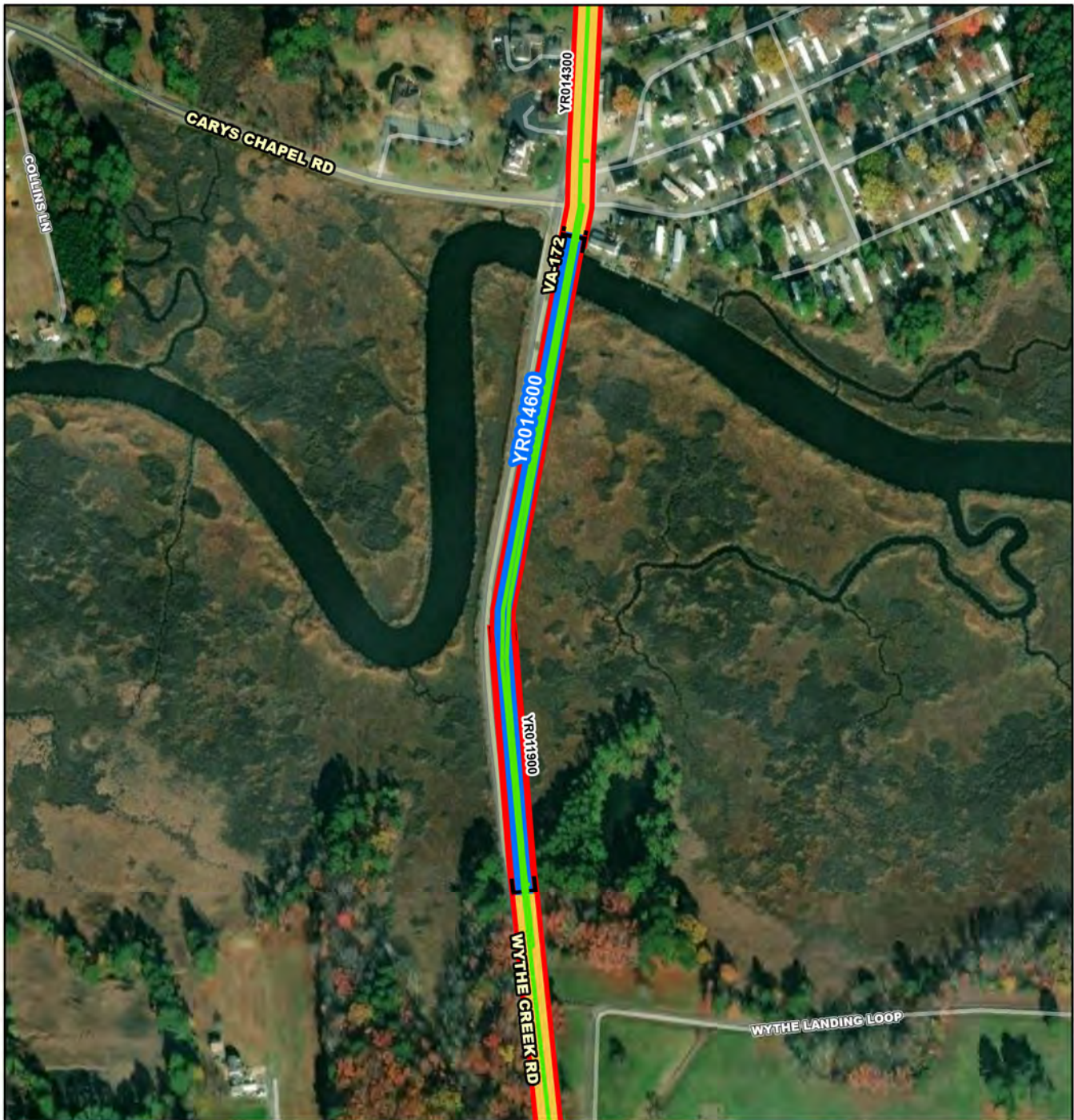
APPENDIX B

ARTICLE FOUR (ROYALTIES AND PAYMENT TERMS)

CONFIDENTIAL – EXCLUDED FROM MANDATORY DISCLOSURE (VA CODE § 2.2-3705.6.3)

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #7

9. Bethel-Poquoson Force Main Part IV Replacement-Wythe Creek Exposed Crossing
Additional Appropriation – Non-Regulatory (>\$1,000,000) and Contract Change Order
(>25% of original contract value or \$50,000, or whichever is greater)



YR014600

- 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

0 112.5 225 450 675 900 Feet

YR014600

**Bethel-Poquoson Force Main Part IV Replacement-
Wythe Creek Exposed Crossing**

N
W E
S

CIP Location

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #8

10. Cybersecurity
Briefing

The background of the slide features a serene sunset scene over a calm body of water. The sun is a bright orange orb on the horizon, casting a long, shimmering reflection across the water's surface. The sky transitions from a deep orange near the horizon to a soft blue at the top. In the foreground, tall green reeds are visible on the left and right sides of the water. The entire image is framed by decorative blue wavy borders at the top and bottom, which are adorned with numerous clear water droplets of varying sizes.

HRSD

Cyber Awareness

October 2024



- Acceptable Use
- Scamming
- Best Practices

Basics of cyber awareness don't require anything advanced – don't be a victim

- Keep Them Separate - Do Not Interchange Home and HRSD Content
 - The exchange of information between home systems and HRSD systems via email or removable media may put HRSD systems at an increased risk of compromise.
 - Ideally, use HRSD provided equipment and accounts to conduct work while away from the office.
 - Do not use personal accounts and resources for HRSD interactions.
 - HRSD.com email should not be used for personal use.

- Smishing
 - SMS sent impersonating someone or something, perhaps even your financial institution – delete it.
- Phishing
 - Never open emails that make outlandish claims or offers, call an established contact if you question the email – or delete it.
- Vishing
 - Identity theft through voice recording of answers you would provide to your bank or credit card companies – Hang up.

Keep your financial institution and other important number separate – call that number to verify

- Avoid revealing sensitive information and abide by the following guidelines while accessing the Internet.
 - Email Best Practices
 - Avoid opening attachments or links from unsolicited emails.
 - Exercise cyber hygiene; do not open unknown emails and don't click on their attachments or web links.
 - Check the identity of the sender via secondary methods (phone call, in person).
 - For those emails with embedded links, open a browser and navigate to the web site directly with Duck Duck Go! (DuckDuckGo.com)
 - Prevent reuse of any compromised passwords, use a different password for each account.
 - Reputational risk support will alert you when your profile was part of a compromise, don't wait – change your password!!! (or use KeepPass type solution?)
 - Avoid using the out-of-office message feature unless necessary.
 - Make it harder for unknown parties to learn about your activities or status – leave out details of your geolocation.

- Social Networking
 - Avoid posting information such as address, phone number, place of employment, and other personal information that can be used to target or harass you.
 - Some scammers use this information, along with pet's name, first car, streets you lived on, to figure out answers to account security questions.
 - Limit access of your information to “friends only” and verify any new friend requests outside of social networking.
 - Review the security policies and settings available from your social network provider quarterly or when the site's Terms of Use/policy changes, as the defaults can change. Opt-out of exposing personal information to search engines.

- Public Hotspots
 - If you have a need to access the internet while away from work or home, avoid direct use of public access. Avoid logging into any personal accounts.
 - If possible, use the cellular network (that is, mobile Wi-Fi, 3G or 4G services) to connect to the Internet instead of public hotspots.
 - If public Wi-Fi must be used, make use of a virtual private network (VPN). This option can protect your connection from malicious activities and monitoring.

Exercise physical security in the public place. Don't leave devices unattended!



Be Vigilant

Be Aware

Questions?

5 Ways to Engage Your Shield Against SOCIAL ENGINEERING ATTACKS

Resist the Rush

Social engineers often create a tremendous sense urgency, such as telling you there is a tight deadline, to trick you into making a mistake. If someone pressures you to bypass or ignore our policies, it is most likely an attack.

Recognize the 'Bag of Tricks'

Social engineers use emotions, such as fear, intimidation, curiosity, or excitement, to get you to do what they want. If something sounds suspicious or too good to be true, it probably is.

Think Before You Click

Social engineers want you to carelessly click on links and not think twice before opening attachments. Be cautious: one wrong move could infect your device and spread it to others.

Don't Just Download It or Plug It In

Social engineers count on you to download unapproved software or plug in infected USB drives or external devices. Only use authorized hardware and software. If you are not sure if something is authorized, just ask.

Ask Questions, and If It Feels Odd or Suspicious, Contact Security

If you feel you are experiencing a social engineering attack, hang up the phone (or do not respond to the email), and contact security right away.





Types of Attacks



Social engineering is the art of human manipulation. It is when bad guys attempt to fool or trick you into doing something you should not do. Some of the most common social engineering attacks to look out for are:



Phishing Emails or Messages

These emails or messages attempt to fool you into taking an action, such as clicking on a malicious link, opening an infected attachment, or filling out an online form.

How to Spot:

- A strong sense of urgency rushing you into making a mistake.
- Generic greetings rather than using your name or title.
- The From or Reply-To address is a personal email address, such as @gmail.com or @hotmail.com.
- An offer that plays on your curiosity or seems too good to be true, such as notification of a package delivery even though you did not order anything.

Spear Phishing

Spear phishing is similar to phishing, but instead of randomly emailing millions of people the attacker targets specific individuals. They research their target and create a customized email, one their victim is more likely to fall for.

How to Spot:

- The email appears to come from a friend or coworker you know, but the tone of the message does not sound like them.
- There's a strong sense of urgency, pressuring you to ignore or bypass our policies.
- The email is work related, but comes from a personal email address, such as @gmail.com or @hotmail.com.



CEO Fraud

Attackers pretend to be a senior leader from our organization in order to trick you into doing something you should not do. The clues of a CEO fraud attack are similar to a spear phishing attack. However, there is no infected attachment or malicious link. Instead, they are attempting to trick you into doing something, such as approving a wire transfer or sending sensitive documents.

How to Spot:

- The email appears to come from a friend or coworker you know, but the tone of the message does not sound like them.
- There's a strong sense of urgency, pressuring you to ignore or bypass our policies.
- The email is very short and urgent (only one or two sentences) and the signature says the email was sent from a mobile device.
- The email is work related, but comes from a personal email address, such as @gmail.com or @hotmail.com.

Phone Calls (aka Vishing)

In addition to email- and messaging-based attacks, attackers can call you on the phone pretending to be an individual or organization you know and trust, such as the help desk or a vendor.

What to Do:

- Be very suspicious if someone creates a strong sense of urgency or asks you to help them without first proving who they are. Always follow our procedures for verifying a person's identity before discussing any sensitive information over the phone.



USB Drops

Attackers give away or intentionally place infected media, such as USB drives, in hopes that someone will pick them up and insert them into their computers.

What to Do:

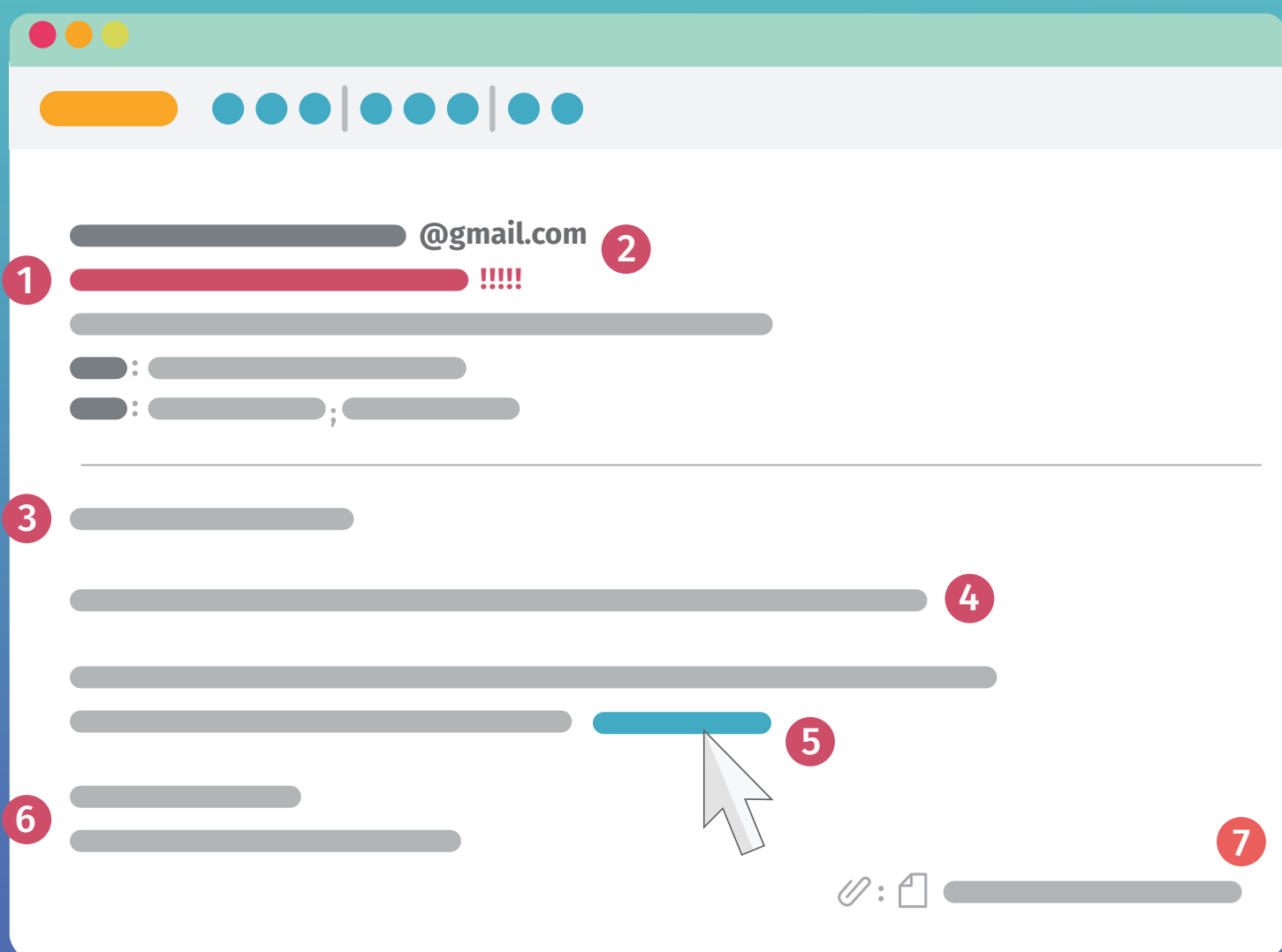
- Never use an unknown or unauthorized USB device or other external media and plug it into your computer. Never let others connect devices to your computer as well.

If you believe you are the target of a social engineering attack, stop all communication with the attacker and report the incident immediately.

7 SIGNS OF PHISHING

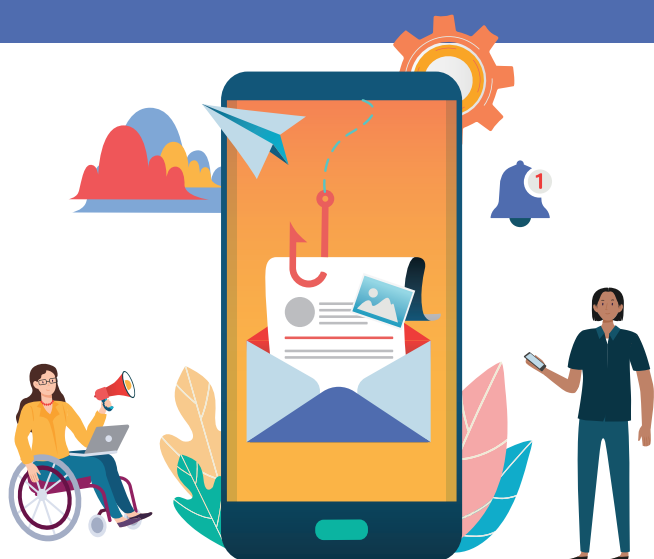
Can you spot a phishing attack?

Cyber criminals use phishing attacks to try to infect your computer, steal your passwords, fool you into sharing sensitive data, and more. While phishing attacks often have different goals, they share many of the same indicators. If you know what to look for, you can spot and stop these attacks. Watch out for these seven signs of a phishing attack:



1

An URGENT Subject: Does the subject line or message try to create a tremendous sense of urgency, often using fear or demanding immediate action? Another approach is curiosity. Is the email offering something that appears too good to be true?



2

Who is This "From"? Watch out for emails that appear to come from official organizations, such as your bank or the government, but the From or Reply-To address is actually someone's personal email account, such as @gmail.com.



2

3

"Hello Valued Customer:" Watch out for generic greetings. Often cyber attackers don't know who you are. They are just trying to reach as many people as possible.



4

"Please provide your credit card number...": Is the sender asking for your password, bank account details, or some other sensitive data they should not have access to?

5

Under Pressure: Is the sender pressuring you to ignore or bypass our security policies?



7

Don't Get Attached: Do not open unexpected or suspicious attachments.

6

Suspicious Characters: Be cautious if an email appears to come from a friend or coworker, but the wording seems odd, or the message doesn't read like something they would send. The signature may even be inaccurate.



SPOT AND PREVENT PHISHING ATTACKS.

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #9

11. Capital Improvement Program (CIP)
Update

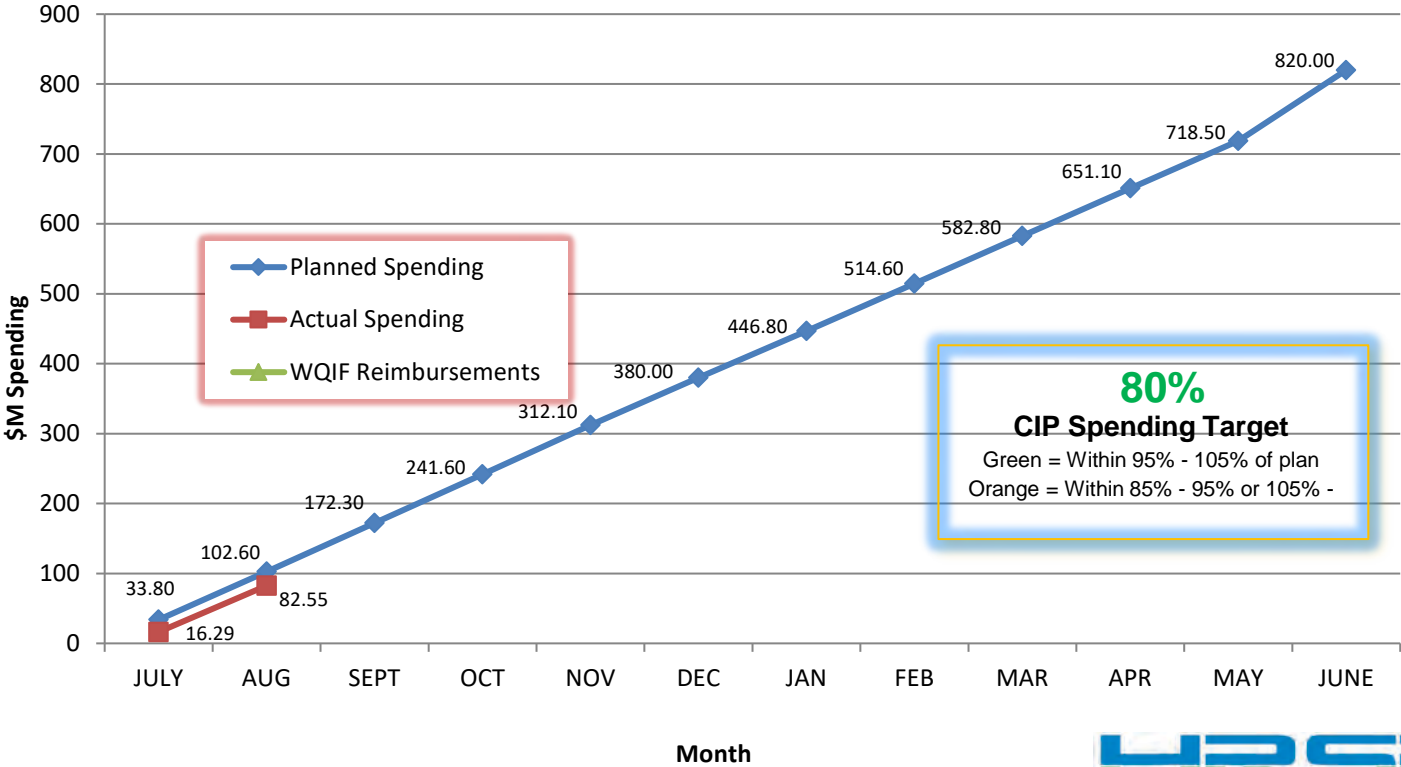


Capital Improvement Program
Commission Briefing

October 22, 2024

- CIP Expenditures for FY-2024
- CIP Performance Metrics
- Consent Decree/Sewer Rehabilitation Plan – Project Status
- SWIFT Program Update
- Significant Project Updates
- Focus: James River Treatment Plant Trails Project

CIP Expenditures for FY-2024



- 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 components.
- 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 | Construction | \$1,826,426 |
| AT011900 | Great Bridge Interceptor Extension 16-Inch Replacement ³ | Design | \$11,915,000 |
| AT013000 | Washington District Pump Station Area Sanitary Sewer Improvements ⁴ | Construction | \$12,188,492 |
| AT013010 | Washington District Pump Station Replacement ² | 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 ⁴ | Design | \$10,566,000 |
| AT015400 | Dozier's Corner Pump Station Replacement ² | Design | \$17,121,868 |
| BH014000 | West Avenue and 35th Street Interceptor Force Main Replacement | Complete | \$4,404,011 |
| BH014500 | Ivy Home-Shell Road Sewer Extension Division I Replacement | Complete | \$2,243,200 |
| BH014600 | 46th Street Diversion Sewer Rehabilitation Replacement | Complete | \$12,178,333 |
| BH014900 | Hampton Trunk Sewer Extension Division K Gravity Improvements | Construction | \$4,644,400 |
| BH015900 | Bloxoms Corner Force Main Replacement | Complete | \$6,391,596 |
| CE011300 | Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II | Construction | \$4,232,651 |
| 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 | Complete | \$13,095,613 |
| GN015000 | South Shore Gravity Sewer Improvements Phase I | Construction | \$3,751,057 |
| GN015300 | Interceptor System Valve Improvements Phase I | Construction | \$4,968,888 |
| GN015400 | South Shore Aerial Crossing Improvements | Construction | \$763,978 |

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

| CIP | Project Name | Project Status | Total CIP Cost |
|----------|---|----------------|----------------|
| GN018600 | North Shore Galvanic Cathodic Protection System Rehabilitation | Design | \$2,323,860 |
| GN018800 | South Shore Galvanic Cathodic Protection System Rehabilitation | Design | \$3,102,235 |
| JR013500 | Lucas Creek Pump Station Replacement ⁴ | Construction | \$26,076,376 |
| NP010620 | Suffolk Pump Station Replacement ² | Design | \$12,049,000 |
| NP012400 | Western Branch Sewer System Gravity Improvements ⁴ | 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 ⁴ | Construction | \$5,271,121 |
| VP014010 | Ferebee Avenue Pump Station Replacement ¹ | Design | \$5,852,747 |
| VP014020 | Sanitary Sewer Project 1950 12 Inch Force Main and 24-Inch & 18-Inch Gravity Replacement | Complete | \$7,179,000 |
| VP014021 | Sanitary Sewer Project 1950 FM Replacement Part 1 | Complete | \$4,225,819 |
| VP014022 | Sanitary Sewer Project 1950 FM Replacement Part 2 ⁴ | Construction | \$24,287,289 |
| VP014700 | Ingleside Road Pump Station Replacement ⁴ | Construction | \$3,810,449 |
| VP014800 | Lee Avenue-Wesley Street Horizontal Valve Replacement | Construction | \$7,802,679 |
| VP015320 | Larchmont Area Sanitary Sewer Improvements ² | Construction | \$52,974,267 |
| VP015400 | Lafayette Norview-Estabrook Pump Station Replacements ² | Design | \$18,495,895 |
| VP016500 | Norview-Estabrook Division I 12-Inch Force Main Replacement ⁴ | Construction | \$5,400,927 |
| VP016700 | Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III ⁴ | Construction | \$4,222,901 |
| VP017110 | Central Norfolk Area Gravity Sewer Improvements Phase I | Complete | \$122,178 |
| VP017120 | Central Norfolk Area Gravity Sewer Improvements Phase II ¹ | Construction | \$7,160,000 |
| VP018000 | Park Avenue Pump Station Replacement ⁴ | Construction | \$15,366,578 |
| YR010300 | Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation | Construction | \$6,503,390 |

\$372,745,957

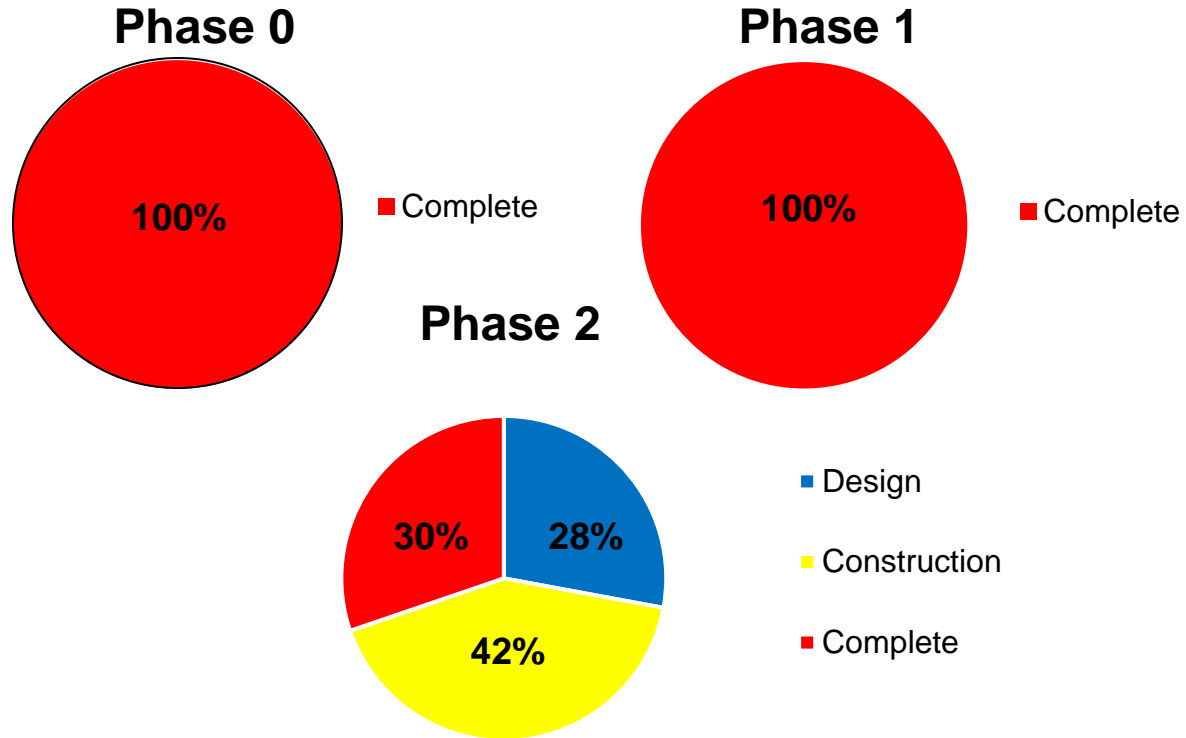
¹ Projects approved by the USEPA with one-year time extension

² Projects approved by the USEPA with two-year time extension

³ Project delayed due to emergency declaration. Time extension requested.

⁴ Projects with a 7-month time extension requested.

Consent Decree / Sewer Rehabilitation Plan – Project Updates



SWIFT Program Update – Nansemond SWIFT Under Design



SWIFT Program Update – Major Projects Under Construction

Boat Harbor FM1 (JRX)
57% Complete



James River ANRI/SWIFT
57% Complete



Boat Harbor PS Conversion
35% Complete



Nansemond ANRI
47% Complete



35 % 57 % 57 % 47 %

Percentage Complete



SWIFT Partners Continue Their Commitment to the Community



Chesapeake Bay Foundation

- Oyster Gardening: Program that provides the opportunity to grow oysters alongside docks and later planted for sanctuary reefs
- \$500 donation to support river and stream restoration efforts



Horizons Hampton Roads

- Hosted high school students from Horizons Hampton Roads to introduce them to various engineering disciplines and showcase day-to-day work in the field



Elizabeth River Project - Build a Wetland

- Team members participated in moving and installing sand along the shoreline to help rebuild the property affected by water erosion from weather and boat wakes



Surfrider Foundation Beach Cleanup

- Beach clean during the East Coast Surfing Competition to protect the environment by removing litter and preventing harm to wildlife and waterways



Nansemond Advanced Nutrient Reduction Improvements Phase II

Owner's Consultant:

AECOM with Hazen & Sawyer

Design-Build Team:

Garney with Tetra Tech

Schedule Completion: April 2026

Project Value: \$318M

Funding:

WIFIA Loan = \$156M

WQIF Grant = \$127M (Requested)

Cash/Debt = \$35M



**Primary Effluent Equalization Basin (PEEQ)
Construction**

James River SWIFT and Advanced Nutrient Reduction Improvements

Owner's Consultant:

AECOM with Hazen & Sawyer

Design-Build Team:

Ulliman & Schutte - Alberici
with HDR and Black & Veatch

Schedule Completion: Oct. 2026

Project Value: \$579M

Funding:

WIFIA Loan = \$284M

SRF Loan = \$100M

WQIF Grant = \$345M (Requested) Cash/Debt
= Remainder



Aerial View of Construction

James River Crossing - JRX

a.k.a.(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 Loan = \$82M

SRF Loan = \$10M

WQIF Grant: \$311M Requested

Cash/Debt = Remainder



Direct Bury Pipe Work About to Begin

Focus: James River Treatment Plant Trails Project

This project includes the design and construction of improvements to the land surrounding the James River Treatment Plant and installation of public access trails. A recreational easement was given to the City of Newport News, and these improvements are provided as part of a negotiated agreement for a land purchase as part of the SWIFT Program. The trails will be operated and maintained by the City of Newport News. The trail work has been broken into two phases to accommodate the construction at the James River Treatment Plant.



Flax Mill Creek Trail along the river



Flax Mill Creek Trail along the woods



Forthcoming Main Trailhead in the Park



Cemetery location along the Flax Mill Creek Trail



Scan the QR Code to watch
10Wavy Report on the
graves!

Questions?

HRSD Commission Meeting Minutes
October 22, 2024
Attachment #10

15. 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 Measures Summary](#)

October 11, 2024

Re: General Manager's Report



Environmental Responsibility

Staff continue to discuss ways to reduce odors from the Atlantic Treatment Plant. Starting in October, staff will begin reducing the pad storage volume by hauling biosolids in the middle of the night to the Waverly landfill. In addition, an odor adsorbing misting system will be installed on the storage pad.

I was briefed on the new version of the Regional Hydraulic Model (RHM) and all the new capabilities. Comparing what I used when I first started at HRSD in 2005 as an Interceptor Engineer to the current version is night and day. We will have very high confidence levels when we make data-driven decisions based on RHM model output.

The EPA is requesting more information on our force majeure claim for a deadline extension to the Larchmont project. If you recall, after the costs came in higher than expected, the City of Norfolk terminated the cost participation agreement for their portion of the project causing a significant delay to revise the construction bid documents. Staff will work to send EPA additional information to support the claim.

Treatment Compliance and System Operations: There were multiple events reported this month. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

- From Fiscal Year (FY) 2025 to date, there have been zero Permit Exceedances out of 14,132 Total Possible Exceedances.
- Pounds of Pollutants Removed in FY 2025 to date: 55.1 million pounds.

Water Quality: One civil penalty was issued in September to Total Fiber Recovery in Chesapeake after they discharged solid material to the sanitary system. The Enforcement Order was accepted, and the fines were paid.



Financial Stewardship

Staff successfully closed the \$268 million Tranche 3 WIFIA loan and locked in the interest rate at 4.15%. As we discussed, this provides an important option for Fiscal Year 2026 CIP funding as we can get a rate reset if it falls more than 10% below 4.15% as long as we have not started drawing funds.

The Chesapeake-Elizabeth Treatment Plant (CETP) Offline Program Water Quality Improvement Fund (WQIF) grant is expected to be executed in October after the public comment period.

Revenues continue to exceed expenses after the first quarter. Interest Income remain strong. Higher than budgeted water consumption is driving wastewater revenues higher than expected.

Our Learning and Development group received a \$500,000 sub-award from the federal Apprenticeship Building America grant to expand and enhance our apprenticeship opportunities.



Talent

After our last annual retreat, the Senior Leadership Team and Directors have started meeting on a quarterly basis to discuss emergent issues. At the last meeting, we discussed our HSA Healthy Equity card issue, Department Roadmaps, and making HRSD the anchor for a water technology focused innovation ecosystem.

I was unanimously voted to remain on the Virginia Investment Pool's (VIP) Board of Trustees by the membership. This is important because the VIP includes \$250 to \$300 million of HRSD's treasury funds. HRSD's treasury funds represents approximately 10% of the VIP's assets under management.

I attended the annual health insurance claims review. HRSD continues to perform better than other organizations. One of the primary drivers is that HRSD has 60% of its staff meet with their doctor annually where the industry average is only 30%. Staff have set a new goal of getting 100% to see their doctor annually and will be revamping our wellness program to increase participation.



Community Engagement

I presented HRSD's Strategic Plan along with Hazen at WaterJAM. The presentation focused on the scenario planning process and how we have implemented the plan.

Staff held a kick-off, and two Locality focused High Priority Inflow and Infiltration meetings the week of September 16th.

I met with James City Service Authority's (JCSA) leadership about groundwater trading and high-pressure concerns in northern James City. We will continue working with their staff on these issues.

TO: General Manager

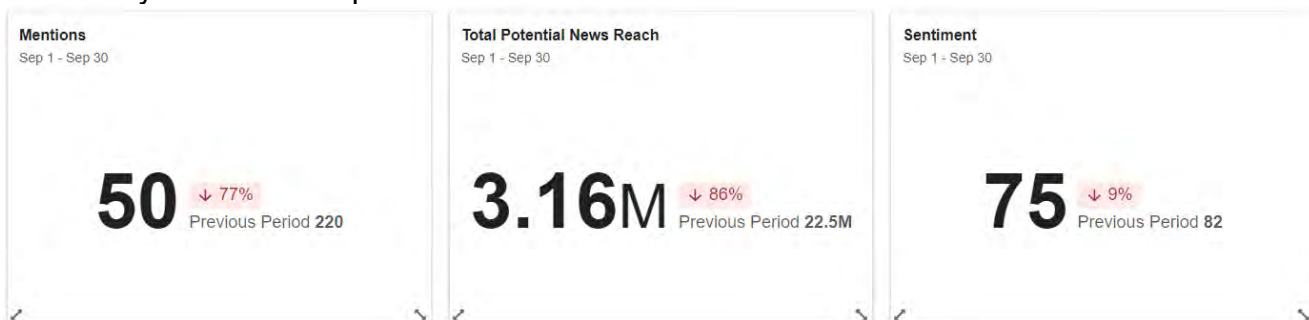
FROM: Chief Communications Officer

SUBJECT: Monthly Report for September 2024

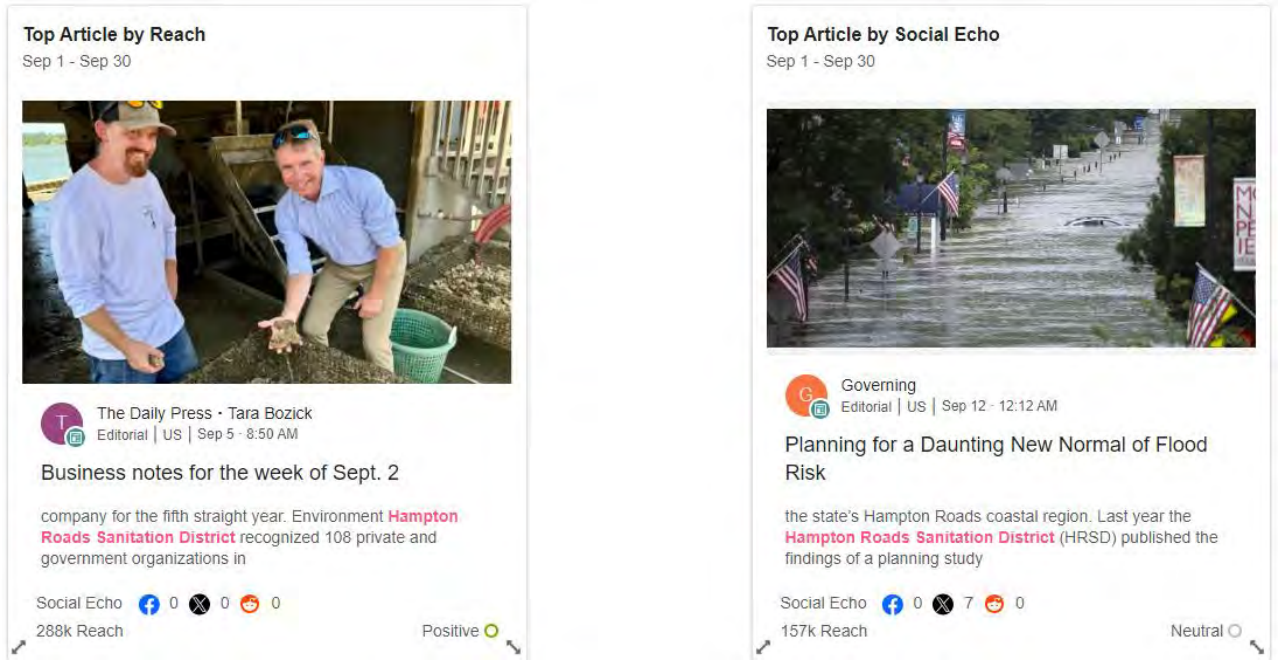
DATE: October 10, 2024

A. Publicity and Promotion

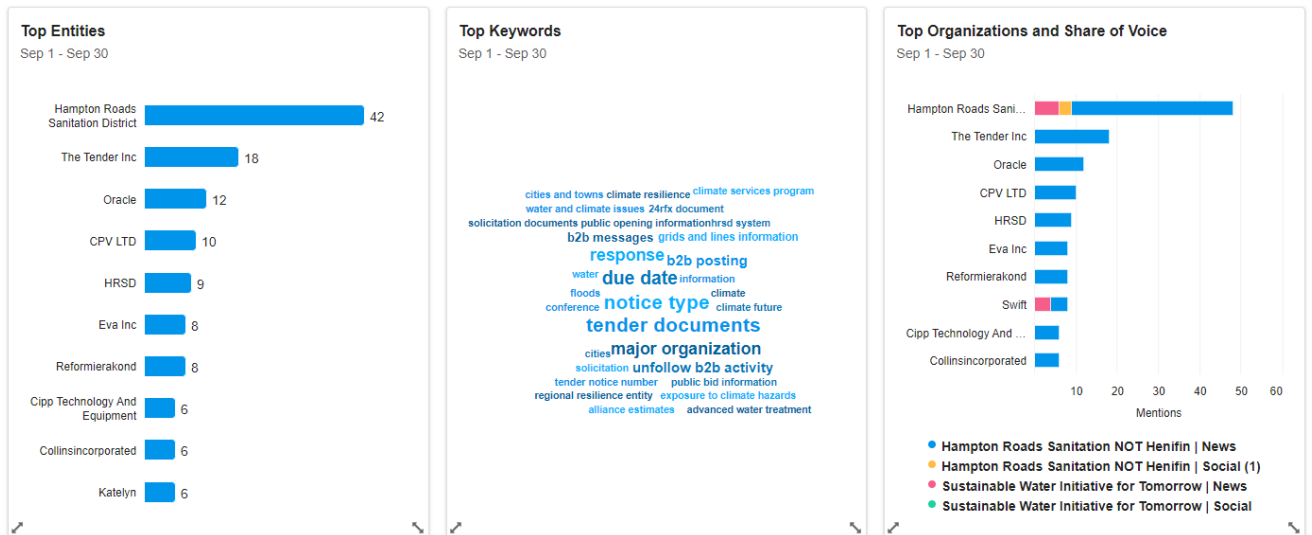
1. HRSD and Sustainable Water Initiative For Tomorrow (SWIFT) were mentioned or featured in eight stories this month. Topics included:
 - a. Garney/Dewberry record-breaking HDD operation in the James River
 - b. Planning for future floods
 - c. Eastern Shore sewer system nears completion, Exmore council discusses growth
2. Analysis of Media Coverage
 - a. Key results for September



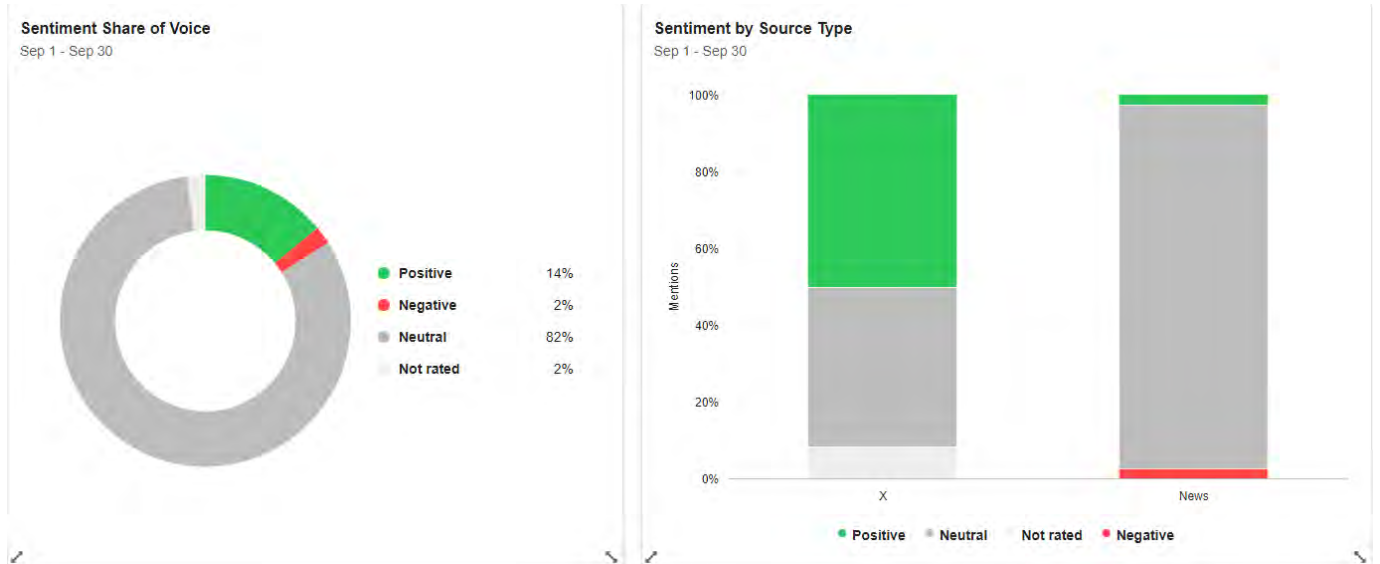
b. Top performing news content



c. Top entities and keywords

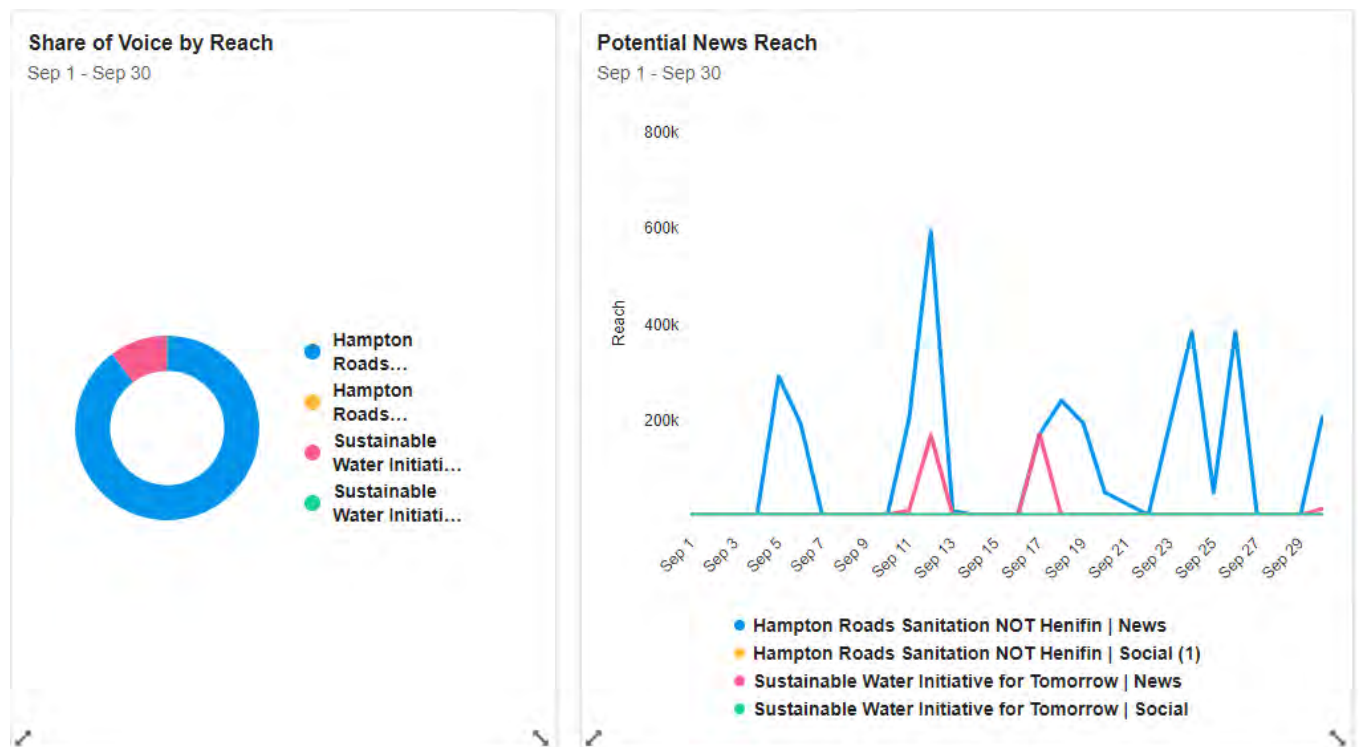


d. How favorable is the content?

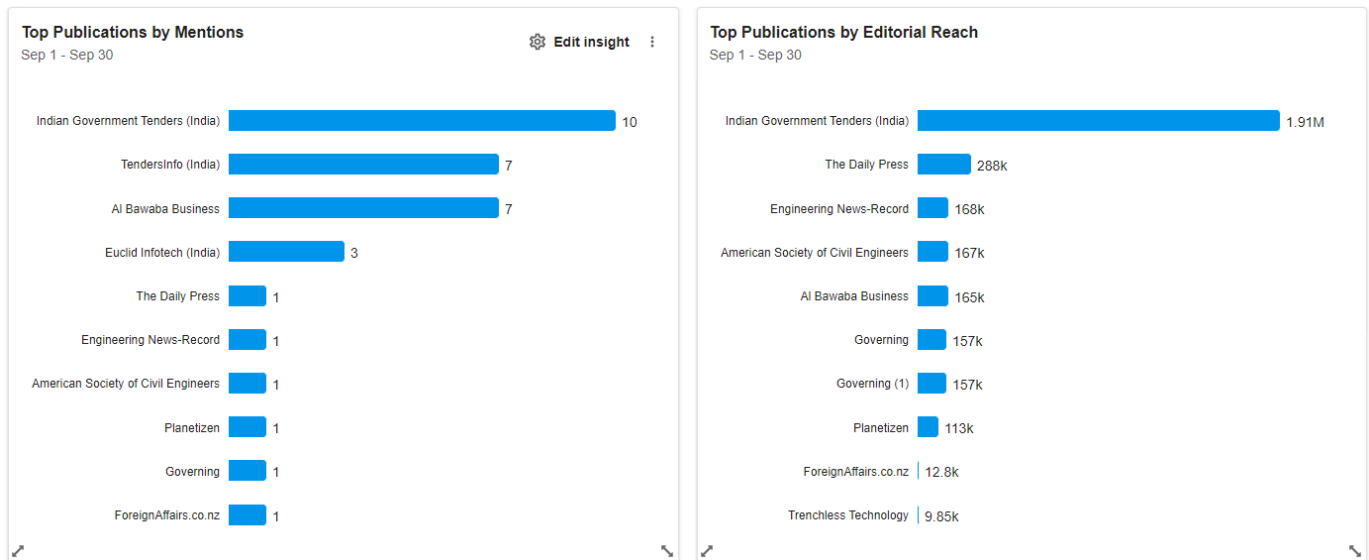


(Negative sentiment attributed to story about planning for future floods and was not specific to HRSD)

e. What is the potential reach?



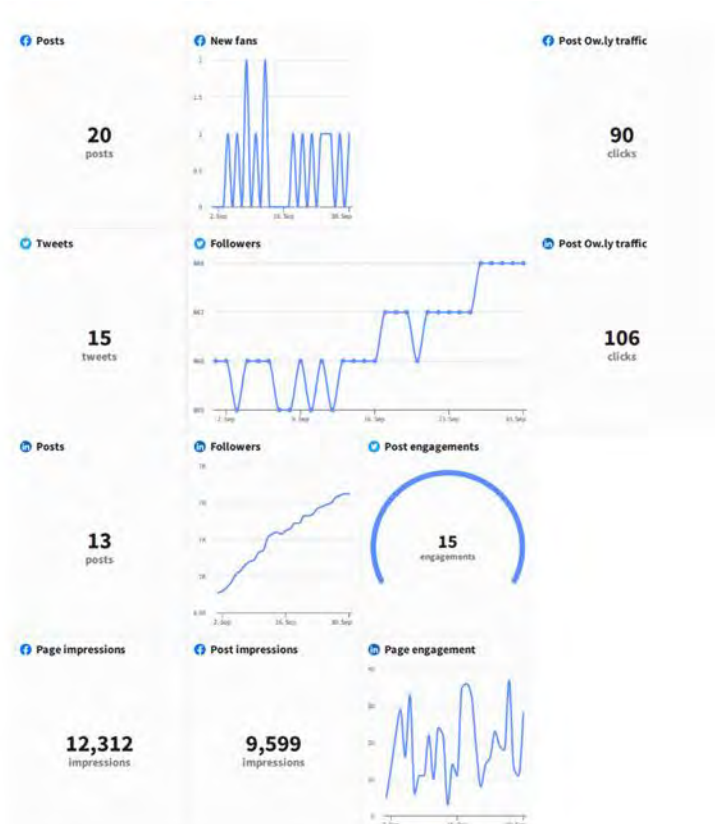
f. Top publishers



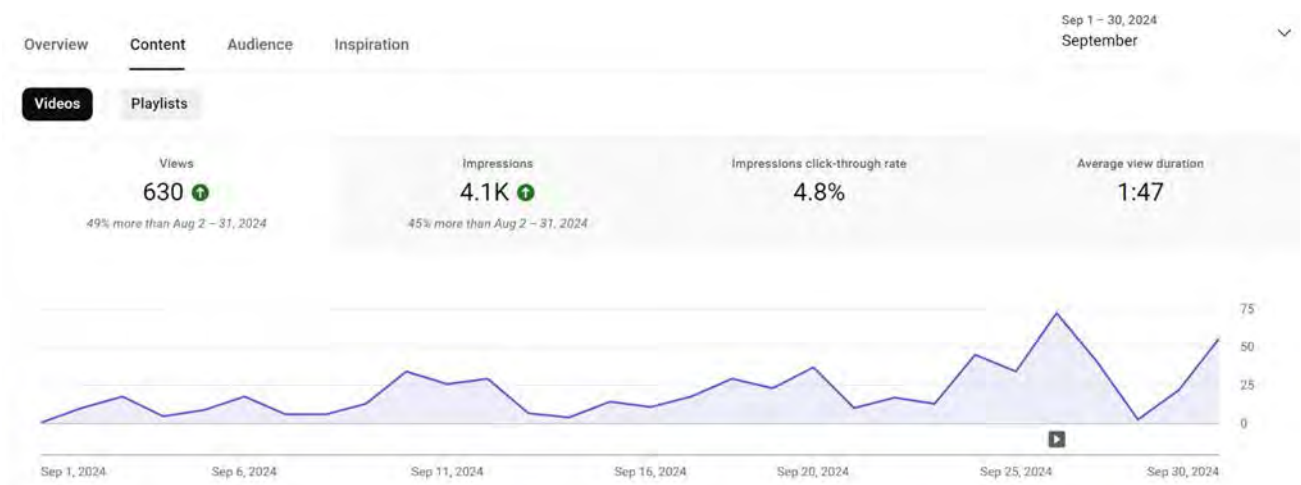
Community Engagement

B. Social Media and Online Engagement

1. Metrics – Facebook, X and LinkedIn



2. YouTube



3. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post

In Case You Missed It

Our dedicated crews worked around the clock to successfully pull a pipeline under the James River! 🌊🔧 This crucial pipeline will transport sewage from the Boat Harbor Pump Station across the river to the Nansemond Treatment Plant, where it will undergo advanced treatment before recharging the Potomac Aquifer!

This project is a huge step forward in enhancing our wastewater management and supporting a sustainable future. Thank you to everyone involved!

For more details and pictures, check out our latest blog post! <https://ow.ly/rFUR50Tw842>

[See insights and ads](#) [Boost post](#)

👍👎🗨️ 37

2 comments 3 shares

b. Top X Post



c. Top YouTube Videos (based on views in the month)

- (1) [The Wastewater Treatment Process](#)
- (2) [SWIFT Research Center: What Is the Potomac Aquifer](#)
- (3) [Why SWIFT Matters](#)
- (4) [Horizontal Directional Drilling Under the James River](#)
- (5) [HRSD Atlantic Treatment Plant Cambi THP Tour](#)

4. Website and Social Media Impressions and Visits

a. Facebook:

- (1) 12,312 page impressions
- (2) 9,601 post impressions reaching 9,212 users.
- (3) Facebook Engagement of 278 (249 reactions, 23 shares, and 6 comments)

b. X: 3.37% engagement rate

c. HRSD.com/SWIFTVA.com: 964 page visits

d. LinkedIn Impressions:

- (1) 16,997 page impressions
 - (2) 13,722 post impressions
- e. YouTube: 630 views
- f. Next Door unique impressions: 77,964 post impressions from 21 targeted neighborhood postings and one region-wide posting.
- g. Blog Posts (0):
- h. Construction Project Page Visits – 1560 total visits (not including direct visits from home page, broken down as follows:
 - (1) 1,097 visits to individual pages
 - (2) 463 to the status page

C. Education and Outreach Activity Highlights

Community Outreach and Education Specialists and HRSD Ambassadors coordinated and participated in six different outreach events this month. Community partners included the York County School Division, Canon Virginia, the Virginia Living Museum and Foxhill United Methodist Church.

South Shore Public Information Specialist participated in the virtual Environmental Assessment meeting for the Wilroy Road Pressure Reducing Station and Offline Storage Facility.

Chief Communications Officer (CCO) and staff provided a SWIFT Tour to the Virginia Living Museum (VLM) educators team. HRSD has formed an educational partnership with VLM and is working toward establishing an interactive exhibit at the museum.

CCO, together with the General Manager and Deputy General Manager observed the external focus group testing for the proposed new HRSD logo. Results of the focus group testing and the internal survey will be used to determine next steps in adoption of a new look and potential tagline for HRSD.

Project notices were distributed to 619 customers for 12 different projects across the service area this month. The department distributed and posted 11 construction or work notices and two traffic advisories to the HRSD.com Newsroom.

D. Internal Communications

CCO participated in the following internal meetings and events:

- 1. HRSD Leadership meeting
- 2. HRSD Security Team meeting

3. Atlantic Treatment Plant monthly communications check-in meeting
4. SWIFT Strategic Communications monthly meeting
5. SWIFT Industry Day 2025 planning meetings
6. SWIFT Community Commitment Plan steering committee meeting
7. Atlantic Treatment Plant Odor taskforce check-in meeting
8. High Priority Infiltration and Inflow and partnering kickoff meeting
9. Website phase 3 development meeting
10. Bi-weekly General Manager (GM) briefings
11. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST), and HRSD QST meetings
12. Check-in meetings with Deputy General Manager (DGM)
13. Director conducted biweekly Communications department status meetings and weekly one-on-one check-in meetings.
14. Staff participated in 16 project progress and/or construction meetings and communication planning meetings with various project managers, plant staff and external stakeholders.



Talent

Professional development activities and pursuits for September included the following:

- CCO participated in the Public Relations Society of Hampton Roads Professional Development Summit.
- CCO attended FOIA Public Records Training.
- CCO attended the PRSA Employee Communication Section Webinar: Working Smarter with Generative AI Tools.
- North Shore Public Information Specialist began LEAD of Greater Williamsburg training with an orientation meeting and two-day retreat.
- Community educator attended several “Methods of Teaching Environmental Education” and Environmental Literacy trainings totaling 14.5 hours.

Respectfully,

Leila Rice, APR

Chief Communications Officer

TO: General Manager

FROM: Chief Engineer

SUBJECT: Engineering Monthly Report for September 2024

DATE: October 11, 2024



Environmental Responsibility

A hurricane drill (Hurricane Maizy) was conducted earlier this year to better prepare HRSD for a potential storm event. With recent severe weather impacting numerous parts of the U.S., this was a timely exercise. The drill included an effort to use the newly updated Damage Assessment software tool for both office and field use. Several lessons learned were found as a result of the drill and these results have been shared with senior leadership over the last two months.

The City of Norfolk is working closely with the U.S. Army Corps of Engineers to study and make improvements to address climate change through coastal resiliency known as “Resilient Norfolk”. This is a huge effort (\$2.6B) impacting large parts of Norfolk. The project includes storm-surge barriers, nearly 9 miles of floodwalls and levees, 11 tide gates, and ten pump stations, along with hundreds of non-structural projects that include home elevations, basement fills, and commercial floodproofing. HRSD has numerous assets in Norfolk impacted by this potential work. This project could impact buried pipes, pump stations and two treatment plants (Army Base and VIP). We have created an internal task force to coordinate with Norfolk and their various consultants. Close coordination is underway to determine the impact of the proposed floodwall on HRSD infrastructure located along Waterside Drive in downtown Norfolk. HRSD is also working with Norfolk to determine the impacts to both the Army Base and VIP Treatment Plants and to determine ways to mitigate potential flooding.



Financial Stewardship

Capital Improvement Program (CIP) spending for the second month of FY2025 was slightly below the planned spending target.

CIP Spending (\$M):

| | Current Period | FYTD |
|--------|----------------|--------|
| Actual | 66.26 | 82.55 |
| Plan | 68.80 | 102.60 |

One metric used to measure the effort to manage the CIP is available through the HRSD ERP system. This metric involves the calculation of time spent by staff on every CIP project. Since the cost of the project is known, a ratio of labor cost incurred vs. total project cost can be calculated. For HRSD CIP projects this ratio is typically between 0.001 to 0.05. Smaller CIP projects tend to have a higher ratio since these projects have certain fixed efforts even if the project cost is low, i.e. project meetings, cost accounting, reporting, etc. This metric allows HRSD to measure the time and cost associated with project management.



Talent

We have recently added Mr. Mike Hess as our new SWIFT Deputy Program Manager. Mike comes to the Engineering Division from the South Shore Interceptors Department. In addition to his experience with Operations, he also has prior experience as a consulting engineer, which should be helpful in his new role within the SWIFT Program.

Recruitment continues to be a focus of the Engineering Division. We currently have six (6) open positions that are critical to the success of the division. Recruitment for the three open Project Manager positions has been finalized and we expect to have these individuals on board in the coming month. Mr. Ray Holmes recently retired from HRSD, and we have begun the recruitment effort for his replacement in our Asset Management Department.



Community Engagement

An important aspect of community engagement is proper planning. HRSD has begun two important planning initiatives. The first effort is the Middle Peninsula Sewer Master Plan. This effort includes close coordination with the communities on the Middle Peninsula to understand their needs and estimate future wastewater flows. In areas like the Middle Peninsula, a few residential developments can greatly impact the capacity of facilities. Numerous options exist to serve this relatively undeveloped area, so careful review of these options is essential to finding cost effective solutions. The second effort is the Development Plan 2025. This plan will serve as a roadmap to guide HRSD for the planning, design, and construction of future CIP projects in a proactive and phased approach. This type of effort has not been conducted since 2000, due to the many constraints related to regulatory compliance and the associated work resulting from these initiatives. This plan is a comprehensive review of all HRSD's service areas (except small communities) and will recommend future interceptor sewers, pump stations, wet weather storage, and treatment plant expansions and/or possible consolidations. This effort will be conducted over the next two years and will require significant coordination with each of the communities served by HRSD.



Innovation

The hydraulic model used by HRSD to manage the complex series of sewer pipes and pump stations throughout the region is known as Mike Urban. This software program was developed by the Danish Hydraulic Institute (DHI) in the Netherlands. This modeling software has been very valuable over the years as we have managed numerous interceptor system improvements and worked with the US EPA to better understand how wet weather impacts the regional sewer system. HRSD recently moved to the DHI Mike+ software program as part of a review of other potential tools. Some of the early benefits of this software program include:

- Ability to store multiple wet weather parameters within a single model instead of having to keep separate files for rainfall simulation
- Ability to run only portions of the regional sewer system to get faster results
- Faster overall processing speed to save time by staff waiting for output

- Initial results indicate that the new model is giving similar results when compared to the previous model

This improved modeling software program is already showing benefits and is a more user-friendly tool that will help to improve modeling efforts for many years to come.

At the August Commission Meeting, an agreement was approved to coordinate with the United States Geological Survey (USGS) to install a Subsidence Superstation at the James River Treatment Plant. An extensometer and related equipment will be installed to measure land subsidence in the coming years. This is an obvious location due to the SWIFT facilities and recharge wells under construction at this site. The SWIFT Project Team is coordinating with the USGS to find a location for this equipment that will ensure accurate results and give easy access to USGS staff. Coordination meetings will be held in the coming months to choose the final site location and coordinate the construction efforts. This effort will help to define the benefits of the SWIFT managed aquifer recharge on mitigating land subsidence within the Hampton Roads region.

Bruce W. Husselbee

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

TO: General Manager

FROM: Deputy General Manager and Chief Financial Officer

SUBJECT: Monthly Report for September 2024

DATE: October 10, 2024



Financial Stewardship

The Chesapeake-Elizabeth Treatment Plant (CETP) Offline Program Water Quality Improvement Fund (WQIF) application was approved by the Commission on September 24. The public comment period will continue until mid-October and then the grant agreement can become fully executed. The \$78 million included in the grant agreement will be the first phase of reimbursements for interceptor assets installed to convey flow from the CETP to the Atlantic Treatment Plant (ATP). Staff will work with the Department of Environmental Quality (DEQ) to negotiate the second phase, an amount of up to \$22 million of this grant that will reimburse for work done at the ATP that was needed to accept the flow from CETP.

The \$268 million loan agreement for WIFIA Tranche 3 and the modifications to the WIFIA master Agreement closed on September 30. WIFIA Tranche 3 will be used to pay for the costs of the Sustainable Water Initiative For Tomorrow (SWIFT) program in Fiscal Year (FY) 2026. Closing on Tranche 3 now provides a low-cost alternative means of financing that will allow staff to determine the lowest cost of capital financing prior to needing the funds in early FY 2026.

The accompanying Interim Financial Report for the first quarter of the year indicates that most revenue and expense accounts are generally in line with the amended budget.

The Debt Solutions team has been actively conducting an outbound call program, advising customers of pending disconnection, promoting available financial assistance, and reviewing pay plan options. Staff is also reviewing the past-due account process flow and exploring collection options for non-severance accounts. Staff estimates outbound calling generated just over \$1million in payments following contact.

Field staff delivered 5,849 warning door tags and disconnected water service to 894 accounts during September 2024. This activity resumed in September following a temporary moratorium during July and August due to the 2024 legislative requirement effective July 1 suspending disconnection activities when the forecasted temperature is 92 degrees or higher within 24 hours of scheduled disconnection.

Partially as a result of resumed field activities and questions regarding longer billing periods from delayed meter reading activities by our locality partners, customer call and email volumes increased in September, ranging from 3,000 to 3,750 per week.

A. Interim Financial Report

1. Operating Budget for the Period Ended September 30, 2024.

| | Amended Budget | Current YTD | Current YTD as % of Budget (25% Budget to Date) | Prior YTD as % of Prior Year Budget |
|-------------------------------------|-------------------|----------------|---|---|
| Operating Revenues | | | | |
| Wastewater | \$ 442,031,000 | \$ 117,040,619 | 26% | 26% |
| Surcharge | 1,400,000 | 449,600 | 32% | 22% |
| Indirect Discharge | 3,970,000 | 1,086,482 | 27% | 28% |
| Fees | 3,172,000 | 858,158 | 27% | 30% |
| Municipal Assistance | 837,000 | 144,354 | 17% | 37% |
| Miscellaneous | 1,982,000 | 583,565 | 29% | 48% |
| Total Operating Revenue | 453,392,000 | 120,162,778 | 27% | 27% |
| Non Operating Revenues | | | | |
| Facility Charge | 6,170,000 | 1,919,900 | 31% | 32% |
| Interest Income | 7,300,000 | 6,986,788 | 96% | 95% |
| Build America Bond Subsidy | - | - | 0% | 0% |
| Other | 330,000 | 119,475 | 36% | 11% |
| Total Non Operating Revenue | 13,800,000 | 9,026,163 | 65% | 42% |
| Total Revenues | 467,192,000 | 129,188,941 | 28% | 27% |
| Transfers from Reserves | 19,475,990 | 4,868,998 | 25% | 25% |
| Total Revenues and Transfers | \$ 486,667,990 | \$ 134,057,939 | 28% | 27% |
| Operating Expenses | | | | |
| Personal Services | \$ 80,140,274 | \$ 17,619,942 | 22% | 23% |
| Fringe Benefits | 30,767,169 | 6,523,967 | 21% | 22% |
| Materials & Supplies | 15,245,514 | 2,848,248 | 19% | 15% |
| Transportation | 2,382,779 | 334,979 | 14% | 20% |
| Utilities | 16,643,039 | 3,469,412 | 21% | 21% |
| Chemical Purchases | 16,974,110 | 3,213,333 | 19% | 23% |
| Contractual Services | 57,868,703 | 9,146,955 | 16% | 16% |
| Major Repairs | 16,778,801 | 1,051,737 | 6% | 10% |
| Capital Assets | 2,361,019 | 154,972 | 7% | 9% |
| Miscellaneous Expense | 4,171,177 | 1,880,199 | 45% | 23% |
| Total Operating Expenses | 243,332,585 | 46,243,744 | 19% | 19% |
| Debt Service and Transfers | | | | |
| Debt Service | 87,700,000 | 18,528,480 | 21% | 41% |
| Transfer to CIP | 155,635,405 | 38,908,851 | 25% | 25% |
| Transfer to Risk management | - | - | 0% | 25% |
| Total Debt Service and Transfers | 243,335,405 | 57,437,331 | 24% | 31% |
| Total Expenses and Transfers | \$ 486,667,990 | \$ 103,681,075 | 21% | 25% |

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 Capital Improvement Project (CIP).

Transfers represent certain budgetary policy designations as follows:

- a. Transfer to CIP: represents the 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, 2024.

HRSD - RESERVE AND CAPITAL ACTIVITY

September 30, 2024

| | General Reserve | | | Capital | | |
|---|-----------------------|----------------------|---------------------|----------------------|-----------------------|----------------------|
| | General | Debt Service | Risk Mgmt Reserve | Paygo | SNAP | CIP Proceeds |
| | Unrestricted | Restricted | Unrestricted | Unrestricted | Restricted | Restricted |
| Beginning - July 1, 2024 | \$ 240,258,497 | \$ 22,307,000 | \$ 4,799,555 | \$ 37,468,922 | \$ - | \$ - |
| Current Year Sources of Funds | | | | | | |
| Current Receipts | 127,397,478 | | | | | |
| Line of Credit | | | | | | |
| VRA Draws | | | | | | 11,699,581 |
| WIFIA Draws | | | | | | 74,198,212 |
| Grants | | | | | | 13,136,680 |
| Series 2024B | | | | | 268,087,870 | |
| Series 2024B Interest | | | | | 2,128,908 | |
| Transfers In | | | | 38,908,851 | | |
| Sources of Funds | 127,397,478 | - | - | 38,908,851 | 270,216,778 | 99,034,473 |
| Total Funds Available | \$ 367,655,975 | \$ 22,307,000 | \$ 4,799,555 | \$ 76,377,773 | \$ 270,216,778 | \$ 99,034,473 |
| Current Year Uses of Funds | | | | | | |
| Cash Disbursements | 70,429,001 | | | 34,779,994 | | 99,034,473 |
| Transfers Out | 38,908,851 | | | | | |
| Uses of Funds | 109,337,852 | - | - | 34,779,994 | - | 99,034,473 |
| End of Period - September 30, 2024 | \$ 258,318,123 | \$ 22,307,000 | \$ 4,799,555 | \$ 41,597,779 | \$ 270,216,778 | \$ - |
| Unrestricted Funds | \$ 304,715,457 | | | | | |

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended September 30, 2024.

HRSD - PROJECT ANALYSIS September 30, 2024

| Classification/ Treatment Service Area | Appropriated Funds | Expenditures prior to 7/1/2024 | Expenditures Year to Date FY2025 | Total Project Expenditures | Encumbrances | Available Funds |
|--|-----------------------|--------------------------------------|--|----------------------------------|------------------|------------------|
| Administration | 76,193,950 | 32,801,479 | 1,681,309 | 34,482,788 | 3,895,551 | 37,815,611 |
| Army Base | 176,442,597 | 126,238,488 | 64,019 | 126,302,507 | 9,865,453 | 40,274,637 |
| Atlantic | 262,172,364 | 89,606,122 | 2,842,507 | 92,448,629 | 30,868,253 | 138,855,482 |
| Boat Harbor | 526,086,433 | 195,525,030 | 8,939,110 | 204,464,140 | 262,895,603 | 58,726,690 |
| Ches-Eliz | 60,564,467 | 20,454,851 | 293,911 | 20,748,762 | 5,085,973 | 34,729,732 |
| Eastern Shore | 63,812,749 | 41,487,070 | 1,174,875 | 42,661,945 | 3,261,918 | 17,888,886 |
| James River | 374,571,240 | 196,624,027 | 11,483,274 | 208,107,301 | 125,480,043 | 40,983,896 |
| Middle Peninsula | 92,488,041 | 26,445,704 | 669,885 | 27,115,589 | 4,455,817 | 60,916,635 |
| Nansemond | 485,050,400 | 210,474,584 | 25,930,927 | 236,405,511 | 183,640,743 | 65,004,146 |
| Surry | 60,391,465 | 45,528,213 | 210,105 | 45,738,318 | 6,968,958 | 7,684,189 |
| VIP | 274,947,838 | 68,101,536 | 9,936,238 | 78,037,774 | 71,808,607 | 125,101,457 |
| Williamsburg | 87,324,019 | 22,399,476 | 228,214 | 22,627,690 | 6,307,653 | 58,388,676 |
| York River | 112,420,863 | 43,280,559 | 4,241,373 | 47,521,932 | 36,833,917 | 28,065,014 |
| General | 1,644,211,174 | 347,184,688 | 31,853,594 | 379,038,282 | 843,968,209 | 421,204,683 |
| | \$ 4,296,677,600 | \$ 1,466,151,827 | \$ 99,549,341 | \$ 1,565,701,168 | \$ 1,595,336,698 | \$ 1,135,639,734 |

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 - TFM Phase I (Accomac) | ES010100 | 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 | \$ 36,124,859 |
| American Rescue Plan Act | VDEQ | Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II | NP013820 | 10/7/2022 | \$ 50,000,000 | \$ 31,693,207 |
| FY2024 Congressionally Directed Funding, Warner/Kaine, Kiggans | CDF FY24 | Eastern Shore Wastewater Improvements, Chincoteague | ES010500 | 3/7/2023 | \$ 9,677,112 | \$ 1,250,000 |
| Water Quality Improvement Fund, Conveyance | VDEQ | Chesapeake-Elizabeth Treatment Plant Conveyance | Multiple | 2/7/2023 | \$ 100,647,746 | \$ 78,276,470 |
| Water Quality Improvement Fund, Conveyance | VDEQ | Eastern Shore TFM Phase 1 and Nassawadox Treatment Plant Conveyance | ES010100, ES010900 | 5/2/2022 | \$ 4,900,000 | \$ 4,936,538 |
| Water Quality Improvement Fund, Nutrient Reduction | VDEQ | James River SWIFT - Advanced Nutrient Reduction Improvements | JR013400 | 3/23/2023 | \$ 344,741,547 | \$ - |
| Water Quality Improvement Fund, Nutrient Reduction | VDEQ | Boat Harbor Pump Station and Conveyance | Multiple | 3/4/2024 | \$ 311,286,392 | \$ - |
| Water Quality Improvement Fund, Nutrient Reduction | VDEQ | Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II | NP013820, GN016380 | 3/4/2024 | \$ 127,657,505 | \$ - |
| Building Resilient Infrastructure and Communities (BRIC) | VDEM-FEM | Dozier's Corner Pump Station and Washington District Pump Station Resiliency Improvements | AT013000, AT015400 | 2/6/2024 | \$ 18,988,629 | \$ - |
| FY2024 Congressionally Directed Funding, Warner/Kaine, Kiggans | CDF FY24 | Onancock Treatment Plant Solids Handling Improvements | ES010800 | 3/21/2024 | \$ 6,624,248 | \$ - |
| Climate Pollution Reduction Grant - Implementation | EPA | PdNA Implementation to Reduce GHG | AB011800 | 4/1/2024 | \$ 59,540,142 | \$ - |
| | | | | | \$ 1,092,430,321 | \$ 156,464,574 |

6. Debt Management Overview

| HRSD - Debt Outstanding (\$000's) | | | | September 30, 2024 | | |
|-----------------------------------|--------------|------------|-----------|----------------------|--------------|------------|
| | | Aug 2024 | | Sept 2024 | | |
| | Principal | | | | Principal | Interest |
| | Balance | Payments | Draws | Capitalized Interest | Balance | Payments |
| Fixed Rate | \$ 1,557,536 | \$ (7,021) | \$ 10,039 | \$ 392 | \$ 1,560,946 | \$ (1,777) |
| Variable Rate | 50,000 | - | - | - | 50,000 | (149) |
| Line of Credit | 100,000 | - | - | - | 100,000 | (428) |
| Total | \$ 1,707,536 | \$ (7,021) | \$ 10,039 | \$ 392 | \$ 1,710,946 | \$ (2,354) |

| HRSD- Series 2016VR Bond Analysis | | | September 27, 2024 |
|-----------------------------------|-------------|--------------------|--------------------|
| | SIFMA Index | HRSD Series 2016VR | Deviation to SIFMA |
| Maximum | 4.71% | 4.95% | 0.24% |
| Average | 1.34% | 0.92% | -0.42% |
| Minimum | 0.01% | 0.01% | 0.00% |
| As of 9/27/24 | 3.15% | 3.10% | -0.05% |

Since October 20, 2011 HRSD has averaged 92 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 | \$ 225,865,648 | 0% | Closed Out |
| WIFIA Tranche 2 | EPA | \$ 476,581,587 | \$ 282,791,861 | 41% | Ongoing |
| WIFIA Tranche 3 | EPA | \$ 268,087,870 | \$ - | 100% | July 2025 |
| Clean Water Program 2024 | DEQ | \$ 80,000,000 | \$ 12,781,302 | 84% | Ongoing |

7. Financial Performance Metrics for the Period Ended September 30, 2024.

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 |
|-----------------------------------|-----------------------|-------------------|----------------------------|
| Total Unrestricted Cash | \$ 304,715,457 | | 457 |
| Risk Management Reserve | \$ (4,799,555) | (7) | 450 |
| Capital (PAYGO only) | \$ (41,597,779) | (63) | 387 |
| Adjusted Days Cash on Hand | \$ 258,318,123 | | 387 |

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

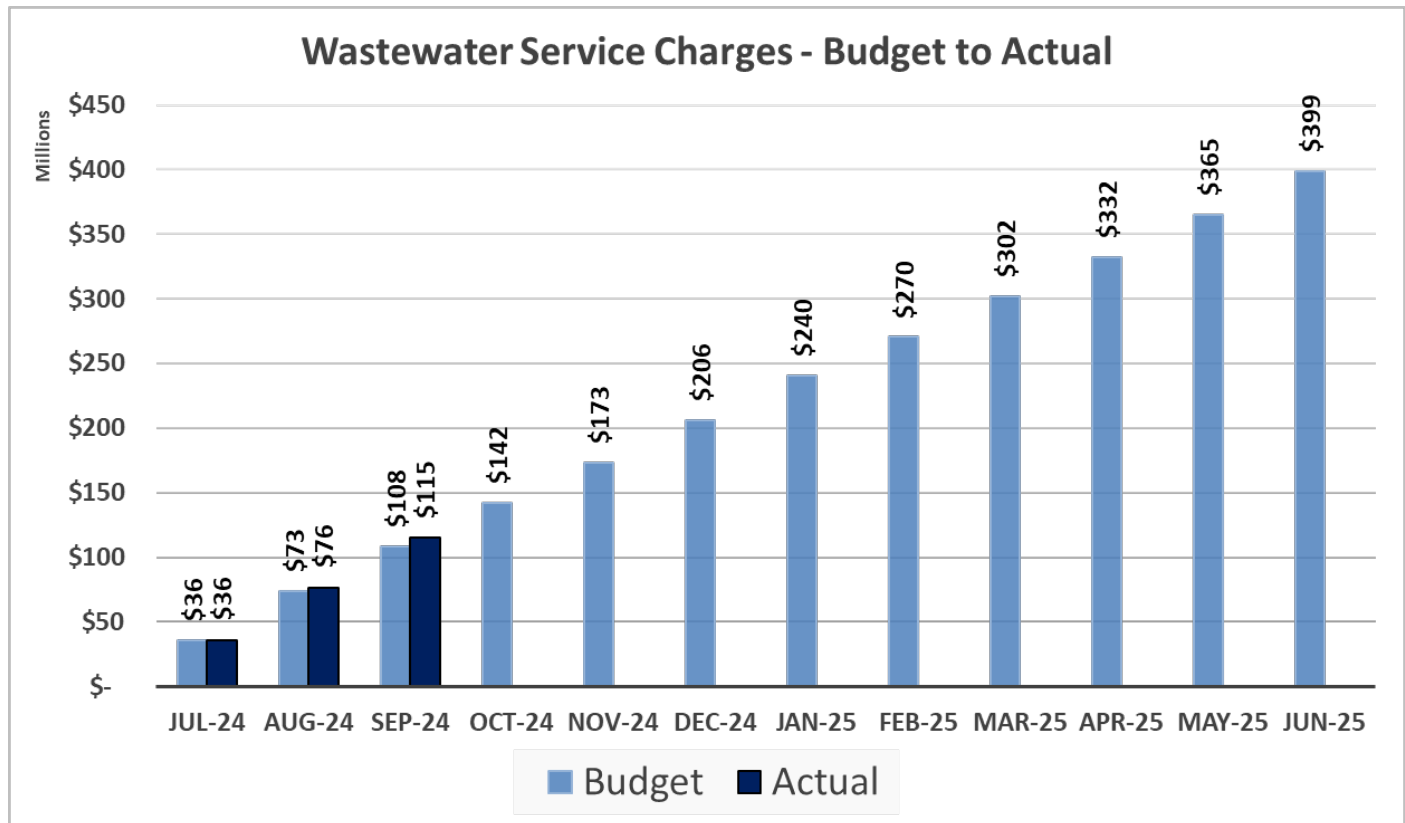
September 30, 2024

| Primary Source | Beginning Market Value July 1, 2024 | YTD Contributions | YTD Withdrawals | YTD Income Earned | Ending Market Value September 30, 2024 | Allocation of Funds | Credit Quality | Current Mo Avg Yield |
|-------------------------------|--|-----------------------|-----------------------|---------------------|---|---------------------|----------------|----------------------|
| BOA Corp Disbursement Account | 31,786,393 | 240,875,643 | 256,140,315 | 332,907 | 16,854,628 | 7.1% | N/A | 0.55% |
| VIP Stable NAV Liquidity Pool | 178,789,050 | 40,000,000 | - | 2,634,363 | 221,423,413 | 92.9% | AAAm | 5.29% |
| Total Primary Source | \$ 210,575,443 | \$ 280,875,643 | \$ 256,140,315 | \$ 2,967,270 | \$ 238,278,041 | 100.0% | | |

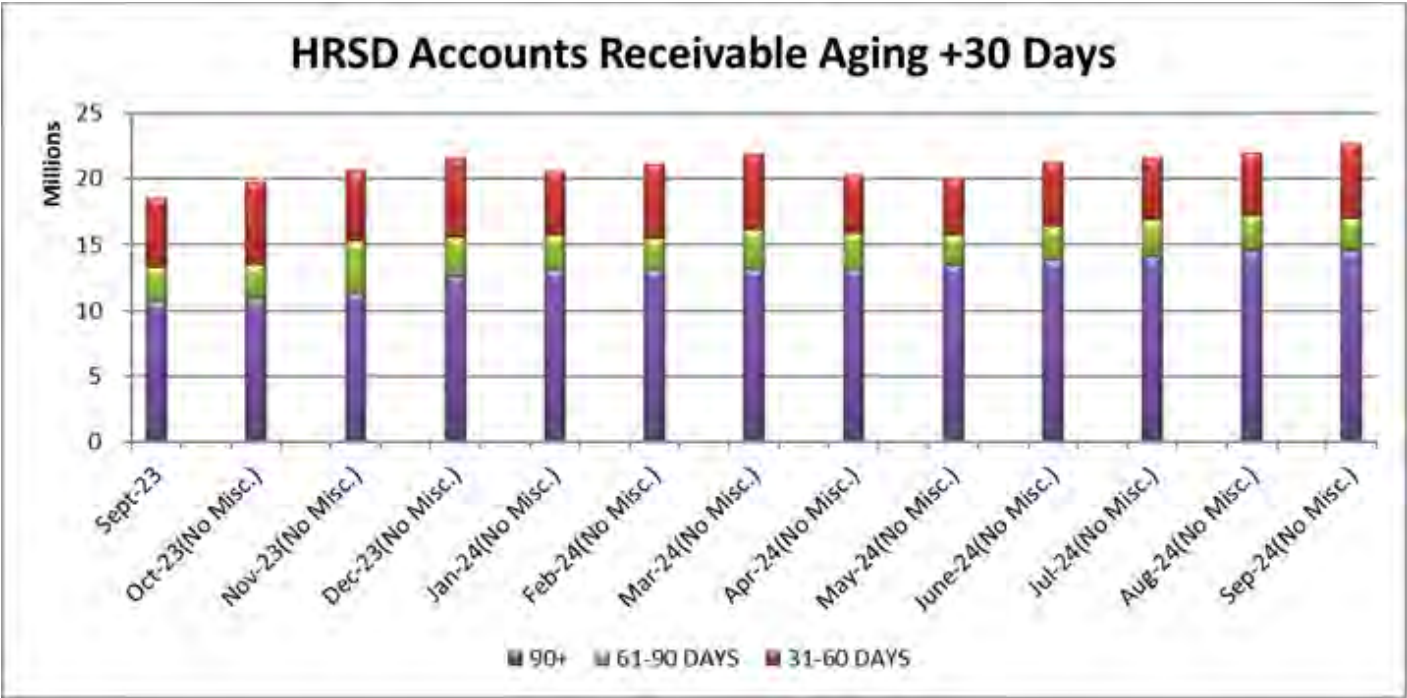
| Secondary Source | Beginning Market Value July 1, 2024 | YTD Contributions | YTD Withdrawals | YTD Income Earned & Realized G/L | Ending Market Value September 30, 2024 | Ending Cost | LTD Mkt Adj | Yield to Maturity at Market |
|-------------------------------------|--|-------------------|-----------------|----------------------------------|---|----------------------|---------------------|-----------------------------|
| VIP 1-3 Year High Quality Bond Fund | 65,915,924 | - | 3,334 | 714,835 | 67,753,845 | 68,017,628 | (263,784) | 3.74% |
| Total Secondary Source | \$ 65,915,924 | \$ - | \$ 3,334 | \$ 714,835 | \$ 67,753,845 | \$ 68,017,628 | \$ (263,784) | |

| | Total | Fund Alloc |
|------------------------|-----------------------|---------------|
| Total Primary Source | \$ 238,278,041 | 77.9% |
| Total Secondary Source | \$ 67,753,845 | 22.1% |
| TOTAL SOURCES | \$ 306,031,886 | 100.0% |

8. Summary of Billed Consumption

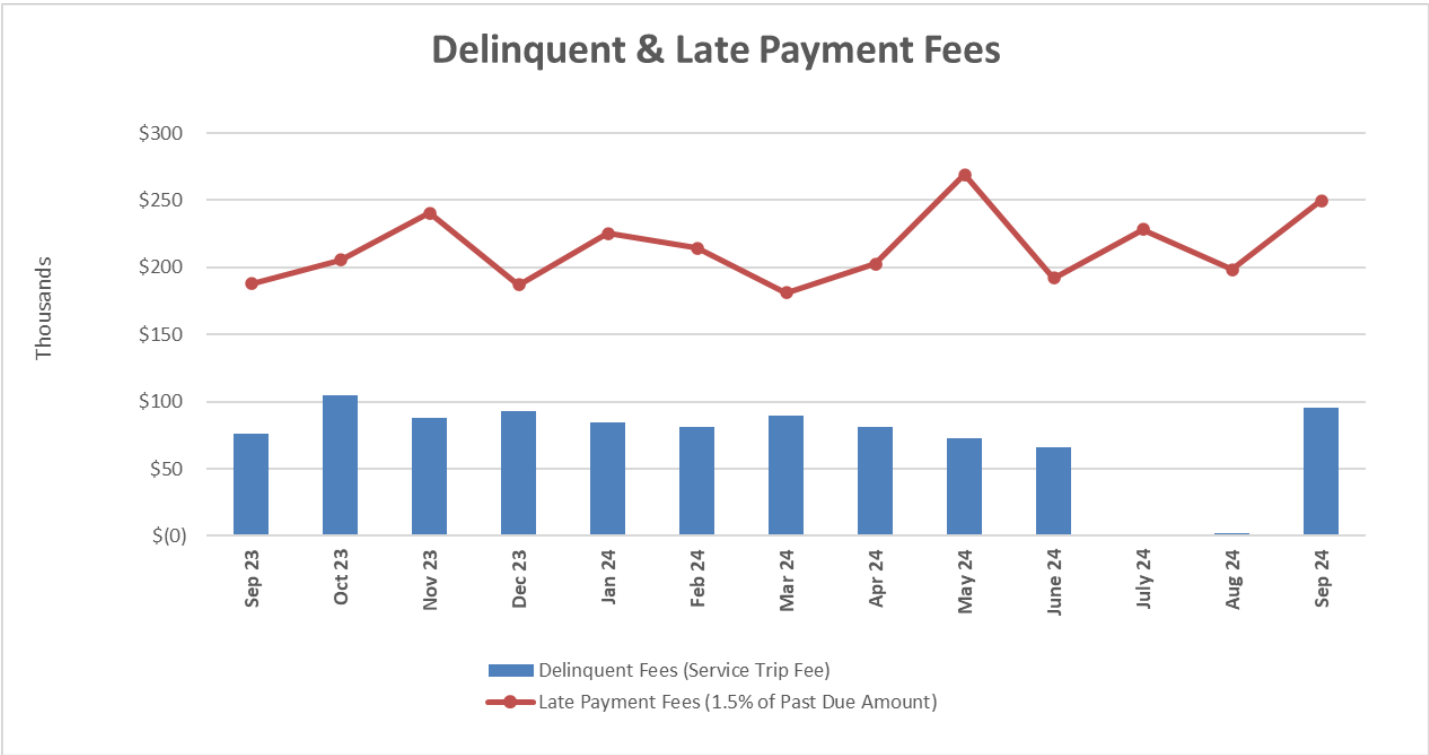


| Summary of Billed Consumption (,000s ccf) | | | | | | | |
|---|-------------------|-------------------|---------------------|-------------------|---------------------|---------------------|---------------------|
| | | | <u>% Difference</u> | | <u>% Difference</u> | | <u>% Difference</u> |
| | <i>FY2025</i> | <i>FY2025</i> | | <i>Cumulative</i> | | <i>Cumulative 3</i> | |
| | <i>Cumulative</i> | <i>Cumulative</i> | | <i>FY2024</i> | <i>From</i> | <i>Year Average</i> | <i>From 3 Year</i> |
| <i>Month</i> | <i>Budget</i> | <i>Actual</i> | <i>From</i> | <i>Actual</i> | <i>FY2024</i> | | <i>Average</i> |
| | <i>Estimate</i> | | <i>Budget</i> | | | | |
| July | 4,678 | 4,630 | -1.0% | 4,504 | 2.8% | 4,721 | -1.9% |
| Aug | 9,644 | 9,518 | -1.3% | 9,432 | 0.9% | 9,534 | -0.2% |
| Sept | 14,196 | 14,223 | 0.2% | 13,965 | 1.9% | 14,173 | 0.4% |
| Oct | 18,663 | - | N/A | 18,854 | N/A | 18,861 | N/A |
| Nov | 22,756 | - | N/A | 23,004 | N/A | 22,911 | N/A |
| Dec | 27,109 | - | N/A | 27,127 | N/A | 27,267 | N/A |
| Jan | 31,641 | - | N/A | 31,819 | N/A | 31,784 | N/A |
| Feb | 35,568 | - | N/A | 36,182 | N/A | 35,990 | N/A |
| March | 39,770 | - | N/A | 39,826 | N/A | 39,954 | N/A |
| Apr | 43,694 | - | N/A | 44,054 | N/A | 44,119 | N/A |
| May | 48,027 | - | N/A | 48,760 | N/A | 48,383 | N/A |
| June | 52,500 | - | N/A | 53,206 | N/A | 52,999 | N/A |

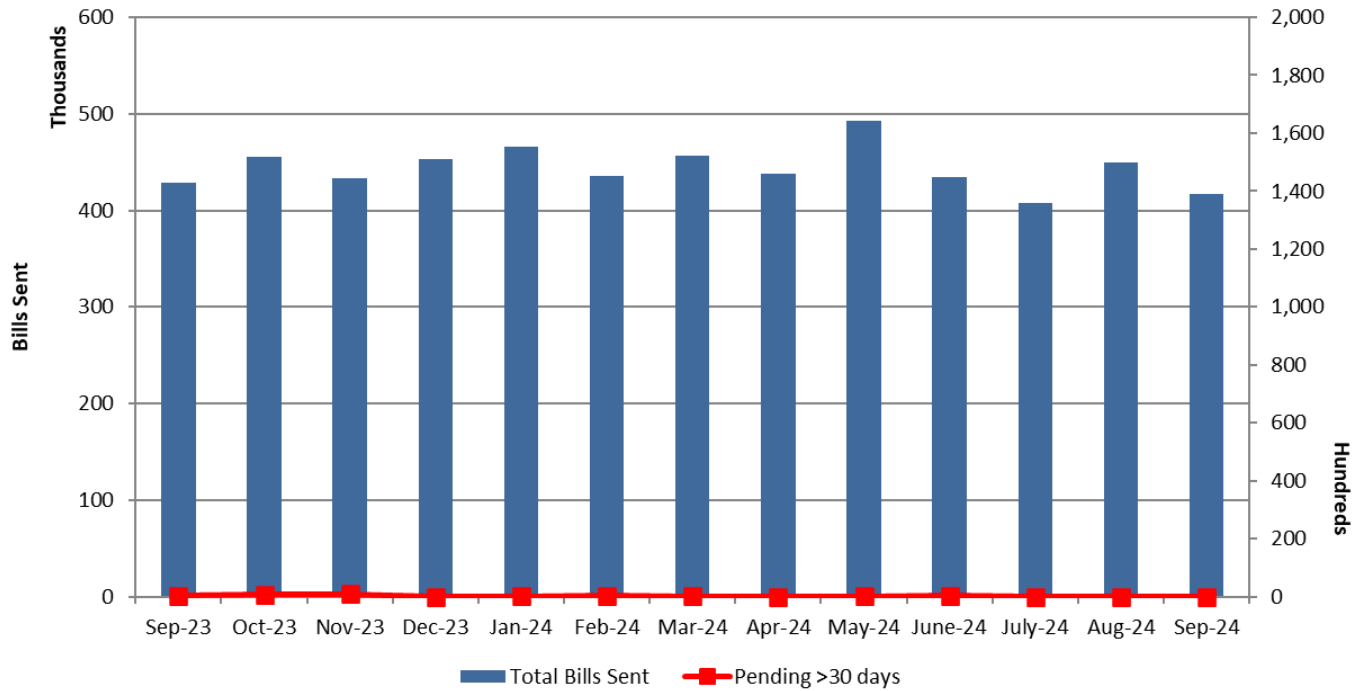


B. Customer Care Center

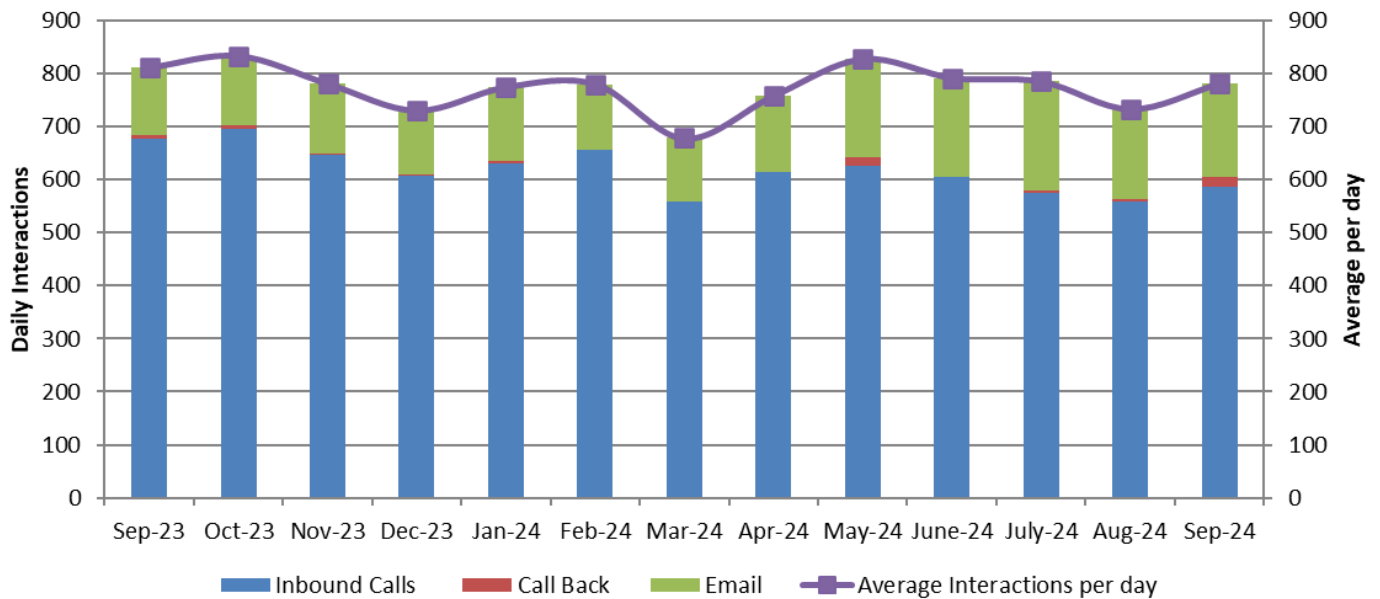
1. Accounts Receivable Overview



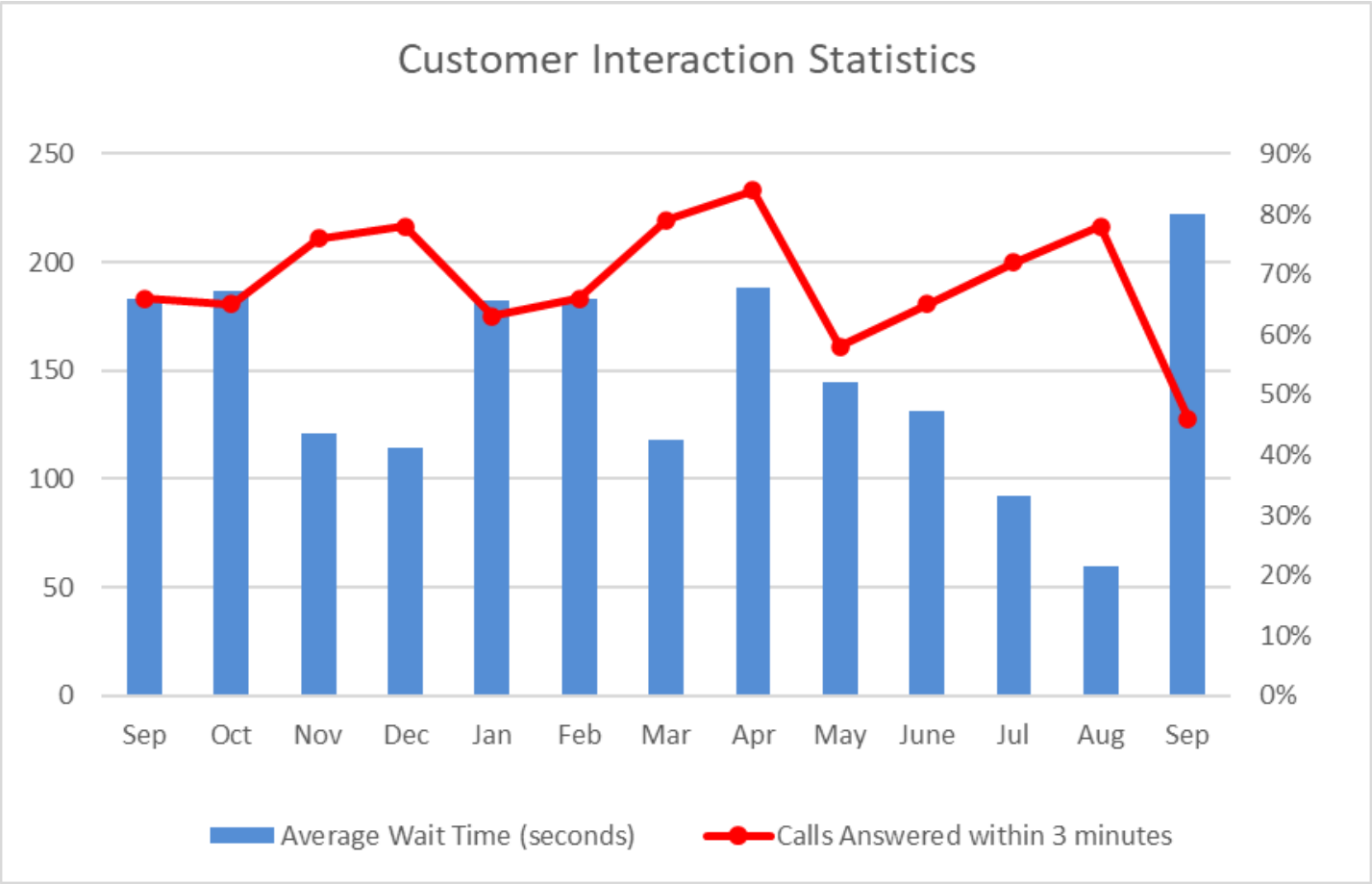
Billing Summary



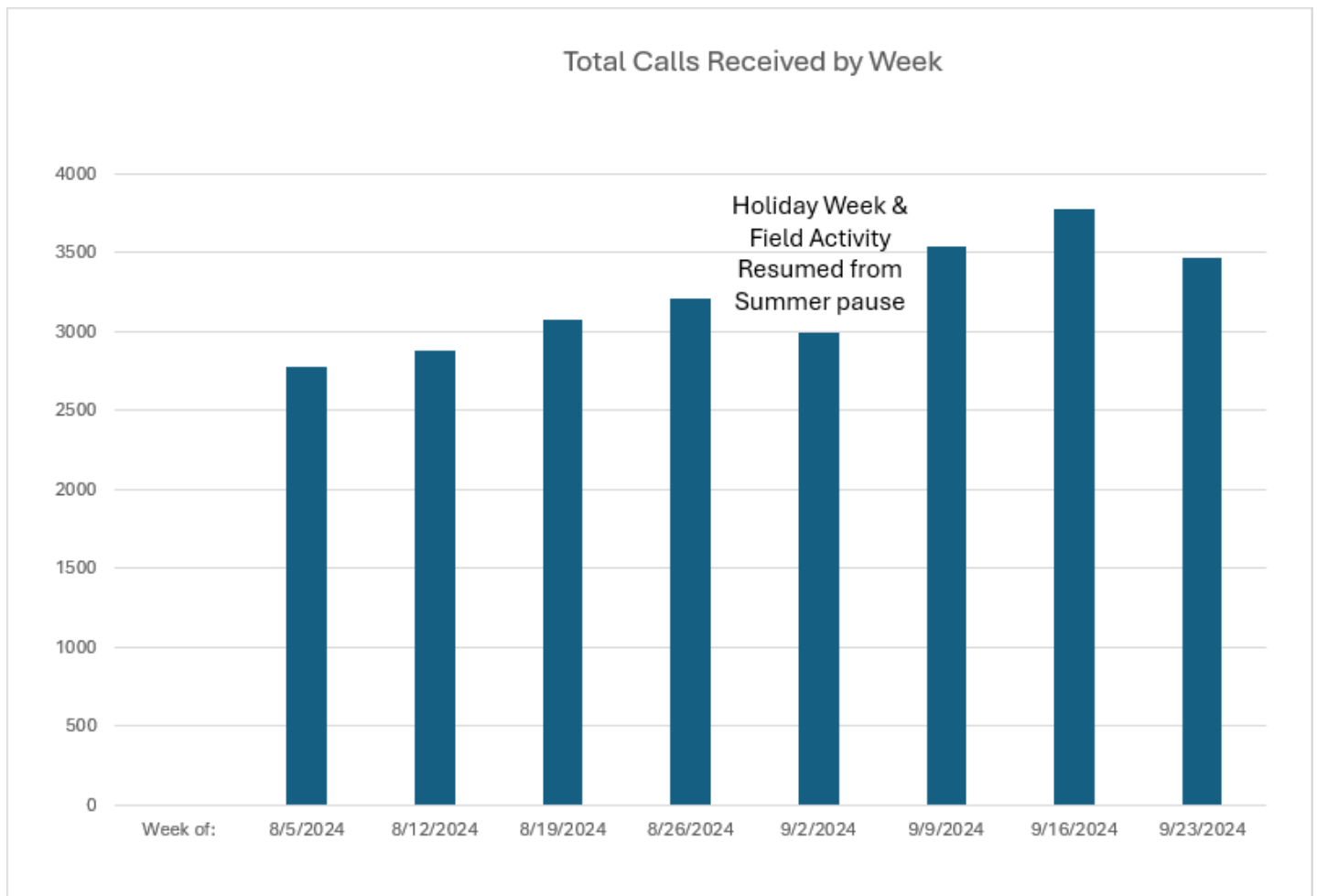
Call Center Interactions (per day)



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 | 66% | 65% | 76% | 78% | 63% | 66% | 79% | 84% | 58% | 65% | 72% | 78% | 46% |
| Average Wait Time (seconds) | 183 | 187 | 121 | 114 | 182 | 183 | 118 | 188 | 145 | 131 | 92 | 60 | 222 |
| Calls Abandoned | 11% | 12% | 10% | 9% | 13% | 12% | 10% | 8% | 15% | 11% | 9% | 6% | 18% |



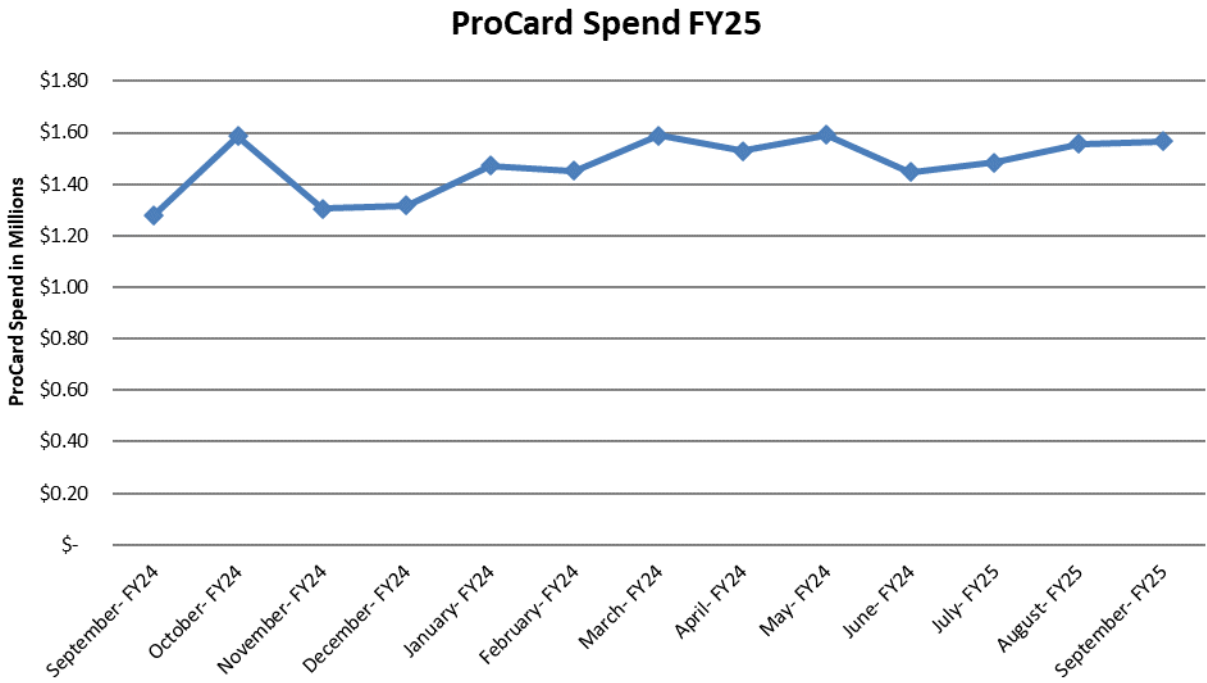
C. Procurement Statistics

| Savings | Current Period | FYTD |
|--|----------------|-----------|
| *Competitive Savings ¹ | \$579,693 | \$726,460 |
| Negotiated Savings ² | \$4,472 | \$5,297 |
| Salvage Revenues | \$51,204 | \$64,613 |
| Corporate VISA Card - Estimated Rebate | \$23,349 | \$69,635 |

*Competitive Savings - FYTD total has been decreased by \$1,102 due to an error on the August 2024 report.

¹ 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.

² 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.



Respectfully,

Steven G. de Mik

Steven G. de Mik
Deputy General Manager/Chief Financial Officer

The City of Chesapeake is working quickly to provide service to the Coastal Virginia Commerce Park. Staff are coordinating closely with the City as this project is a high priority for the City and the Commonwealth.

Staff attended a focus group session for our proposed new HRSD logo and tagline. This information along with our internal survey will guide our next steps.

With the new moratorium on shutoffs above 92 degrees suspending field activity for most of July and August, September saw a significant increase in call volume as shutoffs resumed.



Innovation

Samsung representatives from their Environmental Technology Development Center flew in from South Korea to learn more about our patented technologies. As part of our presentation, I invited the Hampton Roads Alliance (HRA), Hampton Roads Executive Roundtable, Hampton Roads Planning District Commission and 757 Collab to attend. HRA, as our regional Economic Development entity, provided an overview of Hampton Roads as this was a great opportunity to highlight our region should Samsung ever wanted to start a North American water business unit.

Staff are working on a new research project to remove PFAS from landfill leachate using Foam Fractionization. This includes testing technologies that can destroy the PFAS concentrate. One of the technologies is an electron beam developed by Jefferson Labs.

I look forward to seeing you in Newport News at 9:00 a.m. on Tuesday, October 22, 2024.

Respectfully submitted,

Jay Bernas, P.E.
General Manager

TO: General Manager

FROM: Chief Information Officer

SUBJECT: Information Technology Department (ITD) Report for
September 2024

DATE: October 13, 2024



Innovation

Staff is upgrading the operating systems for mid-tier computing platforms within the data center. The upgrade is progressing on schedule and extensive testing throughout the process ensures both data and system integrity.

Programming staff continues working on requisite changes within eBusiness Suite and other relevant systems to accommodate end-of-year and new year data processing and reporting changes (e.g. tax code changes, benefit changes, payroll, etc.).

Initial preparations for the upgrade of the Pre-treatment Information Management System (PIMS) are underway, including cybersecurity and systems engineer review of proposed network and application platform configuration changes.

With the Surface Pro rollout complete, staff is replacing outdated desktop computers throughout HRSD to ensure consistency and reliability of HRSD networked assets are maintained.

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.



Community Engagement

Work is progressing nicely on the upcoming rollout of the Customer Portal. Staff from multiple work centers continue user acceptance testing, error identification and remediation, and finalization of the cutover plan into production for go live. The revised go live is now slated for November.

Respectfully,

Don Corrado

TO: General Manager/Chief Executive Officer

FROM: Chief Operating Officer

SUBJECT: Operations Monthly Report for September 2024

DATE: October 09, 2024



Community Engagement

Staff participated in several community events as follows:

1. On September 30, North Shore (NS) Interceptor Operations held our annual combined locality coordination meeting with most all our member jurisdictions in attendance. A wide range of topics were discussed including Saltwater Chasers, Sustainable Water Initiative for Tomorrow (SWIFT) updates, CIP updates, and operational reviews.
2. On September 16, South Shore (SS) Interceptor Operations staff held a locality collaboration meeting with City of Suffolk Public Utilities Department Operation's staff to discuss operational issues, initiatives, and projects.
3. On September 9, Mr. David Ewing and Mr. Jeff Powell, Operations Superintendent and Maintenance Superintendent respectively at the Atlantic Treatment Plant (ATP) gave a tour of the Total Petroleum Hydrocarbons (TPH) to staff from the City of Arlington, Virginia.
4. Kickoff meeting was held for the second phase of improvements to Riverview Farm Park with the City of Newport News Parks and Recreation and our consultant. This phase includes connector trails on the old City Farm property and access roads to well sites. Three recharge wells are in the phase two improvements area. Trails under phase one are scheduled to open to the public at the end of October.
5. Small Communities Division (SCD) and Electrical and Instrumentation (E&I) staff met with York County Public Works staff to discuss vacuum sewer operation and optimization.
6. SCD staff, Surry County staff, Surry County Schools staff and Prince George Electric Co-op staff met to negotiate a path forward for providing electrical service for the new Surry High School Pump Station.



Environmental Responsibility

Treatment and Interceptor System Reportable Items:

There were multiple events reported this month. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

Internal Air and Odor Compliance:

There were multiple events reported this month. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

1. There were two reportable events at Virginia Initiative Plant (VIP) in September for failing to record two valid Total Hydrocarbon (THC) readings in an hour, resolved by replacing the THC analyzer.
2. Army Base Treatment Plant (ABTP) had two reportable events in September for failing to record two valid THC readings in one hour. The Continuous Emission Monitoring System (CEMS) unit was replaced by E&I staff.
3. ABTP had one reportable event in September for "shutdown of odor control scrubber for more than one hour". The issue was caused when emergency generators were operated during black start procedures.

4. ATP main Thermal Hydrolysis Process (THP) steam boiler kept failing due to a flame failure when running on digester gas (d-gas). Staff called in a contractor that found the d-gas regulator needed adjustment to provide the needed pressure for this boiler to operate on this source of gas. Staff has the backup boiler on to keep the THP process, which directly impacts keeping all of solids handling, up and running. This back-up boiler is a known source for noise complaints, so the plant is expediting repairs as quickly as possible, with the long-term goal of having a permanent back up boiler in the space where the CHP engines are currently sitting.
5. Williamsburg Treatment Plant (WBTP) had one reportable use of the incinerator emergency bypass stack due to the induced draft fan tripping out due to a power blip. The incinerator total hydrocarbon analyzer had a total data capture of only 14.5 percent due to calibration issues.
6. The York River Treatment Plant (YRTP) Odor Control Scrubbers were off-line for more than one hour due to planned electrical shut down. The purpose of the shutdown was to allow a contractor safe access the main switch gear to investigate an issue.

Additional Topics of Interest:

1. On September 25, SS Interceptor Operations supported the Chesapeake-Elizabeth Treatment Plant (CETP) decommissioning and demolition by installing pumps and pipelines to drain the clarifiers that have filled with rainwater.
2. On September 30, SS Interceptor Operations helped the City of Portsmouth Public Utilities Department with the repair of a damaged concrete raw water main in Suffolk that services Portsmouth.
3. There was a reportable event at VIP on September 17 when the plant operator recorded an effluent chlorine residual value lower than 0.10 mg/L, caused by a process upset following a high flow event.
4. On the Advanced Nutrient Removal Improvement (ANRI)/SWIFT Project at the JRTP, sheet piles are still being installed in preparation for constructing the new #2 secondary clarifier, while the #3 secondary clarifier weir box is under construction. Construction of the new final effluent sample building was completed. On the SWIFT side, two more plate settlers were installed in building #1 and concrete work continued on the upper decks of building #2.
5. On September 11, ATP had the annual inspection from the Virginia Beach Fire Marshal. The inspection went well. There were a few minor issues that are being addressed and the Fire Marshal is scheduled to reinspect in early October.
6. E&I staff replaced all the conduit and wire for three burners and three thermocouples that were damaged on incinerator #1 in June at the Boat Harbor Treatment Plant (BHTP).
7. SCD staff successfully repaired a force main break in Mt. Olive that was caused by a private contractor who struck a 2-inch force main pipe while directionally boring for communications cable. The pipe carries flow to the Mt. Olive Treatment Plant.
8. SCD staff have been working to transition plant data entry from the Electronic Data System (EDS) to Hach Water Information Management Systems (WIMS). Dual entry period for West Point Treatment Plant (WPTP) and King William Treatment Plant (KWTP) will continue in October. Urbanna and Central Middlesex are now online with Hach WIMS and undergoing the dual entry period for October.
9. E&I are in the process of designing a temporary solution to counteract a H₂S issue at the centrifuge building at WBTP. H₂S is causing corrosion of electrical components that control the centrifuges and has resulted in significant down time. They are also evaluating permanent solutions that are sustainable and cost effective.
10. E&I staff installed a Hach Sc5500 Low Range phosphate analyzer for the Filter Pilot at VIP. The plant staff is assessing tertiary treatment technologies that will meet new phosphorous limits by 2026, and phosphorous analyzers will be evaluated to ensure permit compliance.
11. Staff managed the conveyance and treatment of over 135 million gallons (MG) of wastewater this month.



Financial Stewardship

1. HRSD Project Team completed liner repairs to the storage pond at the WPTP. Performing this task resulted in cost and time savings and allowed for repairs to be scheduled around operational needs of the Treatment Plant.
2. The Machine Shop had 21 projects during the month of September with two of them being pump rebuilds. Another notable project was for ATP, draft tube mixer flanges were salvaged from worn-out parts. Staff used available materials to re-hub the flanges back to tolerance, returning them to service at minimal cost.
3. The Carpenter shop completed a total of five work orders in September. A significant amount of time has been dedicated to upgrading the old NS Carpenter shop for the Project Team. Current projects include building a CO2 analyzer holder for the boat at TSD, constructing a podium for the wellness team, and repairing and painting office walls.



Innovation

1. The SCADA program continues to make significant progress as more sites were finalized. Numerous variances and network issues were resolved at Coliseum Pressure Reducing Station; however, finalization of this site will not happen until October. The SCADA system continues to be an invaluable tool for helping system performance during emergency operations and during wet-weather events.
2. VIP staff and Mr. Aidan Blair, Research Intern, continues to operate and monitor a ballasted sedimentation and a cloth media filtration pilot for tertiary phosphorus removal. Plant staff have been extremely efficient and creative in assisting with optimization modifications such as mixer installations, piping adjustments, and set-up for various test scenarios.
3. The total volume of SWIFT Research Center recharge into the Potomac aquifer for the month of September was 8.8 million gallons (MG) (33.7% Recharge Time based on 660 gallons per minute). Several factors interfered with recharge operations this month to include process configuration and maintenance related efforts.
4. SCD and E&I staff have been working on a system that will allow remote monitoring on the Mathews County Vacuum System. After meeting with York County Public Works staff, it was determined that a system from FloVac is currently used by their team and is more cost effective than building one of our own. HRSD is working with FloVac for a proposal of their system that meets HRSD's needs.
5. SCD E&I staff have been working on a project to set up a radar level measurement device for the storage pond at WPTP, this will allow us to use the pond for influent flow equalization.
6. SCD staff along with the HRSD Project Team, met and discussed adding hydrocyclones to the KWTP to help extend the service life of the current membranes. A work plan was developed for the Project Team to execute when time allows.



Talent

1. NS Interceptor Operations has two open positions, one Interceptor Assistant positions and one Interceptor Specialist position.
2. Mr. Lonnie Donaldson joined SS Interceptor Operations as an Interceptor Technician. Mr. Lloyd Favors joined SS Interceptor Operations as an Interceptor Assistant. Mr. Gregory Bailey joined SS Interceptor Operations as a Heavy Equipment Operator.
3. SS Interceptor Operations would like to congratulate Mr. Dylan Poland on his promotion to Heavy Equipment Operator. In addition, congratulations to Mr. Jeff Steadman, Mr. Jeff Midgett, Jr., and Mr. Robert Garcia on their promotion to Utility Locators.
4. On September 10, the Atlantic Treatment Plant received the VWEA Facility Maintenance award at WaterJAM.

5. Eastern Shore has one vacancy for a Maintenance Operator Assistant. We have already begun receiving applications and plan to begin the interview process in October.
6. Middle Peninsula is fully staffed after filling two vacancies during the month of September. Ms. Rachel Cooke started with us as a Systems Operator (SO), and another candidate has accepted an offer for a SO position.
7. The inaugural internal Instrumentation and Controls (I&C) training course began September 10. E&I Superintendent, Mr. Lee Inman, is facilitating training for six E&I Specialists and anticipates completing all classroom and lab instruction by December 17. The formal training course will be offered twice a year, with training objectives focused on enhancing the instrumentation knowledge base and troubleshooting skills.
8. Ms. Ashleigh Payne, Mr. Jonah Jones, and Mr. Andrew Williams joined the Materials Transportation & Logistics team.
9. Mr. Mack Pearce has been selected to serve as the new SWIFT Treatment Process Engineer. He will be primarily assigned to JRTP with the objective of successfully commissioning and starting up the new SWIFT facilities. Over the eight years he has been with us as a Research Intern, he completed his Master's degree in Environmental Engineering at Virginia Tech, and he is now nearly finished with his PhD. Mack has been working on SWIFT since nearly the beginning of the treatment testing at the initial York River pilot testing facility. He was also intimately involved in the design and startup of the SWIFT Research Center, and his pilot work on ozone and other processes has been critical for the design of the full-scale SWIFT facilities at James River and Nansemond. Specifically, the ozone contactor design and bromate control approach were based exactly on Mack's ideas and pilot work.

Respectfully submitted,

Eddie M. Abisaab, PE, PMP, ENV SP
Chief Operating Officer

[Attachment: MOM Reporting](#)

MOM Reporting Numbers

[illegible]

TO: General Manager

FROM: Director of Talent Management

SUBJECT: Talent Management Monthly Report for September 2024

DATE: October 9, 2024



Talent

Staff retention and recruitment remain significant priorities for the Talent Management (TM) Department. Human Resources has reopened the recruitment for the Talent Acquisition Specialist position and continues to review applications for our new Human Resources Business Partner. The two other new positions are going through the C&C process before the recruiting efforts begin.

Human Resources (HR): There were numerous issues identified with Health Equity, our new Health Savings account carrier. HR staff work through and communicated with employees as progress was made. The transfer of funds from our old HSA bank to Health Equity was successful with only 40 employees falling out from that process.

HR Staff reviewed the renewal for the Medicare Advantage plan which will renew in January 2025. Additionally, HR Staff met with Marsh McLennan Agency (MMA), our benefits consultant, to review information from their new Pathways section to map out better ways for HRSD to address the most common health issues.

HR staff are working with Learning & Development (L&D) and Safety staff to develop the Learning Management System (LMS) structure for the newly purchased Cornerstone software platform.

Learning and Development (L&D): In September, L&D solicited bids for the Organizational Development & Training contract renewal, continued development of our corporate learning management system, and strengthened community partnerships to develop and expand access to training.

Organizational Development & Training RFP: L&D's RFP was posted and received 13 bids. Four organizations were interviewed, and the RFP panel is working to award a contract. The RFP and award will be presented in the October Commission Meeting.

Cornerstone LMS: L&D Staff are working to build and implement the LMS and transition current training to an online management system.

Industry and Community Partnerships: The Hampton Roads Workforce Council (HRWC) was awarded \$6 million for their proposed regional apprenticeship hub

program through the federal Apprenticeship Building America Grant. As part of the grant award, HRSD's Apprenticeship Program received a \$500,000 sub-award to expand and enhance apprenticeship opportunities in the Hampton Roads area. L&D Staff are working closely with HRWC to build a framework for accomplishing the projected goals over the next four years.

Lastly, L&D facilitators have continued scheduled training for the LAMA cohort, with intended graduation scheduled for December 2024.

Safety: The Safety staff conducted mandatory training for various work centers, including Telehandler Training, Overhead Crane Training, and American Heart Association CPR, First Aid, and AED courses. Annual audiometric testing is currently being administered by Concentra for employees enrolled in HRSD's Hearing Conservation Program, which applies to those exposed to noise levels of 85 decibels or higher. Additionally, several work centers underwent their quarterly safety inspections this month. Owen McLean from Sentry Insurance joined Safety and plant staff for the Eastern Shore Quarterly Safety Inspection. There were seven reported work-related injuries requiring medical attention and two auto/property damage incidents.

Since becoming certified to teach Stop the Bleed, Safety staff have started conducting training sessions for various work centers, including TSD and several plants. These classes are designed to equip employees with the skills to assist co-workers in stopping severe bleeding during emergency situations.



Community Engagement

Staff participated in the United Way Day of Caring event and provided outreach at career events. This outreach was focused on the variety of career fields represented at HRSD. Information was shared about our open positions, the Apprenticeship Program, how we positively impact the local waterways and our generous benefits. Staff also 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

Chief People Officer

TO: General Manager/ Chief Executive Officer

FROM: Chief of Water Quality (CWQ)

SUBJECT: Monthly Report for September 2024

DATE: October 10, 2024



Environmental Responsibility

1. HRSD's Regulatory Activities:

- a. Monthly Discharge Monitoring Report (DMR) Summary and Items of Interest: [Effluent and Air Emissions Summary](#).
- b. From Fiscal Year (FY) 2025 to date, there have been zero Permit Exceedances out of 14,132 Total Possible Exceedances.
- c. Pounds of Pollutants Removed in FY 2025 to date: 55.1 million pounds.
- d. HRSD received a draft VPDES permit for Army Base on September 24. Owner comments will be drafted and submitted by October 9.

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

One civil penalty was issued in September to Total Fiber Recovery at Chesapeake LLC – Chesapeake.

An Enforcement Order was issued to Total Fiber Recovery at Chesapeake, LLC in August 2024 for a technical violation and an administrative violation.

In May 2024, the Permittee discharged solid material to the sanitary sewer causing damages to Chesapeake Pump Station #241 and resulting in the City of Chesapeake having to perform line cleaning and repairs at Pump Station 241. HRSD issued a 4.0-point REG3 violation for an Unauthorized Discharge with harm caused.

Additionally, the Permittee failed to notify HRSD that process wastewater discharge to the sanitary sewer had commenced and failed to start their Initial Wastewater Characterization (IWC) sampling, leading to an administrative violation.

A Show Cause Meeting was held in July 2024 and the Permittee attributed the cause of the unauthorized discharge to their pulper overflowing. The Permittee took corrective action to lock out the sump where the spill occurred, and this remains locked out to this date.

The Enforcement Order issued which contained two invoices: one with a Civil Penalty of \$11,000 and a Cost Recovery/Civil Liability of \$2,856.60 for HRSD labor costs incurred by the investigation and resolution of these events. The Enforcement Order was accepted, and the fines were paid in full on September 25, 2024.

3. Environmental and Regulatory Advocacy

Chief participated in the following advocacy and external activities:

- a. Chaired a subcommittee meeting of the Chesapeake Bay Program's Wastewater Treatment Workgroup, focused on addressing exfiltration loads from wastewater collection systems in the Chesapeake Bay watershed model. Also chaired another subcommittee meeting for this same workgroup, this one focused on evaluating the utility of adding Boater Pump-outs into the model as a management tool for addressing nutrient load reductions.
- b. Attended a meeting of the Eastern Virginia Groundwater Management Advisory Committee and provided the group with a briefing on the current status of HRSD's SWIFT program.
- c. Met with the Virginia Institute of Marine Science (VIMS), the Virginia Department of Health's Division (VDH) of Shellfish Safety, and the Virginia Department of Environmental Quality to discuss updates to water quality modeling around the site of the new, proposed outfall on the island of Chincoteague. This new outfall would replace the existing outfall structure and could potentially support increased capacity for wastewater treatment to meet the needs of the community. The model is specifically evaluating whether changes would be needed to existing shellfish condemnation zones within the channel. Modeling results thus far indicate that the existing zones are protective and would not need to be changed. VIMS and VDH requested additional information as part of their internal evaluations.
- d. Participated in abstract review for the Environment Virginia Symposium.
- e. Participated in the Virginia Association of Municipal Wastewater Agencies (VAMWA) Board and general membership meetings.
- f. Participated in a Virginia Forever Membership Development Committee meeting to evaluate and develop new opportunities for member recruitment.



Financial Stewardship

Staff 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 Virginia Permit Discharge Elimination System (VPDES) permits:
 - a. City of Chesapeake
 - b. City of Fredericksburg
 - c. Hanover County
 - d. Northumberland County
 - e. Westmoreland County
2. [MAP Billed Reimbursements](#) for service provided from July 1 to September 30, 2024.
3. [MAP Invoice Summary](#) for the third Quarter 2024 calendar year.



Talent

1. Megan Pennington-Boggio of the Central Environmental Laboratory (CEL) was honored with an award for the 2024 VWEA Laboratory Analyst Excellence Award at the 2024 WaterJAM Conference.
2. Catherine Svingos graduated from the VWEA Leadership Academy at the 2024 WaterJAM Conference.



Community Engagement

1. Staff 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:
 - a. City of Chesapeake (Southern Branch)
 - b. City of Hampton (New Market Creek)
 - c. City of Newport News (Southeast Newport News)
 - d. City of Norfolk (Mason Creek)

- e. City of Suffolk (downtown)
 - f. City of Virginia Beach (Thalia Creek)
 - g. James City County
2. TSD Staff presented biosolid PFAS research for the Virginia Soybean Field Day at the Virginia Tech Agricultural Research and Extension Center in Warsaw, VA.
 3. Staff participated in a Day of Caring at A Night's Welcome, which is a nightly shelter that provides a safe and warm place to those in need.



Innovation

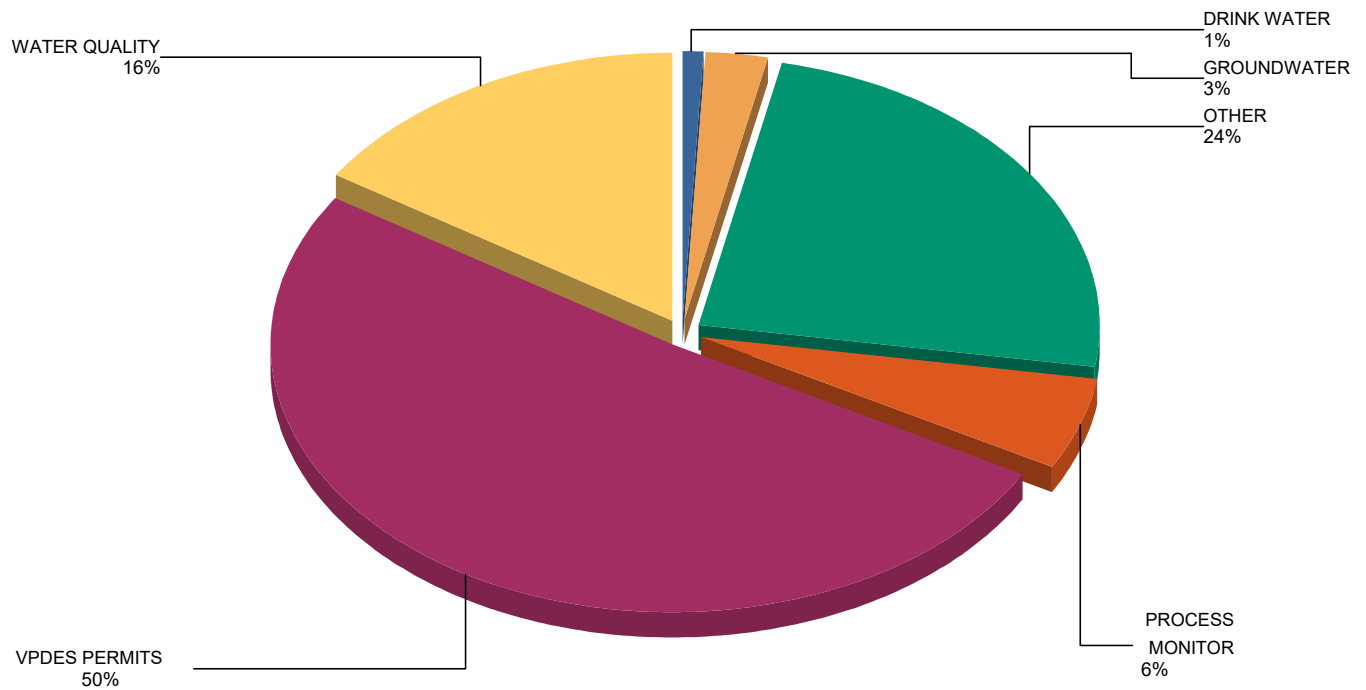
1. CEL staff began collaboration with the Potomac Aquifer Recharge Monitoring Laboratory (PARML) to develop a Perfluoroalkyl Carboxylic Acids (PFCA) analytical method manuscript. This analytical method has a rapid turnaround time and allows SWIFT operational staff to maintain tight process control on the performance of the Granulated Activated Carbon (GAC) media in removing Per- and Polyfluoroalkyl Substances (PFCs). This method will have value for the broader water and wastewater professional community.
2. Technical Presentations:
 - a. Micaela Griffin, WaterJAM - "A Partnership for Potable Reuse: Achieving 1,4-Dioxane Removal through Cometabolic Biological Pretreatment".
 - b. Micaela Griffin, North Carolina Pretreatment Consortium Annual Conference - "A Partnership for Potable Reuse: Achieving 1,4-Dioxane Removal through Cometabolic Biological Pretreatment".
 - c. Amanda Albright, North Carolina Pretreatment Consortium Annual Conference - "HRSD's Approach to Mitigating FOG".
 - d. Jack Denby, WaterJAM - "Application of Online Analyzers for Compliance Reporting: A Case Study".
 - e. Jamie Heisig-Mitchell, WaterJAM Workshop: A Decade of ENR: Current Strategies and Future Outlook - "HRSD SWIFT: A One Water Approach for Nutrient Load Reduction".

Respectfully submitted,

Jamie Heisig-Mitchell
Chief of Water Quality

**Municipal Assistance Billed Reimbursements per Service
From 07/01/2024 to 09/30/2024**

Attachment 1



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

Municipal Assistance Invoice

From 7/1/2024 - 9/30/2024

| Municipality | Reimbursements |
|--|----------------------------|
| Accomack County | \$3,984.82 |
| Buckingham County | \$257.81 |
| City of Chesapeake | \$2,443.54 |
| City of Emporia | \$271.83 |
| City of Franklin | \$1,989.26 |
| City of Fredericksburg | \$6,893.59 |
| City of Hampton | \$8,888.56 |
| City of Norfolk | \$8,672.24 |
| City of Norfolk-Dept of Utilities | \$1,299.76 |
| City of Portsmouth | \$7,735.51 |
| City of Roanoke | \$1,050.00 |
| City of Suffolk | \$2,951.54 |
| City of Virginia Beach | \$8,484.69 |
| Hanover County | \$20,961.18 |
| Henrico County | \$1,725.86 |
| Hopewell RWTF | \$7,621.37 |
| Lynnhaven River NOW | \$254.06 |
| New Kent County | \$22,878.30 |
| Northampton County WWTP | \$3,340.81 |
| Northumberland Co. - Callao WWTP | \$2,450.09 |
| ST BRIDES CORRECTIONAL CENTER | \$552.46 |
| St Brides Corr Ctr WWTP | \$2,342.97 |
| Stafford County | \$108.63 |
| Town of Cape Charles-VAW | \$9,566.60 |
| Town of Round Hill | \$196.91 |
| Virginia Aquarium & Marine Science Ctr | \$7,428.43 |
| Virginia Department of Health | \$14,333.69 |
| Westmoreland County | \$2,004.41 |
| Totals: | <u>\$150,688.92</u> |

EFFLUENT SUMMARY FOR SEPTEMBER 2024

| 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 | 8.56 | 48% | 1 | 1.7 | <1 | <1 | 0.37 | 0.64 | 5.5 | 4.4 | 26 |
| ATLANTIC | 43.37 | 80% | 18 | 9.8 | 9 | 7 | NA | NA | NA | NA | 13 |
| BOAT HARBOR | 10.89 | 44% | 12 | 5.5 | 52 | 5 | 1.2 | 0.78 | 30 | 24 | 8 |
| CENT. MIDDLESEX | 0.015 | 62% | <2 | <1.0 | <1 | <1 | NA | NA | NA | NA | NA |
| JAMES RIVER | 10.75 | 54% | 10 | 7.7 | 1 | <1 | 0.65 | 0.57 | 15 | 11 | 17 |
| KING WILLIAM | 0.093 | 93% | <2 | 2.3 | NA | 1 | 0.057 | 0.15 | 1.8 | 2.1 | NA |
| NANSEMOND | 15.64 | 52% | 4 | 6.6 | 6 | 1 | 1.4 | 1.3 | 5.3 | 4.2 | 5 |
| ONANCOCK | 0.190 | 25% | <2 | <1.0 | 1 | 1 | 0.19 | 0.23 | 2.9 | 3.3 | NA |
| SUNSET BAY | 0.02 | 43% | 4 | 2.2 | 16 | 3 | NA | NA | NA | NA | 0 |
| URBANNA | 0.056 | 56% | 3 | 13 | 4 | 4 | 6.5 | 3.6 | 20 | 17 | NA |
| VIP | 27.37 | 68% | 3 | 3.0 | 2 | 1 | 1.5 | 0.55 | 5.2 | 3.8 | 3 |
| WEST POINT | 0.357 | 59% | 19 | 7.7 | 4 | 13 | 3.6 | 2.8 | 20 | 15 | 3 |
| WILLIAMSBURG | 8.10 | 36% | 2 | 2.0 | 3 | 4 | 1.1 | 0.97 | 3.6 | 2.9 | 18 |
| YORK RIVER | 10.23 | 68% | 2 | 1.5 | <1 | 2 | 0.31 | 0.24 | 5.7 | 5.0 | 16 |
| | 135.63 | | | | | | | | | | |

% of
Capacity

| | |
|-------------------|-----|
| North Shore | 48% |
| South Shore | 67% |
| Small Communities | 41% |

AIR EMISSIONS SUMMARY FOR SEPTEMBER 2024

| | No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters | | | | | | | | Part 503e Limits | | |
|--------------|--|---------------|----------------|------------|--------------|---------------|----------|-----------|------------------|-----|-----------|
| | Temp | Venturi(s) PD | Precooler Flow | Spray Flow | Venturi Flow | Tray/PBs Flow | Scrubber | Any | THC | THC | BZ Temp |
| | 12 hr ave | 12 hr ave | 12 hr ave | 12 hr ave | 12 hr ave | 12 hr ave | pH | Bypass | Mo. Ave | DC | Daily Ave |
| MHI PLANT | (F) | (in. WC) | (GPM) | (GPM) | (GPM) | (GPM) | 3 hr ave | Stack Use | (PPM) | (%) | Days >Max |
| ARMY BASE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 27 | 0 |
| BOAT HARBOR | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 0 | 7 | 99 | 0 |
| VIP | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 0 | 27 | 98 | 0 |
| WILLIAMSBURG | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 1 | 29 | 15 | 0 |

Items of Interest – September 2024

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). The THC continuous emissions monitoring (CEM) valid data capture was 98% or greater for two of the four MHIs. While Army Base and Williamsburg continued to have CEMs systems performance issues that led to a low percent data capture for the month.

The MHIs had no deviations from the required 129 SSI rule minimum operating parameters and one minor bypass event (< 60 minutes).

AIR PERMITS and ODOR CONTROL

On September 24, submitted to DEQ as requested on September 9 additional information for the air permit application for the diesel engine emergency generators to be installed at James River in support of SWIFT.

There was a total of thirty (31) odor control complaints this month.

Atlantic Plant received twenty-nine (29) odor complaints from Ocean Lakes and Lago Mar neighbors. Plant Staff responded to all complaints. In addition to the usual sources of the odors (curing and stored solids, digesters), a leak was found on the CHP gas skid September 10. Plant staff took immediate corrective action in securing the open drain valve on the CHP gas skid. Communications continues to provide responses to the neighbors as needed. TSD recorded all complaints in the air permit required complaint log.

One other complaint was received from Lake Wesley in Virginia Beach some three miles from Atlantic Plant. Complaint determined that odors were from a non-HRSD source.

James River received a complaint regarding plant odors from a neighbor on Horse Pen Road. Plant staff investigated and no clear single source of odor was identified. A potential combination of sources (solids trailer, a higher-than-normal H₂S scrubber exhaust, and maintenance activities) may have contributed to the complaint received. No further complaints have been received.

TREATMENT

DEQ was notified of the following reportable events:

Atlantic

On September 12, a sodium hypochlorite (hypo) feed line ruptured resulting in a low chlorine residual of 0.02 mg/l. The Operator increased the hypo dose while repairs were made, and feed was reestablished.

James River

On September 16, the plant experienced a brief loss of utility power, which caused rapid power cycling that created a water hammer effect, pressurizing a non-potable water (NPW) line and resulting in NPW spraying out of a flange. Approximately 2,000 gallons of NPW could not be recovered from the ground and storm drain.

Nansemond

On September 9, a contractor hit a NPW line while digging with an excavator. The valve on the NPW line was closed and a pump was used to recover as much water as possible. Approximately 2,000 gallons of chlorinated NPW soaked into the ground.

Virginia Initiative

On September 17, a low chlorine residual of 0.09 mg/L was recorded at 00:13 when chlorine demand outpaced what was dosed. Staff increased hypochlorite feed rate and started supplemental ammonia feed to the secondary effluent to lower the chlorine demand. The next residual recorded at 02:13 was within normal limits.

SYSTEM

On September 19, a contractor failed to take the necessary excavation precautions required by VA 811 law and struck the HRSD force main on Big Bethel Road in York County while boring for a conduit installation. HRSD staff successfully recovered 95% of the released flow, resulting in 750 gallons being discharged to the ground and ditch.

On September 26, a 2-inch vent pipe connected to YR6617-3 on Guinea Rd in Gloucester failed when a Bridgeman Civil (BC) contractor drove over the vent pipe with heavy equipment. BC utilized pump and haul trucks to contain sewage and completed repairs. Approximately 505 gallons of raw wastewater were released to the ground and ditch to Thorntons Creek.

SYSTEM/TREATMENT, SMALL COMMUNITIES, AND EASTERN SHORE

Dendron

On September 18 heavy rain inundated the Dendron PS service area, and flash flood warning was in effect during the time of this spill. Pump stations were observed to be operating properly. Following the event, solids were removed and lime was spread on affected areas. The following raw wastewater overflow events were reported:

- Dendron PS1, 2,080 gallons to Cypress Swamp with a total rainfall of 2.72".
- Dendron PS2, 4,650 gallons to Cypress Swamp with a total rainfall of 2.72".

On September 27 heavy rain associated with tropical storm Helene inundated the Dendron PS service area. The surrounding roads were flooded and caused a delay in response to the system. Pump stations were observed to be operating properly. Following the event solids were removed and lime was spread on affected areas. The following raw wastewater overflow events were reported:

- Dendron PS1, 1,580 gallons to Cypress Swamp with a total rainfall of 2.19".
- Dendron PS2, 970 gallons to Cypress Swamp with a total rainfall of 2.19".

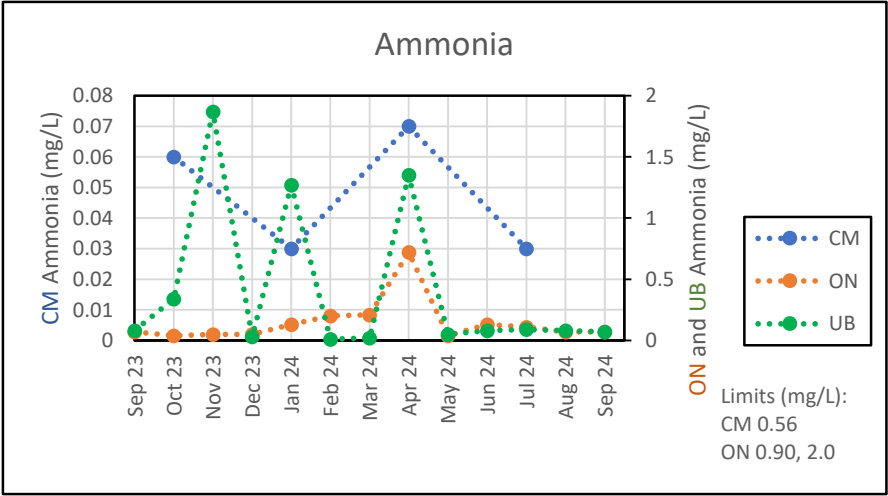
King William collection system

On September 13 a contractor bored into an active force main on Mt Olive Cohoke Road in King William. A vacuum truck was used to recover material and the line was repaired. Approximately 400 gallons of raw wastewater were released to the ground.

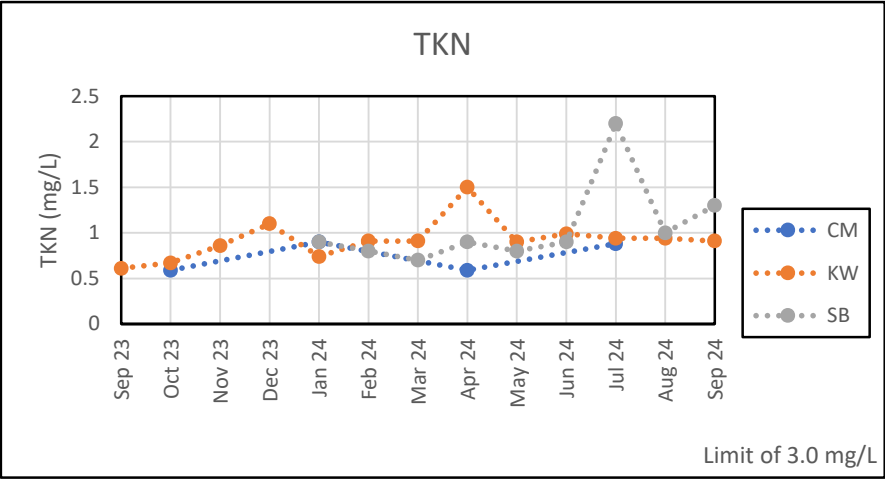
Mathews

On September 17 staff discovered the wet well at Church Street overflowing due to both station pumps in fault status. Upon discovery, the pump breakers were reset and the area was cleaned. No alarm was received initiating an overflow condition resulting in 49,500 gallons of raw wastewater released to the ground and Put-In Creek.

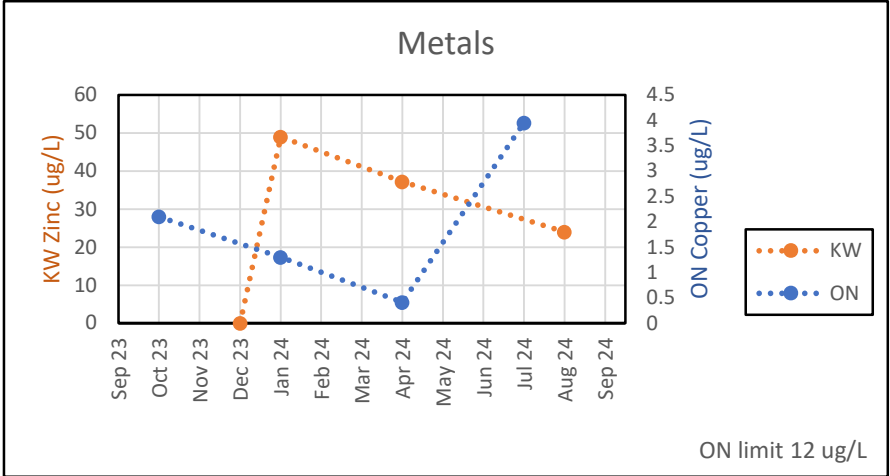
| | Ammonia | | |
|--------|---------|------|------|
| | CM | ON | UB |
| Sep 23 | | 0.07 | 0.08 |
| Oct 23 | 0.06 | 0.04 | 0.34 |
| Nov 23 | | 0.05 | 1.87 |
| Dec 23 | | 0.05 | 0.03 |
| Jan 24 | 0.03 | 0.13 | 1.27 |
| Feb 24 | | 0.2 | 0.01 |
| Mar 24 | | 0.21 | 0.02 |
| Apr 24 | 0.07 | 0.72 | 1.35 |
| May 24 | | 0.04 | 0.05 |
| Jun 24 | | 0.13 | 0.08 |
| Jul 24 | 0.03 | 0.11 | 0.09 |
| Aug 24 | | 0.07 | 0.08 |
| Sep 24 | | 0.07 | 0.07 |



| | TKN | | |
|--------|------|------|------|
| | CM | KW | SB |
| Sep 23 | | 0.61 | |
| Oct 23 | 0.59 | 0.67 | |
| Nov 23 | | 0.86 | |
| Dec 23 | | 1.1 | |
| Jan 24 | 0.90 | 0.74 | 0.90 |
| Feb 24 | | 0.91 | 0.80 |
| Mar 24 | | 0.91 | 0.70 |
| Apr 24 | 0.59 | 1.5 | 0.90 |
| May 24 | | 0.90 | 0.80 |
| Jun 24 | | 0.99 | 0.90 |
| Jul 24 | 0.88 | 0.94 | 2.2 |
| Aug 24 | | 0.94 | 1.0 |
| Sep 24 | | 0.91 | 1.3 |



| | Zinc | Copper |
|--------|------|--------|
| | KW | ON |
| Sep 23 | | |
| Oct 23 | | 2.1 |
| Nov 23 | | |
| Dec 23 | <5.0 | |
| Jan 24 | 49 | 1.3 |
| Feb 24 | | |
| Mar 24 | | |
| Apr 24 | 37 | 0.41 |
| May 24 | | |
| Jun 24 | | |
| Jul 24 | | 4.0 |
| Aug 24 | 24 | |
| Sep 24 | | |





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

Operational Technology Security and Resilience

- **Completed Tasks (September 2024)**
 - Prepared draft report and addressed director's comments.
- **Upcoming Tasks (October 2024)**
 - Issue final report.

Design and Construction Estimating

- **Completed Tasks (September 2024)**
 - Conducted benchmarking organizations' interviews.
 - Sent secondary request for benchmarking interviews.
 - Drafted data analytics appendix to the report.
- **Upcoming Tasks (October 2024)**
 - Issue draft report with data analytics appendix.

IT Governance

- **Completed Tasks (September 2024)**
 - Identify contacts for each domain for walkthrough meetings.
 - Initiate planning procedures.
- **Upcoming Tasks (October 2024)**
 - Schedule and conduct walkthrough meetings.
 - Prepare draft audit program.

Talent Management Investigations

- **Upcoming Tasks (October 2024)**
 - Commence internal audit.
 - Conduct planning procedures.

II. Upcoming Projects

- Model 3: November 2024
- Risk assessment refresh: November/December 2024



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 / Project | Next Follow-up | Recommendations | | |
|---|----------------|-----------------|------|-------|
| | | Closed | Open | Total |
| Safety Division | October 2024 | 2 | 1 | 3 |
| Freedom of Information Act (FOIA) | January 2025 | 0 | 1 | 1 |
| Personally Identifiable Information (PII) | October 2024 | 3 | 1 | 4 |
| AP, ProCard | July 2025 | 0 | 2 | 2 |
| Closed Audit/Projects (x21) | Closed | 135 | 0 | 135 |
| Totals | | 140 | 5 | 145 |

Strategic Measures
September 2024

| Strategic Planning Measure | Department | Aug-24 | Sep-24 | FY-25 |
|---|---------------------|--------------------|---------------------|--------------------|
| Educational and Outreach Events | Communications | 8 | 6 | 21 |
| Number of Community Partners | Communications | 12 | 2 | 20 |
| Number of Technical Presentations | All | 6 | 9 | 15 |
| Revenue vs. Budget | Finance | 18% | | 14% |
| Wastewater Expenses vs. Budget | Finance | 13% | | 10% |
| Accounts Receivable (HRSD) | Finance | \$48,551,706 | | \$46,473,249 |
| Aging Accounts Receivable | Finance | 29.90% | | 31.30% |
| Turnover Rate wo Retirements | Talent Management | 0.80% | 0.80% | 2.07% |
| Turnover Rate w Retirements | Talent Management | 0.80% | 0.92% | 2.18% |
| Avg Time to Hire | Talent Management | 3 months 3 days | 2 months 29 days | 3 months 1 days |
| Number of Vacancies | Talent Management | 82 | 79 | 300 |
| Average number of applicants per position | Talent Management | 13.1 | 19.2 | 13.8 |
| Percentage of positions filled with internal applicants | Talent Management | 25.0% | 45.8% | 33.1% |
| Recruitment source Return on Investment | Talent Management | * | * | * |
| Average time required (days) to onboard new employees, including from initial posting of position to candidates' first day | Talent Management | * | * | * |
| Customer Call Wait Time (mins) | Finance | 1.00 | | 1.16 |
| Capacity Related Overflows with Stipulated Penalties (Reported Quarterly) | Water Quality / ENG | * | * | * |
| Non-Capacity Related Overflows with Stipulated Penalties (Reported Quarterly) | Water Quality / ENG | * | * | * |
| 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. | Operations | * | * | * |
| 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. | Operations | * | * | * |
| 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. | Operations | * | * | * |
| Monthly CIP Spending | Engineering | \$66,260,000 | * | \$41,275,000 |

*Not currently tracking due to constraints collecting the data.

** Updated after EPA Quarterly Report submittal.

***Billing is one month behind

Strategic Measures
September 2024

| Technical Presentations | | | |
|-------------------------|---|-----------------------|---------------|
| Date | Presentation | Presenter | Department |
| 09/09/2024 | WaterJAM - "A Partnership for Potable Reuse: Achieving 1,4-Dioxane Removal through Cometabolic Biological Pretreatment" | Micaela Griffin | Water Quality |
| 09/09/2024 | WaterJAM - "Application of Online Analyzers for Compliance Reporting: A Case Study". | Jack Denby | Water Quality |
| 09/09/2024 | WaterJAM Workshop: A Decade of ENR: Current Strategies and Future Outlook - "HRSD SWIFT: A One Water Approach for Nutrient Load Reduction". | Jamie Heisig-Mitchell | Water Quality |
| 09/10/2024 | WaterJam, Podium Speaker, "Conceptualizing a Regional GAC Reactivation Facility at HRSD" | Shirley Smith | Engineering |
| 09/10/2024 | WaterJam, Podium Speaker, "Healthy Tension or Tug of War? Capital Project Delivery Challenges and Solutions" | Bruce Husselbee | Engineering |
| 09/11/2024 | WaterJAM, Podium Speaker, "A Partnership for Potable Reuse: Achieving 1,4-Dioxane Removal through Cometabolic Biological Pretreatment" | Hannah Stohr | Operations |
| 09/11/2024 | WaterJam, Podium Speaker, "Incorporating Innovation in the Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Design-Build Project" | Lauren Zuravnsky | Engineering |
| 09/12/2024 | WaterJAM, Podium Speaker, "HRSD's Journey from Pilot to Full-Scale Implementation of Mainstream Partial Denitrification/Anammox (PdNA) IFAS" | Megan Bachmann | Operations |
| 09/12/2024 | WaterJAM, Podium Speaker, "Microbial Adaptation to Low Dissolved Oxygen Biological Nutrient Removal" | Lily McIntosh | Operations |
| 09/12/2024 | WaterJAM, Podium Speaker, "Biological Phosphorus Removal Benefits from Low Dissolved Oxygen Operation" | Haley Morgan | Operations |
| 09/13/2024 | WaterJam Panel Discussion on Owner Selection Process | Jeff Scarano | Engineering |
| 09/16/2024 | North Carolina Pretreatment Consortium Annual Conference - "A Partnership for Potable Reuse: Achieving 1,4-Dioxane Removal through Cometabolic Biological Pretreatment" | Micaela Griffin | Water Quality |
| 09/16/2024 | North Carolina Pretreatment Consortium Annual Conference - "HRSD's Approach to Mitigating FOG" | Amanda Albright | Water Quality |

Strategic Measures
September 2024

| Education Outreach and Community Partners | | | |
|---|--|---------------------------------|-------------------------------|
| Date | Event | Community Partner | Departments |
| 09/01/2024 | ODU | | Operations |
| 09/01/2024 | Waste Management | | Operations |
| 09/10/2024 | SWIFT Tour - Virginia Living Museum education staff | Virginia Living Museum | Communications |
| 09/13/2024 | WaterJam Panel Discussion on Owner Selection Process | | |
| 09/19/2024 | SWIFT Tour - Fox Hill United Methodist Church | Foxhill United Methodist Church | Communications |
| 09/19/2024 | Canon Environmental Fair | Canon Virginia | |
| 09/20/2024 | United Way - The UpCenter | | Engineering |
| 09/21/2024 | International Coastal Cleanup event | Virginia Living Museum | Water Quality, Communications |
| 09/26/2024 | SWIFT Tour - family visiting from Richmond, VA | | Communications |
| 09/26/2024 | Yorktown Elementary School STEM Night | York County School Division | Water Quality, Communications |