

HRSD Commission Meeting Agenda  
9:00 a.m. – November 28, 2023

In-person for Commissioners and essential staff at  
1434 Air Rail Avenue, Virginia Beach, VA 23455  
Virginia Initiative Conference Room – 1<sup>st</sup> Floor

Reservations are required for in-person and virtual public observation of all HRSD Commission and Committee meetings; to address the Commission; and to submit written comments to be read into the minutes. Reservations are accepted via the following link and must be completed by noon one business day prior to the meeting: [https://www.hrsd.com/contact/commission\\_meeting](https://www.hrsd.com/contact/commission_meeting).

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
	Call to Order	Commission Chair
1.	<a href="#">Awards and Recognition</a>	Bernas
2.	<a href="#">Public Comments Not Related to the Agenda</a>	Commission Secretary
3.	<a href="#">Consent Agenda</a>	Bernas
4.	<a href="#">City Park Pump Station (PS 106) Replacement Rejection of all Bids (&gt;\$200,000)</a>	Husselbee
5.	<a href="#">Compensation Commission Adopted Policy</a>	de Mik
6.	<a href="#">Atlantic Treatment Plant Reliability and Odor Control Improvements (ATP ROCI):</a> ATP Liquid Side Odor Evaluation and Improvements ATP Gravity Belt Thickener and Pre-Dewatering Polymer Improvements ATP Odor and Solids Improvements 2023 ATP Solids Curing Facility and Pad Improvements Alternative Project Delivery	Husselbee
7.	<a href="#">City of Chesapeake, Regional Airport and Landing West Service Area Service Area Expansion Agreement</a>	Dano
8.	<a href="#">James City County, Hazelwood Farms Service Area Service Area Expansion Agreement</a>	Dano
9.	<a href="#">High Priority Inflow and Infiltration Reduction Program New CIP and Initial Appropriation</a>	Husselbee
10.	<a href="#">Inflow Reduction Program – Phase II Initial Appropriation and Contract Award (&gt;\$200,000)</a>	Husselbee

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
11.	<a href="#"><u>Tabb Pressure Reducing Station and Offline Storage Facility Regulatory Required Capital Improvement Program - Additional Appropriation (&gt;\$10,000,000), Construction Contract and Task Order (&gt;\$200,000)</u></a>	Husselbee
12.	<a href="#"><u>New Business</u></a>	Bernas
13.	<a href="#"><u>Unfinished Business</u></a>	Bernas
14.	<a href="#"><u>Commissioner Comments</u></a>	
15.	<a href="#"><u>Informational Items</u></a>	Bernas

Next Regular Commission Meeting: December 19, 2023 at 1434 Air Rail Avenue, Virginia Beach, Virginia

AGENDA ITEM 1. – November 28, 2023

**Subject:** Awards and Recognition

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

**Brief:** HRSD is pleased to announce the following:

**a. Service Award**

The Commission Chair will present a service award to Mr. Sami Ghosn who marked his 35<sup>th</sup> year of service with HRSD on July 11, 2023. Sami was hired in July of 1988 as an Interceptor Engineer in the Engineering Department, was promoted to Army Base Treatment Plant Manager in 1990, transferred to the Virginia Initiative Plant in 1997, and was promoted to Treatment Chief for the Army Base, Chesapeake-Elizabeth and VIP Treatment Plants in 2015. In Sami's current position as Chief of Resource Recovery, a position he has held since July of 2022, he is responsible for managing HRSD resource recovery efforts, including Biosolids and Residual Management Plan, Strategic Energy and Carbon Footprint.

Sami holds a bachelor's degree in civil engineering from Old Dominion University, is a licensed Professional Engineer, and holds a Wastewater Class 1 license.

He has been an active participant in the HRSD Apprenticeship Program where he taught for over 25 years. Sami was also part of the team that successfully closed the Chesapeake-Elizabeth Treatment Plant. In addition, he was responsible for operating and maintaining the two newly acquired wastewater plants on the Eastern Shore.

**b. New Employee Introduction**

Mr. Earl Stacy was recently hired in the new position of the Customer Care Project and Training Manager. This new position will improve the billing system experience for internal and external users and provide Customer Care project management for many ongoing and planned large and small projects. Earl is a lifelong resident of the Hampton Roads area, a graduate of Great Bridge High School in Chesapeake, and a graduate of Norfolk State University where he earned a bachelor's degree in economics with Honors. He joined HRSD with 20 years of experience specifically focused in municipal utility customer service, billing, and collections. Among his many major accomplishments, he has served as a functional and training leader in successful software implementations and upgrades. Earl strives to build cooperative relationships with internal and external customers to accomplish goals. He enjoys learning new software systems and finding easier ways to accomplish daily activities.

**c. Top 40 Under 40**

Mr. Ryan Radspinner was honored on October 19 as one of Hampton Roads' "Top 40 Under 40." ***Inside Business*** annually recognizes a group of outstanding young professionals who exemplify success in their profession, are active within their communities and use their talents to advance the region. Honorees are chosen by an independent judging panel from publicly-submitted nominees.

Ryan was hired in 2009 as a Hydraulic Analysis Manager in the Planning and Analysis Division and was then promoted to Business Process Engineer in the Capital Finance Division. In Ryan's current position, he is responsible for developing long-term financial analyses of

engineered alternatives that support the region's wastewater needs. He also lead the internal business case evaluation team that ensures new ideas from across the organization are evaluated consistently. Ryan holds Bachelor's and Master's Degrees in Civil Engineering from Virginia Tech and an MBA from William & Mary. He is a licensed Professional Engineer and is an active participant in the Virginia Water Environment Association.



HRSD congratulates its 2023 Top 40 Under 40 honoree,

### **Ryan Radspinner**

As a business process engineer, Ryan successfully develops and optimizes cost-effective engineered and business process solutions to help HRSD keep its promise to treat wastewater and recover natural resources to protect public health and the environment.

HRSD's nearly 900 environmentally focused employees come from many backgrounds, but we share one vision: our communities will have clean waterways and reliable water resources for generations to come.

Please visit us at [HRSD.com](https://www.hrzd.com) to learn more about rewarding career opportunities with the organization that has been reducing human impact on the environment for over 80 years.



AGENDA ITEM 2. – November 28, 2023

**Subject:** Public Comments Not Related to Agenda

## AGENDA ITEM 3. – November 28, 2023

**Subject:** Consent Agenda**Recommended Action:** Approve the Consent Agenda.**Brief:** The items listed below are presented on the following pages for Commission action.

- 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. [Aluminum Chlorohydrate Blanket Purchase Agreement](#) \$265,055
  2. [Fleet Management \(FY-2024\) Biosolids Hauling Trailers](#) \$570,160
  3. [Fleet Management \(FY-2024\) Road Tractors](#) \$452,462
  4. [Information Technology Hardware, Software, and Related Services](#) \$800,000
  5. [Information Technology Research and Advisory Services and Membership](#) \$1,171,725
  6. [Laboratory Consumable Supplies - Fisher Scientific Company, LLC](#) \$1,775,000
  7. [Laboratory Consumable Supplies – Thomas Scientific LLC](#) \$280,000
  8. [Oracle E-Business Suite License and Technical Support Services](#) \$1,466,689
  9. [Underground Utility Locating Contract](#) \$2,302,837
- c. Contract Change Orders (>25% of original contract value or \$50,000)
  1. [Hot Water Mobile Boiler Rental](#) \$79,002
  2. [Sanitary Sewer Replacement 1950 – Part 2](#)

Change Order	\$3,066,126
Required CIP Additional Appropriation	\$3,453,471
- d. Non-Regulatory Capital Improvement Project – Additional Appropriation <\$1,000,000
  1. [Elizabeth River Crossing Reliability Improvements](#) \$256,947
  2. [Small Communities Rehabilitation Phase IV](#) \$138,063

## CONSENT AGENDA ITEM 3.b.1. – November 28, 2023

**Subject:** Aluminum Chlorohydrate Blanket Purchase Agreement  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to USALCO Baltimore Plant LLC in the amount of \$53,011 for one year with four renewal options and an estimated cumulative value of \$265,055.

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Bid

In accordance with HRSD's competitive sealed bidding procedures, the Procurement Department advertised and solicited bids directly from potential bidders. The project was advertised on October 11, 2023, and four bids were received on October 27, 2023 as listed below:

Bidder	Bid Amount
USALCO Baltimore Plant LLC	\$53,011
Kemira Water Solutions Inc.	\$54,472
Univar USA Inc.	\$59,787
Suffolk Sales and Service Corp	\$59,919

**HRSD Estimate:** \$53,808

**Contract Description:** This contract is for supply and delivery of Aluminum Chlorohydrate (ACH), 50 percent solution. ACH is used at the SWIFT Research Center as a primary coagulant and for phosphorus removal. It is also expected to be used at the James River SWIFT facility once it comes online.

**Analysis of Cost:** The cost is based on evaluation of competitive bids received and found to be fair and reasonable in comparison with the FY24 Budget Projections, which is reflected in the HRSD Estimate. USALCO was the supplier for the previous five year term contract and performed satisfactorily.

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

CONSENT AGENDA ITEM 3.b.2. – November 28, 2023

**Subject:** Fleet Management (FY-2024)  
 Biosolids Hauling Trailers  
 Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Virginia Truck Center Inc. dba Excel Truck Group in the amount of \$570,160.

**CIP Project:** GN019300

**Regulatory Requirement:** None

Budget	\$2,670,910
Previous Expenditures and Encumbrances	(\$1,731,778)
Available Balance	\$939,132

**HRSD Estimate:** \$570,160

**Project Description:** The Fleet Management project provides 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:** Provide trailers for the new Materials Transportation and Logistics Division for in-house services.

**Contract Description:** This contract is for the purchase of five, 40-foot full frame dump trailers to be used for biosolids hauling. Features on these trailers include a hoist, lift axles, and vinyl tarp.

**Analysis of Cost:** By utilizing the cooperative contract through the Sourcewell Contract #092922-MCT, HRSD is receiving these vehicles at a fair and reasonable cost. From the base price and all options prices given, Sourcewell, has provided an additional 7% discount on all pricing via this cooperative contract.

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



CONSENT AGENDA ITEM 3.b.3. – November 28, 2023

**Subject:** Fleet Management (FY-2024)  
 Road Tractors  
 Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Peterbilt of Richmond, Inc. dba The Pete Store – Chesapeake in the amount of \$452,462.

**CIP Project:** GN019300

**Regulatory Requirement:** None

Budget	\$2,670,910
Previous Expenditures and Encumbrances	(\$1,735,444)
Available Balance	\$935,466
<b>HRSD Estimate:</b>	<b>\$452,462</b>

**Project Description:** The Fleet Management project provides 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:** Provide tractors for the new Materials Transportation and Logistics Division for in-house services.

**Contract Description:** This contract is for the purchase of two 2025 Peterbilt 567 day cab road tractors. These road tractors include 30-40 GPM hydraulic wet line kits.

**Analysis of Cost:** By utilizing the cooperative contract through the Sourcewell Contract #060920-PMC, HRSD is receiving these vehicles at a fair and reasonable cost. From the base price and all options prices given, Sourcewell, has provided an additional 7% discount on all pricing via this cooperative contract.

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

CONSENT AGENDA ITEM 3.b.4. – November 28, 2023

**Subject:** Information Technology Hardware, Software, and Related Services  
Contract Award (>\$200,00)

**Recommended Action:** Award a contract to CDW LLC DBA CDW Government LLC in the amount of \$160,000 for one year with four renewal options and an estimated cumulative value of \$800,000.

**Regulatory Requirement:** None

**Type of Procurement:** Use of Existing Contract Vehicle

**HRSD Estimate:** \$160,000

**Contract Description:** This contract is for information technology hardware, software, and related services for use by the Information Technology Department. This can include purchases such as, HP computers, printers and supplies; Cisco server and server equipment; and miscellaneous cables and memory solutions. This contract will be in accordance with the cooperative contract competitively solicited by Fairfax County.

Upon evaluation of the Fairfax County contract terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to CDW LLC DBA CDW Government LLC.

**Analysis of Cost:** This is an estimated use contract. By utilizing the Fairfax County contract number 4400006325 for Information Technology Hardware, Software, and Related Services, HRSD is receiving approximately seven percent cost savings.

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

CONSENT AGENDA ITEM 3.b.5. – November 28, 2023

**Subject:** Information Technology Research and Advisory Services and Membership Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Gartner, Inc. in the amount of \$234,345 for one year with four renewal options and an estimated cumulative value of \$1,171,725.

**Regulatory Requirement:** None

**Type of Procurement:** Use of Existing Contract Vehicle

**HRSD Estimate:** \$234,435

**Contract Description:** This contract is for research and advisory services for use by the HRSD Information Technology Department in accordance with a cooperative contract competitively solicited by Virginia Information Technology Agency (VITA). The service categories include customized and individualized advisory services regarding IT strategy and planning, subscriptions with access to published research report bulletins, industry data on IT trends and summaries of industry issues.

The contract will be for services to facilitate and develop a structured methodology and corresponding operating procedures for the identification, assessment, evaluation and mitigation of organizational risk tolerance and management for all HRSD projects as well as projects containing critical/core IT components. The services will include workshops, individual and group interviews, as well as a tailored methodology to incorporate HRSD's unique structure and culture.

Upon evaluation of the VITA contract terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to Gartner, Inc.

**Analysis of Cost:** This is an estimated use contract. By utilizing the VITA contract number VA-180315-GARG for IT Research and Advisory Services, HRSD is receiving fair and reasonable cost under Gartner's State & Local Government pricing structure.

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

CONSENT AGENDA ITEM 3.b.6 – November 28, 2023

**Subject:** Laboratory Consumable Supplies - Fisher Scientific Company, LLC  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Fisher Scientific Company LLC in the amount of \$355,000 for one year with four renewal options and an estimated cumulative value of \$1,775,000.

**Regulatory Requirement:** None

**Type of Procurement:** Use of Existing Contract Vehicle

**HRSD Estimate:** \$355,000

**Contract Description:** This contract is for the purchase of consumables for use with various instruments throughout all of HRSD. HRSD employees will make purchases and pay through the supplier's websites where the negotiated pricing displays. Items purchased cover a range of supplies to include syringe filters, vial tests, Nalgene bottles, pipette tips, and laboratory coats. This contract will be in accordance with the cooperative contract competitively solicited by the Virginia Association of State College and University Purchasing Professionals (VASCUPP).

Upon evaluation of the VASCUPP contract terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to Fisher Scientific Company LLC.

**Analysis of Cost:** This is an estimated use contract. By utilizing the cooperative contract through the Virginia Association of State College and University Purchasing Professionals (VASCUPP) #VTG-546-2017, HRSD is receiving discounted prices between 5 to 25 percent off. Negotiations to the lowest cost have been extended.

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

CONSENT AGENDA ITEM 3.b.7. – November 28, 2023

**Subject:** Laboratory Consumable Supplies – Thomas Scientific LLC  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Thomas Scientific LLC in the amount of \$56,000 for one year with four renewal options and an estimated cumulative value of \$280,000.

**Regulatory Requirement:** None

**Type of Procurement:** Use of Existing Contract Vehicle

**HRSD Estimate:** \$56,000

**Contract Description:** This contract is for the purchase of consumables for use with various instruments throughout all of HRSD. HRSD Employees will make purchases and pay through the supplier's websites where the negotiated pricing displays. Items purchased cover a range of supplies to include gloves, glassware, filtration, pipette tips, and laboratory coats. This contract will be in accordance with the cooperative contract competitively solicited by Sourcewell.

Upon evaluation of the Sourcewell contract terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to Thomas Scientific LLC.

**Analysis of Cost:** This is an estimated use contract. By utilizing the cooperative contract through Sourcewell, HRSD is receiving discounted prices, up to 20 percent off market pricing on most products.

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

## CONSENT AGENDA ITEM 3.b.8. – November 28, 2023

**Subject:** Oracle E-Business Suite License and Technical Support Services  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Mythics LLC in the amount of \$469,851 for one year with two renewal options and an estimated cumulative value of \$1,466,689.

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Bid

In accordance with HRSD's competitive sealed bidding procedures, the Procurement Department advertised and solicited bids directly from potential bidders. The project was advertised on October 18, 2023, and one bid was received on November 2, 2023 as listed below:

<b>Bidder</b>	<b>Bid Amount</b>
Mythics LLC	\$469,851

**HRSD Estimate:** \$488,897

**Contract Description:** This contract is for annual on premise software license and technical support services of the Oracle E-Business Suite (ERP) system.

**Analysis of Cost:** The cost provided includes a discounted rate structure Mythics received from Oracle as a preferred partner. It includes a fixed four percent increase over the renewal years versus the standard eight percent increase typically applied to Oracle support contracts.

Mythics appears to remain the preferred authorized Oracle partner for services and support. Other authorized providers are capable of bidding but must obtain pricing from either Mythics or Oracle directly and then include a markup, which does not make them competitive.

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

CONSENT AGENDA ITEM 3.b.9. – November 28, 2023

**Subject:** Underground Utility Locating Contract  
Contract Award (>\$200,000)

**Recommended Actions:** Award a contract to McKim and Creed Inc in the amount of \$433,750 for one year with four-year renewal options and an estimated cumulative value of \$2,302,837.

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Bid

In accordance with HRSD’s competitive sealed bidding procedures, the Procurement Division advertised and solicited bids directly from potential bidders. The project was advertised on August 11, 2023 and three bids were received on September 8, 2023 as listed below:

Bidder	Bid Amount
McKim and Creed Inc	\$433,750
Stake Center Locating, LLC	\$452,040
C3 Communication Construction Corp.	\$492,500

**HRSD Estimate:** \$500,000

**Contract Description:** This contract is for the protection of vital underground HRSD sanitary sewer utilities by providing subsurface locating services within the cities of Virginia Beach, Portsmouth, Norfolk, Chesapeake, and portions of Suffolk and Isle of Wight. Contractor shall provide all materials, labor, equipment, vehicles, supplies, and personal protective equipment necessary to locate HRSD’s underground sanitary sewer facilities on an as needed basis for South Shore Interceptors. These services will be in accordance with The Virginia Underground Utility Damage Prevention Act and the State Corporation Commission’s (SCC) Underground Utility Marking Standards.

These same services will be performed by HRSD personnel for the North Shore Interceptor and Small Communities locations.

**Analysis of Cost:** The cost is determined to be fair and reasonable based both on the competitive pricing and previous contract pricing.

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

CONSENT AGENDA ITEM 3.c.1. – November 28, 2023

**Subject:** Hot Water Mobile Boiler Rental  
 Contract Change Order (>25% of original contract value or \$50,000)

**Recommended Action:** Approve a change order to the contract with Power Mechanical Inc. in the amount of \$79,002.

**Regulatory Requirement:** None

<b>Contract Status with Change Orders:</b>	<b>Amount</b>	<b>Cumulative % of Contract</b>
Original Contract with Contractor	\$105,670	
Total Value of Previous Change Orders	\$0	%
Requested Change Order	\$79,002	
Total Value of All Change Orders	\$79,002	75%
Revised Contract Value	\$184,672	
Time (Additional Calendar Days)		180

**Change Order Description:** This change order includes the rental of a hot water mobile boiler at the Nansmond Treatment Plant. The rental period must be extended for an additional six months to allow for the installation of the permanent replacement boilers for the anaerobic digesters.

**Analysis of Cost:** The cost is based on the supplier extending the cost for the additional six months and is in agreement with other similar efforts from firms.

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



## CONSENT AGENDA ITEM 3.c.2. – November 28, 2023

**Subject:** Sanitary Sewer Replacement 1950 – Part 2  
Contract Change Order (>25% of original contract value or \$50,000) and Regulatory Required Capital Improvement Project Additional Appropriation (<\$10,000,000)

**Recommended Actions:**

- a. Approve a change order to the contract with Bridgeman Civil, Inc. in the amount of \$3,066,126.
- b. Appropriate additional funding in the amount of \$3,453,471.

**CIP Project: VP014022****Regulatory Requirement:** Rehab Action Plan Phase 2 (2025 Completion)

Budget	\$20,833,818
Previous Expenditures and Encumbrances	(\$20,644,313)
Available Balance	\$189,505
Proposed Change Order No. 3 to Bridgeman Civil	(\$3,066,126)
Proposed Contingency	(\$576,850)
Project Shortage/Requested Additional Funding	(\$3,453,471)
Revised Total Project Authorized Funding	\$24,287,289

<b>Contract Status with Change Orders:</b>	<b>Amount</b>	<b>Cumulative % of Contract</b>
Original Contract with Contractor	\$17,274,540	
Total Value of Previous Change Orders	\$1,537,950	8.9%
Requested Change Order	\$3,066,126	
Total Value of All Change Orders	\$4,604,076	26.7%
Revised Contract Value	\$21,878,616	
Time (Additional Calendar Days)		139

**Project Description:** This project will replace 850 feet of 12-inch cast iron discharge force main, 2,900 feet of 18-inch gravity line, and 2,700 feet of 24-inch gravity line in the South Norfolk area of Chesapeake. In addition, HRSD is partnering with the City of Chesapeake Public Utilities (City) to install 16 laterals and cleanouts on Byrd Avenue. The existing City sewer service is in an alley behind Byrd Avenue and the City has plans to relocate the sewers from the backyard alley to Byrd Avenue. HRSD will be installing a new 30-inch gravity sewer main along Byrd Avenue, and HRSD will install the new City laterals and cleanouts at the edge of the right-of-way. The City has provided a letter of commitment to enter into a cost sharing agreement to reimburse HRSD \$106,400 for the cost of installing the laterals and clean-outs.

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

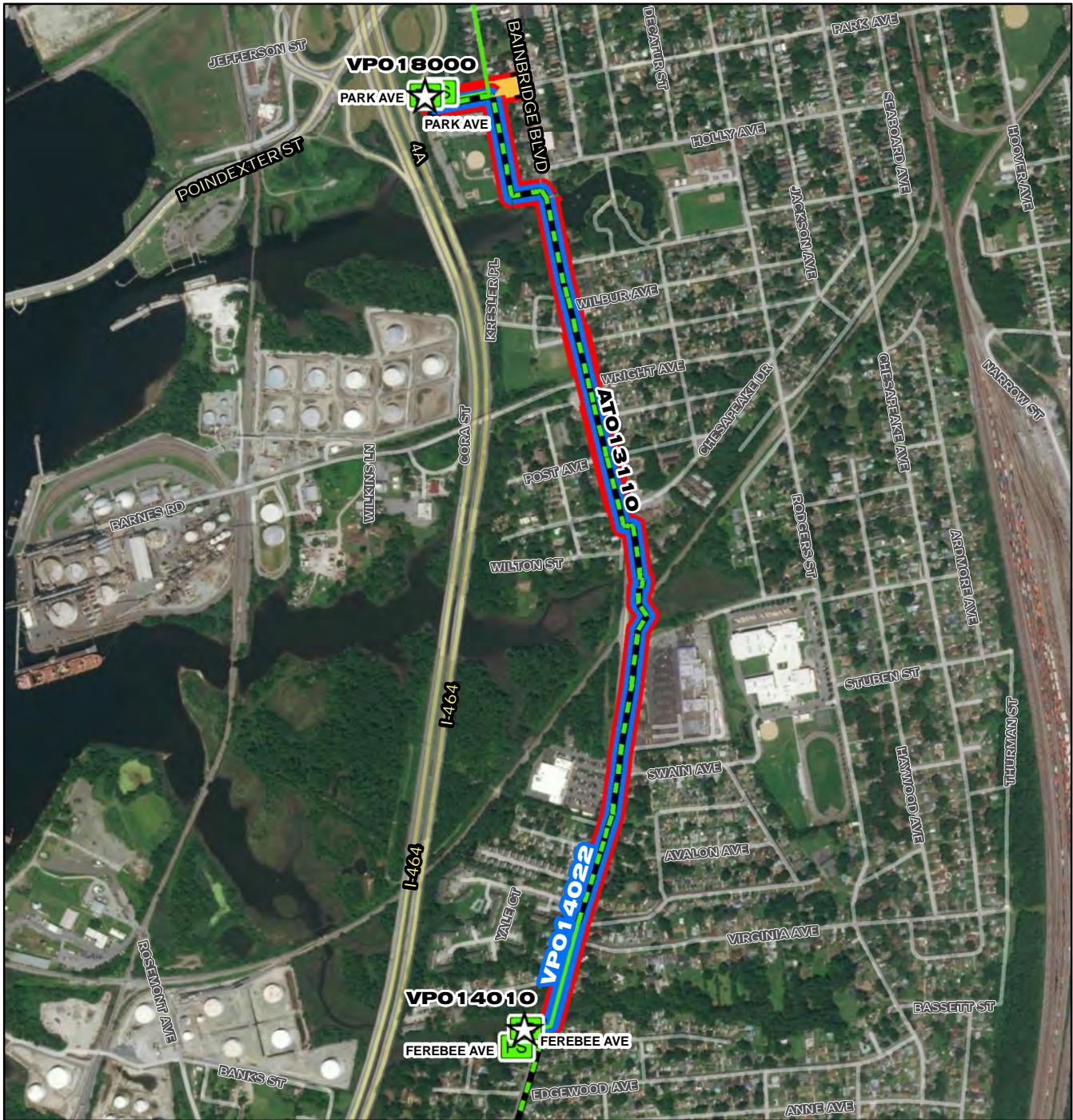
**Project Justification:** This project will evaluate and implement the replacement of HRSD force main and gravity sewer between Ferebee Avenue Pump Station and Park Avenue Pump Station.

**Change Order Description and Analysis of Cost:** This change order includes costs to install bypass pumps and remove and reinstall existing gravity sewer and 4 manholes in conflict with the new 30-inch gravity sewer. The existing infrastructure was not accurately represented on the plans and this additional work is needed to install the new sewer in this limited corridor. The additional costs for this change order were negotiated with the contractor, and the engineer has recommended approval for the negotiated cost for this work.

**Funding Description:** This project requires additional funding to complete construction. Due to utility conflicts discovered at the intersection of Park Avenue and Stewart Street, the contractor had to remove existing gravity sewer and manholes. This request also includes \$576,850 in contingency to accommodate any additional unforeseen conditions. The amount negotiated for the change order exceeds the current balance available for the CIP project.

**Schedule:**

Construction	December 2022
Project Completion	March 2025

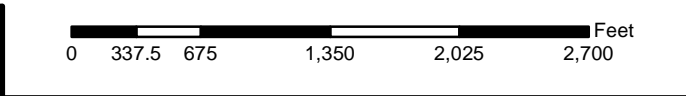


**VPO14022**

- 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



**VPO 14022**

**Sanitary Sewer Replacement 1950  
- Part 2**

N  
W E  
S

**CIP Location**



CONSENT AGENDA ITEM 3.d.1. – November 28, 2023

**Subject:** Elizabeth River Crossing Reliability Improvements  
 Non-Regulatory Capital Improvement Project - Additional Appropriation (<\$1,000,000)

**Recommended Action:** Appropriate additional funding in the amount of \$256,947.

**CIP Project:** VP018500

**Regulatory Requirement:** None

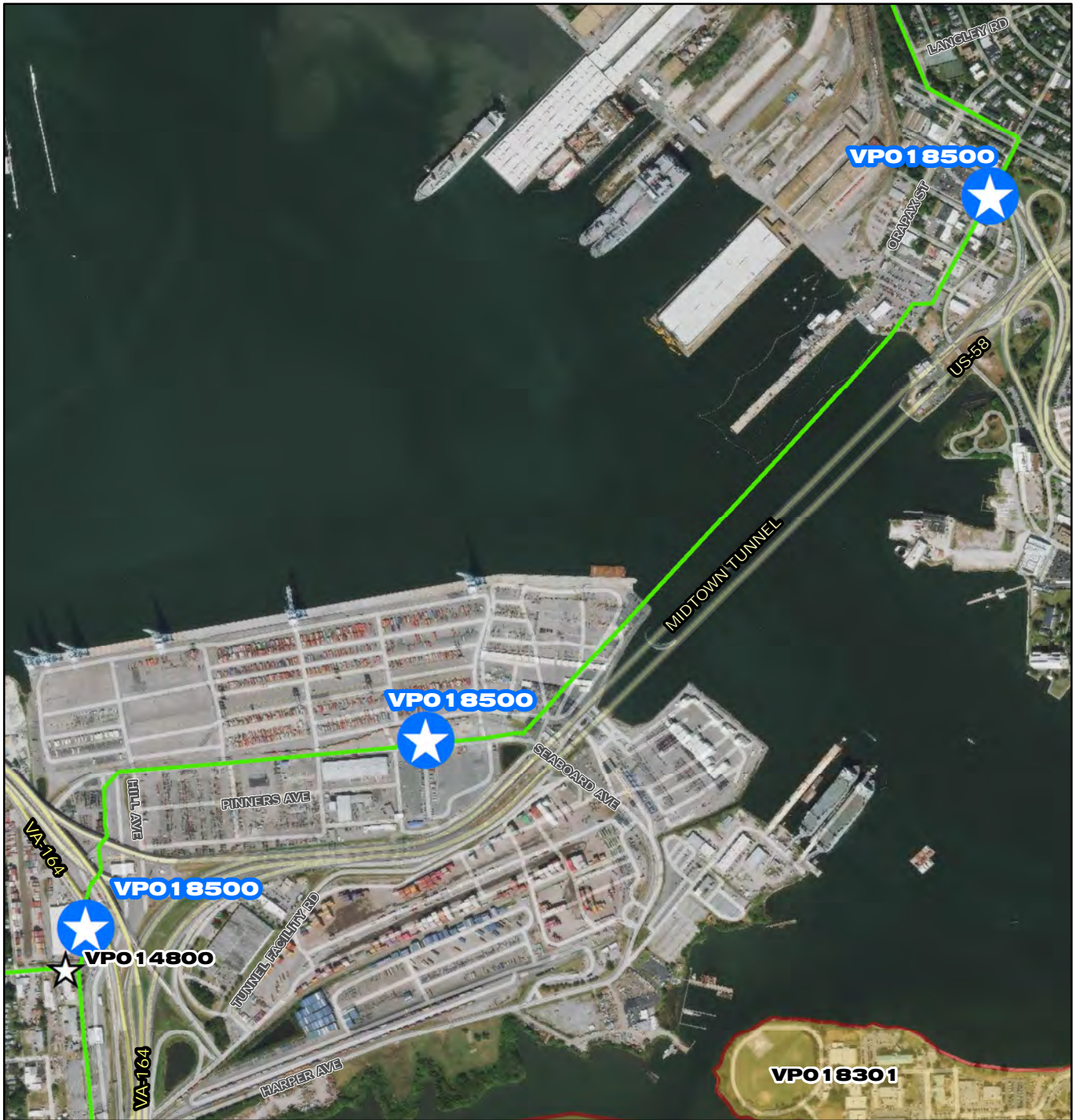
Budget	\$3,065,246
Previous Expenditures and Encumbrances	(\$3,021,147)
Available Balance	\$44,099
Proposed Change Order No. 2 to Bridgeman Civil, Inc.	(\$174,911)
Proposed Contingency	(\$126,135)
Project Shortage/Requested Additional Funding	(\$256,947)
Revised Total Project Authorized Funding	\$3,322,193

**Project Description:** This project will install two metering vaults and a bypass pump connection. One metering vault will replace the failed direct bury meter at Pinners Point. The other metering vault will be located in Norfolk to provide information about the condition of the river crossing. An emergency pump connection will be installed at the Pinners Point diversion structure, and that structure will be demolished. The attached [map](#) depicts the project location.

**Project Justification:** The existing meter at Pinners Point is a direct bury style meter, making it inaccessible for maintenance. The meter is at the end of its useful life and has failed. The metering location is necessary to capture flow information from the south side of the Elizabeth River in Portsmouth. The new meter location in Norfolk will provide critical, missing information on the condition of the river crossing, as currently there is not a means to identify failure at that crossing. The new emergency pump connection will provide a means for conveying flow in the event of a failure of the Elizabeth River crossing and removes the risk of overflow in the downtown area.

**Funding Description:** The contractor encountered valve supply chain issues delaying delivery. A change order has been negotiated for \$174,911 for the additional cost of changing the gate valve manufacturer and modifying the plan of operation so the contractor could continue working while waiting on the valve delivery. This request includes a 5% contingency to accommodate any additional unforeseen conditions. The amount required for the change order and contingency exceeds the balance available for this CIP project.

**Schedule:** Construction July 2022  
 Project Completion June 2025



**VPO 1850**

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

**Legend**

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

Feet

0    380    760    1,520    2,280    3,040

## VPO 1850

### Elizabeth River Crossing Reliability Improvements

**CIP Location**

Norfolk

CONSENT AGENDA ITEM 3.d.2. – November 28, 2023

**Subject:** Small Communities Rehabilitation Phase IV  
 Non-Regulatory Capital Improvement Project Additional Appropriation (<\$1,000,000)

**Recommended Action:** Appropriate additional funding in the amount of \$138,063.

**CIP Project:** MP014700

**Regulatory Requirement:** None

Budget	\$2,112,074
Previous Expenditures and Encumbrances	(\$2,110,137)
Available Balance	\$1,937
Proposed Change Order No. 2 to Contractor	(\$65,000)
Proposed Contingency	(\$75,000)
Project Shortage/Requested Additional Funding	(\$138,063)
Revised Total Project Authorized Funding	\$2,250,137

Contract Status with Change Orders:	Amount	Cumulative % of Contract
Original Contract with Contractor	\$1,541,770	
Total Value of Previous Change Orders	\$78,065	5.1%
Requested Change Order	\$65,000	
Total Value of All Change Orders	\$143,065	9.3%
Revised Contract Value	\$1,684,835	

Time (Additional Calendar Days)	0
---------------------------------	---

**Project Description:** This project consists of rehabilitation or replacement of approximately 2,500 linear feet of small diameter gravity sewer main, associated laterals and manholes within the towns of Urbana and West Point. The attached [map](#) depicts the project location.

**Project Justification:** This project is necessary to correct multiple defects within these line segments, identified by CCTV condition assessments, that will lead to premature failure.

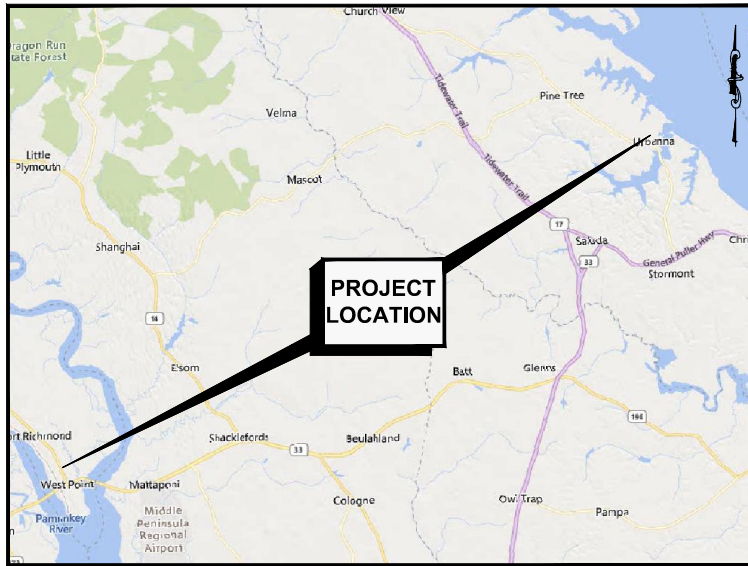
**Analysis of Cost:** This change order includes an offset of a conflicting, existing force main necessary to complete the work, additional work associated with laterals due to previously unknown conflicts and a change requested by HRSD. The cost is based on Engineer’s opinions of probable cost as well as negotiated change order proposals.

**Funding Description:** This request includes a 4.9% contingency based on the original contract price with the Contractor. The amount for this work exceeds the available project balance by \$138,063.

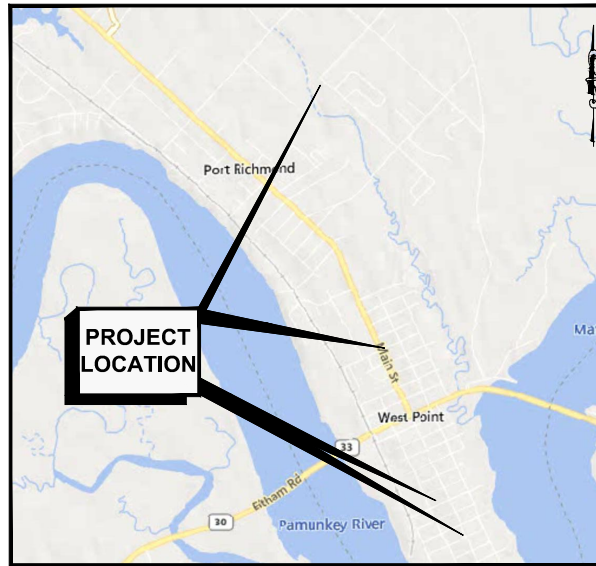
**Schedule:** Project Completion August 2024



# Small Communities Rehabilitation Phase IV - Location Map



**VICINITY MAP**  
SCALE= 1" = 10,000'



**LOCATION MAP - WEST POINT**  
SCALE= 1" = 2000'



**LOCATION MAP - URBANNA**  
SCALE= 1" = 2000'

AGENDA ITEM 4. – November 28, 2023

**Subject:** City Park Pump Station (PS 106) Replacement  
Rejection of all Bids (>\$200,000)

**Recommended Action:** Approve rejection of the bid submitted for the City Park Pump Station (PS 106) Replacement project.

**CIP Project:** VP015410

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

**Type of Procurement:** Competitive Bid

In accordance with HRSD’s competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised on October 12, 2023, and one bid was received on November 16, 2023 as listed below:

Bidder	Bid Amount
Shaw Construction Corporation	\$8,798,722

**Engineer Estimate:** \$4,013,000

Because of the single response and the bid amount being more than twice the engineer’s estimate, HRSD and Hazen and Sawyer staff recommend rejecting the bid, bundling this construction contract with the Luxembourg Pump Station (PS 113) Replacement construction contract which is out for bid currently, and reissuing bid documents for one bid. Both pump stations are relatively small. A larger single contract may attract more bidders.

**Project Description:** This project will construct a new City Park Pump Station to replace the old existing pump station. The attached [map](#) depicts the project location.

**Project Justification:** This project will address aging infrastructure pertaining to the condition of the wet wells, pumps, motors, controls, appurtenances, and emergency generator/pump for the facilities. The pumps, motors, and controls are nearing the end of their useful life and replacement parts are not available.

**Schedule:**

Bid	November 2023
Construction	January 2024
Project Completion	August 2026



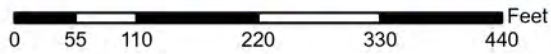


**VPO15410**

- 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



**VPO15410**

**City Park Pump Station (PS 106)  
Replacement**



**CIP Location**



AGENDA ITEM 5. – November 28, 2023

**Subject:** Compensation  
Commission Adopted Policy

**Recommended Action:** Approve amended policy.

**Brief:** In June 2023, the Commission approved a contract with Marsh & McLennan Companies, Inc., DBA Mercer (US) LLC (Mercer) to perform a comprehensive evaluation and market-based salary survey for all positions and an evaluation of our current compensation and classification system. A similar effort was last performed in July 1987.

The Mercer engagement provides for the following services:

- Reviewing the compensation philosophy
- Creating a market strategy
- Evaluating the internal equity classification and compensation system
- Updating and modernizing job descriptions
- Performing a market pricing compensation and benefits analysis
- Evaluating current pay structures and methodologies
- Evaluating pay policies and practices and cost modeling for implementation
- Training and change management

Staff has been working closely with Mercer for several months. As part of the engagement, staff has made proposed amendments to the existing [Compensation Policy](#). Affirming HRSD's compensation philosophy is an important step prior to making market comparisons. Staff believe that the proposed changes better clarify the existing policy, is more transparent and simplifies HRSD's market and position approach.

Staff and Mercer will provide a project update summarizing the project and the proposed changes to the Compensation Policy.

# COMMISSION ADOPTED POLICY

## Compensation



Adopted: October 25, 2016

Revised: ~~[date or N/A]~~ November 28,  
2023

Page 1 of 8

### 1.0 Purpose and Need

Hampton Roads Sanitation District (HRSD) is a political subdivision of the Commonwealth of Virginia. Our promise is to treat wastewater and recover natural resources to protect public health and the environment so that our communities will have clean waterways and reliable water resources for generations to come. Our compensation philosophy is designed in alignment with our promise and culture to help ensure that HRSD can attract and retain high performing top talent with diverse backgrounds. We desire a long-term relationship with every employee who shares HRSD's vision and values and contributes to HRSD's success.

~~HRSD is a political subdivision of the Commonwealth of Virginia. Our mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively.~~

~~HRSD's Strategic Plan was developed to continue HRSD's Legacy of protecting and enhancing our environment with the Vision: "Future Generations will inherit clean waterways and be able to keep them clean" and strategic objectives with a focus on People, Infrastructure, Environmental Impact, Operations and Partnerships.~~

~~This policy supports HRSD's Strategic Plan and objectives in defining a compensation philosophy and process which ensures HRSD can attract and retain top talent with diverse backgrounds~~

### 2.0 Definitions

~~**Benchmark Jobs**— a representative sample of HRSD jobs selected that:~~

- ~~— represent multiple levels within the organization~~
- ~~— have a large population in each job so that a high percentage of employees are represented (60-80%)~~
- ~~— are likely to be represented in compensation survey databases~~

~~**Compensation Market Strategy**— the organization's assessment of the following factors that define the compensation market for HRSD jobs:~~

- ~~(1) — Type of job: different jobs such as executive, engineering support staff which may address each factor differently~~



**COMMISSION ADOPTED POLICY**  
**Compensation**



Adopted: October 25, 2016

Revised: ~~[date or N/A]~~ November 28,  
2023

Page 2 of 8

- ~~(2) — Industry or Business Sectors: the markets from which HRSD recruits or loses talent~~
- ~~(3) — Geographic Reach: the location or areas from where talent is most likely to be recruited~~
- ~~(4) — Organization Size: comparator parameters of likely talent competitors which includes size of budget, scope and number of staff~~
- ~~(5) — Target Salary: the market positioning for pay deemed appropriate for HRSD's talent (median, 75<sup>th</sup>, or 90<sup>th</sup> percentiles)~~

~~**Custom Salary Survey** – A data comparison/market survey approach that surveys salaries of peer organizations to compare jobs similar to HRSD. Peer organizations include both national and local water and wastewater utilities, municipalities and government organizations.~~

**Geographic Calibration of Pay Data.** An adjustment to pay data based on differentials in labor markets and cost of living labor as related to geographic location. Pay differentials are referenced from published data such as The Economic Research Institute survey.

**HRSD's Compensation and Classification System.** An HRSD process to evaluate jobs based on their scope and responsibility to ensure each position is placed into the correct grade and pay range career level relative to other positions creating internal equity among HRSD jobs within HRSD. The system classifies positions based on eight factors including knowledge, scope, decisions, problem solving or complexity, authority, purpose and nature of contacts, occupational risk and physical requirements.

**Compensation Surveys.** – Compensation surveys provide robust market data from independent third parties that are used to develop an understanding of compensation of jobs in other organizations and competitive pay rates.

~~**Market Based Salary Survey Benchmarking** – A data collection/market comparison resource approach that utilizes several published surveys which provides full information on the competitive pay market for both utility jobs and more broad based jobs such as Information Technology and Finance.~~

**Total Compensation Rewards Package.** Includes salary, ~~incentives and bonus pay~~, allowances, paid time off, and benefits including health, retirement, life insurance, and education reimbursement.

# COMMISSION ADOPTED POLICY

## Compensation



Adopted: October 25, 2016

Revised: ~~[date or N/A]~~ November 28,  
2023

Page 3 of 8

### 3.0 Guiding Principles

#### 3.1 Compensation Philosophy

HRSD is committed to providing employees with competitive, fair, and motivating compensation – a key element of our Total Package. We believe compensation should be grounded in market data, in line with our core values of driving decisions and programs through data.

This document contains a summary of our compensation philosophy, including the rationale behind why we compensate our employees the way we do. Our goal is to be as honest and straightforward as possible, to ensure that employees and managers understand the goals and outcomes of the compensation process.

HRSD's compensation philosophy consists of four key elements:

- Communication and transparency.** We believe that committing to transparency ~~on behalf of~~ with our employees builds an environment of trust and inspiration. We strive to not only make relevant information on key compensation programs and processes available to all ~~employees,~~ but employees but do our best to ensure the information is understood by all employees.
- Equity and fairness.** Our goal is to ensure our compensation policies are fair and internally equitable. We hire employees with competencies to fulfill the current role ~~and~~ with the potential to grow, and we aim to fairly compensate them for their talent, skills, and experience. We also take concrete steps to provide consistent guidelines and well-defined job descriptions across the organization.
- Competitive market and positioning.** HRSD conducts regular market analyses to ensure our employees' compensation remains on par with other organizations in the field. We recognize the value that our people bring to HRSD and understand that we have high expectations ~~of~~ for our employees. Therefore, we strive to maintain a leading competitive position to market when it comes to employee compensation (benchmarking our midpoint salary ranges to the market 75<sup>th</sup> percentile, whereas most organizations target the median) ~~when it comes to employee compensation.~~

**COMMISSION ADOPTED POLICY**  
**Compensation**



Adopted: October 25, 2016	Revised: <del>[date or N/A]</del> <u>November 28, 2023</u>	Page 4 of 8
---------------------------	--	-------------

Salary increases. Our merit process is designed to reward our employees for their time, loyalty, and effort spent at HRSD. We know how important it is to acknowledge and compensate employees who align with our ideals of mission-driven work and positive company culture. Recognizing this commitment and fairly rewarding our employees are key foundational elements of our compensation philosophy.

**3.2 Competitive Market and Position Approach**

<u>Job Type</u>	<u>Industry/ Business</u>	<u>Geography</u>	<u>Size of Budget/ Scope/ Staff</u>	<u>Target Salary (Midpoint)</u>
<u>Executives (e.g., CEO, COO, HR, Legal)</u>	<u>Utilities / Public Sector</u>	<u>Primary: Virginia Secondary: Mid-Atlantic</u>	<u>Primary: Current Revenue</u>	<u>75<sup>th</sup> Percentile</u>
<u>All Other Jobs</u>	<u>Utilities / Public Sector / All Industries</u>	<u>Primary: Virginia Secondary: Mid-Atlantic</u>	<u>All Data</u>	<u>75<sup>th</sup> Percentile</u>

These principles will guide the specific practices, programs, and approaches we use to drive employee engagement and development through compensation.

~~All of~~ These elements are applied by our organization to ensure we’re providing meaningful compensation for our workers. At HRSD, we are determined to keep our compensation fair, consistent, and equitable for all employees. We’re committed to working with you to create a workplace that supports you, now and in the future.

~~HRSD provides market-based total compensation that ensures HRSD can attract, develop and retain talented, high performing employees. HRSD desires a long term relationship with every employee that shares HRSD’s vision and values and contributes to HRSD’s success.~~

~~HRSD jobs are classified within salary ranges through HRSD’s Classification and Compensation System. Employees are hired into the range based on skills, knowledge and experience. Employees can earn merit increases (typically one-step within the range) annually based on successfully meeting expectations and contributing to HRSD’s continued success.~~

~~All positions have a finite maximum market value, where additional experience in the position provides no additional market advantage. The top of each range represents this maximum market value. Merit increases at this level are limited to inflationary indices to allow employees to maintain spending power over time.~~

### ~~3.2~~ Salaries

~~The desire for a long term relationship is reflected in the HRSD salary structure that approaches top-of-the-market for the most experienced talent at the top of the salary range:—~~

- ~~—The salary range minimum or entry level compensation at or above market median~~
- ~~—The midpoint of the pay range for a job is targeted to the 75<sup>th</sup> percentile of the competitive market~~
- ~~—The salary range maximum is targeted within 10% of the Market Maximum Salary 90<sup>th</sup> percentile~~

### ~~3.3~~ Benefits

~~Employee benefits are part of total compensation. HRSD believes in providing adequate paid leave to allow an employee to achieve an acceptable work-life balance. Additionally, while HRSD provides a suite of other benefits, HRSD is committed to providing access to affordable health care. To the extent allowable by law and within available revenue, direct employee health insurance costs shall be limited to 10 percent of a Grade 2, Step 1 salary whenever possible. HRSD's benefit plan shall be competitive at or above market in comparison to local municipal and government entities and comparable water and wastewater utilities.~~

### ~~3.4~~ Compensation Market Strategy

~~The strategy, presented in table form, documents the pay philosophy. The strategy is reviewed annually or revisited when there are meaningful changes in job groups or market parameters. The goal of the market strategy is to ensure competitive information about compensation for HRSD jobs is based on the appropriate mix of job types and market parameters. The 2016 Market Strategy is represented below.~~

**COMMISSION ADOPTED POLICY**  
**Compensation**



Adopted: October 25, 2016	Revised: <del>[date or N/A]</del> <u>November 28, 2023</u>	Page 6 of 8
---------------------------	--	-------------

Job-Type	Industry/ Business	Geography	Size of Budget/ Scope/Staf f	Target Salary (Mid/Max)
Senior Management (non-technical) (e.g. CEO, PR, HR, Legal)	Utilities/All Industries/ Public Sector	Mid-Atlantic	\$397M/ 803 FTEs	75th P/90th P
Scientific Staff and Management- Chemist, Environmental Scientists, Lab Specialist, Technician	Public Sector/All Industries	National/ Mid-Atlantic	\$397 M	75th P/90th P
Technical Management (e.g. COO, Ops Manager, Top Maintenance Officer)	Utilities	Mid-Atlantic	\$397M/ 803 FTEs	75th P/90th P
Engineering & IT	Public Sector/All Industries	Mid-Atlantic	\$397 M	75th P/90th P
Professional and Administrative	All Industries	Hampton Roads/Virginia	\$397 M	75th P/90th P
Process, Electrical & Maintenance	All Industries	Mid-Atlantic	\$397M/ 803 FTEs	75th P/90th P

**4.0 Procedures**

HRSD will conduct ~~a comprehensive~~ compensation study studies as often as it deems necessary to ensure compensation policy objectives are maintained. The timing of additional compensation studies may be driven by such things as market and economic changes. ~~every three to five years when markets are relatively stable. Market reviews of difficult to fill or new jobs will be performed on an as needed basis. Assessments will be done more often for any or all job groups experiencing more volatile or unstable markets. The goal is to ensure pay aligns with the market strategy.~~



**COMMISSION ADOPTED POLICY**  
***Compensation***



Adopted: October 25, 2016

Revised: ~~[date or N/A]~~ November 28,  
2023

Page 7 of 8

Generally, no less than every three years, HRSD will conduct a market pricing analysis to assess the appropriate placement of jobs within established pay structures (e.g., grade placement and progression). Depending on employment market conditions some positions may be evaluated more frequently.

Other factors driving the need for market compensation studies and/or review of job architecture (i.e., appropriate placement of jobs to job families, career streams and career levels) may occur in the following instances:

- When there are major changes such as an organization restructuring that impacts job duties and responsibilities.
- New jobs and/or job families that may be created; or Talent patterns or other indicators such as high turnover, high open requisitions, high time to fill vacant positions, etc.

~~———— Any compensation study will use benchmark jobs which may be representative of all of HRSD or be limited to the job groups being studied.~~

~~———— Job comparisons will be based on job content or on knowledge, skills, abilities, education, experience and special requirements, supervision received and physical requirements and not on job titles alone.~~

~~———— The Compensation Market Strategy and Compensation Philosophy will define the study approach and market~~

~~———— The study may incorporate a custom survey to collect peer market data~~

~~———— Market pay data is calibrated based on geographic differential information and job match.~~

~~———— For non-benchmark positions or positions in which appropriate job matches may not be obtainable, HRSD's Compensation and Classification system is used to ensure that each position is placed in the correct grade relative to other positions.~~

~~HRSD will conduct a review of market salary ranges for approximately 10% of jobs on a bi-annual basis to ensure salary range compensation targets are maintained. Market reviews for difficult to fill or new jobs will be performed on an as-needed basis.~~

~~Every three to five years, HRSD will conduct an Executive level compensation study to include a custom survey of similar water and wastewater utilities, public sector agencies, regional entities and appropriate private sector businesses on both a local and national level. The custom survey will compare executive total compensation packages of HRSD's General Manager and Directors to include:~~

**COMMISSION ADOPTED POLICY**  
**Compensation**



Adopted: October 25, 2016	Revised: <del>[date or N/A]</del> <u>November 28,</u> <u>2023</u>	Page 8 of 8
---------------------------	--	-------------

- ~~— Total compensation to include salary, benefits, incentive, allowances and bonus compensation.~~
  - ~~— Salary range and pay data comparisons at the fully qualified level to the market and/or peer organizations including average range minimum, midpoint and maximum compared to median, 75<sup>th</sup> percentile and 90<sup>th</sup> percentile.~~
  - ~~— Market pay data calibrated based on geographic differential information.~~
  - ~~— Data may be calibrated where organizational size impacts the scope of a position~~
- ~~Evaluation of benefits include medical, vision and dental insurance, employee assistance program, wellness program, flexible spending and health savings accounts, life insurance, retirement, defined contribution plans, life insurance, employee leave benefits and education.~~

**5.0 Responsibility and Authority**

HRSD's General Manager and Director of Talent Management are designated administrators of these policies. The Director of Talent Management is responsible for:

- Providing guidance on overall competitiveness of HRSD pay, individual pay and total compensation
- Ensuring appropriate review of data in response to manager concerns about total compensation competitiveness
- Recommending updates to the policy based on variable elements of the policy
- Maintaining pay structures that are market competitive
- Ensuring internal and external pay equity

These policies were adopted by the HRSD Commission. -The Commission Finance Committee will review these policies on an annual basis.

Approved:

\_\_\_\_\_  
~~Frederick N. Elofson~~ Stephen C. Rodriguez  
Commission Chair

\_\_\_\_\_  
Date

Attest:

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

\_\_\_\_\_  
Date

AGENDA ITEM 6. – November 28, 2023

**Subject:** Atlantic Treatment Plant Reliability and Odor Control Improvements (ATP ROCI):  
ATP Liquid Side Odor Evaluation and Improvements  
ATP Gravity Belt Thickener and Pre-Dewatering Polymer Improvements  
ATP Odor and Solids Improvements 2023  
ATP Solids Curing Facility and Pad Improvements  
Alternative Project Delivery

**Recommended Action:** Approve the Construction Management (CM) project delivery method for the Atlantic Treatment Plant Reliability and Odor Control Improvements (ATP ROCI) program.

**CIP Projects:** AT015800, AT015900, AT016000, AT016100

**Regulatory Requirement:** None

**Project Description:** These projects will provide for treatment plant improvements to the Atlantic Treatment Plant to increase treatment reliability and minimize offsite odors for the surrounding community.

**Project Justification:** There has been an increase in odor complaints around the Atlantic Treatment Plant in calendar year 2022 and 2023 since the implementation of the new solids handling process and the diversion of all Chesapeake-Elizabeth Treatment Plant flow. These projects include design and construction to perform needed solids handling and odor control upgrades at the Atlantic Treatment Plant.

**Brief:** The award of an engineering design contract to the firm of Black and Veatch was approved at the January 2023 Commission meeting for preliminary engineering report (PER) services. The design effort for the four listed CIP projects supporting the ROCI program will reach the draft PER stage in early December. As the preliminary design of this project has evolved, it has become apparent how complex the construction sequencing and maintenance of plant operations will be at Atlantic Treatment Plant. Due to a long lead time for the CAMBI train, pre-purchase will be necessary and then reassignment of the purchase agreements with CAMBI to the contractor. The construction phase cost estimate for these projects is \$63,925,000 and is considered a Class 5 budget with an expected accuracy range of -50% under and +100% above the calculated cost.

Per HRSD's Procurement Policy, the competitive sealed bid process is the preferred method of construction procurement that reflects the design-bid-build project delivery method. However, this project delivery method will not meet all of the critical needs for implementing this project. The competitive best-value CM delivery method provides HRSD with the following benefits by:

1. The design, procurement, and installation of the CAMBI system is creating a project with a significant duration. The project includes several early win opportunities that could be done much earlier if we use multiple construction packages, including a bypass conveyor and storage hopper to eliminate that single point of failure, biogas flare, polymer improvements, and odor control improvements. The CM approach facilitates the bidding of multiple construction packages.
2. The CM delivery method will allow for contractor input during the design, which will be beneficial for the complex construction and sequencing of the work.

3. The CM delivery method will allow for contractor input to consider cost saving alternatives during the design and a lump sum or guaranteed maximum price can be received during the final design stage.
4. The CM delivery method will allow for the early procurement of the CAMBI train that can be assigned directly to this Construction Manager instead of HRSD taking temporary ownership then reassigning at a later date. The most recent proposal from CAMBI included a 24-month delivery schedule, making early procurement a critical project need.
5. Contractor input will allow for certain aspects of the Program to be expedited limiting odor issues to the surrounding neighbors.

The desired advertisement of the Request for Qualifications (RFQ) is in mid-January 2024 to align with the availability of the draft PER to share with the short-listed Construction Management firms.

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

<b><u>Schedule:</u></b>	Preliminary Engineering Began	February 2023
	30% design approval and begin RFQ/RFP process	January 2024
	Selection of Construction Management Firm	May 2024
	Guaranteed Maximum Price (GMP)	July 2025
	Construction Completion	October 2027

AGENDA ITEM 7. – November 28, 2023

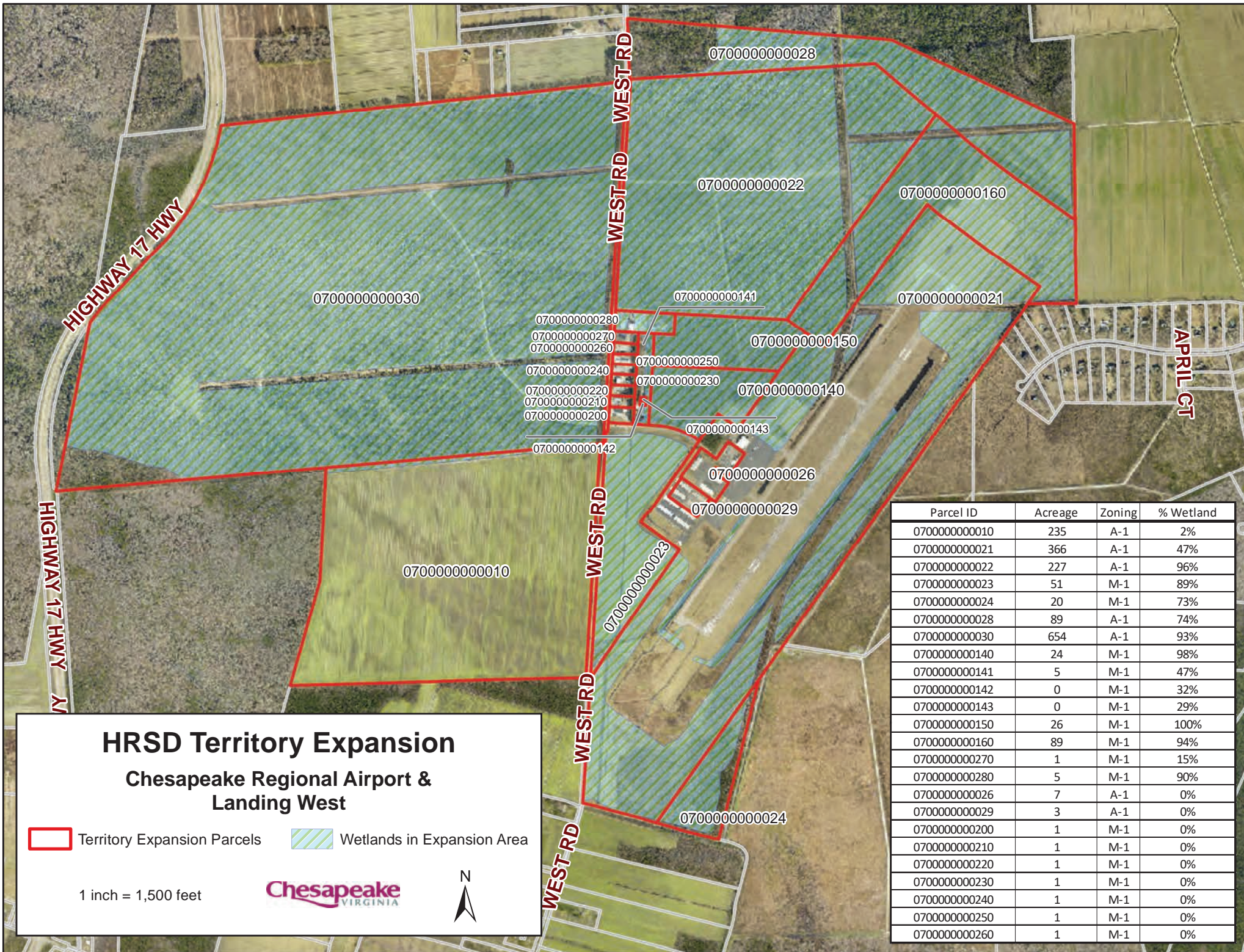
**Subject:** City of Chesapeake, Regional Airport and Landing West Service Area  
Service Area Expansion Agreement

**Recommended Action:** Approve the modification to the existing HRSD Service Area as requested by the City of Chesapeake and authorize the General Manager to execute by letter the same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

**Project Description:** The City of Chesapeake has requested an expansion of HRSD's Service Area to include the Chesapeake Regional Airport and Landing West. HRSD understands that the properties to be served include the Chesapeake Regional Airport and Landing West area lands that consist of 1,809 acres with an estimated 540 acres being considered buildable (the remainder is wetlands). The expanded service area will connect to the HRSD Cedar Road Interceptor Force Main through a new private pump station and sewer force main. The estimated average daily flow from this proposed added service area is 1,056,212 gallons per day (733 gpm) with a peak flow estimated at 1,297 gpm. HRSD has capacity to accommodate the proposed development within the service amended area. Under this concept, all costs associated with connection to the HRSD Interceptor would be the City's responsibility. The attached [map](#) depicts the location.

This work is in accordance with the Service Area Expansion Commission Adopted Policy.





# HRSD Territory Expansion

## Chesapeake Regional Airport & Landing West

Territory Expansion Parcels
  Wetlands in Expansion Area

1 inch = 1,500 feet



Parcel ID	Acreage	Zoning	% Wetland
0700000000010	235	A-1	2%
0700000000021	366	A-1	47%
0700000000022	227	A-1	96%
0700000000023	51	M-1	89%
0700000000024	20	M-1	73%
0700000000028	89	A-1	74%
0700000000030	654	A-1	93%
0700000000040	24	M-1	98%
0700000000041	5	M-1	47%
0700000000042	0	M-1	32%
0700000000043	0	M-1	29%
0700000000050	26	M-1	100%
0700000000060	89	M-1	94%
0700000000070	1	M-1	15%
0700000000080	5	M-1	90%
0700000000026	7	A-1	0%
0700000000029	3	A-1	0%
0700000000020	1	M-1	0%
07000000000210	1	M-1	0%
07000000000220	1	M-1	0%
07000000000230	1	M-1	0%
07000000000240	1	M-1	0%
07000000000250	1	M-1	0%
07000000000260	1	M-1	0%



AGENDA ITEM 8. – November 28, 2023

**Subject:** James City County, Hazelwood Farms Service Area  
Service Area Expansion Agreement

**Recommended Action:** Approve the modification to the existing HRSD Service Area as requested by James City County and authorize the General Manager to execute by letter the same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

**Project Description:** James City County has requested an expansion of HRSD's Service Area to include the remaining portion of the Hazelwood Property. HRSD understands that the properties to be served include the following Parcel ID's: 0530100002, 0440100018, 0440100032, and 1120100009. These lands consist of approximately 75 acres. The expanded service area will connect to the HRSD North Trunk Interceptor Force Main through a new private pump station and sewer force main. The estimated average daily flow from the proposed added service area is 76,000 gallons per day or 53 gallons per minute (gpm) with a peak flow estimated at 156 gpm. Although HRSD has the capacity to accommodate the proposed development within the amended service area, this area is quickly nearing capacity and HRSD system upgrades are being planned. Under this concept, all costs associated with connection to the HRSD Interceptor System would be the City's responsibility. The attached [map](#) depicts the location.

This work is in accordance with the Service Area Expansion Commission Adopted Policy.

# HRSD Service Area Expansion|Hazelwood Property

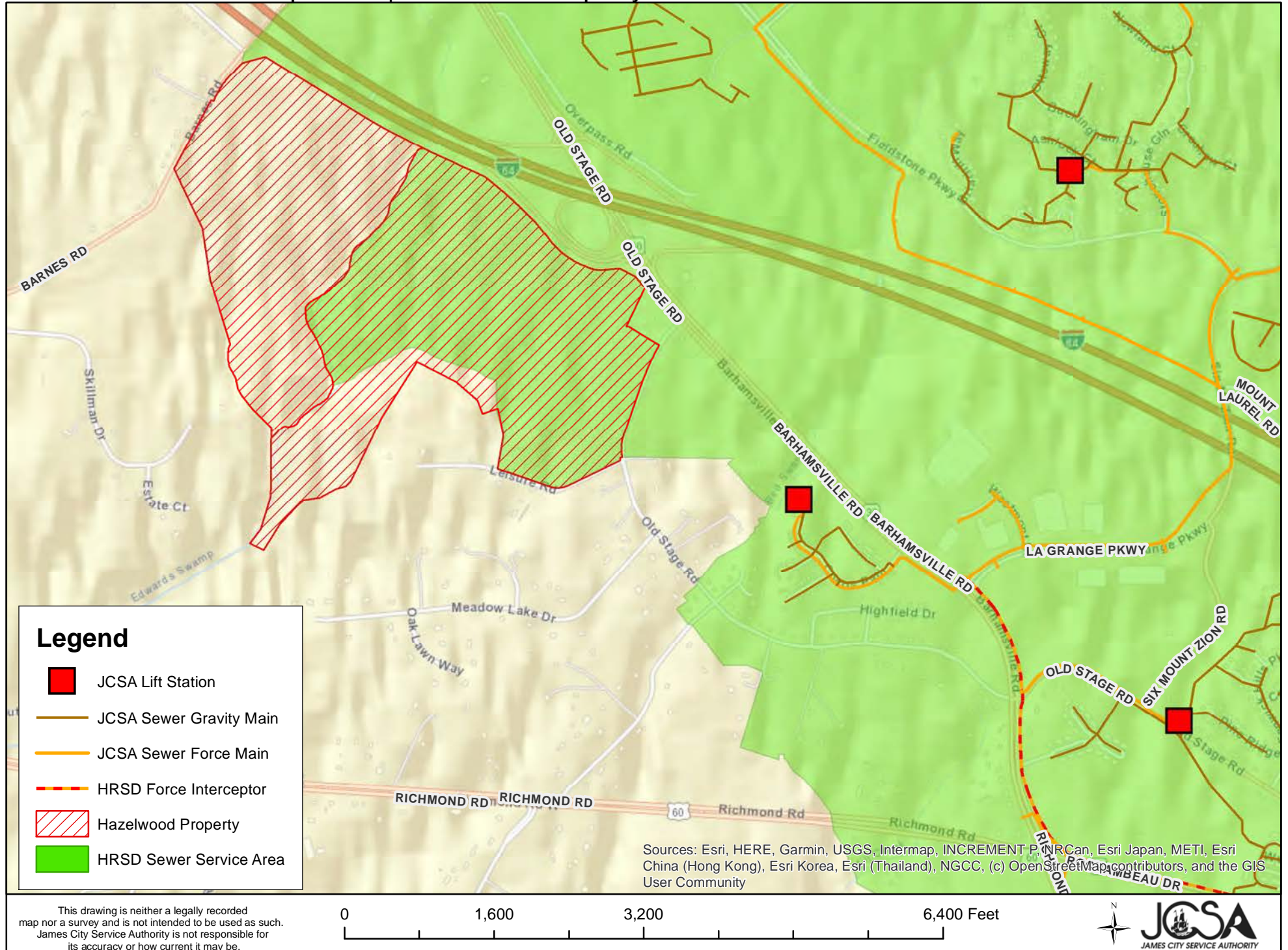


Figure 1



## AGENDA ITEM 9. – November 28, 2023

**Subject:** High Priority Inflow and Infiltration Reduction Program  
New CIP and Initial Appropriation

**Recommended Actions:**

- a. Approve a new CIP project.
- b. Appropriate total project funding in the amount of \$1,300,000.

**CIP Project: GN020300**

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

**Project Description:** This project will include the pre-planning, negotiation, as well as the initial data collection, analysis, and planning phases of the larger Inflow and Infiltration (I&I) Program, which will include I&I components of the following CIP Projects: AT014301; AT014302; JR013700; NP013901; NP013902; VP019300; and WB013200. These projects, and the overall Program, will be delivered via the Public-Private Education Facilities and Infrastructure Act (PPEA) project delivery method. Note that the requested appropriation of \$1,300,000 will be removed from the existing I&I project budgets, which have not yet been appropriated.

The attached [map](#) depicts the program locations.

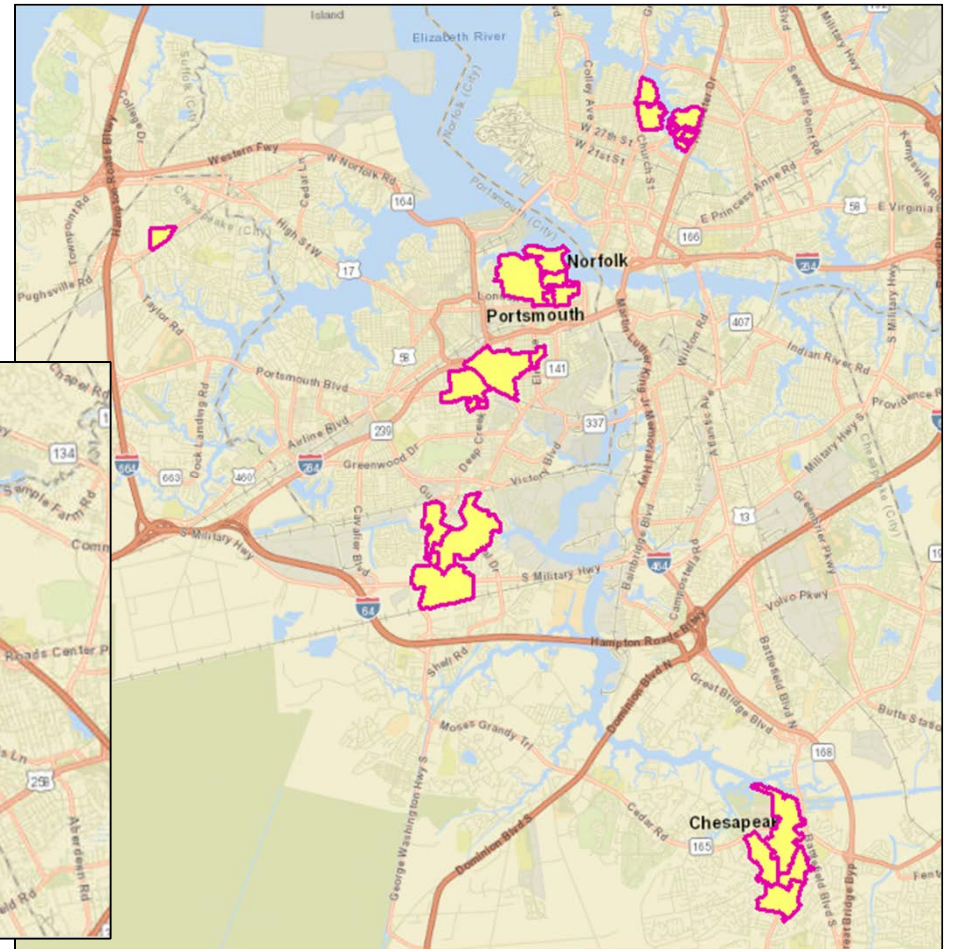
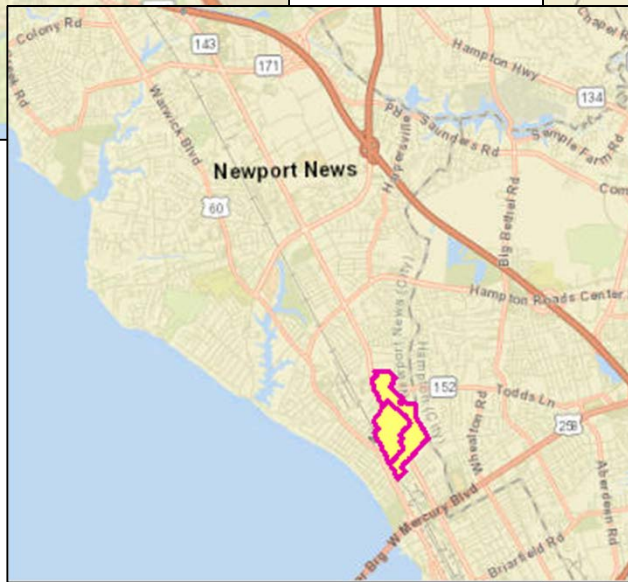
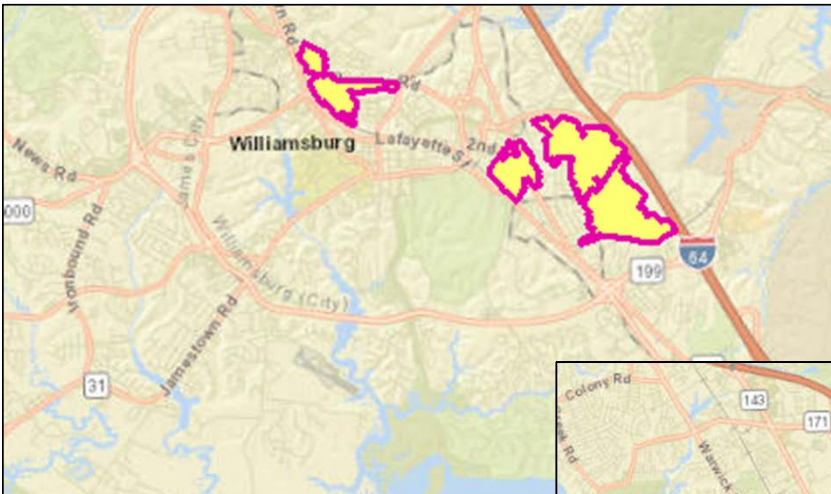
**Project Justification:** Inflow and infiltration projects require extensive field investigation due to the unknown location and severity of defects that allow the extraneous stormwater and groundwater into the sanitary sewer system. They also tend to be long-duration and iterative in nature, as predicting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

Given the relatively short period over which this \$130 million in inflow and infiltration work must be completed and the iterative nature of these projects, staff believes that combining the remaining projects into a single alternative delivery contract is the best path forward. However, the inability to properly define the scope of the work ahead of releasing the request for qualifications makes traditional design-build unrealistic. Therefore, utilizing the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) provides the flexibility to hire a firm (or firms) qualified in this type of work, and allows the collaborative development of the scope of work through multiple task orders. In addition, since the type, location, and amount of construction activities cannot be predicted at this time, the alternative delivery team should be led by an engineering firm that can directly contract with construction firms, as necessary, to complete these projects. In this way, the single engineering firm will also have complete control over the relatively limited pool of contractors equipped to do the type of rehabilitation activities likely to be heavily utilized on these projects.

**Funding Description:** The cost is based on the assumption that planning efforts for similar projects are typically one percent of the overall project budget.

<b><u>Schedule:</u></b>	PER	August 2024
	Design	January 2025
	Bid	August 2025
	Construction	December 2025
	Project Completion	December 2028

## Location of High Priority I&I Program Work



Chesapeake

## AGENDA ITEM 10. – November 28, 2023

**Subject:** Inflow Reduction Program – Phase II  
Initial Appropriation and Contract Award (>\$200,000)

**Recommended Actions:**

- a. Appropriate total project funding in the amount of \$10,600,000.
- b. Award a contract to Hazen and Sawyer PC in the amount of \$581,335.

**CIP Project:** BH016200

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Negotiation

A Public Notice for the Request for Qualifications was issued on July 18, 2023. Five firms submitted Statements of Qualifications on August 8, 2023, and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the Requests for Qualifications. Three firms were short-listed and a Request for Proposals was issued on August 21, 2023. All three short-listed firms submitted Technical Proposals on September 11, 2023, were interviewed, and technically ranked as listed below:

<b>Proposers</b>	<b>Technical Points</b>	<b>Recommended Selection Ranking</b>
Hazen and Sawyer	88.71	1
Arcadis U.S., Inc.	78.83	2
Brown and Caldwell	78.25	3

The Selection Committee recommends award to Hazen and Sawyer PC, whose professional qualifications and proposed services best serve the interest of HRSD.

**Project Description:** This project includes the identification and reduction of points of inflow into locality- and HRSD-owned sanitary sewer systems within the Boat Harbor Treatment Plant (BHTP) service area. Identification may include data analysis, smoke testing, flow and conductivity monitoring, and other field investigations. Inflow reduction strategies may include sealing of manholes, elimination of direct connections, as well as sealing and replacement of laterals and cleanouts. The Regional Wet Weather Management Plan (RWWMP) has identified basins in current need of inflow reductions, and areas of saltwater inflow have been identified through data analysis. Areas to implement inflow reduction strategies will be targeted based on susceptibility to saltwater inflow and through further data analysis of the basins identified in RWWMP. HRSD will coordinate identification and reduction of inflow with locality partners. This project will benefit from the piloted strategies and analysis performed in the Phase I Inflow Reduction Project.

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

**Project Justification:** Hydrographs, flow monitoring, and conductivity indicate that rapid increases in flow occur during wet weather and high tide events. The rapid inflow of water into the system increases the risk of overflows due to limited hydraulic capacity and increases the risk of force main failures due to increased force main operating pressures. Peak flow reduction in the BHTP service

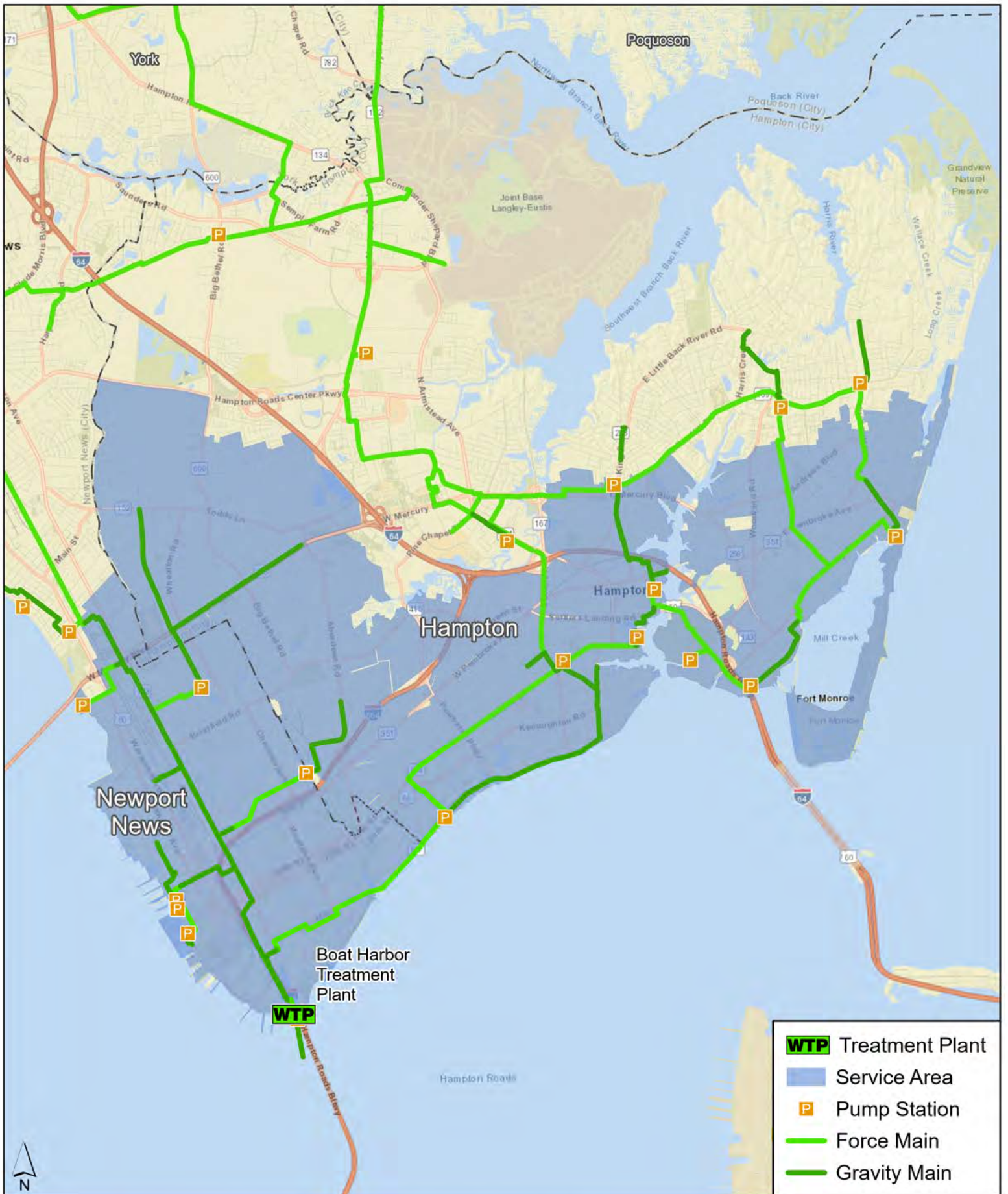
area is desirable to mitigate sanitary sewer overflow (SSO) risk. In addition, reduction of saltwater inflow will protect downstream SWIFT operations and reduce treatment costs.

**Contract Description:** This contract is an agreement for professional engineering services related to the reduction of inflow in the BHTP service area in the Cities of Hampton and Newport News. The initial scope includes managing the program, leveraging existing knowledge and data to support the program, establishing program-level strategies, developing tools for the effective implementation of the program, and commencing inflow reduction efforts when cost-effective reduction opportunities are identified. In summary, the initial scope includes: 1) Program Management; 2) Data Analysis and Program Strategy Development; and 3) Sewer Rehabilitation Procurement.

**Analysis of Cost:** The cost for this initial task order is based on a time and materials basis with negotiated rates and an estimate of time the consultant will need to perform the investigation and analyses. Design and construction phase services will be negotiated after the data analysis phase is complete.

<b><u>Schedule:</u></b>	PER	November 2023
	Design	November 2024
	Bid	May 2025
	Construction	July 2025
	Project Completion	December 2028





## Boat Harbor Treatment Plant Service Area

## AGENDA ITEM 11. – November 28, 2023

**Subject:** Tabb Pressure Reducing Station and Offline Storage Facility  
Regulatory Required Capital Improvement Program - Additional Appropriation  
(>\$10,000,000), Construction Contract and Task Order (>\$200,000)

**Recommended Actions:**

- a. Appropriate additional funding in the amount of \$30,174,452.
- b. Approve construction contract in the amount of \$33,757,000.
- c. Approve engineering task order in the amount of \$2,991,560.

**CIP Project: YR010900**

**Regulatory Requirement:** Integrated Plan – HPP2 (2040 Completion)

Budget	\$13,600,000
Previous Expenditures and Encumbrances	(\$3,650,192)
Available Balance	\$9,949,808
Proposed Construction Contract to Contractor	(\$33,757,000)
Proposed Task Order to Engineer	(\$2,991,560)
Proposed Contingency	(\$3,375,700)
Project Shortage/Requested Additional Funding	(\$30,174,452)
Revised Total Project Authorized Funding	\$43,774.452

<b>Contract Status with Task Orders:</b>	<b>Amount</b>
Original Contract with Engineer	\$413,040
Total Value of Previous Task Orders	\$2,199,532
Requested Task Order	\$2,991,560
Total Value of All Task Orders	\$5,191,092
Revised Contract Value	\$5,604.132
Engineering Services as % of Construction	16.6%

**Type of Procurement:** Competitive Bid

In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised on September 21, 2023, and three bids were received on October 31, 2023, as listed below:

<b>Bidder</b>	<b>Bid Amount</b>
MEB General Contractors, Inc.	\$33,757,000
Crowder Construction Company	\$38,853,000
American Contracting and Environmental Services	\$39,845,000

**Engineer Estimate:** \$38,876,000

The design engineer, Hazen and Sawyer, evaluated the bids based upon the requirements in the invitation for bid and recommends award to the lowest responsive and responsible bidder MEB General Contractors, Inc. in the amount of \$33,757,000.

**Project Description:** This project will construct a new Pressure Reducing Station (PRS) and Offline Storage Tank (OLSF) in the vicinity of Tabb High School in York County, Virginia. The precise capacity of the station and volume of the tank will be determined during the preliminary design. The attached [map](#) and [site plan](#) depict the project location.

**Project Justification:** Staff determined the Tabb PRS and OLSF project would eliminate the need for an onsite storage vessel at the James River Treatment Plant. The facility will provide flow equalization to both York River and James River treatment plants and also provide system relief during wet weather events.

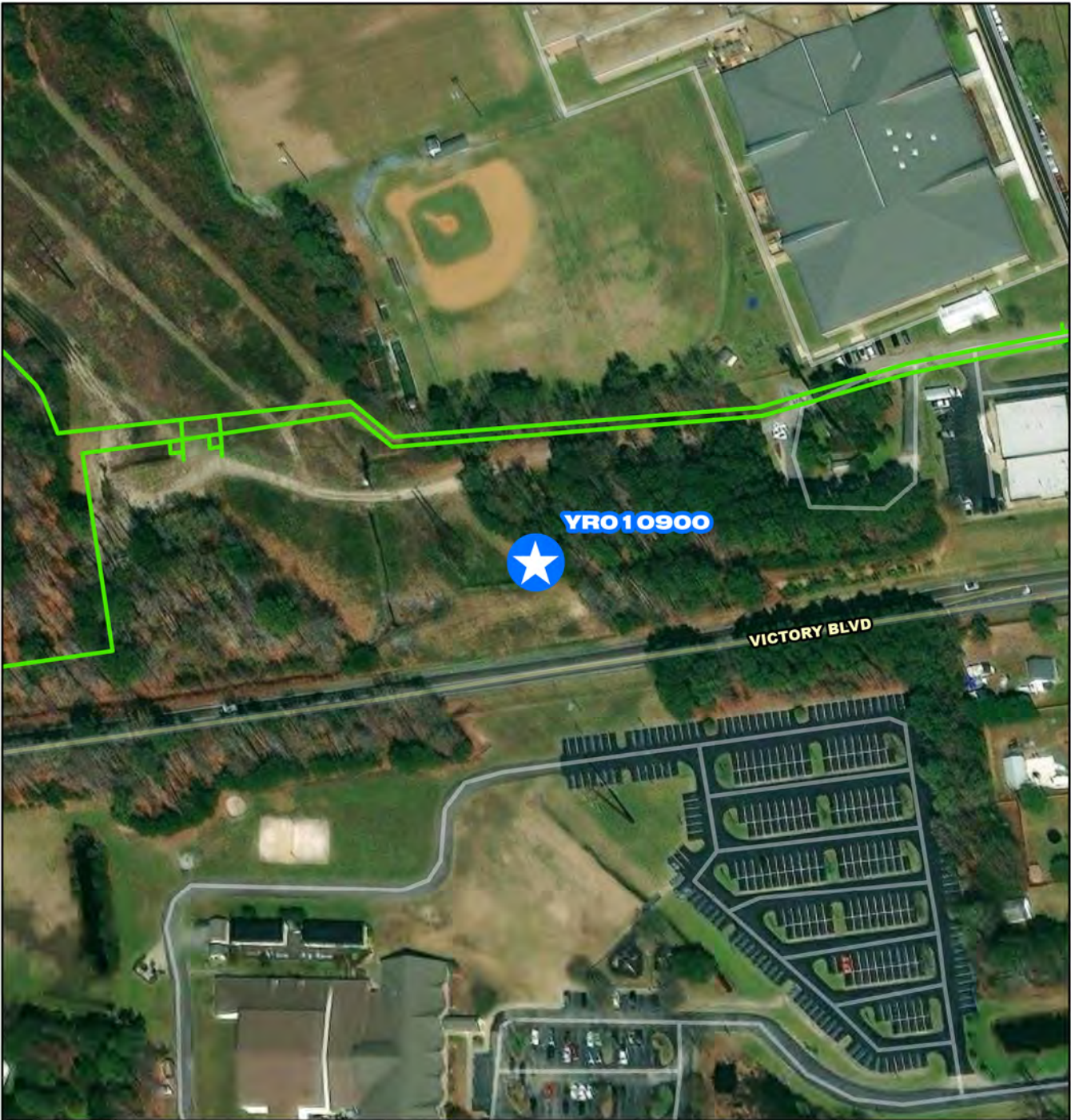
**Contract Description:** This contract is for the construction of the Tabb PRS and OLSF.

**Task Order Description:** This task order will provide Construction Administration Services, Construction Inspection Services and Close-Out Services.

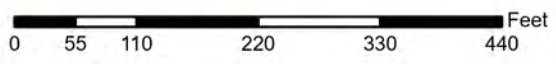
**Analysis of Cost:** The bid price is 13% higher than the engineer's estimate. Hazen computed a second estimate of \$33,681,000 using standard markups (markups associated with historically stable market conditions). Because the low bid is within the range bounded by Hazen's standard- to market-assessed estimates (i.e., \$33.681M to \$38.876M), MEB General Contractors, Inc's bid amount is considered sufficient to complete the work.

<b><u>Schedule:</u></b>	Construction	December 2023
	Project Completion	March 2026





- YRO 10900**
- 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



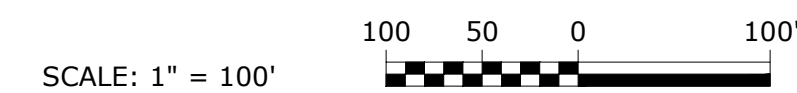
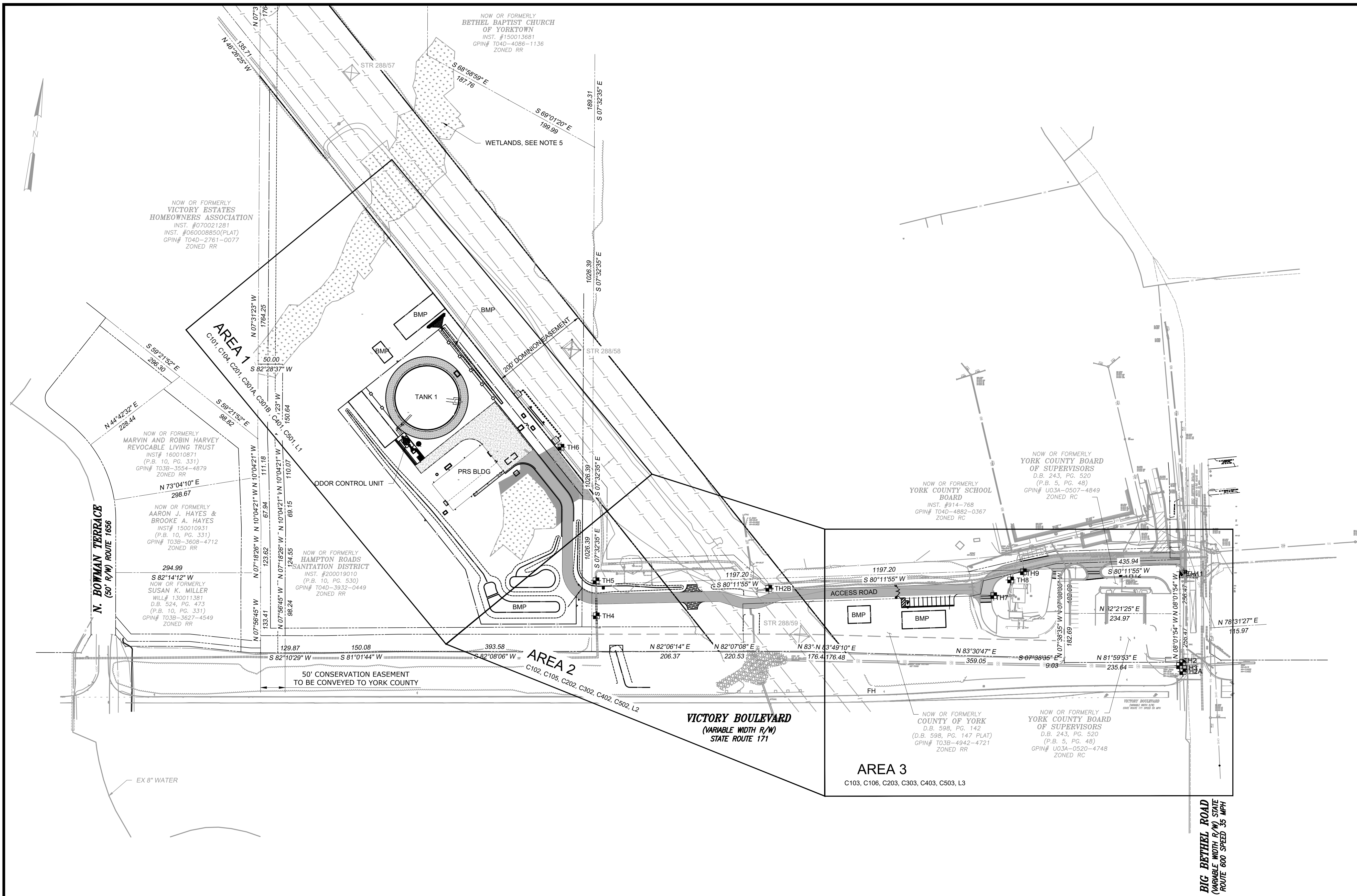
# YRO 10900

## Tabb Pressure Reducing Station and Offline Storage Facility



**NOTES:**

- THIS SURVEY WAS PREPARED TO SHOW EXISTING FEATURES AS OF 08/15/2020 BY PRECISION MEASUREMENTS INC. ADDITIONAL SURVEY DATA WAS OBTAINED ON 02/01/2021, 03/03/2021, AND 05/17/2023.
- THE MERIDIAN SOURCE OF THIS TOPOGRAPHIC SURVEY IS BASED ON THE COUNTY OF YORK GEODETIC CONTROL NETWORK, VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983 (2011) (US SURVEY FEET).
- ELEVATIONS REFER TO NAVD88 AND WERE ESTABLISHED BY SURVEY USING RTK GPS.
- THE PROJECT RESIDES ENTIRELY WITH IN ZONE X (UNSHADED), AN AREA OF MINIMAL FLOOD HAZARD AS SHOWN ON THE FEMA NFIP FIRM FOR YORK COUNTY COMMUNITY - PANEL NUMBERS 51199C0152D AND 51199C0156D, DATED JANUARY 16, 2015.
- THE WETLAND BOUNDARY INFORMATION PRESENTED ON THE DRAWINGS IS PER THE WETLAND DELINEATION PERFORMED BY JMT, INC. DURING MARCH 2020 AND BY HAZEN AND SAWYER DURING AUGUST 2020 AND OCTOBER 2021. ENCROACHMENT INTO, DISTURBANCE OF, DISCHARGE INTO, OR PLACEMENT OF FILL IN JURISDICTIONAL WATERS OF THE UNITED STATES IS AUTHORIZED UNDER 22-SPGP-RCIR (USACE ACTION ID NAO-2022-2576 AND DEQ #22-2561) SHOWN ON SHEETS C101, C102, T2, & T3. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE CONDITIONS, REQUIREMENTS, AND RESTRICTIONS OF ISSUED AUTHORIZATIONS.



File: C:\32562-HRD\32562-001\CAD\_BIM\CIVIL\C100 Saved by EPAGSANJAN Save date: 8/4/2023 11:02 AM  
PLOT DATE: 8/17/2023 9:52 AM BY: EPAGSANJAN

REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	08/2023	WLG
	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	W. GIBSON
DESIGNED BY:	B. SLAUGHTER
DRAWN BY:	E. PAGSANJAN
CHECKED BY:	M. SANTOWASSO
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	

CONSTRUCTION

# Hazen

HAZEN AND SAWYER  
4500 MAIN STREET, SUITE 500  
VIRGINIA BEACH, VIRGINIA 23462  
PHONE: 757-497-0490

TABB PRESSURE REDUCING STATION AND  
OFF-LINE STORAGE FACILITY

BETHEL MAGISTERIAL DISTRICT

CIVIL  
OVERALL SITE AND KEY PLAN

DATE:	AUGUST 2023
HAZEN NO.:	32562-001
CONTRACT NO.:	YR010900
DRAWING NUMBER:	C100
SHEET	6 of 179

AGENDA ITEM 12. – November 28, 2023

**Subject:** New Business

AGENDA ITEM 13. – November 28, 2023

**Subject:** Unfinished Business

AGENDA ITEM 14. – November 28, 2023

**Subject:** Commissioner Comments

AGENDA ITEM 15. – November 28, 2023

**Subject:** Informational Items

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

**Brief:** The following items listed below are 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](#)
  - (10) [Internal Audit – Personally Identifiable Information](#)
- b. [Strategic Metrics Summary](#)



November 17, 2023

Re: General Manager's Report



## Environmental Responsibility

After months of discussions with EPA, I signed the Sixth Amendment to the Consent Decree, which is a minor modification that provided for deadline extensions and minor scope changes. The document will be routed around the Department of Justice for signatures.

**Treatment Compliance and System Operations:** Staff are receiving several odor complaints around the Atlantic Treatment Plant due to various reasons and unfavorable meteorological conditions. Staff are working hard to implement our short-term solutions, fix existing equipment issues, and engaging our consultant for additional help.

There were one Interceptor system and three Treatment Plant (TP) spills in October. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report. There was one treatment plant permit exceedance at West Point in October further described in the Water Quality Air and Effluent Summary.

- From FY2024 to date, there have been 4 Permit Exceedances out of 18,842 Total Possible Exceedances.
- Pounds of Pollutants Removed in FY2024 to Date: 68,575,202 lbs.

**Water Quality:** One civil penalty was issued to New Realm Brewing for one administrative violation.



## Financial Stewardship

Operations and Procurement staff worked together to bid and win six used centrifuges from DC Water at an average price of \$13,000 compared to \$500,000 each new. With HRSD's expertise and a lot of teamwork, we were able to rehabilitate these centrifuges and deploy them at our existing plants, saving millions of dollars.

Since Virginia was one of five states to distribute more than 75% of their Low-Income Household Water Assistance Program (LIHWAP) funds, the Commonwealth was awarded an additional \$2 million. HRSD received almost \$700,000 of this additional amount. To date, HRSD has helped to distribute approximately \$7.5 million to over 15,000 qualified low-income households.



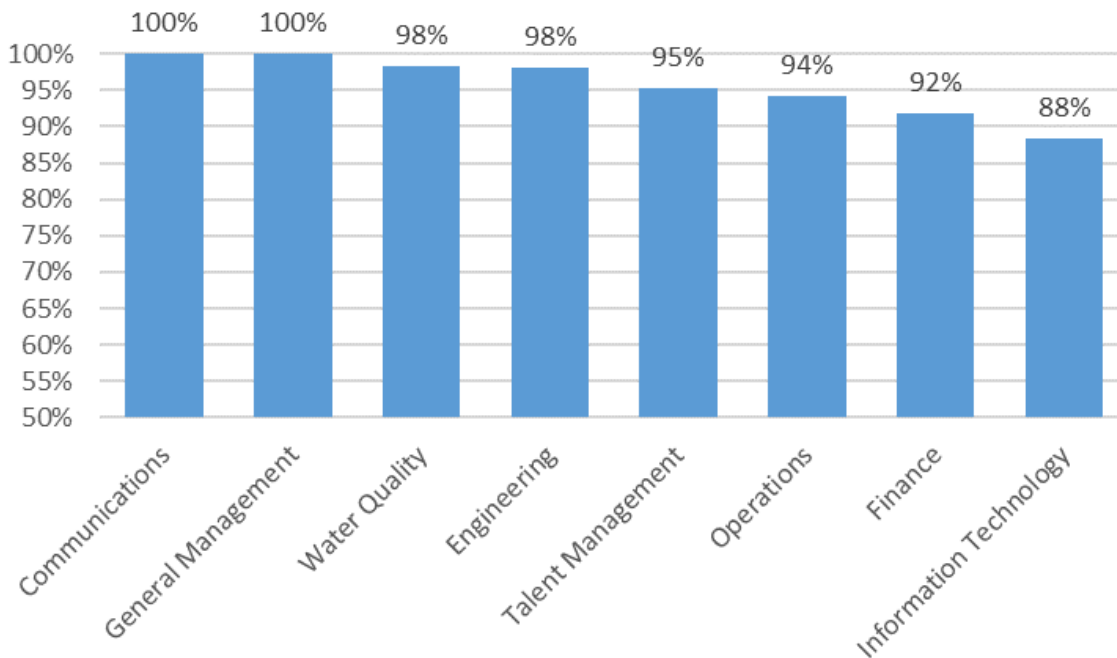
Revenues continue to remain strong as water consumption came in higher than budget and Interest Income is benefiting from higher interest rates as part of the Federal Reserve's attempt to rein in inflation. Facility Charges are stronger than the previous year as the lack of available housing is driving new construction demand. With existing homeowners reluctant to give up their sub-3% mortgages, existing home sales have plummeted. As inflation subsides, our expenses remain under control. October represented our largest monthly spend ever for the Capital Improvement Program at almost \$58 million.

Staff met with Standard and Poor's (S&P) who maintained our current ratings as they did not see any credit concerns.



### Talent

As part of our monthly metrics tracking, we are keeping an eye on staffing levels, especially after seeing some Localities that are only 76% staffed and how it is affecting their ability to provide city services. Based on the data below, we are doing pretty well. Note, there are several positions we have delayed filling until January 1<sup>st</sup> as presented in the FY2024 budget. Overall, we are averaging 93% staffing this fiscal year. Turnover for this fiscal year remains very low with only six employees leaving. This excludes administrative separations, deaths in service and retirements.



Our Operations Challenge Team performed very well at the Water Environment Federation Technical Exhibition and Conference (WEFTEC). Our team won First Place on the Safety event, Third Place on the Maintenance event, and Fourth Place overall for Division III! A significant improvement from last year.

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

1. Provided the Director of Water Quality with their annual review
2. Attended the Compensation Study workshop on job architecture
3. Discussed the Service Area Expansion strategy with staff



## **Community Engagement**

Staff provided two SWIFT tours for elected officials and Hampton Roads Planning District Commission (HRPDC) staff. Attendees included the Portsmouth Mayor, Suffolk Vice-Mayor, Council Members from Virginia Beach and Franklin; County/Town Administrators from Southampton, Gloucester, and Smithfield, and a Deputy City Manager from Chesapeake.

Lauren Zuravnsky and I presented to the Newport News City Council on HRSD's work in the City. We told them that HRSD has \$1 billion in construction going on in the City, which is primarily James River SWIFT but also includes a number of pump stations and pipelines. In addition, we outlined our Community Commitment program where our contractors are giving back to the community.

With the recent stories about saltwater intrusion in the Mississippi River, staff pitched a story to local media outlets on how SWIFT should prevent saltwater intrusion in the Potomac Aquifer. This story was picked up by WTKR and the Virginian Pilot.

I participated in the following external meetings/activities:

1. Attended WEFTEC 2023
2. John Dano, Sam McAdoo and I met with the Accomack County Administrator on their economic development and future land plans for their northern area surrounding Wallops Island and increasing space rocket investments.
3. Staff met with York County to discuss the Tabb Pressure Reducing Station.
4. Staff attended the Virginia Forever Bridge Builders event and sat with the Deputy Secretary of Natural Resources.
5. Staff met with the Virginia Living Museum on a potential partnership.



## Innovation

I attended the Gartner 2023 IT Symposium and heard the latest insights for what is predicted for technology in the next few years. The main discussion was all about artificial intelligence (AI) and how significant the changes will be for all industries. AI will be as game-changing as the launch of the iPhone in 2007 and the world wide web in 1993.

As you recall, HRSD is creating a new division focused on leveraging AI and machine learning to achieve multi-objective optimization. Jeff Sparks was promoted to lead this new division. He was a process engineer in Operations and is working on his PhD at Universite Laval in Canada. His dissertation is about the intersection between digital twins, machine learning, and industrial control at water resource recovery facilities.

The Asset Management Division is piloting a new vendor and software platform for oil analysis. The goal is to see if this new technology that can provide real-time results can help detect lubrication issues in critical hydraulic systems before the equipment fails. This proactive approach could result in significant savings.

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

**I look forward to seeing you in person in Virginia Beach at 9:00 a.m. on Tuesday, November 28, 2023.**

Respectfully submitted,

Jay Bernas, P.E.  
General Manager

TO: General Manager  
FROM: Director of Communications  
SUBJECT: Monthly Report for October 2023  
DATE: November 17, 2023

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. Mentioned in the story about ODU professors receiving National Oceanic and Atmospheric Administration (NOAA) grant to track algal blooms
  - b. HRSD Project helping refill, preserve Potomac Aquifer
  - c. Virginia Tech Secures \$2 Million to Propel Groundwater Access and Quality Research
  - d. Southeast Virginia's massive aquifer is being replenished. Here's why that matters
2. Analysis of media coverage

What are the key results for October?

Mentions

Compared to last period

**13** ↑ 44%  
Previous Value 9

Total Potential News Reach

Compared to last period

**3.74M** ↓ 66%  
Previous Value 10.9M

Sentiment

Compared to last period

**42** ↑ 282%  
Previous Value 11

# What is the top performing news content?

## Top Article by Reach



WAVY-TV · Janita Gadson  
Editorial | US | Oct 4 - 2:51 PM

### ODU professors receive \$3M NOAA grant to track harmful algal blooms

The Virginia Aquarium NASA Langley NASA Goddard York River Oysters The **Hampton Roads Sanitation District** (HRSD) Check WAVY.com for the ...

Social Echo 4 9 0

1.5M Reach

Neutral

## Top Article by Reach and Volume



EurekAlert!  
Editorial | US | Oct 26 - 11:19 AM

### Virginia Tech awarded \$2 million to advance groundwater availability and quality

... and bedrock prevent water from recharging naturally. The **Sustainable Water Initiative for Tomorrow** (SWIFT) is a managed aquifer recharge...

Social Echo 0 0 0

596k Reach

Neutral

## Top Article by Social Echo



WAVY-TV · Janita Gadson  
Editorial | US | Oct 4 - 2:51 PM

### ODU professors receive \$3M NOAA grant to track harmful algal blooms

The Virginia Aquarium NASA Langley NASA Goddard York River Oysters The **Hampton Roads Sanitation District** (HRSD) Check WAVY.com for the ...

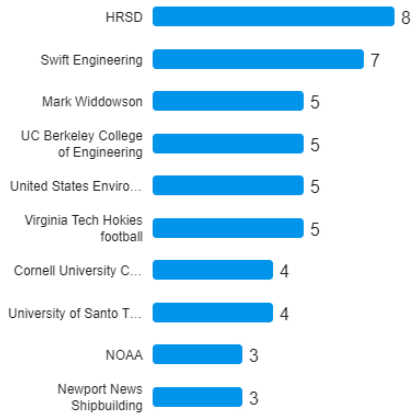
Social Echo 4 9 0

1.5M Reach

Neutral

# What are the top entities and keywords?

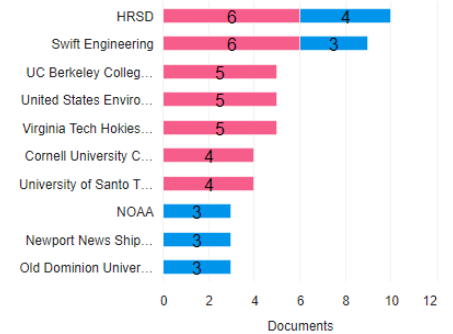
## Top Entities



## Top Keywords



## Top Organizations

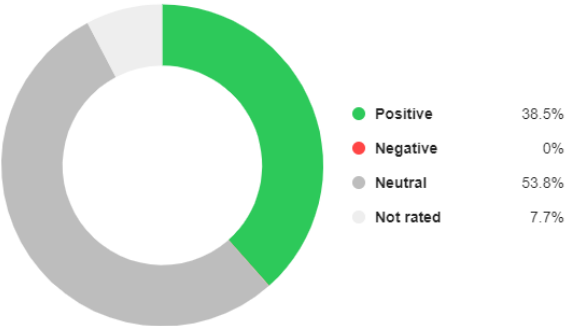


Hampton Roads Sanitation NOT Henifin | News  
 Hampton Roads Sanitation NOT Henifin | Social (1)  
 Sustainable Water Initiative for Tomorrow | News  
 Sustainable Water Initiative for Tomorrow | Social

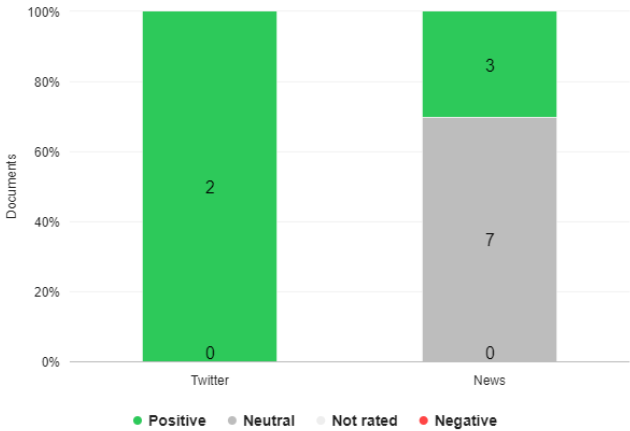


# How favorable is the content?

Sentiment Share of Voice

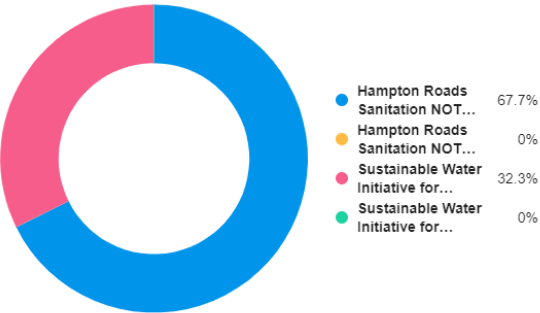


Sentiment by Source Type

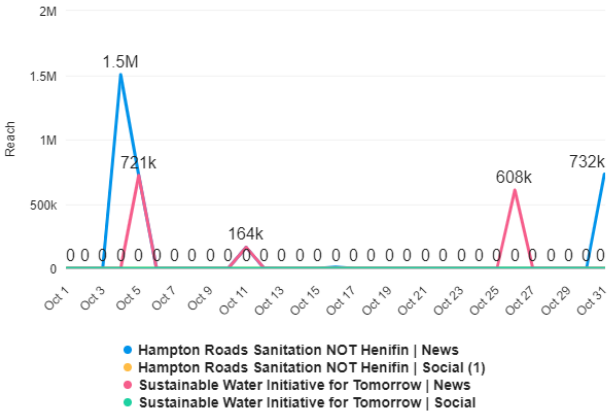


# What is the potential reach?

Share of Voice by Reach



Potential News Reach

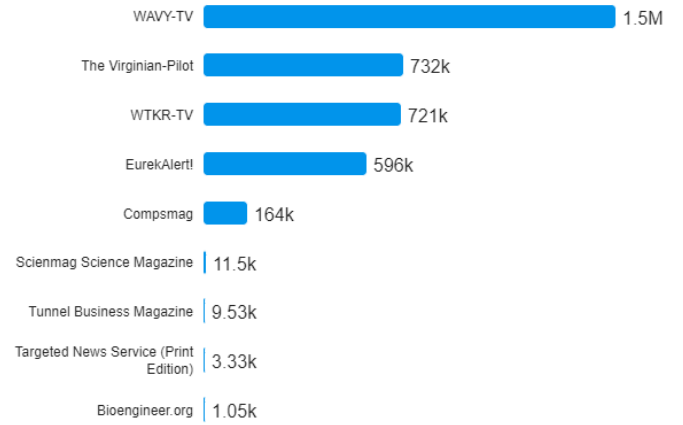


# What are the top publishers?

## Top Publications by Volume



## Top Publications by Reach

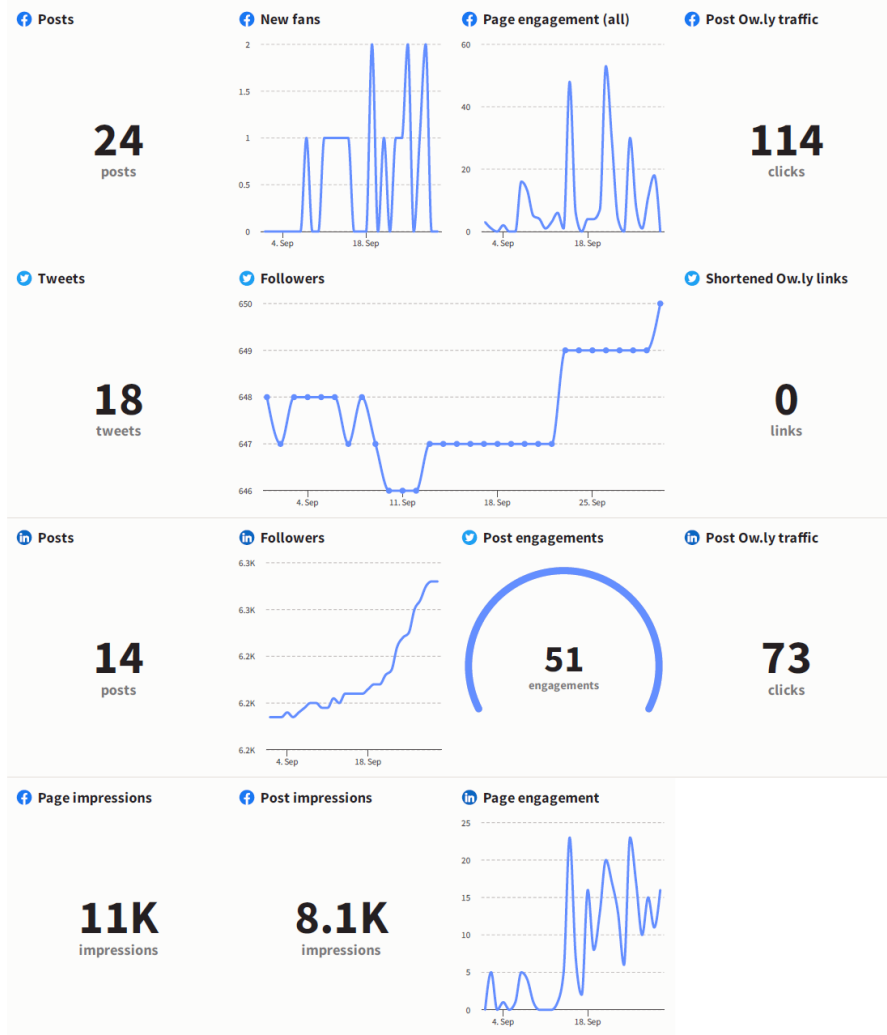




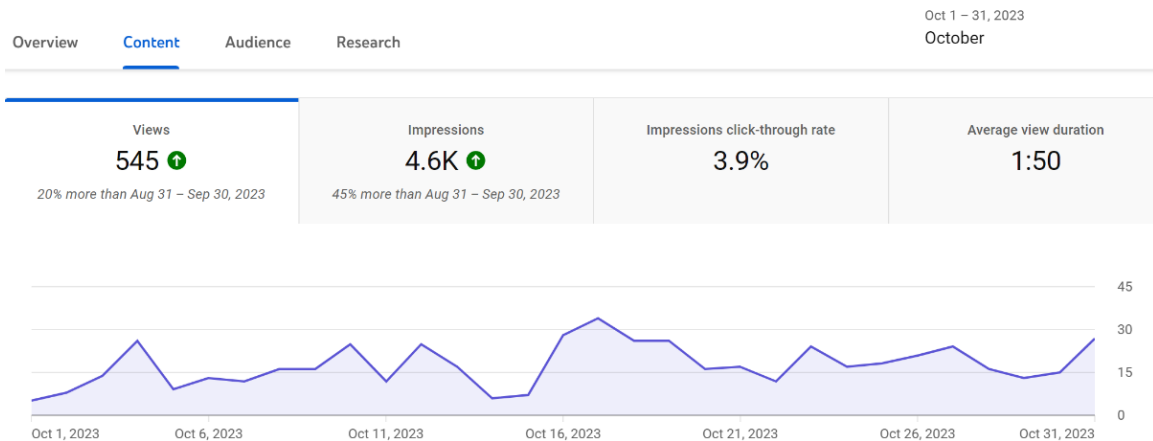
# Community Engagement

## B. Social Media and Online Engagement

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



### 2. YouTube



3. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post

 **HRSD**  
Published by Hootsuite · October 13 at 2:00 PM · 🌐

Feature Friday! HRSD staff at a career event during [WEFTEC](#) last week.  
Want to work for HRSD? Check out our job openings here: <http://www.hrsd.com/jobs>



See insights and ads Boost post

  40 3 comments 2 shares

b. Top Tweet



c. Top YouTube Videos

- (1) [The Wastewater Treatment Process](#) (228 views)
- (2) [SWIFT Research Center: What Is the Potomac Aquifer](#) (44 views)
- (3) [National Infrastructure Week: James River Treatment Plant SWIFT Improvements](#) (28 views)
- (4) [What Is Asset Management? Celebrating Infrastructure Week at HRSD](#) (28 views)
- (5) [Atlantic Treatment Plant Cambi Tour](#) (28 views)

4. Website and Social Media Impressions and Visits

a. Facebook:

- (1) 21,429 page impressions
- (2) 16,195 post impressions reaching 15,132 users
- (3) Facebook Engagement of 589 (496 reactions, 57 shares, and 36 comments)

b. X (Formerly known as Twitter): 2,331 post impressions, 1.9% engagement rate



- c. HRSD.com/SWIFTVA.com: 1092 page visits
- d. LinkedIn Impressions:
  - (1) 14,992 page impressions
  - (2) 13,900 post impressions
- e. YouTube: 545 views
- f. Next Door unique impressions: 17,424 post impressions from 14 targeted neighborhood postings and one region-wide posting shared with 593,596 total residents
- g. Blog Posts: [Fighting Flooding](#)
- h. Construction Project Page Visits – 1,971 total visits (not including direct visits from home page, broken down as follows:
  - (1) 1,635 visits to individual pages
  - (2) 336 to the status page

#### C. Education and Outreach Activities

Director, together with Communications and SWIFT Program staff and HRSD Ambassadors staffed a booth at the Newport News Fall-o-ween Festival, held at Newport News Park. The event draws several thousand attendees, and HRSD's booth featured educational games and giveaways, including bottles of SWIFT Water™. It was a great opportunity to answer questions, engage with our customers and raise awareness and understanding of the critical role HRSD plays in protecting public health and the environment.

Following recent news about saltwater intrusion in the Mississippi River and potential impacts to drinking water in the affecting communities, the Director used the opportunity to localize the story to pitch media outlets about the work HRSD is doing via SWIFT to stave off saltwater intrusion within the Potomac Aquifer. Local media outlets WTKR TV and the Virginian Pilot produced stories highlighting this environmental benefit of SWIFT.

Project notices were distributed to 2,010 customers for nine different projects across the service area this month and the department issued and posted ten construction or work notices to the HRSD.com Newsroom.

There were eight SWIFT Research Center tours given over the course of the month to a total of 242 people.

D. Internal Communications

Director participated in the following internal meetings and events:

1. SWIFT Industry Day planning meetings
2. Pre-proposal conference for graphic design/videography/photography service provider
3. Communications coordination meeting for Sanitary Sewer Overflow (SSO) and emergency maintenance events
4. HRSD Health, Wellness and Safety Fair
5. Website refresh planning meetings
6. Compensation study update meeting
7. Bi-weekly GM briefings
8. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and HRSD QST meetings
9. Check-in meetings with Deputy General Manager (DGM)
10. Director also conducted biweekly Communications department status meetings and weekly one-on-one check-in meetings.
11. Staff participated in 16 project progress meetings and four outreach development meetings with various project managers.

Respectfully,

Leila Rice, APR  
Director of Communications

TO: General Manager  
FROM: Director of Engineering  
SUBJECT: Engineering Monthly Report for October 2023  
DATE: November 14, 2023



### Environmental Responsibility

For many years, HRSD has analyzed the oil used to lubricate critical hydraulic systems. Checking this oil for water and particle contamination is a proactive way to find small problems before they become larger issues. Staff are conducting a pilot study at the Virginia Initiative Treatment Plant (VIP), to consider a new vendor and software platform for oil analysis. This new system can provide near real-time results on a digital platform to many staff members simultaneously. This system is one more tool to address maintenance issues in a proactive manner rather than a reactive way.

Annual inspections to assess the condition and functionality of cathodic protections systems used to protect buried metallic pipe are now complete. External corrosion of the HRSD interceptor system has led to failures in the past and can result in sewage spills. This year, a rectifier was found to have failed on a section of force main pipe at the crossing of the Elizabeth River in Norfolk. This rectifier, when functioning properly, introduces an impressed current on the metallic pipe to protect it from external corrosion. Replacement of the rectifier allows for the continued protection of this important pipe segment.



### Financial Stewardship

Capital Improvement Program (CIP) spending for the third month of FY2024 was significantly above the planned spending target.

CIP Spending (\$M):

	Current Period	FYTD
Actual	57.92	122.77
Plan	46.70	137.40

This is the single largest month of CIP spending in HRSD history. We will need to average \$48M each month in FY2024 to meet our annual CIP spending target.

On October 12, staff met with representatives of the Virginia Department of Environmental quality (VDEQ) to review the pending Water Quality Improvement Fund (WQIF) grant application for the James River SWIFT project. Discussion related to the scope of the project, water quality objectives, SWIFT Program specifics and potential permit implications were discussed. This grant application is estimated at \$340M and will likely be the largest single grant ever issued by the VDEQ. Discussions will likely continue as this grant application is processed by VDEQ in the coming months.



## Talent

Staff were very active in this year's WEFTEC Conference held in Chicago, Illinois. Members of the Engineering Department provided technical presentations, took part in expert panels discussions and moderated sessions on a variety of topics. Staff also assisted the Talent Management Department at a Career Fair held at WEFTEC. This event focused on recruiting students that will be graduating from college in the coming year. WEFTEC has returned to form after COVID19, with over 21,000 professionals in attendance.

Staff are working with the IT Department and the Talent Management Department to create a new set of reports on staff utilization. The data are taken from the Computerized Maintenance Management System (CMMS) and entered in the PowerBI software to generate these reports. This information helps managers understand how staff can be better utilized and where additional resources are needed.



## Community Engagement

Staff assisted with an effort at the Norfolk Naval Station to promote Science, Technology, Engineering and Math (STEM) to local students and their families. The Hampton Roads area continues to see a shortage of graduates in the STEM fields and exposing students to these topics is a good way to promote the many benefits of career opportunities in these areas.

Staff assisted the Old Dominion University Civil and Environmental Engineering Department with a Career Fair on October 20. This fair allowed graduating students to meet with representatives of the engineering community to ask questions and better understand the job prospects in the area. Numerous employers were in attendance including staff from HRSD to assist students in their career decisions.



## Innovation

Staff are working to build a prototype flowmeter to better measure infiltration and inflow (I&I) in the sewer system. If successful, this micro-flow meter will be able to measure flows at specific utility access hole locations and pinpoint I&I. This meter is designed to be portable and quickly installed which is important in tight areas with limited space.

Staff are working to design a software tool to model pump performance curves. This information is supplied by the pump manufacturer and is critical to successfully modeling pump station hydraulics. The program will use the PI Vision tool to graphically display the curve information and assist with data visualization.

*Bruce W. Husselbee*

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

TO: General Manager  
 FROM: Director of Finance  
 SUBJECT: Monthly Report for October 2023  
 DATE: November 15, 2023



**Financial Stewardship**

Staff completed and submitted the Annual Comprehensive Financial Report (ACFR) for the fiscal year ending June 30, 2023, to the Commission Finance Committee on October 12. The independent auditors, Cherry Bekaert, LLP, provided an unmodified (clean) opinion on the financial statements. The auditors also reported no audit deficiencies or disagreements with management.

Staff met with Standard & Poor’s (S&P) regarding the short-term rating for its variable rate demand bonds. S&P analysts indicated that they had no credit concerns.

Since mid-November 2022, HRSD has been working with the Virginia Department of Social Services’ third party to distribute Virginia Low-Income Household Water Assistance Program (LIHWAP) funding. To date a total of \$7,467,512.03 has been applied to over 15,000 low-income qualified HRSD and Hampton Roads Utility Billing Service (HRUBS) customer accounts for water, sewer and wastewater charges. HRSD coordinates and accepts LIHWAP payments on behalf of HRUBS partner localities. Available Virginia LIHWAP funds are anticipated to be spent by the end of 2023, thus concluding the program.

	<b>HRSD</b>	<b>City/County</b>	<b>Total LIHWAP</b>
Norfolk	\$1,057,016.40	\$ 2,434,216.26	\$ 3,491,232.66
Newport News	\$1,133,131.40		\$ 1,133,131.40
Suffolk	\$ 272,199.18	\$ 716,461.41	\$ 988,660.59
Chesapeake	\$ 327,402.61	\$ 470,614.83	\$ 798,017.44
Virginia Beach	\$ 471,191.20		\$ 471,191.20
Portsmouth	\$ 431,594.00		\$ 431,594.00
James City	\$ 37,373.57	\$ 47,673.02	\$ 85,046.59
Smithfield	\$ 8,201.62	\$ 11,765.53	\$ 19,967.15
Isle of Wight	\$ 10,906.99		\$ 10,906.99
King William	\$ 8,390.66	\$ 1,794.73	\$ 10,185.39
Windsor	\$ 7,201.74		\$ 7,201.74
Urbanna	\$ 4,032.53	\$ 1,706.41	\$ 5,738.94
Aqua	\$ 4,946.18		\$ 4,946.18
Surry County	\$ 2,574.18	\$ 1,432.05	\$ 4,006.23
Gloucester	\$ 3,286.11		\$ 3,286.11
Town of Surry	\$ 1,754.72	\$ 145.41	\$ 1,900.13
York County	\$ 372.26		\$ 372.26
Williamsburg	\$ 111.80		\$ 111.80
Hampton	\$ 15.23		\$ 15.23
	<b>\$3,781,702.38</b>	<b>\$ 3,685,809.65</b>	<b>\$ 7,467,512.03</b>

Field staff delivered 5,054 warning door tags and disconnected water service to 2,435 accounts during October. To assist customers, the Debt Solutions team continues to advance assistance initiatives such as LIHWAP, pay plans and Help to Others.



A. Interim Financial Report

1. Operating Budget for the Period Ended October 31, 2023

			Current YTD as % of Budget (33% Budget to Date)	Prior YTD as % of Prior Year Budget
	Amended Budget	Current YTD		
<b>Operating Revenues</b>				
Wastewater	\$ 405,832,000	\$ 144,054,299	35%	36%
Surcharge	1,600,000	477,080	30%	31%
Indirect Discharge	4,400,000	1,535,093	35%	46%
Fees	2,894,000	1,188,910	41%	40%
Municipal Assistance	800,000	424,575	53%	33%
Miscellaneous	1,295,000	722,442	56%	15%
<b>Total Operating Revenue</b>	<b>416,821,000</b>	<b>148,402,399</b>	<b>36%</b>	<b>36%</b>
<b>Non Operating Revenues</b>				
Facility Charge	6,095,000	2,553,665	42%	31%
Interest Income	3,000,000	3,945,314	132%	11%
Build America Bond Subsidy	1,954,000	995,531	51%	0%
Other	620,000	118,952	19%	95%
<b>Total Non Operating Revenue</b>	<b>11,669,000</b>	<b>7,613,462</b>	<b>65%</b>	<b>24%</b>
<b>Total Revenues</b>	<b>428,490,000</b>	<b>156,015,861</b>	<b>36%</b>	<b>35%</b>
Transfers from Reserves	17,120,789	5,706,930	33%	33%
<b>Total Revenues and Transfers</b>	<b>\$ 445,610,789</b>	<b>\$ 161,722,791</b>	<b>36%</b>	<b>35%</b>
<b>Operating Expenses</b>				
Personal Services	\$ 70,450,193	\$ 21,396,939	30%	34%
Fringe Benefits	28,487,963	8,899,587	31%	30%
Materials & Supplies	16,073,465	3,394,883	21%	24%
Transportation	2,003,573	532,878	27%	28%
Utilities	16,843,498	5,192,326	31%	30%
Chemical Purchases	17,688,997	5,285,796	30%	27%
Contractual Services	53,541,285	11,000,340	21%	21%
Major Repairs	13,696,912	1,911,621	14%	22%
Capital Assets	1,258,970	185,567	15%	14%
Miscellaneous Expense	3,938,563	1,145,165	29%	27%
<b>Total Operating Expenses</b>	<b>223,983,419</b>	<b>58,945,102</b>	<b>26%</b>	<b>28%</b>
<b>Debt Service and Transfers</b>				
Debt Service	76,150,000	36,087,892	47%	45%
Transfer to CIP	145,217,370	48,405,790	33%	36%
Transfer to Risk management	260,000	86,668	33%	33%
<b>Total Debt Service and Transfers</b>	<b>221,627,370</b>	<b>84,580,350</b>	<b>38%</b>	<b>40%</b>
<b>Total Expenses and Transfers</b>	<b>\$ 445,610,789</b>	<b>\$ 143,525,452</b>	<b>32%</b>	<b>33%</b>

## 2. Notes to Interim Financial Report

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

This interim report does not reflect financial activity for capital projects contained in HRSD's Capital Improvement Project (CIP).

Transfers represent certain budgetary policy designations as follows:

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

## 3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended October 31, 2023

### HRSD - RESERVE AND CAPITAL ACTIVITY

October 31, 2023

	General Reserve				Capital	
	General	CARES - ARPA	Debt Service	Risk Mgmt Reserve	Paygo	Debt Proceeds
	Unrestricted	Restricted	Restricted	Unrestricted	Unrestricted	Restricted
<b>Beginning - July 1, 2023</b>	\$ 203,718,301	\$ 4,406	\$ 33,830,226	\$ 4,539,551	\$ 3,115,384	\$ -
<b>Current Year Sources of Funds</b>						
<b>Current Receipts</b>	159,830,049					
Line of Credit						31,420,145
VRA Draws						22,308,186
WIFIA Draws						92,586,097
Transfers In				86,668	48,405,790	
<b>Sources of Funds</b>	159,830,049	-	-	86,668	48,405,790	146,314,428
<b>Total Funds Available</b>	\$ 363,548,350	\$ 4,406	\$ 33,830,226	\$ 4,626,219	\$ 51,521,174	\$ 146,314,428
<b>Current Year Uses of Funds</b>						
Cash Disbursements	103,331,001				20,294,760	146,314,428
CARES Transfer Out		4,406				
Transfers Out	48,492,458					
<b>Uses of Funds</b>	151,823,459	4,406	-	-	20,294,760	146,314,428
<b>End of Period - October 31, 2023</b>	\$ 211,724,891	\$ -	\$ 33,830,226	\$ 4,626,219	\$ 31,226,413	\$ -
Unrestricted Funds	\$ 247,577,523					

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended October 31, 2023

**HRSD - PROJECT ANALYSIS**

October 31, 2023

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2023	Expenditures Year to Date FY2024	Total Project Expenditures	Encumbrances	Available Funds
Administration	71,284,950	25,407,455	1,774,446	27,181,901	4,389,088	39,713,961
Army Base	163,448,800	125,866,880	165,481	126,032,361	482,241	36,934,198
Atlantic	237,858,729	81,471,915	2,736,240	84,208,155	16,164,027	137,486,547
Boat Harbor	497,449,124	75,596,057	34,088,226	109,684,283	315,361,544	72,403,297
Ches-Eliz	87,134,516	34,995,850	275,179	35,271,029	1,706,255	50,157,232
Eastern Shore	63,122,892	26,927,768	8,614,064	35,541,832	8,345,884	19,235,176
James River	362,171,624	104,382,910	26,863,426	131,246,336	203,105,320	27,819,968
Middle Peninsula	98,068,053	23,493,172	2,522,599	26,015,771	7,895,830	64,156,452
Nansemond	482,008,177	83,702,138	32,020,267	115,722,405	287,718,259	78,567,513
Surry	60,391,465	41,079,533	1,513,700	42,593,233	9,770,824	8,027,408
VIP	191,750,374	34,150,127	6,413,877	40,564,004	53,693,818	97,492,552
Williamsburg	66,077,531	21,441,839	60,449	21,502,288	370,517	44,204,726
York River	84,083,393	20,416,156	4,542,682	24,958,838	23,690,600	35,433,955
General	1,104,960,982	201,364,418	46,101,340	247,465,758	280,553,655	576,941,569
	3,569,810,610	900,296,218	167,691,976	1,067,988,194	1,213,247,862	1,288,574,554

5. Active Capital Grants

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

## 6. Debt Management Overview

HRSD - Debt Outstanding (\$000's)					October 31, 2023	
	Principal			Principal	Interest	
	Sep 2023	Principal Payments	Principal Draws	Oct 2023	Interest Payments	
<b>Fixed Rate</b>						
Senior	151,306	-	-	151,306	-	
Subordinate	841,075	(1,370)	15,330	855,035	(2,619)	
<b>Variable Rate</b>						
Subordinate	50,000	-	-	50,000	(154)	
<b>Line of Credit</b>	100,000		-	100,000	(398)	
<b>Total</b>	<b>\$ 1,142,381</b>	<b>\$ (1,370)</b>	<b>\$ 15,330</b>	<b>\$ 1,156,341</b>	<b>\$ (3,171)</b>	

HRSD- Series 2016VR Bond Analysis				October 27, 2023
	SIFMA Index	HRSD	Spread to SIFMA	
Maximum	4.71%	4.95%	0.24%	
Average	0.97%	0.73%	-0.24%	
Minimum	0.01%	0.01%	0.00%	
As of 10/27/23	4.09%	3.95%	-0.14%	

\* Since October 20, 2011 HRSD has averaged 73 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	\$ 132,834,148	41%	Ongoing	
WIFIA Tranche 2	EPA	\$ 476,581,587	\$ 75,294,747	84%	Ongoing	
WIFIA Tranche 3	EPA	\$ 346,069,223	\$ -	100%	July 2025	
Clean Water Program 2022	DEQ	\$ 100,000,000	\$ 66,845,495	33%	Ongoing	
Clean Water Program 2023	DEQ	\$ 50,000,000	\$ -	100%	March 2024	

## 7. Financial Performance Metrics for the Period Ended October 31, 2023

### HRSD - UNRESTRICTED CASH

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

		Days Cash on Hand	Adjusted Days Cash on Hand
<b>Total Unrestricted Cash</b>	<b>\$ 247,577,523</b>		<b>403</b>
Risk Management Reserve	\$ (4,626,219)	(7)	396
Capital (PAYGO only)	\$ (31,226,413)	(51)	345
<b>Adjusted Days Cash on Hand</b>	<b>\$ 211,724,891</b>		<b>345</b>

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

### HRSD - SOURCES OF FUNDS

October 31, 2023

Primary Source	Beginning Market Value	YTD Contributions	YTD Withdrawals	YTD Income Earned	Ending Market Value	Allocation of Funds	Credit	Current Mo Avg Yield
	July 1, 2023				October 31, 2023			
BOA Corp Disbursement Account	30,761,730	312,810,713	323,818,112	332,307	20,086,638	10.4%	N/A	0.55%
VIP Stable NAV Liquidity Pool	129,511,237	60,000,000	20,000,000	2,872,108	172,383,345	89.6%	AAA	5.53%
<b>Total Primary Source</b>	<b>\$ 160,272,967</b>	<b>\$ 372,810,713</b>	<b>\$ 343,818,112</b>	<b>\$ 3,204,415</b>	<b>\$ 192,469,983</b>	<b>100.0%</b>		

VIP Stable NAV Liquidity Pool outperformed the Va Local Government Investment Pool's (the market benchmark) by 0.02% in the month of October 2023.

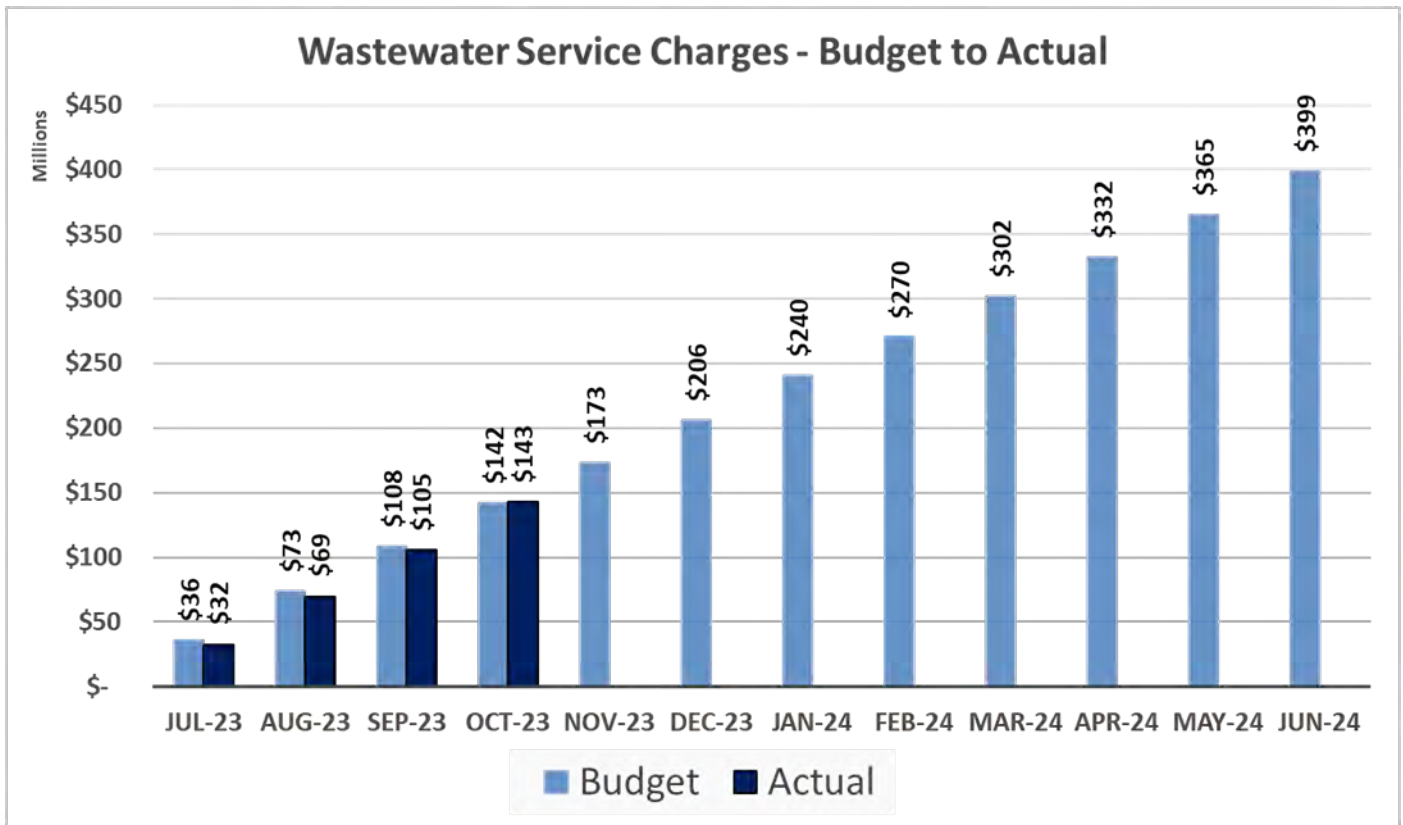
Secondary Source	Beginning Market Value	YTD Contributions	YTD Withdrawals	YTD Income Earned & Realized G/L	Ending Market Value	Ending Cost	LTD Mkt Adj	Yield to Maturity at Market
	July 1, 2023				October 31, 2023			
VIP 1-3 Year High Quality Bond Fund	63,074,075	-	4,234	690,626	63,739,648	65,575,235	(1,835,587)	5.18%
<b>Total Secondary Source</b>	<b>\$ 63,074,075</b>	<b>\$ -</b>	<b>\$ 4,234</b>	<b>\$ 690,626</b>	<b>\$ 63,739,648</b>	<b>\$ 65,575,235</b>	<b>\$ (1,835,587)</b>	

VIP 1-3 Year High Quality Bond Fund performed 0.01% below ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) in October 2023.

	Total	Fund Alloc
Total Primary Source	\$ 192,469,983	75.1%
Total Secondary Source	\$ 63,739,648	24.9%
<b>TOTAL SOURCES</b>	<b>\$ 256,209,631</b>	<b>100.0%</b>

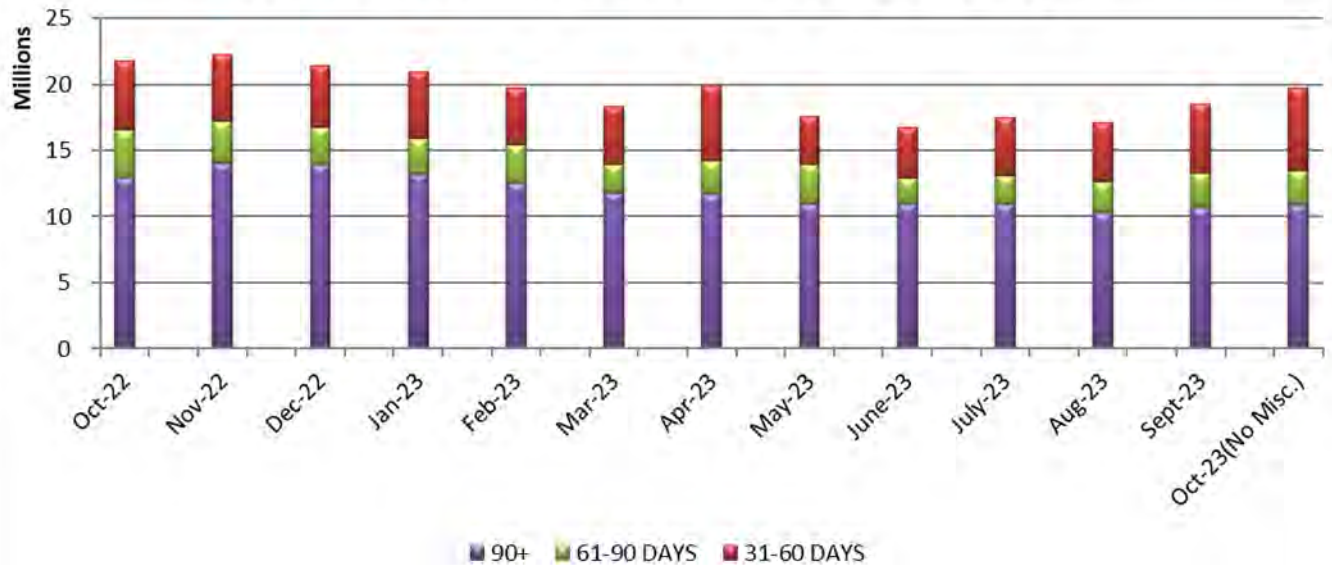


8. Summary of Billed Consumption



Summary of Billed Consumption (,000s ccf)							
Month	FY2024 Cumulative Budget Estimate	FY2024 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2023 Actual	From FY2023	Cumulative 3 Year Average	From 3 Year Average
July	4,678	4,504	-3.7%	4,682	-3.8%	4,803	-6.2%
Aug	9,644	9,432	-2.2%	9,652	-2.3%	9,543	-1.2%
Sept	14,196	13,965	-1.6%	14,208	-1.7%	14,297	-2.3%
Oct	18,663	18,854	1.0%	18,680	0.9%	18,863	0.0%
Nov	22,756	-	N/A	22,777	N/A	22,307	N/A
Dec	27,109	-	N/A	27,133	N/A	27,430	N/A
Jan	31,641	-	N/A	31,669	N/A	32,004	N/A
Feb	35,568	-	N/A	35,601	N/A	35,952	N/A
March	39,770	-	N/A	39,807	N/A	40,351	N/A
Apr	43,694	-	N/A	43,735	N/A	44,473	N/A
May	48,027	-	N/A	48,072	N/A	48,548	N/A
June	52,500	-	N/A	52,549	N/A	53,329	N/A

## HRSD Accounts Receivable Aging +30 Days



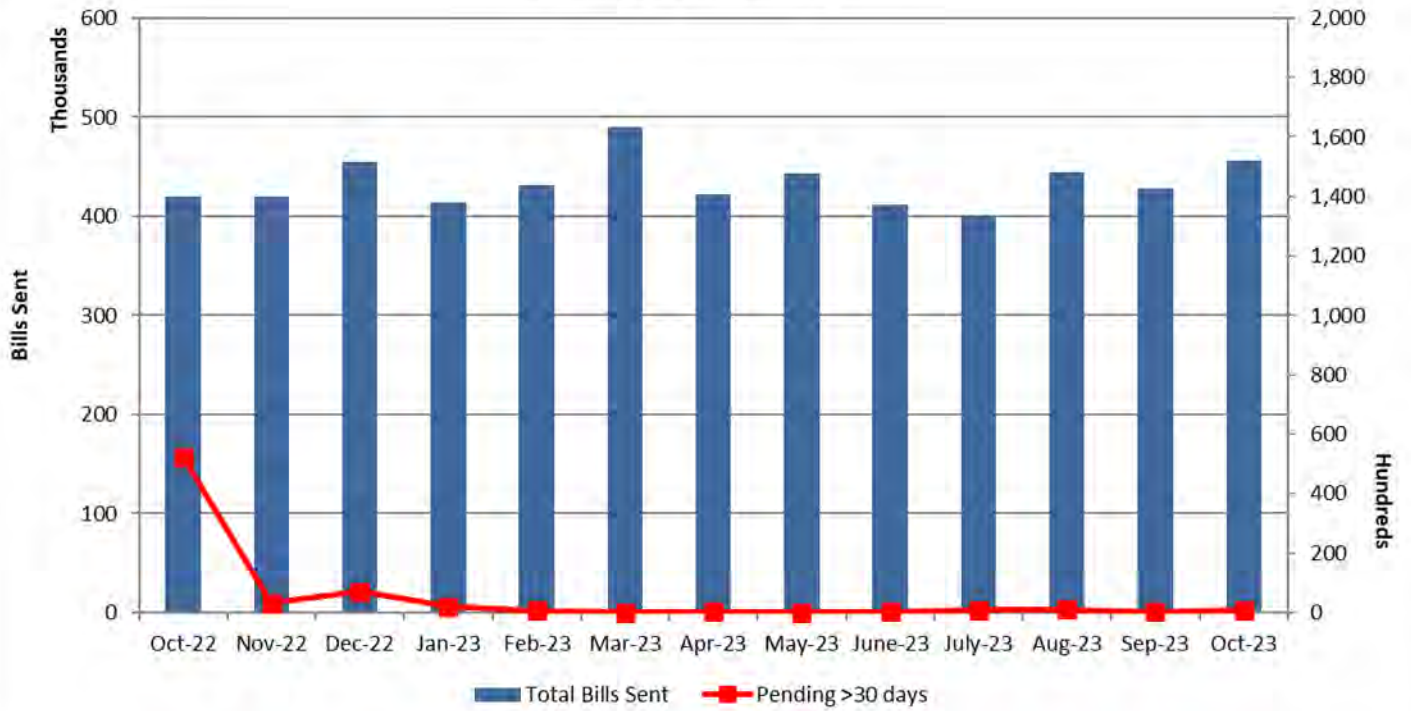
### B. Customer Care Center

#### 1. Accounts Receivable Overview

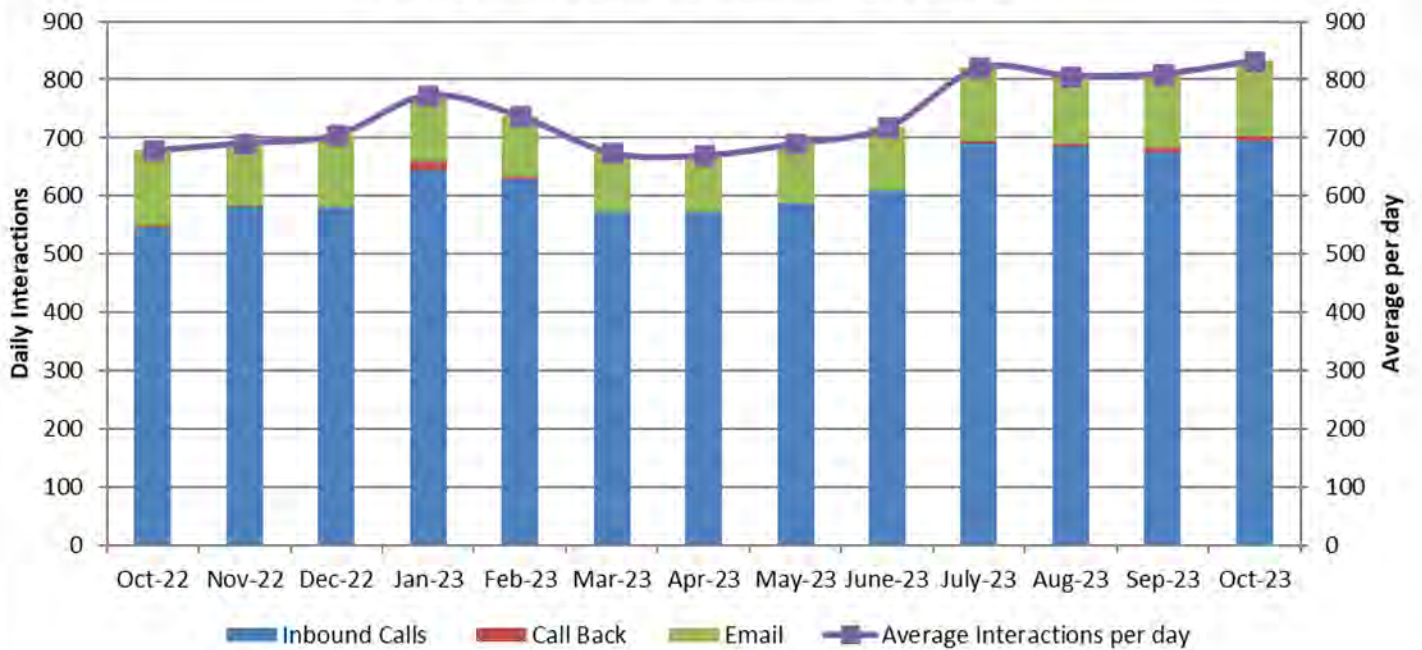
### Delinquent & Late Payment Fees



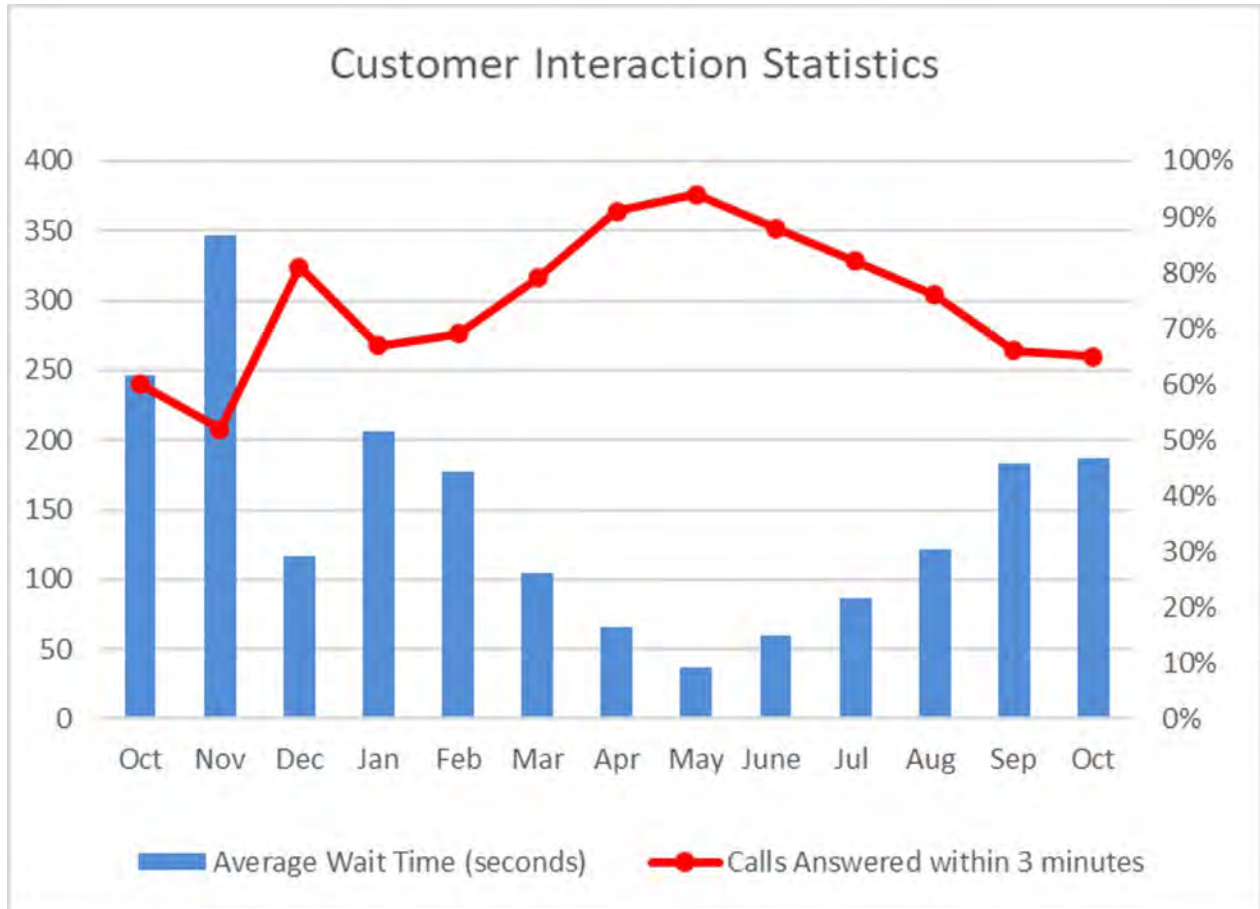
## Billing Summary



## Call Center Interactions (per day)



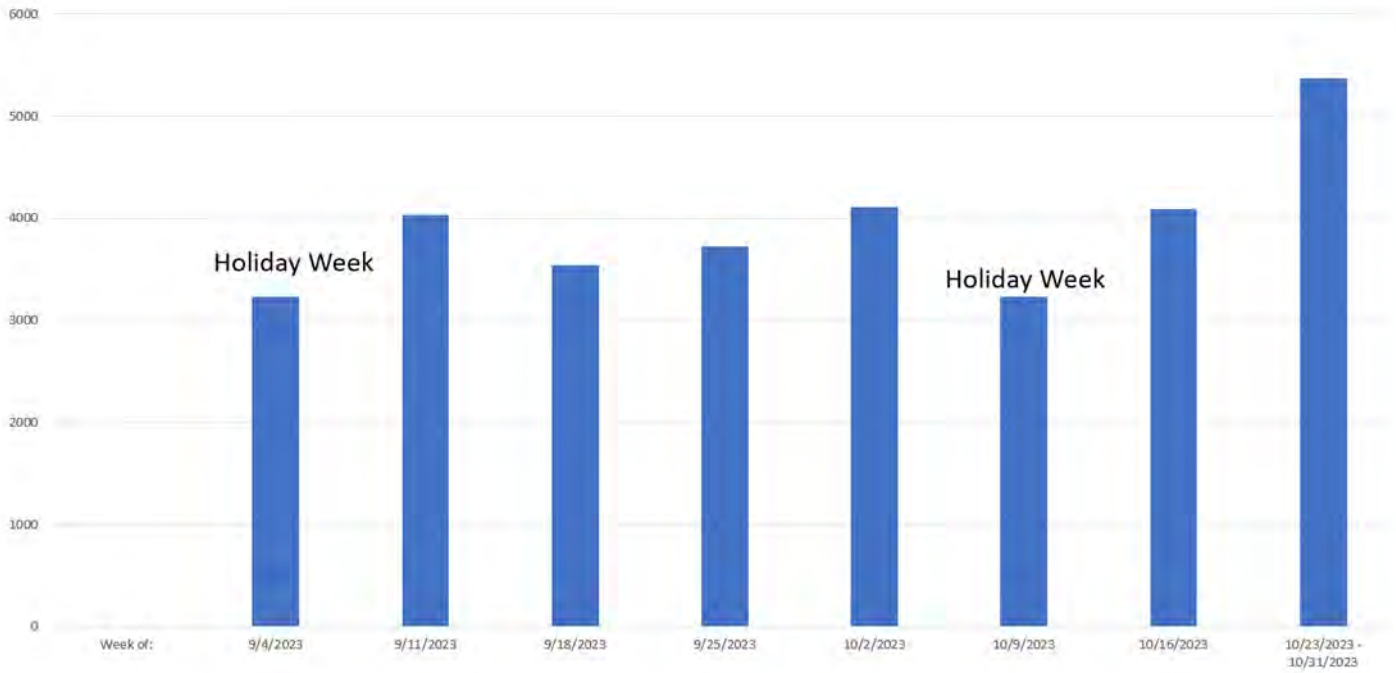
## 2. Customer Care Center Statistics



Customer Interaction Statistics	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct
Calls Answered within 3 minutes	60%	52%	81%	67%	69%	79%	91%	94%	88%	82%	76%	66%	65%
Average Wait Time (seconds)	246	347	117	206	177	105	66	37	60	87	122	183	187
Calls Abandoned	14%	18%	8%	12%	11%	7%	5%	4%	5%	7%	8%	11%	12%



### Total Calls Received by Week



### C. Procurement Statistics

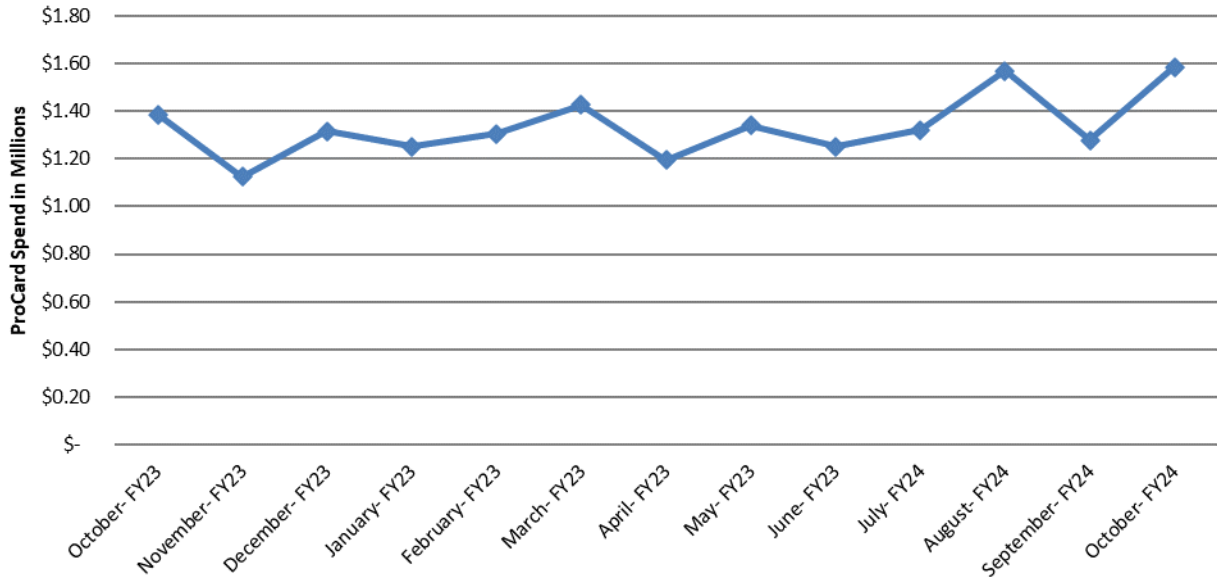
Savings	Current Period	*FYTD
Competitive Savings <sup>1</sup>	\$46,443	\$264,506
Negotiated Savings <sup>2</sup>	\$2,145	\$10,132
Salvage Revenues	\$88,822	\$101,968
Corporate VISA Card - Estimated Rebate	\$23,631	\$85,810

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

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



## ProCard Spend FY24



Respectfully,

*Steven G. de Mik*

Steven G. de Mik  
Deputy General Manager/Chief Financial Officer

Attachments: [Quarterly Performance 1st Quarter FY24](#)  
[HRSD's Operating Cash Strategies and Retiree Health Trust \(OPEB\)](#)

**Hampton Roads Sanitation District**  
**Qtrly Performance Report**  
**For the Quarter Ending September 30, 2023**

## Total Portfolio Summary

<b>Operating Strategies</b>	<b>September 30, 2023</b>	<b>June 30, 2023</b>
Primary Source	\$ 213,775,515	\$ 160,272,967
Secondary Source	63,525,043	63,074,075
	<b>\$ 277,300,558</b>	<b>\$ 223,347,042</b>

### Primary Source Summary

The Primary Source Portfolio consists of Bank of America (BOA) Corp Disbursement Account \$42.20m and VaCo/VML VIP Stable NAV Liquidity Pool \$171.58m. BOA Corp Disbursement Account returned 0.55% for the quarter ending September 30, 2023. VIP LIQ Pool Fund 30 Day Avg Net Yield was 5.52% as of September 30, 2023. VIP Stable NAV Liquidity Pool performed 0.03% above Va Local Government Investment Pool's (the market benchmark) in the month of September 2023. VaCo/VML VIP Stable NAV Liquidity Pool's weighted average credit rating was A-1 for the quarter.

### Secondary Source Summary

The Secondary Source Portfolio consists of VaCo/VML VIP 1-3 Year High Quality Bond Fund. VIP 1-3 Year High Quality Bond Fund's Yield to Maturity at Market was 5.16% in September, which was 0.02% less than ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) performance. The weighted average credit rating for VaCo/VML VIP 1-3 Year High Quality Bond Fund's portfolio was AA for the quarter.

<b>Retirement Health Plan Trust</b>	<b>September 30, 2023</b>	<b>June 30, 2023</b>
Investment Assets	63,740,671	67,392,631
Liquidity Assets	47,657	47,049
Combined Assets	<b>\$ 63,788,328</b>	<b>\$ 67,439,680</b>

### Retiree Health Plan Trust Summary

The Retiree Health Plan Trust portfolio returned -3.12% (investment assets) for the quarter ended September 30, 2023, above the -3.32% return of the Blended Benchmark.\* Inflation pressures remained visible in the first quarter FY23, with headline inflation (CPI) increasing 3.7% year-over-year (YoY) in September, up from 3.0% at the end of the fourth quarter FY23. However, the less volatile core reading (which excludes food and energy) shows continued cooling at 4.1% YoY in September, its slowest pace since 2021.

\*Performance is unreconciled and does not include funds from Boyd Watterson.

Total Portfolio Value			
	September 30, 2023		June 30, 2023
Investment Assets	\$	63,740,671	\$ 63,309,885
<b>Combined Assets</b>	<b>\$</b>	<b>63,788,328</b>	<b>\$ 63,355,891</b>

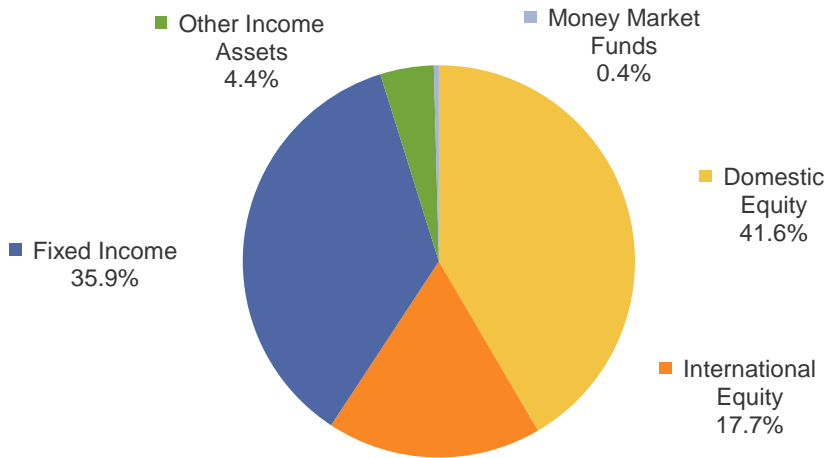
## Portfolio Recap & Strategy

- The Retiree Health Plan Trust portfolio returned -3.12% (investment assets) for the quarter ended September 30, 2023, above the -3.32% return of the Blended Benchmark.\*
- Inflation pressures remained visible in the third quarter, with headline inflation (CPI) increasing 3.7% year-over-year (YoY) in September, up from 3.0% at the end of the second quarter. However, the less volatile core reading (which excludes food and energy) shows continued cooling at 4.1% YoY in September, its slowest pace since 2021.
- In the second quarter, U.S. gross domestic product (GDP) grew at an annualized rate of 2.1%, in line with 2023 growth estimates by the Federal Reserve (Fed) despite persistent inflation and continued rate hikes. This GDP growth rate is below global GDP growth estimates of 3.0%, which have been buoyed by emerging markets (EM) and developing economies.
- The U.S. saw some recovery in manufacturing during the quarter as S&P Global U.S. Manufacturing rose to 49.8, just fractionally contractionary, as supply conditions improved and employment rose. Services weakened over the quarter, but remain expansionary at 50.1. The HCOB Eurozone manufacturing PMI, by comparison, ended the quarter in sharply contractionary territory for the fifteenth consecutive month, at 43.4. The services PMI also turned contractionary ending at 48.7.
- Through the strong labor market and continued growth, consumer confidence saw relative improvement. The Michigan Consumer Sentiment survey ended the quarter at 68.1, up 8.4 year-to-date, though below the long-term average of 85. Consumers savings and incomes remain strong, but debt levels and defaults are increasing.
- The S&P 500 Index (S&P) posted a return of -3.27% for the third quarter of 2023. As of September 30, 2023, the trailing 1-year return for the index was 21.59%. Within the S&P, only two of the 11 Global Industry Classification Standard (GICS) sectors posted positive gains for the quarter: Energy (12.22%) and Communication Services (3.07%). The worst-performing sectors over the quarter were Utilities (-9.25%), Real Estate (-8.90%), and Consumer Staples (-5.97%).
- Markets outside of the U.S., as measured by the MSCI ACWI ex-U.S. Index, slightly underperformed their U.S. counterparts, returning -3.77% for the quarter. There were 10 out of the 11 sectors that posted negative returns for the quarter, with Information Technology (-8.71%), Utilities (-7.89%), and Consumer Staples (-6.38%) being the worst-performing sectors. Energy (+8.96%) was the best and only sector with a positive return for the quarter. The sector benefited from oil prices soaring on tighter supplies.
- REITs, as measured by the FTSE NAREIT Equity REITs Index, fell 7.13% in the third quarter of 2023, compared to a 2.62% increase in the prior quarter. All major sectors posted losses during the quarter as higher interest rates and broader economic concerns have spooked investors. The best performers were the Office and Data Center sectors, which posted returns of -1.47% and -2.50%, respectively. The worst performers during the quarter were the Diversified and Self-Storage sectors, which posted returns of -13.92% and -12.19%, respectively.

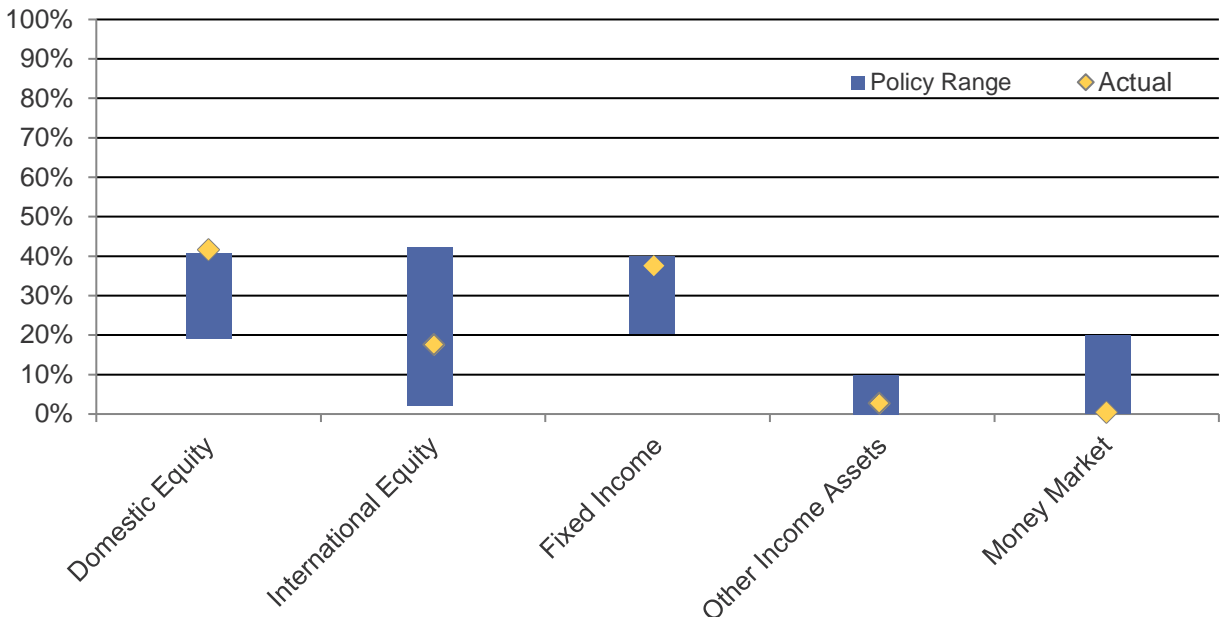
\*Performance is unreconciled and does not include funds from Boyd Watterson. See page 3 for detailed information about the Blended Benchmark.

Asset Category	September 30, 2023	% of Portfolio	June 30, 2023	% of Portfolio	Permitted by Policy
Domestic Equity	\$ 26,516,310	41.6%	\$ 26,791,319	42.3%	19% - 59%
International Equity	\$ 11,284,098	17.7%	\$ 13,616,391	21.5%	1% - 41%
Fixed Income	\$ 22,905,699	35.9%	\$ 19,933,259	31.5%	20% - 60%
Other Income Assets	\$ 2,818,728	4.4%	\$ 2,821,798	4.5%	0% - 10%
Money Market Funds	\$ 263,493	0.4%	\$ 193,124	0.3%	0% - 20%
<b>Totals</b>	<b>\$ 63,788,328</b>	<b>100.0%</b>	<b>\$ 63,355,891</b>	<b>100.0%</b>	

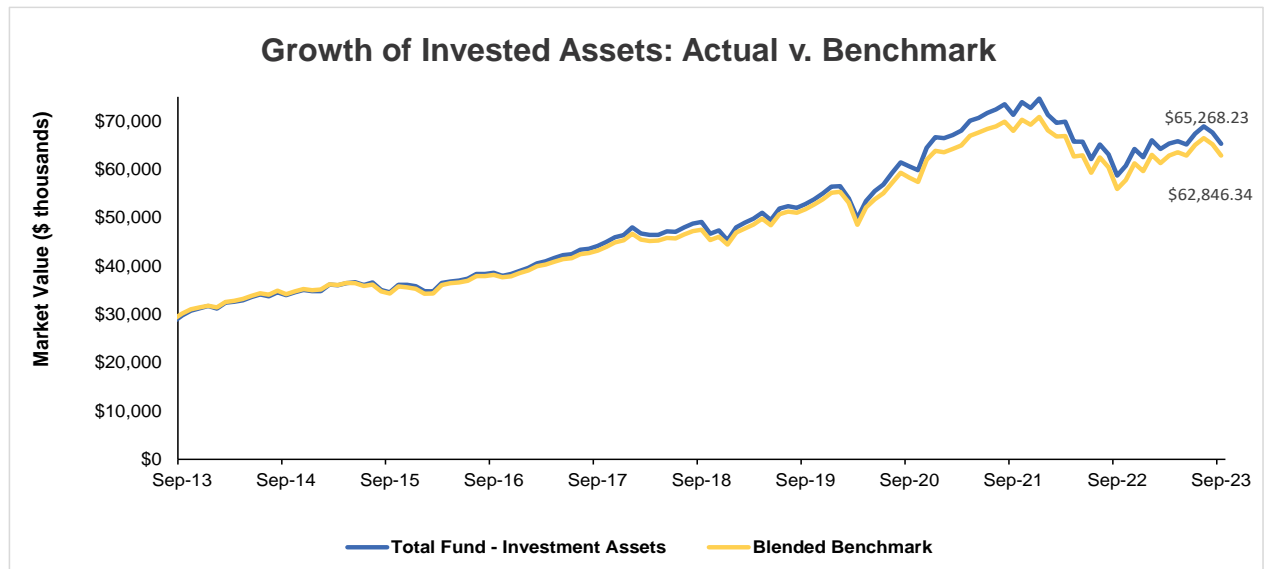
### Portfolio Composition (as of 9/30/2023)



### Asset Allocation (as of (9/30/2023)



Index	Market Value	%	3 Quarter	Year To Date	Trailing 1 Year	Trailing 3 Year	Trailing 5 Year	Apr-2013 Sep-2023*	Since Inception	Inception Date
<b>Domestic Equity</b>	<b>\$ 25,944,517.00</b>	<b>39.75</b>								
Vanguard Total Stock Market ETF	\$ 24,650,181.00	37.77	-3.29%	12.36%	20.40%	9.25%	9.06%	11.60%	17.12%	4/1/2020
Russell 3000 Index			-3.25%	12.39%	20.46%	9.38%	9.14%	11.65%	17.22%	4/1/2020
Jensen Quality Growth Fund	\$ 1,294,336.00	1.98	-3.76%	6.59%	16.30%	9.00%	9.91%	12.53%	10.35%	4/1/2019
S&P 500			-3.27%	13.07%	21.62%	10.15%	9.92%	12.16%	11.51%	4/1/2019
<b>International Equity</b>	<b>\$ 12,960,858.00</b>	<b>19.86</b>								
Vanguard Total International Stock ETF	\$ 6,992,870.00	10.71	-4.01%	5.08%	20.53%	3.91%	2.78%	4.09%	10.34%	4/1/2020
MSCI AC World ex USA (Net)			-3.77%	5.34%	20.39%	3.74%	2.58%	3.82%	9.58%	4/1/2020
J. O. Hambro International Select	\$ 917,372.00	1.41	-5.94%	6.80%	22.41%	-3.72%	1.25%	5.73%	4.85%	1/1/2016
MSCI AC World ex USA (Net)			-3.77%	5.34%	20.39%	3.74%	2.58%	3.82%	5.03%	1/1/2016
Harding Loevner International Equity	\$ 882,784.00	1.35	-7.61%	2.60%	17.70%	1.04%	2.60%	5.20%	3.56%	7/1/2020
MSCI AC World ex USA (Net)			-3.77%	5.34%	20.39%	3.74%	2.58%	3.82%	5.39%	7/1/2020
Goldman Sachs GQG Ptnrs Intl Opportunities	\$ 972,438.00	1.49	-1.74%	8.55%	23.46%	4.42%	7.85%	N/A	-2.28%	9/1/2023
MSCI AC World ex USA (Net)			-3.77%	5.34%	20.39%	3.74%	2.58%	3.82%	-3.16%	9/1/2023
Vanguard FTSE Developed Markets ETF	\$ 1,293,937.00	1.98	-4.68%	5.93%	24.06%	5.35%	3.20%	4.84%	-2.70%	3/1/2022
MSCI EAFE (net)			-4.11%	7.08%	25.65%	5.75%	3.24%	4.63%	-1.20%	3/1/2022
Vanguard FTSE All-World ex-US Small-Cap ETF	\$ 645,696.00	0.99	-3.37%	4.36%	18.08%	2.99%	1.58%	3.95%	-4.24%	9/1/2023
MSCI AC World ex USA Small Cap (Net)			-1.70%	5.03%	19.01%	4.01%	2.58%	4.85%	-3.76%	9/1/2023
Hartford Schroders Emerging Markets Equity	\$ 606,079.00	0.93	-6.04%	0.55%	11.04%	-3.45%	0.39%	1.98%	-1.54%	3/1/2018
MSCI EM (net)			-2.93%	1.82%	11.70%	-1.73%	0.55%	1.70%	-1.51%	3/1/2018
iShares MSCI Emerging Markets ex China ETF	\$ 649,684.00	1.00	-3.92%	5.67%	14.56%	5.12%	2.60%	N/A	-2.54%	9/1/2023
MSCI EM (net)			-2.93%	1.82%	11.70%	-1.73%	0.55%	1.70%	-2.62%	9/1/2023
<b>Fixed Income</b>	<b>\$ 23,341,737.00</b>	<b>35.76</b>								
Baird Core Plus	\$ 6,443,309.00	9.87	-2.73%	-0.21%	2.29%	-4.42%	0.80%	1.59%	1.61%	5/1/2014
Bimbg. U.S. Aggregate			-3.23%	-1.21%	0.64%	-5.21%	0.10%	0.90%	0.92%	5/1/2014
DoubleLine Core Fixed Income	\$ 2,769,141.00	4.24	-2.93%	-0.07%	1.10%	-4.03%	-0.06%	1.27%	-0.14%	9/1/2017
PGIM Total Return Bond	\$ 5,176,326.00	7.93	-2.52%	0.57%	2.90%	-4.66%	0.61%	1.72%	0.30%	9/1/2017
Bimbg. U.S. Aggregate			-3.23%	-1.21%	0.64%	-5.21%	0.10%	0.90%	-0.20%	9/1/2017
Voya Intermediate Bond	\$ 2,766,966.00	4.24	-2.66%	-0.05%	1.60%	-4.72%	0.47%	N/A	-2.22%	1/1/2020
Bimbg. U.S. Aggregate			-3.23%	-1.21%	0.64%	-5.21%	0.10%	0.90%	-2.49%	1/1/2020
iShares Core US Aggregate Bond ETF	\$ 3,922,973.00	6.01	-3.22%	-1.03%	0.64%	-5.21%	0.08%	0.86%	-4.15%	2/1/2023
Bimbg. U.S. Aggregate			-3.23%	-1.21%	0.64%	-5.21%	0.10%	0.90%	-4.15%	2/1/2023
iShares Intermediate-Term Corporate Bond ETF	\$ 1,179,130.00	1.81	-2.47%	1.00%	4.60%	-4.37%	1.42%	1.61%	-1.33%	10/1/2019
ICE BofA U.S. Corporate 5-10 Year Index			-2.45%	0.72%	4.57%	-4.37%	1.48%	2.16%	-1.28%	10/1/2019
BBH Limited Duration	\$ 202.00	0.00	1.74%	4.77%	6.18%	2.12%	2.53%	2.07%	3.39%	2/1/2023
Bimbg. U.S. Treasury 1-3 Year			0.71%	1.69%	2.44%	-0.92%	1.03%	0.77%	0.95%	2/1/2023
MainStay MacKay High Yield Corp Bond Fund	\$ 1,083,691.00	1.66	0.52%	5.81%	9.99%	2.57%	3.37%	N/A	-0.02%	6/1/2021
ICE BofA High Yield Master II			0.53%	5.97%	10.20%	1.82%	2.80%	4.05%	-1.34%	6/1/2021
<b>Other Income</b>	<b>\$ 2,818,728.00</b>	<b>4.32</b>								
Boyd Watterson GSA Fund	\$ 2,818,728.00	4.32	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
NCREIF Property Income			1.07%	3.15%	4.13%	4.11%	4.23%	4.63%	4.18%	7/1/2019
<b>Cash Equivalent 202,392 0.31</b>	<b>\$ 202,392.00</b>	<b>0.31</b>								
First American Government Obligation - Z	\$ 202,392.00	0.31	1.30%	3.58%	4.50%	1.70%	1.61%	0.97%	1.36%	1/1/2004
<b>Total Fund - Investment Assets</b>	<b>\$ 65,268,232.00</b>	<b>100.00</b>	<b>-3.14%</b>	<b>4.40%</b>	<b>11.24%</b>	<b>2.40%</b>	<b>4.61%</b>	<b>6.16%</b>	<b>7.07%</b>	<b>9/1/2009</b>
<b>Blended Benchmark</b>			<b>-3.32%</b>	<b>5.42%</b>	<b>12.40%</b>	<b>2.45%</b>	<b>4.48%</b>	<b>5.55%</b>	<b>6.77%</b>	<b>9/1/2009</b>



\*Active Strategy implemented April 1, 2013. Since inception to present, the Blended Benchmark was 33% Russell 3000 / 21% MSCI ACWI ex USA net) / 3% FTSE NAREIT Equity REITs / 3% Bloomberg Commodity TR / 40% Bloomberg Barclays Aggregate. From July 1, 2017 to present, the Blended Benchmark was 39% Russell 3000 / 21% MSCI ACWI ex USA net) / 40% Bloomberg Barclays Aggregate.



TO: General Manager  
FROM: Director of Information Technology  
SUBJECT: Information Technology Department Report for October 2023  
DATE: November 15, 2023



## Innovation

Compatibility testing for the upcoming Surface Pro refresh is going well. The finalized deployment schedule will be determined by the results of the compatibility testing, as some applications will require more time to configure.

Staff are working on an enhanced interface between the Laboratory Information Management System (LIMS) and the Enterprise Data System (EDS). Once complete, the interface will provide improved data exchange security between the EDS (part of the Operational Technology Network, and LIMS (part of the Business Network.)

The IT Help Desk processed 331 work orders and requests for assistance in October, ensuring availability of computing resources to those working locally and remotely.

In response to recent acts of vandalism at HRSD's Providence Road facilities, staff are working on the installation of additional network accessible security and monitoring equipment.

As HRSD continues its cloud migration efforts, staff are researching means and methods to extend our existing immutable (non-modifiable) hardware and software platforms to include additional cloud-based data.



## Community Engagement

Now that Chesapeake has been successfully converted to a Model 3 jurisdiction (they log in to our billing system, CC&B, to perform their utility billing) staff continue to monitor system performance, effecting any needed changes to ensure optimal performance. This period of "stabilization" is projected to continue through January.

Respectfully,

*Don Corrado*

TO: General Manager  
FROM: Director of Operations  
SUBJECT: Operations Monthly Report for October 2023  
DATE: November 15, 2023



## Environmental Responsibility

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

There were one Interceptor system and three Treatment Plant (TP) spills in October. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

### **Permit Compliance:**

There was one treatment plant permit exceedance in October further described in the Water Quality Air and Effluent Summary.

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

There were several odor complaints and/or permit exceptions at the Atlantic (ATP), James River (JRTP), York River (YRTP) and Onancock (ONTP) treatment plants with one odor complaint at a Pump Station (PS) in Hampton. Please refer to the Water Quality Air and Effluent Summary for additional details.

### **Air Compliance Summary:**

The Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all Multiple Hearth Incineration (MHI) plants, Army Base (ABTP), Boat Harbor (BHTP), Virginia Initiative (VIP), and Williamsburg (WTP), with a THC continuous emissions monitoring valid data captured of greater than 81%. The MHIs had four minor bypass events (< 60 minutes), and no deviations from the required Clean Water Act section 129 Sewage Sludge Incineration rule minimum operating parameters.

### **Additional Topics for Compliance:**

1. A multitude of construction and maintenance efforts are in progress at the ATP to address odor concerns as follows:
  - a. Staff continue to work towards completely overhauling the Odor Scrubber D system, which is a contributing source to recent odor complaints.
  - b. A contractor descaled the drain lines and all media in the first stage scrubbers has been replaced. In addition, all fan bearings have been replaced.
  - c. Staff replaced the gas regulators for waste gas burner #2 which was not functioning properly and is needed to aid in flaring the entire volume of digester gas.

- d. The emissions testing for the Combined Heat and Power (CHP) engines is planned for mid-December and will then be available for use.
2. The Treatment Department Daily Plant Operator Report will be upgraded to a new platform. The platform is more reliable, user friendly, and tailored for wastewater facilities. In addition, it communicates with HRSD's existing systems. Water Information Management System (WIMS) staff conducted training for all plant operators and supervisors in preparation for the transition planned for implementation by the end of 2023.
3. Staff successfully completed cutover testing for the new Ovation Supervisory Control and Data Acquisition (SCADA) System at Center Avenue and Jamestown Crescent PSs. The final site testing was completed, and these sites are now active on the new Ovation SCADA systems.
4. Staff managed the conveyance and treatment of over 127 million gallons of wastewater this month.



## Financial Stewardship

1. HRSD is working through our large treatment plants to renew assets and right size dewatering equipment based on several factors. We've learned over the first few projects that centrifuges are not built the way they use to be and two new machines do not necessarily outperform our most recently purchased Sharples DS706 machines on the same solids. There are examples where we need to purchase new centrifuges – and over time replacement with new equipment will occur. HRSD has shown the ability to maintain and operate older style Sharples centrifuges beyond what asset life would predict. The problem is there are not enough 1990s/2000s vintage DS706s to go around. When DC Water replaced their final dewatering facility in 2015 as part of their Thermal Hydrolysis Project (THP), they mothballed seven Sharples DS706 machines that were maintained under contract by Alfa Laval and originally installed in approximately 2000. The machines were being sold as surplus. HRSD was able to bid on and purchase six centrifuges and one spare rotating assembly (bowl and scroll) for a total of \$80,100 (a single new centrifuge is roughly \$500-600k). An internal HRSD team disassembled and retrieved the machines in October using the capabilities of the newly minted Materials Transportation and Logistics Division. The rotating assembly is already at JRTP and will be installed to allow needed maintenance on one of the existing DS706 machines. Two more will be rehabilitated and installed at JRTP as part of an existing Dewatering Capital Improvement Project (CIP) (in design). Two additional machines will be rehabbed and installed at VIP as part of another existing Dewatering CIP project. Another rotating assembly will serve as backup at YRTP.
2. Electrical & Instrumentation (E&I) staff have been working diligently to give HRSD the capabilities to migrate the control of DS706 machines to Emerson Distributed Control Systems (DCS) (rather than the existing third-party panels) which will result in further cost savings and a better outcome for Operations. The damaged entry gate from ATP was repaired and stored at Chesapeake- Elizabeth TP (CETP) as a spare gate at 60% cost savings over a new gate fabrication.



## Talent

Team HRSD, the Virginia Water Environment Association's (VWEA) sponsored Operations Challenge Team, performed phenomenally well in the two days of competition at the Water Environment Federation Technical Exhibition and Conference (WEFTEC). They competed against teams from other states, regions, and countries. They participated in five events: Maintenance (pumps), Safety (mannequin extraction with a tripod), Collections Systems (pipe repair), Lab (calculations and measurements), Process (written test on treatment scenarios). All events are timed and time penalties can be added due to stringent guidelines. The team (AJ Dickens from JRTP, Kolby Guse from Automotive, Pat Porto from South Shore Interceptor Operations, Billie Swearingen with Customer Care, and Coach Lee Heath with Support Systems (SS)) won **First Place on the Safety event, Third Place on the Maintenance event, and Fourth Place overall for Division III!** A significant improvement from last year. A lot of dedication from the team for practice time and participation in other smaller competitions paid off.



## Community Engagement

Presentation and Participation:

VWEA

- a. October 25 - Eddie Abisaab attended the VWEA Board Meeting.
- b. October 26 - Christel Dyer and Shawn Heselton attended the Annual Joint Leadership Retreat.



## Innovation

1. HRSD is in discussions with our consultant and Johnson Controls Incorporated (JCI) regarding biogas production, repurposing, and incentives at ATP. Staff provided JCI a plant tour and had followed-up discussions with our consultant. The Inflation Reduction Act modifies and extends the clean energy Investment Tax Credit to provide up to 30% credit for qualifying investment in wind, solar, energy storage and other renewable energy projects. To take advantage of the incentive, the project must begin by the end of 2024. Benefits include up to 5,000 metric tons of Carbon Dioxide reduction from greenhouse gases, odor control improvements, and community relations to mention a few.
2. Staff met with a consultant at the West Point TP (WPTP) to discuss a future partnership with Dominion Energy and the Virginia Department of Emergency Management (VDEM). VDEM is searching for locations with critical infrastructure to provide Green Power on Demand Systems (GPODS) as part of a grant application. GPOD is a mobile rechargeable battery system that can be deployed to support critical infrastructure in the event of power outages due to natural disasters.
3. Staff implemented a new control and flow calculation program for Nitrified Recycle (NRCY) pumps #1-5 at Nansemond TP (NTP). This aims to reduce external methanol use by

maximizing NRCY flow rates while ensuring Sustainable Water Initiative for Tomorrow (SWIFT) maintains a low Total Inorganic Nitrogen (TIN) to avoid recharge shutdown. Industrial Automation Programmers (IAP) collaborated with Treatment Process Engineers (TPE) for system design, testing, and control programming integration. Staff addressed Variable Frequency Drive (VFD) and sensor calibration issues and ensured reliability for accurate pump curve calculations.

4. WEFTEC

- a. October 1 - Jeff Nicholson attended and presented in a workshop on Dewatering Optimization
- b. October 1 - Christel Dyer and Shawn Heselton participated in the Water Leadership Institute (WLI) workshop and graduation for class of 2023. They both serve on the WLI steering team
- c. October 2 - Germano Salazar-Benites presented in three sessions on the Water Reuse Landscape Through the Eyes of Industry Leaders, Ozonation: Water Reuse on a New Level, and Water Reuse Regulations Across the States
- d. October 3 - Charles Bott presented a session on Advancing Low-Energy Biological Nitrogen and Phosphorus Removal Through Low Dissolved Oxygen (DO) Operation

Respectfully submitted,

Eddie M. Abisaab, PE, PMP  
Director of Operations

[Attachment: MOM Reporting](#)





TO: General Manager  
FROM: Director of Talent Management  
SUBJECT: Talent Management Monthly Report for October 2023  
DATE: November 15, 2023



## Talent

Staff retention and recruitment remain significant priorities for the Talent Management Department. Two new members join Talent Management this month, Chris Ostrowski, Talent Acquisition Specialist, and Elizabeth Aultice, Apprenticeship Program Administer. We are excited to have them join our department and look forward to their contributions.

**Human Resources (HR):** HR staff along with representatives from all departments continue working on the large compensation project with Mercer. Meetings with the core group, extended project group and Senior Leadership took place throughout the month. HR continues working to implement the new Medicare coverage for our retirees on Medicare and completed several mailings and communications to those currently covered. HRSD selected new vendors for the medical, dental, vision, flexible spending accounts, health savings accounts, COBRA administration and supplemental voluntary plans. The new vendors, Sentara Health and MetLife were approved by the Commission in October and work will begin implementation immediately as these benefits will begin July 1, 2024. Our HR Business Analyst is heavily involved with the creation of any new interface files as well as any benefit plan changes requiring updates in ERP.

Talent Management held the first annual Health, Wellness and Safety Fair in October. Vendors shared relevant information with our employees. Healthy snacks were provided, employees engaged in mini workouts, outdoor games and a breast cancer awareness craft activity. Approximately 200 employees attended.

**Organization Development and Training (ODT) is now Learning and Development (L&D):** The division was renamed to to highlight and reinforce the commitment to assist employees with all aspects of learning, whether through formal, informal, vocational, career, or developmental learning opportunities. L&D has continued to support and assist with the implementation and success of the day Apprenticeship Program and maintain its quality and leadership training programs. The new Apprenticeship Program Administrator has started and will be completing work center visits at all Operations Department work centers. L&D also began research and acquisition of a compliance training system to assist departments with developing, monitoring, and tracking completion of compliance training for their employees. A compliance training system is expected to be implemented by the end of FY 2024.

**Safety:** Staff conducted required safety trainings and medical monitoring.

Weekly, monthly and quarterly safety inspections, testing and monitoring were performed at various work centers and construction sites. There was one reported work-related injury requiring medical attention and two auto/property damage accidents.



## **Community Engagement**

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

Respectfully submitted,

*Dorissa Pitts-Paige*

Director of Talent Management

TO: General Manager  
FROM: Director of Water Quality (DWQ)  
SUBJECT: Monthly Report for October 2023  
DATE: November 15, 2023



## Environmental Responsibility

### 1. HRSD's Regulatory Activities:

- a. Monthly Discharge Monitoring Report (DMR) Summary and Items of Interest: [Effluent and Air Emissions Summary](#).
- b. The Central Environmental Laboratory (CEL) submitted an extensive data packet including quality assurance documentation, and analytical records for 19 methods to the Virginia Environmental Laboratory Accreditation Program office in preparation for the onsite assessment scheduled for the week of February 12, 2024.
- c. HRSD received a draft permit for the King William facility capacity upgrades on October 30, 2023.
- d. The SWIFT Research Center quarterly report was submitted to EPA and the Potomac Aquifer Recharge Oversight Committee (PAROC).

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

One civil penalty was issued by the P3 Division in October to New Realm Brewing Company – Virginia Beach.

An Enforcement Order was issued to New Realm Brewing Company, an alcoholic beverage manufacturer in Virginia Beach, on October 10, 2023, for one administrative violation. This follows previous enforcement actions earlier this year. The Enforcement Order included a \$500 civil penalty notice. This administrative violation was issued for failure to properly maintain records, as the permittee did not retain original monthly report Certification Statements from July and August 2022. The Enforcement Order was accepted, and the civil penalty was paid in full on October 27, 2023.

### 3. Environmental and Regulatory Advocacy

- a. The Sustainability Environment Advocacy (SEA) Group reported the following activities for the month of October:

- (1) Eight volunteers participated in the “Catch the King” event organized by Wetlands Watch. This involved using GIS to map tidal ranges throughout Hampton Roads during a perigean tide event.
  - (2) Volunteers hosted a cleanup event at the Nansemond Treatment Plant (NTP). Twelve volunteers collected 24 bags of trash along the Hampton Roads coastline that borders the North end of NTP.
  - (3) Staff at the Boat Harbor Treatment Plant operated and maintained the trash collector removing 23 pounds of marine debris from the adjacent waterway.
- b. Director participated in the following advocacy and external activities:
- (1) Attended Environmental Protection Agency’s (EPA) WaterVent in Cincinnati, Ohio. The event was presented as rapid water technology pitches to environmental professionals in multiple sectors. Dr. Charles Bott provided HRSD’s “reverse pitch” to quickly highlight our research challenges.
  - (2) Attended the Chesapeake Bay Program’s Water Quality Goal Implementation Team meeting.
  - (3) Attended the Norfolk Innovation Corridor’s Environmental Subcommittee to discuss actions to support innovation in environmental resiliency.
  - (4) Attended the Virginia Forever Bridge Builders Event.
  - (5) Met with the new water permitting staff at the Tidewater Regional Office (TRO) of the Department of Environmental Quality (DEQ).
  - (6) Participated in the EPA Per- and Polyfluoroalkyl Substances (PFAS) panel for biosolids management, The National Association of Clean Water Agencies (NACWA) worked with EPA to convene this panel so that EPA could hear stakeholder perspectives. This was the first of three anticipated convenings.
  - (7) Participated in the Virginia Biosolids Council’s (VBC) monthly meeting and a separate VBC research meeting. The VBC is planning biosolids research objectives for 2024 and plans to engage with Dr. Brooks of Virginia State University to identify opportunities for collaboration in our agricultural research and outreach needs.
  - (8) Participated in the Virginia Association of Municipal Wastewater Agencies (VAMWA) biosolids committee meeting.
  - (9) Provided a SWIFT Research Center tour to Chesapeake Bay Program Office staff.

- (10) Participated in the (Water Research Foundation) WRF 5123 “Establishing Seasonal Targets for Receiving Waters: Rethinking Wet Weather and Dry Weather Expectations” Case Study workshop to provide feedback on opportunities to maximize permitting flexibilities through collaboration with EPA.
- (11) Met with NACWA staff and Pretreatment Committee and Biosolids Committee leadership to discuss next steps forward in working with EPA on their PFAS data collection efforts.



## **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.

HRSD provided analytical services to Chesterfield County Proctors Creek Treatment Plant for an extensive 2-week study to determine phosphorous transport throughout the treatment process.

HRSD provided sampling and analytical services to the following to support monitoring required for their respective VPDES permits:

1. City of Hopewell
2. New Kent County
3. Northumberland County
4. Town of Grottoes
5. Westmoreland County



## **Talent**

1. Jack Denby completed the 2022-2023 Water Environment Federation (WEF) Leadership Institute at WEFTEC. The theme of this program was Diversity, Equity and Inclusion leadership with a group project focused on organization culture.
2. Chris Carlough represented HRSD at the Old Dominion University Environmental Job Fair on October 3.

3. Director participated in the following activities:
  - a. HRSD's UNIFIED Council's ASK Session with the Directors
  - b. Compensation study meeting



## Community Engagement

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:

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



## Innovation

1. Staff met with HACH representatives to present the process for Alternative Test Procedure approval for regulatory online analysis of total residual chlorine. Next steps will be to collaborate with HACH to optimize this technology for use in wastewater.
2. The CEL continued working on development of capabilities to analyze for Perfluorooctanoic Acid (PFOA) to be able to provide quick data turn around to the SWIFT group, and equipment has been purchased to facilitate improved instrument performance.

Respectfully submitted,

*Jamie Heisig-Mitchell*

Director of Water Quality



**EFFLUENT SUMMARY FOR OCTOBER 2023**

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	CONTACT TANK EX
ARMY BASE	8.54	47%	1	2.4	<1	2	1.1	0.88	6.9	4.6	17
ATLANTIC	40.35	75%	13	9.4	10	1	NA	NA	NA	NA	24
BOAT HARBOR	9.92	40%	5	2.7	1	2	0.73	0.65	15	22	3
CENT. MIDDLESEX	0.012	47%	<2	1.0	<1	<1	NA	NA	NA	NA	NA
JAMES RIVER	10.13	51%	4	4.5	3	2	0.24	0.40	6.5	9.8	17
KING WILLIAM	0.088	88%	<2	<1.0	NA	<1	0.047	0.081	4.9	2.4	NA
NANSEMOND	14.51	48%	2	3.9	2	3	1.4	0.86	3.5	3.9	5
ONANCOCK	0.188	25%	<2	0.61	1	1	0.10	0.28	1.2	2.2	NA
URBANNA	0.070	70%	4	12	3	3	4.9	4.9	15	15	NA
VIP	25.65	64%	2	1.6	1	2	0.54	0.41	3.5	3.8	8
WEST POINT	0.273	46%	30	7.6	1	1	3.9	3.3	19	18	0
WILLIAMSBURG	7.46	33%	6	2.7	6	3	0.89	0.89	2.8	2.9	15
YORK RIVER	10.07	67%	2	1.6	1	1	0.37	0.28	5.4	4.7	11
	<u>127.25</u>										

	% of Capacity
North Shore	46%
South Shore	63%
Small Communities*	37%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	YTD	Projection CY23	YTD	YTD	Projection CY23
	%	Lbs	%	%	Lbs	%
James River	44%	1,872,312	53%	43%	206,378	64%
York River	55%	200,440	70%	60%	14,372	74%
Rappahannock	73%	NA	NA	88%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY24 to Date: 4:18,842  
Pounds of Pollutants Removed in FY24 to Date: 68,575,202  
Pollutant Lbs Discharged/Permitted Discharge FY24 to Date: 13%

	Rainfall (inch)		
	North Shore (PHF)	South Shore (ORF)	Small Communities (FYJ)
Month	1.44"	1.13"	1.27"
Normal for Month	4.23"	3.50"	4.17"
Year to Date Total	38.92"	41.69"	32.12"
Normal for YTD	44.80"	42.87"	41.96"

\*Small Communities includes Eastern Shore

### AIR EMISSIONS SUMMARY FOR OCTOBER 2023

	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	Temp 12 hr ave (F)	Venturi(s) PD 12 hr ave (in. WC)	Precooler Flow 12 hr ave (GPM)	Spray Flow 12 hr ave (GPM)	Venturi Flow 12 hr ave (GPM)	Tray/PBs Flow 12 hr ave (GPM)	Scrubber pH 3 hr ave	Any Bypass Stack Use	THC Mo. Ave (PPM)	THC DC (%)	BZ Temp Daily Ave Days >Max
MHI PLANT											
ARMY BASE	0	0	0	0	0	0	0	4	50	81	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	17	90	0
VIP	0	0	0	n/a	0	0	0	0	25	99	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	0	29	90	0

#### ALL OPERATIONS

DEQ Reportable Air Incidents:	0
DEQ Request for Corrective Action:	0
DEQ Warning Letter:	0
DEQ Notice of Violation:	0
Other Air Permit Deviations:	0
Odor Complaints Received:	22
HRSD Odor Scrubber H2S Exceptions:	24

## Items of Interest – October 2023

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

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all four MHI plants (Army Base, Boat Harbor, Virginia Initiative, and Williamsburg) with a THC continuous emissions monitoring (CEM) valid data captured of greater than 81%.

The MHIs had no deviations from the required 129 SSI rule minimum operating parameters and four (4) minor bypass events (< 60 minutes).

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

DEQ issued Williamsburg's Title V air permit renewal October 31, 2023.

There were 24 odor control scrubber system hydrogen sulfide (H<sub>2</sub>S) exceptions in October. Atlantic plant's odor control system D had 14 of them while undergoing system rehab and optimization. James River had the other 10 deviations as they were adjusting to operating with a new H<sub>2</sub>S performance goal that improves chemical efficiency to reduce the cost of operation. No offsite odors observed or complaints were received at JRTP.

Atlantic Plant received seventeen (17) odor complaints from Ocean Lakes neighbors during October. Plant Staff and TSD responded to all complaints and followed up with our neighbors with investigation results.

The other five (5) odor complaints were comprised of three (3) at York River, one (1) at Onancock on the Eastern Shore, and one (1) at a pump station in Hampton. All of these complaints were addressed by Operations and TSD.

### **TREATMENT**

DEQ was notified of the following reportable events:

#### Boat Harbor

On October 10, secondary clarifier #5 was filled with Non-Potable Water (NPW) to test the rake arm function. A leak developed at an expansion joint releasing approximately 130,000 gallons to the ground and storm drain. The condition assessment group will assist in hiring a contractor to repair the tank.

#### James River

On October 14, the on-duty operator pulled a chlorine sample during the scheduled time, but maintenance activities were occurring which resulted in no flow being discharged when the grab was collected. The reported chlorine residual value was 0.0, residuals collected before and after the no-flow event were within normal range.

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

### King William

On October 23, the GAC feed pumps tripped causing the GAC tank to overflow the bypass weir. Upon further investigation the problem began during the reuse/outfall operation changeover on October 21. When HRSD staff changed over from reuse to outfall, the pumps did not turn on due to a system status on/off switch not being cycled during start-up. Approximately 161,000 gallons of membrane filtrate were discharged into Moncuin Creek without UV disinfection.

On October 23, a high wet well and overflow alarm came through for the King William Main Pump Station. When staff arrived, they observed an overflow at the low rim manhole (KW-MH-C20) and verified the two submersible pumps and an emergency bypass pump were on and pumping. An HRSD operated septage truck had offloaded in an upstream manhole potentially causing this station to be overwhelmed. Approximately 160 gallons of raw wastewater were released to Jackpen Creek.

### Nassawadox

Effluent discharge from the plant was ceased on September 27 and influent flow was being held in the EQ basin before being pumped to the new Nassawadox Pump Station. On October 2, construction delays to divert the plant influent caused the EQ Tank level to rise high enough that the level in the secondary wetwell reached the top of a discharge pipe that had an unknown crack in it. When the small leak was discovered, the Plant Operator closed an isolation valve between the EQ tank and the secondary wetwell while HRSD staff pumped the ponded wastewater into the new pump station. Approximately 350 gallons of raw wastewater were released to Warehouse Creek.

### West Point

For the week of October 9, 2023, the weekly maximum average BOD concentration was exceeded at the West Point STP (VA0075434). The permitted weekly maximum average concentration for the West Point STP is 45 mg/L. The average BOD concentration value for the week was 49 mg/L. Staff emptied the plant storage pond for a pre-bid meeting with contractors to perform a liner inspection during this period and the volume of the pond water through the plant led to the high BOD numbers. Staff made every effort to improve BOD performance for the remainder of the month and were able to get the monthly average below the permit level.

### 2023 Metals, Ammonia, and TKN

		Limit	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Central Middlesex	Ammonia	0.56	0.02	NA	NA	0.06	NA	NA	<0.02	NA	NA	0.06		
	TKN	3.0	NA	<0.50	NA	1.7	NA	NA	0.72	NA	NA	0.59		
King William	Zinc	*	54	NA	NA	35	NA	NA	NA	52	NA	NA		
	TKN	3.0	1.9	1.1	1.6	0.76	0.61	0.53	0.47	0.89	0.61	0.67		
Nassawadox Riverside	Cadmium	2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA		
	Copper	23	<5.0	<5.0	<5.0	5.2	<5.0	<5.0	<5.0	5.8	5.4	NA		
	Nickel	38	14	18	14	<10	<10	<10	<10	<10	<10	NA		
	Zinc	150	<50	<50	<50	<50	<50	<50	<50	<50	<50	NA		
	Ammonia	1.7	0.31	0.67	0.44	0.14	0.19	0.09	0.08	0.13	0.04	NA		
Onancock	Copper	12	2.2	NA	NA	0.80	NA	NA	0.52	NA	NA	2.1		
	Ammonia	0.90, 2.0	0.04	0.03	0.03	0.08	0.04	0.77	0.07	0.41	0.07	0.04		
Surry County	Copper	5.9	2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	Zinc	56	24	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	Ammonia	0.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	TKN	3.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Urbanna	Ammonia	3.83, 9.08	0.04	0.16	0.02	0.02	0.92	0.05	0.05	0.05	0.08	0.34		

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

## 2023 MONTHLY FLOW AVERAGES

	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR AVG	FY AVG
Army Base	9.10	9.87	9.09	8.47	8.46	9.28	10.86	10.35	9.76	8.54			9.38	9.87
Atlantic	44.58	46.31	43.65	41.11	41.28	44.62	47.18	45.58	43.84	40.35			43.85	44.24
Boat Harbor	11.60	12.95	11.16	10.39	10.31	12.27	11.88	11.55	10.72	9.92			11.28	11.02
C.Middlesex	0.013	0.013	0.013	0.010	0.010	0.011	0.014	0.011	0.011	0.012			0.012	0.012
James River	12.46	13.31	11.87	12.13	12.03	12.42	11.78	11.46	11.17	10.13			11.88	11.13
King William	0.070	0.065	0.058	0.062	0.076	0.083	0.082	0.084	0.086	0.088			0.075	0.085
Lawnes Point	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			0.000	0.000
Nansemond	15.97	16.61	15.77	15.59	15.75	15.38	16.76	16.13	16.31	14.51			15.88	15.93
Nassawadox	0.016	0.015	0.013	0.013	0.014	0.015	0.018	0.018	0.015	0.000			0.014	0.013
Onancock	0.170	0.194	0.207	0.208	0.197	0.207	0.235	0.209	0.159	0.188			0.197	0.198
Surry, County	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			0.001	0.000
Surry, Town	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			0.000	0.000
Urbanna	0.035	0.039	0.046	0.050	0.056	0.063	0.067	0.061	0.071	0.070			0.056	0.067
VIP	27.26	30.12	27.54	27.47	27.99	29.68	31.37	31.51	29.61	25.65			28.82	29.53
West Point	0.466	0.470	0.389	0.359	0.373	0.330	0.423	0.329	0.312	0.273			0.372	0.334
Williamsburg	7.73	8.09	7.96	8.48	7.76	8.59	8.41	8.27	8.14	7.46			8.09	8.07
York River	12.69	13.74	12.00	12.37	12.31	12.67	11.37	11.02	10.59	10.07			11.88	10.76
North Shore	44.47	48.09	42.99	43.36	42.42	45.95	43.44	42.31	40.63	37.58			43.12	40.99
South Shore	96.91	102.91	96.06	92.64	93.47	98.95	106.16	103.56	99.51	89.04			97.92	99.57
Small Communities	0.78	0.80	0.73	0.70	0.72	0.71	0.84	0.71	0.65	0.63			0.73	0.71
TOTAL	142.16	151.79	139.78	136.70	136.62	145.61	150.44	146.58	140.79	127.25			141.77	141.27

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





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***

---

### **Risk Assessment Refresh**

- **Upcoming Tasks (November 2023)**
  - Commence risk assessment procedures.

### **Design and Construction Estimating**

- **Tasks Completed (October 2023)**
  - Prepared planning documentation and conducted preliminary research.
  - Conducted planning meeting with the Director of Engineering.
- **Upcoming Tasks (November 2023)**
  - Conduct entrance meeting (11/15).
  - Commence planning procedures.

### **Accounts Payable and ProCards**

- **Tasks Completed (October 2023)**
  - Finalized planning documentation and fieldwork audit program.
  - Conducted planning closeout meeting with HRSD.
- **Upcoming Tasks (November 2023)**
  - Conduct data analytics.
  - Commence fieldwork procedures.

### **Remote Access**

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

### **Personally Identifiable Information**

- **Tasks Completed (October 2023)**
  - Received management feedback for report.
- **Upcoming Tasks (November 2023)**
  - Finalize report and submit to the Commission (submitted 11/1).

***Internal audit complete; to be provided in the November commission packet.***

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

---

- IT audit: November/December 2023



**III. Management Action Plan Status**

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

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

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

Audit	Next Follow-up	Recommendations		
		Closed	Open	Total
Personally Identifiable Information	February 2024	0	3	3
Succession Planning	January 2024	2	2	4
Safety Division	November 2023	2	1	3
Freedom of Information Act	December 2023	0	1	1
Family Medical Leave Act (FMLA)	April 2024	0	4	4
D&C: CIP Project Management	Closed	13	0	13
HR Benefits	Closed	15	0	15
Inventory	Closed	5	0	5
Procurement/ProCard	Closed	11	0	11
Engineering Procurement	Closed	8	0	8
Corporate Governance: Ethics Function	Closed	5	0	5
Treatment Plant Operations	Closed	9	0	9
Permitting	Closed	2	0	2
Payroll	Closed	3	0	3
Customer Care Division	Closed	4	0	4
Pollution Source Control	Closed	8	0	8
Fleet Services	Closed	17	0	17
Biosolids Recycling	Closed	8	0	8
Unifier/ERP Integration	Closed	4	0	4
Emergency Repairs	Closed	3	0	3
SWIFT Program	Closed	12	0	12
<b>Totals</b>		<b>131</b>	<b>11</b>	<b>142</b>

Hampton Roads Sanitation District  
Internal Audit  
Personally Identifiable Information



October 27, 2023





# Table of Contents

Executive Summary	1
Objectives	1
Internal Audit Process	2
Summary Results	2
Internal Audit Summary	3
Background	3
Objectives and Scope	5
Methodology and Approach	6
Summary of Work	8
Observations and Recommendations	9
Observation 1	9
Observation 2	13
Observation 3	15

## Executive Summary

SC&H conducted an internal audit of Hampton Roads Sanitation District's (HRSD) Personal Identifiable Information (PII) environment and its related handling and maintenance functions. PII is defined as any information about an individual maintained by an agency/organization including:

1. Any information that can be used to distinguish or trace an individual's identity, including but not limited to name, social security number, date and place of birth, mother's maiden name, or biometric records.
2. Any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information.<sup>1</sup>

Globally, increases in security breaches involving PII have led to the loss of millions of records and can be hazardous to an organization and its individual stakeholders – employees and customers. The average cost of a data breach in the United States is \$9.44 million dollars across involved organizations and affected customers.<sup>2</sup>

PII breaches place organizations at an elevated risk of loss of reputation, legal liability, or remediation costs. They can further place its individual stakeholders at risk of identity theft, public embarrassment, or blackmail.

The following provides a summary of the internal audit's objectives, process, and results.

SC&H thanks HRSD's Finance (Accounting, Customer Care, and Procurement), Talent Management (Human Resources and Safety), Information Technology, and Water Quality departments whose assistance and attentiveness were vital during the internal audit process.

## Objectives

- A. Document an inventory of key forms containing PII, hard copy and electronic, for in-scope departments.
- B. Follow the PII "life cycle" of one key document per department in scope, beginning with obtaining the information through dissemination and disposal, and identify the risks and controls at each stage.
- C. Perform a review of physical access for each department in scope.
- D. Review electronic access to information systems to determine whether PII is sufficiently secured.
- E. Perform an analysis of document access logs to identify indicators of inappropriate external PII access.
- F. Based upon the understanding of the division's/department's processes, and physical and logical access to PII data, identify opportunities to secure PII data.

---

<sup>1</sup> <https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-122.pdf>

<sup>2</sup> <https://www.ibm.com/reports/data-breach>

## Internal Audit Process

SC&H conducted the internal audit with the following three-phased approach.

1. Planning: Understand processes, evaluate risks/controls, and develop an audit program
2. Fieldwork: Conduct evaluation procedures to achieve internal audit objectives
3. Reporting: Conclude internal audit, report results

SC&H will conduct a fourth phase (Follow Up) later to review management action plans resulting from the internal audit's results.

## Summary Results

HRSD's processes surrounding PII storage, maintenance, review procedures, and security are developing. There are certain processes in place and being improved upon regarding the physical security of HRSD's headquarters building and access to critical HRSD systems. Additionally, employees appear to demonstrate awareness of the importance of customer and employee data privacy and are motivated to secure and protect HRSD's sensitive data.

Three observations are provided that identify opportunities for risk management and PII protection. Details are in the "Observations and Recommendations" section of this report.

1. Physical security and workstation/documentation security.
2. Appropriate review of access management.
3. Structured policy and procedural documentation.



# Internal Audit Summary

## Background

SC&H conducted an internal audit of Hampton Roads Sanitation District's (HRSD) treatment of Personally Identifiable Information (PII) and processes or procedures in maintaining and safeguarding PII data. PII can be accessed and stored by various departments, and the processes surrounding its maintenance and protection consist of organization-wide responsibilities.

### PII Definition

PII is defined by the National Institute of Standards and Technology as any information about an individual maintained by an agency including:

1. Any information that can be used to distinguish or trace an individual's identity, including but not limited to name, social security number, date and place of birth, mother's maiden name, or biometric records.
2. Any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information.<sup>1</sup>

The following are PII examples:

1. Full name, maiden name, mother's maiden name, or any alias
2. Social security number, passport number, driver's license number, taxpayer identification number, patient identification number, and financial account or credit card number
3. Street address or email address
4. Internet protocol (IP) or media access control (MAC) address or a host-specific persistent status identifier that consistently links to a particular person or small, well-defined group of people
5. Telephone numbers
6. Personal characteristic images, x-rays, fingerprints, and biometric data (retina scan, voice signature, etc.)
7. Vehicle registration and title number
8. Information that can be linked to any of the information above (i.e., date of birth, place of birth, race, religion, weight, activities, geographical indicators, employment information, medical information, education information, financial information)

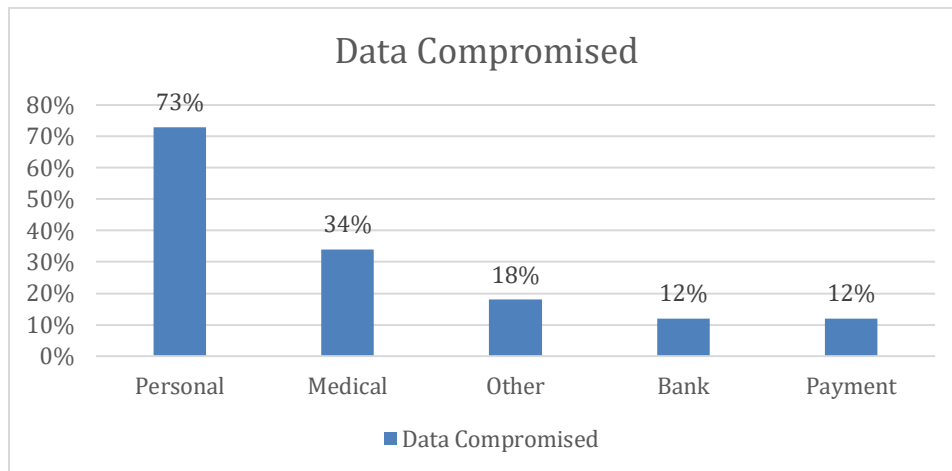
HRSD will be required to identify all PII within its organization or under its control. Treatment of PII is distinct from other types of data because of the context of use – the purpose for which the PII is stored, collected, maintained, processed, disclosed, or disposed – and the organization's obligation to protect according to Virginia's Consumer Data Protection Act (VCDPA).

### Risks

Increases in nationally recognized security breaches involving PII have led to the loss of millions of records and can be hazardous to the organization and the individual stakeholders – both HRSD employees and customers. The average cost of a data breach in the United States is \$9.44 million dollars across involved organizations and affected customers<sup>1</sup> and it takes an average of 277 days for an organization to identify and contain a data breach. According to the National Institute of Standards and Technology (NIST) 800-122<sup>2</sup>, PII breaches, may result in loss of reputation, legal liability, or remediation costs. They can further place an organization's individual stakeholders at risk of identity theft, public embarrassment, blackmail, or criminal or civil penalties - in the cases where the loss of PII constitutes a violation of relevant law.

While the majority of data breaches are typically caused by external actors, internal actors (e.g., individuals within the organization; full-time employees, independent contractors, interns, other staff, etc.) are responsible for 19% of all data breaches (e.g., via privilege misuse), according to the 2023 Data Breach Investigation Reports<sup>3</sup>. Privilege misuse are actions committed by individuals within the organization that use their access rights for malicious purposes or otherwise abuse them intentionally or unintentionally. These actions can lead to data breaches and fraudulent activities/transactions.

Table 1 below shows the type of data that has been reported as compromised by privilege misuse from internal actors.



Additionally, the 2023 Data Breach Investigation Report<sup>3</sup> states that internal actor misuse continues to be a consistent problem in public administration. For example, external actors may take advantage of the vulnerabilities within this sector and using internal actors to reach their goals. The report shows evidence of collusion in 16% of public administration breaches this year. As a political subdivision of the Commonwealth of Virginia, HRSD is required to comply with regulations, laws, and other mandates related to the protection of PII.

### Virginia Consumer Data Protection Act (VCDPA)

As referenced above, HRSD will be required to comply with the VCDPA, which went into effect at the beginning of 2023 and provides residents rights regarding any personal data collected by businesses within the state. VCDPA allows a consumer rights regarding their personal data, including requests that the controller of their personal data:

1. Confirm if the controller is processing their personal data.
2. Correct inaccuracies in the consumer’s personal data that is collected by the controller.
3. Delete personal data provided by or obtained about the consumer.
4. Obtain copies of the personal data collected by the controller.
5. Opt out of the processing of personal data for purposes of targeted advertising, the sale of personal data, or further profiling.<sup>4</sup>

<sup>3</sup> <https://www.verizon.com/business/resources/reports/dbir/2023/master-guide/>

<sup>4</sup> Virginia Consumer Data Protection Act Summary 2/2/23. <https://www.oag.state.va.us/consumer-protection/files/tips-and-info/Virginia-Consumer-Data-Protection-Act-Summary-2-2-23.pdf>

## Library of Virginia Records Management

Additional PII retention requirements are guided by the Library of Virginia (library) Record Management retention policies<sup>5</sup>, which certain HRSD departments referenced using during the audit.

Under the authority of the Virginia Public Records Act, the Records Management section at the library assists state and local governments in ensuring public records are maintained and available throughout their life cycle. Records Management supports the efficient and economical management of public records by publishing records retention and disposition schedules, presenting workshops, monitoring the disposal of non-permanent records, and assisting with the transfer of permanent records to the Archives.

## Objectives and Scope

### Objectives

The following objectives were established based on the internal audit planning procedures:

- A. Document an inventory of key forms containing PII, hard copy and electronic, for in-scope departments.
- B. Follow the PII “life cycle” of one key document per department in scope, beginning with obtaining the information through dissemination and disposal, and identify the risks and controls at each stage.
- C. Perform a review of physical access for each department in scope.
- D. Review electronic access to information systems to determine whether PII is sufficiently secured.
- E. Perform an analysis of document access logs to identify indicators of inappropriate external PII access.
- F. Based upon the understanding of the division’s/department’s processes, and physical and logical access to PII data identify opportunities to secure PII data.

### Scope

Internal audit procedures were conducted from October 2022 to August 2023, and focused on the processes, policies, procedures, and controls in place at the time of the audit. Documentation and samples selected were reviewed for the period of March 1, 2022, to March 31, 2023.

---

<sup>5</sup> <https://www.lva.virginia.gov/agencies/records/>

## Methodology and Approach

### Survey Creation and Analysis

SC&H commenced the audit by administering a survey to HRSD employees to understand the types of PII held by HRSD. The survey covered the following topic areas:

1. Contact and department details
2. Major business processes or activities within a department
3. PII managed within a department
4. Storage, communication, retention, and destruction methods
5. Policy and procedures (e.g., PII, data storage, retention schedule, Clean Desk Policy, communication procedures, etc.)
6. Training procedures
7. Data breach and incident response

SC&H received and analyzed 48 complete responses from the following departments/positions:

1. General Manager (2)
2. Finance (14)
3. Communications (1)
4. Engineering (3)
5. Information Technology (ITD) (15)
6. Talent Management (9)
7. Water Quality (WQ) (3)
8. Water Technology and Research (1)

Responses were provided by all departments, with the most responses from ITD and Finance employees. Both departments and their underlying divisional processes and responsibilities consistently deal with data, PII, and security.

### Process Walkthroughs

Based on the survey response analysis, SC&H conducted interviews with the following departments/divisions who indicated they hold PII, to determine what PII they may hold and the frequency and volume of working with PII.

1. Finance Department: Accounting, Customer Care, and Procurement Divisions
2. Information Technology Department
3. Talent Management Department: Human Resources and Safety Divisions
4. Water Quality

Based on these meetings, each of the above walkthrough departments/divisions were determined to be in-scope for the fieldwork audit program objective procedures (collectively, in-scope departments), except for Water Quality. Water Quality was determined to be out of scope due to very limited PII, specifically an internal calendar with employee birthdays.

Based on the understanding of PII processes, and industry best practices (e.g., NIST guidance), SC&H developed an audit program to achieve the objectives described above. The audit program included detailed steps to address each objective with the goal of verifying the existence of sound internal controls and identifying opportunities for improvement.

## Fieldwork Audit Program Execution

The following procedures were performed to execute the audit program.

1. Documented an inventory of key forms containing PII, documents, and systems.
  - a. Once the audit program was finalized, SC&H met with each in-scope department to assist in identifying key documents and systems. "Key" was defined as a document or system that is frequently utilized to complete daily activities and contains either multiple components of PII (e.g., name, address, and birthdate) or extremely sensitive PII (e.g., social security number).
  - b. SC&H obtained and reviewed the key documents identified by in-scope departments; including determining what types of PII are in each document, the purpose of each document, the storage method for each document, the retention period of each document, and method of destruction for each document.
2. Followed the PII "life cycle" of a sample of one key document per in-scope department beginning with obtaining the information through dissemination and disposal.
  - a. In collaboration with the in-scope departments, SC&H identified one of the key documents from the inventory and created a life-cycle flowchart identifying all the users of the document, both internal and external to HRSD, where it is stored, how it is communicated, how long it is retained, and how it is destroyed.
3. Reviewed physical access for each in-scope department where PII may be held/stored.
  - a. SC&H went on-site to HRSD headquarters (1434 Air Rail Avenue, Virginia Beach, VA) and inspected the security and physical access controls in place for the building, department suites, and IT server room.
4. Reviewed electronic access to information systems to determine whether PII is sufficiently secured.
  - a. SC&H obtained and reviewed the access listings of key systems utilized by the in-scope departments. SC&H evaluated the listings to determine if all users were current employees or contractors and reviewed the roles and permissions to determine if they appeared appropriate based on job role and function.
5. Analyzed document access logs to identify indicators of potentially inappropriate external PII access.
  - a. SC&H obtained and reviewed access logs for the key systems where user access was reviewed. SC&H identified what data was stored in the logs and reviewed to determine if access or changes appeared inappropriate and determined if additional follow up with the in-scope department was required.



## Summary of Work

HRSD's overall handling of PII data is developing. HRSD employees recognize and take due care and precautions with employee and customer PII. HRSD is currently in the process of adding additional physical security measures to HRSD headquarters, as well as actively working towards improvements regarding system safeguards, access management, and management of PII.

Three observations are provided that identify opportunities for risk mitigation and program enhancements.

We appreciate the assistance and cooperation of the management and staff involved in HRSD's PII procedures. Please contact us if you have any questions or comments regarding any of the information contained in the internal audit report.

SC&H Group, Inc.

A handwritten signature in black ink, appearing to read 'Matt Simons', written over a horizontal line.

Matthew Simons, CPA, CIA, CGAP  
Principal



# Observations and Recommendations

## Observation 1

### Summary

Preventive measures within physical day-to-day activities to mitigate the risks of PII exposure, misuse, and theft can be improved. These improvements can be focused on protecting PII, maintaining compliance with laws/regulations, and promoting HRSD's dedication to data security.

### Detail

SC&H conducted a site visit at HRSD's headquarters during non-working hours (escorted by an HRSD employee) to assess the physical workspace and physical security of the HRSD in-scope department facilities including the suites, offices, filing cabinets, storage rooms, and the data center in accordance with internal audit objective C. During the walkthrough, SC&H noted that HRSD's manual processes and documentation rely heavily on physical paper documents. Specifically, the following was identified.

#### Physical Security

During the overall building's walkthrough:

1. The entrance into the HRSD building does not require badge access during normal business hours.
2. Multiple offices containing PII within the HRSD building do not have the ability to be locked.
3. There is not a security camera directly outside any of the suites or anywhere inside of the suites containing PII.

#### Workstation and Document Security

During the in-scope departmental walkthroughs:

1. Finance, Customer Care, Accounting and Procurement
  - a. Documents on workstations/desks are visible to the public. SC&H did not identify any visible passwords, however there were documents that contained PII (e.g., names, addresses, account numbers, etc.).
  - b. Documents containing PII are stored in unlocked cabinets or drawers in unlocked offices with the keys in the locks. More specifically, in one office, there were employee W-2s in unlocked cabinets and accessible to anyone in the suite.
  - c. In the cashier's office workstation, the user terminals utilize a generic login. The username and password to the generic log in is on a sticky note taped to the workstation.  
***HRSD has implemented individual logins for the cashier workstation and are in the testing phase of this implementation.***
2. Talent Management
  - a. Documents containing PII are stored in the HR records room. The door to the records room is open during business hours and requires a code for entry after business hours. There is no current entry log and/or document check out/in log for the HR records room.
  - b. An automatic water-based sprinkler system is currently in place in the HR records room. In the event of a fire or false alarm, the documents in the HR records room may be destroyed.
  - c. File cabinets and drawers in the offices and suites are not locked and file cabinet keys are stored in the cabinet lock.

3. ITD Suite and Data Center
  - a. The device storage rooms are unlocked during business hours and do not require a key or a secondary scan of employee badge to enter. These devices are wiped of all data and/or are new devices not yet configured for an employee.
  - b. File cabinets and drawers in the offices and suites are not locked and file cabinet keys are stored in the cabinet lock.
  - c. The data center was performing scheduled maintenance on the day of SC&H's walkthrough and as such some of the server racks assessed were not locked. Per inquiry, only major projects would have a ticket tracking the work completed and what servers were being affected.
  - d. SC&H identified one computer that was not locked when someone in the IT suite stepped away from their device.  
***HRSD is updating the automatic system 'sleep' locking settings to 15 minutes for all HRSD devices. Estimated roll out to the entire organization is November 2023.***
4. Engineering and Operations:
  - a. The Engineering and Operations Departments were not in-scope departments based on their survey responses. As a result, not all fieldwork audit objectives were performed. However, during the site visit, SC&H observed these departments to assess physical PII maintenance. SC&H identified one user's computer from Operations that was unlocked and had open applications allowing access to HRSD systems. The user believed that the computers were set to automatically sleep/lock after a brief period; however, it was later confirmed that the setting to go to sleep/lock when plugged in was set to 'never'.  
***HRSD is updating the automatic system 'sleep' locking settings to 15 minutes for all HRSD devices. Estimated roll out to the entire organization is November 2023.***

## Risks

Ineffective physical security measures where unauthorized users can access areas of the building that contains PII documents could result in the following:

1. Unauthorized access to building and suites.
2. Unauthorized/accidental modifications to physical documents.
3. Data theft and data breaches.
4. Insider threats that come from employees with malicious intent to misuse or disclose PII.
5. Reputational damage from a data breach or information leak
6. Disruptions to business continuity due to the destruction, theft or loss of documents containing PII.
7. Increased vulnerability/visibility to phishing and social engineering attacks.

Paper-heavy departments risk the following:

1. Unauthorized personnel gaining access to certain documents.
2. In the case of a fire or false alarm, destruction of documents which could lead to loss of critical information, delays in operation, and compliance issues with data retention.

## Recommendation 1

HRSD should implement preventive measures within the physical day-to-day activities that help reduce the risks of the misuse of PII, aim to protect PII, maintain compliance of industry best practices, and promote an environment dedicated to data security within the organization.

The following provides recommendations to mitigate the risks of PII misuse, theft, and destruction. They include three categories.

1. "All HRSD Departments" includes recommendations for both in-scope and not in-scope departments. They focus on universal recommendations for the whole organization. Some recommendations may not apply to all departments, divisions, etc.
2. Human Resources includes recommendations for the specific division and "All HRSD Departments" where applicable.
3. ITD includes recommendations for the specific division and "All HRSD Departments" where applicable.

HRSD should evaluate the following recommendations and determine which will help mitigate PII risks. It is ultimately HRSD's decision on whether to implement a selection of, or all, recommendations.

#### All HRSD departments and locations (in-scope and not in-scope)

HRSD should consider the following:

1. Install locks in offices where PII is/may be stored.
2. Implement cameras at all entry/exit locations within the building to incorporate more visibility into who is entering and exiting the building.
3. Consider if requiring badge access to enter HRSD buildings provides additional security and document determination.  
***As of 8/10/2023, HRSD has changed to a fully secure building. Badge access is required upon entry into the building and visitors must call the specific HRSD employee to gain access to the building. HRSD is also working on implementing Lobby Guard – a system that tracks visitors by asking them to check in via tablet at the front of the building.***
4. Conduct periodic tests of drawers and cabinets to ensure they are locked and that sensitive PII (e.g., SSN, account number, etc.) is not visible on desks.
5. Store file cabinet keys away from the cabinets in a secure location.
6. Store physical PII in secure and locked cabinets, safes, and rooms with limited access.
7. Create a 'Clean Desk Policy' that identifies what documentation can remain on user's desks. Communicate this policy to all HRSD employees and periodically test compliance.
8. Update system sleep/lock settings on all enterprise devices. HRSD can choose the time setting (e.g., 15 minutes); however, the longer the time prior to locking the device, the more opportunities exist if a device is left unlocked.  
***HRSD is updating the automatic system 'sleep' locking settings to 15 minutes for all HRSD devices. Estimated roll out to the entire organization is November 2023.***
9. Implement access control ideology, such as key card access, in storage rooms that house documents with PII.
10. Restrict access to this storage and maintain a log that requires sign in/out of physical documents and information..
11. Ensure all employees know and acknowledge that anytime they step away from their desk or workstation their computer or tablet must be locked.

#### Human Resources

HRSD should consider the following:

1. Ensure the records room remains locked during business hours.
2. Install a dry chemical fire suppression system in the records room to prevent the destruction of employee data including PII.
3. Create a log for tracking all documents that are "checked out" from the records room to ensure they are returned.
4. Digitize documents in the records room and move towards implementing a "paperless" environment with storage of paper documents offsite. This can assist with creating a standardized file structure and data classification system.

5. Consider installing additional security camera(s) in the Talent Management publicly accessible areas to monitor visitors and ensure they remain in the “visitor” areas versus going further into the Talent Management suite.

ITD

HRSD should consider ensuring all data center maintenance has a documented ticket or other physical log documenting what work is being completed to sufficiently track and identify the maintenance occurring. This will assist in ensuring that all other servers and server racks are not affected during maintenance.

### Management Action Plan

Generally, we concur. Concurrent with this audit, HRSD was in the process and now has ensured that all administrative facilities are either locked or are behind a locked gating system for an entire work center site.

HRSD has a committee of HRSD employees who evaluate the physical security of HRSD facilities. This same committee or another will be tasked with developing a PII policy to evaluate the recommendations.

### Implementation Date/Period

Committee will be established by December 31, 2023.

## Observation 2

### Summary

Processes to mitigate risks of unauthorized access to HRSD's PII housed systems, data, and resources can be enhanced.

### Detail

#### Access Rights and Review

SC&H worked with HRSD personnel to identify key systems and shared network drives within in-scope departments. SC&H requested user access listings, an active employee listing, and rights descriptions for each identified system. SC&H cross-referenced the employees names on the access listings for each system to the active employee listing provided by HRSD. Based on the procedures performed, the following was identified:

1. Access management procedures do not include periodic reviews of unauthorized access for all systems.
2. Multiple users that have access to key systems were not current HRSD employees or contractors, specifically:
  - a. Interaction Desktop, Genesis Product (ININ), a desktop application that the Customer Care call center uses to conduct customer service phone calls: Two of 47 users were terminated, however were still active users in the system.
  - b. Track IT, a system that Procurement uses to track work orders or tasks for the Helpdesk: One of 25 users was terminated, however was still an active user in the system.
  - c. Unifier, HRSD's program management system used in Procurement to manage the Capital Improvement Program (CIP) projects: One of 125 users retired, however they were still an active user in the system.
  - d. Oracle WebCenter, a module within Oracle that provides process flows for documents for all departments: Two of 54 users are retired, however were still active users in the system.
  - e. Oracle CC&B, HRSD's Oracle based system for customer billing: One user has a duplicate account.  
***HRSD has since corrected the duplicate account.***

### Risks

1. Ineffective and incomplete user access management procedures could result in opportunities for unauthorized users to access key systems and documents that contain PII. This can further result in:
  - a. Unauthorized/accidental modifications to the data/systems
  - b. Data theft and data breaches
2. Lack of consistent and periodic system access rights monitoring procedures presents the risk of the organization adopting a reactive approach to emerging issues. This could further result in increased downtime and increased service disruptions and can lead to cumulative negative impact – small issues go unnoticed, which could potentially lead to major disruptions.

## Recommendation 2

HRSD should consider the following:

1. Conduct monthly/quarterly reviews of user access rights and system logs to ensure they align with current job roles/job functions. Periodic audits will help HRSD to identify and remove excessive privileges, inactive accounts, inappropriate access permissions, and adopt a proactive approach to problem solving.
2. Implement a role-based access control (RBAC) that assigns access permissions based on predefined roles within the organization. Users will be granted access based on their assigned roles which would make it easier to manage individual access rights.
3. Ensure the accuracy of all access rights reports. For instance, SC&H noted one report provided by Invoice Cloud (Customer Care) mistakenly showed a user as having additional permissions. HRSD followed up and determined it was an issue with Invoice Cloud's report; however, HRSD should be working with vendors to ensure all system generated reports are accurate and reflect access as it is.

Recommendations should be incorporated into policies, procedures, and trainings where applicable. Refer to **Observation 3** for additional details.

## Management Action Plan

HRSD has a committee of HRSD employees who evaluate the physical security of HRSD facilities. This same committee or another will be tasked with developing a PII policy to evaluate the recommendations.

## Implementation Date/Period

Committee will be established by December 31, 2023.



## Observation 3

### Summary

HRSD does not have PII policy or procedural documentation outlining the requirements for maintaining, monitoring, and completing processes with PII exposure for applicable forms and systems.

### Detail

SC&H requested policies and procedural documentation to understand HRSD's processes to support the treatment of PII. Following, HRSD confirmed there was currently no formalized procedural documentation for the steps and processes for receiving, reviewing, approving, monitoring, maintaining, deidentifying, and destroying PII in electronic and hard copy forms.

### Risks

1. Lack of formalized procedure documents could negatively impact:
  - a. The establishment and performance of necessary activities performed consistently, efficiently, and effectively in a controlled and timely manner.
  - b. Untrained and uninformed personnel who may inappropriately oversee, manage, and communicate PII to unintended parties.
2. Without the establishment of policies and procedures, an organization may unknowingly violate data protection and privacy laws and regulations, leading to legal consequences and fines.

### Recommendation 3

HRSD should develop policies, procedures, and trainings to formally document PII and present requirements to employees (and other HRSD related PII stakeholders). These policies and procedures should be consistent and align with HRSD organizational policies/procedures and applicable laws/regulations (e.g., VCDPA).

HRSD should periodically review the policies, procedures, and trainings to ensure they are current. Any changes should be communicated to HRSD employees (and other HRSD related PII stakeholders), followed by trainings as necessary. For example, the policies, procedures, and training documents could include, but not necessarily be limited to the following:

1. Identifying the PII the organization uses.
2. Locating where PII should be stored.
3. Classifying PII in terms of sensitivity and information.
4. Establishing an acceptable usage procedure.
5. Establishing a schedule for periodic reviews of policies and procedures.
6. Complying with laws/regulations (e.g., handling/responding to data requests as referenced in the VCDPA).

### Management Action Plan 3

HRSD has a committee of HRSD employees who evaluate the physical security of HRSD facilities. This same committee or another will be tasked with developing a PII policy to evaluate the recommendations.

### Implementation Date/Period

Committee will be established by December 31, 2023.

Strategic Measures  
October 2023

Strategic Planning Measure	Sep-23	Oct-23	FY-24
Capacity Related Overflows (Quarterly)			3
Educational and Outreach Events	19	28	79
Number of Community Partners	8	15	67
Revenue vs. Budget	\$1	\$1	\$1
Wastewater Expenses vs. Budget	\$0	\$0	\$0
General Reserves	103%	110%	107%
Liquidity	321	345	337
Accounts Receivable (HRSD)	\$48,632,916	\$44,145,812	\$42,836,361
Aging Accounts Receivable	22.00%	24.00%	25.03%
Monthly CIP Spending	\$57,915,848		\$41,018,386
Turnover Rate wo Retirements	0.60%	0.35%	0.17%
Turnover Rate w Retirements	0.84%	0.47%	0.25%
Avg Time to Hire	3 months 9 days		3 months 3 days
Number of Vacancies	67	52	65
Number of Technical Presentations	6	12	22
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.	*	*	
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.	*	*	
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.	*	*	
System Failures (Quarterly)			
Total number of applicants per position	6.00	4.45	6
Percentage of positions filled with internal applicants.	19.05%	29.63%	30.25%
Recruitment source Return on Investment.			0.00
Avg Time to Hire	3 months 9 days		3 months 3 days
Quantity of expenditures (\$) allocated to Information Technology per 1,000 HRSD customers (commercial and residential).			0.00
Percentage of CIP projects that are completed within budget.			0.00%

Strategic Measures  
October 2023

<b>Community Partners</b>		
Month	Department	Event
10/01/23	Operations	Accomack County
10/01/23	Operations	DOE Jefferson Lab
10/01/23	Operations	Norfolk Collegiate School
10/01/23	Operations	ODU
10/01/23	Operations	Virginia Wesleyan University

<b>Education Outreach Events</b>	
Date	Event
10/03/23	College of Sciences Career Fair
10/06/23	SWIFT Tour - Employee Friends and Family
10/06/23	SWIFT Tour - LEAD Peninsula Group
10/07/23	SWIFT Tour - HRPDC -group one
10/08/23	Interactive booth at Newport News Fall-o-ween Festival
10/12/23	NTP tour of the THP and Class A Biosolids - two main office employees from the IT Department
10/14/23	STEM Exploration Community Event
10/17/23	ODU Fall Career Fair
10/18/23	SWIFT Tour - Imagine a Day without Water event
10/18/23	SWIFT Tour - Northshore Interceptors
10/19/23	SWIFT/Extensometer Tour
10/20/23	Naval Station Norfolk STEM Event
10/20/23	STEM Day, Naval Station Norfolk
10/24/23	WQSB and the CEL Tour - CNU Students
10/24/23	Virginia Beach Public Schools Environmental Studies Partnership. Bruce Weckworth met with students to discuss their project and help with project design
10/25/23	SWIFT Tour - MEB and Newport News Public Schools
10/26/23	SWIFT Tour - Grassfield High School students
10/27/23	SWIFT Tour - HRPDC - second group
10/27/23	VIP Tour - Norfolk Collegiate Environmental Science Class
10/27/23	VIP Tour - ODU Professor and Graduate Student
10/28/23	VA AWWA Water Tower Competition at SWIFT
10/31/23	VIP Tour - Virginia Wesleyan Environmental Chemistry Class
10/31/23	Virginia Living Museum – HRSD / VLM Leadership Meeting

Strategic Measures  
October 2023

Technical Presentations			
Date	Department	Presenter	Presentation
10/02/23	Operations	Germano Salazar-Benites	Ozonation: Water Reuse on a New Level
10/02/23	Operations	Germano Salazar-Benites	The Water Reuse Landscape Through the Eyes of Industry Leaders - WEFTEC presentation
10/02/23	Water Quality		Enhancing Interpretation of SARS-CoV-2 Wastewater Data through Collection System Knowledge' - WEFTEC
10/02/23	Water Quality		Shellfish management approach near WWTP outfalls at WEFTEC
10/03/23	Operations	Lilian McIntosh	HRSD's Low DO Pilot Plant Results - WEFTEC, podium presentation
10/03/23	Operations	CJ Cornelius and Nathan Wieczorek	Impact of Carbon Choice for PdN in Integrated PdNA System with Methanol Polishing - WEFTEC, podium presentation
10/03/23	Operations	Germano Salazar-Benites	Water Reuse Regulations Across the States
10/04/23	Operations	Lilian McIntosh	Modeling Low DO Treatment Performance of Different BNR Configurations -WEFTEC, podium presentation
10/10/23	Operations	Charles Bott	Water Startup Matching Extravaganza - EPA-Watervent-WaterCitizen
10/25/23	Operations	Chris Stephan and Shawn Maxfield	Regional Lions Club Meeting & Presentation
10/25/23	Operations	Charles Bott	World Water Tech 2023 - Panel presentation
10/25/23	Water Quality	Chris Stephan and Shawn Maxfield	Regional Lions Club Meeting & Presentation
10/31/23	Operations	Chris Stephan and Josh Walker	Newport News Waterworks SCADA Collaboration