

HRSD Commission Meeting Agenda  
9:00 a.m. – November 23, 2021

Location: 1434 Air Rail Avenue, Virginia Beach, VA 23455

Public participation and observation of all HRSD Commission and committee meetings is available electronically via Zoom due to space limitations currently in place to protect the health of the Commissioners, staff and the public. To receive a link for virtual attendance/observation or to request accommodations to attend the meeting in-person, please send your request to Jennifer Cascio at [jcascio@hrsd.com](mailto:jcascio@hrsd.com) or by phone to 757.460.7003. Requests must be received by noon one business day prior to the meeting.

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
	Call to Order	Rodriguez
	Roll Call of HRSD Commission	Cascio
1.	<a href="#">Awards and Recognition</a>	Henifin
2.	<a href="#">Consent Agenda</a>	Henifin
	a. <a href="#">Approval of Minutes</a>	
	b. <a href="#">Contract Awards</a>	
	c. <a href="#">Task Order</a>	
	d. <a href="#">Sole Source</a>	
	e. <a href="#">HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award</a>	
3.	<a href="#">Disposition of Real Property Commission Adopted Policy</a>	Husselbee
4.	<a href="#">Mid-Year Inflation Adjustment to Salaries</a>	Henifin
5.	<a href="#">Recreational Trails Program Grant Agreement</a>	Henifin
6.	<a href="#">Fuel Supply and Delivery Services Contract Award</a>	de Mik
7.	<a href="#">Birchwood Trunk 24-Inch and 30-Inch Force Main at Independence Boulevard Replacement Phase II Initial Appropriation</a>	Husselbee
8.	<a href="#">Climate Change Planning Additional Appropriation and Task Order</a>	Husselbee

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
9.	<a href="#">Effingham Interceptor Vault Removal Additional Appropriation, Contract Award (&gt;\$200,000) and Task Order (&gt;\$200,000)</a>	Husselbee
10.	<a href="#">Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements Initial Appropriation</a>	Husselbee
11.	<a href="#">Virginia Beach Boulevard Force Main Phase VI Cost Sharing Agreement</a>	Husselbee
12.	<a href="#">York River Treatment Plant Primary Clarifier Influent and Effluent Pipes Rehabilitation New CIP and Initial Appropriation</a>	de Mik
13.	<a href="#">Surry Hydraulic Improvements and Interceptor Force Main Easement Acquisition - Abraham and Yvette Turner Parcel 80, Tax Map #06-01-031, 5391 Old Stage Highway, Smithfield, VA</a>	Husselbee
14.	<a href="#">COVID-19 Wastewater Surveillance Study Update</a>	Gonzalez
15.	<a href="#">Executive Search Committee Report</a>	Levenston
16.	<a href="#">Unfinished Business</a>	Henifin
17.	<a href="#">New Business</a>	Henifin
18.	<a href="#">Commissioner Comments</a>	
19.	<a href="#">Public Comments</a> – A request to make public comments during the meeting via Zoom or written comments to be read into the minutes should be submitted to Jennifer Cascio by email to <a href="mailto:jcascio@hrsdc.com">jcascio@hrsdc.com</a> or by phone to 757.460.7003 and must be received by noon one business day prior to the meeting.	Cascio
20.	<a href="#">Informational Items</a>	Henifin
	a. <a href="#">Management Reports</a>	
	b. <a href="#">Strategic Planning Metrics Summary</a>	
	c. <a href="#">Effluent and Air Summaries with Items of Interest</a>	

Next Regular Commission Meeting Date: **December 21, 2021 at the South Shore Operations Complex, 1434 Air Rail Avenue, Virginia Beach, VA 23455**

AGENDA ITEM 1. – November 23, 2021

**Subject:** Awards and Recognition

**Recommended Action:** Approve the resolution.

**Brief:** Upon approval, the Commission Vice-Chair will present a commending [resolution](#) to the Information Technology Department in recognition of efforts to successfully restore HRSD's systems following the Ransomware attack in November 2020.



**RESOLUTION**  
***Recognition of the Information Technology Department (ITD) Staff  
For Extraordinary Achievement***

**WHEREAS**, HRSD's Computer systems and data fell victim to a ransomware attack on November 17, 2020; and,

**WHEREAS**, quick and decisive action by ITD Staff prevented uncontrolled spread of the ransomware throughout the HRSD network; and,

**WHEREAS**, a culture of professionalism, dedication, and service had been established and nurtured within the ITD under the leadership of Don Corrado, Director of ITD; and,

**WHEREAS**, Don Corrado led the response by the entire ITD Staff and cybersecurity recovery partners working around the clock to restore systems and data necessary for continued delivery of services, meeting HRSD's mission of protecting public health and the environment; and,

**WHEREAS**, ITD Staff restored and rebuilt all critical systems in a fraction of the usual time required, recovered the vast majority of HRSD business data, experienced no breach of data, and paid no ransom to its attackers; and,

**WHEREAS**, in the absence of such a dedicated, professional, and effective staff, HRSD would have likely suffered a catastrophic event, been unable to continue operations for a prolonged period, and incurred millions of dollars in recovery costs; now, therefore,

**BE IT RESOLVED by the HRSD Commission** that it hereby commends the ITD Staff for their extraordinary performance and professionalism in managing the remediation and recovery from the ransomware attack; and,

**BE IT FURTHER RESOLVED**, that the Secretary of the HRSD Commission prepares a copy of this resolution for presentation to the ITD Staff as an expression of the Commission's appreciation and esteem.

*Adopted by the HRSD Commission on the twenty-third day of November 23, 2021.*

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Stephen C. Rodriguez  
HRSD Commission Vice-Chair

## AGENDA ITEM 2. – November 23, 2021

**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

- |    |   |           |
|----|---|-----------|
| 1. | <a href="#"><u>Infor Enterprise Asset Management (EAM) Software Maintenance and Support</u></a>   | \$542,045 |
| 2. | <a href="#"><u>Water Research Foundation (WRF) 5100 Rapid Detection and Quantification of Active Microorganisms Multi-Year Contract</u></a> | \$28,000  |

c. Task Orders

- |    |   |             |
|----|---|-------------|
| 1. | <a href="#"><u>Boat Harbor Treatment Plant Transmission Force Main Section 2</u></a>                              | \$1,621,910 |
| 2. | <a href="#"><u>Ingleside Road Pump Station Replacement</u></a>  | \$365,923   |
| 3. | <a href="#"><u>Middlesex County Hartfield Collection System Phase I</u></a>                                       | \$205,000   |
| 4. | <a href="#"><u>Middlesex Interceptor System Program Phase II – Transmission Force Main</u></a>                    | \$408,377   |
| 5. | <a href="#"><u>Norview Estabrook Division I, 18-Inch Force Main Replacement Phase II Section 2</u></a>            | \$235,294   |
| 6. | <a href="#"><u>Williamsburg Treatment Plant Fats Oils and Grease (FOG) Thickener Tank Coating and Repairs</u></a> | \$233,927   |

d. Sole Source

- |    |  |
|----|--|
| 1. | <a href="#"><u>Cambi B6-4 Thermal Hydrolysis Process (THP) System Replacement Parts, Maintenance and Repairs</u></a> |
|----|--|

e. HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award

- |    |   |             |
|----|---|-------------|
| 1. | <a href="#"><u>Cisco Multilayer Director Switches (MDS) and EMC Unity Equipment Hardware and Software Support</u></a> | \$346,173   |
| 2. | <a href="#"><u>Wireless Voice and Data Equipment and Services</u></a>   | \$3,600,000 |

CONSENT AGENDA ITEM 2.b.1. – November 23, 2021

**Subject:** Infor Enterprise Asset Management (EAM) Software Maintenance and Support Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Infor US Inc. in the estimated amount of \$108,409 for one year with four annual renewal options and an estimated cumulative value of \$542,045.

**Type of Procurement:** Sole Source

All services were previously approved as a sole source with Infor US Inc. in November 2015.

**HRSD Estimate:** \$108,198

**Contract Description:** This contract is an agreement for annual maintenance and support services to existing licenses for use with the existing HRSD Infor EAM operations and work order management system.

**Analysis of Cost:** Pricing is in line with previous increases compared to the Consumer Price Index for support services.

CONSENT AGENDA ITEM 2.b.2. – November 23, 2021

**Subject:** Water Research Foundation (WRF) 5100 Rapid Detection and Quantification of Active Microorganisms  
Research Study (>12 months)

**Recommended Action:** Award a contract to Water Research Foundation (WRF) in the estimated amount of \$28,000 for two and a half years.

**Contract Description:** This contract is an agreement to develop a “Realtime-Detection + Realtime-Quantification” protocol to inform process control and risk analysis at water utilities using DNA sequencing technology. The protocol will be developed for a range of water matrices relevant to the water sector (i.e., sewage, activated sludge, treated wastewater, drinking water, and reuse water) in collaboration with Georgia Tech, Great Lakes Water Authority (GLWA), and Hampton Roads Sanitation District (HRSD). The field-deployable DNA extraction and sequencing protocol will be developed in the first year, then followed up with an HRSD case study implementing the protocol for process control at SWIFT.

HRSD contributions include: \$28,000 to Water Research Foundation to support stipend of a graduate student, \$15,000 in-kind for HRSD employee time spent on the project and \$28,000 in-kind for consumables used throughout the two and a half year project.

## CONSENT AGENDA ITEM 2.c.1. – November 23, 2021

**Subject:** Boat Harbor Treatment Plant Transmission Force Main Section 2  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with CDM Smith Inc. in the amount of \$1,621,910.

**CIP Project: BH015720**

Budget	\$26,424,000
Previous Expenditures and Encumbrances	(\$691,560)
Available Balance	\$25,732,440

<b>Contract Status:</b>	<b>Amount</b>
Original Contract with CDM Smith Inc.	\$487,710
Total Value of Previous Task Orders	\$0
Requested Task Order	\$1,621,910
Total Value of All Task Orders	\$1,621,910
Revised Contract Value	\$2,109,620
Engineering Services as % of Construction	8.1%

**Project Description:** This project consists of the on-land transmission force main section connecting the subaqueous force main Section 1 (separate project under BH015710) to the Nansemond Treatment Plant. This project will provide an interceptor force main to be installed using both open cut methods and a trenchless crossing of I-664. HRSD desires to construct this section of force main separate from Section 1 to accommodate coordination with on-going and proposed development of the multiple privately-owned properties that will be traversed. This project has been revised to include the SWIFT Water and backflush piping from the future Nansemond SWIFT Facility to each of the proposed well sites located west of I-664.

**Task Order Description and Analysis of Cost:** This task order will provide detailed design and pre-construction services. The detailed design will include plan and profile drawings and specifications. The design effort will also include development of an opinion of probably construction cost and a sustainability plan update. Pre-construction services will provide support from project advertisement through recommendation for award. The cost for this task order is based on a detailed, bottoms-up estimate of labor hours and direct costs required to execute the agreed-upon scope of work. The current opinion of probably construction cost for this project is \$20,000,000. The ratio of detailed design fee to construction cost is 8.1 percent, which compares well with three recent HRSD force main projects.

<b>Schedule:</b>	Design	November 2021
	Bid	September 2022
	Construction	December 2022
	Project Completion	December 2025



## CONSENT AGENDA ITEM 2.c.2. – November 23, 2021

**Subject:** Ingleside Road Pump Station Replacement  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Rummel, Klepper and Kahl, LLP in the amount of \$365,923.

**CIP Project: VP014700**

Budget	\$3,810,449
Previous Expenditures and Encumbrances	(\$108,345)
Available Balance	\$3,702,104

<b>Contract Status:</b>	<b>Amount</b>
Original Contract with RKK	\$0
Total Value of Previous Task Orders	\$102,402
Requested Task Order	\$365,923
Total Value of All Task Orders	\$468,325
Revised Contract Value	\$468,325
Engineering Services as % of Construction	7.1%

**Project Description:** This project includes replacement of the existing Ingleside Road Pump Station. The existing submersible pump station was constructed in 1976 and has experienced multiple pump failures, electrical issues and is experiencing structural degradation. Additionally, the pump station was severely damaged several years ago after a car demolished the external (pedestal mounted) pump electrical and control system. The replacement pump station will be a submersible pump station with an external generator and constructed on a site not subject to vehicular damage. The project is included in Phase 2 of the U.S. EPA Consent Decree Rehabilitation Action Plan and must be complete by May 5, 2025.

**Task Order Description:** This task order will provide design and pre-construction phase services to competitively bid the construction project.

**Analysis of Cost:** The cost for this task order is based on hourly labor rates and an estimated number of labor hours considered reasonable as compared to other construction projects.

<b>Schedule:</b>	PER	April 2020
	Design	December 2021
	Bid	December 2022
	Construction	February 2023
	Project Completion	November 2023

## CONSENT AGENDA ITEM 2.c.3. – November 23, 2021

**Subject:** Middlesex County Hartfield Collection System Phase I  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Rummel, Klepper & Kahl, LLP (RK&K) in the amount of \$205,000.

**CIP Project: MP014410**

Budget	\$678,250
Previous Expenditures and Encumbrances	(\$90,130)
Available Balance	\$588,120

<b>Contract Status:</b>	<b>Amount</b>
Original Contract with RK&K	\$46,665
Total Value of Previous Task Orders	\$0
Requested Task Order	\$205,000
Total Value of All Task Orders	\$205,000
Revised Contract Value	\$251,665
Engineering Services as % of Construction	8.0%

**Project Description:** This project includes the design and construction of approximately 3,975 linear feet of 8-inch gravity sewer as part of Hartfield Service Area H#1 sewer improvements, of General Puller Highway within the village of Hartfield, as defined in the 2019 Middlesex County Sewer Preliminary Engineering Report (PER). The gravity sewer will convey flows to a proposed pump station included in the Middlesex Transmission Force Main Phase II – Urbanna to Mathews Transmission Force Main (MP013730) project.

Future gravity system expansion beyond what has been identified as an existing development within the H#1 Service Area will be the responsibility of the development community and/or Middlesex County. Hence, all gravity mains constructed with this project shall be designed with adequate depth to allow for future logical system expansion and to maximize coverage within the boundaries of the H#1 Service Area. Sewer Service Extension Agreement was approved by Commission on May 26, 2020.

**Task Order Description:** This task order will provide Design and Pre-construction phase services for approximately 3,975 linear feet of 8-inch gravity sewer to extend sewer service to the Hartfield Service Area as part of Hartfield Service Area H#1 sewer improvements and convey flows to a proposed pump station on Wood Brothers Road.

**Analysis of Cost:** The cost for this task order is based on a negotiated number of consulting hours to provide Design and Pre-construction services including subconsultant fees for geotechnical investigation, survey, and quality level A and B subsurface utility engineering. The engineering services for these items are comparable to other gravity main projects of similar size and complexity.

<b>Schedule:</b>	Design	November 2021
	Bid	August 2022
	Construction	November 2022
	Project Completion	August 2022

## CONSENT AGENDA ITEM 2.c.4. – November 23, 2021

**Subject:** Middlesex Interceptor System Program Phase II – Transmission Force Main Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Kimley-Horn in the amount of \$408,377.

**CIP Project: MP013730**

Budget	\$33,027,000
Previous Expenditures and Encumbrances	(\$3,206,224)
Available Balance	\$29,820,776

<b>Contract Status:</b>	<b>Amount</b>
Original Contract with Kimley-Horn	\$1,877,700
Total Value of Previous Task Orders	\$339,610
Requested Task Order	\$408,377
Total Value of All Task Orders	\$747,987
Revised Contract Value	\$2,625,687
Engineering Services as % of Construction	11.7%

**Project Description:** This project includes approximately 17 miles of sewer force main that extends from Urbanna to a proposed connection to HRSD's Matthews Transmission Force Main near the intersection of Twiggs Ferry Road and Buckley Hall Road (Route 3/198). The force main will convey wastewater from Middlesex County to HRSD's York River Treatment Plant and enable decommissioning of two HRSD Treatment Plants (Urbanna and Central Middlesex). A portion of this project will be funded through the Virginia Clean Water Revolving Loan Fund Program and the Virginia Water Quality Improvement Fund Program.

**Task Order Description:** This task order will provide additional design phase services including property research for forty parcels, eighty easement plats, forty subsurface utility engineering test holes at a quality level A, easement acquisition assistance and coordination for thirty-six parcels, and forty geotechnical investigation borings.

**Analysis of Cost:** The cost for this task order is based on negotiated rates per parcel, easement plat, test hole, boring, and the number of consulting hours for permanent and temporary construction easement acquisition across an estimated thirty-six properties. The engineering services for these items are comparable to other force main projects of similar size and complexity.

<b>Schedule:</b>	Design	January 2021
	Bid	March 2022
	Construction	July 2022
	Project Completion	May 2025

## CONSENT AGENDA ITEM 2.c.5. – November 23, 2021

**Subject:** Norview Estabrook Division I, 18-Inch Force Main Replacement Phase II Section 2 Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Rummel, Klepper and Kahl, LLP in the amount of \$235,294.

**CIP Project: VP010920**

Budget	\$1,988,585
Previous Expenditures and Encumbrances	(\$84,468)
Available Balance	\$1,904,117

<b>Contract Status:</b>	<b>Amount</b>
Original Contract with RKK	\$82,237
Total Value of Previous Task Orders	\$0
Requested Task Order	\$235,294
Total Value of All Task Orders	\$235,294
Revised Contract Value	\$317,531
Engineering Services as % of Construction	9%

**Project Description:** This project will replace approximately 900 linear feet of 18-inch force main between Cromwell Drive and Robin Hood Road along Chesapeake Boulevard. One railroad crossing, under multiple Norfolk Southern tracks, is required. The pipe material and age are similar to other portions of the interceptor system in which HRSD has experienced multiple failures due to the tendency of cast iron to lose integrity with age. The project is included in Phase 2 of the U.S. EPA Consent Decree Rehabilitation Action Plan and must be complete by May 5, 2025.

**Task Order Description:** This task order will provide design and pre-construction phase services to competitively bid the construction project.

**Analysis of Cost:** The cost for this task order is based on hourly labor rates and an estimated number of labor hours considered reasonable as compared to other construction projects.

<b>Schedule:</b>	PER	November 2020
	Design	December 2021
	Bid	September 2022
	Construction	November 2022
	Project Completion	November 2024

## CONSENT AGENDA ITEM 2.c.6. – November 23, 2021

**Subject:** Williamsburg Treatment Plant Fats Oils and Grease (FOG) Thickener Tank Coating and Repairs  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Commonwealth Epoxy Coatings, Inc. in the amount of \$233,927.

<b>Contract Status:</b>	<b>Amount</b>
Original Contract with Commonwealth Epoxy Coatings, Inc.	\$0
Total Value of Previous Task Orders	\$6,607,019
Requested Task Order	\$233,927
Total Value of All Task Orders	\$6,840,946
Revised Contract Value	\$6,840,946

**Task Order Description:** This task order will provide all labor, tools, equipment and materials to build, install and coat a new steel rake arm system for the Williamsburg Treatment Plant FOG Thickener tank. The project consists of rehabilitating the concrete center shaft structural base, a new steel center shaft filled with concrete, center shaft cage, center shaft bearing and rake arms with bottom rakes with all tied back into the existing catwalk system. Once the steel work is all complete, the steel will be abrasive blasted and coated with an epoxy system.

Collins Engineering has been awarded the design phase of the project.

**Analysis of Cost:** The coating costs for this task order is based on the pre-determined rates of the Annual Coating Services contract. Additional costs related to the structural steel repairs are comparable to previous contracts awards for similar work.

CONSENT AGENDA ITEM 2.d.1. – November 23, 2021

**Subject:** Cambi B6-4 Thermal Hydrolysis Process (THP) System Replacement Parts, Maintenance and Repairs  
Sole Source (>\$10,000)

**Recommended Actions:**

- a. Approve the use of THP system replacement parts by Cambi, Inc. at the Atlantic Treatment Plant.
- b. Approve the use of Cambi, Inc. THP maintenance and repair services for use at the Atlantic Treatment Plant

**Sole Source Justification:**

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory

**Details:** Product includes the purchase of progressive cavity pump rotors and stators installed as part of the THP system. The progressive cavity pumps enclosed in the THP system are exposed to fluctuating and overall high sludge temperatures that require specific modifications to the internal workings of the pumps. It is important the materials and clearances of the rotor and stator are exact to the tolerances required to continue operation.

Services include general maintenance and repairs to the THP system.

A sole source procurement was approved at the November 2013 Commission meeting for the Cambi B6-4 Thermal Hydrolysis Process (THP) system for the Atlantic Treatment Plant including off-site storage for up to one year. This action supersedes previous actions and expands the scope to cover the replacement parts, maintenance and repairs.

CONSENT AGENDA ITEM 2.e.1. – November 23, 2021

**Subject:** Cisco Multilayer Director Switches (MDS) and EMC Unity Equipment Hardware and Software Support  
HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award (>\$200,000)

**Recommended Actions:**

- a. Approve the use of the Virginia Information Technologies Agency (VITA) for Storage Products and Services from Achieve 1, LLC.
- b. Award a contract to Achieve 1, LLC in the estimated amount of \$69,234 for one year with four annual renewal options and an estimated cumulative value of \$346,173.

**HRSD Estimate:** \$129,500

**Contract Description:** This contract is for the support of Cisco MDS, EMC Unity Equipment, Services, and Hardware and Software Support. The maintenance and support covers HRSD primary storage systems and its associated network connectivity.

**Analysis of Cost:** By utilizing the cooperative contract through VITA, HRSD is receiving a 16 percent cost savings.

CONSENT AGENDA ITEM 2.e.2. – November 23, 2021

**Subject:** Wireless Voice and Data Equipment and Services  
HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award  
(>\$200,000)

**Recommended Actions:**

- a. Approve the use of the General Services Administration (GSA) contract for wireless voice and data equipment and services from Verizon Wireless.
- b. Award a contract to Verizon Wireless in the estimated amount of \$720,000 for one year with four annual renewal options and an estimated cumulative value of \$3,600,000.

**Contract Description:** This contract is an agreement to provide wireless voice and data equipment and services for approximately 1,700 devices.

**Analysis of Cost:** The rates are comparable to other similar contracts with Verizon Wireless and other providers and are considered to be fair and reasonable.



AGENDA ITEM 3. – November 23, 2021

**Subject:** Disposition of Real Property  
Commission Adopted Policy

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

**Brief:** HRSD does not currently have a formal policy for disposing of real property to individuals or entities. Periodically, HRSD determines that certain real property it owns in fee simple is no longer needed or useful. In such circumstances, it may be in the best interest of HRSD to dispose of such real property. A formal policy will assure that the public understands HRSD's purpose for disposing of unneeded land and to assure that the effort is fair to all those individuals impacted by a potential sale or conveyance. HRSD's legal counsel has drafted this policy and has confirmed that it meets the Code of Virginia. The draft [Policy](#) is provided for Commission review and comment. The policy will be presented to the Commission for formal action at the December Meeting.

**COMMISSION ADOPTED POLICY**  
***Disposition of Real Property – As Determined  
to be no Longer Useful or Needed***



Adopted: *Draft (11/23/2021)*

Revised: [date or N/A]

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**1.0 Purpose and Need**

To establish procedures for disposing of real property to individuals or entities. Periodically, HRSD determines that certain real property it owns in fee simple is no longer needed or useful. In such circumstances, it may be in the best interest of HRSD to dispose of such real property.

These procedures do not apply to “*Facility Transfer Commission Adopted Policy*” originally adopted September 30, 2019. This policy is made in furtherance of, and does not supersede, “*Procurement Policy Commission Adopted Policy*” originally adopted December 16, 2014 including *Real Property Approvals* [Section 5.0(11)], as amended.

**2.0 Guiding Principles**

HRSD is responsible for ensuring adequate sewage treatment and conveyance capacity exists to meet the current and future sanitary sewer needs within the HRSD service area, and for operating and maintaining the sanitary sewer system, to protect public health and the environment.

HRSD is committed to real estate management practices that are accountable to our ratepayers and the public, ethical, impartial, professional, transparent and fully in accordance with applicable law.

In meeting its commitment to sound real estate management practices, it may be in the best interest of HRSD to dispose of real property that it owns in fee simple that it no longer needs or is useful to it.

**3.0 Procedures**

***Identification.*** HRSD through its Real Estate Manager shall identify real property that is no longer needed or useful to the current and reasonably anticipated future needs of HRSD and may seek to dispose of such real property. Such identification may be made in consideration of requests from third-parties to HRSD regarding the disposition of real property.

***Evaluation.*** HRSD through its Real Estate Manager shall evaluate the real property, which review will include input from members of the Engineering and Operations Departments in determining whether identified real property (or a portion thereof) is no longer needed or useful to the current and reasonably anticipated future needs of HRSD. The evaluation shall include review as to

**COMMISSION ADOPTED POLICY**  
***Disposition of Real Property – As Determined  
to be no Longer Useful or Needed***



Adopted: *Draft (11/23/2021)*

Revised: [date or N/A]

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whether HRSD is to retain any interest in the real property, including, for example, easement or right of way.

***Disposition of Real Property.*** Following an evaluation by the Real Estate Manager resulting in a determination that identified real property (or a portion thereof) is no longer needed or useful to the current and reasonably anticipated future needs of HRSD, HRSD may seek to dispose of such real property.

- a. In connection with the disposition of any real property, HRSD shall confirm its ownership of such real property. Where deemed appropriate, HRSD shall obtain a title report to confirm ownership of the real property.
- b. Generally, fair market value shall be the basis of any disposition of real property. Where deemed appropriate, HRSD may obtain an appraisal of the real property. Acquisition of an appraisal shall be made upon approval of the Director of Engineering. Certain circumstances may warrant a disposition of real property upon terms other than fair market value.
- c. The disposition of real property, including the terms for any such disposition, shall be subject to the approval of the Commission.
- d. The Real Estate Manager shall prepare a recommendation for approval by the Commission of the disposition of real property, which recommendation shall include:
  - (1) confirmation that the real property is no longer needed or useful to the current and reasonably anticipated future needs of HRSD,
  - (2) the proposed terms of any such disposition, and
  - (3) if the terms include a disposition for less than fair market value, a description of the nature of the circumstances warranting such disposition.
- e. Upon approval by the Commission, the instrument disposing of such real property shall be executed in the name of HRSD and shall be in a form approved by HRSD's counsel.

***Property Acquired by Eminent Domain.*** To the extent the real property was acquired, in whole or in part, by the exercise of the power of eminent domain, any disposition of such property shall comply with the applicable statutory requirements governing the disposition of such property to the extent deemed "surplus" as set forth in *Virginia Code* § 25.1-108, as amended.

**COMMISSION ADOPTED POLICY**  
***Disposition of Real Property – As Determined  
to be no Longer Useful or Needed***



Adopted: <i>Draft (11/23/2021)</i>	Revised: [date or N/A]	Page 3 of 3
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**Implementation.** The Director of Engineering shall establish procedures consistent with this policy and may designate other HRSD staff to act on their behalf.

**4.0 Responsibility and Authority**

This policy was developed in accordance with HRSD’s Enabling Act. Any changes to this policy shall be made in writing and approved by the Commission.

This policy shall be reviewed as needed by the Director of Engineering and revised as required to conform to current law and regulations.

Approved: *Draft* \_\_\_\_\_ Date \_\_\_\_\_  
Frederick N. Elofson, CPA  
Commission Chair

Attest: *Draft* \_\_\_\_\_ Date \_\_\_\_\_  
Jennifer L. Cascio  
Commission Secretary

## AGENDA ITEM 4. – November 23, 2021

**Subject:** Mid-Year Inflation Adjustment to Salaries

**Recommended Action:** Approve a one percent cash bonus to all employees in all grades in steps 1 through 10 and a 4.1 percent base salary increase to all employees in all grades in step 10X to be included in the pay to be received on December 30, 2021.

**Background:** The [Compensation Policy](#), adopted by the Commission in 2016, is the basis for setting salaries for all HRSD employees. That policy requires a market review of salaries be conducted every three to five years and the results used as necessary to adjust the HRSD Pay Table to keep HRSD salaries competitive in our market. This review can result in various adjustments to the Pay Table and in the past has adjusted certain grades, eliminated steps at the bottom of the pay range, added steps to the top, and even eliminated steps altogether. This market based process has worked well to keep HRSD salaries competitive.

The Pay Table is designed to allow employees to progress through all steps by earning annual merit increases of 4.4 percent and in approximately 10 years, reaching the top step which is defined as the maximum market value for that position. Once an employee reaches the maximum market value for their position, earned merit increases are based on the Chained CPI-U to protect the employees' spending power. The Chained CPI-U is established as the previous December to December change in the CPI as we use that data to inform our budget for the following fiscal year. For example, this year's (Fiscal Year 2022) merit increases for employees at their maximum market value (Step 10X) is 1.2 percent, which was the increase in the Chained CPI-U between December 2019 and December 2020. Employees earning merits during FY-2022 (July 1, 2021 through June 30, 2022) are receiving a 1.2 percent increase on their merit date.

This trailing system is necessary for budgeting purposes and has served us well in the relatively stable economy that has existed for the past 5 years. The annual Chained CPI-U has ranged from a low of 0.5 percent in FY-2017 to a high of 2.2 percent in FY-2018. With very small annual changes in the index hovering in the 1 to 2 percent range, the trailing nature of the merits (18 months in the case of a June 30<sup>th</sup> merit date) has not been an issue.

In the current economic environment, this system is not working well and staff is recommending adjustments prior to the market review scheduled for this winter as part of the FY-2023 budget process. The near term goal, of preserving spending power, requires a more significant pay adjustment to help employees address this unprecedented increase in year-over-year inflation. The market study to be conducted during the FY-2023 budget preparation will reflect current economic conditions and make the necessary adjustments to ensure HRSD salaries within the pay table remain competitive. The recommended mid-year bonus of one percent for all employees within the pay table keeps them whole when their 4.4 percent merit is considered – everyone will have the ability to maintain pace (actually exceed) with the 5.3 percent rate of inflation (September to September).

The market study does not impact employees earning more than the maximum (Step 10) salary. Those employees have earned Chained CPI-U based merit increases in the past which places their current salaries above the maximum step 10 salary on the pay table. To maintain their spending power, the proposed 4.1 percent base salary increase, when added to their earned merit of 1.2 percent, will provide a total potential annual increase of 5.3 percent.

Funds for this mid-year adjustment will be absorbed within the existing approved budget for FY-2022.

## AGENDA ITEM 5. – November 23, 2021

**Subject:** Recreational Trails Program  
Grant Agreement

**Recommended Action:** Approve the terms and conditions of the subgrantee agreement with Virginia Department of Conservation and Recreation for preliminary engineering and construction of the Flax Mill Creek Trail and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications, and deletions as the General Manager may deem necessary.

**Background:** The Federal Highway Administration's (FHWA) Recreational Trails Program (RTP) provides funds to the states to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. Each state develops and manages its own program of project selection and grant administration. Virginia Department of Conservation and Recreation (DCR) administers the program in Virginia.

The FHWA RTP and Virginia Recreational Trails Program Advisory Committee recommends project selections after a competitive call for applications. Thirty-five applications were received during an open-application process that ended in June 2021. DCR and FHWA awarded nine trail projects this year. HRSD has been awarded \$300,000 of grant funding to be used for preliminary engineering and construction of the Flax Mill Creek Trail project.

HRSD entered into an [Agreement](#) with the City of Newport News to purchase approximately 10 acres of land adjacent to the James River Treatment Plant (JRTP) and receive the required easements for managed aquifer recharge wells, buildings, and related piping. Among the requirements stated in the land purchase Agreement is the commitment by HRSD to design and construct public access trails, which will be operated and maintained by the City of Newport News. HRSD Commission approved the land purchase Agreement in January 2020 and Newport News City Council approved the Agreement in March 2021.

The Flax Mill Creek Trail is one portion of the new public trails. This new trail will connect the existing Riverview Farm Park trails at the northwest corner of HRSD's property to the existing Riverview Farm Park Pier trail near the southeast corner of HRSD's property. The Flax Mill Creek Trail will be located within the recreational easement granted to the City of Newport News along the waterfront perimeter of JRTP. The eight-foot-wide trail will be intended for pedestrian-use only and will include both at-grade asphalt sections and elevated boardwalks. The estimated construction cost for the Flax Mill Creek Trail portion is \$2.5 million.

HRSD will conduct additional trail design and construction efforts that will be completed in addition to this specifically defined Flax Mill Creek Trail. The Flax Mill Creek Trail and the other Phase 1 trails are anticipated to be complete by the end of 2023.

The [subgrantee agreement](#) includes requirements for environmental review, adherence to the Buy America Act, adherence to Disadvantaged Business Enterprise (DBE) and Small, Woman-Owned and Minority-owned (SWaM) procedures, and other requirements as stated in the agreement.

Ann Jennings  
Secretary of Natural and Historic  
Resources and Chief Resilience Officer

Clyde E. Cristman  
Director



**COMMONWEALTH of VIRGINIA**  
DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz  
Deputy Director of  
Administration and Finance

Nathan Burrell  
Deputy Director of  
Government and Community Relations

Darryl M. Glover  
Deputy Director of  
Dam Safety & Floodplain  
Management and Soil & Water  
Conservation

Thomas L. Smith  
Deputy Director of  
Operations

**RECREATIONAL TRAILS PROGRAM (RTP)  
FEDERAL HIGHWAY ADMINISTRATION - FHWA  
VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION**

**Project Agreement – Preliminary Engineering and Construction Phases**

**Recipient:** Hampton Roads Sanitation District

**Project Title:** Flax Mill Creek Trail

**Project Number:** 339N210

**Project Period:** FHWA authorization date of September 14, 2021 through August 31, 2024.

**Project Scope of Work:** Perform Preliminary Engineering, grade, and construct approximately 2,794 linear feet of 8' wide pedestrian trail with combination of asphalt and boardwalk.

**Grant Award Amount:** \$300,000.00 (total project cost of \$375,000.00)

Upon signature of both parties below, the Department of Conservation and Recreation (DCR) and the Hampton Roads Sanitation District hereinafter referred to as the "Recipient" mutually agree to perform this agreement in accordance with the Recreational Trails Program as codified at 23 U.S.C. 206, the provisions and conditions of the FHWA Interim Guidance dated April 1, 1999, as amended, and with the regulations and requirements governing federal grants as stipulated in 2 CFR Parts 175, 200, 215, 225. and Federal Highway Administration regulations as outlined in 49 CFR Parts 18, 20, 29, and 32 (<http://www.whitehouse.gov>)

In accepting this grant, evidenced by the signature below, the Recipient agrees to comply, adhere, and abide with the following conditions of this grant agreement:

**Performance Period**

1. The project period shall begin with the date of FHWA authorization and shall terminate at the end of the stated or amended project period unless the project is completed or terminated sooner; in which event, the project shall end on the date of completion or termination.
2. The scope of work for this project agreement is expected to be complete and financially closed out by **August 31, 2024**. Recipients unable to meet this deadline must contact DCR no less than 90 days prior to project expiration.
3. RTP recipients with PE projects unable to complete construction by the project end date authorization

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date may be required to return all funding to DCR for return to the FHWA, as discussed in the Project Termination section of this agreement.

4. Extensions are not a right and will only be considered in accordance with the extension policy as outlined in the 2021 Recreational Trails Program grant application manual. An extension will only be considered due to documented severe weather conditions, unexpected staff turnover during the project performance period, and delays due to unexpected environmental concerns.

### **Project Execution**

1. The recipient is expected to have a project manager assigned to the project as the primary contact and a designated backup for communicating project status.
2. The subject line of all email correspondence must begin with the project number, *339N210*.
3. Fiscal Procedures, Procurement Procedures, and Bidding Procedures of the Recreational Trails Program as outlined in the most recent Virginia DCR Recreational Trails Program Manual.
4. Any modification and/or amendments must be in accordance with the DCR RTP Manual and FHWA guidelines after consultation with DCR Recreation Grants staff. Final approval is at the authority of FHWA.
5. The Recipient will cause work on the project to be commenced within a reasonable time after receipt of notification that funds have been approved and assure that the project will be pursued to completion with reasonable diligence.
6. The Recipient will comply with the terms of Title II and Title III, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646), 94 Stat. 1894 (1970), and the applicable regulations and procedures implementing such Act for all real property acquisitions and where applicable shall assure that the Act has been complied with for property to be developed with assistance under the project agreement.

### **Environmental Review**

1. The Recipient will insure that the facilities under its ownership, lease, or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities, pursuant to 40 CFR, Part 15.20, and that it will notify DCR of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be utilized in the project is under consideration for listing by the EPA.
2. All applicable state, federal, and local laws, regulations and ordinances including but not limited to compliance with the Virginia Erosion & Sediment Control and Virginia Stormwater Management Laws & Regulations.
3. The recipient agrees to comply with the Virginia Seed Law to ensure no noxious weed seeds are introduced into the project area.
4. The Recipient will comply with the provisions of: Executive Order 11988, relating to evaluation of flood hazards; Executive Order 11288, relating to the prevention, control, and abatement of water pollution, and Executive Order 11990 relating to the protection of wetlands.
5. The recipient will take necessary actions to ensure compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470), Executive Order 11593, and the Archeological and Historic Preservation Act of 1966 (16 U.S.C. 469a-1 et seq.) by (a) consulting with the State Historic



Preservation Officer on the conduct of investigations, as necessary, to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to effects (see CFR Part 800.8) by the activity, and notifying the Federal grantor agency of the existence of any such properties, and by (b) complying with all requirements established by the Federal grantor agency to avoid or mitigate adverse effects upon such properties.

6. The Recipient will comply with the National Environmental Policy Act and complete a NEPA-level review process for the RTP project for submission to FHWA for authorization. No project construction may begin until FHWA authorizes the NEPA document. Please refer to the DCR RTP Manual and supporting documents for further guidance.
7. The Recipient agrees to contact both the appropriate state and/or federal agency and DCR if any unexpected environmental concerns are encountered during project construction. Discovery of previously unforeseen environmental concerns, shall be the responsibility of the project sponsor to coordinate with any and all pertinent agencies as needed for consultation or guidance. Communication with the DCR Recreation Grants Management staff is encouraged to ensure DCR is aware of any project delays.
8. Copies of the National Environmental Policy Act (NEPA) document (categorical exclusion, environmental assessment, or environmental impact statement), the National Historic Preservation Act section 106 determination, the Endangered Species Act section 7 determination, all permits (land disturber, stormwater management, erosion and sediment control, Virginia Department of Transportation right of way permit for ingress/egress and travel of ATVs across public road right of way, COE permits, local building, etc.) issued for the project are required to be submitted to DCR for the grant file.
9. The Recipient will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1976. Section 102(a) requires the purchase of flood insurance in communities where such insurance is available, as a condition for the receipt of any federal financial assistance for construction or acquisition purposes, for use in any area that has been identified as an area having special flood hazards by the Flood Insurance Administration of the Federal Emergency Management Agency.

### **Procurement and Contracting**

1. Purchase of supplies, equipment, or services must be in accordance with the Virginia Public Procurement Act (<https://law.lis.virginia.gov/vacodepopularnames/virginia-public-procurement-act/>) and all applicable state and local procurement laws.
2. The Recipient will comply with Executive Order 12432, "Minority Business Enterprise Development as follows (a) place minority business firms on bidder's mailing lists, (b) solicit these firms whenever they are potential sources of supplies, equipment, construction, or services, (c) where feasible, divide total requirements into smaller needs, and set delivery schedules that will encourage participation by these firms. The recipient will comply with the Disadvantaged Business Enterprise (DBE) Program and the Small, Woman-Owned and Minority-owned (SWaM) procedures as outlined in the DCR RTP Manual. DCR and the Federal Highway Administration are committed to the objectives of this policy and encourage all Recipients of its grants and cooperative agreements to take affirmative steps to ensure such fairness.
3. Bid documentation must be administratively reviewed by DCR prior to posting and must contain notice that the purchase or service is being offered or performed in accordance with the Recreational Trails Program and the Compliance Guidance in the United States Department of Transportation regulations in 49 CFR and applicable parts 18.19 and 26, as amended.
4. Bid documentation must be administratively reviewed by DCR prior to awarding and signing of contracts.

5. Prior to any land disturbances associated with the project, a copy of the advertisement for bid, the bid spreadsheet showing the lowest bidder, evidence of the good faith effort for including DBEs in the bid process, and a copy of the executed contract must be submitted to DCR. The expectation is that the award will go to the lowest bidder. Federal procurement laws for projects within highway Right of Way prohibit negotiation with the lowest bidder. If only one bid response is received then the project **must be re-bid**. Project work shall not be awarded to any vendor which is debarred or suspended or is otherwise excluded for or ineligible for participation in Federal assistance programs under Executive Order 12549, "Debarment and Suspension." All vendors and contractors providing supplies, materials, goods, equipment, services, etc. for the project must be licensed in Virginia as required.
6. Recipient must adhere to 23 U.S.C. 206; 2 CFR 200; the Commonwealth of Virginia's construction procurement requirements; the Buy America Act; and the federal requirements outlined in form FHWA 1273. If contradictions occur the Recipient must communicate them to DCR for consultation with FHWA for instructions on how to proceed. Architectural and engineering firms are to be informed that all projects are to be constructed in compliance with all applicable state and local laws and regulations, FHWA 1273, and Buy America Executive Order 13788.
7. The Recipient bears sole responsibility for ensuring that all contracts are in compliance with federal and state laws concerning the solicitation of supplies, equipment, and services.
8. The Recipient shall secure completion of the work in accordance with approved construction plans and specifications, and shall secure compliance with all applicable Federal, State, and local laws and regulations.
9. Documentation providing a summary of the procurement on the RTP project including the Recipient's effort to including DBEs in the project. This documentation includes but is not limited to the request for proposal for engineering services, the A/E contract, other contracts, final Invitation For Bid, Project Manual, bid spreadsheet showing lowest, responsive and responsible bidder, and executed contract.

### **Record Retention**

1. Financial records, supporting documents, statistical records, and all other records pertinent to this grant shall be retained in accordance with 49 CFR for a period of three years; except the records shall be retained beyond the three-year period if audit findings have not been resolved. The retention period starts from the date of the final expenditure report for the project.
2. The Federal Highway Administration, Comptroller of the United States of America, DCR or any of their authorized representatives shall have access to any books, documents, papers, and records of the recipient which are pertinent to this Recreational Trails Program grant project for the purpose of making audit, examination, excerpts, and transcripts.

### **Project Termination**

1. DCR may terminate the project in whole, or in part, at any time before the date of completion, whenever it is determined that the Recipient has failed to comply with the conditions of the project agreement. DCR will promptly notify the Recipient in writing of the determination and the reasons for the termination, together with the effective date.
2. The recipient understands that terminated projects must return any RTP funding received to DCR for return to the FHWA, unless a funded element within the original scope of work is open and usable to the public at the time of termination. Funding previously received for incomplete or unopen scope items must still be returned.

3. Termination by the Recipient either for cause or for convenience requires that any and all RTP reimbursement payments must be returned to DCR for return to the FHWA unless a funded element within the original scope of work is open and usable to the public at the time of termination. In this circumstance the Recipient may not have to return funds already received for the completed scope element.

### **Reporting**

1. Submission of Quarterly Progress Reports on status of grant implementation. First report due no later than **February 28, 2022**. All correspondence pertaining to this project must reference State Project Number **339N210**.
2. Submission of final design and construction plans and documents for administrative review.
3. Submission of NEPA pathway and supporting documentation, as discussed in “Environmental Review” section.
4. Submission of draft advertisement for bid for administrative review as discussed in Procurement and Contracting. Also submit final spreadsheet of bids received and a copy of the final contract for any engineer and construction work relevant to the RTP project.
5. The first reimbursement request must be submitted by **February 28, 2022**. **FHWA requires that quarterly (every 3 months) reimbursement requests be submitted throughout the project period.** A final reimbursement must be submitted by the grant agreement deadline. Failure to adhere to this requirement renders the project “inactive” which can result in de-obligation and loss of funding. RTP Recipients unable to show fiscal activity in every 3 months must provide justification for project delay.
6. Submission of final closeout report to include verification that no additional reimbursements will be sought, photographs of completed project, final scope, and narrative of project accomplishments.

### **Reimbursement Procedures**

1. The recipient understands all funding associated with the Recreational Trails Program is federal funding made possible from the Federal Highway Administration. Reimbursements are paid on an 80% matching reimbursement basis not to exceed the actual out of pocket expense or the approved total award amount provided adequate documentation is submitted by the Recipient to justify expenditures incurred and paid. The Recipient understands that no Commonwealth of Virginia funding is associated with this project and no Commonwealth of Virginia funding will be made available for this project under any circumstances.
2. The recipients understands that reimbursement by the Recreational Trails Program is not a right. Reimbursements are contingent upon satisfactorily completing the authorized scope of work within the approved performance period and submitting required documentation for reimbursement.
3. Reimbursement requests must be submitted via email to [recreationgrants@dcr.virginia.com](mailto:recreationgrants@dcr.virginia.com). Each reimbursement request must include:
  - a) A signed transmittal letter/performance report describing the work completed, challenges, amount of DBE participation in the project (if any), a breakdown by percentage of the total cash, donation, volunteer, or in-kind work involved. The transmittal should include the reimbursement amount being requested. A template is provided.
  - b) Receipts, delivery tickets, and packing slips for materials and supplies purchased. This is required for all projects including contractor performed work.

- c) Invoices/Schedule of Values (SOV) itemizing charges. All invoices/SOV should reference the RTP project. Invoices/Schedule of Values must be detailed with an explanation for how the purchases relate to the RTP authorized work. Invoices/Schedule of Values with expenses for materials and supplies without corresponding delivery tickets, packing slips, etc. will not be honored and will be ineligible for reimbursement. When invoices contain other purchases not related to the RTP project, the purchases applying to the RTP project must be clearly identified.
  - d) Invoices must clearly show how the material, supply, or service relates to the RTP authorized scope of work.
  - e) Time cards signed by both the employee and supervisor are required for labor submitted for reimbursement. Time cards are needed for contract labor performed work, force account performed work, and volunteer performed work. A description indicating how the work performed by the employee ties to the RTP authorized work is needed. "Trail work" is not acceptable. Unsigned timecards by either the employee or supervisor are ineligible for seeking reimbursement. Incomplete timecards are ineligible for seeking reimbursement. Unsigned and/or incomplete volunteer time cards and/or logs are ineligible for seeking reimbursement. Timecards/volunteer logs for multiple individuals that appear to be in the same handwriting will be deemed ineligible.
  - f) All expenditures must have an accompanying proof of payment in the form of image of cleared check (front and back of check), credit card receipt, bank statement, payroll ledger, or pay stub copies, etc. Internal source documents are not sufficient to prove an outlay of funds.
  - g) Holiday, Annual, Sick leave, and Overtime may not be charged to the RTP project.
  - h) Work logs indicating daily tasks completed for the RTP project are required. Daily work logs are required for engineering services, force account, volunteer and contract built projects.
  - i) Materials notebook. The materials used on any project must be documented as approved materials meeting specifications and documented as to the quantities used. The materials notebook must contain the total quantities of materials incorporated into the project including a description of the material, the material supplier, and manufacturer. Supporting documentation such as delivery tickets, test reports, and certifications demonstrating conformance to specifications is required to demonstrate compliance with Presidential Order 13788 and the Buy America Act. The Contractor's quality control manager and the local project manager must sign the materials notebook. Self-built projects require material books and should be signed by the project manager.
  - j) Equipment records must clearly identify machinery, date, time, name of operator, rate of the equipment, and description how the equipment was used in accordance with the authorized RTP scope of work. If discrepancies exist between the hours on the operator's time sheets and the equipment records explanations are required to determine eligibility for reimbursement purposes.
  - k) Buy America documentation must be submitted to support iron or steel products used in the RTP project. Documentation includes, but is not limited to, certification by the manufacturer, mill paperwork, etc. Reimbursement documentation must identify all iron, steel, and aluminum parts incorporated into the project with the dollar value of each item as delivered to the project site. Failure to demonstrate compliance with the Buy America Act and Executive Order 13788 will result in no reimbursement being made to the recipient.
4. The recipient understands the RTP program requires documentation to justify all expenditures associated with the project before reimbursement can be authorized. Each RTP project is situation specific and

additional information to what is listed in this project agreement above may be requested to receive reimbursement. The failure to provide suitable documentation for authorization from the FHWA for payment can result in the inability to be reimbursed for work performed, either in whole or in part. In situations where ambiguity exists in determining how an expense related to the authorized RTP scope of work no reimbursement will be possible. In situations where ambiguity exists regarding the eligibility of an expense no reimbursement will be allowed.

5. Reimbursements are normally processed in forty-five (45) days once documentation has been received and verified by both DCR and the FHWA.
6. Projects utilizing other federal funds in addition to the Recreational Trails Program funding must discuss this with DCR Recreation Grants Staff. Federal Agency recipients may be required to comply with the 95% rule which states that the total federal dollars from the Secretary of Transportation and the Federal Agency project sponsor cannot exceed 95%. **Each reimbursement request must adhere to this rule.** The recipient is responsible for adherence to program and eligibility requirements of other federal and non-federal fund sources used on the project.
7. The final reimbursement request may be held from final payment until the work described in the scope of work is completed and satisfactorily inspected by DCR.

### **Special Conditions**

1. The Facility Life assigned to this project scope of work after construction funding has been added to the project must be a reasonable lifespan depending on the trail components and materials. DCR preference is 20 years beginning with the date of final reimbursement.
2. The Recipient agrees that DCR's waiver or failure to enforce or require performance of any term or conditions of this project agreement or DCR's waiver of any particular breach of this project agreement by the Recipient extends to that instance only. Such a waiver or failure to enforce is not and shall not be a waiver of any of the terms or condition of this project agreement or a waiver of any other breaches of the project agreement by the Recipient and does not bar DCR from asserting any and all rights and/or remedies it has or might have against the Recipient under this project agreement or by law.
3. The Recipient understands that the Recreational Trails Program is a federally funded program subject to actions by Congress and regulatory changes which may impact the execution of this project by the Recipient. DCR will work with the Recipient in adjusting to any changes that occur during the life of this project as soon as any changes are made known to us.

### **Provision of a Drug-Free Workplace**

In compliance with the Drug-Free Workplace Act of 1988 (43 CFR Part 12, Subpart D), upon signing the Recreational Trails Program project agreement, the Recipient certifies that it must:

- A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- B. Establishing a drug-free awareness program to inform employees about:
  - (1) The dangers of drug abuse in the workplace.
  - (2) The grantee's policy of maintaining a drug-free workplace.
  - (3) Any available drug counseling, rehabilitation, and employee assistance programs.
  - (4) The penalties that may be imposed upon employees for drug violations occurring in the

- workplace.
- (5) Making it a requirement that each employee engaged in the performance of the grant be given a copy of the statement required by paragraph (A)
  - C. Notifying the employee in the statement required by paragraph (A) that, as a condition of employment under the grant, the employee will –
    - (1) Abide by the terms of the statement.
    - (2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction.
  - D. Notifying the agency within ten days after receiving notice under subparagraph (C)(2) from an employee or otherwise receiving actual notice of such conviction.
  - E. Taking one of the following actions, within 30 days of receiving notice under subparagraph (c)(2), with respect to any employee who is so convicted –
    - (1) Taking appropriate personnel action against such an employee, up to and including termination.
    - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.
  - F. Making a good faith effort to continue to maintain a drug-free workplace through implementation of all of the paragraphs above.

### **Non-Discrimination**

- 1. All activities pursuant to this Agreement shall be in compliance with the requirements of Executive Order 11246, as amended; Title VI of the Civil Rights Act of 1964, as amended, (78 Stat. 252; 42 U.S.C. §§2000d et seq.); Title V, Section 504 of the Rehabilitation Act of 1973, as amended, (87 Stat. 394; 29 U.S.C. §794); the Age Discrimination Act of 1975 (89 Stat. 728; 42 U.S.C. §§6101 et seq.); and with all other federal laws and regulations prohibiting discrimination on grounds of race, color, sexual orientation, national origin, disabilities, religion, age, or sex.

### **Lobbying Prohibition**

- 1. 18 U.S.C. §1913, Lobbying with Appropriated Moneys, as amended by Public Law 107–273, Nov. 2, 2002 – No part of the money appropriated by any enactment of Congress shall, in the absence of express authorization by Congress, be used directly or indirectly to pay for any personal service, advertisement, telegram, telephone, letter, printed or written matter, or other device, intended or designed to influence in any manner a Member of Congress, a jurisdiction, or an official of any government, to favor, adopt, or oppose, by vote or otherwise, any legislation, law, ratification, policy, or appropriation, whether before or after the introduction of any bill, measure, or resolution proposing such legislation, law, ratification, policy, or appropriation; but this shall not prevent officers or employees of the United States or of its departments or agencies from communicating to any such Members or official, at his request, or to Congress or such official, through the proper official channels, requests for legislation, law, ratification, policy, or appropriations which they deem necessary for the efficient conduct of the public business, or from making any communication whose prohibition by this section might, in the opinion of the Attorney General, violate the Constitution or interfere with the conduct of foreign policy, counter-intelligence, intelligence, or national security activities. Violations of this section shall constitute violations of section 1352(a) of title 31.

In witness whereof, the parties hereto have executed this agreement as of the date entered below.

**Commonwealth of Virginia  
The Department of Conservation and Recreation**

By \_\_\_\_\_ Date \_\_\_\_\_  
Clyde Cristman  
Department of Conservation and Recreation Director

**Hampton Roads Sanitation District**

By \_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature Date \_\_\_\_\_

\_\_\_\_\_  
Title

AGENDA ITEM 6. – November 23, 2021

**Subject:** Fuel Supply and Delivery Services  
Contract Award (>\$200,000)

**Recommended Action:** Award a blanket purchase contract for Fuel Supply and Delivery Services to Papco, Inc. in the estimated amount of \$589,835 for one year.

**Contract Description:** This contract is an agreement for the supply and delivery of regular gasoline, premium gasoline and ultra-low sulfur diesel for HRSD. This is a temporary contract to provide these services previously fulfilled by another supplier after their contract was terminated due to performance issues.

This is a temporary contract with HRSD readvertising a formal solicitation in September 2022.

**Analysis of Cost:** The cost for fuel is a base index price plus a fixed differential, plus any taxes and fees. The rates are considered to be fair and reasonable. Papco, Inc was the second apparent low bidder on the original Fuel Supply and Delivery competitive solicitation (404004). In addition, Papco, Inc. has agreed to offer these services at rates based on a local municipality current contract rates.



AGENDA ITEM 7. – November 23, 2021

**Subject:** Birchwood Trunk 24-Inch and 30-Inch Force Main at Independence Boulevard  
Replacement Phase II  
Initial Appropriation

**Recommended Action:** Appropriate total project funding in the amount of \$1,702,700.

**CIP Project:** CE011300

**Project Description:** This project will replace approximately 350 linear feet of 24-inch reinforced concrete pipe crossing Independence Boulevard just south of Cleveland Street in the City of Virginia Beach. A leak was identified in December 2009 and repaired under an emergency designation with a recommendation to replace the entire roadway crossing. The project is included in Phase 2 of the U.S. EPA Consent Decree Rehabilitation Action Plan and must be complete by May 5, 2025.

**Funding Description:** The total project cost estimate of \$1,702,700 includes approximately \$88,700 in design phase services, \$1,459,000 in construction phase costs, and \$155,000 of project contingency and is based on a Class 5 CIP-prioritization level cost estimate prepared by HRSD. Engineering services will be completed by Rummel, Klepper and Kahl, LLP under the Interceptor System Projects annual services contract and the cost for the initial design task order is below the \$200,000 Commission approval threshold.

<b><u>Schedule:</u></b>	PER	December 2021
	Design	May 2022
	Bid	November 2022
	Construction	February 2023
	Project Completion	February 2024

## AGENDA ITEM 8. – November 23, 2021

**Subject:** Climate Change Planning  
Additional Appropriation and Task Order

**Recommended Actions:**

- a. Appropriate additional funding in the amount of \$1,870,000.
- b. Approve a task order with CDM Smith, Inc. in the amount of \$1,870,000.

**CIP Project: GN017100**

Budget	\$3,000,000
Previous Expenditures and Encumbrances	(\$3,000,000)
Available Balance	\$0
Proposed Task Order to CDM Smith, Inc.	(\$1,870,000)
Project Shortage/Requested Additional Funding	(\$1,870,000)
Revised Total Project Authorized Funding	\$4,870,000

<b>Contract Status with Task Orders:</b>	<b>Amount</b>
Original Contract with CDM Smith, Inc.	\$828,000
Total Value of Previous Task Orders	\$2,170,780
Requested Task Order	\$1,870,000
Total Value of All Task Orders	\$4,040,780
Revised Contract Value	\$4,868,780

**Project Description:** The Hampton Roads Planning District Commission (HRPDC) has adopted a range of 3 to 4.5 feet as the planning range for sea level rise by 2100. When this elevation is added to the Virginia Institute of Marine Science (VIMS) 100-year flood projections, the Hampton Roads region could be significantly impacted by the year 2060. In addition, there are several other climate change scenarios that will also have impacts to HRSD facilities. These include recurrent flooding and extreme storm events (those beyond the level of service) which could cause damage to HRSD infrastructure. This study will look at ensuring continuing operation of HRSD facilities during these events and to prepare for Sea Level Rise. From this analysis, additional CIP projects will be determined in order to prepare HRSD for resiliency today and future climate change.

**Funding Description:** The original CIP project estimate did not include a detailed analysis for the Nansemond, Virginia Initiative (VIP), and York River Treatment Plants. After reviewing the results of the Atlantic Treatment Plant, it was decided that a similar analysis be completed for the additional three treatment plants because of the proposed SWIFT facilities. As HRSD begins design of improvements to these treatment plants, we need to account for climate change and by having a more in-depth review of the site conditions will assist in those designs. The negotiated amount for this work is \$1,870,000 and exceeds the balance available for this CIP project.

**Task Order Description and Analysis of Cost:** The first effort is for extending Work Order 1, Project Management. This is the overall management of the study which includes meetings and status reports, as needed. A fee of \$175,000 was negotiated and was considered to be appropriate for this effort. The second effort is for Work Order 7, Nansemond, VIP, and York River Treatment Plants Vulnerability Assessment and Mitigation Measure Evaluation. The work order includes a more detailed analysis for the Nansemond, VIP, and York River Treatment Plants using the same facility

data collection, evaluation, flood risk identification, vulnerability assessment, and mitigation measure recommendation approach as applied for the Atlantic Treatment Plant under Work Order 5. Stillwater flood level elevations needed as input for the vulnerability assessment will come from work completed under Work Order 4 of this study and will be supplemented by overland wave propagation analyses under this work order. A fee of \$1,695,000 was negotiated and was considered to be appropriate for this phase of the study.

HRSD's consultant, CDM Smith, Inc., will provide a briefing to describe the initial results of the study and the additional work effort to be conducted.

**Schedule:** Final Report

Jan 2023

## AGENDA ITEM 9. – November 23, 2021

**Subject:** Effingham Interceptor Vault Removal  
Additional Appropriation, Contract Award (>\$200,000) and Task Order (>\$200,000)

**Recommended Actions:**

- a. Appropriate additional funding in the amount of \$2,687,638.
- b. Award a contract to Bridgeman Civil, Inc. in the amount of \$2,179,062.
- c. Approve a task order with Rummel, Klepper and Kahl, LLP (RKK) in the amount of \$351,426.

**CIP Project: VP018200**

Budget	\$989,500
Previous Expenditures and Encumbrances	(\$346,650)
Available Balance	\$642,850
Proposed Contract Award to Bridgeman Civil	(\$2,179,062)
Proposed Task Order to RKK	(\$351,426)
Proposed Contingency	(\$800,000)
Project Shortage/Requested Additional Funding	(\$2,687,638)
Revised Total Project Authorized Funding	<u>\$3,677,138</u>

**Type of Procurement:** Competitive Bid

Bidder	Bid Amount
Bridgeman Civil, Inc.	\$2,179,062
Shaw Construction Corporation	\$3,221,238
Gaston Brothers Utilities, LLC	\$4,058,700
Tidewater Utility Construction, Inc.	\$5,355,100

**Engineer's Estimate:** \$2,153,700

Contract Status:	Amount
Original Contract with RKK	\$96,800
Total Value of Previous Task Orders	\$245,899
Requested Task Order	\$351,426
Total Value of All Task Orders	\$597,325
Revised Contract Value	\$694,125
Engineering Services as % of Construction	27%

**Contract Description:** In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids from potential bidders. The project was advertised on October 3, 2021, and four bids were received on October 28, 2021. The design engineer, RKK, evaluated the bids and recommends award to the lowest responsive and responsible bidder, Bridgeman Civil, Inc. in the amount of \$2,179,062.

**Project Description:** This project will rehabilitate 1,815 feet of existing 36-inch prestressed concrete cylinder pipe (PCCP) interceptor force main with a structural cured-in-place pipe (CIPP) lining and

removal of the vaults. The structural lining will extend from a new tee and valve near the Race Street Pump Station northerly toward the intersection of Effingham Street and County Street.

**Task Order Description and Analysis of Cost:** This task order will provide contract administration, construction inspection and post start-up and certification services for this project. A meeting was held to discuss the project and scope of services. A fee of \$351,426 was negotiated to provide the required oversight for the project. The cost of the task order is based upon an estimation of hours and rates to complete the work. The hours and rates are in line with past efforts on similar projects.

**Funding Description:** This project was originally presented to the Commission in September 2018. The scope of the project has significantly increased since then and has been split into two phases of construction. This project requires additional funding for construction related services. The amount for this work exceeds the balance available for this CIP project. This funding request includes an \$800,000 contingency to accommodate any additional unforeseen conditions.

<b><u>Schedule:</u></b>	PER	August 2018
	Design	September 2018
	Bid	November 2021
	Construction	December 2021
	Project Completion	November 2022

AGENDA ITEM 10. – November 23, 2021

**Subject:** Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements  
Initial Appropriation

**Recommended Action:** Appropriate total project funding in the amount of \$2,262,394.

**CIP Project:** CE011600

**Project Description:** This project will rehabilitate and/or replace approximately 1,600 linear feet of 24-inch diameter gravity pipeline and associated manholes. Condition assessment activities indicate the assets are at a material risk of failure due to physical defects. The project is included in Phase 2 of the U.S. EPA Consent Decree Rehabilitation Action Plan and must be complete by May 5, 2025.

**Funding Description:** The total project cost estimate of \$2,262,394 includes approximately \$103,651 in pre-planning and preliminary engineering report (PER) phase services, \$136,731 in design phase services, \$1,617,610 in construction phase costs, and \$404,402 of project contingency and is based on a Class 5 CIP-prioritization level cost estimate prepared by HRSD. Engineering services will be completed by Rummel, Klepper and Kahl, LLP under the Interceptor System Projects annual services contract and the cost for pre-planning and PER is below the \$200,000 Commission approval threshold.

<b><u>Schedule:</u></b>	PER	December 2021
	Design	May 2022
	Bid	February 2023
	Construction	May 2023
	Project Completion	May 2024

## AGENDA ITEM 11. – November 23, 2021

**Subject:** Virginia Beach Boulevard Force Main Phase VI  
Cost Sharing Agreement

**Recommended Action:** Approve the terms and conditions of the Cost Sharing Agreement with the City of Virginia Beach for the Virginia Beach Boulevard Force Main Phase VI and Sanitary Sewer Revitalization Program III and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

**CIP Project:** CE011823

Budget	\$27,863,000
Previous Expenditures and Encumbrances	(\$25,657,392)
Available Balance	<u>\$2,205,608</u>

**Project Description:** This project upgraded the existing 24-inch reinforced concrete flat bottom pipe from North Lynnhaven Road to North Great Neck Road to approximately 10,000 linear feet of 42-inch and 48-inch pipe. This project reached substantial completion in September 2021.

**Agreement Description:** The attached [Agreement](#) between HRSD and the City of Virginia Beach documents the betterment work that was recently performed on City assets under HRSD's Virginia Beach Boulevard Phase VI project. All replacement and rehabilitation work conducted on City assets was located within the HRSD project corridor.

The value of the work is \$133,197 and the agreement has been reviewed by HRSD legal counsel.

**AGREEMENT FOR COST SHARING**  
**OF THE**  
**HAMPTON ROADS SANITATION DISTRICT**  
**VIRGINIA BEACH BOULEVARD FORCE MAIN PHASE VI**  
**(PROJECT #CE011823)**

**AND**

**CITY OF VIRGINIA BEACH**  
**SANITARY SEWER REVITALIZATION PROGRAM III**  
**(PROJECT #100361)**

THIS AGREEMENT FOR COST SHARING (the "Agreement"), between the CITY OF \_\_\_\_\_ ("CITY") and the HAMPTON ROADS SANITATION DISTRICT ("HRSD"), is entered into this \_\_\_\_ day of \_\_\_\_\_, 2021 (the "Effective Date").

**RECITALS**

**R:1.** HRSD is constructing its VIRGINIA BEACH BOULEVARD FORCE MAIN PHASE VI as shown on **Exhibit 1** (the "HRSD Facilities"); and

**R:2.** The CITY is constructing its own improvements under the SANITARY SEWER REVITALIZATION PROGRAM III as shown on **Exhibit 2** (the "CITY Facilities") as part of the City of VIRGINIA BEACH'S CAPITAL IMPROVEMENT PROGRAM; and

**R:3.** The design and construction of the HRSD Facilities and the CITY Facilities (collectively referred to as the "Improvements") will necessitate the design, construction, bypassing, and replacement of an existing HRSD force main with associated pressure connections and CITY gravity sewer, including approximately 120 linear feet of 12-in PVC and one 5-inch diameter manhole, 281 linear feet of CIPP liner, and replacement of approximately 20 linear feet of 15-in RCP storm drain;

**R:4.** HRSD and the CITY agree that it is in the best interest of the parties to have the Improvements designed and constructed together; and

**R:5.** HRSD agrees to include the construction of the CITY Facilities as part of the construction of the HRSD Facilities, in accordance with the approved plans and specifications; and

**R:6.** The CITY agrees to reimburse HRSD for that portion of the costs of the construction of the Improvements attributable to the CITY Facilities under the terms and conditions set forth herein.



## **TERMS**

NOW THEREFORE, in consideration of the above provisions and agreements set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

### **I. DESIGN OF IMPROVEMENTS**

#### **A. Plans and Specifications**

1. HRSD has employed Kimley-Horn and Associates (“ENGINEER”), to prepare plans and specifications for the HRSD Facilities and the CITY Facilities. A location map of the HRSD Facilities is shown on Exhibit 1. A location map of the CITY Facilities is shown on Exhibit 2.
2. ENGINEER, along with HRSD and the CITY, shall review and approve a set of final construction documents (the “Final Plans”) for the Improvements as set forth herein.

#### **B. Payment of the Design Costs**

HRSD will compensate the ENGINEER for all engineering design costs and any amendments related to the Improvements.

#### **C. Compliance**

All design work shall comply with HRSD’s Design and Construction Standards, latest edition, the Hampton Roads Planning District Commission Regional Construction Standards, latest edition, and the CITY Special Provisions to the Regional Construction Standards. Any changes to the Final Plans shall be approved by HRSD and the CITY.

### **II. CONSTRUCTION OF IMPROVEMENTS**

#### **A. Cost of Construction**

1. The total cost of the construction of the Improvements (the “Improvements Costs”) shall be paid by the parties pursuant to this Agreement. The Improvements Costs will be more particularly defined and described by the Final Plans, prepared by the ENGINEER for HRSD and the CITY.

2. The current estimated cost of the construction of the CITY Facilities is \$133,196.97 (\$115,513.35 for the sanitary sewer work and \$17,683.62 for the storm drain work), unless stated otherwise in the Final Plans.

**B. Approval of Final Plans; Contractors; Change Orders**

1. HRSD and the CITY agree that before CITY Facilities work is to begin under this Agreement, HRSD and the CITY will jointly review and approve the Final Plans for the CITY Facilities.
2. HRSD, in its sole discretion, shall select the Contractors and any Subcontractors to perform the Improvements following the bidding of the project as detailed in Section IV.
3. Contractors shall be responsible for all necessary permits and approvals necessary for the Improvements.
4. HRSD will review and approve change orders related to the HRSD Facilities. CITY will review and approve change order related to the CITY Facilities.

**C. Payment of Improvements Costs**

1. The Improvements Costs shall be apportioned among the parties as follows:
  - a. HRSD will administer and be responsible for paying one hundred percent (100%) of the cost of the HRSD Facilities.
  - b. The CITY will be responsible for paying one hundred percent (100%) of the cost of the CITY Facilities.
  - c. Costs associated with any change to the initial construction cost ("Change Order") shall be as follows:
    - (1) HRSD shall be solely responsible for costs due to a Change Order requested by HRSD; and
    - (2) The CITY shall be responsible for costs due to a Change Order requested by the CITY.

- (3) Change Orders related to design errors, omissions or changed field conditions shall be the responsibility of the entity impacted by the change. If the Change Order impacts the work of both HRSD and the CITY, the responsibility shall be equally shared.
  2. During the course of construction, HRSD shall compensate the Contractors and other individuals and entities providing materials and/or services related to the Improvements for all Improvements Costs, including those for which the CITY is responsible. The CITY shall reimburse HRSD for all such payments made on its behalf. The CITY shall pay its share of the Improvements Costs to HRSD in one lump sum payment upon completion of construction (as determined by HRSD). HRSD shall provide the CITY with an invoice detailing the CITY's share of the Improvements Costs. Within thirty (30) days of its receipt of such invoice, the CITY shall reimburse HRSD for the CITY's share of the Improvements Costs as detailed in the invoice.
- D. Operation and Maintenance of the Improvements during and after Construction
  1. HRSD shall be responsible for operation and maintenance of the HRSD Facilities during and after construction.
  2. CITY shall be responsible for operation and maintenance of the CITY Facilities during and after construction.
  3. HRSD and the CITY agree to cooperate and coordinate for the operations and maintenance of any interconnections between the HRSD Facilities and CITY Facilities.

### III. SCHEDULE

The construction is anticipated to begin by January 2020 and be complete by November 2021. If the construction dates listed herein are substantially delayed, HRSD reserves the right to terminate this Agreement.

IV. OBLIGATIONS OF HRSD AND THE CITY

A. Bidding of the Improvements

1. HRSD agrees to issue bidding documents for construction of the Improvements. The CITY agrees to provide administrative support during the bidding phase. In particular the CITY shall:
  - a. Provide timely responses to the ENGINEER for any questions, requests for clarification, or addenda during the bidding phase.
  - b. Provide miscellaneous support to HRSD as required during the bidding phase.
2. HRSD will receive bids for construction of the Improvements and award all contracts pursuant thereto. The CITY and HRSD shall negotiate in good faith to resolve financial matters with regards to bidding the Improvements. The bidding procedure shall be conducted in accordance with the Virginia Public Procurement Act and the HRSD Procurement Policy.

C. Administration

HRSD shall provide contract administration of the Improvements.

D. Inspection

HRSD shall provide full-time inspection for the Improvements. The inspector(s) shall have the authority to assure the Improvements are constructed in accordance with the Final Plans.

E. Deeds and Easements

1. HRSD shall obtain any and all necessary fee simple deeds and/or deeds of easement needed for the HRSD Facilities.
2. CITY shall obtain any and all necessary fee simple deeds and/or deeds of easements for the CITY Facilities.

F. Correction of Construction Defects in the Improvements

HRSD shall require the Contractors to provide a performance and payment bond for the full amount of the construction of the Improvements. The

construction contract shall also provide for a warranty of the Contractor's work against construction defects in the Improvements and shall require the Contractor to correct such defects that are reported by HRSD or the CITY within one (1) year of the final acceptance of the Improvements.

G. Construction Record Drawings

ENGINEER shall provide HRSD and the CITY approved construction record drawings in accordance with HRSD's Design and Construction Standards, latest edition, Hampton Roads Planning District Commission Regional Construction Standards, latest edition, and City's Utility Policy and Design and Construction Standards, latest edition.

V. GOVERNING LAW

This Agreement shall be deemed to be a Virginia Contract and shall be governed as to all matters whether of validity, interpretations, obligations, performance or otherwise exclusively by the laws of the Commonwealth of Virginia, and all questions arising with respect thereto shall be determined in accordance with such laws. Regardless of where actually delivered and accepted, this contract shall be deemed to have been delivered and accepted by the parties in the Commonwealth of Virginia.

VI. TERMINATION

This Agreement may be terminated by the CITY or HRSD in the event that the other party materially breaches this Agreement and such breach, violation or failure is not cured within sixty (60) days of the defaulting party's receipt of written notice of such breach from the non-defaulting party; or by mutual agreement of the CITY and HRSD. Anything herein or elsewhere to the contrary notwithstanding, any such termination of this Agreement shall not relieve the parties of their obligation to pay all of the Improvements Costs incurred prior to termination, whether or not those amounts are due and payable as of the termination date.

VII. NOTICE

Any notice, communication or request under this Agreement shall be provided in writing by either (a) certified mail, return receipt requested, postage prepaid, or (b) a nationally recognized overnight delivery service (next business day service), or (c) hand-delivery, if the receipt of the same is evidenced by the signature of the addressee or authorized agent, and addressed to the following:

For: HRSD

If by U.S. Postal Service:  
General Manager  
P. O. Box 5911  
Virginia Beach, VA 23471-0911  
Telephone: (757) 460-4242

If by Overnight Mail:  
General Manager  
1434 Air Rail Avenue  
Virginia Beach, VA 23455

With Copy to

Robyn H. Hansen, Esquire  
Sands Anderson PC  
263 McLaws Circle, Suite 205  
Williamsburg, VA 23185

For: City of VIRGINIA BEACH

[NAME, TITLE]  
City of [LOCALITY], Virginia  
[ADDRESS 1]  
[ADDRESS 2]  
Telephone:  
Facsimile:

With Copy to:

City Attorney  
2401 Courthouse Drive, Suite 260  
Building One, Municipal Center  
Virginia Beach, VA 23456  
Telephone: (757) 385-4945  
Facsimile: (757) 385-5687

VIII. ASSIGNMENT

No party may assign its rights in this Agreement without the prior written consent of the other party.

IX. AMENDMENT

This Agreement may be amended only by a written instrument duly executed by the parties.

X. SEVERABILITY

If any provision of this Agreement or the application thereof to any circumstance shall be determined to be invalid, illegal or unenforceable to any extent, the remainder of this Agreement and the application thereof shall not be affected and shall continue to be valid, in effect and enforceable to the fullest extent permitted by law.

XI. INSURANCE

HRSD and the CITY have the right to review and approve insurance coverage in the various insurance categories that HRSD and the CITY deem necessary to be carried by the Contractor or any other parties to this Agreement. Proof of insurance shall be provided at the request of HRSD or the CITY and the insurance coverage shall be maintained during the term of this Agreement.

XII. TERM OF AGREEMENT

The term of the Agreement will commence on the date the Agreement is entered into and be completed when each party has completely performed its obligations hereunder.

XIII. FORCE MAJEURE

In the event of enforced delay in the performance of such obligations due to unforeseeable causes beyond the control of the CITY or HRSD or the Contractor and without their fault or negligence, including, but not restricted to, acts of God or of the public enemy, acts of the government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargos, and unusually severe weather or delays of subcontractors due to such causes; it being the purpose and intent of this provision that in the event of the occurrence of any such enforced delay, the time or times for performance of the obligations of the parties shall be extended for the period of the enforced delay.

XIV. INDEPENDENT CONTRACTOR

If the Contractor(s) hire subcontractors or independent contractors, HRSD and the CITY have the right to approve them by reviewing their requisite experience and knowledge to complete the work assigned.

XV. SUBCONTRACTOR

If any Contractors or subcontractors are selected by any party to this Agreement for completion of the work contemplated herein, HRSD has the right to approve the same.

XVI. WAIVER

No waiver of breach of any term or provision of this Agreement shall be construed to be, or shall constitute, a waiver of any other breach of this Agreement. No waiver shall be binding unless in writing and signed by the parties waiving the breach.

The failure of any party to seek redress for violation of or to insist upon the strict performance of any covenant or condition of this Agreement shall not prevent a subsequent act, which would have originally constituted a violation, from having the effect of an original violation.

The rights and remedies provided by this Agreement are cumulative and the use of any one right or remedy by any party shall not preclude or waive the right to use any or all other remedies. Such rights and remedies are given in addition to any other rights the parties may have by law, statute, ordinance or otherwise.

XVII. INTEGRATION

This Agreement constitutes the entire understanding among the parties. No provision of this Agreement may be waived, modified or amended except by an instrument signed by the party against whom the enforcement of such waiver, modification or amendment is sought. No waiver by either party of any failure or refusal by the other party to comply with its obligations hereunder shall be deemed a waiver of any other or subsequent failure or refusal to comply.

***Signature pages follow***



**IN WITNESS WHEREOF**, the Hampton Roads Sanitation District (HRSD) Commission has caused this Agreement to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on November 23, 2021.

**HAMPTON ROADS SANITATION DISTRICT**

By \_\_\_\_\_  
Edward G. Henifin, P.E., General Manager

COMMONWEALTH OF VIRGINIA,  
CITY OF VIRGINIA BEACH, to-wit:

The foregoing Agreement was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by Edward G. Henifin, HRSD General Manager.

\_\_\_\_\_  
Notary Public

My commission expires:

Registration No.:

**IN WITNESS WHEREOF**, the City of VIRGINIA BEACH (CITY) has caused this Agreement to be signed by the City Manager on its behalf pursuant to Resolution adopted by the City Council on \_\_\_\_\_, 2021,

\_\_\_\_\_  
**CITY OF VIRGINIA BEACH**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

[update the information below as specified by the locality]

**ATTEST:**

\_\_\_\_\_  
City Clerk

COMMONWEALTH OF VIRGINIA,  
CITY OF VIRGINIA BEACH, to-wit:

The foregoing Agreement was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by \_\_\_\_\_ [Name], \_\_\_\_\_ [Title], City of VIRGINIA BEACH, Virginia.

\_\_\_\_\_  
\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

Registration No.: \_\_\_\_\_

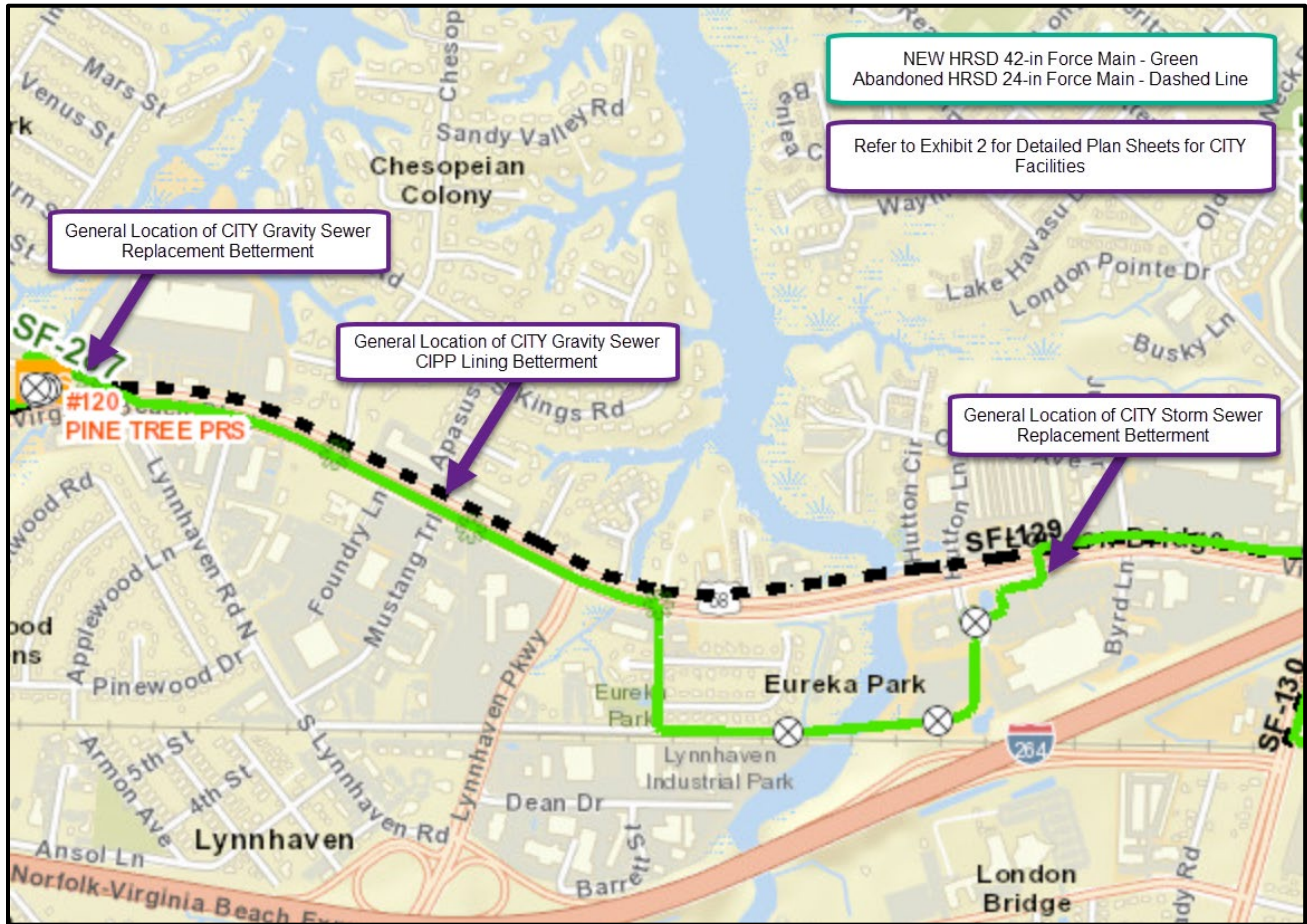
Approved as to Form and Correctness: \_\_\_\_\_

Approved as to Content: \_\_\_\_\_

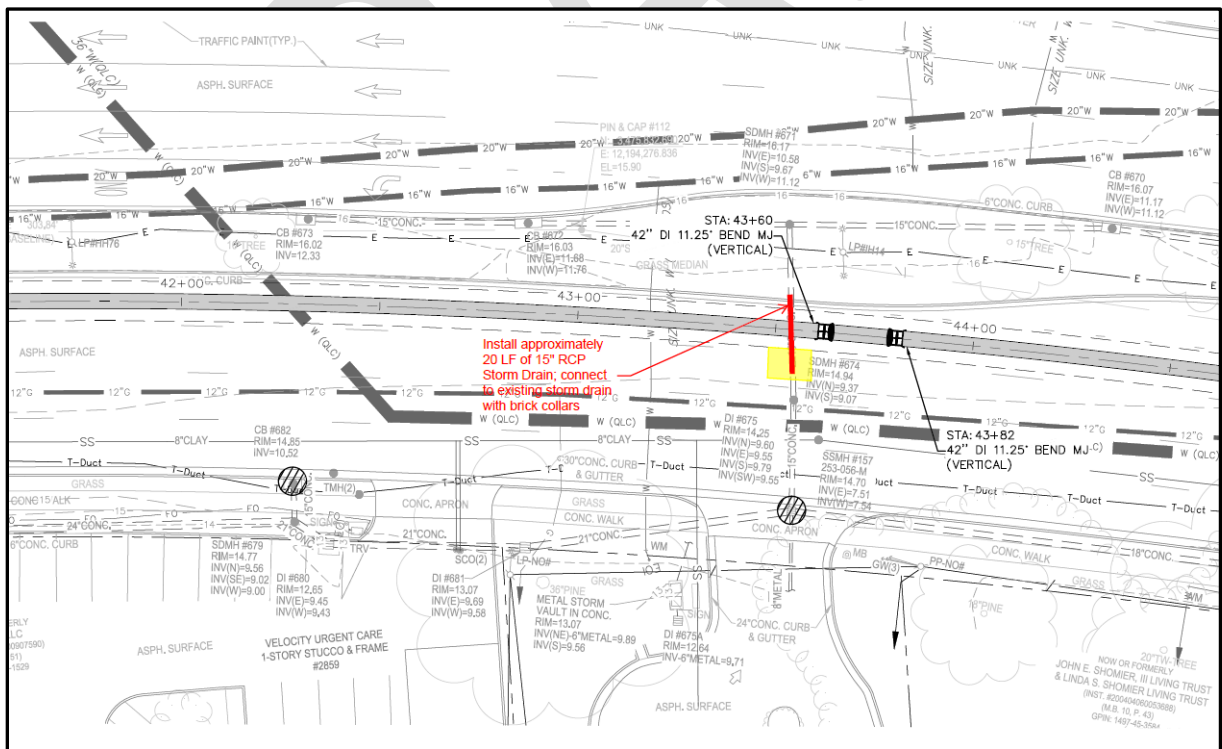
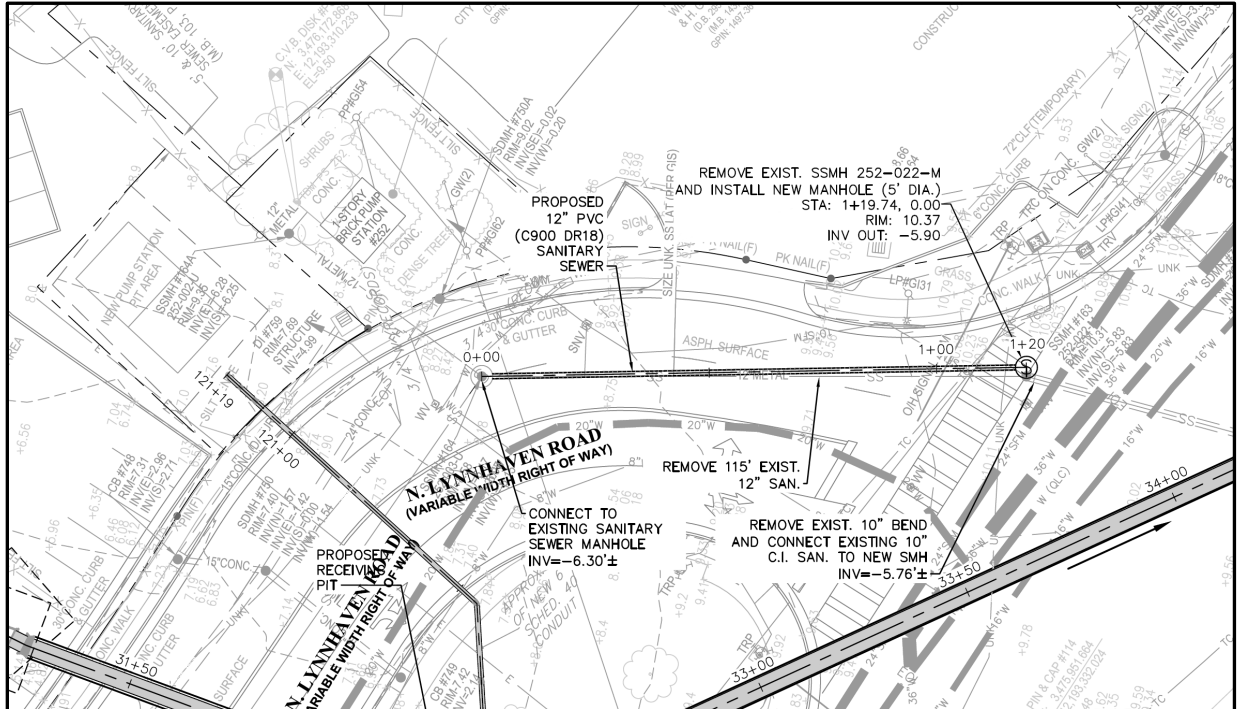
\_\_\_\_\_  
Deputy City Attorney

\_\_\_\_\_  
Director of Utilities

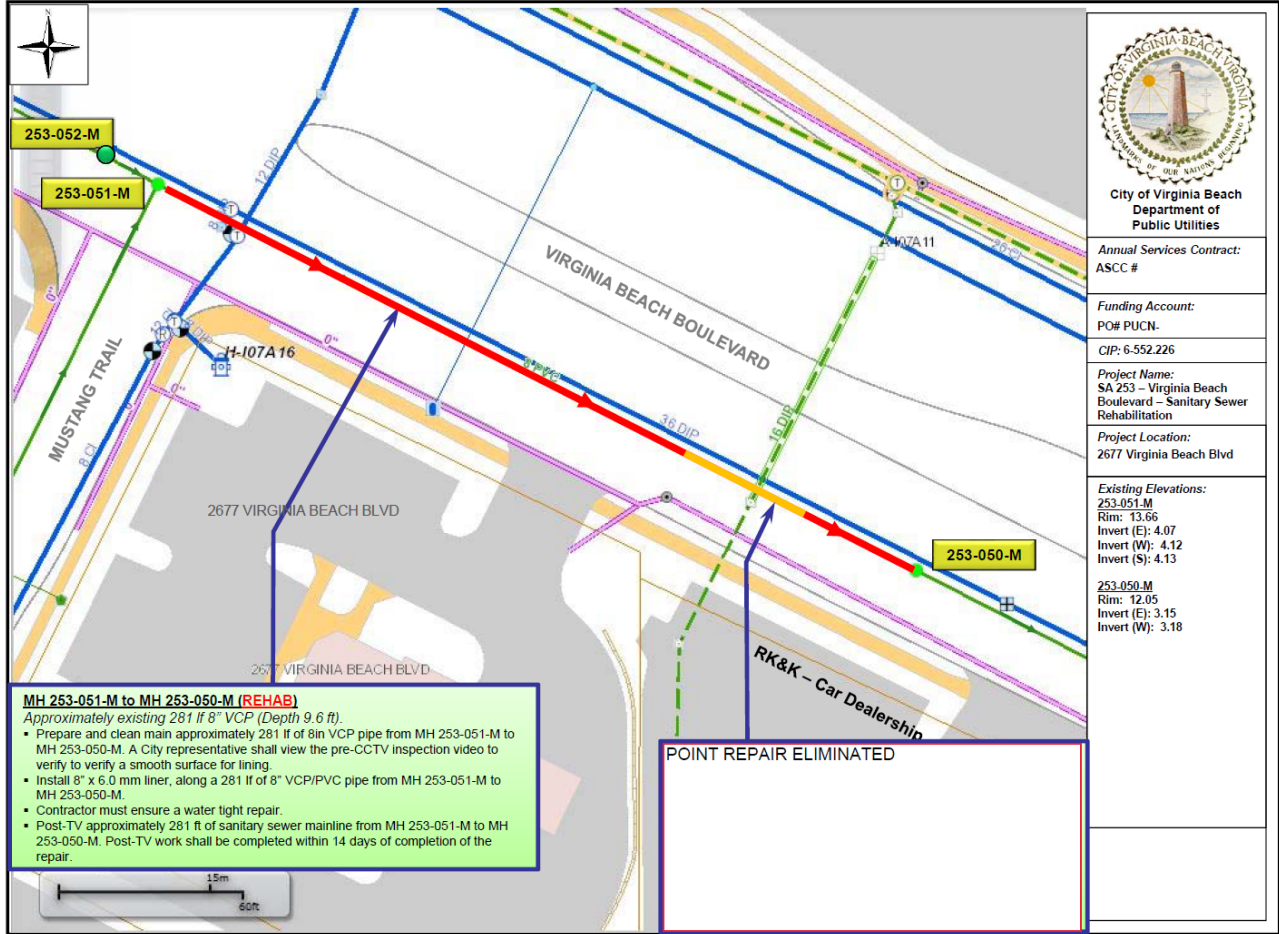
### Exhibit 1 - HRSD Facilities Location Map



### Exhibit 2 - CITY Facilities Location Map



Agreement for Cost Sharing of the HRSD Va. Beach Blvd. FM Phase VI (PROJECT #CE011823) and City of Va. Beach Sanitary Sewer Revitalization Program III (PROJECT #100361)



AGENDA ITEM 12. – November 23, 2021

**Subject:** York River Treatment Plant Primary Clarifier Influent and Effluent Pipes Rehabilitation  
New CIP and Initial Appropriation

**Recommended Actions:**

- a. Approve a new CIP project (**YR014800**) for the York River Primary Clarifier Influent and Effluent Pipes Rehabilitation.
- b. Appropriate total project funding in the amount of \$4,756,000.

**CIP Project: YR014800**

**Project Description:** This project will repair or replace corroded, primary clarifier influent and effluent concrete cylinder pipes from primary clarifier distribution chamber #1 to the aeration tanks. There are nine pipes varying in size from 36-inch to 72-inch, totaling 965 linear feet. A bypass pipeline and pumping may be required to maintain treatment plant operations. On September 17, 2020 the 60-inch concrete, cylinder pipe between the headworks and primary clarifier distribution chamber #1, failed from corrosion during a significant rain event resulting in a spill of approximately 6.8 million gallons. The pipe had been in service since 1984. The break prompted inspection of piping from primary clarifier distribution chamber #1 to the aeration tanks. These pipes are of the same construction, years of service, and operating conditions. The resulting inspection revealed corrosion and broken off sections of concrete at the crown of the pipes, like the failed 60-inch pipe.

**Funding Description:** The total cost for this project is estimated at \$4,756,000 based on a Class 5 cost estimate and a twenty percent contingency. The cost estimate includes \$717,000 for Engineering Services, \$3,366,000 for Construction, and \$673,000 for Project Contingency. HRSD will be using its existing Professional Services Agreement for Interceptor System Services. Engineering services will be provided by RK&K to include preliminary engineering, design, and construction phase services. The cost for the Preliminary Engineering Report (PER) is below the \$200,000 Commission approval threshold.

<b><u>Schedule:</u></b>	PER	December 2021
	Design	March 2022
	Pre-Construction	September 2022
	Construction	December 2022
	Closeout	September 2023

AGENDA ITEM 13. – November 23, 2021

**Subject:** Surry Hydraulic Improvements and Interceptor Force Main  
Easement Acquisition - Abraham and Yvette Turner  
Parcel 80, Tax Map #06-01-031, 5391 Old Stage Highway, Smithfield, VA

**Recommended Action:** Approve the purchase of a 3,316 square foot permanent easement in accordance with the terms and conditions of the forthcoming Deed of Easement between Abraham and Yvette Turner (Landowner) and HRSD for \$50,000 (Tax Map: 06-01-031).

**CIP Project:** SU010200

**Project Description:** This project will close the Town of Surry Treatment Plant and construct a 20-mile long interceptor force main to connect to the existing HRSD force main in the Town of Smithfield. HRSD is a signatory to a Consent Decree with the Virginia Department of Environmental Quality to close the Town of Surry Treatment Plant and this project will eliminate this plant in-lieu of making facility improvements.

As part of the project, HRSD required over 150 temporary and permanent easements. Though all of the easements were acquired, HRSD staff initiated condemnation proceeds by filing a Certificate of Take on subject parcel. The proposed acquisition amount represents the negotiated settlement amount after filing.

**Agreement Description:** The attached [Deed](#) was reviewed by HRSD staff and legal counsel. An [Acquisition Plat](#) and [Facilities Orientation Map](#) are also provided for clarification.

**Analysis of Cost:** The cost for the easement is based upon an appraisal by Valbridge Property Advisors and a negotiated settlement with the property owner and property owner's attorneys that includes landscaping and miscellaneous damages.

PREPARED BY AND RETURN TO:

HRSD  
Attn: Real Estate Department  
1434 Air Rail Avenue  
Virginia Beach, Virginia 23471-0911

Tax ID: 06-01-031

**DEED OF EASEMENT**

THIS DEED OF EASEMENT, made this \_\_\_ day of \_\_\_\_\_, 2021, by and between **TURNER, ABRAHAM and YVETTE, GRANTOR**, (whether one or more) and **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia, **GRANTEE**, whose mailing address is: P.O. Box 5911, Virginia Beach, Virginia, 23471-0911.

**WITNESSETH:**

That for and in consideration of the sum of TEN AND 00/100 (\$10.00) DOLLARS and other good and valuable consideration, receipt of which is hereby acknowledged, **GRANTOR** does hereby grant and convey, all of their right, title and interest, if any, in the following easement, with GENERAL WARRANTY OF TITLE, unto **GRANTEE**, its successors and assigns, forever, the perpetual right, privilege, easement and right-of-way, hereinafter described, for the purpose of laying, erecting, constructing, operating, and maintaining underground wastewater and/or water reuse force mains and/or gravity mains together with above and/or below ground equipment, accessories, and appurtenances thereto, hereinafter called "facilities," on the lands of the **GRANTOR**, said Permanent Easement (the "Easement") being further described as follows:

All that certain Permanent Utility Easement shown and designated as a "20' H.R.S.D. PERMANENT UTILITY EASEMENT 0.072 ACRES 3,136 SQUARE FOOT", as shown on the attached plat prepared by W. M. Naulty, Surveyor, 4701 Owens Way, Suite 900 Prince George, Virginia 23875 entitled, ""PLAT SHOWING EASEMENT TO BE ACQUIRED FROM ABRAHAM & YVETTE TURNER BY HAMPTON ROADS SANITATION DISTRICT FOR ISLE OF WIGHT COUNTY FORCE MAIN HARDY DISTRICT ISLE OF WIGHT COUNTY, VIRGINIA" and dated December 17, 2019.

Together with all and singular the buildings and improvements, tenements, hereditaments, rights, privileges and appurtenances thereunto belonging or in anywise appertaining (the "Easement"), which Plat is attached hereto and made a part hereof.



This easement is subject to the following conditions and provisions:

A. The facilities existing or constructed on or under the Easement shall remain the property of **GRANTEE**. **GRANTEE** shall have the right to inspect, rebuild, remove, repair, improve, and make such changes, alterations, additions to or extensions of its facilities within the boundaries of said right of way as are consistent with the purpose expressed herein. All construction, maintenance, equipment and facilities shall comply with all applicable laws, ordinances, codes and regulations.

B. Any disturbance of the premises by the **GRANTEE** or its contractor will be restored by the **GRANTEE** as nearly as practicable. This includes paving, backfilling of trenches, grass, reseeding, and removal of trash or debris.

C. **GRANTEE** shall have the right to trim, cut and remove trees, shrubbery or other obstructions which interfere with or threaten the efficient and safe operation, construction and maintenance of said facilities. All brush, branches, and other debris resulting from any cutting, trimming, or clearing of said right of way shall be removed from lands of **GRANTOR** for disposal.

D. **GRANTEE** shall have the right of ingress to and egress from said right of way over the lands of **GRANTOR**. **GRANTEE** shall exercise such right in such manner as shall not occasion injury and inconvenience to **GRANTOR**. **GRANTEE** shall at **GRANTEE'S** election pay for or repair any injury to any of **GRANTOR'S** land, structures, roads, fences and other improvements caused by **GRANTEE**, its employees, agents or contractors.

E. **GRANTOR**, its successors and assigns, may use said right of way for any purpose not inconsistent with the rights hereby granted, provided such use does not interfere with the safe and efficient construction, operation or maintenance of said facilities, and further provided that such use is not inconsistent with any laws, ordinances or codes pertaining to the construction, operation or maintenance of said facilities. **GRANTOR** shall not place any permanent improvements within the easement without permission of **GRANTEE**, or its successors, including but not limited to houses, buildings, pools, sheds, signs, or similar permanent structures. **GRANTOR** may install fences, driveways, pavement and landscaping (trees and shrubs shall be varieties that will not exceed 20 feet tall at maturity).

F. It is understood and agreed that the consideration paid to the **GRANTOR** in connection herewith constitutes payment in full for the property hereby conveyed and for damages, if any, to the residue or other property of the **GRANTOR** resulting from the project and use made of the property conveyed.

G. Notwithstanding the above, should the property on which the aforesaid perpetual easement lies be subdivided, then the access rights to the easement as above enumerated shall be along the publicly dedicated streets within the said subdivision as far as practical, and then the access shall be on subdivided lots within the subdivision which shall efficiently provide access for the purposes of the **GRANTEE** as herein enumerated.

**WITNESS** the following signature and seal all as of the day and year first above written.

**GRANTOR:**

\_\_\_\_\_  
ABRAHAM TURNER

COMMONWEALTH OF VIRGINIA  
COUNTY OF \_\_\_\_\_, to-wit:

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_ 2021,  
by Abraham Turner.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_  
Registration Number: \_\_\_\_\_

\_\_\_\_\_  
YVETTE TURNER

COMMONWEALTH OF VIRGINIA  
COUNTY OF \_\_\_\_\_, to-wit:

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_ 2021,  
by Yvette Turner.

\_\_\_\_\_  
Notary Public

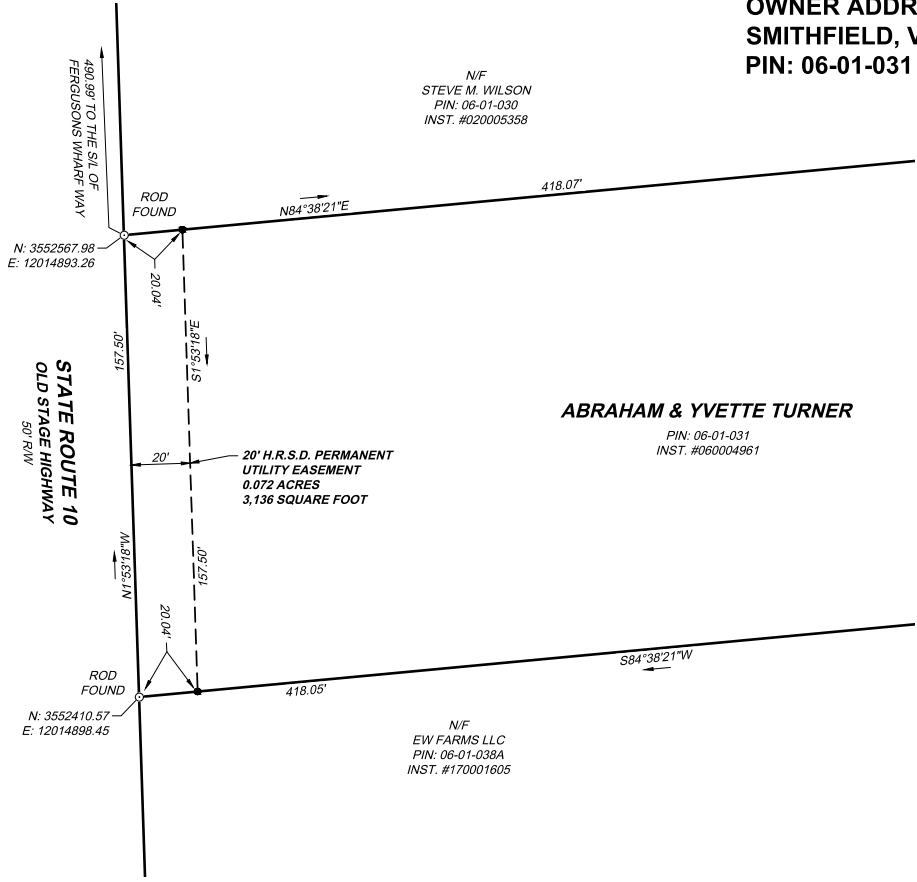
My Commission Expires: \_\_\_\_\_  
Registration Number: \_\_\_\_\_

**HAMPTON ROADS SANITATION DISTRICT:**

IN WITNESS WHEREOF, the Hampton Roads Sanitation District Commission has caused this Deed to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on November 23<sup>rd</sup>, 2021.

By: \_\_\_\_\_  
Edward G. Henifin, P.E.  
General Manager

**PROJECT PARCEL NO. 080**  
**PROPERTY OF: ABRAHAM & YVETTE TURNER**  
**PROPERTY ADDRESS: 5391 OLD STAGE HIGHWAY**  
**OWNER ADDRESS: 5391 OLD STAGE HIGHWAY**  
**SMITHFIELD, VA 23430**  
**PIN: 06-01-031**



N/F  
 STEVE M. WILSON  
 PIN: 06-01-030  
 INST. #020005358

**ABRAHAM & YVETTE TURNER**  
 PIN: 06-01-031  
 INST. #060004961

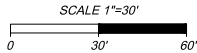
N/F  
 EW FARMS LLC  
 PIN: 06-01-038A  
 INST. #170001605

**AREA TABLE**

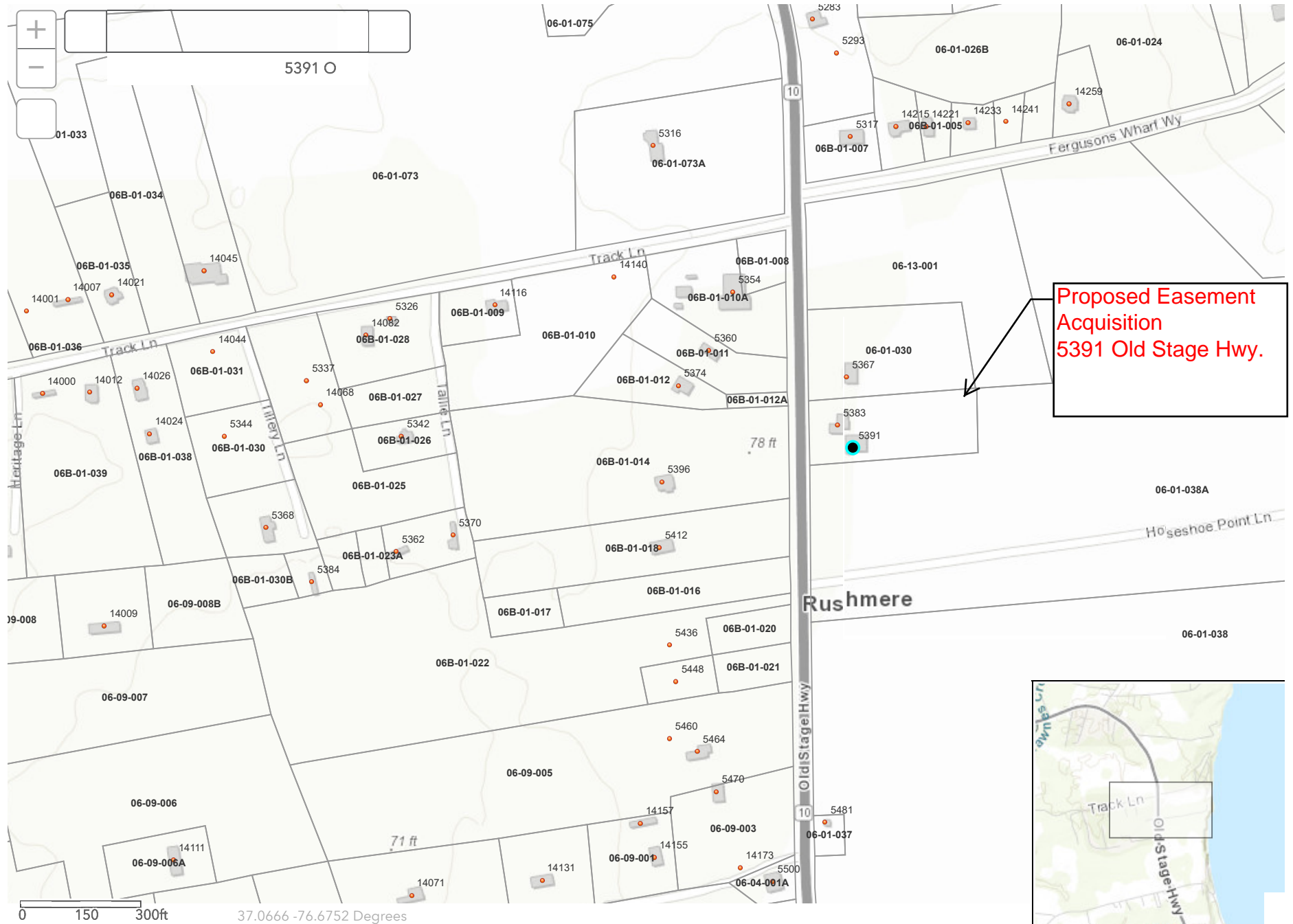
20' H.R.S.D. PERMANENT UTILITY EASEMENT TO BE ACQUIRED	0.072 ACRES 3,136 SQUARE FOOT
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**NOTES:**

1. PROPERTY LINES AND RIGHT OF WAY INFORMATION SHOWN IS BASED ON PLATS, DEEDS OR RECORD AND ACTUAL FILED MEASUREMENTS. ONLY THE BOUNDARIES SHOWN HAVE BEEN SURVEYED FOR THIS PROJECT.
2. THIS SURVEY MAY NOT REFLECT ALL EASEMENTS OR RESTRICTIONS THAT AFFECT THIS PROPERTY
3. EASEMENTS SHALL BE ACQUIRED BY DEED.



PLAT SHOWING EASEMENT  
 TO BE ACQUIRED FROM  
**ABRAHAM & YVETTE TURNER**  
 BY HAMPTON ROADS SANITATION  
 DISTRICT FOR ISLE OF WIGHT  
 COUNTY MARINA FORCE MAIN  
 HARDY DISTRICT  
 ISLE OF WIGHT COUNTY, VIRGINIA  
 SCALE 1"=30' DECEMBER 17, 2019  
 JN: 42956-903-06-01-031  
 W.M. NAULTY, SURVEYOR  
 4701 OWENS WAY, SUITE 900  
 PRINCE GEORGE, VIRGINIA 23875



AGENDA ITEM 14. – November 23, 2021

**Subject:** COVID-19 Wastewater Surveillance Study Update

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

**Brief:** Staff will present the latest data and status of the COVID-19 surveillance work.

AGENDA ITEM 15. – November 23, 2021

**Subject:** Executive Search Committee Report

**Recommended Action:** Receive the Executive Search Committee's Report on recruitment efforts for General Manager.

**Brief:** Commissioners Levenston (committee chair), Rodriguez and Taraski will meet on November 23, 2021 to review the semifinalists for the General Manager position. Commissioner Levenston will provide an update to the full Commission at its regular meeting on November 23, 2021.

AGENDA ITEM 16. – November 23, 2021

**Subject:** Unfinished Business

AGENDA ITEM 17. – November 23, 2021

**Subject:** New Business



AGENDA ITEM 18. – November 23, 2021

**Subject:** Commissioner Comments

AGENDA ITEM 19. – November 23, 2021

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

AGENDA ITEM 20. – November 23, 2021

**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](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent and Air Summaries with Items of Interest](#)



November 17, 2021

Re: General Manager's Report

Dear Commissioners:

One year ago, we were literally under attack – a ransomware attack. In some ways it seems like much more than a year has passed, and in other ways the memories are so vivid it seems like yesterday. The entire staff of the Information Technology Department (ITD) responded with amazing dedication, professionalism, and skill, working around the clock to restore critical systems without paying a ransom. Challenges like a ransomware attack tend to expose the underlying culture of an organization. This event highlighted the amazing culture of teamwork, cooperation, and expertise that Don Corrado has developed and nurtured within the ITD. We will recognize the effort of the entire ITD team at the November Commission meeting as we mark the anniversary of this challenging event.

The highlights of October's activities are detailed in the attached monthly reports.

- A. **Treatment Compliance and System Operations:** There were two permit exceedances, one at the Surry County treatment plant and one at Urbanna. All other plants met permit. There was one small spill in the interceptor system related to a bypass pumping failure.
  
- B. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel:
  - 1. A meeting to review the 2021 United Way Campaign materials
  - 2. A site meeting to discuss planting maintenance and replacement at the Air Rail campus
  - 3. A meeting to discuss building a compendium of external employee development programs
  - 4. A meeting in preparation for the Commission Finance Committee meeting
  - 5. A meeting to discuss development of a pre-apprenticeship program
  - 6. The Commission Finance Committee meeting
  - 7. The Eastern Shore Program Team monthly meeting
  
- C. **External Communications:** I participated in the following meetings/activities:
  - 1. Calls with staff from Senator Warner's and Senator Kaine's offices to clarify legislative needs related to the proposed Atlantic Treatment Plant access road
  - 2. A meeting of the strategic planning membership work group committee for VirginiaForever
  - 3. The semi-annual meeting of the US EPA Environmental Finance Advisory Board

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

4. A meeting of the US Water Alliance's Value of Water Coalition
5. The monthly meeting of the SWIFT Community Commitment Team
6. A meeting with the City of Newport News to review potential locations for the Boat Harbor pump station and equalization tank
7. A planning meeting with Water Environment Federation (WEF) staff for the Public Officials Forum at WEF Technical Exhibition and Conference (WEFTEC)
8. Attended WEFTEC and moderated the Public Officials Forum
9. The monthly meeting of the Hampton Roads Planning District Commission (HRPDC) Director of Utilities Committee
10. A meeting with the City of Newport News to coordinate ongoing activities related to James River SWIFT
11. A debrief with staff from the Aspen-Nicholas Water Policy Roundtable
12. The quarterly meeting of the Potomac Aquifer Recharge Oversight Committee
13. The consultant presentation of the results of the space study for the Central Environmental Lab
14. A meeting with staff from the Suffolk Parks Department about a potential partnership at Constance Wharf
15. Opened the first meeting of the HRSD Diversity, Equity, and Inclusion Council
16. Met with the Town Manager, Mayor and Vice Mayor of Chincoteague
17. Met with the Town Manager of Cape Charles
18. The US Water Alliance's One Water Council

**D. Consent Decree Update:**

- No change. Still awaiting final signatures from the agencies.
- Negotiations over stipulated penalties for calendar year 2020 and the January 2021 spill in Newport News concluded. HRSD agreed to pay \$58,350 for the 2020 spills and \$45,000 for the January 2021 spill. Payment will be made in November.

The leadership and support you provide are the keys to our success as an organization. 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 on Tuesday, November 23, 2021.**

Respectfully submitted,

Ted Henifin, P.E.  
General Manager

TO: General Manager  
 FROM: Director of Communications  
 SUBJECT: Monthly Report for October 2021  
 DATE: November 9, 2021





A. Publicity and Promotion

HRSD and/or SWIFT were mentioned or featured in 17 news stories or media mentions on topics that included:

1. HRSD expansion on Eastern Shore
2. Middle Peninsula Sewer Expansion
3. HRSD work in Chesapeake related to wastewater testing for COVID-19
4. HRSD's Raul Gonzalez named to Hampton Roads Top Forty under 40
5. House Panel hearing related to 'Forever Chemicals'

B. Social Media and Online Engagement

1. Metrics

Social Media Metrics September 2021				
METRIC	 FACEBOOK	 LINKEDIN	 TWITTER	 YOUTUBE
Number of Posts *Number of published posts	19	3	20	1:53 average view duration
Number of Followers/Likes *Total number of fans	1,620	5,345	581	237
Engagement *Sum of reactions comments and shares	388	63	46	655 unique viewers
Traffic *Total clicks on links posted	216	159	175	5.7% click-through

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

### a. Top Facebook post



### b. Top Tweet



### c. Top YouTube Videos

(1) [The Wastewater Treatment Process](#) (466 views)

(2) [SWIFT Research Center: What is the Potomac Aquifer?](#) (71 views)

- (3) [What is Asset Management? HRSD Celebrates Infrastructure Week | United for Infrastructure](#) (69 views)
- (4) [HRSD Atlantic Treatment Plant Cambi Tour](#) (40 views)
- (5) [HRSD Thank You Video](#) (33 views)

3. Impressions and Visits

- a. Facebook: 9,658 page impressions, 7,928 post impressions reaching 7,555 users and Facebook engagement of 388 (320 reactions, 27 shares and 41 comments)
- b. Twitter: 5,247 tweet impressions; 572 profile visits and 19 mentions
- c. HRSD.com/SWIFTVA.com: 1,079 page visits
- d. LinkedIn Impressions: 2,826 page impressions and 2,778 post impressions
- e. YouTube: 860 views
- f. Next Door unique impressions: 240 post views one targeted neighborhood posting shared with 5,000 residents
- g. Blog Posts: [Seriously, Can You Imagine A Day Without Water](#) (1)
- h. Construction Project Page Visits – 1,173 total visits (not including direct visits from home page, broken down as follows:
  - (1) 764 visits to individual pages
  - (2) 409 to the status page

C. News Releases, Advisories, Advertisements, Project Notices, Community Meetings and Project Web Postings

1. News Releases: 1 (public meeting notice)
2. Traffic Advisories: 2
3. Construction Notices and or notices to neighbors: 2
4. Advertisements: 0
5. Project Notices: 4 (via door hangings and/or mailing reaching approximately 129 residents)
6. Project/Community Meetings: 0
7. New Project Web Pages: 2
8. New Project Videos: 0



D. Special Projects and Highlights

1. Director participated in Old Dominion University Marketing Week by serving as guest lecturer in a marketing class, speaking to the importance and value of marketing to a captive audience.
2. Director attended the Potomac Aquifer Recharge Committee meeting (virtually).

E. Internal Communications

1. Director participated in the following internal meetings and events:
  - a. Coordination meeting with operations staff to plan Chesapeake-Elizabeth Plant decommissioning event
  - b. SWIFT Community Commitment Plan Steering Committee meetings
  - c. SWIFT 2022 Industry Outreach Event planning meetings
  - d. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and QST meetings
  - e. Project progress meetings
  - f. Meeting with Water Quality staff to discuss web content updates/additions
  - g. Grant request reviews
  - h. DEI Council Orientation agenda and leadership roles review meeting
  - i. DEI Council Orientation meeting to welcome members as the group's executive sponsor
  - j. Wellness Committee meeting
2. Director conducted biweekly communications department status meetings and weekly team and one-on-one check-in meetings.
3. Staff attended project progress meetings and presentation and outreach development meetings with various project managers.

F. Metrics

1. Educational and Outreach Activities (all virtual unless otherwise noted): 3
  - a. Self-guided SWIFT Virtual Tours – 38 views (analytics specify number of times the “Take a Tour” button was selected)
  - b. 10/19/2021 – Washing Water Virtual Presentation – Woodside High School, Newport News - 17 attendees
2. Number of Community Partners: 1 (Newport News Public Schools)
3. Additional Activities Coordinated by Communications Department: 2
  - a. 10/06/2021 LEAD Peninsula Presentation
  - b. 10/08/2021 SWIFT Presentation

4. Monthly Metrics Summary

<b>Item #</b>	<b>Strategic Planning Measure</b>	<b>Unit</b>	<b>October 2021</b>
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	9
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	18.5
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	1

Respectfully,

Leila Rice, APR  
Director of Communications

TO: General Manager  
FROM: Director of Engineering  
SUBJECT: Engineering Monthly Report for October 2021  
DATE: November 11, 2021

A. General

1. Capital Improvement Program (CIP) spending for the third month of Fiscal Year (FY) 2022 was below the planned spending target. A meeting will be held with the Finance Department to review this CIP spending shortfall and impacts to future short-term borrowing.

CIP Spending (\$ million):

	Current Period	FYTD
Actual	7.31	26.64
Plan	23.10	65.70

2. HRSD has many upcoming projects that should qualify for Water Quality Improvement Fund (WQIF) grant funding. This is a Virginia program to promote the enhancement of water quality objectives through grant assistance to improve the effectiveness of treatment plant nutrient removal efforts. The state not only funds specific treatment removal efforts but will also fund the elimination of treatment plants through the construction of sewer conveyance systems directing flow to other compliant treatment facilities. HRSD has numerous projects that will meet these criteria. These projects include:

- Nassawadox Plant Closure – Eastern Shore Transmission Force Main Phase I
- Chesapeake-Elizabeth Plant Closure - Atlantic Plant Interceptor System Improvements
- Urbanna Plant Closure – Middlesex Interceptor System Improvements
- Boat Harbor Plant Closure – Boat Harbor Transmission Force Main
- James River Plant Advanced Nutrient Reduction Improvements
- Nansemond Plant Advanced Nutrient Reduction Improvements

These projects will be submitted for WQIF Grant Program approvals in the coming year and are likely to result in \$100 million in grants for HRSD.

B. Asset Management Division

1. Staff members have begun creating a Fleet Replacement Planning Model within the Asset Management Program. This new tool will be developed using HRSD's PowerBI software and replace the current spreadsheet system used to prioritize vehicle replacements. The current manual process of gathering CMMS data to prioritize vehicle replacements will be replaced with a dynamic dashboard pulling data automatically. This process will reduce the resources needed to maintain the HRSD data and ensure accurate data is feeding the process.

2. Staff members have begun preparing an Interceptor System Replacement Planning Model. Much like the Fleet Replacement Model, this program will gather data to allow HRSD to make informed decisions on pipe replacement. Pipeline risk data including expected remaining service life and replacement cost will be used for financial forecasting and pipe replacement prioritization. This model will become an important part of the CIP planning effort in future years.

C. North Shore, South Shore and SWIFT Design & Construction Divisions

1. Construction of the Hampton Trunk A and B Replacement Project continues. A large section of above ground temporary bypass piping was recently removed and restoration efforts are underway in this area. Pipe installation continues on 16<sup>th</sup> Street from Jeb's Place to Jefferson Avenue. A proposed addition to the project scope includes making improvements to include paving, landscaping, and other neighborhood amenities due to the difficulties the citizens experienced during the previous pipe failure in the area.
2. As part of the upcoming closure of the Chesapeake-Elizabeth Treatment Plant, 11 private pump stations have been identified as potentially requiring upgrades and 6 of these stations are identified as high priority which will require some level of hydraulic improvements. Design efforts are underway to obtain approval for plans for the high priority stations and to negotiate task orders with on-call construction contractors. Since work is being done on private property, approvals are needed from each private owner to make the needed improvements. This is a time-sensitive initiative and must be closely managed to allow for the planned closure of Chesapeake-Elizabeth Treatment Plant in the coming months.
3. The Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II Project has been initiated to facilitate the proposed SWIFT improvements and the diversion of flow from the Boat Harbor Treatment Plant. Procurement is underway to hire a Design-Build Team to deliver this project. A recommendation will be made to the Commission in 2022 to select a team to complete this project. HRSD continues to see challenges with project delivery including increased material costs, staffing limitations and supply chain delays. These factors present significant challenges for delivering these large projects on budget and schedule.

D. Planning & Analysis Division

1. Staff began creating a Small Communities Division Management, Operations and Maintenance (MOM) Program. This effort will mirror much of the work done as part of the Urban Communities MOM Program and will focus primarily on the collection and interceptor sewer systems in the HRSD Small Communities. This work will include efforts in the Middle Peninsula, Surry, and Eastern Shore. A draft document is currently under review and should be completed in 2022.
2. The Planning & Analysis Division has struggled to backfill an open position. The Engineering Specialist position has been vacant for a year with limited interest. We began reviewing the needed job requirements and have considered training level options to bring in a less experienced individual that can learn the job duties while in the position. Finding qualified candidates for open positions is a challenge for many groups within HRSD.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 3
  - a. 10/09/2021 – Participated in a community outreach effort to construct a playground for a young cancer patient sponsored by the Roc Solid Foundation.
  - b. 10/20/2021 – Participated in a panel discussion entitled, “Owners Only Forum” as part of a webinar sponsored by the Design-Build Institute of America (DBIA) Hampton Roads Chapter.
  - c. 10/26/2021 – Participated in a panel discussion with the Old Dominion University Society of Women Engineers.
2. Number of Community Partners: 3
  - a. DBIA Hampton Roads Chapter
  - b. Old Dominion University Society of Women Engineers
  - c. Roc Solid Foundation
3. Number of Research Partners: 0
4. Monthly Metrics Summary:

<b>Item #</b>	<b>Strategic Planning Measure</b>	<b>Unit</b>	<b>October 2021</b>
M-1.4a	Total Training Hours per Full Time Employee (45) - Current Month	Hours / #FTE	1.80
M-1.4b	Total Training Hours per Full Time Employee (45) - Cumulative Fiscal Year-to-Date	Hours / #FTE	11.30
M-5.2	Educational and Outreach Events	Number	3
M-5.3	Number of Community Partners	Number	3
M-5.4	Number of Research Partners	Number	0

*Bruce W. Husselbee, PhD, P.E.*

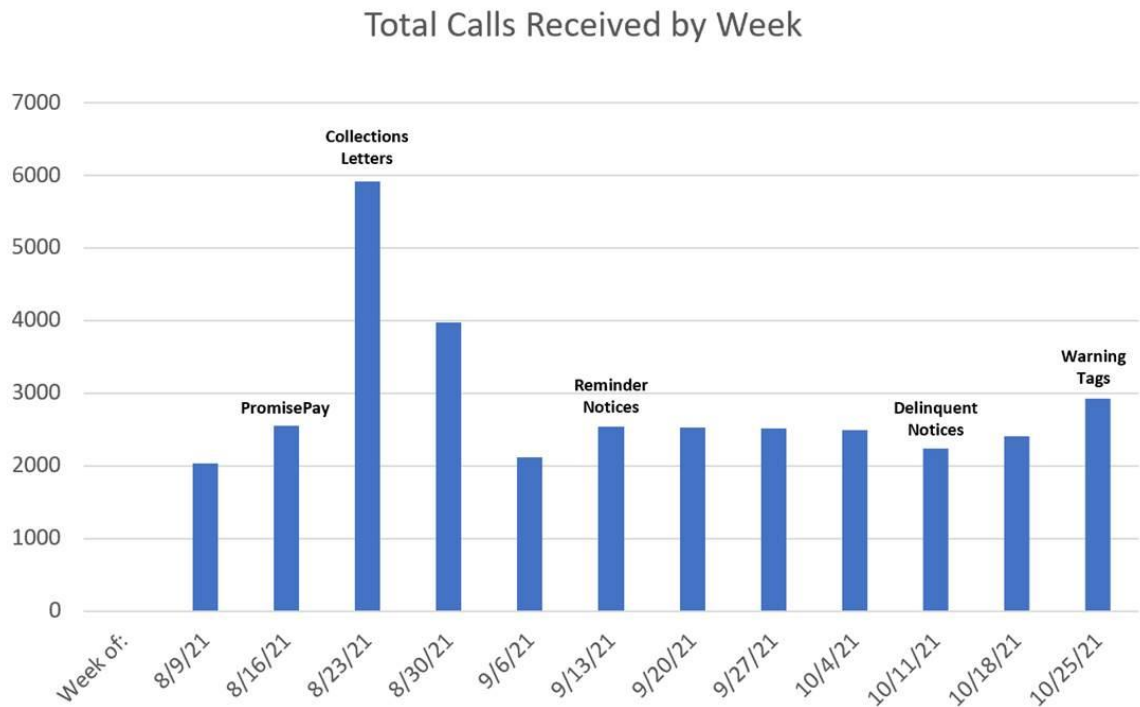
Bruce W. Husselbee, PhD, P.E.

TO: General Manager  
FROM: Director of Finance  
SUBJECT: Monthly Report for October 2021  
DATE: November 10, 2021

A. General

1. HRSD applied for \$15,202,778.77 in the second round of Municipal Utility Relief (MURP). On October 29, Staff was pleased to find that we were awarded \$10,678,341.10, which is approximately 70 percent of our request and 8.9 percent of the \$120 million available for the electric, gas, water and sewer utilities. As required in the award and similar to the first round, HRSD will need to execute a new Memorandum of Understanding with the City of Norfolk where they will act as our fiduciary to pass-through the funds. One of the most important changes in this round is the elimination of the attestation requirement if the entity can pass one of the three comparison tests to verify our arrearage customer base was impacted by the pandemic. HRSD can easily pass any one of the three tests, which means that we can automatically apply funds to customer accounts and will ensure that all funds will be applied before the March 31, 2022, deadline.
2. The Low Income Housing Water Assistance Program (LIHWAP) workgroup is underway with a planned program start in 2022. The ideal timing for this program to start is soon after the MURP round two funds are used. The Federal agency is pushing the Commonwealth to start their program sooner than the original 2023 start date as some states have already started taking applications. Although LIHWAP is temporarily funded, the latest Congressional Reconciliation package has permanent funding proposed for this program. The current plan is to mimic the Low Income Home Energy Assistance Program (LIHEAP), which has been in place since 1981.
3. Water consumption increased in October and cumulative wastewater service charges are close to the estimated seasonal budget. Facility Charges are on target, but less than last fiscal year as labor and supply shortages continue. Interest Income is negative because it includes a decline in market value from our one to three-year fund of -0.23 percent. This is less than the benchmark loss of -0.24 percent. The Federal Reserve is not planning to raise rates until the third quarter of 2022, so Interest Income will continue to lag. Personal Services (salaries) and Fringe Benefits are on target. Even with supply shortages and higher than expected inflation, expenses remain under budget, but we may see some line items exceed budget as we get closer to the end of the fiscal year.

4. Customer Care continues to move forward with resuming normal collections activities. Recently on October 25, 2021, field teams resumed hanging door tags warning of impending disconnection of service. In addition, an additional tag is placed that provides potential resources that could help avoid a service disconnection. The roll out was strategically planned by tagging highest past due accounts first, reducing the debt threshold each day to ensure the Call Center may adequately meet the demand of calls and maintain level of service standards (see annotated weekly call volumes below). Due to the recent award of MURP/ARPA funding in the amount of \$10.7M, warning tags will continue to be delivered, however Customer Care will not conduct disconnection of services until relief funding has been applied, no later than February 28, 2022.



5. The Quarterly investment summary for [HRSD's Operating Cash Strategies and Retiree Health Trust \(OPEB\)](#) are attached.

B. Interim Financial Report

1. Operating Budget for the Period Ended October 31, 2021

	Amended Budget	Current YTD	Current YTD as % of Budget (33% Budget to Date)	Prior YTD as % of Prior Year Budget
<b>Operating Revenues</b>				
Wastewater	\$ 336,455,000	\$ 122,475,830	36%	36%
Surcharge	1,600,000	499,680	31%	37%
Indirect Discharge	3,200,000	1,033,917	32%	33%
Fees	3,020,000	67,132	2%	23%
Municipal Assistance	700,000	394,688	56%	38%
Miscellaneous	1,285,000	439,166	34%	44%
Total Operating Revenue	<u>346,260,000</u>	<u>124,910,413</u>	36%	36%
<b>Non Operating Revenues</b>				
Facility Charge	7,320,000	2,345,185	32%	45%
Interest Income	1,210,000	(111,474)	-9%	19%
Build America Bond Subsidy	2,095,000	1,064,842	51%	0%
Other	610,000	393,149	64%	32%
Total Non Operating Revenue	<u>11,235,000</u>	<u>3,691,702</u>	33%	31%
<b>Total Revenues</b>	357,495,000	128,602,115	36%	36%
Transfers from Reserves	17,346,624	5,782,208	33%	83%
<b>Total Revenues and Transfers</b>	<u>\$ 374,841,624</u>	<u>\$ 134,384,323</u>	36%	39%
<b>Operating Expenses</b>				
Personal Services	\$ 62,776,055	\$ 20,926,035	33%	34%
Fringe Benefits	25,173,707	8,420,572	33%	33%
Materials & Supplies	9,509,735	2,438,002	26%	26%
Transportation	1,555,282	482,029	31%	19%
Utilities	12,350,061	3,672,315	30%	28%
Chemical Purchases	9,249,441	2,712,999	29%	26%
Contractual Services	55,345,089	11,293,520	20%	22%
Major Repairs	16,056,857	2,699,618	17%	16%
Capital Assets	655,963	216,879	33%	27%
Miscellaneous Expense	3,137,304	816,966	26%	28%
<b>Total Operating Expenses</b>	<u>195,809,494</u>	<u>53,678,935</u>	27%	28%
<b>Debt Service and Transfers</b>				
Debt Service	64,308,209	29,234,403	45%	42%
Transfer to CIP	114,463,921	43,154,640	38%	42%
Transfer to Risk management	260,000	86,668	33%	33%
Total Debt Service and Transfers	<u>179,032,130</u>	<u>72,475,711</u>	40%	42%
<b>Total Expenses and Transfers</b>	<u>\$ 374,841,624</u>	<u>\$ 126,154,646</u>	34%	35%



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 Program (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, 2021

HRSD - RESERVE AND CAPITAL ACTIVITY								October 31, 2021	
	General Reserve					Capital			
	General	CARES - HRSD	CARES - JCSA	Debt Service	Risk Mgmt Reserve	Paygo	Debt Proceeds		
	Unrestricted	Restricted	Restricted	Restricted	Unrestricted	Unrestricted	Restricted		
<b>Beginning - July 1, 2021</b>	<b>\$ 182,380,923</b>	<b>\$ 1,373,428</b>	<b>\$ 168,124</b>	<b>\$ 30,454,700</b>	<b>\$ 4,019,543</b>	<b>\$ 6,033,913</b>	<b>\$ -</b>		
<b>Current Year Sources of Funds</b>									
Current Receipts	125,501,482	49,659							
Line of Credit								18,422,172	
VRA Draws							33,521,704		
CARES Transfer In	1,143,630								
Days Cash on Hand Transfer In									
Transfers In	-					86,668	43,154,640		
<b>Sources of Funds</b>	<b>126,645,112</b>	<b>49,659</b>	<b>-</b>	<b>-</b>	<b>86,668</b>	<b>76,676,344</b>	<b>18,422,172</b>		
<b>Total Funds Available</b>	<b>\$ 309,026,035</b>	<b>\$ 1,423,087</b>	<b>\$ 168,124</b>	<b>\$ 30,454,700</b>	<b>\$ 4,106,211</b>	<b>\$ 82,710,257</b>	<b>\$ 18,422,172</b>		
<b>Current Year Uses of Funds</b>									
Cash Disbursements	91,427,704						56,103,564	18,422,172	
CARES Transfer Out		1,423,071	87,815						
Days Cash on Hand Transfer Out	-								
Transfers Out	43,241,308								
<b>Uses of Funds</b>	<b>134,669,012</b>	<b>1,423,071</b>	<b>87,815</b>	<b>-</b>	<b>-</b>	<b>56,103,564</b>	<b>18,422,172</b>		
<b>End of Period - October 31, 2021</b>	<b>\$ 174,357,023</b>	<b>\$ 16</b>	<b>\$ 80,309</b>	<b>\$ 30,454,700</b>	<b>\$ 4,106,211</b>	<b>\$ 26,606,693</b>	<b>\$ -</b>		
Unrestricted Funds	<b>\$ 205,069,927</b>								

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended October 31, 2021

**HRSD - PROJECT ANALYSIS**

October 31, 2021

Classification/ Treatment Service Area	Appropriated Funds	Expenditures		Total		Available Funds
		prior to 7/1/2021	Year to Date FY2022	Project Expenditures	Encumbrances	
Administration	47,227,240	27,658,581	1,595,054	29,253,635	374,638	17,598,967
Army Base	163,448,800	123,537,916	520,738	124,058,654	1,340,270	38,049,876
Atlantic	143,194,633	82,877,498	2,070,903	84,948,401	4,701,440	53,544,792
Boat Harbor	288,504,388	52,827,281	2,515,256	55,342,537	8,562,467	224,599,384
Ches-Eliz	166,427,309	105,212,456	8,020,231	113,232,687	10,630,387	42,564,235
Eastern Shore	18,093,040	68,570	25,349	93,919	16,199,393	1,799,728
James River	315,605,591	49,601,157	5,221,074	54,822,231	210,397,006	50,386,354
Middle Peninsula	95,697,822	13,511,974	2,098,163	15,610,137	8,198,973	71,888,712
Nansemond	355,543,533	41,212,618	2,654,105	43,866,723	6,686,989	304,989,821
Surry	55,505,027	26,875,712	8,734,222	35,609,934	6,106,018	13,789,075
VIP	308,263,674	183,421,754	2,176,233	185,597,987	6,418,436	116,247,251
Williamsburg	39,061,010	27,900,712	800,863	28,701,575	6,225,912	4,133,523
York River	82,379,847	30,364,487	1,121,746	31,486,233	2,562,366	48,331,248
General	839,443,019	213,776,988	13,380,954	227,157,942	276,682,064	335,603,013
	\$ 2,918,394,933	\$ 978,847,704	\$ 50,934,891	\$ 1,029,782,595	\$ 565,086,359	\$ 1,323,525,979

5. Debt Management Overview

**HRSD - Debt Outstanding (\$'000's)**

October 31, 2021

	Principal		Principal Payments	Principal Draws	Interest	
	Sept 2021	Oct 2021			Oct 2021	Payments
<b>Fixed Rate</b>						
Senior	189,342		-	-	189,342	-
Subordinate	591,102		(1,314)	57	589,845	(2,099)
<b>Variable Rate</b>						
Subordinate	50,000		-	-	50,000	(1)
<b>Line of Credit</b>						
	33,721		-	-	33,721	(13)
<b>Total</b>	\$ 864,165	\$	(1,314)	\$ 57	\$ 862,908	\$ (2,113)

**HRSD- Series 2016VR Bond Analysis**

November 5, 2021

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.35%	0.50%	0.15%
Minimum	0.01%	0.01%	0.00%
As of 11/05/21	0.04%	0.06%	0.02%

\* Since October 20, 2011 HRSD has averaged 50 basis points on Variable Rate Debt

## 6. Financial Performance Metrics for the Period Ended October 31, 2021

### HRSD - UNRESTRICTED CASH

October 31, 2021

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

		Days Cash on Hand	Adjusted Days Cash on Hand
Total Unrestricted Cash	\$ 205,069,927		382
Risk Management Reserve	\$ (4,106,211)	(7)	375
Capital (PAYGO only)	\$ (26,606,693)	(50)	325
<b>Adjusted Days Cash on Hand</b>	<b>\$ 174,357,023</b>		<b>325</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, 2021

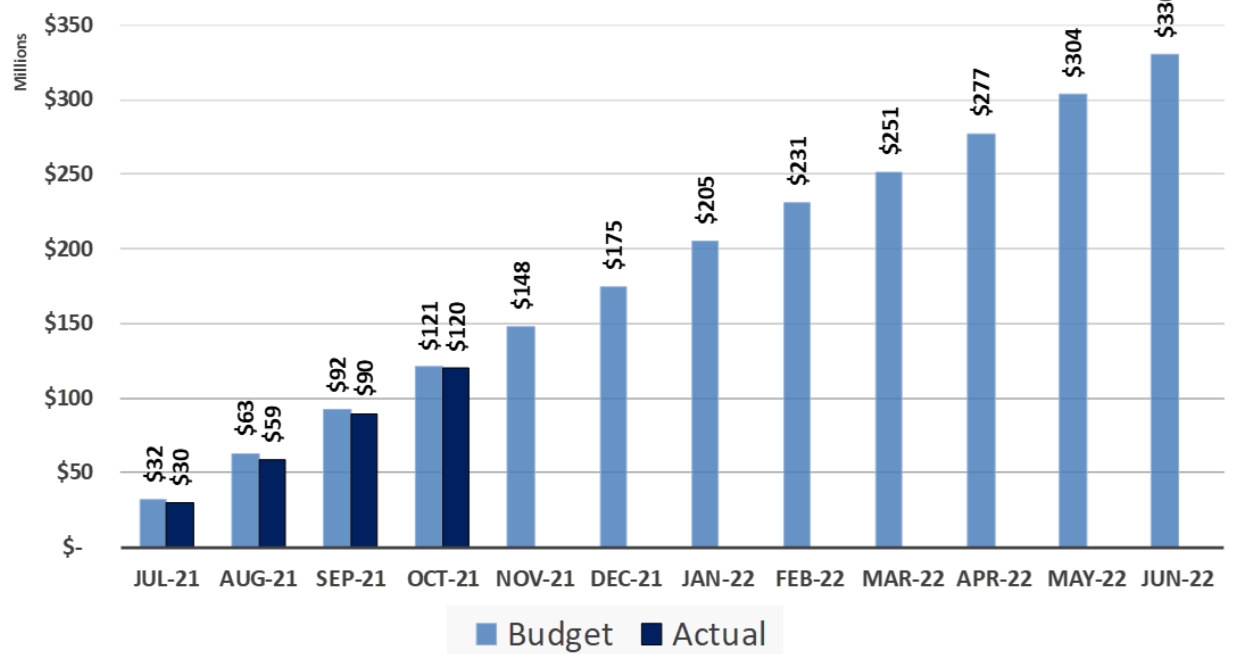
Primary Source	Beginning Market Value July 1, 2021	YTD Contributions	YTD Withdrawals	YTD Income Earned	Ending Market Value October 31, 2021	Allocation of Funds	Credit Quality	Current Mo Avg Yield
BAML Corp Disbursement Account	30,017,420	192,365,926	211,878,740	13,038	10,517,644	6.8%	N/A	0.55%
VIP Stable NAV Liquidity Pool	108,890,465	50,000,000	15,000,000	28,395	143,918,860	93.2%	AAAm	0.07%
<b>Total Primary Source</b>	<b>\$ 138,907,885</b>	<b>\$ 242,365,926</b>	<b>\$ 226,878,740</b>	<b>\$ 41,433</b>	<b>\$ 154,436,504</b>	<b>100.0%</b>		

Secondary Source	Beginning Market Value July 1, 2021	YTD Contributions	YTD Withdrawals	YTD Income Earned & Realized G/L	Ending Market Value October 31, 2021	Ending Cost	LTD Mkt Adj	Yield to Maturity at Market
VIP 1-3 Year High Quality Bond Fund	65,054,203	-	4,354	102,646	64,887,123	63,497,836	1,389,287	
<b>Total Secondary Source</b>	<b>\$ 65,054,203</b>	<b>\$ -</b>	<b>\$ 4,354</b>	<b>\$ 102,646</b>	<b>\$ 64,887,123</b>	<b>\$ 63,497,836</b>	<b>\$ 1,389,287</b>	

	Total	Fund Alloc
Total Primary Source	\$ 154,436,504	70.4%
Total Secondary Source	\$ 64,887,123	29.6%
<b>TOTAL SOURCES</b>	<b>\$ 219,323,627</b>	<b>100.0%</b>

## 7. Summary of Billed Consumption

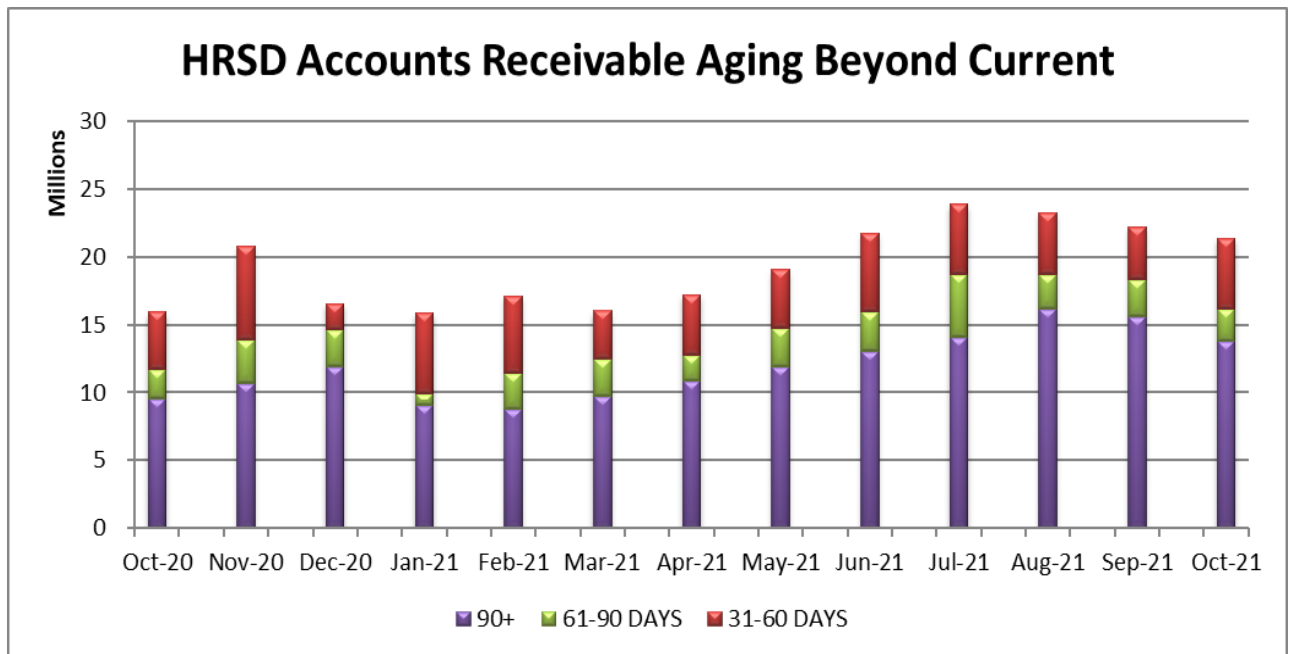
### Wastewater Service Charges - Budget to Actual

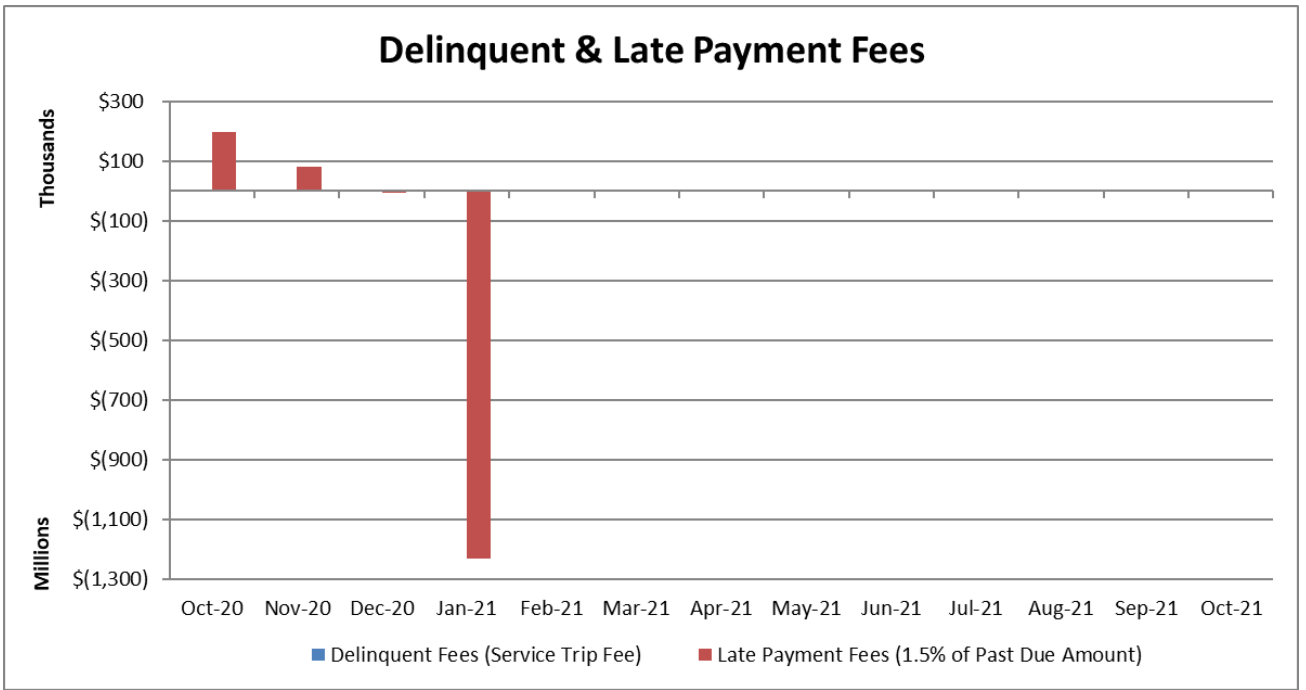


Summary of Billed Consumption (,000s ccf)							
Month	FY2022 Cumulative Budget Estimate	FY2022 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2021 Actual	From FY2021	Cumulative 3 Year Average	From 3 Year Average
July	5,015	4,976	-0.8%	4,751	4.7%	5,006	-0.6%
Aug	9,883	9,517	-3.7%	9,459	0.6%	9,866	-3.5%
Sept	14,413	14,346	-0.5%	14,335	0.1%	14,303	0.3%
Oct	18,892	19,048	0.8%	18,863	1.0%	18,931	0.6%
Nov	23,125	-	N/A	21,192	N/A	22,474	N/A
Dec	27,336	-	N/A	27,614	N/A	27,458	N/A
Jan	32,088	-	N/A	32,478	N/A	32,116	N/A
Feb	36,182	-	N/A	36,068	N/A	36,110	N/A
March	39,309	-	N/A	41,018	N/A	40,340	N/A
Apr	43,360	-	N/A	45,116	N/A	44,540	N/A
May	47,508	-	N/A	49,256	N/A	48,716	N/A
June	51,620	-	N/A	54,195	N/A	53,202	N/A

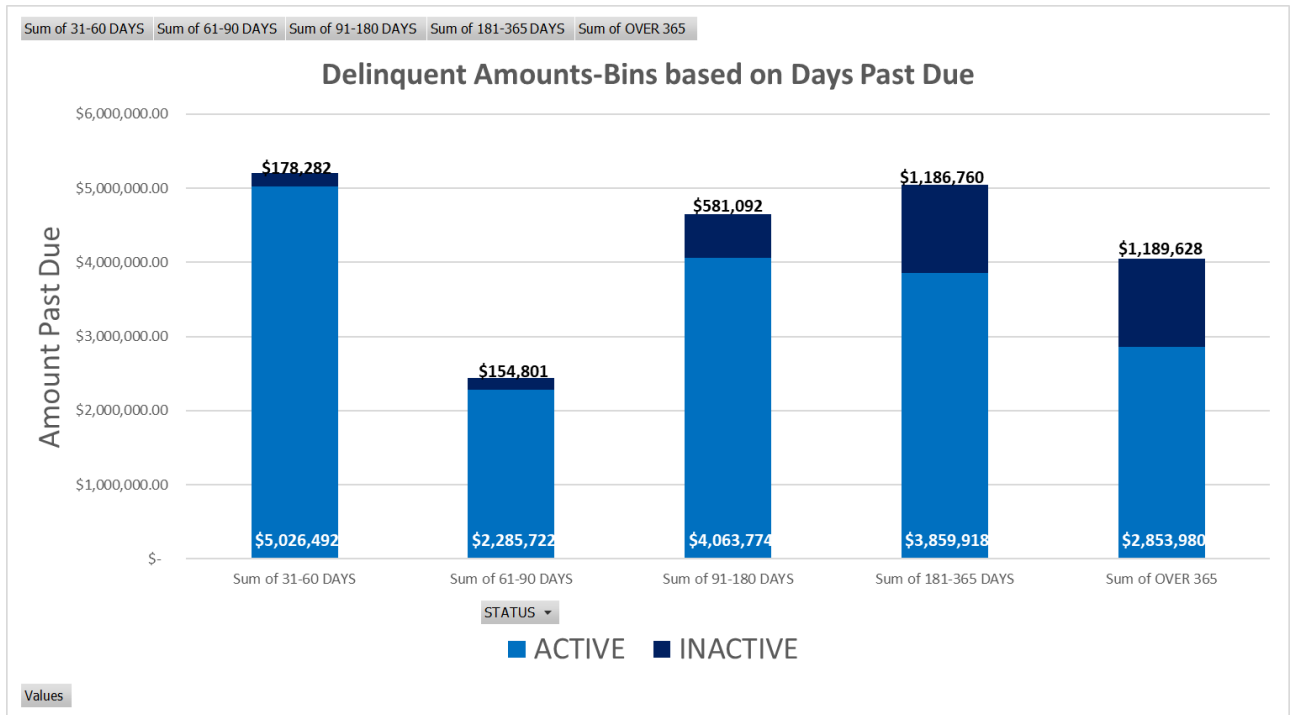
C. Customer Care Center

1. Accounts Receivable Overview

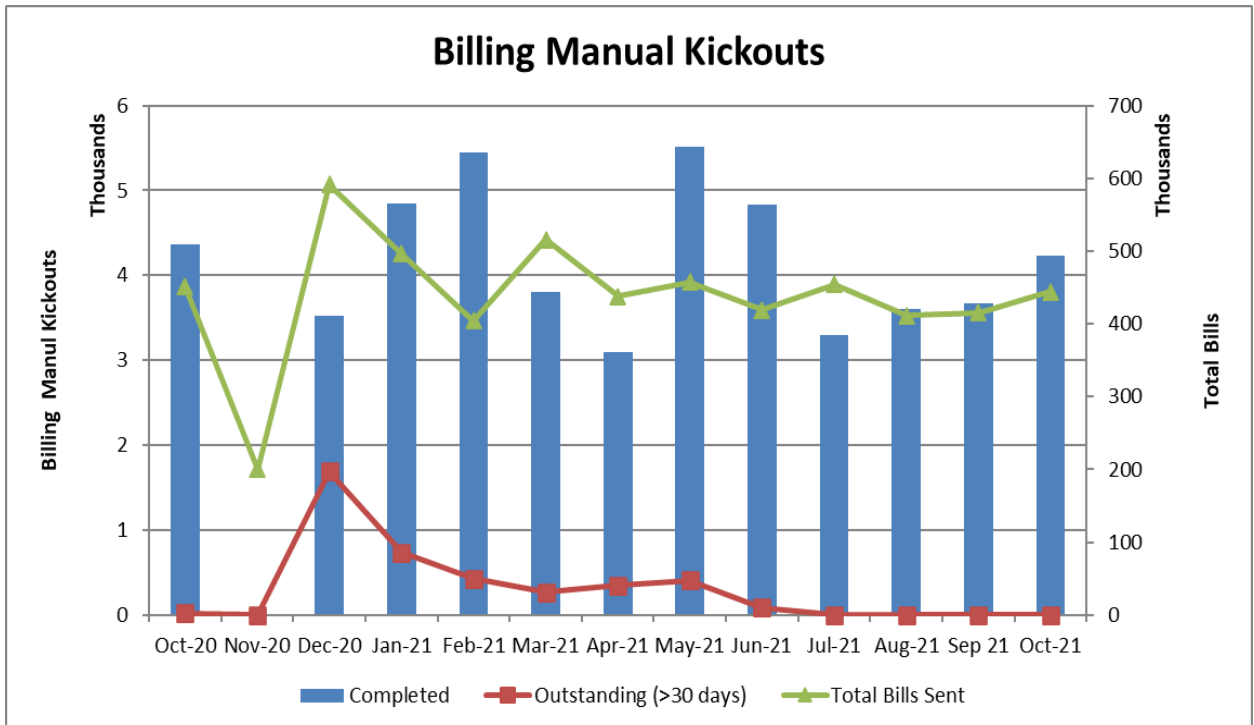




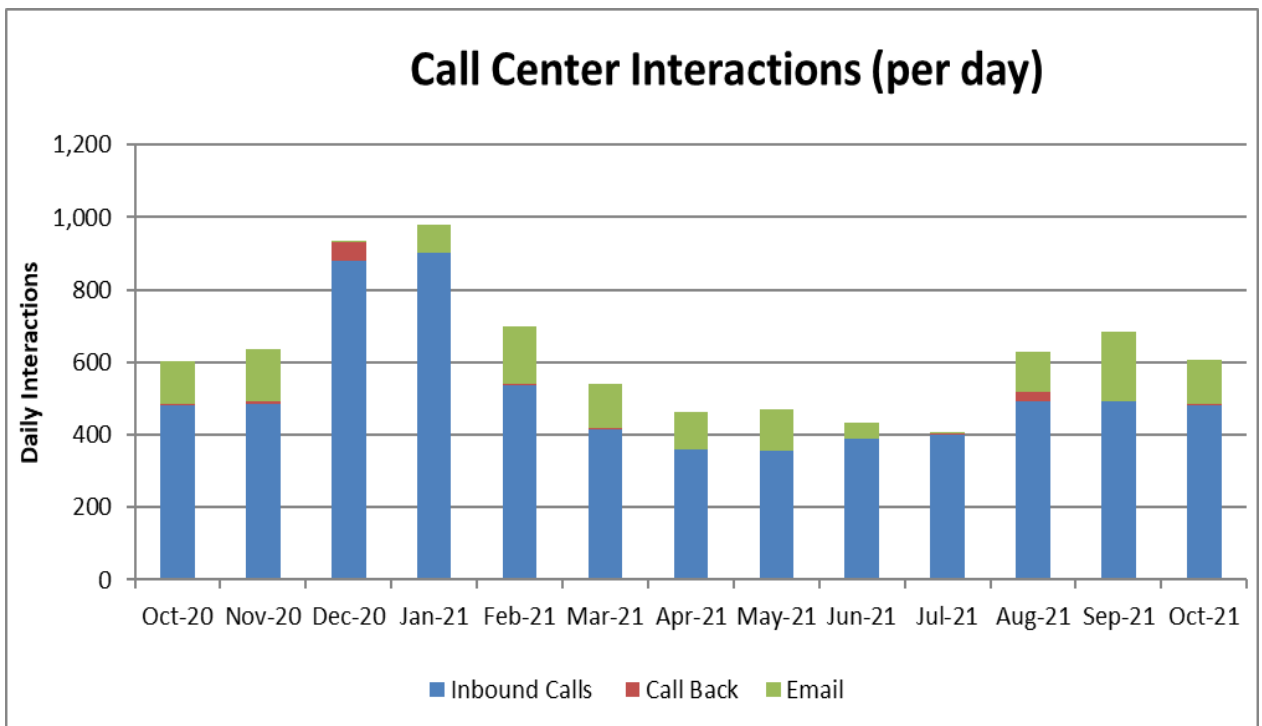
Apr 20-Oct 21 Field Activity was suspended late March 2020 in response to COVID-19.



## 2. Customer Care Center Statistics



November data not available due to Ransomware attack



Customer Interaction Statistics	May	Jun	Jul	Aug	Sep	Oct
Calls Answered within 3 minutes	98%	98%	96%	65%	91%	93%
Average Wait Time (seconds)	16	16	30	433	57	38
Calls Abandoned	2%	3%	4%	23%	6%	4%

D. Procurement Statistics

ProCard Fraud	External Fraud Transactions *	Comments
July	0	
August	0	
September	0	
October	0	
<b>Total</b>	<b>0</b>	

\***External Fraud:** Fraud from outside HRSD (i.e.: a lost or stolen card, phishing, or identity theft)

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1  
10/18/2021 - VAGP 2021 Fall Symposium (Virtual)
2. Community Partners: 0
3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	October 2021
M-1.4a	Training During Work Hours Per Full Time Employee (102) – Current Month	Hours / #FTE	10.31
M-1.4b	Total Training During Work Hours Per Full Time Employee (102) – Cumulative Fiscal Year-to-Date	Hours / #FTE	15.12
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	109%
	General Reserves	Percentage of Operating Budget less Depreciation	105%
	Liquidity	Days Cash on Hand	382 Days
	Accounts Receivable (HRSD)	Dollars	\$42,131,607
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	33%

4. Annual Metrics

Item #	Strategic Planning Measure	Unit	FY-2021
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	7%
M-4.3	Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow	\$1,545
M-4.4	Affordability	6.5 CCF Monthly Charge/Median Household Income <sup>1</sup>	0.67%
M-4.5	Operating Cost/MGD	Total Operating Expense /365/5-Year Average Daily Flow	\$4,311
	Billed Flow	Percentage of Total Treated	72%
	Senior Debt Coverage	Cash Reserves/ Senior Annual Debt Service	6.03
	Total Debt Coverage		2.66

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

Attachments: [HRSD's Operating Cash Strategies and Retiree Health Trust \(OPEB\)](#)

<sup>1</sup> Median Household Income is based on September 28, 2020 article adjusted for June 2020-2021 CPI-W increase:  
<https://www.virginiabusiness.com/article/an-overview-of-hampton-roads/>



	Total Portfolio Value	
	September 30, 2021	June 30, 2021
Investment Assets	\$ 71,256,032	\$ 71,657,066
<b>Combined Assets</b>	<b>\$ 71,427,711</b>	<b>\$ 71,665,784</b>

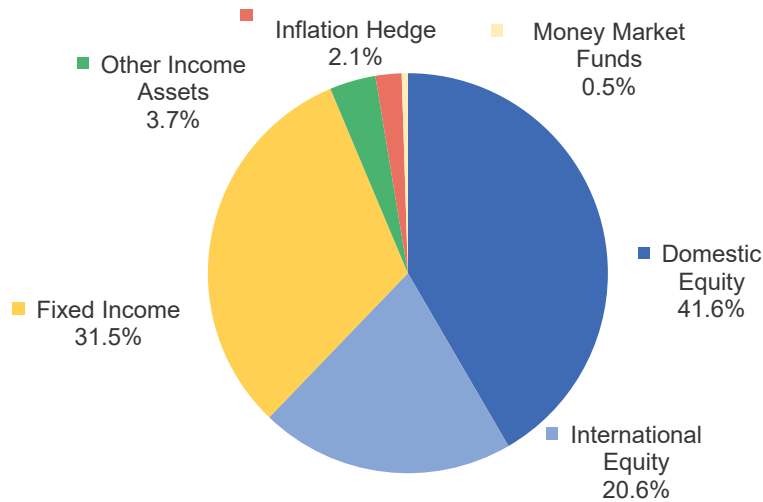
## Portfolio Recap & Strategy

- The Retiree Health Plan Trust portfolio returned -0.55% (investment assets) for the quarter ended September 30, 2021, above the -0.62% return of the Blended Benchmark.\* As of September 30, 2021, the weighted average credit quality of fixed income holdings for the Retiree Health Plan Trust portfolio was A. Over the quarter, the Multi-Asset Class Investment Committee (“the Committee”) sought to add value to the portfolio by reducing allocations to Fixed Income, REITs, Commodities and Domestic Equity (mostly Small Cap and Emerging Markets), while adding a dedicated allocation to a Preferred Securities ETF and a Convertible Securities ETF.
- Real GDP in the U.S. increased by 6.7% in Q2, following a 6.3% expansion in Q1. Spending was again the primary driver, with consumer spending rising by 12% as public health restrictions eased and businesses reopened earlier in the year. The delta variant triggered a summer slowdown in spending, but consumers remain in a strong position to help power the economic recovery. Nevertheless, the impact of waning monetary and fiscal stimulus creates a larger degree of uncertainty for the economy. Job gains disappointed for a second straight month as the U.S. economy added only 366,000 jobs in August and 194,000 jobs in September, far short of expectations and well below the average of 641,000 for the first seven months of the year. Despite the recent weakness, the unemployment rate fell 1.1% to 4.8% in the quarter.
- At the September meeting, the Federal Open Market Committee (FOMC) hinted at the possible tapering of asset purchasing later this year, perhaps as early as November. In December FOMC officials reinforced the timeline for tapering would not supersede making “substantial further progress” on jobs and inflation. The updated September projections showed officials are now evenly split on whether or not it will be appropriate to begin raising the Federal Funds at least once in 2022. The Federal Reserve (Fed) has signaled it would not raise it before 2024, but policymakers’ timelines have been expedited over rising inflation concerns as August saw inflation at 4.3% and September at 5.4%.
- Domestic equity markets ended the third quarter slightly positive, as the delta variant surge led to higher volatility during the back half of the quarter. The S&P 500 Index (S&P) posted a return of 0.58% for the quarter highlighted by September’s negative return of -4.65%, which was a drag on the July and August returns. Six out of 11 sectors within the S&P produced positive returns. Financials (+2.7%), Utilities (+1.8%), and Communication services (+1.6%) lead the way, with Industrials (-4.2%) as the worst-performing sector during the quarter. Markets outside of the United States, as measured by the MSCI ACWI ex-U.S. Index, underperformed their U.S. counterparts, returning -2.99% for the quarter.
- The U.S. bond market represented by the Bloomberg U.S. Aggregate (Aggregate) Index posted a mild gain of 0.05% in the third quarter. The fixed-rate mortgage market, as measured by the Bloomberg U.S. Mortgage-Backed Securities (MBS) Index, had another weak performance and only gained 0.10%. Due to its higher duration, corporate credit had mixed results because the Bloomberg U.S. Corporate Index was flat for the quarter. High yield bonds, as represented by the Bloomberg U.S. Corporate High Yield (HY) Index, posted a return of 0.89% despite some spread widening. Finally, emerging market sovereign debt, represented by the JP Morgan EMBI Global Diversified Index, fell 0.7%.
- Commodity futures, represented by the Bloomberg Commodity Total Return Index, returned 6.6% in the third quarter of 2021. REITs, as measured by the FTSE NAREIT Equity REITs Index, returned just 1.0% in the third quarter of 2021, compared to a 12.0% return in the prior quarter.

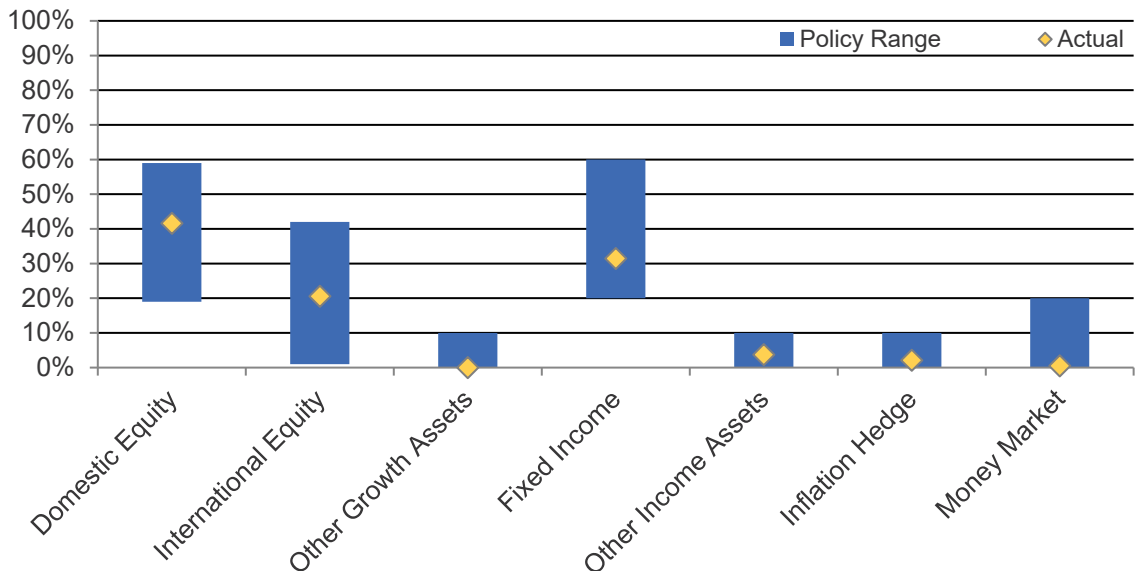
\*Performance is unreconciled and does not include funds from Boyd Watterson. See page 3 for detailed information about the Blended Benchmark.

Security Type	September 30, 2021	% of Portfolio	June 30, 2021	% of Portfolio	Permitted by Policy
Domestic Equity	\$ 29,720,808	41.6%	\$ 29,467,267	41.1%	19% - 59%
International Equity	\$ 14,700,525	20.6%	\$ 15,207,938	21.2%	1% - 41%
Fixed Income	\$ 22,483,649	31.5%	\$ 22,058,133	30.8%	20% - 60%
Other Income Assets	\$ 2,663,213	3.7%	\$ 2,632,037	3.7%	0% - 10%
Inflation Hedge	\$ 1,504,839	2.1%	\$ 2,203,156	3.1%	0% - 10%
Money Market Funds	\$ 354,676	0.5%	\$ 97,253	0.1%	0% - 20%
<b>Totals</b>	<b>\$ 71,427,711</b>	<b>100.0%</b>	<b>\$ 71,665,784</b>	<b>100.0%</b>	

**Portfolio Composition**  
(as of 9/30/21)



**Asset Allocation**  
(as of 9/30/21)

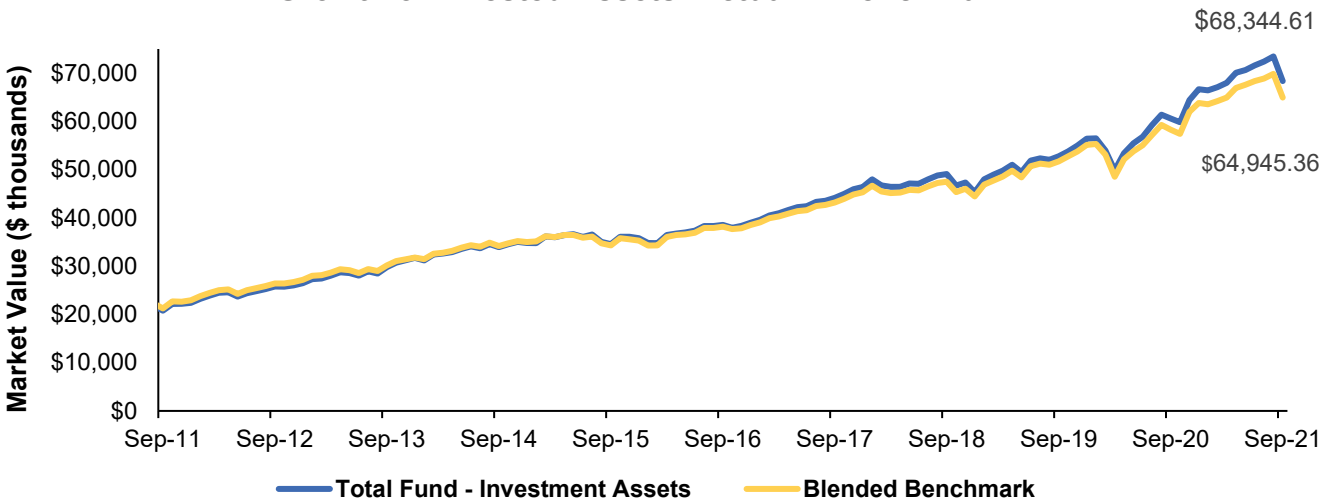


Index	Market Values	%	1 Quarter	Year to Date	Trailing 1 Year	Trailing 3 Years	Trailing 5 Years	Apr-2013 To Mar-2021	Since Inception	Inception Date
<b>Domestic Equity</b>	<b>\$ 29,467,267</b>	<b>41.12</b>								
Vanguard Total Stock Market ETF	\$ 23,343,960	32.58	8.28%	15.25%	44.32%	18.75%	17.90%	15.18%	57.33%	4/1/2020
<i>Russell 3000 Index</i>			8.24%	15.11%	44.16%	18.73%	17.89%	15.18%	57.13%	4/1/2020
Jensen Quality Growth Fund	\$ 2,941,988	4.11	7.86%	10.89%	35.42%	18.49%	17.49%	15.55%	19.26%	4/1/2019
<i>S&amp;P 500</i>			8.55%	15.25%	40.79%	18.67%	17.65%	15.26%	22.50%	4/1/2019
Touchstone Mid Cap Fund	\$ 1,179,878	1.65	3.11%	9.21%	34.58%	15.68%	16.14%	12.91%	34.58%	7/1/2020
<i>Russell Midcap Index</i>			7.50%	16.25%	49.80%	16.45%	15.62%	13.64%	49.80%	7/1/2020
iShares Core S&P Small-Cap ETF	\$ 2,001,441	2.79	4.49%	23.51%	67.23%	12.19%	15.80%	13.76%	23.51%	1/1/2021
<i>S&amp;P SmallCap 600</i>			4.51%	23.56%	67.40%	12.20%	15.82%	13.78%	23.56%	1/1/2021
<b>International Equity</b>	<b>\$ 15,207,938</b>	<b>21.22</b>								
Vanguard Total International Stock ETF	\$ 4,594,250	6.41	5.55%	9.72%	36.59%	9.66%	11.14%	6.96%	46.62%	4/1/2020
<i>MSCI AC World ex USA (Net)</i>			5.48%	9.16%	35.72%	9.38%	11.08%	6.61%	43.89%	4/1/2020
J. O. Hambro International Select	\$ 3,483,247	4.86	3.82%	4.10%	29.37%	12.07%	12.78%	11.02%	12.44%	1/1/2016
<i>MSCI AC World ex USA (Net)</i>			5.48%	9.16%	35.72%	9.38%	11.08%	6.61%	9.82%	1/1/2016
Harding Loevner International Equity	\$ 3,460,783	4.83	5.41%	6.30%	34.10%	11.43%	12.71%	9.02%	34.10%	7/1/2020
<i>MSCI AC World ex USA (Net)</i>			5.48%	9.16%	35.72%	9.38%	11.08%	6.61%	35.72%	7/1/2020
Artisan International Small-Mid	\$ 798,431	1.11	7.40%	5.94%	41.50%	17.19%	15.44%	-	5.94%	1/1/2021
<i>MSCI AC World ex USA Smid Cap Index (Net)</i>			6.05%	10.52%	41.80%	8.97%	11.21%	7.75%	10.52%	1/1/2021
Virtus KAR International Small-Cap	\$ 1,103,820	1.54	7.10%	7.60%	45.87%	13.90%	18.53%	-	7.60%	1/1/2021
<i>MSCI AC World ex USA Small Cap (Net)</i>			6.35%	12.24%	47.04%	9.78%	11.97%	8.39%	12.24%	1/1/2021
Hartford Schroders Emerging Markets Equity	\$ 1,767,406	2.47	2.80%	6.44%	43.55%	13.07%	14.88%	7.12%	8.60%	3/1/2018
<i>MSCI EM (net)</i>			5.05%	7.45%	40.90%	11.27%	13.03%	6.00%	6.78%	3/1/2018
<b>Fixed Income</b>	<b>\$ 22,058,133</b>	<b>30.78</b>								
Baird Core Plus	\$ 5,820,790	8.12	2.13%	-1.03%	1.78%	6.28%	4.03%	3.77%	4.13%	5/1/2014
<i>Bloomberg Barclays U.S. Aggregate</i>			1.83%	-1.61%	-0.34%	5.34%	3.03%	3.01%	3.37%	5/1/2014
DoubleLine Core Fixed Income	\$ 2,691,444	3.76	1.86%	-0.25%	3.33%	4.70%	3.29%	3.33%	3.44%	9/1/2017
PGIM Total Return Bond Fund	\$ 7,103,024	9.91	3.14%	-1.44%	2.70%	6.24%	4.31%	4.10%	4.54%	9/1/2017
<i>Bloomberg Barclays U.S. Aggregate</i>			1.83%	-1.61%	-0.34%	5.34%	3.03%	3.01%	3.69%	9/1/2017
Voya Intermediate Bond	\$ 3,798,171	5.30	2.07%	-1.07%	2.48%	6.14%	4.00%	-	4.65%	1/1/2020
<i>Bloomberg Barclays U.S. Aggregate</i>			1.83%	-1.61%	-0.34%	5.34%	3.03%	3.01%	3.82%	1/1/2020
iShares Intermediate-Term Corporate Bond ETF	\$ 1,431,298	2.00	2.80%	-1.16%	3.10%	7.78%	4.72%	3.88%	5.46%	10/1/2019
<i>ICE BofAML U.S. Corporate 5-10 Year Index</i>			2.95%	-0.97%	3.50%	8.05%	4.96%	4.63%	5.75%	10/1/2019
iShares JP Morgan USD Emerging Markets Bond ETF	\$ 664,864	0.93	4.43%	-1.22%	7.19%	6.61%	4.33%	4.16%	7.19%	7/1/2020
<i>JPM EMBI Global Diversified</i>			4.06%	-0.66%	7.53%	6.71%	4.86%	4.81%	7.53%	7/1/2020
Mainstay Mackay Hight Yield Corp	\$ 548,543	0.77	2.80%	4.01%	14.29%	6.82%	6.91%	-	1.16%	7/1/2020
<i>ICE BofAML High Yield Master II</i>			2.77%	3.70%	15.62%	7.15%	7.30%	5.75%	1.37%	7/1/2020
<b>Other Income</b>	<b>\$ 2,632,037</b>	<b>3.67</b>								
Boyd Watterson GSA Fund	\$ 2,632,037	3.67	2.27%	5.39%	9.11%	-	-	-	7.71%	7/1/2019
<i>NCREIF Property Income</i>			1.06%	2.11%	4.19%	4.37%	4.49%	4.78%	4.29%	7/1/2019
<b>Inflation Hedge</b>	<b>\$ 2,203,156</b>	<b>3.07</b>								
Invesco Opt Yield Diversified Commodity	\$ 1,122,689	1.57	16.70%	31.81%	55.44%	3.61%	5.08%	-	4.02%	7/1/2019
PIMCO Commodity Real Return Strategy	\$ 1,080,467	1.51	14.87%	24.78%	56.86%	6.69%	4.39%	-3.47%	1.58%	7/1/2019
<i>Bloomberg Commodity Index Total Return</i>			13.30%	21.15%	45.61%	3.90%	2.40%	-3.75%	1.85%	7/1/2019
<b>Cash Equivalent</b>										
First American Government Obligation	\$ 88,536	0.12	0.01%	0.01%	0.03%	1.15%	1.01%	0.62%	1.25%	1/1/2004
<b>Retiree Health Plan Trust</b>	<b>\$ 71,657,066</b>	<b>100.00</b>	<b>5.21%</b>	<b>7.34%</b>	<b>25.23%</b>	<b>12.49%</b>	<b>11.24%</b>	<b>9.16%</b>	<b>9.34%</b>	<b>9/1/2009</b>
<b>Blended Benchmark*</b>			<b>5.09%</b>	<b>6.99%</b>	<b>23.22%</b>	<b>11.77%</b>	<b>10.40%</b>	<b>8.23%</b>	<b>8.89%</b>	<b>9/1/2009</b>

Data as of June 30, 2021.

"-" refers to performance that is not applicable.

### Growth of Invested Assets: Actual v. Benchmark



\*Active Strategy implemented April 1, 2013. Since inception to June 30, 2017, 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.

**Hampton Roads Sanitation District  
Quarterly Performance Report  
For the Quarter Ending September 30, 2021**

## Total Portfolio Summary

Operating Strategies	September 30, 2021	June 30, 2021
Primary Source	\$ 154,907,231	\$ 138,907,884
Secondary Source	65,085,629	65,054,203
	<b>\$ 219,992,860</b>	<b>\$ 203,962,087</b>

### Primary Source Summary

The Primary Source Portfolio consists of BAML Corp Disbursement Account \$11.00m and VaCo/VML VIP Stable NAV Liquidity Pool \$108.89m. BAML Corp Disbursement Account returned 0.55% for the quarter ending September 30, 2021. VIP LIQ Pool Fund 30 Day Avg Net Yield was 0.07% as of September 30, 2021. VIP Stable NAV Liquidity Pool out performed Va Local Government Investment Pool (the market benchmark) by 0.01% in the month of September 2021. 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. The VIP 1-3 Yield to Maturity at Market was 0.28% as of September 30, 2021, which performed at the same level as the benchmark, ICE BofA ML 1-3 Yr AAA-AA Corp/Gov Index. The weighted average credit rating for VaCo/VML VIP 1-3 Year High Quality Bond Fund's portfolio was AA for the quarter.

Retirement Health Plan Trust	September 30, 2021	June 30, 2021
Investment Assets	71,256,032	71,657,067
Liquidity Assets	171,679	8,717
Combined Assets	<b>\$ 71,427,711</b>	<b>\$ 71,665,784</b>

### Retiree Health Plan Trust Summary

The Retiree Health Plan Trust portfolio returned -0.55% (investment assets) for the quarter ended September 30, 2021, above the -0.62% return of the Blended Benchmark.\* As of September 30, 2021, the weighted average credit quality of fixed income holdings for the Retiree Health Plan Trust portfolio was A. Over the quarter, the Multi-Asset Class Investment Committee ("the Committee") sought to add value to the portfolio by reducing allocations to Fixed Income, REITs, Commodities and Domestic Equity (mostly Small Cap and Emerging Markets), while adding a dedicated allocation to a Preferred Securities ETF and a Convertible Securities ETF.

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

TO: General Manager

FROM: Director of Information Technology

SUBJECT: Information Technology Department Report for October 2021

DATE: November 10, 2021

A. General

1. Upgrade of the Enterprise Resource Planning platform, Oracle e-Business Suite, is ongoing, with a projected completion of May 1, 2022.
2. The network switches providing connectivity to the Air Rail Avenue complex have been replaced in accordance with HRSD's technology refresh plan. Preparation for replacement of the data center firewalls is now underway.
3. In October, the IT Help Desk processed 314 work orders, ensuring availability of computing resources to those working locally and remotely.
4. The Verizon data circuit for Onancock will be provisioned and tested next month. Pre-staging and configuration of the hardware to be installed within the Onancock facility is being performed at the Air Rail complex and will be transported, installed, and tested, once the data circuit is in place.
5. Staff from ITD and Operations are working on numerous enhancements to the Carlton Scale systems that will provide septic haulers a more efficient and user friendly experience when discharging at one of our treatment plants.
6. Staff are researching backup and recovery solutions which will further enhance HRSD's business continuity and disaster recovery capabilities, while further integrating newer cloud-based applications and platforms.

B. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0
2. Number of Community Partners: 0

3. Metrics Summary

<b>Item #</b>	<b>Strategic Planning Measure</b>	<b>Unit</b>	<b>October 2021</b>
M-1.4a	Training During Work Hours Per Full-Time Employee (51) – Current Month	Total Training Hours / # FTE	0.38
M-1.4b	Total Training During Work Hours Per Full-Time Employee (51) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	5.44
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0

Respectfully,

*Don Corrado*

TO: General Manager  
FROM: Director of Operations  
SUBJECT: Operations Report for October 2021  
DATE: November 16, 2021

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

A Sanitary Sewer Overflow (SSO) occurred when the temporary bypass pump installed at 25<sup>th</sup> Street Pump Station (PS) in Newport News failed. This bypass system was in place to accommodate electrical upgrades at the pump station. The total volume spilled was 500 gallons.

2. South Shore (SS) Interceptor Systems

There were two odor complaints reported this month:

- a. On October 4 staff received a complaint about odors near the Dozier's Corner PS in Chesapeake. Staff inspected the surrounding area with gas meters and found the source to be the drainage ditches.
- b. On October 5 staff received a complaint about odors near the Pughsville Pressure Reducing Station (PRS) in Suffolk. Staff was performing the annual preventative maintenance at the station at the time of the complaint.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Staff replaced three of five harmonic filter cabinets. These cabinets are the power supply for the aeration system and are functioning as designed.
- b. Staff finished rebuilding primary clarifier #2 and returned it to service.

2. Atlantic Treatment Plant (ATP)

- a. On October 25 odor control station D had a high exhaust reading for approximately four hours. The high exhaust resulted from pH probes out of calibration causing the caustic feeds pumps not to run. Staff corrected the issue.
- b. Contractors installed the fourth centrifuge. Performance testing is scheduled for mid-November. This centrifuge will allow for higher feed rates, and potentially higher total solids for the dewatered biosolids. This should help with stacking the solids on the storage pads.

- c. Staff are now running the steam boiler for the Thermal Hydrolysis Process (THP) from the methane produced in the plant's digestion process with very few issues, resulting in energy cost savings. In addition, staff are now running both Combined Heat and Power (CHP) engines about 12 hours a day to utilize some of the excess digester gas that is produced rather than flare it into the atmosphere. Although the CHP engines are not presently producing electricity, once the engines are serviced by a contractor, the plan is to run them under load, further reducing energy costs.
- d. Staff are installing new dissolved oxygen meters, rebuilding auto air valves, rebuilding submersible mixers, and replacing worn manifolds and diffusers in all six aeration tanks. Once completed, the staff will switch to automated dissolved oxygen (DO) control in the aeration tanks. This project should result in energy cost savings and should stabilize the desired microorganisms by maintaining a DO set point at all times.

3. Boat Harbor Treatment Plant (BHTP)

- a. Staff completed an overhaul of the #4 primary clarifier.
- b. Influent conductivity continues to be an ongoing challenge. There were two initial meetings between HRSD and staff from the Newport News shipyard to talk through problems and potential solutions. Staff initiated sampling on the raw influent to test for bromine and conductivity to gain a better understanding of effects on treatment processes and ultimately the Sustainable Water Initiative for Tomorrow (SWIFT) project at the Nansemond Treatment Plant.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

Staff closed the septage receiving station at the end of October in anticipation of the plant's closure by the end of the calendar year.

5. James River Treatment Plant (JRTP)

- a. Staff constructed a temporary pipeline in the digester basement to allow for removal of worn-out recirculation pumps and replacement with new pumps. The new pumps will be installed in November and will require modifying existing piping.
- b. Staff took the #3 primary clarifier out of service to allow for scum to be removed by a contractor.
- c. A contractor continued work on installing gates, fiberglass walls and air diffusers in reactor #5 of Integrated Fixed Film Activated Sludge (IFAS) tank #5 for the testing of nutrient removal improvements. Moving media will be installed and oxygen controlled to promote the growth of annamox bacteria.



6. Nansemond Treatment Plant (NTP)

- a. On October 4, contractors completed the bar screen replacement project two months ahead of schedule. Staff were pleased to see that the overall capture rate from all three screens was 92.35%.
- b. Staff completed repairs to the #2 primary clarifier. The tank will be placed into service in November. Staff installed a heavier duty flight system in hopes to keep the flights from breaking in the future.
- c. Contractors continue construction of Phase 1 of the Struvite Recovery Facility (SRF) upgrade. This project consists of a new Programmable Logic Controller (PLC), a new product dryer, new harvest lines, a new and improved operator workspace, as well as other minor upgrades. A larger upgrade is scheduled to begin in April 2022, which will incorporate the additional loading from the closure of the Boat Harbor Treatment Plant (BHTP).
- d. Sustainable Water Initiative For Tomorrow (SWIFT) Research Center (RC)
  - (1) The total volume of SWIFT recharge into the Potomac aquifer for the month of September was 14.24 million gallons (MG) (64.3% Recharge Time based on 500 gpm).
  - (2) The recharge flow rate setpoint remained at 500 gpm. Currently, the recharge water level looks very stable, and no further changes were needed during this month.
  - (3) On October 26 staff noticed a high ozone demand keeping the plant out of recharge operation. Even though the influent water quality was within normal operating parameters, in terms of TOC, UVT, turbidity, nitrite, iron, manganese, etc., the ozone demand was higher than the critical control point for bromate. On October 29 to decrease the ozone demand, staff started feeding free chlorine into the influent pipe prior to flocculation/sedimentation. This helped to reduce the ozone demand and recharge operations were resumed. Staff is investigating the cause of the high ozone demand.

7. Virginia Initiative Plant (VIP)

- a. On October 12 there was a reportable event for a low three-hour average pH at the incinerator caused by low caustic feed. It was resolved with an increase in the caustic pump output.
- b. On October 23 a breaker tripped causing a loss of power to several chemical pumps, including an in-service sodium bisulfite pump resulting in a loss of effluent dechlorination for more than 10 minutes. Staff responded to the alarm, reset the breaker, and restarted the chemical pump.
- c. On October 26 during a monthly generator test run, power did not transfer smoothly resulting in a partial power loss at the incinerator building and the

shutdown of an induced draft fan. Power was restored and the fan was restarted within eight minutes.

- d. Staff isolated the south section of the anoxic effluent channel to allow repairs to the leak at the expansion joint reported last month. Contractors are on site repairing the wall joint.

8. Williamsburg Treatment Plant (WBTP)

- a. Dewatered solids were transported to the compost facility in Waverly and the BHTP for incineration while incinerators remained offline for repairs. Staff and contractors focused on repairs to the #2 incinerator. Staff performed repairs on the sand seal, ash bucket elevator, cake solids screw conveyors and rabble teeth. Two contractors are involved with repairs, with one contractor completing repairs to castable materials in the incinerator and the other working on the exhaust scrubber. The exhaust scrubber involves a significant amount of rigging to remove the existing corroded scrubber and fabrication work to construct the new scrubber.
- b. Administration building renovations began with the contractor staging and performing demolition work.
- c. Discharge of Fats, Oils and Grease (FOG) by haulers to the WBTP remained largely suspended while the FOG system is out of service for repair. Design drawings to replace the steel rake arm in the FOG thickened tank were completed by the engineer.

9. York River Treatment Plant (YRTP)

- a. Staff responded to an odor complaint and discovered the source to be a locality owned PS.
- b. Inspection of the #2 and #3 primary clarifier influent pipelines was completed. The inspection revealed severe concrete corrosion in several spots. Staff are working to evaluate repair methods and acquire a contractor to make necessary repairs. Staff also prepared the influent pipe of primary clarifier #1 for inspection.

10. Incinerator Operations Events Summary

- a. Total Hydrocarbon (THC) monthly averages (not to exceed 100 parts per million) were met by all five treatment plants with incinerators with a THC continuous emissions monitoring (CEM) valid data captured of greater than 99 percent.
- b. There were three deviations from the required 129 SSI rule minimum operating parameters and five minor bypass events (<60 minute).

D. Small Communities (SC)

- a. West Point Treatment Plant (WPTP) and Collections

The temporary alum feed construction was completed; startup will occur in November.

b. Urbanna Treatment Plant (UBTP) and Collections

There was a weekly maximum ammonia concentration permit exceedance with a value of 13.80 mg/l, exceeding the permitted value of 3.83 mg/l. The treatment plant was experiencing a temporary upset at the beginning of the week believed to be caused by the combination of seasonal temperature fluctuations over the weekend causing inconsistent aeration DO concentrations coupled with heavy cleaning in the collection system in preparation for the Urbanna Oyster Festival and increased loadings from the Bethpage Campground due to tank cleanings as part of their construction upgrades. All other weekly and monthly permit limits were met.

c. King William Treatment Plant and Collections

Total flow for the month was 2.195 million gallons (MG) of which 88.6 percent was pumped to Nestle-Purina as reuse/reclaimed water.

d. Mathews System

Staff responded to an odor complaint on October 21 and discovered that a malfunctioning vacuum valve in a collection pit was causing sewage to remain within the gravity lateral causing odors to come out of the resident's washing machine discharge. Staff repaired the valve and evacuated the sewer lines. Staff also cleaned all above ground wet well/equalization tanks along the transmission force main this month.

e. Mount Olive Treatment Plant (MOTP) & Drain Field

A pad was poured at the drain field plant in preparation for a radar level to be installed for better monitoring of the level to make pump & haul operations more cost effective.

f. Middlesex System

Staff performed substantial cleaning of the collection system in preparation for the annual Urbanna Oyster Festival. A new pump was installed at the Watling Street PS.

1. Small Communities – Surry Systems

a. County of Surry

(1) On October 6 a copper value of 6.0 µg/L exceeded the Weekly Average Permit Limit of 5.9 µg/L at the Surry County Treatment Plant. Staff performed additional copper sampling on October 19 at the County Plant's influent and effluent as well as the school complex PS wet well. The effluent copper level was 3.9 µg/L which brought the monthly average

copper value within the permit limits. High copper values were found at the school complex PS and staff will be working with SSA and the County school staff to try and find the sources of high copper. There was one SSO and one permit exceedance during the month.

- (2) On October 25 staff from the Sussex Service Authority (SSA) discovered a leaking force main directly downstream of the Elberon Heights PS in Surry County. The station was isolated until HRSD staff could repair the force main. Approximately 500 gallons of wastewater was released, with 100 gallons recovered.

## 2. Eastern Shore

No permit exceedances, sanitary sewer overflows or odor complaints occurred this month.

### a. Onancock Treatment Plant (OTP)

Contractor installed conduit that houses the fiber line to the control room and is currently installing the fiber line. It is anticipated to be completed by the end of November.

### b. Nassawadox Riverside Treatment Plant (NRTP)

The goal of the following process improvements is to help maintain nitrification through the winter since the plant historically does not meet the ammonia permit level in the winter:

- (1) The equalization pond aerator/mixer was turned down to allow for more carbon as food source to be fed to the aeration basin.
- (2) One out of two aeration basins have been taken out of service to decrease the hydraulic retention time.
- (3) To improve the ammonia removal process; solids from VIP will be added to the plant. The solids will be trucked from VIP in the middle of November.

## F. Electrical & Instrumentation (E&I)

1. Staff worked with contractors to replace the digester covers and upgrade controls at ATP. Staff are performing all Distributed Control System (DCS) programming changes.
2. Staff completed the Process Treatment Unit (PTU) upgrade at ATP. The PTU and blower skid are both online and working in conjunction with DCS. Issues were resolved regarding running the Thermal Hydrolysis Process (THP) boiler on methane.
3. Staff designed and engineered upgraded controls for the Sequential Batch Reactors (SBRs) and are in the process of installing them in the new Water Quality (WQ) Services Building. These upgrades include PLC controls with a Human Machine

Interface (HMI). This will provide easier operator interface with the system and future modifications.

## H. Water Technology and Research

Over the past year, HRSD has been awarded three federal research grants in support of our biological nutrient removal (BNR) work; one from the Environmental Protection Agency (EPA) and two from the Department of Energy (DOE). These grants are all related to the development of more efficient BNR processes and control systems at pilot- and full-scale and are described in more detail below:

- a. EPA: When a Detour becomes a Shortcut: Mainstream Partial Denitrification/Anammox
  - (1) Lead: The Water Research Foundation
  - (2) Partners: HRSD, DC Water, Northwestern, Columbia, George Washington University
  - (3) \$886,000 total, \$105,000 over two years awarded to HRSD
  
- b. DOE: Crossing the Finish Line: Integration of Data-Driven Process Control for Maximization of Energy and Resource Efficiency in Advanced Water Resource Recovery Facilities
  - (1) Lead: The Water Research Foundation
  - (2) Partners: HRSD, DC Water, Denver Metro, BV, University of Michigan, Northwestern, Oak Ridge National Laboratory, Black & Veatch
  - (3) \$1.2 million, \$120,000 over 2 years awarded to HRSD, \$315,900 in cost share by HRSD
  
- c. DOE: Transforming Aeration Energy in Water Resource Recovery Facilities through Suboxic Nitrogen Removal
  - (1) Lead: Carollo
  - (2) Partners: HRSD, Los Angeles County Sanitation District, Columbia University, Ekster & Associates, APG-Neuros Corp, NEWhub Corp, University of Wisconsin-Madison, The Water Research Foundation
  - (3) \$2 million total, \$80,000 over 2 years awarded to HRSD, \$175,000 in cost share by HRSD



## J. Strategic Measurement Data

### 1. Education and Outreach Events: 14

- a. 10/09/2021 – Roc Solid Foundation playset build for a local child diagnosed with cancer and his family – SS Interceptors staff
- b. 10/09/2021 - Cooperating Hampton Roads Organizations for Minorities in Engineering (CHROME) annual professional development day for Science, Technology, Engineering, and Mathematics (STEM) educators on Saturday October 9 at Christopher Newport University. The program was entitled “Exploring the hidden correlation between STEM and SOL’s” – Sherman Pressey
- c. 10/17/2021 – WEFTEC workshop presentation – HRSD-The Research Aspect – Germano Salazar-Benites
- d. 10/18/2021 – WEF Podium Presentation – Knowledge Development Forum: Process Intensification Using Low DO Operation-Is It Possible and What Can I Control and Look For? – Charles Bott
- e. 10/18/2021 – WEF Podium Presentation – Knowledge Development Forum: Process Intensification Using Low DO Operation-Is It Possible and What Can I Control and Look For? – Kester McCullough
- f. 10/18/2021 – WEF Session Moderator – The Effect of Side Stream EBPR (S2EBR) on Nitrifying Populations Dynamics and On Nitrite Accumulation in A-B Stage AvN-S2EBPR Process – Kester McCullough
- g. 10/19/2021 – WEF Session Moderator – The Theoretical Benefits of Mainstream Shortcut Nitrogen Removal Revisited and Validated by Full-Scale Implementation of Partial Denitrification-Anammox – Kester McCullough
- h. 10/19/2021 – WEF Podium Presenter – Knowledge Development Forum: Process Intensification Using Low DO Operation-Is It Possible and What Can I Control and Look For? – Kyle Malin
- i. 10/19/2021 – WEF Session Moderator – Digital Twins: Trial by Jury – Chris Wilson
- j. 10/19/2021 – WEF Session Moderator – Knowledge Development Forum: Balancing Process and Automation Needs with Cybersecurity Requirements – Chris Wilson
- k. 10/20/2021 – WEF Podium Presenter – High Rate Activated Sludge Fermentation As A Carbon Source for Sidestream BioP and Denitrification - Anand Patel
- l. 10/20/2021 – WEF Session Moderator – High-Rate Sludge Fermentation as a Carbon Source for Sidestream BioP and Denitrification – Chris Wilson

- m. 10/21/2021 – National Science Foundation, Engineering Directorate Advisory Committee, Annual Meeting participant – Charles Bott
  - n. 10/26 /2021 – Plant tour for CEL employees – Todd McGovern
2. Community Partners: 4
- a. Chesapeake Bay Foundation-Oyster Cage Maintenance at BHTP for Oyster Garden Project
  - b. DOE Jefferson Lab
  - c. Old Dominion University (ODU)
  - d. United Way Williamsburg House



3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	October 2021
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (533) – Current Month	Hours / FTE	2.88
M-1.4b	Total Training During Work Hours per FTE (533) – Cumulative Year-to-Date	Hours / FTE	11.51
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	29,204.40
M-2.3b	Planned Maintenance – Preventive and Condition Based	percent of Total Maintenance Hours	58.37%
M-2.3c	Planned Maintenance - Corrective Maintenance	percent of Total Maintenance Hours	15.28%
M-2.3d	Planned Maintenance - Projects	percent of Total Maintenance Hours	26.35%
M- 4.1a	Energy Use: Treatment *Reported for October 2021	kWh/MG	2,880
M-4.1b	Energy Use: Pump Stations *Reported for October 2021	kWh/MG	207
M-4.1c	Energy Use: Office Building *Reported for October 2021	kWh/MG	145
M-5.2	Educational and Outreach Events	Number	14
M-5.3	Number of Community Partners	Number	4

Respectfully submitted,  
Steve de Mik  
 Director of Operations

TO: General Manager

FROM: Director of Talent Management (TM)

SUBJECT: Monthly Report for October 2021

DATE: November 10, 2021

A. Talent Management Executive Summary

1. Recruitment Summary

New Recruitment Campaigns	19
Job Offers Accepted – Internal Selections	8
Job Offers Accepted – External Selections	8
Average Days to Fill Position	79

2. The following were performed in response to the COVID-19 pandemic:

- a. Continued addressing and monitoring suspected COVID-19 cases and potential exposures based on Virginia Department of Health (VDH) guidelines:

Description	October 2021	Total (March 2020 – October 2021)
Quarantines due to illness or direct exposure (household or external)	10	362
Work Related Quarantines	0	54
Personal Travel Quarantines	3	58
Confirmed Employee COVID-19 Cases	7	98
Work Related COVID-19 Cases	0	2
Contractor COVID-19 Cases on Work Sites*	1	12
Vaccine Acknowledgements	37	731

\*No direct exposure to HRSD employees

- b. The Human Resources (HR) Business Analyst continued generating weekly Employee Vaccine Acknowledgement reports for Data Analysts to update the Vaccine Status Dashboard. HRSD's current vaccination rate is 85%.
- c. HR staff clarified Vaccination Policy requirements including medical and religious exemption request procedures for several employees.
- d. Staff completed review of Virginia Occupational Safety and Health Administration (VOSHA) Final Permanent Standard for COVID-19 amendments and incorporated most recent changes into *HRSD's Infectious Disease Preparedness and Response Plan* revisions and presented changes to the HRSD Quality Steering Team (QST). *COVID-19 Supplier and Contractor guidelines* were updated to incorporate COVID-19 vaccine requirements.

3. Business Analysts, HR and Information Technology staff met to plan and discuss testing requirements and scheduling to support the upcoming system-wide upgrade.
4. An HR/Operations workgroup met to develop a plan to implement several recruitment initiatives to improve efficiency, time to fill and recruitment of hard to fill positions.
5. Compensation and Benefits:
  - a. TM and Procurement staff completed a statement of work and initiated procurement for a HRSD Compensation study.
  - b. Salary and benefit information was provided for an Appomattox River Water and South-Central Wastewater Authority compensation study.
  - c. HR staff worked with HRSD's benefit consultant on the following:
    - (1) Cigna provided Fiscal Year (FY) 2021 utilization report and presentation covering medical and vision claims costs, trends, costs saving strategies, impact of COVID-19, benefit changes and plan renewal recommendations.
    - (2) Addressed a potential network disruption due to a contract issue with a Women's Health Care provider which was successfully resolved.

7. Wellness Program

a. Participation

Year Nine Participation Activities	Unit	October 2021	Year to Date (March 2021–February 2022)
Biometric Screenings	Number	13	216
Preventive Health Exams	Number	15	195
Preventive Health Assessments	Number	35	158
Online Health Improvement Programs	Number	41	155
Web-MD Online Health Tracking	Number	50	307
Challenges: <i>Meatless Monday</i>	Number	37	286
Fit-Bit Promotion	Number	6	41

- b. Fifteen on-site flu and tetanus clinics were held providing 267 flu vaccines and 53 tetanus vaccines to employees and spouses.
- c. *A Meatless Monday Challenge* began. Weekly resources were sent to participants. Plans were finalized for a *Thirty Day Gratitude Challenge*.
- d. Two virtual Wellness presentations were provided: *Turn Your Chair into a Gym* with 82 participants; and *The Power of Nutrition* for South Shore Interceptor Systems (SSIS) employees.

8. Worked with Hicks Carter Hicks, the OD&T consultant:
  - a. The Supervisory Knowledge and Information Program (SKIP) continued.
  - b. Conducted a Division Leaders Forum on *The Future of HRSD*.
  - c. Completed development of a Virtual Coaching program.
  - d. Held a DE&I Council Orientation.
  - e. Facilitated a pilot *Time Mastery Coach/Mentor Program*.
  - f. Continued work with the Customer Care Division to curate online learning paths and integration of available Corporate Training courses.
  - g. Worked with Electrical & Instrumentation (E&I) staff on a team-building initiative.
9. The Facilitator team worked with the Leadership and Management Academy (LAMA) participants on their capstone project, *Employee Burnout*, and prepared a presentation for the QST meeting and graduation in November.
10. Apprenticeship Program
  - a. The Apprenticeship Program held four work center graduation events to celebrate the Class of 2020 and Class of 2021, graduating 20 and 21 apprentices respectively, from the Electrical & Instrumentation, Interceptor Technician, Maintenance Operator, Plant Operator, and Small Communities Operator trades. The events included a breakfast and presentation of HRSD Certificate of Completion, Department of Labor Certificate of Completion, and Apprenticeship class ring to each graduate and awards for valedictorian and salutatorian.
  - b. OD&T began accepting internal nominations for HRSD's submission to the Department of Labor's Outstanding Apprentice Awards for the Class of 2021.
  - c. OD&T staff visited work centers to provide Apprenticeship Program information.
11. Mishaps and Work-Related Injuries Status to Date (OSHA Recordable)

	<u>2020</u>	<u>2021</u>
<b>Mishaps</b>	32	30
<b>Lost Time Mishaps</b>	8	10
<i>Numbers subject to change pending HR review of each case.</i>		

12. The following were performed for development of the Onancock and Nassawadox Treatment Plant (TP) Safety Programs:
  - (1) Development of lock out/tag out procedures for processes and equipment.
  - (2) Created space specific confined space entry permits for the Onancock TP.

- (3) An Industrial Hygienist visited Onancock and Nassawadox TPs to gather chemical storage and use information for Emergency Response Procedures.

13. Safety Division Monthly Activities

Safety Training Classes	19
Work Center Safety Inspections	10
Reported Accident Investigations	4
Construction Site Safety Evaluations	20
Contractor Safety Briefings	8
Hot Work Permits Issued	7
Confined Space Permits Issued/Reviewed	270
Industrial Hygiene Monitoring Events	12

14. Staff participated in the following external activities:

- a. Virginia Water Environment Association (VWEA)/Virginia American Water Works Association (AWWA) DE&I Task Force Monthly Meeting
- b. Hampton Roads OD&T Professionals meeting
- c. A meeting with a Virginia Department of Labor Registered Apprentice representative on developing a pre-apprenticeship program.
- d. Co-authored an article, *The Importance of Organizational Culture in Stressful Times* for the Water Environment and Technology publication.

B. Monthly Strategic Planning Metrics Summary

1. Education and Outreach Events: (0)
2. Community Partners: (0)
3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	October 2021
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.74%
M-1.1b	Employee Turnover - Service Retirements	Percentage	0.50%
M-1.4a	Total Training Hours Per Full Time Employee (17)	Total Training Hours/ FTE	4.62
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / FTE	15.12
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Community Partners	Number	0

Respectfully submitted,

**Paula A. Hogg**

Director of Talent Management

TO: General Manager  
FROM: Director of Water Quality (WQ)  
SUBJECT: Monthly Report for October 2021  
DATE: November 10, 2021

A. General

Pretreatment and Pollution Prevention (P3) division staff assessed no civil penalties this month.

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy (SEA) Group reported the following activity for the month of October:
  - Announced a volunteer event to plant 85 mixed hardwood and flowering native trees in the HRSD property across from Atlantic Treatment Plant. The event will take place on November 20 and is open to employees and their families. This is the first of two phases for this project. The second phase will occur Spring 2022 and will include planting a pollinator garden area and several hundred Loblolly Pine trees.
2. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department.

C. Municipal Assistance

HRSD provided sampling and analytical services to Hanover County, Northumberland County, Prince William County, Westmoreland County, and the Town of Lawrenceville to support monitoring required for their respective Virginia Pollution Discharge Elimination System (VPDES) permits.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0
2. Community Partners: 5
  - City of Chesapeake, Chesapeake Local Health District
  - Elizabeth River Project Watershed Action Team
  - Hampton Roads Planning District Commission (HRPDC) Fats, Oil & Grease (FOG) Subcommittee
  - Lynnhaven River Now
  - Virginia Department of Health

### 3. Odor Complaints: 4

- On October 1, Technical Services Division (TSD) contacted Nansemond Operations about an offsite odor observed near the plant while performing field work. Plant staff investigated and determined the most likely source to be a contractor truck carrying biosolids. No other offsite odors were observed or complaints received.
- On October 4, South Shore Operations (SS Ops) received an odor complaint in association with the Dozier Corner pump station. SS Ops and TSD responded and found no offsite odors from the station. SS Ops did observe some odors from a ditch nearby. No further complaints have been received.
- On October 4, a complaint was received near the Pughesville pressure reducing station. SS Ops and TSD responded the next day and found no odors at the station or offsite; the source of the odors associated with the complaint, therefore, is unknown. No further complaints have been received.
- On October 15, York River Plant received a complaint of odors in the local Seaford, VA, area. One of the neighbors of this facility stated there were strong sewer odors outside the Seaford Post Office. Plant staff and TSD responded finding the most likely source as the York County septage facility located right next door to the Post Office. While onsite a Postman did confirm that the septage facility does “stink from time to time.” The complainant was informed of the results and satisfied with the investigation. No additional complaints have been received to date.

4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	October 2021
M-1.4a	Training During Work Hours Per Full Time Employee (119) (Current Month)	Total Hours / # FTE	4.1
M-1.4b	Total Training During Work Hours Per Full Time Employee (119) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	9.5
M-2.5	North Shore/South Shore Capacity Related Overflows	# within Level of Service	0
M-3.1	Permit Compliance	# of Exceedances: # of Permitted Parameters	3:20,293
M-3.2	Odor Complaints	#	4
M-3.4	Pollutant Removal	Total Pounds Removed	65,398,523
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	13%
M-5.2	Educational and Outreach Events	#	0
M-5.3	Community Partners	#	5
	Average Daily Flow	Total MGD for all Treatment Plants	120.83
	Pretreatment Related System Issues	#	0

Respectfully submitted,  
*James Platt, PhD*  
 Director of Water Quality





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 audits, and the status of current management action plan monitoring.

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

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### **Emergency Repairs**

- **Tasks Completed (October 2021)**
  - Conducted testing
  - Disseminated follow-up questions and additional documentation requests
- **Upcoming Tasks (November 2021)**
  - Finalize testing
  - Update and refine report

### **Model 3 Billing**

- **Tasks Completed (October 2021)**
  - Continued documentation review
  - Conducted process walkthroughs
  - Began audit program development
- **Upcoming Tasks (November 2021)**
  - Perform audit program validation meeting and finalize audit program
  - Begin fieldwork tests
  - Communicate findings as they are discovered
  - Complete fieldwork testing
  - Submit report

### **Unifier/ERP Integration**

- **Tasks Completed (October 2021)**
  - Held process flowchart validation meeting to finalize flowcharts
  - Drafted risk and control matrix
  - Drafted fieldwork audit program
- **Upcoming Tasks (November 2021)**
  - Finalize risk and control matrix
  - Finalize fieldwork audit program
  - Begin fieldwork tests
  - Draft initial report



**II. Management Action Plan Monitoring**

SC&H is performing on-going management action plan (MAP) monitoring for internal audits previously conducted for HRSD. SC&H begins MAP follow-up approximately one year following the completion of each audit and will assess bi-annually.

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	Report Date	Next Follow-up	Recommendations		
			Closed	Open	Total
D&C: CIP Project Management	5/11/16	Closed	13	0	13
Biosolids Recycling	10/8/16	Spring 2022	7	1	8
HR Benefits	11/22/16	Closed	15	0	15
Inventory	4/20/17	Closed	5	0	5
Procurement/ProCard	8/23/17	November 2021	8	3	11
Engineering Procurement	4/20/18	Closed	8	0	8
Corporate Governance: Ethics Function	3/21/18	Closed	5	0	5
Treatment Plant Operations	10/15/18	July 2022	8	1	9
Customer Care Division	7/26/19	December 2021	2	2	4
Safety Division	9/12/19	February 2022	0	3	3
Permitting	2/4/20	Closed	2	0	2
Payroll	3/27/20	Closed	3	0	3
Pollution Source Control	6/2/20	January 2022	3	5	8
SWIFT Program	2/24/2021	February 2022	0	12	12
Fleet Services	2/24/2021	February 2022	0	17	17
Succession Planning	6/4/2021	July 2022	0	4	4
<b>Totals</b>			79	48	127

Annual Metrics															
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20	FY-21
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%	6.66%	9.99%	6.63%	6.78%	6.31%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%	0.90%	1.01%	2.10%	3.08%	5.44%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	70%	71%	64%	69%	68%	85%	85%	63%	78%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67	67	66	60	95
M-1.4	Training Hours per Employee - cumulative fiscal year-to-date	Hours	> 40		30.0	43.8	37.5	35.9	42.8	49.0	48.4	41.1	40.9	39.3	28.2
M-1.5a	Safety OSHA 300 Incidence Rate Total Cases	# per 100 Employees	< 3.5	6.57	6.15	5.8	11.2	5.07	3.87	7	5.5	5.7	4.1	4.8	4.1
M-1.5b	Safety OSHA 300 Incidence Rate Cases with Days Away	# per 100 Employees	< 1.1	0.74	1.13	1.33	0.96	1.4	0.82	1.9	1	1.1	0.8	1.34	1.3
M-1.5c	Safety OSHA 300 Incidence Rate Cases with Restriction, etc.	# per 100 Employees	< 0.8	3.72	4.27	2.55	4.5	2	1.76	3.6	2.8	2.8	1.8	1.6	4.1
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%	156%	160%	170%	170%	123%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%	167%	159%	159%	155%
M-2.3a	Total Maintenance Hours	Total Available Mtc Labor Hours Monthly Avg			16,495	22,347	27,615	30,863	35,431	34,168	28,786	28,372	31,887	29,596	28,722
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%	44%	59%	59%	62%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%	24%	18%	19%	16%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%	32%	27%	25%	22%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%	5%	4	5%	7%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45	1.58	1.66	1.58	1.7	1.75
M-3.6	Alternate Energy (Incl. Green Energy as of FY19)	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096	6,052,142	5,862,256	47,375,940	56,473,800	58,044,110
M-4.1a	Energy Use: Treatment	kWh/MG Monthly Avg			2,473	2,571	2,229	2,189	2,176	2,205	2,294	2,395	2,277	2,408	2,459
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163	173	170	181	174	170
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97	104	104	95	102	82
M-4.2	R&D Budget	Percentage of Total Revenue	> 0.5%		1.0%	1.4%	1.0%	1.3%	1.0%	0.8%	1.3%	1.4%	1.8%	1.3%	1.4%
M-4.3	Total Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow		\$1,028	\$1,095	\$1,174	\$1,232	\$1,249	\$1,279	\$1,246	\$1,285	\$1,423	\$1,348	\$1,487	\$1,545
M-4.4	Affordability	8 CCF Monthly Charge/ Median Household Income	< 0.5%		0.48%	0.48%	0.41%	0.43%	0.53%	0.55%	0.59%	0.60%	0.64%	0.71%	0.67%
M-4.5	Total Operating Cost/MGD	Total Operating Expense/ 365/5-Year Average Daily Flow		\$2,741	\$2,970	\$3,262	\$3,316	\$3,305	\$3,526	\$3,434	\$3,592	\$3,959	\$3,823	\$4,048	\$4,311
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A	N/A	53%	N/A	53%	N/A
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%	143%	114%	117%	143%	138%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35	15	20	26	32	27
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09	154.24	152.8	152.23	149.84	149.72
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14	66.66	49.24	53.1	48.49	54.04
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%	76%	72%	78%	72%
	Senior Debt Coverage	Net Revenue/Senior Annual Debt Service	> 1.5	2.51%	2.30%	2.07%	1.88%	1.72%	1.90%	2.56%	3.10%	3.59%	4.84%	5.80%	6.03%
	Total Debt Coverage	Net Revenue/Total Annual Debt	>1.4	1.67%	1.67%	1.46%	1.45%	1.32%	1.46%	1.77%	1.93%	2.03%	2.62%	2.81%	2.66%

\*to be reported

Monthly Updated Metrics																FY-22	FY-22
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20	FY-21	Sep-21	Oct-21
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	145.8	152.7	141.5	155.3	129.0	120.8
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	4	7	1	2	0	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	103%	104%	104%	106%	108%	109%
	General Reserves																
	Accounts Receivable (HRSD)	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	117%	119%	108%	101%	105%
	Aging Accounts Receivable	Dollars (Monthly Avg)			\$17,013,784	\$17,359,488	\$18,795,475	\$20,524,316	\$20,758,439	\$22,444,273	\$22,572,788	\$22,243,447	\$23,900,803	\$27,335,100	\$34,060,154	\$43,353,339	\$42,131,607
		Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	17%	18%	29%	36%	33%	
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	10	5	2	25	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	9:53236	9:58338	2:60879	9:60879	23:60879	1:15220	3:20293
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	6	9	15	31	3	4
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	189,765,922	190,536,910	187,612,572	182,759,003	183,123,855	49,456,507	65,398,523
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	22%	17%	17%	17%	18%	13%	13%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	367	256	145	69	57
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	293	230	128	11	12

### EFFLUENT SUMMARY FOR OCTOBER 2021

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	7.07	39%	2	3.3	2	1	0.39	0.61	3.8	4.1	8
ATLANTIC	27.35	51%	12	8.4	2	3	NA	NA	NA	NA	21
BOAT HARBOR	10.26	41%	11	4.8	7	1	1.1	0.54	28	20	6
CENT. MIDDLESEX	0.004	17%	<2	<1.0	<1	<1	NA	NA	NA	NA	NA
CHES-ELIZ	10.10	42%	18	9.3	6	2	0.61	0.83	20	27	10
JAMES RIVER	11.60	58%	5	2.5	<1	1	0.51	0.35	6.2	5.9	11
KING WILLIAM	0.071	71%	<2	<1.0	NA	<1	0.30	0.090	0.32	1.9	NA
NANSEMOND	13.88	46%	4	3.3	3	2	1.1	0.74	4.1	4.2	0
NASSAWADOX	0.009	9%	0	9.6	1	1	0.94	NA	19	NA	NA
SURRY, COUNTY	0.036	55%	2	1.4	NA	NA	NA	NA	NA	NA	0
SURRY, TOWN	0.026	43%	3	17	NA	30	NA	NA	NA	NA	NA
URBANNA	0.053	53%	6	15	4	8	4.8	2.0	15	11	NA
VIP	21.89	55%	2	1.6	2	1	1.8	0.64	4.6	3.5	6
WEST POINT	0.307	51%	23	5.1	1	2	3.9	3.0	19	15	0
WILLIAMSBURG	8.14	36%	6	3.2	11	13	0.96	0.76	1.8	3.3	1
YORK RIVER	10.03	67%	2	1.0	1	21	0.50	0.26	4.6	5.1	2
	<u>120.83</u>										

<b>Tributary Summary</b>							
	% of Capacity	<u>Annual Total Nitrogen</u>			<u>Annual Total Phosphorus</u>		
		Discharged		Operational	Discharged		Operational
		YTD	Projection	CY21	YTD	Projection	CY21
<b>Tributaries</b>		%	Lbs	%	%	Lbs	%
James River		53%	3,088,396	68%	54%	245,628	78%
York River		65%	233,186	81%	59%	15,585	81%
Rappahannock		48%	NA	NA	31%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY22 to Date: 3:20,293  
Pounds of Pollutants Removed in FY22 to Date: 65,398,523  
Pollutant Lbs Discharged/Permitted Discharge FY22 to Date: 13%

	<b>Rainfall (inch)</b>		
	<u>North Shore (PHF)</u>	<u>South Shore (ORF)</u>	<u>Small Communities (FYJ)</u>
Month	5.30"	2.44"	3.42"
Normal for Month	4.41"	3.68"	4.36"
Year to Date Total	49.60"	35.90"	45.15"
Normal for YTD	45.23"	43.39"	42.82"

\*Small Communities includes Eastern Shore

**AIR EMISSIONS SUMMARY FOR OCTOBER 2021**

MHI PLANT	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
ARMY BASE	0	0	0	0	0	0	2	1	46	100	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	6	100	0
CHES-ELIZ	0	0	0	0	0	0	0	0	8	99	0
VIP	0	0	0	n/a	0	0	1	1	32	100	0
WILLIAMSBURG	*	*	*	n/a	*	*	*	*	*	*	0

\* WTP MHIs did not operate in October.

**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:	4
HRSD Odor Scrubber H2S Exceptions:	2

## Items of Interest – October 2021

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

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all five MHI plants (Army Base, Boat Harbor, Chesapeake-Elizabeth, Virginia Initiative, and Williamsburg) with a THC continuous emissions monitoring (CEM) valid data captured of greater than 99%.

The MHIs had three deviations from the required 129 SSI rule minimum operating parameters and two minor bypass events (<60 minute).

Williamsburg's MHIs did not operate during the month of October.

On October 7, DEQ performed an air inspection of Chesapeake-Elizabeth and observed the plant as operating in compliance with their Title V permit and the 129 MHI requirements. On October 25, in response to the stack test protocol submitted for the 129 MHI stack test of MHI # 1 on November 2, DEQ issued an inspection report identifying the plant as out of compliance for not submitting the protocol 30 days in advance and not testing within the required 11-13 months of MHI operation. Further action from DEQ is pending the results of the stack testing.

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

HRSD received four odor complaints and two hydrogen sulfide (H<sub>2</sub>S) plant odor wet scrubber exceptions in October.

October 1, Technical Services Division (TSD) contacted Nansemond Operations about an offsite odor they observed near the plant while performing field work. Plant staff investigated and determined the most likely source as a Salmons truck carrying biosolids. No other offsite odors observed, or complaints received.

October 4, South Shore Operations (SS Ops) received two odor complaints. The first was odors from Dozier Corner pump station. SS Ops and TSD responded and found no offsite odors from the station. SS Ops did observe some foul odors from a ditch nearby. The second was odors from Pughesville pressure reducing station. SS Ops and TSD responded the next day and found no odors at the station or offsite such that the source of the odors and complaint are unknown. No further complaints on either of these HRSD assets have been received.

October 15, York River Plant received a complaint of odors in the local Seaford, VA area. One of our neighbors stated there were strong sewer odors outside the Seaford Post Office. Plant staff and TSD responded finding the most likely source as the York County septage facility located right next door to the post office. While onsite a Postman did confirm that the septage facility does "stink from time to time". The complainant was informed of the results and satisfied with the investigation. No additional complaints received to date.

## **TREATMENT**

DEQ was notified of the following reportable events:

### Virginia Initiative

On October 23, a loss of dechlorination occurred for 44 minutes when the 70MCCB feeder breaker tripped in the chemical building causing bisulfite pump #2 to shut down. The operator investigated the partial loss of power to the chemical building, notified on call staff, reset the feed breaker, and started the standby bisulfite pump.

## **SYSTEM**

On October 10, a manhole overflow was discovered at 2295 Harbor Road in Newport News. Staff checked the 25<sup>th</sup> Street Pump Station which was running on bypass pumps for electrical and SCADA upgrades. The lead Godwin pump was found to be air-locked, and the lag Godwin pump was in the off position. These pumps were reset. Staff washed down and cleaned the road and surrounding area. Approximately 1000 gallons of wastewater was released, with 500 gallons recovered; the remaining 500 gallons entered a storm drain discharging to the James River.

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

### Surry County

The Surry County Treatment Plant had a weekly maximum copper permit exceedance during the week of October 3 with a value of 6.0 µg/L, exceeding the permitted value of 5.9 µg/L. TSD performed follow up copper sampling on October 19 at the County Plant influent, effluent, and the school complex pump station wet well. The effluent copper on October 19 was 3.9 µg/L, averaging to 5.0 µg/L and below the monthly permit limit. High copper values were found at the school complex pump station and P3 will be working with SSA and County School Staff to try and find sources of high copper.

### Surry System

On October 25, Sussex Service Authority (SSA) was informed by a landscape contractor that there was a wet area which looked questionable around the pump station at 146 Elberon Heights Road. SSA investigated and found wastewater coming up from the ground in a near by ditch when the pump station cycled. SSA shut down the pump station and closed the pump station isolation valve. HRSD staff used the Vactor truck to remove the standing water from the ditch. The station was pumped and hauled until Tuesday October 26 when an HRSD crew dug up the 2-inch PVC forcemain. A 4-inch crack was found in the top and bottom of the PVC forcemain. The damaged pipe was removed, and a coupling installed. Approximately 500 gallons were released, with 100 gallons recovered; the remaining 400 gallons soaked into the ground.

### Urbanna

The Urbanna Treatment Plant (UBTP) had a weekly maximum ammonia concentration permit exceedance with a value of 13.80 mg/l, exceeding the permitted value of 3.83 mg/l. The treatment plant was experiencing a temporary upset at the beginning of the week believed to be caused by the combination of several issues. These included seasonal temperature fluctuations causing inconsistent aeration DO concentrations, heavy cleaning in the collection system in preparation of the Urbanna Oyster Festival, and increased loadings from the Bethpage Campground due to tank cleanings as part of their construction upgrades. UBTP met all other weekly and the monthly permit limits.

## 2021 Metals, Ammonia, and TKN

		Limit	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Central	Ammonia	0.56							0.03	NA	NA	<0.02		
Middlesex	TKN	3.0							0.60	NA	NA	<0.50		
King William	Zinc	*							39	NA	NA	7.1		
	TKN	3.0							<0.50	0.09	<0.50	<0.50		
Nassawadox Riverside	Cadmium	2.0							<0.50	<0.50	<0.50	<0.50		
	Copper	23							9.1	9.8	9.5	6.05		
	Nickel	38							<10	<10	<10	<10		
	Zinc	150							<50	<50	<50	<50		
	Ammonia	1.7							<0.10	<0.10	<0.10	<0.10		
Surry County	Copper	5.9							4.0	4.0	4.0	5.0^		
	Zinc	56							19	21	30	38		
	Ammonia	0.77	NA	NA	NA	NA	NA		<0.10	<0.10	<0.10	<0.10	NA	NA
	TKN	3.0							<0.50	NA	<0.50	NA		NA
Town of Surry	Copper	12							4.0	4.0	3.0	3		
	Zinc	39							13	22	13	11		
	Ammonia	4.5							0.16	<0.10	<0.10	<0.10		
	TKN	6.7							1.6	2.0	1.85	3.28		
Urbanna	Ammonia	3.83, 9.08							0.13	0.13	0.19	2.4^		

\*No limit. Treatment objective 53 ug/L

^Weekly permit exceedance reported



**2021 MONTHLY FLOW AVERAGES**

	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR AVG	FY AVG
Army Base	12.50	16.33	9.51	8.30	7.50	8.51	9.06	8.92	8.36	7.07			9.61	8.35
Atlantic	26.17	30.15	26.78	30.65	28.66	32.11	29.08	30.34	28.62	27.35			28.99	28.85
Boat Harbor	15.39	<b>24.61</b>	15.55	13.06	10.70	11.40	10.62	11.27	11.20	10.26			13.41	10.84
C.Middlesex	0.009	0.010	0.008	0.010	0.010	0.013	0.010	0.009	0.005	0.004			0.009	0.007
Ches-Eliz	19.57	<b>24.32</b>	16.75	10.79	9.75	11.00	12.93	13.35	10.43	10.10			13.90	11.70
James River	15.72	<b>20.76</b>	15.42	14.14	11.60	12.19	12.34	14.37	12.58	11.60			14.07	12.72
King William	0.067	0.070	0.071	0.077	0.070	0.068	0.069	0.070	0.072	0.071			0.070	0.071
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	18.99	22.52	17.66	16.64	14.62	17.31	16.49	18.40	15.46	13.88			17.20	16.06
Nassawadox							0.015	0.012	0.010	0.009			0.011	0.011
Surry, County	0.054	<b>0.073</b>	0.051	0.046	0.038	0.046	0.046	0.048	0.040	0.036			0.048	0.043
Surry, Town	<b>0.080</b>	<b>0.106</b>	<b>0.072</b>	<b>0.078</b>	0.044	0.052	0.047	0.038	0.030	0.026			0.057	0.035
Urbanna	0.064	0.058	0.049	0.050	0.054	0.060	0.064	0.058	0.050	0.053			0.056	0.056
VIP	31.75	<b>44.41</b>	29.39	26.90	22.34	26.20	23.04	26.60	23.45	21.89			27.60	23.75
West Point	<b>0.710</b>	<b>0.958</b>	<b>0.737</b>	0.536	0.351	0.416	0.469	0.440	0.313	0.307			0.524	0.382
Williamsburg	8.65	10.73	9.16	8.49	7.54	8.84	9.00	9.13	7.95	8.14			8.76	8.55
York River	<b>15.60</b>	<b>19.40</b>	<b>14.75</b>	13.30	10.68	10.89	10.61	11.44	10.42	10.03			12.71	10.62
North Shore	55.36	75.50	54.88	48.98	40.53	43.32	42.56	46.21	42.15	40.04			48.95	42.74
South Shore	108.98	137.72	100.10	93.28	82.86	95.14	90.60	97.61	86.33	80.29			97.29	88.71
Small Communities	0.98	1.28	0.99	0.80	0.57	0.65	0.72	0.68	0.52	0.51			0.77	0.60
TOTAL	165.32	214.50	155.96	143.06	123.96	139.11	133.88	144.50	128.99	120.83			147.01	132.05

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