

HRSD Commission Meeting Agenda
9:00 a.m. – January 25, 2022

In person for Commissioners and essential staff at the
HRSD North Shore Operations Center, 2389 G. Avenue, Newport News, 23609

Electronic attendance via Zoom for all others (link and passcode below agenda)

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 request accommodations to attend the meeting in-person, please send your request to Jennifer Cascio at 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	Elofson
	Roll Call of HRSD Commission	Cascio
1.	Awards and Recognition	Henifin
	a. Promotion Announcement	
	b. NACWA Peak Performance Awards for 2020	
2.	Consent Agenda	Henifin
	a. Approval of Minutes	
	b. Contract Awards	
	c. Task Orders	
	d. Contract Change Order	
	e. Sole Source	
	f. HRSD Use of Existing Competitively Awarded Contract Vehicle	
	g. Vacation of Easement	
3.	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II Additional Appropriation, Rejection of Low Bid, Contract Award (>\$200,000), Task Order (>\$200,000)	Husselbee
4.	Virginia Clean Water Revolving Loan Fund (VCWRLF) Rate Resets and Amendment to the Master Financing Agreement for the James River Treatment Plant, Nansemond Treatment Plant, and Interceptor System Metering Projects Resolutions	Bernas
5.	Central Norfolk Area Gravity Sewer Improvements Ph IIA New CIP, Initial Appropriation and Task Order (>\$200,000)	Husselbee
6.	SWIFT Managed Aquifer Recharge Services New CIP and Initial Appropriation	Husselbee

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
7.	Treatment Plant Dewatering Replacement – Phase III Initial Appropriation and Task Order (>\$200,000)	Husselbee
8.	Boat Harbor Pump Station Land Acquisition 1201 Terminal Avenue, Newport News Agreement Amendment	Henifin
9.	COVID-19 Wastewater Surveillance Study Update	Gonzalez
10.	Capital Improvement Program Quarterly Update	Husselbee
11.	U.S. EPA Consent Decree Annual Public Meeting	Henifin
12.	Executive Search Committee Report	Levenston
13.	Unfinished Business	Henifin
14.	New Business	Henifin
15.	Commissioner Comments	
16.	Public Comments – 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 jcascio@hrsd.com or by phone to 757.460.7003 and must be received by noon one business day prior to the meeting.	Cascio
17.	Informational Items	Henifin
a.	Management Reports	
b.	Strategic Planning Metrics Summary	
c.	Effluent and Air Summaries with Items of Interest	
d.	Effluent and Air Summaries for Calendar Year	
e.	Emergency Declaration - Atlantic Treatment Plant (ATP) Combined Heat and Power (CHP) Gas Blower #2	
18.	Closed Meeting	Henifin
19.	Reconvened Meeting	Henifin

Next Regular Commission Meeting Date: **February 22, 2022 at 1434 Air Rail Avenue, Virginia Beach**

[Join Zoom Meeting](#)

One tap mobile: US: [+13017158592](tel:+13017158592),[83831682813](tel:+183831682813)#,[*286185#](tel:+1286185) or [+13126266799](tel:+13126266799),[83831682813](tel:+183831682813)#,[*286185#](tel:+1286185)

Meeting URL: <https://us06web.zoom.us/j/83831682813?pwd=UkRIUWVoRnZEMkNVdTJBdGQrNTNaQT09>

Meeting ID: 838 3168 2813

Passcode: 286185

AGENDA ITEM 1. – January 25, 2022

Subject: Awards and Recognition

Recommended Action: No action is required.

Brief:

a. Promotion Announcement

Mr. Henifin will introduce Ms. Dorissa Pitts-Paige, who was recently promoted to Director of Talent Management. Dorissa has worked in public sector human resources for 20 years as a strategic business partner in the areas of organizational development and training, employee relations, recruitment, benefits, and champion for diversity, equity, and inclusion. Originally coming from the City of Suffolk and the City of Norfolk Department of Utilities, she was hired at HRSD in November 2006 as a Human Resources Business Partner.

Dorissa holds a Bachelor of Arts degree in Broadcast Journalism from Hampton University, a Master of Science degree in Human Resources Management from Troy University and a Master of Arts degree in Law from Regent University. She is a certified Professional in Human Resources (PHR) by the Human Resources Certification Institute (HRCI), Senior Certified Professional (SCP) by the International Public Management Association for Human Resources (IPMA-HR), and a Senior Certified Professional by the Society for Human Resources Management (SHRM-SCP).

She recently led the formation of HRSD's Diversity, Equity, and Inclusion Council, was a Leadership Facilitator for eight years and helped to revamp HRSD's Leadership and Management Academy, served as an Apprenticeship Instructor and subject matter expert for the Hampton Roads Public Works Academy (HRPWA), and HRPWA Cadet inter coordinator, and is currently the team leader of HRSD's Pink Plungers. She is active in several professional organizations:

- Vice Co-Chair of VWEA Diversity, Equity, and Inclusion Committee
- VWEA/AWAA Diversity, Equity, and Inclusion Joint Task Force
- Hampton Roads Society for Human Resource Management (HRSHRM), Director of Workforce Readiness 2019-2021 and HRSHRM Diversity, Equity, and Inclusion Subcommittee
- Suffolk Public Schools Career and Technical Education Business Advisory Council
- Virginia Beach City Public Schools Office of Family and Community Engagement
- Hampton Roads Public Works Academy subject matter expert and Cadet intern coordinator for HRSD
- United Way African-American Leadership Society

Dorissa fills the position vacated by Ms. Paula Hogg who transferred to the Director of Water Quality position upon Dr. Pletl's retirement earlier this month.

b. National Association of Clean Water Agencies (NACWA) Peak Performance Awards

NACWA's Peak Performance Awards recognize member facilities for outstanding compliance with their National Pollutant Discharge Elimination System (NPDES) permits. *Silver Awards* recognize facilities that have received no more than five permit violations per calendar year.

Gold Awards honor those who have achieved perfect permit compliance for an entire calendar year, while *Platinum Awards* recognize 100 percent compliance for at least five consecutive years.

The following treatment plants were recognized for outstanding compliance during calendar year 2020, a remarkable accomplishment:

Award	Plant
Silver	<u>Army Base Treatment Plant</u>
Silver	<u>King William Treatment Plant</u>
Silver	<u>West Point Treatment Plant</u>
Gold	<u>Central Middlesex Treatment</u>
Gold	<u>Chesapeake-Elizabeth Treatment Plant</u>
Gold	<u>Urbanna Treatment Plant</u>
Platinum 6	<u>Atlantic Treatment Plant</u>
Platinum 7	<u>James River Treatment Plant</u>
Platinum 13	<u>York River Treatment Plant</u>
Platinum 19	<u>Boat Harbor Treatment Plant</u>
Platinum 19	<u>Nansemond Treatment Plant</u>
Platinum 25	<u>Virginia Initiative Plant</u>
Platinum 26	<u>Williamsburg Treatment Plant</u>

2020 Peak Performance Awards



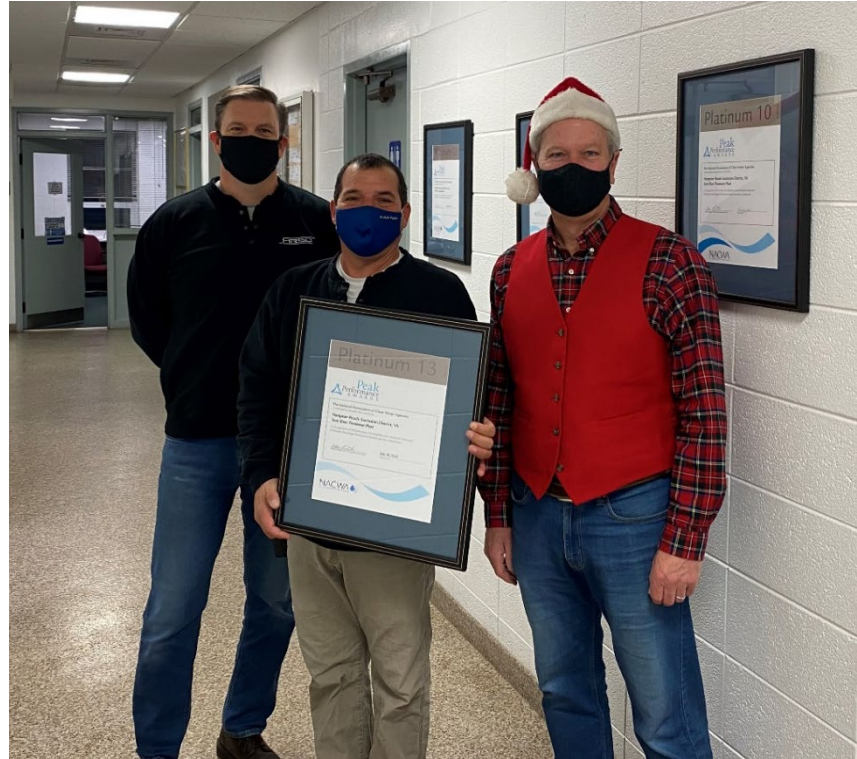
2020 Peak Performance Awards



2020 Peak Performance Awards



2020 Peak Performance Awards



2020 Peak Performance Awards



2020 Peak Performance Awards



AGENDA ITEM 2. – January 25, 2022

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. | Polychem® Flights and Chains | \$216,038 |
| 2. | Pre-Dewatering Centrifuge Equipment | \$860,000 |
| 3. | Vibration Analysis Services | \$1,085,760 |

c. Task Orders

- | | | |
|----|--|-------------|
| 1. | Boat Harbor Treatment Plant Pump Station Conversion | \$1,016,128 |
| 2. | Central Norfolk Area Gravity Sewer Improvements Phase II | \$288,642 |
| 3. | James River Treatment Plant Automation Improvements Phase I | \$571,195 |
| 4. | Magruder Mercury Interceptor Force Main Replacement – Section B | \$419,233 |
| 5. | Williamsburg Treatment Plant Outfall Flow Control System Repairs | \$243,931 |

d. Contract Change Orders

- | | | |
|----|--|-----------|
| 1. | James River Treatment Plant Advanced Nutrient Reduction Improvements | \$107,000 |
|----|--|-----------|

e. Sole Source

- | | | |
|----|--|--|
| 1. | Aerzen Positive Displacement and Hybrid Blowers including Parts and Services | |
|----|--|--|

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

- | | | |
|----|---|-----------|
| 1. | Interceptor System Pump Station Control and SCADA | \$318,601 |
|----|---|-----------|

g. Vacation of Easement

- | | | |
|----|---|--|
| 1. | Freeman Drive and Marple Lane, Hampton Virginia | |
|----|---|--|

CONSENT AGENDA ITEM 2.b.1. – January 25, 2022

Subject: Polychem® Flights and Chains
Contract Award (>\$200,000)

Recommended Action: Award a contract to Geiger Pump and Equipment DBA Gasho, A Geiger Pump & Equipment Co. in the amount of \$216,038.

Type of Procurement: Sole Source

Polychem® Flights and Chains were previously approved as a sole source with Brentwood Industries, Inc. in February 2020. Geiger Pump and Equipment Company is the Authorized Distributor.

HRSD Estimate: \$216,038

Contract Description: This contract is for the purchase of Polychem® flights, chains and associated parts for the Virginia Initiative Treatment Plant. The flights and chains are installed at the bottom of the primary clarifier with the core function of moving sludge through the clarifier. These parts will be a drop-in replacement of existing flights and chains.

Analysis of Cost: Negotiations were conducted which provided HRSD with additional savings. Costs are considered fair and reasonable based on previous purchase prices of similar equipment.

CONSENT AGENDA ITEM 2.b.2.– January 25, 2022

Subject: Pre-Dewatering Centrifuge Equipment
Contract Award (>\$200,000)

Recommended Action: Award a contract for two GEA Westfalia Prime CF7000 pre-dewatering centrifuges, accessories, and services to GEA Mechanical Equipment for the Nansemond Treatment Plant in an estimated amount of \$860,000.

CIP Project: NP013700

Type of Procurement: Competitive Negotiation

Proposers	Technical Points	Recommended Selection Ranking
GEA Mechanical Equipment US, Inc.	87	1
Centrisys Corporation	65	2
Alfa Laval Inc	56	3
Vanderbeken Enterprises Ltd dba Drycake	55	4

Contract Description: This contract is an agreement for GEA Westfalia Prime CF7000 horizontal decanting high solids style centrifuge equipment, accessories, and services for HRSD. Purchases will be made either directly from HRSD or specified as part of a separate construction contract all in accordance with the requirements of this agreement and the contract documents for the construction contract between the Contractor and HRSD. HRSD will be advertising a construction contract next month which will include two CF7000 horizontal decanting high solids style centrifuge systems for installation as part of the Nansemond Treatment Plant struvite recovery facility improvements and digester capacity upgrades.

A Public Notice was issued on November 17, 2021. Four firms submitted proposals on December 8, 2021, and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the requirements in the Request for Proposals. Four firms were short listed and technically ranked. The proposal submitted by GEA Mechanical Equipment was ranked by technical points to be the highest qualified.

Analysis of Cost: Costs are considered fair and reasonable based on other comparable base units.

CONSENT AGENDA ITEM 2.b.3. – January 25, 2022

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

Recommended Action: Award a contract for Vibration Analysis Services to Nikola Labs, Inc. in the estimated amount of \$217,152 for year one with four annual renewal options and an estimated cumulative value in the amount of \$1,085,760.

Type of Procurement: Competitive Negotiation

Proposers	Technical Points	Recommended Selection Ranking
Nikola Labs, Inc.	100	1
Siemens Industry, Inc.	90	2

HRSD Estimate:

\$200,000

Contract Description: This contract is an agreement for vibration analysis services for all treatment plants which will be coordinated through the Asset Management Division. Services will consist of continuous remote monitoring using a cloud-based software program called AssetWatch™. This platform assists with real time data processing, immediate notifications upon alarm conditions and onsite fault determination and repair recommendations and communication with a dedicated vibration analyst.

A Public Notice was issued on October 5, 2021. Four firms submitted proposals on October 29, 2021 and three firms were determined to be responsive and deemed fully qualified, responsible and suitable to the requirements in the Request for Proposals. Two firms were short listed, interviewed and technically ranked. The proposal submitted by Nikola Labs, Inc. was ranked by technical points to be the highest qualified.

Analysis of Cost: Nikola Labs provides an end-to-end solution that includes hardware, software, a cellular network, installation/maintenance, and expert vibration analysis services, all under a single subscription cost. Nikola Labs price structure was found to be a fair and reasonable compared to other services using a subscription based cost point.

CONSENT AGENDA ITEM 2.c.1. – January 25, 2022

Subject: Boat Harbor Treatment Plant Pump Station Conversion
Task Order (>\$200,000)

Recommended Action: Approve a task order with Rummel, Klepper & Kahl, LLP in the amount of \$1,016,128.

CIP Project: BH015700

Budget	\$74,718,760
Previous Expenditures and Encumbrances	(\$1,939,910)
Available Balance	\$72,778,850

Contract Status:	Amount
Original Contract with Rummel, Klepper & Kahl, LLP	\$859,523
Total Value of Previous Task Orders	\$0
Requested Task Order	\$1,016,128
Total Value of All Task Orders	\$1,016,128
Revised Contract Value	\$1,875,651
Engineering Services as % of Construction	3.2%

Project Description: The Boat Harbor Treatment Plant will be converted to a pumping station, including equalization and headworks facilities while remaining in operation for wastewater treatment during conversion. The new infrastructure will be designed to meet HRSD's resiliency standards and consider remote operation and access in future conditions including sea level rise. This project is a critical component to the effort to close the Boat Harbor Treatment Plant and must be completed by December 2025.

Task Order Description: This task order will provide preliminary engineering services required for the design for the Boat Harbor Treatment Plant Pump Station Conversion project. The effort will combine the information obtained in the Concept Development Study and combine it with additional site-specific analyses into a Preliminary Engineering Report (PER). The deliverable for this task will be a PER, and Opinion of Probable Cost, and a Sustainability Plan update.

Analysis of Cost: 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 \$59,630,000. The ratio of PER fee to construction cost is 3.2 percent, which is slightly higher than three other recent HRSD pump station projects, but still reasonable for a project of this complexity.

<u>Schedule:</u>	PER	January 2022
	Design	March 2022
	Bid	July 2022
	Construction	December 2022
	Project Completion	December 2025

CONSENT AGENDA ITEM 2.c.2. – January 25, 2022

Subject: Central Norfolk Area Gravity Sewer Improvements Phase II
Task Order (>\$200,000)

Recommended Action: Approve a task order with Hazen and Sawyer, P.C. in the amount of \$288,642.

CIP Project: VP017120

Budget	\$7,160,000
Previous Expenditures and Encumbrances	(\$146,105)
Available Balance	\$7,013,895

Contract Status:	Amount
Original Contract with Hazen and Sawyer	\$0
Total Value of Previous Task Orders	\$143,570
Requested Task Order	\$288,642
Total Value of All Task Orders	\$432,212
Revised Contract Value	\$432,212
Engineering Services as % of Construction	12%

Project Description: This project consists of three sections of improvements to the existing HRSD gravity sewer system in the City of Norfolk. The method of improvement will be installation of Cured-In-Place-Piep (CIPP) liner:

- Fox Hall/Norcova Drive/East Princess Anne Gravity Sewer - Rehabilitation of 3,650 linear feet (LF) of gravity sewer (ranging from 10 to 12-inches) with associated 19 manholes. The work also includes 150 LF of 12-inch gravity sewer extending to the City of Norfolk Pump Station #44.
- Luxembourg Avenue Gravity Sewer - Rehabilitation of 1,500 LF of 12-inch gravity sewer with associated 11 manholes.
- Norview-Estabrook/Chesapeake Boulevard Gravity Sewer - Rehabilitation of gravity sewer not previously rehabilitated or replaced including 3,000 LF ranging from 12 to 18-inches with 20 associated manholes. Three additional manholes on Chesapeake Boulevard are also included.

Condition assessment activities indicate that these assets present a material risk of failure due to infiltration and inflow and physical defects. This project is a portion of the EPA Rehabilitation Action Plan Phase 2 with a substantial completion requirement of May 5, 2025. At the completion of this project, ownership of the gravity sewer assets and associated manholes will be transferred from HRSD to the City of Norfolk.

Task Order Description: This task order will provide design and bid phase services for the project.

Analysis of Cost: The cost for this task order is based on an estimation of hours and rates to complete the work. The rates in the proposal align with the Professional Service Agreement for General Engineering Services with the firm.

Schedule:	Design	February 2022
	Construction	April 2023
	Substantial Completion	April 2024
	Project Completion	February 2025

CONSENT AGENDA ITEM 2.c.3. – January 25, 2022

Subject: James River Treatment Plant Automation Improvements Phase I
Task Order (>\$200,000)

Recommended Action: Approve a task order with Hazen and Sawyer (Hazen) in the amount of \$571,195.

CIP Project: JR013610

Budget	\$2,353,000
Previous Expenditures and Encumbrances	(\$0)
Available Balance	\$2,353,000

Contract Status:	Amount
Original Contract with Hazen and Sawyer	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$571,195
Revised Contract Value	\$571,195
Engineering Services as % of Construction	11%

Project Description: This project will provide for improved automation and control of the James River Treatment Plant's preliminary treatment, solids thickening, anaerobic digestion, odor control and related systems. The preliminary treatment and solids handling sections of the plant exist now with minimal automation. The distributed control system must be enhanced for consistency with the Advanced Nutrient Removal Improvements and SWIFT projects to allow plant operators to best manage the future facility as a whole.

Task Order Description: This task order will provide design and bid phase services for the project.

Analysis of Cost: The cost for this task order is based on a negotiated price between Hazen and HRSD. The design phase services as a percentage of the estimated construction costs are 10.2%, which compares well with the percentages for other similar projects.

Schedule:	Design	February 2022
	Bid	October 2022
	Construction	February 2023
	Project Completion	April 2024

CONSENT AGENDA ITEM 2.c.4. – January 25, 2022

Subject: Magruder Mercury Interceptor Force Main Replacement – Section B
Task Order (>\$200,000)

Recommended Action: Approve a task order with Dewberry in the amount of \$419,233.

CIP Project: YR010520

Budget	\$5,201,935
Previous Expenditures and Encumbrances	(\$318,407)
Available Balance	\$4,883,528

Contract Status:	Amount
Original Contract with Dewberry	\$61,650
Total Value of Previous Task Orders	\$248,662
Requested Task Order	\$419,233
Total Value of All Task Orders	\$729,545
Engineering Services as % of Construction	16%

Project Description: This project will consist of the design and construction for the replacement of 6,200 linear feet of 30-inch prestressed concrete cylinder pipe (PCCP) and ductile iron (DI) force main from the Langley Circle Pump Station to just east of the Newmarket Creek Crossing in Hampton. This project will require bypass pumping and temporary piping to facilitate maintenance of existing flows during construction. There are a number of infrastructure issues providing the justification for this project and each one will be addressed during the design of the replacement. A force main break and emergency repair occurred on this line in the vicinity of Langley Circle Pump Station due to internal crown corrosion. The as-built profile and the construction methods used during the original installation of this line provide indication that numerous locations of this force main are at elevated risk for internal crown corrosion.

Task Order Description: This task order will provide design and bid phase services for the replacement of the Langley Circle Pump Station yard piping and the targeted replacement of approximately 3,800 linear feet of the 6,200 linear feet of 30-inch PCCP and DI force main from the Langley Circle Pump Station to just east of the Newmarket Creek Crossing in Hampton identified in the Preliminary Engineering Report as high-risk segments. The magnitude of pipe replacement for this project is based on Condition Assessment results presented in the Preliminary Engineering Report.

Analysis of Cost: The cost for this task order is based on a negotiated price between Dewberry and HRSD. The design phase services as a percentage of the estimated construction costs are 9%. This compares well to similar HRSD projects.

Schedule:	Design	February 2022
	Bid	January 2023
	Construction	April 2023
	Project Completion	May 2024

CONSENT AGENDA ITEM 2.c.5. – January 25, 2022

Subject: Williamsburg Treatment Plant Outfall Flow Control System Repairs
Task Order (> \$200,000)

Recommended Action: Approve a task order to HDR Incorporated in the amount of \$243,931.

CIP Project: WB013100

Budget	\$1,958,040
Previous Expenditures and Encumbrances	(\$0)
Available Balance	\$1,958,040

Contract Status:	Amount
Original Contract with HDR	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$243,931
Revised Contract Value	\$243,931
Engineering Services as % of Construction	16%

Project Description: This project will replace flow control and isolation valves on the outfall flow control system used to maintain water levels in the chlorine contact tanks. To replace valves, the contractor will need to isolate the outfall to prevent river water from entering the flow control vault. This project will ensure proper flow control from the chlorine contact tanks to the outfall and maintain the required water level in the chlorine contact tanks by replacing exhausted flow control valves. It will also replace leaking isolation valves needed to isolate flow control valves for maintenance and repair.

Task Order Description: This task order will provide design and bid phase services for the project.

Analysis of Cost: The cost for this task order is based on a negotiated price between HDR Incorporated and HRSD. The design phase services as a percentage of the estimated construction costs are 9.8%, which compares well with the percentages for other similar projects.

Schedule:	Design	February 2022
	Pre-Construction	September 2022
	Construction	January 2023
	Project Completion	January 2024

CONSENT AGENDA ITEM 2.d.1 – January 25, 2022

Subject: James River Treatment Plant Advanced Nutrient Reduction Improvements
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with World Water Works Inc. in the amount of \$107,000.

CIP Project: JR013400

Budget	\$231,764,106
Previous Expenditures and Encumbrances	(\$220,737,338)
Available Balance	\$11,026,768

Contract Status:	Amount	Cumulative % of Contract
Original Contract with World Water Works Inc.	\$360,000	
Total Value of Previous Change Orders	\$24,000	6.67%
Requested Change Order No. 2	\$107,000	
Total Value of All Change Orders	\$131,000	36.39%
Revised Contract Value	\$491,000	

Project Description: This project is for the design and construction of improvements to the secondary treatment process at the James River Treatment Plant (JRTP). The scope includes equalization of primary effluent, modifications to the Integrated Fixed Film Activated Sludge (IFAS) system, increased IFAS media fill, demolition of existing secondary clarifiers (1, 2, and 3), replacement with new rectangular secondary clarifiers, conversion of clarifier 5 to a post denitrification moving bed bio-reactor (MBBR), chemical storage and feed systems, and all pumping, piping, instrumentation, and site work required.

Change Order Description: This change order includes modifications from original design to include a minion system, high-density polyethylene (HDPE) air header, and bottom support cage for all three Fixed Media Integrated Fixed Film Activated Sludge (FIFAS) modules. These modules are part of a demonstration project that will evaluate full-scale mainstream partial denitrification-anammox in two aeration tanks at JRTP.

Analysis of Cost: The cost of this change order is based on a negotiated price between HRSD and World Water Works Inc.

CONSENT AGENDA ITEM 2.e.1. – January 25, 2022

Subject: Aerzen Positive Displacement and Hybrid Blowers including Parts and Services
Sole Source (>\$10,000)

Recommended Actions: Approve the use of Aerzen positive displacement and hybrid blowers including parts and services by Aerzen USA at all HRSD facilities.

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 Aerzen positive displacement and hybrid blowers within the size range of 5 hp up to 125 hp including parts and services. Aerzen blowers have been in use at the York River Treatment Plant since 2012 and at the Onancock Treatment Plant since 2011. These blowers have proven to be very reliable and have outperformed any other small blower that HRSD has used at other facilities throughout the years.

Services include commissioning, inspections, maintenance, and repairs.

CONSENT AGENDA ITEM 2.f.1. – January 25, 2022

Subject: Interceptor System Pump Station Control and SCADA
HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award
(>\$200,000)

Recommended Actions:

- a. Approve the use of the Virginia Association of State College and University Purchasing Professionals Contract 7365172JC for purchase of Cisco Catalyst IE3400 Rugged Series switches from Savant LTD.
- b. Award a contract to Savant in the amount of \$318,601.

HRSD Estimate: \$318,601

CIP Project: GN012800

Project Description: This project provides for implementation of the Interceptor System Supervisory Control and Data Acquisition (SCADA). The project will replace approximately 130 control panels at remote HRSD facilities. The project will also provide replacement of the current top-end SCADA software and hardware.

Contract Description: This is for the purchase of 100 Cisco Catalyst IE3400 Rugged Services switches. This purchase includes installation, firmware and configuration of the switches. The purchase of these switches is in support of the Interceptor System Supervisory Control and Data Acquisition (SCADA) project.

Analysis of Cost: By utilizing the cooperative contract through VASCUPP, HRSD is receiving 35 percent cost savings.

CONSENT AGENDA ITEM 2.g.1. – January 25, 2022

Subject: Freeman Drive and Marple Lane - City of Hampton
Vacation of Easement

Recommended Actions:

- a. Accept the terms and conditions of the Deed of Vacation of Easement with the City of Hampton.
- b. Authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.
- c. Authorize vacation of a 15-foot-wide sanitary sewer easement and accompanying infrastructure in connection with planned development by the City of Hampton in between Freeman Drive and Marple Lane in Hampton.

Project Description: HRSD obtained this easement along with other infrastructure and Freeman Drive Pump Station #11 from the City of Hampton in 1961 who obtained the same from the Federal Housing Commissioner/Federal Works in 1953. The infrastructure was abandoned in the 1980s and is no longer active. The City of Hampton has requested that HRSD formally vacate and extinguish the 15-foot-wide easement in place to accommodate planned future development. This request has been reviewed by HRSD staff and since the easement is no longer needed by HRSD, this request is acceptable.

Funding Description: No funding required.

Agreement Description: The attached [Deed of Vacation of Easement](#) has been reviewed by HRSD legal counsel. [Facilities Orientation Maps](#) are also provided for clarification purposes.

655254

PREPARED BY AND RETURN TO:
Conway H. Sheild, III VSB: 06893
Jones, Blechman, Woltz & Kelly, P.C.
701 Town Center Drive, Suite 800
Newport News, Va. 23606

LRSN: 13001179

EXEMPTION CLAIMED PURSUANT TO VA CODE § 58.1-811(A)(3)
DEED OF VACATION OF EASEMENT

THIS DEED OF VACATION OF EASEMENT made this ____ day of _____, 20____, by and between **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia, hereinafter known as the **GRANTOR** and **THE CITY OF HAMPTON, VIRGINIA**, a municipal corporation, hereinafter known as the **GRANTEE**, and, whose mailing address is: 22 Lincoln Street, City Hall, Hampton Virginia 23669.

WHEREAS, previously **GRANTEE** conveyed to **GRANTOR** a certain Deed of Easement (“Easement”) dated July 29, 1961, and recorded in the Clerk’s Office of the Circuit Court for the City of Hampton, Virginia, on September 12, 1961 in Deed Book 310, page number 583, and assigned a right-of-way over the land hereinafter described and the right to construct, maintain and operate thereon pipe lines for sewage purposes, said right of way being through, upon, and under that certain tract of land located in the City of Hampton, Virginia; and

WHEREAS, it is the desire of **GRANTOR** and **GRANTEE** that the Easement be abandoned, vacated, released of record, and of no further force and effect.

NOW, THEREFORE, the **GRANTOR** hereby releases, surrenders, and vacates the Easement hereinafter described as follows:

A sewer line easement beginning at the point on Armistead Avenue, formerly known as Back River Road, where the Northerly boundary line of the property of Pine Corporation Section I (as said line is located in the description contained in that certain Deed of Trust executed by Pine Corporation Section I on March 11, 1949, in favor of Jno. D. Brown and A.R. Melton, now recorded in Deed of Trust Book 158, page 454, of the records in the Clerk’s Office for the Circuit Court of the City of Hampton, Virginia, and as reflected in the Plat described in said Deed of Trust) intersects the Northwesterly boundary line of said Armistead Avenue, formerly known as Back River Road, and running thence, along said Northerly boundary line of said Pine Corporation Section I property, South 52 degrees, 56 minutes and 15 seconds West, a distance of 637.59 feet to a point being the Northeasterly corner of the pumping station site; thence South 37 degrees 3 minutes 45 seconds East, along the Easterly boundary of the pumping station site a distance of 15 feet; thence in a straight line, in a Northeasterly direction, to the Westerly boundary line of Armistead Avenue, formerly known as Back River Road, a distance at a right angle of 20 feet from the said Northerly boundary line (extended) of said Pine Corporation Section I property; thence along the Westerly boundary line of said Armistead Avenue, formerly known as Back River Road, to the point of beginning of this parcel.

Together with that certain 18-inch gravity interceptor sewer line and that certain 10-inch force main sewer line located within the aforescribed easement.

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

GRANTOR

HAMPTON ROADS SANITATION DISTRICT

By: _____
Ayanna R. Williams, Real Estate Manager

STATE/Commonwealth of Virginia
CITY OF _____, to wit:

The foregoing instrument was acknowledged before me this _____ day _____ 20____, by _____.

Notary Public
My commission expires:
Notary Public Registration No.:

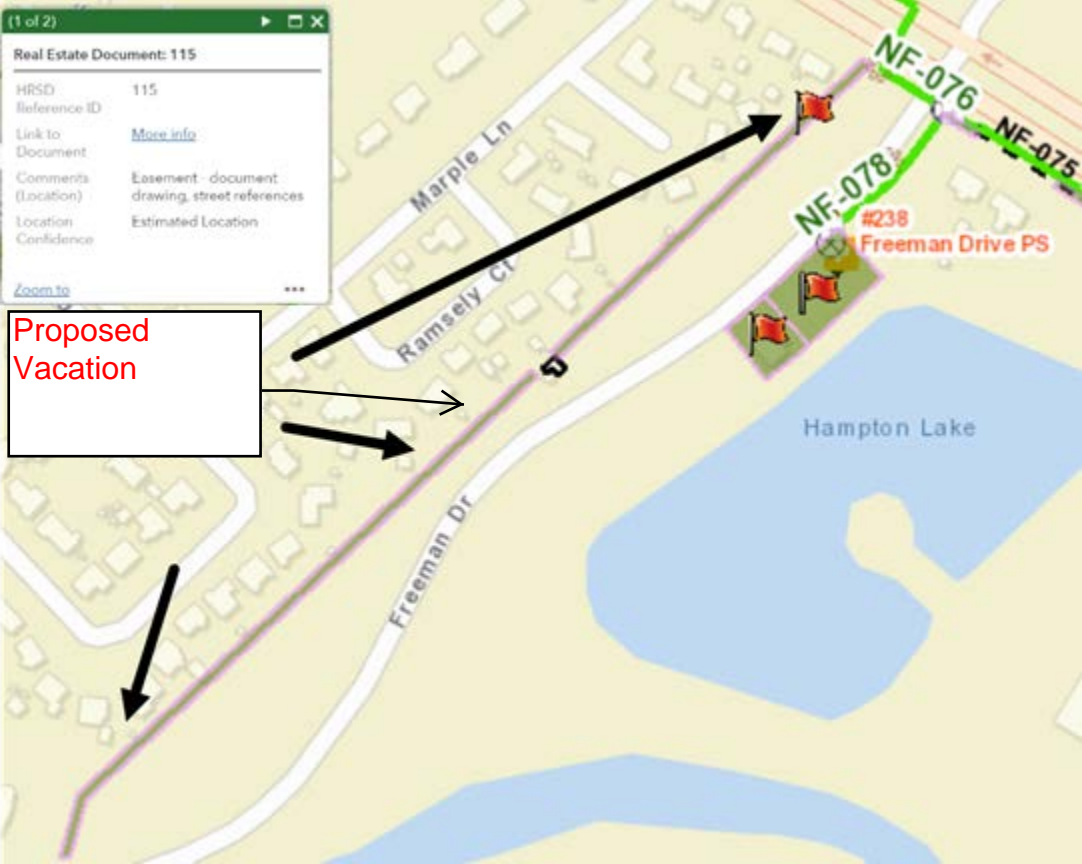
(1 of 2)

Real Estate Document: 115

HRSID	115
Reference ID	
Link to Document	More info
Comments (Location)	Easement - document drawing, street references
Location Confidence	Estimated Location

[Zoom to](#) ...

Proposed Vacation



AGENDA ITEM 3. January 25, 2022

Subject: Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II
Additional Appropriation, Rejection of Low Bid, Contract Award (>\$200,000), Task Order (>\$200,000)

Recommended Actions:

- a. Appropriate additional funding in the amount of \$4,103,206.
- b. Approve rejection of the bid submitted by Garney Companies, Inc. and find the bidder non-responsive.
- c. Award a contract to Tidewater Utility Construction, Inc. in the amount of \$14,783,000.
- d. Award a task order to Kimley Horn and Associates, Inc. in the amount of \$1,076,380.

CIP Project: BH014220

Budget	\$13,644,089
Previous Expenditures and Encumbrances	(\$1,137,915)
Available Balance	\$12,506,174
Proposed Contract Award to Contractor	(\$14,783,000)
Proposed Task Order to Kimley Horn and Associates, Inc.	(\$1,076,380)
Proposed Contingency	(\$750,000)
Project Shortage/Requested Additional Funding	(\$4,103,206)
Revised Total Project Authorized Funding	<u>\$17,747,295</u>

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Garney Companies, Inc.	\$13,624,855
Tidewater Utility Construction, Inc.	\$14,783,000
Bridgeman Civil, Inc.	\$16,120,160
SJ Louis Construction, Inc.	\$26,056,101
Gaston Brothers Utilities, LLC	\$34,933,550

Engineer Estimate: \$14,171,739

Contract Status with Task Orders:	Amount
Original Contract with Engineer	\$85,020
Total Value of Previous Task Orders	\$1,044,502
Requested Task Order	\$1,076,380
Total Value of All Task Orders	\$2,120,882
Revised Contract Value	\$2,205,902
Engineering Services as % of Construction	15%

Project Description: This project includes the replacement of 7,500 linear feet of 30-inch force main from the new Willard Avenue Pump Station at the intersection of Downes Street and Willard Avenue in Hampton, with a 9,000 linear feet of new 24- inch and 30-inch force main. The new force main will

originate from the new Willard Avenue Pump Station to the connection at East Queen Street and Eaton Street. The following ancillary work will be required as part of this project: A 600 linear feet extension of the 10-inch force main from City of Hampton (PS 003); A 1,000 linear feet relocation of the 4-inch force main from the privately owned Hampton Harbor Pump Station; and a 1,200 linear feet of 12-inch force main extension of the Hampton University Pump Station.

Funding Description: The original estimate did not anticipate construction complexities affecting the sequencing of the project. Time of year work restrictions imposed by both the City of Hampton as well as Hampton University will force the Contractor to complete work in multiple phases, thus extending the duration of construction. The lowest responsive and responsible bid amount of \$14,783,000 exceeds the current balance available for the CIP project. A 5 percent construction contingency is also being requested. Therefore, the project requires \$4,103,206 in additional funding.

Contract Award and Analysis of Cost: In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised on November 14, 2021, and five bids were received on December 15, 2021. The low bidder, Garney Companies, Inc. has been determined to be non-responsive due to their bid submittal not complying with the requirements of the contract. The value submitted for the mobilization line item exceeded six percent of the total contract value. The contract documents, including the bid form, indicated this line-item value shall not exceed 6 percent. The design engineer, Kimley Horn and Associates, Inc., evaluated the bids based upon the requirements in the invitation for bids and recommends award to the lowest responsive and responsible bidder, Tidewater Utility Construction, Inc., in the amount of \$14,783,000.

Task Order Description and Analysis of Cost: This task order will provide construction administration and inspection services for the subject project. A meeting was conducted on January 4, 2022 to discuss the project and scope of services. A fee of \$1,076,380 was negotiated, which will provide the required construction administration and inspection services for the efforts associated with this CIP project. The negotiated fee as a percent of construction is 7.3% which is comparable to other projects of similar size and complexity.

<u>Schedule:</u>	Construction	February 2022
	Project Completion	September 2024

Staff will review the process for determination of a non-responsive low bid. Representatives from Garney Companies, Inc. and Tidewater Utility Construction have requested to speak to the Commission. A [letter](#) addressed to the Commission from Garney Companies, Inc. is attached.



12/23/2021

Hampton Roads Sanitation District Commission
PO Box 5911
Virginia Beach, VA 23471
ATTN: HRSD Commissioners

RE: Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II
(BH014220/VCWRLF Program No. C-515663G)

Dear Commissioners:

Garney Companies, Inc. (Garney) received the attached letter regarding our submitted bid for the Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II project.

In response to the attached letter, Garney is providing this letter to object, refute, and appeal the reasoning provided for deeming Garney's bid for this project non-responsive. The ambiguity and apparent difference in interpretation of the Technical Specification revolves around the specified not to exceed value reported in terms of a percentage of the Total Bid for Bid Item 1. Please keep in mind that an ambiguity may exist if there are potentially differing interpretations as long as each interpretation is reasonable. In that regard, please consider the following.

Stated per Section 01270.1.3.A.1: *"The lump sum bid amount for mobilization shall not exceed 6% of the Total Bid amount."*

Garney interprets the stated clause and percentage to be from 0% to 6% which, when illustrated in terms of hundredths of a percent, would include 0.00% to 6.49%. Note the "6%" in the Technical Specifications was not designated as "6.00%". As such, Garney submitted a bid which included Bid Item 1 as 6%, or 6.23% when illustrated in terms of hundredths of a percent, of our total bid amount which falls into the quantifiable nominal percentage represented in the Technical Specifications.

Beyond the ambiguity stated above, Garney submitted the lowest, responsible, and responsive bid as part of a competitive procurement process for the subject project. Garney's competitive bid was both below the Engineer's Estimate as well as \$1,158,145.00 lower than the next, closest competing bidder. As such, it is in the best interest of the Commissioners to consider the interest of its stakeholders, rate payers, taxpayers, Hampton University staff and students, our SWaM subcontractors, and the surrounding community by awarding this contract to Garney as the lowest, responsible, and responsive bidder representing a savings over one million dollars.

In conclusion, Garney respectfully requests that HRSD reconsider its initial determination that Garney's bid was non-responsive and find Garney's bid responsive which Garney's submits is in HRSD and its stakeholders best interest for the reasons detailed herein. This project is extremely important to Garney as we have secured work for our employees and subcontractors in the HRSD and Tidewater Area. Garney takes our bid submittals, and particularly this bid submission, extremely serious as our livelihood directly depends on the results of the bids.

Additionally given the importance of this project to us, Garney requests to speak at the HRSD Commission Meeting on January 25th, 2022 at 9:00 AM regarding our submitted bid for the Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II project. Please consider this letter to be our formal request to the Commission Secretary

Jennifer Cascio, who is included as a CC recipient, as to follow the proper protocol per the instructions detailed at (<https://www.hrsd.com/meeting-minutes>).

Thank you for your time and consideration,

A handwritten signature in blue ink that reads "Jordan Carrier". The signature is written in a cursive style and is positioned over a light blue rectangular background.

Jordan Carrier
Garney Companies, Inc – Director

ATTACHMENTS: Notification Letter of HRSD Evaluation of Bid Dated 12/22/21

CC: Bruce Hesselbee – HRSD
 Rebecca Ashley – HRSD
 Jennifer Cascio – HRSD
 Mark Peters – Garney Companies, Inc.



December 22, 2021

Mr. Jordan S. Carrier
Director
Garney Companies, Inc.
3959 Pender Drive, Suite 100
Fairfax, Virginia 22030

RE: Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II
(BH014220 / VCWRLF Program No. C-515663G)

Dear Mr. Carrier:

HRSD has carefully evaluated your bid submitted on December 15, 2021, for the above referenced project. Based on this evaluation, staff will recommend to the HRSD Commission Meeting to be held on January 25, 2021, that your bid was determined to be non-responsive. Bid Item 1 for Mobilization does not meet the project requirements. Technical Specification Section 01270 Measurement and Payment and the line detail in ERP limited the bid amount for Mobilization to not exceed six percent (6%) of the total bid amount. Your bid for Item 1 Mobilization (\$850,000) represents approximately 6.23% of your total bid amount of \$13,624,855. This issue cannot be considered an informality in your bid.

If you have any questions regarding this matter, please contact me at (757) 460-7012.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Bruce W. Husselbee', is written over a white background.

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

AGENDA ITEM 4. – January 25, 2022

Subject: Virginia Clean Water Revolving Loan Fund (VCWRLF) Rate Resets and Amendment to the Master Financing Agreement for the James River Treatment Plant, Nansemond Treatment Plant, and Interceptor System Metering Projects Resolutions

Recommended Action: Approve the resolutions authorizing the Fifth Amendment to the Master Financing Agreement with the Virginia Resources Authority (VRA) and allonges to three wastewater revenue bonds issued to pay the cost of a certain improvements to the James River Treatment Plant Project, Nansemond Treatment Plant Project and Interceptor System Metering Project.

Brief: The Virginia Resources Authority (VRA) allows for a rate reset after five years from loan issuance based on prevailing market rates or if VRA refunds bonds used to fund the loans and then passes the refunding savings on to the borrower(s). HRSD's financial advisor, PFM, identified three loans eligible for a rate reset that would provide significant savings. Since the VRA funded the loans with cash, the rate resets are based on prevailing market rates with one percent floor. The Net Present Value (NPV) savings is approximately \$927,000, not including closing costs. The draft resolutions, allonges (linked below) and [Fifth Amendment to the Master Financing Agreement](#) were prepared by bond counsel and reviewed by general counsel. The closing date is scheduled in February.

Project Name	Loan Number	Date Issued	Existing Rate	New Rate
James River Treatment Plant Project	C-515409-02	November 20, 2009	2.65%	1.80%
Nansemond Treatment Plant Project	C-515410-02	May 28, 2009	2.65%	1.80%
Interceptor System Metering Project	C-515418-02	December 18, 2009	2.65%	1.80%

Hampton Roads Sanitation District
Resolution of
January 25, 2022

HAMPTON ROADS SANITATION DISTRICT COMMISSION

RESOLUTION AUTHORIZING THE MODIFICATION OF THE WASTEWATER REVENUE BOND ISSUED TO PAY THE COST OF A CERTAIN PROJECT AT THE JAMES RIVER TREATMENT PLANT AND AUTHORIZING THE EXECUTION OF AN AMENDMENT TO THE MASTER FINANCING AGREEMENT WITH THE VIRGINIA RESOURCES AUTHORITY.

Adopted January 25, 2022

JAMES RIVER TREATMENT PLANT PROJECT
#C-515409-02

Resolution

**RESOLUTION AUTHORIZING THE MODIFICATION OF
THE WASTEWATER REVENUE BOND ISSUED TO PAY
THE COST OF A CERTAIN PROJECT AT THE JAMES
RIVER TREATMENT PLANT AND AUTHORIZING THE
EXECUTION OF AN AMENDMENT TO THE MASTER
FINANCING AGREEMENT WITH THE VIRGINIA
RESOURCES AUTHORITY.**

WHEREAS, the Hampton Roads Sanitation District (the “Borrower”) entered into a Trust Agreement with The Bank of New York, as Trustee (The Bank of New York Mellon Trust Company, N.A., as successor trustee, the “Senior Trustee”), dated as of March 1, 2008, as amended (the “Senior Trust Agreement”), pursuant to which the Borrower may incur Senior Obligations, as defined in the Senior Trust Agreement; and

WHEREAS, the Hampton Roads Sanitation District Commission (the “Commission”) received an offer from the Virginia Resources Authority (“VRA”), as Administrator of the Virginia Water Facilities Revolving Fund (the “Fund”), to make a loan from the Fund to the Borrower in the amount of up to \$13,718,671 for the purpose of financing a project described in such offer as improvements to the James River Treatment Plant (“James River Treatment Plant Project”), together with related expenses; and

WHEREAS, the Commission, as the governing body of the Borrower, accepted such offer and closed on such loan from VRA, as Administrator of the Fund, by authorizing and issuing a wastewater revenue bond, dated November 20, 2009, for the purpose of financing Capital Improvement Program Costs (as defined in the Senior Trust Agreement) consisting of improvements to the Borrower’s James River Treatment Plant, as previously amended (the “Local Bond”), and such Local Bond is payable from the Net Revenues (as defined in the Senior Trust Agreement) as a Senior Obligation, as defined in the Senior Trust Agreement, all in

conformity with the terms and provisions of the Senior Trust Agreement; and

WHEREAS, the terms of such loan from VRA, as Administrator of the Fund, are governed by the Financing Agreement, dated as of November 1, 2009, as amended and restated by the Master Financing Agreement, dated as of February 1, 2016, as amended and supplemented, each between VRA, as Administrator of the Fund, and the Borrower (as so amended and restated, the “Master Financing Agreement”); and

WHEREAS, VRA has offered the Borrower the opportunity to reduce the interest costs on the Local Bond; and

WHEREAS, in connection with the modification of the interest rate on the Local Bond, the lower interest rate thereon is evidenced by the delivery of an allonge to the Local Bond; and

WHEREAS, the Commission, as the governing body of the Borrower, determines that it is in the best interests of the Borrower to authorize the execution and delivery of an allonge with respect to the Local Bond in substantially the form attached as Exhibit A hereto (the “Allonge”), pursuant to which the Cost of Funds (as defined in the Master Financing Agreement) on the Local Bond shall be reduced from 2.65% per annum to 1.80% per annum; and

WHEREAS, in connection with the modification of the Local Bond, VRA has requested the Borrower to amend the Master Financing Agreement pursuant to an amendment in substantially the form attached as Exhibit B hereto (the “Amendment to the Master Financing Agreement”); now, therefore,

BE IT RESOLVED by the Hampton Roads Sanitation District Commission as follows:

Section 1. Authorization of Allonge; Ratification of Local Bond Modified Thereby.

The form, terms and conditions of the Allonge with respect to the Local Bond are hereby approved in all respects, and the Chair or Vice-Chair and the Secretary or any Assistant

Secretary of the Commission and the Director of Finance (the “District Representatives”) are hereby authorized and directed to execute, by manual or facsimile signature, and deliver the Allonge, in substantially the form set forth in Exhibit A hereto, together with such changes, modifications and deletions as such District Representatives, with the advice of counsel, may deem necessary and appropriate; such execution and delivery of the Allonge shall be conclusive evidence of the approval and authorization thereof by the Borrower.

The delivery of any Allonge shall not constitute a modification of any provision of the Local Bond, except with respect to the provisions directly modified thereby, and the other terms and conditions of each Local Bond are hereby ratified.

Section 2. Amendment to the Master Financing Agreement. The form, terms and conditions of the Amendment to the Master Financing Agreement relating to the Local Bond are hereby approved in all respects, and the District Representatives are hereby authorized and directed to execute and deliver the Amendment to the Master Financing Agreement, in substantially the form set forth in Exhibit B hereto, together with such changes, modifications and deletions as such District Representatives, with the advice of counsel, may deem necessary and appropriate; such execution and delivery of the Amendment to the Master Financing Agreement shall be conclusive evidence of the approval and authorization thereof by the District.

Section 3. Further Actions. The Chair, the Vice-Chair, the Secretary and any Assistant Secretary of the Commission and the General Manager and the Director of Finance of the Borrower, each of whom may act, are authorized and directed (without limitation except as may be expressly set forth therein) to take such action and to execute and deliver any such documents, certificates, undertakings, agreements or other instruments, including, but not limited to, a tax compliance agreement, as they, with the advice of counsel, may deem necessary or appropriate

to effect the transactions contemplated by this Resolution.

Section 4. Effectiveness. This Resolution shall take effect immediately upon its adoption.

[END OF RESOLUTION]

Adopted by the Hampton Roads Sanitation District Commission on January 25, 2022.

Frederick N. Elofson, Chair

EXHIBIT A
FORM OF ALLONGE

ALLONGE DATED _____, 2022, ATTACHED TO
HAMPTON ROADS SANITATION DISTRICT
WASTEWATER REVENUE BOND,
DATED NOVEMBER 20, 2009,
PAYABLE TO U.S. BANK NATIONAL ASSOCIATION, AS SUCCESSOR TRUSTEE, ON
BEHALF OF VIRGINIA RESOURCES AUTHORITY, AS ADMINISTRATOR OF THE
VIRGINIA WATER FACILITIES REVOLVING FUND

Pursuant to a resolution of the Hampton Roads Sanitation District Commission (the “Borrower”), adopted on _____, 2022, the text of the Bond is hereby amended, and this Allonge shall be executed, authenticated and acknowledged, as follows:

(a) The Cost of Funds on this Bond is reduced from 2.65% per annum to 1.80% per annum beginning on March 1, 2022.

(b) The semiannual installment payments of principal and Cost of Funds due on September 1, 2022 and on each March 1 and September 1 thereafter are changed to \$_____, with the final installment of \$_____ due on September 1, 2030, when, if not sooner paid, all amounts due hereunder and under this Bond shall be due and payable in full.

1. Except as modified hereby, the terms and provisions of the Bond remain in full force and effect. The Bond as modified hereby shall be interpreted and construed in accordance with Virginia law.

This Allonge shall be physically attached to the Bond, simultaneously with the entry into this Allonge by the parties hereto, to evidence the modification of the provisions of the Bond which are affected hereby.

IN WITNESS WHEREOF, the Hampton Roads Sanitation District has caused this Allonge to be signed by the manual signature of the Chair of its Commission and its seal to be impressed hereon and attested by the Secretary of its Commission, as of the date set forth above.

HAMPTON ROADS SANITATION DISTRICT

By: _____
Chair of the Hampton Roads Sanitation
District Commission

[SEAL]

ATTEST:

Secretary of the Hampton Roads
Sanitation District Commission

[Signature page to Allonge
Hampton Roads Sanitation District
Wastewater Revenue Bond
Loan No. C-515409-02]

James River Treatment Plant Project
Modification

Virginia Resources Authority, as Administrator of the Virginia Water Facilities Revolving Fund, hereby agrees to the aforementioned amendments set forth in this Allonge.

APPROVED:

VIRGINIA RESOURCES AUTHORITY,
as Administrator of the Virginia Water
Facilities Revolving Fund

By: _____

Title: _____

U.S. Bank National Association, as Trustee, hereby acknowledges the aforementioned amendments set forth in this Allonge.

ACKNOWLEDGED:

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By: _____

Title: _____

[Signature page to Allonge
Hampton Roads Sanitation District
Wastewater Revenue Bond
Loan No. C-515409-02]

EXHIBIT B

[FORM OF AMENDMENT TO MASTER FINANCING AGREEMENT]

**FIFTH AMENDMENT TO
MASTER FINANCING AGREEMENT**

dated as of _____ 1, 2022

BETWEEN

VIRGINIA RESOURCES AUTHORITY,

**as Administrator of the
Virginia Water Facilities Revolving Fund**

AND

HAMPTON ROADS SANITATION DISTRICT

Virginia Resources Authority
Virginia Water Facilities Revolving Fund

C-515409-02 (James River Treatment Plant Project)
C-515410-02 (Nansemond Treatment Plant Project)
C-515418-02 (Interceptor System Metering Project)

FIFTH AMENDMENT TO MASTER FINANCING AGREEMENT

THIS FIFTH AMENDMENT TO MASTER FINANCING AGREEMENT (this “Amendment”) is made as of _____ 1, 2022, between the **VIRGINIA RESOURCES AUTHORITY**, a public body corporate and a political subdivision of the Commonwealth of Virginia (the “Authority”), as Administrator of the **VIRGINIA WATER FACILITIES REVOLVING FUND** (the “Fund”), and the **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia (the “Borrower”), acting by and through the **HAMPTON ROADS SANITATION DISTRICT COMMISSION**, the governing body of the Borrower (the “Commission”).

A. On May 28, 2009 (the “Nansemond 2009 Closing Date”), the Borrower issued its Wastewater Revenue Bond, in the maximum principal amount of \$19,410,226, as amended by an Allonge dated September 11, 2015 (as amended, the “Nansemond 2009 Local Bond”), and sold the Nansemond 2009 Local Bond to U.S. Bank National Association, as successor trustee (the “Trustee”) for the benefit of the Authority, pursuant to a Financing Agreement, dated as of May 1, 2009, as amended on September 1, 2015 (as amended, the “Nansemond 2009 Financing Agreement”), between the Authority, as Administrator of the Fund, and the Borrower.

B. On November 20, 2009 (the “James River 2009 Closing Date”), the Borrower issued its Wastewater Revenue Bond, in the maximum principal amount of \$13,718,671, as amended by an Allonge dated September 11, 2015 (as amended, the “James River 2009 Local Bond”), and sold the James River 2009 Local Bond to the Trustee for the benefit of the Authority, pursuant to a Financing Agreement, dated as of November 1, 2009, as amended on September 1, 2015 (as amended, the “James River 2009 Financing Agreement”), between the Authority, as Administrator of the Fund, and the Borrower.

C. On December 18, 2009 (the “Interceptor System 2009 Closing Date,” and collectively with the Nansemond 2009 Closing Date and the James River 2009 Closing Date, the “Closing Dates”), the Borrower issued its Wastewater Revenue Bond, in the maximum principal amount of \$11,418,372, as amended by an Allonge dated September 11, 2015 (as amended, the “Interceptor System 2009 Local Bond,” and collectively with the Nansemond 2009 Local Bond and the James River 2009 Local Bond, the “Local Bonds”), and sold the Interceptor System 2009 Local Bond to the Trustee for the benefit of the Authority, pursuant to a Financing Agreement, dated as of December 1, 2009, as amended on September 1, 2015 (as amended, the “Interceptor System 2009 Financing Agreement,” and collectively with the Nansemond 2009 Financing Agreement and the James River 2009 Financing Agreement, the “Financing Agreements”), between the Authority, as Administrator of the Fund, and the Borrower.

D. The Authority and the Borrower previously amended and restated the Financing Agreements with respect to the Local Bonds through the execution and delivery of a Master Financing Agreement, dated as of February 1, 2016 (as amended and supplemented, the “Master Financing Agreement”), between the Authority and the Borrower.

E. The Authority and the Borrower desire to further amend the Master Financing Agreement with respect to the Local Bonds, as set forth herein.

F. The Authority and the Borrower, with the prior written consent of the Department of Environmental Quality (the “Department”), hereby set forth certain amendments to the Master Financing Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements hereinafter contained, the Authority and the Borrower covenant and agree as follows:

ARTICLE I

DEFINITIONS

Section 1.1 Definitions. The capitalized terms contained in this Amendment shall have the meanings set forth in the Master Financing Agreement except as defined in the recitals above or unless the context otherwise requires.

ARTICLE II

AMENDMENTS TO FINANCING AGREEMENT

Section 2.1 Amendment to Section 10.10 of the Master Financing Agreement. Section 10.10 of the Financing Agreement is amended and restated to read as follows:

“Annual Financial Information” with respect to any Fiscal Year for the Borrower, means the following:

(i) the financial statements (consisting of at least a balance sheet and statement of revenues and expenses) of the System, or, if not available, the financial statements (consisting of at least a balance sheet and a statement of revenues and expenses) of the Borrower, which financial statements must be (A) prepared annually in accordance with generally accepted accounting principles in effect from time to time consistently applied (provided that nothing in this clause (A) will prohibit the Borrower after the date of this Agreement from changing such other principles so as to comply with generally accepted accounting principles as then in effect or to comply with a change in applicable law) and (B) audited by an independent certified public accountant or firm of such accountants in accordance with generally accepted auditing standards as in effect from time to time (provided that if audited financial statements are not available for filing when required by this Section or the Rule (as defined herein), unaudited financial statements will be filed and audited financial statements will be filed as soon as possible thereafter); and

(ii) operating data of the type set forth in Exhibit H.

“Dissemination Agent” shall mean any person, reasonably acceptable to the Authority, whom the Borrower contracts in writing to perform its obligations as provided in subsection (b) of this Section.

“Leveraging Bonds” means the bonds and other evidences of indebtedness issued and sold by the Authority pursuant to the Virginia Resources Authority Act, Chapter 21, Title 62.1 of the Code of Virginia (1950), as amended, the Act, and any successor provisions of law, including without limitation the bonds and other evidences of indebtedness issued by the Authority under the Second Amended and Restated Master Indenture of Trust dated as of September 1, 2020, between the Authority and U.S. Bank National Association, as trustee, as supplemented and amended.

“Local Government” shall have the meaning set forth in Section 62.1-199 of the Code of Virginia of 1950, as amended.

“Local Obligations” shall mean any bonds, notes, debentures, interim certificates, bond, grant or revenue anticipation notes, leases or any other evidences of indebtedness of a Local Government evidencing a loan made by the Authority to a Local Government from the Fund or the proceeds of Leveraging Bonds.

“Make Public” or “Made Public” shall have the meaning set forth in subsection (c) of this Section.

“Material Local Government” shall mean a Local Government that satisfies a set of objective criteria established by the Authority at the time of sale of each series of Leveraging Bonds and based on the level of participation of each Local Government in the aggregate outstanding principal amount of all Local Obligations. For all Leveraging Bonds currently outstanding as of the date of this Agreement, a Material Local Government is any Local Government whose aggregate outstanding principal amount of Local Obligations represents twenty percent (20%) or more of the aggregate outstanding principal amount of all Local Obligations.

“Rule” means Rule 15c2-12, as it may be amended from time to time, under the Securities Exchange Act of 1934 and any similar rules of the SEC relating to disclosure requirements in the offering and sale of municipal securities, all as in effect from time to time.

“SEC” means the U.S. Securities and Exchange Commission.

(b) The Borrower shall Make Public or cause to be Made Public:

(1) Within 270 days after the end of the Borrower’s Fiscal Year (commencing with the Fiscal Year in which the Closing Date occurs), Annual Financial Information for such Fiscal Year as of the end of which the Borrower constitutes a Material Local Government. Annual

Financial Information may be set forth in the documents Made Public or may be included by reference in a document Made Public to any document previously filed with the SEC. If the document referred to is a final official statement within the meaning of the Rule, then it must be available from the Municipal Securities Rulemaking Board (“MSRB”).

(2) In a timely manner, notice of any failure by the Borrower to Make Public or cause to be Made Public Annual Financial Information pursuant to the terms of part (1) of this subsection.

(c) For purposes of this Section, information and notices shall be deemed to have been Made Public if transmitted to the Authority and to the MSRB for publication on its Electronic Municipal Market Access system (“EMMA”). All documents provided to the MSRB shall be accompanied by identifying information prescribed by the Authority and the MSRB.

(d) The Borrower shall also notify the Authority within five (5) business days of becoming aware of any of the following events that may from time to time occur with respect to the Local Bond:

- (1) principal and interest payment delinquencies;
- (2) non-payment related defaults;
- (3) unscheduled draws on debt service reserves reflecting financial difficulties;
- (4) unscheduled draws on any credit enhancement reflecting financial difficulties;
- (5) substitution of credit or liquidity providers, or their failure to perform;
- (6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other notices or determinations with respect to the tax status of the Local Bond, or other events affecting the tax status of the Local Bond;
- (7) modifications to rights of the holders of the Local Bond;
- (8) bond calls and tender offers;
- (9) defeasances of all or any portion of the Local Bond;
- (10) release, substitution, or sale of property securing repayment of the Local Bond;
- (11) rating changes;

(12) bankruptcy, insolvency, receivership or similar event of the Borrower^{*};

(13) the consummation of a merger, consolidation or acquisition involving the Borrower or the sale of all or substantially all of the assets of the Borrower, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms;

(14) appointment of a successor or additional trustee or the change in the name of a trustee;

(15) incurrence of a financial obligation^{**} of the Borrower, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the Borrower, any of which affect security holders, if material; and

(16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the Borrower, any of which reflect financial difficulties.

(e) Notwithstanding anything in this Agreement to the contrary, the Borrower need not comply with the provisions of subsections (a) through (d) above unless and until the Authority has notified the Borrower that it satisfied the objective criteria for a Material Local Government as of the end of the Authority's immediately preceding fiscal year.

(f) The obligations of the Borrower under this Section will terminate upon the redemption, defeasance (within the meaning of the Rule) or payment in full of all of the Leveraging Bonds.

(g) The Borrower may modify its continuing disclosure obligations in this Section without the consent of holders of the Leveraging Bonds provided that this Section as so modified complies with the Rule as it exists at the time of modification. The Borrower shall within a reasonable time thereafter send to the Authority and the MSRB through EMMA a description of such modification(s).

* This event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Borrower in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Borrower, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Borrower.

** The term "financial obligation" is defined to mean a (A) debt obligation; (B) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (C) a guarantee of (A) or (B). The term "financial obligation" does not include municipal securities as to which a final official statement has been otherwise provided to the MSRB consistent with the Rule.

(h) (1) If the Borrower fails to comply with any covenant or obligation set forth in this Section, any holder (within the meaning of the Rule) of Leveraging Bonds then Outstanding may, by notice to the Borrower, proceed to protect and enforce its rights and the rights of the holders by an action for specific performance of the Borrower's covenants or obligations set forth in this Section.

(2) Notwithstanding anything herein to the contrary, any failure of the Borrower to comply with any obligation regarding Annual Financial Information specified in this Section (i) shall not be deemed to constitute an Event of Default under this Agreement and (ii) shall not give rise to any right or remedy other than that described in part (h)(1) of this Section.

(i) The Borrower may from time to time disclose certain information and data in addition to that required under this Section. Notwithstanding anything in this Agreement to the contrary, the Borrower shall not incur any obligation to continue to provide, or to update, such additional information or data.

(j) The Borrower may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligation to Make Public the Annual Financial Information, and may discharge any such Agent, with or without appointing a successor Dissemination Agent.”

Section 2.2 Amendments to Exhibit A-2 of the Master Financing Agreement.
Exhibit A-2 of the Master Financing Agreement is amended and restated as set forth in the attached Exhibit A-2.

Section 2.3 Amendments to Exhibit F of the Master Financing Agreement.
Exhibit F of the Master Financing Agreement is amended and restated as set forth in the attached Exhibit F.

Section 2.4 Amendments to Exhibit G of the Master Financing Agreement.
Exhibit G of the Master Financing Agreement is amended solely with respect to the Local Bonds as set forth in the attached Exhibit G.

ARTICLE III

MISCELLANEOUS

Section 3.1 Successors and Assigns. This Amendment shall be binding upon, inure to the benefit of and be enforceable by the parties and their respective successors and assigns.

Section 3.2 Applicable Law. This Amendment shall be governed by the laws of the Commonwealth of Virginia.

Section 3.3 Ratification of Financing Agreement. All of the representations and warranties of the Borrower contained in Article II of the Master Financing Agreement are true

and correct as of the date hereof with the exception of Exhibit I of the Master Financing Agreement as to which no representations or warranties are made. All terms of the Master Financing Agreement except as amended or modified by the terms of this Amendment are hereby reaffirmed, ratified and confirmed. This Amendment shall not be construed as and is not intended as a novation of the Local Bonds.

Section 3.4 Severability. If any clause, provision or section of this Amendment shall be held illegal or invalid by any court, the illegality or invalidity of such clause, provision or section shall not affect the remainder of this Amendment which shall be construed and enforced as if such illegal or invalid clause, provision or section had not been contained in this Amendment. If any agreement or obligation contained in this Amendment is held to be in violation of law, then such agreement or obligation shall be deemed to be the agreement or obligation of the Authority and the Borrower, as the case may be, only to the extent permitted by law.

Section 3.5 Headings. The headings of the several articles and sections of this Amendment are inserted for convenience only and do not comprise a part of this Amendment.

Section 3.6 Term of Amendment. This Amendment shall be effective upon its execution and delivery, provided that the Local Bonds previously or simultaneously has been executed and delivered. Except as otherwise specified, the Borrower's obligations under the Local Bonds and this Amendment shall expire upon payment in full of the Local Bonds and all other amounts payable by the Borrower under the Master Financing Agreement.

Section 3.7 Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be an original and all of which together shall constitute but one and the same instrument.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

WITNESS the following signatures, all duly authorized.

**VIRGINIA RESOURCES AUTHORITY, as
Administrator of the Virginia Water Facilities
Revolving Fund**

By: _____

Its: _____

HAMPTON ROADS SANITATION DISTRICT

By: _____

Its: _____

The Trustee hereby acknowledges the aforementioned amendments to the Master Financing Agreement.

**U.S. BANK NATIONAL ASSOCIATION, as
Trustee**

By: _____

Its: _____

\$8,677,684 Sanitation District Subordinate Wastewater Revenue Bond (Orcutt Avenue and Mercury Boulevard Gravity Sewer Improvements), dated March 20, 2019

\$100,000,000 Subordinate Wastewater Revenue Bond (2020 CIP Project), dated June 11, 2020

EXHIBIT F
Senior Bonds, Migrating Senior Bonds and Parity Bonds
Hampton Roads Sanitation District

[To Be Updated by Borrower's Bond Counsel]

Senior Bonds.

\$152,640,000 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2009, dated November 12, 2009

\$111,345,000 Hampton Roads Sanitation District Wastewater Revenue Bonds, Refunding Series 2014A, dated November 12, 2014

Migrating Senior Bonds.

\$19,410,226 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2009, dated May 28, 2009 (Nansemond Treatment Plant Project), as amended on September 11, 2015 **and on _____, 2022**

\$13,718,671 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2009, dated November 20, 2009 (James River Treatment Plant Project), as amended on September 11, 2015 **and on _____, 2022**

\$11,418,372 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2009, dated December 18, 2009 (Interceptor System Metering Project), as amended on September 11, 2015 **and on _____, 2022**

\$5,924,715 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2010, dated June 29, 2010 (Williamsburg Oxidation Towers Project), as amended on August 31, 2016

Parity Bonds.

\$2,380,185 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated September 28, 2000 (Odor Control Projects)

\$1,759,000 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated January 31, 2002 (Army Base Aeration and James River Thickener Projects), as amended on January 9, 2013

\$2,476,000 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated April 3, 2002 (York River STP-Wastewater Reuse Project), as amended on January 9, 2013

\$1,070,000 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated May 31, 2002 (Chesapeake-Elizabeth Incinerator Project)

\$40,330,298 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated February 26, 2004 (Chesapeake-Elizabeth Treatment Plant Project), as amended on January 9, 2013 and November 19, 2021

\$1,235,000 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated July 29, 2005 (Army Base Treatment Plant Project), as amended on January 9, 2013

\$7,339,600 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated June 22, 2006 (Atlantic Wastewater Treatment Plant Project), as amended on January 9, 2013 and November 19, 2021

\$1,605,200 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated June 22, 2006 (Colonial Williamsburg Pump Station Project), as amended on January 9, 2013 and November 19, 2021

\$30,000,000 Hampton Roads Sanitation District Subordinate Pledge Sewer Revenue Bond, dated December 17, 2008 (York River Wastewater Treatment Plant Project), as amended on January 15, 2015

\$50,000,000 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2010, dated June 29, 2010 (Army Base Wastewater Treatment Plant Project), as amended on August 31, 2016 and January 30, 2020

\$7,583,771 Hampton Roads Sanitation District Wastewater Revenue Bonds, Series 2010, dated June 29, 2010 (Boat Harbor Treatment Project), as amended on August 31, 2016 and January 30, 2020

\$6,318,000 Hampton Roads Sanitation District Wastewater Revenue Bond, Series 2012, dated March 13, 2012 (Atlantic Treatment Plant: Digester Gas to Energy Project), as amended on January 30, 2020 and November 19, 2021

\$22,680,000 Hampton Roads Sanitation District Subordinate Wastewater Revenue Bonds, Refunding Series 2012, dated December 27, 2012

\$246,845,000 Sanitation District Subordinate Wastewater Revenue Bonds, Refunding Series 2016A, dated March 17, 2016

\$50,000,000 Sanitation District Subordinate Wastewater Revenue Bonds, Refunding Series 2016B, dated April 1, 2016

\$57,273,700 Sanitation District Subordinate Wastewater Revenue Bond (Atlantic Treatment Plant Project), dated August 10, 2017

\$1,000,000 Sanitation District Subordinate Wastewater Revenue Bond (Ferguson Park Interceptor Project), dated August 10, 2017

\$3,205,554 Sanitation District Subordinate Wastewater Revenue Bond (Lucas Creek Interceptor Project), dated October 26, 2017

\$1,095,595 Sanitation District Subordinate Wastewater Revenue Bond (Rodman Avenue Pump Station Project), dated November 29, 2017

\$83,485,000 Sanitation District Subordinate Wastewater Revenue Bonds Refunding Series 2017A, dated December 19, 2017

\$63,185,000 Sanitation District Subordinate Wastewater Revenue Bonds Series 2018A, dated January 23, 2018

\$8,314,638 Sanitation District Subordinate Wastewater Revenue Bond (Boat Harbor Treatment Plant Switchgear and Controls Replacements), dated March 20, 2019

\$8,677,684 Sanitation District Subordinate Wastewater Revenue Bond (Orcutt Avenue and Mercury Boulevard Gravity Sewer Improvements), dated March 20, 2019

\$205,675,000 Sanitation District Subordinate Wastewater Revenue Bonds Refunding Series 2019A (Federally Taxable), dated October 2, 2019

\$4,989,671 Sanitation District Subordinate Wastewater Revenue Bond (Deep Creek Project), dated November 21, 2019

\$3,896,616 Sanitation District Subordinate Wastewater Revenue Bond (Huxley – Middle Ground Project), dated November 21, 2019

\$3,500,000 Sanitation District Subordinate Wastewater Revenue Bond (Treatment Plant Project), dated November 21, 2019

\$100,000,000 Subordinate Wastewater Revenue Bond (2020 CIP Project), dated June 11, 2020

EXHIBIT G
Debt Service Schedules
Hampton Roads Sanitation District

[To Come]

Hampton Roads Sanitation District
Resolution of
January 25, 2022

HAMPTON ROADS SANITATION DISTRICT COMMISSION

RESOLUTION AUTHORIZING THE MODIFICATION OF THE
WASTEWATER REVENUE BOND ISSUED TO PAY THE
COST OF A CERTAIN PROJECT AT THE NANSEMOND
TREATMENT PLANT AND AUTHORIZING THE
EXECUTION OF AN AMENDMENT TO THE MASTER
FINANCING AGREEMENT WITH THE VIRGINIA
RESOURCES AUTHORITY.

Adopted January 25, 2022

NANSEMOND TREATMENT PLANT PROJECT
#C-515410-02

Resolution

**RESOLUTION AUTHORIZING THE MODIFICATION OF
THE WASTEWATER REVENUE BOND ISSUED TO PAY
THE COST OF A CERTAIN PROJECT AT THE
NANSEMOND TREATMENT PLANT AND AUTHORIZING
THE EXECUTION OF AN AMENDMENT TO THE
MASTER FINANCING AGREEMENT WITH THE
VIRGINIA RESOURCES AUTHORITY.**

WHEREAS, the Hampton Roads Sanitation District (the “Borrower”) entered into a Trust Agreement with The Bank of New York, as Trustee (The Bank of New York Mellon Trust Company, N.A., as successor trustee, the “Senior Trustee”), dated as of March 1, 2008, as amended (the “Senior Trust Agreement”), pursuant to which the Borrower may incur Senior Obligations, as defined in the Senior Trust Agreement; and

WHEREAS, the Hampton Roads Sanitation District Commission (the “Commission”) received an offer from the Virginia Resources Authority (“VRA”), as Administrator of the Virginia Water Facilities Revolving Fund (the “Fund”), to make a loan from the Fund to the Borrower in the amount of up to \$19,410,226 for the purpose of financing a project described in such offer as improvements to the Nansemond Treatment Plant (“Nansemond Treatment Plant Project”), together with related expenses; and

WHEREAS, the Commission, as the governing body of the Borrower, accepted such offer and closed on such loan from VRA, as Administrator of the Fund, by authorizing and issuing a wastewater revenue bond, dated May 28, 2009, for the purpose of financing Capital Improvement Program Costs (as defined in the Senior Trust Agreement) consisting of improvements to the Borrower’s Nansemond Treatment Plant, as previously amended (the “Local Bond”), and such Local Bond is payable from the Net Revenues (as defined in the Senior Trust Agreement) as a Senior Obligation, as defined in the Senior Trust Agreement, all in

conformity with the terms and provisions of the Senior Trust Agreement; and

WHEREAS, the terms of such loan from VRA, as Administrator of the Fund, are governed by the Financing Agreement, dated as of May 1, 2009, as amended and restated by the Master Financing Agreement, dated as of February 1, 2016, as amended and supplemented, each between VRA, as Administrator of the Fund, and the Borrower (as so amended and restated, the “Master Financing Agreement”); and

WHEREAS, VRA has offered the Borrower the opportunity to reduce the interest costs on the Local Bond; and

WHEREAS, in connection with the modification of the interest rate on the Local Bond, the lower interest rate thereon is evidenced by the delivery of an allonge to the Local Bond; and

WHEREAS, the Commission, as the governing body of the Borrower, determines that it is in the best interests of the Borrower to authorize the execution and delivery of an allonge with respect to the Local Bond in substantially the form attached as Exhibit A hereto (the “Allonge”), pursuant to which the Cost of Funds (as defined in the Master Financing Agreement) on the Local Bond shall be reduced from 2.65% per annum to 1.80% per annum; and

WHEREAS, in connection with the modification of the Local Bond, VRA has requested the Borrower to amend the Master Financing Agreement pursuant to an amendment in substantially the form attached as Exhibit B hereto (the “Amendment to the Master Financing Agreement”); now, therefore,

BE IT RESOLVED by the Hampton Roads Sanitation District Commission as follows:

Section 1. Authorization of Allonge; Ratification of Local Bond Modified Thereby.

The form, terms and conditions of the Allonge with respect to the Local Bond are hereby approved in all respects, and the Chair or Vice-Chair and the Secretary or any Assistant

Secretary of the Commission and the Director of Finance (the “District Representatives”) are hereby authorized and directed to execute, by manual or facsimile signature, and deliver the Allonge, in substantially the form set forth in Exhibit A hereto, together with such changes, modifications and deletions as such District Representatives, with the advice of counsel, may deem necessary and appropriate; such execution and delivery of the Allonge shall be conclusive evidence of the approval and authorization thereof by the Borrower.

The delivery of any Allonge shall not constitute a modification of any provision of the Local Bond, except with respect to the provisions directly modified thereby, and the other terms and conditions of each Local Bond are hereby ratified.

Section 2. Amendment to the Master Financing Agreement. The form, terms and conditions of the Amendment to the Master Financing Agreement relating to the Local Bond are hereby approved in all respects, and the District Representatives are hereby authorized and directed to execute and deliver the Amendment to the Master Financing Agreement, in substantially the form set forth in Exhibit B hereto, together with such changes, modifications and deletions as such District Representatives, with the advice of counsel, may deem necessary and appropriate; such execution and delivery of the Amendment to the Master Financing Agreement shall be conclusive evidence of the approval and authorization thereof by the District.

Section 3. Further Actions. The Chair, the Vice-Chair, the Secretary and any Assistant Secretary of the Commission and the General Manager and the Director of Finance of the Borrower, each of whom may act, are authorized and directed (without limitation except as may be expressly set forth therein) to take such action and to execute and deliver any such documents, certificates, undertakings, agreements or other instruments, including, but not limited to, a tax compliance agreement, as they, with the advice of counsel, may deem necessary or appropriate

to effect the transactions contemplated by this Resolution.

Section 4. Effectiveness. This Resolution shall take effect immediately upon its adoption.

[END OF RESOLUTION]

Adopted by the Hampton Roads Sanitation District Commission on January 25, 2022.

Frederick N. Elofson, Chair

EXHIBIT A
FORM OF ALLONGE

ALLONGE DATED _____, 2022, ATTACHED TO
HAMPTON ROADS SANITATION DISTRICT
WASTEWATER REVENUE BOND,
DATED MAY 28, 2009,
PAYABLE TO U.S. BANK NATIONAL ASSOCIATION, AS SUCCESSOR TRUSTEE, ON
BEHALF OF VIRGINIA RESOURCES AUTHORITY, AS ADMINISTRATOR OF THE
VIRGINIA WATER FACILITIES REVOLVING FUND

Pursuant to a resolution of the Hampton Roads Sanitation District Commission (the “Borrower”), adopted on January 25, 2022, the text of the Bond is hereby amended, and this Allonge shall be executed, authenticated and acknowledged, as follows:

(a) The Cost of Funds on this Bond is reduced from 2.65% per annum to 1.80% per annum beginning on March 1, 2022.

(b) The semiannual installment payments of principal and Cost of Funds due on September 1, 2022 and on each March 1 and September 1 thereafter are changed to \$_____, with the final installment of \$_____ due on March 1, 2031, when, if not sooner paid, all amounts due hereunder and under this Bond shall be due and payable in full.

Except as modified hereby, the terms and provisions of the Bond remain in full force and effect. The Bond as modified hereby shall be interpreted and construed in accordance with Virginia law.

This Allonge shall be physically attached to the Bond, simultaneously with the entry into this Allonge by the parties hereto, to evidence the modification of the provisions of the Bond which are affected hereby.

IN WITNESS WHEREOF, the Hampton Roads Sanitation District has caused this Allonge to be signed by the manual signature of the Chair of its Commission and its seal to be impressed hereon and attested by the Secretary of its Commission, as of the date set forth above.

HAMPTON ROADS SANITATION DISTRICT

By: _____
Chair of the Hampton Roads Sanitation
District Commission

[SEAL]

ATTEST:

Secretary of the Hampton Roads
Sanitation District Commission

Nansemond Treatment Plant Project
Modification

Virginia Resources Authority, as Administrator of the Virginia Water Facilities Revolving Fund, hereby agrees to the aforementioned amendments set forth in this Allonge.

APPROVED:

VIRGINIA RESOURCES AUTHORITY,
as Administrator of the Virginia Water
Facilities Revolving Fund

By: _____

Title: _____

U.S. Bank National Association, as Trustee, hereby acknowledges the aforementioned amendments set forth in this Allonge.

ACKNOWLEDGED:

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By: _____

Title: _____

[Signature page to Allonge
Hampton Roads Sanitation District
Wastewater Revenue Bond
Loan No. C-515410-02

EXHIBIT B

[FORM OF AMENDMENT TO MASTER FINANCING AGREEMENT]

Hampton Roads Sanitation District
Resolution of
January 25, 2022

HAMPTON ROADS SANITATION DISTRICT COMMISSION

RESOLUTION AUTHORIZING THE MODIFICATION OF THE
WASTEWATER REVENUE BOND ISSUED TO PAY THE
COST OF CERTAIN IMPROVEMENTS TO THE
INTERCEPTOR SYSTEM AND AUTHORIZING THE
EXECUTION OF AN AMENDMENT TO THE MASTER
FINANCING AGREEMENT WITH THE VIRGINIA
RESOURCES AUTHORITY.

Adopted January 25, 2022

INTERCEPTOR SYSTEM METERING PROJECT
#C-515418-02

Resolution

RESOLUTION AUTHORIZING THE MODIFICATION OF THE WASTEWATER REVENUE BOND ISSUED TO PAY THE COST OF CERTAIN IMPROVEMENTS TO THE INTERCEPTOR SYSTEM AND AUTHORIZING THE EXECUTION OF AN AMENDMENT TO THE MASTER FINANCING AGREEMENT WITH THE VIRGINIA RESOURCES AUTHORITY.

WHEREAS, the Hampton Roads Sanitation District (the “Borrower”) entered into a Trust Agreement with The Bank of New York, as Trustee (The Bank of New York Mellon Trust Company, N.A., as successor trustee, the “Senior Trustee”), dated as of March 1, 2008, as amended (the “Senior Trust Agreement”), pursuant to which the Borrower may incur Senior Obligations, as defined in the Senior Trust Agreement; and

WHEREAS, the Hampton Roads Sanitation District Commission (the “Commission”) received an offer from the Virginia Resources Authority (“VRA”), as Administrator of the Virginia Water Facilities Revolving Fund (the “Fund”), to make a loan from the Fund to the Borrower in the amount of up to \$11,418,372 for the purpose of financing a project described in such offer as the Interceptor System Metering Project (“Interceptor System Metering Project”), together with related expenses; and

WHEREAS, the Commission, as the governing body of the Borrower, accepted such offer and closed on such loan from VRA, as Administrator of the Fund, by authorizing and issuing a wastewater revenue bond, dated December 18, 2009, for the purpose of financing Capital Improvement Program Costs (as defined in the Senior Trust Agreement) consisting of Interceptor System Metering Project, as previously amended (the “Local Bond”), and such Local Bond is payable from the Net Revenues (as defined in the Senior Trust Agreement) as a Senior Obligation, as defined in the Senior Trust Agreement, all in conformity with the terms and

provisions of the Senior Trust Agreement; and

WHEREAS, the terms of such loan from VRA, as Administrator of the Fund, are governed by the Financing Agreement, dated as of December 1, 2009, as amended and restated by the Master Financing Agreement, dated as of February 1, 2016, as amended and supplemented, each between VRA, as Administrator of the Fund, and the Borrower (as so amended and restated, the “Master Financing Agreement”); and

WHEREAS, VRA has offered the Borrower the opportunity to reduce the interest costs on the Local Bond; and

WHEREAS, in connection with the modification of the interest rate on the Local Bond, the lower interest rate thereon is evidenced by the delivery of an allonge to the Local Bond; and

WHEREAS, the Commission, as the governing body of the Borrower, determines that it is in the best interests of the Borrower to authorize the execution and delivery of an allonge with respect to the Local Bond in substantially the form attached as Exhibit A hereto (the “Allonge”), pursuant to which the Cost of Funds (as defined in the Master Financing Agreement) on the Local Bond shall be reduced from 2.65% per annum to 1.80% per annum; and

WHEREAS, in connection with the modification of the Local Bond, VRA has requested the Borrower to amend the Master Financing Agreement pursuant to an amendment in substantially the form attached as Exhibit B hereto (the “Amendment to the Master Financing Agreement”); now, therefore,

BE IT RESOLVED by the Hampton Roads Sanitation District Commission as follows:

Section 1. Authorization of Allonge; Ratification of Local Bond Modified Thereby.

The form, terms and conditions of the Allonge with respect to the Local Bond are hereby approved in all respects, and the Chair or Vice-Chair and the Secretary or any Assistant

Secretary of the Commission and the Director of Finance (the “District Representatives”) are hereby authorized and directed to execute, by manual or facsimile signature, and deliver the Allonge, in substantially the form set forth in Exhibit A hereto, together with such changes, modifications and deletions as such District Representatives, with the advice of counsel, may deem necessary and appropriate; such execution and delivery of the Allonge shall be conclusive evidence of the approval and authorization thereof by the Borrower.

The delivery of any Allonge shall not constitute a modification of any provision of the Local Bond, except with respect to the provisions directly modified thereby, and the other terms and conditions of each Local Bond are hereby ratified.

Section 2. Amendment to the Master Financing Agreement. The form, terms and conditions of the Amendment to the Master Financing Agreement relating to the Local Bond are hereby approved in all respects, and the District Representatives are hereby authorized and directed to execute and deliver the Amendment to the Master Financing Agreement, in substantially the form set forth in Exhibit B hereto, together with such changes, modifications and deletions as such District Representatives, with the advice of counsel, may deem necessary and appropriate; such execution and delivery of the Amendment to the Master Financing Agreement shall be conclusive evidence of the approval and authorization thereof by the District.

Section 3. Further Actions. The Chair, the Vice-Chair, the Secretary and any Assistant Secretary of the Commission and the General Manager and the Director of Finance of the Borrower, each of whom may act, are authorized and directed (without limitation except as may be expressly set forth therein) to take such action and to execute and deliver any such documents, certificates, undertakings, agreements or other instruments, including, but not limited to, a tax compliance agreement, as they, with the advice of counsel, may deem necessary or appropriate

to effect the transactions contemplated by this Resolution.

Section 4. Effectiveness. This Resolution shall take effect immediately upon its adoption.

[END OF RESOLUTION]

Adopted by the Hampton Roads Sanitation District Commission on January 25, 2022.

Frederick N. Elofson, Chair

EXHIBIT A
FORM OF ALLONGE

ALLONGE DATED _____, 2022, ATTACHED TO
HAMPTON ROADS SANITATION DISTRICT
WASTEWATER REVENUE BOND,
DATED DECEMBER 18, 2009,
PAYABLE TO U.S. BANK NATIONAL ASSOCIATION, AS SUCCESSOR TRUSTEE, ON
BEHALF OF VIRGINIA RESOURCES AUTHORITY, AS ADMINISTRATOR OF THE
VIRGINIA WATER FACILITIES REVOLVING FUND

Pursuant to a resolution of the Hampton Roads Sanitation District Commission (the “Borrower”), adopted on January 25, 2022, the text of the Bond is hereby amended, and this Allonge shall be executed, authenticated and acknowledged, as follows:

(a) The Cost of Funds on this Bond is reduced from 2.65% per annum to 1.80% per annum beginning on March 1, 2022.

(b) The semiannual installment payments of principal and Cost of Funds due on September 1, 2022 and on each March 1 and September 1 thereafter are changed to \$_____, with the final installment of \$_____ due on March 1, 2031, when, if not sooner paid, all amounts due hereunder and under this Bond shall be due and payable in full.

1. Except as modified hereby, the terms and provisions of the Bond remain in full force and effect. The Bond as modified hereby shall be interpreted and construed in accordance with Virginia law.

This Allonge shall be physically attached to the Bond, simultaneously with the entry into this Allonge by the parties hereto, to evidence the modification of the provisions of the Bond which are affected hereby.

IN WITNESS WHEREOF, the Hampton Roads Sanitation District has caused this Allonge to be signed by the manual signature of the Chair of its Commission and its seal to be impressed hereon and attested by the Secretary of its Commission, as of the date set forth above.

HAMPTON ROADS SANITATION DISTRICT

By: _____
Chair of the Hampton Roads Sanitation
District Commission

[SEAL]

ATTEST:

Secretary of the Hampton Roads
Sanitation District Commission

Interceptor System Metering Project
Modification

Virginia Resources Authority, as Administrator of the Virginia Water Facilities Revolving Fund, hereby agrees to the aforementioned amendments set forth in this Allonge.

APPROVED:

VIRGINIA RESOURCES AUTHORITY,
as Administrator of the Virginia Water
Facilities Revolving Fund

By: _____

Title: _____

U.S. Bank National Association, as Trustee, hereby acknowledges the aforementioned amendments set forth in this Allonge.

ACKNOWLEDGED:

U.S. BANK NATIONAL ASSOCIATION,
as Trustee

By: _____

Title: _____

[Signature page to Allonge
Hampton Roads Sanitation District
Wastewater Revenue Bond
Loan No. C-515418-02]

EXHIBIT B

[FORM OF AMENDMENT TO MASTER FINANCING AGREEMENT]

AGENDA ITEM 5. – January 25, 2022

Subject: Central Norfolk Area Gravity Sewer Improvements Phase IIA
New CIP, Initial Appropriation and Task Order (>\$200,000)

Recommended Actions:

- a. Approve a new CIP project (**VP017130**) for Central Norfolk Area Gravity Sewer Improvements Ph IIA.
- b. Appropriate total project funding in the amount of \$5,424,000.
- c. Approve a task order with Hazen and Sawyer, P.C. in the amount of \$588,515.

CIP Project: VP017130

Contract Status:	Amount
Original Contract with Hazen and Sawyer	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$588,515
Revised Contract Value	\$588,515
Engineering Services as % of Construction	11%

Project Description: This project consists of abandoning a tidal creek crossing on the Lafayette River and rerouting the gravity sewer through the City of Norfolk right of way in the Luxembourg Avenue area of central Norfolk. This section of sewer will consist of 3,900 linear feet of gravity sewer and 16 manholes. Due to differences in design and construction requirements for this sewer section compared to the cured-in-place lining in Phase II of this project, this proposed sewer work will be designed and constructed separately as Phase IIA.

Condition assessment activities indicate that these assets present a material risk of failure due to infiltration and inflow and physical defects. This project is a portion of the U. S. EPA Rehabilitation Action Plan Phase 2 with a substantial completion requirement of May 5, 2025. At the completion of this project, ownership of the gravity sewer assets and associated manholes will be transferred from HRSD to the City of Norfolk.

Funding Description: The total cost for this project is estimated at \$5,424,000 based on a Class 4 cost estimate and includes a twenty percent contingency.

Task Order Description: This task order will provide design and bid phase services for the project.

Analysis of Cost: The cost for this task order is based on an estimation of hours and rates to complete the work. The rates in the proposal align with the Professional Service Agreement for General Engineering Services with the firm.

<u>Schedule:</u>	Design	February 2022
	Construction	July 2023
	Substantial Completion	May 2024
	Project Completion	March 2025

AGENDA ITEM 6. – January 25, 2022

Subject: SWIFT Managed Aquifer Recharge Services
New CIP and Initial Appropriation

Recommended Actions:

- a. Approve a new CIP project (GN016331) for the SWIFT Managed Aquifer Recharge Services.
- b. Appropriate total project funding in the amount of \$788,000.

CIP Project: GN016331

Project Description: This project includes engineering services necessary to advance the conceptual design and planning for Managed Aquifer Recharge (MAR) wells at each SWIFT facility. Tasks include evaluating the suitability of locations for well sites, preparing preliminary site layouts with respect to well installation and site planning requirements, supporting real estate acquisition, planning well installation logistics, testing, and aquifer conditioning fluid management, developing the overall MAR well data management structure, and supporting contractor and stakeholder outreach. This project is necessary to inform the selection of individual MAR sites and provide information critical to planning and subsequently installing successful MAR wells. Information developed during this project will support SWIFT recharge and monitoring well land acquisition efforts and locality site planning requirements

Funding Description: The total cost for this project is estimated to be \$788,000, which is based on an estimate of engineering services for conceptual development services for each of the remaining four proposed SWIFT locations plus a 5 percent project contingency.

Earth Data Incorporated was awarded the SWIFT Recharge and Monitoring Well Services Program contract in August 2020 to perform recharge and monitoring well design and construction support services for the SWIFT Well program. They will continue with engineering design, construction administration, and inspection services on the location specific SWIFT recharge well installation capital improvement projects. Future phases of work will be negotiated subsequently.

<u>Schedule:</u>	Pre-Planning	January 2022
	Project Completion	December 2031

AGENDA ITEM 7. – January 25, 2022

Subject: Treatment Plant Dewatering Replacement – Phase III
Initial Appropriation and Task Order (>\$200,000)

Recommended Actions:

- a. Appropriate total project funding in the amount of \$4,631,900.
- b. Approve a task order with HDR Engineering, Inc. in the amount of \$315,408.

CIP Project: GN017400

Contract Status:	Amount
Original Contract with HDR	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$315,408
Revised Contract Value	\$315,408
Engineering Services as % of Construction	10%

Project Description: This project includes evaluation, design and construction relating to the modification of the solids handling building for the installation of two HRSD-owned final dewatering centrifuges. Additionally, the project will include rehabilitation as needed of HRSD-owned centrifuges currently installed and in operation at the James River Treatment Plant and abandoned at the Chesapeake-Elizabeth Treatment Plant. These centrifuges will be installed in locations with no currently installed centrifuges at Virginia Initiative Plant (VIP), requiring the addition of cake conveyors and other appurtenances to feed solids and polymer to the centrifuges, to convey dewatered solids cake to the multiple hearth furnace, and to connect to the centrate drain.

Funding Description: The total project cost estimate of \$4,631,900 includes approximately \$748,230 in engineering services, \$2,814,770 in construction phase services, and \$1,068,900 of project contingency and is based on a Class 5 CIP-prioritization level estimate prepared by HRSD.

Task Order Description: This task order will provide preliminary engineering report (PER) services for the replacement of an existing dewatering centrifuge for VIP. The PER will also study thickening options for VIP.

Analysis of Cost: The cost for this task order is based on an estimation of hours and rates to complete the work. The rates in the proposal align with the Professional Service Agreement for General Engineering Services with the firm. The PER is 10% of the construction cost which is reasonable since the PER is looking at both dewatering centrifuges and thickening.

<u>Schedule:</u>	PER	February 2022
	Design	July 2022
	Construction	March 2023
	Project Completion	March 2024

AGENDA ITEM 8. – January 25, 2022

Subject: Boat Harbor Pump Station Land Acquisition
Acquisition of Real Property for a Public Purpose
1201 Terminal Avenue, Newport News
Agreement Amendment

Recommended Actions: Approve Amendment Number 1 to the Purchase, Sale, and Cost Sharing Option Agreement dated December 30, 2021, together with such changes, modifications and deletions as the General Manager may deem necessary and authorize the General Manager to execute same.

Project Description: HRSD will close its Boat Harbor Treatment Plant in Newport News to further reduce nutrients discharged to the James River Basin, which will support local water quality and Chesapeake Bay restoration. Property near the current Boat Harbor Treatment Plant has been identified upon which a new pump station and equalization storage will be constructed.

At the [November 23, 2021](#), meeting, the Commission authorized the General Manager to enter into a Purchase, Sale, and Cost Sharing Option Agreement with River Port LLC (DBA S23) for the purchase of a 4.7-acre portion of 1201 Terminal Avenue, Newport News. One of the terms of the agreement granted River Port an option to purchase the current Boat Harbor Treatment Plant upon decommissioning.

The agreement required HRSD provide title and survey documents to River Port within five days of executing the agreement ([executed on December 30, 2021](#)). As HRSD staff and counsel were assembling the documents to meet this requirement, it was discovered that a portion of the property (approximately 2.4 acres purchased from CSX Railroad in 1975 for plant expansion needs at that time) was encumbered with a reversion clause.

Staff has started the process to have CSX release their interest in the property, but this will take months, perhaps longer. With a regulatory and legislative deadline of December 31, 2025, for closure of Boat Harbor, we do not have time to obtain the required release from CSX and stay on schedule. To keep moving forward with certainty, staff proposed an amendment to the Agreement that would provide time to resolve this issue with CSX. River Port requires certainty that they will be able to meet their long-term parking requirements, which under the terms of the Agreement were to be met with their exercising the option on the Boat Harbor Treatment Plant property. The [Amendment](#) addresses this with HRSD to provide the greater of \$5,500,000 or the cost to construct 400 parking spaces on River Port owned property less the \$2,500,000 option price in the Agreement, if HRSD cannot obtain clear title by 2026. Staff believes it is unlikely we will not be able to obtain clear title and as such is not requesting an appropriation at this time.

The Amendment, however, does place a potential financial obligation on HRSD and as such requires Commission action before it can be executed. A draft of the Amendment is attached.

PURCHASE, SALE, AND COST SHARING OPTION AGREEMENT

THIS PURCHASE, SALE, AND COST SHARING OPTION AGREEMENT (the "Agreement") made this 30th day of December, 2021, by and between **RIVER PORT, LLC**, a Virginia Limited Liability Company, hereinafter referred to as "Seller," and **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia ("HRSD"), Purchaser, (collectively, the "Parties").

RECITALS

- A. Seller is the owner in fee simple absolute of an unimproved parcel of land containing approximately 4.7 acres in area (the "Property"), being a part of a larger parcel of property containing approximately 43.119 acres (the "Entire Parcel") and located at 1201 Terminal Avenue, Newport News, Virginia, Parcel ID: 321000301. A reduced copy of the plat entitled "RIVER PORT LLC PARCEL – NEAR FUTURE WITH MAXIMUM GOVERNMENT PARKING 1201 TERMINAL AVE NEWPORT NEWS, VA" dated 8/8/19, and prepared by VHB is hereto as Exhibit A and made a part hereof and shows the boundaries of the Entire Parcel and also the boundaries of the Property which is labeled on the plat as "HRSD PARCEL 4.73 ACRES." The portion of the Entire Parcel to be retained by Seller (all of the Entire Parcel other than the Property) is referred to herein as the "Retained Property").
- B. HRSD desires to purchase the Property from the Seller in connection with closure of its Boat Harbor Treatment Plant in Newport News to further reduce nutrients discharged to the James River Basin. A new pumping station facility will be constructed on a portion of the Property, and wastewater will be pumped to HRSD's Nansemond Treatment Plant in Suffolk via the construction of a large diameter pipe below the bottom of the James River. A significant portion of the treated water will undergo additional advanced treatment to meet drinking water quality standards to produce SWIFT Water™. This effort will also support local water quality and Chesapeake Bay restoration efforts as well as ensure the active operation of the Boat Harbor Treatment Plant during the decommission process.
- C. In exchange for the Property, HRSD has offered certain consideration to the Seller, as further set forth herein.
- D. The Parties wish to set forth the terms of the sale and purchase of the Property and hereby agree to the terms and conditions defined in this Agreement.

NOW, THEREFORE, in consideration of the purchase price and the mutual promises contained in this Agreement, the Parties agree as follows:

1. **SALE**. Seller agrees to sell and HRSD agrees to purchase the Property, together with all rights and appurtenances thereto, including all right, title and interest of Seller in and to any land lying in the bed of any highway, street, road, or avenue, open or proposed, in front of or abutting, or adjoining such tract or piece of land and any riparian rights, if any, and any

rights, easements, and appurtenances pertaining thereto, and any building or other improvements situated thereon.

2. **PURCHASE PRICE**. The purchase price (the Purchase Price) for the Property is **Eight Million Dollars (\$8,000,000.00)**, and the Purchase Price shall be paid to the Seller by wired funds at the "Closing" (defined below). HRSD shall pay a \$100,000 deposit (the "Deposit") to NexGen Title Agency, LLC ("Escrow Agent") upon execution of this Agreement. The Deposit shall be applied against the Purchase Price at Closing.

3. **DECLARATION OF EASEMENTS AND COVENANTS**. At the Closing the Parties will enter into and record a Declaration of Easements and Covenants (the "Declaration"), the final form of which shall be mutually approved by the parties prior to the end of the Due Diligence Period (defined below), which approval shall not be unreasonably withheld, and that will provide for the following:
 - a. Stormwater runoff from the Property will be directed into a stormwater management system (the "Stormwater Management System") that will be designed, permitted, constructed, and maintained by Seller to serve the stormwater requirements of the Property and such portion of the Retained Property as Seller elects, currently or in the future. A part of the Stormwater Management System may be constructed on the Property. Seller shall cause to be prepared a master plan for the Stormwater Management System (the "Stormwater Plan") and shall submit the Stormwater Plan to HRSD for review and comment prior to submission to the City of Newport News (the "City"). HRSD agrees to review and comment upon the Stormwater Plan within ten (10) business days. Subject to any delays caused by HRSD's review of the Stormwater Plan, Seller agrees to submit the Stormwater Plan to the City on or before April 30, 2022, and to thereafter diligently prosecute the final City approval of the Stormwater Plan. If (i) the City requires revisions to the Stormwater Plan that result in the cost to construct the Stormwater Management System to exceed \$930,175 or (ii) unforeseen underground conditions (limited to unforeseen obstructions below existing land surface that could not be reasonably anticipated or avoided without incurring additional cost) result in the cost to construct the Stormwater Management System to exceed \$930,175, then in either such case Seller and HRSD will share in those excess construction costs equally (50% - 50%) and HRSD shall pay any amount owed as a result to Seller prior to Seller's commencement of construction of the Stormwater Management System. HRSD will design, construct, and maintain stormwater drainage features that are required per regulatory guidelines on the Property and as shall be required to convey any stormwater from the Property into the Stormwater Management System. In no event shall HRSD design, use or permit

such stormwater drainage features to convey wastewater or hazardous substances into the Stormwater Management System. Any site plan for the development of the Property shall conform to the Stormwater Plan and shall be subject to Seller's prior written approval, which approval shall not be unreasonably withheld. Ongoing maintenance, repair, and replacement costs for the Stormwater Management System will be shared by the Parties on a pro rata basis with HRSD's portion to be 33%. If there are any special stormwater requirements for the Property related to its operations, including, but not limited to, spill prevention control and settling and treatment tanks that will require additional pretreatment of the stormwater runoff arising on the Property, HRSD will be responsible (at HRSD's cost) for permitting, installation and maintenance of such a system, including development and operation of the Spill Pollution Control and Countermeasure (SPCC) Plan. HRSD shall be obligated to execute any storm water management facilities agreement required by the City with respect to the portions of the Stormwater Management System located on the Property.

- b. Should HRSD's proposed operations require a Virginia Pollutant Discharge Elimination System (VPDES) permit or permits for discharge from its operations on the Property, sampling at the stormwater outfall and development of the Storm Water Pollution Prevention Plan (SWPPP), HRSD will be required to obtain and comply with the requirements of such permit(s).
- c. HRSD shall grant to Seller such access easements as may be required to permit Seller to construct and maintain the portions of the Stormwater Management System located on the Property.
- d. HRSD will design, permit, and construct entrances to the Property from Harbor Road and Terminal Avenue. To the extent that any entrances into the Property affect the Retained Property or access to or from the Retained Property or between the two parcels of the Retained Property, the design of such entrances shall be subject to approval by Seller. Seller agrees not to unreasonably withhold its approval of the entrances. HRSD will develop the plans for all work impacting vehicular and pedestrian access and utility service to the Retained Property (the "Work Plans") with an intention to prevent interruptions to Seller's operations or the access of employees, customers, contractors, suppliers or other invitees to the Retained Property. Such Work Plans shall be subject to Seller's approval, which shall not be unreasonably withheld, and HRSD shall proceed with its work in accordance with such approved Work Plans. Provided, however, if a blockage or interruption of vehicular or pedestrian access or utility service not contemplated in the approved Work Plans nonetheless occurs, HRSD will be responsible to

indemnify and reimburse Seller for all damages, losses or delays thereby incurred by Seller (including, without limitation, and delay damages or liquidated damages incurred by Seller to its customers as a result thereof_.

- e. Seller shall grant to HRSD an easement, forty (40) feet in width, under the Retained Property for the construction, maintenance, repair and replacement of an underground pipe to convey wastewater from HRSD's facilities on the Property to HRSD's pipe to be constructed under the James River to convey wastewater to HRSD's plant in Suffolk. The Declaration shall provide that any construction activities in connection with the installation of such pipe shall be conducted in a manner that will not interrupt or impede access to the Retained Property from Harbor Road or Terminal Avenue, nor shall such construction interrupt or impede access from one parcel of the Retained Property to the other parcel of the Retained Property.
- f. Seller shall also grant to HRSD an easement forty (40) feet in width, under the Retained Property, for the construction, maintenance, repair and replacement of an underground pipe to convey wastewater from various facilities in Newport News to HRSD's facilities on the Property. The Declaration shall provide that any construction activities in connection with the installation of such pipe shall be conducted in a manner that will not interrupt or impede access to the Retained Property from Harbor Road or Terminal Avenue, nor shall such construction interrupt or impede access from one parcel of the Retained Property to the other parcel of the Retained Property. Seller shall reserve the right to pave over the easement area and use such area as a vehicular driveway.
- g. Seller shall reserve for the benefit of itself as the owner of the Retained Property, and its successors, a perpetual, non-exclusive vehicular and pedestrian easement across the Property, not less than twelve (12) feet in width, to provide access from each of the two parcels of the Retained Property to the other (the "Access Easement"). HRSD shall have the right to relocate the Access Easement from time to time so long as any such relocation does not make it materially more difficult or time consuming, or make it less safe, to cross the Property from one portion of the Retained Property to the other. Seller, or its successors, shall have the right to pave the area encumbered by the Access Easement.

4. **CONVEYANCE.**

- a. Within five (5) days after the execution of the Agreement by both Parties, Seller shall deliver to HRSD copies of the following items:

- (i) a copy of its title insurance policy for the Entire Property (the "Title Policy"), and (ii) a copy of Seller's physical survey of the Entire Property, along with (iii) any and all environmental assessments, in Seller's possession.
- b. At the Closing, Seller shall convey title to the Property in fee simple, by special warranty deed, in accordance with the provisions of subsection c. below but subject to the following permitted exceptions: (a) the lien of real estate taxes not yet due and payable; (b) zoning and building restrictions and other laws, ordinances, and regulations of governmental bodies having jurisdiction over the Property; and (c) matters of record affecting title to the property or matters that would be disclosed by an accurate survey of the Property, except for matters objected to by HRSD pursuant to subsection c. below and which objection is not thereafter waived or deemed to be waived by HRSD. Except as expressly stated in this Agreement, the Property shall be conveyed in "AS IS" condition.
- c. Title to the Property shall be good and marketable and, if HRSD chooses to obtain title insurance, insurable by a nationally recognized ALTA title insurance company of HRSD's choice at or below normal rates. In the event that a title examination discloses defects of title or other matters unsatisfactory to HRSD at HRSD's sole determination, HRSD shall notify Seller in writing (an "Objection Notice"), within thirty (30) days of the Effective Date of such title defects or other matters to which HRSD objects. Seller covenants that it shall cure all monetary encumbrances. Seller may notify HRSD in writing (an "Objection Response"), within ten (10) business days after receiving an Objection Notice if the Objection Notice makes reference to any title defect or other matter that Seller cannot or elects not to cure. Upon receipt of an Objection Response from Seller, HRSD shall have the option either to (i) terminate this Agreement by notice to Seller given within ten (10) business days after its receipt of the Objection Response (with the Deposit fully refunded) or (ii) accept the defects, exceptions or other matters referenced in such Objection Response and proceed to Closing hereunder with no reduction of the Purchase Price. Seller shall have the period until the Closing date within which to correct all defects, exceptions or other matters that it is required or elects to cure. Seller shall provide such documents (including evidence of authority), affidavits, and other instruments that may be reasonably required for the issuance of a title insurance policy to HRSD.
- d. Possession of the Property will be given to HRSD at Closing, except that HRSD will have access to the Property as specified in the Declaration.

- e. Seller agrees to pay Grantor's tax, proration of real estate taxes and storm water fees and agrees to deliver possession of the Property to HRSD at settlement. HRSD will pay all other fees charged in connection with preparation and recordation of the deed and subdivision plat.
 - f. Seller and HRSD agree that the attorney selected by HRSD shall act as the Settlement Agent at HRSD's expense. The Settlement Agent shall prepare the settlement statement, update and record the deed, collect and disburse settlement funds in accordance with this Agreement and the settlement statement, and file any required state and federal tax forms or other certifications. The settlement agent shall be required to disburse Seller's sale proceeds on the day of the Closing.
5. **RIGHT OF ENTRY.** HRSD and HRSD's authorized representatives may at any reasonable time and after giving reasonable notice to Seller, enter upon the Property for the purpose of making inspections, appraisals, surveys, including but not limited to the cutting of survey lines and putting up markers and driving stubs and stakes, site analysis, engineering studies, core sampling for engineering reports, and locating existing rights of way, easements, and utilities. HRSD will exercise this right of entry in such a way so as to not cause unreasonable damage to the Property. HRSD agrees to indemnify and save harmless the Seller from all claims of liability for any personal injury or property damage or otherwise to any person or property caused by any action or omission of HRSD or its agents on the Property before or after Closing.
6. **CONDITIONS/ DUE DILIGENCE PERIOD.**
- a. HRSD's obligations are expressly conditioned upon the waiver or satisfaction of each of the following conditions in the sole determination of HRSD. If any one of the following conditions is not met within the period ending on April 30, 2022 or the date on which the Stormwater Plan is submitted to the City, whichever occurs first (the "Due Diligence Period") HRSD may unilaterally terminate this Agreement by giving Seller written notice thereof prior to the end of the Due Diligence Period:
 - i. Receipt of a satisfactory title commitment with all unacceptable title exceptions, encumbrances, and conditions as deemed by HRSD removed or cured at Seller's cost; however, if Seller chooses not to remove or cure any such title exception, HRSD's sole remedy shall be to terminate this Agreement; HRSD shall be responsible for obtaining during the Due Diligence Period, at its sole cost and expense, such

title commitments or survey updates as HRSD deems advisable.

- ii. Seller's compliance with its obligations under this Agreement, but the City's approval of the Stormwater Plan or the City's approval of a site plan for HRSD's development of the Property shall not be conditions to the Closing.
 - b. This Agreement is expressly conditioned upon the completion of all title and environmental "due diligence" by HRSD and notification to the Seller in writing of any conditions that are unsatisfactory to HRSD within the Due Diligence Period. In the event HRSD fails to notify the Seller in writing of its exercise of its termination right prior to the end of the Due Diligence Period, any objection to such conditions shall be deemed waived by HRSD and the parties shall proceed to closing; provided, however, in no event shall any mortgage, deed of trust, security agreement or monetary lien against the Property be deemed waived objections and the Seller agrees that the same shall be removed and released as liens on the Property on or before Closing.
7. **SUBDIVISION PLAT.** Promptly following the Effective Date (the "Effective Date" being defined as the first date on which this Agreement has been executed by both HRSD and Seller and each has delivered an its executed counterpart to the other), HRSD shall, at its own cost and expense, cause to be prepared and submitted to the City a subdivision plat (the "Subdivision Plat") that will create the Property as a separate parcel of land. Seller shall have the right to review the Subdivision Plat prior to its submission to the City and any subsequent substantive modifications thereof that affect the Retained Property. Seller shall be deemed to have approved the Subdivision Plat and any substantive modifications thereof unless Seller gives HRSD written notice of objection within ten (10) business days following Seller's receipt of Seller's proposed submission. Seller's approval or deemed approval of the Subdivision Plat and any substantive modifications thereof that affect the Retained Property shall be a condition to its obligation to sell the Property. Seller agrees that its approval shall not be unreasonably withheld, delayed, or conditioned. Seller further agrees to sign the mutually approved Subdivision Plat as the property owner along with any other required application required for City review and approval. Following submission of the Subdivision Plat to the City, HRSD shall work diligently to cause it to be approved by the City and Seller shall cooperate with HRSD in such efforts. The Subdivision Plat, as approved by the City, shall be recorded in the Clerk's Office of the Circuit Court of the City prior to, or at, the Closing. HRSD agrees to submit the Subdivision Plat to the City prior to the end of the Due Diligence Period, and to thereafter diligently prosecute the final City approval of the Subdivision Plat. If the City imposes any material conditions to its approval of the Subdivision Plat that are not acceptable to Seller or HRSD, either party may terminate this Agreement

by giving notice thereof to the other party within ten (10) business days of receipt of such City conditions, in which event neither Party shall have any further rights against, or obligations to, the other and the Deposit shall be fully refunded.

8. **REPRESENTATIONS AND WARRANTIES BY SELLER.** Seller represents and warrants as of the date of this Agreement that: Seller has the right, title, and authority to enter into this Agreement and to perform its obligations hereunder.

Seller further represents and warrants and shall deliver to HRSD at or prior to the Settlement, an Affidavit prepared by HRSD evidencing the following facts:

- (i) Other than this Agreement, there are no other contracts for sale or options involving the Property now in effect;
- (ii) To the best of Seller's knowledge, no other party has any right, title or interest in the Property that is not reflected in the public records;
- (iii) To Seller's knowledge, there are no unrecorded leases, options, licenses or easements existing encumbering the Property;
- (iv) Seller has received no adverse government notifications or proceedings and there is no pending or threatened litigation or any other potentially adverse claims affecting the Property of which the Seller has knowledge.
- (v) Seller is not a foreign corporation, person or entity and is a "United States Corporations, Person or Entity" as such terms is defined in Section 1445 and in Section 7701 (a)(30) of the Internal Revenue Code of 1986, as amended (the "Code").
- (vi) From and after the date of this Agreement, Seller shall not transfer any interest in, or grant any easements or enter into any contractual agreement or understanding, written or oral, with respect to the Property or any portion thereof or make any changes at all that require recordation and therefore modifications to title (other than the Subdivision Plat and the Declaration), and that would be binding on HRSD after the Closing, without the prior written consent of HRSD.

The Seller warrants that to the best of its knowledge and except for any matters disclosed in any written report delivered by Seller to HRSD there are no wetlands or

hazardous wastes, which would prevent HRSD's intended use of the land. To the best of the Seller's knowledge: (i) none of the Property has been excavated (except for standard grading related to site development); (ii) no hazardous materials, toxic chemicals, or similar substances, as defined by 42 U.S.C. §1251, et seq. or 42 U.S.C. §6901, et seq. or 42 U.S.C. §9601, et seq., or 33 U.S.C. §1317(1), or 15 U.S.C. §2606(f), or 49 U.S.C. §1801, et seq., or regulations adopted pursuant thereto, or any similar provision of any applicable state, Federal, or local law (collectively "Hazardous Materials"), are or were stored or used on or under or otherwise were or are in existence or were in any way dealt with on or under the Property; and (iii) no owner or occupant of the Property has received any notice from any governmental agency with regard to such Hazardous Materials.

For the purposes of this Section, the knowledge of Seller shall mean the current actual knowledge of Jorge L. Rivera, the Manager of Seller.

9. **OPTION TO PURCHASE HRSD OWNED BOAT HARBOR SITE:** HRSD hereby grants to Seller an option (the "Option") to purchase the parcel of land located at 300 Terminal Avenue, Newport News, VA (the "Boat Harbor Site") (Parcel ID No. 321000102). The Boat Harbor Site is shown outlined on Exhibit B which is attached hereto and made a part hereof. HRSD will continue operations until at least 2026. Seller may exercise the Option by giving HRSD written notice of exercise during the period (the "Option Period") beginning of the date of HRSD's cessation of operations at that location and ending one year thereafter. Once HRSD has ceased operations at the Boat Harbor Site, HRSD will demolish all buildings and slabs to a depth of approximately 18 inches below grade and re-grade the site. HRSD will retain approximately 20,000 SF (+/-) of the Boat Harbor Site for the operation of a small pump station and existing cell tower. HRSD agrees to an option purchase price of **two million, five-hundred thousand and 00/100 dollars (\$2,500,000)**. Seller shall have the right to enter onto the Boat Harbor Site from and after HRSD's cessation of operations on such property for the purpose inspecting it and determining whether it is feasible for Seller's purposes (for industrial marine or similar uses to include, without limitation, surface parking for vehicles). HRSD shall be obligated to convey title by general warranty deed. Closing on the sale of the Boat Harbor Site shall occur within sixty (60) days after Seller's exercise of the Option. HRSD shall convey marketable title free and clear of liens and encumbrances, except for the reserved rights described above. Within five (5) days after the execution of the Agreement by both Parties, HRSD shall deliver to Seller copies of the following items: (i) a copy of its title insurance policy for the Boat Harbor Site (the "Title Policy"), and (ii) a copy of HRSD's physical

survey of the Boat Harbor Site, along with (iii) any and all environmental assessments, in HRSD's possession. By giving notice thereof to HRSD within thirty (30) days of receiving items (i) and (ii), Seller may terminate this Agreement if matters of title or survey would preclude Seller from using the Boat Harbor Site for Seller's purposes. From and after the date hereof, HRSD shall not grant or permit any liens, easements, restrictions, leases, conditions, covenants or other encumbrances on or against the Boat Harbor Site without Seller's prior written approval. If the Boat Harbor Site contains any environmental contamination or other violation of law or regulation that would preclude Seller from using Boat Harbor for the Seller's intended purpose (to specifically exclude uses dependent on groundwater, residential uses, health care facilities, childcare facilities, playgrounds or other uses inconsistent with the marine industrial uses of the surrounding properties), HRSD shall clean up such contamination and cure any such violation prior to the closing on the sale of the Boat Harbor Site. HRSD hereby grants Seller and its employees, contractors, consultants and agents, a right of access onto, over, on or under the Boat Harbor Site to conduct all such due diligence, and to prepare surveys and geotechnical and environmental assessments, with respect thereto as Seller desires during the Option Period. This Section shall survive the Closing.

10. **NOTICES**. All notices to the parties hereto will be delivered by hand, by certified mail return receipt requested, or by a nationally recognized overnight courier (with delivery charges paid by or billed to the sender) and shall be deemed effective upon delivery if by hand and upon confirmation of receipt if by other means, to the following address until the address is changed by notice in writing to the other party:

HRSD: Edward G. Henifin, P.E., General Manager
P.O. Box 5911
Virginia Beach, Virginia 23471-0911

Copy to: Conway Sheild, III
Jones, Blechman, Woltz and Kelly
701 Town Center Dr, Ste 800
Newport News, VA 23606

Seller: Jorge L. Rivera, CEO/Chairman
River Port, LLC
1201 Terminal Avenue
Newport News, VA 23607

Copy to: Charles V. McPhillips
Kaufman & Canoles, A Professional Corporation
150 W. Main Street, Suite 2100
Norfolk, VA 23510

11. **CLOSING**. Unless this Agreement is terminated pursuant to its terms or by mutual agreement of the parties, closing (the "Closing") will be made at the offices of the Settlement Agent within thirty (30) days after the Subdivision Plat has been recorded, time being of the essence of this Agreement, unless such Closing Date is extended by the terms of this Agreement or by mutual written agreement of the parties.
12. **SURVIVAL**. The representations and warranties made by the Parties in this Agreement shall survive for a period of six (6) months following the Closing. Seller's rights and HRSD's obligations under Sections 9 and 15 of this Agreement shall survive the Closing.
13. **PRORATIONS**. All rents, interest, taxes, insurance premiums, utility bills, and fuel oil, if any, will be prorated as of the date of Closing.
14. **RISK OF LOSS**. All risk of loss or damage to the Property by fire, windstorm, casualty, or other cause is assumed by Seller until Closing. In the event of substantial loss or damage to the Property before Closing, HRSD will have the option of either:
 - a. Terminating this Agreement, or
 - b. Affirming this Agreement and proceeding to Closing.
15. **FUTURE SALE BY HRSD**. In the event that HRSD shall determine to sell all or a portion of the Property for private development within two (2) years of the Settlement Date and receives an offer that it is willing to accept (the "Offer"), it agrees to notify Seller and give Seller a right of first refusal to purchase the Property, or such portion that is the subject of the Offer (the "ROFR"), at the price and on such terms as set forth in the Offer (except that any terms that would be impossible for Seller to perform shall be deleted from the Offer). Such notice shall be writing addressed in accordance with the provisions of Section 10 herein or such other address provided to HRSD by the Seller and shall provide Seller with at least thirty (30) calendar days within which to exercise the ROFR and if Seller fails to respond within such period it shall be deemed to have elected not to exercise the ROFR. This Section shall survive the Closing.
16. **CONDEMNATION**. Seller covenants and warrants that Seller has not heretofore received any notice of any condemnation proceeding or other proceeding in the nature of eminent domain in connection with the Property. If prior to Settlement any such proceeding is commenced or any change is made, or proposed to be made, to the current means of ingress and egress to the Property or to the roads or driveways adjoining the Property, or to change such ingress or egress or to change the grade thereof, Seller agrees immediately to notify HRSD thereof. HRSD then shall have the right, at

HRSD's option, to terminate this Agreement by giving written notice to Seller within thirty (30) days after receipt of such notice.

17. **DEFAULT AND REMEDIES.**

- a. If the sale and purchase contemplated by this Agreement is not consummated because of Seller's default, HRSD may elect, as its exclusive remedies, to:
 - i. Terminate this Agreement and recover the Deposit; or
 - ii. Seek and obtain specific performance of this Agreement; or
 - iii. If Seller has taken any action which renders the remedy of specific performance unavailable (such as the sale of the Property to another party), pursue all other rights or remedies available at law or in equity, including an action for damages.
- b. If the sale and purchase contemplated by this Agreement is not consummated because of HRSD's default, Seller may elect to:
 - i. Terminate this Agreement and retain the Deposit; or
 - ii. Seek and obtain specific performance of this Agreement; or
 - iii. Pursue all other rights or remedies available at law or in equity, including an action for damages
- c. If either Seller or HRSD defaults under this Agreement, the defaulting party will be liable for any expenses incurred by the non-defaulting party in connection with the enforcement of its rights under this Agreement.
- d. If the sale and purchase contemplated by this Agreement is not consummated by December 31, 2022, for any reason other than the Seller's delay in submitting the Stormwater Plan to the City for approval, the City's delay in approving the Stormwater Plan or Seller's default under this Agreement, Seller may terminate this Agreement by giving written notice thereof to HRSD, in which case HRSD shall be entitled to recover the Deposit unless HRSD is in default hereunder.

18. **ENTIRE AGREEMENT.** This Agreement contains the entire agreement of the parties and will supersede the terms and conditions of all prior written and oral agreements, if any, concerning the matters it covers. The parties acknowledge there are no oral agreements, understandings, representations, or warranties that supplement or explain the terms and conditions

contained in this Agreement. This Agreement may not be modified except by an agreement in writing signed by the parties.

19. **WAIVER**. Failure to insist upon strict compliance with any of the terms, covenants, or conditions hereof will not be deemed a waiver of the term, covenant, or condition, nor will any waiver or relinquishment of any right or power at any one time or more times be deemed a waiver or relinquishment of the right or power at any other time or times.
20. **SEVERABILITY**. This Agreement will be construed in its entirety and will not be divisible, except that the invalidity or unenforceability of any provision hereof will in no way affect the validity or enforceability of any other provision.
21. **CAPTIONS**. Captions are used in this Agreement for convenience only and will not be used to interpret this Agreement or any part of it.
22. **GOVERNING LAW**. This Agreement is to be construed in accordance with the laws of the Commonwealth of Virginia.
23. **CHOICE OF FORUM/JURISDICTION**. The parties hereby consent to the jurisdiction and venue of the courts of the Commonwealth of Virginia, and to the jurisdiction and venue of the United States District Court for the Eastern District of Virginia in connection with any action, suit, or proceeding arising out of or relating to this Agreement and further waive and agree not to assert in any action, suit, or proceeding brought in the same.
24. **WAIVER OF TRIAL BY JURY**. THE PARTIES WAIVE TRIAL BY JURY IN ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY EITHER PARTY AGAINST THE OTHER ON ANY MATTER WHATSOEVER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ANY RELATED AGREEMENTS OR INSTRUMENTS AND THE ENFORCEMENT THEREOF, INCLUDING ANY CLAIM OF INJURY OR DAMAGE TO ANY PARTY OR THE PROPERTY OF ANY PARTY.
25. **SUCCESSOR/ASSIGNMENT**. This Agreement will be binding upon and the obligations and benefits hereof will accrue to the parties hereto, their heirs, personal representatives, successors, and assigns. This Agreement is assignable by HRSD only upon written consent of the Seller, which consent will not be unreasonably withheld. If this Agreement is assigned by HRSD with Seller's consent, HRSD will nevertheless remain fully liable for its performance.
26. **COUNTERPARTS**. This Agreement may be executed in any number of counterparts, each will be considered an original, and together they will constitute one Agreement.

27. **FACSIMILE SIGNATURES.** Facsimile signatures (including pdfs transmitted by email) will be considered original signatures for the purpose of execution and enforcement of the rights delineated in this Agreement.
28. **ETHICS IN PUBLIC CONTRACTING.** By executing this Agreement, the undersigned Seller or its representative, and the representative of HRSD, certify that the prices agreed to in this Agreement were arrived at without collusion or fraud and that they have not offered or received any payment, kickbacks or other inducement from any other party to this Agreement or its agent or employee in connection with this Agreement, and that they have not conferred on any public employee having responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services (or anything of more than nominal value, present or promised) unless disclosed in this Agreement.
29. **TIME.** Time periods under this Agreement shall be computed by excluding the starting day and including the ending day of the period. The term “business day” shall mean any day that is not a Saturday, Sunday or a day in which the Connecticut courts or federal banks are closed. When any date for taking action does not fall on a business day, then the time for taking such action will be extended to the next business day.
30. **BROKERAGE COMMISSIONS.** Seller and HRSD represent and warrant each to the other that it has not dealt with any real estate broker in connection with this transaction, except for Seller’s broker, Colliers International Virginia, LLC (“Seller’s Broker”). Seller hereby agrees to pay Seller’s Broker a commission in accordance with the terms of a separate Agreement. Each party shall indemnify and hold harmless the other from and against any and all other claims, demands or the cost and expense thereof (including reasonable attorneys’ fees) arising out of any brokerage commission, fee or other compensation due or alleged to be due to any person in connection with the transaction contemplated by this Agreement based upon any agreement alleged to have been made or other action alleged to have been taken by the indemnifying party. This indemnity obligation shall survive Closing and any termination of this Agreement.

(Remainder of page intentionally left blank – Signature Pages follow)

SELLER:

RIVER PORT, LLC,
a Virginia limited liability company



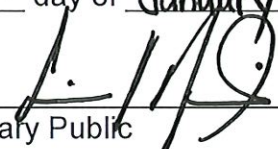
Jorge L. Rivera, CEO/Chairman

COMMONWEALTH OF VIRGINIA

CITY OF Portsmouth, to-wit:

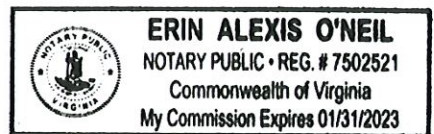
I, ERIN O'NEIL, a Notary Public in and for the City of Norfolk, in the Commonwealth of Virginia, whose term of office expires on 01/31/2023, do hereby certify that Jorge L. Rivera, CEO/Chairman for River Port, LLC, Seller herein, whose name is signed to the foregoing Purchase, Sale and Cost Sharing Option Agreement, has acknowledged the same before me in my City and State aforesaid.

Given under my hand this 3rd day of January, 2022



Notary Public

My Commission Expires: 01/31/2023
Registration Number: 7502521



IN WITNESS WHEREOF, the Hampton Roads Sanitation District 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

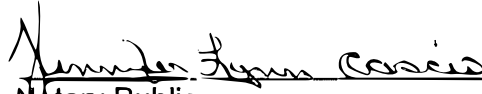
By: 
Edward G. Henifin, P.E.,
General Manager

COMMONWEALTH OF VIRGINIA

CITY OF VIRGINIA BEACH, to-wit:

I, Jennifer Lynn Cascio, a Notary Public in the City of Virginia Beach, in the Commonwealth of Virginia, whose term of office expires on August 31, 2022, do hereby certify that Edward G. Henifin, General Manager for Hampton Roads Sanitation District, whose name is signed to the foregoing Purchase, Sale and Cost Sharing Option Agreement, has acknowledged the same before me in my City and State aforesaid.

Given under my hand this 3rd day of January, 2022


Notary Public

My Commission Expires: August 31, 2022
Registration Number: 361710

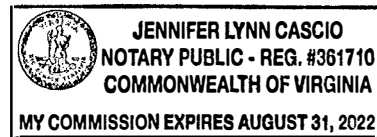


EXHIBIT A



RIVER PORT LLC PARCEL - NEAR FUTURE WITH MAXIMUM GOVERNMENT PARKING
1201 TERMINAL AVE
NEWPORT NEWS, VA



Exhibit B - Boat Harbor Site



12/29/2021, 3:58:36 PM

1:4,514

AMENDMENT TO PURCHASE, SALE, AND COST SHARING OPTION AGREEMENT

THIS AMENDMENT TO PURCHASE, SALE, AND COST SHARING OPTION AGREEMENT (this “Amendment”) made this ___ day of January, 2022, by and between **RIVER PORT, LLC**, a Virginia limited liability company, hereinafter referred to as “Seller,” and **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia (“HRSD”), as purchaser (collectively, the “Parties”).

RECITALS

- A. The Parties entered into a certain Purchase, Sale, and Cost Sharing Option Agreement dated as of December 30, 2021 (the “Agreement”) setting forth the terms and conditions on which HRSD has agreed to purchase, and Seller has agreed to sell, approximately 4.7 acres of land designated and defined as the “Property” in the Agreement.
- B. Among the terms and conditions applicable to Seller’s agreement to sell the Property, HRSD granted to Seller an option (the “Option”) to purchase the Boat Harbor Site (as defined in Section 9 of the Agreement) for the price and on the terms and conditions set forth in Section 9 of the Agreement. In due diligence, it has been determined that there may be certain encumbrances on the Boat Harbor Site that could preclude the Seller from using the Boat Harbor Site for Seller’s purposes (for industrial marine or similar uses to include, without limitation, surface parking for vehicles). Pursuant to Section 9 of the Agreement, Seller has the right to terminate the Agreement under such circumstances.
- C. In order to induce Seller to agree not to terminate the Agreement and to relinquish such right of termination, HRSD has agreed to compensate Seller if any matters of title or survey would preclude Seller from using the Boat Harbor Site for Seller’s purposes.

NOW, THEREFORE, the Parties hereby agree as follows:

- 1. **DEFINED TERMS.** Except as otherwise defined herein, all capitalized terms used in this Amendment shall have the same meanings given to such terms in the Agreement. All references in the Agreement or this Amendment to the “Agreement” shall mean the Agreement, as amended by this Amendment.
- 2. **SECTION 9.** Section 9 of the Agreement is hereby deleted in its entirety and inserted in lieu thereof is the following substitute Section 9:
 - 9. **OPTION TO PURCHASE HRSD OWNED BOAT HARBOR SITE:** HRSD hereby grants to Seller an option (the “Option”) to purchase the parcel of land located at 300 Terminal Avenue, Newport News, VA (the “Boat Harbor Site”) (Parcel ID No. 321000102). The Boat Harbor Site is shown outlined on Exhibit B which is attached hereto and made a part hereof. HRSD will continue operations until at least 2026. Seller may exercise the Option by giving HRSD written notice of exercise during the period (the “Option Period”) beginning of the date of HRSD’s cessation of operations at that location and ending one year thereafter. Once HRSD has ceased operations at the Boat Harbor Site, HRSD will demolish all buildings and slabs to a depth of approximately 18 inches below grade and re-grade the site. HRSD will retain approximately 20,000 SF (+/-) of the Boat Harbor Site for

the operation of a small pump station and existing cell tower. HRSD agrees to an option purchase price of **two million, five-hundred thousand and 00/100 dollars (\$2,500,000)**. Seller shall have the right to enter onto the Boat Harbor Site from and after HRSD's cessation of operations on such property for the purpose inspecting it and determining whether it is feasible for Seller's purposes (for industrial marine or similar uses to include, without limitation, surface parking for vehicles). HRSD shall be obligated to convey title by general warranty deed. Closing on the sale of the Boat Harbor Site shall occur within sixty (60) days after Seller's exercise of the Option. HRSD shall convey marketable title free and clear of liens and encumbrances, except for the reserved rights described above. Any matters of title or survey that would preclude Seller from using the Boat Harbor Site for Seller's purposes shall be resolved prior to December 31, 2025. In the event these issues are not resolved on or prior to this date, HRSD shall pay to Seller by January 31, 2026, in exchange for the Seller's release of the Option herein, the greater of (i) \$5,500,000 or (ii) the difference between (A) the total out-of-pocket costs to be incurred by Seller to acquire and develop 400 surface and/or structured parking spaces on another site **owned by and** acceptable to Seller, as determined in Seller's sole discretion, less (B) \$2,500,000. From and after the date hereof, HRSD shall not grant or permit any liens, easements, restrictions, leases, conditions, covenants or other encumbrances on or against the Boat Harbor Site without Seller's prior written approval. If the Boat Harbor Site contains any environmental contamination or other violation of law or regulation that would preclude Seller from using Boat Harbor for the Seller's intended purpose (to specifically exclude uses dependent on groundwater, residential uses, health care facilities, childcare facilities, playgrounds or other uses inconsistent with the marine industrial uses of the surrounding properties), HRSD shall clean up such contamination and cure any such violation prior to the closing on the sale of the Boat Harbor Site. HRSD hereby grants Seller and its employees, contractors, consultants and agents, a right of access onto, over, on or under the Boat Harbor Site to conduct all such due diligence, and to prepare surveys and geotechnical and environmental assessments, with respect thereto as Seller desires during the Option Period. This Section shall survive the Closing.

3. **CONTINUING VALIDITY.** Subject to the modifications set forth herein, the Agreement remains in full force and effect.
4. **GOVERNING LAW.** This Amendment shall be governed by, and construed in accordance with, the internal laws of the Commonwealth of Virginia.



Deleted: Within five (5) days after the execution of the Agreement by both Parties, HRSD shall deliver to Seller copies of the following items: (i) a copy of its title insurance policy for the Boat Harbor Site (the "Title Policy"), and (ii) a copy of HRSD's physical survey of the Boat Harbor Site, along with (iii) any and all environmental assessments, in HRSD's possession.

Deleted: to the Seller's satisfaction at the Seller's sole discretion.

Deleted: to Seller's satisfaction

SELLER:

RIVER PORT, LLC,
a Virginia limited liability company

By: _____
Jorge L. Rivera, CEO/Chairman

COMMONWEALTH OF VIRGINIA

AT LARGE, to-wit:

The foregoing instrument was acknowledged before me in the City of _____, Virginia, this ____ day of _____, 2022, by Jorge L. Rivera, CEO/Chairman of River Port, LLC. He is personally known to me or has/have produced _____ as identification.

Notary Public

My commission expires: _____

Notary registration number: _____

HRSD:
HAMPTON ROADS SANITATION DISTRICT

By: _____
Edward G. Henifin, P.E.,
General Manager

COMMONWEALTH OF VIRGINIA

AT LARGE, to-wit:

The foregoing instrument was acknowledged before me in the City of _____, Virginia, this ____ day of _____, 2022, by Edward G. Henifin, General Manager for Hampton Roads Sanitation District. He is personally known to me or has/have produced _____ as identification.

Notary Public

My commission expires: _____

Notary registration number: _____

AGENDA ITEM 9. – January 25, 2022

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 10. – January 25, 2022

Subject: Capital Improvement Program (CIP)
Quarterly Update

Recommended Action: No action is required.

Brief: Implementing the CIP continues to be a significant challenge as we address numerous regulatory requirements, SWIFT Program implementation and the need to replace aging infrastructure. Staff will provide a briefing describing the status of the CIP, financial projections, projects of significance and other issues affecting the program.

AGENDA ITEM 11. – January 25, 2022

Subject: U.S. EPA Consent Decree Annual Public Meeting

Recommended Action: No action is required.

Brief: The Consent Decree with the U.S. EPA requires that we hold an annual informational meeting open to the public and the localities we serve. The meeting is intended to provide an update on compliance activities and status of all activities related to the Consent Decree. The virtual meeting will be held at 1:30 p.m. on January 25, 2022.

AGENDA ITEM 12. – January 25, 2022

Subject: Executive Search Committee Report

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

Brief: Commissioners Levenston (committee chair), Rodriguez and Taraski will meet on January 25, 2022 prior to the regular Commission meeting to review final steps in the recruitment process for the next General Manager. Commissioner Levenston will provide an update to the full Commission at its regular meeting on January 25, 2022.

AGENDA ITEM 13. – January 25, 2022

Subject: Unfinished Business

AGENDA ITEM 14. – January 25, 2022

Subject: New Business

AGENDA ITEM 15. – January 25, 2022

Subject: Commissioner Comments

AGENDA ITEM 16. – January 25, 2022

Subject: Public Comments Not Related to Agenda

AGENDA ITEM 17. – January 25, 2022

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](#)
- d. [Effluent and Air Summaries](#) for Calendar Year
- e. [Emergency Declaration – Atlantic Treatment Plant Combined and Power \(CHP\) Gas Blower #2](#)



January 18, 2022

Re: General Manager's Report

Dear Commissioners:

The Chesapeake-Elizabeth Treatment Plant was taken off-line on December 15, 2021. The final flow diversion to the Atlantic Treatment Plant was completed that day without incident or fanfare. This closure has been in our plans for more than eight years, a key element of our compliance plan with the Chesapeake Bay Total Maximum Daily Load (TMDL). Work begins now on the final decommissioning and closure, including evaluation of any potential reuse or repurpose of the site to support the regional wastewater system in the future.

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

- A. **Treatment Compliance and System Operations:** Another dry month with very low wastewater flow equates to few issues with treatment or the interceptor system. That was true in December with all plants meeting permit and only one spill in the system.
- B. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel:
1. Two new employee orientations
 2. Presented NACWA Peak Performance Awards with the Director of Operations at work centers from West Point to the Atlantic Treatment Plant
 3. A meeting to discuss enforcement response with the Chief of Pretreatment and Pollution Preventions (P3)
 4. A meeting to review property issues related to the Suffolk Pump Station project
 5. A meeting with Organizational Development and Training (OD&T) division to discuss relocation to the second floor of 1434
 6. Several meetings to review implementation and communication related to the inflationary compensation adjustment approved by the Commission in November
 7. A review of various air issues including stack testing options at Chesapeake-Elizabeth and odor issues at York River Treatment Plants
 8. Several meetings related to the Director of Talent Management recruitment
 9. Eleven employee grievances related to vaccinations
- C. **External Communications:** I participated in the following meetings/activities:
1. A conversation with the new CEO of the US Water Alliance
 2. Interviews with candidates for the Director of Talent Management
 3. A meeting with staff from Promise Pay
 4. The VAMWA Board annual dinner

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

5. The quarterly VAMWA membership meeting
6. Multiple meetings with the owner and his representatives of the property to be acquired for the new pump station required to facilitate closure of the Boat Harbor Treatment Plant
7. An Aspen Institute facilitated small group to explore water affordability issues
8. A discussion with the Executive Director of SPSA regarding long range plans for leachate management
9. A meeting with HRPDC Staff to discuss regional issues
10. The quarterly meeting of the Virginia Forever Board

D. Consent Decree Update:

There has been no change. The long awaited Fifth Amendment (approving the final schedule and plan) was signed off by Federal officials and lodged with the court on December 5, 2021. The public comment period has passed, and staff expects the order to be signed by the judge very soon.

We were uniquely positioned to make some personnel changes in December that may mitigate the many leadership changes occurring in early 2022. While change is healthy, too much in a short time span can often be challenging for individuals and organizations. In baseball, a player that can play multiple positions is referred to as a utility infielder. Having someone who can fill multiple roles is invaluable, filling in where needed if someone is injured, traded, or otherwise is unable to play.

At HRSD, our utility player is Paula Hogg. Paula worked in the Central Environmental Laboratory (CEL) for the first three decades of her career at HRSD, starting out as a chemist and working her way up to become Chief of the CEL. When a need arose to lead our Talent Management Department, I turned to Paula who had developed a reputation for her skill in leading, developing, and counseling people both within her segment of the organization and beyond. She has excelled in the role as Director of Talent Management.

Now after seven years as Director of Talent Management, I once again asked Paula if she would be willing to apply her talents to another position, the Director of Water Quality. As Jim Pletl retires, having someone with a long HRSD history, specifically within the Water Quality Department, as well as the respect and admiration of the entire organization provides some stability during this period of organizational transition. I am confident Paula will excel in this role as well.

Paula's move to the Director of Water Quality allowed the selection of a new Director of Talent Management, with Paula remaining available as a resource to provide counsel and guidance. We were so fortunate to find our next Director of Talent Management within our own organization. Dorissa Pitts-Paige has accepted that position and began her new role on

December 25, 2021. Dorissa has been a human resource professional within the Talent Management Department since 2006 and brings her expertise, energy, and passion to her new leadership role. While some of you may have had the pleasure of meeting Dorissa before, she will be introduced formally at the January Commission meeting.

We are so fortunate to have so many great people. An organization is only as good as its people and our people make HRSD great, including our Commissioners. 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 Newport News on Tuesday, January 25, 2022.**

Respectfully submitted,

Ted Henifin, P.E.
General Manager

TO: General Manager
 FROM: Director of Communications
 SUBJECT: Monthly Report for December 2021
 DATE: January 11, 2022





A. Publicity and Promotion

HRSD and/or SWIFT were mentioned or featured in 13 news stories or media mentions on topics that included:

1. Ted Henifin receives 2021 Water Finance & Management award
2. HRSD testing for COVID-19 omicron variant in wastewater
3. HRSD expansion on the Eastern Shore

B. Social Media and Online Engagement

1. Metrics

Social Media Metrics December 2021				
METRIC	 FACEBOOK	 LINKEDIN	 TWITTER	 YOUTUBE
Number of Posts *Number of published posts	25	11	21	1:47 average view duration
Number of Followers/Likes *Total number of fans	1,62	5,382	595	240
Engagement *Sum of reactions comments and shares	270	382	38	337 unique viewers
Traffic *Total clicks on links posted	33	414	78	4.3% click-through

2. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post

HRSD
December 17, 2021

Feature Friday: HRSD's General Manager, Ted Henifin.
"We're here to protect the environment and public health and we really want future generations to have clean water. It's easy to come to work every day when that's what you're doing." - Ted Henifin
Congratulations to Ted for winning the Water Finance & Management Award. ... See more

Thinking Regionally, Thinking Big: Ted Henifin, 2021 WF&M Award Winner

Get more likes, comments and shares
When you boost this post, you'll show it to more people.

785 People reached 140 Engagements Boost post

Tim Marsh, Newport News Waterworks and 40 others 2 Shares

Performance for your post

785 People Reached

47 Reactions, Comments & Shares

35 Like	32 On Post	3 On Shares
9 Love	9 On Post	0 On Shares
1 Haha	1 On Post	0 On Shares
0 Comments	0 On Post	0 On Shares
2 Shares	2 On Post	0 On Shares

93 Post Clicks

0 Photo views	58 Link clicks	35 Other clicks
---------------	----------------	-----------------

NEGATIVE FEEDBACK

0 Hide post	0 Hide all posts
0 Report as spam	0 Unlike Page

Reported stats may be delayed from what appears on posts

b. Top Tweet

Top Tweet earned 1,946 impressions

Feature Friday!
Today we are featuring our Chesapeake-Elizabeth Treatment Plant! The Chesapeake-Elizabeth plant, commissioned in 1968 in Virginia Beach, is officially being decommissioned and closed.
Check out these photos!
*Photos of employees from 2012
pic.twitter.com/P7iZfiCLbi

5

c. Top YouTube Videos

(1) [The Wastewater Treatment Process](#) (216 views)

(2) [What is Asset Management? HRSD Celebrates Infrastructure Week | United for Infrastructure](#) (46 views)

- (3) [SWIFT Research Center: What is the Potomac Aquifer?](#) (24 views)
- (4) [SWIFT: Sustainable Water Initiative for Tomorrow](#) (24 views)
- (5) [HRSD Atlantic Treatment Plant Cambi Tour](#) (17 views)

3. Impressions and Visits

- a. Facebook: 10,033 page impressions, 8,937 post impressions reaching 8,750 users and Facebook engagement of 154 (122 reactions, 16 shares and 16 comments)
- b. Twitter: 6,047 tweet impressions; 815 profile visits and 22 mentions
- c. HRSD.com/SWIFTVA.com: 890 page visits
- d. LinkedIn Impressions: 14,516 page impressions and 15,958 post impressions
- e. YouTube: 475 views
- f. Next Door unique impressions: 1,421 post views from three targeted neighborhood posting shared with 16,350 residents
- g. Blog Posts: (2)
 - (1) [15 Easy Elf on the Shelf Ideas: Wastewater Approved!](#)
 - (2) [Can you recycle your Christmas packaging?](#)
- h. Construction Project Page Visits – 1,100 total visits (not including direct visits from home page, broken down as follows:
 - (1) 693 visits to individual pages
 - (2) 407 to the status page

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

- 1. News Releases: 3 (one news release, one public meeting notice, one notice for public review and comment)
- 2. Traffic Advisories: 0
- 3. Construction Notices and or notices to neighbors:4
- 4. Advertisements: 0
- 5. Project Notices: 5 (via door hangings and/or mailing reaching approximately 122 residents)
- 6. Project/Community Meetings: 0
- 7. New Project Web Pages: 0

8. New Project Videos: 0

D. Special Projects and Highlights

1. Director participated in meetings with the Water Research Foundation (WRF) Public Affairs Committee and with the Water Reuse Education and Outreach Advisory Committee and continues to play an active role providing collateral review and feedback for the development of water reuse education facility planning documents for other agencies to utilize as best practices.
2. Staff participated in outreach planning with Portsmouth Public Schools and participated in the monthly askHRGreen water Awareness meeting.

E. Internal Communications

1. Director participated in the following internal meetings and events:
 - a. Interview panel for Director of Talent Management
 - b. SWIFT Community Commitment Plan Steering Committee meetings and educational involvement and economic development needs assessment
 - c. SWIFT 2022 Industry Outreach Event planning meetings
 - d. Engineering Week planning meeting
 - e. Strategic Carbon Footprint Reduction Committee meeting
 - f. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and QST meetings
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 outreach development meetings with various project managers.

F. Metrics

1. Educational and Outreach Activities (all virtual unless otherwise noted):0
 - a. Self-guided SWIFT Virtual Tours – 49 views (analytics specify number of times the “Take a Tour” button was selected)
2. Number of Community Partners: 0
3. Additional Activities Coordinated by Communications Department: 0

4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	December 2021
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	4.5
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	35.75
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 December 2021
DATE: January 10, 2022

A. General

1. Capital Improvement Program (CIP) spending for the fifth month of Fiscal Year (FY) 2022 was below the planned spending target. A meeting was recently 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	8.15	41.08
Plan	22.80	111.60

2. Construction costs in 2021 rose by 7.4 percent as documented by the Engineering News Record (ENR) Construction Cost Index (CCI). The wider economy has improved but is hampered by inflation, staffing challenges, COVID-19 infections, and lingering supply chain constraints. The construction industry is a bright spot in the overall economy with improvements in the housing, warehouse, and manufacturing sectors. The ENR predicts a 3.3 percent increase in the cost forecast in 2022, due to continued increases in both materials and labor. The Infrastructure Investment and Jobs Act approved in 2021, should begin to impact the U.S. economy in the second half of the year as more funds will become available for capital projects. The consultant community has been able to manage the challenges of the current economic situation, but staffing shortages are driving up salaries in the professional ranks. HRSD has seen both increased pricing for construction and fewer bidders competing for work. As the local contracting community increases their backlog of work and as labor pressures from the limited availability of skilled trades and material prices increase, we expect to see increases in costs. These issues should result in an increase in costs for many of HRSD's CIP projects to be bid and constructed in the coming year.

B. Asset Management Division

1. Staff are working with the Operations Department to create a new method to manage the Coatings Program. This was a program set up to provide improved coatings services for repairing existing coatings systems to prevent deterioration and corrosion. A dashboard is under development which will replace an existing spreadsheet used to prioritize projects in this \$2.5 million annual spending program.
2. Staff have been working in recent years to find a solution to the challenge of inspecting the internal condition of force main piping in the interceptor system. Several techniques have been used which allows for the pipeline to stay in service while the inspection is underway. One technique is to install a spherical ball inside a pipe segment and retrieve it at a downstream location. This tool known as a SmartBall has had only limited success. A neutrally buoyant inspection ball has been proposed which should help to

limit the chance of the ball being lost inside the pipeline. We will reach out to vendors to consider this technology for future pipeline inspection efforts.

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

1. Construction of the Surry Hydraulic Improvements and Interceptor Force Main Project continues to track ahead of schedule. All pipe installation work is now complete with only some remaining restoration efforts remaining underway. Work continues on the four new pump stations. A change order has been issued to add additional scope to the project, including work at five existing pump stations to facilitate their use when the new pipeline is put into service. The project continues to track ahead of schedule with a planned completion date of July 2022.
2. The Eastern Shore Infrastructure Improvements and Transmission Force Main Phase I Project design continues. This project includes over 20 miles of force main and two new pump stations. This project is being delivered using a Design-Build method to fast-track this important effort. A change to the project scope has included an additional 2.5 mile pipe segment to serve the Wachapreague area. The Design-Build Team plans to provide the 60% design submittal and the final stipulated price in the coming month. If acceptable, this will allow the project to move into the construction phase of work. A Water Quality Improvement Fund (WQIF) Grant application will be submitted for this project after the construction contract is finalized.
3. The SWIFT Program Team conducted a Virtual Partnering Session on December 13 with the key members of the leadership group. This all-day workshop focused on issues, constraints, and risks for the program. Several actionable steps were described to assure overall program goals are met. A discussion of ways to improve communication during the COVID-19 pandemic were discussed. An outside facilitator was used to drive the discussions and keep the group on track. A common theme during the discussions centered on how the group can move from a "Good Team" to a "World Class Team."

D. Planning & Analysis Division

1. Staff continues to review Federal Facilities Sanitary Sewer Overflow (SSO) Prevention Plans. This has been a multiyear effort and requires a cross-departmental group to review these submittals from the various federally owned and operated facilities in Hampton Roads. Most of these facilities are military installations with varying degrees of sophistication related to their sewer infrastructure facilities. We are currently reviewing 15 submittals from various federal facilities in Hampton Roads. This is an important part of our overall program to reduce SSOs in the region since there are so many federal facilities that discharge to the regional sewer system.
2. The Engineering Specialist position remains unfilled even as we reach out to find prospective candidates. This position requires knowledge of both computer-aided design (CAD) and geographic information systems (GIS). These are two much-needed skill sets for many organizations. We will continue to look to local colleges and universities to find potential candidates.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 4
 - a. 12/07/2021 – Participated in Panel Discussion with students from ODU and Hampton University about Climate Change.
 - b. 12/08/2021 – Moderated a session on Intelligent Water Systems at the Sustainable Water Infrastructure Management (SWIM) Conference hosted by Virginia Tech.
 - c. 12/09/2021 – Made a presentation on the HRSD’s Smart Sewer Initiatives at the Sustainable Water Infrastructure Management (SWIM) Conference hosted by Virginia Tech.
 - d. 12/17/2021 – Provided a tour for Congressman Scott and the Congresswoman Luria’s District Representative at the SWIFT Research Center. Members of the Chesapeake Bay Foundation and Wetlands Watch were also in attendance.
2. Number of Community Partners: 3
 - a. Old Dominion University
 - b. Hampton University
 - c. Virginia Tech
3. Number of Research Partners: 0
4. Monthly Metrics Summary:

Item #	Strategic Planning Measure	Unit	December 2021
M-1.4a	Total Training Hours per Full Time Employee (45) - Current Month	Hours / #FTE	3.10
M-1.4b	Total Training Hours per Full Time Employee (45) - Cumulative Fiscal Year-to-Date	Hours / #FTE	15.20
M-5.2	Educational and Outreach Events	Number	4
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 December 2021
DATE: January 14, 2022

A. General

1. Water consumption rebounded in December as wastewater revenues are slightly higher than last fiscal year. Facility Charges are lower than the previous year as the combination of supply chain, labor shortages and higher long-term interest rates are slowing new construction activity. Interest Income continues to be negative to reflect lower market values. As interest rates rise, bond prices decline. Personal services and fringe benefit expenses are at 53 percent and 49 percent, respectively, consistent with prior year's 53 percent and 48 percent. For Personal Services, there were 14 biweekly pay periods from July through December, which is driving the 53 percent budget to date. There will only be 12 from January through June, so Personnel Services are expected to be close to budget by the end of the fiscal year. Operating expenses are under budget at 44 percent and continue to be well controlled.
2. Payment plans and tagging were suspended in mid-December to prepare for the systematic application of the \$10.7 million in the second round of Municipal Utility Relief. The funds should be received in January and applied shortly thereafter.
3. Call Center metrics continue to be challenged due to staffing shortages and the tight labor market, but two new call center representatives are in training and two more should be hired in January.
4. Work continues on the Low-Income Household Water Assistance Program (LIHWAP). The current plan is to roll the program out in two phases. The first phase will be for existing customers of the Low-Income Household Energy Assistance Program (LIHEAP) to be automatically approved for LIHWAP. Once the customers are identified, the Department of Social Services (DSS) will coordinate with utilities to make a one-time payment for those accounts. The second phase is for other customers, but this will require an approval process by DSS.
5. Accounts Receivable in arrears between 30-60 days decreased due to 1) jurisdiction partner and HRSD field activities which drove in more payments, 2) increase in Pay Arrangements, which moves arrearages to current balance, 3) decrease in bills issued due to multiple holidays in November and additional personnel leave taken during this time of year, including larger commercial account billing (P3).
6. Customer Care and Information Technology continue to work with Smithfield to convert from Model 2 to Model 3 Billing. The project should conclude sometime early Spring. Next month, another conversion project from Model 2 to Model 3 will kick-off with Chesapeake with an expected completion in the late spring of 2023.

B. Interim Financial Report

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

	Amended Budget	Current YTD	Current YTD as % of Budget (50% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 336,455,000	\$ 177,588,076	53%	52%
Surcharge	1,600,000	832,776	52%	52%
Indirect Discharge	3,200,000	1,490,415	47%	33%
Fees	3,020,000	70,884	2%	26%
Municipal Assistance	700,000	519,076	74%	40%
Miscellaneous	1,285,000	726,480	57%	49%
Total Operating Revenue	<u>346,260,000</u>	<u>181,227,707</u>	52%	52%
Non Operating Revenues				
Facility Charge	7,320,000	3,618,110	49%	61%
Interest Income	1,210,000	(218,348)	-18%	27%
Build America Bond Subsidy	2,095,000	1,064,842	51%	0%
Other	610,000	460,491	75%	38%
Total Non Operating Revenue	<u>11,235,000</u>	<u>4,925,095</u>	44%	42%
Total Revenues	357,495,000	186,152,802	52%	51%
Transfers from Reserves	17,346,624	8,673,312	50%	85%
Total Revenues and Transfers	<u>\$ 374,841,624</u>	<u>\$ 194,826,114</u>	52%	55%
Operating Expenses				
Personal Services	\$ 62,776,055	\$ 33,303,966	53%	53%
Fringe Benefits	25,173,707	12,387,464	49%	48%
Materials & Supplies	9,509,735	4,865,903	51%	37%
Transportation	1,555,282	674,802	43%	26%
Utilities	12,350,061	5,636,682	46%	42%
Chemical Purchases	9,249,441	4,182,244	45%	36%
Contractual Services	55,345,089	18,827,627	34%	35%
Major Repairs	16,056,857	4,313,371	27%	23%
Capital Assets	655,963	309,830	47%	27%
Miscellaneous Expense	3,137,304	1,472,864	47%	43%
Total Operating Expenses	<u>195,809,494</u>	<u>85,974,753</u>	44%	42%
Debt Service and Transfers				
Debt Service	64,308,209	38,314,806	60%	56%
Transfer to CIP	114,463,921	62,231,960	54%	57%
Transfer to Risk management	260,000	130,002	50%	50%
Total Debt Service and Transfers	<u>179,032,130</u>	<u>100,676,768</u>	56%	56%
Total Expenses and Transfers	<u>\$ 374,841,624</u>	<u>\$ 186,651,521</u>	50%	49%

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 December 31, 2021

HRSD - RESERVE AND CAPITAL ACTIVITY

December 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	
Beginning - July 1, 2021	\$ 182,380,923	\$ 1,373,428	\$ 168,124	\$ 30,454,700	\$ 4,019,543	\$ 6,033,913	\$ -	
Current Year Sources of Funds								
Current Receipts	182,120,698	51,790						
Line of Credit							18,422,172	
VRA Draws						37,643,787		
CARES Transfer In	1,141,075							
Days Cash on Hand Transfer In								
Transfers In					130,002	62,231,960		
Sources of Funds	183,261,773	51,790	-	-	130,002	99,875,747	18,422,172	
Total Funds Available	\$ 365,642,696	\$ 1,425,218	\$ 168,124	\$ 30,454,700	\$ 4,149,545	\$ 105,909,660	\$ 18,422,172	
Current Year Uses of Funds								
Cash Disbursements	133,216,068					71,105,301	18,422,172	
CARES Transfer Out		1,422,396	168,124					
Days Cash on Hand Transfer Out								
Transfers Out	62,361,962							
Uses of Funds	195,578,030	1,422,396	168,124	-	-	71,105,301	18,422,172	
End of Period - December 31, 2021	\$ 170,064,666	\$ 2,822	\$ -	\$ 30,454,700	\$ 4,149,545	\$ 34,804,359	\$ -	
Unrestricted Funds	\$ 209,018,570							

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

HRSD - PROJECT ANALYSIS

December 31, 2021

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2021	Expenditures Year to Date FY2022	Total Project Expenditures	Encumbrances	Available Funds
Administration	77,227,240	27,658,581	1,736,972	29,395,553	511,774	47,319,913
Army Base	163,448,800	123,537,916	682,628	124,220,544	1,212,167	38,016,089
Atlantic	143,194,633	82,877,498	3,642,302	86,519,800	3,296,423	53,378,410
Boat Harbor	288,504,388	52,827,281	4,317,036	57,144,317	8,187,967	223,172,104
Ches-Eliz	182,266,229	105,212,456	9,354,178	114,566,634	11,465,118	56,234,477
Eastern Shore	18,093,040	68,570	433,737	502,307	15,805,526	1,785,207
James River	315,605,591	49,601,157	6,268,013	55,869,170	209,451,044	50,285,377
Middle Peninsula	95,697,822	13,511,974	3,046,818	16,558,792	8,596,923	70,542,107
Nansemond	389,835,533	41,212,618	3,499,225	44,711,843	6,971,682	338,152,008
Surry	58,162,528	26,875,712	10,071,792	36,947,504	4,796,109	16,418,915
VIP	310,961,312	183,421,754	3,242,892	186,664,646	9,315,225	114,981,441
Williamsburg	39,061,010	27,900,712	894,110	28,794,822	6,148,983	4,117,205
York River	87,135,847	30,364,487	1,453,249	31,817,736	4,781,037	50,537,074
General	846,115,019	213,776,988	18,553,023	232,330,011	289,819,835	323,965,173
	\$ 3,015,308,992	\$ 978,847,704	\$ 67,195,975	\$ 1,046,043,679	\$ 580,359,813	\$ 1,388,905,500

5. Debt Management Overview

HRSD - Debt Outstanding (\$000's)

December 31, 2021

	Principal Nov 2021	Principal Payments	Principal Draws	Principal Dec 2021	Interest Payments
Fixed Rate					
Senior	185,172	-	-	185,172	-
Subordinate	591,935	(1,442)	2,033	592,526	(237)
Variable Rate					
Subordinate	50,000	-	-	50,000	(2)
Line of Credit	33,721	-	-	33,721	(14)
Total	\$ 860,828	\$ (1,442)	\$ 2,033	\$ 861,419	\$ (253)

HRSD- Series 2016VR Bond Analysis

December 31, 2021

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.34%	0.49%	0.15%
Minimum	0.01%	0.01%	0.00%
As of 12/31/21	0.10%	0.10%	0.00%

* Since October 20, 2011 HRSD has averaged 49 basis points on Variable Rate Debt

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

HRSD - UNRESTRICTED CASH

December 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	\$ 209,018,570		390
Risk Management Reserve	\$ (4,149,545)	(8)	382
Capital (PAYGO only)	\$ (34,804,359)	(65)	317
Adjusted Days Cash on Hand	\$ 170,064,666		317

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

December 31, 2021

Primary Source	Beginning Market Value July 1, 2021	YTD Contributions	YTD Withdrawals	YTD Income Earned	Ending Market Value December 31, 2021	Allocation of Funds	Credit Quality	Current Mo Avg Yield
BAML Corp Disbursement Account	30,017,420	254,951,125	262,142,795	19,411	22,845,161	13.7%	N/A	0.55%
VIP Stable NAV Liquidity Pool	108,890,465	50,000,000	15,000,000	48,427	143,938,892	86.3%	AAAm	0.09%
Total Primary Source	\$ 138,907,885	\$ 304,951,125	\$ 277,142,795	\$ 67,838	\$ 166,784,053	100.0%		

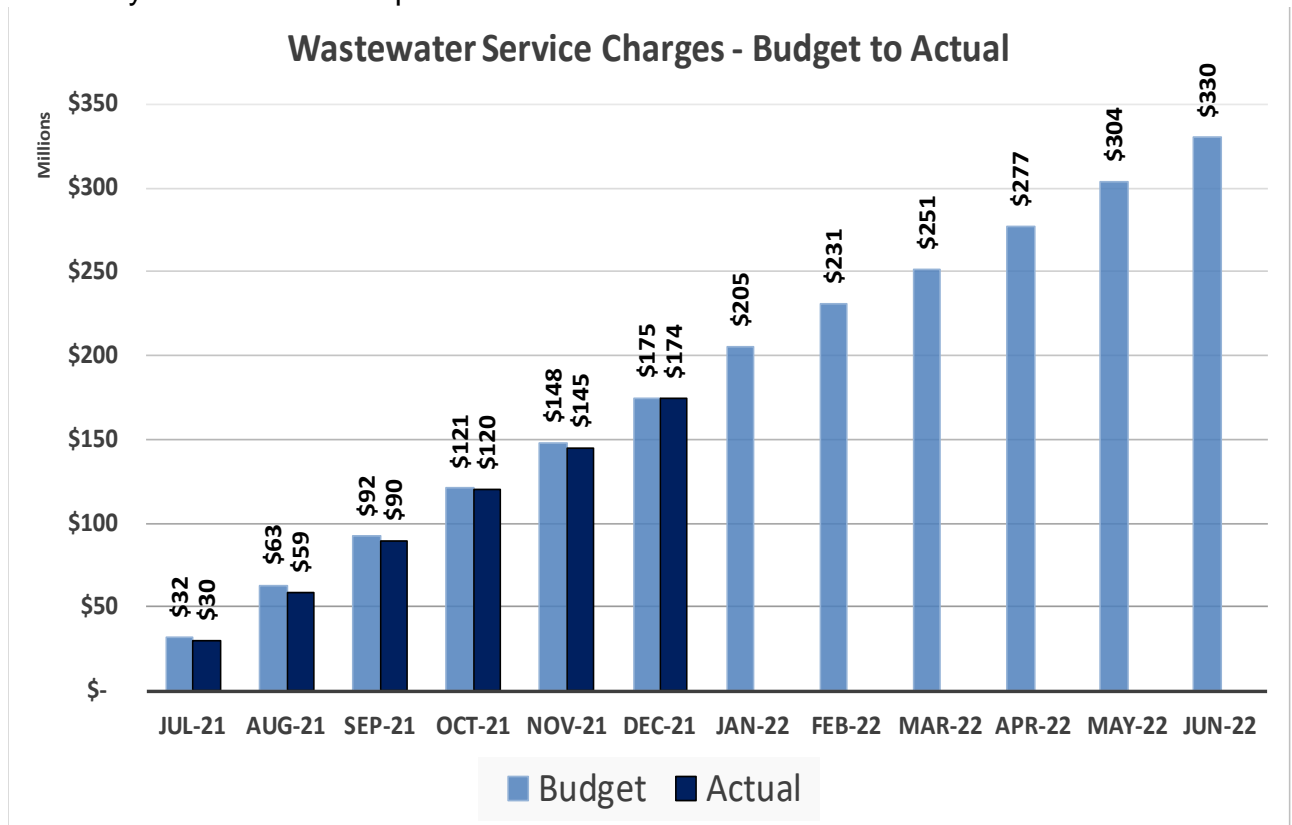
VIP Stable NAV Liquidity Pool outperformed Va Local Government Investment Pool (the market benchmark) by 0.01% in the month of December 2021.

Secondary Source	Beginning Market Value July 1, 2021	YTD Contributions	YTD Withdrawals	YTD Income Earned & Realized G/L	Ending Market Value December 31, 2021	Ending Cost	LTD Mkt Adj	Yield to Maturity at Market
VIP 1-3 Year High Quality Bond Fund	65,054,203	-	6,524	150,476	64,745,261	63,543,495	1,201,766	0.69%
Total Secondary Source	\$ 65,054,203	\$ -	\$ 6,524	\$ 150,476	\$ 64,745,261	\$ 63,543,495	\$ 1,201,766	

VIP 1-3 Year High Quality Bond Fund performed at the same level as the ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) in December 2021.

	Total	Fund Alloc
Total Primary Source	\$ 166,784,053	72.0%
Total Secondary Source	\$ 64,745,261	28.0%
TOTAL SOURCES	\$ 231,529,314	100.0%

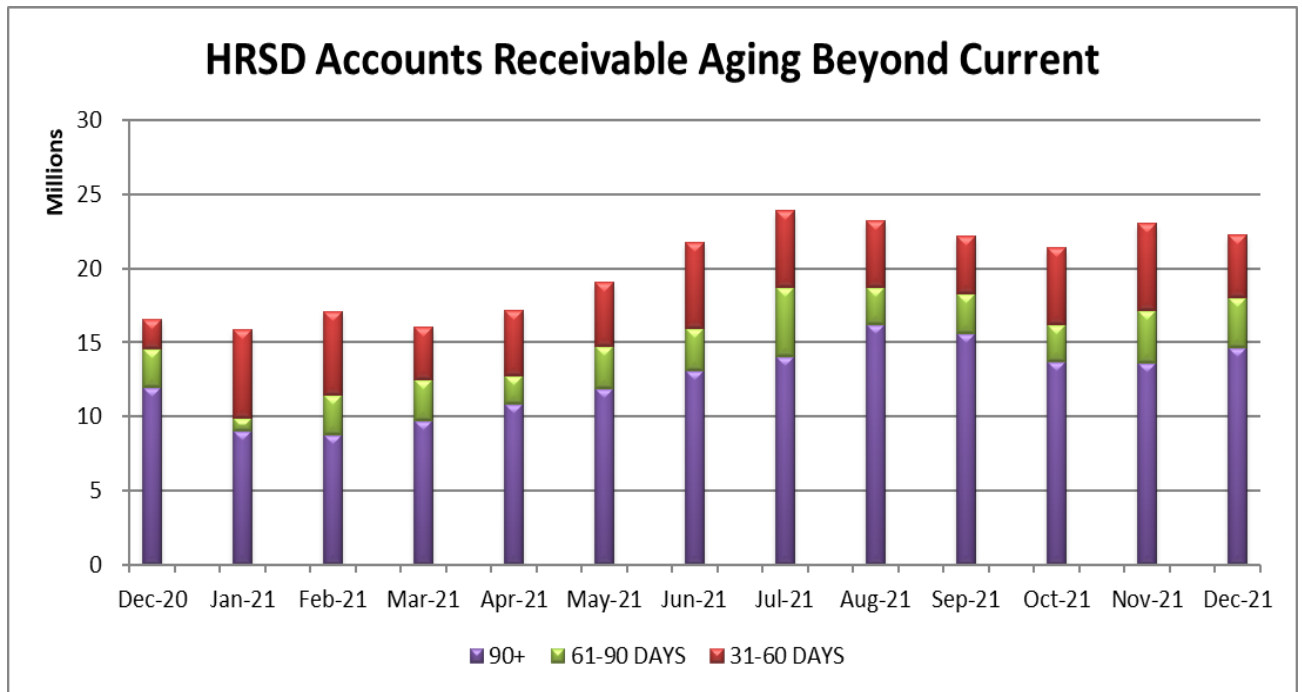
7. Summary of Billed Consumption

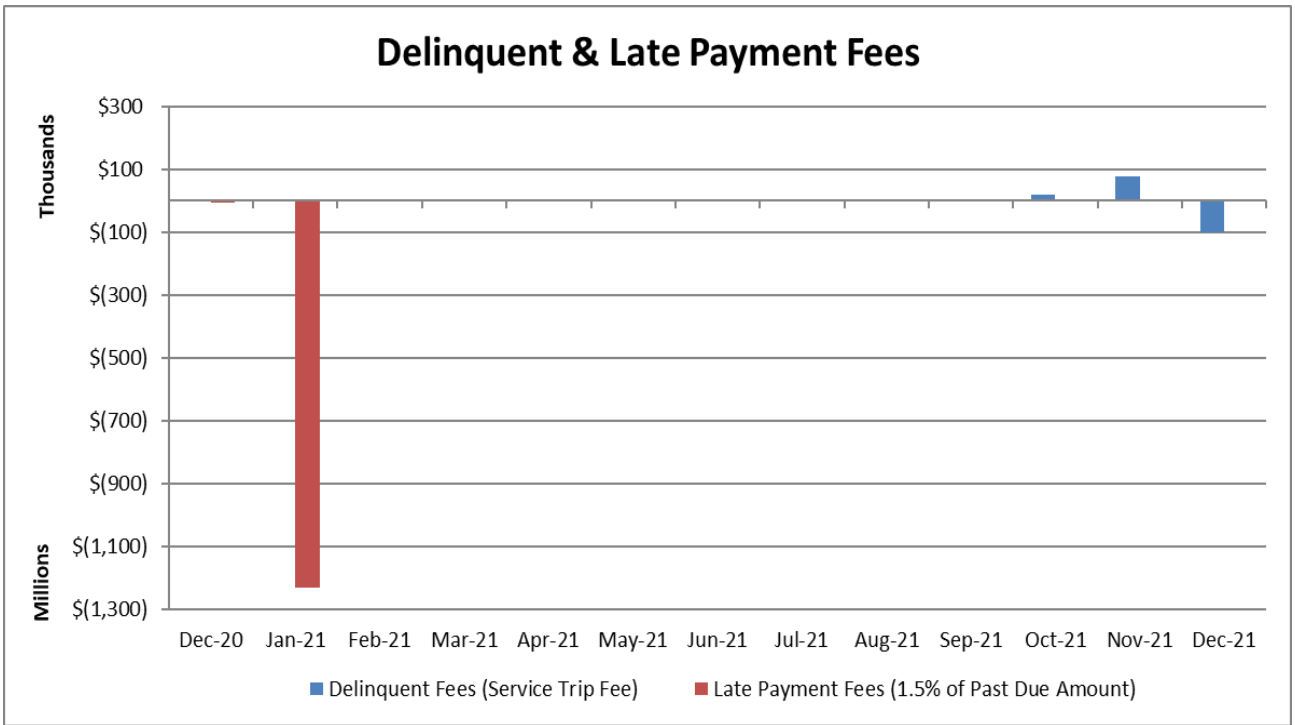


Summary of Billed Consumption (,000s ccf)							
Month	FY2022 Cumulative Budget Estimate	FY2022 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2021 Actual	From FY2021	Cumulative 3 Year Average	From 3 Year Average
July	5,015	4,976	-0.8%	4,751	4.7%	5,006	-0.6%
Aug	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	22,952	-0.7%	21,192	8.3%	22,474	2.1%
Dec	27,336	27,541	0.8%	27,614	-0.3%	27,458	0.3%
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

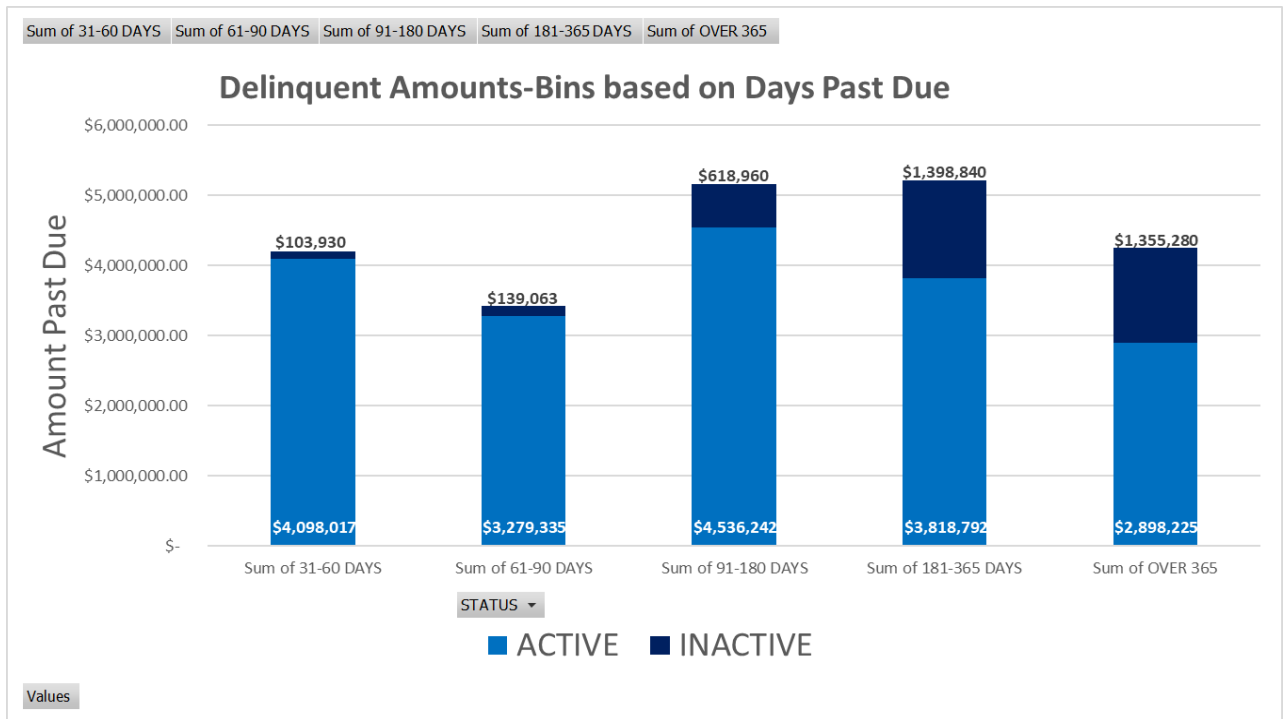
C. Customer Care Center

1. Accounts Receivable Overview

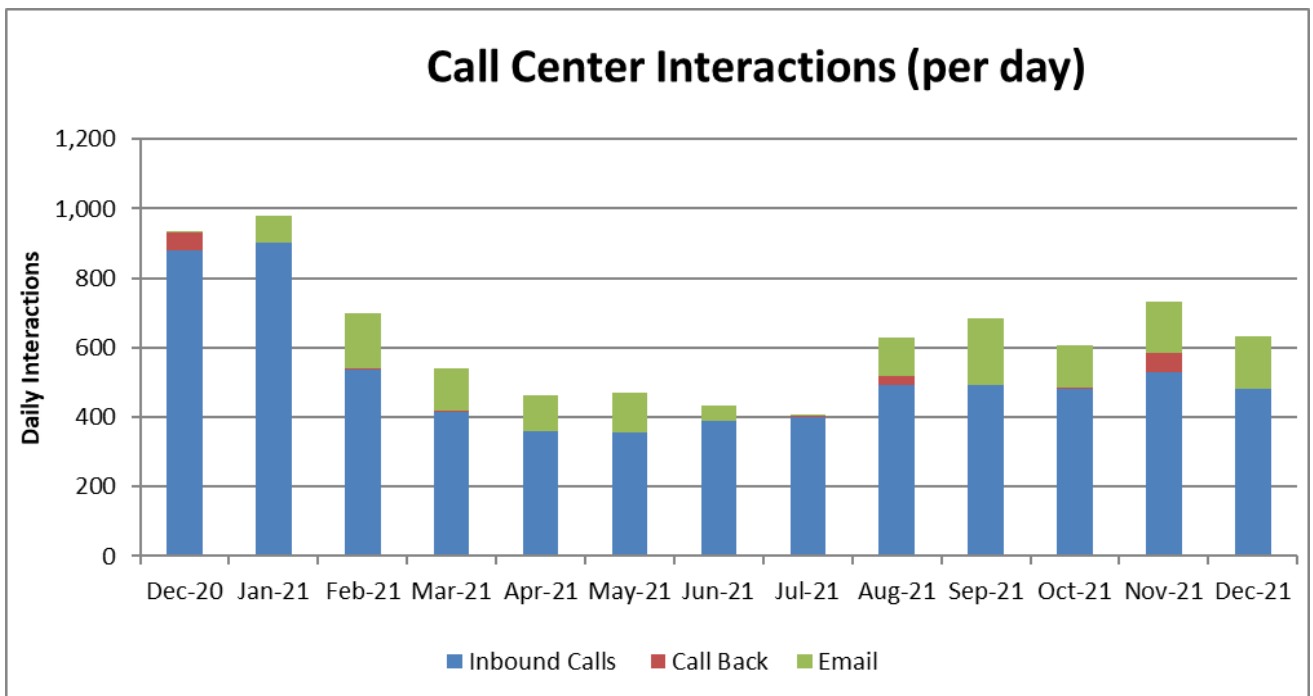
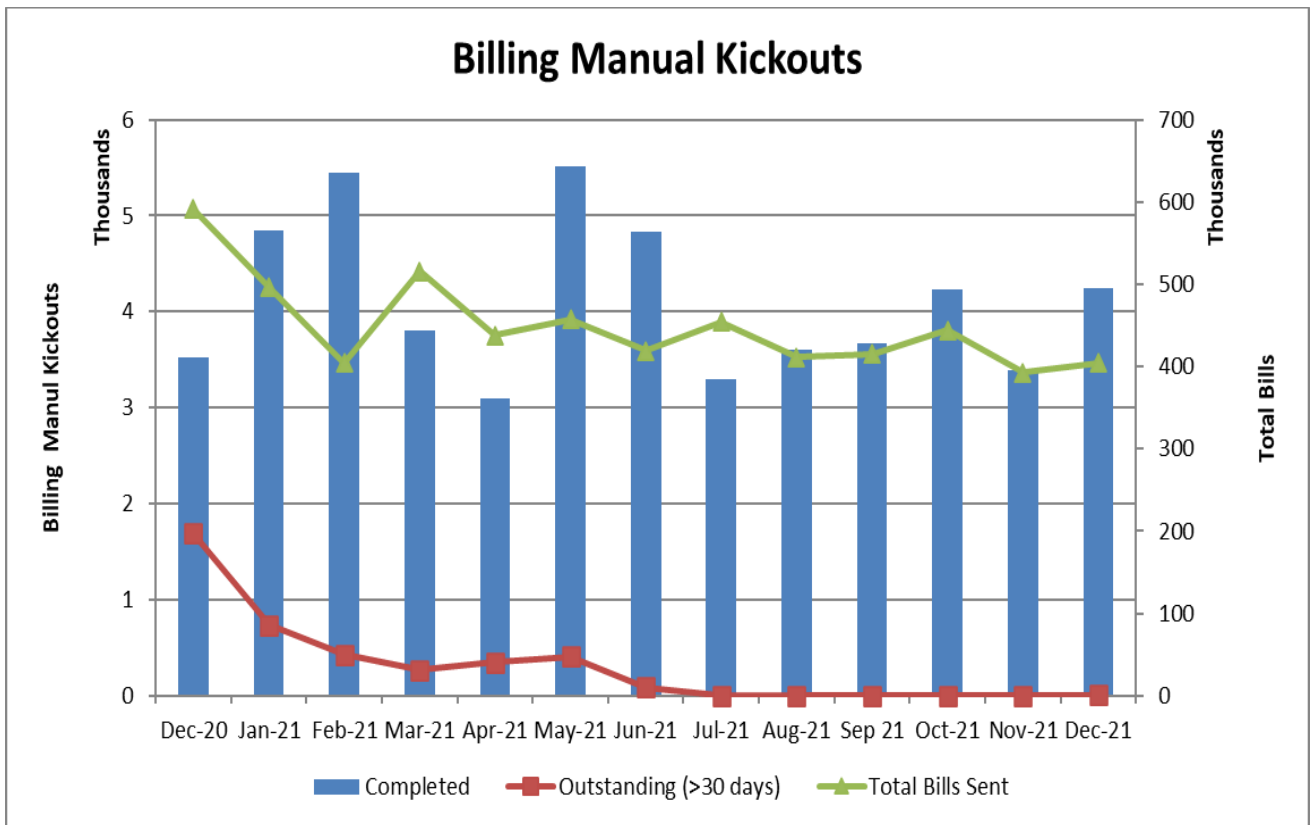


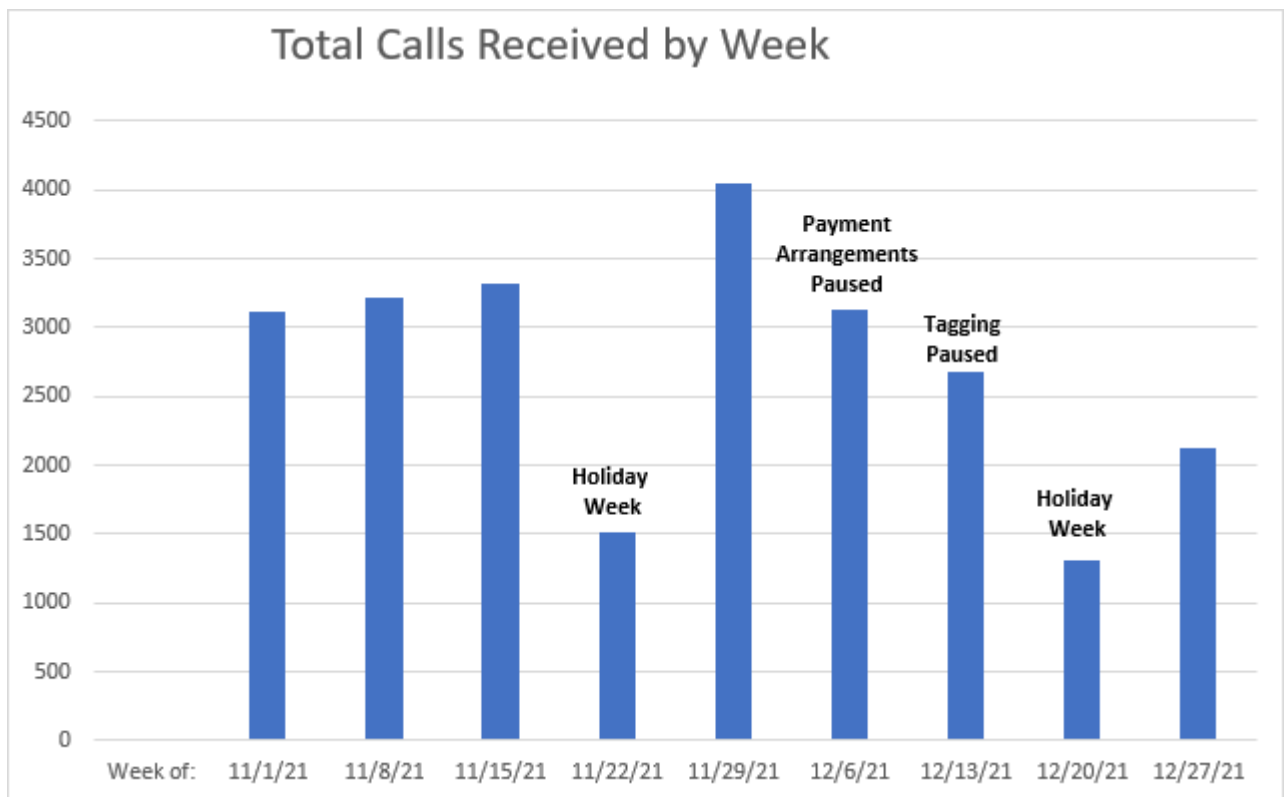


Apr 20-Dec 21 Field Activity was suspended late March 2020 in response to COVID-19.



2. Customer Care Center Statistics





Customer Interaction Statistics	Jul	Aug	Sep	Oct	Nov	Dec
Calls Answered within 3 minutes	96%	65%	91%	93%	50%	67%
Average Wait Time (seconds)	30	433	57	38	379	193
Calls Abandoned	4%	23%	6%	4%	22%	15%

D. Procurement Statistics

ProCard Fraud	External Fraud Transactions *	Comments
July	0	
August	0	
September	1	Caught by card holder
October	0	
November	1	
December	8	Caught by card holder
Total	10	

***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: 0
2. Community Partners: 0

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	December 2021
M-1.4a	Training During Work Hours Per Full Time Employee (102) – Current Month	Hours / #FTE	0.82
M-1.4b	Total Training During Work Hours Per Full Time Employee (102) – Cumulative Fiscal Year-to-Date	Hours / #FTE	16.61
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	106%
	General Reserves	Percentage of Operating Budget less Depreciation	102%
	Liquidity	Days Cash on Hand	390 Days
	Accounts Receivable (HRSD)	Dollars	\$42,173,073
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	35%

Respectfully,

Jay A. Bernas

Jay A. Bernas, P.E.

Director of Finance

TO: General Manager
FROM: Chief of Enterprise Data Services
SUBJECT: Information Technology Department Report for December 2021
DATE: January 12, 2022

A. General

1. Upgrade of the existing network servers at each treatment plant continues this month. All replacements are still on schedule for completion in the first quarter of 2022.
2. Staff worked on installation of all networking equipment for the Onancock Treatment Plant.
3. Staff began working on replacement and upgrades of networking routers throughout HRSD.
4. The IT Help Desk processed 363 work orders in December, ensuring availability of computing resources to those working locally and remotely.
5. Staff continues implementation of a lifecycle management platform which incorporates hardware, software, vulnerability, and project management for HRSD's IT infrastructure.
6. IT assisted Pretreatment and Pollution Prevention (P3) staff on a successful go-live of their new HRSD Environmental Reporting System (HERS). This new system allows eligible industrial users to electronically submit reports and permit applications to the P3 Division.
7. The Enterprise Resource Planning (ERP) upgrade project is on schedule. Testing and validations are ongoing. The WebCenter upgrade phase kicked off in early December.
8. Staff continues to work on implementing new functionality for Microsoft Office 365.
9. Programming staff are working with Customer Care on reporting and automation processes needed in preparation for American Rescue Plan Act (ARPA) funding distribution.
10. Staff worked on patching systems vulnerable to various cyber risks.

B. Strategic Planning Metrics Summary

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

3. Metrics Summary

Item #	Strategic Planning Measure	Unit	December 2021
M-1.4a	Training During Work Hours Per Full-Time Employee (51) – Current Month	Total Training Hours / # FTE	0.03
M-1.4b	Total Training During Work Hours Per Full-Time Employee (51) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	6.91
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0

Respectfully,
Mary Corby

TO: General Manager
FROM: Director of Operations
SUBJECT: Operations Report for December 2021
DATE: January 12, 2022

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

Staff and contractors continue to migrate new sites to the new supervisory control and data acquisition (SCADA) system. Each site requires removal of the existing industrial control panel(s) and installation of new one(s). Once complete, for each station or site, onsite testing is required to ensure proper operations, alarming, and data acquisition. In addition, hundreds of analogue and digital points along with control programming are assessed by several departments and contractors. So far, HRSD has migrated 35 of 204 sites to the new SCADA system.

2. South Shore (SS) Interceptor Systems

- a. One Sanitary Sewer Overflow (SSO) was reported this month. On December 23, staff inadvertently opened the wrong valve near a newly installed valve that should have been opened instead. When staff observed flow filling the nearby excavation area and realized the error, they attempted to close the valve which broke in the opened position. Staff repaired and permanently closed the valve, pump and hauled the residual wastewater, and restored the surrounding area. The failure leaked approximately 6,000 gallons into a nearby storm ditch that drains to Little Creek Cove.
- b. On December 14, staff discovered a broken closed valve on Diamond Springs Road in Virginia Beach that needed to be opened as part of the diversion of flows from the Chesapeake-Elizabeth Treatment Plant (CETP) to the Atlantic Treatment Plant (ATP). Staff excavated and utilized a bag stop to remove the valve disc blocking the flow.
- c. A contractor installed a new force main and valve near the CETP entrance that connects the 42-inch force main to the east with the 48-inch force main to the west to keep system pressures low in the City of Virginia Beach system during wet weather events.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Staff removed all mechanical components from primary #4 in preparation for upcoming concrete rehabilitation work.
- b. A contractor installed new working platforms around the emergency generators outdoor cooling fans.

2. Atlantic Treatment Plant (ATP)

- a. On December 15, staff diverted the remaining flow from CETP to the ATP. Staff placed an additional grit removal system, primary clarifier, aeration tank, secondary clarifier, and a contact tank in service to handle the additional flow. Other than addressing an initial surge of rags in the preliminary treatment facility, there were no real operational challenges associated with the final diversion.
- b. On December 19, there were high hydrogen sulfide (H₂S) levels in the exhaust from Odor Control Station B lasting just under an hour. Staff added caustic and cleaned the pH probe to correct the issue.
- c. Staff completed cleaning and filling in the trenches with concrete on the north solids pad. THP solids are now being placed on this pad.

3. Boat Harbor Treatment Plant (BHTP)

- a. Staff completed the evergreen distributed control system (DCS) upgrade at the end of November. Some control setpoints were lost and there were some control programming challenges due to the upgrade. One challenge associated with the hypochlorite automation required staff to manage the hypochlorite feed manually and estimating flow levels until the problem could be resolved. During this time there were 20 contact exceptions with a total of 22 exceptions for the month.
- b. An odor exception occurred during the planned shutdown of an odor control system for maintenance at the end of the month. The drain line of the odor control system is a combined line for both odor scrubber systems, causing both systems to be offline during the cleaning. While the system was off, staff cleaned the scrubber nozzles to improve efficiency. Replacement of the media should occur in early January.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

- a. On December 15 all influent flow to the plant was finally diverted away from the plant and sent to the ATP. This was the culmination of years of work by Operations, Engineering and Water Quality Departments.
- b. On December 22, while processing the remaining wastewater left in the plant's process tanks, staff discharged approximately 55,000 gallons of treated wastewater but failed to take a plant effluent pH reading during this discharge.

5. James River Treatment Plant (JRTP)

- a. On December 20, there was a 20-gallon spill of defoaming chemical from a temporary feed system. Approximately half was recovered. On the same day, approximately 100 gallons of nocardia foam breached the aeration tank walls and spilled on to the ground. All but approximately ten gallons was recovered. Staff used a chemical defoamer, non-potable water spray systems, and containment barriers to keep foam under control.

- b. The contractor completed installing fiberglass walls and screens in reactor #5 of IFAS tank #5 for the testing of nutrient removal improvements. Installation of mixing equipment is almost complete.
- c. Test piles were driven on the future Sustainable Water Initiative for Tomorrow (SWIFT) site by the contractor.

6. Nansemond Treatment Plant (NTP)

- a. Contractors completed installation of the new Big Bubble Mixers on aeration tank #7. This is the third of four tanks to have the mixers installed. This project will allow for a lower dissolved oxygen setpoint to be reached in the aeration tanks while still maintaining adequate mixing, thereby increasing the efficiency of nutrient removal resulting in reduced chemical and energy demands.
- b. Staff from across the department worked together to address significant issues with the digester gas system. The digester lids were imbalanced, gas pressure was extremely high, the waste gas burners were not staying lit, and the gas booster fan was intermittently failing. Staff repaired the gas booster fan and were able to troubleshoot the gas pressure and waste gas burner issues.
- c. On December 8, plant staff discovered primary clarifier #1 had failed due to excessive Fats, Oil, & Grease (FOG). Staff removed the clarifier from service and started cleaning to make the repairs. This is the second failure this year in the rectangular clarifiers. Staff are in the process of replacing flights with a heavier duty version, hopefully to correct this issue.
- d. The FOG handling facility remains under construction with an estimated completion date in March. This new facility will convert FOG received into a usable fuel product and will keep it out of the treatment process. FOG that is currently being received and creating issues at the BHTP will be diverted to NTP once this project is complete.
- e. Sustainable Water Initiative for Tomorrow (SWIFT) Research Center (RC)
 - (1) Recharge activities remained off-line for the whole month of December to ensure the new well is conditioned properly. Recharging negatively impacts the aquifer well conditioning since the mixing/displacement of the aluminum chlorhydrate (ACH) caused by recharging might increase the pH above five and precipitate aluminum hydroxide. Recharge activities are expected to resume in mid-January.
 - (2) The Lower Potomac Aquifer (LPA) sample pump failed on December 6, and staff were able to replace it on December 8. These pumps are used to monitor the conductivity that it is used as a tracer to determine if SWIFT water is reaching that point (approximately 500 feet from the recharge well).

7. Virginia Initiative Plant (VIP)

- a. Staff removed one primary clarifier from service, made repairs to the cross-collector gear box and linkage, then placed the tank back in service.
- b. Contractors assisted staff with the installation of a pumping station at the preliminary treatment facility that will provide raw wastewater flow to the new research pilot facility.

8. Williamsburg Treatment Plant (WBTP)

- a. On December 6, there was a spill of 9,840 gallons down a storm drain when a non-potable water line broke in an area where an electrical duct bank had been installed within the past year. The break was probably caused by ground settling. Due to the depth of the pipe, a contractor was hired to excavate to the pipe and make repairs.
- b. On December 30, there was an odor control scrubber deviation because of a low sodium hypochlorite set point.
- c. Dewatered solids continued to be transported to the compost facility in Waverly and the BHTP for incineration while both incinerators remained off-line for repairs. The contractor finished fabricating and installing the new exhaust scrubber on the #2 incinerator and staff installed a new combustion air fan. Startup of the #2 incinerator is scheduled for January.
- d. Discharge of FOG remained suspended while the FOG system remains out of service for repairs. The contractor fabricating the FOG thickened tank rake arm is awaiting materials.

9. York River Treatment Plant (YRTP)

- a. Staff received an odor complaint from the Sommerville area of Seaford, and a second one near the oil refinery approaching Dandy. Staff believe the odor source may be from hydrogen sulfide gas that is not currently being eliminated in the headworks. The replacement of the headworks motor control center (MCC) necessitated the pre-aeration-grit blower to be off-line. Although the headworks odor control system remained on-line and functioning properly, the agitating action of the pre-aeration-grit blower appears to strip hydrogen sulfide gas from the wastewater stream where it is picked up by the odor control system before leaving the headworks. Staff increased the amount of ferric chloride to the primary section of the plant to reduce potential odors. The MCC project was completed this month.
- b. Staff completed the air control improvements for enhanced nutrient removal in aeration tanks #1 and #2. Work completed includes installation of piping, actuators, and air supply equipment.

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 98 percent.
- b. There were no deviations from the required 129 SSI rule minimum operating parameters and one minor bypass events (<60 minute).
- c. The WBTP incinerator was not operational for the month of December.

C. Small Communities (SC)

1. Middle Peninsula

a. West Point Treatment Plant (WPTP) and Collections

- (1) The mobile dewatering unit was returned after repairs were made. A raw influent autosampler was installed to meet new permit-required monitoring that allows the calculation of percent removal of biochemical oxygen demand (BOD) and total suspended solids (TSS).
- (2) The contractor made good progress with the rehabilitation of the 7th and Lee Pump Station (PS). Most of the old equipment was removed, and installation of pumps and piping commenced. The lateral and mainline connection at 1103 Lee Street was replaced this month.

b. King William Treatment Plant and Collections

- (1) Total flow for the month of December was 2.033 MG, of which 0.856 MG (42.1%) was pumped to Nestle-Purina as reuse/reclaimed water and 1.177 MG was effluent flow to the outfall.
- (2) Staff replaced all pump station check valves and isolation valves except McCauley Park, which is anticipated for January.

c. Mathews System

Despite being properly marked, contractors boring a telecommunications cable in the Town of Mathews bored through a six-inch HRSD vacuum line. Due to the nature of the vacuum system, however, no spill occurred, and staff were able to repair the damage in a few hours. Staff added an isolation valve to the vacuum line during the repair efforts to assist in future troubleshooting.

2. Surry Systems – Town of Surry

The Surry County Plant digester aerator motor has a failing bearing that will need to be replaced. Repairs are scheduled for mid-January.

3. Eastern Shore

a. Onancock Treatment Plant (OTP)

Staff are coordinating with contractors to demolish the deteriorated dewatering building and move and install the Quonset Hut from the CETP in its place.

b. Nassawadox Riverside Treatment Plant (NRTP)

Staff are focused on maintaining nitrification through the winter since historically, the plant has struggled to meet its ammonia permit requirements during winter season.

D. Support Systems

1. Staff completed 16 projects, two of which were total pump rebuilds. One notable project included fixing two ISCO samplers that were thought to be useless. Staff were able to repair the two samplers and return them to service.
2. Staff issued and reviewed Closed Circuit Television (CCTV) inspections of 19,821 Linear Feet (LF) for North Shore and South Shore Interceptors, and 24,175 LF for Small Communities. Staff also reviewed 74 utility access hole inspections and oversaw seven coating, concrete, and roof projects.

E. Electrical & Instrumentation (E&I)

1. A contractor finished installing conduit and wiring for the primary scum actuators at ATP. Staff completed the internal actuator wiring, set actuator limits, and placed all eight actuators in service.
2. Staff completed Distributed Control System (DCS) programming and graphics for the new centrifuge #4 programming and graphics for the new influent screen #2 at ATP.
3. Staff replaced a broken aeration timer and are participating in the design of a new weir plate for the effluent flow meter at NRTP.
4. Staff replaced a broken wet well level transmitter at Surry County Pump Station (PS) #2.
5. Staff designed a calibration flange for the wet well level transmitters at Surry County PS #2. This flange will enable staff to perform onsite calibrations.

F. Water Technology and Research

With initiatives such as the closure of the Chesapeake-Elizabeth, Boat Harbor, Town of Surry, Surry County, Urbanna, and Central Middlesex treatment plants as well as consolidating Eastern Shore flows at the Onancock Plant, treatment plant capacity and factors affecting plant capacity will be important topics of conversation in the next few years.

From the standpoint of treatment plant infrastructure, the most significant sewage treatment capital investments are the reinforced concrete tanks and appurtenances associated with clarifiers and aeration tanks. In addition, the manner in which biological treatment processes (aeration tanks and clarifiers) are operated can have major impacts on operating costs and on available capacity. Over the next few months, we will be reviewing the variables that determine plant capacity and how the HRSD treatment process research program is contributing to the intensification of aeration tanks and clarifiers. The word intensification in this sense refers to obtaining more treatment capacity from our existing aeration tank and clarifier infrastructure without sacrificing operating costs.

G. MOM reporting numbers

MOM Reporting #	Measure Name	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
2.7	# of PS Annual PMs Performed (NS)	2	3	3	4	2	4						
2.7	# of PS Annual PMs Performed (SS)	6	6	4	5	2	4						
2.7	# of Backup Generator PMs Performed (Target is 4.6)	10	13	8	10	8	13						
2.8	# of FM Air Release Valve PMs Performed (NS)	72	89	184	210	166	251						
2.8	# of FM Air Release Valve PMs Performed (SS)	124	165	193	269	167	205						
2.9	# of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD)	5,209	0	9,963	8,696	3,829	3,161						
2.9	# of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD)	0	3,531	7,717	10,276	5,272	0						
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	0	0	11,796	0	11,796	24,175						

H. Strategic Measurement Data

1. Education and Outreach Events: 6

- a. 12/06/2021 – Follow-up meeting with the City of Chesapeake Public Utilities Operations staff to discuss the CETP closure and the effects on the locality system – South Shore Interceptors Staff
- b. 12/07/2021 – International Water Association Biofilm Process Conference – Session - Stephanie Klaus
- c. 12/07/2021 - International Water Association Biofilm Process Conference – Oral Presentation, Success at Pilot-Scale leads to the Full-Scale Application of PdNA in MBBR and IFAS and the Inadvertent Development of Mainstream PNA Along the Way - Megan Bachmann
- d. 12/08/2021 - Follow-up meeting with City of Virginia Beach Public Utilities Operations staff to discuss the CETP closure and the effects on the locality system – South Shore Interceptors
- e. 12/14/2021 - Follow-up meeting with City of Virginia Beach Public Utilities Operations staff to discuss the CETP closure and the effects on the locality system – South Shore Interceptors
- f. 12/22/2021 - Follow-up meeting with City of Virginia Beach Public Utilities Operations staff to discuss the CETP closure and the effects on the locality system – South Shore Interceptors

2. Community Partners: 3

- a. Chesapeake Bay Foundation-Oyster Cage Maintenance at BHTP for Oyster Garden Project
- b. DOE Jefferson Lab
- c. Old Dominion University (ODU)

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	December 2021
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (533) – Current Month	Hours / FTE	2.09
M-1.4b	Total Training During Work Hours per FTE (533) – Cumulative Year-to-Date	Hours / FTE	15.83
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	25,626
M-2.3b	Planned Maintenance – Preventive and Condition Based	percent of Total Maintenance Hours	61.94%
M-2.3c	Planned Maintenance - Corrective Maintenance	percent of Total Maintenance Hours	13.26%
M-2.3d	Planned Maintenance - Projects	percent of Total Maintenance Hours	24.81%
M- 4.1a	Energy Use: Treatment *Reported for December 2021	kWh/MG	2,989
M-4.1b	Energy Use: Pump Stations *Reported for December 2021	kWh/MG	223
M-4.1c	Energy Use: Office Building *Reported for December 2021	kWh/MG	130
M-5.2	Educational and Outreach Events	Number	6
M-5.3	Number of Community Partners	Number	3

Respectfully submitted,
Steve de Mik
 Director of Operations

TO: General Manager

FROM: Director of Talent Management (TM)

SUBJECT: Monthly Report for December 2021

DATE: January 7, 2022

A. Talent Management Executive Summary

1. Recruitment

a. Summary

New Recruitment Campaigns	16
Job Offers Accepted – Internal Selections	8
Job Offers Accepted – External Selections	7
Average Days to Fill Position	64

b. HR and Operations staff began implementing several recruitment initiatives to improve efficiency, time to fill, and recruitment of hard to fill positions.

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	December 2021	Total (March 2020 – December 2021)
Quarantines due to illness or direct exposure (household or external)	5	372
Work Related Quarantines	1	55
Personal Travel Quarantines	0	58
Confirmed Employee COVID-19 Cases	17	123
Work Related COVID-19 Cases	0	2
Contractor COVID-19 Cases on Work Sites*	0	12
Vaccine Acknowledgements	5	819

*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 97%.

c. Staff continued addressing multiple Vaccination Policy religious and medical exception requests.

- d. *HRSD's Infectious Disease Preparedness and Response Plan* was revised based on Virginia Occupational Safety and Health Administration (VOSHA) Final Permanent Standard for COVID-19. The plan, along with a summary of changes was distributed to HRSD employees.
 - e. TM, Engineering and Procurement staff clarified COVID-19 vaccination and testing requirements for contractors and suppliers working onsite.
3. Business Analysts, HR, Organizational Development and Training (OD&T) and Information Technology (IT) staff continued testing for the system-wide upgrade.
4. Compensation and Benefits:
- a. Staff compiled and provided organization, pay and benefit, job summary and custom survey contact information to the consultant for the HRSD Compensation study.
 - b. HR and Finance staff continued developing and implementing plans for providing the mid-year inflationary adjustment to employees.
5. Wellness Program
- a. Participation

Year Nine Participation Activities	Unit	December 2021	Year to Date (March 2021–February 2022)
Biometric Screenings	Number	35	277
Preventive Health Exams	Number	26	250
Preventive Health Assessments	Number	41	231
Online Health Improvement Programs	Number	22	222
Web-MD Online Health Tracking	Number	33	380
New Challenges	Number	0	340
Fit-Bit Promotion	Number	4	47

- b. The *Gratitude Challenge* concluded with 55 participants. The *Holiday Maintain Don't Gain Challenge* continued. Resources, tips, and recipes were sent to participants.
- c. Omada's Diabetes Prevention Holiday Launch program was promoted.

- e. The following Wellness presentations were provided:
 - (1) Virtual Wellness Demonstration: *Fitting in Mini Workouts During the Holidays* was recorded and posted on SharePoint. Workout tips were sent to 58 participants.
 - (2) Virtual *Mindful Meditation* for Connecting to Oneself was recorded and posted on SharePoint.
 - (3) A *Health and Wise* presentation was provided for the Apprenticeship Program orientation.

- 6. Work continued with Hicks Carter Hicks, the Organizational Development consultant:
 - a. Conducted a Division Leaders Forum. A discussion on HRSD's future and potential issues was facilitated to provide input for the strategic planning process.
 - b. Worked with the HRSD sponsor on several Diversity, Equity, and Inclusion (DE&I) strategies.
 - c. Facilitated a *Strength Finders* Workshop for the Women in Leadership Program.

- 7. Mu Lee, an E&I Specialist, presented his Your Role in Quality project, *Morale Booster* to the Quality Steering Team (QST). Mu took a simple idea of bringing music to the workplace by providing sheet music and holding a start of the day sing along with his co-workers to improve daily morale.

- 8. Apprenticeship Program
 - a. New Apprentice Orientation was held. The new *See Yourself Successful* program was incorporated with the objective of providing new apprentices with tools to quickly acclimate to being an apprentice and enhancing their knowledge of adult learning. The interactive workshop included an apprenticeship program introduction, goal setting, study skills, health and financial wellness, and guidance on accessing apprenticeship program resources. The Apprenticeship Mentoring Program was introduced and will be available next academic year.
 - b. The Apprenticeship Committee meeting was held to review program status and updates along with the semi-annual meeting with apprenticeship representatives to gather feedback.

- 9. Rachel Goldsmith was hired as OD&T part-time administrative assistant.

- 10. Mishaps and Work-Related Injuries Status to Date (OSHA Recordable)

	<u>2020</u>	<u>2021</u>
Mishaps	32	33
Lost Time Mishaps	8	12
<i>Numbers subject to change pending HR review of each case.</i>		

11. Safety staff participated in a voluntary Virginia Occupational Health and Safety Administration (VOSHA) compliance inspection of the Nansemond Treatment Plant Grease Facility construction site with the contractor.
12. The following were completed for the Respiratory Protection Program:
 - a. Updates to the Respiratory Protection Program and training program
 - b. Annual training, fit testing, and completion of employee screening questionnaires for several work centers.
13. Safety Division Monthly Activities

Safety Training Classes	6
Work Center Safety Inspections	6
Reported Accident Investigations	1
Construction Site Safety Evaluations	16
Contractor Safety Briefings	2
Hot Work Permits Issued	2
Confined Space Permits Issued/Reviewed	200
Industrial Hygiene Monitoring Events	2

15. Staff participated in the following external activities:
 - a. Water Environment Federation (WEF) Utility Management Committee HR/Operations and Leadership Workgroups
 - b. Hampton Roads Society of Human Resources Management (HR-SHRM) Diversity Equity and Inclusion subcommittee meeting
 - c. Virginia Water Environment Association Leadership Academy meeting

B. Monthly Strategic Planning Metrics Summary

1. Education and Outreach Events: (1)
 - a. 12/16/2021: City of Newport News One City Celebration Workforce Council Career Fair.
2. Community Partners: (1)
 - a. City of Newport News Workforce Council

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	December 2021
M-1.1a	Employee Turnover Rate (Total)	Percentage	2.59
M-1.1b	Employee Turnover - Service Retirements	Percentage	1.02
M-1.4a	Total Training Hours Per Full Time Employee (17)	Total Training Hours/ FTE	0.41
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / FTE	17.47
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Community Partners	Number	1

Respectfully submitted,
Dorissa Pitts-Paige
Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for December 2021
DATE: January 12, 2022

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 no significant activities for this month.
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 Frederick County, Northumberland 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: 1
 - 12/07/2021 – Technical Services Division (TSD) supported a Nansemond Treatment Plant Tour for the Boy Scouts of America (Public Health Merit Badge)
2. Community Partners: 4
 - Hampton Roads Planning District Commission – Fats, Oils & Grease subcommittee
 - City of Chesapeake + Virginia Health Department +Chesapeake local health department – wastewater COVID surveillance
 - Elizabeth River Project – Watershed Action Team
 - Lynnhaven River Now
3. Odor Complaints: 4
 - On December 7, a residential neighbor of the York River facility contacted HRSD regarding an odor. Staff determined that this odor originated from the ongoing master control equipment (MCE) project work going on at the headworks of the facility. This work limited electrical power to the headworks, including the blower for the aerated grit management system. Facility staff increased the ferric feed to

the system to reduce odors. The MCE work has now been completed and the aerated grit management system has been placed back into normal service.

- On December 15, another residential neighbor of the York River facility contacted HRSD regarding an odor. Staff determined that this odor, like that of December 7, originated from the ongoing mater control equipment (MCE) project work going on at the headworks of the facility. This work limited electrical power to the headworks, including the blower for the aerated grit management system. Facility staff increased the ferric feed to the system to reduce odors. The MCE work has now been completed and the aerated grit management system has been placed back into normal service.
- On December 27 the same residential neighbor of the York River facility that reported on December 7 reported odors but also stated that it did not appear to be originating with this facility. This neighbor indicated that the wind, at this time, was not blowing in a direction that would indicate that this facility was the source. A York County-owned pump station was identified as the cause of this odor. HRSD will continue to monitor odors associated with the York River facility to ensure customer satisfaction.
- On December 29, the Atlantic treatment plant received one report of odors observed by neighbors on Bold Ruler Road between Sword Dancer and Unicorn streets. Plant staff and TSD investigated and determined the most likely source of these odors was the local city pump station. No further reports or observations of pump station related odors in the neighborhood have been made.

4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	December 2021
M-1.4a	Training During Work Hours Per Full Time Employee (119) (Current Month)	Total Hours / # FTE	4.9
M-1.4b	Total Training During Work Hours Per Full Time Employee (119) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	26.4
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	3:30,440
M-3.2	Odor Complaints	#	4
M-3.4	Pollutant Removal	Total Pounds Removed	93,741,304
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	14%

Item #	Strategic Planning Measure	Unit	December 2021
M-5.2	Educational and Outreach Events	#	1
M-5.3	Community Partners	#	4
	Average Daily Flow	Total MGD for all Treatment Plants	120.79
	Pretreatment Related System Issues	#	0

Respectfully submitted,
James Platt, Ph.D
 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

Emergency Repairs

- **Tasks Completed (December 2021)**
 - Submitted report to obtain management action plans
 - Finalized report
- **Upcoming Tasks (January 2022)**
 - Obtain feedback from management
 - Review management action plans
 - Issue final report

Model 3 Billing

- **Tasks Completed (December 2021)**
 - Completed fieldwork testing
 - Drafted Model 3 report
- **Upcoming Tasks (January 2022)**
 - Issue final report

Unifier/ERP Integration

- **Tasks Completed (December 2021)**
 - Continued fieldwork phase
- **Upcoming Tasks (January 2022)**
 - Continue testing
 - Conduct follow-up meeting discussions
 - Conduct findings validation meeting

Grant Management

- **Tasks Completed (December 2021)**
 - Completed grant scoping activities with HRSD
- **Upcoming Tasks (January 2022)**
 - Begin planning phase

Risk Assessment Refresh

- **Task Completed (December 2021)**
 - Began risk assessment activities
- **Upcoming Tasks (January 2022)**
 - Continue risk assessment activities



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	Closed	11	0	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	January 2022	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
Totals			82	45	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	Nov-21	Dec-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	117.9	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%	105%	106%
	General Reserves																
	Accounts Receivable (HRSD)	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	117%	119%	108%	106%	102%
	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	\$39,367,413	\$42,173,073
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	18%	17%	18%	29%	35%	35%
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	3:25366	3:30440
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	78,799,583	93,741,304
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	22%	17%	17%	17%	18%	14%	14%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	367	256	145	51	60
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	293	230	128	15	10

EFFLUENT SUMMARY FOR DECEMBER 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	6.82	38%	6	5.2	18	13	0.67	0.61	5.1	4.2	0
ATLANTIC	33.80	63%	12	12	2	1	NA	NA	NA	NA	7
BOAT HARBOR	9.96	40%	12	8.1	3	3	1.4	0.65	29	21	22
CENT. MIDDLESEX	0.005	22%	<2	1.7	1	1	NA	NA	NA	NA	NA
CHES-ELIZ	6.94	29%	18	13	11	3	0.73	0.81	28	27	5
JAMES RIVER	11.80	59%	6	4.5	1	1	0.92	0.42	8.4	6.4	7
KING WILLIAM	0.066	66%	<2	<1.0	NA	1	0.19	0.12	1.3	1.8	NA
NANSEMOND	14.03	47%	4	4.2	1	1	0.73	0.75	4.0	4.2	0
NASSAWADOX	0.008	8%	<2	7.3	1	1	0.28	NA	14	NA	NA
SURRY, COUNTY	0.032	49%	1	<1.0	NA	3	NA	NA	NA	NA	0
SURRY, TOWN	0.021	35%	10	15	NA	100	NA	NA	NA	NA	NA
URBANNA	0.034	34%	4	8.2	4	4	0.65	2.2	4.0	10	NA
VIP	19.71	49%	4	2.0	1	<1	0.83	0.72	4.6	3.8	1
WEST POINT	0.293	49%	25	5.3	<1	1	4.0	3.1	23	17	0
WILLIAMSBURG	7.54	34%	6	3.9	1	11	0.87	0.80	6.3	3.5	4
YORK RIVER	9.72	65%	1	0.21	1	1	0.30	0.25	5.8	5.2	0
	<u>120.79</u>										

	Tributary Summary						
	% of Capacity	<u>Annual Total Nitrogen</u>			<u>Annual Total Phosphorus</u>		
		Discharged	Operational		Discharged	Operational	
		YTD	Projection	CY21	YTD	Projection	CY21
Tributaries	%	Lbs	%	%	Lbs	%	
James River	62%	2,872,152	63%	65%	205,378	65%	
York River	76%	219,790	76%	68%	13,214	68%	
Rappahannock	55%	NA	NA	39%	NA	NA	

Permit Exceedances: Total Possible Exceedances, FY22 to Date: 3:30,440
Pounds of Pollutants Removed in FY22 to Date: 93,741,304
Pollutant Lbs Discharged/Permitted Discharge FY22 to Date: 14%

	Rainfall (inch)		
	<u>North Shore (PHF)</u>	<u>South Shore (ORF)</u>	<u>Small Communities (FYJ)</u>
Month	1.70"	1.81"	1.36"
Normal for Month	3.80"	3.39"	3.62"
Year to Date Total	52.11"	38.92"	47.49"
Normal for YTD	52.15"	49.87"	49.49"

*Small Communities includes Eastern Shore

AIR EMISSIONS SUMMARY FOR DECEMBER 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	0	1	42	100	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	7	100	0
CHES-ELIZ	0	0	0	0	0	0	0	0	20	98	0
VIP	0	0	0	n/a	0	0	0	1	29	98	0
WILLIAMSBURG	*	*	*	n/a	*	*	*	*	*	*	*

* WTP MHIs did not operate in December.

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:	1
Odor Complaints Received:	4
HRSD Odor Scrubber H2S Exceptions:	2

Items of Interest – December 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 98%.

The MHIs had no deviations from the required 129 SSI rule minimum operating parameters and one minor bypass event (<60 minute).

Army-Base required the use of the emergency bypass stack for more than one hour on December 26. Utility power was lost power due to a transformer issue on the Port. The plant switched to generator power but one of the tie breakers for part of the plant failed to close when switching to generator power. This caused a temporary loss of power to the solids handling building resulting the MHI bypass dampener opening. Electrical and Instrumentation were called in and power was restored to the building within an hour and half. The Operator completed a partial burnout of the furnace until the ID fan could be restarted and resume normal operation. DEQ was notified accordingly.

Chesapeake-Elizabeth MHI had a 129 emissions limits stack test performed by the test contractor on November 3. The final test report submitted to DEQ on December 27 included an exceedance of the particulate matter (PM) limit. The suspected cause of the noncompliant PM test result is that soot was inadvertently entrained into the Method 5 sampling train. HRSD 129 team advised the test contractor of this testing issue and further requested the contractor to carefully follow the method including section 8.5.2 and 8.5.5 with respect to entrainment of deposited materials (e.g., soot) in all future stack tests. The 129 team also instructed the test contractor to notify HRSD of any unusual sample collected in the field at the time of testing. In this case, the heavily particulate laden probe rinse-ate collected from the probe during testing. No MHI retest to demonstrate compliance for PM is planned since the plant and MHIs are shut down.

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

AIR PERMITS and ODOR CONTROL

HRSD received four odor complaints and two hydrogen sulfide (H₂S) plant odor wet scrubber exceptions in December.

York River received three complaints of odors on December 7 and 27 from our neighbor Ms. Cooper. From her first complaint we determined the odors came from the on-going motor control center (MCC) project work going on at the headworks that limited power to the headworks including the blower for the aerated grit. Similarly, Mr. Robert Holloway contacted us regarding what we believe are these same odors on December 15 when driving by the plant on multiple occasions. In both instances plant operations increased the ferric feed to reduce odors. The MCC work that started just before Thanksgiving has been completed with the aerated grit placed back into service and no observed offsite odors. In Ms. Cooper's second complaint she said she smelled odors but didn't think it was us but thought she'd check with the plant anyway. She also indicated the wind really wasn't even right for the plant to be the source. Plant staff and Technical Services had identified for her other sources of odor around her including

odors from a York County pump station. The county pump station was identified as the cause of one of her previous complaints we received. HRSD will continue to monitor odors from York River to ensure we are meeting our good neighbor policy.

Atlantic received one report of odors on December 29 being observed by our neighbors out on Bold Ruler Road between Sword Dancer and Unicorn streets. Plant staff and TSD investigated and determined the most likely source of these odors at the local city pump station. No further reports or observations of pump station related odors in the neighborhood.

TREATMENT

DEQ was notified of the following reportable events:

Chesapeake Elizabeth

Influent flow was diverted to Atlantic on December 15. On December 22 the plant discharged approximately 55,000 gallons of treated effluent between 09:05 and 10:20. The operator forgot to perform the pH sample, and a composite for TSS, BOD, TN, and TP was not collected during this brief discharge period.

James River

On December 2, a temporary chemical line feeding defomant shifted causing a spill into the grass and a storm drain. Oil dry was placed to remove chemical residue, the chemical release was stopped, and a more rigid piping system was put in place to ensure the chemical line does not shift in the future. Approximately 20 gallons of Foam A Tac REL defomant was released, with 10 gallons recovered. The remaining 10 gallons entered a storm drain leading to the Warwick River.

Williamsburg

On December 6 water was discovered coming up from the grass near a curb during a routine walk around the plant. The water was traced to an electrical manhole; after attempting to pump out the manhole excessive ground water was discovered entering several nearby manholes and entering the storm drain system. The source of the water was a Non-Potable Water (NPW) line that had been previously excavated when a new duct bank was installed. Isolation of this NPW line was not possible without significant disruption to plant processes. Plant staff blocked a storm drain manhole and lowered a pump into it to keep up with the flow. Though this pipe was blocked ground saturation occurred and water entered old underground stormwater piping. HRSD crews dug up the area to triangulate the location and Bridgeman Civil repaired the cracked 10", 10 ft deep NPW line. Approximately 9,840 gallons of NPW were released to storm drain leading to Grove Creek.

SYSTEM

On December 23 a valve failed while operating it near 5332 Shore Drive in Virginia Beach. Staff were able to capture a large amount of the overflow by pumping it to clarifiers at the Chez-Liz Treatment Plant. Once the valve was repaired, the overflow was stopped. Staff then treated the impacted area with lime. Approximately 311,000 gallons were released, with 305,000 gallons recovered. The remaining 6,000 gallons entered a ditch draining to the Chesapeake Bay.

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

There were no reportable events during the month of December.

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	NA	NA
Middlesex	TKN	3.0							0.60	NA	NA	<0.50	NA	NA
King William	Zinc	*							39	NA	NA	7.1	NA	NA
	TKN	3.0							<0.50	0.09	<0.50	<0.50	<0.50	0.89
Nassawadox Riverside	Cadmium	2.0							<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Copper	23							9.1	9.8	9.5	6.05	<5.0	<5.0
	Nickel	38							<10	<10	<10	<10	<10	<10
	Zinc	150							<50	<50	<50	<50	<50	<50
	Ammonia	1.7							<0.10	<0.10	<0.10	<0.10	0.19	<0.10
Surry County	Copper	5.9							4.0	4.0	4.0	5.0^	5.0	4.0
	Zinc	56							19	21	30	38	48	43
	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	<0.50	NA
Town of Surry	Copper	12							4.0	4.0	3.0	3.0	3.0	4.0
	Zinc	39							13	22	13	11	14	18
	Ammonia	4.5							0.16	<0.10	<0.10	<0.10	1.6	<0.10
	TKN	6.7							1.6	2.0	1.9	3.3	3.5	2.2
Urbanna	Ammonia	3.83, 9.08							0.13	0.13	0.19	2.4^	0.07	4.3

*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	6.82	6.82	9.14	7.84
Atlantic	26.17	30.15	26.78	30.65	28.66	32.11	29.08	30.34	28.62	27.35	26.99	33.80	29.23	29.36
Boat Harbor	15.39	24.61	15.55	13.06	10.70	11.40	10.62	11.27	11.20	10.26	10.13	9.96	12.85	10.57
C.Middlesex	0.009	0.010	0.008	0.010	0.010	0.013	0.010	0.009	0.005	0.004	0.005	0.005	0.008	0.006
Ches-Eliz	19.57	24.32	16.75	10.79	9.75	11.00	12.93	13.35	10.43	10.10	9.99	6.94	12.99	10.62
James River	15.72	20.76	15.42	14.14	11.60	12.19	12.34	14.37	12.58	11.60	11.85	11.80	13.70	12.42
King William	0.067	0.070	0.071	0.077	0.070	0.068	0.069	0.070	0.072	0.071	0.068	0.066	0.070	0.069
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	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	13.75	14.03	16.64	15.33
Nassawadox							0.015	0.012	0.010	0.009	0.007	0.008	0.010	0.010
Surry, County	0.054	0.073	0.051	0.046	0.038	0.046	0.046	0.048	0.040	0.036	0.036	0.032	0.046	0.040
Surry, Town	0.080	0.106	0.072	0.078	0.044	0.052	0.047	0.038	0.030	0.026	0.023	0.021	0.051	0.031
Urbanna	0.064	0.058	0.049	0.050	0.054	0.060	0.064	0.058	0.050	0.053	0.046	0.034	0.053	0.051
VIP	31.75	44.41	29.39	26.90	22.34	26.20	23.04	26.60	23.45	21.89	20.45	19.71	26.34	22.52
West Point	0.710	0.958	0.737	0.536	0.351	0.416	0.469	0.440	0.313	0.307	0.297	0.293	0.486	0.353
Williamsburg	8.65	10.73	9.16	8.49	7.54	8.84	9.00	9.13	7.95	8.14	7.52	7.54	8.56	8.21
York River	15.60	19.40	14.75	13.30	10.68	10.89	10.61	11.44	10.42	10.03	9.97	9.72	12.23	10.36
North Shore	55.36	75.50	54.88	48.98	40.53	43.32	42.56	46.21	42.15	40.04	39.47	39.03	47.33	41.58
South Shore	108.98	137.72	100.10	93.28	82.86	95.14	90.60	97.61	86.33	80.29	77.99	81.31	94.35	85.69
Small Communities	0.98	1.28	0.99	0.80	0.57	0.65	0.72	0.68	0.52	0.51	0.48	0.46	0.72	0.56
TOTAL	165.32	214.50	155.96	143.06	123.96	139.11	133.88	144.50	128.99	120.83	117.94	120.79	142.40	127.82

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

2021 EFFLUENT SUMMARY

PLANT	FLOW MGD	BOD MG/L	TSS MG/L	FC #/100 ML	ENTERO/EC #/100 ML	TP MG/L	TN MG/L	CONTACT TANK EX	NH3 MG/L
ARMY BASE	9.14	6	7.2	4	3	0.61	4.2	5	NA
ATLANTIC	29.23	13	11	3	2	NA	NA	9	NA
BOAT HARBOR	12.85	8	7.0	6	1	0.65	21	9	NA
C. MIDDLESEX	0.008	<2	1.9	1	1	NA	NA	NA	0.03
CHES-ELIZ	12.99	17	12	8	3	0.81	27	8	NA
JAMES RIVER	13.70	4	3.3	1	1	0.42	6.4	4	NA
KING WILLIAM	0.070	0	0.02	NA	1	0.12	1.8	NA	NA
LAWNES POINT	NA	NA	NA	NA	NA	NA	NA	NA	NA
NANSEMOND	16.64	4	4.3	3	1	0.75	4.2	1	NA
NASSAWADOX*	0.010	0	8.2	1	1	0.75	16	N/A	0.05
SURRY, COUNTY	0.046	4	2.4	NA	2	NA	NA	NA	0.03
SURRY, TOWN	0.051	5	14	NA	47	NA	NA	NA	0.18
URBANNA	0.053	3	8.3	4	4	2.2	10	NA	1.6
VA INITIATIVE	26.34	3	2.3	2	1	0.72	3.8	3	NA
WEST POINT	0.486	21	10	1	2	3.1	17	0	NA
WILLIAMSBURG	8.56	5	4.3	6	6	0.80	3.5	4	NA
YORK RIVER	12.23	2	0.78	1	3	0.25	5.2	2	NA

Permit Exceedances:

January 2021: Town of Surry cBOD weekly loading (1)

February 2021: Army Base BOD weekly loading (1) and concentration (1), TSS weekly loading (1) and concentration (1), TSS monthly loading (1); King William TKN weekly (1) and monthly (1) concentration; West Point TSS weekly (1) and monthly (1) loading; Town of Surry cBOD (1) and TSS (1) weekly loading, TSS monthly

May 2021: Riverside ammonia monthly (1) and weekly (1) concentration; copper monthly (1) and weekly (1) concentration

June 2021: Surry County copper weekly concentration (2), copper monthly concentration (1); Riverside copper weekly (1) and monthly (1) concentration

August 2021: Town of Surry TSS weekly concentration (1)

October 2021: Urbanna ammonia weekly concentration (1); Surry County copper weekly concentration (1)

*Nassawadox Riverside summary includes July-December 2021 only

AIR EMISSIONS SUMMARY FOR CY 2021

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave (F)	12 hr ave (in. WC)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	pH 3 hr ave	Bypass Stack Use	Mo. Ave (PPM)	DC (%)	Daily Ave Days >Max
ARMY BASE	0	3	0	0	1	0	6	14	50	99	0
BOAT HARBOR	0	1	0	n/a	2	0	0	4	9	96	0
CHES-ELIZ	0	0	0	0	0	0	0	0	14	98	0
VIP	0	1	0	n/a	0	0	1	7	20	98	0
WILLIAMSBURG	2	0	0	n/a	0	0	0	15	23	97	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	2
DEQ Request for Corrective Action:	0
DEQ Warning Letter:	0
DEQ Notice of Violation:	0
Other Air Permit Deviations:	1
Odor Complaints Received:	25
HRSD Odor Scrubber H2S Exceptions:	52

AGENDA ITEM 17.e. – January 25, 2022

Subject: Atlantic Treatment Plant (ATP) Combined Heat and Power (CHP) Gas Blower #2
Emergency Declaration

Recommended Action: No action is required. Information Only

Brief: In early December 2021, one of the two ATP digester gas blowers, located at the CHP gas conditioning skid failed. The gas blowers pull gas from the digester, through the gas conditioning skid, which cleans the gas before sending it to either the Thermal Hydrolysis Process (THP) steam boiler, or the CHP engines.

If the second digester gas blower also fails, then, all digester gas would need to be directed to the methane gas flares. The permitted amount of methane gas that can be burned through the flares is based on treatment plant flows prior to the closure of the Chesapeake-Elizabeth Treatment Plant. With the closure of the treatment plant, and the subsequent re-routing of most of those flows to ATP, the lack of redundancy of the digester gas blowers puts HRSD at a significant risk of not meeting its permit obligations.

An emergency declaration was authorized by the General Manager on December 20, 2021, to provide necessary repairs that are estimated to cost approximately \$30,000.

AGENDA ITEM 18. – January 25, 2022

Subject: Closed Meeting

Recommended Action: Approve a motion to go into closed meeting to consider the Business Continuity and Disaster Recovery Plan Audit Report as provided for in Code of Virginia §2.2-3711A:

Purpose : Discussion of plan and report
Specific Exemptions : §2.2-3711.A19

Brief: Discussion of plans to protect public safety as it relates to terrorist activity or specific cybersecurity threats or vulnerabilities and briefings by staff members, legal counsel, or law-enforcement or emergency service officials concerning actions taken to respond to such matters or a related threat to public safety; discussion of information subject to the exclusion in subdivision 2 or 14 of § 2.2-3705.2, where discussion in an open meeting would jeopardize the safety of any person or the security of any facility, building, structure, information technology system, or software program; or discussion of reports or plans related to the security of any governmental facility, building or structure, or the safety of persons using such facility, building or structure.

AGENDA ITEM 19. – January 25, 2022

Subject: Reconvened Meeting

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