

HRSD Commission Meeting Agenda
9:00 a.m. – March 22, 2022

In Person for Commissioners and essential staff at the
HRSD South Shore Operations Center, 1434 Air Rail Avenue, Virginia Beach, VA 23455

Electronic attendance via Zoom for all others

Public participation and observation of all HRSD Commission and committee meetings is available electronically via Zoom due to space limitations currently in place to protect the health of the Commissioners, staff and the public. To receive a link for virtual attendance/observation or to request accommodations to attend the meeting in-person, please send your request to Jennifer Cascio at jcascio@hrsd.com 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	Husselbee
2.	Consent Agenda	Bernas
	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	
3.	Eastern Shore Infrastructure Improvements – Transmission Force Main Phase I Additional Appropriation and Approval of Stipulated Price	Husselbee
4.	James River Treatment Plant MIFAS Conversion Emergency New CIP and Initial Appropriation	Husselbee
5.	Western Branch Sewer System Gravity Improvements Initial Appropriation	Husselbee
6.	Jefferson Avenue Interceptor Force Main Replacement Phase III Acquisition Resolution	Husselbee
7.	York River Isolation Valve Replacement Project Acquisition Resolution	Husselbee

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
8.	COVID-19 Wastewater Surveillance Study Update	Mitchell
9.	Unfinished Business	Bernas
10.	New Business	Bernas
11.	Commissioner Comments	Elofson
12.	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@hrsdc.com or by phone to 757.460.7003 and must be received by noon one business day prior to the meeting.	Cascio
13.	Informational Items	Bernas
	a. Management Reports	
	b. Strategic Planning Metrics Summary	
14.	Fiscal Year-2023 Annual Budget Work Session	Bernas

Next Regular Commission Meeting Date: **April 26, 2022 at 1434 Air Rail Avenue, Virginia Beach**

AGENDA ITEM 1. – March 22, 2022

Subject: Awards and Recognition

Recommended Action: No action is required.

Brief: HRSD is pleased to announce the following awards:

- a. American Council of Civil Engineering Companies (ACEC) Virginia 2022 Grand Award

Hazen and Sawyer, the firm which led the Providence Road Offline Storage Facility Woodstock Park Improvements Project, in conjunction with HRSD and the City of Virginia Beach, recently won the ACEC Virginia 2022 Grand Award. The Grand Award highlights projects which showcase engineering excellence through innovation and creativity and exceptional social, economic, and environmental benefits.



- b. Build America Merit Award

The Providence Road Offline Storage Facility Woodstock Park Improvements Project was selected as the winner of the 2022 Construction Risk Partners Build America Merit Award, in the Design-Build Category. The award will be presented during the AGC of America Annual Convention later this month.

AGENDA ITEM 2. – March 22, 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. | Class 8 Vacuum Truck Chassis with Vacuum Body | \$275,179 |
| 2. | Sodium Hydroxide Blanket Purchase Agreement | \$9,278,360 |

c. Task Orders

- | | | |
|----|--|-----------|
| 1. | Central Trunk Interceptor Force Main (IFM) Condition Assessment (SF-119) | \$355,100 |
| 2. | Cyber Security Practice and Procedure Initiative | \$550,000 |
| 3. | High Risk Clamp Replacement Program Phase 1 | \$253,485 |
| 4. | Washington District Pump Station Replacement | \$754,389 |

d. Contract Change Orders

- | | | |
|----|--|----------|
| 1. | Oracle Business for Intelligence Applications (OBIA) and Oracle Business Intelligence Enterprise Edition (OBIEE) Upgrade | \$51,251 |
|----|--|----------|

e. Sole Source

- | | | |
|----|--|--|
| 1. | Cummins Emergency Generator Parts, Repairs, Hardware, and Software Upgrades | |
| 2. | Hamilton Syringe Pumps, Rotary Valves, and Replacement Parts | |
| 3. | Milli-Q® IQ 7000 Purification System Replacement Parts, Maintenance, and Repairs | |

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

- | | | |
|----|--|-----------|
| 1. | Pikrite Vacuum Trailers | \$945,192 |
| 2. | Vaccon Combination Sewer Flusher with Accessories | \$534,848 |
| 3. | VMware Global Support and Subscription Annual Services | \$480,000 |

CONSENT AGENDA ITEM 2.b.1. – March 22, 2022

Subject: Class 8 Vacuum Truck Chassis with Vacuum Body
Contract Award (>\$200,000)

Recommended Action: Award a contract to Atlantic Machinery Inc. in the amount of \$275,179.

CIP Project: GN018100

Budget	\$3,600,000
Previous Expenditures and Encumbrances	(\$2,960,500)
Available Balance	\$639,500

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Atlantic Machinery Inc.	\$275,179

HRSD Estimate: \$250,000

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

Contract Description: This contract is for the purchase of a Class 8 Vacuum Truck Chassis with 7,200-gallon Vacuum Body for use at the Small Communities Division.

Analysis of Cost: Atlantic Machinery Inc. responded to the competitive bid and based their pricing on the Virginia Sheriff's Association contract resulting in a savings of up to 10 percent off market pricing.

CONSENT AGENDA ITEM 2.b.2. – March 22, 2022

Subject: Sodium Hydroxide Blanket Purchase Agreement
Contract Award (>\$200,000)

Recommended Action: Award a blanket purchase contract for Sodium Hydroxide to Univar USA Inc. in the estimated amount of \$1,855,672 for year one with four annual renewal options and an estimated cumulative value in the amount of \$9,278,360.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Univar USA, Inc.	\$1,855,672

HRSD Estimate: \$1,760,615

Contract Description: This contract is an agreement to supply and deliver 50% Sodium Hydroxide solution which is used at treatment plants and in interceptor systems primarily for odor control scrubbers and alkalinity addition.

Analysis of Cost: The previous annual costs from Univar have been at or just below the fiscal year budget projections. The FY-2023 budget projection accounted for a 50 percent increase due to the raw materials market volatility and issues with the trucking and transportation industry. Univar has exceeded that projection by only five percent. Other suppliers feel that they would not be competitive with Univar's rates as Univar has held our contracts for several terms.

CONSENT AGENDA ITEM 2.c.1. – March 22, 2022

Subject: Central Trunk Interceptor Force Main (IFM) (SF-119) Condition Assessment
Task Order (>\$200,000)

Recommended Action: Approve a task order with Bridgeman Civil Inc. in the amount of \$355,100.

Contract Status:	Amount
Original Contract with Bridgeman Civil Inc.	\$0.00
Total Value of Previous Task Orders	\$0.00
Requested Task Order	\$355,100
Total Value of All Task Orders	\$355,100
Revised Contract Value	\$355,100

Task Order Description: This task order will provide all traffic control, labor and equipment necessary to perform exploratory excavation and pipeline inspections at eight sites along the Central Trunk Interceptor Force Main (SF-119). This 63-year-old 36-inch reinforced concrete force main has been identified as a high risk line with a high likelihood and consequence of failure due to its age and known unvented high spots. Pipe Penetrating Radar (PPR) will be used during the inspection to determine the pipe wall thickness. The contractor will replace any corroded hardware found and install air release valves at verified unvented high spots. This effort provides critical information needed to determine the remaining useful life of this pipeline.

Analysis of Cost: This cost is in agreement with the existing Sewer Repair and Condition Assessment contract and other similar projects.

CONSENT AGENDA ITEM 2.c.2. – March 22, 2022

Subject: Cyber Security Practice and Procedure Initiative
Task Order (>\$200,000)

Recommended Action: Approve a task order with Reliaquest, LLC in the amount of \$550,000.

CIP Project: AD012500

Budget	\$15,500,000
Previous Expenditures and Encumbrances	(\$ 4,284,800)
Available Balance	\$11,215,200

Contract Status:	Amount
Original Contract with Reliaquest, LLC	\$1,366,000
Total Value of Previous Task Orders	\$165,600
Requested Task Order	\$550,000
Total Value of All Task Orders	\$550,000
Revised Contract Value	\$2,081,600

Project Description: This project will provide for the development of a sustainable comprehensive framework for secure computing and data management utilizing a variety of hardware, software, and professional contractual services.

Task Order Description: This task order will provide assistance in defining security standards, identifying vulnerabilities/deviations from security standards, and necessity to facilitate remediation of security risks present on the distributed control systems layers and networks at each treatment plant.

Analysis of Cost: The cost of this task order is based on anticipated programs under the Managed Security Provider Services Agreement in accordance with the pre-determined labor rates.

CONSENT AGENDA ITEM 2.c.3. – March 22, 2022

Subject: High Risk Clamp Replacement Program Phase 1
Task Order (>\$200,000)

Recommended Action: Approve a task order with Tidewater Utility Construction Inc. in the amount of \$253,485.

CIP Project: GN18300

Budget	\$455,000
Previous Expenditures and Encumbrances	(\$69,860)
Available Balance	\$385,140

Contract Status:	Amount
Original Contract with Tidewater Utility Construction Inc.	\$0.00
Total Value of Previous Task Orders	\$0.00
Requested Task Order	\$253,485
Total Value of All Task Orders	\$253,485
Revised Contract Value	\$253,485

Project Description: Many of our pipelines have clamps from previous repairs or as a method to make the pipeline system watertight upon installation. The bolts are starting to corrode on these clamps due to the corrosivity of soils in certain areas, which can lead to an unexpected opening of the clamp. A clamp failure acts much like a pipeline failure, as in both cases there is an opening in our pipe. We have started to identify high risk clamps, those that have the greatest likelihood of failure coupled with a high consequence if they were to fail. This program will replace those clamps to minimize this risk. The first phase of this project will replace six asbestos clay repair clamps.

Task Order Description: This task order will provide all traffic control, labor and equipment necessary to perform exploratory excavation and replacement of four clamps on Little Neck Interceptor Force Main(SF-127) that were found to be high risk.

Analysis of Cost: This cost is in agreement with the existing Sewer Repair and Condition Assessment contract and other similar projects.

Schedule:	Design	July 2021
	Bid	October 2021
	Construction	December 2021
	Project Completion	March 2022

CONSENT AGENDA ITEM 2.c.4. – March 22, 2022

Subject: Washington District Pump Station Replacement
Task Order (>\$200,000)

Recommended Action: Approve a task order with Rummel, Klepper & Kahl, LLP (RKK) in the amount of \$754,389.

CIP Project: AT013010

Budget	\$9,400,000
Previous Expenditures and Encumbrances	(\$190,644)
Available Balance	\$9,209,356

Contract Status:	Amount
Original Contract with RKK	\$0
Total Value of Previous Task Orders	\$190,644
Requested Task Order	\$754,389
Total Value of All Task Orders	\$945,033
Revised Contract Value	\$945,033
Engineering Services as % of Construction	10.3%

Project Description: This project will replace the existing Washington District Pump Station as a Phase 2 Rehabilitation Action Plan project requiring completion by May 2025. The existing pump station is outdated and also needs to be raised in elevation to meet the City of Chesapeake's flood plain ordinance.

Task Order Description: This task order will provide design and bid phase services for construction of a replacement pump station and a vactor receiving facility on the existing site in accordance with the approved recommendations from the Preliminary Engineering Report. Pump station replacement is required due to the age of the existing facility. It will be raised to elevation 11 feet to address sea level rise. A vactor receiving facility will assist with handling additional solids which were previously sent to the Chesapeake Elizabeth Treatment Plant.

Analysis of Cost: A total fee of \$754,389 was negotiated which is based on an estimation of hours and existing rates in RKK's annual services contract for Interceptor System Projects. The design fee is 10.3 percent of the estimated construction cost which is reasonable when compared to other similar projects.

Schedule:	PER	August 2021
	Design	May 2022
	Bid	August 2023
	Construction	November 2023
	Project Completion	January 2025

CONSENT AGENDA ITEM 2.d.1. – March 22, 2022

Subject: Oracle Business for Intelligence Applications (OBIA) and Oracle Business Intelligence Enterprise Edition (OBIEE) Upgrade
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with Emtec, Inc. in the amount of \$51,251.

Contract Status:	Amount	Cumulative % of Contract
Original Contract with Emtec, Inc.	\$102,852	
Total Value of Previous Change Orders	\$156,997	175.98%
Requested Change Order No. 5	\$51,251	
Total Value of All Change Orders	\$208,248	202.47%
Revised Contract Value	\$311,100	
Time (Additional Calendar Days)		120

Change Order Description: This change order includes additional work and testing required under Phase two of the OBIA and OBIEE environment upgrade within the Oracle E-Business Suite (ERP). These tasks were not included in the original scope of work. This upgrade is required to stay compatible with the new version of the Enterprise Resource Planning (ERP) system that is scheduled for implementation in April 2022.

Analysis of Cost: The cost of this change order is based on the labor rates set forth in the Managed Support Services Agreement with Emtec and the initial Oracle OBIA upgrade project.

CONSENT AGENDA ITEM 2.e.1. – March 22, 2022

Subject: Cummins Diesel Emergency Generator Parts, Repairs, Hardware, and Software Upgrades
Sole Source (>\$10,000)

Recommended Actions: Approve Cummins Inc. as the provider of repair parts, services, hardware, and software upgrades for Cummins Diesel Emergency Generators in use a HRSD.

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
- Only known source

Details: Service includes hardware and software upgrades for Cummins Diesel Emergency Generators in use throughout HRSD. The diesel emergency generators are critical to continued facility operations in the event of a power outage.

The Commission previously approved limited sole source authority to Cummins for repair parts and services of the Combined Heat and Power (CHP) digester gas generators in use at HRSD. This action supersedes previous actions and expands the scope to cover Hardware and Software Upgrades.

Cummins is the only provider of parts and repairs and does not outsource diesel generator repair services via third party vendors.

CONSENT AGENDA ITEM 2.e.2 – March 22, 2022

Subject: Hamilton Syringe Pumps, Rotary Valves, and Replacement Parts
Sole Source (>\$10,000)

Recommended Action: Approve the use of PSD4 syringe pumps, ceramic rotary valves, and replacement parts by the Hamilton Company for use in “Jarbalyzer” wet-chemical online analyzers 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: HRSD has been pursuing the development and deployment of wet chemical analyzers for the online measurement of ammonia, nitrite, nitrate, and orthophosphate. The motivation for doing this was the consistent dissatisfaction with commercially available probes and analyzers in terms of reliability, cost, maintenance requirements, training, and precision/accuracy. The primary developers of the new HRSD system include Electrical and Instrumentation Specialists, Josh Walker and Arba Williamson, and the new analyzer is affectionately known among HRSD work centers as a “Jarbalyzer” in their honor. The instrument is modular, expandable, normally operates unattended for more than a month without maintenance (and with automatic calibration), integrates directly with plant distributed control systems, is easily maintained, includes a robust sample filtration and delivery, and is cost-effective compared to commercially available products. Although the development and testing effort has taken a few years, the system is now mature and is being deployed; though design improvements continue to be made. Jarbalyzers are in place and being used for process monitoring and control at York River, James River, Boat Harbor, and Nansemond treatment plants, and soon will be installed at several other facilities. In addition, a Jarbalyzer is being used in the interceptor system to provide an early warning for and help track down the source of periodically high loads of phosphorus.

The Hamilton Company PSD4 syringe pumps and ceramic rotary valves are a critical component of the Jarbalyzer system, and the cost of each integrated syringe pump and rotary valve assembly is about \$1,700. With the increase in Jarbalyzer use, the annual purchase of these components will exceed \$10,000. The product includes repair parts.

CONSENT AGENDA ITEM 2.e.3. – March 22, 2022

Subject: Milli-Q® IQ 7000 Purification System Replacement Parts, Maintenance, and Repairs
Sole Source (>\$10,000)

Recommended Actions:

- a. Approve the use of Milli-Q® IQ 7000 Purification system replacement parts by EMD Millipore Corporation at the Technical Service Division.
- b. Approve the use of EMD Millipore Corporation maintenance and repair services for use at the Technical Service Division.

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 replacement Millipak® filters, Milli-Q® IQ/EQ 7000 purification kits, and ech2o TOC lamps. The water purification system is designed to greatly reduce the concentration of contaminants such as suspended particles, viruses, and other contaminants that would negatively impact the quality of daily work. HRSD relies on contaminant free water to verify equipment and practices. The water purification systems are critical to work performed by the Water Quality Department.

Services include bi-annual maintenance and repairs to the Milli-Q® IQ 7000 Purification system.

The Milli-Q® IQ 7000 Purification system was purchased using the University of Virginia cooperative contract in December 2020.

CONSENT AGENDA ITEM 2.f.1. – March 22, 2022

Subject: Pikrite Vacuum Trailers

HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award
(>\$200,000)

Recommended Actions:

- a. Approve the use of the Virginia Sheriff's Association contract for the purchase of six Pikrite Vacuum Trailers from Atlantic Machinery Inc.
- b. Award a contract to Atlantic Machinery Inc. in the amount of \$945,192.

CIP Project: GN018100

HRSD Estimate: \$723,000

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

Contract Description: This contract is for the purchase of six Pikrite Vacuum Trailers with 6500-gallon capacity to be used for biosolids hauling throughout HRSD.

Analysis of Cost: By utilizing the cooperative contract through The Virginia Sheriffs Association, HRSD is receiving 10 percent cost savings.

CONSENT AGENDA ITEM 2.f.2. – March 22, 2022

Subject: Vaccon Combination Sewer Flusher with Accessories
HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award
(>\$200,000)

Recommended Actions:

- a. Approve the use of the Virginia Sheriff's Association contract for the purchase of Vaccon Combination Sewer Flusher with accessories from Atlantic Machinery Inc.
- b. Award a contract to Atlantic Machinery Inc. in the amount of \$534,848.

CIP Project: GN018100

HRSD Estimate: \$600,000

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

Contract Description: This contract is for the purchase of a Vaccon 12-yard Combination Sewer Flusher with accessories for use by the North Shore Interceptors.

Analysis of Cost: By utilizing the cooperative contract through the Virginia Sheriffs Association, HRSD is receiving a 10 percent cost savings.

CONSENT AGENDA ITEM 2.f.3. – March 22, 2022

Subject: VMware Global Support and Subscription Annual Services
HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award
(>\$200,000)

Recommended Actions:

- a. Approve the use of the Fairfax County Contract for IT Hardware, Software and Related Services for purchase of VMware Global Support and Subscription Services from CDW LLC DBA CDW Government LLC.
- b. Award a contract to CDW LLC DBA CDW Government LLC in the amount of \$120,000 for one year with three annual renewal options and an estimated cumulative value of \$480,000.

HRSD Estimate: \$113,000

Contract Description: This contract is for annual licensing and maintenance to support the HRSD server and desktop virtualization environments.

Analysis of Cost: By utilizing the cooperative contract through Fairfax County Contract, HRSD is receiving five percent cost savings.

AGENDA ITEM 3. – March 22, 2022

Subject: Eastern Shore Infrastructure Improvements – Transmission Force Main Phase I
Additional Appropriation and Approval of Stipulated Price

Recommended Actions:

- a. Appropriate additional funding in the amount of \$8,874,611.
- b. Approve a Stipulated Price of \$22,961,728 to the Comprehensive Agreement with Garney Companies, Inc.

CIP Project: ES010100

Budget	\$17,643,040
Previous Expenditures and Encumbrances	(\$16,099,509)
Available Balance	\$1,543,531
Proposed Change Order No. 1 to Garney Companies, Inc.	(\$7,197,028)
Proposed Task Order to HDR Engineering, Inc.	(\$67,915)
Proposed Contingency	(\$1,200,000)
Payment to the Town of Onancock	(\$1,953,199)
Project Shortage/Requested Additional Funding	(\$8,874,611)
Revised Total Project Authorized Funding	<u>\$26,517,651</u>

Project Description: This project will provide for the abandonment of the wastewater treatment plant at the Town of Nassawadox by taking advantage of unused capacity at the Onancock Treatment Plant. A pumping station will be built in the Town of Nassawadox in order to abandon the Town's wastewater treatment plant and a pumping station will be built in the Town of Exmore to receive additional flow. HRSD will replace the Hartman Avenue Pumping Station due to additional flow being added to the existing station in the Town of Onancock.

Funding Description: The original CIP project estimate did not anticipate accepting flow from Accomack County including three pumping stations and approximately 6,000 linear feet of gravity sewer. This request includes a \$1,200,000 contingency to accommodate any additional unforeseen conditions and the negotiated amount for this work is \$7,197,028.

The payment to the Town of Onancock was included in the total project cost because HRSD had to make the payment in order to close the facility and will be reimbursed from the Virginia Department of Environment Quality's Water Quality Improvement Fund grant.

Description and Analysis of Cost: This project is being procured using the Design-Build delivery process. On July 27, 2021, the Commission approved a Comprehensive Agreement with Garney Companies, Inc. with a Contract Cost Limit (CCL) of \$15,764,700.

The CCL price was based on the Basis of Design Report (BODR), which has since been revised. The changes in the BODR are:

1. HRSD is working on an agreement with Accomack County to accept all the following assets owned by Accomack County; gravity sewer, force main (FM), two pumping stations located in the Accomack County Industrial Park, and another located in the Town of Onley. The pumping stations in the Accomack County Industrial Park will be incorporated into the HRSD Eastern

Shore Infrastructure FM project and will incorporate two valves for isolation purposes. There will be a need to Jack and Bore a casing across Langford Highway, Route 13. An off-site FM which serves approximately 23 privately owned grinder pumps which discharge into the FM the Industrial Park currently flows into a gravity sewer located in the Town of Onley. There also is a need to replace approximately six sanitary sewer manholes due to deterioration as well as a cast iron section of gravity sewer. All the gravity sewer owned by Accomack County were installed in 1977 and in need of repair. All existing gravity pipelines will be lined within this contract. There is a need to also replace six sanitary manholes with this project. Four of the six will be replaced with polymer manholes to protect them against corrosion.

2. The Town of Exmore is installing approximately 725 grinder pumps to properties within the town. The pumping station being built by HRSD has become a larger station due to the Town of Exmore's activity. The initial BODR was to only service one pumping station in the Town of Exmore which currently discharges to the town's wastewater treatment plant. With the installation of the grinder pumps, the treatment plant will no longer be needed.
3. HRSD will replace a pumping station in the Town of Onancock at Hartman Avenue. HRSD is in negotiations with the existing property owner for the location of the proposed Hartman Avenue Pump Station. Also, HRSD currently owns and operates the existing wastewater treatment plant. The gravity sewer, which also services the current Accomack County sewer, will also need to be rehabilitated due to condition issues.
4. HRSD will renovate Jackson Street in the Town of Onancock as part of the sewer repair and replacement work.
5. There will be two additional jack and bore crossing two high traffic roadways along Coastal Boulevard and Route 13 Langford Highway in the Town Onley.

The costs were prepared by Garney Companies, Inc. and reviewed by HRSD and HRSD's Owner's Consultant, HDR Engineering, Inc. A breakdown of the revised cost has been provided. Staff agrees and recommends the Comprehensive Agreement be amended to include the new Stipulated Price.

Staff will provide an overview of the project during the meeting.

<u>Schedule:</u>	Design-Build	September 2021
	Substantial Completion	June 2023
	Project Completion	September 2023

AGENDA ITEM 4. – March 22, 2022

Subject: James River Treatment Plant MIFAS Conversion Emergency
New CIP and Initial Appropriation

Recommended Actions:

- a. Approve a new CIP project for the James River Treatment Plant MIFAS Conversion Emergency Project.
- b. Appropriate total project funding in the amount of \$5,000,000.

CIP Project: JR013401

Project Description: This project will modify the James River Treatment Plant (JRTP) integrated fixed-film activated sludge (IFAS) basins 1, 2, 3, 4, 6, 7, and 9 (seven tanks) by adding a second anoxic zone to achieve partial denitrification-annamox (PdNA). The installation in each tank should be identical to the moving-media integrated fixed-film activated sludge (MIFAS) demonstration tank (tank 5).

As part of the James River Treatment Plant Advanced Nutrient Reduction Improvements (ANRI) (JR013400) project, it was decided to upgrade the JRTP aeration tanks from an A20 configuration to a 5-stage with PdNA MIFAS in a newly created second anoxic zone. PdNA MIFAS provides considerable operational cost savings, but more importantly, this is needed to meet nitrogen limits in the future for the James River SWIFT Facility (GN016360) and to meet new total nitrogen discharge requirements. The only time available for PdNA MIFAS construction to occur is immediately before the JR013400 construction project begins to avoid significant conflicts with the larger design-build project performing construction in the same space to upgrade the secondary clarifiers.

Contract Description: This project was declared an emergency on February 11, 2022. HRSD developed a scope of work and sought proposals from several contractors for the various elements of project including structural, mechanical, and electrical work. HRSD selected Crowder Construction Company (Crowder) to perform all the work elements based on a combination of staffing availability and work plan, proposed schedule, and estimated price.

Funding Description and Analysis of Cost: The total cost for this project is estimated at \$5,000,000 based on the Crowder cost estimate, owner furnished equipment, and a 40 percent contingency. The cost estimate has been reviewed by HRSD and is reasonable based on the actual costs to complete the demonstration tank and other proposals received. This proposed Commission action creates and fully funds a new CIP project that will allow all future costs as well as costs already incurred against the JR013400 project to be charged to this CIP project.

<u>Schedule:</u>	Emergency Declaration	February 2022
	Construction	March 2022
	Project Completion	September 2022

AGENDA ITEM 5. – March 22, 2022

Subject: Western Branch Sewer System Gravity Improvements
Initial Appropriation

Recommended Action: Appropriate total project funding in the amount of \$5,100,000.

CIP Project: NP012400

Project Description: This project will rehabilitate and/or replace approximately 5,600 linear feet of gravity pipeline with associated manholes. Pipe diameters range from 15 to 30-inches. Condition assessment activities indicate that these assets present a material risk of failure due to Inflow/Infiltration. The project is included in Phase 2 of the U.S. EPA Consent Decree Rehabilitation Action Plan and must be complete by May, 2025.

Funding Description: The total cost for this project is estimated at \$5,100,000 based on a Class 5 CIP-prioritization level cost estimate prepared by HRSD and includes a 20% contingency. The Preliminary Engineering Report (PER) will be completed by Rummel, Klepper and Kahl, LLP under the Interceptor Systems Projects annual services contract. The fee for the PER is \$89,388 and is below the \$200,000 Commission approval threshold.

<u>Schedule:</u>	PER	April 2022
	Design	October 2022
	Preconstruction	October 2023
	Construction	February 2024
	Completion	September 2024

AGENDA ITEM 6. – March 22, 2022

Subject: Jefferson Avenue Interceptor Force Main Replacement Phase III
Acquisition Resolution

Recommended Action: Adopt the Resolution approving the public use determination and directing acquisition by condemnation, or other means, of permanent and temporary easements as required for the Jefferson Avenue Interceptor Force Main Replacement Phase III project.

CIP Project: JR011730

Project Description: This project will replace approximately 9,000 linear feet of 12-inch, 14-inch and 16-inch HRSD force main (FM) with a new 30-inch force main from the intersection of Route 171 (Oyster Point Road) and Jefferson Avenue to a connection with the existing force main located northwest of Brick Kiln Boulevard within the City of Newport News. A trenchless crossing of I-64 is also required with this force main replacement effort. A number of alignments were considered for the replacement force main during the preliminary engineering design. The Jefferson Avenue corridor is a congested area with numerous businesses located along the proposed replacement route.

As part of the project, a total of 15 temporary and permanent easements are required. Twelve of these easements from ten property owners listed below have not been finalized:

	Address	Tax ID Number
1.	711 Brick Kiln Boulevard	132000203
2.	Kiln Creek Lake 1	No Parcel #
3.	12302 Jefferson Avenue	141000131
4.	12300 Jefferson Avenue	141000113
5.	638 River Bend Court	152000701
6.	12120 Jefferson Avenue	151000508
7.	12130 Jefferson Avenue	151000513
8.	12132 Jefferson Avenue	141000503
9.	900 Bland Boulevard	112000101
10.	12150 Jefferson Avenue	151000505

A Public Hearing was held on February 22, 2022, to review the scope of the project, to define the public need of the project and identify the specific impact to properties where condemnation was being considered and to receive public input. No public comments were received during the public hearing. Staff will continue to negotiate with property owners where possible and condemnation will be utilized only if continued negotiations prove unsuccessful. The attached [Resolution](#) meets the requirements of the Code of Virginia should condemnation be necessary.



RESOLUTION

Providing for the acquisition by condemnation, if necessary, of parcels and/or easements with respect to Jefferson Avenue Interceptor Force Main Replacement Phase III; CIP NO. JR011730

WHEREAS, Hampton Roads Sanitation District (hereinafter “HRSD”), as part of its Capital Improvement Program, is proceeding with the project known as Jefferson Avenue Interceptor Force Main Replacement Phase III; CIP NO. JR011730 (the “Project”), and

WHEREAS, as a part of the said Project, HRSD has determined that it is necessary to acquire certain property and easements (the “Property”) by condemnation (or other means) across the properties identified herein:

	Address	Tax ID Number
1.	711 Brick Kiln Boulevard	132000203
2.	Kiln Creek Lake 1	No Parcel #
3.	12302 Jefferson Avenue	141000131
4.	12300 Jefferson Avenue	141000113
5.	638 River Bend Court	152000701
6.	12120 Jefferson Avenue	151000508
7.	12130 Jefferson Avenue	151000513
8.	12132 Jefferson Avenue	141000503
9.	900 Bland Boulevard	112000101
10.	12150 Jefferson Avenue	151000505

WHEREAS, HRSD provided public notice, duly published in newspapers of general circulation in the City of Newport News, and held a public hearing on this matter at 1434 Air Rail Avenue, Virginia Beach, Virginia on February 22, 2022; and

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

WHEREAS, HRSD has determined that a public necessity exists for the acquisition of the Property for the Project and that the Project is in the public interest;

NOW, THEREFORE, BE IT RESOLVED, on the 22nd day of March 2022, by the HRSD Commission that

1. The Project is approved as a public use, necessary for the construction of an interceptor force main within HRSD’s system; and said Project is further declared to be in the public interest;

2. The acquisition of the Property by purchase or condemnation is necessary for the installation and operation of said interceptor force main and is hereby approved across the properties identified in the aforementioned table;
3. The Property will be used by HRSD in furtherance of its public functions pursuant to the Virginia Code, and that that the acquisition of the Property for that public use: (i) will serve only public interests which dominate any private gain; (ii) are sought for the primary purpose of serving public interests and not private financial gain, private benefit, or an increase in employment; and (iii) otherwise complies with §1-219.1 of the Virginia Code;
4. HRSD previously has made bona fide efforts to acquire the Property from the landowners, but, to date, those efforts have been ineffectual;
5. HRSD authorizes its staff and counsel, respectively, to take all actions for and on behalf of HRSD which are or may be appropriate or necessary for HRSD to acquire the Property through the exercise of its power of eminent domain, including but not limited to, the filing of any papers or pleadings with the applicable circuit court, and other actions related to the initiation of any legal proceedings necessary or appropriate to acquire the Property by eminent domain, *provided, however*, that nothing in this Resolution shall be construed as preventing the continued negotiation by HRSD, its staff, and/or counsel for the acquisition by purchase or other means of the Property before the initiation of any such eminent domain proceedings; and
6. This resolution shall take effect immediately upon its adoption.

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

Frederick N. Elofson, Chair

AGENDA ITEM 7. – March 22, 2022

Subject: York River Isolation Valve Replacement Project
Acquisition Resolution

Recommended Action: Adopt the Resolution approving the public use determination and directing acquisition by condemnation, or other means, of permanent and temporary easements as required for the York River Isolation Valve Replacement project.

CIP Project: YR013900

Project Description: This project will install eight new valves and replace three existing valves on existing force mains in the interceptor system. These valves are main line and branch isolation valves within the force main system from Coliseum Pressure Reducing Station (PRS) to the proposed Tabb PRS and will provide operational flexibility for isolation and flow diversion. A number of options and locations for these valves were considered as part of the preliminary engineering design. The chosen locations were selected due to the location of existing valves that need to be replaced or installed to improve the operational control of the interceptor system.

As part of the project, HRSD will require a total of six temporary and permanent easements. Three easements from two property owners have not been finalized as listed below:

	Address	Tax ID Number
1.	115 Bellgrade Drive, Hampton	6001016
2.	100Z Indian Summer Drive, York County	V02C-1878-1200

A Public Hearing was held on February 22, 2022, to review the scope of the project, to define the public need of the project and identify the specific impact to properties where condemnation was being considered and to receive public input. No public comments were received during the public hearing. Staff will continue to negotiate with property owners where possible and condemnation will be utilized only if continued negotiations prove unsuccessful. The attached [Resolution](#) meets the requirements of the Code of Virginia should condemnation be necessary.



RESOLUTION

Providing for the acquisition by condemnation, if necessary, of parcels and/or easements with respect to York River Isolation Valve Replacement; CIP No. YR013900

WHEREAS, Hampton Roads Sanitation District (hereinafter “HRSD”), as part of its Capital Improvement Program, is proceeding with the project known as York River Isolation Valve Replacement; CIP No. YR013900 (the “Project”), and

WHEREAS, as a part of the said Project, HRSD has determined that it is necessary to acquire certain property and easements (the “Property”) by condemnation (or other means) across the properties identified herein:

	Address	Tax ID Number
1.	115 Bellgrade Drive, Hampton	6001016
2.	100Z Indian Summer Drive, York County	V02C-1878-1200

WHEREAS, HRSD provided public notice, duly published in newspapers of general circulation in the City of Hampton and the County of York, and held a public hearing on this matter at 1434 Air Rail Avenue, Virginia Beach, Virginia on February 22, 2022; and

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

WHEREAS, HRSD has determined that a public necessity exists for the acquisition of Property for the Project and that the Project is in the public interest;

NOW, THEREFORE, BE IT RESOLVED, on the 22nd day of March 2022, by the HRSD Commission that

1. The Project is approved as a public use, necessary for the construction of replacement isolation valves within HRSD’s system; and said Project is further declared to be in the public interest;
2. The acquisition of the Property by purchase or condemnation is necessary for the installation and operation of said isolation valve replacement work and is hereby approved across the properties identified in the aforementioned table;
3. The Property will be used by HRSD in furtherance of its public functions pursuant to the Virginia Code, and that that the acquisition of the Property for that public use: (i) will serve only public interests which dominate any private gain; (ii) are sought for the primary purpose of serving public interests and not private financial gain, private benefit, or an increase in employment; and (iii) otherwise complies with §1-219.1 of the Virginia Code;

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

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

Frederick N. Elofson, Chair

AGENDA ITEM 8. – March 22, 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 9. – March 22, 2022

Subject: Unfinished Business

AGENDA ITEM 10. – March 22, 2022

Subject: New Business

AGENDA ITEM 11. – March 22, 2022

Subject: Commissioner Comments

AGENDA ITEM 12. – March 22, 2022

Subject: Public Comments Not Related to Agenda

AGENDA ITEM 13. – March 22, 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](#)



March 14, 2022

Re: General Manager's Report

Dear Commissioners:

The agreement to acquire the Town of Onancock's collection system was signed on February 18, 2022. Once the six pump stations have clear title and are transferred, HRSD will assume operation, maintenance and ownership of the entire collection system. Staff will continue to work with the Town to obtain clear title to the collection system.

On February 25, HRSD signed a letter of intent with the Town of Chincoteague to take over the private wastewater treatment plant, currently owned by Chincoteague Sunsets. In addition, staff is working with the adjacent Coast Guard facility to potentially accept their wastewater flows.

With only four official days in February as the General Manager, things are off to a great start. I'm hitting the ground running and incorporating many of the ideas I referenced in my interview. Interviews for my replacement are scheduled in March and hopefully, the new leader will start in April. Meanwhile, I am more than happy to continue wearing two hats throughout the budget process as the new leader comes up to speed. As you know, budget season is my favorite time of year. We are also meeting with potential Strategic Planning consultants in March and planning to start the process in the coming months. At our March Commission budget workshop, I plan to illustrate my vision of incorporating strategic planning goals into our budget process. This is in alignment with my goal to improve HRSD's value proposition to our customers. We need to effectively communicate how their bill payments help protect public health and the environment so that future generations will inherit clean waterways.

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

- A. **Treatment Compliance and System Operations:** Staff successfully started running one of our digester gas-fed generators at the Atlantic Treatment plant after being off-line for two years due to the Thermal Hydrolysis Process (THP) startup. This should provide up to 20% of the plant's power and comes at key time of significantly increased power rates. At the Williamsburg Treatment Plant, a new dry activation polymer system was installed, which is reducing our polymer usage by 50 to 60 percent. We will continue to track these projects to quantify the savings as staff are working diligently to help offset seemingly endless inflation pressures. At the King William Treatment Plant, staff reported one weekly Nitrogen permit exceedance due to pH induced nitrification inhibition, which staff corrected with a new chemical feed system. At the Army Base Treatment Plant, the emergency bypass stack was used for more than one hour on two different days due to a power outage and a bad thermocouple which caused an emergency shutdown of the furnace. DEQ was notified as required by the permit.

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

B. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel:

1. Held a kick-off with meeting with the Senior Leadership team
2. Initiated weekly 15-minute briefings with each Director
3. Individual lunches with six Division Leaders to discuss my vision and build relationships
4. A new 15-minute bi-weekly General Manager briefing with over 150 supervisors to communicate my vision and hot topics within the organization – this replaced a weekly 30-minute COVID-specific meeting. Based on feedback, future meetings will include a 15-minute question and answer session.

C. **External Communications:** I participated in the following meetings/activities:

1. Attended a Chesapeake Bay Advisory Board meeting organized by Congresswoman Elaine Luria and updated them on SWIFT's progress
2. Attended the Hampton Roads Planning District Commission (HRPDC) Stormwater Committee meeting specifically to answer MS4 (Municipal Separate Storm Sewer Systems) nutrient trading questions
3. At the monthly Director of Utilities meeting, staff briefed the Localities on the finalized Integrated Plan and existing agreements.
4. The weekly Virginia Association of Metropolitan Wastewater Agencies (VAMWA) legislative update calls

D. **Integrated Plan Update:** Planning and Analysis will be responsible for ensuring compliance with the Integrated Plan. They are in the process of communicating the compliance requirements to the organization through various meetings and an upcoming all-HRSD lunch and learn.

Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth, and the environment. **I look forward to seeing you in person in Virginia Beach on Tuesday, March 22, 2022.**

Respectfully submitted,

Jay Bernas, P.E.
General Manager

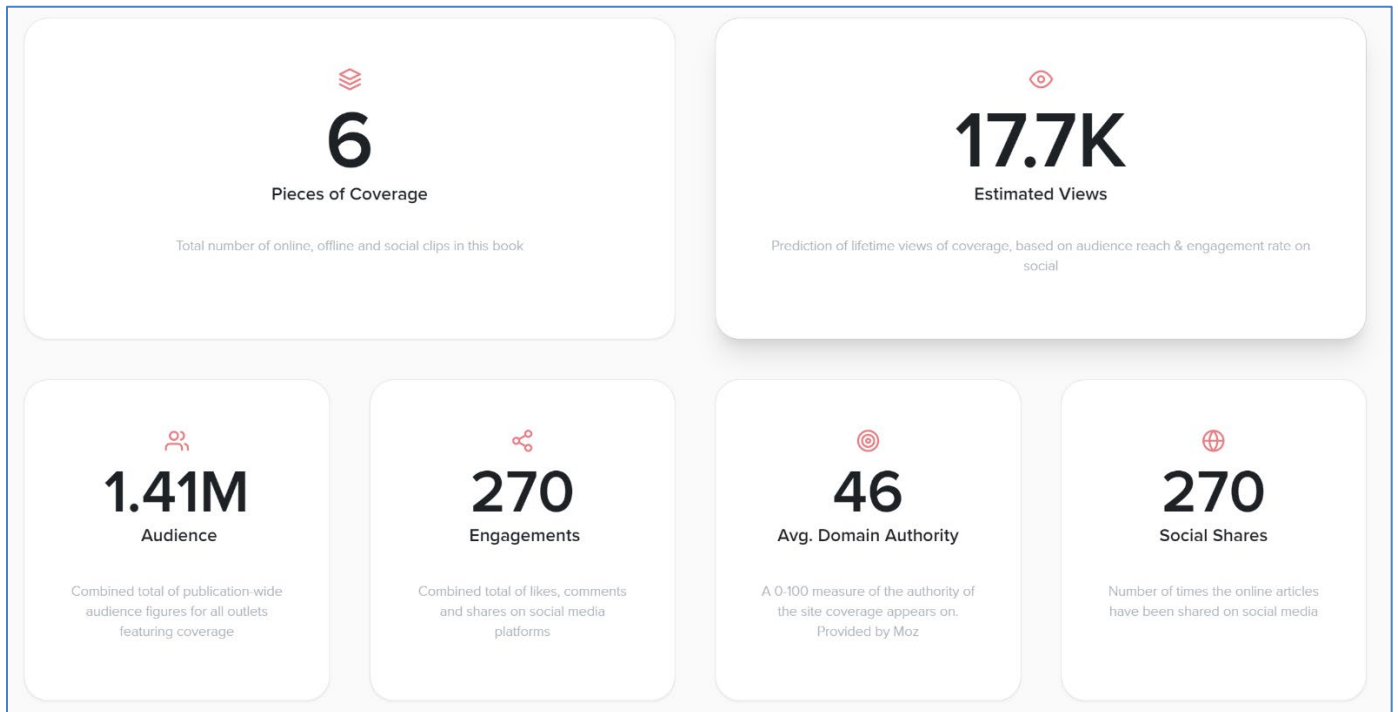
TO: General Manager
FROM: Director of Communications
SUBJECT: Monthly Report for February 2022
DATE: March 8, 2022

A. Publicity and Promotion

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





1. EPA Administrator visits Hardy Pump Station site
2. CDC using HRSD data from COVID-19 tracking in wastewater
3. HRSD expansion into Eastern Shore (Cape Charles explores options)
4. Delayed water and wastewater billing stories (related to late meter readings)

Analysis of February media coverage:



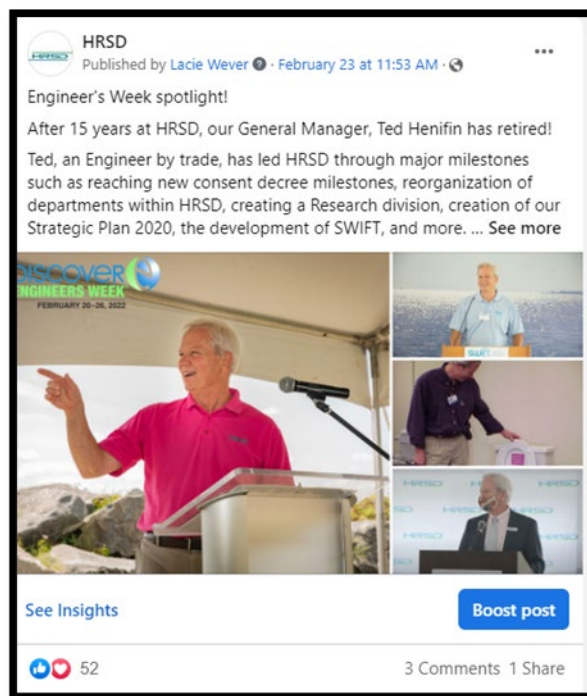
B. Social Media and Online Engagement

1. Metrics

Social Media Metrics February 2022				
METRIC	 FACEBOOK	 LINKEDIN	 TWITTER	 YOUTUBE
Number of Posts *Number of published posts	8 -6	4 -7	9 -9	1:49 average view duration
Number of Followers/Likes *Total number of fans	1,642 +7	5,461 +28	605 +3	450 +207
Engagement *Sum of reactions comments and shares	119 -124	346 +3	40 +16	620 unique viewers +261
Traffic *Total clicks on links posted	0 -70	532 +39	0 +0	4.3% click through +.3%

2. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post



b. Top Tweet



c. Top YouTube Videos

- (1) [The Wastewater Treatment Process](#) (364 views)
- (2) [What is Asset Management? HRSD Celebrates Infrastructure Week | United for Infrastructure](#) (58 views)
- (3) [SWIFT What is the Potomac Aquifer](#) (39 views)
- (4) [Virtual Tour of HRSD's Virginia Initiative Plant Nutrient Reduction Improvement Project](#) (21 views)
- (5) [HRSD Atlantic Treatment Plant Cambi Tour](#) (17 views)

3. Impressions and Visits

- a. Facebook: 7,636 page impressions, 3,365 post impressions reaching 3,240 users and Facebook engagement of 119 (104 reactions, 10 shares and 5 comments)
- b. Twitter: 4,940 tweet impressions; 907 profile visits and 13 mentions
- c. HRSD.com/SWIFTVA.com: 980 page visits
- d. LinkedIn Impressions: 13,907 page impressions and 13,548 post impressions
- e. YouTube: 620 views
- f. Next Door unique impressions: 3,256 post views from three targeted neighborhood posting shared with 3,256 residents

- g. Blog Posts: (0)
- h. Construction Project Page Visits – 1,041 total visits (not including direct visits from home page, broken down as follows:
 - (1) 675 visits to individual pages
 - (2) 366 to the status page

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

- 1. News Releases: 0
- 2. Traffic Advisories: 0
- 3. Construction Notices and or notices to neighbors:1
- 4. Advertisements: 0
- 5. Project Notices: 2 (via mail, reaching 203 residents)
- 6. Project/Community Meetings: 2
- 7. New Project Web Pages: 0
- 8. New Project Videos: 0

D. Special Projects and Highlights

- 1. Director and staff, along with design and construction consultants and representatives from the City of Newport News hosted a virtual open house to answer questions and share James River Treatment Plan Land Improvement design concepts and information with the surrounding communities.

E. Internal Communications

- 1. Director participated in the following internal meetings and events:
 - a. UNIFIED Council check in meeting with leadership and update meetings
 - b. SWIFT Community Commitment Plan Steering Committee meetings
 - c. SWIFT 2022 Industry Outreach Event debrief meetings
 - d. Engineering Week planning meeting
 - e. Meetings with IT to review proposal for SWIFT Community Commitment Plan external facing reporting tool
 - f. Follow up meeting to review final PFAS content and layout for HRSD.com subpage
 - g. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and QST meetings
 - h. Department budget review meeting with General Manager
 - i. Weekly GM check-in 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): 7
 - a. Self-guided SWIFT Virtual Tours – 32 views (analytics specify number of times the “Take a Tour” button was selected)
 - b. 02//2022 – Craddock Middle School outreach (4 classes) | 81 students
 - c. 02/03/22 – Waters Middle School outreach (4 classes) | 61 students
 - d. 02/09/22 – Waters Middle School outreach (4 classes) | 84 students
 - e. 02/10/22 – Churchland Middle School outreach (1 class) | 23 students
 - f. 02/17/22 – Churchland Middle School outreach (4 classes) | 99 students
 - g. 02/18/22 – Churchland Middle School outreach (4 classes) | 94 students
 - h. 02/24/22 – Churchland Middle School outreach (4 classes) | 95 students
2. Number of Community Partners: 1
 - Portsmouth Public Schools
3. Additional Activities Coordinated by Communications Department: 1
 - Peninsula Catholic High School | 282 students
4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	February 2022
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	12
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	53.75
M-5.2	Educational and Outreach Events	Number	7
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 February 2022
DATE: March 8, 2022

A. General

1. Capital Improvement Program (CIP) spending for the seventh month of Fiscal Year (FY) 2022 was below the planned spending target. Discussions continue with the Finance Department to review this CIP spending shortfall, future projections, and impacts to future short-term borrowing.

CIP Spending (\$ million):

	Current Period	FYTD
Actual	9.27	70.70
Plan	26.00	159.90

2. The Engineering Department coordinated several activities for National Engineers Week held February 21-26. This year's theme was "Reimagining the Possible." Activities conducted by HRSD staff included:
 - Speak ENG? – Staff answered a series of online trivia questions about Engineering and related issues. We had 35 individuals participate in the trivia test and Mr. Santino Granato was the winner.
 - Engineers Spotlight – We highlighted six Engineers working at HRSD in various roles and responsibilities. The goal was to highlight their technical accomplishments, interests, and contributions to HRSD.
 - Egg Drop Competition – This was the sixth year of this event. Eleven individuals submitted entries and the eggs were dropped from the Mezzanine in the Interceptor Systems Shop. The winner was Mr. Ricky Keating.
 - Design-Build Challenge – A team was created to act as an Owner/Client, Engineer/Consultant, General Contractor, and Builder/Subcontractor to build the Owner's communicated product. Each team member was only able to communicate within a specific up and down chain of command. Each team's Builder was provided with the needed (and unneeded) building materials for this competition. A virtual audience was able to monitor progress of the building competition and route on the team.

B. Asset Management Division

1. A contractor is assisting HRSD with our annual inspection of certain segments of the interceptor sewer system. Seven segments will be inspected this FY. Four segments will be inspected in the coming month. The final three segments will be inspected later this year. To expose and inspect these buried pipe segments requires both careful coordination and contingency planning. It has already been determined that one of the pipe segments is a concern due to metallic corrosion of the pipe wall, and it will be scheduled for replacement.

2. A software enhancement to provide cost modeling for the Computerized Maintenance Management System (CMMS) is nearly complete. This cost modeling tool will allow for up-to-date replacement costs for various HRSD assets. These replacement costs will consider materials, design, and construction costs with an adjustable annual inflation factor. The use of more accurate costs within CMMS helps to better define when an asset should ultimately be replaced.

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

1. The preliminary design for the Surry Force Main and Pump Station project was recently completed. This project will provide sewer service to the Dominion Energy Surry Power Facility and allow for the elimination of their small wastewater treatment plant. The project will include a new pump station and approximately seven miles of 6" diameter force main pipe. The work will be reimbursed by Dominion Energy and an agreement will be prepared to address the work to be done by HRSD's consultant and contractor already working in the area. This agreement should be ready for Commission approval in the next few months.
2. The work to upgrade several small, privately owned pump stations in the Chesapeake-Elizabeth Plant (CETP) Service Area continues. When the CETP was closed, it was determined that a small group of pump stations (6) required improvements to meet increased pressure conditions. Temporary improvements were installed to allow for closure of the CETP while more permanent improvements could be considered. To date, one pump station has been completed, three are being improved and two are waiting for approval from the property owners before work can begin. This effort should be completed later this Summer.
3. The Nansemond Treatment Plant (NTP) Advanced Nutrient Removal Improvements (ANRI) Phase II project has reached a new milestone. The Design-Build contract was awarded in February to the team of Tetra-Tech and Garney. Discussions have already been held with this team and a project kick-off meeting is scheduled for early March. This project, while not directly related to the SWIFT Program, will allow flow to be delivered from the planned closure of the Boat Harbor Treatment Plant (BHTP) and facilitate the future wastewater treatment needs at the NTP for SWIFT. This project is critical to the planned closure of the BHTP which is scheduled to close by December 2025.

D. Planning & Analysis Division

1. Staff has been tasked with monitoring and reporting on the recently approved US EPA Consent Decree (Amendment No. 5) to reduce sanitary sewer overflows in the region. The most recent effort known as Phase 2 includes \$208 million in Round 1 High-Priority CIP projects, and a \$10 million Pathogen Source Tracking Program. In addition to regular monitoring of program performance goals, a series of reports will be required (quarterly, semi-annual, and annual). This reporting will be provided internally and to VDEQ and the US EPA.
2. Staff is in the process of creating new data visualization screens using the Microsoft PowerBI software program. This data will include sanitary sewer overflow volumes and locations, and related weather conditions. Using one location to view both data types will improve understanding of the relationships between sewer overflows and rain events.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1
 - a. 02/16/2022 – Participated in Engineering Day at B.C. Charles Elementary School in Newport News.
2. Number of Community Partners: 1
 - a. City of Newport News Public Schools
3. Number of Research Partners:
 - a. Water Research Foundation – Holistic Flood Modeling Under Climate Change (WRF-5084)
4. Monthly Metrics Summary:

Item #	Strategic Planning Measure	Unit	February 2022
M-1.4a	Total Training Hours per Full Time Employee (45) - Current Month	Hours / #FTE	0.70
M-1.4b	Total Training Hours per Full Time Employee (45) - Cumulative Fiscal Year-to-Date	Hours / #FTE	17.10
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	1
M-5.4	Number of Research Partners	Number	1

Bruce W. Husselbee, PhD, P.E.

Bruce W. Husselbee, PhD, P.E.

TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for February 2022
DATE: March 10, 2022

A. General

1. Customer Care is thrilled to report \$10,061,335 of funding from the federal Municipal Utility Relief Program (MURP)/American Rescue Plan Act (ARPA) has been successfully applied to over 57,000 HRSD customer accounts, reducing the HRSD Accounts Receivable 90+ days arrearage from \$16.2M to \$8.6M. HRSD also assisted other cities and counties by applying a portion of remaining funds to their respective water and sewer accounts. The distribution of HRSD ARPA funds are as follows:

HRSD Wastewater	\$10,061,334.96
SUFFOLK Water/Sewer	\$178,385.21
Surry County Water/Sewer	\$10,733.92
JCSA Water/Sewer	\$5,522.34
Urbanna Water/Sewer	\$5,080.33
King William Water/Sewer	\$3,134.22
Town of Surry Water/Sewer	\$1,284.10
TOTAL RELIEF	\$10,265,475.08

2. Calls are increasing in February due to ARPA-related activities at the end of the month. We anticipate call levels to continue to increase while Customer Care moves forward with resuming collection activity in the field. Customers will have the option to arrange pay plans of up to twelve (12) months via Call Center agent or website self-service. Resuming collections will follow the same progression of Reminder Letter, Delinquency Letter, and Warning Tag. No customer will go straight to shut-off and the cadence of field activities will start slowly to ensure HRSD has adequate staffing to accommodate the volume. Field Activities are scheduled to resume as follows:

Warning Tags 3/21/2022
Shut-off 4/4/2022

3. A few of our locality partners have indicated difficulties with meter-reading staffing shortages and as such have reverted to estimating meter reads in their system. The impact of this business process typically affects HRSD/HRUBS billing when the updated and accurate meter read is performed and sent to HRSD a month or two later. The HRSD billing system is designed to flag the anomaly and requires manual intervention to prepare the bill. In the coming weeks and months, we anticipate an increase in the bills requiring manual intervention and are planning to shift resources as needed.
4. Water consumption is in-line with our budget projections and ties to our Wastewater Service Charges Budget to Actual. Facility Charges continue to lag last year as new single family permits have slowed down with labor and supply shortages. Interest Income should continue to be below budget as rising interest rates vary inversely with bond values. Materials and Supplies, Chemicals and Utilities are higher compared to

last year due to inflation. Overall, revenues exceed expenses on a budget to date basis, 68% vs 65% respectively, but we expect the gap to close towards the end of the fiscal year with inflation continuing to rise.

B. Interim Financial Report

1. Operating Budget for the Period Ended February 28, 2022

**Hampton Roads Sanitation District
Interim Financial Report
Operating Budget
For the Period Ending February 28, 2022**

	Amended Budget	Current YTD	Current YTD as % of Budget (67% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 336,455,000	\$ 234,388,458	70%	68%
Surcharge	1,600,000	1,050,298	66%	72%
Indirect Discharge	3,200,000	1,972,813	62%	68%
Fees	3,020,000	94,474	3%	-14%
Municipal Assistance	700,000	742,817	106%	62%
Miscellaneous	1,285,000	947,509	74%	53%
Total Operating Revenue	346,260,000	239,196,369	69%	67%
Non Operating Revenues				
Facility Charge	7,320,000	4,592,560	63%	84%
Interest Income	1,210,000	(846,759)	-70%	27%
Build America Bond Subsidy	2,095,000	1,064,842	51%	0%
Other	610,000	480,745	79%	66%
Total Non Operating Revenue	11,235,000	5,291,388	47%	57%
Total Revenues	357,495,000	244,487,757	68%	67%
Transfers from Reserves	17,346,624	11,564,416	67%	85%
Total Revenues and Transfers	\$ 374,841,624	\$ 256,052,173	68%	68%
Operating Expenses				
Personal Services	\$ 62,776,055	\$ 43,382,663	69%	68%
Fringe Benefits	25,173,707	16,175,032	64%	65%
Materials & Supplies	9,509,735	6,094,430	64%	58%
Transportation	1,555,282	865,071	56%	38%
Utilities	12,350,061	8,216,788	67%	61%
Chemical Purchases	9,249,441	5,881,464	64%	51%
Contractual Services	55,345,089	25,142,424	45%	45%
Major Repairs	16,056,857	5,516,841	34%	31%
Capital Assets	655,963	444,507	68%	27%
Miscellaneous Expense	3,137,304	1,761,888	56%	59%
Total Operating Expenses	195,809,494	113,481,108	58%	56%
Debt Service and Transfers				
Debt Service	64,308,209	47,754,945	74%	77%
Transfer to CIP	114,463,921	81,309,280	71%	71%
Transfer to Risk management	260,000	173,336	67%	67%
Total Debt Service and Transfers	179,032,130	129,237,561	72%	73%
Total Expenses and Transfers	\$ 374,841,624	\$ 242,718,669	65%	64%

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended February 28, 2022

HRSD - PROJECT ANALYSIS

February 28, 2022

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2021	Expenditures Year to Date FY2022	Total		Available Funds
				Project Expenditures	Encumbrances	
Administration	77,227,240	27,658,581	1,871,095	29,529,676	1,472,422	46,225,142
Army Base	163,448,800	123,537,916	779,870	124,317,786	1,167,457	37,963,557
Atlantic	143,194,633	82,877,498	4,325,572	87,203,070	2,633,852	53,357,711
Boat Harbor	292,607,594	52,827,281	6,037,973	58,865,254	23,811,363	209,930,977
Ches-Eliz	182,266,229	105,212,456	10,956,749	116,169,205	8,056,951	58,040,073
Eastern Shore	18,093,040	68,570	1,063,676	1,132,246	15,180,908	1,779,886
James River	321,605,591	49,601,157	12,838,643	62,439,800	206,628,542	52,537,249
Middle Peninsula	95,697,822	13,511,974	3,986,174	17,498,148	7,862,291	70,337,383
Nansemond	419,737,392	41,212,618	5,116,188	46,328,806	5,987,199	367,421,387
Surry	58,162,528	26,875,712	10,680,796	37,556,508	4,245,881	16,360,139
VIP	320,618,247	183,421,754	4,235,475	187,657,229	13,085,012	119,876,006
Williamsburg	39,061,010	27,900,712	1,326,851	29,227,563	6,319,697	3,513,750
York River	87,135,847	30,364,487	2,174,310	32,538,797	5,006,066	49,590,984
General	853,205,534	213,776,988	30,648,834	244,425,822	285,095,294	323,684,418
	\$ 3,072,061,507.00	\$ 978,847,704.00	\$ 96,042,206.00	\$ 1,074,889,910.00	\$ 586,552,935.00	\$ 1,410,618,662.00

5. Debt Management Overview

HRSD - Debt Outstanding (\$000's)

February 28, 2022

	Principal			Interest	
	Jan 2022	Principal Payments	Principal Draws	Feb 2022	Payments
Fixed Rate					
Senior	185,172	-	-	185,172	-
Subordinate	599,689	(3,800)	-	595,889	(4,325)
Variable Rate					
Subordinate	50,000	-	-	50,000	(2)
Line of Credit	33,721	-	-	33,721	(14)
Total	\$ 868,582	\$ (3,800)	\$ -	\$ 864,782	\$ (4,341)

HRSD- Series 2016VR Bond Analysis

February 28, 2022

	SIFMA Index	HRSD	Spread to
			SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.33%	0.48%	0.15%
Minimum	0.01%	0.01%	0.00%
As of 2/28/22	0.20%	0.19%	-0.01%

* Since October 20, 2011 HRSD has averaged 48 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended February 28, 2022

HRSD - UNRESTRICTED CASH

February 28, 2022

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	\$ 217,090,621		405
Risk Management Reserve	\$ (4,192,879)	(8)	397
Capital (PAYGO only)	\$ (34,076,801)	(64)	333
Adjusted Days Cash on Hand	\$ 178,820,941		333

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

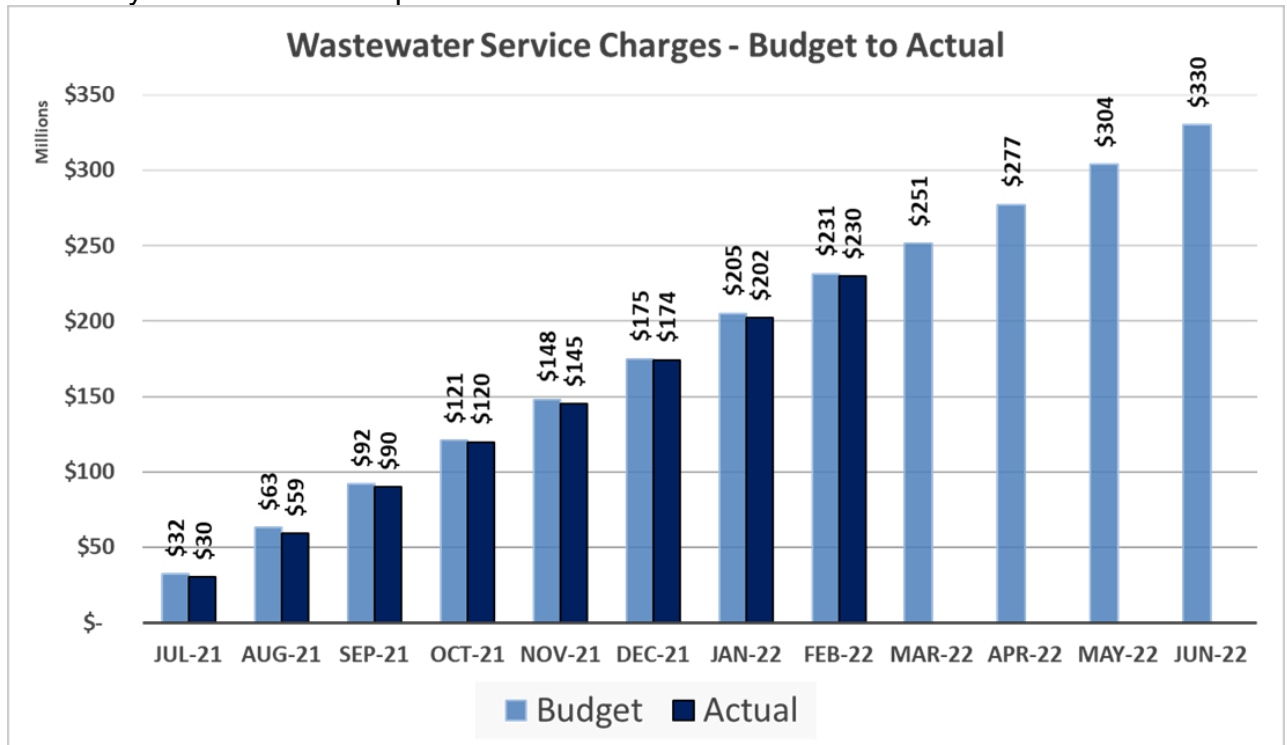
February 28, 2022

Primary Source	Beginning Market Value	YTD	YTD	YTD	Ending Market Value	Allocation of	Credit Quality	Current Mo Avg Yield
	July 1, 2021	Contributions	Withdrawals	Income Earned	February 28, 2022	Funds		
BAML Corp Disbursement Account	30,017,420	327,354,303	327,519,423	25,852	29,878,152	17.2%	N/A	0.55%
VIP Stable NAV Liquidity Pool	108,890,465	50,000,000	15,000,000	77,770	143,968,235	82.8%	AAAm	0.14%
Total Primary Source	\$ 138,907,885	\$ 377,354,303	\$ 342,519,423	\$ 103,622	\$ 173,846,387	100.0%		

Secondary Source	Beginning Market Value	YTD	YTD	YTD	Ending Market Value	Ending Cost	LTD	Yield to Maturity
	July 1, 2021	Contributions	Withdrawals	Income Earned & Realized G/L	February 28, 2022		Mkt Adj	at Market
VIP 1-3 Year High Quality Bond Fund	65,054,203	-	8,722	201,846	64,074,864	63,592,667	482,197	
Total Secondary Source	\$ 65,054,203	\$ -	\$ 8,722	\$ 201,846	\$ 64,074,864	\$ 63,592,667	\$ 482,197	

	Total	Fund Alloc
Total Primary Source	\$ 173,846,387	73.1%
Total Secondary Source	\$ 64,074,864	26.9%
TOTAL SOURCES	\$ 237,921,251	100.0%

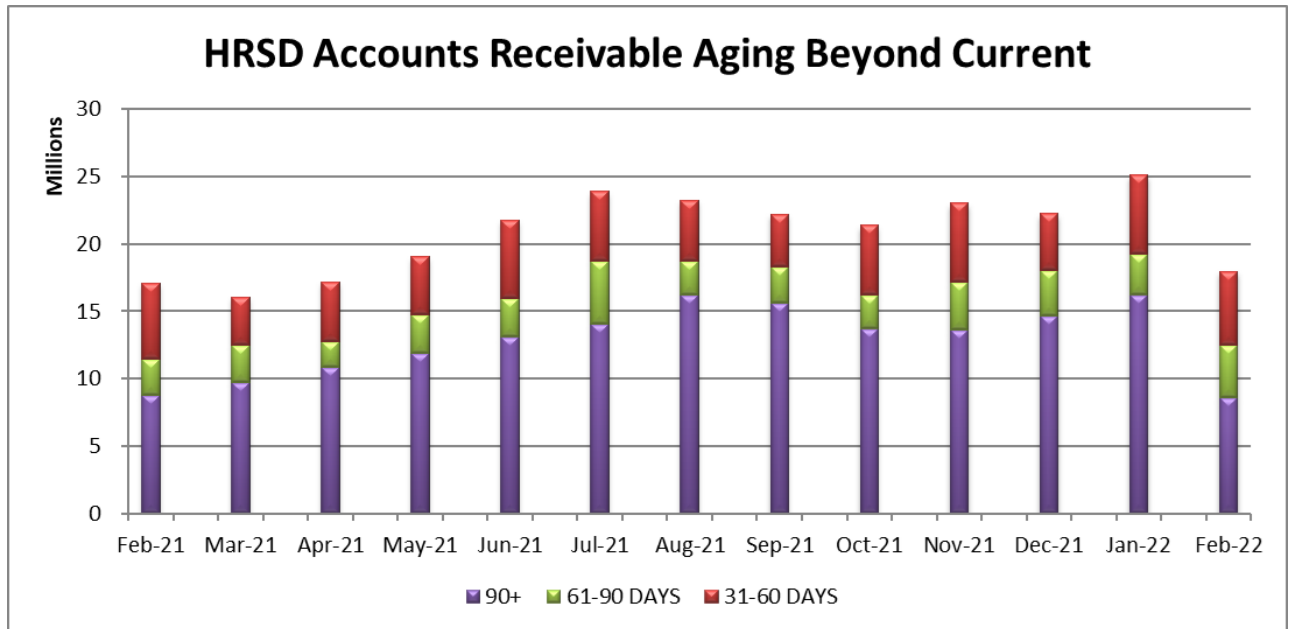
7. Summary of Billed Consumption

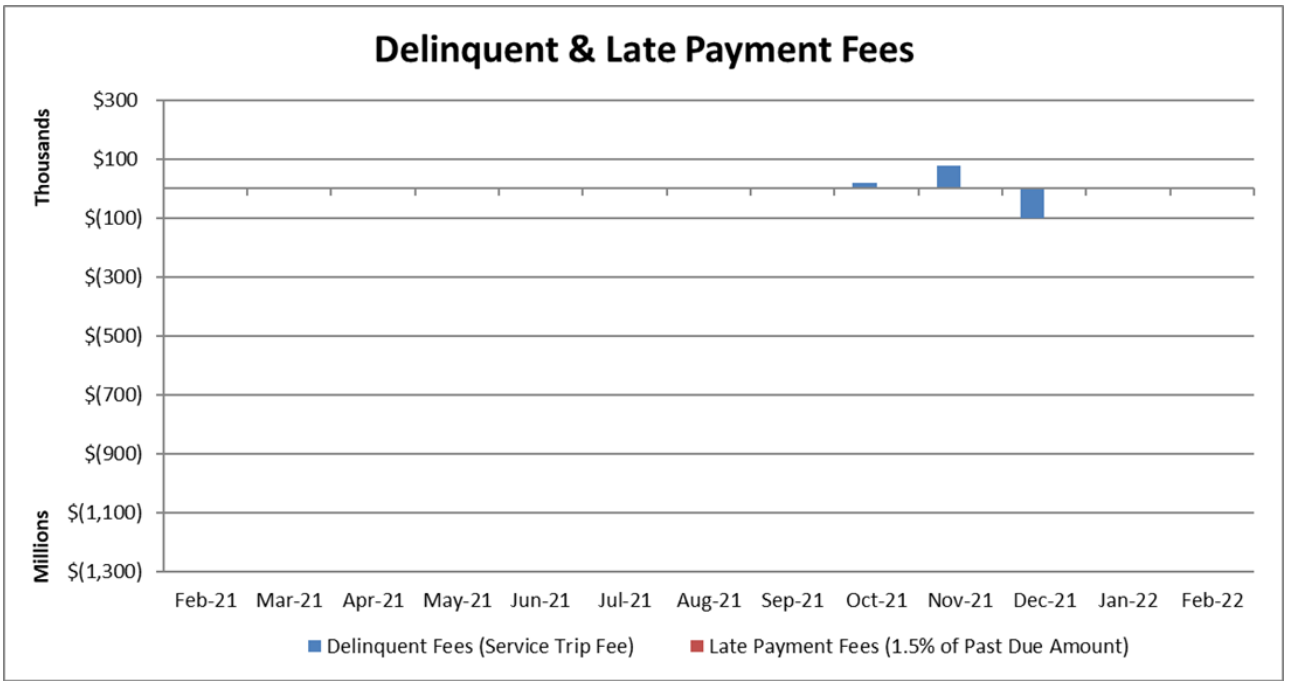


Summary of Billed Consumption (,000s ccf)							
Month	FY2022 Cumulative Budget Estimate	FY2022 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2021 Actual	From FY2021	Cumulative 3 Year Average	From 3 Year Average
July	5,015	4,976	-0.8%	4,751	4.7%	5,006	-0.6%
Aug	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	31,865	-0.7%	32,478	-1.9%	32,116	-0.8%
Feb	36,182	36,187	0.0%	36,068	0.3%	36,110	0.2%
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

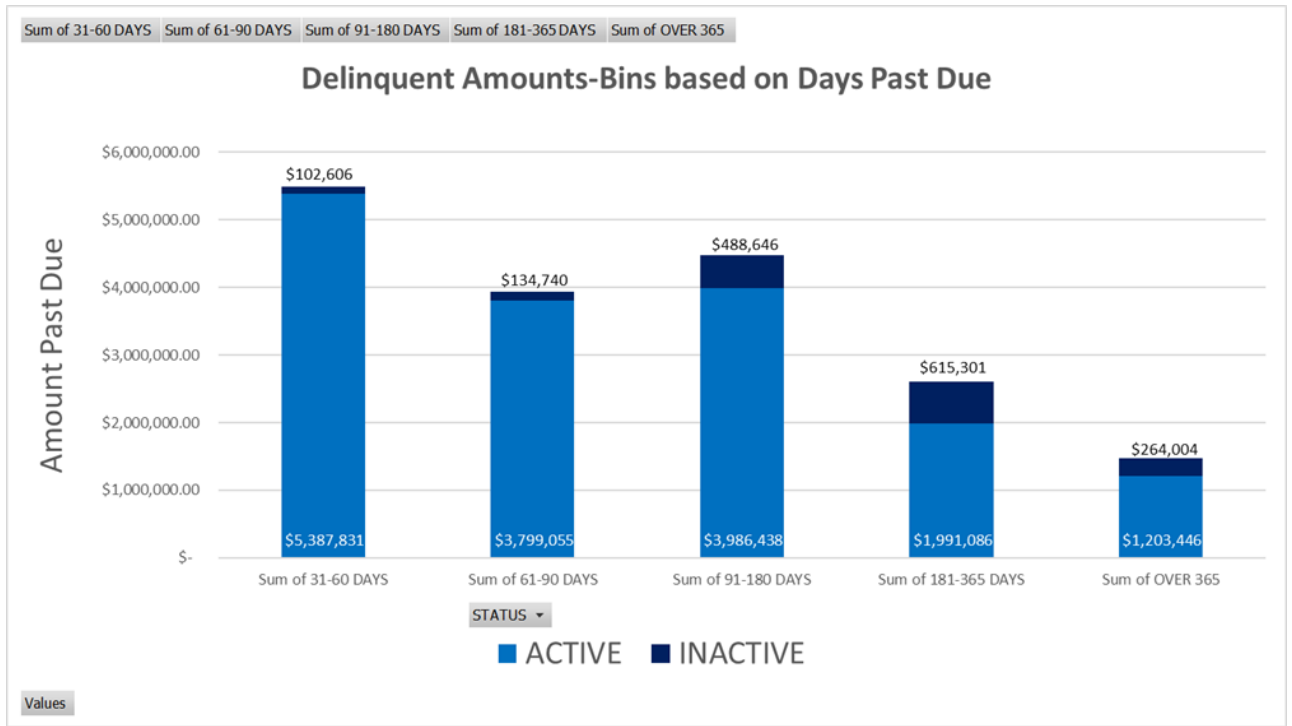
C. Customer Care Center

1. Accounts Receivable Overview

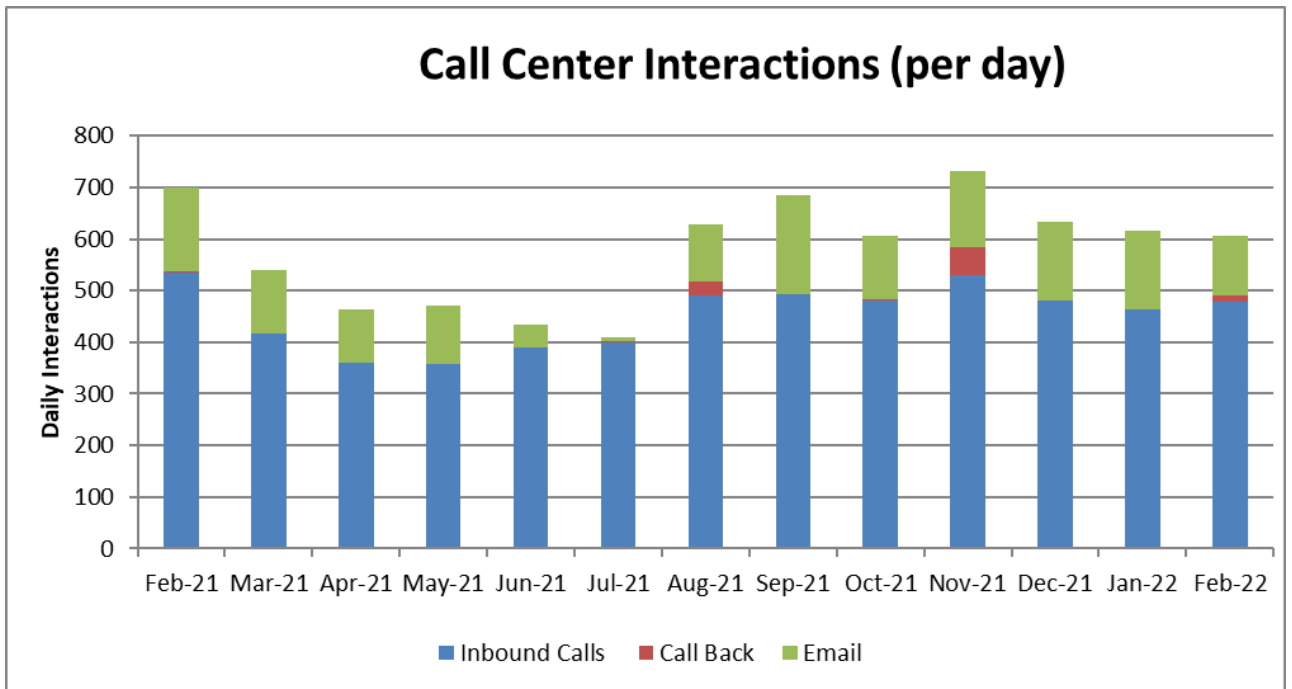
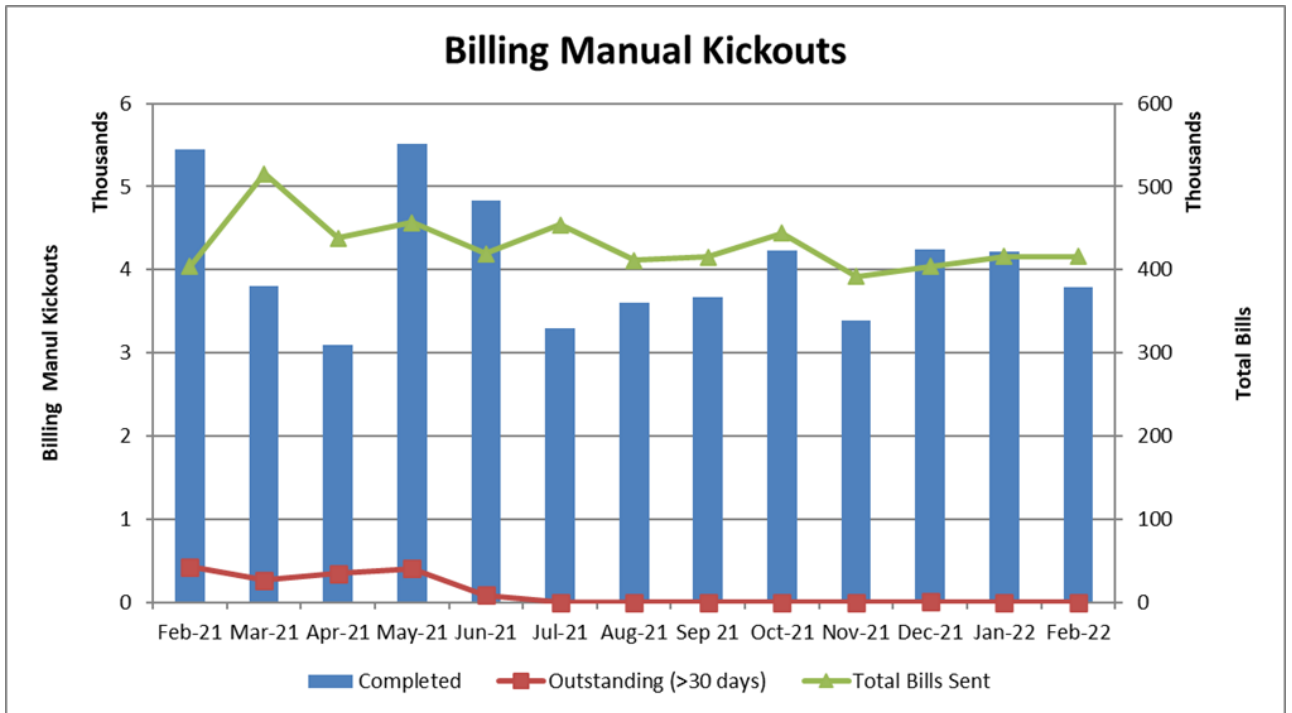


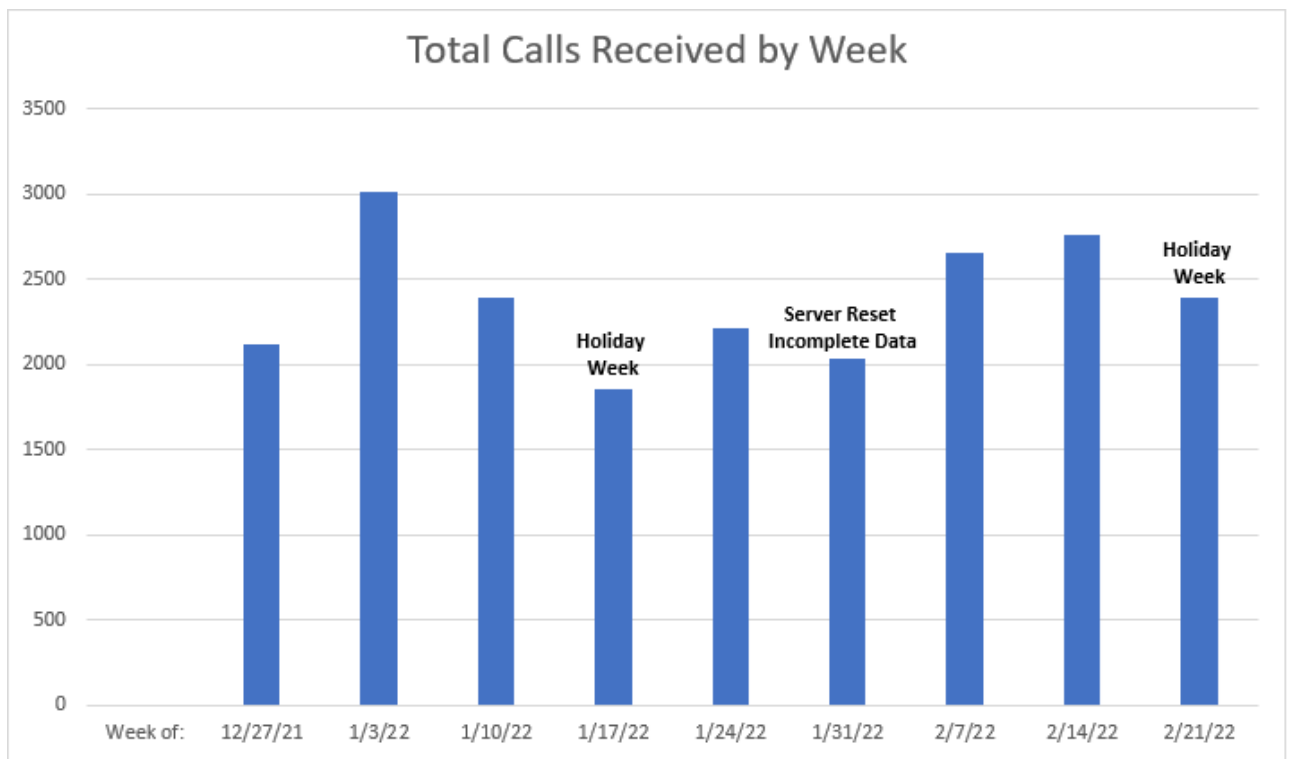


Apr 20-Feb 22 Field Activity was suspended late March 2020 in response to COVID-19.



2. Customer Care Center Statistics





Customer Interaction Statistics	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Calls Answered within 3 minutes	96%	65%	91%	93%	50%	67%	84%	88%
Average Wait Time (seconds)	30	433	57	38	379	193	89	69
Calls Abandoned	4%	23%	6%	4%	22%	15%	9%	6%

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
January	5	3 Caught by the bank, 2 caught by card holder
February	1	Caught by card holder
Total	16	

***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	February 2022
M-1.4a	Training During Work Hours Per Full Time Employee (102) – Current Month	Hours / #FTE	0.27
M-1.4b	Total Training During Work Hours Per Full Time Employee (102) – Cumulative Fiscal Year-to-Date	Hours / #FTE	17.35
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	104%
	General Reserves	Percentage of Operating Budget less Depreciation	107%
	Liquidity	Days Cash on Hand	405 Days
	Accounts Receivable (HRSD)	Dollars	\$36,909,633
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	23%

Respectfully,

Jay A. Bernas

Jay A. Bernas, P.E.

Director of Finance

TO: General Manager
FROM: Director of Information Technology
SUBJECT: Information Technology Department Report for February 2022
DATE: March 9, 2022

A. General

1. Customer Care and ITD staff successfully applied over 10 million dollars in American Rescue Plan Act (ARPA) funds to approximately 57,000 HRSD customer accounts. These funds provided some much-needed relief to many, while substantially reducing account balances 90 or more days past due.
2. The IT Help Desk processed 372 work orders in February, ensuring availability of computing resources to those working locally and remotely.
3. HRSD staff and representatives of the City of Chesapeake officially kicked-off the project which will convert all Chesapeake accounts from Model 2 billing to Model 3 billing. This will provide direct access and use of our billing system to the Chesapeake Department of Utilities for billing of water and wastewater conveyance and treatment services. The project is anticipated to take one year to complete.
4. The Enterprise Resource Planning (ERP) upgrade project is on schedule. Testing and validations are almost complete, with a go-live date of April 12, 2022.
5. Staff continue to work on implementing and integrating new functionality for Microsoft Office 365, Teams, and OneDrive. User's home drives are being migrated from on-premises (Air Rail Avenue data center) to the cloud/OneDrive. Once all accounts' home drives have been migrated, the current on-premises host servers will be taken offline, and decommissioned. In addition to the added collaborative and accessibility features of O365, data will be protected by Microsoft's advanced security management tools, thus enhancing our cybersecurity posture and business continuity capabilities.
6. Staff worked on patching systems, applications, and databases while planning for the upgrade to Microsoft Windows 11.

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	February 2022
M-1.4a	Training During Work Hours Per Full-Time Employee (51) – Current Month	Total Training Hours / # FTE	0.98
M-1.4b	Total Training During Work Hours Per Full-Time Employee (51) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	8.04
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0

Respectfully,

Don Corrado

TO: General Manager
FROM: Director of Operations
SUBJECT: Operations Report for February 2022
DATE: March 9, 2022

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

The contractor for the Supervisory Control and Data Acquisition (SCADA) project successfully installed and tested the replacement and update of all hardware and SCADA software at the NS and Small Communities Division.

2. South Shore (SS) Interceptor Systems

On February 25, a resident informed staff about intermittent odors at the Powhatan Pump Station (PS) in Norfolk. Staff is working to determine the odor source.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

Staff took the #2 raw water influent pump out of service to be rebuilt. The pumps were not inspected in years past due to unsafe and limited access to the pumps. Staff had a contractor install a hoist system that now allows for the safe removal of the pumps.

2. Atlantic Treatment Plant (ATP)

- a. On February 4, the primary influent channel that feeds primaries 5 and 6 overflowed when a mechanical failure occurred in primary clarifier 6 requiring staff to take the primary out of service. Staff closed the influent gate to #6 while flow was still entering the channel from the distribution box resulting in an overflow of about 1,000 gallons that was spilled on the ground. About 200 gallons were recovered.
- b. On February 3 and February 28, staff received odor complaints. Staff investigated each incident and determined that the most likely cause were odors from the solids storage pads. Solids on the pad should be removed from plant site around mid-March.
- c. Staff received a noise complaint this month and discovered that a fan motor for a Combined Heat and Power (CHP) radiator was going bad and there was a harmonic sound emanating from the rental boiler. The CHP fan motor was replaced, and the rental boiler is offline and will be tuned by a contractor before it is returned to service.
- d. Increased flows from the closure of the Chesapeake Elizabeth Treatment Plant coupled with a wet weather event loaded the primary clarifiers with heavy levels

of solids and grit causing the flights and screw collectors to fail on multiple primary tanks this month. With all the work required to repair the primaries to get the units back in service, staff decided to delay the Thermal Hydrolysis Process (THP) annual inspection until the end of the calendar year. The annual inspection is a five-day process and requires coordination with multiple departments and external contractors. Staff will continue to closely monitor primary clarifiers performance over the next few months, especially during wet weather events.

- e. Most of the maintenance staff time for the month was dedicated to the repairs of the aforementioned primary clarifiers. A contractor assisted in the repair of primary clarifier #5 repair since it had the most damage.
- f. Staff shut down the Fats, Oils, and Grease (FOG) receiving facility for two days because the tank had become clogged. Because of the problems with the primary clarifiers, staff stopped receiving FOG at the head of the plant, thus reducing the amount of FOG allowed at the ATP.
- g. Contractors started the new #1 influent screen this month. This is the last of the four influent screens to be replaced for the influent screen replacement CIP. This screen has been running since February 7 with no issues so far. This CIP project has proven to be critical and worth the expense in the number of rags and trash that are removed at the headworks. The downstream equipment is in much better shape because of this new equipment.
- h. Staff successfully restarted one of the CHP generators, after the units were off-line for two years because of the THP project startup and the overhaul of the gas pretreatment system. Running this system will help staff meet its flare gas permit and lower overall power consumption by approximately 20%.

3. Boat Harbor Treatment Plant (BHTP)

- a. Contractors completed the coatings work on the Baleen Trash Collector as part of the final step in preparing for permanent installation. Staff completed the installation of the collector along the rip rap under the Monitor Merrimac Bridge Tunnel. The trash collector was designed by HRSD staff during a sustainability and advocacy event to help remove trash from the small boat channel because of the large amount that accumulates on the rip rap rock underneath the interstate. The collector was designed by a team from both Operations and Water Quality Departments. Staff from the Operations Department built and installed the unit.
- b. Staff replaced deteriorated influent baffle plates on the center column of secondary clarifier #4.

4. James River Treatment Plant (JRTP)

- a. Staff made temporary repairs to a leaking 12-inch gravity thickener supernatant line between the gravity thickeners and the digester.
- b. Contractors for the Sustainable Water Initiative For Tomorrow (SWIFT) Project started drilling a well near secondary clarifier #5 close to the shoreline.

- c. The contractor completed the work on cell #5 of IFAS tank #5. Staff installed media in cell #5 and should have flow on the tank by first week of March.

5. Nansemond Treatment Plant (NTP)

- a. On February 2, staff found and repaired a broken Non-Potable Water (NPW) line, which had resulted in a spill of 6,000 gallons. Because of its location, only about 1,000 gallons could be recovered.
- b. On February 28, a sodium hypochlorite tank valve broke spilling approximately 5,800 gallons of hypochlorite into the containment area. Staff quickly set up pumps and recovered most of the product. There was also a leak detected in the sodium hydroxide line to the struvite recovery facility. The pipe is double walled, and the leak appears to be confined to the inner pipe. Staff will need to set up temporary pumping and investigate the location of the leak. There was also a leak from the seal on a methanol transfer pump into the containment area. The leak was a very small amount and staff flushed the containment area and closed valves to stop the leak. A new seal will be installed on the pump to stop any further leaks.
- c. Sustainable Water Initiative for Tomorrow (SWIFT) Research Center (RC)
 - (1) The total volume of SWIFT recharge into the Potomac aquifer for the month of February was 10.37 million gallons (MG) (53.6% Recharge Time based on 475 gpm).
 - (2) On February 11, staff decreased the recharge flow rate set point from 500 gpm to 475 gallons per minute, since the water level in the aquifer after 12 hours of operations was getting close to the 3/10/2022
 - (3) Operations were interrupted several times to accommodate different scenarios/tests that might help understand better the injectivity issues that SWIFT is experiencing at the well. High Total Organic Carbon (TOC), high chlorine, no chlorine, monochloramines and iron, were some of the main water quality characteristics that were tested.

6. Virginia Initiative Plant (VIP)

- a. On February 12, there was an odor control event when a loss of communication between the Distributed Control System (DCS) and the caustic feed pumps prevented the pumps from controlling scrubber pH properly.
- b. There was an overwhelming amount of grease present in the raw water influent on the afternoon of February 8. Staff from the Water Quality Department reported that there was no evidence of sewer line cleanings by the area cities or grease present in HRSD's pump stations. Staff worked overtime to keep the grease moving through the band screens and compactors. Approximately 10 cubic yards of compacted grease was removed from the influent screening equipment during an eight-hour period. The grease that did pass through the screening system disabled the scum collection systems at the primary clarifier and solids handling

facilities. Primary scum vaults were plugged with grease solids and the scum concentrator drive chain broke under the strain of conveying the solids. Staff hired a contractor to haul grease solids from the primary clarifier scum vaults and the scum concentrator tank. Another 10 yards of solidified grease was pumped from the vaults and concentrator.

7. Williamsburg Treatment Plant (WBTP)

- a. Contractors completed the installation of a new dry activation polymer system. Upon start-up, there was a 50 to 60 percent reduction in polymer usage. Staff will continue to monitor polymer usage over the next several months to evaluate the potential annual cost savings.
- b. Repairs on the Fats, Oils, and Grease (FOG) thickening tank continued. The contractor completed fabricating and installing the new steel rake. Coating of the rake was started and should be complete in early March.
- c. Because of problems with solids in the primary clarifiers at ATP, approximately 10,000 gallons per day of FOG was diverted to WBTP from ATP. To accomplish this, staff received and stored FOG in the FOG water tank. This tank does not have a skimmer to remove FOG floating on top of the water, so once the FOG was received, staff drained water underneath the FOG and pumped concentrated FOG to the incinerator feed tanks.

8. York River Treatment Plant (YRTP)

There was one odor complaint on February 23. Staff investigated and determined that treatment operations and odors were normal on that date.

9. Incinerator Operations Events Summary

- a. Total Hydrocarbon (THC) monthly averages (not to exceed 100 parts per million) were met by all four treatment plants with incinerators with a THC continuous emissions monitoring (CEM) valid data captured of greater than 91 percent.
- b. There were no deviations from the required 129 SSI rule minimum operating parameters and no minor bypass events (<60 minute). There were two bypasses at Army Base Treatment Plant (ABTP) that lasted over an hour and DEQ was notified per Title V permit requirements.

C. Small Communities (SC)

1. Middle Peninsula

a. King William Treatment Plant and Collections

There was a weekly total nitrogen (TKN) permit exceedance for the sample week of February 6, exceeding the weekly TKN permit average of 4.5 mg/l with a value of 9.95 mg/L. During the month of January, staff observed that influent alkalinity levels had fallen to very low values; subsequent process testing showed considerably reduced pH values within the biological process, inhibiting

nitrification. In addition to seeding activities to restore nitrification, staff obtained and installed a new liquid chemical feed system to raise alkalinity and pH. Unfortunately, complications with the new chemical solution necessitated a switch to a dry chemical feed. Alkalinity and pH increased back to the normal range and the plant biological process was restored, however, during the timeframe to find and fix the issue a reduction in nitrification occurred, resulting in the weekly permit exceedance. All other subsequent weekly and monthly TKN permit values were compliant.

2. Eastern Shore

a. Onancock Treatment Plant

- (1) Staff is increasing the laboratory analysis to be more in line with other SC operations.
- (2) Staff responded to numerous breaks, de-ragging of manholes and malfunction of pumps in the collection system this month. Rags and electrical malfunctions are causing most of issues in the collection system.

D. Electrical & Instrumentation (E&I)

1. Staff worked with a contractor, to replace a circuit breaker charging motor for the 4,160 Volt (V) Switchgear at Atlantic Treatment Plant (ATP). Staff discovered the charging motor was operating slower than normal and decided to replace the component. The circuit breaker was tested and returned to normal service.
2. Staff continues to assist Dominion Energy (DE) for new electrical services at various Pump Station's (PS's) that serve apartment complexes. This effort is a result of the Chesapeake Elizabeth Treatment Plant (CETP) closure.
3. Staff discovered the filters on the Jarbalyzer required extensive maintenance due to excessive clogging at NTP. This caused severe issues with the cascade control of the reactor and the accuracy of phosphate sample measurements. Staff designed a new filter system. Bleach filter injection was also added to counteract organic material build up causing the clogging.
4. Staff assisted a contractor with the installation of two Motor Control Center's (MCC's) and air purification and filtration system located in the Headworks Building at YRTP. The MCC copper bus deteriorated due to exposure of hydrogen sulfide (H₂S) gases. As a mitigation strategy, all penetrations and conduits were sealed. The system will be installed by the end of March to remove harmful and corrosive H₂S gases from the electrical room.

E. Water Technology and Research

This month continues a discussion of the factors that affect 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. Last month, mixed liquor settleability was discussed as a factor that affects plant capacity, and

methods for ensuring good settling were considered.

Another factor that affects plant capacity is the need to fully nitrify (convert all the influent ammonia to nitrate) in the aerobic zone of the biological process. Nitrification is carried out by relatively slow growing ammonia and nitrite oxidizing bacteria, and the need to retain these organisms in the process controls the target aerobic solids retention time (SRT). The higher the required SRT, more mixed liquor inventory must be retained, and larger aeration tanks and clarifiers are needed for treatment of a given influent load. This required aerobic SRT is most critical in winter months when nitrifying bacteria are operating at even slower kinetics. Furthermore, it is now well known that there are significant operational cost savings associated with low dissolved oxygen (DO) concentrations in the aerobic zone, but conventional wisdom suggests that higher aerobic SRT is needed at low DO. Two HRSD initiatives are addressing these “required SRT-related” capacity concerns. First, HRSD’s development and demonstration of polishing partial denitrification-anammox (PdNA) has been quite promising, and this technology allows for the discharge of relatively high concentrations of ammonia from the aerobic zone, allowing for decreased required SRT. Second, the new VIP biological nutrient removal pilot facility is entering the final phase of construction with startup expected within a few weeks. The facility will be started with a project targeted at better understanding the acclimation of nitrifying and phosphorus accumulating bacteria to low dissolved oxygen conditions, such as in the case of ammonia versus NO_x (AVN) or ammonia-based aeration control (ABAC), potentially challenging previous understanding that elevated SRT is required for low DO operation.

F. 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	4	4				
2.7	# of PS Annual PMs Performed (SS)	6	6	4	5	2	4	2	10				
2.7	# of Backup Generator PMs Performed (Target is 4.6)	10	13	8	10	8	13	12	12				
2.8	# of FM Air Release Valve PMs Performed (NS)	72	89	184	210	166	251	149	41				
2.8	# of FM Air Release Valve PMs Performed (SS)	124	165	193	269	167	205	211	166				
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	4,047	4,403				
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	0	745				
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	0	0	11,796	0	11,796	24,175	33,133	10,570				

G. Strategic Measurement Data

1. Education and Outreach Events: 2

- a. 02/01/2022 – SWIFT at the Second Annual Nevada Water Reuse Symposium – Germano Salazar-Benites
- b. 02/28/2022 – Plant tour for student Randolph Macon – Christel Dyer

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	February 2022
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (538) – Current Month	Hours / FTE	2.15
M-1.4b	Total Training During Work Hours per FTE (538) – Cumulative Year-to-Date	Hours / FTE	22.27
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	25,704.20
M-2.3b	Planned Maintenance – Preventive and Condition Based	percent of Total Maintenance Hours	58.16%
M-2.3c	Planned Maintenance - Corrective Maintenance	percent of Total Maintenance Hours	19.45%
M-2.3d	Planned Maintenance - Projects	percent of Total Maintenance Hours	22.39%
M- 4.1a	Energy Use: Treatment *Reported for February 2022	kWh/MG	2,460
M-4.1b	Energy Use: Pump Stations *Reported for February 2022	kWh/MG	254
M-4.1c	Energy Use: Office Building *Reported for February 2022	kWh/MG	96
M-5.2	Educational and Outreach Events	Number	2
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 February 2022

DATE: March 9, 2022

A. Talent Management Executive Summary

1. Recruitment Summary

New Recruitment Campaigns	10
Job Offers Accepted – Internal Selections	3
Job Offers Accepted – External Selections	4
Internal Applications	20
External Applications	118
Average Days to Fill Position	70

2. The following activities 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	February 2022	Total (March 2020 – February 2022)
Quarantines due to illness or direct exposure (household or external)	6	422
Work Related Quarantines	0	59
Personal Travel Quarantines	0	59
Confirmed Employee COVID-19 Cases	4	195
Work Related Confirmed COVID-19 Cases	0	6
Contractor COVID-19 Cases on HRSD Sites*	0	12
Vaccine Acknowledgements	5	836
Booster Acknowledgements	21	344

- b. The Human Resources (HR) Business Analyst continued generating reports for Data Analysts to track and update transmission rates across the region. HRSD's current vaccination rate is 99% and 43% of employees have received the booster.
- c. Staff continued addressing multiple Vaccination Policy religious and medical exception requests.

3. Human Resources, Accounting, and Information Technology staff began validation of 2021 Affordable Care Act reporting.
4. Compensation and Benefits

The Compensation and Classification (C&C) team evaluated positions based on Department requests.

5. Wellness Program

- a. Participation

Year Nine Participation Activities	Unit	February 2022	Year to Date (March 2021– February 2022)
Biometric Screenings	Number	302	664
Preventive Health Exams	Number	281	614
Preventive Health Assessments	Number	256	614
Online Health Improvement Programs	Number	261	640
Web-MD Online Health Tracking	Number	58	540
New Challenges	Number	0	428
Fit-Bit Promotion	Number	7	59

- b. Wellness designed a COVID Vaccine Alternative Plan for participants who have an exemption for the COVID vaccine and drafted an email to send to the participants.
 - c. Wellness Participant Requirement Spreadsheet – Wellness continued to review participant information and sent reminder emails to employees and spouses who were missing wellness requirements prior to the end of the wellness year.
 - d. Wellness spent a majority of the month on end of the year wellness activities: fielded phone calls from employees and spouses, answered emails, updated front end with wellness activities, sent out progress emails to participants as front end was updated with their wellness requirements, looked up usernames for the Optima Health website, and added new spouses to the wellness program.
6. Worked with Organizational Development consultant Hicks Carter Hicks (HCH) on the following:
 - a. Conducted a Division Leaders Forum
 - b. Worked with the HRSD sponsor on several Diversity, Equity, and Inclusion (DE&I) strategies
 - c. Worked on the Leadership Ethical Accountability Program (LEAP), Supervisor training program

- d. Facilitated *Appreciative Inquiry Workshops* for the Women in Leadership Program
 - e. Continued working with the Customer Care Division to curate online learning paths, and integration of available Corporate Training courses
 - f. Continued working on the 2022 program and cohort recruitment for the Leadership and Management Academy (LAMA) program
7. Coordinated a cross-sectional team to advance the functionality of Canvas
8. Apprenticeship Program
- a. The new *See Yourself Successful* team continues to review the training conducted in December and make improvements. The training will be facilitated again in August.
 - b. Work continued on the following:
 - (1) See Yourself Successful - Student Success Skills Programs
 - (2) Apprentice Mentoring Program
 - (3) Request for Proposals for a Student Information System and Attendance and Assessment applications
 - c. Several improvements were initiated:
 - (1) Standard Operating Procedures
 - (2) Staff visited work centers to provide Apprenticeship Program information to apprentices and supervisors.
9. Mishaps and Work-Related Injuries Status to Date (OSHA Recordable)

	<u>2021</u>	<u>2022</u>
Mishaps	33	4
Lost Time Mishaps	12	3
<i>Numbers subject to change pending HR review of each case.</i>		

10. The Safety Division updated SARA Title III Tier 1 and Tier II reports for HRSD facilities and submitted to EPA and each city or county's Local Emergency Planning Commissions (LEPC). SARA (Superfund Amendments and Reauthorization Act) Of 1986, title III is also known as the Emergency Planning and Community Right to Know Act (EPCRA). This law sets requirements for facilities that manufacture, process or store certain hazardous chemicals, of a certain threshold level, to report annually to the state and local governments for the basis of community right to know and local emergency planning and preparedness.

11. Safety Division Monthly Activities

Safety Training Classes	28
Work Center Safety Inspections	6
Reported Accident Investigations	4
Construction Site Safety Evaluations	9
Contractor Safety Briefings	4
Hot Work Permits Issued	0
Confined Space Permits Issued/Reviewed	228
Industrial Hygiene Monitoring Events	2

12. Staff participated in the following external activities:

- a. Water Environment Federation (WEF) Utility Management Committee Leadership Workgroup
- b. Virginia Water Environment Association (VWEA) Diversity, Equity, and Inclusion Committee

B. Monthly Strategic Planning Metrics Summary

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

Item #	Strategic Planning Measure	Unit	February 2022
M-1.1a	Employee Turnover Rate (Total)	Percentage	1.29
M-1.1b	Employee Turnover - Service Retirements	Percentage	0.64
M-1.4a	Total Training Hours Per Full Time Employee (17)	Total Training Hours/ FTE	0
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / FTE	18.23
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Community Partners	Number	0

Respectfully submitted,
Dorissa Pitts-Paige
 Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for February 2022
DATE: March 10, 2022

A. General

1. In January 2022, the Pretreatment and Pollution (P3) Division issued an Enforcement Order to X-R-I Testing Company, an x-ray processing facility located in Hampton for technical and administrative violations. The Enforcement Order included a \$2,750 civil penalty invoice. The permittee exceeded the permit limit for silver multiple times in 2021. Exceedances in July and October 2021 resulted in a civil penalty status due to chronic occurrences. The permittee also received administrative violations for failing to provide 24-hour notification of a self-monitoring violation and a late response to a Notice of Violation. A Show Cause meeting was held in December 2021 and the permittee attributed the violations to inexperienced staff. The permittee has installed a larger, improved pretreatment system. The Civil Penalty was accepted and was paid in full in February 2022.
2. The Division of Consolidated Laboratory Services (DCLS) completed the biennial assessment of the Central Environmental Laboratory (CEL) and Whole Effluent Toxicity Testing to meet Virginia Environmental Laboratory Accreditation Program (VELAP) requirements. The virtual assessment required submittal of an extensive data and quality assurance packet for preliminary review. DCLS assessors provided positive feedback on documentation quality and analyst competence. Less than ten minor findings related to documentation were identified for corrective action.
3. Revised Industrial Wastewater Discharge Regulations and Enforcement Response Plan were submitted to the Virginia Department of Environmental Quality (DEQ) for review and for a determination of substantial versus non-substantial changes. A determination of substantial changes requires a public comment period before regulations are final.
4. The York River Virginia Pollution Discharge Elimination System (VPDES) draft permit was received and accepted by HRSD with minor comments. The public notice began February 28th and will end on March 30th. The permit will be issued with an April 1 effective date if there are no significant public comments.
5. P3 worked closely with Operations to address challenges with Fats, Oils and Grease (FOG) discharges from waste haulers. The Williamsburg FOG station remained closed through February and treatment issues at Atlantic and Nansemond Treatment plants (TPs) necessitated a new distribution of FOG loads. Significant staff time was required to coordinate with Operations and haulers to ensure FOG loads were distributed to prevent disruption to operations at Atlantic, Nansemond and Boat Harbor TPs. The Williamsburg FOG receiving facility re-opened March 1st.
6. Stacie Crandall, Chief of the Laboratory was elected for a second three-year term to The National Environmental Laboratory Accreditation Council (NELAC) Institute Board

of Directors. The board provides oversight for the development of consensus-based accreditation standards, strategic planning, approval of accreditation bodies, and advocates for training and advancement of accreditation programs.

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy (SEA) Group performed the following:
 - a. Presented the Boat Harbor TP Trash Collection project to the Hampton Roads Planning District Commission's (HRPDC) Recycling and Beautification Committee. The project was designed and built by HRSD employees across numerous work centers and works to pull trash from the waterway daily.
 - b. Announced and finalized a volunteer event to plant approximately 450 Loblolly Pine trees on HRSD property near the Atlantic TP, the second phase of an afforestation and meadowing project that will add to the more than 90 hardwood and shrub species planted in Fall 2021.

C. Municipal Assistance

HRSD provided sampling and analytical services to Hanover County, Northumberland County, Westmoreland County, the City of Chesapeake, and the Town of Lawrenceville to support monitoring required for respective VPDES permits and to the City of Chesapeake to support Microbial Source Tracking projects.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 4
 - a. 2/2/2022 – Technical Services staff presented HRSD science-related opportunities for Christopher Newport University's (CNU) *Wednesdays-for-Work* science career program.
 - b. 2/11/22 - Stacie Crandell, Chief of the Laboratory participated on a Public Works podcast, focused on public works careers and professional development.
 - c. 2/24/22 – Director of Water Quality attended a virtual presentation and discussion on PFAS given by Dana Gonzales, Treatment Process Engineer at a Garden Club of Virginia Conservation and Beautification committee meeting.
 - d. 2/28/2022 & 3/1/2022 - Angela Kilgore (P3 Supervising Specialist), James Sabo (P3 Manager) and Mike Martin (Chief of P3) presented at the 2022 Virginia Water Environment Association (VWEA) Industrial Waste & Pretreatment Conference, providing information on HRSD's Hauled Waste Program and on a HRSD case study involving methods for tracing a TP upset through a pressurized collection system.
2. Community Partners: 3
 - a. The City of Chesapeake, Chesapeake Local Health District and the Virginia Department of Health - Local COVID-19 wastewater surveillance

- b. Lynnhaven River Now -water quality trend analysis of citizen monitoring data
 - c. Hampton Roads Planning District Commission - Fats, Oils & Grease subcommittee
3. Odor Complaints:
- See attached [Effluent and Air Emissions Summary](#) for details.
4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	February 2022
M-1.4a	Training During Work Hours Per Full Time Employee (119) (Current Month)	Total Hours / # FTE	5.28
M-1.4b	Total Training During Work Hours Per Full Time Employee (119) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	36.69
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	6:40,586
M-3.2	Odor Complaints	#	3
M-3.4	Pollutant Removal	Total Pounds Removed	120,825,576
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	15%
M-5.2	Educational and Outreach Events	#	4
M-5.3	Community Partners	#	3
	Average Daily Flow	Total MGD for all Treatment Plants	141.47
	Pretreatment Related System Issues	#	0

Respectfully submitted,
Paula A Hogg
 Director of Water Quality

EFFLUENT SUMMARY FOR FEBRUARY 2022

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	CONTACT TANK EX
ARMY BASE	8.29	46%	4	4.5	1	3	0.25	0.34	4.4	3.9	7
ATLANTIC	42.46	79%	11	8.7	2	<1	NA	NA	NA	NA	6
BOAT HARBOR	13.78	55%	12	13	2	4	0.57	0.49	22	20	5
CENT. MIDDLESEX	0.006	22%	<2	2.4	<1	<1	NA	NA	NA	NA	NA
JAMES RIVER	13.70	68%	6	5.0	1	1	0.44	0.77	8.2	9.0	5
KING WILLIAM	0.050	50%	<2	4.3	NA	1	0.32	0.43	4.1	3.6	NA
NANSEMOND	15.78	53%	4	3.9	1	1	0.45	0.56	4.3	4.4	0
NASSAWADOX	0.013	13%	2	7.4	1	1	0.31	0.35	19	16	NA
ONANCOCK	0.160	21%	<2	<1.0	1	2	0.22	0.28	1.2	1.3	0
SURRY, COUNTY	0.043	66%	5	2.8	NA	NA	NA	NA	NA	NA	0
SURRY, TOWN	0.044	73%	7	15	NA	27	NA	NA	NA	NA	NA
URBANNA	0.034	34%	7	11	3	5	1.4	0.83	28	18	NA
VIP	26.17	65%	5	2.9	1	<1	0.20	0.22	3.0	3.3	1
WEST POINT	0.385	64%	25	6.8	1	3	3.1	2.8	20	18	0
WILLIAMSBURG	7.59	34%	5	3.5	1	1	0.72	0.69	3.9	3.7	0
YORK RIVER	12.97	86%	1	<1.0	<1	<1	0.33	0.29	4.8	5.0	1
	<u>141.47</u>										

	% of Capacity
North Shore	58%
South Shore	56%
Small Communities*	40%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY22	YTD	Projection	CY22
	%	Lbs	%	%	Lbs	%
James River	9%	2,426,632	68%	7%	207,671	66%
York River	14%	264,099	92%	13%	16,641	86%
Rappahannock	11%	NA	NA	2%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY22 to Date: 6:40,586
Pounds of Pollutants Removed in FY22 to Date: 120,825,576
Pollutant Lbs Discharged/Permitted Discharge FY22 to Date: 15%

	Rainfall (inch)		
	North Shore (PHF)	South Shore (ORF)	Small Communities (FYJ)
Month	1.37"	1.62"	1.30"
Normal for Month	2.96"	2.91"	2.81"
Year to Date Total	7.35"	7.09"	6.57"
Normal for YTD	6.47"	6.12"	6.33"

*Small Communities includes Eastern Shore

AIR EMISSIONS SUMMARY FOR FEBRUARY 2022

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	0	0	0	0	0	0	2	36	91	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	8	99	0
VIP	0	0	0	n/a	0	0	0	0	41	98	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	0	18	100	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:	0
Odor Complaints Received:	3
HRSD Odor Scrubber H2S Exceptions:	3

Items of Interest – February 2022

MULTIPLE HEARTH INCINERATION (MHI)

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all four MHI plants (Army Base, Boat Harbor, Virginia Initiative, and Williamsburg) with a THC continuous emissions monitoring (CEM) valid data captured of greater than 91%.

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

Army Base required the use of the emergency bypass stack for more than one hour on February 15 and 20. On the 15th, utility power was lost to the plant while on the 20th a thermocouple malfunctioned causing an emergency shutdown of the furnace. In both instances, the operator completed a partial burnout of the furnace until needed repairs were made to then resume normal operation. DEQ was notified per Title V permit requirements for both events.

AIR PERMITS and ODOR CONTROL

HRSD received three odor complaints and had three hydrogen sulfide (H₂S) plant odor wet scrubber exceptions in February.

Atlantic received two odor complaints from one of our trusted Ocean Lakes neighbors. She stated odors were very strong and reached complaint level on February 3 7:25AM and February 28 9:42PM. Plant staff and TSD investigated and were unable to identify the source of the odors. She also provided us reports or observations of other minor odors during the month.

York River received an odor complaint on February 23 at 10:55 PM from a neighbor across the street from the plant on Back Creek Road. She said she smelled a strong sewer smell and a strong chemical smell both inside and outside of her house for an hour. Plant Ops and TSD responded the morning of the 24th and could not determine the source of the odors or her complaint from the night before. She was given the plant's operator on duty phone number to report future after hours complaints.

TREATMENT

DEQ was notified of the following reportable events:

Atlantic

On February 4, the operator on duty was taking Primary Clarifier #6 offline. The influent gates to the clarifier were closed but the gate at the distribution box remained open. This caused a buildup of wastewater in the influent channel leading to the clarifier which eventually overflowed up through the channel covers and down the sides of the channel to ground. After the overflow was detected the distribution box gate was adjusted and secured to stop the overflow. Drain covers were placed over storm drains. Dried residual solids on the ground were manually removed to the storage pad. Approximately 1000 gallons of PCI were released, with 200 gallons recovered; the remaining 800 gallons soaked into the ground.

Nansemond

On February 2 a Non-Potable Water (NPW) line was isolated to repair a cracked valve. When repressurized, the NPW line leaked upline of the repair. The NPW line was secured and repaired. Approximately 6,000 gallons of NPW were released, with 1,000 gallons recovered. The remaining 5,000 gallons of NPW soaked into the ground.

SYSTEM

There were no reportable events during this month.

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

King William

This facility reported one weekly TKN permit exceedance for the sample week of February 6th, exceeding the weekly TKN permit average of 4.5 mg/l with a value of 10 mg/l. During the month of January, a decrease in the influent alkalinity was observed and subsequent process testing showed a drop in pH values within the biological process which inhibited nitrification. Plant personnel undertook seeding activities to restore nitrification and installed a new liquid chemical feed system to increase the alkalinity and pH. The alkalinity and pH were increased to within the normal range and the plant biological process was restored. However, during the time it took to find and fix the issue, a partial reduction in nitrification occurred resulting in the weekly permit exceedance. All other subsequent weekly TKN values, and the monthly TKN value, were in permit compliance.

2022 Metals, Ammonia, and TKN

		Limit	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Central Middlesex	Ammonia	0.56	0.03	NA										
	TKN	3.0	<0.50	NA										
King William	Zinc	*	75	NA										
	TKN	3.0	1.3	2.6^										
	Cadmium	2.0	<0.50	<0.50										
Nassawadox	Copper	23	<5.0	<5.0										
Riverside	Nickel	38	17	23										
	Zinc	150	<50	<50										
	Ammonia	1.7	2.2^	0.09										
Onancock	Copper	12	2.0	NA										
	Ammonia	0.90, 2.0	0.29	0.16										
Surry County	Copper	5.9	3.0	2.0										
	Zinc	56	24	33										
	Ammonia	0.77	NA	NA	NA	NA	NA					NA	NA	
	TKN	3.0	0.55	NA										
Town of Surry	Copper	12	2.0	6.0										
	Zinc	39	14	12										
	Ammonia	4.5	0.11	0.10										
	TKN	6.7	2.0	1.9										
Urbanna	Ammonia	3.83, 9.08	7.76	0.05										

*No limit. Treatment objective 53 ug/L

Units: TKN, Ammonia: mg/L. Metals: ug/L

^ NR Monthly average 2.2, weekly Jan 23 3.4

^ KW Monthly average 2.6, weekly Feb 6 9.95

2022 MONTHLY FLOW AVERAGES

	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR AVG	FY AVG
Army Base	8.38	8.29											8.34	7.97
Atlantic	42.47	42.46											42.47	32.64
Boat Harbor	15.64	13.78											14.71	11.61
C.Middlesex	0.005	0.006											0.005	0.006
Ches-Eliz	0.00	0.00											0.00	7.97
James River	14.47	13.70											14.08	12.84
King William	0.064	0.050											0.057	0.066
Lawnes Point	0.000	0.000											0.000	0.000
Nansemond	16.32	15.78											16.05	15.51
Nassawadox	0.020	0.013											0.016	0.012
Onancock	0.177	0.160											0.17	0.189
Surry, County	0.047	0.043											0.045	0.041
Surry, Town	0.043	0.044											0.044	0.034
Urbanna	0.041	0.034											0.038	0.048
VIP	25.64	26.17											25.90	23.37
West Point	0.433	0.385											0.409	0.367
Williamsburg	8.25	7.59											7.92	8.14
York River	14.08	12.97											13.53	11.16
North Shore	52.45	48.03											50.24	43.74
South Shore	92.81	92.70											92.76	87.45
Small Communities	0.83	0.73											0.78	0.76
TOTAL	146.09	141.47											143.78	131.96

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



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

I. Projects in Process

Model 3 Billing

- **Tasks Completed (February 2022)**
 - Obtained management's feedback
 - Updated report as necessary
- **Upcoming Tasks (March 2022)**
 - Issue final report

Unifier/ERP Integration

- **Tasks Completed (February 2022)**
 - Continued test procedures
- **Upcoming Tasks (March 2022)**
 - Finalize testing
 - Conduct findings validation meeting
 - Prepare draft report

Grant Management

- **Tasks Completed (February 2022)**
 - Conducted preliminary meetings with Engineering, Finance, Customer Care, and Water Technology and Research
 - Evaluated preliminary objectives
- **Upcoming Tasks (March 2022)**
 - Present preliminary objectives
 - Conduct formal kick-off

Risk Assessment Refresh

- **Task Completed (February 2022)**
 - Continued risk assessment activities
- **Upcoming Tasks (March 2022)**
 - Present draft audit plan
 - Finalize risk assessment



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
Biosolids Recycling	10/8/16	June 2022	7	1	8
Treatment Plant Operations	10/15/18	July 2022	8	1	9
Safety Division	9/12/19	March 2022	0	2	2
Pollution Source Control	6/2/20	March 2022	3	5	8
SWIFT Program	2/24/2021	March 2022	0	12	12
Fleet Services	2/24/2021	March 2022	0	17	17
Succession Planning	6/4/2021	July 2022	0	4	4
D&C: CIP Project Management	5/11/16	Closed	13	0	13
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
Permitting	2/4/20	Closed	2	0	2
Payroll	3/27/20	Closed	3	0	3
Customer Care Division	7/26/19	Closed	4	0	4
Totals			84	42	126

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	
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	
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	
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	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	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	Jan-22	Feb-22
	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	120.8	141.5
	Industrial Waste Related System Issues	Number	0	3	6	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%	104%	104%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%	72%	82%	84%	92%	94%	95%	104%	112%	117%	119%	108%	104%	107%	107%
	Accounts Receivable (HRSD)	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	\$44,943,904	\$36,909,633	
	Aging Accounts Receivable	Percentage of receivables greater than 90 days		21%	20%	18%	19%	21%	20%	18%	18%	17%	18%	29%	36%	23%	
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	2:52491	9:53236	9:58338	2:60879	9:60879	23:60879	5:35513	6:40586	
M-3.2	Odor Complaints	Number	0	6	2	7	11	5	9	7	6	9	15	31	3	3	
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	107,695,395	120,825,576	
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%	25%	22%	25%	22%	22%	20%	22%	17%	17%	18%	15%	15%		
M-5.2	Educational and Outreach Events	Number		302	184	238	322	334	443	502	432	367	256	145	44	50	
M-5.3	Number of Community Partners	Number		280	289	286	297	321	354	345	381	293	230	128	8	7	

AGENDA ITEM 14. – March 22, 2022

Subject: Fiscal Year-2023 Annual Budget Work Session

Recommended Action: No action is required.

Brief: Staff will present key components of the Fiscal Year-2023 budget as a continuation of the budget preview provided in February. The following topics will be covered:

- Operating Revenues
- Operating Expenses