



COMMISSION MEETING MINUTES
February 23, 2021

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Chair Elofson called the virtual meeting to order and Ms. Cascio read the roll call of HRSD Commissioners.

Name	Title	Present for Item Nos.
Elofson, Frederick N.	Commission Chair	1-15
Lynch, Maurice P.	Commission Vice-Chair	1-15
Glenn, Michael E.	Commissioner	1-15
Lakdawala, Vishnu K.	Commissioner	1-15
Levenston, Jr., Willie	Commissioner	1-15
Rodriguez, Stephen C.	Commissioner	1-15
Taraski, Elizabeth	Commissioner	1-15
Ward, Molly Joseph	Commissioner	1-15

1. **Awards And Recognition**

Action: No action required.

Brief:

a. **Service Awards**

The Commission recognized Ms. Jamie Heisig-Mitchell who marked her 20th year of service with HRSD on February 20, 2021. Jamie was hired in February 2001 as Water Quality Investigator and was promoted to Water Quality Specialist in April 2001. In March 2002, she was promoted to Water Quality Supervising Specialist, then to an Environmental Scientist in April 2006. She was again promoted in January 2012 to Chief of the Technical Services Division, the position she currently holds. Jamie holds both a Bachelor of Science degree and a master's degree in biology from Old Dominion University. Jamie has been key in securing regulatory approval for SWIFT aquifer recharge demonstration project at the Nansemond Treatment Plant. She represents HRSD on the VAMWA Board, is President of Virginia Biosolids Council, is a graduate of Kenan Flagler Water and Wastewater Leadership program, alumna of both the Virginia Natural Resources Leadership Institute and the Hampton Roads Civic Leadership Institute. Jamie is also a member of United Way's Women United leadership society.



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b. New Employee Introduction

Dan Holloway was recently hired to fill the role of HRSD's first Hydrogeologist in support of the SWIFT program. Dan is a Professional Geologist and earned his BS in Geology from James Madison University and his MS in Geology from ODU. For the past 18+ years, he was employed with Jacobs (previously CH2M) where he led projects for multiple municipal water and wastewater utilities. As an expert in Coastal Plain hydrogeology, he has been actively engaged in the SWIFT program since its inception in 2015, guiding us through the feasibility evaluations and taking us forward into full-scale implementation. He has represented HRSD at countless outreach events and public meetings. He has proven invaluable in our transition to the full-scale program and we're delighted to have him join us as an official member of HRSD.

Attachment: None

Public Comment: None



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2. **Consent Agenda**

Action: Approve the items listed in the Consent Agenda.

Moved: Vishnu Lakdawala

Seconded: Maurice Lynch

Roll call vote:

Ayes: 8

Nays: 0

Brief:

a. Approval of minutes from previous meeting.

b. Contract Awards

1.	Atlantic Treatment Plant Influent Screens 1 – 3 Replacement Contract Award	\$2,608,200
	Task Order	\$341,185

2.	Cleaver-Brooks Steam Boiler Rental	\$585,000
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c. Task Orders

1.	South Shore High Point Air Vent Installation Phase I	\$600,375
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d. Sole Source

1.	Goulds Hydro-Solids Centrifugal Pumps and Parts
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2.	Viking Flights and Chains
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Item(s) Removed for Discussion: None

Attachment: #1

Public Comment: None



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3. **COVID-19 Municipal Utility Relief Program Update**

Action: No action required.

Brief: In early January, HRSD received \$8.7 million in Coronavirus Aid, Relief and Economic Security (CARES) Act funding as part of the Commonwealth's COVID-19 Municipal Utility Relief Program. This program is designed to help customers experiencing an economic hardship get back on track by providing assistance funds for overdue water, sewer, electric and gas bills. The deadline for providing utility assistance was originally January 29, 2021, but this has been extended to December 31, 2021.

HRSD advertised this program through its website, social media channels and by distributing approximately 60,000 door hanger notices within three weeks with the help of localities. Customers impacted by COVID-19 were encouraged to apply for relief either online or through a third-party call center contracted for this effort. HRSD's application deadline was January 29, 2021. Approximately 18,000 valid applications were received and \$6.8 million was applied to past due accounts. HRSD will use the remaining funds when utility shut-offs begin this summer. This will coincide with new payment plan programs that are currently being implemented. Staff provided an update at the meeting.

Discussion Summary: The Commission and staff discussed response time to utility shutoff notices; tax liability and request for private IRS ruling; and relief payments by jurisdiction. The Commission concurred with staff's recommendation to not seek reimbursement for administrative costs for administering the program and use the funds instead for customer assistance. Administrative costs will be absorbed by savings expected by debt service cost.

Attachment: #2

Public Comment: None



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4. **Educational Outreach during the COVID-19 Pandemic**

Action: No action is required.

Brief: Leila Rice, Director of Communications, and Lacie Wever, Community Education and Outreach Specialist, provided the Commission with an update sharing how HRSD's educational outreach efforts have adapted and continued through the course of the COVID-19 pandemic.

Attachment: [#3](#)

Public Comment: None



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5. **Elizabeth River Project – Sponsorship of Research Pier**

Action: Approve sponsorship with naming rights of the Elizabeth River Project’s Research Pier at their new Resilience Lab on Colley Avenue in Norfolk at the \$300,000 level.

Moved: Willie Levenston

Seconded: Maurice Lynch

Roll call vote:

Ayes: 8

Nays: 0

Background: HRSD has a long history of partnership with the Elizabeth River Project (ERP). We share the same vision, that future generations will inherit clean waterways. The ERP has focused on partnerships with businesses and residents on the river and within the watershed. They have had tremendous success and are moving to the “Next Wave” with a focus on resiliency. The three key elements in this initiative are building a resilience lab on Colley Avenue in Norfolk on Knitting Mill Creek, a tributary of the Lafayette River within the watershed of the Elizabeth; expanding the Beazley River Academy at Paradise Creek in Portsmouth; and a new Youth Resilience Strategy focused on expanding educational opportunities on the ERP Learning Barge.

In 2010 HRSD partnered with ERP to get the River Star Home initiative off the ground. The concept was to increase personal accountability for ensuring a clean river with homeowners within the watershed. HRSD funded the first ERP River Star Home position at ERP as well as developing and producing the initial education materials and recognition flags. This program has been extremely successful with thousands of River Star Homes within the watershed and similar programs in other watersheds modeled after the ERP success.

In 2015 HRSD partnered with ERP to fund a portion of the education building at Paradise Creek Nature Park in Portsmouth. Our funding provided build out of the bathrooms, where we were able to design and install educational graphics to tell the HRSD story and our positive impact on the Elizabeth.

Recently ERP reached out to HRSD with yet another opportunity to partner. With construction of their new Resilience Lab, ERP plans to build a research pier in Knitting Mill Creek. This pier will be home to VIMS continuous water quality monitoring equipment while increasing access to students at Norfolk State and Old Dominion to studies focused on river water quality – a live laboratory. Old Dominion University is relocating its Institute for Coastal Adaptation and Resilience to a University owned building across Colley Avenue from the ERP Resilience Center. The goal is to develop an eco-corridor along this stretch of Colley Avenue.

With HRSD leading the region in water quality monitoring and related science, our partnership in this project fits perfectly with our mission and vision. A visible presence at this exciting new facility will provide HRSD with a platform to highlight our leadership in water quality science. Staff recommends we partner with ERP in this effort and provide the funding for the research pier. More details can be found at <https://elizabethriver.org/thenextwave>.



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Discussion Summary: The Commission and staff discussed the differences between naming opportunities and the Environmental Improvement Fund Grant program. They also discussed guidelines on funding including distribution of payment over several years. Previous sponsorship opportunities include Paradise Creek Park (\$75,000) and River Star Homes (\$100,000).

Commissioner Glenn stated he lives near this facility and he fully supports their mission. The partnership with ODU, the community, the Elizabeth River Project and HRSD will do a lot of good and the money will be well spent.

Attachment: None

Public Comment: None



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6. **Central Trunk Interceptor Force Main Section A (SF-119) Failure
New CIP and Initial Appropriation**

Actions:

- a. **Approve a new CIP project (CE012300) for the Central Trunk Interceptor Force Main Section A (SF-119) Failure**
- b. **Appropriate total project funding in the amount of \$650,000**

Moved: Stephen Rodriguez

Seconded: Willie Levenston

Roll call vote: **Ayes:** 8 **Nays:** 0

CIP Project: CE012300

Project Description: This appropriation request establishes a CIP for an emergency project that will be completed in April 2021.

On February 5, 2021, the City of Virginia Beach reported a force main break near the intersection of Independence Boulevard and Hinsdale Street. The 36-inch reinforce concrete pipe (RCP) force main failed either from a defect when the pipe was manufactured or installed or perhaps damage from a nearby excavation or an errant directional drill by another utility at some point in the past. The failure leaked approximately 281,000 gallons into a storm drain leading to Thalia Creek, a tributary of the Western Branch of the Lynnhaven River.

Staff isolated the leak by operating mainline valves and pumping and hauling at City of Virginia Beach pump stations. The contractor, Bridgeman Civil, Inc., was called due to the depth of the pipeline, complexity of the traffic control, and the difficulty of the roadway installation. All three southbound lanes of Independence Boulevard were closed due to the break. Bridgeman Civil, Inc. immediately mobilized on-site, replaced the failed section of pipe, and repaired the comprised roadway section.

An emergency declaration was authorized on February 10, 2021.

This emergency was declared to utilize the Pump and Haul Services contractor, Atlantic Heating and Cooling Service Inc., for pump and haul services use the Prompt Repair On-Call Services contractor, Bridgeman Civil, Inc., to establish required traffic control, complete repairs on the force main, provide supplemental pump and haul, provide CCTV, clean the storm system and roadway median affected by the spill, and make all necessary roadway repairs and use the On-Call General Engineering consultant, Hazen and Sawyer, to provide construction administration and inspection.



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Funding Description: The total cost for this project is estimated to be \$650,000 based on a Class 5 cost estimate. The scope of this cost estimate includes costs for the pump and haul services, traffic control, force main repairs, CCTV, restoration, roadway repairs, and construction administration and inspection. These estimates have been reviewed by staff and are considered reasonable. The proposed Commission action creates a new CIP project that will allow future costs as well as all costs already incurred against the Operations Department budget for this emergency to be charged to the CIP project.

<u>Schedule:</u>	Emergency Declaration	February 2021
	Construction	February 2021
	Project Completion	April 2021

Attachment: None

Public Comment: None



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7. **LaSalle Avenue Boat Harbor to York River Interconnect Force Main Initial Appropriation and Contract Award**

Actions:

- a. **Appropriate total project funding in the amount of \$8,112,000.**
- b. **Award a contract to Kimley Horn and Associates, Inc.**

Moved: Maurice Lynch

Seconded: Elizabeth Taraski

Roll call vote: **Ayes:** 8 **Nays:** 0

CIP Project: YR014200

Type of Procurement: Competitive Negotiation

Proposers	Technical Points	Recommended Selection Ranking
Kimley Horn and Associates, Inc.	90.50	1
Michael Baker International	90.13	2

Contract Description: This contract is for Preliminary Engineering Report (PER) phase services. A Public Notice was issued on November 1, 2020. Seven firms submitted proposals on January 6, 2021 and all firms were determined to be responsive and fully qualified, responsible, and suitable to the requirements in the Request for Proposals. Two firms were short listed, interviewed and technically ranked. The Professional Services Selection Committee recommends the firm of Kimley Horn and Associates, Inc. whose professional qualifications and proposed services best serve the interest of HRSD.

Project Description: This project will involve the study, design and construction of 10,000 linear feet of 30-inch interceptor force main (IFM) from the intersection of LaSalle Avenue and Victoria Boulevard to the intersection of LaSalle Avenue and Mercury Boulevard in Hampton. A gravity interconnect will be installed between this new force main (FM) and gravity line Ivy Home Shell Road Sewer Extension Division 1 and an interconnect between the proposed FM and the existing LaSalle Avenue Sanitary Sewer IFM to allow for system flexibility.



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This project is needed to shift peak flows currently in the Boat Harbor Treatment Plant (BHTP) service area by diverting these flows through the Coliseum Pressure Reducing Station (PRS). This project will maximize the wet weather capabilities at the York River Treatment Plant while minimizing the peak flows within the Boat Harbor system in preparation for the scheduled future shutdown of the BHTP. This project, along with the proposed storage tanks at Coliseum PRS, will allow for flows from the Bridge Street and Victoria Boulevard Pump Station service areas to be diverted north through the Coliseum PRS.

Analysis of Cost: The total cost estimate for this project is \$8,112,000 and is based on an AACE Class 5 cost estimate completed by HRSD. The estimated project cost consists of construction costs of \$6,220,000 combined with an engineering services estimate of \$754,000 and approximately a 16.5% project contingency of \$1,138,000. A fee of \$182,528 was negotiated for the PER phase services. This cost is in agreement with other similar efforts from other firms.

Schedule:	PER	March 2021
	Design	July 2023
	Bid	April 2024
	Construction	July 2024
	Project Completion	May 2026

Attachment: None

Public Comment: None



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8. **COVID-19 Wastewater Surveillance Study Update**

Action: No action is required.

Brief: Staff presented the latest data and status of the COVID-19 surveillance work including United States daily cases and 7-day average through February 17, 2021; regional trends including number of COVID-19 clinical cases in Hampton Roads and viral load at HRSD facilities; a spatial look at the last five weeks; and clinical and wastewater signal association..

Discussion Summary: Since not all cases are reported, Commissioner Rodriguez asked if there was a way to quantify the estimated number of people infected. The prevalence estimated model and the linear relationship model can be used to estimate cases. In the linear relationship model, the wastewater data can explain 91 percent of the variability in the clinical data. The relationship between the clinical case study and the viral load is very strong, suggesting the lag in clinical data response is reduced. However, the residual signal is a confounder as there could be a long shedding rate. The prevalence estimated model is a better model which is solely based on wastewater data, concentration in wastewater, assumed shedding rate and flow. HRSD has begun validating assays against variants of interest (UK, South Africa).

Attachment: [#4](#)

Public Comment: None



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9. **Unfinished Business**

Legislative Update – The updates to the Enabling Act was passed by the House of Representatives on February 3, 2021 and is through the Senate. It is expected to be signed into law by the Governor in the next couple of weeks and will be effective on July 1, 2021. In addition, House Bill 2129 related to the floating cap with the Watershed Implementation Plan (WIP) 3, is moving through the Senate now. This bill will define a clear path for meeting the bay TMDL.

10. **New Business** – None

11. **Commissioner Comments**

Commissioner Lynch requested the Commission be notified of line breaks prior to reading about it in the newspaper. Staff apologized for the oversight.

12. **Public Comments Not Related to Agenda** – None

13. **Informational Items**

Action: No action required.

Brief: The items listed below were presented for information.

- a. [Management Reports](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)
- e. [Emergency Declarations](#)
 - (1) [Central Trunk Interceptor Force Main Section A Failure](#)
 - (2) [20-Inch Force Main Ocean View Via Granby Street \(West Bay Avenue and St. George Avenue\)](#)

Attachment: [#5](#)

Public Comment: None



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14. **Closed Meeting**

Action: Motion to go into Closed Meeting to consider acquisition of real property for a public purpose located in the City of Newport News as provided for in Section 2.2-3711A (Specific exemption: Va. Code §2.2-3711.A3)

Moved: Willie Levenston

Seconded: Vishnu Lakdawala

Roll call vote: **Ayes:** 8 **Nays:** 0

Brief: Discussion or consideration of the acquisition of real property for a public purpose, where discussion in an open meeting would adversely affect the bargaining position or negotiating strategy of the public body.

15. **Reconvened Meeting**

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

Roll call vote: **Ayes:** 8 **Nays:** 0

Attachment: None

Public Comment: None

16. **Announcements**

- The Finance Committee will meet on March 4, 2021 via Zoom to review the draft Capital Improvement Program for FY 2021-2030.

Next Commission Meeting Date: March 23, 2021

Meeting Adjourned: 10:37 a.m.

SUBMITTED:

APPROVED:

Jennifer L. Cascio
Secretary

Frederick N. Elofson, CPA
Chair

HRSD Commission Meeting Minutes
February 23, 2021

Attachment #1

Agenda Item 2. Consent Agenda

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

Subject: Atlantic Treatment Plant Influent Screens 1 – 3 Replacement
Contract Award (>\$200,000) and Task Order (>\$200,000)

Recommended Actions:

- a. Award a contract to MEB General Contractors, Inc. in the amount of \$2,608,200.
- b. Approve a task order with HDR Engineering, Inc. in the amount of \$341,185.

CIP Project: AT014500

Budget	\$3,910,000
Previous Expenditures and Encumbrances	(\$492,505)
Available Balance	\$3,417,495

Type of Procurement: Competitive Bid

Bidder	Bid Amount
MEB General Contractors, Inc.	\$2,608,200
Clark Construction, LLC	\$2,622,327
American Contracting and Environmental Services, Inc.	\$2,688,000
Crowder Construction Company	\$2,787,900
Ulliman Schutte Construction, LLC	\$2,816,000

Engineer's Estimate: \$4,186,136

Contract Status:	Amount
Original Contract with HDR	\$335,439
Total Value of Previous Task Orders	\$0
Requested Task Order	\$341,185
Revised Contract Value	\$676,624
Engineering Services as % of Construction	26%

Project Description: This CIP project will replace three influent screens at the Atlantic Plant. Each new screen will also have a new compactor and washer included as part of the installation. This project is needed to improve performance of the headworks of the Atlantic Plant so that it can handle the additional flow coming from the Chesapeake Elizabeth Plant in 2021. Also, the improved performance of the screens will ensure the new thermal hydrolysis process will work correctly and not cause excessive maintenance problems for the plant staff.

Contract Description and Analysis of Cost: In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised on January 10, 2021 and five bids were received on February 9, 2021. All bids were very competitive and were within 5 percent of the average bid price. The construction industry is very competitive in certain work categories resulting in multiple bids and very competitive pricing, including labor and material costs. The Engineer's Estimate did not account for this competitive nature, which resulted in a higher estimate of price. The Engineer's Estimate also included a COVID-19 markup due to the uncertainty of the ongoing pandemic. The COVID-19 markup was originally assumed to be 5 percent of the overall construction cost. The Engineer's Estimate also

included the initial major influent screening equipment payment of approximately \$157,000. This payment will be made by HRSD and should not have been included in the construction cost. The Engineer's Estimate was conservative to account for uncertainties in the marketplace; however, the bids show a very competitive marketplace for this type of work with very little uncertainties or volatility. The design engineer, HDR, evaluated the bids and recommends award to the lowest responsive and responsible bidder, MEB General Contractors, Inc., in the amount of \$2,608,200.

Task Order Description and Analysis of Cost: This task order will provide engineering services during construction including contract administration and field engineering and inspection. A fee of \$341,185 was negotiated based upon anticipated hours required for this effort and in accordance with hourly rates in HDR's General Engineering Services contract. This cost for construction phase services is roughly 13 percent of the total construction cost and is within the range of comparable projects.

<u>Schedule:</u>	Construction	March 2021
	Project Completion	July 2022

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

Subject: Cleaver-Brooks Steam Boiler Rental
Contract Award (>\$200,000)

Recommended Action: Award a blanket purchase contract for rental of a Cleaver Brooks Steam Boiler to Tate Engineering Systems Inc. in the estimated amount of \$117,000 for year one with four annual renewal options and an estimated cumulative value in the amount of \$585,000.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Tate Engineering Systems Inc.	\$117,000
Valley Boiler & Mechanical Inc.	\$169,950
Power Mechanical Inc.	\$184,704

HRSD Estimate: \$50,000/year

Contract Description: This contract is an agreement for all materials, equipment, and labor for annual rental of a Cleaver-Brooks CBEX Firetube steam boiler. This is a completely integrated boiler, burner, and controls system resulting in high efficiency and low emissions. The boiler will be connected to the Cambi-THP (Thermal Hydrolysis Process) System in the event the permanent steam boiler becomes inoperable. The steam boiler is a part of the bypass process to continuously delivery steam to the reactor tanks in the Cambi-THP System. If the plant is unable to produce steam, solids would have to be shipped to another location which would be an additional and unnecessary expense to HRSD.

Analysis of Cost: Tencarva submitted an all-inclusive cost which includes delivery, set up, and dismantling fees; an annual inspection, cleaning, testing, and turning of the boiler and ancillary equipment. Cost were negotiated and determined to be fair and reasonable based on other Bidders costs, which were not all-inclusive. In addition, Procurement reviewed budget estimates for direct purchase of a steam boiler versus rental. Costs were approximately three times higher and additional expenses would be the responsibility of HRSD for maintenance over the five years.

CONSENT AGENDA ITEM 2.c.1. – February 23, 2021

Subject: South Shore High Point Air Vent Installation Phase I
Task Order (>\$200,000)

Recommended Actions:

- a. Approve a task order with Bridgeman Civil, Inc. in the amount of \$355,260.
- b. Approve a task order with Tidewater Utility Construction, Inc. in the amount of \$245,115.

CIP Project: GN016600

Budget	\$902,321
Previous Expenditures and Encumbrances	(\$275,172)
Available Balance	\$627,149

Contract Status:	Amount
Original Contract– Bridgeman Civil, Inc.	\$0
Total Value of Previous Task Orders – Bridgeman Civil, Inc.	\$4,441,041
Requested Task Order – Bridgeman Civil, Inc.	\$355,260
Total Value of All Task Orders – Bridgeman Civil, Inc.	\$4,796,301
Revised Contract Value – Bridgeman Civil, Inc.	\$4,796,301
Original Contract– Tidewater Utility Construction, Inc.	\$0
Total Value of Previous Task Orders – Tidewater Utility Construction, Inc.	\$1,155,767
Requested Task Order – Tidewater Utility Construction, Inc.	\$245,115
Total Value of All Task Orders – Tidewater Utility Construction, Inc.	\$1,400,882
Revised Contract Value – Tidewater Utility Construction, Inc.	\$1,400,882

Project Description: This project involves subsurface utility engineering of HRSD's facilities and installation of new manual air vents at the most critical unvented high points in the South Shore Interceptor Force Main system.

Task Order Description: This task order will provide the installation of manual air vents at current unvented high points at multiple locations across the South Shore to reduce future failure due to internal corrosion. A meeting was held with each contractor to discuss the task orders and scope of services. Multiple tasks orders were negotiated one with each contractor.

Analysis of Cost: The costs are in alignment with the existing Sewer Repair and Condition Assessment contract.

Schedule: Construction February 2020
Project Completion June 2021

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

Subject: Goulds Hydro-Solids Centrifugal Pumps and Parts
Sole Source (>\$10,000)

Recommended Action: Approve the use of Goulds Hydro-Solids Centrifugal Pumps and Parts by Tencarva Machinery Company at the Williamsburg Treatment Plant.

Sole Source Justification:

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

Details: Product includes the purchase of Goulds Hydro Solids Centrifugal Pump. This pump eliminates clogging problems due to a recessed impeller design that can handle large particle solids and any fibrous materials.

The existing Goulds Hydro Solid Centrifugal pumps were installed during the construction of the plant drain pump station and have been repaired by plant staff over the years. All the drains at the Williamsburg Treatment Plant flow to this pump station and return the water back to the headworks building for treatment. Pump failures would result in pump station overflow. This replacement pump will be placed in inventory to act as a backup and alleviate any downtime during failure.

CONSENT AGENDA ITEM 2.d.2. – February 23, 2021

Subject: Viking Flights and Chains
Sole Source (>\$10,000)

Recommended Action: Approve the use of Viking Flights and Chains by Connexus Industries, Inc. at the Army Base Treatment Plant.

Sole Source Justification:

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

Details: Product includes the purchase of Viking brand flights and chains. The flights and chains are installed at the bottom of the primary clarifier with the primary function of moving the solids through the clarifier. These parts are for replacement of existing to act as a drop-in replacement.

The original purchase of Viking flights and chains was completed in 2017 via competitive solicitation (accepting equals). It was determined that due to measurements of the sprocket for the pattern of the bracket for the flight, another product could not intermix and still function properly.

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Attachment #2

Agenda Item 3. COVID-19 Municipal Utility Relief Program Update



COVID-19 Municipal Utility Relief
Program Update
February 23, 2021

- HRSD was awarded \$8.7 million
- Customers must provide a COVID-19 impact attestation
 - Online Form
 - Third-Party Call center
- Past due balances between 3/1/20 to 12/31/21
- Tagged 60,000 homes in three weeks
 - Focus was accounts 60+ Days Past Due residential customers

HRSD's \$8.7M COVID-19 Payments Applied to Date

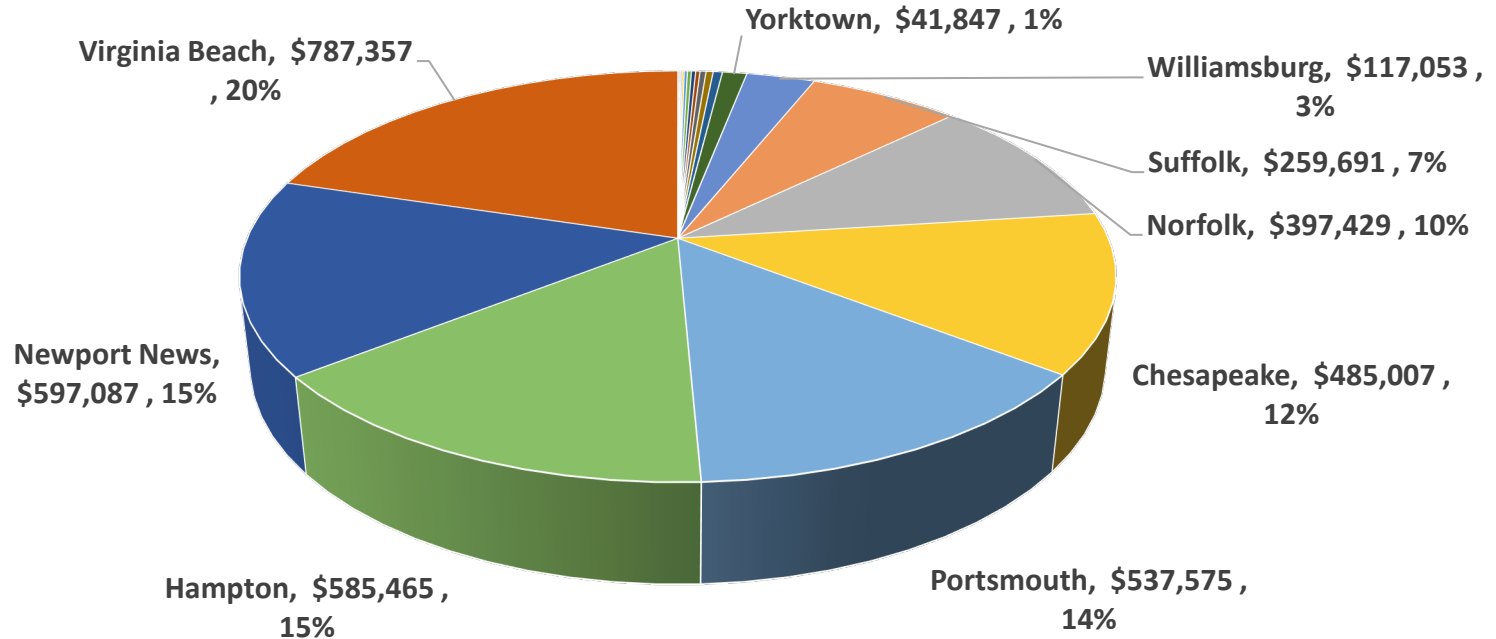
- HRSD paid off customers locality bills to maximize assistance
- Localities also paid HRSD bills, **\$635k**
- Total applied to HRSD accounts, **\$4.52M**

	Amount	Accounts	Average
HRSD	\$3,884,864	17,371	\$224
Norfolk	\$1,104,696	3,199	\$346
Chesapeake	\$941,052	2,125	\$443
Suffolk	\$856,558	1,443	\$594
James City County	\$1,445	5	\$294
Smithfield	\$15,484	51	\$304
Surry City	\$2,561	11	\$233
Urbanna	\$2,156	10	\$216
King William	\$1,952	16	\$122
Total	\$6,810,768	17,537*	\$396

**Total Customers helped -
166 accts had a Locality balance only*

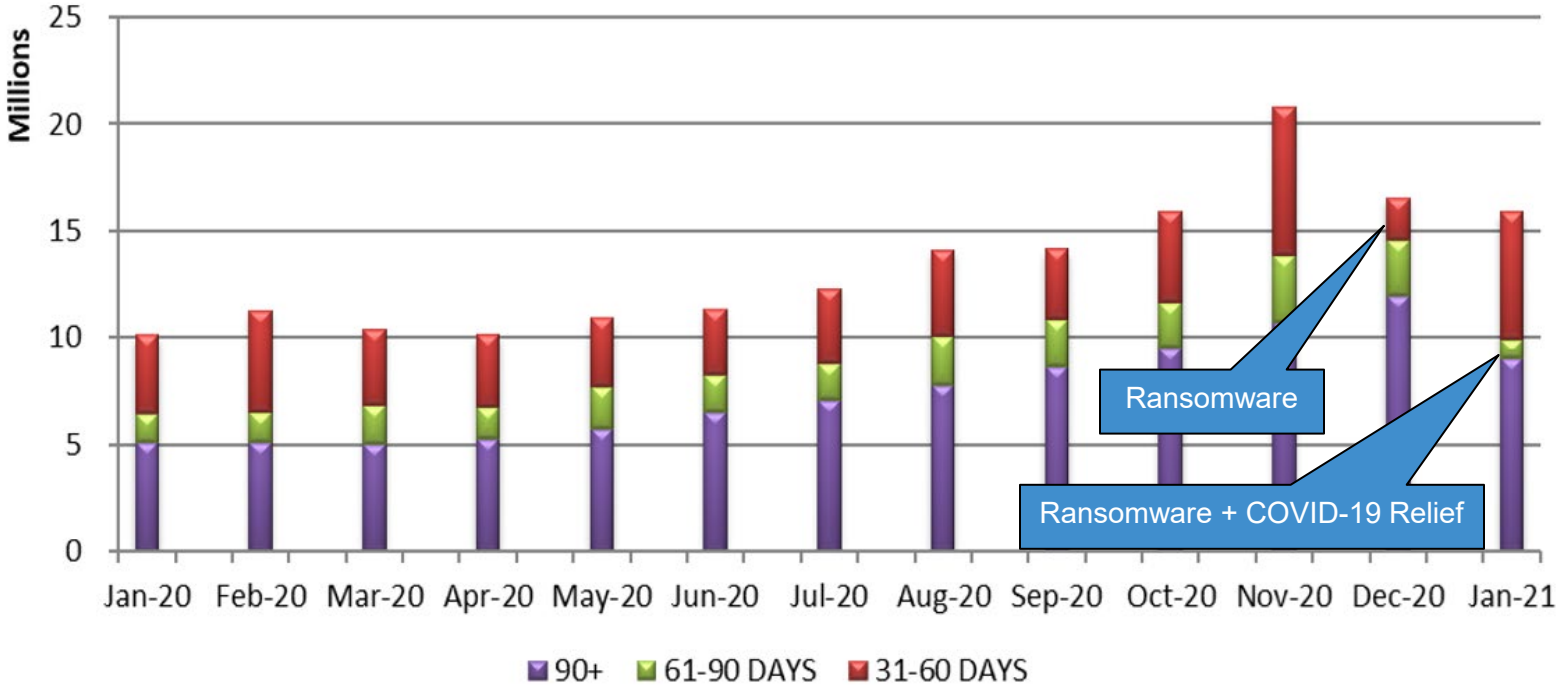


Where HRSD's \$3.88M COVID-19 Relief Payments were applied



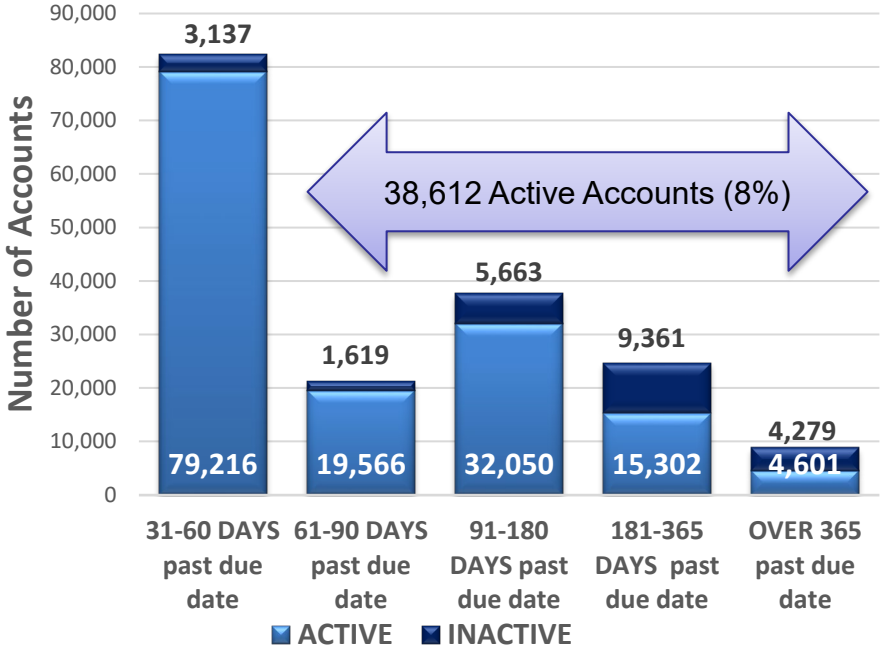
- Mathews
- King William
- York County
- Urbanna
- Surry
- Windsor
- Isle of Wight
- James City
- Gloucester
- Smithfield
- Poquoson
- Yorktown
- Williamsburg
- Suffolk
- Norfolk
- Chesapeake
- Portsmouth
- Hampton
- Newport News
- Virginia Beach

HRSD Accounts Receivable Aging Beyond Current



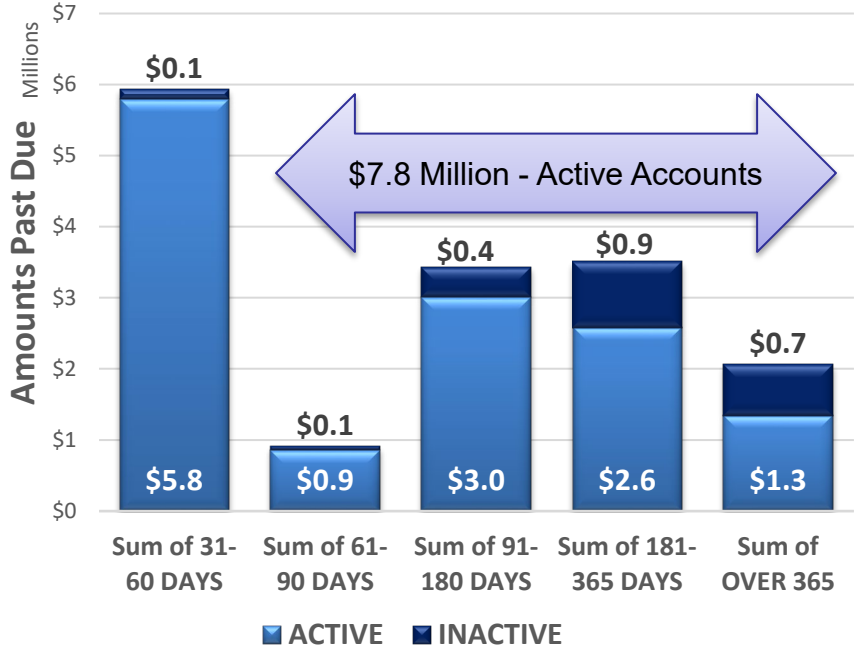
Delinquency Data as of Jan 31st

Number of Active and Inactive Accounts Bins based on Days Past Due



One account can be multiple bins

Delinquent Amounts Bins based on Days Past Due (millions)



Can HRSD absorb the “Administrative Costs”?

- HRSD received \$8,737,113
- Entities are allowed to use up to 5% = \$436,856

Current Reimbursable Administrative Costs

- Salaries = \$92,753
 - Part-Time = \$1,156
 - Overtime = \$6,693
 - Tags = \$3,578
 - Third-Party Call Center = \$66,749
-
- Total Allowable Reimbursement = \$170,929
 - Total Non-Budgeted (Out-of-Pocket) = \$77,020

Can we use the max funds to help customers?

@ \$171k = 763 customers

- Begin Utility Shut-offs this summer
 - Utilize remaining CARES funds for COVID-19 impacted customers
 - Available funds estimated around \$1.1 million assuming admin costs are available for relief (equivalent to approx. 4,900 customers)
 - Payments Pending \$350k
 - Potential Leak Adjusted Accounts \$450k
- Deploy short and long-term payment plans
 - Promise to Pay – plans up to 24 months via a mobile device
 - Paypal
 - Pay in 4 - 25% now/25% in 2 weeks/25% in 4 weeks/25% in 6 weeks
 - Paypal Credit – 0% Interest in six months, requires credit approval
 - Customer service rep assisted payment plans

Questions?

HRSD Commission Meeting Minutes
February 23, 2021

Attachment #3

Agenda Item 4. Educational Outreach during the COVID-19 Pandemic

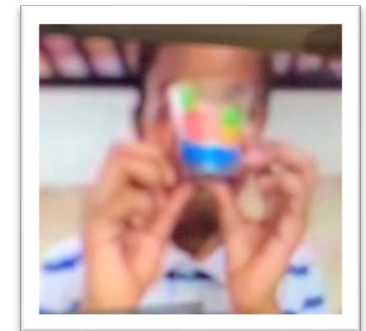
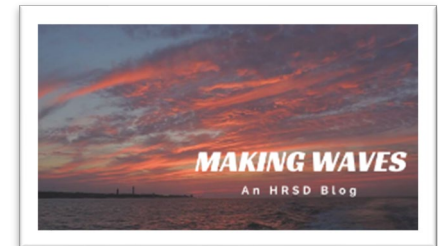
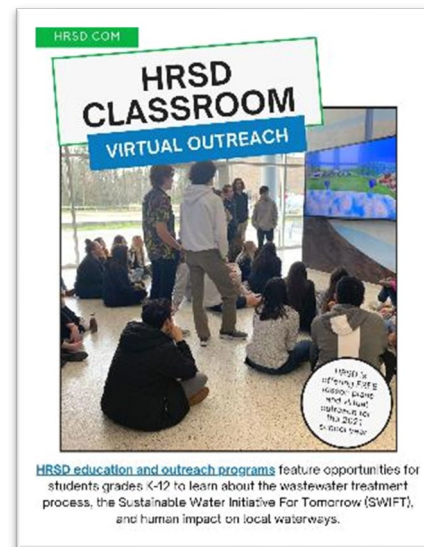
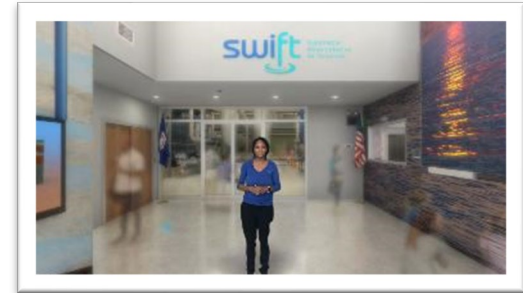


HRSD Community Outreach During the Pandemic
[HRSD.com/classroom](https://www.hrdsd.com/classroom)
Lacie Wever

February 23, 2021

Continuing Education and Outreach During a Pandemic

1. Revamping Classroom Materials
2. Increasing Social Media Engagement
3. Promoting Virtual Opportunities
4. Previous Virtual Outreach
5. Upcoming Virtual Outreach
6. Virtual Outreach in the Future



Revamping Classroom Lessons

- Amazing Aquifers
- Tracking Down The Pollution (CSI)
- Just Throw It Away
- Washing Water
- What's Your pH
- Water Cycle in a Bag*
- LEGO Water Cycle*
- Density Columns*
- Ocean In a Bottle*
- Edible Aquifer*
- PDF Coloring Pages
- [Earth Day Bingo*](#)
- [Green Learning Guides](#)
- [SWIFT Virtual Tour*](#)

*new resources



Increasing Social Media Engagement

According to research, 46% - 51% of US adults were using social media more since the pandemic began.

How We've Increased Engagement:


- Sharing Lesson Plans
- Promoting [HRSD Classroom](#)
- Promoting [Treatment Plant Tool](#)
- Promoting [SWIFT Virtual Tour](#)
- [Videos](#)
- [Blog Posts](#)

New Fans in 2020

407
new fans

HRSD
Published by Hootsuite [?] · April 8, 2020

As toilet paper continues to become increasingly difficult to find, we've seen an increase in wipes at our treatment plants. Please remember, wipes are not flushable. Here is a look at our Nansemond Treatment Plant last week. The rags were so bad they destroyed one of our bar screens. A bar screen is located at the beginning of a wastewater treatment plant to remove large trash, sticks, plastic materials, rags, etc. In large quantities, this material can cause damage to the plant equipment. #whatnottoflush #nowipesinourpipes



Get More Likes, Comments and Shares
When you boost this post, you'll show it to more people.

55,769 People Reached 11,745 Engagements **Boost Post**

👍👎🗨️ Pam-Nan Hatfield, Tom Morris and 103 others 24 Comments 497 Shares

Like Comment Share

PERFORMANCE FOR YOUR POST

55,769 People Reached

1,846 Reactions, Comments & Shares

24 Like	11 On Post	13 On Shares
510 Love	41 On Post	469 On Shares
27 Haha	2 On Post	25 On Shares
325 Wow	45 On Post	280 On Shares
108 Sad	20 On Post	88 On Shares
35 Angry	5 On Post	30 On Shares
314 Comments	43 On Post	271 On Shares
505 Shares	497 On Post	8 On Shares

9,899 Post Clicks

3,870 Photo Views 2 Link Clicks 6,027 Other Clicks

NEGATIVE FEEDBACK

8 Hide Post 4 Hide All Posts

UNITED INFRASTRUCTURE WEEK




What is Asset Management? Celebrating Infrastructure Week at HRSD

248 views · Sep 14, 2020

24 0 0 0 0 0 0 0

HRSD
5,193 followers

Congratulations to Christopher Wilson, HRSD Chief of Process Engineering and Research, 2020 Top 40 Under 40 honoree! <http://ow.ly/Q46C50BQ88>




HRSD congratulates its 2020 Top 40 Under 40 honoree, **Christopher Wilson, Ph.D., P.E.**

As Chief of Process Engineering and Research, Christopher plays a vital role in protecting public health and the waters of Hampton Roads while enhancing the quality of life through his commitment to safety, his creativity and future environmental engineers.

HRSD is more than 80 environmentally-focused employees come from many backgrounds, but all share one vision: Protect generations, well ahead of us today and be able to keep them clean.

Visit HRSD.com to learn more about rewarding career opportunities with the organization that has been making better impact on the environment for 80 years.



191 · 27 comments

Like Comment

Organic impressions: 8,939 impressions Show stats

Promoting Virtual Opportunities

- Social Media
- Connecting with teachers and community groups through email and past collaborations
- Word of Mouth
- Partnership Resources

– [askHRgreen](http://askHRgreen.org)

askHRgreen.org

– [eMedia VA](http://eMediaVA.org)

– [ERP Youth Resilience Clearinghouse](http://ERPYouthResilience.org)

Elizabeth River Project
Making restoration a reality



LESSON PLANS

- Amazing Aquifers
- Density Columns
- Edible Aquifer
- Just Throw It Away
- LEGO Water Cycle
- Ocean In a Bottle
- GIS Invisible Infrastructure
- [SWIFT Virtual Tour](#)
- Washing Water
- What's Your pH
- Water Cycle in a Bag

GAMES & ACTIVITIES

- [Earth Day Bingo](#)
- [Fats, Oils, and Grease Coloring Page](#)
- [Green Learning Guides](#)

VIRTUAL PRESENTATION

Free virtual presentation to your K-12 class!

*Available to public, private, and homeschools in the HRSD Service Area

Please contact
Lacie Wever, HRSD Community Education and Outreach Specialist
LWever@hrsd.com | 757-613-5015
www.hrsd.com/classroom

eMediaVASM
Featuring content from PBS LearningMedia

HRSD

Previous Virtual Outreach Success

- Infrastructure Week
- Virtual Presentations
 - ODU ASCE SWIFT Presentation
 - The Hague School, Norfolk
 - LEAD SWIFT Virtual Tour
 - Richard Bowling Elementary, Norfolk, 4th Grade
 - Landstown Middle School



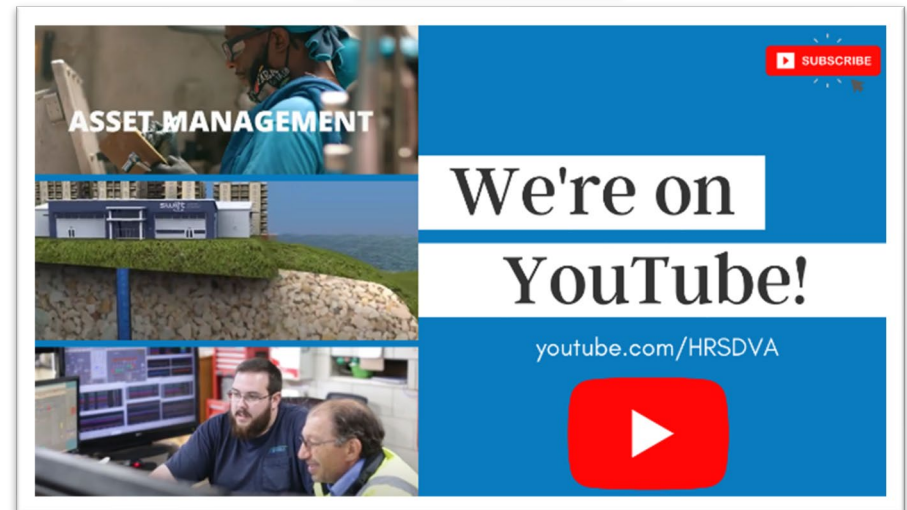
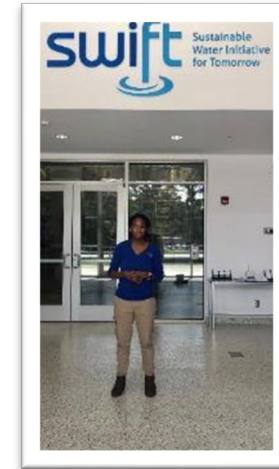
Upcoming Outreach Opportunities

- Engineers Week
- Virtual Presentations
 - GO Virginia Regional Council
 - Richard Bowling Elementary, Norfolk, 4th Grade
 - All 13 City of Portsmouth CHROME Clubs (Cooperating Hampton Roads Organizations for Minorities in Engineering, Inc.)
 - Rotary Club of Norfolk
 - Landstown Middle School



Virtual Outreach in the Future

- Wastewater virtual tour
- More YouTube content
- Sharing online games
- **Share these opportunities with others!**



HRSD Commission Meeting Minutes
February 23, 2021

Attachment #4

Agenda Item 8. COVID-19 Wastewater Surveillance Study Presentation

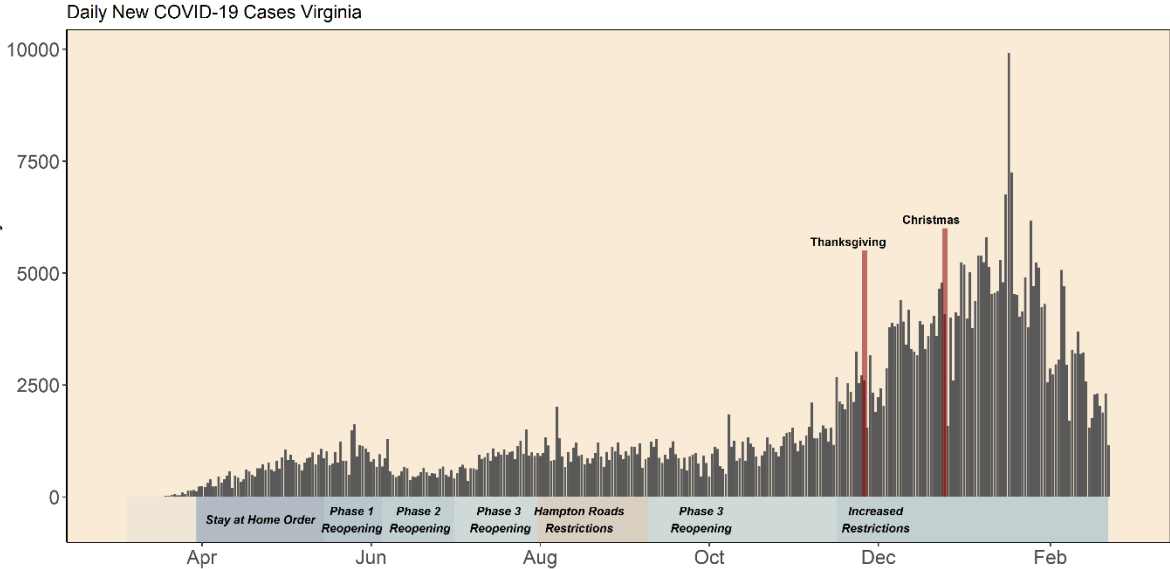
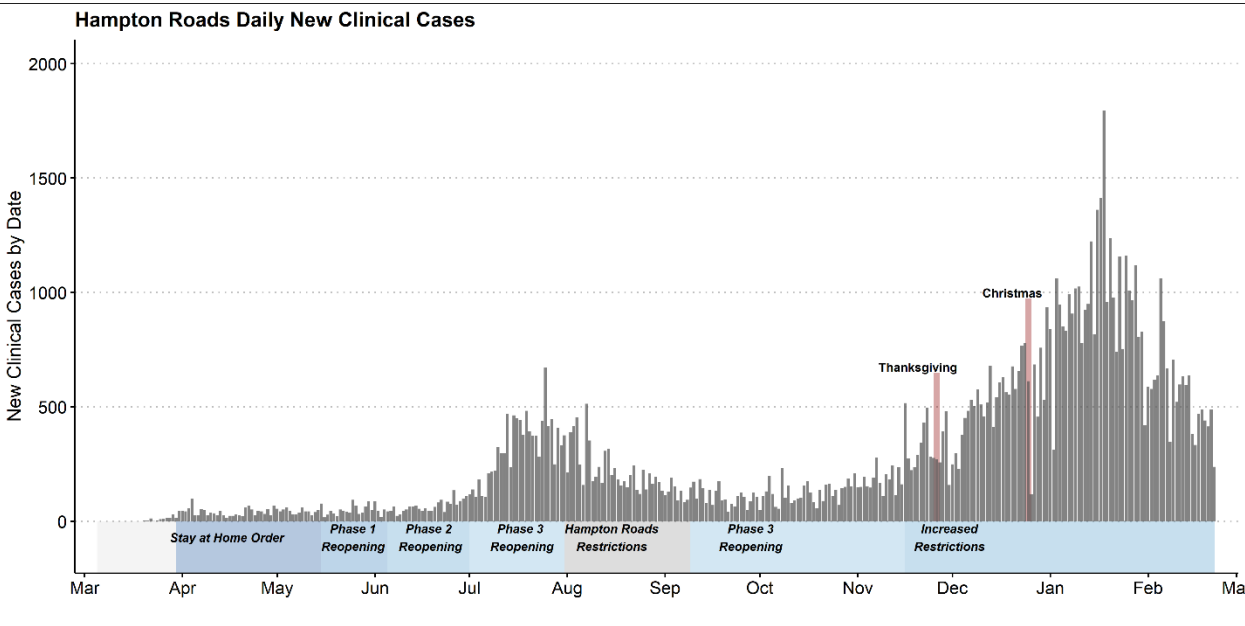


COVID-19 Surveillance Commission Update

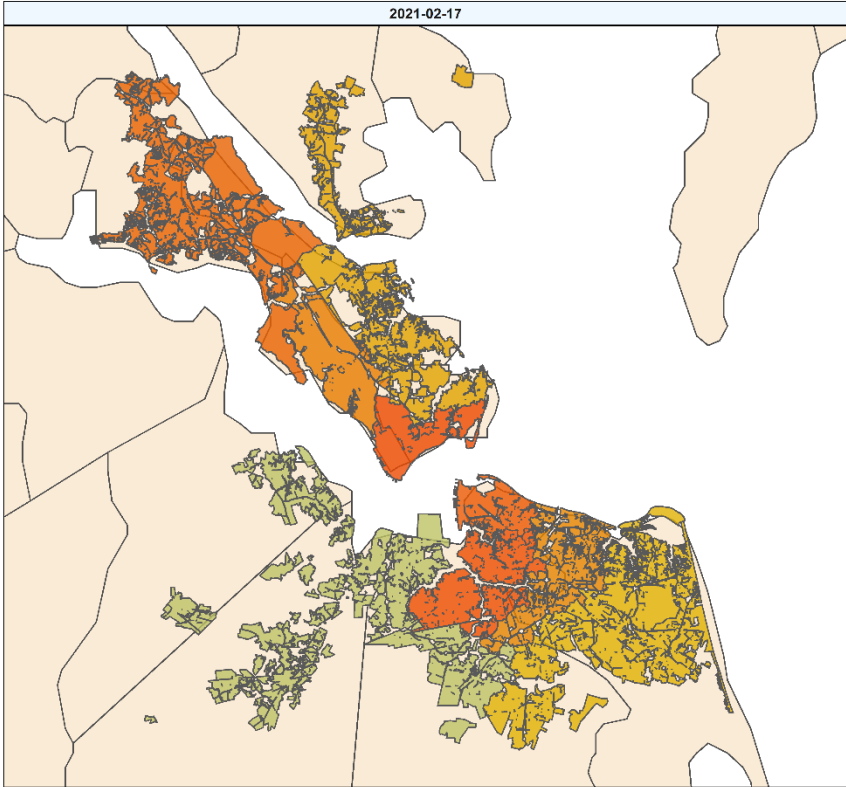
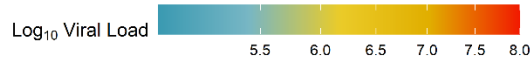
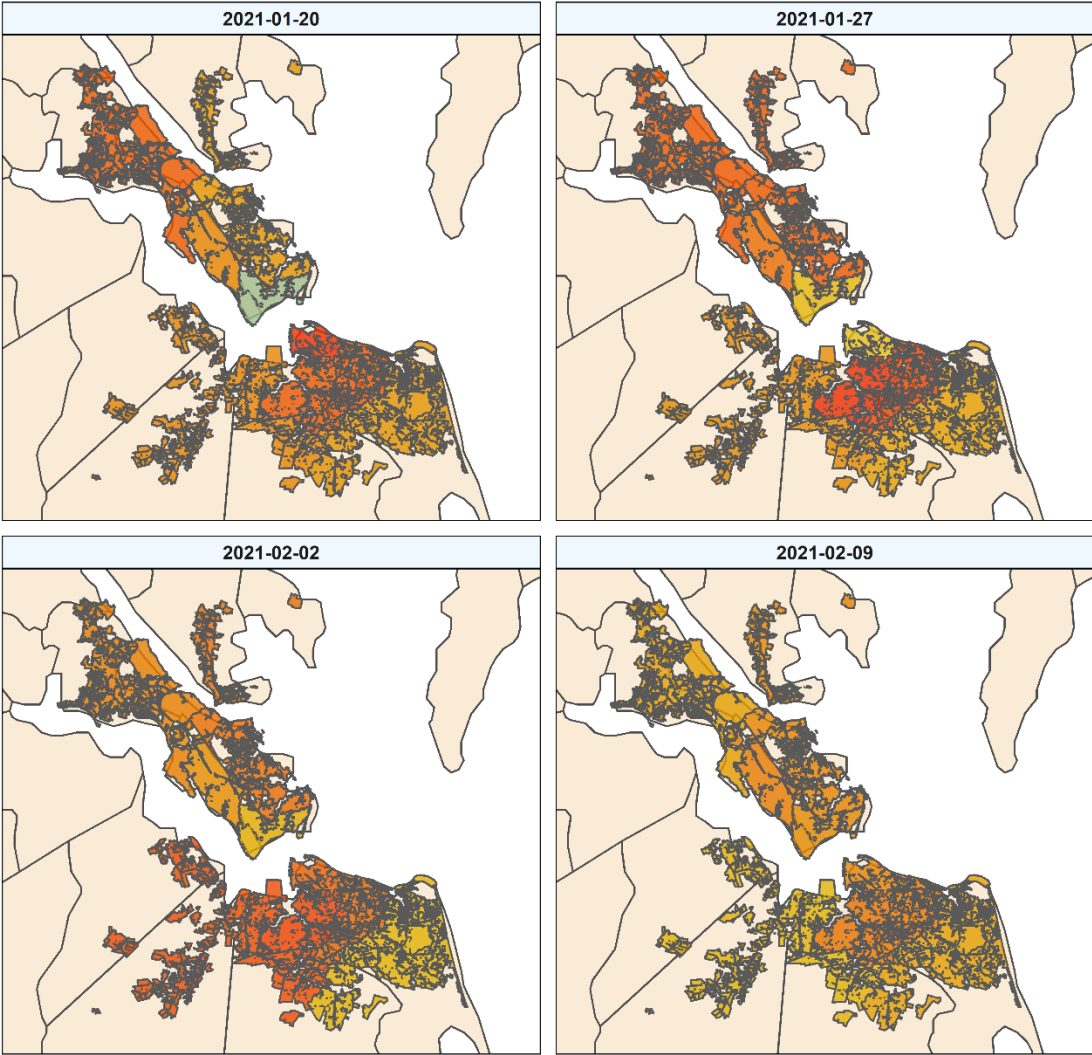
February 23, 2021

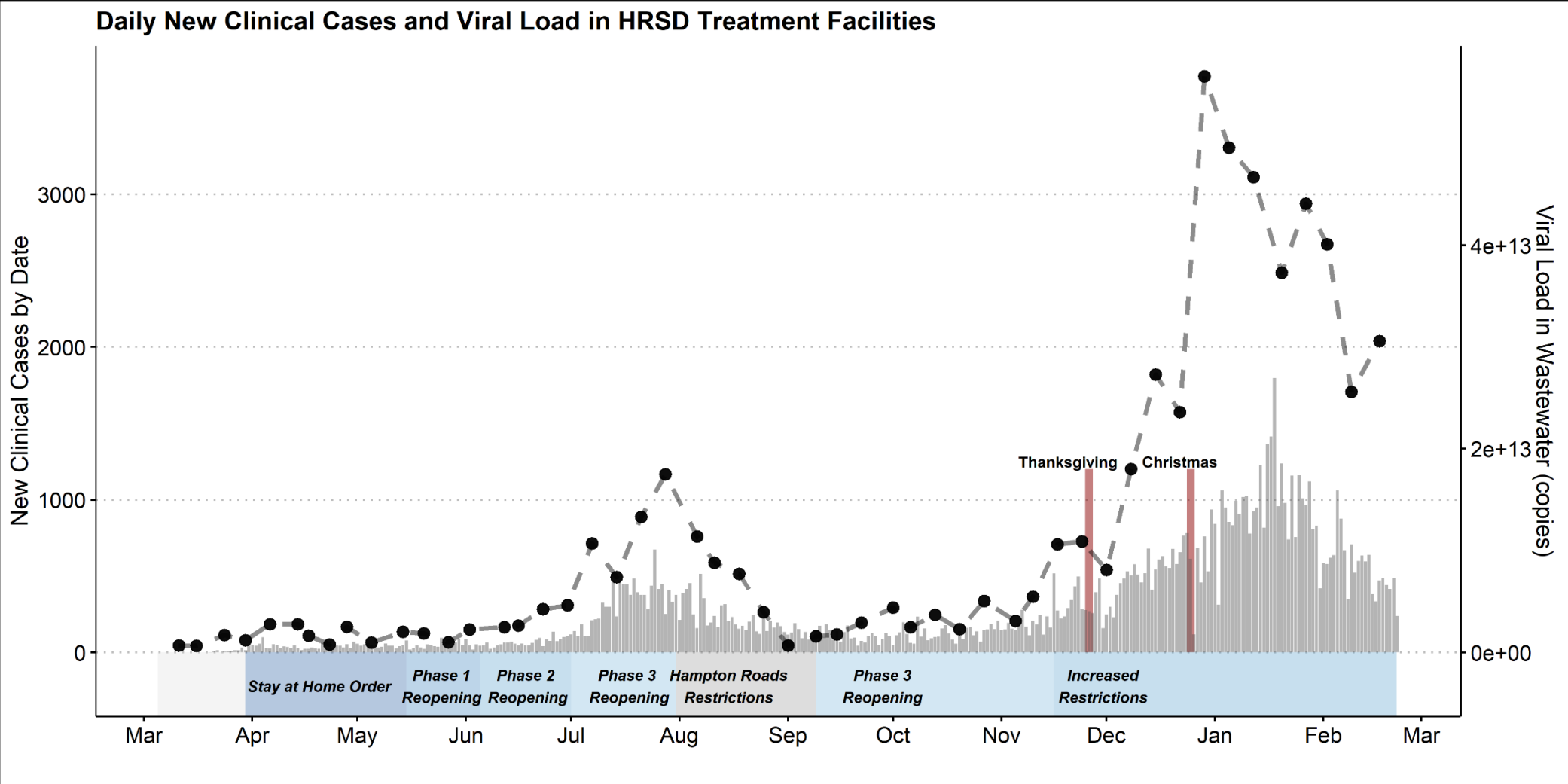
- Weekly sampling of the 9 major facilities
- Data through 2/17 presented
- General notes;
 - Continued decline since holidays
 - State and regional clinical cases following this trend
 - Still greater than summer peak

Clinical Cases by Region and State



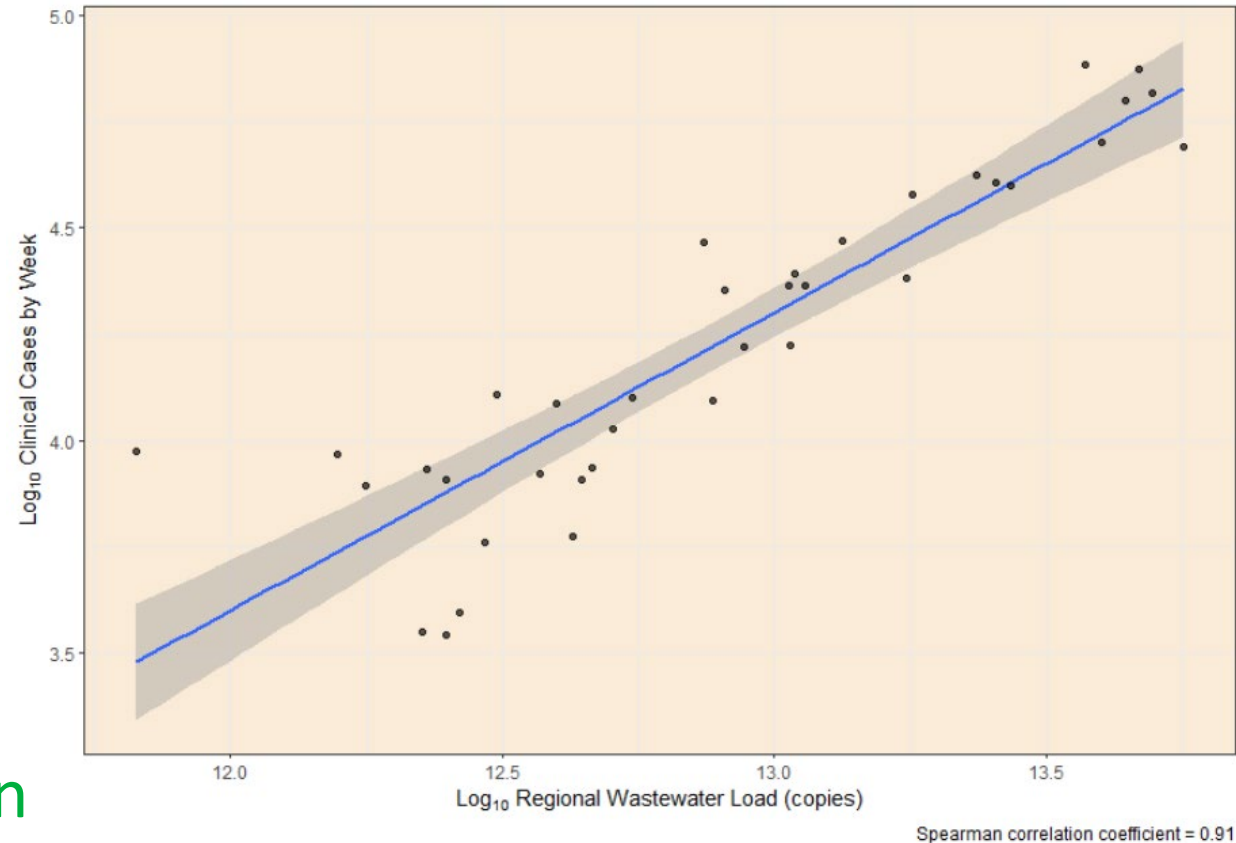
Most Recent 5 Weeks





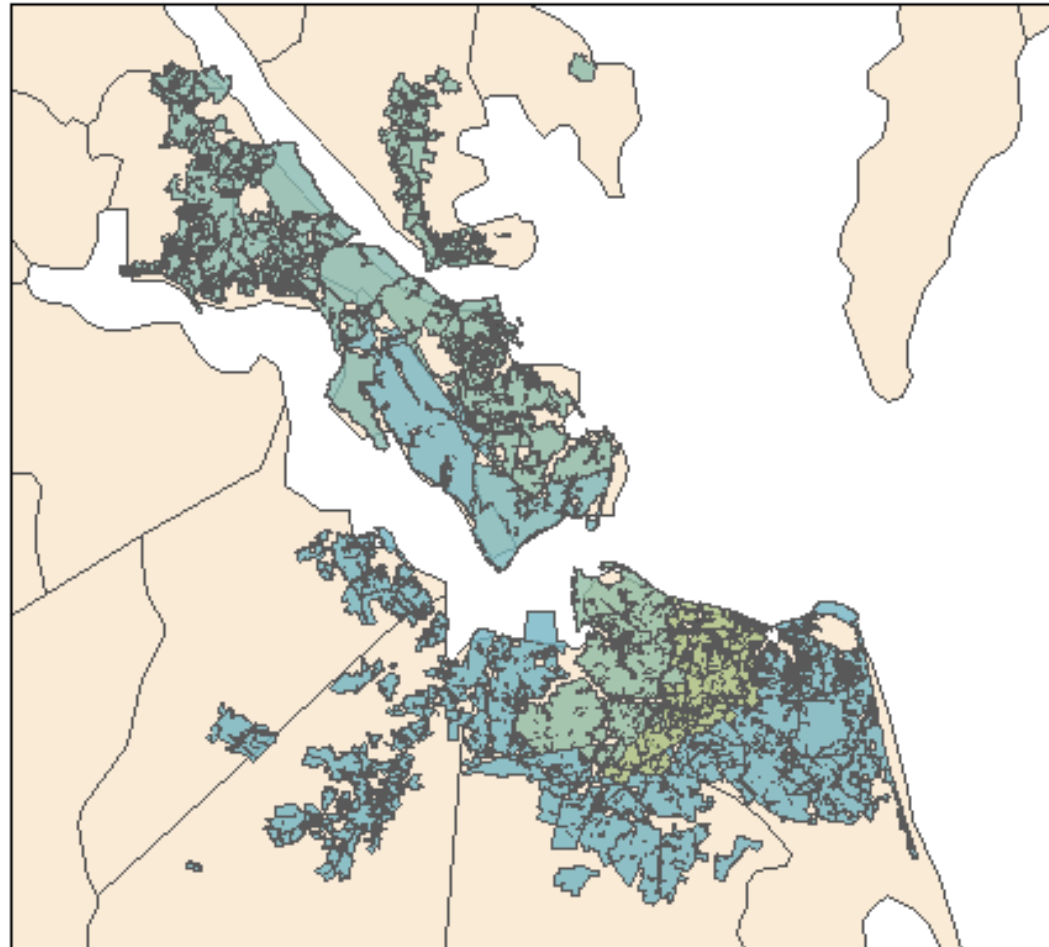
Clinical and Wastewater Signal Association

- Test the linear relationship between wastewater and clinical
- Data 6/1/20 - 2/17/21
- Each dot represents a week
- Correlation coefficient = 0.91
- Lead/lag analysis suggests reduced lag in clinical data response



- Continued weekly monitoring of 9 major facilities
- Continue to provide data to VDH and CDC
- Screening for SARS-CoV-2 variants
 - Looking into the required assays
 - Should be able to detect the main variants of interest (UK, South Africa)

Population Normalized SARS-CoV-2 Loading
Date: 2020-03-11



HRSD Commission Meeting Minutes
February 23, 2021

Attachment #5

AGENDA ITEM 13. Informational Items

a. Management Reports

- (1) [General Manager](#)
- (2) [Communications](#)
- (3) [Engineering](#)
- (4) [Finance](#)
- (5) [Information Technology](#)
- (6) [Operations](#)
- (7) [Talent Management](#)
- (8) [Water Quality](#)
- (9) [Report of Internal Audit Activities](#)

b. [Strategic Planning Metrics Summary](#)

c. [Effluent Summary](#)

d. [Air Summary](#)

e. [Emergency Declarations](#)

- (1) [Central Trunk Interceptor Force Main Section A Failure](#)
- (2) [20-Inch Force Main Ocean View Via Granby Street \(West Bay Avenue and St. George Avenue\)](#)



February 17, 2021

Re: General Manager's Report

Dear Commissioners:

While we all looked forward to putting 2020 behind us as we entered 2021, the challenges we faced in January were arguably more difficult than those faced in 2020. The month started with the largest pipe failure in recent memory. While our response was immediate and our efforts to contain the spill and mitigate the impact were heroic, losing nearly 30 million gallons of wastewater creates significant challenges to the public's perception of our work. While the January spill equates to less than 0.05 percent of the flow we convey and treat in any given year, the perspective is often difficult for customers to see in the moment.

A spill of this magnitude brings our mission of protecting public health and the environment to the forefront. Wastewater conveyance and treatment goes from out-of-sight and out-of-mind to front page news overnight. We have made a significant effort to use this opportunity to tell our asset management story to anyone that will listen. We have a robust asset management program focusing our reinvestment and renewal efforts on assets with the highest likelihood of failure with the highest consequence of failure. We program those assets into our capital improvement program that invests tens of millions of dollars each year in renewal and replacement.

Even with our level of effort, we continue to have the occasional pipe failure – and always will. We cannot visually inspect our force mains and replacing based solely on age is cost prohibitive and wasteful. Our experience has shown a significant amount of pipe replaced over the past decade had many years of useful life remaining. Programming renewal and replacement is a well-informed guess. We do a good job and will continue to get better, but we will never be able to prevent all failures.

Our entire organization takes our mission very seriously. A spill of any size is disheartening and in this pandemic environment no one needs any additional disheartening events. There are brighter days ahead and that knowledge keeps us all focused on ensuring future generations inherit clean waterways and are able to keep them clean.

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



Commissioners: Frederick N. Elofson, CPA, Chair • Maurice P. Lynch, PhD, Vice-Chair • Vishnu K. Lakdawala, PhD
Michael E. Glenn • Stephen C. Rodriguez • Willie Levenston, Jr. • Elizabeth A. Taraski, PhD • Molly Joseph Ward
www.hrsd.com

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

- A. **Treatment Compliance and System Operations:** All plants met permit with the exception of the Town of Surry facility. The Town plant exceeded a weekly maximum loading for cBOD. The KWTP has not had issues with TKN in the past, one of our best performing plants. This issue was traced back to under-performing blower that has been corrected.
- B. **Internal Communications:** I participated in the following meetings/activities (all virtual unless otherwise noted) with HRSD personnel:
1. A meeting to discuss data required for the Onancock assets
 2. A progress meeting on the James River Treatment Plant property acquisition
 3. The monthly status review of the Consent Decree Rehabilitation Phase I projects
 4. CARES Act funding process meeting
 5. A review of condition assessment processes
 6. A planning meeting for activities celebrating Engineer's Week 2021
 7. A review of the draft report on the ransomware attack
 8. A meeting to discuss policy issue related to the COVID vaccine
 9. The architectural review meeting for the Larchmont sewer project
 10. A meeting to review the investigation into the Suffolk Pump Station failure in November
 11. A meeting to discuss status of the Tabb Pressure Reducing Station and Storage Tank project in York County
 12. A follow up to the courageous conversations held with employees interested in engaging in diversity, equity and inclusion discussions and actions at HRSD
- C. **External Communications:** I participated in the following meetings/activities (all virtual unless otherwise noted):
1. The monthly Hampton Roads Planning District Commission meeting of the Director of Utilities Committee
 2. The weekly legislative update meeting of the Virginia Association of Municipal Wastewater Agencies (VAMWA)
 3. A coordinating call with DEQ and other agencies related to the 16th Street SSO
 4. An executive training session conducted by the UNC Kenan-Flagler School of Business sponsored by NACWA
 5. The 2021 kick-off meeting for the joint association Utility of the Future Today award committee
 6. Hosted the Consent Decree annual public meeting
 7. Attended the US Water Alliance's Value of Water meeting
 8. Attended the Elizabeth River Project's River Star Award Ceremony

9. Facilitated the quarterly meeting of the Potomac Aquifer Recharge Oversight Committee
10. A meeting with the team working on the US EPA Water Reuse Action Plan implementation in preparation of participating on a panel at the WaterReuse Symposium
11. A meeting with the team preparing a WEF Workshop on presentations
12. The January 26th Norfolk City Council meeting to discuss billing issues
13. A meeting with York County officials to discuss the Tabb PRS project

D. **Consent Decree Update:** The Commonwealth has signed off on the Fifth Amendment. I confirmed that EPA has also signed off on the Fifth Amendment but we are still waiting for DOJ final signatures before lodging with the Norfolk District Court. We continue to anticipate final signatures soon but do not expect the judge to approve until first quarter 2021.

Two key pieces of legislation continue to advance during this session of the General Assembly. The proposed amendments to our enabling act introduced by Delegate Rob Bloxom as [HB 2257](#) passed the House (98-Y 0-N) on February 23rd and was reported out of the Senate Local Government Committee (13-Y 0-N) and is on the uncontested calendar for a third reading in the Senate for February 17th. I hope to report final disposition of this bill at our February meeting.

The other bill we have been watching closely is HB 2129 which attempts to resolve some of the challenges with the administration's WIP 3 proposal through legislation. This bill passed the House (58-Y 39-N) and has been referred to Senate Finance and Appropriations. A companion bill passed the Senate and is working through the House after crossover. This bill includes specific requirements for HRSD to reduce nutrient discharges according to a schedule that ties to our SWIFT upgrades. The bill is an improvement from the WIP 3 proposal but still imposes unnecessary requirements on the wastewater sector in general and HRSD specifically. We (HRSD and the wastewater sector) have already met our TMDL requirements and these added mandates solve the Commonwealth's issues on the Potomac that resulted from flawed assumptions in the WIP 3 modeling while letting the other sectors off the hook for meeting their TMDL obligations. The WIP 3 is more about equity (everyone meeting the same arbitrary target) than cost effective application of the appropriate reductions for the specific body of water. Science has been largely set aside. I have been describing this legislative solution as the least worst of alternatives on the table.

The meeting next week will be another fully electronic meeting using Zoom (or another virtual platform, if necessary) as we have done since April. The Governor has extended the declared state of emergency indefinitely and as such we will continue to meet in this fashion until that executive order is lifted.

The leadership and support you provide are the keys to our success as an organization. Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth, and the environment. **I look forward to seeing you (virtually) on Tuesday, February 23, 2021.**

Respectfully submitted,

Ted Henifin, P.E.
General Manager

TO: General Manager
 FROM: Director of Communications
 SUBJECT: Monthly Report for January 2021
 DATE: February 8, 2021





A. Publicity and Promotion

HRSD and/or SWIFT were mentioned or featured in 21 news stories on topics that included:

1. HRSD suffers ransomware attack
2. CARES Act relief funding for water and wastewater bills
3. Wastewater sampling to trace COVID-19 in communities

B. Social Media and Online Engagement

1. Metrics

Social Media Metrics January 2021				
*Imagine A Day Without Water October 21 METRIC	 FACEBOOK	 LINKEDIN	 TWITTER	 YOUTUBE
Number of Posts *number of published posts	21 -7	4 -5	18 -2	1:50 average view duration
Number of Followers/Likes *total number of fans	1,570 +184	5,159 +48	547 +13	210 +4
Engagement *sum of reactions comments and shares	432 -585	147 -7	38 +20	670 unique viewers -120
Traffic *total clicks on links posted	114 -187	195 -68	114 -195	3.7% click through -0.1%

2. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post

HRSD
Published by Hootsuite | 71 | January 6

BILLING UPDATE:
HRSD, HRUBS BILL PAYMENT DUE DATES FOR NOVEMBER AND DECEMBER BILLS EXTENDED TO JANUARY 31 WITHOUT PENALTY
The HRSD ransomware attack that occurred in November 2020 disrupted billing across the service region for several weeks, affecting November and December bills, as well as access to customer accounts... See More

PLEASE NOTE
HRSD, HRUBS BILL PAYMENT DUE DATES FOR NOVEMBER AND DECEMBER BILLS EXTENDED TO JANUARY 31 WITHOUT PENALTY.

Get More Likes, Comments and Shares
When you boost this post, you'll show it to more people.

8,779 People Reached | 573 Engagements | Boost Post

Christopher Memes Phillips, Jazzie Wise and 12 others | 6 Comments | 59 Shares

Performance for Your Post

8,779 People Reached		
199 Reactions, Comments & Shares		
116 Like	14 On Post	102 On Shares
2 Love	0 On Post	2 On Shares
21 Comments	9 On Post	12 On Shares
60 Shares	59 On Post	1 On Shares
374 Post Clicks		
11 Photo Views	20 Link Clicks	343 Other Clicks
NEGATIVE FEEDBACK		
1 Hide Post	1 Hide All Posts	
0 Report as Spam	0 Unlike Page	

Reported stats may be delayed from what appears on posts

b. Top Tweet

Top Tweet earned 4,333 impressions

HRSD/HRUBS BILLING UPDATE: The HRSD ransomware attack that occurred in November 2020 disrupted billing across the service region for several weeks, affecting November and December bills, as well as access to customer accounts. More information: hrsd.com/news-release-j...
pic.twitter.com/eLB22HNfp0

PLEASE NOTE
PAYMENT DUE DATES FOR NOVEMBER AND DECEMBER BILLS EXTENDED TO JANUARY 31 WITHOUT PENALTY.

4 | 2

- c. Top YouTube Videos
 - (1) [The Wastewater Treatment Process](#)
 - (2) [SWIFT Research Center: What is the Potomac Aquifer?](#)
 - (3) [HRSD Atlantic Treatment Plant Cambi Tour](#)
 - (4) [What is Asset Management? Celebrating Infrastructure Week at HRSD](#)
 - (5) [HRSD Employee Testimonials - Robert](#)

3. Impressions and Visits

- a. Facebook: 22,789 page impressions, 41,868 post impressions reaching 16,712 users and Facebook engagement of 432 (288 reactions, 97 shares and 47 comments)
- b. Twitter: 13,600 tweet impressions; 618 profile visits and 12 mentions
- c. HRSD.com/SWIFTVA.com: 1,405 page visits
- d. LinkedIn Impressions: 5,740 page impressions reaching and 4,232 post impressions
- e. YouTube: 670 views
- f. Next Door unique impressions: 43,599 post views from 10 postings
- g. Blog Posts: 1
 - (1) [HRSD Continues Outreach and Education Through Virtual Experiences](#)
- h. Construction Project Page Visits – 1187 total visits (not including direct visits from home page, broken down as follows:
 - (1) 467 visits to individual pages
 - (2) 720 to the status page

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

- 1. News Releases/Traffic Advisories/Construction Notices: 15 (4 news releases, 8 construction notices, one emergency repair notice, one Commission meeting notice, one public meeting notice)
- 2. Advertisements: 0
- 3. Project Notices: 10 (via door hanging and emailing, reaching approximately 334 residents)

4. Project/Community Meetings: two (held virtually)
 - a. 01/18/2021 -- Greenwood/Elmhurst/Norview Heights Civic League – virtual presentation for Chesapeake Blvd. Pump Station (PS) 105 and Norfolk PS 107 (nine logged into in meeting)
 - b. Luxembourg/Wynona Civic League – virtual presentation for Luxembourg PS 113 (22 logged into meeting)
5. New Project Web Pages /Videos: 0

D. Special Projects and Highlights

1. Director participated in weekly Department of Environmental Quality (DEQ) coordination call meetings, addressed media inquiries and worked closely with Virginia Department of Health (VDH) public affairs to communicate impacts and updates related to the 16th Street force main failure in Newport News.
2. Director worked with reporters from several media outlets to provide information related to HRSD's business operation restoration efforts following the November ransomware attack and to respond to inquiries about billing errors because of the attack.
3. Director participated in the Hampton Roads Planning District Commission (HRPDC) regional public information subcommittee meeting.
4. Director and staff met with City of Norfolk communications staff to review the draft Larchmont Project Communications Plan.
5. Staff participated in the HRPDC askHRGreen Water Awareness and FOG meetings.
6. Staff attended the Virginia Water Education Association (VWEA) communications meeting.
7. Director and staff attended the Value of Water (VOW) meeting.

E. Internal Communications

1. Director participated in the following internal meetings and events:
 - a. Weekly Leadership and COVID-19 meetings
 - b. COVID-19 vaccination communications plan development with Talent Management
 - c. Meeting with Engineering Director and staff to plan 2021 Engineering Week
 - d. SWIFT Industry Outreach Day planning meetings
 - e. Stakeholder communication planning, website content review, progress meetings and locality coordination planning meetings for the Larchmont Sanitary Sewer Improvements Program
 - f. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and QST meetings
 - g. Potomac Aquifer Recharge Oversight Committee meeting
 - h. Introductory meeting for the Lafayette Norview Overbrook PS replacement project

- i. MOM update discussions
 - j. James River Land Improvements kickoff meeting
2. Director conducted biweekly communications department status meetings and weekly one-on-one and team check-in meetings.
 3. Staff attended project progress meetings and presentation and outreach development meetings with various project managers.

F. Metrics

1. Educational and Outreach Activities (all virtual unless otherwise noted): 5
 - a. Amazing Aquifer virtual presentation – Richard Bolling Elementary 4th grade class (Norfolk)
 - b. Virtual presentation on wastewater – Landstown Middle School 8th grade (Virginia Beach)
 - c. Wastewater and SWIFT virtual presentation – Landstown Middle School Earth Science classes
 - d. SWIFT Virtual Tour – 41 views (represents survey access at the beginning of each tour)
2. Number of Community Partners: 2
 - a. City of Norfolk Public Schools
 - b. City of Virginia Beach Public Schools
3. Additional Activities Coordinated by Communications Department: 0
4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	January 2021
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	3.6
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	42.99
M-5.2	Educational and Outreach Events	Number	5
M-5.3	Number of Community Partners	Number	2

Respectfully,

Leila Rice, APR
 Director of Communications

TO: General Manager
FROM: Director of Engineering
SUBJECT: Engineering Monthly Report for January 2021
DATE: February 12, 2021

A. General

1. Capital Improvement Program (CIP) spending for the sixth month of Fiscal Year (FY) 2021 was below the planned spending target:

CIP Spending (\$M):

	Current Period	FYTD
Actual	9.11	96.17
Plan	19.30	128.50

2. The update to the HRSD Capital Improvement Program (CIP) FY22 to FY31 is underway. Each existing CIP project is under review and will be updated if needed and new CIP projects are under preliminary consideration. Last year we piloted a new project risk prioritization process. This year we will use the criteria to make important decisions on whether projects are accepted into the CIP and when they will be scheduled to be delivered. This new process involves a Project Review Team comprised of team members from both the Engineering and Operations Departments. The team will evaluate each project for the following factors:
 - Need for project
 - Scope development
 - Risk (likelihood and consequence) score
 - Preliminary cost estimate

B. Asset Management Division

1. A presentation was made to the HRSD QST in January to review options and decide on a path forward for HRSD's Business Continuity Plan (BCP). Work Centers will start documenting lessons learned from the Ransomware attack, COVID-19 epidemic, recent pipeline failures and other events in 2020 and early 2021. The Asset Management Division will compile these lessons learned to incorporate into the BCP. Clear and timely communications was noted as an area for improvement and should be addressed in the plan.
2. The Asset Management Division and the Operations Department have been discussing options to proactively address main line valve reliability. Main line valves are installed in the interceptor system to allow for isolation and diversion of flows. An internal discussion was held to plan addressing the reliability of critical valves. It was agreed that a two-step process will be conducted starting this year. The first step will be to conduct assessments on the most critical valves and the second step will be to replace and/or add new valves in the next year. Annual projects will be added to the CIP starting in FY23 to address valve reliability.

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

1. The Hampton Trunk A and B Replacement project construction continued in January. The contractor mobilized in November and began to install replacement pipe in December. The pipe failure at 16th Street in Newport News required a significant change to the project construction work effort. Two additional contractors mobilized on site and assisted with the temporary repair efforts in January. A temporary force main was installed to limit the risk of another pipe failure in the area until the full replacement project is completed. The temporary force main installation impacted access to several residences and the around-the-clock work was disruptive. Coordination with the tenants of the impacted properties has been a significant and challenging effort.
2. Atlantic Treatment Plant Thermal Hydrolysis Process (THP) and Fats, Oils and Grease (FOG) Receiving Station construction efforts are nearing completion. The THP system has been in service for the past few months and is being optimized. The FOG Receiving Station is being evaluated and will be started up in the coming month. Some additional work has been added to the project scope including a new digester cover, a new screen, and improvements to the existing Drain Pump Station No. 1. This has been an exciting and unique project and will be an important part of HRSD's Solids Management Strategy in the future.
3. HRSD held its second annual SWIFT Industry Outreach Day on January 14. This was a well-attended virtual event with 350 participants facilitated by HRSD's SWIFT consultant, AECOM. The event included an Opening Session discussing the SWIFT Program and HRSD procurement procedures. Breakout areas were available to attendees in which specific SWIFT projects were reviewed. This was an interactive event and attendees could ask questions via a live virtual chat feature and further interaction was possible in each breakout area. This event was well received, but offered limited ability for attendees to interact with one another. We hope to have a hybrid event next year that will allow for an in-person experience and a virtual feature for those that are not able to attend in person.

D. Planning & Analysis Division

1. Staff has been leading the effort to update the HRSD Management, Operations and Maintenance (MOM) Plan. HRSD is required to update this document every three years. The plan impacts every department at HRSD, so revising the plan is a large and time-consuming process. Updates to the MOM are handled thru HRSD's Network site to facilitate document sharing and archival needs. The revised MOM Plan will be finalized by July 1st.
2. Staff is working with the IT Department to develop a reporting application to support the Small Communities Division (SCD). This computer application will provide a preventative maintenance and service call response tool. This tool will include a Geographic Information Management (GIS) mapping feature to facilitate work crews in this very large and dispersed area. This application should allow the SCD to become more responsive and limit drive times when remote work needs to be completed.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 2
 - a. 01/07/2021 – Virtual Meeting with the Loudoun School A.P. Environmental Science Class on the SWIFT Program.
 - b. 01/14/2021 – HRSD’s SWIFT Industry Outreach Day.
2. Number of Community Partners: 1
 - a. Loudoun County Public Schools
3. Number of Research Partners: 0
4. Monthly Metrics Summary:

Item #	Strategic Planning Measure	Unit	January 2021
M-1.4a	Total Training Hours per Full Time Employee (44) - Current Month	Hours / #FTE	1.20
M-1.4b	Total Training Hours per Full Time Employee (44) - Cumulative Fiscal Year-to-Date	Hours / #FTE	12.70
M-5.2	Educational and Outreach Events	Number	2
M-5.3	Number of Community Partners	Number	1
M-5.4	Number of Research Partners	Number	0

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, PhD, PE

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

A. General

1. As a reminder, HRSD's Operating Revenue is based on billed revenue, which includes Fees. In this month's financials, Fees are shown as negative due to the elimination of \$1.2 million in late payment fees as part of the COVID-19 Municipal Utility Relief Program and more recently due to the ransomware system outage. Relief funds cannot be applied to late payment fees since it would be considered a form of revenue replacement and would violate Coronavirus Aid, Relief and Economic Security (CARES) Act Guidelines. Since the applicable time period extends back to March 1, 2020, which includes four months in Fiscal Year-2020, the financial entry resulted in a negative value.
2. Billed Wastewater Revenues remained strong as water consumption remains above projections. Facility Charges remain above budget as new construction continues with the red-hot housing market. Interest Income will lag as the Federal Reserve keeps short-term rates low. The Internal Revenue Service is still behind on approving Build America Bond Subsidies as they have been busy getting stimulus checks out, and it's currently tax season. Personal Services remains slightly over budget due to three pay periods in December. Fringe Benefits remain below budget as medical costs are below expectations. Operating Expenses remain under control as they remain below budget. Adjusted Days Cash on Hand is near the upper-end of policy at 345 days.
3. HRSD's \$50 million in variable rate debt continues to be a great asset to liability match. In this strategy, HRSD is reducing our interest rate risk by holding variable rate debt where interest rates typically match the rates we would receive from our short-term cash investments. At the end of January, the weekly variable rate we paid on our debt was set at 0.02 percent while our cash was earning 0.13 percent, which is great.
4. In the Reserve and Capital Activity Table, two new columns were added for COVID-19 Municipal Relief Funds received: CARES – HRSD and CARES – JCSA (James City Service Authority). JCSA is the only locality that directly sent HRSD their relief funds to apply to their accounts. New rows were also added to show the transfers in and out of these funds. CARES Transfer-In reflects the amount that was added to our General Reserve - Unrestricted as the payments were applied to valid, COVID-19 attested HRSD customer accounts. CARES Transfer-Out reflects the total amount of payments applied. Since HRSD used our CARES funds for other locality customers' bills, the difference between the two transfer numbers is the amount paid to localities.
5. The January Call Center statistics continued to reflect the surge in interactions resulting from the ransomware system outage and delayed customer bills. As anticipated, the measures staff put in place to manage the increased interactions were successful. As regular billing operations have resumed, interactions have reduced and the service levels have normalized.

Customer Interaction Statistics	Nov	Dec	Jan	Feb 1-5
Calls Answered within 3 minutes	86%	30%	41%	84%
Average Wait Time (seconds)	0:37	378	803	0:72
Calls Abandoned	8%	28%	39%	7%

6. HRSD's Retiree Health Plan Trust performed extremely well as it returned 10.02 percent for the quarter, above the 9.51 percent benchmark. The one-year trailing return for the Retiree Health Plan Trust portfolio was 16.62 percent compared to the Blended Benchmark return of 14.14 percent. PFM, our investment manager, shifted to a less defensive approach as there is a commitment from the Federal Reserve to use its full range of tools to keep the economy moving forward and there's light at the end of the tunnel with the vaccine rollout February 10, 2021. The Quarterly investment summary for [HRSD's Operating Cash Strategies and Retiree Health Trust \(OPEB\)](#) are attached.

B. Interim Financial Report

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

	Amended Budget	Current YTD	Current YTD as % of Budget (58% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 312,218,000	\$ 189,463,510	61%	60%
Surcharge	1,522,000	964,244	63%	65%
Indirect Discharge	3,200,000	1,907,438	60%	67%
Fees	3,020,000	(424,661)	-14%	62%
Municipal Assistance	700,000	357,496	51%	53%
Miscellaneous	1,165,000	597,435	51%	81%
Total Operating Revenue	321,825,000	192,865,462	60%	61%
Non Operating Revenues				
Facility Charge	6,160,000	4,396,680	71%	60%
Interest Income	1,510,000	442,878	29%	89%
Build America Bond Subsidy	2,292,000	-	0%	47%
Other	610,000	347,187	57%	54%
Total Non Operating Revenue	10,572,000	5,186,745	49%	66%
Total Revenues	332,397,000	198,052,207	60%	61%
Transfers from Reserves	28,765,873	22,774,028	79%	58%
Total Revenues and Transfers	\$ 361,162,873	\$ 220,826,235	61%	61%
Operating Expenses				
Personal Services	\$ 60,952,502	\$ 36,726,110	60%	63%
Fringe Benefits	24,945,953	14,166,816	57%	59%
Materials & Supplies	9,663,402	4,911,996	51%	54%
Transportation	1,579,254	526,208	33%	42%
Utilities	13,019,361	6,677,936	51%	56%
Chemical Purchases	10,500,337	4,759,856	45%	47%
Contractual Services	51,831,008	21,173,016	41%	40%
Major Repairs	13,076,208	3,569,315	27%	30%
Capital Assets	867,079	238,130	27%	20%
Miscellaneous Expense	3,721,391	1,798,529	48%	89%
Total Operating Expenses	190,156,495	94,547,912	50%	52%
Debt Service and Transfers				
Debt Service	61,407,822	38,995,525	64%	67%
Transfer to CIP	109,338,556	69,774,757	64%	58%
Transfer to Risk management	260,000	151,669	58%	58%
Total Debt Service and Transfers	171,006,378	108,921,951	64%	61%
Total Expenses and Transfers	\$ 361,162,873	\$ 203,469,863	56%	57%

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

HRSD - PROJECT ANALYSIS

January 31, 2021

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2020	Expenditures Year to Date FY2021	Total Project Expenditures	Encumbrances	Available Funds
Administration	47,227,240	15,313,091	8,204,150	23,517,241	4,454,817	19,255,182
Army Base	155,448,800	123,095,232	-	123,095,232	2,425,211	29,928,357
Atlantic	112,007,296	76,561,802	2,026,767	78,588,569	5,933,390	27,485,337
Boat Harbor	262,090,388	35,978,245	3,595,311	39,573,556	17,893,593	204,623,239
Ches-Eliz	164,257,309	67,523,875	25,185,053	92,708,928	30,917,661	40,630,720
Eastern Shore	14,000,000	-	-	-	91,500	13,908,500
James River	309,704,973	38,156,333	3,133,997	41,290,330	2,840,667	265,573,976
Middle Peninsula	100,643,276	10,777,028	1,691,562	12,468,590	6,287,469	81,887,217
Nansemond	347,081,385	23,308,106	8,984,621	32,292,727	14,034,390	300,754,268
Surry	45,747,598	10,881,628	4,132,916	15,014,544	24,641,584	6,091,470
VIP	297,032,874	178,713,857	3,088,030	181,801,887	2,894,147	112,336,840
Williamsburg	34,145,622	17,684,308	6,578,735	24,263,043	7,662,471	2,220,108
York River	68,328,343	25,849,807	2,100,800	27,950,607	3,440,588	36,937,148
General	755,529,055	155,712,879	27,450,044	183,162,923	43,355,625	529,010,507
	\$ 2,713,244,159	\$ 779,556,191	\$ 96,171,986	\$ 875,728,177	\$ 166,873,113	\$ 1,670,642,869

5. Debt Management Overview

HRSD - Debt Outstanding (\$000's)

January 31, 2021

	Principal Dec 2020	Principal Payments	Principal Draws	Principal Jan 2021	Interest Payments
Fixed Rate					
Senior	202,866	(2,955)	-	199,911	(1,535)
Subordinate	555,102	(45)	-	555,057	(7)
Variable Rate					
Subordinate	50,000	-	-	50,000	(4)
Line of Credit	10,000			10,000	(20)
Total	\$ 817,968	\$ (3,000)	\$ -	\$ 814,968	\$ (1,566)

HRSD- Series 2016VR Bond Analysis

January 29, 2021

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.46%	0.53%	0.07%
Minimum	0.01%	0.01%	0.00%
As of 01/29/21	0.04%	0.02%	-0.02%

* Since October 20, 2011 HRSD has averaged 53basis points on Variable Rate Debt

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

HRSD - UNRESTRICTED CASH

January 31, 2021

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

		Adjust Days Cash	
		on Hand	Days Cash on Hand
Total Unrestricted Cash	\$ 195,015,488		374
Risk Management Reserve	\$ (3,911,204)	(7)	367
Capital (PAYGO only)	\$ (11,177,253)	(22)	345
Adjusted Days on Cash	\$ 179,927,031		345

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

January 31, 2021

Primary Source	Beginning	YTD	YTD	YTD	Ending	Allocation of	Credit Quality	Current
	Market Value				Market Value			
	July 1, 2020	Contributions	Withdrawals	Income Earned	January 31, 2021			Yield
BAML Corp Disbursement Account	7,339,242	293,489,058	278,458,358	16,142	22,386,084	15.9%	N/A	0.55%
VIP Stable NAV Liquidity Pool	178,660,390	10,000,000	70,000,000	185,275	118,845,665	84.1%	AAAm	0.13%
Total Primary Source	\$ 185,999,632	\$ 303,489,058	\$ 348,458,358	\$ 201,417	\$ 141,231,749	100.0%		

Secondary Source	Beginning	YTD	YTD	YTD	Ending	LTD	Yield to
	Market Value				Market Value		
	July 1, 2020	Contributions	Withdrawals	& Realized G/L	January 31, 2021	Ending Cost	at Market
VIP 1-3 Year High Quality Bond Fund	64,899,667	-	7,598	490,675	65,116,556	63,219,631	1,896,925
Total Secondary Source	\$ 64,899,667	\$ -	\$ 7,598	\$ 490,675	\$ 65,116,556	\$ 63,219,631	\$ 1,896,925

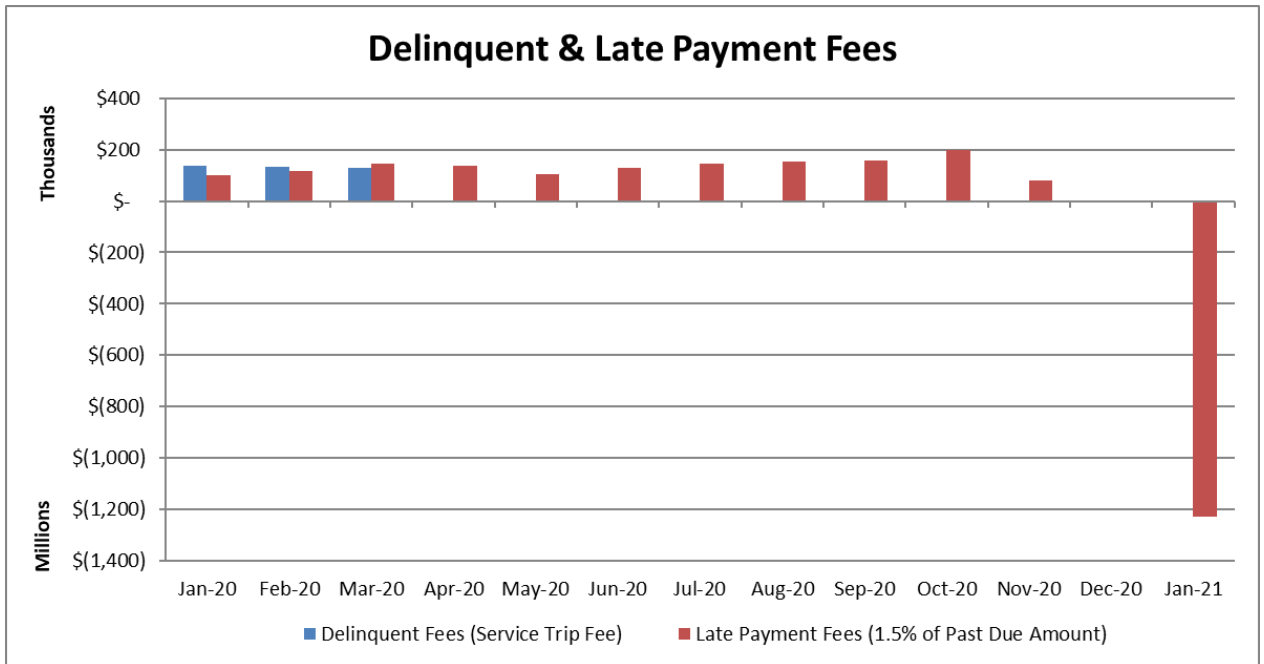
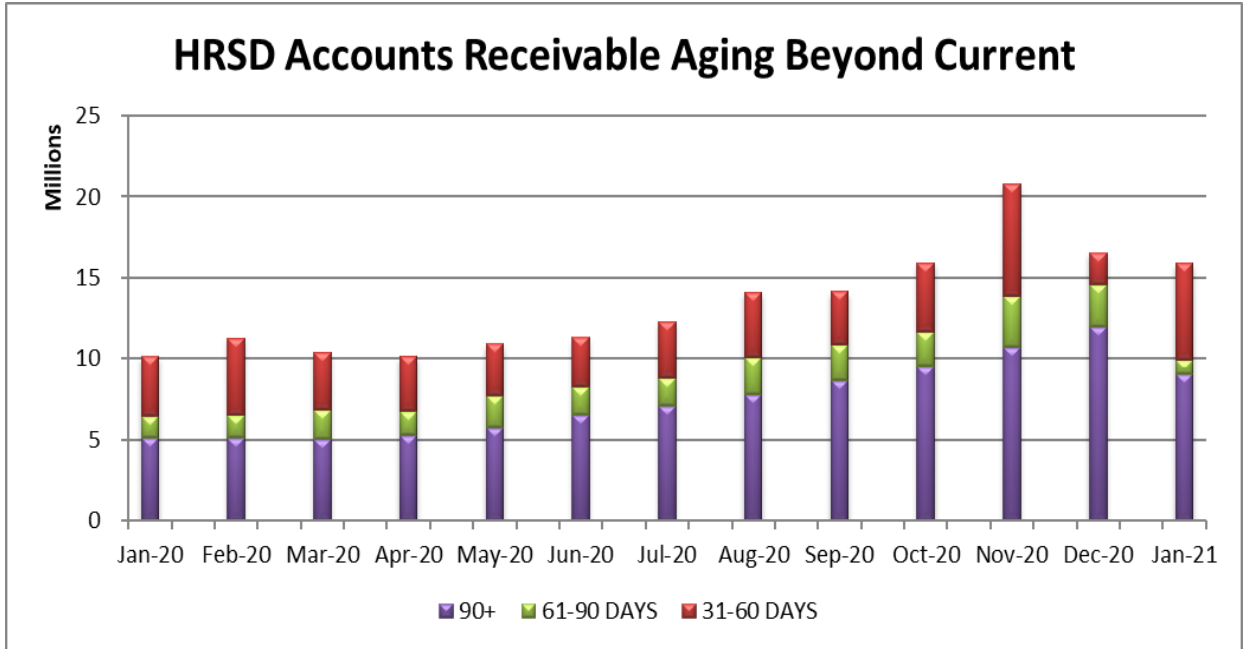
	Total	Fund Alloc
Total Primary Source	\$ 141,231,749	68.4%
Total Secondary Source	\$ 65,116,556	31.6%
TOTAL SOURCES	\$ 206,348,305	100.0%

7. Summary of Billed Consumption

Summary of Billed Consumption (,000s ccf)							
Month	FY2021 Cumulative Budget Estimate	FY2021 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2020 Actual	From FY2020	Cumulative 3 Year Average	From 3 Year Average
July	5,086	4,751	-6.6%	5,114	-7.1%	5,045	-5.8%
Aug	10,047	9,459	-5.8%	9,944	-4.9%	10,026	-5.7%
Sept	14,477	14,335	-1.0%	14,354	-0.1%	14,389	-0.4%
Oct	18,951	18,863	-0.5%	18,952	-0.5%	18,966	-0.5%
Nov	22,937	21,192	-7.6%	23,092	-8.2%	23,160	-8.5%
Dec	27,268	27,614	1.3%	27,518	0.3%	27,383	0.8%
Jan	31,818	32,477	2.1%	32,101	1.2%	31,920	1.7%
Feb	36,287	-	N/A	36,005	N/A	36,236	N/A
March	39,495	-	N/A	40,108	N/A	40,223	N/A
Apr	43,441	-	N/A	44,246	N/A	44,387	N/A
May	47,762	-	N/A	48,397	N/A	48,604	N/A
June	52,222	-	N/A	52,535	N/A	52,869	N/A

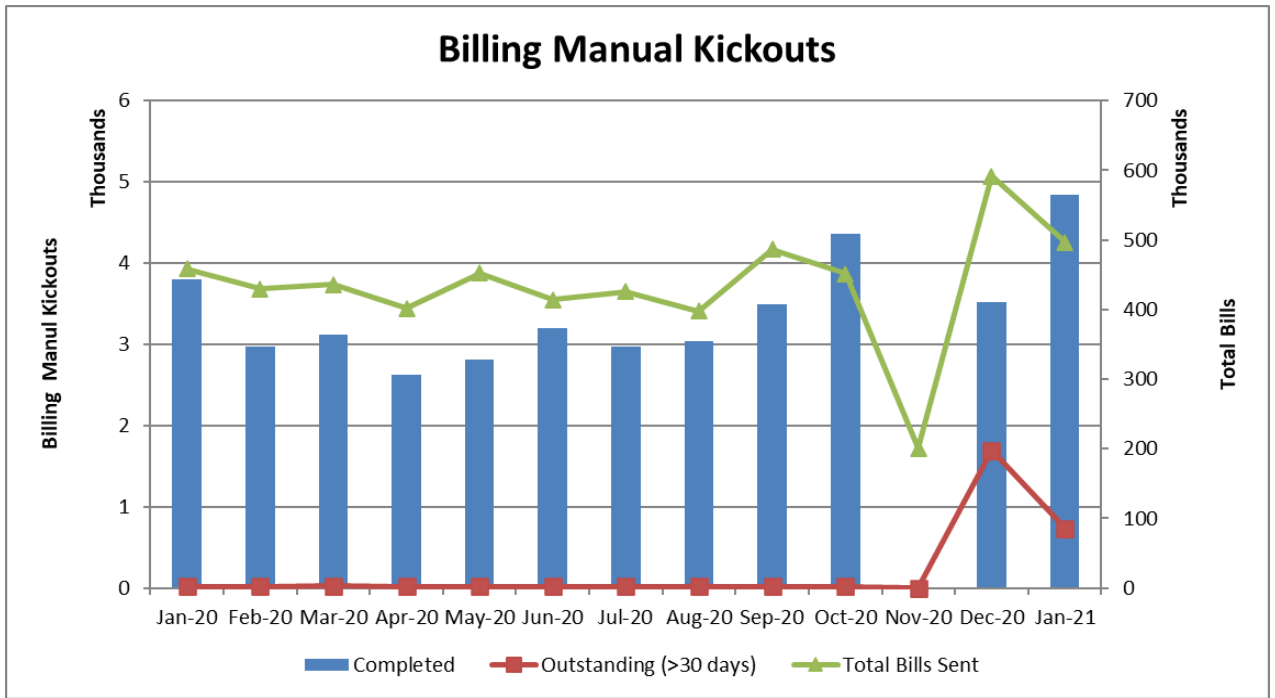
C. Customer Care Center

1. Accounts Receivable Overview

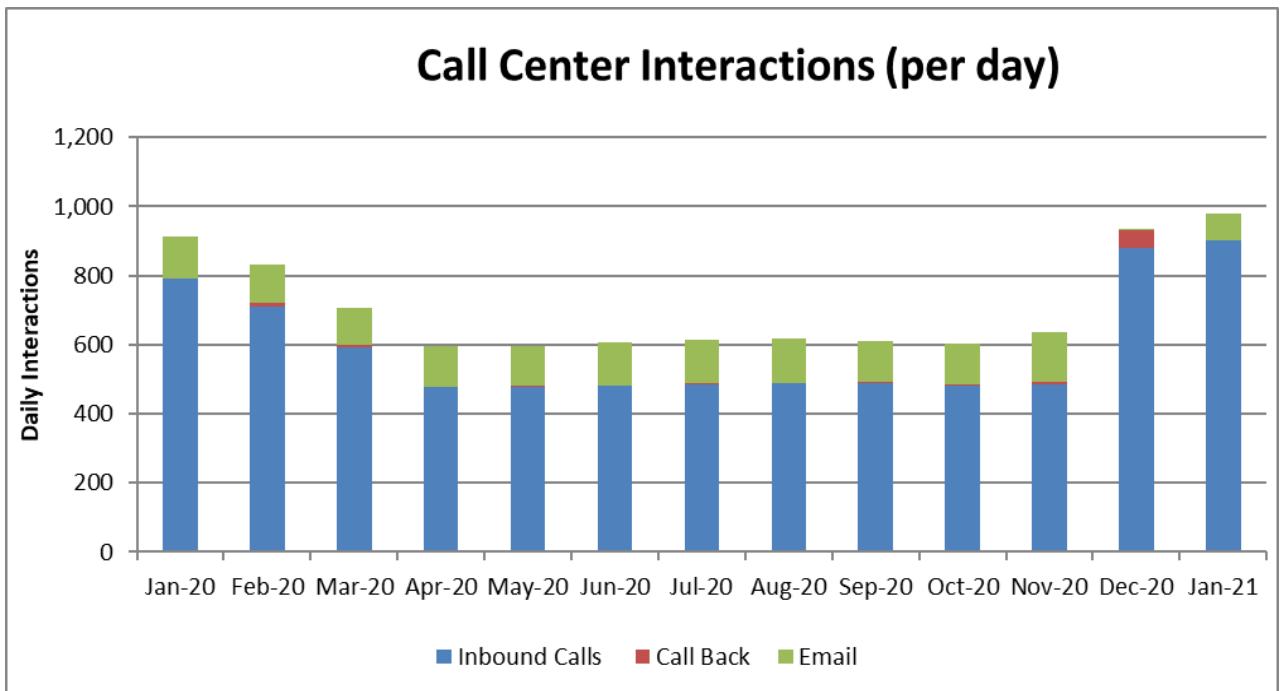


Apr 20-Jan 21 Field Activity was suspended late March 2020 in response to COVID-19.

2. Customer Care Center Statistics



Nov Completed data not available due to Ransomware attack



Customer Interaction Statistics	Aug	Sep	Oct	Nov	Dec	Jan
Calls Answered within 3 minutes	98%	95%	95%	86%	30%	41%
Average Wait Time (seconds)	0:17	0:28	0:25	0:37	378	803
Calls Abandoned	3%	3%	3%	8%	28%	39%

D. Procurement Statistics

ProCard Fraud	External Fraud Transactions *	Comments
July	0	
August	3	One transaction was caught by the card holder and two transactions were caught by the bank immediately.
September	3	Three caught by card holder
October	2	Caught by bank immediately
November	0	
December	0	
January	1	Caught by bank immediately
Total	8	

***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	January 2021
M-1.4a	Training During Work Hours Per Full Time Employee (102) – Current Month	Hours / #FTE	0.32
M-1.4b	Total Training During Work Hours Per Full Time Employee (102) – Cumulative Fiscal Year-to-Date	Hours / #FTE	5.85
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	105%
	General Reserves	Percentage of Operating Budget less Depreciation	109%
	Liquidity	Days Cash on Hand	374 Days
	Accounts Receivable (HRSD)	Dollars	\$35,305,729
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	25%

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

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

**Hampton Roads Sanitation District
Quarterly Performance Report
For the Quarter Ending December 31, 2020**

Total Portfolio Summary

Operating Strategies	December 31, 2020	September 30, 2020
Primary Source	\$ 131,677,563	\$ 170,462,368
Secondary Source	65,101,937	65,027,478
	\$ 196,779,500	\$ 235,489,846

Primary Source Summary

The Primary Source Portfolio consists of BAML Corp Disbursement Account \$12.85m and VaCo/VML VIP Stable NAV Liquidity Pool \$118.83m. BAML Corp Disbursement Account returned 0.55% for the quarter ending December 31, 2020. VIP LIQ Pool Fund 30 Day Avg Net Yield was 0.14% as of December 31, 2020. VIP Stable NAV Liquidity Pool out performed Va Local Government Investment Pool (the market benchmark) by 0.01% in the month of December. VaCo/VML VIP Stable NAV Liquidity Pool's weighted average credit rating was A-1 for the quarter.

Secondary Source Summary

The Secondary Source Portfolio consists of VaCo/VML VIP 1-3 Year High Quality Bond Fund. The VIP 1-3 Yield to Maturity at Market was 0.18% as of December 31, 2020, which out performed the benchmark, ICE BofA ML 1-3 Yr AAA-AA Corp/Gov Index, by 0.03%. The weighted average credit rating for VaCo/VML VIP 1-3 Year High Quality Bond Fund's portfolio was AA for the quarter.

Retirement Health Plan Trust	December 31, 2020	September 30, 2020
Investment Assets	66,657,247	60,592,596
Liquidity Assets	19,830	6,625
Combined Assets	\$ 66,677,077	\$ 60,599,221

Retiree Health Plan Trust Summary

The Retiree Health Plan Trust portfolio returned 9.93% (investment assets) for the quarter ended December 31, 2020, above the 9.51% return of the Blended Benchmark.* The one-year trailing return for the Retiree Health Plan Trust portfolio was 16.52% compared to the Blended Benchmark return of 14.14%. As of December 31, 2020, the weighted average credit quality of fixed income holdings for the Retiree Health Plan Trust portfolio was A.

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

	Total Portfolio Value	
	December 31, 2020	September 30, 2020
Investment Assets	\$ 66,657,247	\$ 60,592,596
Combined Assets	\$ 66,677,077	\$ 60,599,221

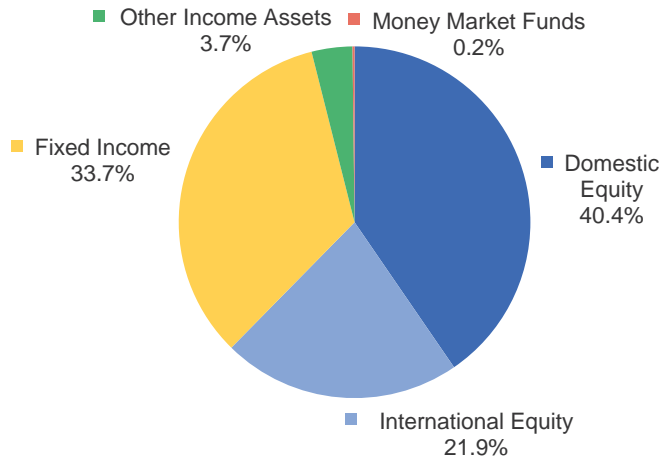
Portfolio Recap & Strategy

- The Retiree Health Plan Trust portfolio returned 10.02% (investment assets) for the quarter ended December 31, 2020, above the 9.51% return of the Blended Benchmark.* The one-year trailing return for the Retiree Health Plan Trust portfolio was 16.62% compared to the Blended Benchmark return of 14.14%. As of December 31, 2020, the weighted average credit quality of fixed income holdings for the Retiree Health Plan Trust portfolio was A. Over the quarter, the Multi-Asset Class Investment Committee (“the Committee”) adopted a less defensive approach, relative to allocations seen in the first half of the year. This shift brought the equity allocation slightly above policy targets and the fixed income allocation slightly below. During this process, the Committee added the iShares Small Cap S&P 600 ETF (*DE*), Artisan International Small-Mid Fund (*IE*), and Virtus KAR International Small-Cap Fund (*IE*).
- U.S. real gross domestic product grew at an annual rate of 4.0% during the fourth quarter of 2020, according to the Bureau of Economic Analysis’ advance estimate. This more tepid level of growth reflects the struggle between the continued economic recovery from sharp declines and ongoing impact of the COVID-19 pandemic. The slowed recovery is also reflected in the last jobs report of 2020. Total nonfarm payrolls, during December, unexpectedly fell by 140,000 during the month, marking the first time employment has fallen since the height of the pandemic in April. The acceleration of COVID-19 case and death counts to frequent records is weighing on the economy significantly.
- Throughout the fourth quarter, the Federal Open Market Committee (“FOMC”) reiterated its commitment to using its full range of tools to support the U.S. economy, thereby promoting its maximum employment and price stability mandates. This includes its “zero lower bound” policy regime and significant levels of U.S. Treasury and agency mortgage-backed security purchases. While FOMC participants raised their projections for year-end economic growth from those presented in September, Chairman Powell was clear that overall economic activity remains well below the levels prior to the pandemic and the economic outlook remains “highly uncertain.”
- Domestic equity markets continued their march ahead during the fourth quarter, as they remained supported by unprecedented levels of Federal Reserve liquidity. The S&P 500 Index’s 12.2% return was also pushed forward by the announcement of multiple highly effective COVID-19 vaccines, the passing of a \$900B stimulus bill, and presidential election results conducive to further fiscal stimulus. Driving this strong performance were the Energy (27.8%), Financials (23.2%), and Industrials (15.7%) sectors. On the other end, Real Estate (4.9%), Consumer Staples (6.4%), Utilities (6.6%), Consumer Discretionary (8.0%), and Healthcare (8.0%) notably lagged the broader market.
- International equity markets outperformed their domestic equity counterparts. Non-U.S. developed markets, as measured by the MSCI EAFE Index, posted a 16.1% fourth quarter return. The Financials (44.4%), Information Technology (24.7%), and Energy (22.5%) sectors lead the charge. Healthcare (-6.9%) and Consumer Staples (8.5%) were standout laggards in international equity markets.
- Emerging markets (“EM”), as represented by the MSCI Emerging Market Index, had a 19.7% fourth quarter return, outperforming the non-U.S. developed market return of 16.1%. EM Asia continued to be a strong performer over the quarter, returning 18.9%.
- The U.S. bond market, represented by the Bloomberg Barclays U.S. Aggregate Index, delivered a meager 0.7% fourth quarter return. Mortgage-backed securities, as measured by the Bloomberg Barclays U.S. Mortgage-Backed Securities Index, also detracted from overall portfolio performance after posting a 0.2% fourth quarter return. Corporate credit, however, distinctly strengthened portfolio performance. The Bloomberg Barclays U.S. Corporate Index advanced 3.1%, while the Bloomberg Barclays U.S. Corporate High Yield Index gained 6.5%. Finally, emerging market sovereign debt, represented by the JP Morgan EMBI Global Diversified Index, also contributed positively to portfolio performance as below investment-grade countries pushed the index to a 5.8% fourth quarter return.

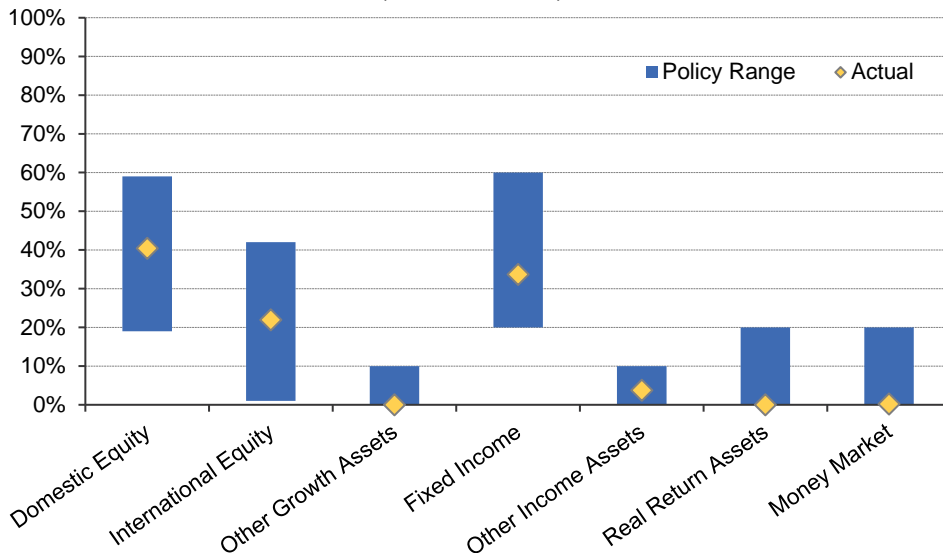
*Performance is unreconciled and does not include funds from Boyd Watterson. See page 3 for detailed information about the Blended Benchmark.

Security Type	December 31, 2020	% of Portfolio	September 30, 2020	% of Portfolio	Permitted by Policy
Domestic Equity	\$ 26,955,686	40.4%	\$ 23,710,677	39.1%	19% - 59%
International Equity	\$ 14,623,707	21.9%	\$ 12,593,311	20.8%	1% - 41%
Fixed Income	\$ 22,474,215	33.7%	\$ 21,793,175	36.0%	20% - 60%
Other Income Assets	\$ 2,497,473	3.7%	\$ 2,450,330	4.0%	0% - 10%
Money Market Funds	\$ 125,996	0.2%	\$ 51,728	0.1%	0% - 20%
Totals	\$ 66,677,077	100.0%	\$ 60,599,221	100.0%	

Portfolio Composition
(as of 12/31/20)



Asset Allocation
(as of 12/31/20)

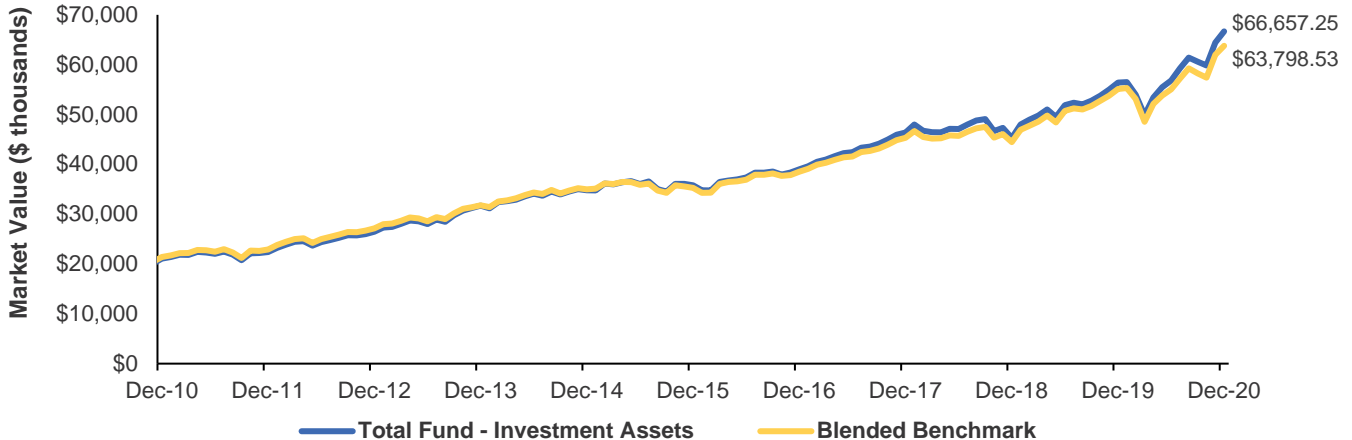


Index	Market Values	%	1 Quarter	Year to Date	Trailing 1 Year	Trailing 3 Years	Trailing 5 Years	Apr 2013 to June 2020*	Since Inception	Inception Date
Domestic Equity	\$ 23,710,677	39.13								
Vanguard Total Stock Market Index	\$ 64,386	0.11	9.20%	5.49%	14.99%	11.64%	13.68%	12.55%	13.58%	9/1/2009
Russell 3000 Index			9.21%	5.41%	15.00%	11.65%	13.69%	12.57%	13.57%	9/1/2009
Vanguard Total Stock Market ETF	\$ 20,321,219	33.54	9.19%	5.46%	14.96%	11.64%	13.68%	12.55%	33.31%	4/1/2020
Russell 3000 Index			9.21%	5.41%	15.00%	11.65%	13.69%	12.57%	33.26%	4/1/2020
Jensen Quality Growth Fund	\$ 2,379,126	3.93	9.59%	6.45%	15.25%	14.99%	16.07%	13.97%	13.10%	4/1/2019
S&P 500			8.93%	5.57%	15.15%	12.28%	14.15%	12.98%	14.27%	4/1/2019
Touchstone Mid Cap Fund	\$ 945,947	1.56	7.89%	-1.34%	3.64%	11.68%	13.06%	10.98%	7.89%	7/1/2020
Russell Midcap Index			7.46%	-2.35%	4.55%	7.13%	10.13%	10.12%	7.46%	7/1/2020
International Equity	\$ 12,593,311	20.78								
Vanguard Total International Stock ETF	\$ 4,952,550	8.17	6.47%	-4.79%	3.82%	1.28%	6.33%	4.16%	25.76%	4/1/2020
MSCI AC World ex USA (Net)			6.25%	-5.44%	3.00%	1.16%	6.23%	3.85%	23.38%	4/1/2020
J. O. Hambro International Select	\$ 3,893,282	6.43	9.81%	14.61%	23.30%	9.20%	10.58%	9.77%	10.66%	1/1/2016
MSCI AC World ex USA (Net)			6.25%	-5.44%	3.00%	1.16%	6.23%	3.85%	5.86%	1/1/2016
Harding Loevner International Equity	\$ 2,520,518	4.16	8.63%	3.61%	14.04%	5.28%	10.24%	6.92%	8.63%	7/1/2020
MSCI AC World ex USA (Net)			6.25%	-5.44%	3.00%	1.16%	6.23%	3.85%	6.25%	7/1/2020
Hartford Schroders Emerging Markets Equity	\$ 1,226,961	2.02	11.12%	1.81%	13.23%	3.93%	10.43%	4.24%	0.74%	3/1/2018
MSCI EM (net)			9.56%	-1.16%	10.54%	2.42%	8.97%	3.10%	-1.27%	3/1/2018
Fixed Income	\$ 21,793,175	35.97								
Baird Core Plus	\$ 5,762,706	9.51	1.37%	7.25%	7.82%	5.71%	5.01%	4.10%	4.56%	5/1/2014
Bloomberg Barclays U.S. Aggregate			0.62%	6.79%	6.98%	5.24%	4.18%	3.45%	3.93%	5/1/2014
DoubleLine Core Fixed Income	\$ 2,881,136	4.75	1.84%	3.82%	4.15%	4.04%	3.90%	3.47%	3.80%	9/1/2017
PGIM Total Return Bond Fund	\$ 6,774,731	11.18	1.78%	5.59%	5.97%	5.65%	5.30%	4.40%	5.37%	9/1/2017
Bloomberg Barclays U.S. Aggregate			0.62%	6.79%	6.98%	5.24%	4.18%	3.45%	4.93%	9/1/2017
Voya Intermediate Bond	\$ 3,608,201	5.95	1.73%	6.29%	6.53%	5.46%	4.92%	-	6.29%	1/1/2020
Bloomberg Barclays U.S. Aggregate			0.62%	6.79%	6.98%	5.24%	4.18%	3.45%	6.79%	1/1/2020
iShares Intermediate-Term Corporate Bond ETF	\$ 1,412,373	2.33	1.83%	7.01%	8.40%	6.80%	5.33%	4.10%	8.40%	10/1/2019
ICE BofAML U.S. Corporate 5-10 Year Index			1.94%	7.24%	8.62%	6.61%	6.10%	4.89%	8.62%	10/1/2019
iShares JP Morgan USD Emerging Markets Bond ETF	\$ 699,272	1.15	2.39%	-0.47%	1.52%	3.13%	5.77%	3.95%	2.39%	7/1/2020
JPM EMBI Global Diversified			2.32%	-0.51%	1.29%	3.49%	6.15%	4.61%	2.32%	7/1/2020
iShares iBoxx \$ High Yield Corporate Bond ETF	\$ 654,756	1.08	4.20%	-1.39%	1.26%	3.39%	5.61%	3.90%	4.20%	7/1/2020
Bloomberg Barclays U.S. High Yield Very Liquid Ind			4.54%	-0.08%	2.65%	3.98%	6.48%	4.67%	4.54%	7/1/2020
Other Income	\$ 2,450,330	4.04								
Boyd Watterson GSA Fund	\$ 2,450,330	4.04	1.58%	3.96%	5.00%	-	-	-	6.36%	7/1/2019
NCREIF Property Income			-	-	-	-	-	-	-	7/1/2019
Cash Equivalent										
First American Government Obligation	\$ 45,103	0.00	0.01%	0.36%	0.76%	1.46%	1.02%	0.68%	1.30%	1/1/2004
Retiree Health Plan Trust	\$ 60,592,596	100.00	6.04%	6.01%	12.07%	7.95%	9.07%	7.71%	8.37%	9/1/2009
Blended Benchmark*			5.18%	4.23%	9.90%	7.25%	8.32%	6.81%	7.97%	9/1/2009

Data as of September 30, 2020

* refers to performance that is not applicable.

Growth of Invested Assets: Actual v. Benchmark



*Active Strategy implemented April 1, 2013. Since inception to June 30, 2017, the Blended Benchmark was 33% Russell 3000 / 21% MSCI ACWI ex USA net) / 3% FTSE NAREIT Equity REITs / 3% Bloomberg Commodity TR / 40% Bloomberg Barclays Aggregate. From July 1, 2017 to present, the Blended Benchmark was 39% Russell 3000 / 21% MSCI ACWI ex USA net) / 40% Bloomberg Barclays Aggregate.

TO: General Manager
FROM: Director of Information Technology
SUBJECT: Information Technology Department Report for January 2021
DATE: February 10, 2021

A. General

1. Staff continues hardening systems and application configurations following November's ransomware incident. Security measures have been expanded so as to provide enhanced security for all HRSD cell phone users. Product testing and evaluation are underway within the IT Department.
2. Following months of preparation and testing, SharePoint Online went live. This cloud-based version of the software provides additional functionality and collaboration tools for all HRSD computer users. Over the next several months, other Microsoft applications will migrate to the cloud, allowing authorized users to work from anywhere they have an Internet connection.
3. During the month of January, the IT Help Desk staff completed over 600 work orders and requests for assistance.
4. Staff is working with Verizon field engineering to determine available connectivity options for data circuits between Air Rail Avenue and the Eastern Shore.
5. Design and configuration options are being explored to permit authorized consultants the access needed to complete their work with minimal disruption, while maintaining the integrity of the HRSD network. User credentials and privileges must be tightly controlled in response to the cybersecurity threats of our connected world.

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	January 2021
M-1.4a	Training During Work Hours Per Full-Time Employee (50) – Current Month	Total Training Hours / # FTE	0.65
M-1.4b	Total Training During Work Hours Per Full-Time Employee (50) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	8.1
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 January 2021

DATE: February 8, 2021

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

- a. On January 4, a failure of a 36-inch pipeline along 16th Street in Newport News resulted in a Sanitary Sewer Overflow (SSO). The cause of the failure was internal crown corrosion at an unknown, un-vented high spot. Because of its location in the interceptor system, there was no ability to divert the flow to other parts of the system. Flow from the break covered the street and sidewalks making them impassable. Staff made provisions to remove flow from the 16th Street area by allowing the flow to discharge at an upstream pump station until temporary repairs could be made. Temporary repairs were completed on January 7. In total, approximately 29,068,057 gallons of raw wastewater was spilled. Because of the criticality and the observed poor condition of the pipeline and concerns that the temporary repairs would not hold, staff instructed contractors to construct approximately 4,000 linear feet of above-ground emergency bypass piping. The contractor's around-the-clock efforts were completed on January 27. These temporary measures will remain in place along 16th Street for several months as contractors construct a permanent replacement pipe. This section of pipe was already slated for replacement, and construction to complete the replacement was underway (but not near the location of the break) at the time of failure. This spill was very disruptive to the surrounding community. Staff appreciates the support it was given from the surrounding community, its contractors, and the City of Newport News during this trying event.
- b. The Supervisory Control and Data Acquisition (SCADA) project reached a significant milestone with successful completion of Factory Acceptance Testing. A week-long test of the SCADA Ovation system was successfully demonstrated at the contractor's factory floor. On-site installation at the South Shore complex is scheduled for early March. Final site demonstration and acceptance testing will be

completed in late March. Locally, contractors completed the cutover of the Cedar Lane Pump Station (PS) to the new system.

2. South Shore (SS) Interceptor Systems

- a. On January 22, the City of Norfolk reported a force main failure near the intersection of Raby Road and Sabre Road. Staff isolated the force main and found a circumferential crack on the 12-inch cast iron force main. They installed a full circle clamp around the cracked section of pipe. The failure resulted in an SSO that leaked approximately 980 gallons into a nearby storm drain that drains to Broad Creek.
- b. Staff assisted with the 16th Street force main failure with clean-up efforts and installing an inflatable bag line stop to connect and activate the bypass pipeline.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Staff removed and reinstalled return activated solids (RAS) motor and returned it to service.
- b. Staff removed and replace a section of the dewatered biosolids conveyor screw along with all the hanger and end bearings.

2. Atlantic Treatment Plant (ATP)

- a. There were three odor exceptions in January. The first occurred on January 11th at the Odor Control Station (OCS) A when staff was dewatering out of both solids handling tanks which resulted in a high level of hydrogen sulfide (H₂S) in the exhaust. Staff corrected the issue. The second occurred on January 19th at OCS D. The scrubber sump became saturated with H₂S and caused a high exhaust reading. The sump was drained, correcting the issue. The third occurred on January 21st at OCS D. A problem with a scrubber recirculation pump caused insufficient recirculation, resulting in a high exhaust reading. Staff repaired the pump and corrected the issue.
- b. The Thermal Hydrolysis Process (THP) continues to process all the plant's solids. One of the de-aerator pumps failed and is awaiting parts. The other pump's seal leaked and was replaced.

- c. In anticipation of producing Class A biosolids, staff disinfected the digested solids line in the dewatering building and the centrifuges. Disinfection of digesters 3,4,5 and the digested solids storage tank and the storage pads also require disinfection.

3. Boat Harbor Treatment Plant (BHTP)

- a. Dewatering challenges because of centrifuge mechanical issues, polymer delivery challenges due to weather conditions, and pipe breaks in the solids feed line caused solids to age in the holding tank making it difficult to dewater. The solids content from the centrifuges declined, producing wetter cake and poor centrate. Due to the poor conditions, staff limited the solids feed to the dewatering centrifuges which caused the level in the holding tanks to continue to rise. As a result, staff began efforts to procure services to assist in a 24/7 solids dewatering operation via a mobile dewatering unit to remove old solids from the holding.
- b. Due to the issues with dewatering and to aid the solids dewaterability, staff tried feeding the second empty holding tank with fresh solids. This would allow the plant to dewater more effectively. The holding tank solids line, located in the transfer pump basement which sends solids to the centrifuges, became clogged and burst while the operator attempted to put the line in service. Staff repaired the damaged section of pipe and tried to clear the line again, but the pipe burst a second time. Staff installed a temporary set up to allow dewatering to continue while the line is repaired, and mobile dewatering is initiated.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

On January 19, staff discovered an underground non-potable water (NPW) leak near the disinfection building. Staff repaired the line, recovering all but 50 of the approximately 500 gallons of NPW that was released.

5. James River Treatment Plant (JRTP)

- a. Staff rebuilt a digester recirculation pump, replaced worn out digester gas valves, and replaced a belt on the #1 gravity belt thickener.
- b. Staff continued working on the centrate pipeline from the centrate pump vault to the centrate equalization tanks. Staff finished installing all above ground pipe and will focus on below ground pipe installation in February. When complete, the new pipeline will deliver centrate

from the centrifuges to the centrate equalization tanks by gravity instead of pumping. Eliminating pumping may reduce the formation of struvite in the pipeline.

6. Nansemond Treatment Plant (NTP)

- a. Three odor exceptions between January 30 – 31 occurred when the H₂S lines to the scrubber froze.
- b. The collector mechanism on primary clarifier #2 failed on January 5. Staff began the process of cleaning the tank for repairs and ordered flights for installation that are more resistant to failure.
- c. Sustainable Water Initiative for Tomorrow (SWIFT) Research Center (SWIFT RC)
 - (1) The total volume of SWIFT recharge into the Potomac aquifer for the month of January was 0.0 MG (0% Recharge Time).
 - (2) Staff discovered significant damage to the backflush pump components resulting from sand scouring.
 - (3) A video survey was completed for the recharge well to better understand the condition of each screen; well rehabilitation work was initiated.

7. Virginia Initiative Plant (VIP)

Staff continued rehabilitating primary clarifier #1, rebuilt a grit slurry pump, and continued working on optimizing automation of the aeration blowers with the newly installed control panels.

8. Williamsburg Treatment Plant (WBTP)

- a. On January 26, a pump failed causing an overflow of approximately 9,400 gallons of scrubber recycle water. Approximately 5,600 gallons was recovered in a retaining area and 3,800 gallons was lost down a storm drain. The pump was repaired and returned to service.
- b. Staff worked on improving grease removal by replacing worn out equipment, retraining operators on grease removal procedures, and using contractors to remove grease built up in tanks over time. The grease buildup is believed to promote the growth of a type of filament bacteria that could cause poor secondary clarifier settling. Secondary

clarifier settling has recently been an issue at the plant, requiring chlorination of the return activated solids to eliminate the filament and return settling to normal.

9. York River Treatment Plant (YRTP)

- a. Staff was contacted by the Department of Environmental Quality (DEQ) after they received a complaint about odors emanating from the plant. Onsite, plant H₂S-based odor has increased since the September 2020 60-inch line break that required the establishment of bypass pumping. To control odors staff increased the ferric feed rate.
- b. Work to replace approximately 300 linear feet of corroded 60-inch headworks effluent pipe from the headworks to the primary clarifier distribution chamber continued. All pipe was connected, laid, and pressure tested. Construction of the primary clarifier distribution chamber influent receiving structure started.
- c. Electrical contract work on the aeration tanks continued. The contractor continued running cable from breakers in the new electrical building to valve actuators and other equipment that will be used to monitor and control air to the aeration tanks.

10. Incinerator Operations Events Summary

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all five plants with incinerators with a THC continuous emission monitoring valid data captured of greater than 99%.

There were three deviations from the required minimum operating parameters and one (>60 minute) reportable bypass event. A drain line on Williamsburg's off-gas wet scrubbing system became plugged with debris prohibiting air flow. The bypass opened for one hour and 32 minutes while the drain line was cleaned, and the system drained. Normal operations were restored and DEQ was contacted.

C. Small Communities (SC)

1. Middle Peninsula Small Communities Treatment and Collections

a. West Point Treatment Plant (WPTP)

Both pumps in the final effluent (FNE) pump station were restored and are pumping at full flow capacity.

b. King Williams Treatment Plant (KWTP)

Elevated flows increased the need for pump and haul operations in January. An estimated 200,000 gallons were removed from the plant during the month.

c. Urbanna Treatment Plant (UBTP)

A total daily flow of 0.151 million gallons per day occurred in early January; this is the single highest daily flow total in over 10 years.

d. Central Middlesex Treatment Plant (CMTP)

Staff installed a new automated bar screen this month. This project was partially funded by the regional jail facility.

2. Small Communities – Surry Systems

During the week of January 2, 2021, a weekly maximum loading exceedance for final effluent cBOD limit occurred at the Town of Surry facility. The permit weekly limit is 3,400 grams per day (g/d) and the reported value was 3,498 g/d. Staff determined that blower #1 had an electrical issue and was not providing oxygen at full capacity. Blower #2 was put into service and the issue subsided. Staff is repairing blower #1.

3. Small Communities – Lawne's Point

Two property owners called with after-hours complaints because their private grinder pumps were backing up. Staff responded to both complaints, checking system pressures and confirming normal system operations. After consulting with the homeowners and their plumbers, both grinders were found to have clogged impellers.

D. Support Systems

1. Facilities Maintenance

Staff is working to upgrade all scale computers and re-image cameras for the Network Video Recorders. Staff coordinated the COVID-19 cleaning for South Shore Interceptors locker room, vehicles, and Central Environmental Lab (CEL) common areas.

E. Energy Management (EM)

Staff and contractors began installing oxidation catalysts on the ATP and YRTP diesel generators (DGs). This effort will help to clean up DG exhaust, allow additional permitted hours of DG operation, and allow HRSD to participate in the demand response program, which allows our DGs to run when critical power is regionally needed. BHTP and NTP DGs are currently on this plan.

F. Electrical & Instrumentation (E&I)

1. Staff discovered the Continuous Emissions Monitoring System (CEMS) unit was measuring inaccurately at CETP. The contractor replaced the carbon dioxide (CO₂) Adstractor on the CEMS unit. The unit was tested and returned to normal service.
2. Staff removed and relocated all CETP pilot study equipment to VIP.
3. Staff installed a new control panel for the #1 Blower at VIP. The project involved installing a new Programmable Logic Control (PLC) control panel, raceways, conductors, and Distributed Control System (DCS) integration. They also modified the new PLC's program to revise the control scheme, to allow integration with our DCS control. The system was successfully commissioned and placed in service.
4. Staff assisted with the 16th Street line break in Newport News by designing and implementing a control system for a portable actuated valve at the Claremont Pump Station (PS). The purpose of the actuated valve was to reduce pipeline pressures in the event it was necessary. Once the temporary bypass line was completed, staff removed the actuator and controls.

G. Water Technology and Research

HRSD's development and demonstration of polishing partial denitrification-anammox (PdNA) has been quite promising as applied in the case of the full-scale and pilot-scale YRTP deep-bed denitrification filters and the JRTP pilot-scale moving bed biofilm reactors (MBBR). It was previously reported that the JRTP nutrient upgrade associated with SWIFT will include polishing MBBR reactors that can be operated in PdNA mode, and this provides considerable operational and capital benefits. The next phase of research broadly involves transitioning to integrated PdNA, such as in second anoxic zones of our existing BNR facilities (NTP, ABTP, VIP, JRTP). This is a much larger challenge from a development and control standpoint, but we have initiated an investigation of both moving and fixed media integrated fixed film activated sludge (IFAS),

including both full-scale and pilot plant testing.

E. 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)	4	2	4	3	3	3	4					
2.7	# of PS Annual PMs Performed (SS)	5	7	5	5	5	3	4					
2.7	# of Backup Generator PMs Performed (Target is 4.6)	7	15	6	17	10	5	7					
2.8	# of FM Air Release Valve PMs Performed (NS)	114	42	187	264	182	186	161					
2.8	# of FM Air Release Valve PMs Performed (SS)	220	243	200	316	108	152	249					
2.9	# of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD)	9,394	3,605	5,057	6,050	1,467	3,320	2,062					
2.9	# of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD)	10,686	2,217	1,100	6,245	3,687	3,370	1,876					
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	0	0	0	0	0	0	0					

F. Strategic Measurement Data

1. Education and Outreach Events: 1

01/26/2021: Virginia Beach Fire Department HazMat Team & Fire Station # 2 tour

2. Community Partners: 1

Chesapeake Bay Foundation-oyster cage maintenance at BHTP for oyster garden project

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	January 2021
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (526) – Current Month	Hours / FTE	2.25
M-1.4b	Total Training During Work Hours per FTE (526) – Cumulative Year-to-Date	Hours / FTE	12.38
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	26,671.16
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	64%
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	16%
M-2.3d	Planned Maintenance - Projects	% of Total Maintenance Hours	20%
M- 4.1a	Energy Use: Treatment *reported for December 2020	kWh/MG	2,360

Item #	Strategic Planning Measure	Unit	January 2021
M-4.1b	Energy Use: Pump Stations *reported for December 2020	kWh/MG	169
M-4.1c	Energy Use: Office Building *reported for December 2020	kWh/MG	82
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	1

Respectfully submitted,
Steve de Mik
Director of Operations

TO: General Manager

FROM: Director of Talent Management (TM)

SUBJECT: Monthly Report for January 2021

DATE: February 10, 2021

A. Talent Management Executive Summary

1. Recruitment Summary

New Recruitment Campaigns	4
Job Offers Accepted – Internal Selections	3
Job Offers Accepted – External Selections	7
Average Days to Fill Position	69

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

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

Direct Exposure Quarantines (household or external)	54
Work-Related Exposure Quarantines	5
Personal Travel Quarantines	2
Confirmed Employee COVID-19 Cases	20
Work Related Employee COVID-19 Case	1
Contractor employee COVID-19 Cases on HRSD Work Sites*	2*

*No direct exposure to HRSD employees

- b. Worked with supervisors on additional prevention measures due to an increase in cases at one location
- c. Met with Facilities staff to discuss process and communication improvements for work center cleaning following an exposure event
- d. Developed and distributed a COVID-19 vaccine policy, information, and resources to employees. Worked with the Director of Communications on an overall COVID-19 Vaccine Communication plan.
- e. Contacted medical providers to plan on-site vaccination clinics for Phase 1c.

3. Benefits and Compensation

- a. Pre-Renewal meetings were held with HRSD's Benefit consultant to:
- (1) Review previous, current year and projected utilization, claims, and cost trends for medical, vision and dental plans.
 - (2) Evaluate renewal options including coverage, deductibles and cost-saving strategies
 - (3) Review proposed supplemental health care plan options and recommendations

- b. Quarterly Review Meetings were held for the following:
 - (1) HRSD’s Wellness Program with Optima Health
 - (2) HRSD’s Weight Loss Program with Omada and Wellness Program staff
- 4. HR continued to partner with Departments and work centers on:
 - a. Finalizing remaining employee contracts for Boat Harbor Treatment Plant (TP) closure.
 - b. Working with Operations on planning the transition of Onancock TP employees to HRSD. Provided benefit information, assisted with position placement and compensation, and began developing job descriptions.
- 5. Wellness Program
 - a. Participation

Year Eight Participation Activities	Unit	January 2021	Year to Date (March 2020–February 2021)
Biometric Screenings	Number	19	106
Preventive Health Exams	Number	19	162
Preventive Health Assessments	Number	184	328
Online Health Improvement Programs	Number	284	436
Web-MD Online Health Tracking	Number	36	940
Challenges: <i>Holiday Maintain Don’t Gain</i>	Number	114	414
Fit-Bit Promotion	Number	4	59

- b. Several communications were sent to participants and ten virtual work center meetings were held on current year Wellness Plan changes. Revisions allow flexibility for meeting requirements to earn the lowest health plan deductible and incentives.
- c. The Wellness Specialist worked with TM staff to update the new Year 9 Wellness Plan to include a COVID-19 vaccine incentive.
- d. The Wellness Specialist presented *Creating Mindful Habits for Health and Happiness* at two South Shore Interceptor Systems meetings.

6. Work continued with the OD&T consultant on the following:
 - a. Implementing the Leadership and Management Academy (LAMA)
 - b. Completing the *Courageous Conversations Tour* summary and developing next steps
 - c. Revising the Supervisor Training Program; Evaluating online training materials for an introductory *Supervisory Knowledge and Information Program* (SKIP)
7. The Workplace Team presented the Your Role in Quality Improvement Award at the HRSD Quality Steering Team (QST) meeting to Bill McDermott for the project, *Technical Services Division (TSD) Boat and Trailer Washer*.
8. The Facilitator team conducted the second LAMA module, *Design Thinking*. The cohorts began work on their capstone project, Employee Burnout.
9. Apprenticeship Program
 - a. Staff conducted Pre-Apprenticeship Orientation for 18 apprentices which included program information, registration, and a math placement exam.
 - b. Several improvements are in progress:
 - (1) Canvas course development
 - (2) Electrical and Instrumentation (E&I) trade revisions
 - (3) Plant Operator Curriculum review
 - (4) Development of a Student Success Program
 - (5) Apprenticeship Mentoring Program (AMP)
 - (6) Simulation Development - Operations
10. Safety and HR staff finalized the Occupational Safety and Health Administration (OSHA) 300 Log of 2020 Work Related Injuries and Accidents. The document was distributed to all work centers for required posting and submitted to OSHA.
11. Safety Recognition Program:
 - a. Thirty-two work centers received full or partial recognition for no or a reduced number of work-related injuries and accidents from July through December 2020.
 - b. 2020 Safety Innovation Awards were presented at the HRSD QST meeting:
 - (1) Army Base TP employees for *A Hole Lot of Cover-up*, design and construction of aeration tank drain covers to prevent trips and falls
 - (2) TSD *Boat and Trailer Washer*, design and construction of a wash system to prevent corrosion and associated accidents
12. The Safety Manager escorted a Virginia OSHA inspector on an Atlantic TP construction work site inspection.

- 13. The Safety Division continued conducting respirator fit testing and coordinating medical screenings for work centers to meet Respiratory Protection Program requirements.
- 14. Mishaps and Work-Related Injuries Status to Date (OSHA Recordable)

	<u>2020</u>	<u>2021</u>
Mishaps	32	5
Lost Time Mishaps	8	2
<i>Numbers subject to change pending HR review of each case.</i>		

15. Safety Division Monthly Activities

Safety Training Classes	18
Work Center Safety Inspections	9
Reported Accident Investigations	5
Construction Site Safety Evaluations	36
Contractor Safety Briefings	7
Hot Work Permits Issued	16
Confined Space Permits Issued/Reviewed	170
Industrial Hygiene Monitoring Events	4

B. Monthly Strategic Planning Metrics Summary

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

Item #	Strategic Planning Measure	Unit	January 2021
M-1.1a	Employee Turnover Rate (Total)	Percentage	1.13%
M-1.1b	Employee Turnover - Service Retirements	Percentage	0.38%
M-1.4a	Total Training Hours Per Full Time Employee (17) – December	Total Training Hours/ FTE	2.85
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / FTE	17.76
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Community Partners	Number	0

Respectfully submitted,
Paula A. Hogg
 Director of Talent Management

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

A. General

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

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy (SEA) Group reported no activity for the month of January.
2. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department.

C. Municipal Assistance

HRSD provided sampling and analytical services to Northumberland, Westmoreland, and Hanover counties and to the City of Fredericksburg to support monitoring required for their respective Virginia Pollution Discharge Elimination System (VPDES) permits.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1
 - P3 staff created a presentation for the Hampton Roads Public Works Academy. This presentation is for the Washing Water Activity and will replace in-person events.
2. Community Partners: 2
 - a. American Red Cross
 - b. Hampton Roads Planning District Commission
3. Odor Complaints: 1
 - HRSD was contacted by the Department of Environmental Quality (DEQ) after it received a complaint about odors from HRSD's York River plant. A Seaford, VA resident who has lived in the local area since 2011, had for some time been noticing sulfur odors that seemed to be getting worse lately. The onsite plant H₂S based-odors had increased after the September 17, 2020 60-inch line break that required shutting down the aerated grit system and establishing bypass pumping. This reduced the sulfides going to the odor scrubbers and allowed for the release of sulfides at the primary clarifier distribution box and primary clarifiers. Plant operations had begun feeding ferric at a rate of 150 lbs/day to the distribution box

at the outset of the bypass pumping to address H2S concerns. In response to the complaint, operations doubled the ferric feed rate to 300 lbs/day. TSD performed odor monitoring after corrective action was implemented and confirmed a reduction in onsite odors. Offsite odors are being kept to a minimum and no further complaints have been received. Odor monitoring will continue until the line repair is completed and the bypass pumping ends in March. The resident and DEQ were contacted and informed of the situation and corrective action taken. They were both appreciative of HRSD's efforts to control odors and were satisfied with HRSD's response to the complaint.

4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	January 2021
M-1.4a	Training During Work Hours Per Full Time Employee (118) (Current Month)	Total Hours / # FTE	3.95
M-1.4b	Total Training During Work Hours Per Full Time Employee (118) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	28.86
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	7:35,513
M-3.2	Odor Complaints	#	1
M-3.4	Pollutant Removal	Total Pounds Removed	108,738,508
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	19%
M-5.2	Educational and Outreach Events	#	1
M-5.3	Community Partners	#	2
	Average Daily Flow	Total MGD for all Treatment Plants	165.32
	Pretreatment Related System Issues	#	0

Respectfully submitted,
James Plett, Ph.D
 Director of Water Quality



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

I. Projects in Process

SWIFT Program Management Plan

- **Upcoming Tasks (February 2021)**
 - Obtain Management actions plans
 - Finalize report

Fleet Services

- **Upcoming Tasks (February 2021)**
 - Obtain Management actions plans
 - Finalize report

Succession Planning

- **Tasks Completed (January 2021)**
 - Obtained Management feedback
 - Met with Management to discuss comments
- **Upcoming Tasks (February 2021)**
 - Review and make necessary updates
 - Request Management action plans
 - Obtain Management actions plans
 - Finalize report

Risk Assessment

- **Tasks Completed (January 2021)**
 - Conducted additional Risk Assessment interviews
 - Develop and draft Risk Assessment rankings
- **Upcoming Tasks (February 2021)**
 - Conduct remaining interviews
 - Finalize Risk Assessment Documentation
 - Develop FY22 Internal Audit Plan

Business Continuity and Disaster Recovery (Audit Fieldwork Complete/ Management Response in Process)

- HRSD management has communicated its continued progress to develop a plan to address the recommendations included in the BC/DR report. SC&H will continue to work with HRSD process owners and management to finalize the audit report, incorporating management action plans. A specific completion date has not been identified at this time.

Upcoming Projects (FY2021)

SC&H is working with HRSD/the Director of Finance coordinate and determine timing to commence the Contract Management (procurement, non-engineering) internal audit and the annual risk assessment.

II. Management Action Plan (MAP) Monitoring



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

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

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

Audit	Report Date	Next Follow-up	Recommendations		
			Closed	Open	Total
D&C: CIP Project Management	5/11/16	Closed	13	0	13
Biosolids Recycling	10/8/16	Pending Permit	7	1	8
HR Benefits	11/22/16	Closed	15	0	15
Inventory	4/20/17	Closed	5	0	5
Procurement/ ProCard	8/23/17	In process	8	3	11
Engineering Procurement	4/20/18	In process	4	4	8
Corporate Governance: Ethics Function	3/21/18	January 2021	3	2	5
Treatment Plant Operations	10/15/18	July 2021	5	4	9
Customer Care Division	7/26/19	In-Process	0	4	4
Safety Division	9/12/19	In process	0	3	3
Permitting	2/4/20	March 2021	0	2	2
Payroll	3/27/20	April 2021	0	3	3
Pollution Source Control	6/2/20	January 2022	3	5	8
Totals			63	31	94

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
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%
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%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	70%	71%	64%	69%	68%	85%	85%	63%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67	67	66	60
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
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%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%	167%	159%	159%
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
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%	44%	59%	59%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%	24%	18%	19%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%	32%	27%	25%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%	5%	4	5%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45	1.58	1.66	1.58	1.7
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
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
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163	173	170	181	174
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97	104	104	95	102
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%
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
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%
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
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A	N/A	53%	N/A	53%
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%	143%	114%	117%	143%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35	15	20	26	32
	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
	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
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%	76%	72%	78%
	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%
	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%

*to be reported

Monthly Updated 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 Dec-20	FY-21 Jan-21
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	145.8	152.7	141.5	168.0	165.3
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	4	7	1	0	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	103%	104%	104%	109%	105%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	117%	119%	101%	109%
	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	\$45,708,907	\$35,305,729
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	18%	17%	18%	26%	25%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	10	5	2	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	9:53236	9:58338	2:60879	9:60879	6:30440	7:35513
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	6	9	15	0	1
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	92,975,317	108,738,508
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	22%	17%	17%	17%	18%	19%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	367	256	6	6
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	293	230	7	8

EFFLUENT SUMMARY FOR JANUARY 2021

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	TKN mg/l	NH3 mg/l	CONTACT TANK EX
ARMY BASE	12.50	69%	6	5.2	3	4	0.41	0.41	4.9	4.9	NA	NA	2
ATLANTIC	26.17	48%	16	15	2	1	NA	NA	NA	NA	NA	NA	18
BOAT HARBOR	15.39	62%	8	7.8	4	1	0.22	0.22	18	18	NA	NA	7
CENT. MIDDLESEX	0.009	37%	<2	1.5	<1	1	NA	NA	NA	NA	<0.50	0.03	NA
CHES-ELIZ	19.57	82%	23	14	22	9	1.1	1.1	29	29	NA	NA	2
JAMES RIVER	15.72	79%	4	4.1	1	1	0.34	0.34	6.8	6.8	NA	NA	1
KING WILLIAM	0.067	67%	<2	<1.0	NA	<1	0.025	0.025	2.8	2.8	2.2	NA	NA
NANSEMOND	18.99	63%	6	7.9	4	2	0.72	0.72	6.6	6.6	NA	NA	1
SURRY, COUNTY	0.054	83%	8	1.9	NA	NA	NA	NA	NA	NA	1.2	NA	0
SURRY, TOWN	0.080	133%	7	10	NA	42	NA	NA	NA	NA	1.3	<0.10	NA
URBANNA	0.064	64%	3	6.5	1	3	0.29	0.29	10	10	NA	2.27	NA
VIP	31.75	79%	5	4.0	3	1	0.78	0.78	4.1	4.1	NA	NA	0
WEST POINT	0.710	118%	23	17	1	1	2.0	2.0	12	12	NA	NA	0
WILLIAMSBURG	8.65	38%	8	6.8	2	2	0.39	0.39	4.0	4.0	NA	NA	2
YORK RIVER	15.60	104%	1	0.71	<1	1	0.16	0.16	5.5	5.5	NA	NA	1
	<u>165.32</u>												

	% of Capacity
North Shore	67%
South Shore	66%
Small Communities	98%

	Tributary Summary						
		<u>Annual Total Nitrogen</u>			<u>Annual Total Phosphorus</u>		
		Discharged	Operational		Discharged	Operational	
		YTD	Projection	CY21	YTD	Projection	CY21
Tributaries	%	Lbs	%	%	Lbs	%	
James River	7%	4,520,813	99%	6%	318,506	100%	
York River	9%	262,764	91%	6%	19,376	100%	
Rappahannock	13%	NA	NA	7%	NA	NA	

Permit Exceedances: Total Possible Exceedances, FY21 to Date: 7:35,513
Pounds of Pollutants Removed in FY21 to Date: 108,738,508
Pollutant Lbs Discharged/Permitted Discharge FY21 to Date: 19%

	Rainfall (inch)		
	<u>North Shore (PHF)</u>	<u>South Shore (ORF)</u>	<u>Small Communities (FYJ)</u>
Month	4.00"	3.81"	3.97"
Normal for Month	3.39"	3.11"	3.43"
Year to Date Total	4.00"	3.81"	3.97"
Normal for YTD	3.39"	3.11"	3.43"

AIR EMISSIONS SUMMARY FOR JANUARY 2021

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								January	2021	
	Temp 12 hr ave (F)	Venturi(s) PD 12 hr ave (in. WC)	Precooler Flow 12 hr ave (GPM)	Spray Flow 12 hr ave (GPM)	Venturi Flow 12 hr ave (GPM)	Tray/PBs Flow 12 hr ave (GPM)	Scrubber pH 3 hr ave	Any Bypass Stack Use	Part 503e Limits THC Mo. Ave (PPM)	THC DC (%)	BZ Temp Daily Ave Days >Max
ARMY BASE	0	0	0	0	0	0	3	0	29	100	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	6	100	0
CHES-ELIZ	0	0	0	0	0	0	0	0	14	99	0
VIP	0	0	0	n/a	0	0	0	0	14	99	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	1	13	99	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	1
DEQ Request for Corrective Action:	0
DEQ Warning Letter:	0
DEQ Notice of Violation:	0
Other Air Permit Deviations:	0
Odor Complaints Received:	1
HRSD Odor Scrubber H2S Exceptions:	10

AGENDA ITEM 13.e.1 – February 23, 2021

Subject: Central Trunk Interceptor Force Main Section A Failure
Emergency Declaration

CIP Project: CE012300

Recommended Action: No action is required. Information Only

Brief: On February 5, 2021, the City of Virginia Beach reported a force main break near the intersection of Independence Boulevard and Hinsdale Street. The 36-inch reinforce concrete pipe (RCP) force main failed either from a defect when the pipe was manufactured or installed or perhaps damage from a nearby excavation or an errant directional drill by another utility at some point in the past. The failure leaked approximately 281,000 gallons into a storm drain leading to Thalia Creek, a tributary of the Western Branch of the Lynnhaven River.

Staff isolated the leak by operating mainline valves and pumping and hauling at City of Virginia Beach pump stations. The contractor, Bridgeman Civil, Inc., was called due to the depth of the pipeline, complexity of the traffic control, and the difficulty of the roadway installation. All three southbound lanes of Independence Boulevard were closed due to the break. Bridgeman Civil, Inc. immediately mobilized onsite, replaced the failed section of pipe, and repaired the comprised roadway section.

An emergency declaration was authorized on February 10, 2021.

Staff used the Pump and Haul Services contractor, Atlantic Heating and Cooling Service Inc., for pump and haul services. Staff also utilized the Prompt Repair On-Call Services contractor, Bridgeman Civil, Inc., to establish required traffic control, complete repairs on the force main, provide supplemental pump and haul, provide CCTV, clean the storm system and roadway median affected by the spill, and make all necessary roadway repairs. Finally, staff used the On-Call General Engineering consultant, Hazen and Sawyer, to provide construction administration and inspection.

The cost of the work is estimated to be \$650,000 and will be funded from the new CIP Central Trunk Interceptor Force Main Section A (SF-119) Failure (CE012300).

AGENDA ITEM 13.e.2. – February 23, 2021

Subject: 20-inch Force Main Ocean View Via Granby Street Failure (W Bay Avenue and St. George Avenue)
Emergency Declaration

Recommended Action: No action is required. Information Only

Brief: On February 8, 2021, staff reported a force main break near the intersection of W Bay Avenue and St. George Avenue in Norfolk. The 20-inch prestressed concrete cylinder pipe (PCCP) force main failed due to severe internal corrosion. The failure leaked approximately 900 gallons into a storm drain leading to Oastes Creek.

Staff isolated the leak by operating mainline valves and pumping and hauling at City of Norfolk pump stations. Staff immediately mobilized onsite, replaced the failed section of pipe, and repaired the comprised roadway section. A contractor, Shaw Construction Company, was used to apply an epoxy coating on the PCCP interior at both tie-in connections for internal corrosion protection.

An emergency declaration was authorized on February 10, 2021.

Staff used the Pump and Haul Services contractor, Atlantic Heating and Cooling Service Inc., for pump and haul services. Staff also utilized the Closed-Circuit Television (CCTV) Gravity Sewer Inspection and Cleaning Service contractor, Tri-State Utilities, to provide CCTV to check on the pipe condition at the tie-in locations. Staff used Shaw Construction Corporation to apply the epoxy coating and Virginia Pump and Motor to supplement the Pump and Haul Services contractor with additional pump and haul trucks.

The cost of the work is estimated to be \$120,000 and will be funded from the Operating Budget.