



COMMISSION MEETING MINUTES
March 28, 2023

No. Topic

[Call to Order](#)

[Roll Call of HRSD Commission](#)

1. [Awards and Recognition](#)
2. [Consent Agenda](#)
3. [Middlesex Interceptor System Program Phase II-Transmission Force Main Project Public Hearing on Determination of Public Need for Fee Simple and Easement Acquisition and Resolution](#)
4. [Suffolk Pump Station Replacement Public Hearing on Determination of Public Need for Fee Simple and Easement Acquisition and Resolution](#)
5. [Post-Issuance Tax Compliance Policy Revisions Commission Adopted Policy](#)
6. [Hampton Roads Bridge Tunnel Expansion Project Hampton Roads Water Quality Credit Trade Agreement for Chesapeake Bay Restoration Compliance Year 2022](#)
7. [Atlantic Treatment Plant Secondary Clarifier Effluent Weir Replacement and Enhancements Additional Appropriation & Contract Award \(>\\$200,000\)](#)
8. [Deep Creek Interceptor Force Main Risk Mitigation Additional Appropriation](#)
9. [Eastern Shore Infrastructure Improvements – Transmission Force Main Phase I Additional Appropriation, Contract Change Order \(>25%\)](#)
10. [Lucas Creek – Woodhaven Interceptor Force Main Replacement Phase II Additional Appropriation, Contract Award \(>\\$200,000\) and Task Order \(>\\$200,000\)](#)
11. [Suffolk Pump Station Replacement Easement Acquisition 568 East Constance Road a/k/a 568 Wilroy Road, Suffolk](#)
12. [Unfinished Business](#)



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- | <u>No.</u> | <u>Topic</u> |
|------------|--|
| 13. | <u>New Business - Suffolk Pump Station Replacement
Real Estate Acquisition – Easement Interest
701 Old East Pinner Street and 725 E. Constance Road, Suffolk</u> |
| 14. | <u>Commissioner Comments</u> |
| 15. | <u>Public Comments</u> |
| 16. | <u>Informational Items</u> |
| 17. | <u>Closed Meeting</u> |
| 18. | <u>Reconvened Meeting</u> |
| 19. | <u>Work Session – FY-2024 Annual Budget</u> |
| 20. | <u>Announcements</u> |



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The Commission Chair called the meeting to order, and the Commission Secretary read the roll call of HRSD Commissioners.

Name	Title	Present for Item Nos.
Rodriguez, Stephen C.	Commission Chair	1-20
Elofson, Frederick N.	Commission Vice-Chair	Absent
Glenn, Michael E.	Commissioner	1-20
Lakdawala, Vishnu K.	Commissioner	1-20
Levenston, Jr., Willie	Commissioner	1-20
Stern, Nancy J.	Commissioner	1-20
Taraski, Elizabeth	Commissioner	1-20
Templeman, Ann	Commissioner	Absent

1. **Awards And Recognition**

Action: No action required.

Brief: HRSD is pleased to announce the following:

a. **Service Awards**

The Commission Chair presented a service award to Guy Dominique who marked his 30th year of service with HRSD on March 1, 2023. Guy began his career at HRSD as a Solids Handling Maintenance Operator Assistant at the Virginia Initiative Plant (VIP). In July 1994 he switched roles to Plant Operator Assistant (POA) at VIP, then transferred to the Nansemond Treatment Plant as a POA in March 2000, and was promoted to his current position as Maintenance Operator Assistant in February 2016.

Guy remains a crucial team member in the success of the Nansemond Treatment Plant and has been especially instrumental in both the operations and maintenance of the Struvite Recovery Facility and the Regional Residuals Facility.

We often say that every facility has that one guy you can rely on, who can fill in the gap no matter where you ask them to be, who excels, and is eager, we are incredibly fortunate to not only have a guy but “the” Guy.



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b. New Employee Introductions

- Mr. Dale Stevick has joined HRSD's E&I Division as the South Shore Instrumentation Manager. Dale is a graduate of the U.S. Navy Nuclear Power Training program. He also graduated with a Bachelor of Science in Applied Science and Technology from Thomas Edison State College. In his new role, Dale's primary responsibilities will include supporting CIP project engineering design reviews, contract management (i.e., preventive maintenance, engineering services, etc.), organizational development, and budgetary management.
- Mr. Nicholas Taschner was hired in March 2023 as a Project Manager in the South Shore Design and Construction Division. Nick holds a Bachelor of Science in Systems Engineering from the United States Naval Academy. He is an active participant in the United States Marine Corps Reserve and the Professional Association of Dive Instructors (PADI). Nick's responsibilities will include design and construction management oversight for both capital and non-capital projects and serving on cross departmental committees as with the HRSD Design and Construction Standards.

c. Other Awards

(1) HRSD Environmental Improvement Fund Awards

The winners of the HRSD Environmental Improvement Fund Awards were presented on March 12 during the 72nd Tidewater Science and Engineering Fair. The following recipients were selected by a team of Water Quality scientists, led by Environmental Scientist, Chris Burbage (TSD). Judging panel members were Kaitlyn Stone (P3), Tina-Marie Haskell (TSD), Jacy Hazlitt (TSD), Marcos Davila-Banrey (TSD), and Heather Groundwater (CEL).

Junior Division (Middle School)

Isaac West (Yorktown Middle School) *More than just seafood: The role oysters play on the waters of the Chesapeake Bay.*

Mason Anderson (Tabb Middle School) *Nature vs. Machine*

Senior Division (High School)

Zahra Rizvi (Grafton High School) *Flowing into the future: Addressing urbanization's impact on water quality in the Chesapeake Bay.*

Hannah Chen (Governor's School of Science and Technology) *Predicting life in water with math.*



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The prizes were:

Junior Division: First Place - \$450 cash, a certificate, and a trophy; Second Place - \$350 cash, a certificate, and a trophy.

Senior Division: First Place - \$550 cash, a certificate, and a trophy; Second Place - \$450 cash, a certificate, and a trophy.

HRSD also presents a \$100 cash honorarium to the teacher that mentored and supported each winner.

(2) **Virginia Water Environment Association (VWEA) Industrial Waste and Pretreatment Excellence Platinum Award**

HRSD nominated STIHL Incorporated for a VWEA Industrial Waste and Pretreatment Excellence Platinum Award. The Platinum award requires 100% compliance with pretreatment regulations for five or more consecutive years.

STIHL has been in perfect compliance with HRSD's regulations and permit requirements for 13 consecutive years. STIHL has decreased chemical usage in various departments, eliminated chemical rinse tanks and is currently working on introducing a mop water recycle system. The company follows a well-developed Environmental Management System and has developed a global climate strategy for sustainability to include elimination of single use plastics, climate neutral facilities, and increased efficiency. They have reduced their industrial water usage by over 20% in the previous five-year span and decreased process chemical use by six gallons per month through chemical alteration.

HRSD staff received the award at the ceremony earlier this month on behalf of STIHL who was unable to attend.

Public Comment: None



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2. **Consent Agenda**

Action: Approve the items listed in the Consent Agenda.

Moved: Michael Glenn

Seconded: Willie Levenston

Roll call vote: **Ayes: 6** **Nays: 0**

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Change Orders
 - 1. [James River Treatment Plant MIFAS Conversion Emergency](#) \$396,330
- c. Sole Source
 - 1. [Duperon Flexrake® GTS](#)
- d. HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award
 - 1. [Cybersecurity Practice and Procedure Initiative](#) \$560,000

Item(s) Removed for Discussion: None

Public Comment: None



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3. **Middlesex Interceptor System Program Phase II-Transmission Force Main Project Public Hearing on Determination of Public Need for Fee Simple and Easement Acquisition and Resolution**

Actions:

1. Conduct public hearing.
2. Adopt the Resolution approving the public use determination and directing acquisition by condemnation, or other means, of permanent and temporary easements for the Middlesex Interceptor System Program Phase II-Transmission Force Main Project.

Moved: Nancy Stern

Seconded: Vishnu Lakdawala

Roll call vote:

Ayes: 6

Nays: 0

CIP Project: MP013730

Regulatory Requirement: None

Project Description: This project consists of multiple, smaller projects to construct a sewage conveyance system to serve Middlesex County. The new system will include new pipes and pump stations to convey wastewater from Middlesex County to HRSD's existing sewage system in Mathews County. The projects will help enable the decommissioning of both the HRSD Urbanna and Central Middlesex Treatment Plants. The new pipes and pump stations will generally be constructed in the Town of Urbanna, Urbanna Road (Route 227), General Puller Highway (Route 33), Twiggs Ferry Road (Route 3), and near the Waverley Lane/John Clayton Memorial Highway in Gloucester.

Project Justification: The project includes constructing new sanitary sewer pump stations: one in Saluda, one in the Town of Urbanna, one in the Locust Hill area, one in the Hartfield area, and one in Gloucester on Waverley Lane. The new pump stations will include new pipes to convey wastewater from Middlesex County to HRSD's existing sewage system in Mathews County. The Saluda Pump Station will be constructed within an existing parking area adjacent to the Middle Peninsula Regional Security Center. The new pipes will generally be constructed along Oaks Landing Road and Bowden Street. The Urbanna Pump Station will be constructed along Linden Avenue. The Locust Hill Pump Station will be constructed along General Puller Highway near St. Clare Walker Middle School. The Hartfield Pump Station and pipes will generally be constructed along Wood Brothers Road and General Puller Highway. The Gloucester Booster Pump Station will be constructed along Waverley Lane and will connect to HRSD's existing Mathew's sewer system.

As part of the project, HRSD anticipates a total of 87 temporary and permanent easements and five fee simple acquisitions.



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A public hearing was held to review the scope of the project, to define the public need of the project and identify the specific impact to the properties where condemnation may be considered and to receive public input. Attempts to purchase the property and easements from the owners have been unsuccessful. While a purchase is still possible, condemnation will likely be necessary to keep the project on schedule. The attached [Resolution](#) meets the requirements of the Code of Virginia should condemnation be necessary. The resolution has been reviewed by HRSD legal counsel.

Staff provided a short [overview](#) for the Commission and the public immediately prior to the Public Hearing.

Discussion Summary: Staff explained the project scope and alignment, alternatives evaluated during the preliminary engineering design, key issues, cost, schedule, number of easements and parcels needed, status of easement/property acquisition, regulatory agency approvals required, nationwide permits required for water/wetlands crossings, and stakeholder acceptance.

The Commission Chair then opened the public hearing by asking if there was any member of the public who wished to address the Commission. No member of the public desired to address the Commission. The public hearing was closed.

Public Comment: None



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4. **Suffolk Pump Station Replacement
Public Hearing on Determination of Public Need for Fee Simple and Easement
Acquisition**

Action: Conduct public hearing.

CIP Project: NP010620

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

Project Description: This project will design and construct two replacement pump stations in lieu of constructing one replacement for the existing Suffolk Pump Station located at 1136 Sanders Drive, in Suffolk. The benefit of the two-pump station scenario includes abandonment/removal of over 7,000 linear feet of gravity sewer and 34 manholes along Shingle Creek and associated wetlands with ongoing concerns for potential overflows, pipe failure and difficulty accessing for maintenance.

Project Justification: The new stations will meet current capacity needs and provide for future expansion to meet anticipated growth and improve system efficiencies. The existing pump station site does not provide the needed space for expansion, is difficult to access and creates a nuisance to traffic in the surrounding residential neighborhood.

As part of the project, HRSD anticipates a total of 26 temporary and permanent easements and three fee simple acquisitions.

A public hearing was held to review the scope of the project, to define the public need of the project and identify the specific impact to the properties where condemnation may be considered and to receive public input. Attempts to purchase the property and easements from the owners have been unsuccessful. While a purchase is still possible, condemnation will likely be necessary to keep the project on schedule.

Staff provided a short [overview](#) for the Commission and the public immediately prior to the Public Hearing.

Discussion Summary: Staff explained the project scope and alignment, alternatives evaluated, key issues, logistics and timing of construction, Consent Order compliance deadline of May 2025, cost and schedule, easement/property acquisition, railroad crossing impacts, regulatory agency approvals required, nationwide permits required for water/wetlands crossings, stakeholder acceptance, work done to date to acquire the properties, and the condemnation process in detail. Staff also explained the difference between an easement acquisition and a fee simple acquisition. A fee simple acquisition includes full and irrevocable ownership of the land and any buildings on that land. The current pipe along Shingle Creek will be abandoned in place. All work performed will be done in a manner to minimize environmental impacts.



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The Commission Chair then opened the public hearing by acknowledging one member of the public had requested to speak to the matter. The Commission Chair asked the Commission Secretary, to call for public comments.

- James Arzillo, resident of Suffolk, Virginia and owner of the parcel located at 960 Portsmouth Boulevard in Suffolk. *"I would like to comment on the proposed taking of part of our parcel at 960 Portsmouth Boulevard for the pump station replacement project. We are asking to see if the HRSD staff could reconsider the taking and place the pump station on the adjacent wooded parcel or the wooded parcel behind our property. We believe HRSD already has the easements in place with existing manholes. We believe the taking of the part of our parcel will adversely affect our daily operations since we only have one entrance on Virginia Ham Drive. We are asking HRSD to install a second entrance on Portsmouth Boulevard to accommodate our needs. We also believe that HRSD is required under the Suffolk Unified Defined Ordinance to get a variance or waiver to the rear SCOD requirements on the subdivision site plan. Any future development may have issues with our property lines being redrawn and ask HRSD to correct these issues now. We were told by HRSD engineers that our driveway would not be impacted because they have new tunneling technology. If this new technology exists, then we believe the tunneling under the railroad tracks should not be an issue. Some have stated that the railroad tracks or the structure crossing Virginia Ham Drive is old and deteriorated and it is reasonable to assume that it would be costly for the CSX to make the bridge usable. Therefore, even though we have been negotiating with HRSD staff for over two years, we kindly ask that you reconsider the taking of a part of our parcel at 960 Portsmouth Boulevard. Thank you."*

The Commission Chair then asked the Commission if they had any questions.

Commissioner Glenn asked if staff had researched Mr. Arzillo's suggested options or alternatives. Staff stated they have had multiple discussions with Mr. Arzillo on how to fit the pump station on his property and have already made changes on the project design to accommodate his requests. At this point, no compromise has been reached. HRSD does have some easements around the area but has not acquired fee simple acquisitions that would be required to build a pump station in a different location.

Mr. Arzillo: "I was just reading on the site plan for the subdivision site plan that the SCOD rear setback is going to be changed since my property line is going to be changed. And it clearly says that on the SCOD setback and HRSD needs to get a waiver or a variance, in my opinion, to get this subdivision site plan approved by the City of Suffolk. There is no reason why I should be burdened with that cost for the subdivision site plan variance or waiver. I don't know how the City of Suffolk can approve your subdivision site plan without that variance or waiver."



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Staff said HRSD would follow all City requirements on any re-subdivision of this parcel because we will be connecting these two pieces together.

Mr. Arzillo: "I've met with the City staff, the City Manager, and he said you guys need to get a variance and bring it before the Board of Zoning Appeals to get the variance in place before the subdivision can be approved. That is right in the UDO. There is no reason why I should have to pay for that. If you want the variance, that is HRSD's responsibility not ours."

The Commission Chair then closed the hearing. He directed staff to consider the comments made today in any subsequent recommended action to be presented to this Commission. Action to adopt a resolution was deferred to the next meeting.

The Commission Chair then asked Mr. Arzillo to attend the next meeting in person if he had any further comments. If he is not able to attend the meeting in person, we will accommodate him the best we can.

Mr. Arzillo: "Yes, sir. I really wanted to go there today, but this is my first time using Zoom and the first time we have done something like this, so I really didn't know what to expect. But I appreciate you hearing me out."



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5. **Post-Issuance Tax Compliance Policy Revisions
Commission Adopted Policy**

Action: Approve the revised Post-Issuance Tax Compliance Policy.

Moved: Willie Lakdawala

Seconded: Nancy Stern

Roll call vote:

Ayes: 6

Nays: 0

Brief: HRSD from time-to-time issues tax-exempt bonds and other “tax-advantaged” obligations (collectively “Tax-Advantaged Bonds”) to raise funds to finance and refinance various capital improvements.

The Post-Issuance Tax Compliance Policy (Policy) was originally adopted by the Commission in March 2012 and was created to assist staff in monitoring compliance with rules applicable to Tax-Advantaged Bonds in order to preserve their tax-advantaged status.

This Policy covers (1) record retention, (2) limitations on “private loans” and “private business use,” including the rules relating to the taking of “remedial action” to preserve the status of an issue of Tax-Advantaged Bonds, and (3) limitations on earning arbitrage, including the payment of arbitrage rebate to the federal government at various intervals.

This Policy reflects best practices, and is to be revised periodically as circumstances warrant, including changes in federal tax law, and as the municipal bond market and Internal Revenue Service (“IRS”) enforcement each evolve.

Given the scope and complexity of HRSD’s financings, the Policy requires ongoing review and refinement. The changes reflected herein are generally administrative and clarifying in nature. The 2012 policy contained an appendix which staff believes is too technical in nature to be contained within a policy document and has therefore been eliminated. Generally, the provisions within the appendix are contained within each financing’s tax certificate delivered at closing.

The attached [policy](#) was reviewed by staff and HRSD’s bond counsel.

Public Comment: None



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6. **Hampton Roads Bridge Tunnel Expansion Project
Hampton Roads Water Quality Credit Trade Agreement for Chesapeake Bay
Restoration Compliance Year 2022**

Action: Approve the terms and conditions of the compliance credit trade agreement with the Hampton Roads Connector Partners (HRCP) and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

Moved: Willie Levenston
Seconded: Elizabeth Taraski
Roll call vote:

Ayes: 6 **Nays:** 0

Brief: The Hampton Roads Connector Partners (HRCP) is a joint venture of Dragados USA, Inc., HOR, Mott MacDonald, Vinci Construction Grands Projets, Dodin Campenon Bernard and Flatiron Constructors, Inc. that is expanding the Hampton Roads Bridge-Tunnel ("HRBT") to ease congestion along the existing I-64 HRBT corridor. The project includes a new bridge-tunnel complex that will add four additional lanes of traffic. This construction activity requires a Virginia Pollutant Discharge Elimination System (VPDES) permit to discharge wastewater generated during construction. HRCP entered into an [agreement](#) with HRSD in October 2020 to obtain the nutrient offset required for issuance. This agreement provided HRCP with a wasteload allocation of 4,000 lbs/yr of Total Nitrogen (TN) and 2,000 lbs/yr of Total Phosphorus (TP) through a transfer of allocation from HRSD to HRCP for a defined period (through December 31, 2025), intended to cover the period of construction.

Given that the HRBT Expansion is a regional initiative offering multi-jurisdictional benefits within the HRSD service area, the credit offset was provided at no cost, consistent with HRSD's [Nutrient Credit Management Policy](#). This policy considers overall cost to ratepayers for trades and offsets that provide the region with maximum environmental benefit at the lowest net cost. The HRBT expansion project is funded primarily by the Hampton Roads Transportation Accountability Commission (HRTAC), a commission supporting regional transportation projects.

For the 2022 compliance year, HRCP exceeded its 4,000 lbs/yr TN allocation by 3,828 lbs and approached HRSD for the compliance credits necessary to meet their 2022 obligation under Virginia's Watershed General Permit for the discharge of nutrients into the Chesapeake Bay. In 2022, HRSD generated more than 1.6 million pounds of credits on the Lower James. Consistent with HRSD's Nutrient Credit Management policy, staff recommends providing HRCP's 2022 compliance credits at no cost as outlined in the attached draft [credit trade agreement](#). Additional compliance credits may be needed each of the next 2 – 3 years over the duration of construction.



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Discussion Summary: Staff said the Finance Committee will review the proposed rate at their meeting on April 19. The Commission Chair said he would like the Operations & Nominations (O&N) committee to review the proposed changes to the policy at their meeting on May 23.

Public Comment: None



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7. **Atlantic Treatment Plant Secondary Clarifier Effluent Weir Replacement and Enhancements
Additional Appropriation & Contract Award (>\$200,000)**

Actions:

- a. Appropriate additional funding in the amount of \$503,740.
- b. Award a contract to D&D Mechanical, Inc. in the amount of \$2,998,800.

Moved: Vishnu Lakdawala

Seconded: Michael Glenn

Roll call vote: **Ayes:** 6 **Nays:** 0

CIP Project: AT015500

Regulatory Requirement: None

Budget	\$2,645,000
Previous Expenditures and Encumbrances	(\$0)
Available Balance	\$2,645,000
Construction Contract	\$2,998,800
Contingency (5%)	\$149,940
Project Shortage/Request Additional Funding	\$503,740
Revised Total Project Authorized Funding	\$3,148,740

Type of Procurement: Competitive Bid

In accordance with HRSD’s competitive sealed bidding procedures, the Procurement Department advertised and solicited bids directly from potential bidders. The project was advertised on February 1, 2023, and three bids were received on February 16, 2023. The bids received are listed below:

Bidder	Bid Amount
D&D Mechanical, Inc	\$2,998,800
Rebuild-It Services Group, LLC	\$3,528,845
Pioneer Industries	\$6,484,000

HRSD Estimate: \$2,325,170

Project Description: This project will replace secondary clarifier effluent weirs, launders, and add new covers to the weirs for Secondary Clarifiers 1 through 4.



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Project Justification: The effluent weirs are failing in all four of the secondary clarifiers due to age and sun exposure. This project will replace all weirs, to include the launders, and will include the purchase and installation of covers to prevent UV degradation on the fiberglass weirs.

Contract Description: This contract is for the replacement of the effluent weirs, launders, and to add new covers to the weirs for Secondary Clarifiers 1 through 4.

Analysis of Cost: The cost for this effort is based on a competitive bid of \$2,998,800 and a five percent contingency. The reason for the cost increase and the request for additional funding is due to the original estimate being based on a vendor quote from 2021 and the fact that fiberglass materials have gone up significantly due to supply chain issues. The material cost from the original vendor quote was \$532,894 less than the bid price received last month.

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

Schedule: Construction April 2023

Public Comment: None



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8. **Deep Creek Interceptor Force Main Risk Mitigation
Additional Appropriation**

Action: Appropriate additional funding in the amount of \$284,895.

Moved: Michael Glenn

Seconded: Willie Levenston

Roll call vote: **Ayes:** 6 **Nays:** 0

CIP Project: NP013400

Regulatory Requirement: None

Budget	\$3,135,562
Previous Expenditures and Encumbrances	(\$3,133,091)
Available Balance	\$2,471
Proposed Change Order No. 2 to Tidewater Utility Construction, Inc.	\$276,813
Proposed Task Order to Whitman Requardt & Associates, LLP	\$9,553
Proposed Contingency	\$1,000
Project Shortage/Requested Additional Funding	\$284,895
Revised Total Project Authorized Funding	<u>\$3,420,457</u>

Project Description: This project constructed 3,800 linear feet of 6-inch force main, 600 linear feet of 12-inch force main, and 2,400 linear feet of 4-inch low pressure force main. Pipe work was complete in September 2020. The remaining work involves flowable fill of the Hot Ditch and fly ash pile at the Dominion Energy power facility near the Coleman Bridge in Chesapeake. The attached [map](#) depicts the project location.

Project Justification: This project will eliminate the risk associated with operating an aging ductile iron and pre-stressed concrete force main beneath a capped coal ash pile and Hot Ditch within the Dominion Energy owned property.

Funding Description: This project requires additional funding to complete the restoration efforts. A change order has been negotiated with Tidewater Utility for \$276,813 for the remaining work. A task order has been negotiated with Whitman Requardt for \$9,553 to provide contract administration and field engineering and inspection services through the end of construction. This request also includes \$1,000 in contingency to accommodate any additional unforeseen conditions.



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Schedule: Construction October 2019
 Project Completion September 2023

Discussion Summary: Staff explained the process to abandon a pipe in place. The contractor and engineer are working together to resolve issues and plan to fill the pipe with grout to seal the gaps in the line.

Public Comment: None



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9. **Eastern Shore Infrastructure Improvements – Transmission Force Main Phase I
Additional Appropriation, Contract Change Order (>25%)**

Actions:

- a. Appropriate additional funding in the amount of \$5,641,804.
- b. Approve a change order to the contract with Garney Companies, Inc. (Garney) in the amount of \$5,167,141.

Moved: Vishnu Lakdawala

Seconded: Nancy Stern

Roll call vote: **Ayes:** 6 **Nays:** 0

CIP Project: ES010100

Regulatory Requirement: None

Budget	\$32,914,664
Previous Expenditures and Encumbrances	(\$31,839,185)
Available Balance	\$1,075,479
Proposed Change Order No. 4 to Garney	(\$5,167,141)
Proposed Contingency	(\$1,550,142)
Project Shortage/Requested Additional Funding	(\$5,641,804)
Revised Total Project Authorized Funding	\$38,556,468

Contract Status with Change Orders:	Amount	Cumulative % of Contract
Original Contract (Stipulated Price) for Garney	\$22,961,728	
Total Value of Previous Change Orders	\$6,007,946	26.17%
Requested Change Order	\$5,167,141	
Total Value of All Change Orders	\$11,175,087	48.67%
Revised Contract Value	\$34,136,815	
Time (Additional Calendar Days)		0

Project Description: This project is a Design-Build project with Garney who have teamed up with the engineering firm of AECOM to install approximately 26 miles of 4-inch, 6-inch, 10-inch and 12-inch pipeline for 25 miles along the Railway right-of-way and along Wachapreague Road all on the Eastern Shore of Virginia, in Northampton and Accomack Counties. The project will also be constructing three wastewater pumping stations in the Towns of Nassawadox, Exmore, and Onancock.



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Project Justification: This project will provide service to the Eastern Shore for the Towns of Nassawadox, Exmore, Accomac, and will serve the County Courthouse Complex for Accomack. The pipelines will primarily be located in the Railway right-of-way. The [map](#) depicts the project location.

Change Order Description and Analysis of Cost: This change order includes the following additional scope items and work:

1. Design and construct a new pump station serving the Town of Accomac (\$1,137,746),
2. Design and construct approximately 1,700 linear feet (LF) of gravity sewer including five manholes, and abandon the existing pumping facilities and septic tank system in the Town of Accomac (\$1,029,395),
3. Design and construct approximately 1,200 LF of 8-inch gravity sewer, five manholes, and reconnection of ten existing laterals to provide sewer to the Carnival Grounds in the Town of Onancock (\$1,500,000), and
4. Complete repairs to the gravity sewer interceptor in the Town of Onancock the runs parallel to the North Branch of Onancock Creek to address deficiencies (\$1,500,000).

There was an extensive review of the scope and cost by HRSD for this change and the additional funding for all other costs associated with the additional work being performed under the current phase of the contract.

This project is currently included in the Virginia Clean Water Revolving Loan Fund (VCWRLF) programmatic loan and American Rescue Plan Act (ARPA) Sewer Collection System (SCS) Program. Portions of this contract change order will be reimbursed by the Town of Accomac to HRSD.

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

Public Comment: None



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10. **Lucas Creek – Woodhaven Interceptor Force Main Replacement Phase II
Additional Appropriation, Contract Award (>\$200,000) and Task Order (>\$200,000)**

Actions:

- a. Appropriate additional funding in the amount of \$1,705,892.
- b. Award a contract to Tidewater Utility Construction, Inc. in the amount of \$3,117,300.
- c. Approve a task order with Michael Baker International (Michael Baker) in the amount of \$361,870.

Moved: Vishnu Lakdawala

Seconded: Elizabeth Taraski

Roll call vote:

Ayes: 6

Nays: 0

CIP Project: JR013200

Regulatory Requirement: None

Budget	\$2,445,000
Previous Expenditures and Encumbrances	(\$371,722)
Available Balance	\$2,073,278
Proposed Task Order to Michael Baker	\$361,870
Proposed Contract to Tidewater Utility Construction, Inc.	\$3,117,300
Proposed Contingency	\$300,000
Project Shortage / Requested Additional Funding	\$1,705,892
Revised Total Project Authorized Funding	\$4,150,892

Type of Procurement: Competitive Bid

In accordance with HRSD’s competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised on January 24, 2023, and 2 bids were received on February 28, 2023, as listed below:

Bidder	Bid Amount
Tidewater Utility Construction	\$3,117,300
Bridgeman Civil	\$3,178,230

HRSD/Engineer Estimate: \$2,714,800



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The design engineer, Michael Baker, evaluated the bids based upon the requirements in the invitation for bid and recommends award to the lowest responsive and responsible bidder Tidewater Utility Construction in the amount of \$3,117,300.

Project Description: This project involves the replacement of approximately 1,500 linear feet of ductile iron pipe between Denbigh High School and Stoney Run Elementary School. This section of pipe will be replaced with a 30-inch horizontal directional drilled polyethylene pipe underneath Stony Run.

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

Project Justification: In 2014, two failures occurred on the Lucas Creek-Woodhaven Interceptor Force Main just south of Woodhaven Road within a 6-month period. These failures shared the same characteristics as the previous failures on the prestressed concrete cylinder pipe force main in 2007 that required the replacement of approximately 2 miles of HRSD force main. After the first failure, condition assessment was performed along the force main from Woodhaven Road to Lucas Creek Road along Warwick Boulevard. The testing confirmed a loss of wall thickness along the bottom third of the pipe. While no condition assessment has been performed along this section of force main from Warwick Boulevard and Lucas Creek Road to the Lucas Creek Pump Station, it is anticipated that a loss of wall thickness has occurred along the bottom of the pipe. This 1,500 linear foot section of pipe to be replaced represents the most difficult section of force main to access and repair from Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I (JR013100) to Lucas Creek Pump Station. This portion of the 1970 Ductile Iron pipe lies between Denbigh High School and Stoney Run Elementary School.

Additional appropriation is required for construction services to complete this project.

Contract Description: This contract is for the construction services with Tidewater Utility Construction.

Task Order Description: This task order will provide construction administration and construction inspection services for the subject project. HRSD and the design engineer, Michael Baker, negotiated a fee in the amount of \$361,870. The fee proposal is comparable to other projects of similar size and complexity.

Funding Description: The original CIP project estimate did not foresee the current market conditions as they relate to inflation, labor shortages and long lead times for materials. This request includes a 10% contingency to accommodate any unforeseen conditions. Additional appropriation is being requested for the construction contract award and construction phase services. The amount for this work exceeds the balance available for this CIP project by \$1,705,892.



COMMISSION MEETING MINUTES

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Analysis of Cost: Two bids were received and evaluated based upon the requirements of the Invitation for Bid. Tidewater Utility Construction is the apparent low bidder with a bid amount of \$3,117,300. The low bid results are 12.9% higher than the Engineer's Opinion of Probable Construction Cost. An analysis was performed on the bid prices and determined that the cost difference was mainly due to a higher unit price for the ductile iron pipe installation. This is likely the result of the Contractor trying to account for the relatively small quantity of ductile iron pipe that is required to be installed. Based on the information provided and verifications performed, it appears Tidewater Utility Construction, Inc., as the prime contractor, meets the intent of the qualifications and presents adequate experience to competently perform the work set forth in the Contract Documents.

The information herein supports the award of this construction contract to Tidewater Utility Construction as the lowest responsive bidder in the amount of \$3,117,300.

<u>Schedule:</u>	Construction	May 2023
	Project Completion	June 2024

Discussion Summary: Staff explained the various types of pipes used and associated issues with poor soil conditions.

Public Comment: None



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March 28, 2023

11. **Suffolk Pump Station Replacement
Easement Acquisition
568 East Constance Road a/k/a 568 Wilroy Road, Suffolk**

Action: Approve the acquisition of a variable width permanent (+/- 0.052 acres) HRSD utility and temporary (+/- 0.103 acres) HRSD construction easements located at 568 East Constance Road a/k/a 568 Wilroy Road in Suffolk, Tax Parcel#: 35D*F*A and associated acquisition costs of \$36,430 in accordance with the terms and conditions of the Purchase Agreement with Ralph L. Wetherington, Jr., (Seller) and authorize the General Manager to execute same and related acquisition documents in accordance with those terms and conditions substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

Moved: Nancy Stern
Seconded: Willie Levenston
Roll call vote:

Ayes: 6 **Nays:** 0

CIP Project: NP010620

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

Budget	\$12,049,000
Previous Expenditures and Encumbrances	(\$3,639,817)
Available Balance	\$8,409,183

Project Description: This project will design and construct two replacement pump stations in lieu of constructing one replacement for the existing Suffolk Pump Station located at 1136 Sanders Drive, in Suffolk. The benefit of the two-pump station scenario includes abandonment/removal of over 7,000 linear feet of gravity sewer and 34 manholes along Shingle Creek and associated wetlands with ongoing concerns for potential overflows, pipe failure and difficulty accessing for maintenance.

Project Justification: The new stations will meet current capacity needs and provide for future expansion to meet anticipated growth and improve system efficiencies. The existing pump station site does not provide the needed space for expansion, is difficult to access and creates a nuisance to traffic in the surrounding residential neighborhood.

Acquisition Details: As part of the project, HRSD will require 26 temporary and permanent easements. These easements inhabit a portion of the active business’s parking lot owned by Ralph L. Wetherington, Jr. and is perceived by the property owner to possibly limit parking for this business. This subject easement acquisition cost is above the \$25,000 threshold as defined in HRSD’s Policy and Guidelines and requires Commission approval.



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Agreement Description: The [Purchase Agreement](#) between HRSD and Ralph L. Wetherington, Jr. was reviewed by HRSD staff and real estate legal counsel. The [Plat](#) and [Map](#) depict the project and easement locations.

Analysis of Cost: The cost for the easements is based on an appraisal by Brian Dundon & Associates. The total cost is the result of a negotiated settlement with the property owner to include: a cost to cure; securing a three year window for the start of the project activities at this site; securing the usage for six months for the temporary construction easement area with flexibility to extend if needed, setting the future rental price if the work extends past the planned six months, and bringing this item to resolution.

Public Comment: None



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12. **Unfinished Business - None**



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March 28, 2023

13. **New Business - Suffolk Pump Station Replacement
Real Estate Acquisition – Easement Interest
701 Old East Pinner Street and 725 E. Constance Road, Suffolk**

Action: Approve the acquisition of a 30’ permanent HRSD utility (0.045 +/- acres), temporary construction (0.080 +/- acres), and 15’ permanent ingress/egress (0.019 +/- acres) easements located at 701 Old East Pinner Street and 725 E. Constance Road in Suffolk, Tax Parcel#: 35D*X7*A1 and 35D*X7*A2 and associated acquisition costs of \$40,000 in accordance with the terms and conditions of the Purchase Agreement with LW’s Lawn Service, LLC., (Seller) and authorize the General Manager to execute same and related acquisition documents in accordance with those terms and conditions substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

Moved: Willie Levenston
Seconded: Elizabeth Taraski
Roll call vote:

Ayes: 6 **Nays:** 0

CIP Project: NP010620

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

Budget	\$12,049,000
Previous Expenditures and Encumbrances	(\$3,639,817)
Available Balance	\$8,409,183

Project Description: This project will design and construct two replacement pump stations in lieu of constructing one replacement for the existing Suffolk Pump Station located at 1136 Sanders Drive, in Suffolk. The benefit of the two-pump station scenario includes abandonment/removal of over 7,000 linear feet of gravity sewer and 34 manholes along Shingle Creek and associated wetlands with ongoing concerns for potential overflows, pipe failure and difficulty accessing for maintenance.

Project Justification: The new stations will meet current capacity needs and provide for future expansion to meet anticipated growth and improve system efficiencies. The existing pump station site does not provide the needed space for expansion, is difficult to access and creates a nuisance to traffic in the surrounding residential neighborhood.

Acquisition/Disposition Details: As part of the project, HRSD will require 26 temporary and permanent easements. This easement acquisition crosses through the active business of LW’s Lawn Service LLC. and is perceived by the property owner to possibly impact future business activity during construction. This subject easement acquisition cost is above the \$25,000 threshold as defined in HRSD’s Policy and Guidelines and requires Commission approval.



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Agreement Description: The [Purchase Agreement](#) between HRSD and LW's Lawn Service, LLC. was reviewed by HRSD staff and real estate legal counsel. The [plat](#) and [map](#) depict the project and easement locations.

Analysis of Cost: The cost for the easement is based on an appraisal by Brian Dundon & Associates. The total cost is the result of a negotiated settlement with the property owner to include their perceived losses, new property use for a business venture that was not present during the appraisal process and to bring this item to resolution.

Public Comment: None



COMMISSION MEETING MINUTES
March 28, 2023

14. **Commissioner Comments**

The Commission Chair thanked everyone for attending today. He said it was good to see staff attending in person again.

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

16. **Informational Items**

Action: No action required.

Brief: The items listed below were presented for information.

- a. [Management Reports](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Emergency Declaration](#) - Great Bridge Interceptor Force Main Emergency Repair (SF-180)

Recommended Action: No action is required. Information Only

CIP Project: N/A

Regulatory Requirement: None

Brief: An emergency declaration was authorized on March 13, 2023, due to a force main failure likely caused by a “spud” from a dredge vessel.

On March 10, 2023, at approximately 5:00pm, the City of Chesapeake notified HRSD about a force main failure under the Intracoastal Waterway, between the Great Bridge Lock (operated by the U.S. Army Corps of Engineers – Norfolk District) and the Great Bridge Drawbridge (operated by the City of Chesapeake). The failure was on a 20-inch ductile iron (DI) force main that was installed in 1968. By 8:00pm, HRSD Interceptor Operations was able to isolate the failure via valve closures. Pressure data indicated that the pipeline failure occurred at approximately 1:15 p.m., and flow data from the Elbow Road PRS and Atlantic Treatment Plant suggest 2.5 million gallons of sewage were spilled during this event.

According to the Incident Report from the Army Corp of Engineers, a tugboat was moving a dredge vessel and one of the dredge’s “spuds” was reported to have ‘gotten stuck on something’ in the Waterway. The time of this Report (1:03 p.m.) aligns with when the HRSD system pressures dropped, thus the spud is the likely cause of the force main failure.

The City of Chesapeake Pump Station No. 33 is located within the area of isolation and is



COMMISSION MEETING MINUTES
March 28, 2023

currently being pump-and-hauled by the City. In addition, HRSD's Elbow Road PRS is being operated continuously to help maintain pressures for City and private pump stations affected by the diversion of flow.

Staff will utilize RK&K and Crofton Industries (via Bridgeman Civil, Inc.) to assist with the initial evaluation of the damaged pipeline and any design necessary for repairs. The attached [map](#) depicts the force main failure location.

Staff provided a [briefing](#) on this issue and efforts to make needed repairs to this force main.

Analysis of Cost: The initial estimated cost of this work is \$500,000 and will be funded from the Operating budget. The cost for this is based on high-level, preliminary estimates developed prior to completion of the damage assessment.

<u>Schedule:</u>	Emergency Declaration	March 2023
	Inspection/Repair	March – April 2023
	Project Completion	Unknown at this time

Discussion Summary: Staff explained they are running various hydraulic models to determine the best diversion route to keep pressure at normal levels while this pipe is out of service. In addition, this pipeline was going to be used for flow diversions for a couple upcoming Consent Decree related projects. Staff are reviewing alternatives to determine the timeline for how quickly this pipeline needs to be returned to service.

Public Comment: None



COMMISSION MEETING MINUTES
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17. **Closed Meeting**

Action: Motion to go into Closed Meeting to consider acquisition of real property for a public purpose of publicly held real property located in the City of Suffolk as provided for in Code of Virginia Va. Code §2.2-3711.A3.

Moved: Vishnu Lakdawala

Seconded: Willie Levenston

Roll call vote:

Ayes: 6

Nays: 0

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

18. **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: 6

Nays: 0

Action: No action required.

Public Comment: None



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19. **Work Session – Fiscal Year-2024 Operating Budget**

Action: No action is required.

Brief: Staff presented key components of the General Manager's [Proposed Fiscal Year-2024 Operating Budget](#). The following topics were covered:

- Operating Revenues
- Operating Expenses

Public Comment: None

20. **Announcements**

- The Finance Committee will meet on April 19, 2023 to review the proposed FY-2024 Annual Budget.

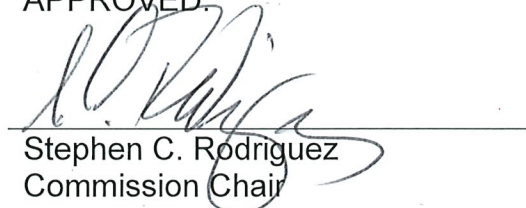
Next Commission Meeting Date: April 25, 2023 at the HRSD North Shore Operations Center, 2389 G. Avenue, Newport News, VA 23602

Meeting Adjourned: 12:56 pm

SUBMITTED:


Jennifer L. Cascio
Commission Secretary

APPROVED:


Stephen C. Rodriguez
Commission Chair

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #1

2. Consent Agenda

CONSENT AGENDA ITEM 2.b.1. – March 28, 2023

Subject: James River Treatment Plant MIFAS Conversion Emergency
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with Pioneer Industries in the amount of \$396,330.

CIP Project: JR013401

Regulatory Requirement: None

Budget	\$5,000,000
Previous Expenditures and Encumbrances	(\$4,489,557)
Available Balance	\$510,443

Contract Status:	Amount	Cumulative % of Contract
Original Contract with Pioneer Industries	\$44,253	
Total Value of Previous Change Orders	\$0	%
Requested Change Order No. 1	\$396,330	
Total Value of All Change Orders	\$396,330	895%
Revised Contract Value	\$440,583	

Project Description: This project modified the James River Treatment Plant (JRTP) integrated fixed-film activated sludge (IFAS) basins by adding a second anoxic zone to achieve partial denitrification-anammox (PdNA).

Parallel with the James River Treatment Plant Advanced Nutrient Reduction Improvements (ANRI) (JR013400) project, it was decided to upgrade the JRTP aeration tanks from an A2O configuration to a 5-stage Bardenpho with moving media IFAS (MIFAS) PdNA in a newly created second anoxic zone in 8 of the 9 IFAS tanks. PdNA MIFAS provides considerable operational cost savings, but more importantly, this is needed to meet nitrogen limits in the future for the James River SWIFT Facility (GN016360) and to meet new total nitrogen discharge requirements. PdNA MIFAS construction began immediately before the large SWIFT/ANRI design-build project (JR013400) construction project to avoid significant conflicts with the larger project performing construction in the same space to upgrade the secondary clarifiers.

This initial MIFAS construction allowed HRSD to get the needed mechanical equipment installed for a PdNA MIFAS zone on a very rapid timeline. MIFAS was started in one tank and has demonstrated anammox and PdNA activity, confirming the full-scale validity of this technology. Other tanks will start up as the ANRI project sequence proceeds. The optimization of this MIFAS process must continue in the same sequence with which tanks are out-of-service for the ANRI portion of JR013400 construction in order to meet the timeline needed for nutrient limits.

As a full-scale pilot test for other HRSD plant PdNA upgrades, one of the nine IFAS tanks was upgraded with fixed media IFAS (FIFAS). This tank was placed in service in November 2022. Similar to MIFAS, some optimization work is required.

Project Justification: PdNA MIFAS (moving media integrated fixed-film activated sludge) provides considerable operational cost savings, but more importantly, this is needed to meet nitrogen limits in the future for James River SWIFT and to meet new total nitrogen discharge requirements.

Change Order Description: This change order must proceed along a timeline that matches the ANRI construction schedule and includes:

1. The addition of a swing zone fine bubble aeration system in the last cell of the first anoxic zone of eight IFAS tanks. Aerobic operation in this zone accommodates the removal of excess internal carbon upstream of the nitrification zone which will help provide a stable ammonia versus nitrate (AvN) ratio that is required for the downstream PdNA zone. This concept was piloted in IFAS tank #5, and Pioneer performed the installation. The observed nitrification performance improvements suggest that deploying this in other tanks will be needed for effective winter operation. Following the tank #5 upgrade, it was anticipated that Pioneer would be requested to complete the remaining eight IFAS tank swing zone installations. It is also critical that this work be initiated immediately in IFAS tanks 1, 2, and 3 while they are out of service for ANRI work, moving to the other IFAS tanks as they are sequentially taken out of service for the needs of the ANRI project construction.
2. Repairs and optimization of the FIFAS modules based on experience over the last few months of operation. Since Pioneer originally assembled and installed the FIFAS modules, they are the obvious selection to perform these repairs.
3. Adjustments to the wet weather PdNA bypass gates to accommodate a slightly higher water surface elevation in the IFAS tanks.

Analysis of Cost: The cost of this change order is based on a negotiated price between HRSD and Pioneer Industries and is in agreement with other similar efforts from other suppliers.

This work is in accordance with Commission Adopted Procurement Policy.

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

CONSENT AGENDA ITEM 2.c.1. – March 28, 2023

Subject: Duperon Flexrake® GTS
Sole Source (>\$10,000)

Recommended Action: Approve the use of Duperon Flexrake® GTS at the Nansemond Treatment Plant.

Regulatory Requirement: None

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 one Duperon Flexrake® GTS mechanically cleaned bar screen. The same make of screen was installed in the Nansemond Treatment Plant (NTP) Preliminary Treatment Facility (PTF) in 2020. The new screens will use the same maintenance and tools that are currently used at the PTF and will have the same maintenance requirements. Additionally, the Duperon screens do not have a lower sprocket which decreases the maintenance on the screen. This feature prevents the requirement of needing a channel drum screen that would require hot water accessibility and additional modifications to the channel structure. These features were listed as requirements in the specification.

The screen will be purchased as part of a future construction contract and will be purchased and installed by the Contractor.

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

CONSENT AGENDA ITEM 2.d.1. – March 28, 2023

Subject: Cybersecurity Practice and Procedure Initiative
 HRSD Use of Existing Competitively Awarded Contract Vehicle and Contract Award
 (>\$200,000)

Recommended Actions:

- a. Approve the use of the Fairfax County Contract# 4400006325 for IT Hardware, Software & Related Services for Darktrace Software and System Support.
- b. Award a contract for Darktrace Software and System Support to CDW LLC DBA CDW Government LLC in the estimated amount of \$140,000 for year one with three years annual renewal options and an estimated cumulative value in the amount of \$560,000.

HRSD Estimate: \$560,000

CIP Project: AD012500

Regulatory Requirement: None

Budget	\$15,500,000
Previous Expenditures and Encumbrances	(\$5,218,471)
Available Balance	<u>\$10,281,529</u>

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

Project Justification: IT staff has coordinated an IT security and vulnerability assessment. This project will address the assessment's recommendations for minimizing risk exposure.

Contract Description and Analysis of Cost: This contract is for Darktrace software that provides network security service to our current cybersecurity portfolio and addresses a known gap in protection. Darktrace reduces network risk by prioritizing vulnerabilities and hardening systems. By utilizing the cooperative contract through Fairfax County, HRSD is receiving 5.5 percent cost savings.

<u>Schedule:</u>	PER	July 2019
	Design	March 2021
	Bid	June 2025
	Construction	June 2025
	Project Completion	June 2025

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #2

3. Middlesex Interceptor System Program Phase II-Transmission Force Main Project
Public Hearing on Determination of Public Need for Fee Simple and Easement Acquisition and Resolution



Determination of Public Need
Middlesex Interceptor System Phase II
Transmission Force Main
CIP# MP013730

March 28, 2023

Project Overview

Project Description

This project includes the construction of a 3-mile force main from Urbanna to Cook's Corner and a 13-mile force main along Route 33 in Middlesex County from Cook's Corner to the existing Mathews Force Main. This creates the backbone of the "Middlesex Force Main" and includes a horizontal direction drill crossing of the Piankatank River. This interceptor system will convey wastewater from Middlesex County to the York River Treatment Plant and allow for the decommissioning of the Central Middlesex and Urbanna Treatment Plants. The project will also include the construction of a number of new pump stations. This project will also involve provisions for connecting the Topping Service Area near the intersection of Route 33 and Route 3 and the Deltaville Service Area near Hartfield along General Puller Highway.



Project Alignment and Design

Several alignments were considered during the preliminary engineering design. The preferred force main alignment runs along Urbanna Road, General Puller Highway, and Twiggs Ferry Road. This alignment limits impacts to private property and allows for easy access and maintenance of the force main.

Force Main Alignment

- Project Easements
 - 87 total easements
 - Permanent
 - Temporary
 - 5 fee simple parcels



- Cost and Schedule
- Easement/property acquisition
- Regulatory Agency Approval
- Nationwide Permits for water/wetlands crossings
- Stakeholder Acceptance

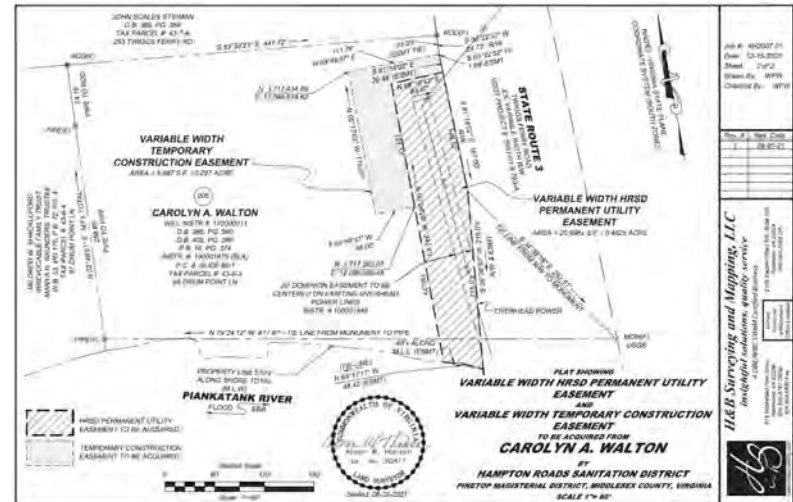
Status of Easement Acquisitions

<u>Number</u>	<u>Address</u>	<u>Tax ID Number</u>	<u>Name</u>	<u>Type</u>	<u>Status</u>
1	65 Drum Point Lane Hartfield, VA 23071	43-6-3	Walton	Temp: 9,897 Perm: 20,998 SF	Impasse/owners would negotiate no further
2	Urbanna Creek R/W	20A-21-43	Heirs of Chewning	Temp: 0 SF Perm: 3,589 SF	Title issues/owner not determined
3	1103 Urbanna Road Saluda, VA 23149	27-7B	Henry Lovell Ackies	Temp: 2,140 SF Perm: 0 SF	Impasse/owners would negotiate no further
4	(N/A Site Address)	27-16	Robert Reed Estate	Temp: 3,34 0 SF Perm: 0 SF	Title issues/owner not determined
5	(N/A Site Address)	27-17	Belton King	Temp: 1,350 SF Perm: 0 SF	Never engaged the owner as the property is being sold for lack of tax payments
6	863 Urbanna Road Saluda, VA 23149	27-18	Global Green Foundation	Temp: 1,710 SF Perm: 0 SF	Impasse/owners would negotiate no further
7	307 Urbanna Road Saluda, VA 23149	27-24A	Estelle W. & Willie Waddell Jackson	Temp: 1,935 SF Perm: 0 SF	No response from owners

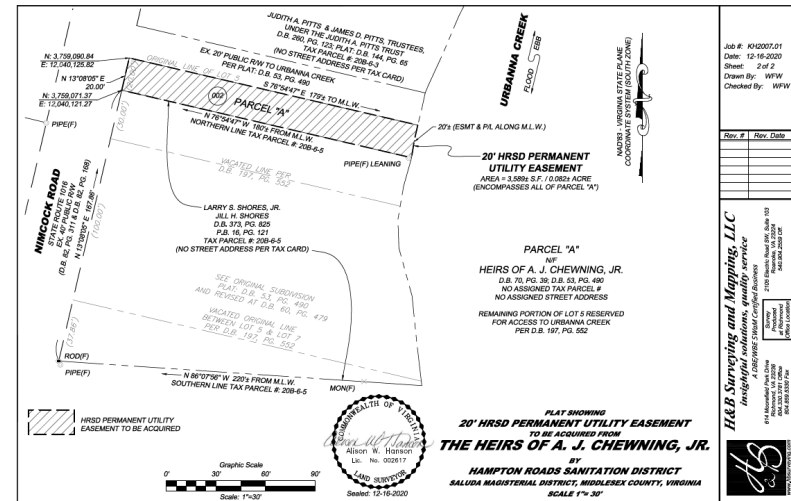
Status of Easement Acquisition

<u>Number</u>	<u>Address</u>	<u>Tax ID Number</u>	<u>Name</u>	<u>Type</u>	<u>Status</u>
8	348 Urbanna Road Saluda, VA 23149	27-190	Noah & Angela R/S Davila	Temp: 0 SF Perm: 1,716	Impasse/owners would negotiate no further
9	267 Urbanna Road Saluda, VA 23149	27- 11- 5	Herman & Annie Lee Wake	Temp: 0 SF Perm: 1,785 SF	(In progress)
10	2570 Twiggs Ferry Road Saluda, VA 23149	38-76	Michael A. & Ellen M. Johnson	Temp: 0 SF Perm: 6,890 SF	Impasse/owners would negotiate no further
11	1834 Twiggs Ferry Road Saluda, VA 23149	43-33	Macey W. White Jr	Temp: 0 SF Perm: 3,562 SF	Impasse/owners would negotiate no further
12	10860 General Puller Hwy Saluda, VA 2319	38 24 1	Marguerite L. Haasnoot Trust	Temp: 0 SF Perm: 3,400 SF	Impasse/owners would negotiate no further
13	N/A	38-142F	Harry Lee & Thomas Bailey Gilbert	Temp: 0 SF Perm: 9,503 SF	Ownership undetermined
14	N/A	43C 24	Coves at Wilton Creek Owners Assoc.	Temp: 0 SF Perm: 26,350 SF	HOA indicated they would not sign at this time

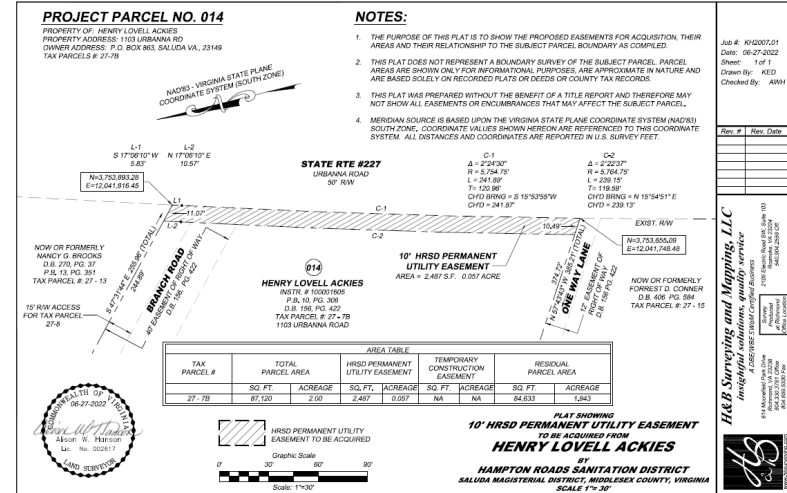
65 Drum Point Lane Hartfield, VA 23071



Heirs of Chewning, Urbanna Va



1103 Urbanna Road Saluda, VA 23149



Robert Reed Estate

PROJECT PARCEL NO. 016

PROPERTY OF: ROBERT REED ESTATE
 PROPERTY ADDRESS: NO PROPERTY ADDRESS AVAILABLE
 OWNER ADDRESS: P.O. BOX 1903, HAYES, VA., 23072-1903
 TAX PARCELS #: 27-16

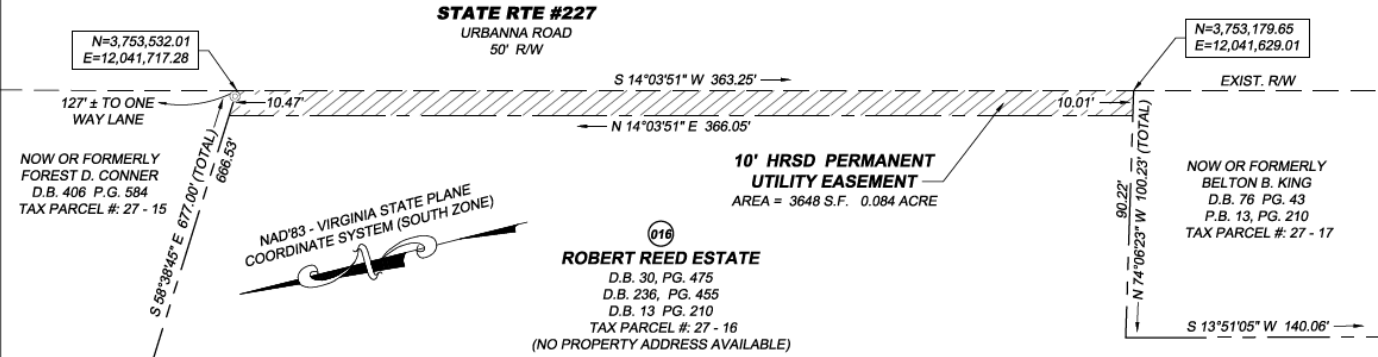


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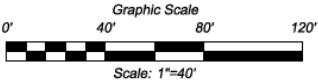
1. THE PURPOSE OF THIS PLAT IS TO SHOW THE PROPOSED EASEMENTS FOR ACQUISITION, THEIR AREAS AND THEIR RELATIONSHIP TO THE SUBJECT PARCEL BOUNDARY AS COMPILED.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE SUBJECT PARCEL. PARCEL AREAS ARE SHOWN ONLY FOR INFORMATIONAL PURPOSES, ARE APPROXIMATE IN NATURE AND ARE BASED SOLELY ON RECORDED PLATS OR DEEDS OR COUNTY TAX RECORDS.
3. THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND THEREFORE MAY NOT SHOW ALL EASEMENTS OR ENCUMBRANCES THAT MAY AFFECT THE SUBJECT PARCEL.
4. MERIDIAN SOURCE IS BASED UPON THE VIRGINIA STATE PLANE COORDINATE SYSTEM (NAD'83) SOUTH ZONE. COORDINATE VALUES SHOWN HEREON ARE REFERENCED TO THIS COORDINATE SYSTEM. ALL DISTANCES AND COORDINATES ARE REPORTED IN U.S. SURVEY FEET.

Job #: KH2007.01
 Date: 06-27-2022
 Sheet: 1 of 1
 Drawn By: KED
 Checked By: AWH

Rev. #	Rev. Date



TAX PARCEL #	TOTAL PARCEL AREA		HRSD PERMANENT UTILITY EASEMENT		TEMPORARY CONSTRUCTION EASEMENT		RESIDUAL PARCEL AREA	
	SQ. FT.	ACREAGE	SQ. FT.	ACREAGE	SQ. FT.	ACREAGE	SQ. FT.	ACREAGE
27 - 16	402,277	9.235	3,648	0.084	NA	NA	398,629	9.151



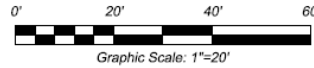
PLAT SHOWING
10' HRSD PERMANENT UTILITY EASEMENT
TO BE ACQUIRED FROM
ROBERT REED ESTATE
 BY
HAMPTON ROADS SANITATION DISTRICT
SALUDA MAGISTERIAL DISTRICT, MIDDLESEX COUNTY, VIRGINIA
SCALE 1"= 40'

H&B Surveying and Mapping, LLC
insightful solutions, quality service
 A DBE/WBE SWAIA Certified Business
 2108 Electric Road SW, Suite 103
 Roanoke, VA 24224
 540.504.2559 O.F.
 540.504.5330 F.A.X.
 Survey Produced at Richmond Office Location



PROJECT PARCEL NO. 017

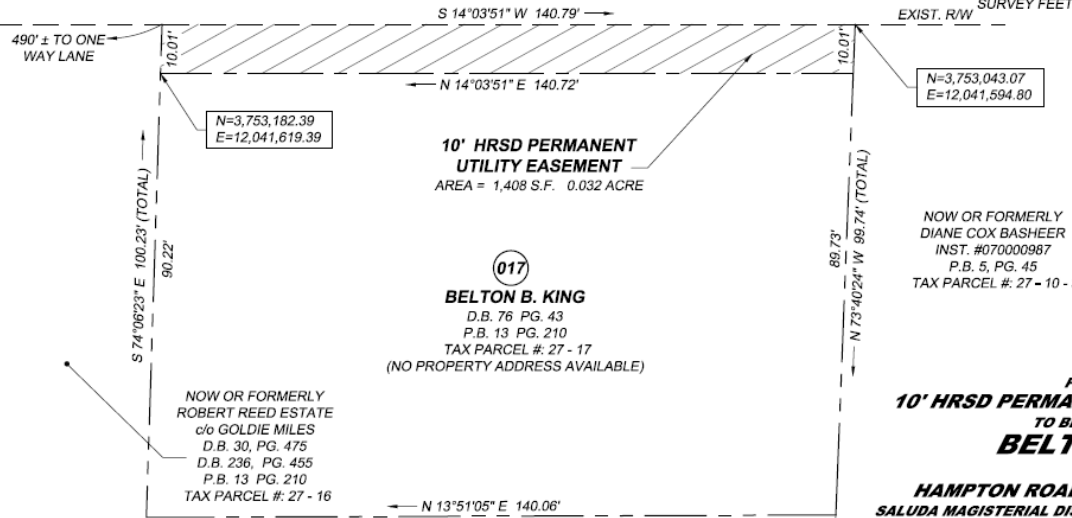
PROPERTY OF: BELTON B. KING
 PROPERTY ADDRESS: NO PROPERTY ADDRESS AVAILABLE
 OWNER ADDRESS: 1008 EASTON RD.
 ABBINGTON, PA. 19001-4305
 TAX PARCELS #: 27-17



TAX PARCEL #	TOTAL PARCEL AREA		HRSD PERMANENT UTILITY EASEMENT		TEMPORARY CONSTRUCTION EASEMENT		RESIDUAL PARCEL AREA	
	SQ. FT.	ACREAGE	SQ. FT.	ACREAGE	SQ. FT.	ACREAGE	SQ. FT.	ACREAGE
27 - 17	43,560	1.00	1,408	0.032	NA	NA	42,152	0.97

NAD'83 - VIRGINIA STATE PLANE
 COORDINATE SYSTEM (SOUTH ZONE)

STATE RTE #227
 URBANNA ROAD
 50' RW



NOTES:

1. THE PURPOSE OF THIS PLAT IS TO SHOW THE PROPOSED EASEMENTS FOR ACQUISITION, THEIR AREAS AND THEIR RELATIONSHIP TO THE SUBJECT PARCEL BOUNDARY AS COMPILED.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE SUBJECT PARCEL, PARCEL AREAS ARE SHOWN ONLY FOR INFORMATIONAL PURPOSES, ARE APPROXIMATE IN NATURE AND ARE BASED SOLELY ON RECORDED PLATS OR DEEDS OR COUNTY TAX RECORDS.
3. THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND THEREFORE MAY NOT SHOW ALL EASEMENTS OR ENCUMBRANCES THAT MAY AFFECT THE SUBJECT PARCEL.
4. MERIDIAN SOURCE IS BASED UPON THE VIRGINIA STATE PLANE COORDINATE SYSTEM (NAD'83) SOUTH ZONE. COORDINATE VALUES SHOWN HEREON ARE REFERENCED TO THIS COORDINATE SYSTEM. ALL DISTANCES AND COORDINATES ARE REPORTED IN U.S. SURVEY FEET.



NOW OR FORMERLY
 DIANE COX BASHEER
 INST. #07000987
 P.B. 5, PG. 45
 TAX PARCEL #: 27 - 10 - 3

PLAT SHOWING
10' HRSD PERMANENT UTILITY EASEMENT
TO BE ACQUIRED FROM
BELTON B. KING
 BY
HAMPTON ROADS SANITATION DISTRICT
 SALUDA MAGISTERIAL DISTRICT, MIDDLESEX COUNTY, VIRGINIA
 SCALE 1"= 20'

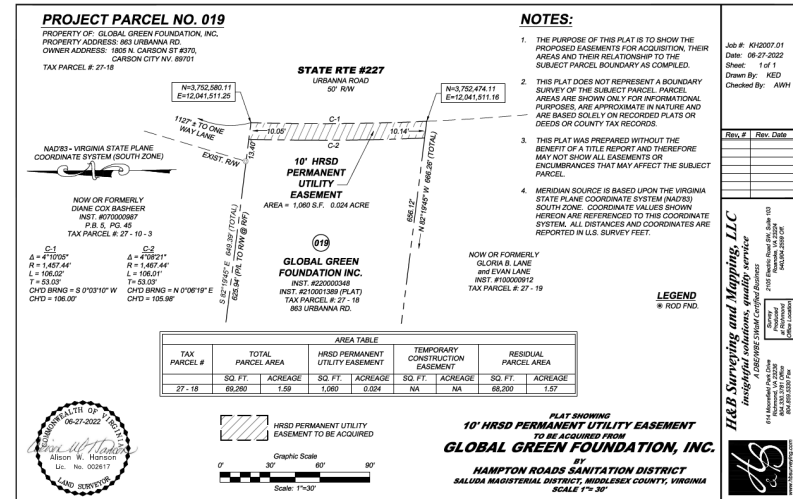
Job #: KH2007.01
 Date: 06-27-2022
 Sheet: 1 of 1
 Drawn By: KED
 Checked By: AWH

Rev. #	Rev. Date

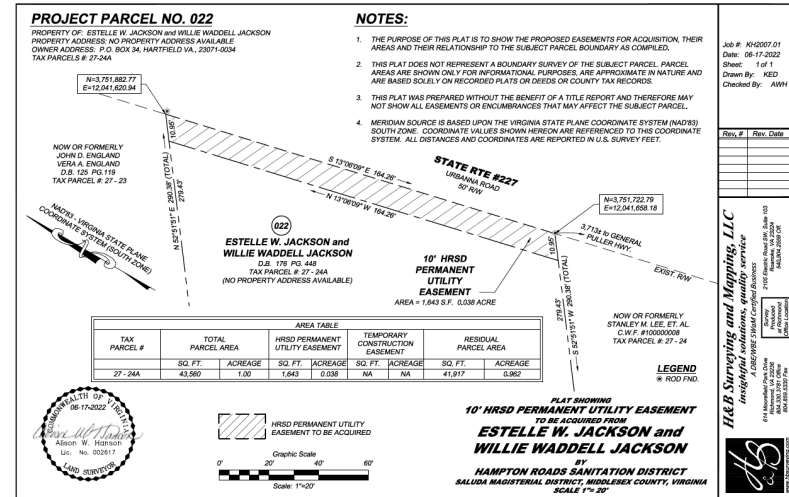
H&B Surveying and Mapping, LLC
insightful solutions, quality service
 A DBE/WBE SVAIA Certified Business
 2108 Electric Road SW, Suite 103
 Roanoke, VA 24224
 540.504.2559 O/A
 Survey Professional at Richmond
 Office Location
 614 Macenfield Park Drive
 Richmond, VA 23226
 804.300.3781 Office
 804.659.5330 Fax
 www.hbsurveying.com



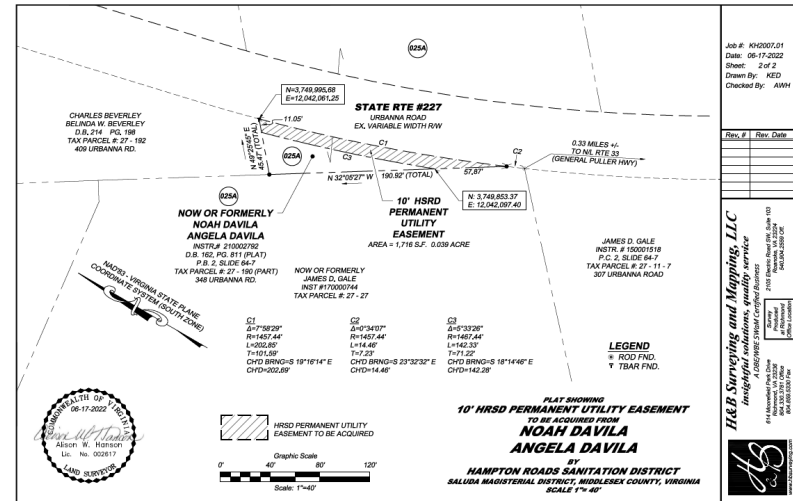
863 Urbanna Road Saluda, VA 23149



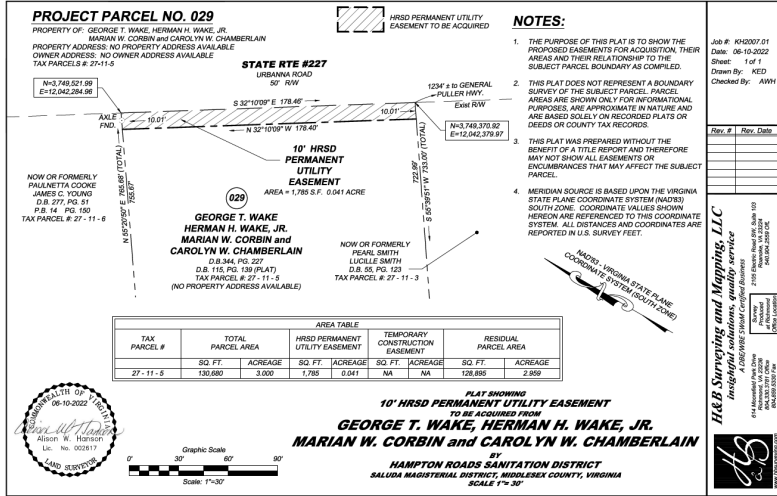
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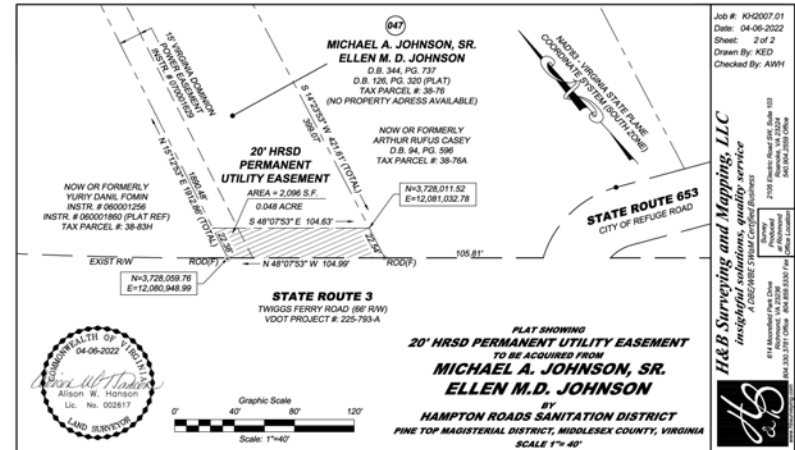
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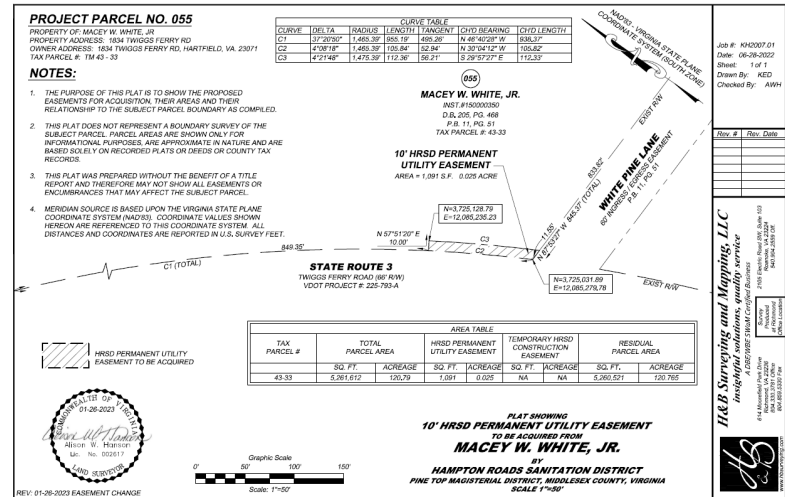
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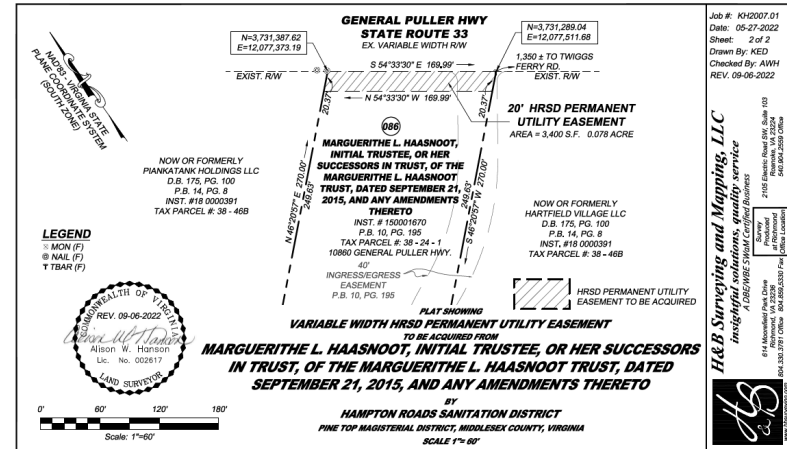
2570 Twiggs Ferry Road Saluda, VA 23149



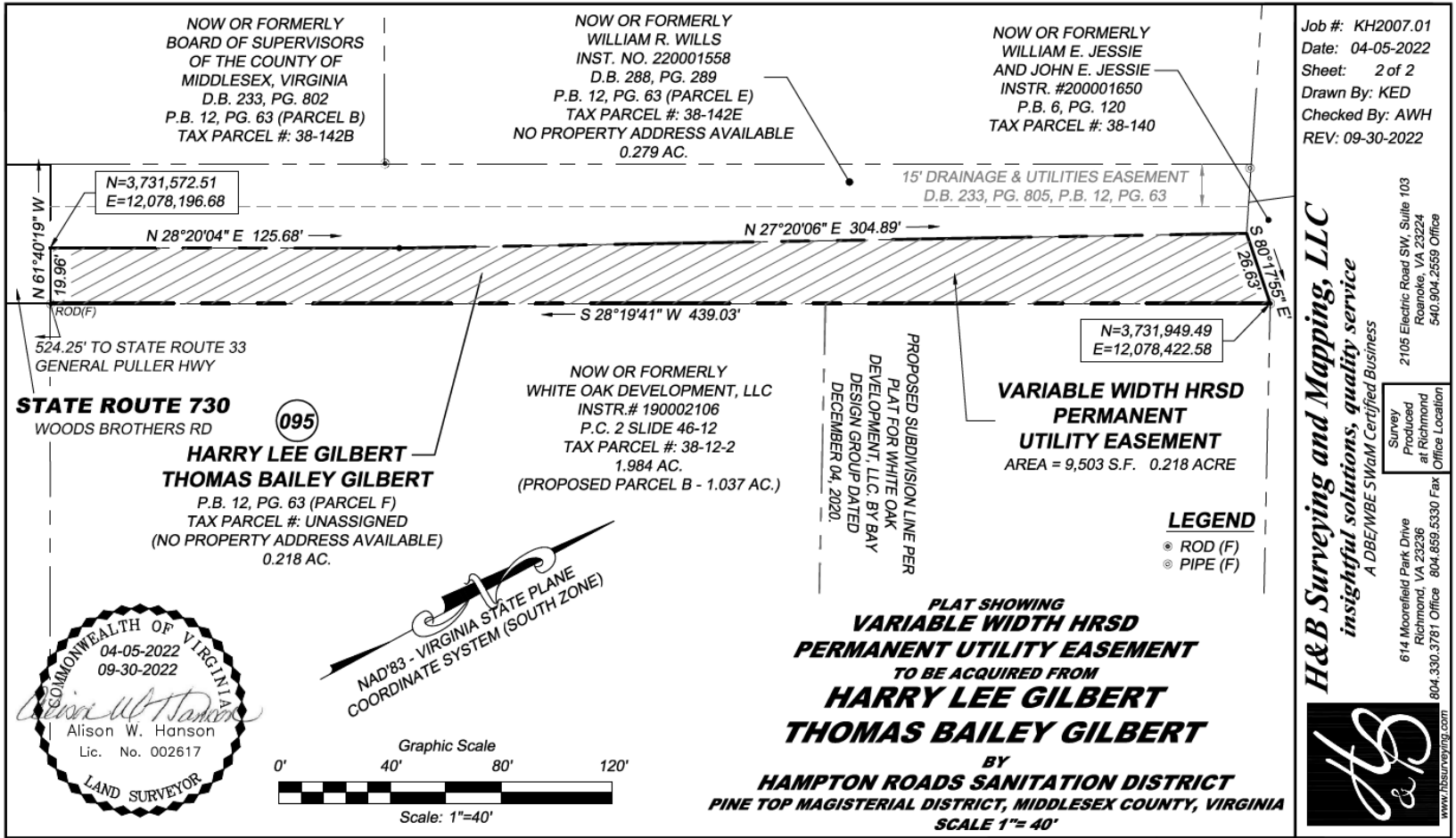
1834 Twigg's Ferry Road Saluda, VA 23149



10860 General Puller Highway Saluda, VA 23149



Harry Lee & Thomas Bailey Gilbert



Job #: KH2007.01
Date: 04-05-2022
Sheet: 2 of 2
Drawn By: KED
Checked By: AWH
REV: 09-30-2022

H&B Surveying and Mapping, LLC
insightful solutions, quality service
A DBE/WBE SVI/AM Certified Business

Survey
Produced
at Richmond
Office Location

2105 Electric Road SW, Suite 103
Roanoke, VA 24024
540.904.2559 Office

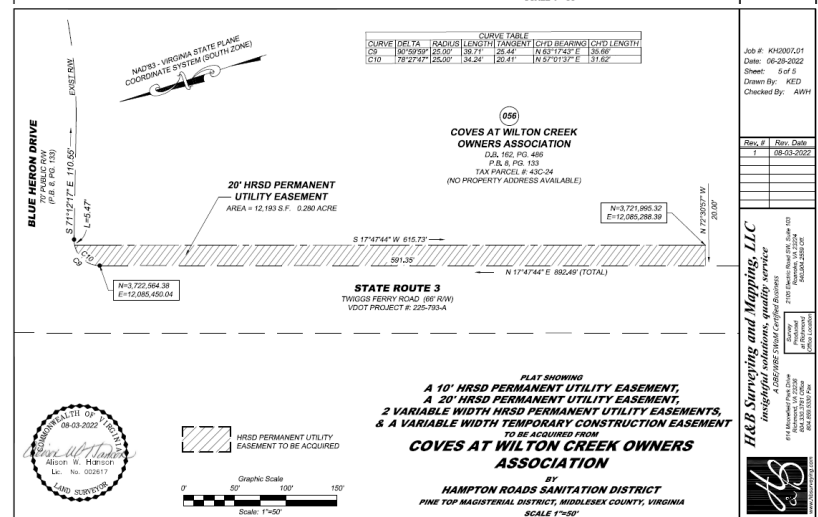
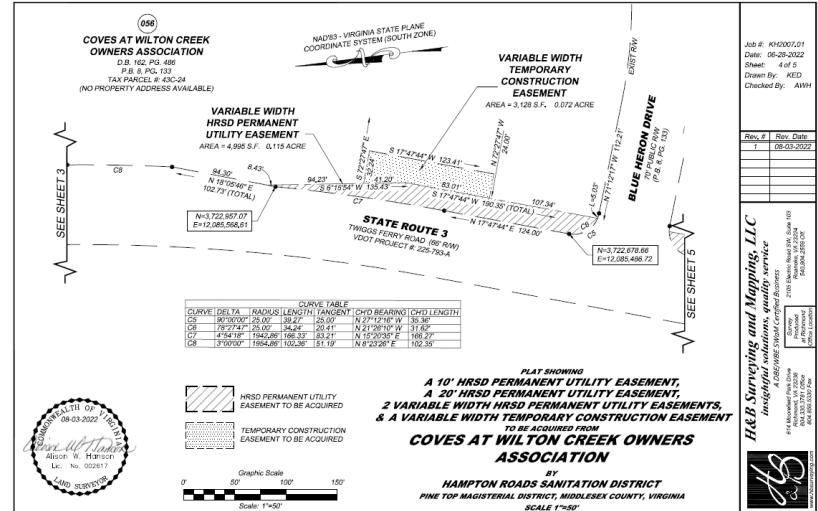
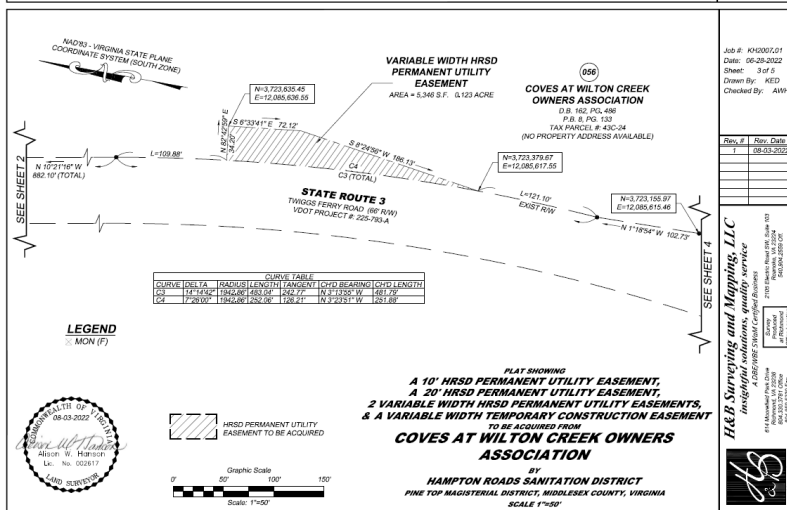
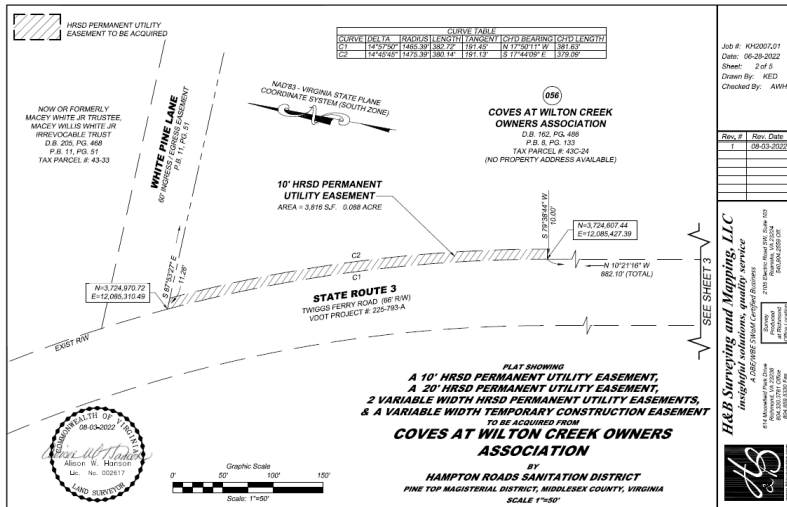
614 Moorfield Park Drive
Richmond, VA 23236
804.330.3781 Office 804.659.6330 Fax



Coves at Wilton Creek Owners Assoc.



Coves at Wilton Creek Owners Assoc.



Questions?



RESOLUTION

***Providing for the acquisition by condemnation, if necessary,
of parcels and/or easements with respect to
the Middlesex Interceptor System Program Phase II-Transmission
Force Main Project; CIP NO. MP013730***

WHEREAS, Hampton Roads Sanitation District (hereinafter "HRSD"), as part of its Capital Improvement Program, is proceeding with the project known as the Middlesex Interceptor System Program Phase II-Transmission Force Main Project; MP013730 (the "Project"); and

WHEREAS, as a part of the said Project, HRSD has determined that it is necessary to acquire certain property and easements, as shown on the plans for the Middlesex Interceptor System Program Phase II-Transmission Force Main Project (the "Plans"), the Plans being on file in the offices of HRSD at 1434 Air Rail Avenue, Virginia Beach, Virginia, (the "Property"), by condemnation (or other means); and

WHEREAS, HRSD provided public notice, duly published in newspapers of general circulation in the County of Middlesex, and held a public hearing on this matter at 1434 Air Rail Avenue, Virginia Beach, Virginia on March 28, 2023; and

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

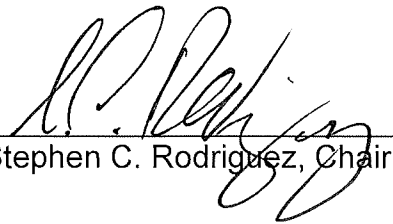
WHEREAS, after holding a public hearing on the matter, HRSD has determined that a public necessity exists for the acquisition of the Property for the Project and that the Project is in the public interest;

NOW, THEREFORE, BE IT RESOLVED on the 28th day of March 2023, by the HRSD Commission that:

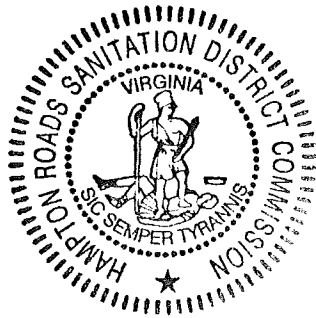
1. The Project is approved as a public use, necessary for the construction of said Project within HRSD's system; and said Project is further declared to be in the public interest;
2. The acquisition of the Property by purchase or condemnation is necessary for the said Project and is hereby approved;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

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

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



Stephen C. Rodriguez, Chair



HRSD Commission Meeting Minutes
March 28, 2023
Attachment #3

4. Suffolk Pump Station Replacement
Public Hearing on Determination of Public Need for Fee Simple and
Easement Acquisition and Resolution



Determination of Public Need
Suffolk Pump Station Replacement
CIP# NP010620

March 28, 2023

Project Overview

Location: Portsmouth Blvd. and E. Washington St., Suffolk, VA

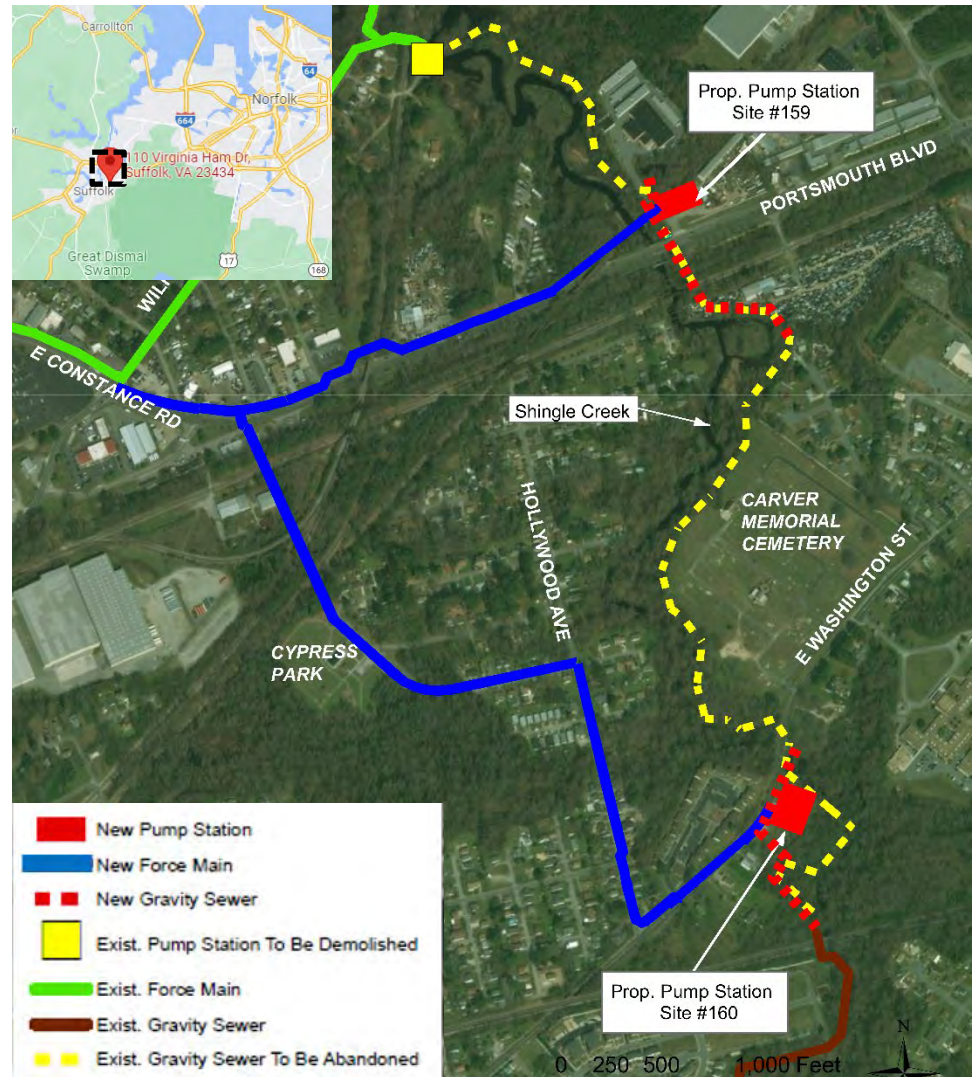
Scope: Replacement of existing Pump Station (PS) and rehabilitation or replacement of gravity sewer

Need: Reduce impacts to neighbors/environment (SSO's, creek crossings, oyster beds), remedy multiple breaks, reduce O&M challenges

Design Plan: Construct two PS's and corresponding force main, gravity sewer improvements and abandonment of existing sewer and PS

Construction Length: 3 years

Regulatory Deadline: May 2025



Alternatives Explored

- Team analyzed 14 parcels for the future pump station sites
 - Multiple pipeline routes evaluated for top 3 PS sites
- Decision matrix utilized for PS locations and pipeline alignments
- Strong weightings for:
 - O&M
 - Compatibility with surrounding area
 - measure how project will affect the community, neighborhoods and environment
- Result: 2 strategic PS's sites to replace the existing PS and corresponding highest scoring pipeline alignments were selected
 - High Score driven by advantages to:
 - Abandoning 6,500 LF of hard to access/maintain sewer
 - More accessible force main routes



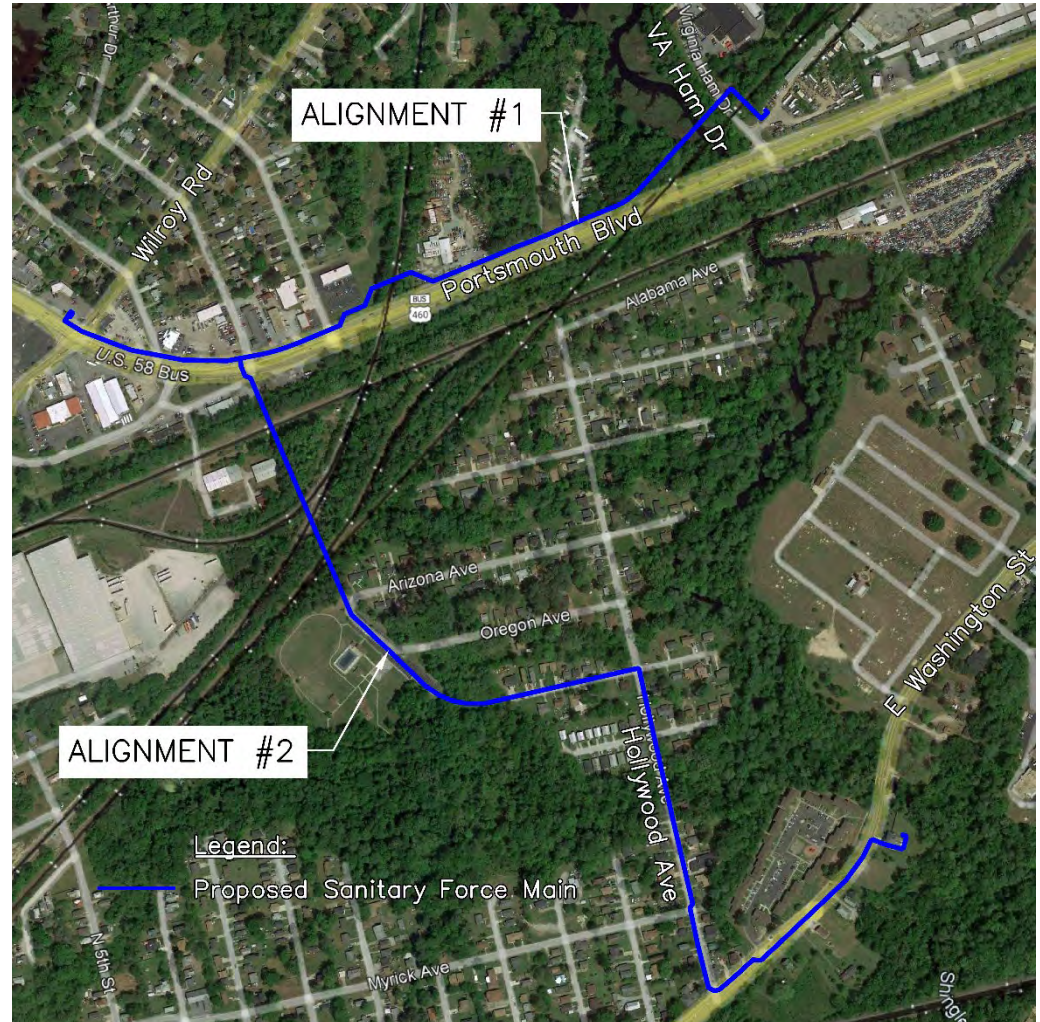
Project Overview – Phase 1: Force Main

Phase 1 Description

- Includes force main (FM), construction from HRSD's existing interceptor FM to the proposed pump station (PS) locations (to be constructed during Phase 2).

Force Main Routes

- Alignment #1: 2,360 LF of 8" FM
 - Along Portsmouth Blvd.
 - From Virginia Ham Dr. to connection w/Alignment #2
- Alignment #2: 5,760 LF of 16" FM
 - Originating at E. Washington St.
 - Traversing Hollywood Ave. and Kentucky Ave. and Portsmouth Blvd.
 - Connect to HRSD's existing interceptor FM at Wilroy Rd.



Project Overview – Phase 2: Gravity Sewer and Pump Stations

Phase 2 Description

- Construction of two new pump stations
- 2,700 LF of gravity sewer pipe and associated manholes.
- Abandonment of approx. 6,600 LF of existing gravity sewer and
- Decommissioning of the existing HRSD pump station

Pump Station and Gravity System Locations

- Pump Station #159 located at 104 Virginia Ham Drive in Suffolk, VA (near the intersection of Virginia Ham Drive and Portsmouth Blvd).
 - Approximately 700 LF of 12" and smaller gravity sewer along Virginia Ham Dr. and Shingle Creek
- PS #160 will be located at 2245 E. Washington Drive.
 - Approx. 1,200 LF of 24" and smaller gravity sewer along HRSD's ex. system and E. Washington Street.



- Consent Order Compliance - deadline May 2025
- Cost and schedule
- Easement/property acquisition
- Railroad Crossings
- Regulatory Agency Approval
- Nationwide Permits
- Stakeholder Acceptance

Overall Project Map

Fee Simple Acquisitions

- 3 sites

Project Easements

- 26 total easements
- Types
 - Permanent
 - Temporary
 - Ingress/Egress Access

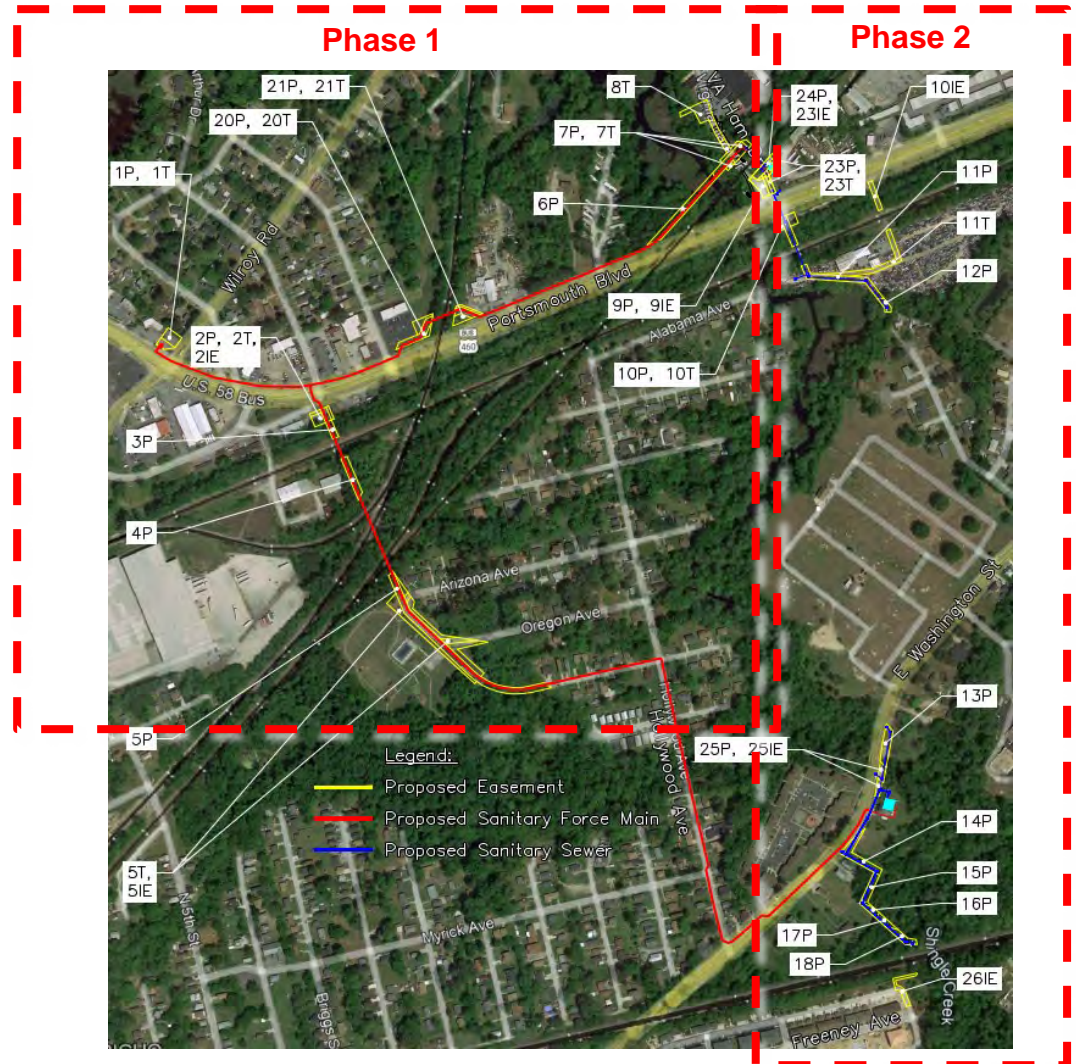
Phase 1 corridor (9 easements)

- Portsmouth Blvd (Rt. 58 Bus.)
- Virginia Ham Drive
- Cypress Park
- 2 HRSD will convey to City on PS site

Phase 2 corridor (12 easements)

- Portsmouth Blvd (Rt. 58 Bus.)
- Virginia Ham Drive
- E. Washington Street

5 shared between both phases

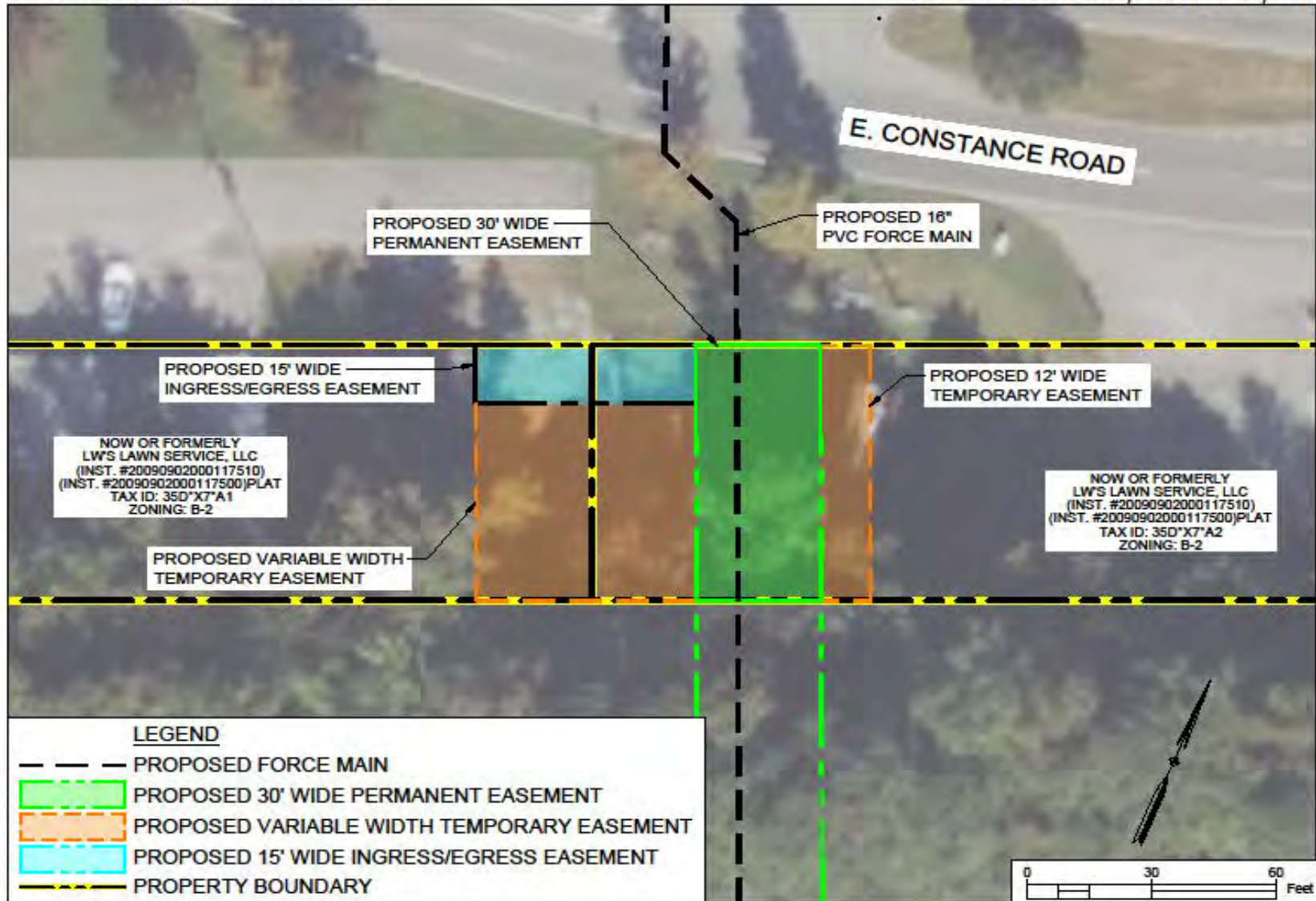


Easement Progress Tracking

Parcel #	Tax Map	Landowner	Property Address	Status
PHASE 1 ONLY				
1P / 1T	35D*F*A	RALPH L. WETHERINGTON, JR.	568 E Constance Road, Suffolk, VA 23434	Acquired
2P / 2T / 2IE	35D*X7*A1 35D*X7*A2	LW'S LAWN SERVICE, LLC (INST #20090902000117510, 20090902000117500)	701 OLD EAST PINNER ST 725 E CONSTANCE RD ST	OPEN
3P	35D*X8	CITY OF PORTSMOUTH	N/A	Acquired
4P	35E(A)*H	HAMPTON ROADS BOX COMPANY, INC.	619 East Pinner Street, Suffolk, VA 23434	Acquired
5P / 5T	35C*A	CITY OF SUFFOLK	2001 Arizona Avenue, Suffolk, VA 23434	Acquired
6P	35*56	Nicholas O. Moyer	950 Portsmouth Boulevard, Suffolk, VA 23434	Acquired
19P	35C*21*A	BRIAN HILL & SHEILA M. HILL	2200 Kentucky Avenue, Suffolk, VA 23434	Acquired
20P / 20T	35D*D1*B	CRAIG JOHNSON LLC (INST #200019190)	860 Portsmouth Boulevard, Suffolk, VA 23434	Acquired
21P / 21T	35*53*53A	900 PORTSMOUTH BLVD, LLC	900 Portsmouth Boulevard, Suffolk, VA 23434	OPEN
PHASE 1 & PHASE 2				
7P / 7T	35*58*2	SHINGLE CREEK ASSOCIATES, LLC (INST #050007278)	N/A	Acquired
9P / 9IE Fee Simple	35*147	SHINGLE CREEK ASSOCIATES, LLC (INST #030022333)	N/A	Agreement
23P / 23T / Fee Simple	35*147A	ARZILLO INVESTMENTS INC. (INST #010012756)	960 Portsmouth Boulevard, Suffolk, VA 23434	OPEN
PHASE 2 ONLY				
8T	35*58*A	SHINGLE CREEK ASSOCIATES, LLC (INST #030022333)	110 Virginia Ham Drive, Suffolk, VA 23434	Acquired
10P / 10T / 10IE	N/A	CITY OF PORTSMOUTH	N/A	Acquired
11P / 11IE	35*149	TROUNG DUC TRAN & KHUONG THI PHAM TRAN	965 Portsmouth Boulevard, Suffolk, VA 23434	Acquired
12P	35I*2*9	LISA MARIE BASNIGHT	214 Bunch Avenue, Suffolk, VA 23434	Acquired
13P	35*154A	EVERETT G. PURRINGTON	2314 East Washington Street, Suffolk, VA 23434	Acquired
14P	35*160	ENOCH C. COPELAND, TRUSTEE OF THE JALPENIA ODELL GARDENER FAMILY TRUST	N/A (Formerly)	Acquired
15P	35*159*6	HAZEL R. TRAINER	2233 East Washington Street, Suffolk, VA 23434	Acquired
16P	35*159*5	HALLIE O. F. BREMBY	2223 East Washington Street, Suffolk, VA 23434	Acquired
17P	35*159*7	ANTOINETTE TRAINER	N/A	Acquired
18P	35*159*4	HAZEL B. R. TRAINER AND ANTOINETTE Y. TRAINER	N/A	Acquired
26	35*164*D	TIDEWATER FAIR DOWNS LLC	2058 Freeney Ave	Acquired
Fee Simple	35*157B	LAVOSKIA TURNER-CONNER35*157B	2245 E. Washington Street, Suffolk, VA	Acquired

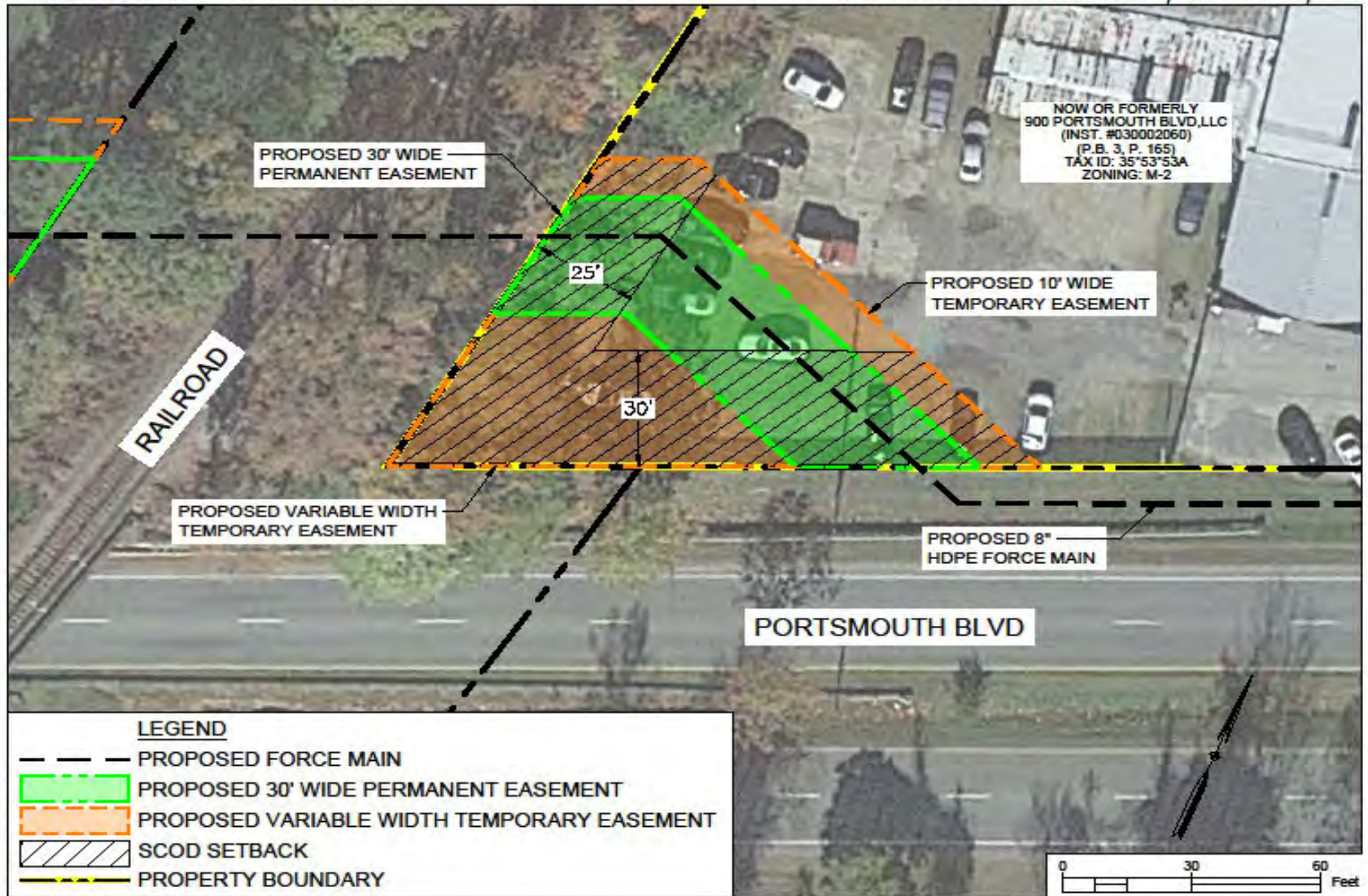
Total number of easement: 26

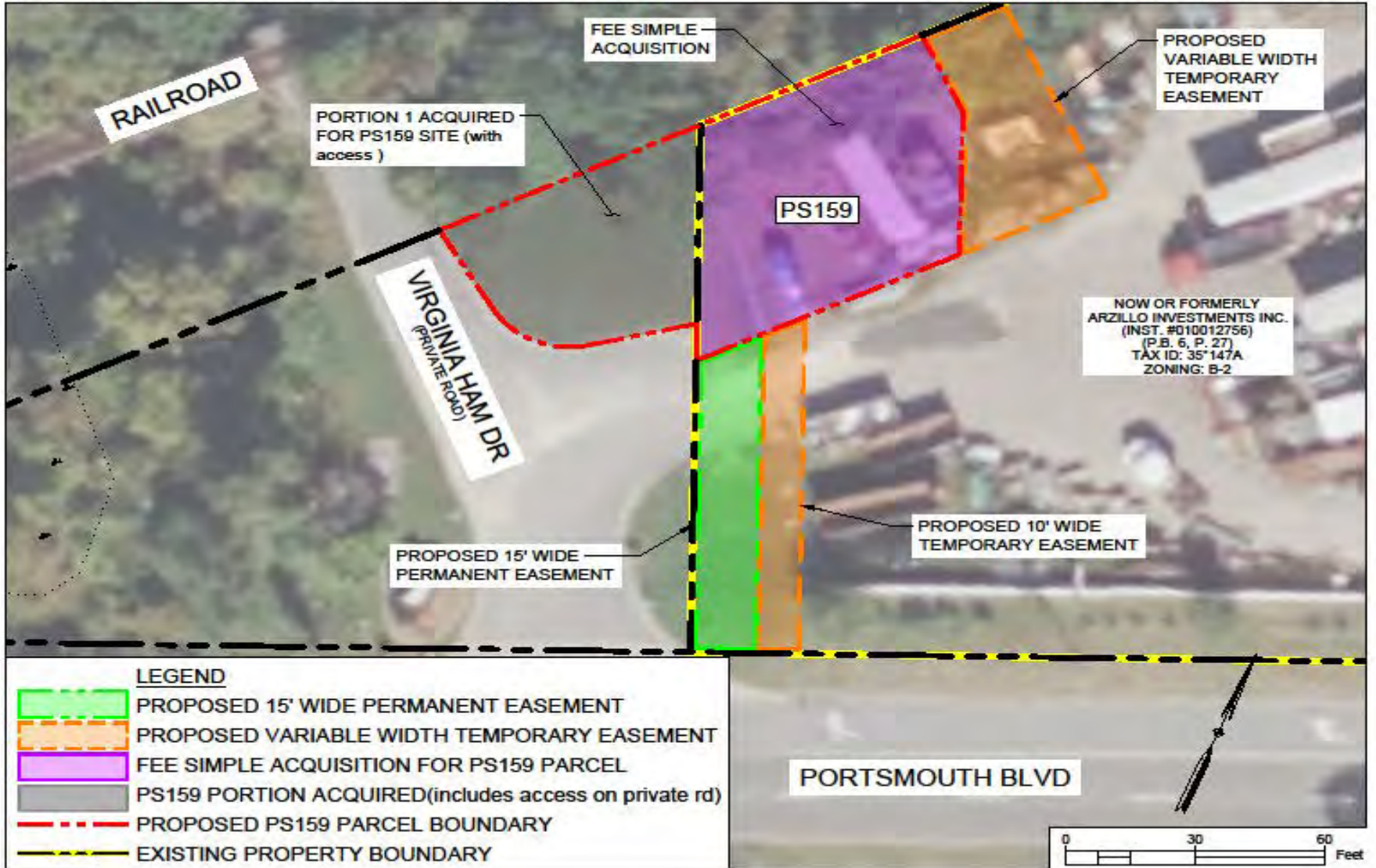
Fee Simple Property Acquisition: 3



LOCATION MAP - PARCEL 021

900 PORTSMOUTH BLVD, SUFFOLK, VA





Questions?

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #4

5. Post-Issuance Tax Compliance Policy Revisions
Commission Adopted Policy

1.0 Purpose and Need

Hampton Roads Sanitation District (“HRSD”) from time-to-time issues tax-exempt bonds and other “tax-advantaged” obligations (collectively “Tax-Advantaged Bonds¹”) to raise funds to finance and refinance various capital improvements of HRSD. These procedures (the “Post-Issuance Compliance Procedures”) have been adopted by HRSD to assist it in monitoring compliance with certain rules applicable to Tax-Advantaged Bonds in order to preserve their tax-advantaged status. These Post-Issuance Compliance Procedures specifically cover:

- (1) record retention;
- (2) limitations on “private loans” and “private business use,” including in particular the rules relating to the taking of “remedial action” to preserve the status of an issue of Tax-Advantaged Bonds; and
- (3) limitations on earning arbitrage, including the payment of arbitrage rebate to the federal government at various intervals (the “Rebate Requirement”).

HRSD recognizes that the various tax-related limitations, including the above-mentioned limitations, are based on the provisions of the Internal Revenue Code of 1986, as amended (the “Internal Revenue Code”), and the regulations of the U.S. Treasury promulgated thereunder (the “Treasury Regulations”).

These Post-Issuance Compliance Procedures are intended to document and supplement existing practices and describe various procedures and systems implemented and to be implemented to demonstrate compliance with the requirements that must be satisfied before and after the issuance of Tax-Advantaged Bonds. Compliance with applicable provisions of the Internal Revenue Code and the Treasury Regulations is an ongoing requirement and an integral component of HRSD’s debt management program. Accordingly, implementation of these Post-Issuance Compliance Procedures will require ongoing surveillance through, and sometimes beyond, the final maturity of Tax-Advantaged Bonds and may require on-going consultation with bond counsel after the issuance of particular obligations.

¹ Reference to Tax-Advantaged Bonds herein includes tax-exempt bonds and other tax-advantaged obligations issued by other governmental entities, e.g., Virginia Resources Authority, the proceeds of which are loaned to HRSD to finance or refinance various capital improvements of HRSD, and other forms of borrowing, e.g., leases entered into to purchase equipment, revolving credit arrangements, and private loans advanced by a local bank.

COMMISSION ADOPTED POLICY
Post-Issuance Tax Compliance



Adopted: March 27, 2012

Revised: March 28, 2023

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These Post-Issuance Compliance Procedures are intended to reflect best practices, to be revised periodically as circumstances warrant, including changes in federal tax law, and as the municipal bond market and Internal Revenue Service (“IRS”) enforcement each evolve. Given the scope and complexity of HRSD’s financings, compliance with these Post-Issuance Compliance Procedures will require ongoing review and refinement. Failure to conform to any element of these Post-Issuance Compliance Procedures, however, should in no way imply that HRSD is not in compliance with the provisions of the Internal Revenue Code applicable to its Tax-Advantaged Bonds. In addition, the Tax Compliance Designee (defined below) is authorized to deviate from strict compliance with these Post-Issuance Compliance Procedures to the extent necessary to carry out the intent and purpose of the Post-Issuance Compliance Procedures and provided such deviations do not jeopardize the tax-advantaged status of any Tax-Advantaged Bonds.

2.0 Definitions

Construction Contracts and Other Purchases of Capital Assets: A contract with a Nongovernmental Person to construct capital assets or to sell capital assets to HRSD does not generally result in Private Use unless the Nongovernmental Person is providing additional services in connection with such contract, *e.g.*, construction management or consulting services, or has some other special legal entitlement or special economic benefit with respect to such capital assets. Such services, special legal entitlement or special economic benefit with respect to bond financed property must be analyzed for Private Use.

Leases of bond financed property: All leases of bond financed property to a Nongovernmental Person constitute Private Use of such property unless an exception for short term use is satisfied.

Management and Service Contracts: With respect to management and service contracts, the determination of whether a particular contract results in Private Use shall be based on the application of the Code and Treasury Regulations, including particularly Revenue Procedure 2017-13, 2017-6 I.R.B. 787 (“Revenue Procedure 2017-13”), and, for any management and service contract entered into before August 18, 2017 and not materially modified or extended on or after such date, such determination may be made on the basis of applying Revenue Procedure 97-13, 1997-1 C.B. 632, as amended by Revenue Procedure 2001-39, 2001-2 C.B. 38, and as amplified by Notice 2014-67, 2014-46 I.R.B. 822 (collectively, “Revenue Procedure 97 13” and referred to collectively with Revenue Procedure 2017-13 as the “Management Contract Safe

COMMISSION ADOPTED POLICY
Post-Issuance Tax Compliance



Adopted: March 27, 2012

Revised: March 28, 2023

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Harbors”). Such management and service contracts include, but are not limited to, operating agreements, construction management agreements, business services agreements, technical consulting services agreements and other similar agreements. Further, for purposes of determining the nature of a Private Use, any management or service contract that is properly characterized as a lease for federal income tax purposes is treated as a lease. Consequently, any such agreements, even though referred to as a management or service contract may nevertheless be treated as a lease. In determining whether a management or service contract is properly characterized as a lease, it is necessary to consider all of the facts and circumstances, including, but not limited to, the following factors:

- the degree of control over the property that is exercised by a Nongovernmental Person; and
- whether a Nongovernmental Person bears risk of loss of the financed or refinanced property.

Materials and Commodity Supply Contracts: A contract or purchase order for materials, commodities, inventory or other supplies from a Nongovernmental Person does not generally result in Private Use unless there are additional services being provided by the Nongovernmental Person in connection with the contracts, *e.g.*, consulting services. Such service arrangements with respect to bond financed property must be analyzed for Private Use under the Management Contract Safe Harbors.

Nongovernmental Person: Any person or entity other than a state or local government entity. State and local governments used herein are governmental entities. The United States of America (including any federal agencies) and non-profit corporations, including charitable organizations exempt from tax under Section 501(c)(3) of the Code, are Nongovernmental Persons.

Nonpossessory Incidental Use: Any nonpossessory incidental use such as vending machines, bank machines and similar uses may be excluded from the Private Use rules if the nonpossessory use is not functionally related to any other use of the bond financed facility by the same person and all such nonpossessory uses of the financed facility do not in the aggregate involve the use of more than 2.5% of facility. Such use of bond financed property shall be tracked by Tax Compliance Designee.

Ownership of bond financed property: If bond financed property is owned by a Nongovernmental Person, either in name or in substance pursuant to the

COMMISSION ADOPTED POLICY
Post-Issuance Tax Compliance



Adopted: March 27, 2012

Revised: March 28, 2023

Page 4 of 15

federal income tax rules, such ownership will be considered Private Use of the asset for purposes of the Private Use rules.

Private Payments: For purposes of these Post-Issuance Compliance Procedures, "Private Payments" means payments derived, directly or indirectly, in respect of property used or to be used for Private Use. As an example, if there is Private Use with regard to a facility of HRSD as a result of a non-complying management contract and HRSD customers make payments with respect to such facility, such payments may be treated as Private Payments.

Private Use: For purposes of these Post-Issuance Compliance Procedures, the term "Private Use" means any activity that constitutes a trade or business that is carried on by Nongovernmental Persons. Any activity carried on by a person other than a natural person is treated as a trade or business. Any asset financed with Tax-Advantaged Bonds not owned by a Governmental Entity will be considered to be used in a Private Use.

In most cases, Private Use will occur only if a Nongovernmental Person has a special legal entitlement to use the bond financed property. Such a special legal entitlement includes ownership or actual or beneficial use pursuant to a lease, management, service or incentive payment contract, output contract, research agreement or similar arrangement. Private Use may also be established solely on the basis of a special economic benefit to one or more Nongovernmental Person.

Short-Term Use Exception: Arrangements fitting within either of the following two exceptions will not result in Private Use unless the property is financed for the principal purpose of providing that property for use by that Nongovernmental Person.

- (1) **100 Day Exception - Use Pursuant to Generally Applicable and Uniformly Applied Rates:** An arrangement will not result in Private Use if:
 - (a) the arrangement does not transfer ownership for federal income tax purposes of the property to a Nongovernmental Person,
 - (b) the term of the use under the arrangement, including all renewal options, is not longer than 100 days, and

(c) the arrangement would be treated as general public use, except that it is not available for use on the same basis by natural persons not engaged in a trade or business because generally applicable and uniformly applied rates are not reasonably available to natural persons not engaged in a trade or business.

(2) ***50 Day Exception - Use Pursuant to Negotiated Arm's Length Arrangements:*** An arrangement will not result in Private Use if:

- (a) the arrangement does not transfer ownership for federal income tax purposes of the property to a Nongovernmental Person,
- (b) the term of the use under the arrangement, including all renewal options, is not longer than 50 days, and
- (c) the arrangement is a negotiated arm's-length arrangement and compensation under the arrangement is at fair market value.

Special Priority Rights or Special Economic Benefits: A contract that conveys special priority rights or special economic benefits in bond financed property to a Nongovernmental Person may create Private Use. In determining whether special economic benefit gives rise to Private Use of bond financed property, it is necessary to consider all of the facts and circumstances, including, but not limited to, one or more of the following factors:

- whether the bond financed property is functionally related or physically proximate to property used in the trade or business of a Nongovernmental Person;
- whether only a small number of Nongovernmental Persons receive the economic benefit; and
- whether the cost of the bond financed property is treated as depreciable by the Nongovernmental Person.

Such arrangements with respect to bond financed property must be reviewed by bond counsel.

3.0 Procedures

3.1 Guiding Principles

Policies and Post-Issuance Compliance Procedures Generally: HRSD's Director of Finance shall be responsible for monitoring tax compliance with regard to HRSD's debt offerings (the "Tax Compliance Designee"). The Tax Compliance Designee shall also be responsible for ensuring an adequate succession plan for transferring tax compliance responsibilities when changes in staff occur.

The Tax Compliance Designee needs to review the tax compliance procedures and systems on a periodic basis (e.g., annually), and consult with the General Manager and bond counsel as appropriate and as needed.

3.2 Private Use, Change in Use and Remedial Action

1. Private Use Generally

Tax-Advantaged Bonds may lose their tax status if they meet either:

- the private business use test in Section 141(b)(1) of the Internal Revenue Code, and
- the private security or payment test in Section 141(b)(2) of the Internal Revenue Code, or
- the private loan financing test in Section 141(c) of the Internal Revenue Code.

The private business use test relates to the use of the proceeds of an issue and the test is met if more than the lesser of (1) \$15,000,000 and (2) 10%² of the proceeds of an issue meet the private business use test. Generally, private business use arises if proceeds of an issue are used by Nongovernmental Persons in a trade or business ("Private Use"). It is necessary to look to direct and indirect uses as well as actual and beneficial uses. In most cases, Private Use arises if a Nongovernmental Person has special legal entitlements with respect to financed property.

² Such ten percent limitation is reduced to five percent with respect to Private Use that is either unrelated to governmental uses of proceeds of the same issue, or disproportionate to related governmental uses of proceeds of such issue.

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Private payments include revenues derived, directly or indirectly, with respect to property used or to be used for a Private Use ("Private Payments"). Private security takes into account the payment of debt service on an issue that is directly or indirectly secured by any interest in property used or to be used for a Private Use.

The private loan financing test is met if more than the lesser of:

- (1) \$5,000,000, and
- (2) 5% of the proceeds of an issue is or are to be used, directly or indirectly, to make or finance loans to Nongovernmental Persons ("Private Loan")³.

In addition to these procedures, the Tax Compliance Designee shall refer to the Tax Certificate executed for a particular issue of Tax-Advantaged Bonds for purposes of ascertaining the application of the private business tests and the private loan financing test to such issue of Tax-Advantaged Bonds. The Tax Compliance Designee shall also consult with bond counsel as appropriate for clarification and guidance with respect to the application of such tests.

The following are specific HRSD policies with respect to addressing Private Use.

- a. *Structuring of Arrangements to Avoid Private Use or Private Payments.* It is the policy of HRSD that, to the extent consistent with the business objectives of HRSD, any potential arrangement that might result in Private Use of bond financed property shall be structured so as to avoid or minimize Private Use or Private Payments.
- b. *Structuring of Arrangements to Avoid Private Loans.* It is the policy of HRSD that, to the extent consistent with the business objectives of HRSD, any potential arrangement with respect to bond financed property that might result in a direct or indirect loan of bond

³ Such arrangements may include arrangements in which the Nongovernmental Person leases the bond financed property and is the owner for federal income tax purposes, or installment sales of bond financed property to Nongovernmental Persons.

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Post-Issuance Tax Compliance



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proceeds to a Nongovernmental Person shall be structured so as to avoid or minimize the amount of such loan.

- c. *Allocating Equity or Taxable Debt to Capital Improvement Program Components with Private Use or Private Payments.* If an arrangement cannot be structured so as to avoid Private Use, Private Payments or Private Loan, it is the general policy of HRSD to use its equity or proceeds of debt that is not tax-advantaged, to finance the subject property.
- d. *Allocation of Bond Proceeds to Assets Financed.* For each issue of Tax-Advantaged Bonds, HRSD shall maintain records establishing costs financed. In addition, to the extent any improvements are financed with taxable debt that HRSD anticipates to be refinanced with the proceeds of Tax-Advantaged Bonds, HRSD shall maintain records establishing the costs of the capital improvements financed by such taxable debt. Guidelines for allocating proceeds to expenditures/costs are set forth in Treasury Regulations Sections 1.141-6 and 1.148-6.

Generally, HRSD must account for the allocation of proceeds to expenditures (final allocations) not later than 18 months after the later of:

- the date the expenditure is paid, and
 - the date the project that is financed by the issue is placed in service but in no event later than the date 60 days after the fifth anniversary of the respective issue date or the date 60 days after the retirement of the issue, if earlier.
- e. *Contract Log.* A listing of the ownership arrangements, leases, management contracts, output contracts, research agreements, other arrangements that convey special legal entitlements, arrangements with special economic benefits, and other contractual arrangements with respect to the Tax-Advantaged Bonds shall be developed and maintained substantially in the form attached hereto as Schedule 1 (referred to as the "Contract Log").

Each item listed in the Contract Log shall set forth the issue or issues of Tax-Advantaged Bonds that financed property used in connection with such arrangement, the amount of proceeds of such

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issue allocable to such property, and the amount of payments, if any, expected with respect to such arrangement, net of the incremental costs incurred by HRSD to operate and maintain the facility as a result of such arrangement.

- f. *Quantifying Private Use and Periodic Review.* HRSD will monitor compliance with the private business tests and the private loan financing tests and develop and maintain a log with respect to each issue of Tax-Advantaged Bonds, either separate and apart from or part of the Contract Log and Disposition Log, and periodically (e.g., annually), set forth the amount of proceeds of such issue allocable to each separate facility financed by HRSD, and the amount of proceeds of such issue attributable to Private Use and Private Loan.
- g. *Dispositions.* HRSD policies with respect to dispositions of HRSD property are addressed in the HRSD Procurement Manual and appendices thereto (the "Surplus Property Procedures"). It is the policy of HRSD that all dispositions of bond-financed property are to be addressed in a manner that does not jeopardize the tax-advantaged status of obligations issued by or for the benefit of HRSD. In furtherance of this policy, HRSD personnel responsible for implementing the Surplus Policy Procedures are required to be familiar with the requirements of these Post Issuance Compliance Procedures and are to receive training as necessary. If capital assets financed or refinanced with Tax-Advantaged Bonds are to be transferred to another state or local governmental entity (a "Governmental Transferee"), such Governmental Transferee shall also be required to comply with the private business use and private loan limits.

2. Remedial Action and Voluntary Compliance Agreement Program

Even though HRSD reasonably expects on the issue date of each issue of Tax-Advantaged Bonds to satisfy all applicable federal tax requirements relating to such bonds for so long as the bonds remain outstanding, post-issuance events can occur that jeopardize compliance with these requirements. As a private business use example, property financed with Tax-Advantaged Bonds that is leased to a private party may be contrary to the private business tests. Such lease may be entered into out of necessity or without an understanding that it may be contrary to the

private business tests. As an arbitrage example, HRSD may inadvertently violate an applicable yield restriction.

In the event HRSD does not stay within the limitations of the private business tests, the private loan financing tests, or the arbitrage requirements described herein, the Tax Compliance Designee shall work with bond counsel to take appropriate steps to preserve the tax-advantaged status of the respective bond issue, including taking appropriate "remedial action" pursuant to Section 1.141-12 of the Treasury Regulations. Remedial action for this purpose may consist of the redemption or defeasance of bonds and/or the investment/expenditure of amounts received as a result of the sale of bond financed property in other qualified capital improvements of HRSD. HRSD may also be able to take corrective action under the Voluntary Compliance Agreement Program of the IRS (commonly referred to as VCAP). The Tax Compliance Designee shall maintain copies of the documentation with respect to the remedial action.

3.3 Arbitrage and Rebate

Section 148 of the Internal Revenue Code, the regulations promulgated thereunder and pronouncements relating thereto (the "Arbitrage Rules") are intended to ensure that issuers of Tax-Advantaged Bonds, such as HRSD, issue Tax-Advantaged Bonds for the primary purpose of financing property needed to carry out its governmental purposes, and not for the purpose of exploiting the difference between the tax exempt and taxable interest rates. Compliance with the Arbitrage Rules requires that:

- (a) proceeds of Tax-Advantaged Bonds are not invested at a yield in excess of the yield of the Tax-Advantaged Bonds unless an exception applies, and
- (b) even if an issuer is permitted to invest the proceeds at a higher yield pursuant to an exception, the excess of the aggregate amount earned on all investments over the amount that would have been earned if such investments had a yield equal to the yield of the Tax-Advantaged Bonds, plus any income attributable to such excess must be rebated to the United States Treasury unless an exception applies.

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The Tax Compliance Designee shall undertake the following actions in furtherance of complying with the Arbitrage Rules:

1. Refer to the Tax Certificate executed for a particular issue of Tax-Advantaged Bonds for purposes of ascertaining the application of the Arbitrage Rules to such issue of Tax-Advantaged Bonds.
2. Consult with bond counsel as appropriate for clarification and guidance with respect to application of the Arbitrage Rules.
3. Review these Post-Issuance Compliance Procedures with bond counsel periodically (*e.g.*, annually) and refine and update the procedures as needed.
4. Ensure that adequate records are established and maintained to set forth the date, amount and nature of each expenditure of the Bond Proceeds of each issue of Tax-Advantaged Bonds and investment earnings thereon. Specifically, a record of the following is to be established and maintained for each investment of Bond Proceeds:
 - the purchase date,
 - the purchase price,
 - information establishing that the purchase price is the fair market value as of such date (*e.g.*, the published quoted bid by a dealer in such an investment on the date of purchase),
 - any accrued interest paid,
 - the face amount,
 - the coupon rate,
 - periodicity of interest payments,
 - disposition price,
 - any accrued interest received, and
 - disposition date.
5. Monitor the expenditure of Bond Proceeds of each issue of Tax-Advantaged Bonds and any investment earnings thereon.
6. Maintain a procedure for the allocation of proceeds of each issue of Tax-Advantaged Bonds and investment earnings to expenditures, including the reimbursement of pre-issuance expenditures.

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7. Consult with and seek the assistance of HRSD's financial advisor as needed to comply with and memorialize compliance with the requirements set forth in these Post-Issuance Compliance Procedures.
8. Engage a firm with expertise in the area of arbitrage rebate compliance (the "Rebate Consultant") with respect Tax-Advantaged Bonds to arrange, as necessary, for the monitoring of Bond Proceeds expenditure for compliance with various expenditure exceptions and timely computation of arbitrage rebate or arbitrage yield reduction liability.
9. If rebate or a yield reduction payment is due to the IRS, arrange for the timely filing of Form 8038-T and the payment of such rebate liability.
10. Prior to engaging in any post-issuance credit enhancement transactions (e.g., bond insurance, letter of credit) or hedging transactions (e.g., interest rate swaps, caps), the Tax Compliance Designee is to consult with bond counsel.
11. In the case of refunding bonds, the Tax Compliance Designee should consult with bond counsel and coordinate with HRSD's financial advisor, the bond trustee or escrow agent to arrange for the purchase of the refunding escrow securities and should obtain a computation of the yield on such escrow securities from HRSD's outside arbitrage rebate specialist.

3.4 Reissuance

Generally, a reissuance occurs when there are significant changes to the terms of a bond so that the bond ceases to be the same bond for federal tax purposes. A reissuance is a *deemed exchange* of the modified bond for the original bond and is treated as a new debt issuance for federal income tax purposes.

The Tax Compliance Designee is to:

- (a) identify and consult with bond counsel regarding any post-issuance change to any terms of an issue of Tax-Advantaged Bonds,

- (b) request bond counsel to determine whether such potential change would cause the bond issue to be treated as “reissued” for federal income tax purposes, and
- (c) take such action as may be required to the preserve the tax-advantaged status of the subject obligations.

3.5 Records Retention

The Tax Compliance Designee is to coordinate procedures for record retention and review of such records as more fully described herein and shall be familiar with IRS Forms 8038-G, 8038-B, 8038-TC, 8038-CP, and relevant provisions of the Internal Revenue Code and the Treasury Regulations, including but not limited to Treasury Regulations Sections 1.141-2, 1.141-3, 1.141-12, and 1.148-1 through 1.150-2.

Commonwealth of Virginia statutes also address record retention requirements (the “Virginia Record Retention Requirements”). These Post-Issuance Compliance Procedures are independent of the Virginia Record Retention Requirements. It is HRSD’s policy and intention to fully comply with both the federal requirements applicable to Tax Advantaged Bonds and the Virginia Record Retention Requirements.

Retention of Record: In addition to the preparation and maintenance of the Contract Log described above, HRSD is to retain the following documentation (the “Records”):

- a. All legal and accounting documents relating to proceeds of the Tax-Advantaged Bonds, including opinions of counsel and the tax certificate with respect to each issue of Tax-Advantaged Bonds.
- b. Expenditure of proceeds of Tax-Advantaged Bonds as described below:
 - Documents evidencing the expenditure of the proceeds of the Tax-Advantaged Bonds and investment earnings thereon and the specific assets financed with such proceeds, including projected draw schedules and invoices (e.g., records with respect to the bond accounts and funds);
 - Documents setting forth all funds and accounts relating to the Tax-Advantaged Bonds;

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Post-Issuance Tax Compliance



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- Documents pertaining to the investment of the proceeds of the Tax-Advantaged Bonds (e.g., records with respect to the bond accounts and funds), including the purchase and sale of securities, guaranteed investment contracts, and swap/hedge transactions; and
 - With respect to all investments acquired in any fund or account in connection with the Tax-Advantaged Bonds, the specific information set forth under the heading “Arbitrage and Rebate” herein.
- c. Documents evidencing any allocations with respect to the proceeds of the Tax-Advantaged Bonds.
- d. Documents evidencing the use and ownership of the bond financed property, including contracts for the use of such property (e.g., the Contract Log described herein, and documents evidencing the sale or other disposition of the bond financed property.
- e. Copies of the documentation with respect to any remedial actions.

Required Retention Period: HRSD will retain the Records until the date that is six years after the complete retirement of the related Tax-Advantaged Bonds.

Form of Records: HRSD will keep all records in a manner that ensures complete access thereto for the applicable above-described period either in hard copy or electronic format. Records kept in electronic format, shall comply with Revenue Procedure 97-22, 1997-1 C.B. 652 (or subsequent guidance provided by the Internal Revenue Service), which provides guidance for maintaining books and records by using an electronic storage system that either images their hardcopy books and records or transfers their computerized books and records to an electronic storage media (e.g., an electronic data compression system).

3.6 Training and Periodic Review of Post-Issuance Compliance Procedures

HRSD personnel are to periodically obtain training with regard to the record retention, private business use, arbitrage and rebate issues addressed by these Post-Issuance Tax Compliance Procedures. The training shall include a review of HRSD’s recent compliance initiatives, discussions relating to restrictions on the use of proceeds of Tax-Advantaged Bonds, arbitrage requirements and recent developments with respect to Tax-Advantaged Bonds. Training is especially warranted in the event of changes in law or changes in HRSD staff.

COMMISSION ADOPTED POLICY
Post-Issuance Tax Compliance



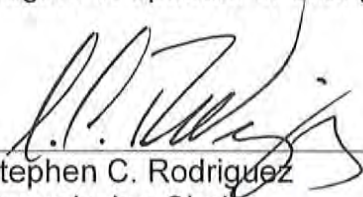
Adopted: March 27, 2012

Revised: March 28, 2023

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HRSD shall periodically (e.g., annually) review its post-issuance compliance efforts and these Post-Issuance Compliance Procedures and consult with bond counsel with regard to updates or changes that may be warranted.

Approved:



Stephen C. Rodriguez
Commission Chair



Date

Attest:



Jennifer L. Cascio
Commission Secretary



Date



HRSD Commission Meeting Minutes
March 28, 2023
Attachment #5

6. Hampton Roads Bridge Tunnel Expansion Project
Hampton Roads Water Quality Credit Trade Agreement for Chesapeake
Bay Restoration Compliance Year 2022

**HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT
FOR CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

THIS HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT FOR CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022 (this “Agreement”) is made this 19th day of April, 2023, by and between the Hampton Roads Sanitation District (“HRSD”) and the Hampton Roads Connector Partners (“HRCP”) (each a “Party” and jointly the “Parties”):

BACKGROUND

- A. HRSD. HRSD owns and operates various wastewater treatment plants that are authorized to discharge the nutrients total nitrogen (“TN”) and total phosphorus (“TP”) to the James River in the Chesapeake Bay watershed (the “HRSD Plants”). The HRSD Plants have TN and TP waste load allocations (the “HRSD James River Basin Allocations”) assigned by the State Water Control Board and the Virginia Department of Environmental Quality (jointly, “DEQ”) pursuant to the Water Quality Management Planning Regulation, 9 VAC 25-720, and by the U.S. Environmental Protection Agency (“EPA”) pursuant to the Chesapeake Bay Total Maximum Daily Load (“TMDL”). The HRSD Plants are subject to the General Virginia Pollutant Discharge Elimination System (“VPDES”) Watershed Permit Regulation for TN and TP Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia, 9 VAC 25-820, most recently reissued by DEQ effective January 1, 2022, as hereafter modified or reissued from time to time (the “Watershed General Permit”).
- B. HRCP. HRCP is an unincorporated joint venture of Dragados USA, Inc., Vinci Construction Grands Projets, Inc., Dodin Campenon Bernard Inc. and Flatiron Constructors, Inc., that is expanding the Hampton Roads Bridge Tunnel (“HRBT”) to ease congestion along the existing I-64 HRBT corridor. The project includes a new bridge-tunnel complex that will add two new twin-lane tunnels to accommodate four additional lanes of traffic. HRCP is authorized by DEQ through the Watershed General Permit to discharge TN and TP on a short-term basis for the period of construction.
- C. HRSD-HRCP Nutrient Offset Agreement. In October of 2020, HRSD and HRCP entered into the Nutrient Offset Agreement for I-64 Hampton Roads Bridge Tunnel Expansion Project (the “Offset Agreement”) that provided HRCP with temporary TN and TP offsets to satisfy HRCP’s obligation under the Watershed General Permit in the amounts of 4,000 pounds per year (“lbs/yr”) of TN and 2,000 lbs/yr of TP (the “Offset Allocations”).
- D. HRCP Additional Credit Needs. The original offset request was based on assumptions of water quality, flows and annual nutrient loads. HRCP’s actual nitrogen discharge in 2022 exceeded the HRSD-provided TN Offset Allocation by 3,828 lbs.
- E. HRSD Credit Trade Authority. Through exceptional performance and current operating conditions at HRSD Plants, HRSD discharged less TN and TP in Compliance Year 2022 than the HRSD Plants were authorized to discharge under the

**HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT
FOR CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

Watershed General Permit while protecting Chesapeake Bay water quality and, therefore, HRSD has the ability to provide additional TN compliance credits to HRCF. Pursuant to Code of Virginia section 62.1-44.19:12 *et seq.* and 9 VAC 25-820-70 Part I J, HRSD is authorized to transfer to HRCF the compliance credits needed to fulfill its obligation under the Watershed General Permit.

AGREEMENT

NOW, THEREFORE, and in consideration of the mutual covenants and conditions herein, and for other good and valuable consideration, the receipt and sufficiency of which the Parties acknowledge, the Parties agree as follows.

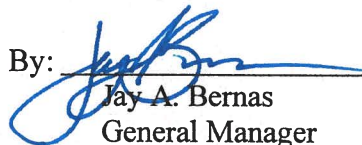
1. Credit Transfers, Compliance Year 2022. HRSD agrees to transfer 3,828 lbs TN credits generated in the James River Basin in the Compliance Year 2022 for use by HRCF to comply with its 2022 discharge limits under the Watershed General Permit. The transfer shall be completed and confirmed by HRSD's execution and delivery to HRCF of the Water Quality Credit Trade Confirmation set forth in Attachment A hereto.
2. No Monetary Cost for Compliance Credits. In consideration of the importance of this regional project in benefiting HRSD's ratepayers and the regional economy as well as the modest nature of the request (<5,000 lbs), there shall be no monetary cost charged by HRSD to HRCF for the compliance credits provided for the 2022 Compliance Year under this Agreement.
3. Brokerage Commissions. The Parties represent and warrant to each other that they have not dealt with any business broker or agent who would be entitled to a brokerage commission or finders fee as a result of this Agreement or any related transactions. Each Party agrees, to the extent permitted under law and without waiving sovereign immunity, to indemnify and hold the other harmless from any and all claims for commissions of broker's or finder's fees claiming by, through or under the indemnifying Party, including any losses related to any such claim.
4. Governing Law; Venue; Severability. This Agreement shall be construed in accordance with and governed for all purposes by the laws of the Commonwealth of Virginia. This Agreement is a Virginia contract deemed executed and accepted in the City of Virginia Beach; and all questions with respect to any of its provisions shall be instituted, maintained, and contested in a court of competent jurisdiction in the City of Virginia Beach, Virginia or the U.S. District Court for the Eastern District of Virginia, Norfolk Division. If any word or provision of this Agreement as applied to any Party or to any circumstance is adjudged by a court to be invalid or unenforceable, the same shall in no way affect any other circumstance or the validity or enforceability of any other word or provision.

**HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT
FOR CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

5. No Waiver. Neither any failure to exercise or any delay in exercising any right, power or privilege under this Agreement by either Party shall operate as a waiver, nor shall any single or partial exercise of any right, power or privilege hereunder preclude the exercise of any other right, power or privilege. No waiver of any breach of any provision shall be deemed to be a waiver of any preceding or succeeding breach of the same or any other provision, nor shall any waiver be implied from any course of dealing.
6. Entire Agreement; Amendments. This Agreement contains the entire agreement between the Parties as to the subject of TN compliance credits for 2022 and supersedes all previous written and oral negotiations, commitments, proposals and writings. No amendments may be made to this Agreement except by a writing signed by both Parties. For avoidance of doubt, this Agreement does not amend the 2020 Offset Agreement, which remains in full force and effect.
7. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. The Parties further agree that a facsimile, scanned or electronic signature may substitute for and have the same legal effect as an original signature, and that any copy of this executed Agreement made by photocopy, facsimile or scanner shall be considered an original.
8. The Hampton Roads Sanitation District (HRS D) Commission has caused this Agreement to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on March 28, 2023.

IN WITNESS WHEREOF, the Parties hereto have caused the execution of this Hampton Roads Water Quality Credit Trade Agreement for Chesapeake Bay Restoration, Compliance Year 2022, as of the date first written above.

HAMPTON ROADS SANITATION DISTRICT

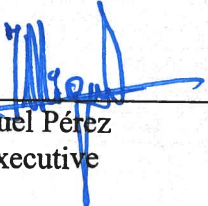
By:  _____
Jay A. Bernas
General Manager

[SIGNATURES CONTINUE ON FOLLOWING PAGE]

**HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT
FOR CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

**SIGNATURE PAGE OF
HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT FOR
CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

**HAMPTON ROADS CONNECTOR
PARTNERS**

By: 
Name: Juan Miguel Pérez
Title: Project Executive

[END OF SIGNATURES]



**HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT
FOR CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

**HAMPTON ROADS WATER QUALITY CREDIT TRADE AGREEMENT FOR
CHESAPEAKE BAY RESTORATION, COMPLIANCE YEAR 2022**

ATTACHMENT A

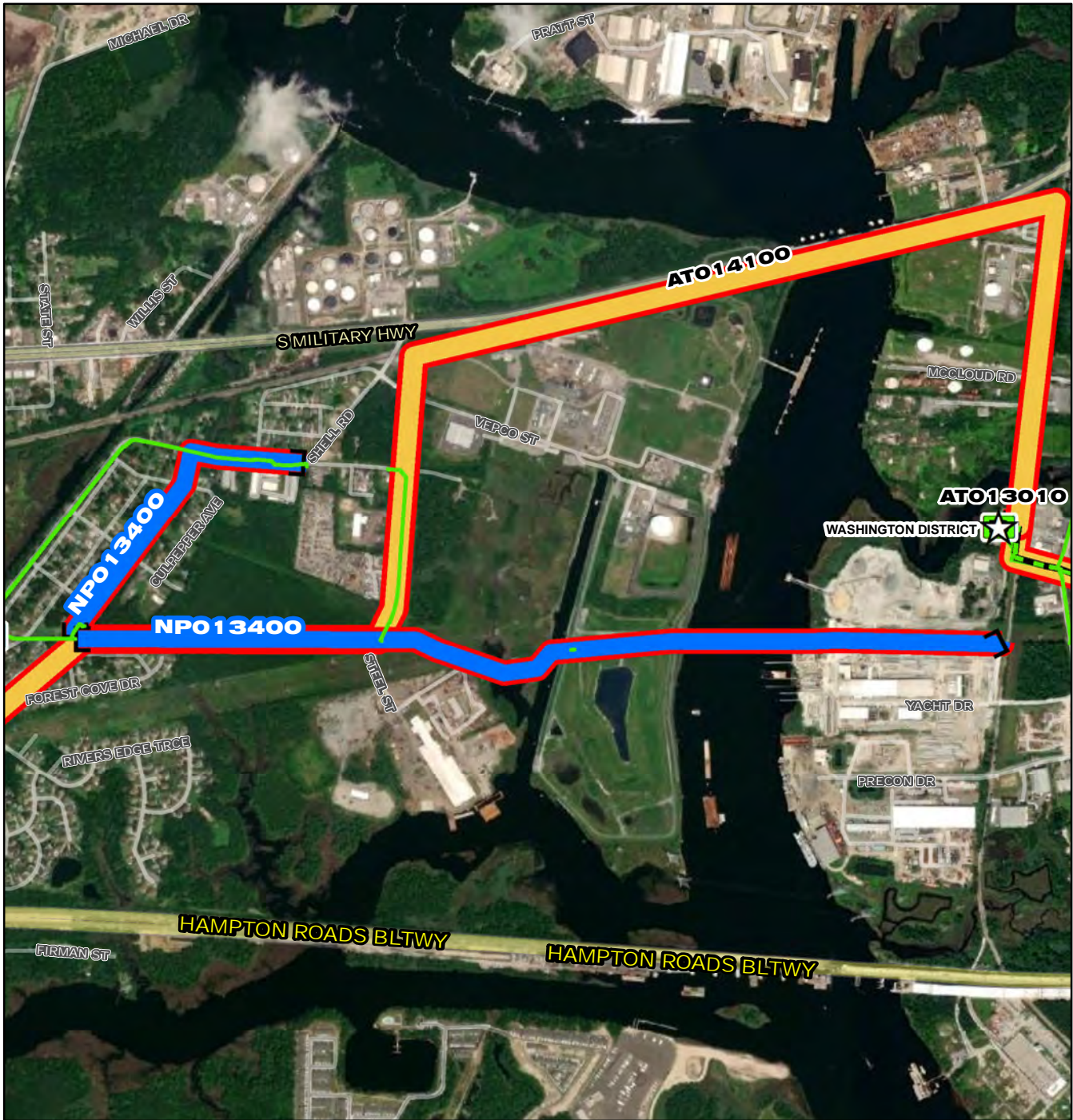
WATER QUALITY CREDIT TRADE CONFIRMATION

By execution and delivery of this Water Quality Credit Trade Confirmation, the following water quality credits, in the amounts specified below, are hereby transferred in accordance with, and for the specific and limited purposes of, the Hampton Roads Water Quality Credit Trade Agreement for Chesapeake Bay Restoration, Compliance Year 2022, by and between the Hampton Roads Sanitation District ("HRSD") and the Hampton Roads Connector Partners ("HRCP"). HRCP is authorized to present this executed confirmation to the Virginia Department of Environmental Quality to report this transfer for purposes of Watershed General Permit compliance.

Transferor:	Hampton Roads Sanitation District
Transferee:	Hampton Roads Connector Partners
TN Credit Quantity:	3,828 pounds
TP Credit Quantity:	N/A
TSS Credit Quantity:	N/A
Basin Generated:	James
Year Generated:	2022
Date Transferred:	<u>June 1, 2023</u>
Signed (for HRSD):	<u>Jamie S. Heisig-Mitchell</u>
Name (Print):	<u>Jamie S. Heisig-Mitchell</u>
Title:	<u>DIRECTOR OF WATER QUALITY</u>

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #6

8. Deep Creek Interceptor Force Main Risk Mitigation
Additional Appropriation



NPO 13400

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

Legend

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

Feet

0 445 890 1,780 2,670 3,560

NPO 13400

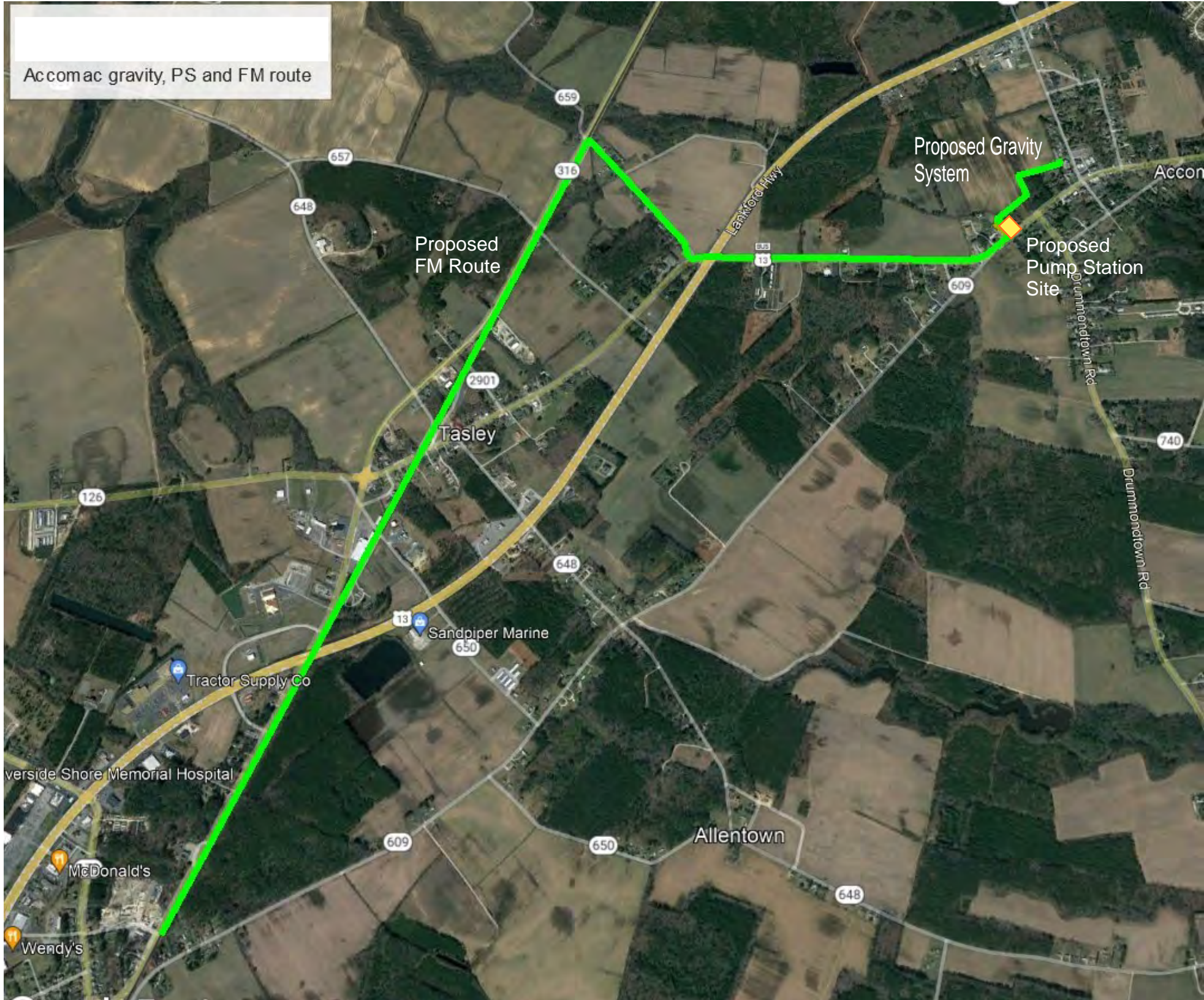
Deep Creek Interceptor Force Main Risk Mitigation Project

CIP Location

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #7

9. Eastern Shore Infrastructure Improvements – Transmission Force Main Phase I
Additional Appropriation, Contract Change Order (>25%)

Accomac gravity, PS and FM route



Proposed FM Route

Proposed Gravity System

Proposed Pump Station Site

Tasley

Allentown

verside Shore Memorial Hospital

Tractor Supply Co

Sandpiper Marine

McDonald's

Wendy's

Lankford Hwy

Drummondtown Rd

Drummondtown Rd

740

Accomac

659

316

657

648

2901

126

18

648

609

650

648

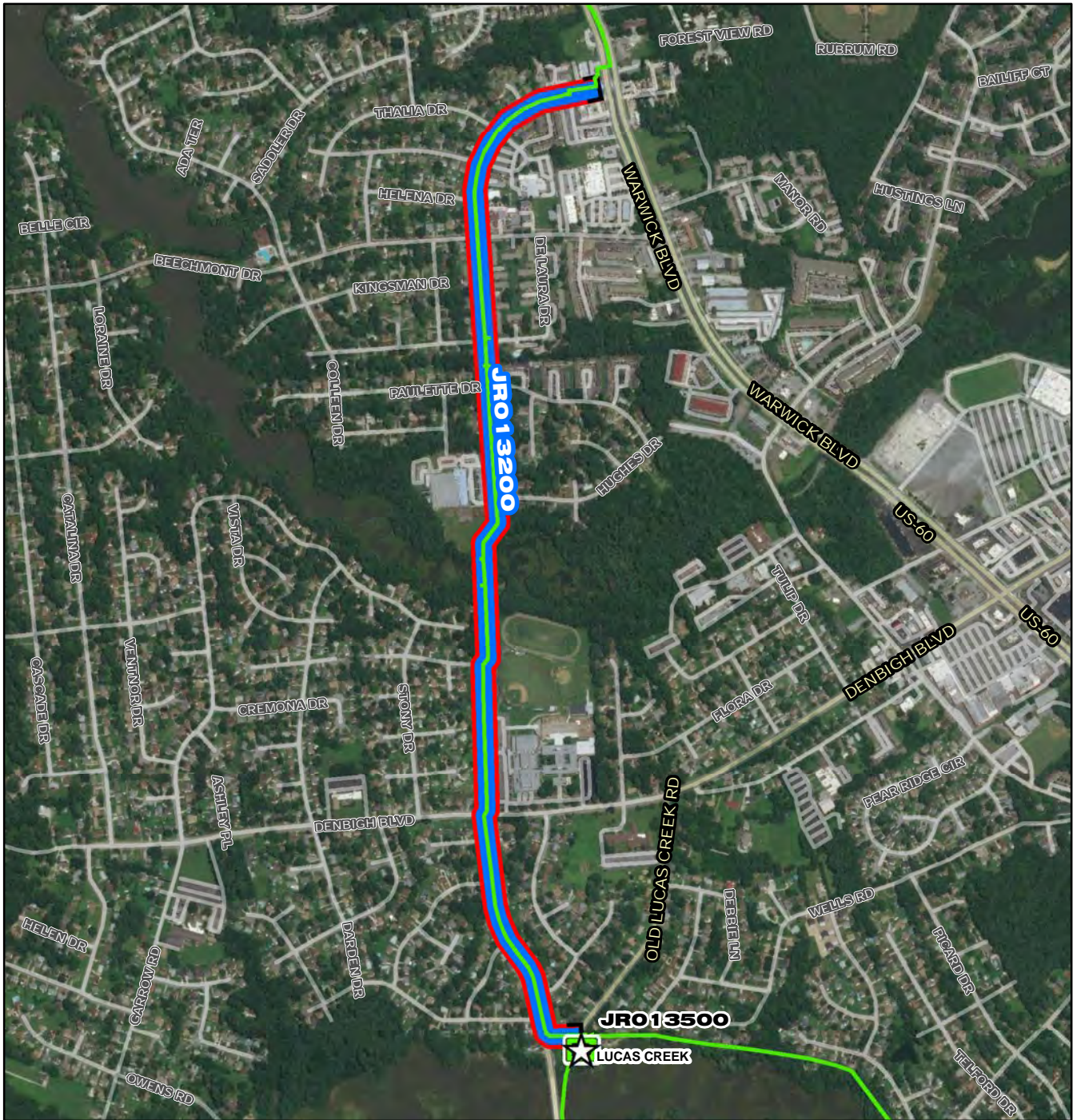
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609

740

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #8

10. Lucas Creek – Woodhaven Interceptor Force Main Replacement Phase II Additional Appropriation, Contract Award (>\$200,000) and Task Order (>\$200,000)

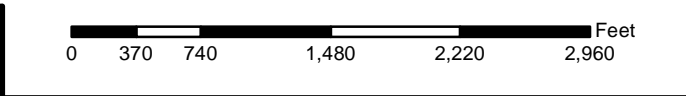


JRO13200

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

Legend

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



JRO 13200

Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II

CIP Location

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #9

11. Suffolk Pump Station Replacement
Easement Acquisition
568 East Constance Road a/k/a 568 Wilroy Road, Suffolk

TAX PARCEL NO.: 35D*F*A
PROJECT: Suffolk Pump Station Replacement Phase 1 (NP010610)
ROUTE/STREET: 568 East Constance Road
CITY/COUNTY: Suffolk, VA

PURCHASE AGREEMENT

THIS CONTRACT FOR PURCHASE AND SALE, made this 24th day of February 2023, by and among **HAMPTON ROADS SANITATION DISTRICT** ("HRSD"), a political subdivision of the Commonwealth of Virginia, located at 1434 Air Rail Avenue, Virginia Beach, Virginia 23455 their successors and/or assigns (the "Buyer"), and Ralph L. Wetherington, Jr., (the "Landowner"). Collectively, Buyer and Landowner shall be referred to as the "Parties."

WITNESSETH: That for and in consideration of ten dollars (\$10.00) and other valuable consideration, receipt of which is hereby acknowledged, Landowner agrees to convey to HRSD, its successors and assigns, forever, the perpetual right, privilege, easement and right of ingress/egress over, across under and through hereinafter described, for the purpose of laying, erecting, constructing, operating, and maintaining underground wastewater and/or water reuse force mains and/or gravity mains together with above and/or below ground equipment, accessories, and appurtenances the following described property of the Landowner, by deed of easement, properly executed, acknowledged, and delivered.

The land and improvements subject to this Purchase Agreement for a Permanent Utility Easement and Temporary Construction Easement (hereinafter referred to as "the Easement Area") are described as follows:

Being as shown on attached plat prepared by Rouse-Sirine Associates, Ltd., entitled "PLAT SHOWING VARIALBE WIDTH PERMANENT HRSD UTILITY EASEMENT AND TEMPORARY HRSD CONSTRUCTION EASEMENT TO BE ACQUIRED FROM RALPH L. WETHERINGTON, JR. BY HAMPTON ROADS SANITATION DISTRICT" and dated November 10, 2020 and signed November 11, 2020 and containing 0.052 acres (2,269 square feet), more or less land for the proposed permanent HRSD utility easement and 0.103 acres (4,473 square feet) more or less land for proposed temporary HRSD construction easement; and vested in Ralph L. Wetherington, Jr., pursuant to deed dated September 9, 1999, from Patricia C. Darden Revocable Living Trust, which is recorded in the Clerk's office of the Circuit Court of the City of Suffolk Virginia, in Deed Book 680, Page 745.

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

The total consideration for the conveyance provided for herein is as follows:

CONSIDERATION: THIRTY-SIX THOUSAND FOUR HUNDRED THIRTY AND 00/100 DOLLARS (\$36,430.00) in full for the easements described hereinbefore and for all damages, if any.

The consideration hereinabove mentioned represents the value of all estates or interests in such land, and the damage to remaining lands of the Landowner which may result by reason of the use to which HRSD will put the land to be conveyed. The Landowner agrees to accept his legal proportionate share of such total consideration for his interest and right in the said land.

HRSD will notify the Landowner thirty (30) days in advance of work starting on the Easement Area.

The Temporary Construction Easement will commence on the Date of the Deed of Temporary Easement, and it will automatically expire and terminate upon the earlier to occur of: (i) three (3) years following the commencement of the Temporary Construction Easement, or (ii) within six months of work started on the Easement Area. In the event the need for the Temporary Construction Easement extends past six months, through no fault of the Landowner, the Landowner is entitled to additional compensation for the Temporary Construction Easement. A monthly rental rate for the Temporary Construction Easement area is hereby established at Four Thousand Seven Hundred Sixty-Six and 30/100 (\$4,766.30). Upon completion of work within the Temporary Construction Easement and upon request, HRSD will promptly execute and record a termination agreement by which it will acknowledge the termination and the relinquishment of the Temporary Construction Easement.

The Landowner hereby covenants and agrees for himself, his heirs and assigns and successors, that the consideration herein mentioned shall be in lieu of any and all claims to compensation and damages by reason of the location, construction and maintenance of the project by HRSD, including such drainage facilities as may be necessary.

In the event the Landowner is unable to convey clear title to the above easement to HRSD as herein provided, and HRSD should elect to institute condemnation proceedings for the purpose of acquiring such easements, it is agreed by the Landowner that this instrument may be introduced in such proceedings as evidence of the value of land and damages, if any, to the remaining property of the Landowner.

The Landowner by execution of this instrument acknowledges that the plans for the aforesaid project as they affect the subject property have been fully explained to the undersigned.

HRSD or its contractor will restore Landowner's land and Parcel affected as a result of construction of the project as closely as is reasonably possible to its pre-construction condition (or better) upon completion of the Project including replacing with acceptable landscaping.

HRSD or its contractor hereby agrees that it will perform all such measures in a manner causing as little inconvenience and disruption to the Landowner, and Landowner's invitees, licensees and occupants as is reasonably possible.

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

HRSD, or its agents, successors and assigns may exercise the unimpeded right to enter upon so much of the parcel or land needed for such purposes as may be necessary for the construction operation or maintenance of said facilities, and further provided that such use is not inconsistent with any laws, ordinances or codes pertaining to the construction, operation or maintenance of said facilities, without

Rew

further notice to the Landowner. Landowner shall not place any permanent improvements within the easement without permission of Buyer, or its successors, including but not limited to houses, buildings, pools, sheds, signs, or similar permanent structures. Landowner may install fences, driveways, pavement and landscaping (trees and shrubs shall be varieties that will not exceed 20 feet tall at maturity).

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

INSURANCE. HRSD shall maintain, at its expense, or cause to be maintained, and keep in force at all times during the term of this Agreement, a policy of comprehensive general public liability insurance, including a contractual liability endorsement, and personal injury liability coverage in an amount of not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate, which shall include coverage against claims for any injury, death, or damage to persons or property occurring on, in, or about the Easement Area and HRSD's use thereof. Prior to making any entry onto the Easement Area, HRSD shall furnish to Landowner a valid certificate of insurance evidencing the foregoing coverages.

LANDOWNER NOT LIABLE: In no event shall Landowner be liable for any damage to, or loss of personal property or equipment sustained by HRSD within the Easement Area, whether or not it is insured.

ETHICS IN PUBLIC CONTRACTING: By executing this Agreement, the undersigned Landowner or its representative, and the representative of HRSD, certify that the prices agreed to in this Agreement were arrived at without collusion or fraud and that they have not offered or received any payment, kickbacks or other inducement from any other party to this Agreement or its agent or employee in connection with this Agreement, and that they have not conferred on any public employee having responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised unless disclosed in this Agreement.

Landowner acknowledges that HRSD has relied upon these covenants, representations, and warranties in purchasing the above easement.

This Agreement is contingent on the review and approval of the purchase by the Hampton Roads Sanitation District Commission and upon such Commission granting authorization to the General Manager to proceed under the terms of this Agreement.

Settlement shall be within ninety (90) days, or as soon thereafter, allowing a reasonable time to correct any title defects reported by the title examiner and preparation and signing of the necessary documents to enable the HRSD to take proper title.

THE COVENANTS, AGREEMENTS, REPRESENTATIONS, WARRANTIES OF THE LANDOWNER CONTAINED IN THESE PARAGRAPHS SHALL SURVIVE THE CLOSING AND DELIVERY OF THE DEED OF EASEMENT ACROSS THE SUBJECT LAND.

WITNESS the following signatures and seals:

RLW

IN WITNESS WHEREOF, the Hampton Roads Sanitation District Commission has caused this Agreement to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on March 28, 2023. This Agreement is expressly subject to approval by the HRSD Commission

BUYER:

HAMPTON ROADS SANITATION DISTRICT (HRSD)

By:  Date: 3/28/2023

Name: Jay Bernas, P.E.
Title: General Manager
Contact Address: 1434 Air Rail Avenue, Virginia Beach, Virginia 23455

COMMONWEALTH OF VIRGINIA
City of Virginia Beach, to-wit:

The foregoing instrument was acknowledged before me this 28th day of March, 2023, by Jay Bernas, P.E., General Manager, Hampton Roads Sanitation District.


Notary Public

Notary Public Registration No. _____
My commission expires: _____

JENNIFER LYNN CASCIO
NOTARY PUBLIC- Reg. #361710
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES AUGUST 31, 2026

LANDOWNER(S):
Ralph L. Wetherington, Jr.

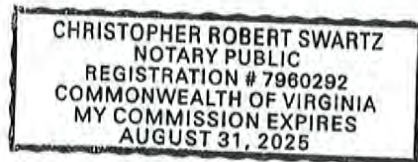

(Signature)

COMMONWEALTH OF VIRGINIA
City/County of Norfolk to-wit:

The foregoing instrument was acknowledged before me this 24 day of February, 2023, by
Ralph L. Wetherington, Jr.


Notary Public

Notary Public Registration No. 7960292
My commission expires: August 31, 2025



PROJECT PARCEL NO. 001 HRSD CIP #NP010620 - SHINGLE CREEK

PROPERTY OF: RALPH L. WETHERINGTON, JR.
 PROPERTY ADDRESS: 568 WILROY ROAD
 OWNER ADDRESS: 9709 DOLPHIN RUN NORFOLK, VA 23518
 TAX MAP #: 35D*F*A



TAX MAP NO.	AREA TABLE							
	TOTAL PARCEL AREA		VARIABLE WIDTH PERMANENT HRSD UTILITY EASEMENT		TEMPORARY HRSD CONSTRUCTION EASEMENT		RESIDUAL PARCEL AREA	
	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES
35D*F*A	21,344 +/-	0.49 +/-	2,269	0.052	4,473	0.103	14,602 +/-	0.335 +/-

NOTES:

1. MERIDIAN SOURCE WAS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD83(HARN)). COORDINATE VALUES ARE SHOWN IN U.S. SURVEY FEET.
2. THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND THEREFORE MAY NOT SHOW ALL EASEMENTS OR PROPERTY REFERENCES THAT AFFECT THIS PROPERTY.
3. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY. PARCEL AREAS SHOWN ARE APPROXIMATE AND BASED ON PLATS AND DEEDS OF RECORD, OR CITY TAX RECORDS AND ARE APPROXIMATE IN NATURE.

(001)

PLAT SHOWING
VARIABLE WIDTH PERMANENT HRSD UTILITY EASEMENT
 AND
TEMPORARY HRSD CONSTRUCTION EASEMENT
 TO BE ACQUIRED FROM
RALPH L. WETHERINGTON, JR.
 BY
HAMPTON ROADS SANITATION DISTRICT

SUFFOLK BOROUGH - CITY OF SUFFOLK, VIRGINIA
 PROJECT: HRSD CIP#NP010620 - SHINGLE CREEK
 DATE : NOVEMBER 10, 2020 / CADD: SRE



ROUSE-SIRINE ASSOCIATES, LTD.
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 SUITE 103
 WILLIAMSBURG, VIRGINIA 23185
 TEL: (757)903-4695

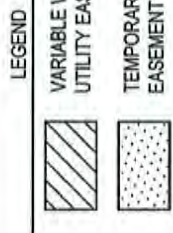
1	2
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MACARTHUR DRIVE
(50' RIGHT-OF-WAY)

NOW OR FORMERLY
**BRIAN S. SERVIDIO &
WENDI L. SERVIDIO**
(INST. #160013724)
(P.B. 6, P. 72-73)
TAX MAP: 35D*FPT*10*11
N: 3,434,463.867
E: 12,049,159.224
S54°10'30"E 227.13'

NOW OR FORMERLY
**JOSHUA A. WEST &
PHYLLIS C. BRUCKSE,**
LIFE ESTATE
(INST. #200005443)
(P.B. 6, P. 72-73)
TAX MAP: 35D*F12*PT*11

CURVE TABLE						
CURVE NO.	ARC LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	97.91'	1,068.70'	05°14'58"	48.99'	N57°15'11"W	97.88'
C2	13.42'	1,068.70'	00°43'10"	6.71'	N59°31'05"W	13.42'
C3	43.47'	1,068.70'	02°19'50"	21.74'	N57°59'35"W	43.47'
C4	41.02'	1,068.70'	02°11'58"	20.51'	N55°43'41"W	41.02'



001

PROPERTY OF
**RALPH L.
WETHERINGTON, JR.**
(D.B. 680, P. 745)
(P.C. 2, SL. 191-E)
TAX MAP: 35D*F*A

TEMPORARY HRSD
CONSTRUCTION EASEMENT
TO BE ACQUIRED
AREA = 4,473 S.F. / 0.103 ACRE

VARIABLE WIDTH PERMANENT
HRSD UTILITY EASEMENT
TO BE ACQUIRED
AREA = 2,269 S.F. / 0.052 ACRE
N: 3,434,386.670
E: 12,049,103.497

PLAT SHOWING
VARIABLE WIDTH PERMANENT HRSD UTILITY EASEMENT
& TEMPORARY HRSD CONSTRUCTION EASEMENT
TO BE ACQUIRED FROM
RALPH L. WETHERINGTON, JR.
BY
HAMPTON ROADS SANITATION DISTRICT
SUFFOLK BOROUGH - CITY OF SUFFOLK, VIRGINIA
PROJECT: HRSD CIP#NP010620 - SHINGLE CREEK
DATE: NOVEMBER 10, 2020 / CADD: SRE
SCALE: 1" = 30'



ROUSE-SIRINE ASSOCIATES, LTD.
LAND SURVEYORS, MAPPING CONSULTANTS & SUE. QUALITY LEVELS "A-D"
www.rouse-sirine.com
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SUITE 103
WILLIAMSBURG, VIRGINIA 23185
TEL: (757) 490-2300
FAX: (757) 499-9136
TEL: (757) 903-4695

E. CONSTANCE ROAD
ROUTE 13, 58 & 460
(VARIABLE WIDTH RIGHT-OF-WAY)

1	2
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SEE SHEET 1 FOR ALL NOTES AND AREA TABLE.



PROJECT PARCEL NO. 001 HRSD CIP#NP010620 – SHINGLE CREEK

PROPERTY OF: RALPH L. WETHERINGTON, JR.
 PROPERTY ADDRESS: 568 WILROY ROAD
 OWNER ADDRESS: 9709 DOLPHIN RUN NORFOLK, VA 23518
 TAX MAP #: 35D*F*A

TAX MAP NO.	AREA TABLE							
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	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES
35D*F*A	21,344 +/-	0.49 +/-	2,269	0.052	4,473	0.103	14,602 +/-	0.335 +/-



001

PLAT SHOWING

VARIABLE WIDTH PERMANENT HRSD UTILITY EASEMENT

AND

TEMPORARY HRSD CONSTRUCTION EASEMENT

TO BE ACQUIRED FROM

RALPH L. WETHERINGTON, JR.

BY

HAMPTON ROADS SANITATION DISTRICT

SUFFOLK BOROUGH - CITY OF SUFFOLK, VIRGINIA

PROJECT: HRSD CIP#NP010620 - SHINGLE CREEK

DATE : NOVEMBER 10, 2020 / CADD: SRE

NOTES:

- MERIDIAN SOURCE WAS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD83(HARN)). COORDINATE VALUES ARE SHOWN IN U.S. SURVEY FEET.
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1	2
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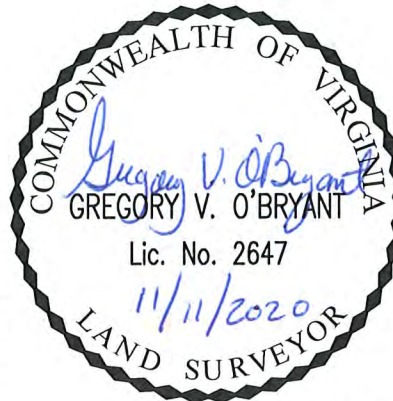
MACARTHUR DRIVE
(50' RIGHT-OF-WAY)

NOW OR FORMERLY
**BRIAN S. SERVIDIO &
WENDI L. SERVIDIO**
(INST. #160013724)
(P.B. 6, P. 72-73)
TAX MAP: 35D*FPT*10*11

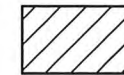
NOW OR FORMERLY
**JOSHUA A. WEST &
PHYLLIS C. BRUCKSE,**
LIFE ESTATE
(INST. #200005443)
(P.B. 6, P. 72-73)
TAX MAP: 35D*F12*PT*11

N: 3,434,463.867
E: 12,049,159.224
S54°10'30"E 227.13'

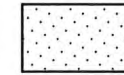
CURVE TABLE						
CURVE NO.	ARC LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	97.91'	1,068.70'	05°14'58"	48.99'	N57°15'11"W	97.88'
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C4	41.02'	1,068.70'	02°11'58"	20.51'	N55°43'41"W	41.02'



LEGEND



VARIABLE WIDTH PERMANENT HRSD
UTILITY EASEMENT TO BE ACQUIRED



TEMPORARY CONSTRUCTION
EASEMENT TO BE ACQUIRED

(001)

PLAT SHOWING

**VARIABLE WIDTH PERMANENT HRSD UTILITY EASEMENT
& TEMPORARY HRSD CONSTRUCTION EASEMENT**

TO BE ACQUIRED FROM

RALPH L. WETHERINGTON, JR.

BY

HAMPTON ROADS SANITATION DISTRICT

SUFFOLK BOROUGH - CITY OF SUFFOLK, VIRGINIA

PROJECT: HRSD CIP#NP010620 - SHINGLE CREEK

SCALE: 1" = 30'

DATE: NOVEMBER 10, 2020 / CADD: SRE

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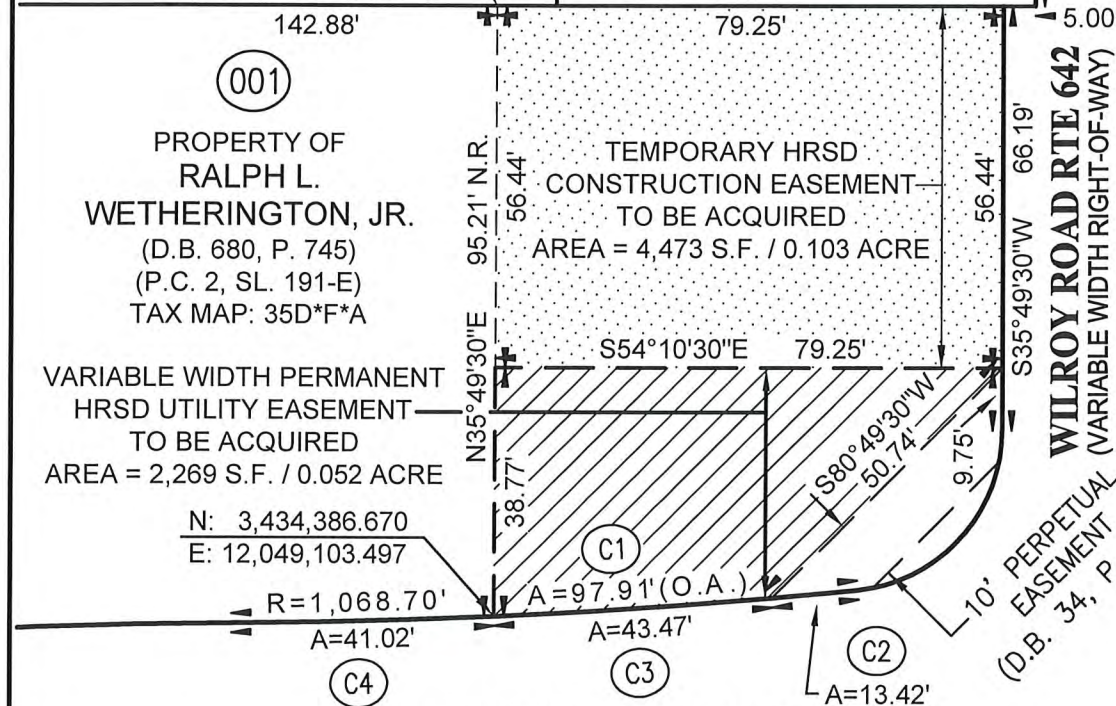
FAX:(757)499-9136

TEL.(757)903-4695



0 30 60 90 FEET

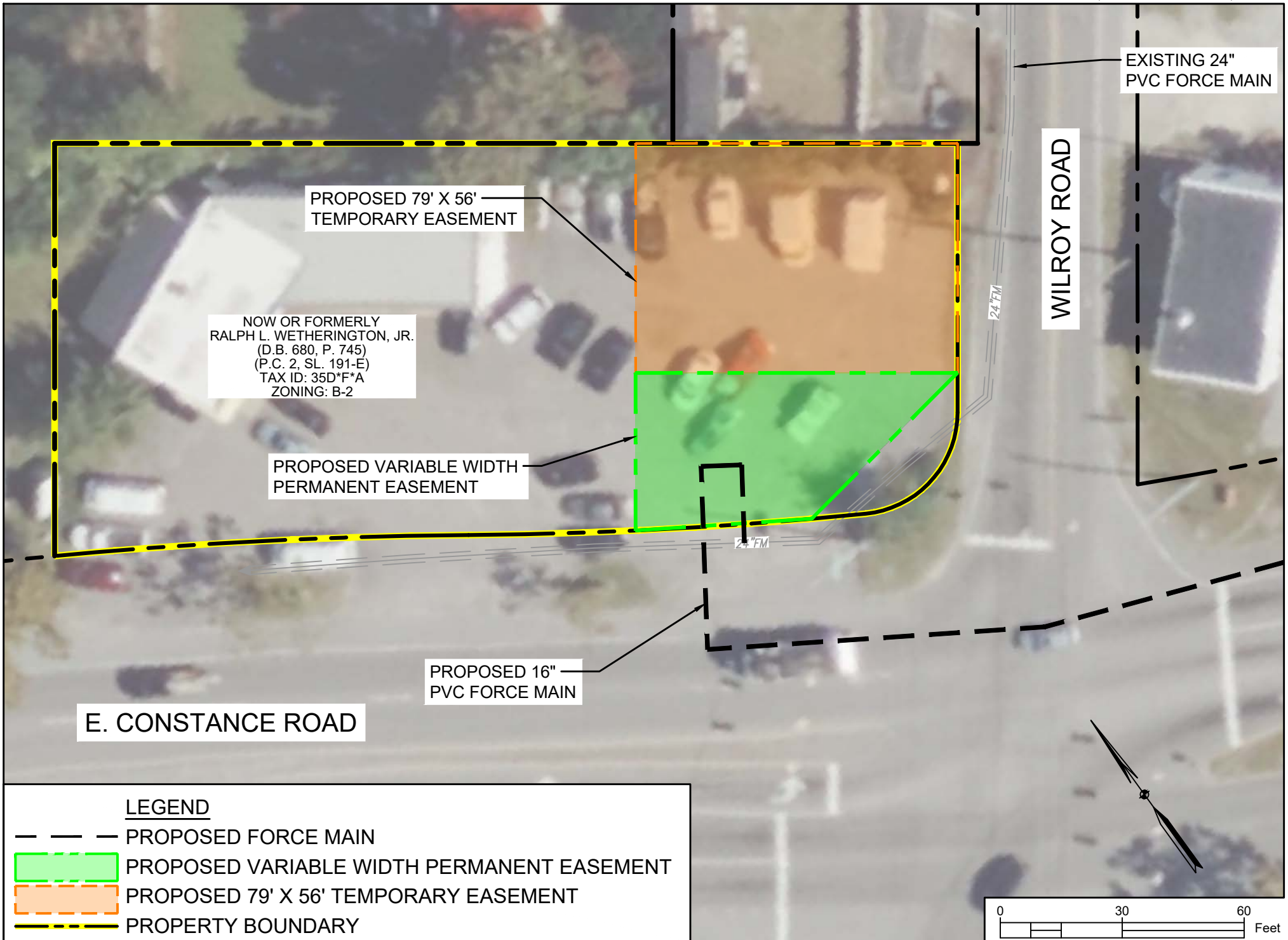
GRAPHIC SCALE



E. CONSTANCE ROAD
ROUTE 13, 58 & 460
(VARIABLE WIDTH RIGHT-OF-WAY)

SEE SHEET 1 FOR ALL NOTES AND AREA TABLE.

1	2
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HRSD Commission Meeting Minutes
March 28, 2023
Attachment #10

13. New Business – Suffolk Pump Station Replacement

Easement Acquisition

701 Old East Pinner Street and 725 E. Constance Road, Suffolk

TAX PARCEL NO.: 35D*X7*A1 & 35D*X7*A2
PROJECT: Suffolk Pump Station Replacement Phase 1 (NP010610)
ROUTE/STREET: 701 Old East Pinner Street & 725 E. Constance Road
CITY/COUNTY: Suffolk, VA

PURCHASE AGREEMENT

THIS CONTRACT FOR PURCHASE AND SALE, made this 28th day of March 2023, by and among **HAMPTON ROADS SANITATION DISTRICT** ("HRSD"), a political subdivision of the Commonwealth of Virginia, located at 1434 Air Rail Avenue, Virginia Beach, Virginia 23455 their successors and/or assigns (the "Buyer"), and **LW's LAWN SERVICE, LLC**, a Virginia limited liability company, (the "Landowner"). Collectively, Buyer and Landowner shall be referred to as the "Parties."

WITNESSETH: That for and in consideration of ten dollars (\$10.00) and other valuable consideration, receipt of which is hereby acknowledged, Landowner agrees to convey to HRSD, its successors and assigns, forever, the perpetual right, privilege, easement and right of ingress/egress over, across under and through hereinafter described, for the purpose of laying, erecting, constructing, operating, and maintaining underground wastewater and/or water reuse force mains and/or gravity mains together with above and/or below ground equipment, accessories, and appurtenances the following described property of the Landowner, by deed of easement, properly executed, acknowledged, and delivered.

The land and improvements subject to this Purchase Agreement for a Permanent Utility Easement, Permanent Ingress/Egress Easement and Temporary Construction Easement (hereinafter referred to as "the Property") are described as follows:

Being as shown on attached plat prepared by Rouse-Sirine Associates, Ltd., entitled "PLAT SHOWING 30' PERMANENT HRSD UTILITY EASEMENT, TEMPORARY HRSD CONSTRUCTION EASEMENT AND 15' PERMANENT INGRESS/EGRESS EASEMENT TO BE ACQUIRED FROM LW'S LAWN SERVICE, LLC BY HAMPTON ROADS SANITATION DISTRICT" and dated November 10, 2020 and signed ~~June~~ ^{July} 11, 2022, and containing 0.045 acres (1,971 square feet), more or less land for the proposed permanent HRSD utility easement, 0.019 acres (795 square feet), more or less land for the proposed permanent ingress/egress easement, and 0.080 acres (3,474 square feet), more or less land for the proposed temporary construction easement; and vested in LW's Lawn Service, LLC, a Virginia limited liability company pursuant to deed dated August 28, 2009 from Norfolk Southern Railway Company, a Virginia corporation, successor by merger to Tidewater Railway Company and Norfolk and Western railway Company, which is recorded in the aforesaid Clerk's Office as Instrument No. 20090902000117510. (Temporary easement will terminate at such time as the construction of the aforesaid project is complete and accepted).

Together with all and singular the buildings and improvements, tenements, hereditaments, rights, privileges, and appurtenances thereunto belonging or in anyway appertaining (the "Property"), a copy of which plat is attached hereto and made a part hereof.

The total consideration for the conveyance provided for herein is as follows:

CONSIDERATION: FORTY THOUSAND DOLLARS AND 00/100 DOLLARS (\$40,000.00)
in full for the easements described hereinbefore and for all damages, if any.

The consideration hereinabove mentioned represents the value of all estates or interests in such land, and the damage to remaining lands of the Landowner which may result by reason of the use to which HRSD will put the land to be conveyed. The Landowner agrees to accept his legal proportionate share of such total consideration for his interest and right in the said land.

The Landowner hereby covenants and agrees for himself, his heirs and assigns and successors, that the consideration herein mentioned shall be in lieu of any and all claims to compensation and damages by reason of the location, construction and maintenance of the project by HRSD, including such drainage facilities as may be necessary.

In the event the Landowner is unable to convey clear title to the above easement to HRSD as herein provided, and HRSD should elect to institute condemnation proceedings for the purpose of acquiring such easements, it is agreed by the Landowner that this instrument may be introduced in such proceedings as evidence of the value of land and damages, if any, to the remaining property of the Landowner.

The Landowner by execution of this instrument acknowledges that the plans for the aforesaid project as they affect the subject property have been fully explained to the undersigned.

HRSD or its contractor will restore Landowner's land and Parcel affected as a result of construction of the project as closely as is reasonably possible to its pre-construction condition (or better) upon completion of the Project including replacing with acceptable landscaping.

HRSD or its contractor hereby agrees that it will perform all such measures in a manner causing as little inconvenience and disruption to the Landowner, and Landowner's invitees, licensees and occupants as is reasonably possible.

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

HRSD, or its agents, successors and assigns may exercise the unimpeded right to enter upon so much of the parcel or land needed for such purposes as may be necessary for the construction operation or maintenance of said facilities, and further provided that such use is not inconsistent with any laws, ordinances or codes pertaining to the construction, operation or maintenance of said facilities, without further notice to the Landowner. Landowner shall not place any permanent improvements within the easement without permission of Buyer, or its successors, including but not limited to houses, buildings, pools, sheds, signs, or similar permanent structures. Landowner may install fences, driveways, pavement and landscaping (trees and shrubs shall be varieties that will not exceed 20 feet tall at maturity).

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

ETHICS IN PUBLIC CONTRACTING: By executing this Agreement, the undersigned Landowner or its representative, and the representative of HRSD, certify that the prices agreed to in this Agreement were arrived at without collusion or fraud and that they have not offered or received any payment, kickbacks or other inducement from any other party to this Agreement or its agent or employee in connection with this Agreement, and that they have not conferred on any public employee having responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised unless disclosed in this Agreement.

Landowner acknowledges that HRSD has relied upon these covenants, representations, and warranties in purchasing the above easement.

This Agreement is contingent on the review and approval of the purchase by the Hampton Roads Sanitation District Commission and upon such Commission granting authorization to the General Manager to proceed under the terms of this Agreement.

Settlement shall be within ninety (90) days, or as soon thereafter, allowing a reasonable time to correct any title defects reported by the title examiner and preparation and signing of the necessary documents to enable the HRSD to take proper title.

THE COVENANTS, AGREEMENTS, REPRESENTATIONS, WARRANTIES OF THE LANDOWNER CONTAINED IN THESE PARAGRAPHS SHALL SURVIVE THE CLOSING AND DELIVERY OF THE DEED OF EASEMENT ACROSS THE SUBJECT LAND.

WITNESS the following signatures and seals:

IN WITNESS WHEREOF, the Hampton Roads Sanitation District Commission has caused this Agreement to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on March 28, 2023. This Agreement is expressly subject to approval by the HRSD Commission

BUYER:

HAMPTON ROADS SANITATION DISTRICT (HRSD)

By: [Signature] Date: 3/28/2023

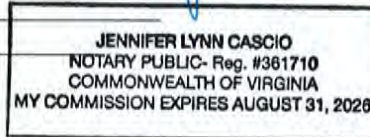
Name: Jay Bernas, P.E.
Title: General Manager
Contact Address: 1434 Air Rail Avenue, Virginia Beach, Virginia 23455

COMMONWEALTH OF VIRGINIA
City of Virginia Beach, to-wit:

The foregoing instrument was acknowledged before me this 28th day of March, 2023, by Jay Bernas, P.E., General Manager, Hampton Roads Sanitation District.

[Signature]
Notary Public

Notary Public Registration No. _____
My commission expires: _____



Easement Agreement between HRSD and LW's Lawn Service, LLC
TAX PARCEL#: 35D*X7*A1 & 35D*X7*A2

LANDOWNER(S):
LW'S Lawn Service, LLC

BY: [Signature]
(Signature)

ITS: CEO
(Title)

COMMONWEALTH OF VIRGINIA
City of Suffolk . to-wit:

The foregoing instrument was acknowledged before me this 24 day of March, 2023, by
Leotis Williams (Name), CEO (Title).

[Signature]
Notary Public

Notary Public Registration No. 7837081
My commission expires: April 30, 2023

KAREN CHRISTINE RUSSO-SCARANO
NOTARY PUBLIC - REG. #7837081
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES: APRIL 30, 2023

Easement Agreement between HRSD and LW's Lawn Service, LLC
 TAX PARCEL#: 35D*X7*A1 & 35D*X7*A2

PROJECT PARCEL NO. 002 HRSD CIP#NP010620 - SHINGLE CREEK

PROPERTIES OF: LW'S LAWN SERVICE, LLC
 PROPERTY ADDRESS: 701 OLD EAST PINNER STREET
 OWNER ADDRESS: 615 OLD EAST PINNER STREET SUFFOLK, VA 23434
 TAX MAP #: 35D*X7*A1
 PROPERTY ADDRESS: 725 E. CONSTANCE ROAD
 OWNER ADDRESS: P O BOX 3285 SUFFOLK, VA 23439
 TAX MAP #: 35D*X7*A2

TAX MAP NO	TOTAL PARCEL AREA		15' PERMANENT INGRESS/EGRESS EASEMENT		30' PERMANENT HRSD UTILITY EASEMENT		VARIABLE WIDTH TEMPORARY HRSD CONSTRUCTION EASEMENT			RESIDUAL PARCEL AREA			
	SO. FT.	ACRES	AREA	SO. FT.	ACRES	AREA	SO. FT.	ACRES	AREA	SO. FT.	ACRES	SO. FT.	ACRES
35D*X7*A1	17,424 +/-	0.40 +/-	A	423	0.010	-	-	-	D	1,428	0.033	15,573	0.36 +/-
35D*X7*A2	28,750 +/-	0.66 +/-	-	-	-	-	-	-	E	1,258	0.029	24,361	0.56 +/-
			B	372	0.009	C	1,971	0.045	F	768	0.018		
			TOTAL	795	0.019	TOTAL	1,971	0.045	TOTAL	3,474	0.080		

NOTES:

- MERIDIAN SOURCE WAS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD83(HARN)). COORDINATE VALUES ARE SHOWN IN U.S. SURVEY FEET.
- THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND THEREFORE MAY NOT SHOW ALL EASEMENTS OR PROPERTY REFERENCES THAT AFFECT THIS PROPERTY.
- THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY. PARCEL AREAS SHOWN ARE APPROXIMATE AND BASED ON PLATS AND DEEDS OF RECORD, OR CITY TAX RECORDS AND ARE APPROXIMATE IN NATURE.

PLAT SHOWING
 30' PERMANENT HRSD UTILITY EASEMENT,
 TEMPORARY HRSD
 CONSTRUCTION EASEMENT AND
 15' PERMANENT INGRESS/EGRESS EASEMENT
 TO BE ACQUIRED FROM
LW'S LAWN SERVICE, LLC
 BY
HAMPTON ROADS SANITATION DISTRICT
 SUFFOLK BOROUGH - CITY OF SUFFOLK, VIRGINIA
 PROJECT: HRSD CIP#NP010620 - SHINGLE CREEK
 DATE: NOVEMBER 10, 2020 / CADD: SRE
ROUSE-SIRINE ASSOCIATES, LTD.
 LAND SURVEYORS, MAPPING CONSULTANTS & S.U.E. QUALITY LEVELS "A-D"
 www.rouse-sirine.com

06/10/2022	07/11/2022
1 REVISED EASEMENTS	2 REVISED OWNER NAME

J.O. #13321-2 ACAD 002-35D_X7_A1 A2-Esmt-071122.dwg SHEET 1 OF 2

OLD EAST PINNER STREET
 (VARIABLE WIDTH RIGHT-OF-WAY)

PROPERTY OF
LW'S LAWN SERVICE, LLC
 (INST. #20090902000117510)
 (INST. #20101222000194470-PLAT)
 TAX MAP: 35D*X7*A1

PROPERTY OF
LW'S LAWN SERVICE, LLC
 (INST. #20090902000117510)
 (INST. #20101222000194470-PLAT)
 TAX MAP: 35D*X7*A2

PROPERTY OF
LW'S LAWN SERVICE, LLC
 (INST. #20090902000117510)
 (INST. #20101222000194470-PLAT)
 TAX MAP: 35D*X7*A1

TEMPORARY HRSD CONSTRUCTION EASEMENT TO BE ACQUIRED AREA "D" = 1,428 S.F. / 0.033 ACRE

TEMPORARY HRSD CONSTRUCTION EASEMENT TO BE ACQUIRED AREA "E" = 1,258 S.F. / 0.029 ACRE

TEMPORARY HRSD CONSTRUCTION EASEMENT TO BE ACQUIRED AREA "F" = 768 S.F. / 0.018 ACRE

30' PERMANENT HRSD UTILITY EASEMENT (INST. #220006233)

15' PERMANENT INGRESS/EGRESS EASEMENT TO BE ACQUIRED AREA "A" = 423 S.F. / 0.010 ACRE

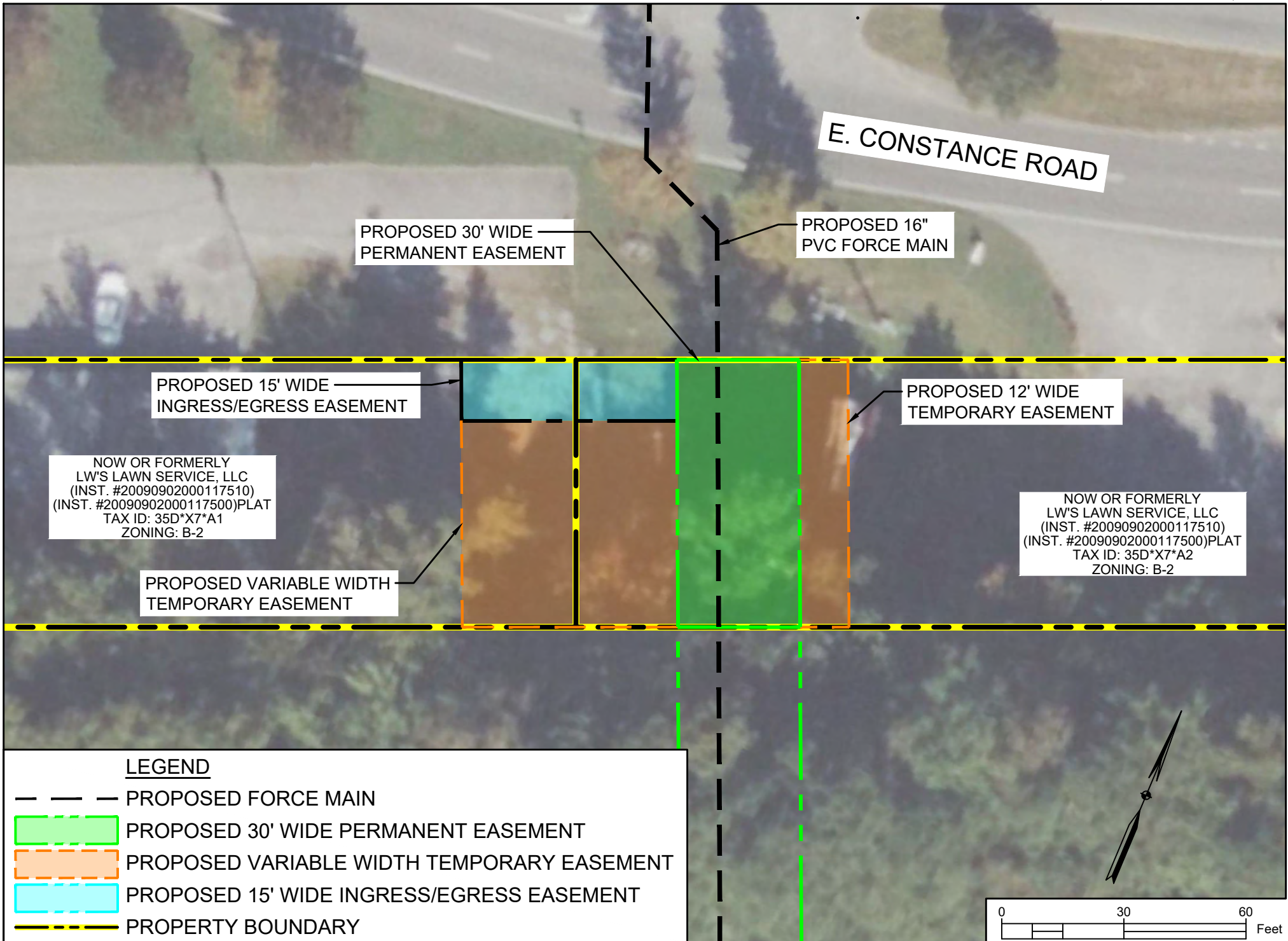
15' PERMANENT INGRESS/EGRESS EASEMENT TO BE ACQUIRED AREA "B" = 372 S.F. / 0.009 ACRE

15' PERMANENT INGRESS/EGRESS EASEMENT TO BE ACQUIRED AREA "C" = 1,971 S.F. / 0.045 ACRE

PLAT SHOWING
 30' PERMANENT HRSD UTILITY EASEMENT,
 TEMPORARY HRSD
 CONSTRUCTION EASEMENT AND
 15' PERMANENT INGRESS/EGRESS EASEMENT
 TO BE ACQUIRED FROM
LW'S LAWN SERVICE, LLC
 BY
HAMPTON ROADS SANITATION DISTRICT
 SUFFOLK BOROUGH - CITY OF SUFFOLK, VIRGINIA
 PROJECT: HRSD CIP#NP010620 - SHINGLE CREEK
 SCALE: 1" = 25' DATE: NOVEMBER 10, 2020 / CADD: SRE
ROUSE-SIRINE ASSOCIATES, LTD.
 LAND SURVEYORS, MAPPING CONSULTANTS & S.U.E. QUALITY LEVELS "A-D"
 www.rouse-sirine.com

06/10/2022	07/11/2022
1 REVISED EASEMENTS	2 REVISED OWNER NAME

J.O. #13321-2 ACAD 002-35D_X7_A1 A2-Esmt-071122.dwg SHEET 2 OF 2



HRSD Commission Meeting Minutes
March 28, 2023
Attachment #11

16. 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) [Wastewater Surveillance Data](#)
- (10) [Report of Internal Audit Activities](#)

b. [Strategic Planning Metrics Summary](#)

c. [Emergency Declaration – Great Bridge Interceptor Force Main Emergency Repair \(SF-180\)](#)



March 20, 2023

Re: General Manager's Report

Dear Commissioners:

The FY-2024 budget continues to be challenging. Historic inflation and the tight labor market (where HRSD needs to be competitive to attract and retain talent) are driving year over year cost increases. Staff remain vigilant on ensuring ratepayer affordability and staying within our financial plan.

HRSD is not impacted by the bank failures occurring around the world. HRSD uses Bank of America that many believe is "too big to fail." In addition, the Commonwealth has the Virginia Security of Public Deposits Act, whereby the bank must have 110 percent of HRSD's deposits in collateral. If there is a failure, the Treasurer takes possession of the collateral, liquidates it and reimburses HRSD.

The Low-Income Household Water Assistance Program (LIHWAP) continues to ramp up as more than \$4.8 million has been applied to over 13,000 accounts. We are working with different organizations to lobby for continued LIHWAP funding.

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

A. **Treatment Compliance and System Operations:** There was only one conveyance SSO in February. It occurred in a utility access hole in King William due to construction material blocking the pipe. Staff removed the debris to prevent future spills.

The Army Base incinerator is down for repairs. Staff initially used dump trucks to haul away solids but will transition to a contractor pending repair efforts. Parts have been ordered and the repair should be complete in the coming months.

B. **Water Quality:** No civil penalties this month.

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

1. Annual review of Pump Station Architectural Guidelines.
2. Several budget related meetings.
3. Held a town hall session with the Boat Harbor and James River Treatment Plants.

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

1. Attended the NACWA board meeting and sat on a panel discussing HRSD's Integrated Plan and Financing.

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

2. Participated on a utility management panel along with other regional utility directors on current and future challenges such as workforce, financing and customers.
3. Provided a SWIFT Research Center tour to Congresswoman Kiggans.

Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth, and the environment. **I look forward to seeing you in person in Virginia Beach at 9 am on Tuesday, March 28, 2023.**

Respectfully submitted,

Jay Bernas, P.E.
General Manager

TO: General Manager
FROM: Director of Communications
SUBJECT: Monthly Report for February 2023
DATE: March 6, 2023

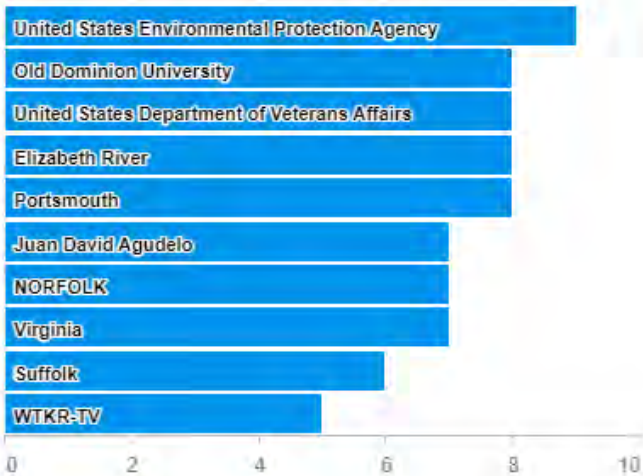
A. Publicity and Promotion

1. HRSD and/or SWIFT were mentioned or featured in 4 news stories or media/social media mentions. Topics included:
 - a. WTKR TV reporter visits HRSD treatment plant in Norfolk to learn what not to flush
 - b. HRSD work in Nassawadox and other areas of the Eastern Shore
 - c. Social media posts re: Representative Jen Kiggans' visit to the SWIFT Research Center
2. Analysis of media coverage

What are the top entities and keywords?

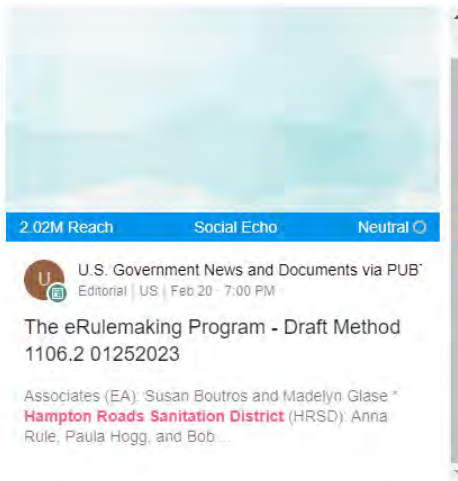
Top Entities

Top Keywords

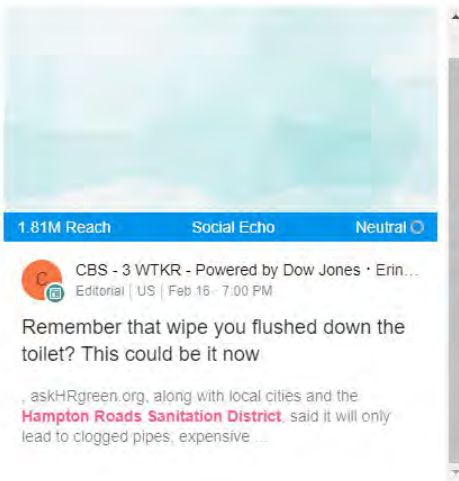


What is the top performing news content?

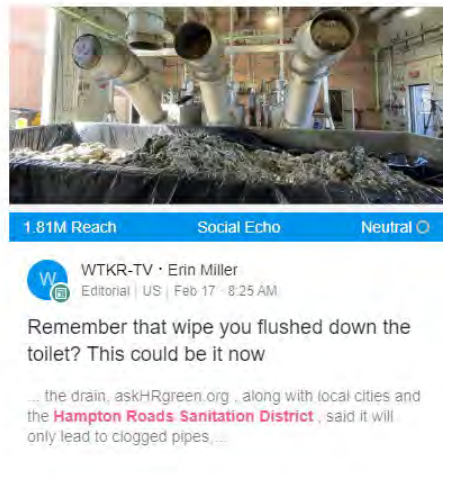
Top Article by Reach



Top Article by Reach and Volume

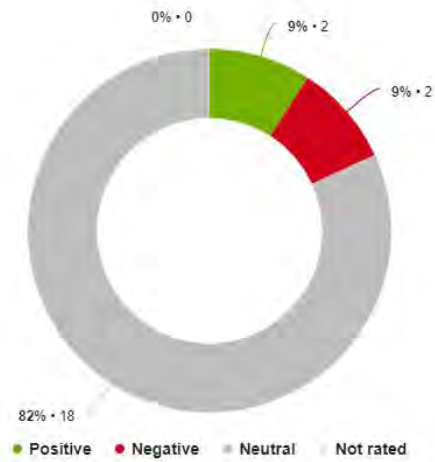


Top Article by Social Echo

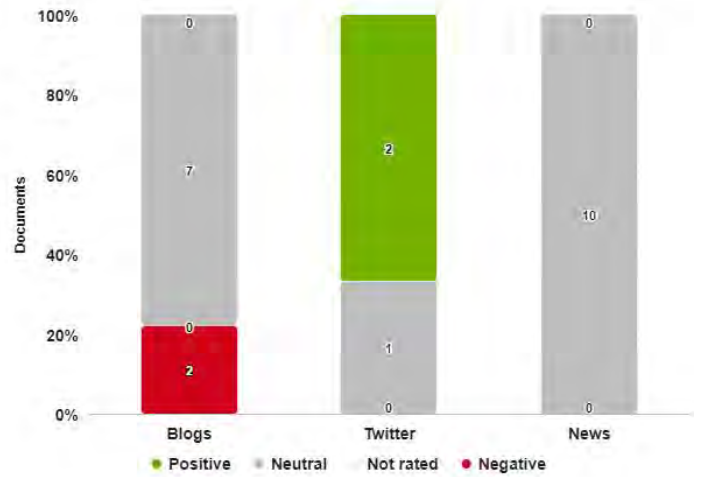


How favorable is the content?

Sentiment Share of Voice



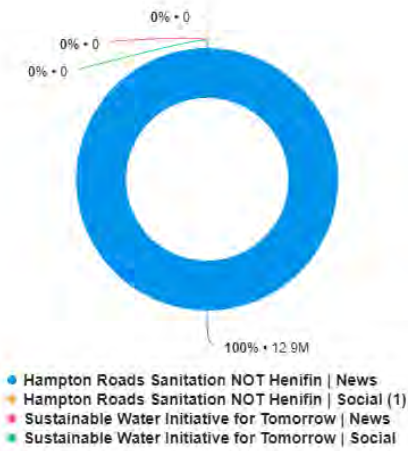
Sentiment by Source Type



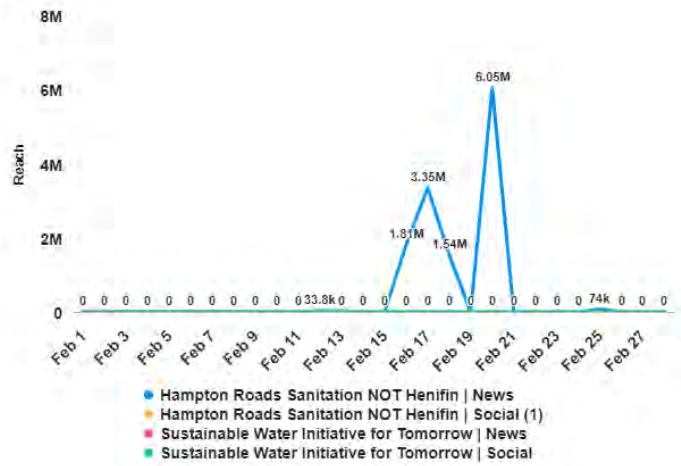
(NOTE: 'Negative' sentiment erroneously calculated based on flawed natural language processing algorithm. The two blogs were in fact additional positive coverage of WTKR's story related to 'flushable' wipes)

What is the potential reach?

Share of Voice by Reach

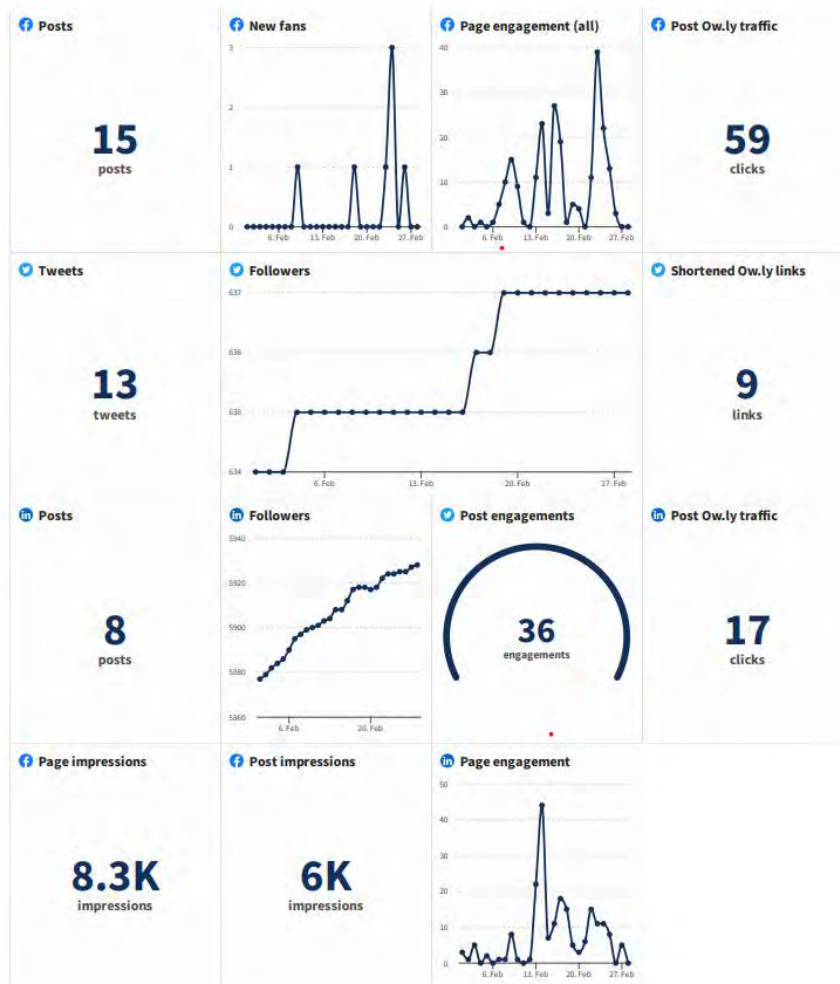


Potential News Reach

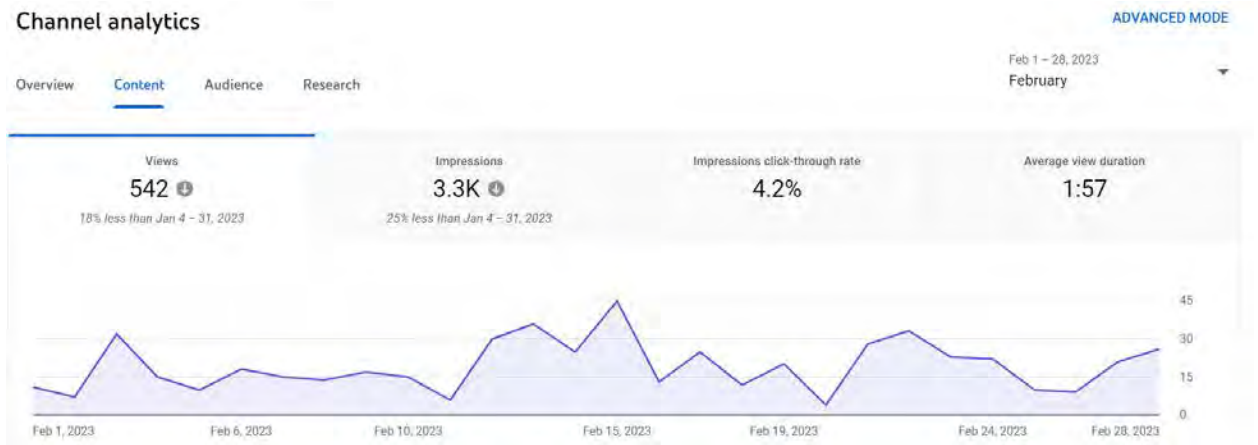


B. Social Media and Online Engagement

1. Metrics – Facebook, Twitter and LinkedIn



2. YouTube Channel analytics



3. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post

HRSD
Published by Hootsuite • February 16 at 12:33 PM •

Check out this feature of Dorissa Pitts-Paige, HRSD Director of Human Resources!

CIVIC Leadership Institute Class of 2023

WELCOME
Wednesday

Dorissa Pitts-Paige
HRSD

CIVIC
Leadership Institute

CIVIC Leadership Institute
February 15 at 12:02 PM •

Dorissa Pitts-Paige joined HRSD in November of 2006 as a Human Resources Business Partner. She was promoted to Director of Talent Management in December 2021. Ms. Pitts-Paige has worked in public sector human resources for over 20 years as a strategic business partner in the areas of organizational development and training, employee relations, recruitment, benefits, and champion for diversity, equity, and inclusion. Ms. Pitts-Paige holds a bachelor's degree in Broadcast Journalism from Hampton University, master's from Troy University in Human Resources Management and a Master of Law degree from Regent University. She served as the Director of Workforce Development for the Hampton Roads Society for Human Resources Management (HRSHRM) from 2019-2021. She currently serves as the Vice Co-Chair of the Virginia Water Environment Association (VWEA) Diversity, Equity, and Inclusion Council.

No insights to show

Boost a post

26

2 comments

b. Top Tweet



c. Top YouTube Videos

- [The Wastewater Treatment Process](#) (172 views)
- [SWIFT Research Center: What is the Potomac Aquifer](#) (109 views)
- [What is Asset Management](#) (50 views)
- [HRSD Employee Testimonials - Robert](#) (20 views)
- [HRSD Atlantic Treatment Plant Cambi](#) (22 views)

4. Website and Social Media Impressions and Visits

a. Facebook:

- 8,284 page impressions
- 6,041 post impressions reaching 5,692 users
- Facebook Engagement of 225 (181 reactions, 26 shares, and 18 comments)

b. Twitter:

- 1,671 tweet impressions
- 348 profile visits
- 5 mentions

c. HRSD.com/SWIFTVA.com: 1,192 page visits

d. LinkedIn Impressions:

- 6,322 page impressions
- 5,876 post impressions

e. YouTube: 572 views

- f. Next Door unique impressions: 21,878 post impressions from 8 targeted neighborhood postings shared with 552,063 residents
- g. Blog Posts: (1) [Celebrating Engineer's Week: Get To Know Our Engineers](#)
- h. Construction Project Page Visits – 1,610 total visits (not including direct visits from home page, broken down as follows:
 - 1,249 visits to individual pages
 - 361 to the status page

C. News Releases, Advisories, Advertisements, Project Notices, Community Meetings and Project Web Postings: 16

- 1. News Releases: 0
- 2. Traffic Advisories: 1
- 3. Construction Notices and/or notices to neighbors: 9
- 4. Advertisements: 0
- 5. Project Notices: 6 (via door hangings, reaching 124 residents)
- 6. Project/Community Meetings: 0
- 7. New Project Web Pages: 0
- 8. New Project Videos: 0

D. Special Projects and Highlights

Director, General Manager (GM) and Deputy General Manager (DGM) met with SIR Research to review results of the recently completed HRSD Brand Perception study to gain insights into customer satisfaction and perceived value of HRSD services.

E. Internal Communications

- 1. Director participated in the following internal meetings and events:
 - a. Meeting with GM and DGM to review Strategic Plan Key Performance Indicators (KPIs) for Community Outreach
 - b. Meeting with GM, DGM and procurement to evaluate Crisis Communication consultant Request For Proposals (RFPs)
 - c. Orientation meeting with new North Shore Chief of Design and Construction
 - d. Meeting to discuss ideas for 2023 Pollution Prevention Awards event
 - e. Interviews for North Shore Public Information Specialist position
 - f. Pump station Architectural Guidelines review meeting
 - g. HRSD LIFE (Learning, Innovating and Fostering Excellence) Internal Conference planning meetings
 - h. SWIFT Community Commitment Plan steering team meeting

- i. Bi-weekly GM briefings
 - j. Engineers Week planning meetings
 - k. HRSD security assessment meetings
 - l. UNIFIED Council meeting
 - m. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and HRSD QST meetings
2. Director also conducted biweekly Communications department status meetings and weekly team and one-on-one check-in meetings.
 3. Staff attended 11 project progress and outreach development meetings with various project managers.

F. Metrics

1. Educational and Outreach Activities: 57 (50 virtual, 7 in-person)
 - a. Self-guided SWIFT Virtual Tours – 50 views (analytics specify number of times “Take a Tour” button was selected)
 - b. 02/01/23 – LEAD Peninsula Treatment Plant & SWIFT Research Center (SWIFT RC) Tours | 50 participants
 - c. 02/08/23 – Norfolk Naval Shipyard SWIFT RC Tour | 7 participants
 - d. 02/13/23 – WTKR Interview and Tour of Virginia Initiative Plant (VIP)
 - e. 02/16/23 – Commonwealth Youth Challenge SWIFT RC Tour | 15 students
 - f. 02/23/23 – St. Helena Elementary School ‘Ocean in a Bottle’ activity | 40 students
 - g. 02/27/23 – Edible Aquifer activity -Kilgore Gifted Center | 121 students
 - h. 02/28/23 – James River SWIFT presentation to Denbigh Plantation Garden Club | 15 participants
2. Number of Community Partners: 6
 - a. LEAD Peninsula
 - b. Norfolk Naval Shipyard
 - c. Commonwealth Youth Academy
 - d. Norfolk Public Schools
 - e. Hampton Public Schools
 - f. Denbigh Plantation Garden Club
3. Additional Activities Coordinated by Communications Department: 3
 - a. 02/08/23 – Atlantic Treatment Plant Tour Challenge Youth Academy | 15 students
 - b. 02/21/23 – Williamsburg Treatment Plan Tour to Johns Hopkins student
 - c. 02/23/23 – Anheuser-Busch SWIFT Technical Tour | 10 participants

4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	February 2023
M-1.4a	Total Training Hours per Full Time Employee (4) - Current Month	Hours / #FTE	0.5
M-1.4b	Total Training Hours per Full Time Employee (4) - Cumulative Fiscal Year-to-Date	Hours / #FTE	6.54
M-5.2	Educational and Outreach Events	Number	57
M-5.3	Number of Community Partners	Number	6

Respectfully,

Leila Rice, APR
Director of Communications

TO: General Manager
FROM: Director of Engineering
SUBJECT: Engineering Monthly Report for February 2023
DATE: March 13, 2023

A. General

1. Capital Improvement Program (CIP) spending for the seventh month of Fiscal Year (FY) 2023 was below the planned spending target.

CIP Spending (\$M):

	Current Period	FYTD
Actual	20.45	166.71
Plan	34.25	219.75

2. Staff retention and recruitment remains a significant focus for the Engineering Department. A total of 5 positions are needed to fully staff the Engineering Department. Two new employees have joined the Engineering Department this month:
 - Shirley Smith – Design & Construction Project Manager
 - Nick Taschner – Design & Construction Project Manager

We have offers out to two more Project Managers and hope to have them on board in March. Finding qualified candidates remains challenging, but we are making progress to reduce the number of open positions in the Engineering Department.

B. Asset Management Division

1. Staff are working with the Operations Department to reduce the backlog of incomplete condition assessment data at the treatment plants. Assets are being scored based on their existing condition which is a key input to the Asset Management Plan. Progress on this data gathering effort has improved and now approximately 75% of all existing assets have been assessed.
2. Staff are working with the Operations Department to assess the condition of buried plant piping. Work has been completed at the York River and Williamsburg treatment plants. Assessment work is being planned at the James River, VIP, and Atlantic treatment plants. Key segments to be assessed include the piping upstream and downstream of the headworks facilities.

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

1. Initial design efforts are underway for the Surry Force Main and Pump Station – Dominion Energy project. The contract has been executed by both HRSD and Dominion Energy. The Design-Build Team began conducting the aerial survey and determined the needed easements to be acquired. Although this project is being designed and built by HRSD, Dominion Energy will reimburse HRSD for the cost of this work. HRSD will ultimately own and operate the pump station and associated force main.

2. Preliminary design efforts continue for the Central Environmental Laboratory Expansion and Rehabilitation project. A draft Preliminary Engineering Report was received this month and will be finalized soon. The Project Team is preparing the Request for Qualifications which will be used to hire a Construction Management (CM) firm. This procurement process will take a few months to complete. To date, five CM firms have expressed interest in the project. This project is being constructed using a Construction Manager at Risk delivery method and the close collaboration between HRSD, designer and contractor will be valuable on this complex project.
3. The emergency work to replace the damaged odor control scrubber at the Atlantic Treatment Plant continues. The forensic analysis of the fire damaged equipment indicates that the bearing within the odor scrubber fan failed causing the fan blades to impact the fan housing. Friction caused by this interaction ignited the fiberglass material. Equipment delivery delays have delayed the planned completion of the work until June 2023. Staff are working with the insurance adjuster to provide needed cost information related to this claim.
4. An important SWIFT Program milestone was reached in February with the acceptance of the stipulated price from the Design-Builder for the Nansemond Advanced Nutrient Reduction Improvements (ANRI) Phase II project. Although design efforts continue on this project, approval of the stipulated price allows the Design-Build Team to begin certain construction-related activities. This project is important as we ready the Nansemond Treatment Plant for the future full-scale SWIFT facilities and additional flow from the future closing of the Boat Harbor Treatment Plant.

D. Planning & Analysis Division

1. Staff continue coordination discussions related to future sewer improvements in Chincoteague. Discussions include HRSD staff, the Town of Chincoteague, a local developer, and a homeowner association. Discussions have included possible treatment plant improvements, service to existing and future development and needed property acquisitions. A Memorandum of Understanding has been drafted to address these issues and provide a path forward.
2. Staff completed a study to address the need for a future equalization tank in the Oceana section of Virginia Beach. The City of Virginia Beach has a possible site that could be acquired by HRSD for this future tank. Negotiations are underway with the City to determine the feasibility and cost to acquire this property. This effort is moving forward, and the property should be acquired in the coming year.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 5
 - a. 02/03/2023 – Staff hosted One-Water Nevada as part of a discussion on Water Reuse and HRSD's SWIFT Program.
 - b. 02/22/2023 – Staff made numerous presentations as part of National Engineer's Week to a number of local schools including Middlesex Elementary, Crossroads Middle School, and Indian River High School.

- c. 02/22/2023 – Staff made a presentation to the Hampton Master Gardeners related to the HRSD SWIFT Program.
- d. 02/23/2023 – Staff made a presentation to Congresswoman Jennifer Kiggins related to the HRSD SWIFT Program.
- e. 02/27/2023 – Staff met with the Philadelphia Water Department to discuss the use of the HRSD Program Management System and methods to improve capital project delivery.

2. Number of Community Partners: 7

- a. Congresswoman Jennifer Kiggins
- b. Crossroads Middle School
- c. Hampton Master Gardeners
- d. Indian River High School
- e. Middlesex Elementary School
- f. One-Water Nevada
- g. Philadelphia Water Department

3. Number of Research Partners: 0

4. Monthly Metrics Summary:

Item #	Strategic Planning Measure	Unit	February 2023
M-1.4a	Total Training Hours per Full Time Employee (53) - Current Month	Hours / #FTE	3.08
M-1.4b	Total Training Hours per Full Time Employee (53) - Cumulative Fiscal Year-to-Date	Hours / #FTE	18.10
M-5.2	Educational and Outreach Events	Number	5
M-5.3	Number of Community Partners	Number	7
M-5.4	Number of Research Partners	Number	0

Bruce W. Husselbee

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

TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for February 2023
DATE: March 21, 2023

A. General

1. On Friday, March 10, Silicon Valley Bank (SVB) failed, and the Federal Deposit Insurance Corporation (FDIC) was named as receiver. With over \$200 billion in assets, it was the largest bank failure since 2008. Most bank failures are related to recessions or exposure to bad loans. Although SVB was considered well capitalized by regulatory standards, it carried some unique risks. In 2019 and 2022, SVB grew significantly with a heavy client concentration in the technology and venture capital sectors.

It has been reported that as deposits grew, SVB purchased long duration investments whose value fell when interest rates began to rise in 2022. When their clients needed liquidity, the bank was forced to sell some of their investments at a loss, putting its credit ratings in jeopardy helping to create a “run on the bank.”

Subsequently other regional US banks were also shut down as global concerns about bank sector stability, continued rising interest rates and a recession grew.

While HRSD’s bank deposits far exceed insurance provided by the FDIC, its deposits are collateralized in accordance with the Virginia Security for Public Deposits Act (the Act). In accordance with the Act, a bank pledges collateral in the form of federal obligations with a fair value equal to 110 percent of HRSD’s deposits with a third-party trustee in the name of the Treasurer of the Commonwealth. If a bank fails, the Treasurer will take possession of the collateral, liquidate it, and reimburse HRSD up to the value of the deposits. The State Treasury Board monitors compliance with the collateralization and reporting requirements of the Act.

2. Staff completed a grant application to reimburse HRSD for some of the costs associated with closing the Chesapeake-Elizabeth Treatment Plant (CETP). Staff are optimistic that HRSD may receive an award amounting to \$100 million in fiscal year 2024.
3. HRSD began receiving Low Income Household Water Assistant Program (LIHWAP) payments in mid-November 2022. As of the end of February 2023, a total of \$4,813,071 has been applied to over 8,500 customer accounts for water, sewer and wastewater charges. HRSD accepts LIHWAP payments on behalf of locality Hampton Roads Utility Billing Service (HRUBS) partners.

The following is a breakout of combined water, sewer, and wastewater treatment assistance received for all HRSD and locality HRUBS charges:

	LIHWAP	Count
HRSD	\$ 2,277,025.90	8,572
Norfolk	\$ 1,723,426.51	2,419
Suffolk	\$ 501,849.71	1,663
Chesapeake	\$ 271,167.10	749
JCSA	\$ 29,332.91	149
Smithfield	\$ 6,803.30	13
Urbanna	\$ 1,593.71	4
King William	\$ 1,048.06	6
Surry County	\$ 756.10	2
Town of Surry	\$ 67.83	1
	\$ 4,813,071.13	13,578

The following demonstrates LIHWAP applied to HRSD Wastewater charges only, by locality:

	HRSD LIHWAP	Count
Norfolk	\$ 715,925.00	3,134
Newport News	\$ 584,297.12	1,623
Virginia Beach	\$ 287,217.38	937
Portsmouth	\$ 279,109.51	944
Chesapeake	\$ 182,792.51	879
Suffolk	\$ 177,903.49	886
JCSA	\$ 22,816.10	103
Smithfield	\$ 5,966.30	17
King William	\$ 4,335.30	7
Urbanna	\$ 3,821.92	5
Windsor	\$ 3,200.74	14
Gloucester	\$ 2,865.44	7
Isle of Wight	\$ 2,435.54	7
Surry County	\$ 2,208.48	3
Aqua	\$ 1,524.40	5
Town of Surry	\$ 606.67	1
	\$ 2,277,025.90	8,572

4. Staff delivered 4,346 warning door tags and disconnected water service to 1,357 accounts during February, over 1,200 more field activities than the previous month. However, an emphasis was placed on warning tags paired with a LIHWAP informational tag to promote the availability of assistance. Approvals of LIHWAP funding are uploaded daily in the billing system to prevent disconnection for customers awaiting assistance.
5. Customer call and email volumes remained steady throughout the month of February 2023. Increased field activities combined with four vacancies and training new staff contributed to a decrease in service level to 69 percent of calls answered within three minutes (down from 81 percent in January). Call abandonment is up slightly to 11

percent (eight percent in January). Average wait time has increased to two minutes, 57 seconds (up from less than two minutes in January). New hires are scheduled to begin in March and are ultimately expected to have a positive effect on service levels once training and all associated onboarding activities are complete.

6. The accompanying Interim Financial Report indicates that most revenue and expense accounts are in line with budgetary expectations.

Fee collections are significantly greater than last year because field activity in FY2022 was suspended due to the COVID-19 pandemic.

Interest Income continues to be a revenue bright spot and is well above budgetary expectations because of rising interest rates.

B. Interim Financial Report

1. Operating Budget for the Period Ended February 28, 2023

	Amended Budget	Current YTD	Current YTD as % of Budget (67% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 366,882,000	\$ 251,277,753	68%	70%
Surcharge	1,755,000	1,050,729	60%	66%
Indirect Discharge	3,200,000	2,910,082	91%	62%
Fees	2,910,000	2,273,049	78%	3%
Municipal Assistance	800,000	423,933	53%	106%
Miscellaneous	1,254,000	668,079	53%	74%
Total Operating Revenue	376,801,000	258,603,625	69%	69%
Non Operating Revenues				
Facility Charge	7,150,000	4,590,128	64%	63%
Interest Income	1,570,000	2,788,250	178%	-70%
Build America Bond Subsidy	2,026,000	1,031,088	51%	51%
Other	302,000	463,286	153%	79%
Total Non Operating Revenue	11,048,000	8,872,752	80%	47%
Total Revenues	387,849,000	267,476,377	69%	68%
Transfers from Reserves	18,868,701	12,579,134	67%	67%
Total Revenues and Transfers	\$ 406,717,701	\$ 280,055,511	69%	68%
Operating Expenses				
Personal Services	\$ 63,288,297	\$ 43,203,310	68%	69%
Fringe Benefits	26,520,561	15,599,318	59%	64%
Materials & Supplies	13,385,885	7,494,148	56%	64%
Transportation	1,797,226	994,046	55%	56%
Utilities	15,055,652	10,595,566	70%	67%
Chemical Purchases	13,026,120	7,837,425	60%	64%
Contractual Services	57,808,888	26,163,082	45%	45%
Major Repairs	12,409,035	5,567,203	45%	34%
Capital Assets	625,737	129,168	21%	68%
Miscellaneous Expense	3,657,334	1,894,170	52%	56%
Total Operating Expenses	207,574,735	119,477,436	58%	58%
Debt Service and Transfers				
Debt Service	69,470,000	50,890,765	73%	74%
Transfer to CIP	129,412,966	86,275,311	67%	71%
Transfer to Risk management	260,000	173,336	67%	67%
Total Debt Service and Transfers	199,142,966	137,339,412	69%	72%
Total Expenses and Transfers	\$ 406,717,701	\$ 256,816,848	63%	65%

2. Notes to Interim Financial Report

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

This interim report does not reflect financial activity for capital projects contained in HRSD's CIP.

Transfers represent certain budgetary policy designations as follows:

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

3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended February 28, 2023

HRSD - RESERVE AND CAPITAL ACTIVITY

February 28, 2023

	General Reserve				Capital	
	General	CARES - ARPA	Debt Service	Risk Mgmt Reserve	Paygo	Debt Proceeds
	Unrestricted	Restricted	Restricted	Unrestricted	Unrestricted	Restricted
Beginning - July 1, 2021	\$ 189,168,885	\$ 420	\$ 33,134,065	\$ 4,279,547	\$ 32,535,033	\$ -
Current Year Sources of Funds						
Current Receipts	238,411,624					
Line of Credit						
VRA Draws					45,540,858	
WIFIA Draws					35,159,916	
CARES Transfer In	730,692					
Days Cash on Hand Transfer In						
Transfers In	-			151,669	75,490,897	
Sources of Funds	239,142,316	-	-	151,669	156,191,671	-
Total Funds Available	\$ 428,311,201	\$ 420	\$ 33,134,065	\$ 4,431,216	\$ 188,726,704	\$ -
Current Year Uses of Funds						
Cash Disbursements	159,769,687				174,345,714	
CARES Transfer Out		(1,116)				
Days Cash on Hand Transfer Out						
Transfers Out	75,642,566					
Uses of Funds	235,412,253	(1,116)	-	-	174,345,714	-
End of Period - February 28, 2023	\$ 192,898,948	\$ 1,536	\$ 33,134,065	\$ 4,431,216	\$ 14,380,990	\$ -
Unrestricted Funds	\$ 211,711,155					

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended February 28, 2023

HRSD - PROJECT ANALYSIS

February 28, 2023

Classification/ Treatment Service Area	Appropriated Funds	Expenditures		Total		Available Funds
		prior to 7/1/2022	Year to Date FY2023	Project Expenditures	Encumbrances	
Administration	73,738,240	24,017,666	3,506,670	27,524,336	1,830,390	44,383,514
Army Base	163,448,800	124,990,776	679,327	125,670,103	792,946	36,985,751
Atlantic	233,825,424	79,425,640	1,835,370	81,261,010	17,886,656	134,677,758
Boat Harbor	391,690,953	55,428,123	18,824,916	74,253,039	188,231,803	129,206,111
Ches-Eliz	183,518,801	118,083,285	3,026,284	121,109,569	4,823,828	57,585,404
Eastern Shore	34,564,664	3,409,844	13,851,815	17,261,659	15,109,203	2,193,802
James River	348,266,356	40,526,157	36,344,137	76,870,294	241,071,400	30,324,662
Middle Peninsula	102,724,107	19,904,529	5,379,141	25,283,670	11,867,249	65,573,188
Nansemond	494,728,123	41,289,643	18,314,454	59,604,097	313,422,240	121,701,786
Surry	60,391,465	38,362,111	2,243,283	40,605,394	11,659,801	8,126,270
VIP	180,644,256	17,792,976	12,498,874	30,291,850	42,875,911	107,476,495
Williamsburg	28,535,758	20,517,874	3,789,557	24,307,431	941,969	3,286,358
York River	77,255,863	13,910,493	2,501,811	16,412,304	15,792,375	45,051,184
General	1,147,886,755	153,413,076	70,051,630	223,464,706	327,354,969	597,067,080
	3,521,219,565	751,072,193	192,847,269	943,919,462	1,193,660,740	1,383,639,363

5. Debt Management Overview

HRSD - Debt Outstanding (\$000's)

February 28, 2023

	Principal			Principal Feb 2023	Interest Payments
	Jan 2023	Principal Payments	Principal Draws		
Fixed Rate					
Senior	166,437	-	-	166,437	-
Subordinate	688,781	(3,870)	7,420	692,331	(4,200)
Variable Rate					
Subordinate	50,000	-	-	50,000	(90)
Line of Credit	33,721			33,721	(104)
Total	\$ 938,939	\$ (3,870)	\$ 7,420	\$ 942,489	\$ (4,394)

HRSD- Series 2016VR Bond Analysis

March 03, 2023

	SIFMA Index	HRSD	Spread to
			SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.62%	0.58%	-0.04%
Minimum	0.01%	0.01%	0.00%
As of 03/03/23	2.80%	2.60%	-0.20%

* Since October 20, 2011 HRSD has averaged 58 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended February 28, 2023

HRSD - UNRESTRICTED CASH

February 28, 2023

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

		Days Cash on	
		Hand	Adjusted Days Cash on Hand
Total Unrestricted Cash	\$ 211,711,155		372
Risk Management Reserve	\$ (4,431,216)	(7)	365
Capital (PAYGO only)	\$ (14,380,990)	(26)	339
Adjusted Days Cash on Hand	\$ 192,898,948		339

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

HRSD - SOURCES OF FUNDS

February 28, 2023

Primary Source	Beginning	YTD			Ending	Allocation of Funds	Credit Quality	Current Mo Avg Yield
	Market Value July 1, 2022	Contributions	Withdrawals	Income Earned	Market Value February 28, 2023			
BAML Corp Disbursement Account	25,498,734	372,441,387	364,887,542	290,244	33,342,823	19.5%	N/A	0.55%
VIP Stable NAV Liquidity Pool	144,268,153	10,000,000	20,000,000	2,984,919	137,253,072	80.5%	AAAm	4.73%
Total Primary Source	\$ 169,766,887	\$ 382,441,387	\$ 384,887,542	\$ 3,275,163	\$ 170,595,895	100.0%		

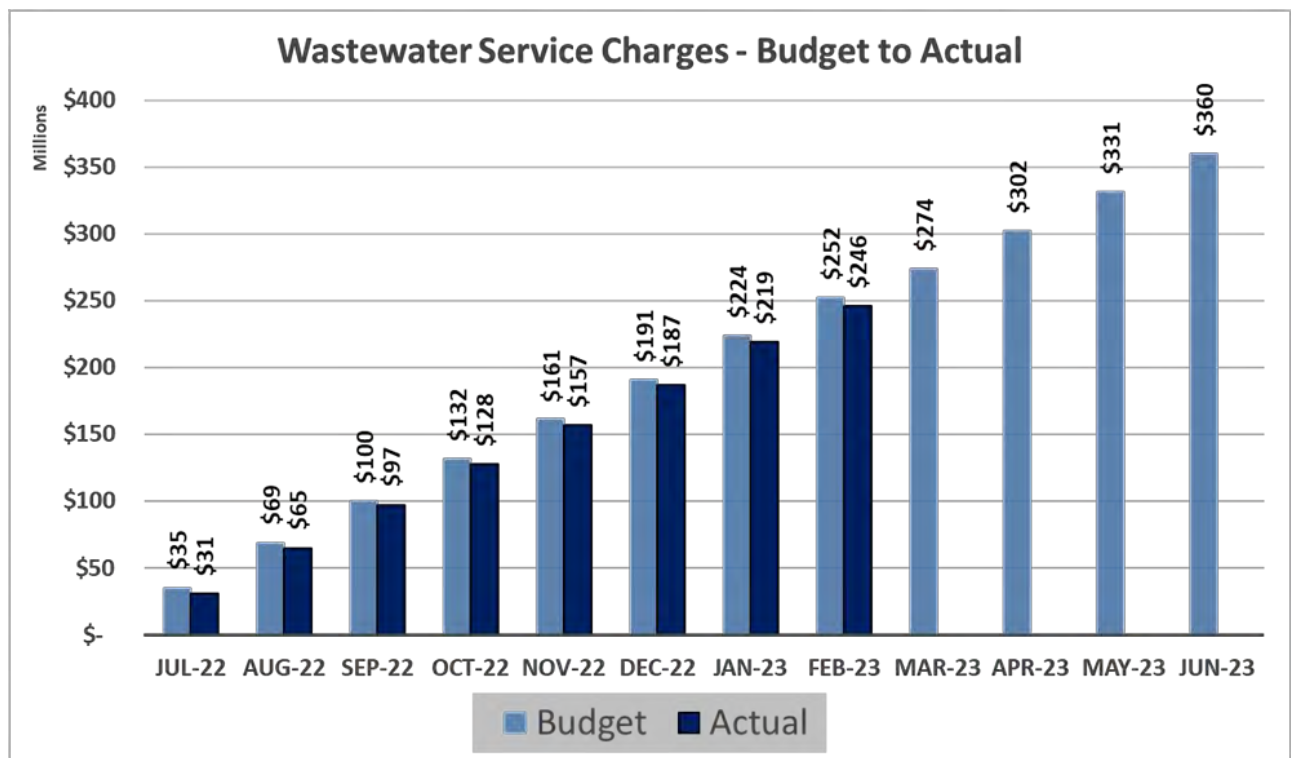
VIP Stable NAV Liquidity Pool performed at the same level as Va Local Government Investment Pool's (the market benchmark) in the month of February 2023.

Secondary Source	Beginning	YTD			Ending	Ending Cost	LTD Mkt Adj	Yield to Maturity at Market
	Market Value July 1, 2022	Contributions	Withdrawals	Income Earned & Realized G/L	Market Value February 28, 2023			
VIP 1-3 Year High Quality Bond Fund	62,932,017	-	8,395	614,717	62,385,104	64,350,340	(1,965,236)	4.90%
Total Secondary Source	\$ 62,932,017	\$ -	\$ 8,395	\$ 614,717	\$ 62,385,104	\$ 64,350,340	\$ (1,965,236)	

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

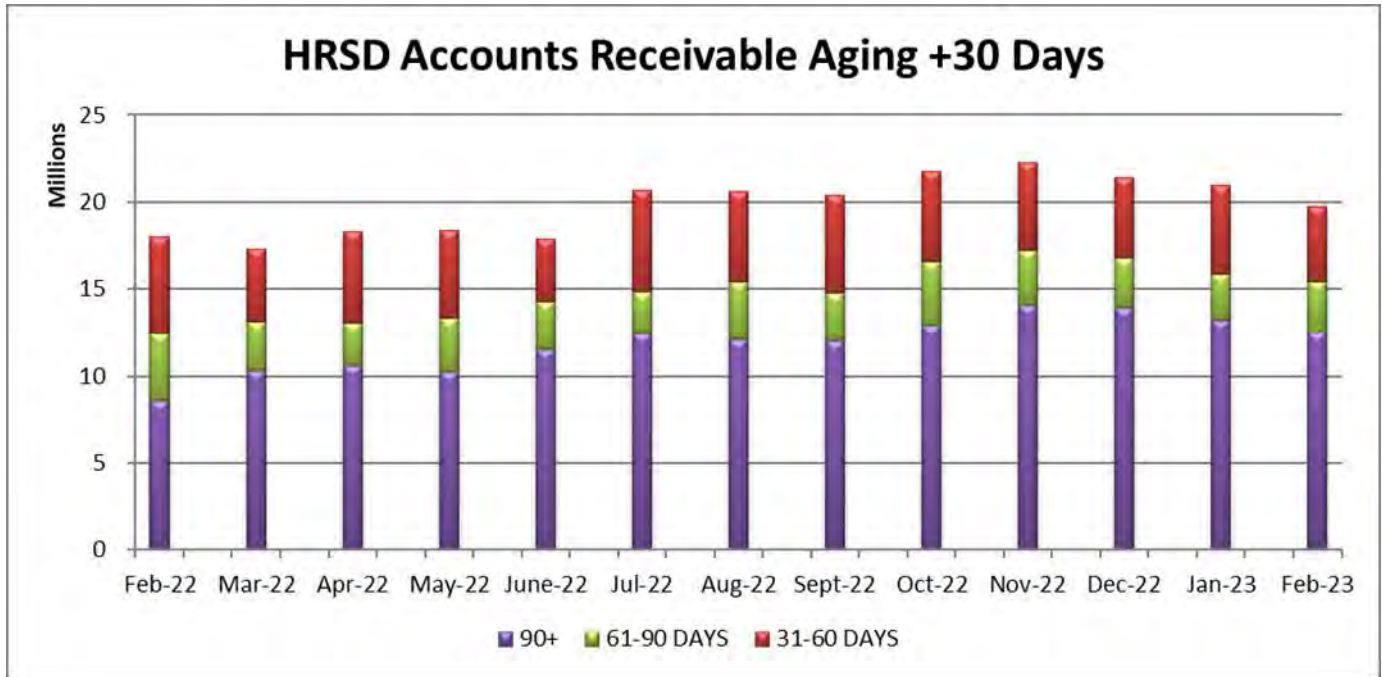
	Total	Fund Alloc
Total Primary Source	\$ 170,595,895	73.2%
Total Secondary Source	\$ 62,385,104	26.8%
TOTAL SOURCES	\$ 232,980,999	100.0%

7. Summary of Billed Consumption

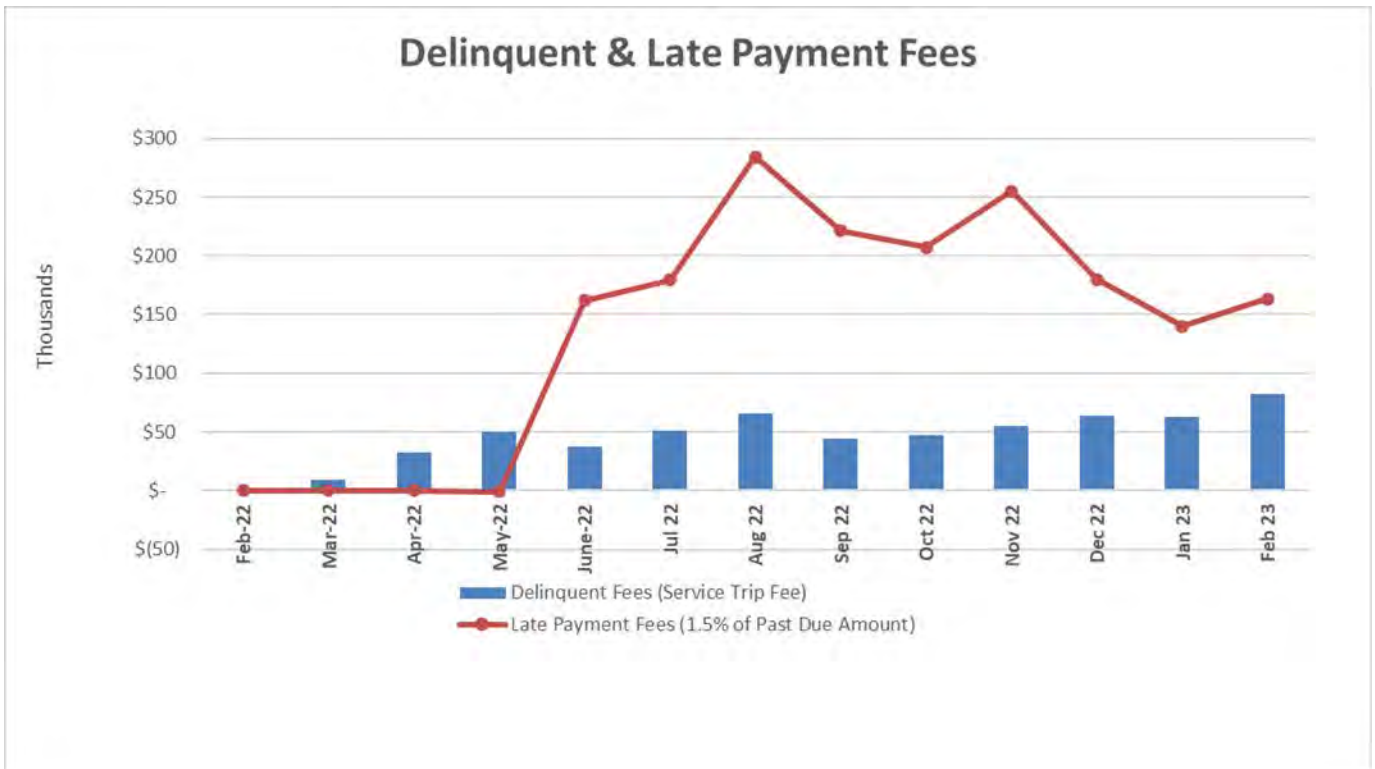


C. Customer Care Center

1. Accounts Receivable Overview

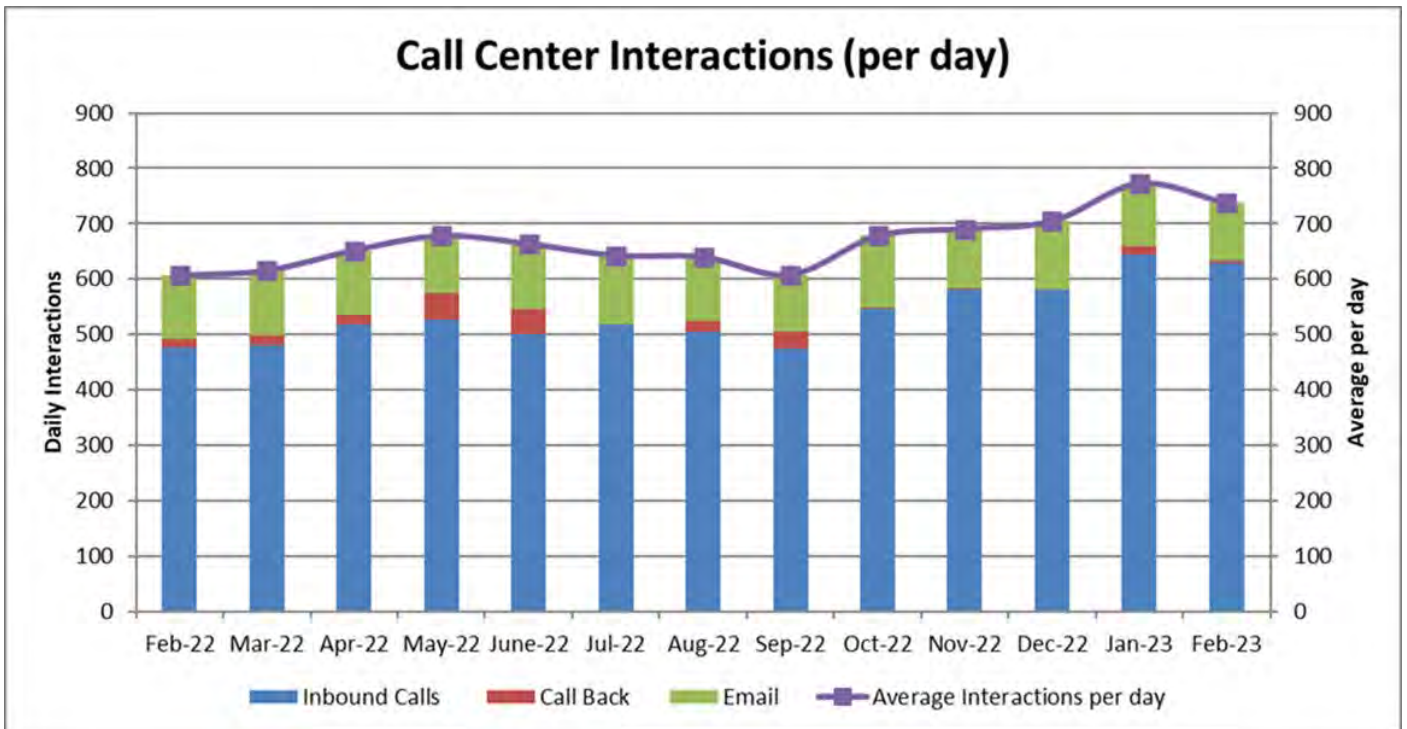


Summary of Billed Consumption (,000s ccf)							
Month	FY2023 Cumulative Budget Estimate	FY2023 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2022 Actual	From FY2022	Cumulative 3 Year Average	From 3 Year Average
July	5,015	4,682	-6.6%	4,976	-5.9%	4,947	-5.4%
Aug	9,883	9,651	-2.3%	9,518	1.4%	9,641	0.1%
Sept	14,413	14,207	-1.4%	14,347	-1.0%	14,345	-1.0%
Oct	18,892	18,679	-1.1%	19,048	-1.9%	18,955	-1.5%
Nov	23,125	22,776	-1.5%	22,953	-0.8%	22,412	1.6%
Dec	27,336	27,133	-0.7%	27,541	-1.5%	27,558	-1.5%
Jan	32,088	31,669	-1.3%	31,865	-0.6%	32,148	-1.5%
Feb	36,182	35,601	-1.6%	36,188	-1.6%	36,087	-1.3%
March	39,309	-	N/A	40,229	N/A	40,452	N/A
Apr	43,360	-	N/A	44,569	N/A	44,644	N/A
May	47,508	-	N/A	48,315	N/A	48,656	N/A
June	51,620	-	N/A	53,243	N/A	53,324	N/A



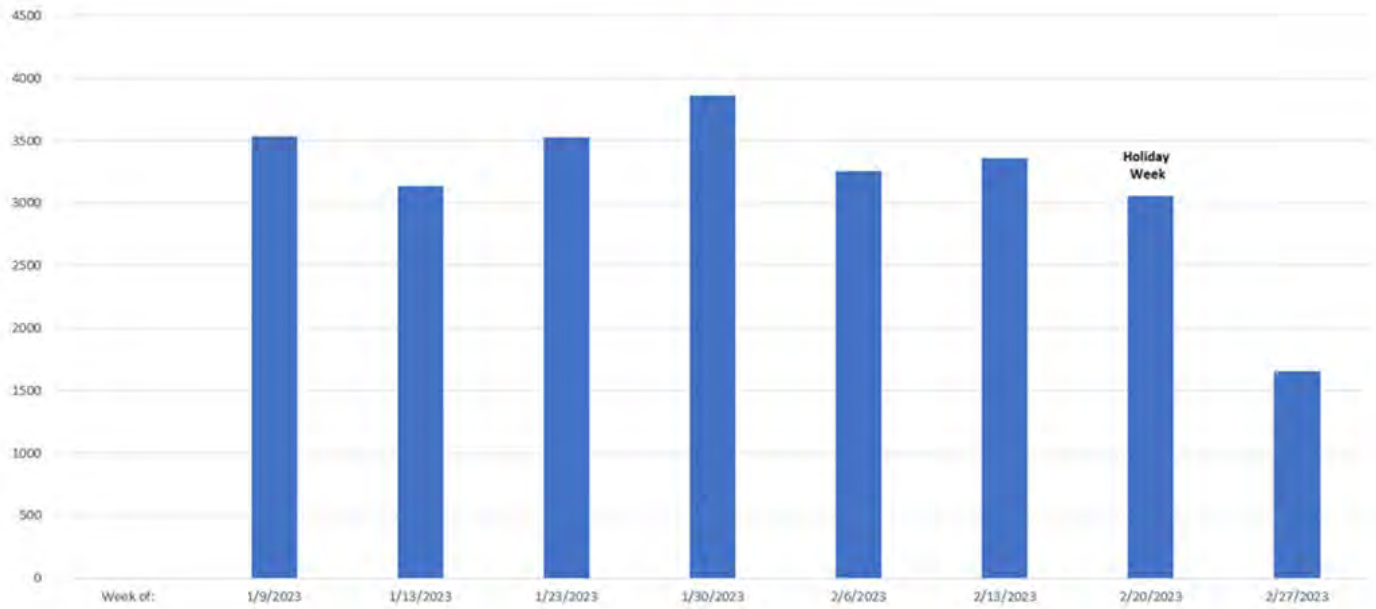
Apr 20-Feb 22 Field Activity was suspended late March 2020 in response to COVID-19.

2. Customer Care Center Statistics

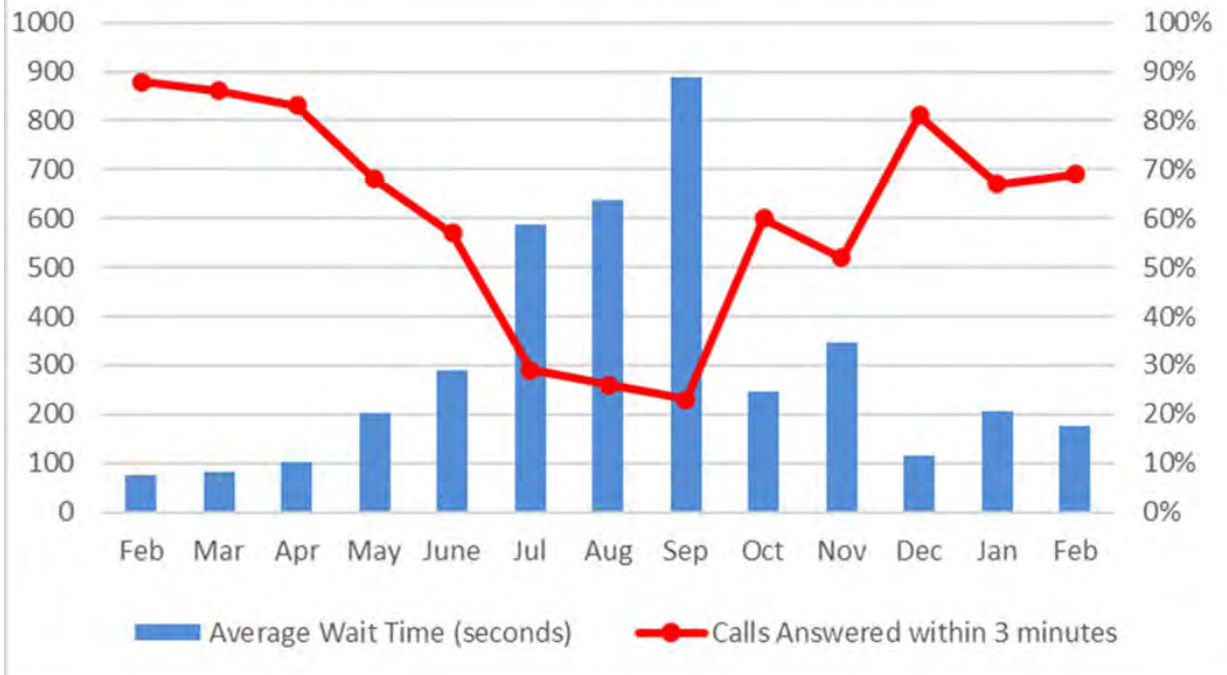


Customer Interaction Statistics	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Calls Answered within 3 minutes	88%	86%	83%	68%	57%	29%	26%	23%	60%	52%	81%	67%	69%
Average Wait Time (seconds)	75	81	101	203	291	587	638	887	246	347	117	206	177
Calls Abandoned	6%	7%	7%	12%	15%	25%	25%	31%	14%	18%	8%	12%	11%

Total Calls Received by Week

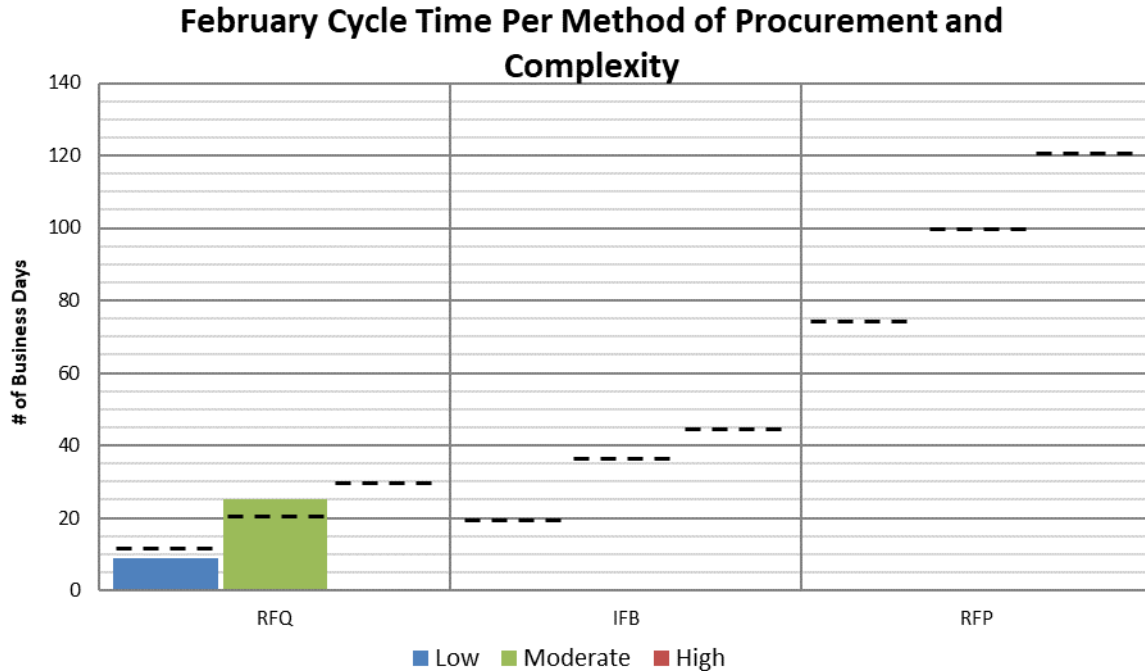


Customer Interaction Statistics



D. Procurement Statistics

Savings	Current Period	FYTD
Competitive Savings ¹	\$10,307	\$367,824
Negotiated Savings ²	\$3,105	\$28,813
Salvage Revenues	\$425	\$22,631
Corporate VISA Card - Estimated Rebate	\$19,448	\$159,247



Dashed Line: Target Service Level Cycle Time

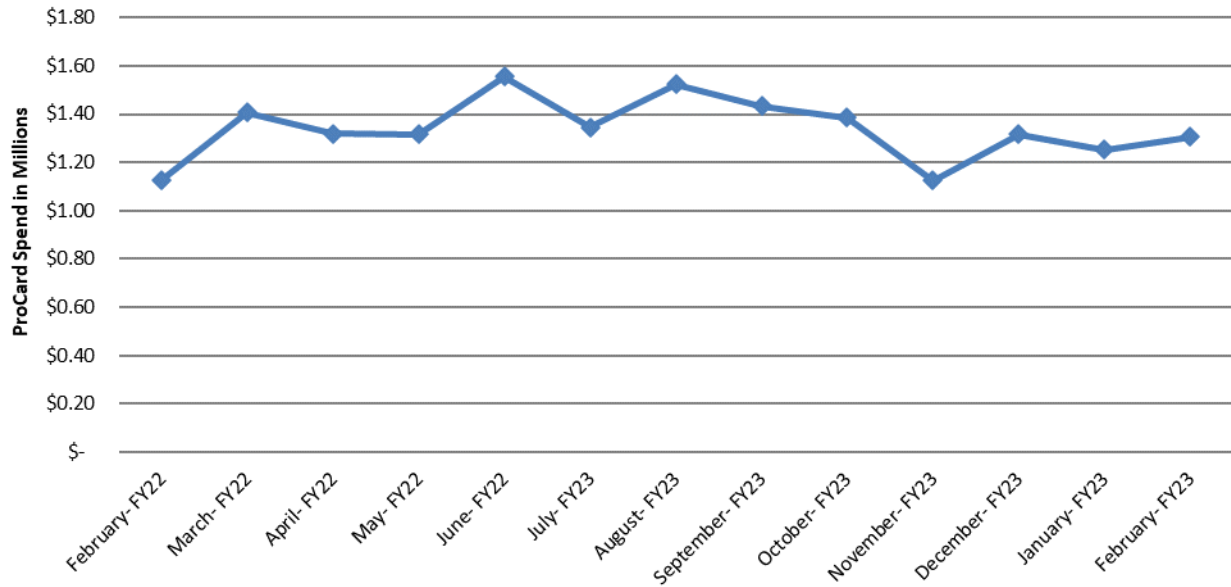
	Low	Moderate	High
RFQ	12	20	30
IFB	20	35	45
RFP	75	100	120

Low: Low technical, quick turnaround; **Moderate:** Technical, routine; **High:** Highly technical, time intensive.

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

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

ProCard Spend FY23



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

Item #	Strategic Planning Measure	Unit	February 2023
	Accounts Receivable (HRSD)	Dollars	\$39,724,461
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	31.6%

E. Monthly Strategic Planning Metrics Summary

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

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	February 2023
M-1.4a	Training During Work Hours Per Full Time Employee (103) – Current Month	Hours / #FTE	0.10
M-1.4b	Total Training During Work Hours Per Full Time Employee (103) – Cumulative Fiscal Year-to-Date	Hours / #FTE	5.02
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	101%
	General Reserves	Percentage of Operating Budget less Depreciation	111%
	Liquidity	Days Cash on Hand	346 Days
	Accounts Receivable (HRSD)	Dollars	\$39,724,461
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	31.6%

Respectfully,

Steven G. de Mik

Steven G. de Mik
Deputy General Manager/CFO

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

A. General

1. IT staff are working in conjunction with Microsoft and other vendors in providing recommendations on how to enhance functionality and security in the Microsoft cloud.
2. Verizon completed installation and testing of the data circuit to Onancock. Network connectivity is being configured for both the business and operational networks. Following successful testing, the circuit will go live, and the existing slower interim circuit, removed.
3. The IT Help Desk processed 403 work orders and requests for assistance in February, ensuring availability of computing resources to those working locally and remotely.
4. The building automation system was migrated to a new server, thus facilitating the retirement of old equipment, and the introduction of stronger cybersecurity hardware, software, and firmware.
5. Staff are working to complete the installation of network servers to host the new engineering document management system, Adept, replacing the old system, Meridian.
6. In conjunction with various work centers, staff are conducting a market survey to identify which eSignature application best suits HRSD's business needs. Currently, users occasionally make use of the eSignature capability in currently licensed products (e.g., Microsoft O365 and Adobe Acrobat). Before selecting a standardized solution for HRSD, a business process needs analysis is being completed. This will ensure a "one-size-fits-all," standards-based, solution.

B. Strategic Planning Metrics Summary

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

3. Metrics Summary

Item #	Strategic Planning Measure	Unit	February 2023
M-1.4a	Training During Work Hours Per Full-Time Employee (54) – Current Month	Total Training Hours / # FTE	1.37
M-1.4b	Total Training During Work Hours Per Full-Time Employee (54) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	18.61
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0

Respectfully,
Don Corrado

TO: General Manager
FROM: Director of Operations
SUBJECT: Operations Report for February 2023
DATE: March 20, 2023

A. Interceptor Systems

1. North Shore (NS) Interceptors

- a. The Supervisory Control and Data Acquisition (SCADA) project progression continued in February with several factory acceptance tests, site cutovers and global changes performed.
- b. There were no Sanitary Sewer Overflows (SSOs) this month.
- c. There were no odor complaints, one interceptor complaint, and six system alarms during the month. The complaint was investigated and found not to be HRSD's infrastructure. The system alarms were all relatively minor and fully resolved by NS Operations staff.
- d. There were zero Miss Utility "No Shows" and three afterhours emergency tickets reported for the month.
- e. NS Operations and Engineering staff continue to support the numerous capital project under design and construction.
- f. Staff conducted a site visit to Clemson Engineering Hydraulics in Anderson, South Carolina to witness a physical model performing hydraulic testing on the proposed design for the future Boat Harbor Pump Station (PS). The testing went well and only minor changes were proposed to the Intermediate PS.
- g. Staff completed the review of all existing and newly proposed Capital Improvement Program (CIP) projects for the upcoming fiscal year (FY) budget.

2. South Shore (SS) Interceptor Systems

- a. There were no SSOs this month.
- b. There were no odor complaints reported this month.
- c. There were zero Miss Utility "No Shows" reported this month.
- d. There were four interceptor complaints reported this month. One issue was with the City of Virginia Beach Public Utilities Department and two issues were with the City of Portsmouth Public Utilities Department. Staff responded and resolved the minor issues. On February 24, a City of Virginia Beach resident called to report a broken valve lid at the intersection of South Independence Boulevard and Jericho Road. Staff replaced the valve lid and sealed it with epoxy.

- e. Staff responded to and resolved nine system alarms this month.
- f. On February 3, staff assisted the City of Chesapeake Department of Public Utilities staff with a force main failure repair by operating a system valve.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP), Virginia Initiative Plant (VIP), Treatment Projects Team (TPT) (ACV Group)

a. ABTP

- (1) ABTP staff met all Virginia Pollutant Discharge Elimination System (VPDES) permit requirements with no odor complaints.
- (2) ABTP had one exception for failing to record two valid Total Hydrogen Carbon (THC) readings per hour. The cause was low levels of helium in a helium bottle preventing proper calibration.
- (3) ABTP had one regulatory report for malfunctioning odor control system. The malfunction was due to an instrumentation failure.
- (4) Incinerator #1 is down awaiting substantial repairs.
- (5) Incinerator #2 is down waiting to be cleaned and thoroughly inspected to address substantial repairs.
- (6) Staff have been working to utilize the alternate cake chute to load out and haul dewatered solids to other facilities. This is being conducted so repairs can be completed within both incinerators. Plant staff are currently utilizing two North Shore Interceptors dump trucks to haul away solids, however the operation will transition to a contractor in March pending repair efforts.
- (7) Lead Operator and Maintenance Operator vacancies were filled this month.
- (8) Staff installed a new eductor on the secondary clarifier #3. The eductor replaced the old foam pumps.
- (9) The contract for the Chlorine Contact tank gate repair will be awarded in March.

b. VIP

- (1) VIP staff met all Virginia Pollutant Discharge Elimination System (VPDES) permit requirements with no odor complaints.
- (2) There were two reportable events for low chlorine residual levels in the contact tank effluent. The first event occurred on February 13, when staff

secured hypochlorite feed to the secondary clarifier weirs for special testing and did not increase contact tank hypochlorite dosage quickly enough to compensate. This resulted in three consecutive residuals less than 0.30 mg/L, with one residual less than 0.10 mg/L. The second event occurred on February 21, when staff were making repairs on the contact tank hypochlorite lines. This resulted in one effluent residual less than 0.10 mg/L.

- (3) Ammonia-Based Aeration Control (ABAC) is operating at a dissolved oxygen low-end setpoint of 0.5 mg/L, ortho-phosphate setpoint of 2.5 mg/L and ammonia setpoint of 1.50 mg/L. The average DO level in the aeration tanks was 0.9 mg/L for February. No supplemental carbon chemical addition was used for denitrification.
- (4) Incinerator #1 is in service, and Incinerator #2 is on standby, pending repairs.
- (5) Staff performed repairs on two primary solids pumps and the biosolids receiving conveyor system.
- (6) The Operations Project Team worked with maintenance staff to replace underground caustic tubing for the headworks and the Preliminary Treatment Facility (PTF) odor control system.
- (7) One primary clarifier rebuild was completed with assistance from the Operations Project Team. Another primary clarifier is under repair, pending parts delivery.
- (8) One dewatering centrifuge was returned after being rebuilt and is back in service.

c. TPT

- (1) Supported the Williamsburg Treatment Plant (WBTP) by performing operations and maintenance on the dewatering unit.
- (2) Supported the Onancock Treatment Plant (OTP) with maintenance activities.
- (3) Completed Atlantic Treatment Plant's (ATP) re-pipe drain line for D-gas booster.
- (4) Completed the repairs on the VIP storm drainpipe.
- (5) Completed Chemical tubing replacement to high water chemical scrubber at VIP.
- (6) Completed installation of Non-Potable Water (NPW) hose reels for Gravity Belt Thickener's (GBT) at Nansmond Treatment Plant (NTP).

- (7) Began installation of new primary sludge pump and motors #1 & #3 at WBTP.
- (8) Began installation of new digester blowers at West Point Treatment Plant (WPTP).
- (9) Completed WPTP new discharge piping on digester #1 & #2.
- (10) Completed replacement of three-yard hydrants WPTP.
- (11) Continued scoping and planning efforts for future projects.

2. Atlantic (ATP), Boat Harbor (BHTP), and Nansemond (NTP) Treatment Plant (ABN Group)

a. ATP

- (1) The plant met all VPDES permit requirements.
- (2) There were five odor complaints in February. Staff continue to work with Technical Services Division (TSD) to identify and mitigate off-site odors.
- (3) Staff along with a consultant (Black and Veatch) started engineering efforts on the ROCI (Reliability and Odor Control Improvements) upgrade.
- (4) There was one reportable spill event this month. On February 11, contact tank #3 developed a leak at an expansion joint. Upon discovery, staff took the tank out of service, an RRF (Regulatory Reporting Form) was completed and Permits Manager Lauren Grimmer was notified. Staff estimated that 150 gallons of chlorinated Final Effluent (FNE) leaked into the ground and was unrecoverable. A contractor has repaired this leaking expansion joint.
- (5) On February 27, the City of Virginia Beach inspected a stormwater site. Staff provided all required documentation as well as a site tour to the inspector. The final report is expected in a few weeks.
- (6) Staff continue working with the contractor installing the solids receiving station to accommodate the ABTP liquid solids. This project should be complete by the end of 2023.
- (7) The digester fire panel alarmed on February 6, dispatching the fire department. Staff were unable to clear the alarm which resulted in the fire marshal placing the plant on fire watch until the issue could be resolved. Staff contacted a contractor (Summit fire) to address the issue. It was found that the panel had a bad pull box and a bad duct detector. The replacement parts were ordered and a temporary fix is currently in place. Staff continue working with contractors and other HRSD personnel to prevent these panels from alarming and dispatching the fire department.

- (8) The curing pilot for biosolids continues on the South pad. This phase is nearly complete with total solids (TS) values currently at 55%. Once the data indicates that the solids are no longer drying out the current phase will end. Phase three will evaluate the stability of the cured biosolids as well as variables that may optimize the curing process.
- (9) Treatment Process Engineers (TPE) are working with Electrical & Instrumentation (E&I) staff to construct a pilot project in the basement of the Digester Solids Storage Tank (DSST) that will inform design decisions for the ROCI project upgrades. This pilot will evaluate the benefits of post-aerobic digestion and precipitation of phosphorous containing compounds within the DSST to potentially improve odors at the pads, increase polymer savings at final dewatering, and protect downstream equipment from struvite scale, among others. TPEs continue to onboard the first intern who will work on this project for their Master's thesis.
- (10) A contractor replaced a bad bearing for blower #1 and this blower is now operational.
- (11) A contractor started working on a trench between Odor B and Odor D. The chemical tanks at odor B need replacement. However, instead of replacing these tanks, the trench will allow us to use the storage tanks at odor D to feed chemicals to both odor D and odor B.
- (12) Staff started performing Preventative Maintenances (PMs) and cleaning of the odor D scrubber system. Train two has been completed, train three is in progress and train four will be completed in March.
- (13) Staff cleared drains at waste gas burners and gas booster buildings this month. This will allow odorous condensate from the digester gas system to drain more rapidly and should reduce the potential of off-site odors from condensate and methane gas piping.
- (14) The influent gate for #2 secondary clarifier separated from the operating stem. Staff were able to get the stem reconnected to the gate.
- (15) Staff cleaned out the primary scum concentrator and added a new bubbler line so that primary scum removal can be automated via Distributed Control Systems (DCS).
- (16) Staff rebuilt #3 final dewatering centrifuge and placed it back in service.
- (17) Pre-dewatering centrifuge #2 main drive motor is making noises that sound like bearings are going bad within the motor. Pre-dewatering centrifuge #3 has a bad Variable Frequency Drive (VFD) and the lead times for a new VFD is 3 months. Staff are developing a contingency plan in the event the #2 centrifuge motor fails before #3 centrifuge is repaired.
- (18) While staff were performing a PM to open and close the gate on inverter power for the influent screening's bypass channel, it malfunctioned, and

the actuator was damaged. Staff were able to repair the gate but now must investigate and fix the issue that caused this malfunction.

- (19) A contractor completed the coating work for digester #4 cover. Once the contractor removes their equipment; the digester will be placed back in service.
- (20) Odor B recirculation pumps failed this month due to a bad wire. The age and condition of this odor control system is making it difficult to maintain, which is why it is included in the ROCI Project for evaluation and upgrades.
- (21) #2 chlorine mixer failed on February 27 due to a bad motor. This mixer was placed in service about six weeks ago. Staff are contacting the vendor to follow up on the warranty.

b. BHTP

- (1) No odor complaints were reported.
- (2) No MACT 129 deviations occurred in the month.
- (3) One THC reportable event occurred during the month. On February 1, the THC unit failed calibration and staff called the vendor (STI) representative to address the issue. The unit is now running properly.
- (4) A contractor completed repairs on the bull gear for secondary clarifier #5 which is an integral component of the rake system. Staff placed the tank back in service after almost a year of downtime.
- (5) Programming and preparations for the side stream upgrades at BHTP continued this month. Plant leadership and the TPE met with the plant operators to explain the plan for testing the effectiveness of the upgrades this year to prepare for the delays in completing the BH pump station that is necessary to send flows to NTP.
- (6) The new side stream process pumps were tested and determined to operate at the expected design points. However, one of the pumps is significantly louder than the other. The root cause is currently unknown. In addition, the piping for the second pump is shaking due to the impact from the biological process mixers. The piping will be cut to minimize the length below the liquid level and supports will be added to resolve this issue.
- (7) Staff worked with the TPE and Industrial Automation Programmers to program new hypo control for BHTP. Plant leadership and the TPE met with operators to explain the program and answer questions. Optimization of the program will continue into next month.

c. NTP/Sustainable Water Initiative for Tomorrow (SWIFT) Research Center (RC)

- (1) The plant met all VPDES permit requirements.
- (2) There were no odor exceptions or odor complaints during the month.
- (3) There were no reportable events for the month.
- (4) The total volume of SWIFT recharge into the Potomac aquifer for the month of February was 8.99 million gallons (MG) (34.5% Recharge Time based on 650gpm).
- (5) Contractors continue construction of the Fats, Oils and Grease (FOG) handling facility, with a new estimated completion date of May 2023.
- (6) On February 8, staff replaced the sanitary drain well pump with a chopper pump to try to reduce clogging of the pump with debris.
- (7) On February 17, the odor control train #2 scrubber fan motor failed. Plant maintenance staff removed the motor from train #1 and installed it on train #2 awaiting the delivery of a new motor.
- (8) Staff continue to make progress on the Chlorine Analyzer (CL17) effort, adding robustness to the instrument itself and the processes that will protect the plant from permit exceptions. This month, it was observed that the pond diversion program did not work as intended when the CL17 began measuring low residual concentrations. The pond influent diversion valve opened, but the effluent valve did not close and therefore, reject water was allowed to short circuit. Staff are working with the Industrial Automation Programmers to put measures in place to prevent this from happening in the future.
- (9) Efforts began this month to create a sensor/analyzer training program for NTP operators. The format will resemble the CL17 training in Canvas. Jarbalyzers will be the first analyzer/sensor that will get included in the training program. Operators will have to review the training/course material and complete quizzes to demonstrate proper understanding. The intention is to expand this same type of training to the biological process controllers.
- (10) While operating only one Granular Activated Carbon (GAC) vessel during the beginning of the month, SWIFT went out of the water quality range due to the detection of Perfluorooctanoic Acid (PFOA) on SWIFT Water™. Operations transferred from discharging to the recharge wells back to the outfall until this was corrected.
- (11) On February 8, the GAC media on vessel #1 was replaced and took about five days for conditioning by performing several backwashes to remove small carbon fines, to adjust pH, and to ensure turbidity was within the operating parameters.

3. James River (JRTP), Williamsburg (WBTP), and York River (YRTP) Treatment Plant (JWY Group)

a. JRTP

- (1) The plant met all VPDES permit requirements.
- (2) There were three reportable wastewater events and one odor scrubber deviation. Two wastewater events were caused by a contactor excavating next to pipes. One incident was a non-potable water line break resulting in the release of 500 gallons and the other was a drain pipe break resulting in the release of 30,000 gallons of chlorinated effluent with some floatable solids. None of these releases were recovered with flows to the ground or down storm drains. The third event was about 400 gallons of foam exiting Integrated Fixed Film Activated Solids (IFAS) tanks during increased flows from a rain event. All but 10 gallons was recovered. The odor scrubber deviation was a scrubber effluent discharge over two parts per million (ppm) due to chemical optimization efforts.
- (3) The contractor drilling on-site wells worked on wells near the solids holding tank, shoreline, and the northwest corner of Riverview Farm Park.
- (4) The contractor working on the Advanced Nutrient Removal Improvements (ANRI)/SWIFT Project continued setting sheet piles for the new #1 secondary clarifier. Sheet piles were also set where the new return activated solids building will be located. Forms were installed at the IFAS effluent of tanks #1, #2, and #3 to construct the new IFAS effluent channel.,
- (5) Work continued on the foundation for buildings #1 and #2 at the SWIFT location, the main power supply building, and SWIFT equalization and moving bed bioreactor tank.
- (6) The contractor working on the Shoreline Stabilization project set timber piles and leveled the bank in preparation for constructing the trail.

b. WBTP

- (1) The plant met all VPDES permit requirements.
- (2) There were no reportable wastewater events, one reportable air event, one incinerator deviation, and nine odor scrubber deviations. The air event was a use of the incinerator emergency bypass stack due to loss of the induced draft fan. The incinerator deviation was a failure of the total hydrocarbon meter to record two valid readings per hour due to calibration issues. The odor scrubber deviations were effluent exhaust hydrogen sulfide readings over two ppm due to control parameters needing adjustment, low chemical feed, or equipment failure.

- (3) The contractor continued work on the Administration Building Renovation Project which is expected to be complete in April 2023.

c. YRTP

- (1) The plant met all VPDES permit requirements.
- (2) The contractor working on the Administration Building Renovation Project installed rebar and set forms for constructing the walls on the main expansion, northwest of the existing administration building.

d. Multiple Hearth Incinerator (MHI) Operations Events Summary

- (1) All plants (Army Base, Boat Harbor, Virginia Initiative, and Williamsburg) met the 100 PPM THC limit with continuous emissions monitoring valid data captured of greater than 81%.
- (2) The MHIs had no deviations from the required 129 Sewage Sludge Incineration (SSI) rule minimum operating parameters and one minor bypass events (<60 minute).

C. Small Communities (SC) Division (SCD)

1. Middle Peninsula

- a. There was one SSO in the Middle Peninsula System. On February 8, a utility access manhole in the King William service area overflowed due to a contractor blocking the pipe with construction material. HRSD staff pumped the surcharged utility access manhole to stop the potential for future spills from this service area. The area was cleaned, and lime applied to the spill area. Approximately 70 gallons of raw wastewater went into a storm drain to Moncuin Creek.
- b. There were no odor complaints and no collection system complaints.
- c. There were zero Miss Utility “no shows” and five after-hour emergency tickets for the month.
- d. Four new single-family home connections were made in February.
- e. There may be a possible monthly average BOD exceedance for February but at the time of this report the final monthly values have not been received. BOD levels were elevated due to treating excess pond water after having to utilize the pond discharge valve several times during repairs. A clean-in-place was performed on the tertiary filter on March 1 and should also improve BOD removal.

f. West Point Treatment Plant (WPTP)

- (1) On February 9, the number two secondary clarifier overflowed overnight when two Tertiary Filter Pump Station wet well pumps tripped. The third pump is currently out of service pending repairs. The fail safes including a

power monitor and a float to discharge to the pond both failed during this event. Staff were able to correct the issue and place everything back in service shortly afterwards. E&I staff repaired the failed float on the number two secondary clarifier and staff completed the wiring and programming for the automatic valve between the contact tank and the tertiary filter pump station. Approximately 90,000 gallons of secondary clarifier effluent overflowed, with approximately 1,600 gallons recovered; the remaining 88,400 gallons drained to the Mattaponi River.

- (2) On February 14, staff were replacing a leaking yard hydrant on plant site and hit an electrical conduit while excavating. The broken conduit led to most of the treatment plant losing power, except for the tertiary filter pump station and one effluent pump station pump. From 11:30 a.m. to 12:00 p.m. the chemical building was without power, and effluent was being discharged during this time. Given the 30-minute duration of this event, water discharge was chlorinated and processed through the contact tank, but residuals would have been lower than normal. Dechlorination did not occur. The plant operator opened the bypass valve at the headworks of the plant to send flow to the storage pond. At 12:00 p.m. staff realized that one of the effluent pumps and the tertiary filter pump station still had power and manually turned them off. E&I staff were able to restore power to the plant shortly after, and the bypass valve was closed. Chemical feeds were restored and verified prior to discharge resuming at 12:55 p.m.
- (3) On February 23, staff found water coming from the ground near the plant entrance. The release occurred from a two-inch air vent riser pipe with a half inch-diameter hole caused by corrosion. Staff diverted flow to the plant equalization pond and began shutdown procedures at 1:40 p.m. Staff removed the damaged riser and will rebuild the air vent once parts arrive. Plant flow was restored, and start-up procedures began at 10:10 p.m. Approximately 2,450 gallons of final effluent were released to the ground and finally to the Mattaponi River.
- (4) Staff spent considerable time updating the Operations and Maintenance (O&M) Manual for the Department of Environmental Quality (DEQ) five-year plant inspection. DEQ has received and reviewed the updated O&M and have no comments or concerns.
- (5) SCD staff repaired a misaligned joint on a gravity sewer main in the town of West Point.

g. King William Treatment Plant (KWTP)

- (1) Staff completed Clean in Place procedures on the plant membranes.
- (2) Staff inspected McCauley Park subdivision gravity system for debris after the spill on February 8. Multiple utility access manholes had debris from road paving that the contractor removed.

h. Mathews Collection System

- (1) There were multiple service calls on the vacuum system and several repairs were made, and blockages cleared.

2. Surry Systems

- a. There were no SSOs this month.
- b. There were no odor complaints and no collections system complaints.
- c. There were zero Miss Utility “no shows” and no after-hour emergency tickets reported for the month.
- d. Sussex Sewer Authority (SSA) staff salvaged everything of value from the town treatment plant for start of demolition and the county plant tanks are currently being cleaned for future demolition as well.

3. Lawnes Point (LP)

- a. There were no SSOs this month.
- b. Pump and haul operations continue. A contractor (Atlantic Heating and Cooling) performed four days of pump and haul of the Sequential Batch Reactor (SBR) tank this month.

4. Eastern Shore (ES)

- a. There were no SSOs this month.
- b. There were two permit exceedances for the month. At the Nassawodox Treatment Plant, a Total Suspended Solids (TSS) value was 24.4 mg/L which is above the permitted weekly average of 23 mg/L. Also, the monthly average value came in at 18.2 mg/L above the 15 mg/L permitted level. These elevated TSS levels were from algae growth in the clarifiers and lagoon. Measures were taken to control algae and the TSS values have greatly improved.
- c. There were no odor complaints and no collections system complaints.
- d. There were zero Miss Utility “no shows” and seven after-hour emergency tickets reported for the month.
- e. Onancock Treatment Plant (OTP)
 - (1) SS Interceptors provided a Vactor Truck and staff to assist plant personnel with cleaning the grit from Aeration Basin #1 in preparations to placing it back in service.
 - (2) Staff replaced broken diffusers on Membrane #2 Cassette and pulled Membrane #3 Cassettes for inspections.

- (3) A Gate Card Reader and a security camera were installed at the plant entrance.

f. Nassawadox Treatment Plant

Staff took extra measures to control algae growth and get the effluent TSS levels back below permitted values.

g. Chincoteague Treatment Plant

Planning is underway for HRSD to assume ownership of the package plant in early 2023.

D. Electrical & Instrumentation (E&I)

1. Staff submitted the Dominion Energy (DE) Interconnection Agreement (IA) application for the James River (JR) Sustainable Water Initiative for Tomorrow (SWIFT) Project. A meeting with DE will be scheduled to determine next steps to prevent any scheduling delays.
2. Staff worked with consultant HDR to finalize the design drawings and specifications for VIP Motor Control Center (MCC) replacement Capital Improvement Project (CIP). This month, 100% drawings and preliminary contractor submittals were reviewed and comments provided.
3. Staff worked with contractors HDR and IFCO on burner replacements for both Incinerators at VIP. Work involved verifying control drawings and submittal reviews, as well as answering questions about equipment and conduit needs.
4. Staff and electrical contractor REW Corporation met at WPTP to discuss the replacement of two feeder cables that serve the lab and effluent pump #2, respectively. The cables were damaged while staff were excavating to replace a water hydrant.
5. Staff coordinated with contractor E.T. Gresham for the replacement of medium voltage (MV) feeder cables that were spliced for the YRTP Administration Project.
6. Staff connected a temporary generator due to an issue discovered by the Automotive Shop during routine preventive maintenance (PM) of the permanent generator at Rolling Hills Pump Station (PS). Automotive staff are coordinating with Carter Cat, the generator manufacturer, to resolve the automatic start issue. A replacement controller was ordered.
7. There were periodic and intermittent SCADA communication failures at Oak Grove PS in West Point. After several days of troubleshooting, staff determined that the direct communication path between the Oak Grove PS and WPTP Front End Processor (FEP) are no longer possible, (specific reasons unknown). Oak Grove communications are now "hopped" or redirected through the Pamunkey PS and forwarded to the WP FEP. Program and antenna changes were made at both PS's to facilitate this change.

8. Staff worked with CEC and Systems East Inc. (SEI), the contractors, and Interceptor Division staff to update the existing controls to the new SCADA Remote Terminal Unit (RTU) controls at Independence Pressure Reducing Station (PRS), Windsor Pressure Control Valve (PCV), and Dominion/Cedar Road PS. In addition, proposals for four more station cutovers are under review.
9. Staff assisted contractors with the SCADA upgrade at various locations. Staff also installed a temporary SCADA alarm panel to provide alarming at Greens Springs PS while the station was being cut over to the new system.
10. Staff coordinated with (NS) Interceptor staff and electrical contractor Infralogix to schedule two remaining PS thermographic inspections that were not completed in Fall 2022. The original schedule was postponed due to construction at Kingsmill PS and contractor gate access issues at Fort Eustis. This completes inspections for NS stations and reports are forthcoming.
11. The IAPs participated in the successful completion of cutover testing for the new Ovation SCADA System at Independence PRS, Fords Colony PS, Windsor PCV, and Dominion/Cedar Road Pressure Monitoring Site (PMS). The final site testing was completed by SEI staff, CEC Staff, Emerson staff, IAPs, E&I staff, and Interceptor Systems staff. These sites are now active on the new Ovation SCADA systems.
12. Staff installed a Flexim portable flow meter to verify flow measurements at Kempsville Road PRS and Atlantic PRS. As a result of these efforts, they were able to confirm the accuracy of the permanently installed flow meter at Kempsville Road PRS. In addition, they determined the erratic flow measurements were attributed to loose connections on the direct burial flow meter at Atlantic PRS. Staff tightened the loose connections and the flow meter operated as designed.
13. Staff assisted Automotive with diesel generator load bank testing at Camden Avenue, Chesapeake Boulevard, Copeland Park, Freeman Avenue, and Luxembourg PSs. The generators operated as designed and were returned to service. The generator at Fort Eustis PS will be load banked after replacement of the controller.
14. Staff experienced a power outage on the main server equipment while performing the monthly generator PM test run at the South Shore (SS) Main Complex. The Uninterrupted Power Source (UPS) system failed to maintain power to the critical server equipment. This occurred during the transfer of power from utility to generator and back. Power was restored and all server equipment was brought back online. Investigation continues into the cause and prevention of this failure.
15. Staff responded to five SCADA communication failures, and five Telog communication failures. A communication failure is defined as a total loss of communication at a site that may require staff to respond to the site location during and/or after normal working hours. Staff responded and addressed the minor failures.
16. Staff met with Prince George Electric Cooperative (PGEC) and School Administrators onsite to determine the best route for the new electrical service to feed the future PS located behind Surry County High School. The route was finalized and PGEC will generate a costing letter for Hampton Roads Sanitation District (HRSD's) approval.

17. Staff placed arc flash labels on equipment at Industrial Park PS located in Dendron, Virginia (VA).

E. Support Systems (SS)

1. Facilities Maintenance (FM)

- a. Renovation of the electrical shop at ATP continues. The HVAC contractor installed a 5-ton HVAC unit. They are awaiting the electrical contractor to install a new breaker so the startup can be performed. The contractors were delayed so the drywall will be ready for paint the week of March 6, along with the installation of the suspended ceiling in mid-March.
- b. The Carpentry Shop (CS) reconfigured two offices at 1434, as well as primed and painted walls at Independence Blvd. CS also repaired wall damage for conference rooms at both VIP and ATP.
- c. The Machine Shop (MS) had a total of 18 projects with four pump rebuilds. There were two notable projects for February. The first is making 30 custom Teflon strainers for TSD that are used for sampling and to be sold to other municipalities around the country. The second was assisting the Automotive Shop with extracting a broken bolt in the intake manifold that was a part of the Exhaust Gas Recirculation (EGR) system for one of our fleet trucks.

2. Infrastructure Assessment (IA)

- a. Staff continue to work with TSD and the Automotive Superintendent on the transition of Underground Storage Tanks (UST) inspections to the IA group.
- b. The Concrete Coatings staff oversaw several coating and concrete rehabilitation projects at ABTP, BHTP, and NTP. Staff completed rehabilitating two steel equalization tanks for SCD County Line PS and two at the Beaver Damn PS.

3. Material Transportation & Logistics (MTL)

The Material Transportation and Logistics work center is now official with the promotion of Garrett Clower as the new Transportation Superintendent. Garrett is currently assisting NTP a few hours each week until his Lead Operator position is filled.

F. Resource Recovery (RR)

1. Methane reduction: Planning with Interceptor System (IS) staff are working on the implementation of the Proof-of-Concept of flaring high methane. This will include addressing safety concerns, familiarizing staff with the flare, and discussing the flare specifications. The next step is to field test the flare and provide adequate discussion for IS staff to feel comfortable before performing the test. This could include site visits to work centers that currently have flares and having a question and answer with the flare manufacturer.
2. Greenhouse Gases: Staff developed a spreadsheet with all the required data to calculate HRSD's Metric for Alternate Energy.

3. HRSD KPI: Staff met with stakeholders to automate the data entry process and to create one spreadsheet utilized for calculating HRSD's Alternate Energy.

G. Water Technology and Research

HRSD will be subjected to much more stringent phosphorus (P) limits for our plants discharging into the James River in incremental decreases in permit limits in 2028, 2030, and 2032. Improved P removal can be achieved by very efficient removal/polishing of suspended solids prior to discharge. This is typically known as tertiary filtration and removes particulate P remaining in the secondary effluent. This process already exists at the York River, King William, and Onancock treatment plant (OTP), and it makes sense given that these plants already have total phosphorus (TP) treatment objectives of about 0.3 mg/L. In addition to removing particulate P, we must also improve the efficiency of removing ortho-phosphate (OP). This can be achieved by chemical precipitation using iron or aluminum salts, but it is expensive in terms of chemical cost, solids production, capacity utilization, and alkalinity consumption. All our large plants are reliant to a large degree on biological P removal (bioP) to remove OP, and this process is sustainable and economical. Unfortunately, bioP is not always reliable, and there are numerous considerations that impact the efficiency of this process. Unlike other biological processes, warm wastewater temperatures in the summer tend to impact bioP. Other factors include sidestream recycle P load management and saltwater inflow and infiltration. Looking ahead, staff will be focusing more on optimizing the efficiency of bioP in preparation for new treatment limits. As an example, we are evaluating at both pilot- and full-scale the benefits of low dissolved oxygen operation in summer months as a means of improving warm temperature bioP.

SWIFT recharge is also a significant benefit for P removal requirements because it effectively removes that P load from the final effluent. In addition, SWIFT treatment provides very good OP and particulate P polishing for achieving very low levels of effluent TP due to the combination of coagulation with aluminum salts and biofiltration.

H. 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	3	4	3	2	3	5	4				
2.7	# of PS Annual PMs Performed (SS)	3	6	7	8	3	1	2	2				
2.7	# of Backup Generator PMs Performed (Target is 4.6)	17	15	10	13	16	12	15	12				
2.8	# of FM Air Release Valve PMs Performed (NS)	105	192	136	181	403	337	184	305				
2.8	# of FM Air Release Valve PMs Performed (SS)	8	193	135	98	149	131	258	241				
2.9	# of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD)	2,685	4,501	4,298	2,197	3,549	3,935	5,602	1,553				
2.9	# of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD)	0	6130	7044	14,051	6,967	0	8,964	13,303				
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	0	10,896	11,845	17,293	17,293	0	2,274	0				

I. Strategic Measurement Data

1. Education and Outreach Events: 6

- a. 02/03/2023 – SWIFT staff provided a tour for the “One water” Nevada team
- b. 02/08/2023 – ATP Plant staff provided a tour for Commonwealth Challenge Academy
- c. 02/13//2023 – News Channel 3 report on flushable vs. non flushable material. – Riley Riggins, Matt Poe, Lacie Weaver, John Farley
- d. 02/21/2023 - Middlesex Elementary School Engineers Week - Jeremiah Bulford
- e. 02/22/2023 - Eggdrop contest at Crossroads Middle School - Thomas Chappell and Sami Ghosn
- f. 02/28/2023 – Water Environment Federation (WEF) winter meeting - Germano Salazar-Benites

2. Community Partners: 9

- a. Atlantic Treatment Plant Roundtable Group, OLHS, OL Neighborhood, Lynnhaven River NOW, City of VB, Navy
- b. Accomack County
- c. Chesapeake Bay Foundation
- d. DOE Jefferson Lab
- e. Ocean Lakes (OL) High School
- f. Old Dominion University (ODU)
- g. Town of Parksley
- h. Norfolk Public Schools
- i. Middlesex County Public Schools

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	February 2023
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (524) – Current Month	Hours / FTE	2.86
M-1.4b	Total Training During Work Hours per FTE (524) – Cumulative Year-to-Date	Hours / FTE	20.05
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	27,996.26
M-2.3b	Planned Maintenance – Preventive and Condition Based	percent of Total Maintenance Hours	57.06%
M-2.3c	Planned Maintenance - Corrective Maintenance	percent of Total Maintenance Hours	20.85%
M-2.3d	Planned Maintenance - Projects	percent of Total Maintenance Hours	22.08%
M- 4.1a	Energy Use: Treatment	kWh/MG	2,569
M-4.1b	Energy Use: Pump Stations	kWh/MG	262
M-4.1c	Energy Use: Office Building	kWh/MG	101
M-5.2	Educational and Outreach Events	Number	6
M-5.3	Number of Community Partners	Number	9

Respectfully submitted,
Eddie M. Abisaab, PE
 Director of Operations

TO: General Manager

FROM: Director of Talent Management (TM)

SUBJECT: Monthly Report for February 2023

DATE: March 15, 2023

A. Talent Management Executive Summary

1. Recruitment Summary

Current Vacancies	47
New Recruitment Campaigns	10
Job Offers Accepted – Internal Selections	7
Job Offers Accepted – External Selections	20
Internal Applications	30
External Applications	114
Average Days to Fill Position	190

2. Employee Separation Summary

	February 2023	Total (April 2022-February 2023)
Career/Better Opportunity	2	19
Content of work	2	5
Family circumstances	0	5
Dismissal	1	9
Going to school	0	1
Lack of Opportunity for Advancement	0	1
Moving from the area	0	5
Salary	0	5
Retirement	3	15
End of Assignment (PT)	0	23
Administrative Separation	0	2
Unknown	0	1

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

Description	February 2023	Total (March 2020 – February 2023)
Quarantines due to illness or direct exposure (household or external)	0	452
Work Related Quarantines	0	106
Personal Travel Quarantines	0	61
Confirmed Employee COVID-19 Cases	1	330
Work Related Confirmed COVID-19 Cases	0	13
Contractor COVID-19 Cases on HRSD Sites*	0	12
Work Related exposure no quarantine required*	1	91
Vaccine Acknowledgements	5	907
Booster Acknowledgements	14	488
Vaccination Rate	93%	
Boosted*	44%	

*Added May 2022

4. HRSD continued work with the consultant on system changes to benefit interfaces and benefit plan changes.
5. Benefits and Compensation
- a. Held a final renewal meeting for health benefits with MMA.
 - b. Preparation is underway for the scope of work for the compensation RFP process with a final report date from the selected vendor of January 1, 2024.
6. Wellness Program
- a. Participation

Year Ten Participation Activities	Unit	February 2023	Year to Date (March 2022– February 2023)
Biometric Screenings	Number	329	555
Preventive Health Exams	Number	328	506
Preventive Health Assessments	Number	167	512
Online Health Improvement Programs	Number	0	N/A
Web-MD Online Health Tracking	Number	0	N/A
New Challenges (Previously HIP)	Number	0	442
Fit-Bit Promotion	Number	0	N/A
WellSpark Challenges - Healthy Heart Challenge (ends Feb. 27 th)		212 enrolled	

- b. The WellSpark Wellness Specialist) conducted a virtual presentation on *Stress Hardiness* to the HRSD Leadership forum with a total of 30 employees in attendance.
 - c. Presented the wellness program during New Employee Orientation (NEO) to 8 new employees.
 - d. Continued one-on-one conversations with employees to answer questions and administered 24 biometric readings, 25 individual wellness meetings, and gained one new employee in coaching.
 - e. Reached a total of 88 employees through the engagement activities mentioned above.
7. Organizational Development and Training (ODT):
- a. Worked with consultant Hicks-Carter-Hicks (H-C-H) and the HRSD sponsor on several Diversity, Equity, and Inclusion (DE&I) initiatives. Conducted the final Leadership and Management Academy (LAMA) workshop on Inclusion.
 - b. Facilitated the full day Your Role in Quality (YRIQ) workshop.
 - c. Worked with consultant H-C-H on executive coaching. Interviewed certified coach to begin an executive coaching partnership.
 - d. Continued work on the Corporate Training software. We are currently reviewing courses to finalize offerings.
 - e. Continued work with the Customer Care Division to curate online learning paths and integration of available Corporate Training courses.
 - f. Continued work with the Water Quality Department to increase quality assurance training courses.
 - g. Began a new initiative with the Water Quality Department to facilitate several focus groups around the topic of communication.
 - h. Continued to work with a cross-departmental team to advance the functionality of Canvas.
8. Apprenticeship Program
- Work continued on the following:
- a. Apprenticeship Mentoring Program
 - b. Building and structuring a day Apprenticeship Program
 - c. Developing Standard Operating Procedures for ODT responsibilities

- d. Trade curricula revisions and course development to update and enhance course offerings

9. Safety

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

	<u>2022</u>	<u>2023</u>
Mishaps	36	2
Lost Time Mishaps	4	0
<i>Numbers subject to change pending HR review of each case.</i>		

10. Safety Division Monthly Activities

Safety Training Classes	22
Work Center Safety Inspections	6
Reported Accident Investigations	1
Construction Site Safety Evaluations	8
Contractor Safety Briefings	12
Hot Work Permits Issued	0
Confined Space Permits Issued/Reviewed	61
Industrial Hygiene Monitoring Events	2

B. Monthly Strategic Planning Metrics Summary

1. Education and Outreach Events: (13)

- a. 2/1/2023 Ft. Eustis Transition Assistance Program (TAP)
- b. 2/3/2023 Virginia Beach Vocational and Technical School
- c. 2/3/2023 Norfolk Vocational and Technical School
- d. 2/8/2023 Great Bridge Technical Education Career Event
- e. 2/9/2023 Hampton University Spring Career Event
- f. 2/14/2023 Veterans Employment Center, Newport News
- g. 2/15/2023 College and Career Fair Great Bridge
- h. 2/15/2023 VEC Workforce Wednesday
- i. 2/17/2023 Veterans and Military Spouse Employer Panel
- j. 2/23/2023 Langley Resume Review Session and Veterans Career Summit
- k. 2/27/2023 Langley Transition Assistance Program (TAP)
- l. 2/28/2023 Veterans Employment Center, Newport News
- m. 2/28/2023 TCC Career Fair

2. Community Partners: (7)

- a. Career and Technical Education (CTE) Advisory Board, Suffolk Public Schools
- b. City of Chesapeake Public Schools
- c. City of Newport News
- d. City of Virginia Beach Public Schools
- e. Organizational Development Regional Committee

- f. Virginia Career Works
- g. Virginia Employment Commission (VEC)

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	February 2023
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.97
M-1.1b	Employee Turnover - Service Retirements	Percentage	0.36%
M-1.4a	Total Training Hours Per Full Time Employee (18)	Total Training Hours/ FTE	0.83
M-1.4b	Total Training During Work Hours Per Full Time Employee (18) – Cumulative Fiscal Year-to-Date	Hours / FTE	15.86
M-5.2	Educational and Outreach Events	Number	13
M-5.3	Community Partners	Number	7

Respectfully submitted,

Dorissa Pitts-Paige
 Director of Talent Management

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

A. General

1. No civil penalties were issued by the Pretreatment and Pollution (P3) Division in February.
2. Laboratory Manager, Ashley Roberts, winner of the 2022 Water Environment Federation (WEF) Analyst Award, was interviewed for a spotlight in Treatment Plant Operator Magazine. Highlights include her professional experience, educational background, outreach, and future initiatives.
3. Central Environmental Laboratory (CEL), Technical Services Division (TSD), and Nansemond Treatment Plant (NTP) staff have completed testing and data evaluation of online Total Residual Chlorine (TRC) analysis as part of implementing the Alternate Test Procedure for compliance monitoring. Full scale implementation is scheduled for March 1, 2023.
4. WQ continued work with Operations staff to address ongoing odor issues at the Atlantic Treatment Plant (ATP). TSD maintained increased odor surveillance and worked with ATP staff to identify and mitigate odor sources and provide immediate response to odor complaints.
5. DWQ participated in the following HRSD activities:
 - a. HRSD Quality Steering Team (QST)
 - b. SWIFT QST
6. Advocacy and external activities:
 - a. Chesapeake Bay Total Maximum Daily Load (TMDL) Tracking Team, a team of stakeholders across Virginia and Maryland from stormwater and wastewater sectors
 - b. Coalition of Recyclers of Residual Organics by Providers of Sustainability (CRROPS) briefing for congressional staff on the science and policy priorities associated with the development of federal policies to address Per- and Polyfluoroalkyl Substances (PFAS) chemicals in the environment
 - c. Elizabeth River Project's Knitting Mill Creek Eco-District Committee
 - d. National Association of Clean Water Agencies (NACWA) Winter Conference "Galvanizing Ratepayer Trust in Turbulent Times" and co-chaired the joint Biosolids Committee and Water Quality Committee's session on PFAS
 - e. Potomac Aquifer Recharge Monitoring Committee meeting

- f. Recorded an episode of the Virginia Water Environment Association's (VWEA) "Straight Flush" podcast: "[Sewer Signals: Using Wastewater to Track Disease](#)" with Dr. Raul Gonzalez of HRSD and Dr. Marcia Degen of the Virginia Department of Health (VDH)
- g. SWIFT Research Center (SRC) tour with Congresswoman Jennifer Kiggans
- h. Water Research Foundation (WRF) project 5123 workshop, "Establishing Seasonal Targets for Receiving Waters: Rethinking Wet Weather versus Dry Weather Expectations"

B. Quality Improvement and Strategic Activities

The Sustainability Environment Advocacy (SEA) Group reported no activities for the month of February.

C. Municipal Assistance Program (MAP)

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

- 1. City of Franklin
- 2. Northumberland County
- 3. Westmoreland County

D. Microbial Source Tracking (MST)

Hampton Roads Projects - HRSD provided sampling and analytical services to:

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

E. Strategic Planning Metrics Summary

- 1. Educational and Outreach Events: (2)
 - a. 02/03/23 - Homeschool Science, Technology, Engineering, and Math (STEM) Student Tour of NTP and SRC
 - b. 02/27/23 – Christopher Newport University Microbiology Class Tour of NTP and SRC
- 2. Community Partners: (10)
 - a. American Red Cross
 - b. Christopher Newport University
 - c. City of Chesapeake, Chesapeake Local Health District

- d. City of Virginia Beach
- e. Elizabeth River Project – Knitting Mill Creek Eco-District
- f. Hampton Roads Planning District Commission (HRPDC)
- g. HRPDC Fats, Oils & Grease (FOG) Subcommittee
- h. Lynnhaven River Now Citizen Monitoring project
- i. VDH
- j. VDH – Division of Shellfish Sanitation

3. Odor Complaints:

See attached [Effluent and Air Emissions Summary](#)

4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	February 2023
M-1.4a	Training During Work Hours Per Full Time Employee (120) (Current Month)	Total Hours / # FTE	6.14
M-1.4b	Total Training During Work Hours Per Full Time Employee (120) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	36.34
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	10:41,126
M-3.2	Odor Complaints	#	5
M-3.4	Pollutant Removal (Cumulative Fiscal Year-to-Date)	Total Pounds Removed	154,000,577
M-3.5	Pollutant Discharge (Cumulative Fiscal Year-to-Date)	% Pounds Discharged/ Pounds Permitted	16%
M-5.2	Educational and Outreach Events	#	2
M-5.3	Community Partners	#	10
	Average Daily Flow	Total MGD for all Treatment Plants	151.79
	Pretreatment Related System Issues	#	0

Respectfully submitted,

Jamie Heisig-Mitchell

Director of Water Quality

EFFLUENT SUMMARY FOR FEBRUARY 2023

P A	mg	of esign	mg l	SS mg l	E l	ER l	P mg l	P A g	mg l	A g	A E
AR ASE	9.87	55	6	5.7	1	2	0.34	0.40	2.9	3.9	18
A A	46.31	86	14	13	4	3	A	A	A	A	7
A AR R	12.95	52	5	6.0	4	5	0.31	0.44	23	24	4
E . ESE	0.013	50	2	1.4	1	1	A	A	A	A	A
A ES R ER	13.31	67	8	6.4	2	1	0.59	0.52	13	11	15
A	0.065	65	2	1.0	A	1	0.044	0.038	1.3	1.9	A
A SE	16.61	55	5	8.8	2	3	0.46	0.51	4.3	4.0	1
ASSA A	0.015	15	3	18	1	1	0.30	0.37	14	14	A
A	0.194	26	2	0.14	1	1	0.15	0.10	2.1	1.6	A
R A A	0.039	39	4	12	5	6	3.1	3.2	13	12	A
P	30.12	75	6	3.6	1	1	0.21	0.21	4.1	3.8	7
ES P	0.470	78	31	20	1	1	2.5	2.5	18	18	0
A S R	8.09	36	6	3.6	12	4	0.45	0.48	2.2	2.4	12
R R ER	13.74	92	1	0.29	1	1	0.39	0.27	4.8	4.7	0
	<u>151.79</u>										

Tributary Summary						
	<u>Annual otal itrogen</u>			<u>Annual otal Phosphorus</u>		
	ischarge	perational	Pro ection 23	ischarge	perational	Pro ection 23
Tributaries						
ames Ri er	9	2 395 978	68	5	232 424	74
ork Ri er	12	213 861	74	13	13 552	70
Rappahannock	8	A	A	7	A	A

	of apacit
orth Shore	58
South Shore	72
Small ommunities	46

Rainfall (inch)

<u>orth Shore</u>	<u>South Shore</u>	<u>Small ommunities</u>
<u>P</u>	<u>R</u>	<u>---</u>

Permit E cee ances otal Possi le E cee ances 23 to ate 10 41 126
 Poun s of Pollutants Remo e in 23 to ate 154 000 577
 Pollutant s ischarge Permitte ischarge 23 to ate 16

onth	2.21	2.51	2.11
ormal for onth	2.92	2.89	2.78
ear to ate otal	5.15	5.63	4.99
ormal for	6.40	6.10	6.27

Small ommunities inclu es Eastern Shore

AIR EMISSIONS SUMMARY FOR FEBRUARY 2023

	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	Temp 12 hr ave (F)	Venturi(s) PD 12 hr ave (in. WC)	Precooler Flow 12 hr ave (GPM)	Spray Flow 12 hr ave (GPM)	Venturi Flow 12 hr ave (GPM)	Tray/PBs Flow 12 hr ave (GPM)	Scrubber pH 3 hr ave	Any Bypass Stack Use	THC Mo. Ave (PPM)	THC DC (%)	BZ Temp Daily Ave Days >Max
MHI PLANT											
ARMY BASE	0	0	0	0	0	0	0	0	35	88	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	25	81	0
VIP	0	0	0	n/a	0	0	0	0	32	98	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	1	23	99	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	0
DEQ Request for Corrective Action:	0
DEQ Warning Letter:	0
DEQ Notice of Violation:	0
Other Air Permit Deviations:	0
Odor Complaints Received:	5
HRSD Odor Scrubber H2S Exceptions:	11

Items of Interest – February 2023

MULTIPLE HEARTH INCINERATION (MHI)

total rocar on monthl a erages not to e cee 100 ppm ere met all four plants Arm ase oat ar or irginia nitiati e an illiams urg ith a continuous emissions monitoring E ali ata capture of greater than 81 .

he s ha no e iations from the require 129 SS rule minimum operating parameters an one 1 minor pass e ent 60 minute .

Su mitte 129 semiannual e iation reports the itle semiannual an itle annual compliance certifications for the four plants to E .

E appro e the test protocol for Arm ase s 129 emission limits test sche ule for April 26 2023.

E air compliance inspecte oat ar or on e ruar 22 an as eeme in compliance ith their itle fe eral operating permit.

AIR PERMITS and ODOR CONTROL.

Su mitte to E the annual thruput up ates for the Atlantic pressure re ucing station an ames Ri er an ork Ri er Plants.

Ele en 11 o or control scru er s stem h rogen sulfi e $2S$ e ception ere measure an fi e 5 o or complaints ere recei e in e ruar .

Atlantic Plant recei e fi e 5 o or complaints from cean akes an ago ar neigh ors. Plant Staff an S respon e to all complaints an follo e up ith our neigh ors ith in estigation results as ocumente an rela e to them accor ingl .

TREATMENT

E as notifie of the follo ing reporta le e ents

Atlantic

n e ruar 11 ontact ank 3 as leaking from the si e all at an e pansion oint. he leak as plugge an the contact tank as raine an taken out of ser ice. Repairs to the e pansion oint ha e een complete ut the tank remains out of ser ice. Appro imatel 150 gallons of chlorinate final effluent soake onto the groun uring this e ent.

ames Ri er

n e ruar 6 contractors igging ith an e ca ator roke the isulfite fee line to the final effluent. he roken fee line as secure ithin 10 minutes an s itche to the ack up line. Appro imatel 500 gallons of chlorinate non pota le ater ith trace isulfite ent into the groun an as not reco era le.

ames River

On February 8, while a contractor was pumping groundwater from an excavation site and continuing to excavate, the contractor struck a pipe from the plant rain system. During the investigation, it was determined the pipe was broken previously and the hoses had been moved to the storm water outfall on 2/6/2023. Plant staff secured the rain to the storm water outfall and discharge was rerouted to send the flow back into the plant collection system and the hoses were routed into a process tank. Further training and standard procedures were updated with the contractor. Approximately 30,000 gallons of discharge to the storm rain to the mill creek.

On February 13, during a high flow event caused by rainfall, one of the integrated lime film Activated Sludge (AS) tanks was not foaming enough. During this time, a filamentous foam from the biological process reached the tank and spilled onto the ground. When it was discovered the foam had already stopped overflowing the tank, the operator increased the foamant dosage to match the other tanks. Recovery occurred and applied lime to the ground. Approximately 400 gallons of aeration foam was released with 390 gallons recovered. The remaining 10 gallons soaked into the ground.

Virginia Intertiate Plant

On February 13, three consecutive 30-minute contact tank residuals were less than 0.30 mg/l with one being under 0.10 mg/l between 4:15 AM and 8:30 AM. This problem often occurs in two places at the secondary clarifier and at the head of the chlorine contact tank. The secondary clarifiers have been cut off at midnight in preparation for S sampling. The chlorine contact tank has a problem as active but insufficient. To correct the problem, operators fed supplemental ammonia, placed sodium hypochlorite pump in A, and increased the high flow setpoint. Additionally, operators cleaned the 5- and 30-minute analytical strainers and calibrated the 5-minute analyzer.

On February 21, a low chlorine residual of 0.06 mg/l was recorded at 12:17 PM. The sewerice line was switched to the standby line and corrective maintenance was performed. Additionally, operators increased the high flow setpoint.

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

King William Collection System

On February 8, a manhole overflowed due to a contractor blocking the pipe with construction material. RS staff pumped the surcharge manhole to stop the potential for future spills from this sewerice area. The area was cleaned and lime applied to the spill area. Approximately 70 gallons of raw wastewater went into a storm rain to the mill creek.

King William Treatment Plant

On February 26th, 2023, the plant operator did not perform a final pour measurement for the King William Plant final effluent. The operator thought the plant was sending all of the effluent to reuse and measure only at the reuse system discharge. The plant has not been properly changed over to reuse and the outfall is still active. The operator has been re-trained on how to change over the plant to reuse outfall and reuse.

assa a o

uring the eek of e ruar 5 2023 the eekl ma imum concentration for the final effluent SS limit as e ce e . Ele ate SS e gan in anuar an continue into e ruar . As such the monthl a erage SS concentration limit as also e ce e for e ruar .

he assa a o plant continue to struggle ith clarifier performance in e ruar . he eekl a erage for the first eek of the month as 24 mg hich as greater than the eekl limit of 23 mg . o ifications ere ma e to impro e mi ing in the aeration asin hich helpe impro e settling. o e ere en after settling impro e algae gro th in the clarifier cause high SS alues. easures ere taken to control algae gro th in oth the influent equali ation lagoon an the clarifier. t no appears that the plant is ack on track to meet the monthl SS permit limits for arch as the a erage for the last 7 a s of the month as 13 mg . espite these recent lo alues e ere not ale to meet the monthl permit of 15 mg as e en e the month at 18 mg . he assa a o -Ri ersi e facilit met all other eekl an monthl permit limits.

est Point

n e ruar 9 the num er t o secon ar clarifier o erflo e o ernight hen the tertiar ilter Pump Station fee pumps num er one an t o trippe . he et eather pump pump 3 is out for repairs. he po er monitoring equipment installe to track po er anomalies faile appro imatel t o eeks prior an is in the process of eing repaire . he float in the num er t o secon ar clarifier hich opens the automatic pon pass ale as also isco ere to e malfunctioning at the same time. he automatic ale et een the contact tank an the tertiar filters that as recentl installe is in the process of eing ire an programme . he aria le requenc ri es s an the pumps ere rought ack into ser ice an the o erflo en e shortl after ar s. RS Electrical an nstrumentation staff repaire the faile float on the num er t o secon ar clarifier an staff complete the iring an programming for the automatic ale et een the contact tank an the tertiar filter pump station. Appro imatel 90 000 gallons of secon ar clarifier effluent o erflo e ith appro imatel 1 600 gallons reco ere the remaining 88 400 gallons raine to the attaponi Ri er.

n e ruar 14 RS Pro ect eam as replacing a leaking ar h rant on plant site an hit an electrical con uit hile e ca ating. he roken con uit le to a ma orit of the treatment plant losing po er e cept for the tertiar filter pump station an one effluent pump station pump. rom 11 30A to 12 00P the chemical uil ing as ithout po er an no h pochlorite or isulfite as eing fe into the contact tank. Effluent as eing ischarge uring this time. i en the 30-minute uration of this e ent ater ischarge ha een chlorinate an processe through the contact tank ut resi uals oul ha e een lo er than normal. echlorination i not occur. he plant operator opene the pass ale at the hea orks of the plant to sen flo to the storage pon . At 12 00 pm staff reali e that one of the effluent pumps an the tertiar filter pump station still ha po er an manuall turne them off. Electrical staff as ale to restore po er to the plant shortl after an the pass ale as close . hemical fee s ere restore an erifie prior to ischarge resuming at 12 55pm.

est Point

On February 23, RS staff found water coming from the ground near the plant entrance. The release occurred from a 6-inch air vent riser pipe with a half-inch diameter hole caused by corrosion. RS staff diverted flow to the plant equalization pond and began shutdown procedures at 13:40 hours. Staff removed the damaged riser and will re-install the air vent once parts arrive. Plant flow was restored and start-up procedures began at 22:10 hours. Approximately 2,450 gallons of final effluent were released to the ground at the Tapi Ri'er.

For the month of February 2023, the monthly maximum average concentration as measured at the est Point S/P A0075434. The permitted monthly maximum average concentration for the est Point S/P is 30 mg/L. The average concentration value for the month of February was 31 mg/L. During the month of February, we had two emergency events that led to plant staff diverting all influent flow coming to the treatment plant to the storage pond temporarily, bypassing the treatment plant. After both events, the storage pond water was pumped into the headworks of the plant for treatment. The storage pond water may have contained elevated concentrations which increase effluent loading to the permit exceedance. To avoid this issue in the future, plant operators have been instructed to decrease the amount of water that is pumped from the storage pond into the plant influent and floating mechanical aerators will be installed in the storage pond later this year which should lower concentrations.

2023 Metals Ammonia and

		limit	an	e	ar	Apr	a	un	ul	Aug	Sep	ct	o	ec
entral	Ammonia	0.56	0.02	A										
i lese		3.0	A	0.50										
ing illiam	inc		54	A										
		3.0	1.9	1.1										
	a mium	2.0	0.50	0.50										
assa a o	opper	23	5.0	5.0										
Ri ersi e	ickel	38	14	18										
	inc	150	50	50										
	Ammonia	1.7	0.31	0.67										
nancock	opper	12	2.2	A										
	Ammonia	0.90	2.0	0.04	0.03									
	opper	5.9	2.0	A										
Surr ount	inc	56	24	A										
	Ammonia	0.77	A	A										
		3.0	A	A										
r anna	Ammonia	3.83	9.08	0.04	0.16									

o limit. reatment o ecti e 53 ug
 nits Ammonia mg . etals ug

2023 MONTHLY FLOW AVERAGES

	A	E	AR	APR	A	E	A	SEP	E	RA	A
Armase	9.10	9.87								9.49	8.19
Atlantic	44.58	46.31								45.44	44.13
Boatharbor	11.60	12.95								12.27	10.50
Chilse	0.013	0.013								0.013	0.012
James River	12.46	13.31								12.89	12.03
King William	0.070	0.065								0.068	0.070
Lanes Point	0.000	0.000								0.000	0.000
Lawson	15.97	16.61								16.29	15.16
Massaquoi	0.016	0.015								0.015	0.014
Norfolk	0.170	0.194								0.182	0.166
Northampton	0.011	0.000								0.006	0.028
Northampton	0.000	0.000								0.000	0.019
Northampton	0.035	0.039								0.037	0.057
Poanoke	27.26	30.12								28.69	22.92
Portsmouth	0.466	0.470								0.468	0.352
Williamsburg	7.73	8.09								7.91	8.89
York River	12.69	13.74								13.21	11.22
North Shore	44.47	48.09								46.28	42.64
South Shore	96.91	102.91								99.91	90.40
Small Communities	0.78	0.80								0.79	0.72
A	142.16	151.79								146.98	133.75

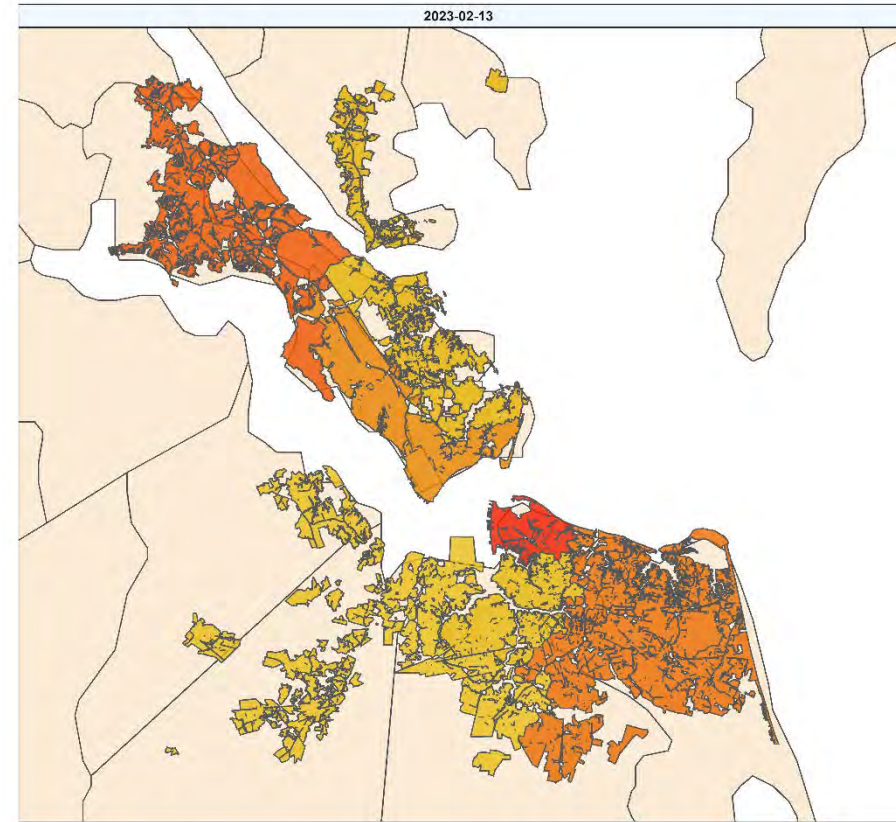
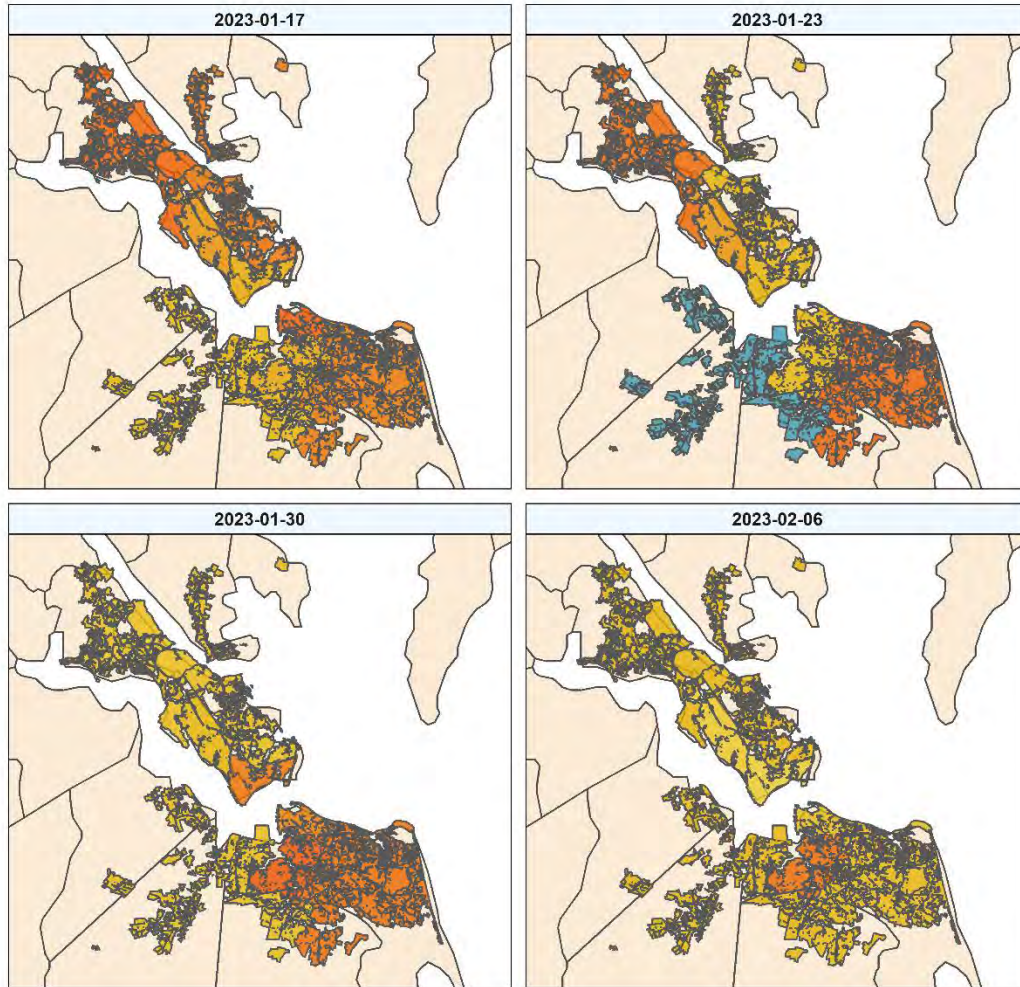
Bold values indicate monthly plant flow average >95% of permitted design flow



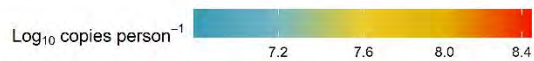
Wastewater Surveillance Commission Report

March 2023

SARS-CoV-2 Most Recent 5 Weeks



** Note that the scale for this heatmap is now based on the range of the most recent 5 weeks of data.



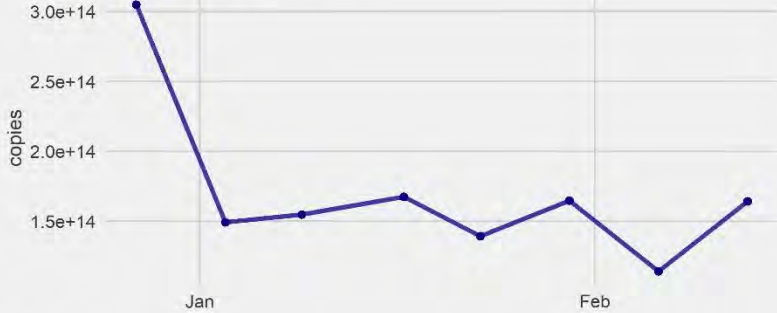
Regional Viral Load, Hospitalizations, and Deaths

Aggregate Viral Load for HRSD Treatment Facilities



Wastewater Data HRSD Facilities

Most Recent 8 Weeks



COVID-19 Hospitalizations and Deaths

Hampton Roads 5 Day Rolling Mean

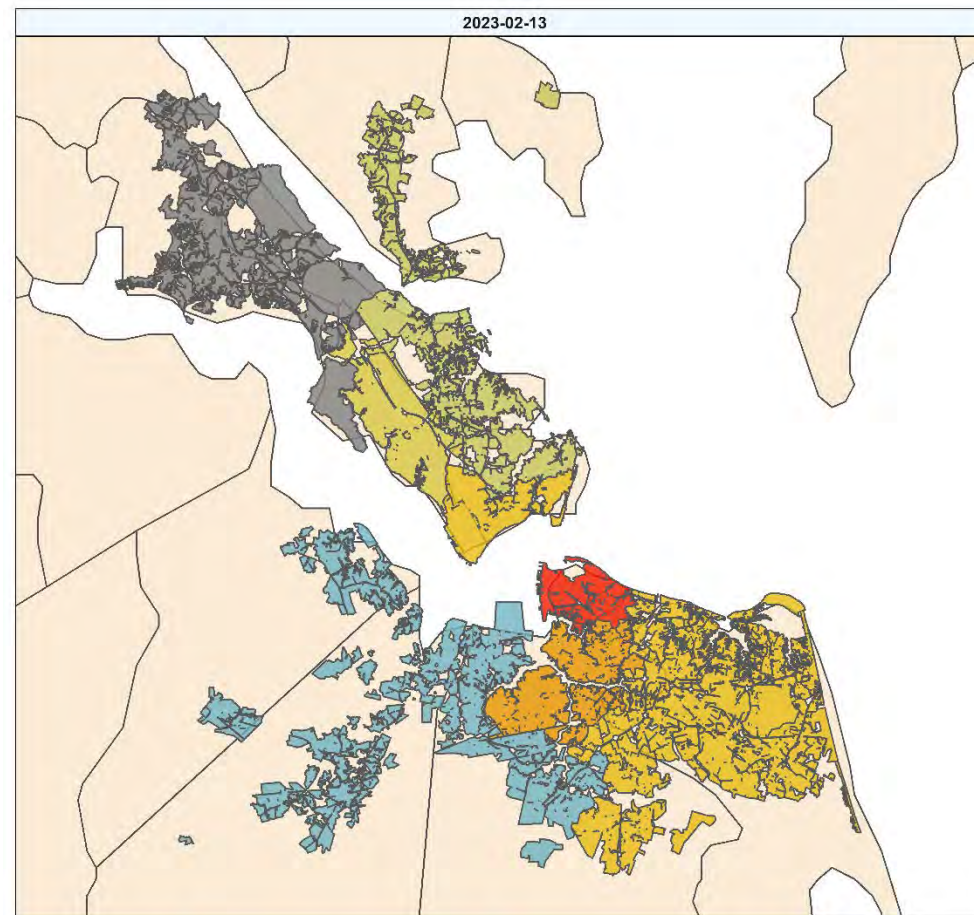
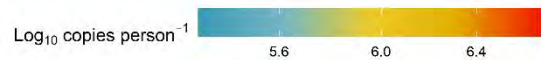
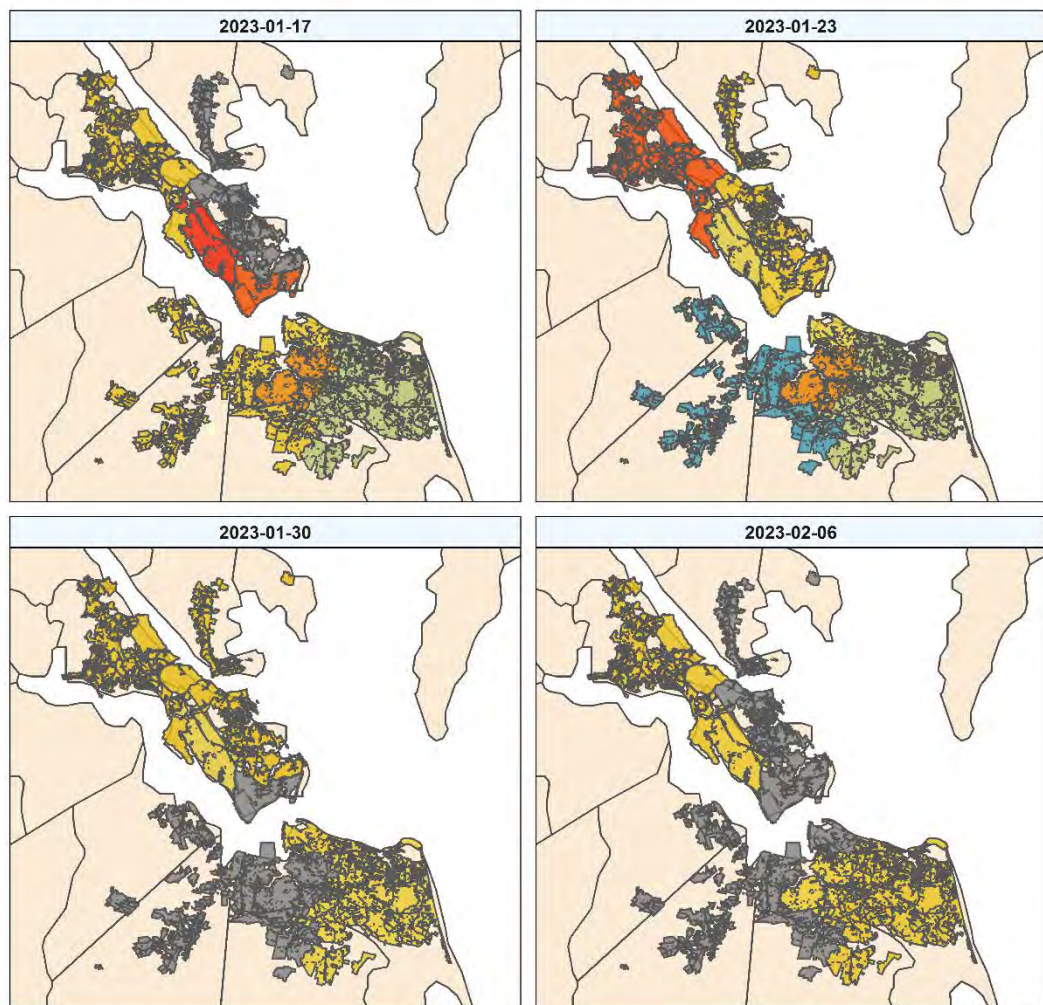


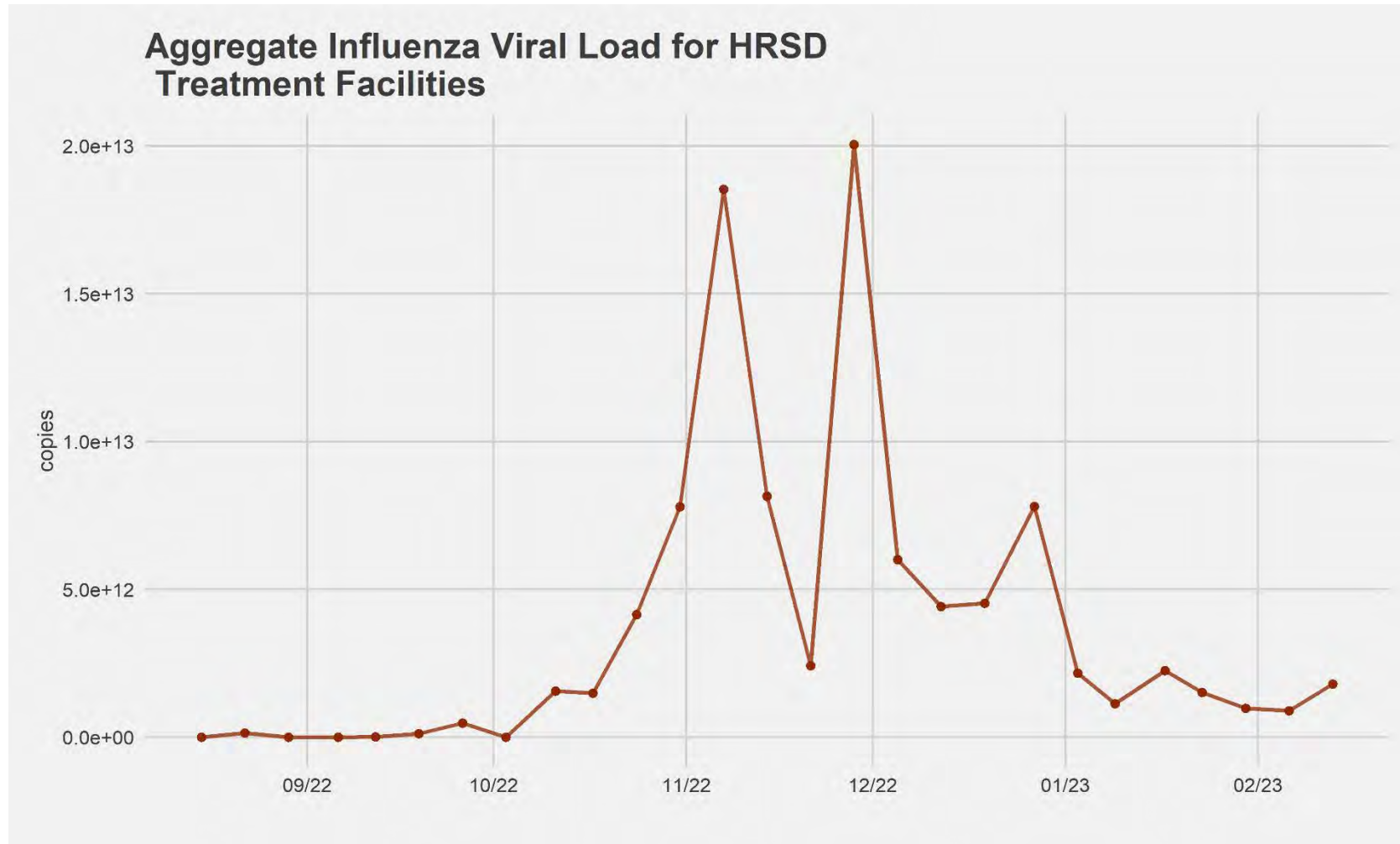
COVID-19 Hospitalizations and Deaths

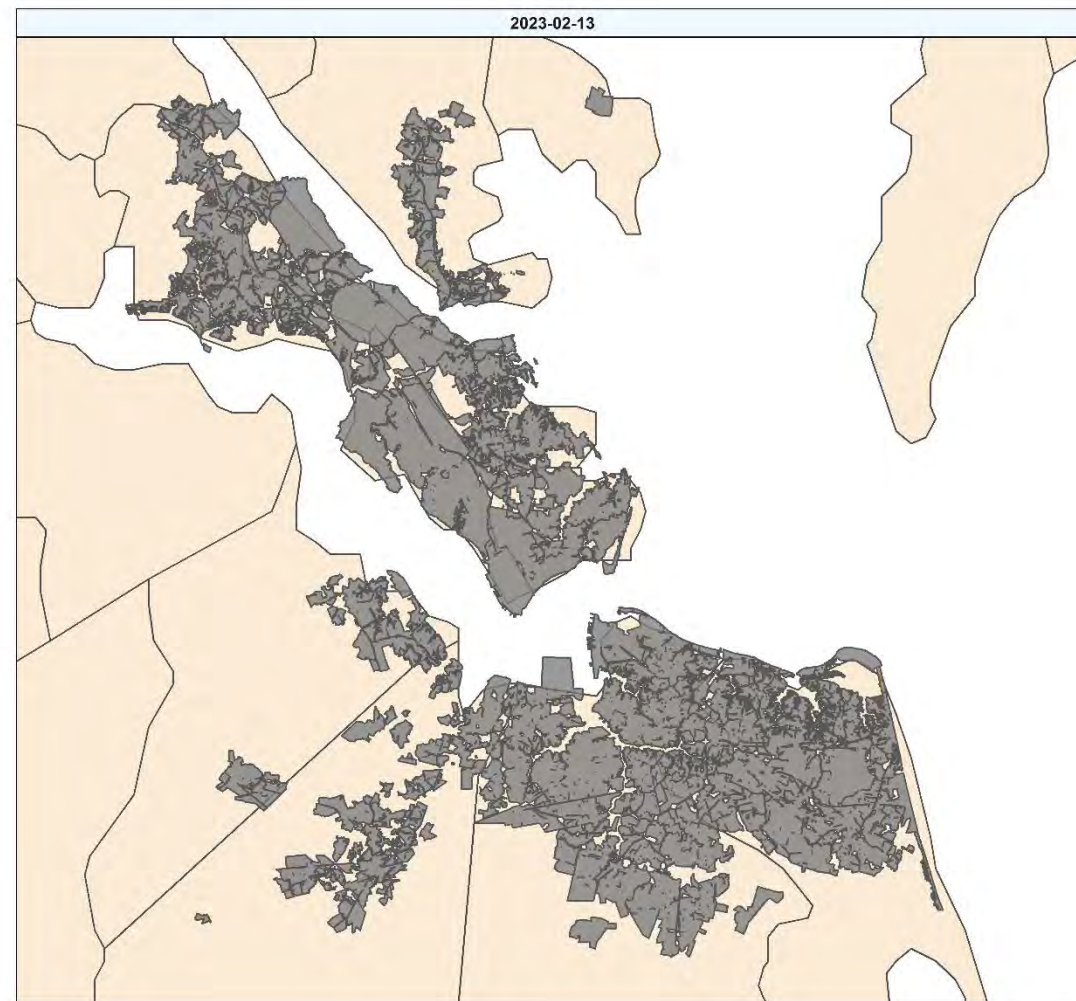
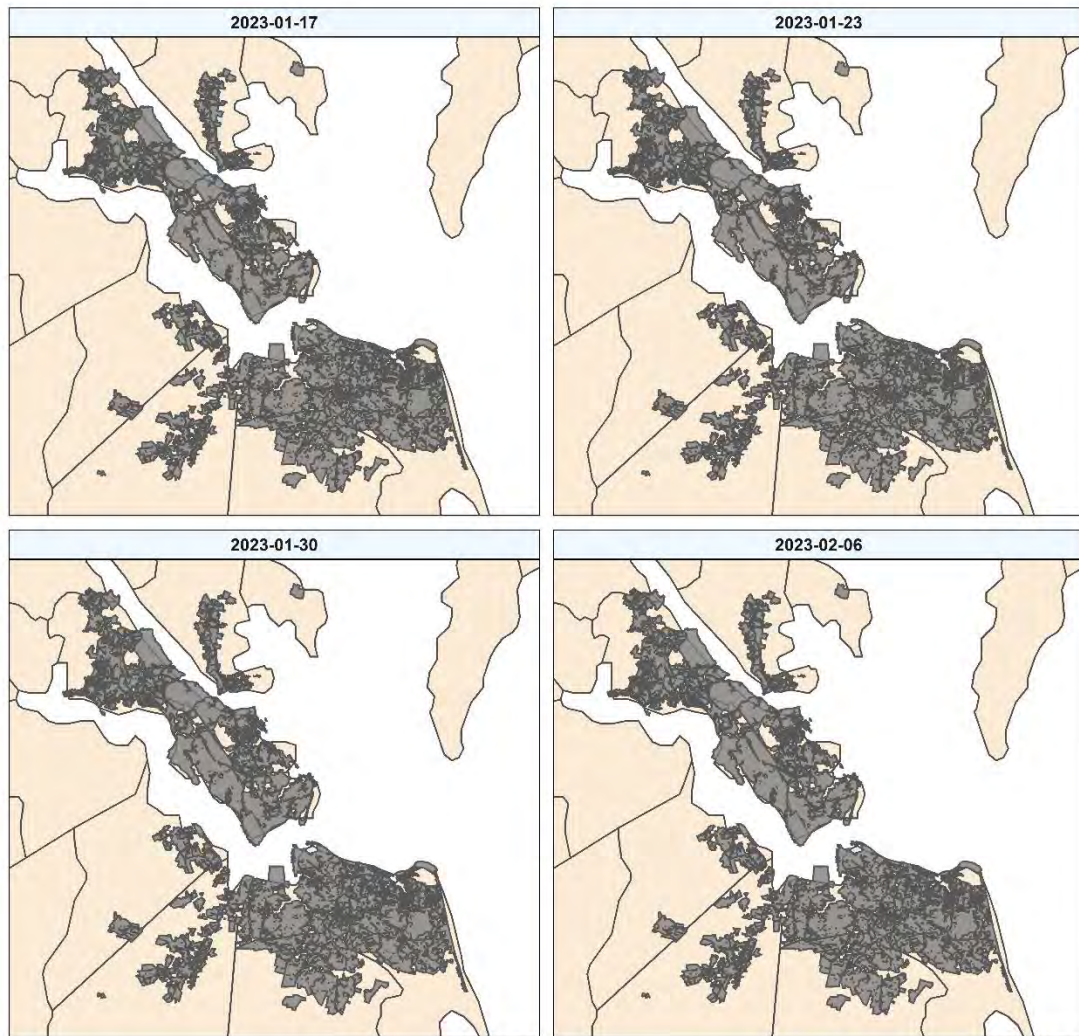
Most Recent 8 Weeks



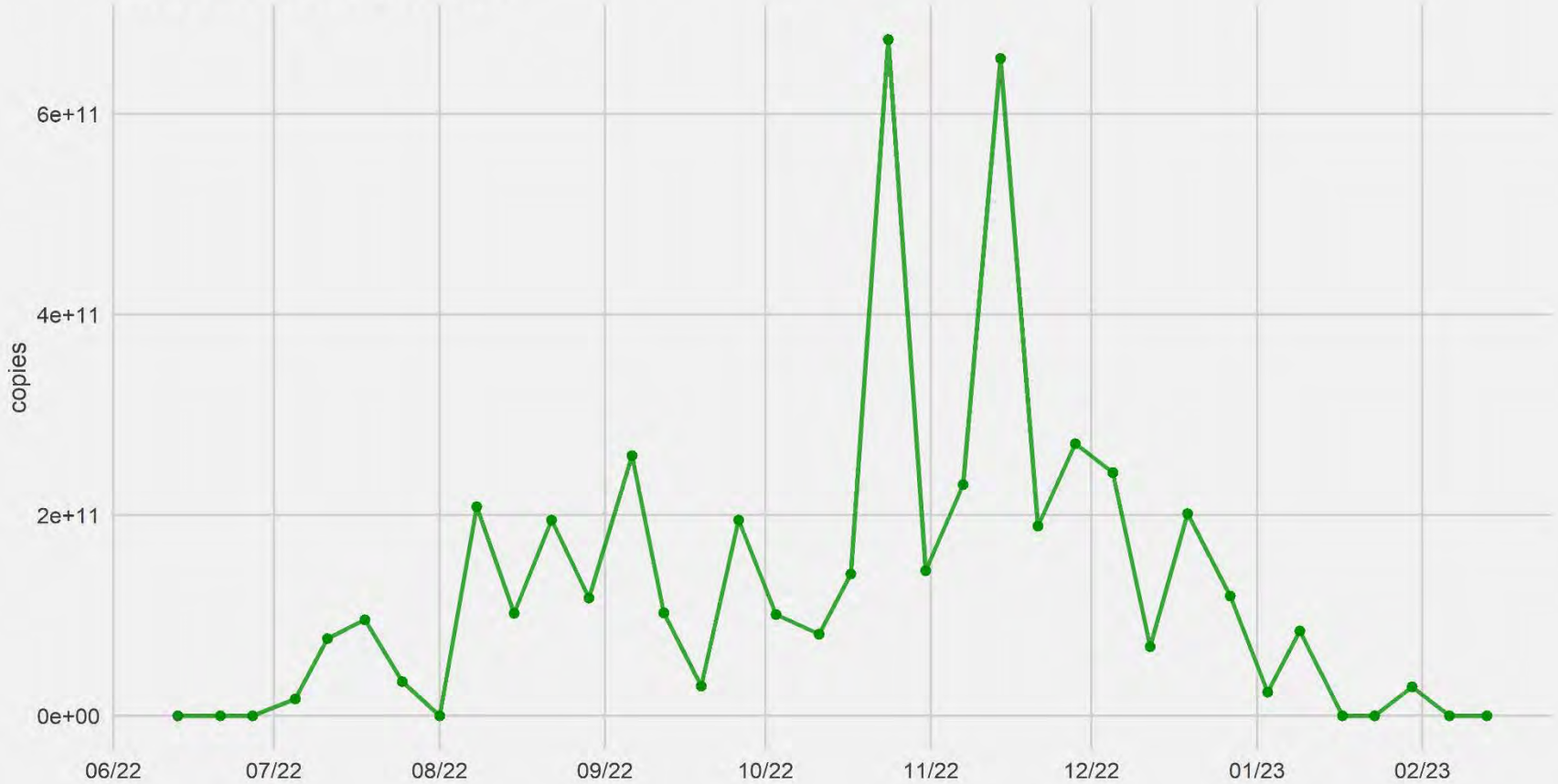
Influenza







Aggregate MPX Viral Load for HRSD Treatment Facilities





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

I. Projects in Process

Personally Identifiable Information

- **Tasks Completed (February 2023)**
 - Finalized audit program
 - Discussed strategy with Deputy General Manager and Director of Finance
- **Upcoming Tasks (March 2023)**
 - Begin scheduling fieldwork walkthrough meetings
 - Commence fieldwork procedures

Risk Assessment

- **Tasks Completed (February 2023)**
 - Finalized surveys to directors, chiefs, and Commission
 - Administered IT specific RA questionnaire
 - Updated risk assessment procedures and internal audit plan
- **Upcoming Tasks (March 2023)**
 - Finalize risk assessment procedures
 - Finalize internal audit plan, submit for review

Grants Management

- **Tasks Completed (February 2023)**
 - Finalized preliminary improvement
 - Scheduled meeting (3/1/23) with Finance to discuss improvement opportunities
- **Upcoming Tasks (March 2023)**
 - Finalize and closeout project

Family Medical Leave Act (FMLA)

- **Tasks Completed (February 2023)**
 - Presented draft report to Talent Management
- **Upcoming Tasks (March 2023)**
 - Finalize report and provide to HRSD stakeholders

Remote Access

- **Tasks Completed (February 2023)**
 - Began internal planning for audit
 - Drafted entrance meeting materials
- **Upcoming Tasks (March 2023)**
 - Conduct entrance meeting



Management Action Plan Monitoring

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

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

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

Audit	Report Date	Next Follow-up	Recommendations		
			Closed	Open	Total
Safety Division	9/12/19	March 2023	2	1	3
SWIFT Program	2/24/2021	March 2023	11	1	12
Succession Planning	6/4/2021	March 2023	0	4	4
Emergency Repairs	1/18/2022	February 2023	0	3	3
Freedom of Information Act	12/21/2022	December 2023	0	1	1
D&C: CIP Project Management	5/11/16	Closed	13	0	13
HR Benefits	11/22/16	Closed	15	0	15
Inventory	4/20/17	Closed	5	0	5
Procurement/ProCard	8/23/17	Closed	11	0	11
Engineering Procurement	4/20/18	Closed	8	0	8
Corporate Governance: Ethics Function	3/21/18	Closed	5	0	5
Treatment Plant Operations	10/15/18	Closed	9	0	9
Permitting	2/4/20	Closed	2	0	2
Payroll	3/27/20	Closed	3	0	3
Customer Care Division	7/26/19	Closed	4	0	4
Pollution Source Control	6/2/20	Closed	8	0	8
Fleet Services	2/24/2021	Closed	17	0	17
Biosolids Recycling	10/8/16	Closed	8	0	8
Unifier/ERP Integration	6/27/2022	Closed	4	0	4
Totals			125	10	135

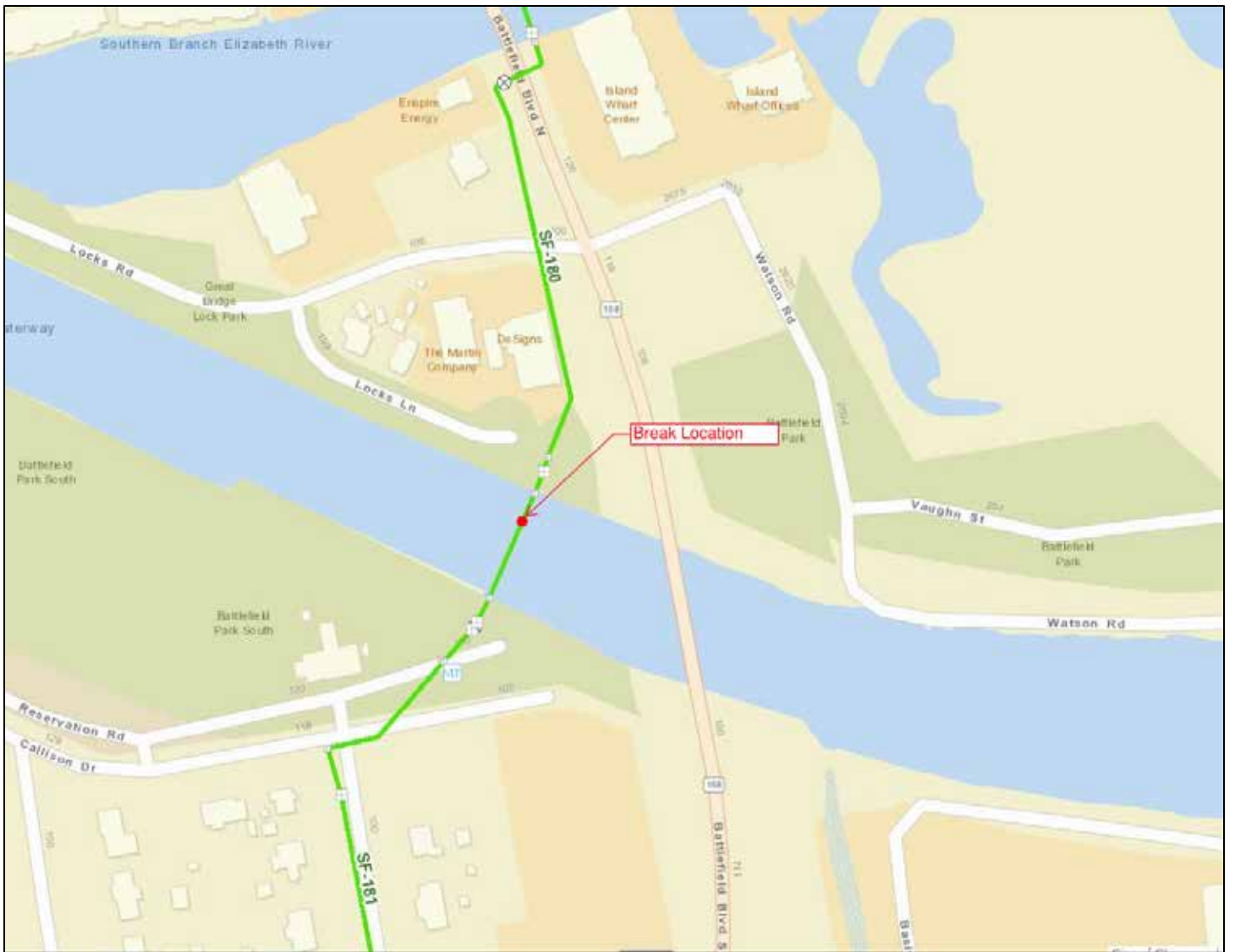
Annual Metrics																
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20	FY-21	FY-22
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%	6.66%	9.99%	6.63%	6.78%	6.31%	16.04%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%	0.90%	1.01%	2.10%	3.08%	5.44%	1.64%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	70%	71%	64%	69%	68%	85%	63%	63%	78%	65%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67	67	66	60	95	74.52
M-1.4	Training Hours per Employee - cumulative fiscal year-to-date	Hours	> 40		30.0	43.8	37.5	35.9	42.8	49.0	48.4	41.1	40.9	39.3	28.2	32.3
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	4.1	4.53
M-1.5b	Safety OSHA 300 Incidence Rate Cases with Days Away	# per 100 Employees	< 1.1	0.74	1.13	1.33	0.96	1.4	0.82	1.9	1	1.1	0.8	1.34	1.3	1.09
M-1.5c	Safety OSHA 300 Incidence Rate Cases with Restriction, etc.	# per 100 Employees	< 0.8	3.72	4.27	2.55	4.5	2	1.76	3.6	2.8	2.8	1.8	1.6	4.1	3.43
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%	156%	160%	170%	170%	123%	120%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%	167%	159%	159%	155%	152%
M-2.3a	Total Maintenance Hours	Total Available Mtc Labor Hours Monthly Avg			16,495	22,347	27,615	30,863	35,431	34,168	28,786	28,372	31,887	29,596	28,722	28,030
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%	44%	59%	59%	62%	61%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%	24%	18%	19%	16%	15%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%	32%	27%	25%	22%	24%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%	5%	4	5%	7%	6%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45	1.58	1.66	1.58	1.7	1.75	1.89
M-3.6	Alternate Energy (Incl. Green Energy as of FY19)	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096	6,052,142	5,862,256	47,375,940	56,473,800	58,044,110	53,931,273
M-4.1a	Energy Use: Treatment	kWh/MG Monthly Avg			2,473	2,571	2,229	2,189	2,176	2,205	2,294	2,395	2,277	2,408	2,459	2,439
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163	173	170	181	174	170	218
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97	104	104	95	102	82	136
M-4.2	R&D Budget	Percentage of Total Revenue	> 0.5%		1.0%	1.4%	1.0%	1.3%	1.0%	0.8%	1.3%	1.4%	1.8%	1.3%	1.4%	1.4%
M-4.3	Total Labor Cost/MGD	Average Daily Flow		\$1,028	\$1,095	\$1,174	\$1,232	\$1,249	\$1,279	\$1,246	\$1,285	\$1,423	\$1,348	\$1,487	\$1,545	\$1,542
M-4.4	Affordability	Median Household Income	< 0.5%		0.48%	0.41%	0.43%	0.53%	0.55%	0.59%	0.60%	0.64%	0.71%	0.67%	0.65%	0.65%
M-4.5	Total Operating Cost/MGD	365/5-Year Average Daily Flow		\$2,741	\$2,970	\$3,262	\$3,316	\$3,305	\$3,526	\$3,434	\$3,592	\$3,959	\$3,823	\$4,048	\$4,311	\$4,436
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A	N/A	53%	N/A	53%	N/A	N/A
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%	143%	114%	117%	143%	138%	128%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35	15	20	26	32	27	39
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09	154.24	152.8	152.23	149.84	149.72	145.75
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14	66.66	49.24	53.1	48.49	54.04	38.18
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%	76%	72%	78%	72%	84%
	Senior Debt Coverage	Net Revenue/Senior Annual Debt Service	> 1.5	2.51%	2.30%	2.07%	1.88%	1.72%	1.90%	2.56%	3.10%	3.59%	4.84%	5.80%	6.03%	7.55%
	Total Debt Coverage	Net Revenue/Total Annual Debt	>1.4	1.67%	1.67%	1.46%	1.45%	1.32%	1.46%	1.77%	1.93%	2.03%	2.62%	2.81%	2.66%	3.04%

*to be reported

Monthly Updated Metrics																	FY-23	FY-23
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	FY-22	Jan-23	Feb-23
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	145.8	152.7	141.5	155.3	131.3	142.2	151.8
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	4	7	1	2	4	0	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	103%	104%	106%	106%	106%	105%	101%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	117%	119%	108%	106%	109%	111%
	Accounts Receivable (HRSD)	Dollars (Monthly Avg)			\$17,013,784	\$17,359,488	\$18,795,475	\$20,524,316	\$20,758,439	\$22,444,273	\$22,572,788	\$22,243,447	\$23,900,803	\$27,335,100	\$34,060,154	\$39,539,639	\$41,315,851	\$39,724,461
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	18%	17%	18%	29%	33%	32%	32%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	10	5	2	25	0	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	9:53236	9:58338	2:60879	9:60879	23:60879	9:60879	7:35985	10:41126
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	6	9	15	31	51	11	5
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	189,765,922	190,536,910	187,612,572	182,759,003	183,123,855	177,322,331	139,094,381	154,000,577
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	22%	22%	17%	17%	17%	18%	14%	16%	16%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	367	256	145	687	65	70
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	293	230	128	125	27	37

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #11

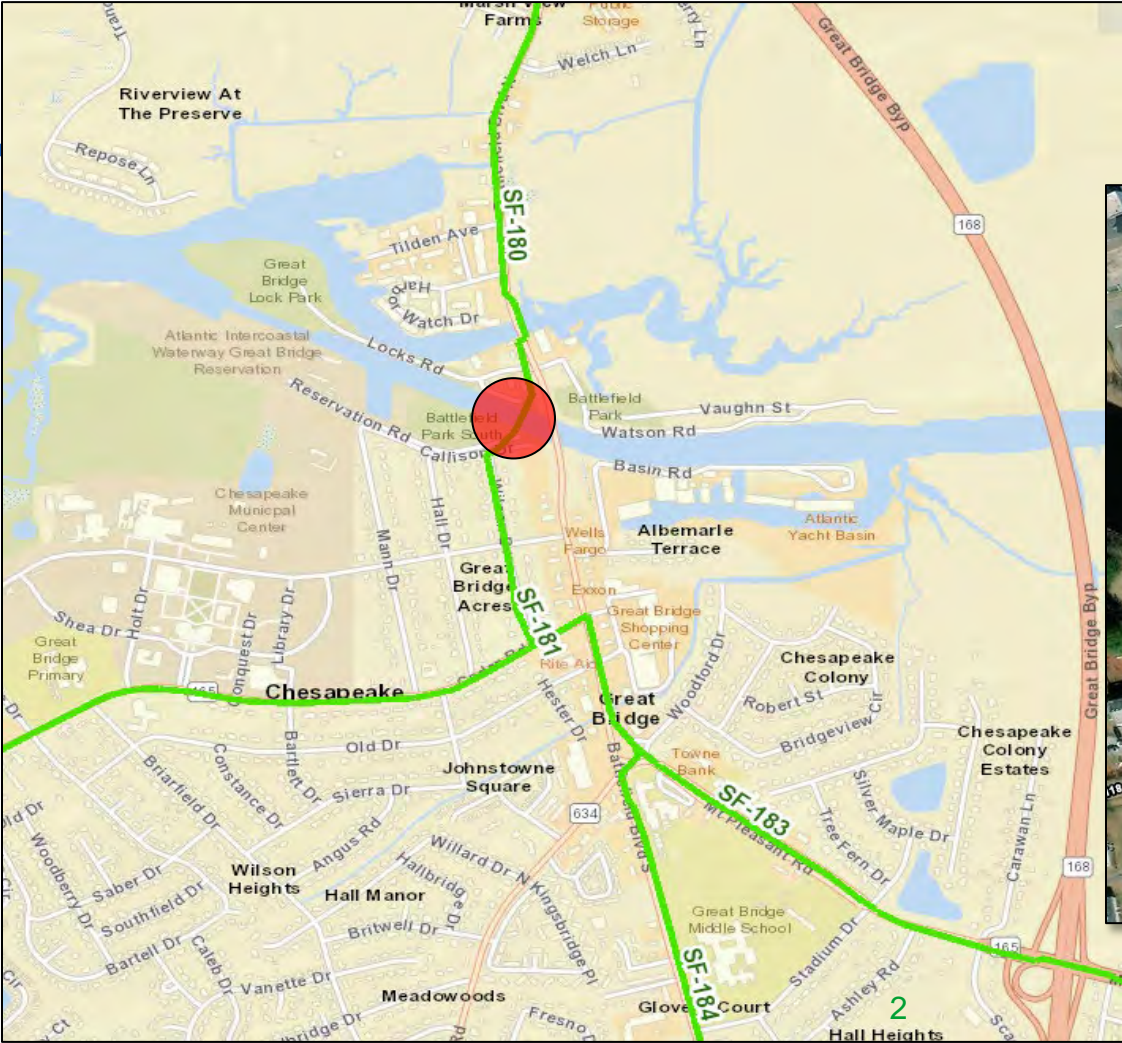
16. Informational Items – Emergency Declaration



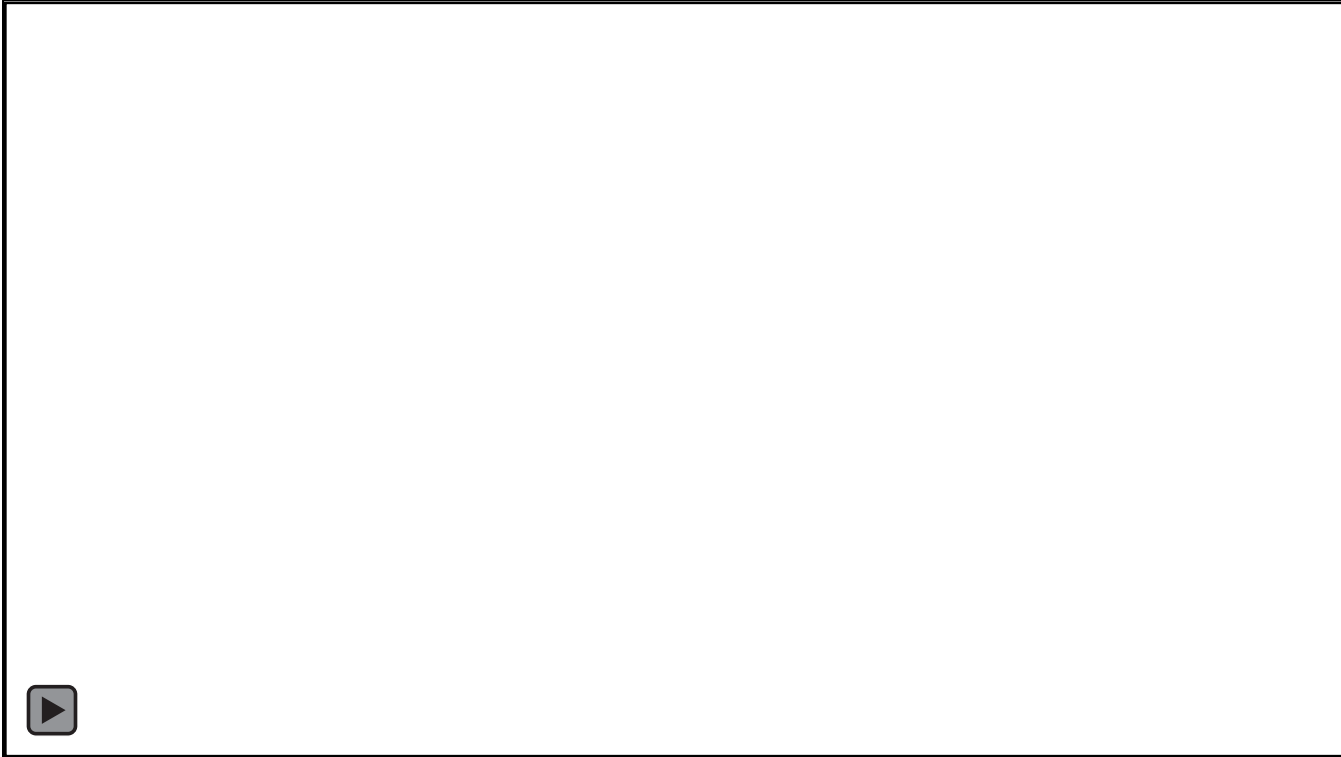


Great Bridge Interceptor Force
Main Emergency Repairs
March 28, 2023

Location of the Break



Discovery of the Break



Vessel anchor causes force main failure at Great Bridge Lock in Chesapeake

by Courtney Ingalls
Posted: Mar 11, 2023 / 06:20 PM EST
Updated: Mar 11, 2023 / 11:14 PM EST

SHARE

CHESAPEAKE, Va. (WAVY) – The HRSD says a tug boat's anchor caused a force main failure on Friday night in Chesapeake.

According to a press release, HRSD was notified Friday night that a tug boat near Great Bridge Lock had compromised an HRSD 20-inch cast iron force main with its anchor.



Media Coverage

2.5M gallons of wastewater spills into canal at Great Bridge Lock following vessel anchor incident

by Andy Box, Julian Aggs
Posted: Mar 16, 2023 / 01:57 PM EDT
Updated: Mar 16, 2023 / 12:13 AM EDT



SHARE

CHESAPEAKE, Va. (WAVY) — Officials said 2.5 million gallons of wastewater spilled into the canal at Great Bridge Lock during an incident Friday evening, and as yet, there is no explanation for how it

NEED 10 ON YOUR SIDE?



Engineers begin repair inspections for broken sewage pipe in Chesapeake waterways

— The health advisory from the Chesapeake Health Department lasts until Saturday.



Contact 10 On Your Side Click here for details.

Damage assessment finds sewage main 'crushed' by dredge anchor in Chesapeake canal

How the local ecosystem avoided major impact from Chesapeake sewage spill

Engineers with HRSD say there is no timetable yet for the fix to the broken sewer pipe



Author: Alex Littlehales (WVEC)
Published: 6:36 PM EDT March 23, 2023

HRSD: 'Significant' damage to broken sewage pipe in Chesapeake waterways

— The health advisory from the Chesapeake Health Department lasts until Saturday.



Author: Alex Littlehales (WVEC)
Published: 3:02 PM EDT March 22, 2023
Updated: 6:07 PM EDT March 22, 2023

Divers assess damaged HRSD pipeline following wastewater spill at Great Bridge Lock

by Julian Aggs
Posted: Mar 22, 2023 / 11:53 AM EDT
Updated: Mar 22, 2023 / 11:53 AM EDT



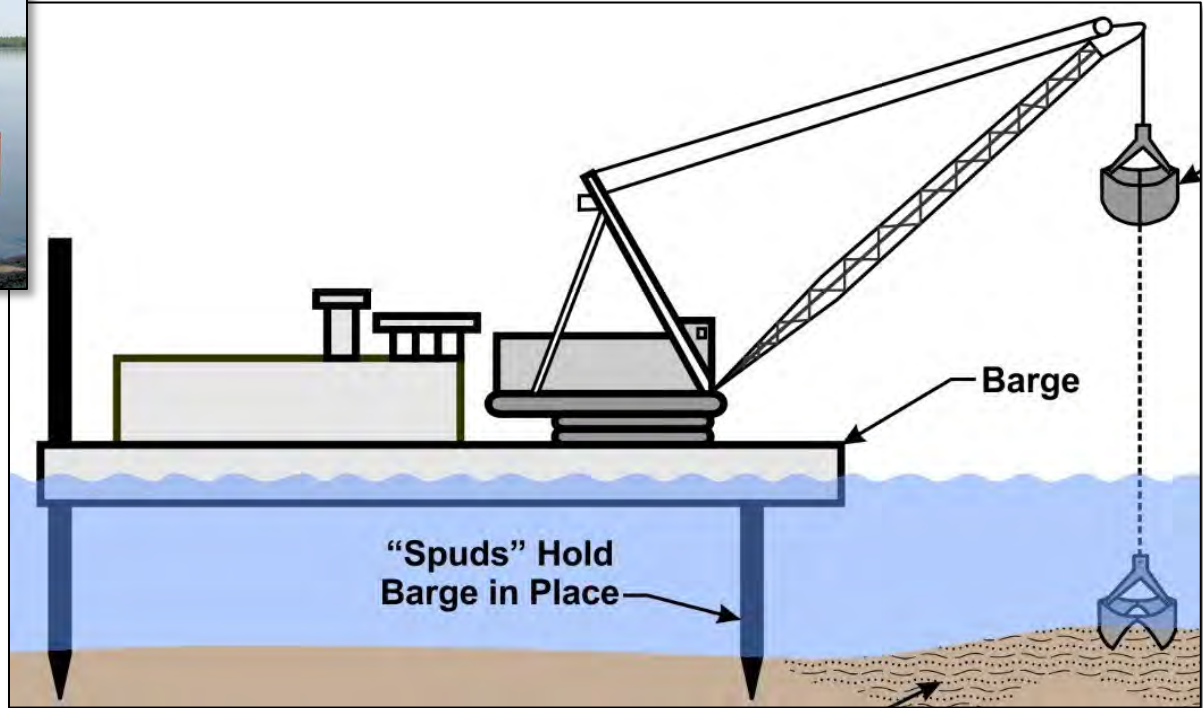
SHARE

TRENDING STORIES

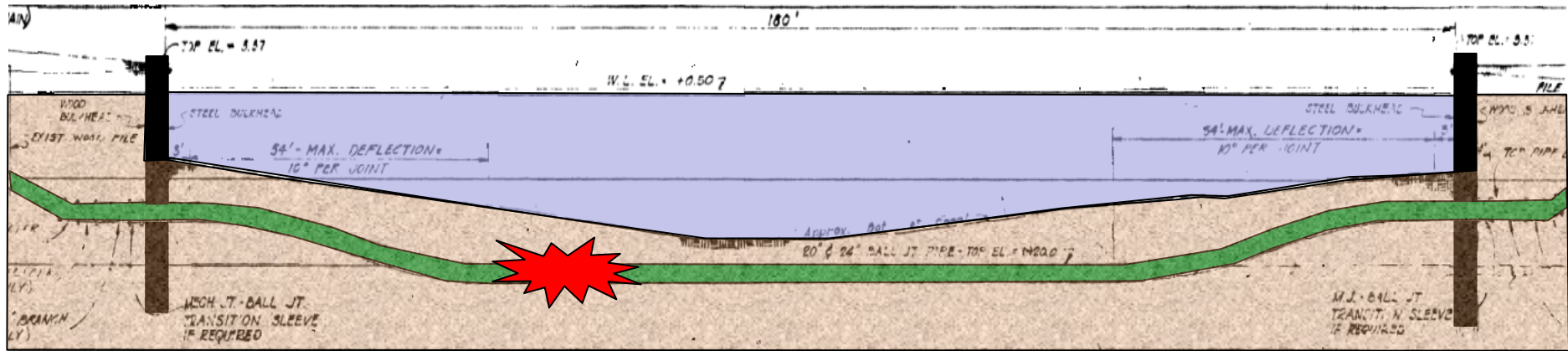
CHESAPEAKE, VA. (WAVY) — HRSD contractors and divers were on site Wednesday at the Great Bridge Lock assessing the aftermath of a damaged force main that caused millions of gallons of sewage to spill into the canal.

- 1 Adventure park nearly twice as large as VBs set ...
- 2 2 arrested following fatal shooting in Portsmouth
- 3 Sheriff's office leads to arrest in ...

What's a Spud?



Existing Force Main - Circa 1968



NORTH BULKHEAD - FOR
DETAILS SEE SHEET 46

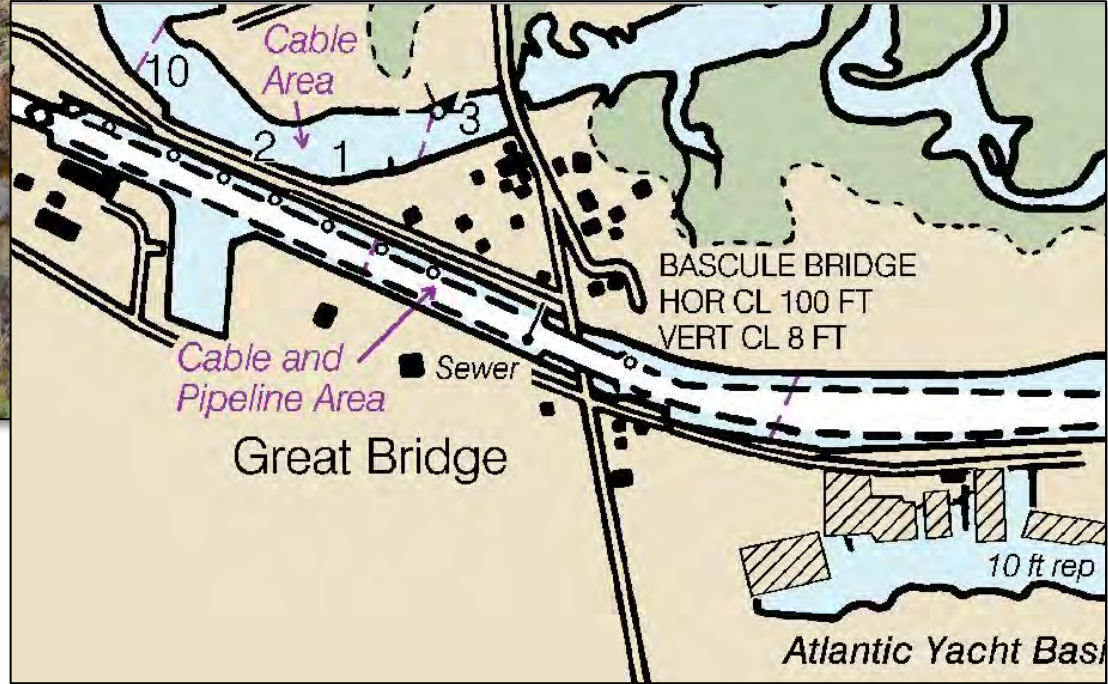
PROFILE 'A'
SCALE: 1" = 10' HOR. / VERT.

SOUTH BULKHEAD -
SEE SHEET 46

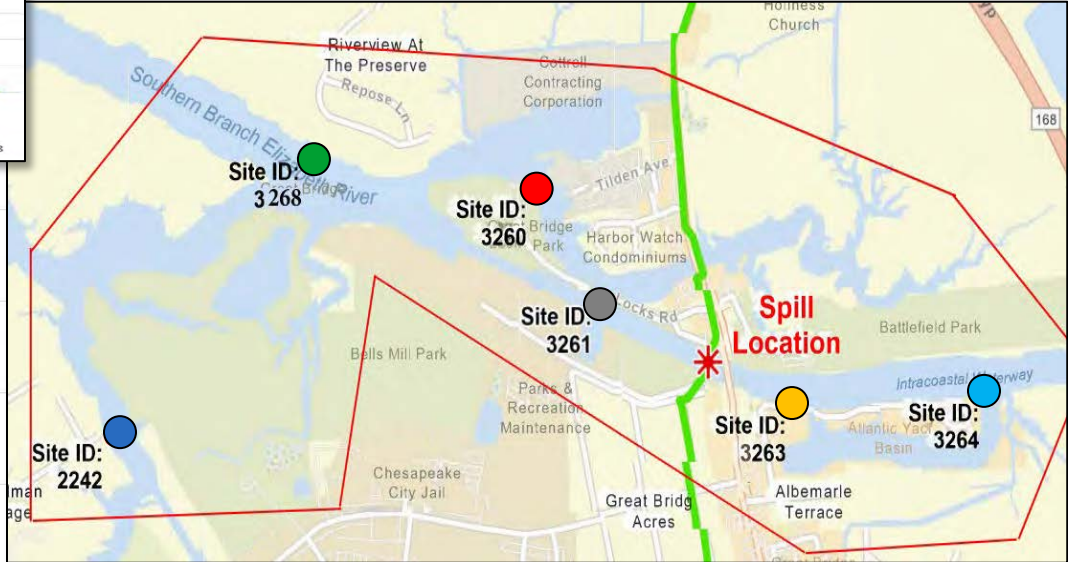
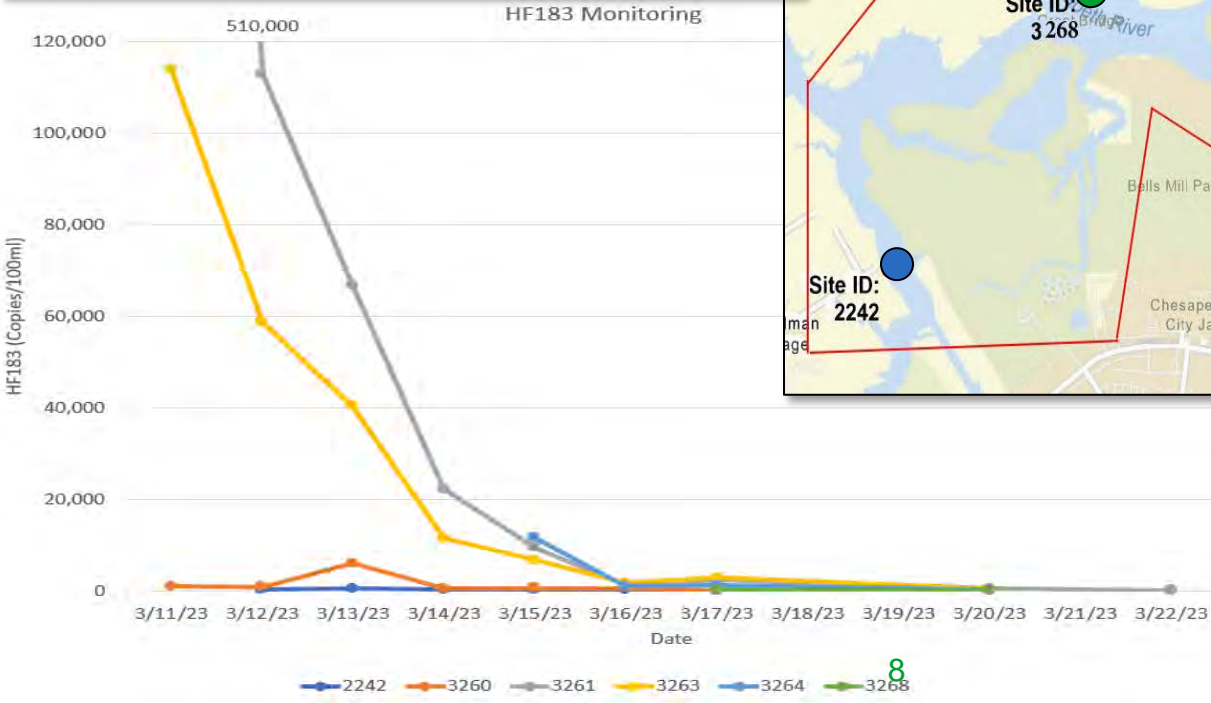
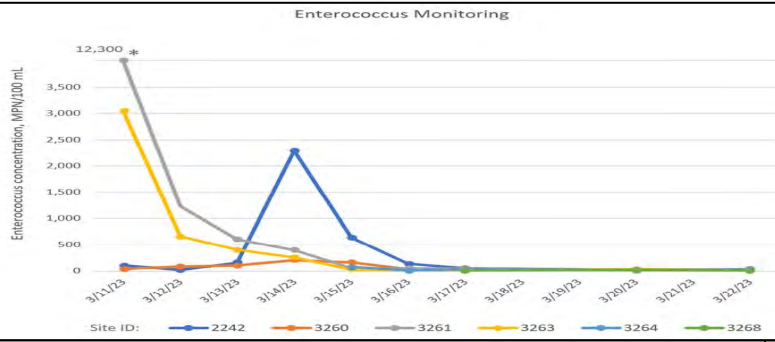
Signage and Nautical Maps



Source: WTKR



Water Quality Monitoring



Field Investigation of Break

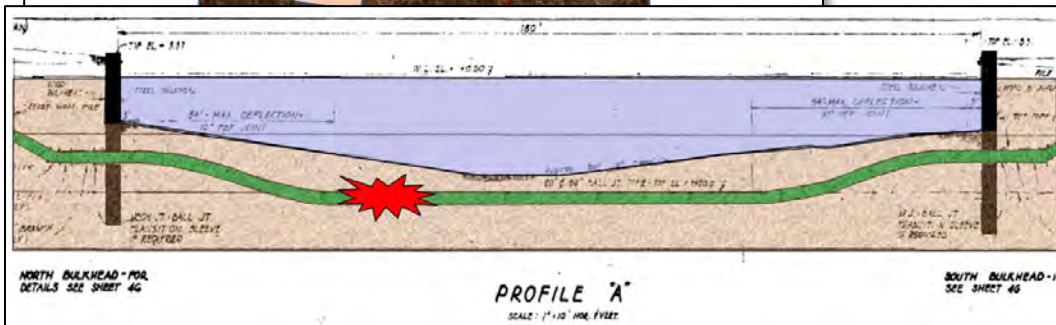
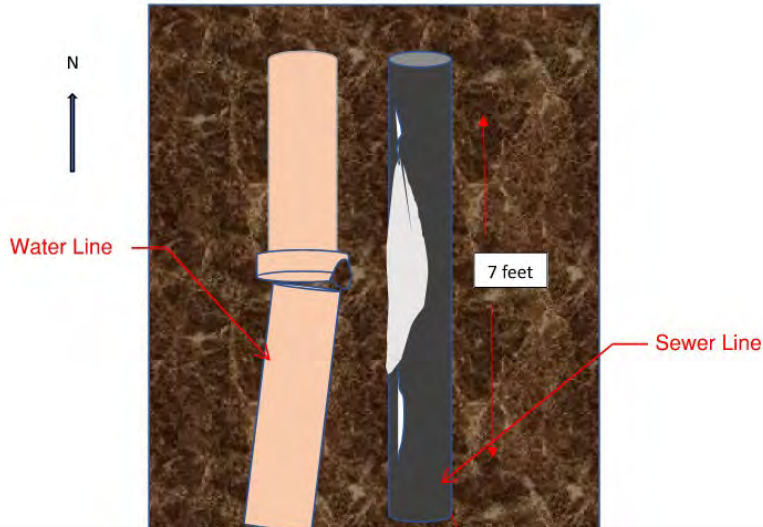


Photo by: Anthony Sabella/WTKR



Field Investigation of Break

Plan



- Activate a portion of HRSD FM to eliminate need to pump and haul existing City PS
- Evaluate replacement alternatives for damaged pipeline, then design and construct
- Remove/abandon existing pipe as required by ACOE
- Coordinate with insurance adjuster for property damage (likely a subrogation claim)

Questions?

HRSD Commission Meeting Minutes
March 28, 2023
Attachment #12

19. Work Session – FY-2024 Annual Budget



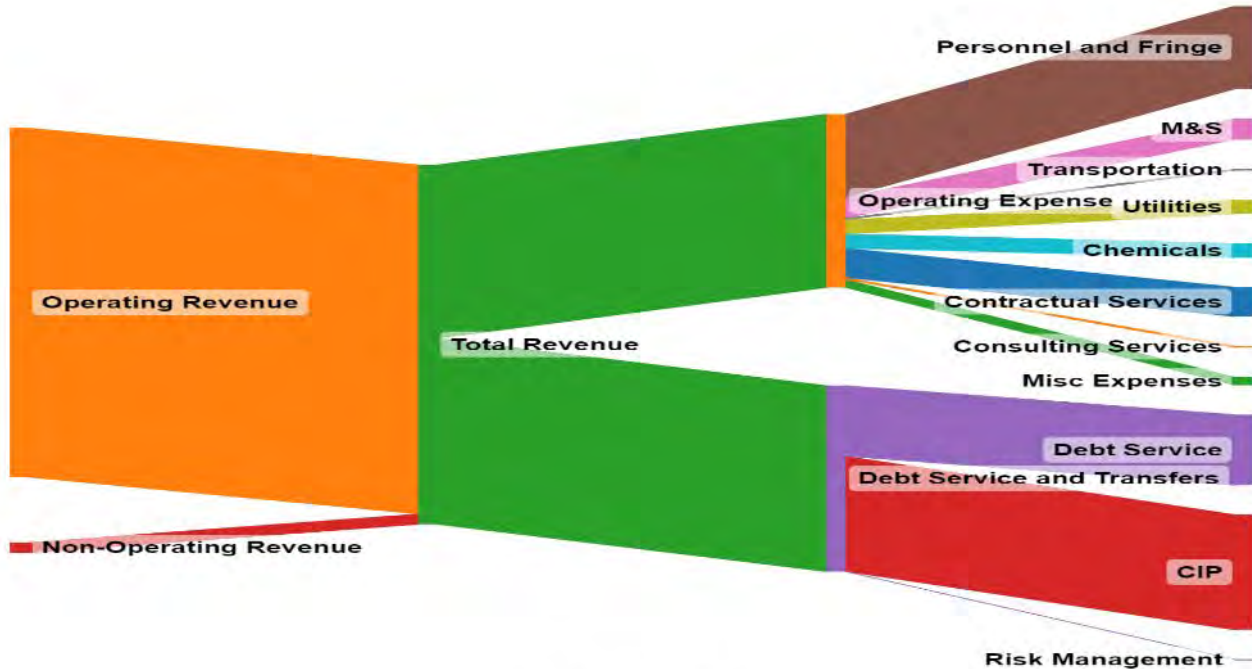
FY 2024 Commission Budget Work Session

March 28, 2023

Water/Wastewater Sector - Background Perspective

- Fitch Ratings - US Water Sewer Outlook – 2023
- Sector Outlook – “deteriorating”
 - Strong headwinds related to chemicals, labor and power costs and weaker economic growth
 - Weakening credit quality
 - 2022 – inflationary pressures alone pushed operating costs 7%
 - 2023 – expected to continue 4%
 - Borrowing costs face upward pressure
 - Capital requirements and sustained higher operating costs exacerbating problem

Budget Overview – by Object Code

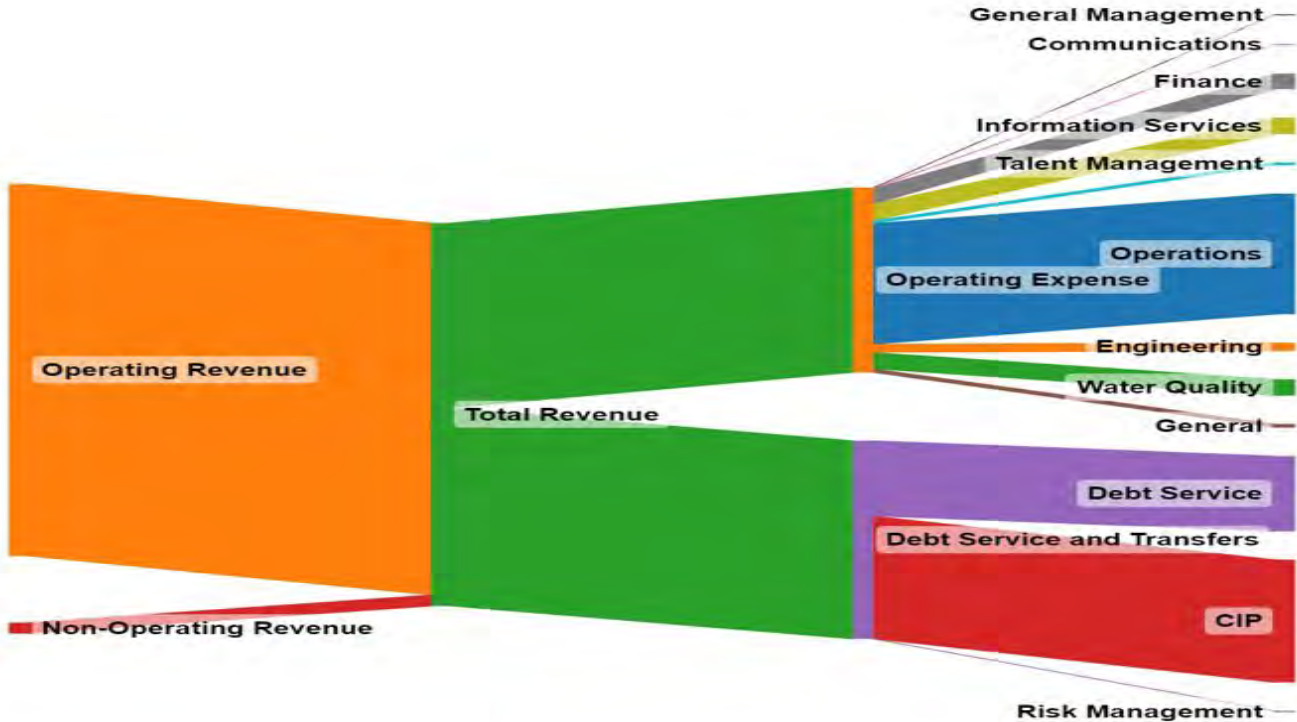


Operating Budget Summary

Operating Revenues	<u>\$ 428,490,000</u>
Operations	\$ 206,862,630
Debt Service	76,150,000
Transfers	<u>145,477,370</u>
Total Appropriations	<u>\$ 428,490,000</u>

Made with SankeyMATIC

Budget Overview – by Department



Operating Budget Summary

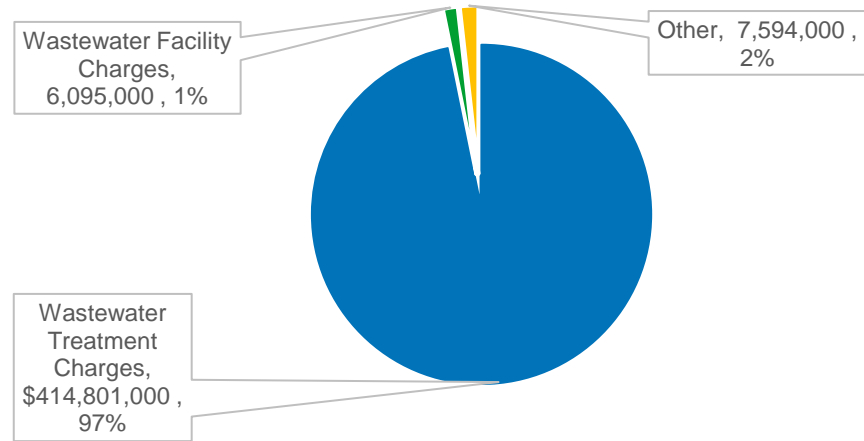
Operating Revenues	\$ 428,490,000
Operations	\$ 206,862,630
Debt Service	76,150,000
Transfers	145,477,370
Total Appropriations	\$ 428,490,000

Made with SankeyMATIC



Revenue Summary

Operating Revenues



Operating Revenues

Wastewater Treatment Charges	\$ 414,801,000	374,842,000	\$ 39,959,000	10.7%
Miscellaneous	1,320,000	1,284,000	36,000	2.8%
Total Operating Revenue	416,121,000	376,126,000	39,995,000	10.6%

Non-Operating Revenues

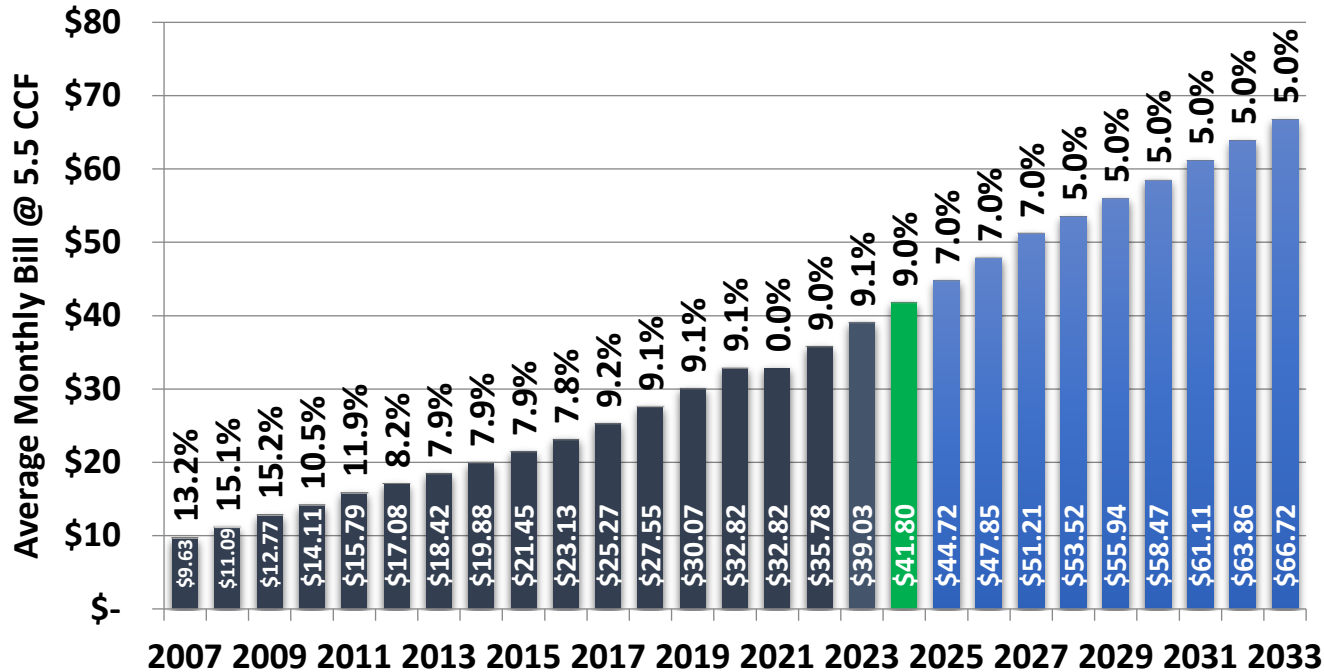
Wastewater Facility Charges	6,095,000	7,150,000	(1,055,000)	(14.8%)
Investment Earnings	3,000,000	1,570,000	1,430,000	91.1%
Build America Bond Subsidy	1,954,000	2,026,000	(72,000)	(3.6%)
Other	1,320,000	977,000	343,000	35.1%
Total Non-Operating Revenues	12,369,000	11,723,000	646,000	5.5%

Total Revenues

	FY-2024	Adopted FY-2023	Increase/ (Decrease)	Percent Change
Total Revenues	\$ 428,490,000	387,849,000	\$ 40,641,000	10.5%

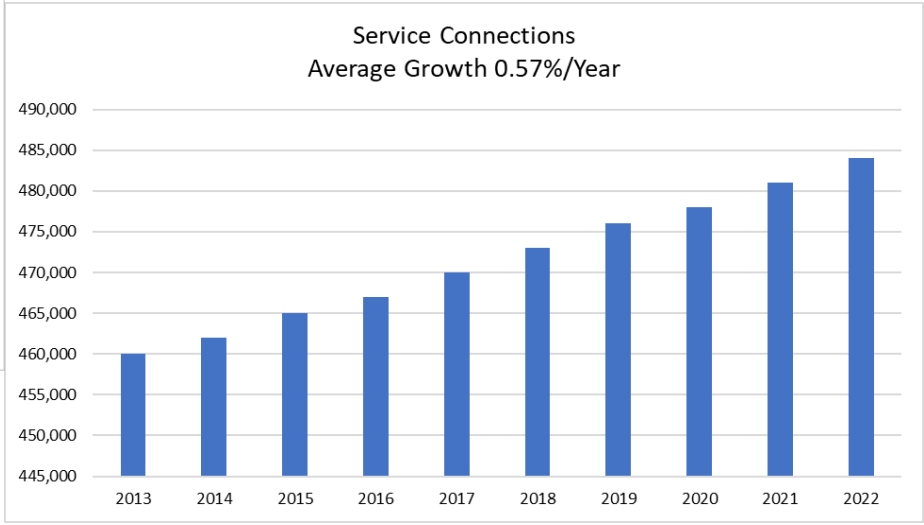
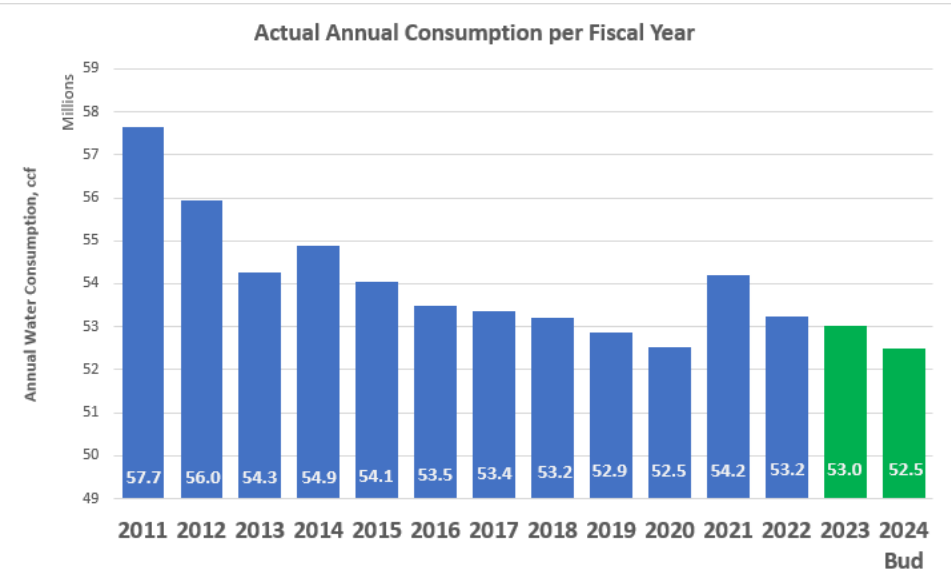
9% proposed Rate Increase

Historical and Projected Monthly Wastewater Treatment Bill @ 5.5 ccf



- Average CPI-U Inflation
 - 2012 – 2020 – 1.6%
 - 2012 – 2022 – 2.6%
 - 2021 – 7.0%
 - 2022 – 6.5%

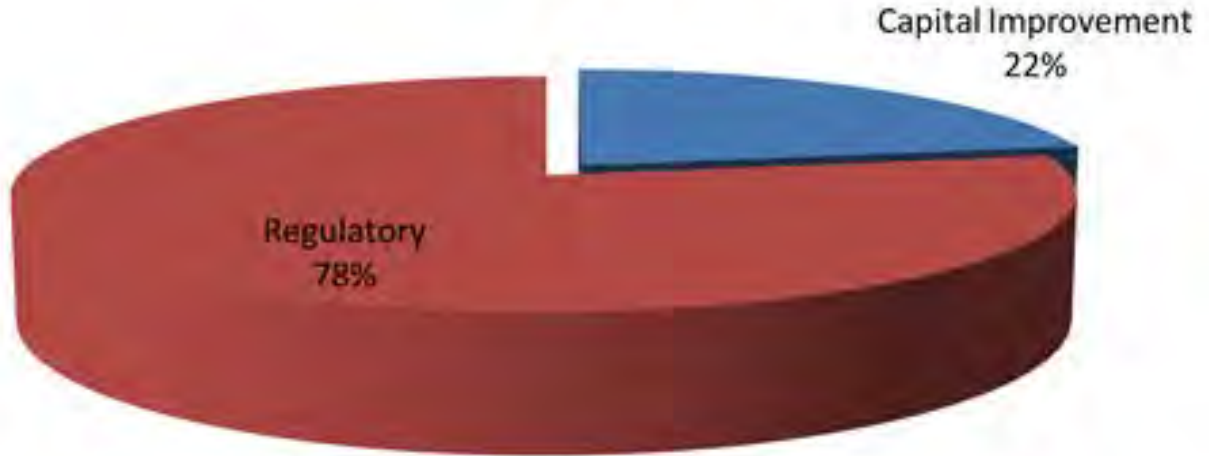
Billed Consumption & Service Growth



Proposed Rate Increase – 9%

- FY24 – 9% rate increase
 - \$7.60 per ccf (up from \$6.97 per ccf)
 - Proposed Avg monthly bill
 - \$41.80 (5.5 ccf)
 - +\$0.11/day
 - \$0.01/gallon
 - **Largely driven by CIP**
 - **78% Regulatory Required**

FY24 to FY33 Program - Regulatory Driven Projects



Expenses

	FY-2024	Adopted FY-2023	Increase/ (Decrease)	Percent Change
Operating Appropriations				
Personal Services	\$ 70,450,193	\$ 63,288,297	\$ 7,161,897	11.3%
Fringe Benefits	28,485,720	26,513,570	1,972,150	7.4%
Materials & Supplies	14,768,127	12,309,985	2,458,142	20.0%
Transportation	1,993,014	1,790,611	202,403	11.3%
Utilities	16,749,019	14,948,819	1,800,200	12.0%
Chemical Purchases	17,093,255	12,472,034	4,621,221	37.1%
Contractual Services	42,035,805	44,891,488	(2,855,683)	(6.4%)
Major Repairs	10,354,024	8,497,970	1,856,054	21.8%
Capital Assets	1,064,500	447,684	616,816	137.8%
Miscellaneous Expense	3,868,973	3,482,576	386,397	11.1%
Total Operating Appropriations	206,862,630	188,643,034	18,219,597	9.7%
Appropriations for Debt Service and Transfers				
Debt Service	76,150,000	69,533,000	6,617,000	9.5%
Transfer to CIP	145,217,370	129,412,966	15,804,403	12.2%
Transfer to Risk Management Reserve	260,000	260,000	-	0.0%
Total Appropriations for Debt Service and Transfers	221,627,370	199,205,967	22,421,403	11.3%
Total Appropriations	\$ 428,490,000	\$ 387,849,001	\$ 40,641,000	10.5%

Baseline Budget vs. Enhancements

- *Baseline Budget* - on-going costs associated with providing a consistent level of service

- *Enhancement Budget* - changes in a level of service provided.

- ~\$5M

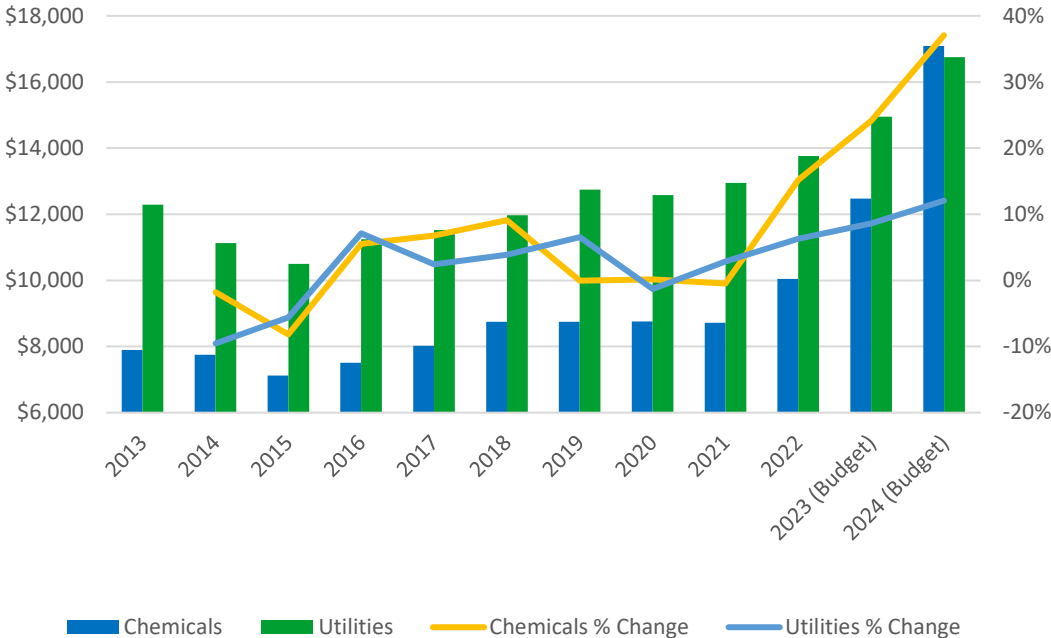
- \$2.3M for new positions
 - \$537K for Capital Assets
 - \$108K instrumentation training units
 - Miscellaneous equipment
 - \$1.45M Major Repairs and Replacements
 - \$150K Architectural improvements – Ferguson and Freeman PS
 - \$261K New VFD’s Atlantic PS
 - \$357K New VFD’s for centrifuge, polymer skid system, scale upgrade, new 8” pump at NP
 - \$51K New fall protection at WB
 - \$515K for storage building concrete slab, spare pumps for SCD
 - \$250K for stand by pumps and controllers
 - \$100K Condition Assessment
 - Vibration monitoring for plant equipment (large rotating equipment)

Total Appropriations		
Baseline Budget	\$ 423,452,879	99%
Enhancements	5,037,121	1%
Total Appropriations	<u>\$ 428,490,000</u>	<u>100%</u>



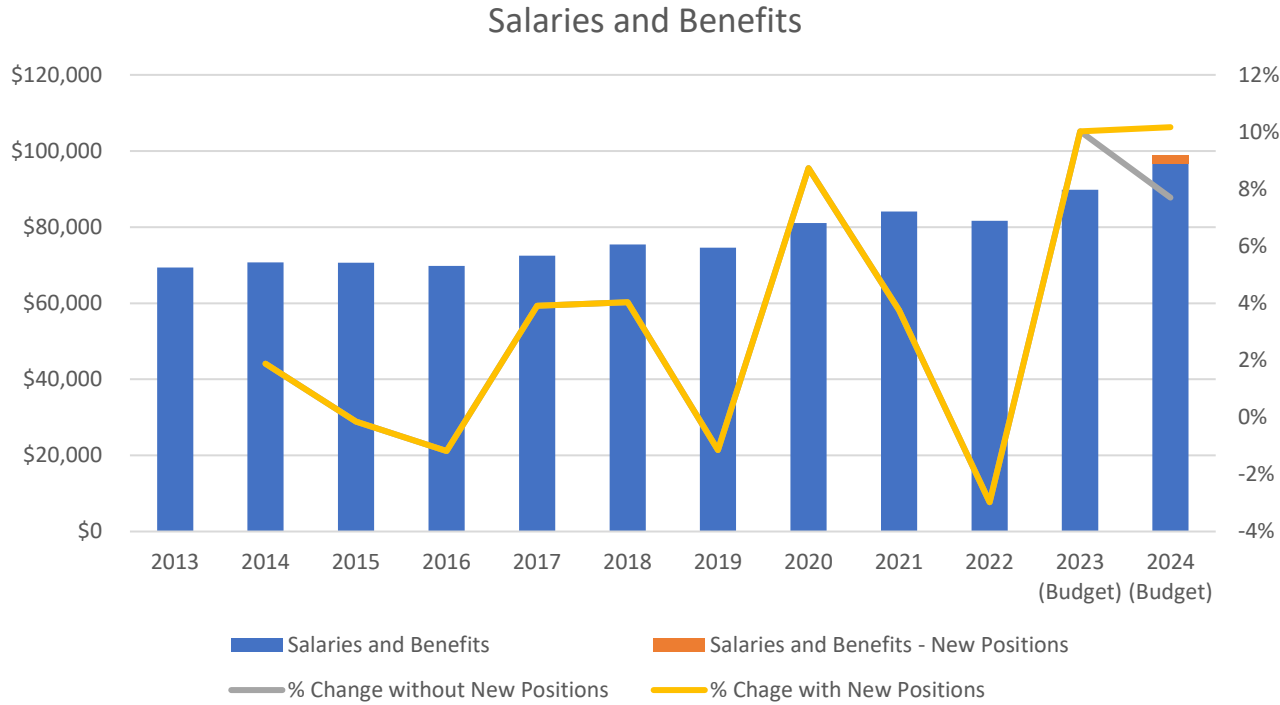
Chemicals and Utilities

Chemicals and Utilities



- 17% of Opex
 - Chemicals + 37%
 - +91% Sodium Hypochlorite (used for final disinfection)
 - Utilities + 12%

Salaries and Benefits



- 28 new positions
~ \$2.23M



2030 VISION

A STRATEGIC PLAN

“Our communities will have clean waterways and reliable water resources for generations to come.”



TALENT

We attract, develop, and retain an exceptional and diverse workforce that reflects our principles.



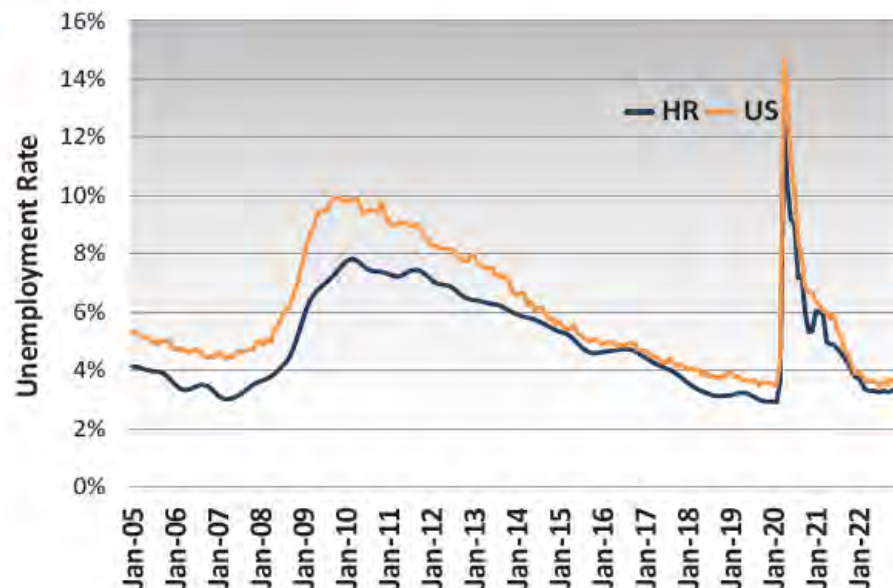
HRSD Priorities

Tight Labor Market – Hampton Roads Unemployment @ 3.33%

UNEMPLOYMENT RATE, SEASONALLY ADJUSTED (M) SOURCE: BUREAU OF LABOR STATISTICS, HRPDC

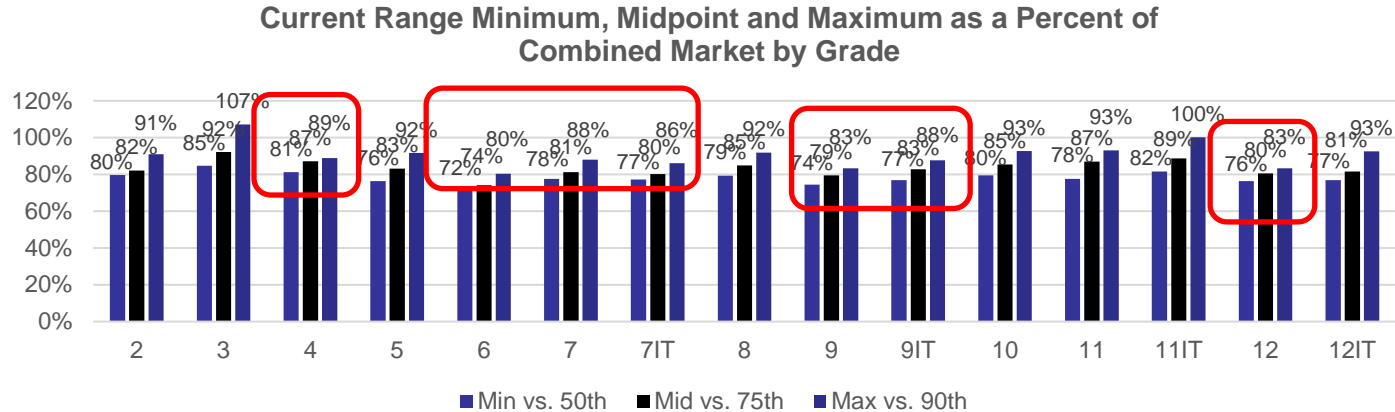
	Dec '21	Nov '22	Dec '22	Trend
Hampton Roads	3.87%	3.34%	3.33%	▼
Virginia	3.31%	2.85%	2.96%	▲
United States	3.90%	3.65%	3.47%	▼

Unemployment Rate: The unemployment rate is the percentage of the population actively seeking work but unable to obtain a position. Hampton Roads' unemployment rate decreased after two months of increases to 3.33% in December 2022, reflected by an increase in the labor force and the number of employed persons and a slight decrease in total unemployed persons (all seasonally adjusted).



Salary Range Comparison – by Grade

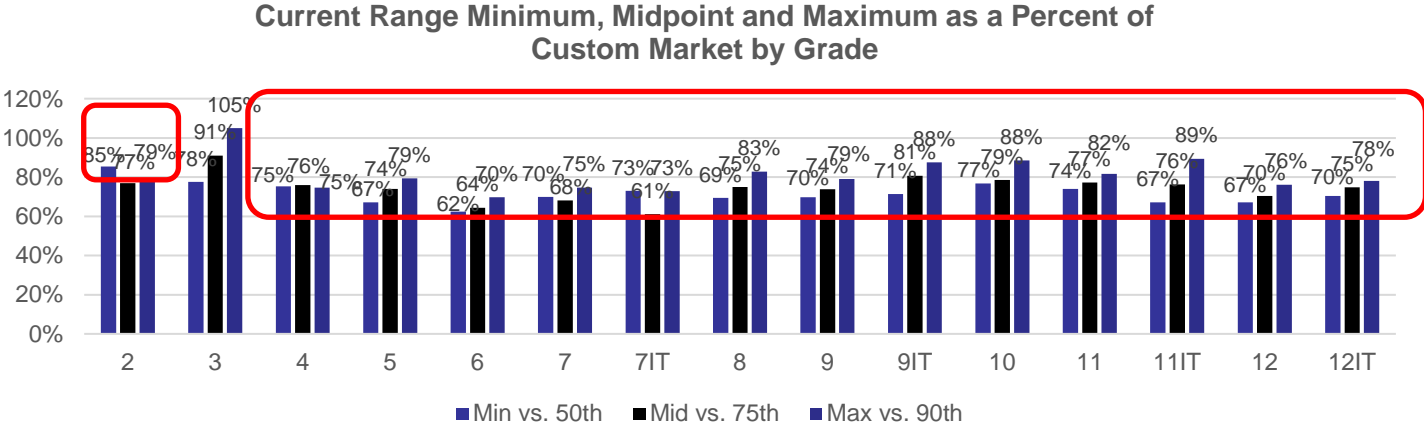
- Below shows the comparisons to the salary range minimum/midpoint/maximum by grade vs. the combined market 50th/75th/90th.



- This data suggests the greatest misalignments of Grades 4/6/7/7IT/9/9IT/12, outside of HRSD compensation policy for range maximum.

Salary Range Comparison – by Grade

- Below shows the comparisons to the salary range minimum/midpoint/maximum by grade vs. the custom market 50th/75th/90th.



- This data suggests a greater misalignment in the custom market of all grades except for Grade 3, outside of HRSD compensation policy for range maximum.

General Wage Adjustments

- July 1, all salaries and ranges adjusted 6.5%
- Merit increase of 4.4% for those on steps on anniversary date



- Positions fully funded for FY
 - Hiring of less mission critical new positions delayed to January 1
 - Turnover allowance raised to \$2M (negative)
- Labor attributable to and funded from CIP is \$3.5M (negative)
- Increased budget for recruitment – expanded scope, new platforms to find a talented and diverse pool of high quality applicants

Benefit Comparison (from Compensation Survey)

- Benefits offered are in-line with Custom Market
- Medical (Monthly Employer Cost)

	Market 50 th	Market 75 th	HRSD
Family	\$1,560	\$1,818	\$1,976
Individual	\$429	\$576	\$697

- Comp Policy – medical costs s/b $\leq 10\%$ of Grade 2, Step 1 salary
- Retirement/Pension – complex and difficult to compare

Health Insurance

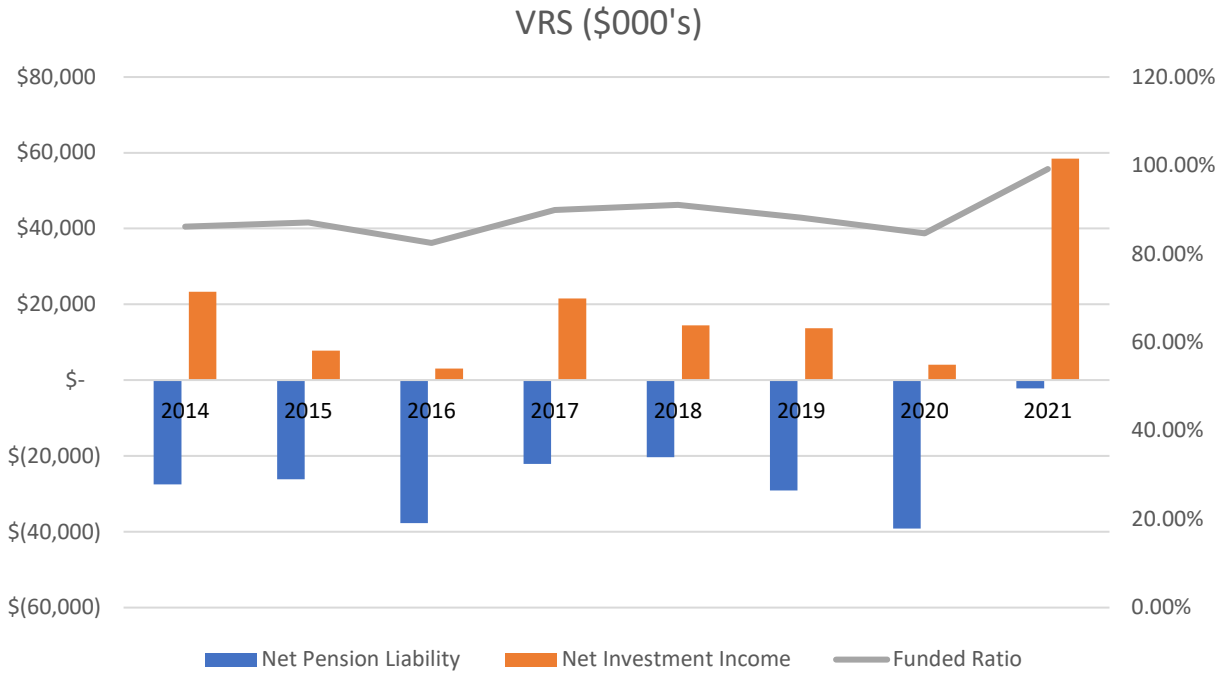
- Pharmacy is large driver with increases in Anti-inflammatory (specialty drugs, Hypoglycemics and Asthma medicines)
- 10-year contract set to expire this year
- Benefits remain unchanged
- With new positions, budget is \$14.510 (net of (\$385K CIP labor))

	FY 23	FY 23 (6 Months)	FY 23 Forecast	FY 24 Estimate	% Increase
Medical Claims	\$ 9,607,000	\$ 4,389,000	\$ 9,536,000	\$ 10,240,000	6.6%
Pharmacy Claims	\$ 2,829,000	\$ 1,299,000	\$ 2,954,000	\$ 3,353,000	18.5%
Dental Claims	\$ 485,000	\$ 241,000	\$ 490,000	\$ 519,000	7.0%
Vision Claims	\$ 42,000	\$ 23,000	\$ 42,000	\$ 44,000	4.8%
Fees/Administration	\$ 495,000	\$ 250,000	\$ 505,000	\$ 527,000	6.5%
	\$ 13,458,000	\$ 6,202,000	\$ 13,527,000	\$ 14,683,000	9.1%

Medical	Employee	Family
Premium	\$0	\$0
Pharmacy Co-pay	\$10-\$75	\$10-\$75
Deductible	\$1,500	\$3,000
Out of Pocket Max	\$3,000	\$6,000

Virginia Retirement System

- Retirement Costs + 11%
 - Coincides with Payroll cost
 - Contribution Rates remain unchanged
- However,
 - Valuation to June 30, 2021
 - Return 2021 – 27.5%
 - Return 2022 – 0.6%
 - Expected Return – 6.75%



- Finance
 - Payroll Specialist
- Talent Management
 - HR Coordinator (PT to FT)
 - ODT Instructor (PT to FT)
 - Workforce Development Specialist
- Operations
 - Biosolids Drivers (7)
 - Automotive Technician

- Talent Management/Operations
 - Apprentices Program
 - Migrate to paid day program for trades
 - PO Trade online
 - Paid program for E/I trade
- Reinstated PO License Bonuses
- Talent Management
 - Compensation structure study
 - Healthcare RFP (every 10 years)



ENVIRONMENTAL RESPONSIBILITY

We protect public health and preserve natural resources to ensure a sustainable future.



HRSD Priorities

Environmental Responsibility – New Positions

- Water Quality
 - TSD Specialist
 - CEL Lab Specialist
 - Lab Assistant (PT to FT)
- Operations
 - Maintenance Operator (3)
 - Lead Operator (2)
 - System Operator (2)
 - Plant Operator (-3)¹
 - Maintenance Operator (-1)¹
 - Maintenance Operator Assistant (-1)¹

¹Assumes closure of AB incinerator NLT 3/31/24

- Chemicals - \$17.1M, up \$4.6M or 37%
 - Sodium Hypochlorite - \$7M, up \$4.2M or 149%
 - Required for disinfection
 - FY18 Budget - \$1.7M, up 4x compared to 5 years ago
- Utilities - \$16.7M, up \$1.8M or 12%
 - Electricity - \$13.1M up \$1.5M or 13%

- Collaborative research on the impact of contaminants in our environment (PFAS, microplastics)
- Air and odor research to find more effective odor mitigation solutions to minimize impacts to our local communities



INNOVATION

We lead the industry by boldly innovating in every aspect of our business to enable continuous improvement.



HRSD Priorities

- Novel and Cost-Effective Approaches to collection system evaluations through molecular and sensor-based environmental monitoring

Water Technology and Research FY24 Initiatives

- New Process Control Technologist
 - In-house water quality sensor development
- Research interns
 - Master's Degree = 11
 - Ph.D. = 9
- Key FY24 Initiatives:
 - Advancing SWIFT treatment technology and preparing for future regulations (1,4-dioxane, PFAS, etc.)
 - Continuing to expand benefits of DETOUR technology at HRSD plants.
 - Further improving Atlantic TP EQ biosolids product quality for distribution and marketing



FINANCIAL STEWARDSHIP

We preserve financial integrity and sustainability through sound planning to help ensure long-term affordability.

HRSD Priorities

- IT
 - Oracle Developer (ERP Support)
 - Senior Systems Engineer
 - OT Cybersecurity Solutions Architect
 - Cybersecurity Analyst – Risk Management and Awareness
- Engineering
 - Condition Assessment Analyst
 - Brings out-sourced work in-house, 2-1 savings

- Identify new opportunities to beneficially reuse biosolids
 - Reduce management costs
 - Sustainable reusing a limited resource
 - Potential revenue source (Re-establish Nutrigreen?)
- Establish a Project Management Office (PMO)
 - Helps to standardized processes and deliver capital projects efficiently

Internal Audit

- Historically, 4-IA/year
- Reducing to 2-IA/year
 - Reduction of ~\$125K
- Reassess, direction to areas of greatest risk often – IT, Finance, HR
- However, IA does not report to GM or CFO

Project Name	Status	PO 6231309	FY23
Admin, project management, management action plans, etc.	Ongoing		
Risk Assessment	In progress		
Remote Access Network Security	In progress: Planning		
Vendor / Contract Compliance (Fin) <i>* Potential change/refocus based on risk assessment</i>	Planned: April/May		
Vendor / Contract Compliance (Eng) <i>* Potential change/refocus based on risk assessment</i>	Planned: June		
FY24: Audit 1 <i>*To be determined based on risk assessment</i>	Planned	FY24	

Internal Audit – Completed Engagements

Subject	Departmental Focus	Observations / Recommendations
Design and Construction: CIP Project Management	Engineering	8 / 13
Biosolids Recycling Program	Water Quality	5 / 8
HR Administration of Employee Health Insurance	Talent Management	6 / 15
IT Network Security/ Cybersecurity: Confidential	IT	6 / 7
Inventory Management	Operations	5 / 5
Procurement and ProCard Management	Finance	6 / 11
Corporate Governance: Ethics Function	Organization-wide	3 / 5
Engineering Procurement	Engineering	4 / 8
Treatment Plant Operations	Operations	6 / 9
Customer Care Division	Finance	2 / 4
Safety Division	Talent Management	2 / 3
Permitting Function	Water Quality	2 / 2
Payroll and Timekeeping	Finance	1 / 3
Pollution Source Control	Water Quality	4 / 8
SWIFT Program Management Plan	Engineering	5 / 12
Fleet Services	Operations	6 / 17
Succession Planning	Talent Management	1 / 4
WIFIA Compliance Assessment ¹	Finance	N/A / 5
Business Continuity Plan and Disaster Recovery Plan: Confidential	IT	4 / 6
Emergency Repairs	Operations	2 / 3
Model 3 Billing: Internal control evaluation: Confidential ¹	Finance	5 / 5
Unifier / ERP Integration	Engineering	3 / 4
Freedom of Information Act	Organization-wide	1 / 1

¹ No formal management action plans required



COMMUNITY ENGAGEMENT

We engage and partner with the communities we serve to enhance relationships, provide value, and foster trust.

HRSD Priorities

- Finance
 - Quality Call Monitor
 - Customer Care Coordinator (remote)
 - Technical Analyst
 - Technical Coordinator
- IT
 - Web Portal Programmer

- Finance/Communications
 - Customer Care Web Portal
 - Rebrand HRUBS
 - Revise bill design
 - Begin work with Norfolk or Portsmouth on Model 3 implementation
- Communications
 - Update website

- Operating Budget \$428,490,000
 - Rate Increase +9.0%
 - Operating Expenses +9.7%
 - Inflationary pressures, labor market and regulatory driven CIP driving costs
- Next steps
 - April 19, Finance Committee, focus on rates and financial projections
 - April 25, Commission Meeting, budget presented to Commission
 - May 23, Commission Meeting, vote on GM proposed budget



Updated SWIFT Strategy

Why are our rates going up?

- Over 50% of our annual spend is on capital projects (cash for CIP and debt service)
- Compliance with two major regulations
 - Clean Water Act (Consent Decree for SSOs/Integrated Plan)
 - Chesapeake Bay (TMDL/WIP3)

Evolution from EPA Consent Decree for Sanitary Sewer Overflows to an EPA Integrated Plan (IP)

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

EPA
308

Develop Regional Wet Weather Management Plan – Estimated @ \$1.8B

Aquifer Replenishment Program (ARP)



- Alternatives Analysis
- 4th Amendment
- Locality Trading Agreement

Integrated Plan Development

5th Amendment

IP SIGNED Feb 8, 2022

EPA INTEGRATED PLANNING
"...prioritize capital investments and achieve our human health and water quality objectives."



Clean Water Act (CWA) Compliance - HRSD's Integrated Plan

2021 2022 2023 2024 **2025** 2026 2027 2028 2029 **2030** 2031 **2032** 2033 2034 2035 2036 2037 2038 2039 **2040 - 2043**

\$700M Phase 1,
Rehab Action Plan




Adaptive Mgt

\$208M High Priority 1

**-47%
SSO**

\$202M High Priority 2

**-69%
SSO**



>\$1B

Aquifer Replenishment Program (ARP)

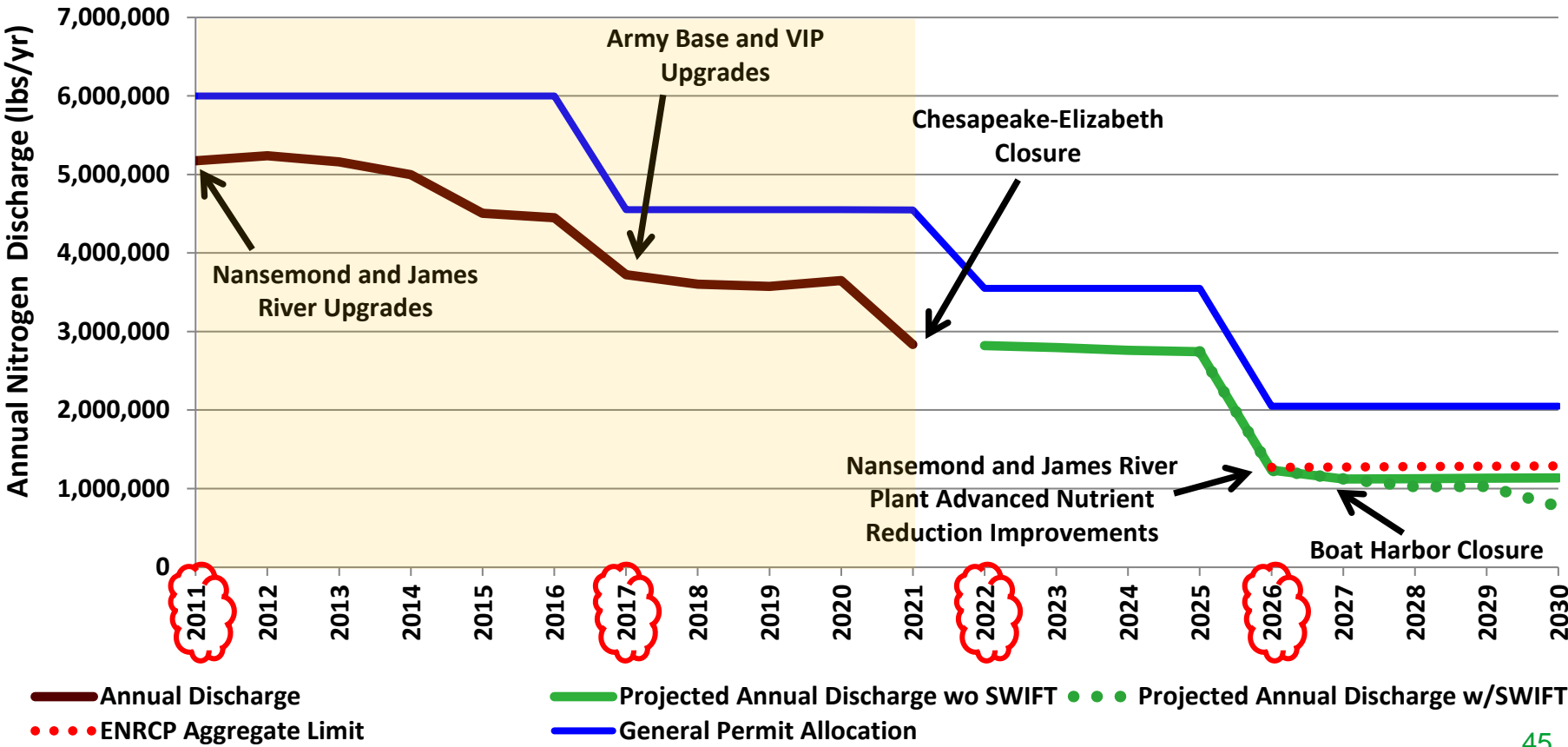
\$20M Microbial Source Tracking

\$2M Post Construction Monitoring

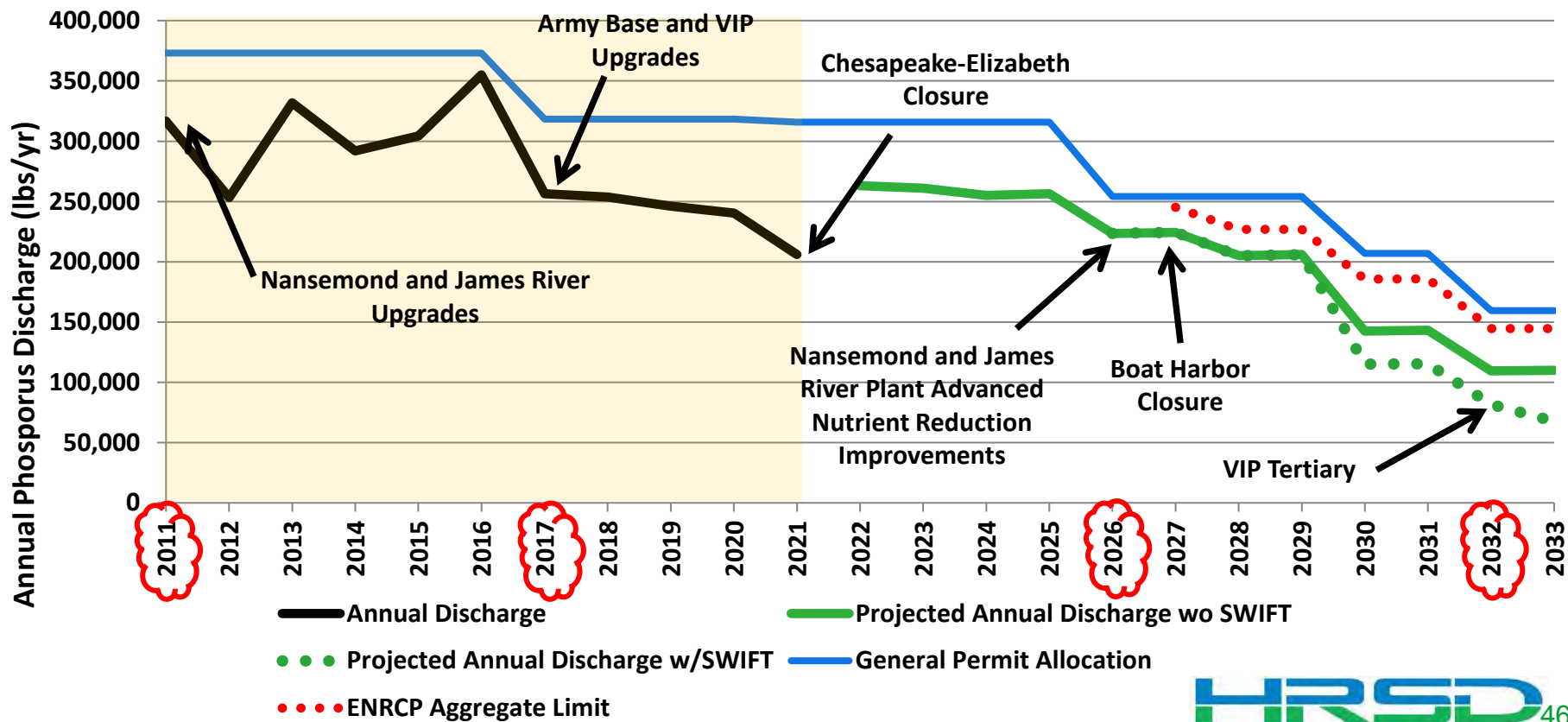


The compliance objective is a 69 percent or greater reduction in baseline modeled SSOs by volume for the 5-year peak flow recurrence event

James River Nutrient Compliance TN



James River Nutrient Compliance TP



SWIFT Phase 1 – Complies with CWA and Chesapeake Bay



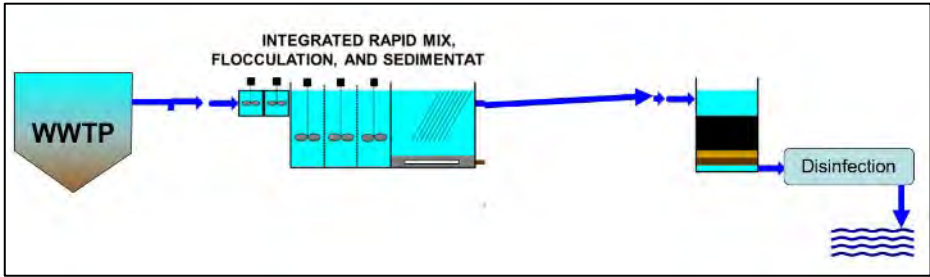
James River SWIFT + ANRI



Nansemond SWIFT + ANRI

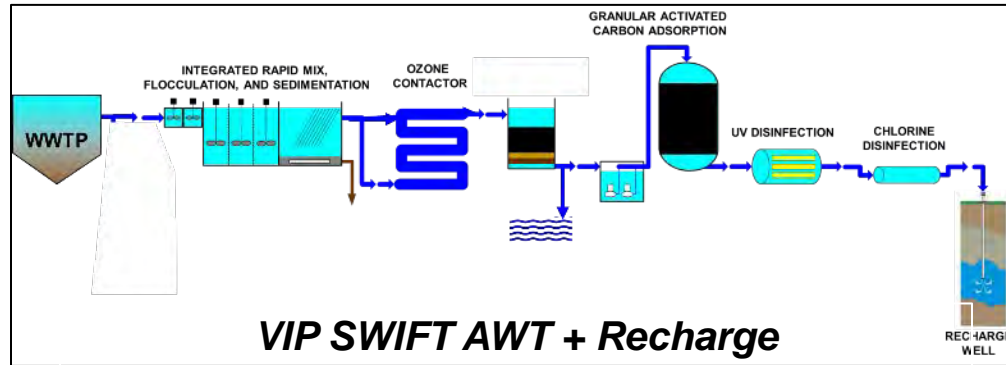


Boat Harbor PS + FM



VIP SWIFT Tertiary

SWIFT Phase 2 Dependent on Future Regulations



York River SWIFT

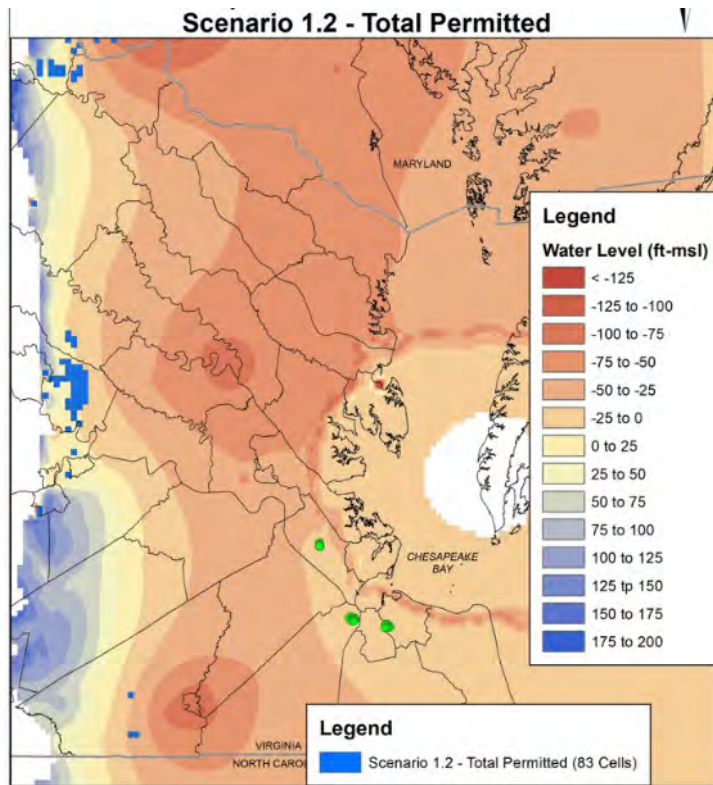
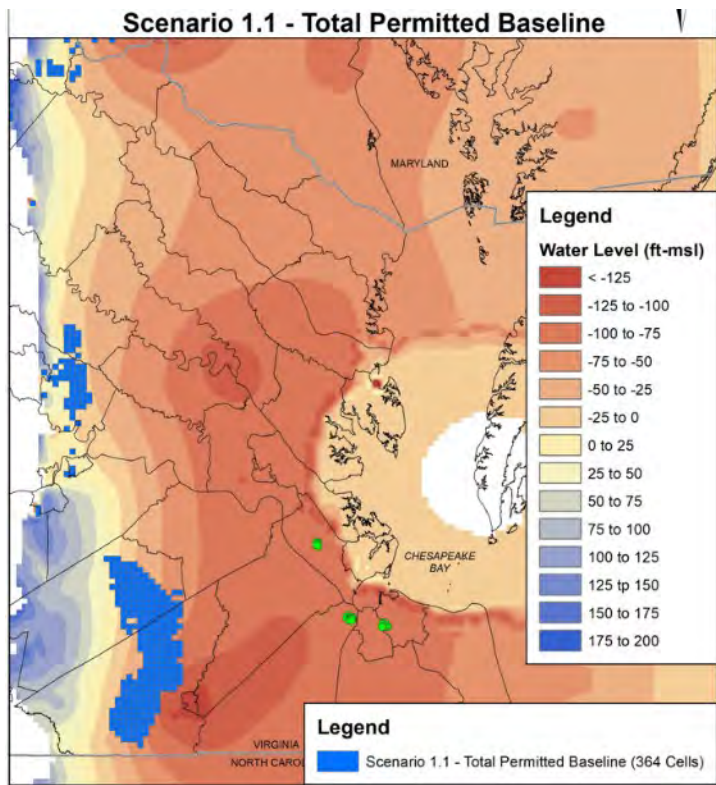


Williamsburg SWIFT



Army Base

Groundwater Impact – 77% of Critical Cells eliminated with Phase 1



Total Permitted critical cells
Baseline – 364
JR/NP – 83 remaining (77% reduction)
JR/NP/VIP – 59 remaining (84% reduction)

What if we didn't do SWIFT + HPP for \$2.8B?

- Clean Water Act Compliance - \$4.1B
 - Localities build wet weather capacity = \$2.7B
 - HRSD builds wet weather capacity = \$1.4B
- Chesapeake Bay TMDL (Nutrient Reduction) - \$3.7B
 - HRSD nutrient reduction plants = \$1.5B
 - Locality stormwater retrofits = \$2.2B
- **HRSD saved the region \$5.0B**
 - *Difficult to calculate the value of sea-level rise, groundwater replenishment and protection from saltwater intrusion*

Rate Increase Message Points

- We are always researching ways to lower costs to keep our waterways clean
- We stretch a dollar by doing projects with multiple benefits
- SWIFT is a twofer, complies with two regulations that would have otherwise cost billions more
- Only a penny to clean a gallon of wastewater
 - Protective of human health and provides clean waterways





Questions?