



COMMISSION MEETING MINUTES
May 26, 2020

| <u>No.</u> | <u>Topic</u> | <u>Page</u> |
|------------|--|-------------|
| | Call to Order | 3 |
| | Roll Call of HRSD Commission | 3 |
| 1. | <u>Award and Recognition – Introductions</u> | 3-4 |
| 2. | <u>Consent Agenda</u> | 5 |
| a. | <u>Approval of Minutes</u> | 5 |
| b. | <u>Contract Awards</u> | 5 |
| c. | <u>Sole Source</u> | 5 |
| d. | <u>Vacation of Easement</u> | 5 |
| e. | <u>Service Area Amendment</u> | 5 |
| 3. | <u>Western Trunk Force Main Replacement and Newtown Road Interceptor Force Main Relocation</u> <u>Rejection of Low Bid, Contract Award and Task Order</u> | 6-7 |
| 4. | <u>Financial Policy</u> | 8 |
| 5. | <u>Expenditure of Tax-Exempt Bond Proceeds</u> <u>Reimbursement Resolution for Fiscal Year (FY) 2021 - 2022</u> | 9 |
| 6. | <u>King William to Hanover Wastewater Treatment Agreement Negotiation</u> | 10 |
| 7. | <u>King William Treatment Plant Improvements Phase I</u> <u>Additional Appropriation</u> | 11-12 |
| 8. | <u>Middlesex County Sewer Service and Sewer Extension Agreements</u> | 13 |
| 9. | <u>Central Norfolk Area Gravity Sewer Improvements Phase I</u> <u>Initial Appropriation</u> | 14 |
| 10. | <u>Virginia Initiative Plant Service Area I/I Reduction Phase I (Portsmouth)</u> <u>Initial Appropriation</u> | 15 |



COMMISSION MEETING MINUTES
May 26, 2020

| <u>No.</u> | <u>Topic</u> | <u>Page</u> |
|-----------------|---|-------------|
| 11. | <u>Virginia Initiative Plant Service Area I/I Reduction Phase III (Portsmouth) Initial Appropriation</u> | 16 |
| 12. | <u>Lucas Creek Pump Station Replacement Acquisition of Real Property – 748 Old Lucas Creek Road, Newport News, Virginia</u> | 17 |
| 13. | <u>COVID-19 Wastewater Surveillance Study</u> | 18 |
| 14. | <u>Operations & Nominations (O&N) Committee Appointment</u> | 19 |
| 15. | <u>Unfinished Business</u> | 19 |
| 16. | <u>New Business</u> | 19 |
| 17. | <u>Commissioner Comments</u> | 19 |
| 18. | <u>Public Comments Not Related to Agenda</u> | 19 |
| 19. | <u>Informational Items</u> | 20 |
| | a. <u>Management Reports</u> | 20 |
| | b. <u>Strategic Planning Metrics Summary</u> | 20 |
| | c. <u>Effluent Summary</u> | 20 |
| | d. <u>Air Summary</u> | 20 |
| 20. | <u>Announcements</u> | 20 |
| Attachments (8) | | |



COMMISSION MEETING MINUTES
May 26, 2020

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

| Name | Title | Present for Item Nos. |
|------------------------|-----------------------|-----------------------|
| Elofson, Frederick N. | Commission Chair | 1-19 |
| Lynch, Maurice P. | Commission Vice-Chair | 2-19 |
| Glenn, Michael E. | Commissioner | 1-19 |
| Lakdawala, Vishnu K. | Commissioner | 1-19 |
| Levenston, Jr., Willie | Commissioner | 1-19 |
| Rodriguez, Stephen C. | Commissioner | 1-19 |
| Taraski, Elizabeth | Commissioner | 1-19 |
| Ward, Molly Joseph | Commissioner | 1-19 |

1. **Awards and Recognition**

Action: No action required.

Brief:

a. Promotion Announcement

Mr. Henifin introduced Ms. Joy Cook, who was recently promoted to Laboratory Manager. Joy began her career at HRSD six years ago as a chemist in the wet lab section. She holds bachelor's and master's degrees in Chemistry. Before coming to HRSD she interned with Johnson & Johnson, then worked in an environmental lab extracting chlorophenols from water and soil samples from the St. Johns River, and then proceeded to work in the biotech industry in San Diego synthesizing modified nucleotides. In her new role, she will be managing the Environmental Data Management System (EDMS) team and the nutrients section in the CEL.

b. New Hire

Mr. Henifin introduced Mr. Roger Caslow who was recently hired as the HRSD Chief Information Security Officer (CISO.) Roger has over 20 years' experience in the security and privacy fields and has expertise in physical, operational, and cybersecurity. He has a successful track record of coordinating and developing technical, governance, compliance, and risk assessment programs to meet desired business goals and objectives. He has also provided testimony to Congressional Subcommittees, highlighting the need for more focused cybersecurity solutions using foundational best practices. Most recently, as CISO for GE Water and then SUEZ



COMMISSION MEETING MINUTES
May 26, 2020

Water Technology Solutions, he was responsible for leading security strategy and solutions development.

Roger's education includes post graduate work on Information Operations, from the National Intelligence University, Washington, D.C. He has a master's degree in Applied Economics from the University of Central Florida and is a Certified Information Systems Security Professional (CISSP) as well as a proud US Navy veteran.

In his newly established role as HRSD's CISO, Roger will be responsible for all facets of organizational cybersecurity.

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

2. **Consent Agenda**

Action: Approve the items listed in the Consent Agenda.

Moved: Willie Levenston
Seconded: Vishnu Lakdawala

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

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Awards
 - 1. [Lawn Maintenance Service Contract – Small Communities Division](#) \$257,100
 - 2. [Methanol Blanket Purchase Agreement](#) \$5,459,935
 - 3. [Nansemond Treatment Plant Influent Screen Replacement Contract Award Task Order](#) \$1,134,000
\$238,151
 - 4. [Student Loan Refinancing and Financial Services Benefits](#) \$50,000
 - 5. [Tabb Pressure Reducing Station and Offline Storage Facility](#) \$413,040
- c. Sole Source
 - 1. [Primary Clarifier Scum Trough Parts](#)
 - 2. [Trimble GPS Equipment, Accessories, and Software Support](#)
- d. Vacation of Easement
 - 1. [Williamsburg Influent Force Main Contract A](#)
- e. Service Area Amendment
 - 1. [City of Suffolk Kings Highway Service Area](#)

Item(s) Removed for Discussion: None

Attachment #1: [Consent Agenda](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

3. **Western Trunk Force Main Replacement and
Newtown Road Interceptor Force Main Relocation
Rejection of Low Bid, Contract Award and Task Order**

Actions:

- a. **Approve rejection of the bid submitted by Tidewater Utility Construction, Inc. and find the bidder non-responsible.**
- b. **Award a contract to Bridgeman Civil, Inc. in the amount of \$5,448,180 (\$2,720,693 for CE011700 and \$2,727,487 for CE010520).**
- c. **Approve a task order with McDonough Bolyard Peck, Inc. (MBP) for CE011700 in the amount of \$217,223.**

Moved: Vishnu Lakdawala

Seconded: Elizabeth Taraski

Roll call vote:

Ayes: 8

Nays: 0

CIP Project: CE011700

| | |
|--|-------------|
| Budget | \$4,286,000 |
| Previous Expenditures and Encumbrances | (\$467,919) |
| Available Balance | \$3,818,081 |

CIP Project: CE010520

| | |
|--|---------------|
| Budget | \$16,555,000 |
| Previous Expenditures and Encumbrances | (\$1,433,015) |
| Available Balance | \$15,121,985 |

Type of Procurement: Competitive Bid

| Bidder | Bid Amount |
|--------------------------------------|----------------|
| Tidewater Utility Construction, Inc. | \$4,330,360.70 |
| Bridgeman Civil, Inc. | \$5,448,180.00 |
| Gaston Brothers Utilities, LLC | \$6,199,950.00 |
| Garney Companies, Inc. | \$6,762,790.00 |

Engineer's Estimate: \$5,800,290.00



COMMISSION MEETING MINUTES
May 26, 2020

| Contract Status (CE011700): | Amount |
|---|---------------|
| Original Contract with MBP | \$0 |
| Requested Task Order | \$217,223 |
| Revised Contract Value | \$217,223 |
| Engineering Services as % of Construction | 8% |

Contract Description: 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 March 16, 2020, and four bids were received on April 14, 2020. The low bidder, Tidewater Utility Construction, Inc. has been determined to be non-responsible because of a lack of required documented experience with large diameter pipe and line stops specified for this project. The design engineer, AECOM, evaluated the bids and recommends award to the lowest responsive and responsible bidder, Bridgeman Civil, Inc., in the amount of \$5,448,180.

Project Description: This project will abandon a portion of 20-inch asbestos cement pipe which has been determined to have reached the end of its useful life and reconnect four Virginia Beach Pumping Stations to an existing 48-inch reinforced concrete cylinder pipe. In addition, a 48-inch plug valve, tee, 42-inch plug valve, and approximately 250 linear feet of 42-inch pipe will be installed at Wesleyan Drive in order to isolate the line.

Analysis of Cost: Costs were compared to past similar projects and were determined to be fair and reasonable. AECOM will provide contract administration services (\$139,320 for CE011700 and \$60,570 for CE010520) under their existing professional services agreements for each project. MBP will provide field engineering and inspection services (\$217,223 for CE011700 and \$119,260 for CE010520) under the Construction Inspection Services annual services contract.

Schedule:

| | |
|--------------------|----------------|
| Bid | March 2020 |
| Construction | June 2020 |
| Project Completion | September 2021 |

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

4. **Financial Policy Revisions**
Commission Adopted Policy

Action: Approve the revised Financial Policy.

Moved: Stephen Rodriguez

Seconded: Willie Levenston

Roll call vote:

Ayes: 8

Nays: 0

Brief: HRSD’s Financial Operations are guided by its Financial Policy (Policy). The Policy was originally adopted in 2009 and most recently revised in 2018. It is the primary document that places parameters and defines management discretion and philosophies relative to the financial aspects of HRSD. The Policy covers areas such as reserves; budgetary principles and control; key financial metrics, internal controls and audits; debt affordability; and risk, debt, derivative and investment management.

The draft Policy was presented to the Commission for review on April 28, 2020. The driver for this revision is to include the definition of Adjusted Days Cash on Cash which more closely manages how the Finance Department makes decisions about liquidity levels. The other changes are minor additions and clarifications such as the inclusion of the Water Infrastructure and Financing Act (WIFIA) and the Virginia Resources Authority (VRA) Master Financing Agreement. In addition, there are updates based on regulatory changes. For example, LIBOR is expected to be phased out in 2021 and the policy was edited to include “or substitute” and Secured Overnight Financing Rate (SOFR), which is the leading candidate to replace SOFR.

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

Attachment #2: [Policy](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

5. **Expenditure of Tax-Exempt Bond Proceeds
Reimbursement Resolution for Fiscal Year (FY) 2021 - 2022**

Action: Adopt reimbursement resolution.

Moved: Stephen Rodriguez

Seconded: Michael Glenn

Roll call vote:

Ayes: 8

Nays: 0

Brief: Federal tax law requires that a government officially declare its intent to “reimburse” itself for capital expenditures occurring prior to the availability of tax-exempt debt proceeds used to eventually finance the improvements. The origin of this regulation is to avoid potential abuse of arbitrage motivated reimbursement transactions, whereby entities attempt to profit from price imbalances particularly due to the tax-exempt nature of municipal bonds.

For example: HRSD used cash to fund the \$25 million SWIFT Research Center on June 1, 2018. On October 1, 2018, the Commission adopts a Reimbursement Resolution to declare its intent to reimburse those original expenditures. On November 1, 2018, HRSD issues \$25 million in tax-exempt bonds and invests those funds in materially higher yielding investments. The reimbursement resolution would be considered “artificial” due to the untimely declaration of official intent.

The [reimbursement resolution](#) amount of \$175 million is based on the FY 2021-2030 Capital Improvement Program less amounts that HRSD intends to pay with cash and is a reasonable estimation of the maximum amount of debt proceeds that could be subject to reimbursement. HRSD was approved for a \$125 million Clean Water Revolving Loan Fund and \$50 million Line of Credit. The expenditures to be reimbursed cannot be more than 60 days prior to the date of the resolution.

In FY-2021, staff is planning to initially use cash to fund Virginia Clean Water Revolving Loan Fund (VCWRLF) projects while we await invoice approval from the Department of Environmental Quality for reimbursement. When we receive these tax-exempt proceeds, we will reimburse our cash balance. Staff may also use cash to fund capital projects and seek reimbursement from our tax-exempt Line of Credit with Bank of America.

Attachment #3: [Reimbursement Resolution](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

6. **King William to Hanover Wastewater Treatment Agreement Negotiation**

Action: Approve entering into negotiations with Hanover County to develop an agreement for sending King William County flows to Hanover County for wastewater treatment.

Moved: Stephen Rodriguez

Seconded: Maurice Lynch

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

Background: King William Treatment Plant can currently treat 100,000 GPD average daily flow (ADF). Development in King William County has been accelerating in recent years. New subdivisions are planned and construction has ramped up in existing subdivisions with projected flows exceeding 150,000 GPD in addition to current flow. Buildout of approved subdivisions will require an increase of treatment capacity beyond 100,000 GPD ADF. To meet the needed increase in capacity, HRSD created CIP project MP013300 “King William Treatment Plant Improvements Phase II.” The project is intended to increase treatment capacity for King William from 100,000 GPD ADF to a firm capacity of 200,000 GPD ADF. The improvements will be planned to facilitate expansion to 300,000 GPD ADF of capacity. Two alternatives to increase treatment capacity were evaluated: 1) constructing a new treatment plant in King William, and 2) constructing a transmission force main to send flow to the Hanover County Totopotomoy Treatment Plant. A Transmission Force Main feasibility study was recently completed. Based on a Net Present Value analysis of the alternatives, staff recommends pursuing the transmission force main alternative.

HRSD had preliminary conversations about terms for Hanover County to provide wastewater treatment for flows from King William County. Developing an agreement between HRSD and Hanover County is needed to move the project forward. Staff provided a [briefing](#) on flow projections, transmission force main alignment, and 50-year present value analysis.

Discussion Summary: Staff explained HRSD would abandon its ability to treat flows at King William and would purchase enough capacity at the Hanover County facility for the foreseeable future. This is a common practice among communities to reserve capacity at a neighboring treatment facility to guarantee treatment capacity based on a cost per gallon transmitted to the treatment plant. DC Water is the largest in the region to have these types of agreements in place. When asked about permitting and EPA regulations, staff explained Hanover County would assume responsibility for those permitted discharges. Commissioner Rodriguez requested potential projected costs for necessary upgrades be outlined in the agreement. Staff said if an agreement is reached with Hanover County, the draft agreement will be presented to the Commission for approval prior to execution.

Attachment #4: [Presentation](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

7. **King William Treatment Plant Improvements Phase I
Additional Appropriation**

Action: Appropriate additional funding in the amount of \$3,147,076.

Moved: Lynch
Seconded: Rodriguez
Roll call vote:

Ayes: 8 **Nays:** 0

CIP Project: MP012000

| | |
|---|---------------|
| Budget | \$801,000 |
| Previous Expenditures and Encumbrances | (\$767,076) |
| Available Balance | \$33,924 |
| Proposed Budget for Construction | (\$2,709,800) |
| Proposed Contingency | (\$471,200) |
| Project Shortage/Requested Additional Funding | (\$3,147,076) |
| Revised Total Project Authorized Funding | \$3,948,076 |

Project Description: This project allows for improvements to the King William Treatment Plant in order to continue to provide reliable treatment and capacity per regulatory requirements. The Initial Appropriation was approved at the January 2015 Commission meeting for this project. Seven separate amendments to the General Engineering Services contract with CH2M Hill/Jacobs Engineering have been issued to evaluate a range of improvements for KWTP throughout the membrane evaluation study, the Facility Plan, the Preliminary Engineering Report, and the Design phases of this project. The original Scope of the project was to allow for the reliable operation of both King William Treatment Plant’s treatment trains simultaneously by adding the following components:

- Pumps and piping dedicated to each treatment train
- Dedicated membrane cleaning tank
- New rack with attached membranes
- Bridge crane
- New biological process PLC
- New UV disinfection system
- Instrumentation and electrical improvements as required to operate the equipment itemized above

While the original purpose of the project remains the same, this Additional Appropriation is due to scope changes that resulted from various investigations and deliberations during the membrane evaluation study, the Facility Plan, the Preliminary Engineering Report, and the Design phases of this project. A summary of these changes follows:



COMMISSION MEETING MINUTES
May 26, 2020

- Automated remote backwash cleaning system (this will item will be addressed as a bid alternate)
- An emergency generator sized for current and future needs was added
- The bridge crane was deleted
- Headworks screening was added
- Rehabilitation of the existing equalization and digester tank was added
- A flow control valve was added
- Consolidation of chemical storage and metering was investigated, but the cost was prohibitive, so it was not added to the project.

The finalized scope will provide the necessary improvements for continued reliable operations while allocating membrane redundancy to achieve full permitted plant capacity, which currently is not achievable with the existing plant configuration and equipment. The finalized project scope is reflected in the current Capital Improvement Program and aligns with the project budget of \$3,981,490. The design phase of the King William Treatment Plant Improvements project is nearing completion and is anticipated to bid in July 2020.

An alternative long-term solution for King William capacity will convey sewage flows to the Hanover County Totopotomoy Treatment Plant via a transmission force main system. A feasibility study has been completed and discussions are ongoing with Hanover officials to finalize an agreement and associated costs. As these discussions progress and timetable for this solution is finalized, this current Phase I Improvement project will potentially see a reduction in scope with a cost savings of approximately \$1.5 million to the overall CIP project. The project will be designed and bid to allow for elimination of the automated remote backwash cleaning system which would not be required if the long-term solution is approved in the near future.

Funding Description and Analysis of Cost: The estimated construction cost is based on a Class 2 construction cost estimate of \$2,130,800 combined with in-house work estimated at \$225,000, engineering construction services estimate of \$354,000 and a contingency allowance of \$471,200. Engineering services will be provided by Jacobs and will include all design and construction phase efforts.

| | | |
|-------------------------|--------------------|----------------|
| <u>Schedule:</u> | Bid | August 2020 |
| | Construction | September 2020 |
| | Project Completion | September 2021 |

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

8. **Middlesex County Sewer Service and Sewer Extension Agreements**

Action: Approve the terms and conditions of the Sewer Service Agreement and the Sewer Extension Agreement with Middlesex County 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: Maurice Lynch

Seconded: Vishnu Lakdawala

Roll call vote:

Ayes: 8

Nays: 0

Background: HRSD previously entered into an agreement dated January 6, 1999 with the Town of Urbanna and an agreement dated March 28, 2010, with the Middle Peninsula Regional Jail Authority to assume ownership and operations of the Urbanna Treatment Plant and Central Middlesex Treatment Plant respectively; both located in Middlesex County. HRSD is in the process of taking these two treatment plants offline by constructing a force main to convey flow to the York River Treatment Plant. The force main will extend 16 miles through Middlesex County. The force main will provide capacity for sanitary sewer systems in the area to connect to the HRSD regional system.

An [agreement](#) that transfers all the real property associated with the Middlesex County public gravity and vacuum collection systems, along with pump stations and other sewer appurtenances to HRSD has been developed. As we have done with other small systems, all infrastructure and property shall be conveyed to HRSD at no cost. HRSD will provide interceptor sewers including necessary treatment capacity to within two miles of a sewer service area in the County provided it is in accordance with the County's Comprehensive Plan and the County water system is extended to serve the area.

The County may terminate this agreement with 12 months notice to HRSD. Any property conveyed to HRSD by the County would be returned to the County at no cost to the County. As the County has no capacity to convey and treat sewage, HRSD can only terminate with consent of the County.

A second [agreement](#) that describes how gravity and vacuum sewer collection systems may be planned, designed, and constructed, at County cost, by HRSD on behalf of the County in the future has also been developed. This agreement builds upon the terms and conditions of an existing Memorandum of Understanding dated July 21, 2017 and amended March 15, 2018, between the County and HRSD. Execution of these agreements will memorialize our current and future operations as has been done in all other small communities.

Attachment #5: [Agreement](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

9. **Central Norfolk Area Gravity Sewer Improvements Phase I
Initial Appropriation**

Action: Appropriate total project funding in the amount of \$320,000.

Moved: Michael Glenn
Seconded: Stephen Rodriguez

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

CIP Project: VP017110

Project Description: This project will evaluate the condition of approximately 400 linear feet (LF) of gravity sewer segments and three manholes along McNeal Avenue in Central Norfolk and perform needed rehabilitation. This section of gravity sewer is classified as an EPA Rehabilitation Action Plan Phase 2 project with a completion date requirement by May 2025. The City of Norfolk Department of Utilities requested that HRSD design and construct this sewer rehabilitation project in McNeal Avenue on the same schedule that Norfolk Utilities planned to replace a 2-inch water line that lies parallel with the gravity sewer system. The planned water line replacement is to occur between June and August 2020. HRSD and Norfolk Utilities discussed the strategy of both parties contracting individually with Tidewater Utility Construction Inc. for the respective work for each party since both parties have an active on-call construction services contract with this firm.

Funding Description: The total project cost is estimated at \$320,000 and is based upon engineering fees for design and construction oversight by Hazen and Sawyer under the Condition Assessment annual services contract for \$28,000, rehabilitation/replacement construction costs by Tidewater Utility Construction, Inc. under their Sewer Repair and Condition Assessment on-call construction services contract for \$32,000, and the remainder will be available as a contingency due to the challenges working in this highly developed section of Norfolk.

Schedule: Construction June 2020
Project Completion August 2020

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

10. **Virginia Initiative Plant Service Area I/I Reduction Phase I (Portsmouth)
Initial Appropriation**

Action: Appropriate total project funding in the amount of \$15,582,800.

Moved: Willie Levenston

Seconded: Elizabeth Taraski

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

CIP Project: VP018301

Project Description: This CIP corresponds to VIP-RWWMP-04A (PORT-01 and PORT-02) from the Regional Wet Weather Management Plan (RWWMP). The goal of these projects is to reduce the total 10-year peak inflow and infiltration from 4.7 million gallons per day down to 1.5 million gallons per day.

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Funding is being requested now to begin flow monitoring. The data collected through flow monitoring will inform the project's design and construction.

Funding Description: The total cost for this project is estimated at \$15,582,800 based on the RWWMP cost estimates. The flow monitoring includes deploying five flow meters for a 12-month period at a cost of \$20,000 based on an existing unit price based contract.

| | | |
|------------------|----------------------------|--------------|
| Schedule: | Flow meter data collection | May 2020 |
| | PER | May 2021 |
| | Design | October 2021 |
| | Construction | May 2022 |
| | Project Completion | April 2024 |

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

11. **Virginia Initiative Plant Service Area I/I Reduction Phase III (Portsmouth)
Initial Appropriation**

Action: Appropriate total project funding in the amount of \$11,205,600.

Moved: Willie Levenston

Seconded: Michael Glenn

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

CIP Project: VP018303

Project Description: This CIP corresponds to VIP RWWMP-04C (PORT-04, PORT-LOP65-1, Port-LOP65-2, and PORT-LOP65-3) from the Regional Wet Weather Management Plan (RWWMP). The goal of these projects is to reduce the total 10-year peak inflow and infiltration from 4.9 million gallons per day down to 1.8 million gallons per day.

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Funding is being requested now to begin flow monitoring, the data collected through flow monitoring will inform the project's design and construction.

Funding Description: The total cost for this project is estimated at \$11,205,600 based on the RWWMP cost estimates. The flow monitoring includes deploying five flow meters for a 12-month period at a cost of \$20,000 based on an existing unit price based contract.

| | | |
|------------------|----------------------------|--------------|
| Schedule: | Flow meter data collection | May 2020 |
| | PER | May 2021 |
| | Design | October 2021 |
| | Construction | May 2022 |
| | Project Completion | April 2024 |

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

12. **Lucas Creek Pump Station Replacement**
Acquisition of Real Property – 748 Old Lucas Creek Road, Newport News, Virginia

Action: Approve the purchase of property at 748 Old Lucas Creek Road (.28-acre), and associated acquisition costs for \$438,500 in accordance with the terms and conditions of the Purchase and Sale Agreement with Ted and Doris Ehrenfried, owner of subject property in Newport News, Virginia 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 and further authorize the General Manager to execute the forthcoming deed of bargain and sale upon approval of legal counsel.

Moved: Molly Ward
Seconded: Elizabeth Taraski
Roll call vote:

Ayes: 8 **Nays:** 0

CIP Project: JR010600

Project Description: As part of a Regulatory Rehab Phase II Project (deadline May 2025), a replacement pump station will be designed and constructed for the existing station located at 750 Old Lucas Creek Road in Newport News. The current pump station has reached the end of its useful life and several studies were conducted to evaluate rehabbing the current pump station versus replacing it. Replacement of the pump station was recommended to allow for a more open layout and improved flexibility. Additionally, replacing the pump station will result in a cost savings of at least \$1 million dollars compared to the rehabilitation option.

Upon acquisition of 748 Old Lucas Creek Road, HRSD staff will work with the City of Newport News to vacate and acquire adjacent right of way in exchange for 750 Old Lucas Creek Road (current pump station site). This will ensure sufficient space to house the new pump station and accessory structures. The [Purchase and Sale Agreement](#) is attached and was reviewed by HRSD staff and legal counsel. The deed of bargain and sale is forthcoming and will also be reviewed by HRSD staff and legal counsel before execution. [Facilities Orientation Maps](#) are provided for clarification purposes.

Analysis of Cost: The cost of the acquisition will total \$438,500. This amount includes the purchase of the property at 748 Old Lucas Creek Road for the negotiated price of \$225,000, lien payoff amount of \$200,000, and relocation and moving costs totaling \$13,500. (Note: The offer amount of \$225,000 for the property is consistent with sales of single-family homes and current listings in the area).

Attachment #6: [Purchase and Sale Agreement](#) and [Maps](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

13. **COVID-19 Wastewater Surveillance Study Briefing**

Action: No action required.

Brief: HRSD has been developing in-house capabilities to perform microbial source tracking methods using molecular analyses over the past five years. This experience and knowledge, gained by providing services to local jurisdictions, positioned the Water Quality Department well to explore wastewater surveillance as a tool to inform health professionals here in Hampton Roads regarding the current COVID-19 event.

Wastewater surveillance, in this case, is a monitoring approach that samples wastewater and analyzes the samples for genetic material specific to the SARS-CoV-2 virus. This information can be used to inform localities as they make decisions relative to whether this event is increasing or decreasing in magnitude and how these changes differ between localities over time. For example, health professionals may be able to use this information, in combination with clinical data, to decide if and when changes can or should be made to approaches in place to mitigate the current event. In a long-term monitoring context this surveillance tool could be used to detect the onset of an event. Staff provided a [presentation](#) describing the current monitoring program and conclusions drawn thus far.

Discussion Summary: The Commission asked how the data would be used; rate of detection; how quickly laboratory test results are received and how HRSD projections compare to the Virginia Health Department (VDH) clinical calculations. The Commission also discussed monitoring trends from treatment plants to neighborhoods and detecting virus in wastewater before clinical data is available to better predict hot spots is limited to public funding. SARS-CoV-2 monitoring has been conducted on SWIFT Water and the virus has not been detected. This is expected because the virus is highly susceptible to the wastewater treatment process. HRSD is actively providing data to VDH and CDC and will continue to push the science and encourage others to use the data available.

Attachment #7: [Presentation](#)

Public Comment: None



COMMISSION MEETING MINUTES
May 26, 2020

14. **Operations & Nominations (O&N) Committee Appointment**

Action: The Chair appointed Commissioners Willie Levenston (Committee Chair) and Michael Glenn to the O&N Committee.

Brief: The Commission is required by the Enabling Act to elect a chair and vice-chair each year. The election of officers is normally held in June, and the new officers assume their duties in July.

The Chair customarily appoints an O&N Committee to nominate Commission officers for the coming year. The Committee will also review the HRSD Commission Governance Guidelines, Remote Participation and Ethics policies. Commissioners Levenston and Glenn served on the committee last year.

The Committee will hold its first meeting following adjournment of the May 26 Commission meeting.

Attachment: None

Public Comment: None

15. **Unfinished Business – None**

16. **New Business – None**

17. **Commissioner Comments – None**

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



COMMISSION MEETING MINUTES
May 26, 2020

19. **Informational Items**

Action: No action required.

Brief: The items listed below were presented for information.

- a. [Management Reports](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)

Attachment #8: [Informational Items](#)

Public Comment: None

20. **Announcements**

The Operations and Nominations (O&N) Committee will meeting following adjournment of this meeting.

Next Commission Meeting Date: June 23, 2020

Meeting Adjourned: 10:31 am

SUBMITTED:

APPROVED:

Jennifer L. Cascio

Frederick N. Elofson

Jennifer L. Cascio
Secretary

Frederick N. Elofson, CPA
Chair

HRSD COMMISSION MEETING MINUTES
May 26, 2020

ATTACHMENT #1

AGENDA ITEM 2. CONSENT AGENDA

CONSENT AGENDA ITEM 2.b.1. – May 26, 2020

Subject: Lawn Maintenance Service Contract – Small Communities Division
Contract Award (>\$200,000)

Recommended Action: Award a contract for lawn maintenance services to Green Alt LLC DBA Green Alternatives LLC in the estimated amount of \$51,420 for year one with four years annual renewal options and an estimated cumulative value in the amount of \$257,100.

Type of Procurement: Competitive Bid

| Bidder | Bid Amount |
|--|------------|
| Green Alt LLC DBA Green Alternatives LLC | \$51,420 |

HRSD Estimate: \$32,130

Contract Description: This contract is an agreement for lawn maintenance services for the Small Communities Operation Center, West Point Treatment Plant, King William Treatment Plant, Urbanna Treatment Plant and affiliated Small Communities pump stations. Services include annual maintenance of sites (weekly cutting, edging, trimming), fence line maintenance (removal of vines, dead tree limbs and brush height), and flower bed/mulch replenishment.

Analysis of Cost: The HRSD estimate shown is based on an original scope of work for this contract. The specifications were revised to add additional service requirements and new locations. Green Alternatives currently has the lawn maintenance service contract for the HRSD South and North Shore Pump Stations. Taking into consideration the extensive travel requirements under this contract; their pricing has been found to be fair and reasonable compared to their current contract and past bids submitted overall.

CONSENT AGENDA ITEM 2.b.2. – May 26, 2020

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

Recommended Action: Award a blanket purchase contract for supply and delivery of Methanol to HRSD Treatment Plants in the estimated amount of \$1,091,987 for year one with four annual renewal options and an estimated cumulative value in the amount of \$5,459,935.

Type of Procurement: Competitive Bid

| Bidder | Bid Amount |
|----------------------------|-------------|
| Univar USA, Inc. | \$1,091,987 |
| Industrial Chemicals, Inc. | \$1,108,046 |

HRSD Estimate: \$1,180,310

Contract Description: This contract is an agreement for the supply and delivery of Methanol. Pure methanol, waste methanol products, and waste glycerol products are used as supplemental carbon sources for denitrification at HRSD treatment plants. Although HRSD staff work to minimize the usage of supplemental carbon, methanol feed is a critical aspect of meeting effluent total nitrogen requirements.

The methanol is added to a second stage anoxic zones using sensor-based control systems, for example in the 5-stage Bardenpho processes at the Nansemond and Army Base treatment plants, and post denitrification processes like the denitrification filters at the York River Treatment Plant.

Analysis of Cost: This contract is calculated using a monthly unit rate based on a methanol index (Mi) plus a fixed monthly adder (Fa) provided the Bidder. The Bid Amounts reflects the complete monthly rate (Mi+Fa) times the estimated annual usage at the HRSD Treatment Plants. The HRSD Estimate is based on the current average monthly unit rate times the estimated annual usage.

Monthly Adder

| | |
|----------------------------|--------|
| Univar USA, Inc. | \$0.08 |
| Industrial Chemicals, Inc. | \$0.10 |

CONSENT AGENDA ITEM 2.b.3. – May 26, 2020

Subject: Nansemond Treatment Plant Influent Screen Replacement
Contract Award (>\$200,000) and Task Order (>\$200,000)

Recommended Actions:

- a. Award a contract to MEB General Contractors, Inc. in the amount of \$1,134,000.
- b. Approve a task order with Hazen and Sawyer in the amount of \$238,151.

CIP Project: NP014400

| | |
|--|-------------|
| Budget | \$3,508,700 |
| Previous Expenditures and Encumbrances | (\$254,719) |
| Available Balance | \$3,253,981 |

Type of Procurement: Competitive Bid

| Bidder | Bid Amount |
|-----------------------------------|-------------|
| MEB General Contractors, Inc. | \$1,134,000 |
| Ulliman Schutte Construction, LLC | \$1,215,000 |
| Clark Construction, LLC | \$1,399,390 |
| Crowder Construction Company | \$1,435,000 |

Engineer Estimate: \$2,500,000

| Contract Status: | Amount |
|---|-----------|
| Original Contract with Hazen and Sawyer | \$253,283 |
| Total Value of Previous Task Orders | \$0 |
| Requested Task Order | \$238,151 |
| Total Value of All Task Orders | \$238,151 |
| Revised Contract Value | \$491,434 |
| Engineering Services as % of Construction | 43% |

Contract Description: In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. Four bids were received and evaluated based upon the requirements in the invitation for bid. MEB General Contractors, Inc. is the apparent low bidder with a bid amount of \$1,134,000.

Project Description and Analysis of Cost: This project is to replace three aging mechanical bar screens at the Nansemond Treatment Plant, as well as to install a new screen in the current bypass channel.

The Engineer's Estimate was prepared in accordance with the guidelines of the Association for the Advancement of Cost Engineering (AACE). The estimate is consistent with the criteria for a Class I cost estimate; however, a 20 percent contingency was also included in the estimate based on higher costs of labor and steel experienced over the past several years. The bids came in significantly lower than the Engineer's Estimate. The difference is attributed to strong market uncertainties as a result of the COVID-19 pandemic inflating the estimate and fierce competition between the major equipment suppliers to sell products reducing the bids from contractors.

Task Order Description and Analysis of Cost: This task order will provide construction phase services for this project. A fee of \$238,151 was negotiated with Hazen and Sawyer and was based upon anticipated construction administration and inspection hours required for this effort. This cost for construction phase service is approximately 20 percent of the total construction cost, which is somewhat higher than comparable projects although the labor hours are comparable. The labor rates are within the Rate Schedule included in the Professional Engineering Services Agreement for General Engineering Services, dated July 1, 2019.

Schedule: Construction July 2020
Project Completion October 2021

CONSENT AGENDA ITEM 2.b.4. – May 26, 2020

Subject: Student Loan Refinancing and Financial Services Benefits
Contract Award

Recommended Action: Award a contract to Langley Federal Credit Union (LFCU) to provide employee financial services benefits including but not limited to refinancing student debt with an estimated cost of \$50,000.

Project Description: Student debt has become a major issue impacting the financial health of the nation. Seven out of ten college graduates leave school with debt that averages close to \$30,000. As a nation there are 37 million people carrying a total of one trillion dollars in student debt. It is a huge drag on our economy.

HRSD employees are included in those numbers. A recent survey of our employees found over 50 employees that responded dealing with student loans that total over \$1.4 million, very close to the national average of \$30,000 each.

While student debt has taken on more significance during the COVID related economic crisis, HRSD has been focused on this issue for more than a year. Staff began researching options last summer and issued a request for proposals on January 27, 2020. Only one financial institution responded by the closing date of February 21, 2020. Staff has worked with LFCU to develop a low-cost, low-risk refinancing benefit for our employees with outstanding student debt. These loans will be originated and serviced by LFCU. To keep the cost down, HRSD will fund a loan loss allowance based on the value of refinanced loans, estimated to be less than \$50,000 (3% of outstanding balance). Funding an allowance for loan loss allows LFCU to offer below market rates to our employees.

An additional feature of this benefit is the access to financial counseling services for employees with student loan debt. Staff will explore other financial service benefits that can be developed and offered in the future beyond student loan debt refinancing.

Disclosure: The General Manager is an uncompensated volunteer director on the LFCU Board. He recused himself from any participation in the evaluation and selection of LFCU in response to the HRSD request for proposals. The RFP development and evaluation team was led by Amy Murphy and included Erin Girardi, Brenda Matesig, Lee Marsh, Kyle Curtis, and Melissa Josey-White.

CONSENT AGENDA ITEM 2.b.5 – May 26, 2020

Subject: Tabb Pressure Reducing Station and Offline Storage Facility
Contract Award (>\$200,000)

Recommended Action: Award a contract to Hazen and Sawyer, P.C. in the amount of \$413,040.

CIP Project: YR010900

| | |
|--|--------------|
| Budget | \$13,600,000 |
| Previous Expenditures and Encumbrances | (\$3,032) |
| Available Balance | \$13,596,968 |

Type of Procurement: Competitive Negotiation

| Proposers | Technical Points | Recommended Selection Ranking |
|----------------------------------|------------------|-------------------------------|
| Hazen and Sawyer, P.C. | 87.75 | 1 |
| Rummel, Klepper and Kahl, LLP | 86.90 | 2 |
| Kimley Horn and Associates, Inc. | 84.45 | 3 |

Contract Description: A Public Notice was issued on March 1, 2020. Four firms submitted proposals on March 31, 2020 and all firms were determined to be responsive and deemed fully qualified, responsible and suitable to the requirements in the Request for Proposals. Three firms were short listed, interviewed and technically ranked. The Professional Services Selection Committee selected the firm of Hazen and Sawyer, P.C. (Hazen) whose professional qualifications and proposed services best serve the interest of HRSD.

Project Description: This project will construct a new Pressure Reducing Station (PRS) and Offline Storage Tank in the vicinity of Tabb High School in York County, Virginia. The precise capacity of the station and volume of the tank will be determined during the preliminary design. Staff determined the Tabb PRS and Offline Storage Facility project could eliminate the need for a two million gallon onsite storage vessel at the James River Treatment Plant, and provide other operational benefits in the interceptor system including meeting a requirement of the Regional Wet Weather Management Plant (RWWMP).

Analysis of Cost: A meeting was held with Hazen to discuss the project and scope of services. A fee of \$413,040 was negotiated for the preparation of a Preliminary Engineering Report (PER). This cost is approximately three percent of the estimated

construction cost which is comparable to other similar efforts. Future phases of the work will be negotiated after the PER phase of the project is completed.

| | | |
|-------------------------|--------------------|--------------|
| <u>Schedule:</u> | Pre-Planning | June 2020 |
| | PER | July 2020 |
| | Design | April 2021 |
| | Bid | January 2022 |
| | Construction | May 2022 |
| | Project Completion | January 2024 |

CONSENT AGENDA ITEM 2.c.1. – May 26, 2020

Subject: Primary Clarifier Scum Trough Parts
Sole Source (>\$10,000)

Recommended Action: Approve the use of Primary Clarifier Scum Trough Parts by Jim Myers and Sons, Inc. at the Atlantic Treatment Plant.

Sole Source Justification:

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

Details: Product includes the purchase of replacement scum trough parts for primary clarifiers no. 1 through 4 at the Atlantic Treatment Plant. The scum trough and skimmers efficiently remove all grease, scum, and floating material from the water surface in the clarifier.

Previous competitive bids were done in 2017 and 2019 for equal parts. These bids resulted in only one response from Jim Myers and Sons. Atlantic Plant purchased replacement parts in June 2017 and the wall bearing drawings are proprietary to Jim Myers and Sons, Inc.

CONSENT AGENDA ITEM 2.c.2. – May 26, 2020

Subject: Trimble GPS Equipment, Accessories, and Software Support
Sole Source (>\$10,000)

Recommended Action: Approve the use of various Trimble GPS equipment, Accessories and Software Support by Duncan-Parnell at all HRSD facilities.

Sole Source Justification:

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

Details: Product includes the purchase of various Trimble GPS units, accessories and corresponding software support for use in the Engineering Department. The Trimble GPS units will be used to locate geographically to the required horizontal and vertical accuracies, and capture associated data related to HRSD infrastructure. The same Trimble equipment is currently being used by HRSD personnel to capture data and will work in tandem with existing Collector for ArcGIS program deployment.

CONSENT AGENDA ITEM 2.d.1. – May 26, 2020

Subject: Williamsburg Influent Force Main Contract A
Deed of Vacation

Recommended Action: Authorize the Vacation of a portion of an existing sanitary sewer easement and accompanying infrastructure in connection with the Williamsburg Influent Force Main Contract A project and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

CIP: WB010700

Project Description: In connection with the completion of the Williamsburg Influent Force Main Contract A project and the new alignment, HRSD can vacate a portion of its existing easement located on three contiguous parcels: Tax ID #5130100006; Tax ID #5130100002 and Tax ID #5820100002. This Vacation request is also in accordance with the [Agreement for Force Main Removal and Force Main Abandonment](#) between HRSD and Escalante Golf dated November 29, 2017. HRSD staff has determined that this portion of the easement is no longer needed.

Funding Description: No funding required.

Agreement Description: The attached [Deed of Vacation](#) was reviewed by HRSD legal counsel. [The Easement Vacation Plat](#) is also provided for clarification purposes.

AGREEMENT
FOR
FORCE MAIN REMOVAL AND FORCE MAIN ABANDONMENT
OF THE
HAMPTON ROADS SANITATION DISTRICT
WILLIAMSBURG INTERCEPTOR FORCE MAIN CONTRACT "A" REPLACEMENT
(WB010700)
AND
ESCALANTE GOLF

THIS AGREEMENT FOR REMOVAL OF ABANDONED PIPING (the "Agreement"), between the Escalante Golf ("Escalante") and the HAMPTON ROADS SANITATION DISTRICT ("HRSD"), is entered into this 29TH day of NOVEMBER, 2017 (the "Effective Date").

RECITALS

R:1. HRSD has constructed its Williamsburg Interceptor Force Main Contract "A" Replacement as shown on Exhibit 1, (the "HRSD Facilities"); and

R:2. The construction of the HRSD Facilities will necessitate the removal of approximately fifteen hundred (1,500) feet of abandoned force main to accommodate future development by Escalante; and

R:3. HRSD and ESCALANTE agree that it is in the best interest of the parties to coordinate the removal of portions of the abandoned force main; and

R:4. HRSD agrees to remove portions of the abandoned force main as shown on Exhibit 1.

R:5. HRSD agrees to replant grass seed and regrade the affected area as shown on Exhibit 1.

TERMS

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

I. Removal and Abandonment of Thirty-Six (36) Inch Force Main

- A. HRSD will administer and be responsible for bearing one hundred percent (100%) of the cost of the removal and abandonment of existing thirty-six (36) inch force main as shown on the attached Exhibit 1. HRSD will employ AECOM ("ENGINEER") to prepare plans for removal and abandonment.
- B. HRSD and ESCALANTE will meet to coordinate, review, and approve a set of final construction documents (the "Final Plans") for the removal and abandonment.

II. Payment of the Design Costs

HRSD will compensate ENGINEER for all engineering design costs and any amendments related to the removal and abandonment of the existing thirty-six (36) inch force main.

III. Compliance

All design work shall comply with HRSD Standards and Preferences for use in Engineered Construction Projects, latest edition, and the Hampton Roads Planning District Commission Regional Construction Standards, latest edition. Any changes to the Final Plans shall be approved by HRSD and ESCALANTE.

IV. Construction of Removal and Abandonment

A. Cost of Construction

The total cost of the removal and abandonment, as more particularly defined by the Final Plans prepared by the ENGINEER for HRSD shall include:

- 1. Cost of construction of the removal and abandonment of the pipe and replanting the grass seed and regrading the affected area as shown on Exhibit 1;
- 2. Costs for construction contract administration and inspection;
- 3. Costs of services rendered by ENGINEER;

4. Any related miscellaneous essential expenses.
- B. Approval of Final Plans, Contractors and Change Orders
1. HRSD and ESCALANTE agree that before any construction work is to begin under this Agreement, HRSD and ESCALANTE will jointly review and approve the Final Plans. This approval shall be in writing.
 2. HRSD shall acquire all necessary plan approvals and property acquisitions related to HRSD Facilities
 3. TA Sheets General Contractors, Inc. ("Contractor") shall be responsible for all necessary permits and approvals necessary for the removal and abandonment of the pipe and replanting the grass seed and regrading the affected area as shown on Exhibit 1.
 4. HRSD will review and approve shop drawings related to the abandonment and removal.
 5. HRSD will review and approve scope of work and fee for the construction contract administration and inspections related to the HRSD Facilities.
 6. HRSD will review and approve change orders related to the HRSD Facilities.
- C. Payment of Removal and Abandonment Costs
1. The Removal and Abandonment Costs shall be apportioned among the parties as follows:
 - a. HRSD will administer and be responsible for bearing one hundred percent (100%) of the cost of the removal and abandonment.
 - b. Costs associated with any change to the initial construction cost ("Change Order") shall be as follows:
 - (1) HRSD shall be solely responsible for costs due to a Change Order requested by HRSD; and
 - (2) The ESCALANTE shall be responsible for costs due to a Change Order requested by the ESCALANTE.
 2. Any future removal of abandoned pipe or removal of abandoned

pipe not indicated on Exhibit 1 will be performed by and paid for by Escalante.

D. Abandoned Facilities and Future Cooperation between HRSD and Escalante

HRSD and the ESCALANTE agree to cooperate and coordinate with regards to any future removal of abandoned force main.

E. Payment of Replanting Grass Seed and Regrading

1. The Replanting Grass Seed and Regrading Costs shall be apportioned among the parties as follows:

a. HRSD will administer and be responsible for bearing one hundred percent (100%) of the cost of the replanting grass seeds and regrading.

b. Costs associated with any change to the initial construction cost ("Change Order") shall be as follows:

(1) HRSD shall be solely responsible for costs due to a Change Order requested by HRSD; and

(2) The ESCALANTE shall be responsible for costs due to a Change Order requested by ESCALANTE.

V. SCHEDULE

The construction is anticipated to begin by November 2017 and be complete by December 2017.

VI. OBLIGATIONS OF HRSD AND THE ESCALANTE

A. Administration

HRSD shall provide contract administration of the removal and abandonment.

B. Inspection

HRSD shall provide part-time inspection for the removal and abandonment. The inspector(s) shall have the authority to assure the

removal and abandonments are constructed in accordance with the Final Plans.

C. Construction Record Drawings

ENGINEER shall provide HRSD and the ESCALANTE approved construction record drawings in accordance with HRSD Standards and Preferences for use in Engineered Construction Projects and Escalante's Utility Policy and Design and Construction Standards, latest edition.

VII. GOVERNING LAW

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

VIII. TERMINATION

Anything herein or elsewhere to the contrary notwithstanding, this Agreement and the obligations of the parties hereunder may be terminated by ESCALANTE or HRSD in the event that the other party breaches or violates any material provision of this Agreement or fails to perform any material covenant or agreement to be performed by either party under the terms of this Agreement and such breach, violation or failure is not cured within sixty (60) days of the defaulting party's receipt of written notice of such breach from the non-defaulting party; or by mutual agreement of ESCALANTE and HRSD.

IX. NOTICE

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

For: HRSD

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

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

With Copy to:

Conway H. Sheild, III
Jones, Blechman, Woltz and Kelly
701 Town Center Drive, Suite 200
Newport News, VA 23606

For: Escalante Golf

2930 Bledsoe Street #124
Fort Worth, TX 76107
Telephone: (817) 386-9721

X. ASSIGNMENT

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

XI. AMENDMENT

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

XII. SEVERABILITY

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

XIII. DAMAGES

If by omission that constitutes negligence or willful misconduct or failure to abide by engineering standards or failure to abide by the Final Plans and Specifications described herein, the negligent party shall be responsible for the payments for damages to any other party to this Agreement.

XIV. INSURANCE

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

XV. TERM OF AGREEMENT

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

XVI. FORCE MAJEURE

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

XVII. INDEPENDENT CONTRACTOR

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

XVIII. SUBCONTRACTOR

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

XIX. WAIVER

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

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

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

XX. INTEGRATION

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

AGREEMENT FOR FORCE MAIN REMOVAL AND FORCE MAIN ABANDONMENT HRSD Williamsburg
Interceptor Force Main Contract "A" Replacement (WB010700) and Escalante Golf

IN WITNESS WHEREOF, the Hampton Roads Sanitation District (HRSD) Commission has caused this Agreement to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on September 26, 2017.

HAMPTON ROADS SANITATION DISTRICT

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

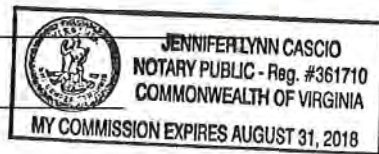
COMMONWEALTH OF VIRGINIA,
CITY OF VIRGINIA BEACH, to-wit:

The foregoing agreement was acknowledged before me this 12th day of December, 2017, by Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District.


Notary Public

My commission expires:


Registration No.:



AGREEMENT FOR FORCE MAIN REMOVAL AND FORCE MAIN ABANDONMENT HRSD Williamsburg
Interceptor Force Main Contract "A" Replacement (WB010700) and Escalante Golf

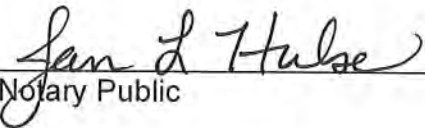
IN WITNESS WHEREOF, Escalante Golf has caused this Agreement to be signed by
ELCIO SILVA on its behalf pursuant to Resolution adopted by the Escalante
Council on NOVEMBER 29, 2017.

ESCALANTE GOLF

By: 
Name: ELCIO SILVA
Title: SR. VP OF OPERATIONS

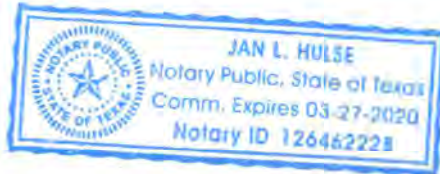
STATE OF TEXAS
CITY or COUNTY OF Tarrant, to-wit:

The foregoing Agreement was acknowledged before me this 29 day of
November, 2017, by Elcio Silva [Name], Sr VP of [Title], Escalante
Golf. operations


Notary Public

My commission expires:

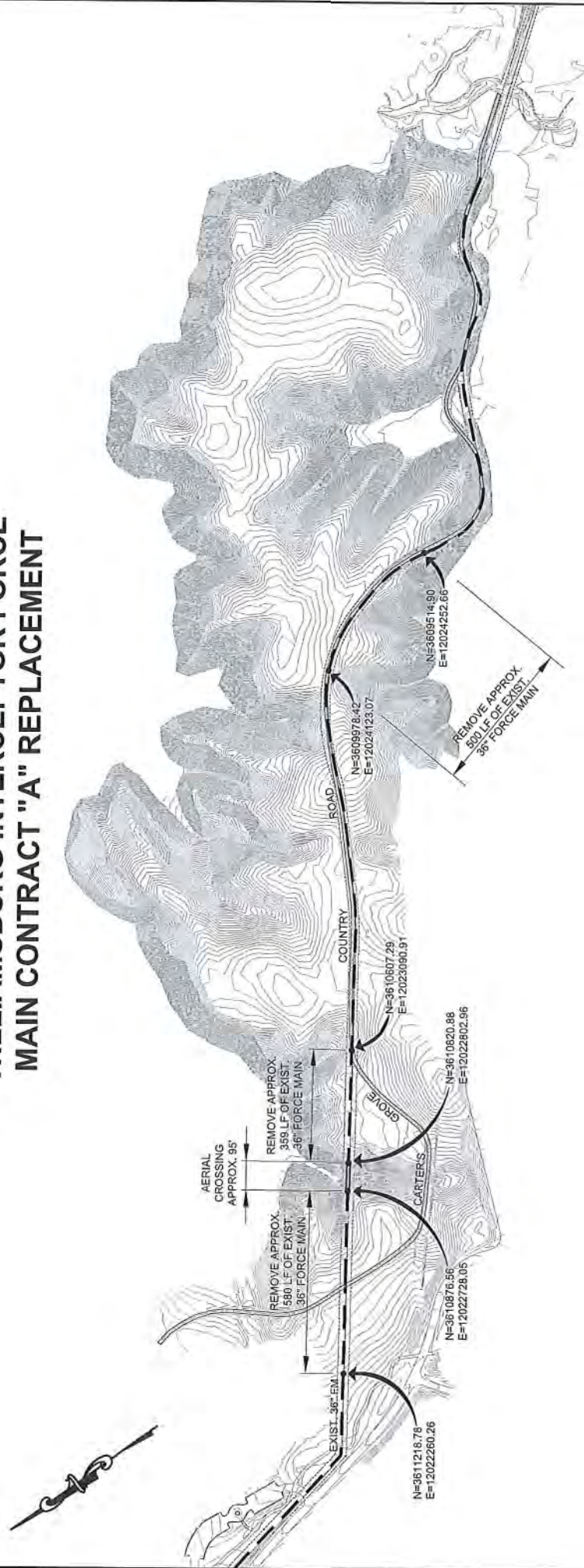
Registration No.:



HAMPTON ROADS SANITATION DISTRICT



**WILLIAMSBURG INTERCEPTOR FORCE
MAIN CONTRACT "A" REPLACEMENT**



**EXHIBIT 1
EXISTING FORCE MAIN REMOVAL PLAN**



NOVEMBER 17, 2017
SHEET 1 OF 1



533337

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

Tax ID Number: 5130100006 Kingsmill; 5130100002 Escalante; 5820100002 Carter's

THIS DEED OF VACATION, made this 26th day May, 2020, by and between the HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia, Grantor; and KINGSMILL COMMUNITY SERVICES ASSOCIATION, a Virginia non stock corporation, whose mailing address is P.O. Box 348, Williamsburg, VA 23187; ESCALANTE KINGSMILL DEVELOPMENT, LLC, a Virginia limited liability company, whose mailing address is 1010 Kingsmill Road, Williamsburg, Virginia, 23185; and CARTER'S GROVE ASSOCIATES, LLC, a Delaware limited liability company, whose mailing address is c/o Madison Dearborn Partners, Three First National Plaza, 70 West Madison, Suite 4600, Chicago, Illinois, Grantees.

WHEREAS, Grantor has an existing easement on property owned by the above Grantees, and desires to vacate a portion of said easement which is located on each of the Grantee's land.

NOW, THEREFORE, HRSD does by these presents release, quit-claim and vacate unto the above three Grantees respectively, that portion of the following described easement which lies partially on each of the Grantee's property, to-wit:

All that certain lot, part lot, piece or parcel of land situate, lying and being in James City County, Virginia, known and designated as "APPROXIMATE LOCATION OF A PORTION OF 30' H.R.S.D. FORCE MAIN EASEMENT D.B. 132, PG. 122 TO BE VACATED", as shown on that certain plat entitled, "EASEMENT VACATION PLAT SHOWING 30' H.R.S.D. FORCE MAIN EASEMENT FOR HAMPTON ROADS SANITATION DISTRICT JAMESTOWN DISTRICT JAMES CITY COUNTY, VIRGINIA", dated August 24, 2018, revised April 16, 2020 and made by JOHNSON MIRMIRAN & THOMPSON, a copy of which plat is attached hereto and made a part hereof for a more particular description of the aforesaid property.

IN WITNESS WHEREOF, the Hampton Roads Sanitation District (HRSD) Commission has caused this document to be signed on its behalf by its General Manger in accordance with authorization granted at its regular meeting held on May 26, 2020.

WITNESS the following signature and seal:


HAMPTON ROADS SANITATION DISTRICT

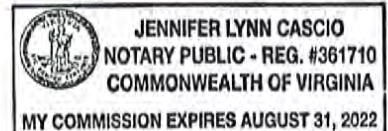
BY 
Edward G. Henifin, P.E.
General Manager

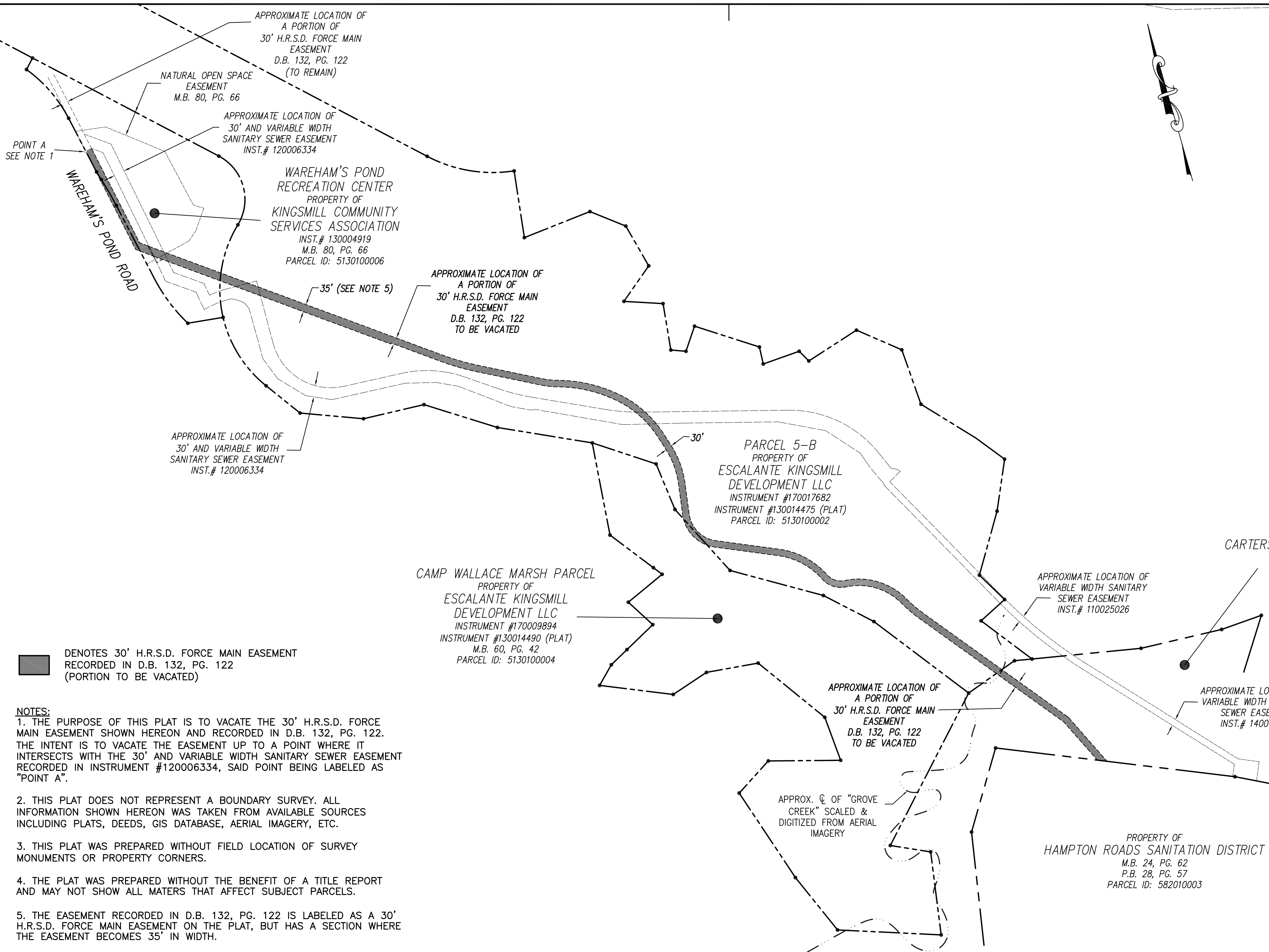
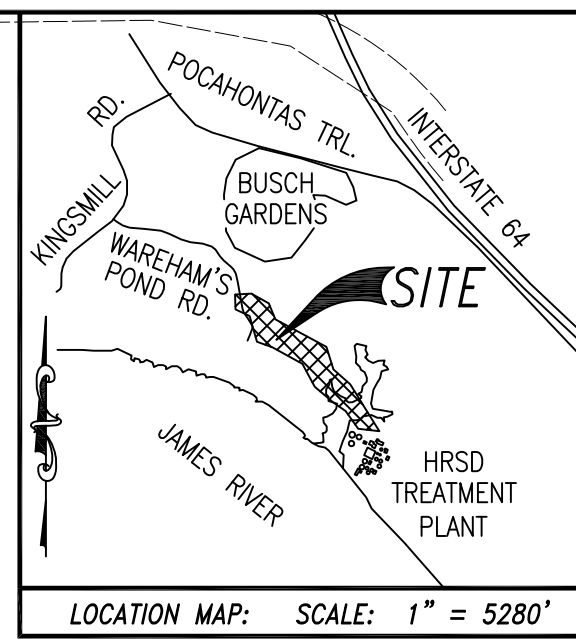
STATE OF VIRGINIA
CITY OF VIRGINIA BEACH, to-wit:

I hereby certify on this 26th day of May, 2020, that Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District, acknowledged the foregoing Deed of Vacation before me. He is personally known to me.

My commission expires: August 31, 2022


Notary Public
Registration No: 361710

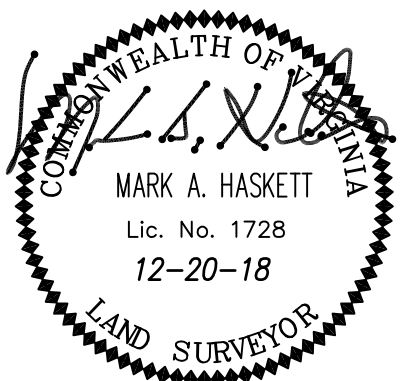
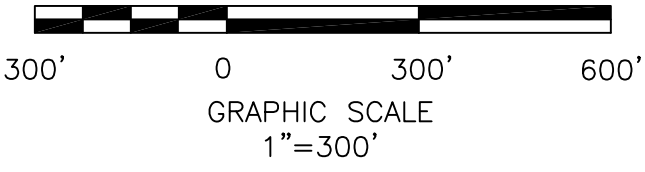




■ DENOTES 30' H.R.S.D. FORCE MAIN EASEMENT RECORDED IN D.B. 132, PG. 122 (PORTION TO BE VACATED)

- NOTES:**
1. THE PURPOSE OF THIS PLAT IS TO VACATE THE 30' H.R.S.D. FORCE MAIN EASEMENT SHOWN HEREON AND RECORDED IN D.B. 132, PG. 122. THE INTENT IS TO VACATE THE EASEMENT UP TO A POINT WHERE IT INTERSECTS WITH THE 30' AND VARIABLE WIDTH SANITARY SEWER EASEMENT RECORDED IN INSTRUMENT #120006334, SAID POINT BEING LABELED AS "POINT A".
 2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY. ALL INFORMATION SHOWN HEREON WAS TAKEN FROM AVAILABLE SOURCES INCLUDING PLATS, DEEDS, GIS DATABASE, AERIAL IMAGERY, ETC.
 3. THIS PLAT WAS PREPARED WITHOUT FIELD LOCATION OF SURVEY MONUMENTS OR PROPERTY CORNERS.
 4. THE PLAT WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND MAY NOT SHOW ALL MATERS THAT AFFECT SUBJECT PARCELS.
 5. THE EASEMENT RECORDED IN D.B. 132, PG. 122 IS LABELED AS A 30' H.R.S.D. FORCE MAIN EASEMENT ON THE PLAT, BUT HAS A SECTION WHERE THE EASEMENT BECOMES 35' IN WIDTH.

JOHNSON, MIRMIAN & THOMPSON
Engineering A Brighter Future®
 272 BENDIX ROAD SUITE 260 VIRGINIA BEACH, VA. 23452
 (757) 499-1895 (OFFICE) - (757) 257-0343 (FAX)



EASEMENT VACATION PLAT
 SHOWING 30' H.R.S.D. FORCE MAIN EASEMENT
 FOR
HAMPTON ROADS SANITATION DISTRICT
 JAMESTOWN DISTRICT
 JAMES CITY COUNTY, VIRGINIA
 SCALE: 1" = 300' - AUGUST 24, 2018
 SHEET 1 OF 1

REVISED: APRIL 16, 2020

CONSENT AGENDA ITEM 2.e.1. May 26, 2020

Subject: Service Area Amendment
City of Suffolk Kings Highway Service Area

Recommended Action: Approve the modification to the existing Kings Highway Service Area as requested by the City of Suffolk.

Project Description: The City of Suffolk has requested a modification to the HRSD Service Area boundary in the Kings Highway area of the City as shown on the [attached map](#). The Commission approved an expansion to the City of Suffolk service area on March 26, 2013 with approval of the [Holland Interceptor Force Main City Ownership Transfer Agreement](#). That agreement requires Commission approval for City of Suffolk service area expansions.

HRSD has capacity to accept flows from development within this amended service area as shown.

**HAMPTON ROADS SANITATION DISTRICT
HOLLAND INTERCEPTOR FORCE MAIN
CITY OF SUFFOLK
OWNERSHIP TRANSFER AGREEMENT**

THIS AGREEMENT ("Agreement"), between the CITY OF SUFFOLK (the "City") and the HAMPTON ROADS SANITATION DISTRICT ("HRSD"), entered this day of March, 2013.

WHEREAS, the City currently owns and operates an existing 24-inch force main on Holland Road ("HOLLAND ROAD FORCE MAIN") from approximately 670 feet east of Faulk Road to Kenyon Road, a distance of approximately 3,200 linear feet shown on Exhibit 1; and

WHEREAS, on August 22, 1989, HRSD's Commission agreed to take ownership of the HOLLAND ROAD FORCE MAIN that the City extended at its expense when "at such time as that becomes a part of the line to Holland," see **Exhibit 1**; and

WHEREAS, the City is coordinating with a private developer who is planning to extend the HOLLAND ROAD FORCE MAIN for approximately 5,800 linear feet with a 24-inch pipe from the terminus of the existing HOLLAND ROAD FORCE MAIN to the intersection of Holland Road with the western access road of the proposed CenterPoint Development (hereinafter "HOLLAND ROAD FORCE MAIN EXTENSION"); and

WHEREAS, the City agrees to transfer ownership of the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION to HRSD when HRSD completes construction of approximately 22,200 feet of 24-inch Interceptor Force Main from the HOLLAND ROAD FORCE MAIN to Point Street on East Constance Road as part of HRSD CIP Project No. NP-118, Holland Road 24-inch Force Main – Section A; and

WHEREAS, for and in consideration of the mutual covenants herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

WITNESSETH:

I. HOLLAND ROAD FORCE MAIN EXTENSION DESIGN

- A. The City will design, or have its engineer design, at City's sole expense, the HOLLAND ROAD FORCE MAIN EXTENSION in conformance with HRSD's Standards & Preferences (hereinafter "S&P"). City's engineer will submit said design to HRSD for its review and approval.
- B. City's engineer will prepare construction plans and specifications, which the City will submit to HRSD for its review and approval.

- C. The City will pay, without assistance or contribution from HRSD, to construct the HOLLAND ROAD FORCE MAIN EXTENSION. City agrees that all design and construction, including change orders, will be at City's sole expense. City will not advertise or bid before receiving HRSD's approval of all construction plans and specifications.
- D. The City agrees not to approve the HOLLAND ROAD FORCE MAIN EXTENSION construction plans or specifications without HRSD's written consent.

II. HOLLAND ROAD FORCE MAIN TRANSFER of OWNERSHIP

- A. HRSD agrees to take ownership of the existing HOLLAND ROAD FORCE MAIN under the following Terms and Conditions:
 1. A Condition Assessment Plan (CAP) for the HOLLAND ROAD FORCE MAIN must be developed, funded and implemented by HRSD;
 2. The CAP will be available for review by the City.
 3. In the event that the CAP reveals that all or part of the HOLLAND ROAD FORCE MAIN is found to not meet HRSD's S&P, the City agrees to take corrective action, at its sole expense, to rehabilitate the section(s) of force main which were found to not meet HRSD's S&P.
 4. Rehabilitation and replacement will include all associated appurtenances such as air vents, mainline valves, and branch valves.
 5. The City shall ensure that all connections to the force main adhere to HRSD's S&P.

III. CONSTRUCTION OF HOLLAND ROAD FORCE MAIN EXTENSION

- A. The City agrees to construct, or have constructed, the HOLLAND ROAD FORCE MAIN EXTENSION to HRSD's S&P;
- B. The City hereby agrees to fully fund this project in total and all construction change orders that may result to comply with HRSD's S&P.
- C. Plan Approvals

Both Parties agree to the following:

1. The City and HRSD will review and approve shop drawings and change orders.
2. The City and HRSD will review and approve record drawings.

3. All record drawings must adhere to HRSD's S&P.
- D. The City will allow HRSD's designated inspector, if HRSD chooses to have one, to observe the pipeline construction and the City will make all reasonable efforts to remedy deviations from HRSD's S&P in a timely manner. All construction deficiencies or work not meeting HRSD's S&P or the approved plans and specifications shall be the responsibility of the City to correct.
- E. A warranty associated with construction of the HOLLAND ROAD FORCE MAIN EXTENSION furnished by the contractor shall be issued to HRSD effective for a period of one (1) year from the date of the transfer of the facilities to HRSD by the City. The City shall provide written documentation that this project was constructed in conformance with the plans and specifications approved by HRSD and the City and signed and sealed by a Professional Engineer.

IV. OBLIGATIONS OF HRSD AND CITY

A. Inspection

The City shall provide inspection of the HOLLAND ROAD FORCE MAIN EXTENSION at no cost to HRSD. The inspector(s) shall have the authority to assure the rehabilitation and replacements are constructed in accordance with the approved plans and specifications. HRSD agrees to review all shop drawing submittals and provide written comments or approval. All inspections shall meet current HRSD S&P.

B. Correction of Construction Not Meeting HRSD's S&P

The City agrees to require that the contractor provide a performance and payment bond for the full amount of the construction of the HOLLAND ROAD FORCE MAIN EXTENSION. The contractor shall also provide HRSD with a Warranty of the Work against work not meeting HRSD's S&P and shall require the contractor to correct such construction reported by HRSD or City within one year of the acceptance of the improvements.

C. Connections

The City will own, operate and maintain the existing and future pump stations and discharge force mains connected to the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION up to the branch valve as required in HRSD's standard connection detail as shown in the S&P.

All connections to the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION must have a minimum average daily flow of 40,000 gpd, unless otherwise agreed.

D. Service Area

The City will adhere to the service area expansion as shown in blue on **Exhibit 2**. Any further proposed expansion of HRSD's service area must be first approved by HRSD and no connections will be allowed without a Service Area Expansion request being submitted by the City and approved by HRSD.

The City will develop and provide future service area and flow information to HRSD to allow HRSD to adequately plan infrastructure.

E. Conveyance of Facilities

The transfer of ownership of the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION shall occur within 120 days from the completion of HRSD's construction of HRSD's 24-inch Interceptor Force Main project, as part of HRSD CIP Project No. NP-118, Holland Road 24-inch Force Main – Section A. The anticipated date of project completion is approximately November, 2014.

HRSD will accept ownership, operation and maintenance of the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION and the associated appurtenances such as air vents, mainline valves and branch valves. City will provide duly recordable non-exclusive easements for any facilities not in the City street satisfactory to HRSD and its attorney. In the event such recordable easements overlap areas where City water and/or sanitary sewer improvements exist, the City will retain all rights to enter such easement areas to replace, maintain, or enlarge their water and/or sanitary sewer improvements, taking care to protect HRSD facilities. Any modifications near the HRSD infrastructure will require a set of drawings to be submitted to HRSD for their records.

All documents for the transfer of the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION and the associated appurtenances shall be in recordable form, acceptable to HRSD and the City, accompanied by plats and record drawings of the Project and of the rights conveyed. The engineer shall provide HRSD and City with approved construction record drawings, valve guides and approved shop drawings in accordance with HRSD S&P for use in engineered construction projects, latest edition, and City's Public Facilities Manual for restoration work.

F. Future Relocating of Lines

If the HOLLAND ROAD FORCE MAIN and HOLLAND ROAD FORCE MAIN EXTENSION are required to be relocated to accommodate other City projects, relocation shall be at the City's expense.

G. To the extent inconsistent with this agreement, any prior agreements will be deemed to be amended and revised and the provisions of this agreement shall control.

V. MISCELLANEOUS

A. Notices

All notices given between parties shall be in writing and shall be considered properly sent by postage prepaid United States Mail or Country of Origin Mail to the persons identified below:

For City:

Albert S. Moor, II, P.E.
Director of Public Utilities
1258 Holland Road
Suffolk, VA 23434
(757) 514-7000

For HRSD:

Steve Richendollar
Right of Way Administrator
Post Office Box 5911
Virginia Beach, VA 23471-0911
(757) 460-7027

With a copy to:

Helivi L. Holland, Esq.
City Attorney
441 Market Street
Suffolk, VA 23434
(757) 514-7130

With a copy to:

William A. Cox, III, Esq.
Kellam, Pickrell, Cox & Tayloe, PC
2102 Mediterranean Avenue
Virginia Beach, VA 23451
(757) 425-1230

B. Controlling Law/Venue

This Agreement shall be governed by the laws of the Commonwealth of Virginia without regard to its conflict of law rules. In the event of litigation concerning this Agreement, the parties agree to the exclusive jurisdiction and venue of a court of competent jurisdiction in the City of Suffolk.

C. Entire Agreement

This Agreement comprises the entire understanding between the parties and cannot be modified, altered or amended, except in writing and signed by all parties.

D. Waiver

The failure by one party to require performance of any provision of this Agreement shall not affect the party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of the Agreement constitute a waiver of any subsequent breach or default or waiver of the provision itself.

E. Severability

If any part, term, or provision of this Agreement shall be found by the Court to be legally invalid or unenforceable, then such provision or portion thereof, shall be performed in accordance with applicable laws. The invalidity or unenforceability of any provision or portion of this Agreement shall not affect the validity of any other provision or portion of the Agreement.

F. Nonassignment

Neither party shall assign or transfer their right or obligations under this Agreement without the prior written consent of the other party; such consent shall not be unreasonably withheld.

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

SIGNATURE PAGES TO FOLLOW

This signature page is part of the Ownership Transfer Agreement between City of Suffolk and HRSD.

IN WITNESS WHEREOF, the City of Suffolk has caused this Agreement to be signed by the City Manager in its behalf pursuant to resolution adopted by the City Council on March 20, 2013, and the Hampton Roads Sanitation District Commission has caused this Agreement to be signed in its behalf by its General Manager in accordance with authorization granted at its regular meeting held on March 27, 2013.

CITY OF SUFFOLK

By: [Signature]
City Manager

Attest: [Signature]
City Clerk

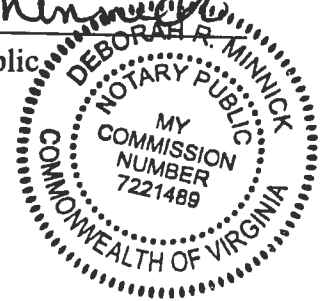
STATE OF VIRGINIA

CITY OF SUFFOLK, to-wit:

The foregoing instrument was acknowledged before me this 9th day of April, 2013, by Selena Cuffee-Glen, City Manager of the City of Suffolk and Erika S. Dawley, who is City Clerk of the City of Suffolk.

[Signature]

Notary Public



Notary Number: 7221489
My Commission Expires July 31, 2016

APPROVED AS TO CONTENT:

[Signature]
Director of Public Utilities

APPROVED AS TO FORM AND CORRECTNESS:

[Signature]
Assistant City Attorney

This signature page is part of the Ownership Transfer Agreement between City of Suffolk and HRSD.

HAMPTON ROADS SANITATION DISTRICT

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

Attest: JH
Jennifer Heilman, Secretary

STATE OF VIRGINIA

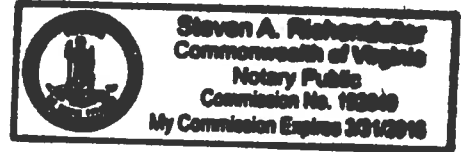
CITY OF VIRGINIA BEACH, to-wit:

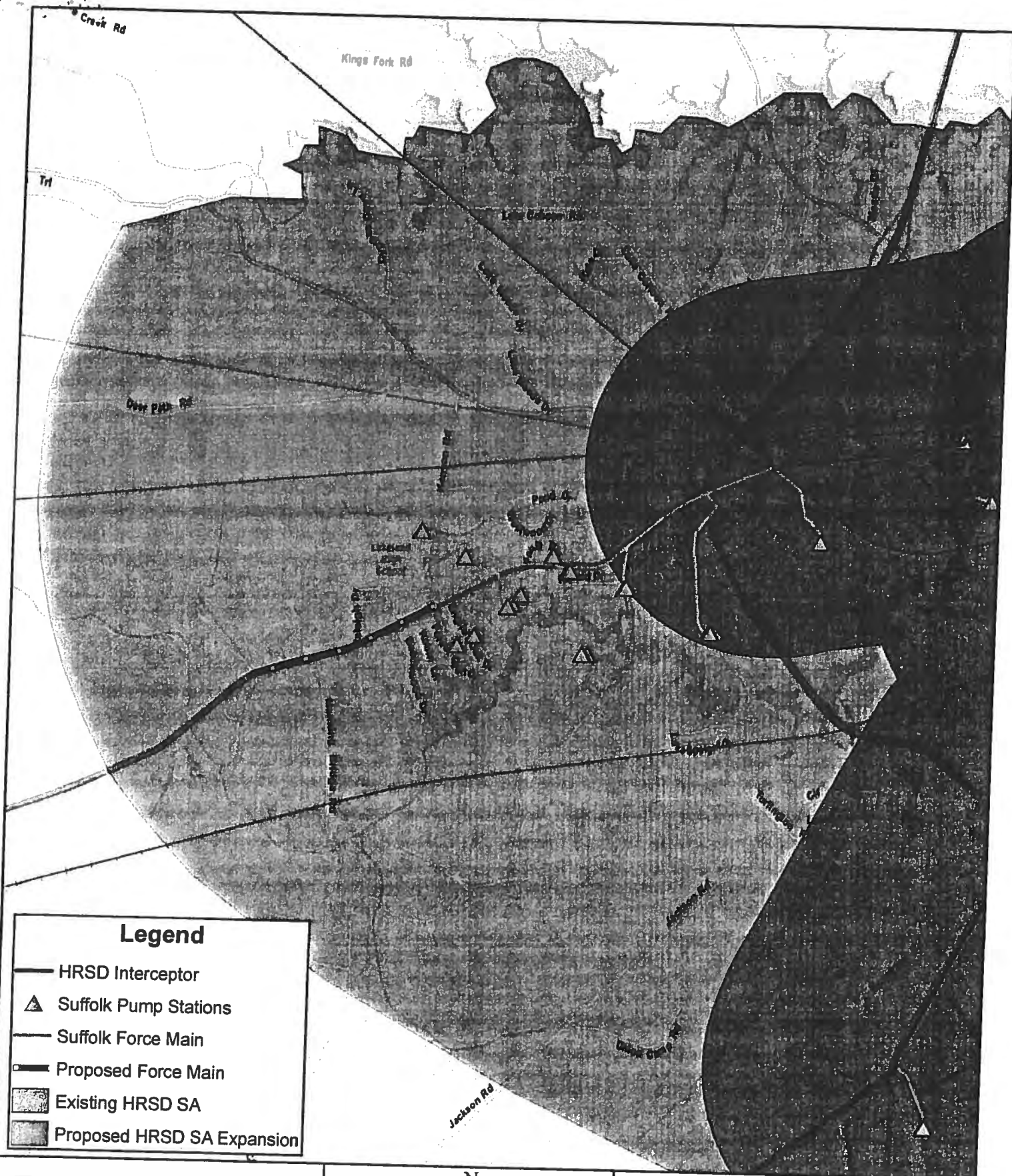
The foregoing instrument was acknowledged before me by Edward G. Henifin, P.E., General Manager for Hampton Roads Sanitation District and by Jennifer Heilman, Secretary for Hampton Roads Sanitation District, this 27th day of March, 2013.

Steven A. Richenthal
Notary Public







Notary Number: 192849

My commission expires: 3/31/2016

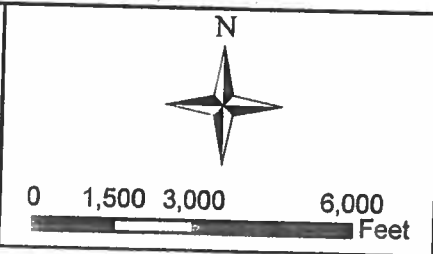




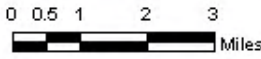
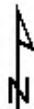
Legend

-  HRSD Interceptor
-  Suffolk Pump Stations
-  Suffolk Force Main
-  Proposed Force Main
-  Existing HRSD SA
-  Proposed HRSD SA Expansion

**Exhibit 2
Proposed HRSD
Service Area
Expansion**



HRSD Service Area Amendment



| Legend | |
|--------|----------------------------|
| | Area to be Removed |
| | Area to be Added |
| | Existing HRSD SA - Suffolk |

HRSD COMMISSION MEETING MINUTES
May 26, 2020

ATTACHMENT #2

AGENDA ITEM 4. FINANCIAL POLICY

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 1 of 60

1.0 PURPOSE AND NEED

Hampton Roads Sanitation District (HRSD) was created in 1940 by the Virginia General Assembly as a political subdivision of the Commonwealth of Virginia and was established as a governmental instrumentality to provide for the public health and welfare. HRSD was created for the specific purpose of abating pollution in the Hampton Roads area of Virginia through the interception of existing wastewater outfalls, the construction of wastewater treatment facilities and the installation of interceptors throughout the service area.

HRSD operates under the direction of the Hampton Roads Sanitation District Commission (the Commission) comprised of eight members appointed by the Governor for staggered terms of four years.

Regulatory requirements to reduce nutrients, hydraulic expansion, aging infrastructure renewals and replacements, and increased treatment capacity are addressed through HRSD's Capital Improvement Program (CIP).

HRSD recognizes that adherence to formal financial policies is critical to sound financial management. This sentiment is echoed by bond rating agencies, investors and the Government Finance Officers Association.

This Financial Policy (Policy) is designed to help protect HRSD's financial resources by:

- a. Promoting sound financial management;
- b. Ensuring the legal and prudent use of HRSD's debt issuance authority; and
- c. Guiding HRSD and its managers in policy, investment and debt issuance decisions.

2.0 DEFINITIONS

2.1 Adjusted Days Cash on Hand. Days Cash on Hand that excludes accrued debt service, the Risk Reserve, the Renewal and Replacement Reserve, and cash budgeted for the CIP in the next fiscal year.

2.2 Annual Determined Contribution (ADC). The annual contribution requirement determined by an actuary for a defined benefit plan.

2.3 Arbitrage. The simultaneous purchase and sale of an asset in order to profit from a difference in the price. It is a trade that profits by exploiting price differences of identical or similar financial instruments in different markets or in different forms. For the purposes of this Policy, Arbitrage refers to the difference between the interest

COMMISSION ADOPTED POLICY
Financial Policy



| | |
|-----------------------------|---------------------|
| Adopted: | May 26, 2009 |
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Page 2 of 60

paid on the tax-exempt securities and the interest earned by investing the security proceeds in higher-yielding taxable securities. The IRS Code governs arbitrage on the proceeds from issuance of tax-exempt municipal securities.

- 2.4 Asset Allocation.** An investment strategy that attempts to balance risk versus reward by adjusting the percentage of each asset in an investment portfolio according to the investor's risk tolerance, goals and investment time frame.
- 2.5 Balloon Maturity.** As defined in the Trust Agreements, a maturity that contains twenty-five percent (25%) or more of the original principal amount of an issue and that is not required to be amortized by redemption prior to maturity.
- 2.6 Bankers' Acceptance.** A draft or bill or exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill, as well as the issuer.
- 2.7 Basis Swap.** An agreement between two parties to exchange interest payments based on different variable-rate indices, e.g. SIFMA vs. LIBOR; a floating-to-floating swap.
- 2.8 Benchmark.** A comparative base for measuring the performance or risk tolerance of an investment portfolio. A benchmark should represent a close correlation to the level of risk and the average duration of the portfolio's investments.
- 2.9 Bond Anticipation Notes.** Notes which are generally repaid from the proceeds of the issuance of long-term indebtedness.
- 2.10 Bond Insurance.** Credit Enhancement provided by a bond insurer that insures the payment of the principal of and interest on one or more maturities of Bonds.
- 2.11 Broker.** Matches buyers and sellers of securities for a commission.
- 2.12 Bullet Maturity.** A maturity within an issue of bonds for which there are no sinking fund payments prior to the stated maturity date.
- 2.13 Call Provisions.** The term of a bond giving the issuer the right to redeem all or a portion of such bond prior to its stated maturity at a specific price, usually at or above par.
- 2.14 Capital Appreciation Bond.** A municipal security on which the interest on an initial principal amount is reinvested at a stated compounding rate until maturity. At maturity the investor receives a single payment (the "maturity value") representing both the initial principal amount and the total investment return.

COMMISSION ADOPTED POLICY
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Commission Revision: May 26, 2020
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Page 3 of 60

- 2.15 Capital Asset.** A unit of property purchased by, constructed by or donated to HRSD that (1) was acquired or produced and has a value of \$5,000 or more and (2) has an economic useful life of a minimum of 60 months. Capital Assets must be capitalized and depreciated for financial statement purposes. Assets constructed and paid by HRSD that improve the performance of the Wastewater System and subsequently transferred to a Locality constitute Locality Assets and will not be capitalized by HRSD for any purpose.
- 2.16 Capital Improvement Program (CIP).** HRSD's planned program of capital projects (greater than \$100,000), such as property, plant and equipment and related engineering, legal and construction services, and may consist of Capital Assets and Locality Assets.
- 2.17 Capitalized Interest.** A portion of the proceeds of a bond issue which is set aside to pay interest on one or more bond issues for a specific period of time. Interest capitalized for the construction period of the project is typically treated as a capital cost under the IRS Code.
- 2.18 Certificate of Deposit (CD).** A time deposit with a specific maturity evidenced by a certificate. Large-denomination CDs are typically negotiable.
- 2.19 Collateral.** Securities, evidence of deposit or other property, which a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.
- 2.20 Commercial Paper (CP).** Short-term, unsecured promissory notes issued by corporations or governments to finance receivables for a maturity specified by the purchaser that ranges from three days to 270 days. Notes are generally sold at a discount, and carry credit ratings issued by an NRSRO.
- 2.21 Competitive Sale.** A sale/auction of securities by an issuer in which underwriters or syndicates of underwriters submit bids to purchase the securities.
- 2.22 Constant Maturity Swap.** An interest rate swap that is predicated upon the shape of the forward implied yield curve whereby counterparties exchange interest rate payments based on an anticipated future interest rate and a variable swap index rate. The interest rate on one leg of the swap is reset periodically but with reference to a market swap rate rather than an index such as LIBOR or a substitute. The other leg of the swap is generally a market index, such as LIBOR or a substitute.
- 2.23 Continuing Disclosure.** The principle that accurate and complete information material to an issuer of securities be made available on an ongoing basis. Pursuant to SEC Rule 15c2-12, underwriters of HRSD's bonds are generally obligated to obtain a Continuing Disclosure Agreement (CDA) from HRSD prior to underwriting such bonds.

COMMISSION ADOPTED POLICY
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Page 4 of 60

- 2.24 Corporate Notes.** Unsecured promissory notes issued by corporations to raise capital for a maturity that is longer than 270 days. Corporate Notes are generally sold at a discount and carry credit ratings issued by an NRSRO.
- 2.25 Credit Enhancement.** Credit support purchased by the issuer to raise the credit rating of a debt issue. The most common credit enhancements consist of Bond Insurance, direct or standby Letters of Credit, and Lines of Credit.
- 2.26 Credit Support Annex.** A legal document that regulates credit support (collateral) for derivative transactions.
- 2.27 Days Cash on Hand.** Measured by current and non-current unrestricted cash and investments, plus any restricted cash and investments, if available for general system purposes, divided by Operating Expenses, divided by 365.
- 2.28 Dealer.** Acts as a principal in securities transactions, buying and selling for its own account.
- 2.29 Debenture.** An unsecured bond backed only by the general credit of the issuer.
- 2.30 Debt Service Coverage Ratio – GAAP.** Calculated in accordance with HRSD’s Senior Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets are considered an expense. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).
- 2.31 Debt Service Coverage Ratio - Adjusted.** Calculated in accordance with HRSD’s Subordinate Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets may be excluded from the calculation of Net Revenues under the circumstances described within the definitions of Net Revenues and Operating Expenses. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).
- 2.32 Debt Service Reserve Fund.** The fund in which money is placed that may be used to pay debt service if revenues available for debt service and Credit Enhancements, if applicable, are insufficient to pay debt service on HRSD’s bonds secured by a Debt Service Reserve Fund as it becomes due and payable.
- 2.33 Deep Discount Bonds.** Bonds which are priced for sale at a substantial discount from their face or par value.
- 2.34 Delivery versus Payment.** Delivery of securities with an exchange of money for the securities. (See also Delivery versus Receipt)

COMMISSION ADOPTED POLICY
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Page 5 of 60

- 2.35 Delivery versus Receipt.** Delivery of securities with an exchange of a signed receipt for the securities. Also known as “free” delivery; (See also Delivery versus Payment).
- 2.36 Derivative.** A financial product whose value is derived from some underlying asset value.
- 2.37 Designation Policies.** Outline how an investor’s order is filled when a bond’s maturity is oversubscribed when there is an underwriting syndicate. The senior managing underwriter and issuer decide how the bonds will be allocated among the syndicate. There are three primary classifications of orders which form the designation policy: Group Net orders; Net Designated orders and Member orders.
- 2.38 Discount.** A bond that is issued for less than its par (or face) value, or a bond currently trading for less than its par value in the secondary market.
- 2.39 Diversification.** A process of investing assets among a variety of security types by sector, maturity and quality rating.
- 2.40 Enabling Act.** HRSD’s Enabling Act is Chapter 66 of the Acts of Assembly of Virginia of 1960, as amended.
- 2.41 Encumbrances.** Commitments related to unperformed contracts for goods and services (i.e., purchase orders, contracts and commitments). Encumbrance accounting is utilized to the extent necessary to assure effective budgetary control and accountability and to facilitate effective cash planning and control.
- 2.42 Escrow.** A fund established to hold money pledged and to be used to pay debt service on one or more maturities of HRSD’s defeased bonds or other indebtedness.
- 2.43 Federal Agency.** Government sponsored/owned entity created by the U.S. Congress, generally for the purpose of acting as a financial intermediary by borrowing in the marketplace and directing proceeds to specific areas of the economy considered to otherwise have restricted access to credit markets, also referred to as Government Sponsored Enterprises (GSEs). The largest GSEs are Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC), Federal Home Loan Bank (FHLB), Federal Farm Credit Bank (FFCB), and Tennessee Valley Authority (TVA).
- 2.44 Federal Funds Rate.** The rate of interest at which Federal Funds are traded. This rate is currently set by the Federal Reserve through open-market operations.

COMMISSION ADOPTED POLICY
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Page 6 of 60

- 2.45 Federal Funds.** Funds placed in Federal Reserve Banks by depository institutions in excess of current reserve requirements, and frequently loaned or borrowed on an overnight basis between depository institutions.
- 2.46 FINRA.** The Financial Industry Regulatory Authority.
- 2.47 Fitch.** Fitch Ratings is an NRSRO.
- 2.48 Forward Swap.** A swap executed today, the exchange of interest payments on which starts at some future date (the Effective Date), based on rates and terms determined and agreed upon today. On the **Effective Date** of a Forward swap begin net exchange of swap payments. On the **Trade Date** of the swap:
- Enter into Forward swap agreement
 - Set terms of the swap
 - Pay commitment fees for swap and bond insurance (if done in conjunction with a synthetic forward refunding of bonds)
- 2.49 Interest Rate Cap.** An option that pays its holder when and if the floating interest rate index is above the pre-determined fixed rate (strike price).
- 2.50 Interest Rate Collar.** The simultaneous purchase and sale of an Interest Rate Cap and an Interest Rate Floor on a floating index.
- 2.51 Interest Rate Floor.** An option that pays its holder when and if the floating interest rate index is below the pre-determined fixed rate (strike price).
- 2.52 Interest Rate Swap.** A contract between two parties, referred to as “counterparties”, to exchange interest rate payments at specified dates in the future. One party under the swap contract normally makes payments based on a fixed rate while the other party makes payments based on a variable (floating) rate.
- 2.53 Internal Controls.** Systematic measures (such as reviews, checks and balances, methods and procedures) instituted by an organization to: conduct its business in an orderly and efficient manner; safeguard its assets and resources; deter and detect errors, fraud, and theft; ensure accuracy and completeness of its accounting data; produce reliable and timely financial and management information; and ensure adherence to its policies and plans. An important concept in establishing appropriate internal controls is that the cost of the controls should not exceed their anticipated benefits.
- 2.54 IRS Code.** The Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 7 of 60

- 2.55 Knock-in Option.** An option the existence of which is conditional upon a pre-set trigger price trading before the option's designated maturity. If the trigger is not touched before maturity, then the option is deemed not to exist.
- 2.56 Letter of Credit.** A bank facility wherein the bank agrees to deliver funds to a third party for the benefit of the account party, upon the presentation of the documents described in the Letter of Credit. A Letter of Credit may be used as Credit Enhancement or a Liquidity Facility for HRSD's indebtedness.
- 2.57 Line of Credit.** A bank facility wherein the bank permits the borrower to access funds at any time, subject to a maximum loan balance. A Line of Credit may be used as Credit Enhancement or a Liquidity Facility for HRSD's indebtedness.
- 2.58 Liquidity.** The ability of ease with which an asset can be converted into cash without a substantial loss of value. May also refer to unrestricted cash or investments of an issuer.
- 2.59 Liquidity Facility.** A type of bank credit facility wherein the bank agrees to purchase securities, typically variable rate debt, that cannot be immediately remarketed to investors. The Liquidity Facility provider purchases the securities until they can be remarketed.
- 2.60 Locality Assets.** Assets constructed and paid for by HRSD and subsequently transferred to a locality. A Commission Resolution is required to exclude these costs from the calculation of the Operating Expenses for purposes of the calculation of the Debt Service Coverage Ratio – Adjusted.
- 2.61 London InterBank Offered Rate (LIBOR).** LIBOR is the rate on U.S. dollar denominated deposits with maturities from one day to 12 months transacted between banks in London. LIBOR is generally the benchmark floating index in the taxable or corporate swap market. This index is expected to be discontinued after 2021. The leading replacement is the Secured Overnight Financing Rate (SOFR), which is based on the cost of overnight borrowing using U.S. treasury securities as collateral.
- 2.62 Management Fee.** The fixed percentage of the gross spread which is paid to the senior managing underwriter for structuring a bond issue.
- 2.63 Market Value.** The price at which a security is trading and could presumably be purchased or sold.
- 2.64 Master Repurchase Agreement.** A written contract covering future transactions between the parties to repurchase/reverse repurchase agreements that establishes each party's rights in the transactions. A master agreement will often specify, among

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 8 of 60

other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller borrower.

- 2.65 Maturity.** The date upon which the principal or stated value of an investment becomes due and payable.
- 2.66 Members.** Underwriters in a syndicate other than the senior underwriter.
- 2.67 Moody's.** Moody's Investors Service, Inc. is an NRSRO.
- 2.68 Nationally Recognized Statistical Rating Organization (NRSRO).** A credit rating agency registered with the SEC that issues credit ratings that the SEC permits other financial firms to use for certain regulatory purposes. Examples include Moody's, Fitch and S&P.
- 2.69 Negotiated Sale.** A method of selling bonds in which the issuer chooses an underwriter to negotiate terms pursuant to which such underwriter will purchase and market the bonds.
- 2.70 Net Revenues.** All revenues received by HRSD less Operating Expenses.
- 2.71 Net Revenues Available for Debt Service.** Under the Subordinate Trust Agreement, means all Net Revenues less debt service on Senior Bonds.
- 2.72 Nominal Interest Rate.** The interest rate before taking inflation into account. Generally, it is the stated or quoted rate in a loan or deposit agreement.
- 2.73 Normal Cost.** The annual current cost of a member's future retirement benefit.
- 2.74 Operating Expenses.** As defined by the Enabling Act and as used in the Senior Trust Agreement, operating expenses includes the cost of maintaining, repairing and operating such system or systems or sewer improvements and to provide such reserves therefor as may be provided in the resolution providing for the issuance or such revenue bonds or in the trust agreement securing the same. As defined in the Subordinate Trust Agreement, Operating Expenses includes those expenses required to pay the cost of maintaining, repairing and operating the Wastewater System, including, but not limited to, reasonable and necessary usual expenses of administration, operation, maintenance and repair, costs for billing and collecting the rates, fees and other charges for the use of or the services furnished by the Wastewater System, insurance premiums, credit enhancement and liquidity support fees, legal, engineering, auditing and financial advisory expenses, expenses and compensation of the Trustee, and deposits into a self-insurance program. Operating Expenses shall exclude allowance for depreciation and amortization and expenditures for extraordinary maintenance or repair or improvements. Operating Expenses shall also exclude expenses for improvements that will not be owned by

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 9 of 60

HRSD, but which will, in the reasonable determination of the Commission, as evidenced by a resolution thereof, maintain or improve the integrity of the Wastewater System.

- 2.75 Original Issue Discount.** In general, the amount by which the original par amount of a bond or an issue exceeds its public offering price at the time it is originally offered to an investor.
- 2.76 Percentage of (% of) LIBOR Swap.** A swap whose floating rate is reset based on a percentage of a taxable rate (e.g. 67% of LIBOR) rather than a tax-exempt rate, e.g. the SIFMA Index. A Percentage of LIBOR swap generally carries a lower expected or nominal fixed rate than a comparable SIFMA swap to compensate the fixed payer (issuer) for the assumption of basis and tax risk.
- 2.77 Portfolio.** Collection of securities held by an investor.
- 2.78 Premium.** The difference between the higher price paid for a fixed-income security and the security's face amount at issue.
- 2.79 Present Value.** The current value of a future cash flow.
- 2.80 Primary Dealer.** A group of government securities dealers who submit daily reports of market activity and positions and monthly financial statements to the Federal Reserve Bank of New York and are subject to its informal oversight. Primary dealers include SEC-registered securities broker-dealers, banks, and a few unregulated firms.
- 2.81 Private Placement.** The placement of an issue of indebtedness directly with one or more qualified or institutional investors.
- 2.82 Prudent Person Rule.** An investment standard outlining the fiduciary responsibilities of public funds invested relating to investment practices.
- 2.83 Rate Lock.** An interest rate hedge that is cash-settled at maturity based on the prevailing level of an agreed upon underlying index. (e.g. the SIFMA 'AAA' scales)
- 2.84 Rate of Return.** The yield obtainable on a security based on its purchase price or its current market price. This may be the amortized yield to maturity on a bond or the current income return.
- 2.85 Rebate.** A requirement imposed by the IRS Code whereby the issuer of tax -exempt bonds must, under certain circumstances, pay the United States Treasury an amount equal to its profit earned from investment of tax-exempt bond proceeds at rates exceeding the tax-exempt borrowing rate. The tax-exempt borrowing rate (or

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 10 of 60

bond yield) is calculated pursuant to the IRS Code together with all income earned on the accumulated profit pending payment.

- 2.86 Repurchase Agreement (RP or REPO).** An agreement under which the holder of securities sells them to an investor with a contract to repurchase the securities at a fixed price on a fixed date. The security “buyer” in effect lends the “seller” money for the period of the agreement, and the terms of the agreement are structured to compensate the buyer for this.
- 2.87 Revenue Bonds.** Bonds issued by HRSD secured by Net Revenues or Net Revenues Available for Debt Service.
- 2.88 Revenue Anticipation Notes.** Notes issued in anticipation of receiving revenues at a future date.
- 2.89 Safekeeping.** A service to customers rendered by banks for a fee whereby securities and valuables of all types and descriptions are held in the bank’s vaults for protection.
- 2.90 Securities and Exchange Commission (SEC).** Agency created by Congress to protect investors in securities transactions by administering securities legislation.
- 2.91 Securities Industry and Financial Markets Association (SIFMA).** SIFMA is a high grade market index of 7-day variable rate demand notes that is produced by Municipal Market Data. SIFMA is the benchmark swap floating index in the tax-exempt swap market.
- 2.92 Self-Liquidity.** A term used in connection with variable rate bond financings whereby the issuer agrees to repurchase, with its own capital, bonds that have been tendered but not yet remarketed without procuring a third-party Liquidity Facility. In this instance, the issuer uses its own funds to purchase securities.
- 2.93 Selling Group.** A group of securities dealers that participate in an offering not as underwriters but rather receiving securities less a selling concession from the managing underwriter for distribution at the public offering price.
- 2.94 Senior Bonds.** Bonds and other indebtedness issued by HRSD secured by the Senior Trust Agreement.
- 2.95 Senior Trust Agreement.** The Trust Agreement, dated March 1, 2008, as the same may be amended and supplemented from time, between HRSD and a trustee. The Senior Trust Agreement secures HRSD’s Senior Bonds. No additional Senior Bonds may be issued under the Senior Trust Agreement.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 11 of 60

- 2.96 Serial Bond.** A bond that matures on one date with no mandatory sinking fund redemptions that is part of an issue containing multiple Serial Bonds.
- 2.97 Standard & Poor's (S&P).** S&P Global Ratings is an NRSRO.
- 2.98 Stripped Security.** Securities for which the rights to receive principal and interest payments have been decoupled and separately sold.
- 2.99 Subordinate Bonds.** Bonds and other indebtedness issued by HRSD and secured by the Subordinate Trust Agreement.
- 2.100 Subordinate Trust Agreement.** The Trust Agreement, dated October 1, 2011, as amended and restated as of March 1, 2016, as amended and supplemented from time to time, between HRSD and a trustee. The Subordinate Trust Agreement secures HRSD's Subordinate Bonds.
- 2.101 Swaption.** An option on a forward swap. The purchaser of a swaption (counterparty) has the right, but not the obligation, to compel the swaption seller (usually an issuer) to enter into a pre-negotiated swap agreement at some future date (exercise date). In exchange for this right, the swaption purchaser pays the swaption seller a premium amount. This amount can be paid up front, at some future date, or as an annuity over time.
- 2.102 Syndicate Policies.** The contractual obligations placed on the underwriting group relating to distribution, price limitations and market transactions.
- 2.103 Term Bond.** A Bond whose principal is amortized based on sinking fund redemption.
- 2.104 Termination Payment Risk.** The risk that an issuer is forced to liquidate a swap when it owes a termination payment to its counterparty.
- 2.105 Treasury Bills.** A non-interest bearing discount security issued by the U.S. Treasury to finance the national debt. Most Treasury Bills are issued to mature in three months, six months, or one year.
- 2.106 Treasury Bonds.** Long-term interest-bearing U.S. Treasury securities issued as direct obligations of the U.S. Government and having initial maturities of more than 10 years.
- 2.107 Treasury Inflation Protected Security (TIPS).** The principal of a TIPS increases with inflation and decreases with deflation, as measured by the Consumer Price Index. When a TIPS matures, the adjusted principal or original principal, whichever is greater, is paid.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 12 of 60

- 2.108 Treasury Notes.** Medium-term interest-bearing U.S. Treasury securities issued as direct obligations of the U.S. Government and having initial maturities from one to 10 years.
- 2.109 Trust Agreements.** Collectively, the Senior Trust Agreement and the Subordinate Trust Agreement.
- 2.110 Underwriter.** A dealer that purchases new issues of municipal securities from the Issuer and resells them to investors.
- 2.111 Underwriter's Discount.** The difference between the price at which bonds are bought by the Underwriter from the Issuer and the price at which they are offered to investors.
- 2.112 Underwriter's Expenses.** Compensates senior managers for out-of-pocket expenses, generally including underwriter's counsel DTC charges, travel, syndicate expenses, dealer fees, communication expenses, CUSIP fees and postage. Underwriter's expenses are subject to negotiation and can vary from transaction to transaction.
- 2.113 Uniform Net Capital Rule.** SEC requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of indebtedness to liquid capital, also called net capital rule or net capital ratio. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities, one reason new public issues are often spread among members of underwriting syndicates. Liquid capital includes cash and assets easily converted into cash.
- 2.114 Variable Rate Debt (VRD).** An interest rate on a security that changes at intervals according to an index or a formula or other standard of measurement or that changes in connection with a mandatory tender and remarketing or where interest is not set to maturity.
- 2.115 VRA Master Financing Agreement.** The Amended and Restated Master Financing Agreement, as amended and supplemented from time to time, between Virginia Resources Authority and HRSD.
- 2.116 Water Infrastructure Finance and Innovation Act (WIFIA) -** The Water Infrastructure Finance and Innovation Act of 2014, as amended (WIFIA), established the WIFIA, a federal credit program administered by EPA for eligible water and wastewater infrastructure projects. The WIFIA program provides long-term, low-cost supplemental loans for up to 49% of the total cost of an eligible project.
- 2.117 Yield.** The rate of annual income return on an investment, expressed as a percentage. Income/current yield is obtained by dividing the current dollar income by

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 13 of 60

the current market price for the security. Net yield or yield to maturity is the current income yield minus any premium above par or plus any discount from par in purchase price, with the adjustment spread over the period from the date of purchase to the date of maturity of the bond. In addition, Yield may, for certain purposes, be calculated in accordance with the IRS Code.

3.0 GUIDING PRINCIPLES

3.1 RESERVES. An important metric of HRSD's financial flexibility is its liquidity position as measured by available cash and investments. Setting a minimum liquidity position for known risks and obligations will provide funding in emergency or other unexpected situations as they arise. The reserves represent an earmarking, for budgetary and Policy purposes, of cash and liquid investments (current and non-current). These reserves are in addition to existing reserves required by the Trust Agreements, if any, and any funds earmarked for debt service, capital improvements or budget carryover amounts.

3.1.1 General Reserve. HRSD will maintain sufficient liquidity to ensure adequate working capital for HRSD's operations. These funds are intended to help HRSD cover unanticipated expenses that cannot be paid from the current fiscal year's budgetary resources. Liquidity will be determined in terms of Days Cash on Hand and Adjusted Days Cash on Hand. Adjusted Days Cash on Hand at the end of a fiscal year may not be less than 270. HRSD will target Adjusted Days Cash on Hand to be below 365 days.

In the event the cash and investments are used to provide funding for unanticipated expenses and the Adjusted Days Cash on Hand falls below the 270 day minimum, the General Manager will submit a plan in writing to the Commission that will restore it to the policy level over a period not to exceed five fiscal years.

3.1.2 Risk Reserve. HRSD maintains a self-insurance program for some of its risk exposures.

- A. HRSD will maintain a Risk Reserve as of the end of the fiscal year of not less than 25 percent of projected annual self-insured claims costs for known, retained risks.
- B. In the event the Risk Reserve is used and reduced to a level that is less than the 25 percent minimum to provide funding of unanticipated self-insured expenses, the General Manager will submit a plan in writing to the Commission that will restore the reserve to the policy level over a period not to exceed five fiscal years.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 14 of 60

3.1.3 Renewal and Replacement Reserve. As permitted by the Enabling Act, HRSD's Trust Agreements establish a reserve to finance "anticipated renewals, replacements, extensions, additions and extraordinary repairs" to wastewater system the extent needed. Under the Trust Agreements, the funding of the Renewal and Replacement Reserve is discretionary.

3.2 BUDGETARY PRINCIPLES.

3.2.1 Long-Range Financial Forecast. Each fiscal year the General Manager will submit to the Commission a 20-year financial forecast of anticipated annual revenues and expenses and capital improvements.

This forecast will serve as the foundation for the General Manager's annual budget proposal to the Commission.

3.2.2 Annual Operating Budget Proposals. The Commission is required to adopt an operating budget no later than June 30 each fiscal year.

The Commission will adopt an operating budget that:

- A. Is structurally balanced whereby current budgetary revenues are sufficient to meet current budgetary expenses (those that are ongoing in nature);
- B. Considers the affordability of rates within the context of local wealth and income indicators;
- C. Is at a level necessary to ensure the adequate maintenance and operations of the wastewater system and ensure material compliance with all applicable regulatory requirements;
- D. Is sufficient to meet Actuarially Determined Contribution (ADC) for HRSD's defined benefit plans;
- E. Includes amounts necessary to maintain the required reserves in amounts at least equal to the minimum balances as defined in this Policy;
- F. Enables HRSD to meet the debt service coverage targets defined in these policies and the covenants contained in its Trust Agreements; and
- G. Annually funds at least 15 percent of its capital improvement program in cash.

3.2.3 Capital Improvement Program (CIP). Each year HRSD will adopt a ten-year CIP that identifies projects to be undertaken over the next ten years to meet projected needs for regulatory compliance, infrastructure renewal, expansion, replacing old or new facilities, principally Capital Assets and Locality Assets.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 15 of 60

3.2.4 Budgetary Accounting and Control. HRSD operates in accordance with annual operating and capital budgets prepared on a basis of accounting that is different from generally accepted accounting principles.

- A. The operating budget is adopted by department, with budgetary controls exercised administratively by management at the department level. The General Manager is authorized to transfer funds among departments without further approval by the Commission. Appropriations lapse at the end of the fiscal year. Valid, outstanding encumbrances (those for which performance under a contract is expected in the next year) are re-appropriated without further approval by the Commission and become part of the subsequent year's budget.
- B. The capital budget is a ten-year plan of CIP spending based on estimated project costs and prioritized schedules. Prior to the commencement of construction for any project, the Commission must appropriate funding for the total project cost. If a project is expected to exceed its initial appropriation, the Commission must approve any additional funding through a revised appropriation.

3.3 DEBT SERVICE COVERAGE. HRSD will comply with the debt service coverage ratios included in its Trust Agreements. Beyond the Trust Agreements' minimums, HRSD will adopt operating and capital budgets that it projects will enable HRSD to maintain a Debt Service Coverage Ratio – Adjusted at a minimum of 1.5 times on Senior Bonds and 1.4 times on total debt.

3.4 DERIVATIVES. The Derivatives section outlined herein is intended to provide general direction regarding the use, procurement and execution of Derivatives by HRSD. The Policy is intended to relate to the use of various interest rate hedging techniques, including the contractual exchange of different fixed and variable rate payment streams through interest rate swap agreements. The Policy is not intended to relate to other derivative products, such as hedges for fuel or other commodities that HRSD may consider for hedging exposures other than to interest rates.

3.5 ACCOUNTING AND FINANCIAL REPORTING. Except as permitted by the Subordinate Trust Agreement, HRSD will adhere to all Generally Accepted Accounting Principles (GAAP). As permitted by the Subordinate Trust Agreement, HRSD may present, or cause to be presented, certain calculations that reflect certain adjustments that are not in accordance with GAAP.

HRSD will maintain a comprehensive framework of internal controls, and policies and procedures.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 16 of 60

Over a period of not more than every five years, HRSD under the direction of the Finance Committee of the Commission will seek proposals from qualified firms of certified public accountants, including the current auditors if their performance has been satisfactory, to perform an annual audit of HRSD's financial statements.

3.6 RISK MANAGEMENT. HRSD will make diligent efforts to protect and preserve HRSD assets through a Risk Management program that selectively transfers risk (purchase insurance) for high severity-low frequency exposures and retains risk (self-insurance) for low severity-high frequency exposures.

3.7 INTERNAL AUDIT. HRSD or its designee will conduct internal audits using a risk-based approach. Such audit efforts will be approved and directed by the Finance Committee of the Commission.

4.0 PROCEDURES

4.1 DEBT MANAGEMENT. HRSD's debt management program represents an effort to smooth out the fiscal impact of major capital investments while aligning the costs of utility service with the payment of those who will actually use the service.

The proceeds of long-term indebtedness will not be used to finance current operations or expenses for normal maintenance. Long-term indebtedness will be structured such that financial obligations do not exceed the aggregate expected useful lives of the assets financed. Short-term borrowing may be utilized for the temporary funding of operational cash flow deficits or interim construction requirements.

The most appropriate instrument for a proposed sale of debt shall be determined in light of financing needs and expected market conditions at the time of sale.

4.1.1 Permitted Debt by Type.

- A. **Lease Financing.** HRSD may use leasing for facilities or equipment if (1) it can be demonstrated that this is the most cost effective or appropriate way to secure financing, or (2) on small projects that do not warrant entry into the bond market.
- B. **Installment Purchases or Conditional Sale Contracts.** HRSD may utilize installment purchase or conditional sale contracts having an original term of one year or less.
- C. **Bond Anticipation Notes, Commercial Paper (CP) and Lines of Credit.** Each are typically short duration debt instruments issued to provide interim financing and, due to their short duration, expose HRSD to interest rate risk

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 17 of 60

and market access risk upon renewal. Bond Anticipation Notes, Commercial Paper and Lines of Credit may be used

- (1) to provide interim financing designed to reduce the frequency of bond sales, thereby reducing cost of issuance;
- (2) during times of high interest rates and when the expectation is that interest rates will stabilize in the future or trend downward;
- (3) when market conditions are such that a Bond Anticipation Notes, Commercial Paper or Lines of Credit may be more readily received in the market than long-term debt; or
- (4) as an interim financing tool during the construction period for a project(s) until the project(s) is placed into service and / or HRSD sells long-term debt or is reimbursed through a clean water revolving loan or WIFIA loan.

- D. **Long-Term Revenue Bonds.** HRSD may issue long-term revenue bonds to fund Capital Assets and Locality Assets.
- E. **Revenue Anticipation Notes.** May be issued to meet HRSD's operational cash flow needs.

4.1.2 Guidelines on Debt Issuance.

- A. **Trust Agreements and VRA Master Financing Agreement.** HRSD will abide by the covenants contained in its Trust Agreements and VRA Master Financing Agreement. As a matter of prudence, HRSD considers its financial covenants to be minimum requirements to be exceeded.
- B. **Authorization.** Prior to the issuance of debt, the Commission will pass a resolution authorizing the financing arrangements and setting appropriate limits and parameters for the anticipated financing.
- C. **Lowest Cost Financing.** Generally, HRSD intends to pursue the lowest cost of financing within the parameters of this Policy, the Trust Agreements, the VRA Master Financing Agreement and the Enabling Act.
- D. **Cash Financing from Available Sources.** HRSD intends to contribute at least 15 percent of each year's programmed CIP in cash.
- E. **Project Costs Prior to Debt Issue.** If project costs are incurred prior to the issuance of debt, the Commission will pass a resolution documenting its intent to be reimbursed from bond proceeds. As a general practice, the

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 18 of 60

Commission will consider and adopt a reimbursement resolution in connection with the adoption of each fiscal year's CIP.

- F. **Variable Rate Debt and Bond Anticipation Notes.** VRD and Bond Anticipation Notes carry inherent interest rate risk. Such securities typically have interest rates lower than fixed rate securities and offer the potential for lower debt service costs over the term of the bond issue without regard to the cost of Credit Enhancement. HRSD will consider using VRD when it improves matching of assets and liabilities, potentially lowers debt service costs, adds flexibility to HRSD's capital structure, or diversifies HRSD's investor base.
- (1) Debt service on VRD will be budgeted at a conservative rate based on historical fluctuations in interest activity and current market assumptions. Before issuing VRD, HRSD will determine how potential volatility in the debt service will be funded and consider the impact of various interest rate scenarios on its financial position and on various debt ratios.
 - (2) HRSD does not intend to issue VRD in excess of 15 percent of its total debt portfolio. This limitation, however does not apply to debt issued as part of an interim financing program (e.g. Bond Anticipation Notes, Lines of Credit, Commercial Paper) nor does it apply to hedged variable rate debt. In addition, if HRSD can demonstrate historical and projected sufficiency of offsetting principal and interest coverage from short-term and variable rate investment assets held in unrestricted, non-operating accounts, these assets may be netted from variable rate liabilities.
- G. **Derivative Products.** HRSD recognizes that the use of Derivatives may aid HRSD in reducing the cost of capital and gaining flexibility in structuring its debt portfolio. The use of such products is governed by the Derivatives section of this policy.
- H. **Method of Sale.** HRSD will select a method of sale it believes is the most appropriate and economically advantageous in light of financial, market, transaction-specific and HRSD-related conditions. Acceptable methods of sale may include a competitive sale, a negotiated sale, a private placement, or a direct institutional investor purchase.
- I. **Duration of Debt.** HRSD will not issue debt for a period longer than the weighted useful lives of the projects being financed. Pursuant to the Enabling Act, HRSD cannot issue debt with a final maturity more than 40 years from their date or dates, as may be determined by the Commission. Factors to be considered when determining the final maturity of debt include the average

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 19 of 60

life of the assets being financed, relative level of interest rates, and the HRSD's overall outstanding debt service.

4.1.3 Debt Structure

- A. **Interest Rate Structure.** HRSD may make use of both VRD and fixed -rate debt in accordance with limitations set forth in this Policy.
- B. **Tax Status.** Tax-exempt debt will be used whenever possible and appropriate.
- C. **Maturity Structure.** HRSD's long-term debt may include serial and term bonds. Other maturity structures may also be considered when demonstrated to be advantageous to HRSD.
- D. **Coupon Structure.** Fixed -rate debt may include par, discount, and premium bonds, and may include current interest bonds and Capital Appreciation Bonds.
- E. **Call Provisions.** In order to preserve flexibility and refinancing opportunities, HRSD debt shall generally be issued with Call Provisions. HRSD may consider Call Provisions that are shorter than traditional or non-callable debt or debt with yield maintenance features when warranted by market conditions. For each transaction, various call option scenarios will be evaluated so that the most beneficial can be utilized.
- F. **Credit Enhancement.** HRSD may use Credit Enhancement when it is economically advantageous to do so.
 - (1) When considering the use of Bond Insurance, HRSD will perform a maturity-by-maturity analysis. The economic feasibility of Bond Insurance will be analyzed based on the value of insurance as priced to the earlier of each maturity's first applicable call date and the maturity date of such maturity. Bond Insurance will be used when present value savings result or when such use permits HRSD to incorporate less restrictive covenants into a transaction which results in greater flexibility or lower user charges. HRSD may insure bonds in maturities that are borderline from an economic feasibility standpoint if warranted by other factors (e.g., use of insurance to attract investor interest where certain bond maturities might otherwise be difficult to sell).
 - (2) When considering the use of a Letter of Credit or Line of Credit as a Credit Enhancement or Liquidity Facility, HRSD will examine the economic feasibility thereof by taking into account the trading spread,

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 20 of 60

the cost of the Letter of Credit or Liquidity Facility and the effect on interest costs of HRSD's debt.

- G. **Debt Service Reserve Fund.** The Senior Trust Agreement requires HRSD to fund a Debt Service Reserve Fund when certain debt service coverage and liquidity ratios are not met. HRSD will fund such reserve when and if it is required. The Subordinate Trust Agreement permits, but does not require, the funding of a Debt Service Reserve Fund.
- H. **Capitalized Interest.** Capitalized Interest increases the amount of debt that is issued. If HRSD capitalizes interest on one or more series of indebtedness, it will do so only for the period prior to the project being financed is expected to be placed in service.
- I. **Refinancing of Debt.** HRSD will refinance debt from time to time to achieve debt service savings as market opportunities arise or if it determines that it is beneficial for another compelling business reason. To refinance debt, HRSD may use a range of financing tools including but not limited to tax-exempt current refundings, taxable advance refundings, and forward delivery bonds. HRSD's Director of Finance will determine the appropriate financing tool based on tax law, market conditions and the risks associated with each tool (in addition to present value savings and refunding efficiency considerations).
- When a refinancing is undertaken to achieve debt service savings, HRSD will target minimum net present value savings of three percent of the amount refinanced. As set forth above, HRSD may refinance debt that does not meet this threshold for another compelling business reason. In addition, HRSD may consider the efficiency of a proposed refinancing transaction and any changes to the callability of debt after such refinancing. In any refinancing of long-term debt, HRSD maintains a bias to not extend maturities.
- J. **Escrow Structuring.** HRSD will utilize the least costly securities available in structuring refinancing escrows. Unless State and Local Government Securities (SLGS) are used, a certificate will be provided by a third party agent stating that the securities were procured through an arms-length, competitive bid process (in the case of open market securities), and that the price paid for the securities was reasonable within federal guidelines. Under no circumstances will an underwriter, agent or financial advisor sell escrow securities to HRSD from its own account. HRSD will consult with Bond Counsel in connection with any defeasance escrows.
- K. **Hiring of Professionals.** All key members of the financial advisory team including underwriter, financial advisor, bond counsel, and other professionals will be selected in a manner consistent with HRSD's procurement policy for professional services.

4.1.4 Underwriter Selection.

- A. **Senior Manager Selection.** HRSD will select a senior manager for any proposed negotiated sale. The selection criteria will include but not be limited to the following:
- (1) The firm's ability and experience in managing transactions similar to that contemplated by HRSD;
 - (2) Prior knowledge and experience with HRSD;
 - (3) The firm's ability and willingness to risk capital and demonstration of the firm's capital availability and underwriting of unsold balances;
 - (4) Quality and experience of personnel assigned to HRSD's engagement;
 - (5) Financing plan presented; and
 - (6) Cost, including underwriting fees and anticipated pricing.
- B. **Co-Manager Selection.** Co-managers may be selected on the same bases as the senior manager with the exception of underwriting fees, which are determined by the senior manager. In addition to their qualifications, co-managers appointed to specific transactions will be a function of transaction size and the necessity to ensure maximum distribution of HRSD's bonds.
- C. **Selling Groups.** HRSD may establish selling groups in certain transactions. To the extent that selling groups are used, HRSD may make appointments to selling groups, as the transaction dictates.
- D. **Underwriter's Counsel.** In any negotiated sale of HRSD debt in which the underwriter desires legal counsel, the appointment will be made by the senior managing underwriter.
- E. **Underwriter's Discount.** HRSD will evaluate the proposed underwriter's discount against other proposals and/or comparable issues in the market. Any additional expenses payable to an underwriter and paid out of the Underwriter's Discount must be substantiated.
- F. **Evaluation of Underwriter Performance.** HRSD will evaluate each bond sale after completion to assess the following: costs of issuance including underwriters' compensation, pricing of the bonds in terms of the overall interest cost and on a maturity-by-maturity basis, the distribution of bonds and sales credits, and the use of capital by the underwriters to take down bonds.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 22 of 60

- G. **Syndicate Policies.** For each negotiated transaction, HRSD will establish syndicate policies that will describe the priority of orders and designation policies governing the upcoming sale.
- H. **Designation Policies.** To encourage the pre-marketing efforts of each member of the underwriting team, orders for HRSD's bonds will be net designated, unless otherwise expressly stated. HRSD shall require the senior manager to:
- (1) Fairly allocate bonds to other managers and the selling group.
 - (2) Comply with the Municipal Securities Rulemaking Board's (MSRB) regulations governing the priority of orders and allocations.
 - (3) Within 10 working business days after the sale date, submit to HRSD a detail of orders, allocations and other relevant information pertaining to HRSD's sale.

4.1.5 Consultants.

- A. **Financial Advisor.** HRSD will select a financial advisor (or advisors) to assist in its debt issuance and debt administration processes. Such financial advisor(s) will be an Independent Registered Municipal Advisor within the meaning of the Securities Exchange Act of 1934, as amended. Selection of HRSD's financial advisor(s) will be based on, but not limited to, the following criteria:
- (1) Experience in providing consulting services to entities similar to HRSD
 - (2) Knowledge and experience in structuring and analyzing bond issues
 - (3) Experience and reputation of assigned personnel; and
 - (4) Fees and expenses
- B. **Bond Counsel.** HRSD debt will include a written opinion by legal counsel affirming that HRSD is authorized to issue the proposed debt, that HRSD has met all legal requirements necessary for issuance, and, if the interest on the debt to be issued is to be exempt under the IRS Code, a determination consistent therewith. The approving opinion and other documents relating to the issuance of debt will be prepared by counsel with extensive experience in public finance and tax issues. The Bond Counsel will be selected by HRSD.
- C. **Conflicts of Interest.** HRSD requires that its consultants and advisors provide objective advice and analysis, maintain the confidentiality of HRSD

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 23 of 60

financial plans, and be free from any conflict of interest. In no case will HRSD's financial advisor be permitted to underwrite any portion of HRSD's bond issues, whether sold competitively or negotiated.

- D. **Disclosure by Financing Team Members.** All financing team members will be required to provide full and complete disclosure, relative to agreements with other financing team members and outside parties. The extent of disclosure may vary depending on the nature of the transaction. However, in general terms, no agreements will be permitted which could compromise the firm's ability to provide independent advice which is solely in HRSD's best interests or which could reasonably be perceived as a conflict of interest.

4.1.6 Communication and Disclosure.

- A. **Rating Agencies [NRSROs].** HRSD seeks to maintain the highest credit ratings it believes appropriate for its debt without compromising the delivery of its basic core services. The Director of Finance will manage relationships with the rating analysts assigned to HRSD by the NRSROs
- B. **Investors, Bond Insurers, Liquidity Providers.** The Director of Finance will manage relationships using both informal and formal methods to disseminate information.
- C. **Continuing Disclosure.** HRSD recognizes that ongoing disclosure is imperative to maintaining the high credit quality of its debt. HRSD will comply with all of its contractual obligations and applicable law and will meet such disclosure requirements in a timely and thorough manner.
- D. **Arbitrage Compliance.** HRSD will maintain a system of record keeping and reporting in order to comply with the Arbitrage Rebate Compliance Requirements of the IRS Code.
- E. **Post-Issuance Compliance Procedures.** Separate from this policy, HRSD will maintain and follow post-issuance compliance procedures. Such procedures will include provisions regarding continuing disclosure and arbitrage compliance, among others.

4.2 DERIVATIVES.

- 4.2.1 Approach and Objectives.** Interest Rate Swaps and options (swaps) are Derivatives that can help HRSD meet important financial objectives. Properly used, these instruments can increase HRSD's financial flexibility, provide opportunities for interest rate savings or enhanced investment yields, and help HRSD manage its balance sheet through better matching of assets and liabilities.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 24 of 60

- A. **Specific Objectives for Using Interest Rate Swaps.** HRSD may consider the use of specific Interest Rate Swaps if they meet one or more of the benefits previously described in this Policy or if they:
- (1) Result in an expected lower net borrowing cost than traditional debt alternatives;
 - (2) Result in an improved capital structure (e.g., altered pattern of debt service payments or to create variable rate exposure) or better asset/liability matching;
 - (3) Cap, limit, or hedge HRSD's exposure to changes in interest rates on a particular financial transaction; or
 - (4) Provide a specific benefit not otherwise available.
 - (5) Swaps must not be speculative or create unreasonable risk. Each swap will be reviewed on a case-by-case basis to determine whether or not the level of risk is appropriate for HRSD. Examples of swaps that HRSD considers speculative and which create unreasonable risk include, without limitation:
 - Basis Swaps;
 - Constant Maturity Swaps;
 - Knock-in Options on Swaps;
 - Interest Rate Swaps that including a floating index multiplier greater than 1.0 (e.g., three times SIFMA); and
 - Interest Rate Swaps that are not associated with a specific bond issue.
 - (6) HRSD prefers Swaps that meet the "consistent critical terms method" for evaluating the effectiveness of Interest Rate Swaps as defined by the Governmental Accounting Standards Board in Statement #53: Accounting and Financial Reporting for Derivative Instruments.
- B. **Prohibited Interest Rate Swap Features.** HRSD will not use Interest Rate Swaps that:
- (1) Are speculative or create extraordinary leverage or risk;
 - (2) Lack adequate liquidity to terminate without incurring a significant bid/ask spread;
 - (3) Provide insufficient price transparency to allow reasonable valuation; or

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 25 of 60

(4) Are not reasonably uniform to the risk evaluation criteria by this Policy.

C. **Legal Authority.** As stated in Section 29 of HRSD's Enabling Act, as amended by the Virginia General Assembly on March 11, 2008,

"With respect to contracts concerning interest rates, currency, cash flow and other basis, the District may enter into any contract that the Commission determines to be necessary or appropriate to place any obligation or investment of the District, as represented by bonds or the investment of their proceeds, in whole or in part, on the interest rate, cash flow or other basis desired by the Commission. Such contracts may include, without limitation, contracts commonly known as interest rate swap agreements, rate locks, forward purchase agreements, and futures or contracts providing for payments based on levels of, or changes in, interest rates. Such contracts or arrangements may be entered into by the District in connection with, or incidental to, entering into or maintaining any (i) agreement that secures bonds or (ii) investment, or contract providing for investment, otherwise authorized by law. These contracts and arrangements may contain such payment, security, default, remedy, and other terms and conditions as determined by the Commission, after giving due consideration to the creditworthiness of the counterparty or other obligated party, including any rating by any nationally recognized rating agency."

All Derivative contracts require Commission approval prior to execution.

D. **Permitted Instruments.** HRSD may utilize the following financial products on a current or forward basis, after identifying the objective(s) to be realized and assessing the attendant risks.

- (1) Interest Rate Swaps, including fixed and floating rate swaps.
- (2) Options, including Swaptions, Interest Rate Caps, Interest Rate Floors, and Interest Rate Collars.

HRSD prefers Interest Rate Swaps that have strong price transparency and which are of a type referred to as "plain vanilla," e.g., a fixed to floating rate SIFMA -based Interest Rate Swap.

Interest Rate Swaps will be subject to the legal provisions set forth in HRSD's Trust Agreements, applicable debt documents, and statutory requirements.

E. **Procedure for Submission and Execution.** HRSD may consider Interest Rate Swaps that are either presented as proposals or that are developed by HRSD in consultation with its financial advisor and legal counsel. HRSD will

COMMISSION ADOPTED POLICY
Financial Policy



| | |
|-----------------------------|---------------------|
| Adopted: | May 26, 2009 |
| Commission Revision: | May 26, 2020 |
| Effective: | July 1, 2020 |

Page 26 of 60

give detailed consideration only to proposals that HRSD, in its sole discretion, believes will offer the projected savings or other benefits and will have the ability to meet one or more of the objectives outlined herein.

- (1) When feasible, Interest Rate Swaps should be competitively procured either under a competitive sealed bid or competitive negotiation (e.g. initiated via RFP). On a product-by-product basis, HRSD will have authority to negotiate the procurement of financial instruments that have customized or specific attributes designed for HRSD.
- (2) For both competitive and negotiated procurements, the execution of any Interest Rate Swap transaction will be subject to receipt of a fairness opinion from HRSD's financial advisor, finding that the terms and conditions of the swap reflect a fair market value of such transaction as of the date and time of its execution.
- (3) The execution of all Interest Rate Swaps will be subject to receipt of an opinion from a law firm with extensive experience in public finance and tax issues that the contract is a legal, valid and binding obligation of HRSD that complies with applicable law and has no adverse effect on the tax status of any related bonds.

F. Interest Rate Swap Analysis and Participant Requirements. In connection with any Interest Rate Swap, HRSD, its financial advisor and legal counsel will review the proposed transaction and outline considerations associated with the transaction. Such a review will include the following:

- (1) The identification of the proposed benefit and potential risks, which will include, but not necessarily be limited to, those risks outlined in this Policy;
- (2) Analysis of potential savings and stress testing of the proposed transaction;
- (3) Fixed versus variable rate and Interest Rate Swap exposure;
- (4) To the extent HRSD deems relevant, any rating reports or criteria regarding Interest Rate Swaps by rating agencies; and
- (5) Legal constraints.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 27 of 60

- G. **Interest Rate Swap Risks.** In reviewing proposed or possible Interest Rate Swaps, HRSD will consider at a minimum each of the following types of risks, as applicable:
- (1) **Counterparty Risk.** The risk of a payment default on a an Interest Rate Swap by a counterparty.
 - (2) **Termination Risk.** The risk that an Interest Rate Swap has a negative value and HRSD owes a “breakage” fee if the contract has to be terminated.
 - (3) **Tax Risk.** A mismatch between changes in the rate or price on HRSD’s underlying debt and the Interest Rate Swap caused by a reduction or elimination in the benefits of the tax exemption for municipal bonds, e.g. a tax cut that results in an increase in the ratio of tax-exempt to taxable yields.
 - (4) **Basis Risk.** A mismatch between the rate on HRSD’s underlying debt and the rate paid under the Interest Rate Swap (for example, an issue of tax-exempt Variable Rate Debt that bears interest at a variable rate equal to 67% of LIBOR while HRSD receives 80% of LIBOR under the swap).
 - (5) **Liquidity/Remarketing Risk.** The risk that HRSD cannot secure a cost-effective renewal of a Letter or Line of Credit or suffers a failed remarketing with respect to its Variable Rate Debt.
 - (6) **Rollover Risk.** The risk that the maturity of an Interest Rate Swap does not match maturity of the related debt or asset.
- H. **Counterparty Risk Assessment.** HRSD will only enter into an Interest Rate Swap with highly rated financial institutions. Credit criteria for financial institutions are as follows:
- (1) The institutions’ long-term, unsecured and unsubordinated obligations are rated at the time of execution of the Interest Rate Swap by at least one rating agency at least “Aa3” by Moody’s or “AA” by S&P, or “AA” by Fitch and by at least one other rating agency at no lower than “A2” by Moody’s, “A” by S&P, or “A” by Fitch; or
 - (2) The institutions’ obligations under the Interest Rate Swap and the Credit Support Annex are unconditionally guaranteed by a bank or non-bank financial institution the long-term, unsecured and unsubordinated obligations of which are rated at the time of execution of the swap by at least one credit agency at least “Aa3” by Moody’s or

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 28 of 60

“AA” by S&P or “AA” by Fitch and by at least one other rating agency at no lower than “A2” by Moody’s, “A” by S&P, or “A” by Fitch.

In the event of downgrade of an Interest Rate Swap counterparty below the minimal rating standard set forth above, the counterparty will be required to:

- a. Provide a substitute guarantor or assign the swap contract to an acceptable counterparty meeting the rating criteria, or
- b. Provide collateral as described in the Collateral section of this Policy.

- I. **Benefit Expectation.** Financial transactions using Interest Rate Swaps or other Derivatives related to a debt issue should generate at least two percent or greater projected debt service savings than a traditional debt alternative. Such savings analysis will include, where applicable, the consideration of the probability (based on historical interest rate indices, where applicable, or other accepted analytic techniques) of the realization of savings for the Derivative structure. The savings target requirement is intended to reflect the complexity and risk of derivative financial instruments, and should include a risk adjustment for other factors. For example, if the underlying debt is callable and the Interest Rate Swap is not, then the analysis should include a risk adjustment for this factor.

In determining any benefit in implementing an Interest Rate Swap, the cost of remarketing, in addition to the cost of credit enhancement or liquidity fees, will be added to the projected variable rate. Such a calculation should consider the trading performance of comparable indebtedness and any trading premium resulting from a specific form of credit enhancement or liquidity and/or any impact related to broader industry trends.

- J. **Hedging Derivatives.** When utilizing a Derivative to cap, limit or hedge HRSD’s exposure to changes in interest rates, HRSD will evaluate various interest rate scenarios and the estimated impact on projected wastewater rates.
- K. **Legal and Contractual Requirements.** HRSD will use standard International Swap and Derivatives Association, Inc. swap documentation, including the Schedule to the Master Agreement and a Credit Support Annex, and related protocols. HRSD may use additional documentation if the product is proprietary or HRSD deems in its sole discretion that such documentation is otherwise in its interest. The Interest Rate Swap agreement between HRSD and each counterparty will include payment, term, security, collateral, default, remedy, termination, and other terms, conditions,

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 29 of 60

provisions and safeguards as HRSD, in consultation with its legal counsel, deems necessary or desirable.

L. **Legal Terms of Swaps.** Terms and conditions of any Interest Rate Swap agreement will be negotiated by HRSD in the best interests of HRSD. Swap documentation and terms should include the following:

- (1) Downgrade provisions triggering termination based on HRSD's credit rating will in no event be less advantageous than those permitting termination based on a downgrade of the counterparty.
- (2) Governing law for swaps will be New York law to the extent permitted by law, but should reflect that HRSD's authorization of the related agreement is governed by Virginia law.
- (3) The specified debt related to credit events in any swap agreement should be narrowly drafted and refers only to specific debt.
- (4) Collateral thresholds will be set on a sliding scale reflective of credit ratings (see Collateral Section).
- (5) Eligible collateral will be as set forth in the Collateral Section.
- (6) Termination value will be established by "market quotation" methodology, which involves the solicitation of quotations from unrelated brokers regarding the valuation of the swaps.

M. **Notional Amount.** HRSD will limit the aggregate notional amount of derivatives to an amount not to exceed 20 percent of aggregate outstanding debt.

To the extent that HRSD is party to multiple derivatives contracts at any given time, HRSD will seek to diversify its counterparty credit risk by limiting its credit exposure to any single counterparty.

N. **Final Maturity.** The final maturity of any Interest Rate Swap will not extend beyond the lesser of the final maturity date of HRSD's related debt and the expiration date of any Letter of Credit or Liquidity Facility on the related bonds unless HRSD has the right to cancel the swap agreement without cost on such expiration date.

O. **Termination Provisions.** Interest Rate Swaps will contain provisions granting HRSD the right to optionally terminate an Interest Rate Swap at any time over its term. Such a provision will be required even if the termination is at market. In general, exercising the right to terminate an agreement should

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 30 of 60

produce a benefit to HRSD, either through the receipt of a payment from a termination or, if the termination payment is made by HRSD, in conjunction with the conversion of the related indebtedness to a more beneficial interest rate mode or mitigates a risk to HRSD, as will be determined by HRSD in its sole discretion.

Any termination payment will be established by a “market quotation” methodology, unless HRSD deems an alternate methodology to be appropriate. HRSD’s Director of Finance will provide a written report to the Commission with respect to any termination, including the reason(s) why the swap was terminated.

P. **Collateral.** As part of any swap, HRSD will require collateralization or other forms of credit enhancement to secure any or all swap payment obligations. As appropriate, HRSD, in consultation with its financial advisor and legal counsel, will require collateral or other credit enhancement to be posted by each swap counterparty as follows:

- (1) Each counterparty to HRSD will be required to post collateral if the long-term credit rating of the counterparty or its guarantor falls below the requirements outlined in the Counterparty Risk Assessment section of this Policy. Additional collateral for further decreases in credit ratings of a counterparty will be posted by the counterparty in accordance with the provisions contained in the related Collateral Support Annex. Threshold amounts for collateral posting will be determined by HRSD on a case-by-case basis.
- (2) In determining maximum uncollateralized exposure, HRSD will consider financial exposure that it may have to the same corporate entities through other forms of financial dealings, such as commercial paper investments.
- (3) Collateral will be deposited with a third party trustee, or as mutually agreed upon between HRSD and the counterparty.
- (4) A list of acceptable securities that may be posted as collateral and the valuation of such collateral will be determined and mutually agreed upon during negotiation of the swap agreement with each swap counterparty. A complete list of acceptable securities and valuation percentages is included in the Acceptable Collateral section of the Policy.
- (5) The market value of the collateral will be determined on at least a weekly basis, or more frequently if HRSD determines it is in its best interest given the specific collateral.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 31 of 60

Q. Ongoing Management. HRSD will seek to maximize the benefits and minimize the risks it carries by actively managing its Interest Rate Swap program. This will entail frequent monitoring of market conditions for emergent opportunities and risks. Active management may require modification of existing positions including, for example:

- Early full or partial termination;
- Shortening or lengthening the term of Interest Rate Swaps; or
- Sale or purchase of options.

Legal modification to an existing swap will require approval from the Commission. In modifying any swap, HRSD will fulfill all terms of this Policy and refer back to the original procurement and execution procedures outlined in this Policy.

R. Ongoing Reporting Requirements. HRSD will take steps to ensure that there is full and complete disclosure of all Swaps to the Commission, to Rating Agencies and to EMMA. HRSD will also present a summary description of its swaps in its disclosure documents.

HRSD will provide a written report regarding the status of all Swap agreements to the Commission at least on a semi-annual basis and will include the following:

- (1) A description of all outstanding swap agreements, including, if and when applicable, bond series, type of Swap, rates paid and received by HRSD, total notional amount, average life of each swap agreement, remaining term of each Swap agreement and covenant compliance;
- (2) Highlights of all material changes to swap agreements or new swap agreements entered into by HRSD since the last report;
- (3) The credit rating of each Swap counterparty and credit enhancer insuring swap payments, if any;
- (4) A summary of Swap agreements that were terminated or that have expired;
- (5) A mark-to-market valuation of swap agreements and the source of the valuation, which HRSD may use for financial reporting purposes; and
- (6) A summary of Collateral postings.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
 Commission Revision: May 26, 2020
 Effective: July 1, 2020

S. Acceptable Collateral.

| <u>Security</u> | <u>Collateral Requirement</u> <u>Valuation Percentage*</u> | <u>Example:</u> <u>\$ Value Based on \$1.0 Million</u> |
|---|---|---|
| Cash | 100% | \$1.0 million |
| (x) Negotiable debt obligations issued by the U.S. Treasury Department or GNMA, or | | |
| (y) Mortgage-backed securities issued by GNMA (but with respect to either (x) or (y) excluding interest only or principal only Stripped Securities, securities representing residual interests in mortgage pools, or securities that are not listed on a national securities exchange or regularly quoted in a national quotation service) and in each case having a remaining maturity of: | | |
| • less than one year | 98% | \$1.02 million |
| • greater than one year | 95% | \$1.05 million |

*To calculate the dollar amount required to satisfy the collateral requirement, divide the collateral requirement by the valuation percentage shown above.

T. Conformance with Dodd-Frank Act. It is the intent of HRSD to conform to the requirements relating to legislation and regulations for over-the-counter derivatives transactions under Title VII of the Dodd-Frank Wall Street Transparency and Accountability Act of 2010, as amended from time to time, and the regulations promulgated thereunder (herein collectively referred to as Dodd-Frank). It is the policy of HRSD that (i) each swap advisor engaged or to be engaged by HRSD will function as the designated qualified investment representative of HRSD (Designated Qualified Independent Representative or QIR); (ii) each swap advisor agrees to meet and meets the requirements specified in the Commodity Futures Trading Commission Regulation 23.450(b)(1) or any successor regulation thereto (hereinafter referred to as the QIR Regulation); (iii) each swap advisor provide a written certification to HRSD to the effect that such swap advisor agrees to meet and meets the requirements specified in the QIR Regulation; (iv) HRSD monitor the performance of each swap advisor consistent with the requirements specified in the QIR regulation; (v) HRSD exercise independent judgment in consultation with its swap advisor in evaluating all recommendations, if any presented by any counterparty with respect to transactions authorized

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 33 of 60

pursuant to this Financial Policy; (vi) HRSD rely on the advice of its swap advisor with respect to transactions authorized pursuant to this Financial Policy and not rely on recommendations, if any, presented by any counterparty with respect to transactions authorized pursuant to this Financial Policy; (vii) HRSD comply with all recordkeeping reporting and certification requirements for end-users as applicable under the Commodity Exchange Act.

4.3 INVESTMENT

4.3.1 Ethics and Conflicts Of Interest. The Director of Finance and other employees involved in the investment process will comply with the Code of Virginia Section 2.2-3100 et seq., the State and Local Government Conflict of Interests Act (the "Conflict of Interests Act").

- A. Specifically, no officer or employee will:
- (1) Accept any money, loan, gift, favor, service, or business or professional opportunity that reasonably tends to influence him in the performance of his official duties;
 - (2) Accept any business or professional opportunity when he knows there is a reasonable likelihood that the opportunity is being afforded to influence him in the performance of his official duties; or
 - (3) Violate any of the provision of the Conflict of Interests Act.
- B. All employees involved in the investment process will refrain from personal business activity that could conflict with the proper execution and management of the investment program, or that could impair their ability to make impartial decisions.
- C. All employees involved in the investment process will disclose to the Director of Finance and the General Manager any material interest in financial institutions with which they conduct business. They will further disclose any personal financial or investment positions that could be related to the performance of the investment portfolio.
- D. All employees involved in the investment process will refrain from undertaking personal investment transactions with the same individual with whom business is conducted on behalf of HRSD.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 34 of 60

4.3.2 Operating Funds

- A. **Scope.** Except for funds maintained in trust for retirement and health and welfare benefits for employees and/or retirees, this Policy applies to all HRSD's cash and investments (the Investment Portfolio). The Policy will apply to such monies from the time of receipt until the time the monies leave HRSD's accounts. Although these assets may be pooled for investment purposes, they may be segregated as necessary for accounting and budgetary reporting purposes.
- B. **Objectives.**
- (1) All investments will be in compliance with the Code of Virginia Sections 2.2-4400 et seq. and 2.2-4500 et seq. and the Trust Agreements.
 - (2) The cash management and investment activities of HRSD will be conducted in a manner which is consistent with applicable law and prevailing prudent business practices which may be applied by other public organizations of similar size and financial resources.
 - (3) The Investment Portfolio will be managed to accomplish the following fundamental goals:
 - a. **Safety of Principal.** The single most important objective of the investment program is the preservation of principal of those funds within the Investment Portfolio.
 - b. **Maintenance of Liquidity.** The Investment Portfolio will be managed at all times with sufficient Liquidity to meet all daily and seasonal needs, to fund special projects and other operational requirements which are either known or which might reasonably be anticipated, and to provide adequate Self-Liquidity, if applicable.
 - c. **Maximizing Return.** The Investment Portfolio will be managed so as to maximize the return on investments within the context and parameters set forth by the safety and liquidity objectives above.
- C. **Standard of Prudence.** All investments will be in compliance with the Code of Virginia Sections 2.2-4400 et seq. and 2.2-4500 et seq. and the Trust Agreements. Public funds held and invested by HRSD are held for the benefit of its ratepayers and any investment of such funds will be made solely in the interest of the ratepayers and with the care, skill, prudence, and diligence under the circumstances then prevailing that a person acting in a

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 35 of 60

like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

The Director of Finance and other HRSD employees acting in accordance with written procedures, including this Policy and exercising due diligence will be relieved of personal responsibility for an individual security's performance, provided that deviations from expectations are reported in a timely fashion to the Commission.

- D. **General Account Structure.** In order to meet HRSD's general objectives, the Investment Portfolio is divided into three major investment strategies: an Operating Liquidity Strategy, a Total Return Strategy and a Capital Investment Strategy.
- (1) The **Operating Liquidity Strategy** consists of funds that are expected to provide for HRSD's day-to-day disbursement and operational needs. As such, Liquidity is the emphasis in this strategy. This strategy will be funded to meet all known operating needs. Selection of investment maturities will be consistent with the cash requirements of HRSD in order to minimize the forced sale of securities prior to maturity. It is expected that a portion of the Operating Liquidity Strategy will be invested in highly liquid funds such as money market funds, overnight repurchase agreements, bank deposit accounts, or other short-term investment vehicles. Funds invested pursuant to this strategy may be utilized to provide Self-Liquidity on debt financings.
 - (2) The **Total Return Strategy** consists of operating funds that are not expected to be a major source of HRSD's day-to-day disbursement requirements and operational needs. The Total Return Strategy may therefore be invested in longer-term securities in order to generate an investment return, which, over time, is higher than the total return of the Operating Liquidity Strategy. Funds invested pursuant to this strategy may be utilized to provide Self-Liquidity on debt financings.
 - (3) The **Capital Investment Strategy** is the source for capital improvement disbursements. The strategy will consist of unspent debt proceeds and unspent HRSD cash contributions to its CIP. It is anticipated that investments will be made in the Capital Investment Strategy with maturity dates matching the anticipated expenditures or invested in highly liquid funds such as money market funds, overnight repurchase agreements, bank deposits or other short-term investment vehicles.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 36 of 60

- E. **Authorized Investments.** Under the Trust Agreements, the Director of Finance may invest in such of the following securities that are in compliance with the Investment of Public Funds Act (Code of Virginia Section 2.2-4500 et seq.), the Government Non-Arbitrage Investment Act (Code of Virginia Section 2.2-4700 et seq.) and any successor statutes as from time to time amended. The Director of Finance, however, may impose additional requirements and restrictions in order to ensure that HRSD's goals are met.
- (1) **U.S. Treasury Obligations.** TIPS, Treasury Bills, Treasury Notes and Treasury Bonds, and any other obligation or security issued by or backed by the full faith and credit of the United States of America. The final maturity will not exceed a period of five years from the time of purchase.
 - (2) **Federal Agency Obligation.** Bonds, notes and other obligations of Federal Agencies, provided that such investments must be rated in one of the two highest rating categories by at least one NRSRO and or the have the same rating as those of U.S. Treasury obligations. The final maturity will not exceed a period of five years from the time of purchase.
 - (3) **Municipal Obligations.** Bonds, notes and other general obligation indebtedness, upon which there is no default, with a rating of at least "AA" from S&P and "Aa" from Moody's, maturing within five years of the date of purchase, and otherwise meeting the requirements of Code of Virginia Section 2.2-4501. However, HRSD is prohibited from purchasing its own debt for the purpose of investing its Operating Funds. Please see the *Self-Liquidity* section of this policy for important information related to Self-Liquidity and HRSD's purchase of its own debt.
 - (4) **Commercial Paper.** Commercial Paper issued by domestic corporations (corporations organized and operating under the laws of the United States or any state thereof) provided that the issuing corporation, or its guarantor, has a short-term debt rating of no less than "A-1" (or its equivalent) from at least two of the NRSROs.
 - (5) **Bankers' Acceptances.** Issued by domestic banks or a federally chartered office of a foreign bank, which are eligible for purchase by the Federal Reserve System with a maturity of 180 days or less. The issuing corporation, or its guarantor, must have a short-term debt rating of no less than "A-1" (or its equivalent) from at least two of the NRSROs.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 37 of 60

- (6) **Corporate Notes.** Corporate Notes with a rating of at least “Aa” by Moody’s and at least “AA” by S&P. [The final maturity will not exceed a period of five years from the time of purchase.]
- (7) **Negotiable Certificates of Deposit and Bank Deposit Notes.** Negotiable CDs and negotiable bank deposit notes of domestic banks and domestic offices of foreign banks with ratings of at least “A-1” from P-1 from Moody’s, for maturities of one year or less, and a rating of at least “AA” from S&P and “Aa” from Moody’s, for maturities over one year. The final maturity may not exceed a period of five years from the time of purchase.
- (8) **Money Market Mutual Funds (Open-Ended Investment Funds).** Shares in open-end, no-load investment funds provided such funds are registered under the Federal Investment Company Act of 1940, provided that the fund is rated at least “AAAm” or the equivalent by an NRSRO. The mutual fund must comply with the diversification, quality and maturity requirements of SEC Rule 2(a)-7, or any successor rule, provided the investments by such funds are restricted to investments otherwise permitted by the Code of Virginia for political sub-divisions.
- (9) **Local Government Investment Pool.** A specialized fund pursuant to Code of Virginia Section 2.2-4000 et seq. designed to offer a convenient, liquid, and cost-effective investment vehicle for public entities. The Fund is administered by the Treasury Board of the Commonwealth of Virginia.
- (10) **State Non-Arbitrage Pool Fund.** The pooled investment vehicle established for the investment of bond proceeds under the Government Non-Arbitrage Investment Act (Virginia Code Section 2.2-4700 et seq.).
- (11) **Repurchase Agreements.** In overnight, term and open repurchase agreements provided that the following conditions are met:
 - a. The contract is fully secured by deliverable U.S. Treasury Bills, Bonds or Notes or Federal Agency obligations as described in paragraph 1 and 2 above (with a maximum maturity of five years), having a market value at all times of at least 102 percent of the amount of the contract;
 - b. A Master Repurchase Agreement or specific written Repurchase Agreement governs the transaction;

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 38 of 60

- c. The securities are free and clear of any lien and held by an independent third-party custodian acting solely as agent for HRSD, provided such third party is not the seller under the Repurchase Agreement;
 - d. A perfected first security interest under the Uniform Commercial Code in accordance with book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities is created for the benefit of HRSD;
 - e. For Repurchase Agreements with terms to maturity of greater than one day, HRSD will value the collateral securities daily and require that if additional collateral is required then that collateral must be delivered within one business day (if a collateral deficiency is not corrected within this time frame, the collateral securities will be liquidated);
 - f. The counterparty is a:
 - (1) Primary government securities dealer who reports daily to the Federal Reserve Bank of New York; or
 - (2) A bank, savings and loan association, or diversified securities broker-dealer having at least \$5 billion in assets and \$500 million in capital and subject to regulation of capital standards by any state or federal regulatory agency; and
 - (3) The counterparty meets the following criteria: A long-term credit rating of at least 'AA' or the equivalent from an NRSRO; has been in operation for at least five years; is reputable among market participants.
- (12) **Collateralized Bank Deposits.** CDs and other evidence of deposit as permitted by Section 2.2.4400 et seq. of the Code of Virginia.
- (13) **U.S. Dollar Denominated Supra Sovereign Agency Bonds.** Bonds and other obligations issued, guaranteed or assumed by the International Bank for Reconstruction and Development, by the Asian Development Bank or by the African Development Bank, provided that the obligation is rated by an NRSRO the higher of "AA" or the rating on U.S. Treasury obligations.

COMMISSION ADOPTED POLICY
Financial Policy



| | |
|-----------------------------|---------------------|
| Adopted: | May 26, 2009 |
| Commission Revision: | May 26, 2020 |
| Effective: | July 1, 2020 |

Page 39 of 60

(14) **Virginia Investment Pool Trust Fund (VIP) Stable NAV Liquidity Pool.** This pool supports the cash management needs of municipalities, other governmental agencies and political subdivisions in Virginia that must manage investments conservatively. The objective of the fund is to obtain a competitive market yield on available financial assets consistent with the constraints imposed by the safety objectives, cash flow considerations and the laws of the Commonwealth of Virginia that govern the placement of public funds while facilitating daily liquidity and the maintenance of a stable Net Asset Value, with the price of shares in the portfolio targeted to maintain a value of \$1.00. The fund is governed by the Board of Trustees of the VIP.

(15) **VIP 1-3 Year High-Quality Bond Fund.** This fund is a fixed income investment portfolio designed to provide another pooled investment alternative to those Participants that have excess funds and that have an investment horizon greater than that of money market instruments, typically one year or longer. The investment objective is to:

- a. Exceed the return of the Bank of America Merrill Lynch One-to Three-Year U.S. Corporate & Government Index over three-year periods
- b. Preserve capital

The VIP 1-3 Year High Quality Bond Fund will generally invest in securities with greater potential returns and risk than those offered by money market type instruments. The fund is governed by the Board of Trustees of the VIP.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
 Commission Revision: May 26, 2020
 Effective: July 1, 2020

- E. **Portfolio Diversification.** The Investment Portfolio will be diversified by security type and institution. The maximum percentage of the portfolio permitted in each eligible security is as follows:

| <u>Permitted Investment</u> | <u>Sector Limit</u> | <u>Issuer Limit</u> |
|---------------------------------------|---------------------|---------------------|
| Treasury Bonds, Notes and Bills | 100% | 100% |
| Federal Agency Obligations | 100% | 35% |
| Municipal Obligations | 15% | 5% |
| Commercial Paper | 25% | 5% |
| Bankers' Acceptances | 25% | 5% |
| Corporate Notes | 25% | 3% |
| Negotiable CDs and Bank Deposit Notes | 25% | 3% |

| <u>Permitted Investment</u> | <u>Sector Limit</u> | <u>Issuer Limit</u> |
|-------------------------------------|---------------------|---------------------|
| Money Market Mutual Funds | 100% | 100% |
| LGIP | 100% | 100% |
| SNAP Fund (bond proceeds only) | 100% | 100% |
| Repurchase Agreements | 35% | 35% |
| Collateralized Bank Deposits | 100% | 100% |
| Supra Sovereign Agency Bonds | 15% | 10% |
| VIP Stable NAV Liquidity Pool | 100% | 100% |
| VIP 1-3 Year High-Quality Bond Fund | 100% | 100% |

The Sector Limit and Issuer Limit will be applied to the total Investment Portfolio value at the date of acquisition.

- F. **Maximum Maturity.** Maintenance of adequate Liquidity to meet the cash flow needs of HRSD is essential. Accordingly, to the extent possible, the investment portfolio will be structured in a manner that ensures sufficient cash is available to meet anticipated Liquidity needs. Whenever practical, selection of investment maturities will be consistent with the known cash requirements of HRSD in order to minimize the forced sale of securities prior to maturity. For the purposes of the Investment Policy:

- (1) The Funds Invested under the **Operating Liquidity Strategy** will be invested in short-term investments maturing in 12 months or less. Because of the difficulties inherent in accurately forecasting all cash flow requirements, at least 25 percent of the funds invested under this strategy will be continuously invested in readily available funds such as bank deposit accounts, money market funds and overnight

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 41 of 60

repurchase agreements and at least 75 percent of this strategy will be invested in securities with maturities less than 180 days.

- (2) The Funds Invested in pursuant to **Total Return Strategy** will be invested in permitted investments with a stated maturity of not more than five years from the date of purchase. To manage volatility, the Director of Finance will from time-to-time determine an investment duration target which will not exceed three years and which will be comparable to the selected performance standards as identified under the Performance Standards section of this Policy.
 - (3) The Funds invested under the **Capital Investment Strategy** will be invested in compliance with the specific requirements of the Trust Agreements. However, in no case will bond proceeds, or funds set aside for capital projects, be invested in securities with a term to maturity that exceeds the expected disbursement date of those monies.
 - (4) Accounts credited to Debt Service Reserve funds with longer term investment horizons may be invested in securities exceeding five years, provided that such investments will mature no later than the first call date for the related bonds.
- G. **Security Downgrades.** If any security held in the Investment Portfolio is downgraded below "AA" or equivalent rating by any NRSRO, the security will be sold within 180 days of such downgrade.
- H. **Self-Liquidity.** In the event that HRSD determines to provide Self-Liquidity for any issuance of CP, VRDs, or related indebtedness, funds invested under the Operating Liquidity Strategy and the Total Return Strategy may be used to support such obligations, if necessary, provided that HRSD will not be legally obligated to pledge such funds for such purpose. The investments identified to provide Self-Liquidity coverage will be sufficient to meet the quality, volatility, liquidity, and maturity guidelines of the NRSRO's then providing ratings on HRSD's debt obligations. If needed, HRSD is permitted to purchase its own debt on a temporary basis or for the retirement of the debt. Such purchase will not be limited to the sector and issuer diversification limits as set forth in the Portfolio Diversification section of this policy or the maximum maturity requirement as set forth in the Capital Investment Strategy section of this Policy.
- I. **Investment of Bond Proceeds.** HRSD intends to comply with all applicable sections of the Internal Revenue Code as it relates to Arbitrage Rebate and the investment of bond proceeds. All investment records will be maintained to ensure compliance with all regulations.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 42 of 60

- J. **Collateralization of Bank Deposits.** All bank deposits of HRSD should be considered Public Deposits as defined by Code of Virginia Security for Public Deposits Act (Section 2.2-4400 et seq.) and all deposits must be made with Qualified Public Depositories within the meaning of such law.
- K. **Selection of Broker/Dealers.** All broker/dealers who desire to provide investment services to HRSD will be provided with current copies of HRSD's Financial Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Financial Policy.
- (1) At the request of the Director of Finance, broker/dealers will supply HRSD with information sufficient to adequately evaluate their financial capacity and creditworthiness. The following information will be provided:
 - (a) Audited financial statements;
 - (b) Regulatory reports on financial condition;
 - (c) Proof of Financial Institution Regulatory Authority (FINRA) certification and of state registration;
 - (d) A sworn statement by an authorized representative of the broker/dealer pledging to adhere to Capital Adequacy Standards established by the Federal Reserve Bank and acknowledging the broker/dealer understands that HRSD has relied upon this pledge; and
 - (e) Any additional information requested by the Director of Finance in evaluating the creditworthiness of the institution.
 - (2) Only firms meeting the following requirements will be eligible to serve as broker/dealers for HRSD:
 - (a) "Primary" dealers and regional dealers that qualify under SEC Rule 15c3-1 (Uniform Net Capital Rule);
 - (b) Unrestricted Capital of at least \$10,000,000;
 - (c) Registered as a dealer under the Securities Exchange Act of 1934;
 - (d) Member of the FINRA;

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 43 of 60

- (e) Registered to sell securities in the Commonwealth of Virginia; and
 - (f) Engaged in the business of effecting transactions in U.S. government and agency obligations for at least five consecutive years.
 - (3) HRSD will designate broker/dealers on an annual basis.
- L. **Competitive Selection of Investment Instruments.** All securities purchases and sales will be transacted only with designated broker/dealers through a formal and competitive process requiring the solicitation and evaluation of at least three bids/offers, taking into consideration current market conditions and any applicable provisions of the IRS Code. Electronic bids will be accepted. HRSD will accept the bid which, in the sole judgment of the Director of Finance or his/her designee: (1) can be accepted under applicable provisions of the IRS Code; (2) offers the highest rate of return within the maturity required; and (3) optimizes the investment objective of the overall investment portfolio, including diversification requirements. When selling a security, HRSD will select the bid that generates the highest sale price, consistent with the diversification requirements and any applicable provisions of the IRS Code.
- M. **Safekeeping and Custody.** All investment securities purchased by HRSD or held as collateral on deposits or investments will be held by HRSD or by a third-party custodial agent that may not otherwise be counterparty to the investment transaction.
 - (1) All securities in HRSD's investment portfolio will be held in the name of HRSD and will be free and clear of any lien. Further, all investment transactions will be conducted on a delivery versus payment basis. On a monthly basis, the custodial agent will provide reports that list all securities held for HRSD, the book value of holdings, and the market value as of month-end.
 - (2) HRSD officials and representatives of the custodial agent responsible for, or in any manner involved with, the safekeeping and custody process of HRSD will be bonded in such a manner as to protect HRSD from losses from malfeasance and misfeasance.
 - (3) Confirming copies of all other investment transactions must be delivered to HRSD or its custodial agent.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 44 of 60

- N. **Internal Controls.** The Director of Finance will establish a framework of internal controls governing the administration and management of HRSD's investment portfolio, and these controls will be documented in writing. Such controls will be designed to prevent and control losses of HRSD monies arising from fraud, employee error, and misrepresentation by third parties, unanticipated changes in financial markets, or imprudent actions by any personnel. The internal control structure will be designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived, and (2) the valuation of costs and benefits requires estimates and judgments by management.
- O. **Records and Reports.** The Director of Finance will prepare an investment report on at least a quarterly basis for the Commission.
- P. **Performance Standards.** The investment portfolio will be designed to obtain at least a market level rate of return, given budgetary and economic cycles, commensurate with HRSD's investment risk and cash flow needs. HRSD's portfolio management approach will be active, allowing periodic restructuring of the investment portfolio to take advantage of current and anticipated interest rate movements.
- (1) The returns on HRSD's investments will be compared on a quarterly basis to indices of U.S. Treasury securities having similar maturities or to other appropriate benchmarks.
- (2) The applicable benchmarks for each of HRSD's three major Investment strategies are listed below:

| <u>Fund</u> | <u>Benchmark</u> |
|---------------------|--|
| Operating Liquidity | 3-Month Treasury Bill or Effective Federal Funds rate |
| Total Return | Merrill Lynch 1-3 Year U.S. Corporate & Government Index over three-year periods |
| Capital Investment | 3-Month Treasury Bill, Effective Federal Funds rate, Virginia LGIP or similar index appropriate to the duration of the expected cash flows |

- Q. **Engagement of Investment Managers.** The Director of Finance may engage one or more qualified firms to provide discretionary investment management services in compliance with this Policy for HRSD. All investment management firms who desire to provide investment services to

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 45 of 60

HRSD will be provided with current copies of HRSD's Investment Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Investment Policy. The Director of Finance will conduct appropriate due diligence in the selection of qualified investment management firms and will periodically confirm a manager's qualifications by visiting that manager's operational facilities that provide services to HRSD.

- (1) Only firms meeting the following requirements will be eligible to serve as investment manager for HRSD:
 - (a) Registered with the SEC under the Investment Advisers Act of 1940;
 - (b) Must provide to HRSD an annual updated copy of Form ADV, Part II;
 - (c) Must be registered to conduct business in the Commonwealth of Virginia; and
 - (d) Must have proven experience in providing investment management services under Code of Virginia Sections 2.2-4500 et seq.
- (2) Any firm engaged by HRSD to provide investment services will:
 - (a) Maintain a list of approved security brokers/dealers selected by creditworthiness who are authorized to provide investment services in the Commonwealth of Virginia;
 - (b) Provide monthly reports of transactions and holdings to the Director of Finance;
 - (c) Provide performance reports, at least quarterly, that display investment performance in comparison to HRSD's investment benchmarks; and
 - (d) Not collect any soft dollar fees from any broker/dealer or other financial firm in relation to services provided to HRSD.

4.3.3 Retiree Health Plan Trust

- A. **Background.** HRSD established the Hampton Roads Sanitation District Retiree Health Plan Trust (the Trust) originally effective July 1, 2002, and amended and restated effective January 22, 2008 and November 25, 2008.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 46 of 60

The Trust provides for funding of non-pension and Other Post-Employment Benefits (OPEB), for employees who meet the age and service requirements outlined in the Hampton Roads Sanitation District Health Benefits Plan (the Plan) originally effective July 1, 2002, as it may be amended from time to time.

- B. **Purpose.** The main investment objective of the Trust is to achieve long-term growth of Trust assets by maximizing long-term rate of return on investments and minimizing risk of loss in order to fulfill HRSD's current and long-term OPEB obligations. The purpose of the Policy is to achieve the following:
- (1) Document investment objectives, performance expectations and investment guidelines for Trust assets.
 - (2) Establish an appropriate investment strategy for managing all Trust assets, including an investment time horizon, risk tolerance ranges and asset allocation to provide sufficient diversification and overall return over the long-term time horizon of the Trust.
 - (3) Establish investment guidelines to control overall risk and liquidity.
 - (4) Establish periodic performance and cost reporting requirements that will effectively monitor investment results and ensure that the investment policy is being followed.
 - (5) Comply with all fiduciary, prudence, due diligence and legal requirements for Trust assets.
- C. **Investment Authority.** HRSD, as Plan Administrator (the Administrator), has oversight authority of certain policies and procedures related to the operation and administration of the Trust. Pursuant to the terms of the Trust, the Trustee is to hold title to the trust assets held for the Plan and to operate exclusively in the capacity as a directed Trustee. HRSD, as the named Administrator, has the authority not only to direct the Trustee but to appoint one or more investment managers. The Administrator will have authority to implement the investment policy and guidelines in the best interest of the Trust to best satisfy the purposes of the Trust.
- (1) The Administrator has a fiduciary duty to the Trust and the participants and beneficiaries, which requires integrity and competence. Integrity requires management of the Trust and the assets for the exclusive benefit of the Trust's participants and beneficiaries. The required level of competence is that of a prudent person acting in like capacity and familiar with such matters would act. This standard of competence

COMMISSION ADOPTED POLICY
Financial Policy



| | |
|-----------------------------|---------------------|
| Adopted: | May 26, 2009 |
| Commission Revision: | May 26, 2020 |
| Effective: | July 1, 2020 |

Page 47 of 60

extends to the retention and supervision of expert investment advice and all other areas of Trust's management.

- (2) In implementing this Policy, the Administrator, in accord with the provisions of the Trust, may delegate certain functions to:
 - (a) An investment advisor (the Investment Advisor) to assist the Administrator in the investment process and to maintain compliance with this Policy. The Investment Advisor may assist the Administrator in establishing investment policy objectives and guidelines. The Investment Advisor will adjust asset allocation for the Trust subject to the guidelines and limitations set forth in this Policy. The Investment Advisor will also select investment managers (Managers) and strategies consistent with its role as a fiduciary for the Trust. The investment vehicles allowed may include mutual funds, commingled trusts, separate accounts, limited partnerships and other investment vehicles deemed to be appropriate by the Investment Advisor. The Investment Advisor is also responsible for monitoring and reviewing investment managers; measuring and evaluating performance; and other tasks as deemed appropriate in its role as Advisor for Trust assets. The Investment Advisor may also select investment managers with discretion to purchase, sell, or hold specific securities, such as Exchange Traded Funds, that will be used to meet the Trust's investment objectives. The Investment Advisor shall never take possession of securities, cash or other assets of the Trust, all of which shall be held by the custodian. The Investment Advisor must be registered with the SEC. The Director of Finance will conduct appropriate due diligence in the selection of the Investment Advisor and will periodically confirm the Investment Advisor's qualifications by visiting its operational facilities that provide services to the Trust and HRSD.
 - (b) A custodian to physically maintain possession of securities owned by the Trust, collect dividend and interest payments, redeem maturing securities, and effect receipt and delivery following purchases and sales, among other things. The custodian may also perform regular accounting of all assets owned, purchased, or sold, as well as movement of assets into and out of the Trust.
 - (c) A trustee appointed by the Trust, such as a bank trust department, if the Trust does not have its own Trustees, to assume fiduciary responsibility for the administration of Trust

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 48 of 60

assets; provided, however, that if the Administrator shall have appointed an investment advisor, then any trustee appointed under this paragraph shall have no authority with respect to selection of investments.

- (d) Specialists such as attorneys, auditors, actuaries and, retirement plan consultants to assist the Administrator in meeting its responsibilities and obligations to administer Trust assets prudently.
- (3) HRSD Commissioners, staff, investment advisors, consultants and managers will refrain from engaging in any activity that impairs (or has the potential to impair) their ability to make impartial investment decisions for the Trust. Persons who nevertheless engage in such conduct will immediately disclose the conduct to the Administrator. HRSD members, staff, investment managers and advisers will also immediately disclose to the Administrator any activity engaged in by their respective firms, employers, employees and agents which conflicts (or has the potential to conflict) with the execution of HRSD's investment program for the Trust.

D. **Statement of Investment Objectives.** The investment objectives of the Trust are as follows:

- (1) **Funding.** The primary objective of the Administrator is to maintain the assets of the Trust at the funding level necessary to provide a pool of funds to be used to provide post-retirement welfare benefits to Plan participants. To obtain this objective the Administrator will diversify Trust assets and adopt an investment strategy consistent with the Trust's investment objectives.
- (2) **Safety.** In order to maintain the safety of Trust assets the Administrator will:
 - (a) Invest assets of the Trust in a manner consistent with the following fiduciary standards: all transactions undertaken must be for the sole interest of Trust beneficiaries and defray reasonable expenses in a prudent manner, and assets are to be diversified in order to minimize the impact of large losses in individual investments.
 - (b) Conserve and enhance the value of Trust assets in real terms through asset appreciation and income generation, while maintaining a moderate investment risk profile.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 49 of 60

- (c) Minimize principal fluctuations over the Time Horizon (as defined below).
 - (d) Achieve a long-term level of return commensurate with contemporary economic conditions and equal to or exceeding the investment objective set forth in this policy under the Performance Expectations section of the Policy.
- (3) **Liquidity.** The Trust's Investment Portfolio in combination with the projected net cash flows will provide sufficient Liquidity to enable the Plan to meet all operating requirements which may be reasonably anticipated.

E. **Investment Guidelines.** Within this section of the Policy, several terms will be used to articulate various investment concepts. The descriptions are meant to be general and may share investments otherwise considered to be in the same asset class. They are:

- (1) **Growth Assets** - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on capital appreciation. Investments within this category can include income and risk mitigating characteristics, so long as the predominant investment risk and return characteristic is capital appreciation. Examples of such investments or asset classes are: domestic and international equities or equity funds, private or leveraged equity, certain real estate investments, and hedge funds focused on equity risk mitigation or equity-like returns.
- (2) **Income Assets** - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on income generation. Investments within the Income Assets category can include capital appreciation and risk mitigating characteristics, so long as the primary investment risk and return characteristic is income generation. Examples of such investments or asset classes are: fixed income securities, guaranteed investment contracts, certain real estate investments, and hedge funds focused on interest rate risk mitigation or income investment-like returns.
- (3) **Real Return Assets** - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on real returns after inflation. Investments within this category can include inflation protected securities, commodities, certain real estate investments and hedge funds.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 50 of 60

- F. **Time Horizon.** The Trust's investment objectives are based on a market-cycle investment horizon so that interim fluctuations should be viewed with appropriate perspective. HRSD has adopted a long-term investment horizon such that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets.
- G. **Liquidity and Diversification.** Trust will hold an adequate amount of protected liquidity needs for benefit payments and expenses in cash or cash equivalents, as determined necessary. The liquidity assets will be invested in accordance with statutory requirements applicable to liquid assets, as determined by the Administrator. The remaining assets will be invested in longer-term securities.
- Investments will be diversified with the intent to minimize the risk of long-term investment losses. The total portfolio will be constructed and maintained to provide prudent diversification with regard to the concentration of holdings in individual issues, issuers, countries, governments or industries.
- H. **Asset Allocation.** The Administrator recognizes that asset allocation is one of the most important investment decisions that an investor makes. The Administrator or Investment Advisor, as appropriate, will allocate Trust assets in keeping with the Prudent Person Rule. The Administrator or Investment Advisor has determined that to achieve the greatest likelihood of meeting the applicable investment objectives and achieving the best balance between risk and return for optimal diversification, the Trust should allocate assets into two broad classes called Investment Assets and Liquidity Assets.
- (1) The Investment Assets will be invested in accordance with the targets for each asset class as follows to achieve an average total annual rate of return that is equal to or greater than the Trust's actuarial discount rate as described in the Section titled "Performance Expectations." The Liquidity Assets will be held in cash equivalent investments and used to pay for benefits and expenses of the Trust.
 - (2) The Administrator, Investment Advisor, or Managers will have discretion to temporarily invest a portion of the assets in cash reserves when they deem it appropriate. However, the Investment Advisor and each Manager will be evaluated against their peers on the performance of the total funds under their direct management.



Adopted: May 26, 2009
 Commission Revision: May 26, 2020
 Effective: July 1, 2020

INVESTMENT ASSETS

| <u>Asset Classes</u> | <u>Asset Range</u> | <u>Weightings Target</u> |
|----------------------------|--------------------|--------------------------|
| Growth Assets | | |
| Domestic Equity | 19% - 59% | 39% |
| International Equity | 1% - 41% | 21% |
| Other | 0% - 10% | 0% |
| Income Assets | | |
| Fixed Income | 20% - 60% | 40% |
| Other | 0% - 10% | 0% |
| Real Return Assets | 0% - 20% | 0% |
| Cash Equivalentents | 0% - 20% | 0% |

LIQUIDITY ASSETS

| <u>Asset Classes</u> | <u>Asset Range</u> | <u>Weightings Target</u> |
|----------------------|--------------------|--------------------------|
| Cash Equivalentents | 0% - 100% | 100% |

I. **Rebalancing Philosophy.** The asset allocation range established by this Policy represents a long-term perspective. For that reason, rapid unanticipated market shifts or changes in economic conditions may cause the asset mix to fall outside the Policy range. When these divergences occur, the Administrator or Investment Advisor, as appropriate, will rebalance the asset mix to its appropriate targets and ranges. Rebalancing will typically occur on at least a quarterly basis, unless the divergence is deemed an appropriate tactical strategy by the Administrator or Investment Advisor. Similarly, if the cash requirement to handle liquidity needs falls to a level at which near-term distributions (over the following six months or less) cannot be met and no contributions are anticipated, the Administrator or Investment Advisor will rebalance the fund to its appropriate targets and ranges.

Regarding allocating contributions to the Trust, the Administrator or Investment Advisor will review the Trust allocation and fill the liquidity allocation first and the remaining investment allocations last.

J. **Risk Tolerance.** The Trust will be managed in a style that seeks to minimize principal fluctuations over the established Time Horizon and that is consistent with the Trust's investment objectives.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 52 of 60

- K. **Performance Expectations.** Over the long-term, a rolling five- year period, the performance objective for Trust assets will be to achieve an average total annual rate of return that is equal to or greater than the Trust's current actuarial discount rate. Additionally, it is expected that the annual rate of return on Trust assets will be commensurate with the then prevailing investment environment. Measurement of this return expectation will be judged by reviewing returns in the context of industry standard benchmarks, peer universe comparisons for individual Trust investments and blended benchmark comparisons for the Trust in its entirety. Costs will be reviewed by the Administrator and Investment Advisor to determine that they are minimized to the extent possible and are reasonable when compared to benchmarks.
- L. **Selection of Investment Managers.** The Administrator or Investment Advisor will prudently select appropriate investment managers to manage the assets of the Trust. Managers must meet the following criteria:
- (1) The investment manager must be a bank, insurance company, or investment adviser as defined by the Investment Advisers Act of 1940.
 - (2) With respect to Trust assets invested in a mutual fund, the investment manager must provide historical quarterly performance data for the mutual fund compliant with SEC and FINRA standards.
 - (3) The investment manager must provide historical quarterly performance data compliant with Global Investment Performance Standards, SEC, FINRA or industry recognized standards, as appropriate, calculated on a time-weighted basis, based on a composite of all fully discretionary accounts of similar investment style and reported net of fees.
 - (4) The investment manager must provide detailed information on history of the firm, key personnel, key clients, fee schedule (including most favored nation clauses) and support personnel.
 - (5) The investment manager must clearly articulate the investment strategy that will be followed and document that the strategy has been successfully adhered to over time.
 - (6) The investment professionals making the investment decisions must have a minimum of three years of experience managing similar strategies either at their current or at previous firms.
 - (7) The investment manager for portfolios other than Pooled Vehicles (see the following Guidelines for Portfolio Holdings) must confirm that it has

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 53 of 60

received, understands and will adhere to this policy and any manager specific policies by signing a consent form.

M. **Guidelines for Portfolio Holdings.** The Administrator will make every effort to prudently select funds that follow the guidelines listed below.

(1) Until the Trust reaches a size for which investment in separate accounts is viable and appropriate, the Trust will invest in pooled vehicles such as commingled and/or mutual funds. Pooled vehicles are regulated by either the Office of the Comptroller of the Currency (OCC) or the SEC and provide the Trust the ability to appropriately diversify its holdings in a cost-effective manner. Inherent within the Pooled Vehicle structure is the limitation on customizing the underlying security selection based on Trust specific economic, social or other screens.

(2) **Direct Investments by Advisor.** Every effort shall be made, to the extent practical, prudent and appropriate, to select investments that have investment objectives and policies that are consistent with this Policy (as outlined in the following sub-sections of the Guidelines for Portfolio Holdings). However, given the nature of the investments, it is recognized that there may be deviations between this Policy and the objectives of these investments.

(3) **Limitations on Investment Manager's Portfolios.**

(a) **Growth Assets.**

Equities. Not more than five percent or weighting in the relevant index (Russell 3000 Index for U.S. issues and MSCI All County World Index (ACWI) ex-U.S. for non-U.S. issues) of the total equity portfolio valued at market may be invested in the common stock of any one corporation. MSCI is a publically traded company that is an independent provider of research-driven insights and tools for institutional investors. The MSCI ACWI is an index that captures all sources of equity returns in 23 developed and 23 emerging markets. Ownership of the shares of one company will not exceed two percent of those outstanding. Not more than 25 percent of stock valued at market may be held in any one sector, as defined by the Global Industry Classification Standard.

(1) **Domestic Equities.** Other than these constraints, there are no quantitative guidelines suggested as to issues, industry or individual security diversification. However,

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 54 of 60

prudent diversification standards should be developed and maintained by the investment manager(s).

(2) **International Equities.** The overall non-U.S. equity allocation, if any, should include a diverse global mix that is comprised of the equity of companies from multiple countries, regions and sectors.

(b) **Income Assets.**

Fixed Income. Fixed income securities, other than U.S. Treasury Bonds/Note/Bills or Federal Agency issues, of any one issuer or obligation will not exceed five percent of the total bond portfolio at time of purchase. The five percent limitation does not apply to issues of the U.S. Treasury.

The overall weighted rating of the fixed income assets will be at least "A", based upon the ratings of such assets from a NRSRO.

(c) **Other Assets (Growth and Income Assets).**

Other Assets (Alternatives). Alternatives may consist of non-traditional asset classes such as real estate and commodities, when deemed appropriate. The total allocation to this category may not exceed 10 percent of the overall portfolio.

Real Estate. Consists of publicly traded Real Estate Investment Trust (REIT) securities and/or non-publicly traded private real estate and shall be diversified across a broad array of property types and geographic locations. Investments of this type are designed to provide a stable level of income combined with potential for price appreciation, particularly in periods of unexpected inflation. For private real estate, the illiquid, long-term nature should be considered. For purposes of asset allocation targets and limitations, publicly traded REITs will be categorized as "Other" under the Growth Assets category. Depending on the investment characteristics of a private real estate fund, the fund will be categorized as "Other" under either the Income Assets category, for example, a core real estate fund, or under the Growth Assets category, for example, an opportunistic real estate fund where capital gains are expected to make up a significant portion of the total return.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 55 of 60

Portfolio Risk Hedging. Portfolio investments designed to hedge various risks including volatility risk, interest rate risk, etc. are allowed to the extent that the investments are not used for the sole purpose of leveraging Trust assets. One example of a hedge vehicle is an Exchange Traded Fund (“ETF”) which takes short positions.

(d) **Real Return Assets.**

Inflation Hedge. Shall consist of pooled vehicles holding among other assets: TIPS, commodities or commodity contracts, index-linked derivative contracts, certain real estate or real property funds and the equity of companies in businesses thought to hedge inflation. Inflation hedge assets will be reported in the Real Return Assets category.

If the credit quality of any one issue should drop below investment grade (as defined by at least two of the following three NRSROs – Fitch, Moody’s and S&P), the investment manager should notify the Administrator and Investment Advisor immediately detailing a plan of action regarding the security.

(e) **Cash Equivalents.** Liquidity and temporary cash equivalent reserves will be invested according to the provisions of Code of Virginia Sections 2.2-4500 through 2.2-4518 applicable to liquid assets.

(f) **Additional Limitations.**

(1) **Prohibited Investments.** Except for purchase within authorized investments, the following investments and transactions are not authorized and will not be purchased:

- Letter stock and other unregistered securities,
- Direct commodities or commodity contracts,
- Short sales,
- Margin transactions,
- Private placements (with the exception of Rule 144A securities),
- Venture capital funds,
- Private equity,
- Hedge funds;

COMMISSION ADOPTED POLICY
Financial Policy



| | |
|-----------------------------|---------------------|
| Adopted: | May 26, 2009 |
| Commission Revision: | May 26, 2020 |
| Effective: | July 1, 2020 |

Page 56 of 60

Further, derivatives, options or futures for the sole purpose of portfolio leveraging (portfolio leveraging refers specifically to investments which can lead to losses in excess of 100 percent of initial invested capital) are also prohibited. Direct ownership of real estate, natural resource properties such as oil, gas or timber and the purchase of collectibles is also prohibited.

(2) **Safekeeping.** All securities will be held by a third-party custodian selected through a public procurement process by the Administrator, pursuant to contract approval, for safekeeping. The custodian will produce statements monthly listing the name and value of all assets held, and the dates and nature of all transactions. Assets of the Trust held as liquidity or investment reserves will, at all times, be invested in interest-bearing accounts. Investments and portfolio securities may not be loaned.

(g) **Control Procedures.**

(1) **Legal Requirements, Controls, and Investment Policy Statement Review.** At all times the Administrator will comply with all State, and federal reporting requirements. The Administrator will establish, maintain and review prudent internal controls for the assets of the Trust, including those used by HRSD staff, and the Trust's Investment Advisor and custodian. The Administrator will provide for annual review of the adequacy and compliance of these control procedures.

(2) The Administrator will review the Financial Policy no less than annually and provide documentation to HRSD when their review is complete. Specifically, the investment component of the Financial Policy will be reviewed when any one of the following occurs:

- Change in investment advisors
- Initial use of investment vehicles other than mutual funds
- Significant change in Trust assets
- Significant change in funded status
- Significant change in market conditions

(3) **Review of Investment Objectives.** The Administrator will review annually the appropriateness of this Policy for

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 57 of 60

achieving the Trust's stated objectives. It is not expected that the Policy will change frequently. In particular, short-term changes in the financial markets should not require an adjustment in the investment policy.

- (4) **Review of Investment Performance.** The Administrator, on a quarterly basis, will review the total Trust investment performance, including all fees and costs and provide a report to the Commission. In addition, should investment functions be delegated, the Investment Advisor will be responsible for keeping the Administrator advised of any material change in investment strategy, investment managers, and other pertinent information potentially affecting performance of the Trust.

The Administrator will compare the investment results, including all fees and costs, on a quarterly basis to appropriate benchmarks, as well as to market index returns in both equity and debt markets. Examples of benchmarks and indexes that will be used include the:

- Russell 3000 Index for broad U.S. equity strategies;
- S&P 500 Index for large cap U.S. equities,
- Russell 2000 Index for small cap U.S. equities,
- MSCI ACWI ex-U.S. Index for broad based non-U.S. equity strategies;
- MSCI Europe, Australasia, and Far East (EAFE) Index for developed markets international equities,
- Barclays Capital Aggregate Bond Index for fixed income securities, and
- U.S. 91 Day Treasury Bill for cash equivalents
- Russell 3000 Index will be used to benchmark the U.S. equities portfolio;
- MSCI ACWI ex-U.S. Index will be used to benchmark the non-U.S. equities portfolio;
- Barclays U.S. Aggregate Bond Index will be used to benchmark the fixed income portfolio.

The categories "Other" will be benchmarked against appropriate indices depending on the specific characteristics of the strategies and funds used. The Administrator will also compare investment results with

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 58 of 60

the Virginia Retirement System at the end of each fiscal year.

- (5) **Voting of Proxies.** The Administrator recognizes that proxies are a significant and valuable tool in corporate governance. The voting rights of individual stocks held in separate accounts or collective, common, or pooled funds will be exercised by the investment managers in accordance with their own proxy voting policies. The voting rights of funds will be exercised by the Investment Advisor.

Investment manager(s) are expected to be aware of corporate provisions that may adversely affect stockholdings, including but not limited to “golden parachutes,” “super majorities,” “poison pills,” “fair price” provisions, staggered boards of directors, and other tactics. Proxies should be vigorously voted with the interest of preserving or enhancing the security’s value.

The investment manager(s) of a commingled trust or mutual fund that holds the assets of the Trust along with assets of other funds with conflicting proxy voting policies must reconcile the conflicting policies to the extent possible, and, if necessary, to the extent legally permissible, vote the proxies to reflect the policies in proportion to each fund’s interest in the pooled fund.

- (6) **Review of Actuarial Data.** The Administrator will review the Trust’s actuarial data at least once every two years or more frequently if deemed necessary, to determine whether any substantive change in the investment policy is appropriate. The Administrator will provide for an actuarial valuation in compliance with GAAP, at least every two years.

4.4 ASSET CAPITALIZATION

4.4.1 Notifications. Accounting must be notified when any Capital Asset is placed in service or is in the process of disposal to ensure accurate asset records are kept.

A. Cost.

- (1) Property, plant and equipment purchased, donated or constructed is recorded at historical cost as of the date acquired.

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 59 of 60

- (2) Cost includes capitalized interest borrowed to finance the construction of major capital additions.
- (3) Generally, for projects funded with both debt proceeds and other resources, it is HRSD's policy to use available debt proceeds to pay project expenditures prior to using its own resources.
- (4) Assets costing below the \$5,000 threshold amount are recorded as an expense in HRSD's financial statements. (5) Routine repairs and maintenance are expensed as incurred.
- (6) Vehicles, office furniture, equipment, software and intangible assets are reviewed monthly to determine whether the asset meets the capitalization threshold.
- (7) Assets that are constructed over a period of time, such as capital projects, treatment plants, buildings and facilities, and interceptor systems, are reviewed at completion to determine the appropriate capitalization value, which may include interest costs.

B. Useful Life.

- (1) Assets with an economic useful life of less than 60 months are required to be expensed for financial statement purposes, regardless of the acquisition or production cost.
- (2) Major repairs that substantially extend the life of an asset or expand its service capacity may be capitalized. For example, if a roof repair or coating is expected to extend the asset's useful life 20 years or beyond, the cost may be capitalized.
- (2) The service lives for Capital Assets are as follows:

| | |
|---|------------|
| Treatment plants, buildings and facilities | 30 years |
| Interceptor systems | 50 years |
| Office furniture, computer hardware and equipment | 5-10 years |
| Software and intangible assets | 5-7 years |
| Automotive | 5 years |

COMMISSION ADOPTED POLICY
Financial Policy



Adopted: May 26, 2009
Commission Revision: May 26, 2020
Effective: July 1, 2020

Page 60 of 60

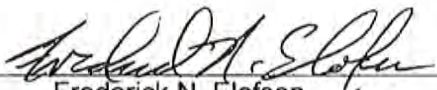
5.0 RESPONSIBILITY AND AUTHORITY

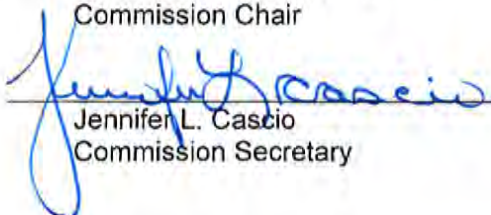
These financial policies were created after much study and evaluation and were specifically adopted by the Commission. They were developed subject to the requirements of HRSD's Trust Agreements, the VRA Master Financing Agreement, the Enabling Act and the Code of Virginia. Any changes and exceptions to these policies will be made in writing and approved by the Commission.

HRSD's General Manager and Director of Finance are the designated administrators of these policies. The Director of Finance shall have the day-to-day responsibility and authority for implementing the provisions of these policies.

HRSD understands that changes in the capital markets or other unforeseen circumstances may from time to time produce situations that are not covered by the Policy and will require modifications or exceptions to achieve the Policy goals. In these cases, HRSD's management flexibility is appropriate provided specific authorization from the Commission is obtained. This Policy is not a contract or other obligation of HRSD, and no party shall have any right or standing to enforce any provision of this Policy. Failure to comply in any manner with this Policy will not result in any liability on the part of HRSD to any party.

HRSD, together with HRSD's financial advisor and legal counsel, will no less than every two years review the Policy and recommend appropriate changes.

Approved:  _____ 5/26/20
Frederick N. Elofson
Commission Chair
Date

Attest:  _____ 5/26/2020
Jennifer L. Cascio
Commission Secretary
Date

HRSD COMMISSION MEETING MINUTES
May 26, 2020

ATTACHMENT #3

AGENDA ITEM 5. EXPENDITURE OF TAX-EXEMPT BOND PROCEEDS
REIMBURSEMENT RESOLUTION FOR FY 2021-2022

Hampton Roads Sanitation District
Resolution of
May 26, 2020

HAMPTON ROADS SANITATION DISTRICT COMMISSION

RESOLUTION OF THE HAMPTON ROADS SANITATION DISTRICT
COMMISSION OF HAMPTON ROADS SANITATION DISTRICT DECLARING ITS
INTENTION TO REIMBURSE ITSELF FROM THE PROCEEDS OF ONE OR MORE
TAX-EXEMPT FINANCINGS FOR CERTAIN EXPENDITURES MADE OR TO BE
MADE IN CONNECTION WITH THE ACQUISITION, CONSTRUCTION OR
EQUIPPING OF CERTAIN CAPITAL IMPROVEMENTS

Adopted May 26, 2020

RESOLUTION OF THE HAMPTON ROADS SANITATION DISTRICT
COMMISSION OF HAMPTON ROADS SANITATION DISTRICT DECLARING ITS
INTENTION TO REIMBURSE ITSELF FROM THE PROCEEDS OF ONE OR MORE
TAX-EXEMPT FINANCINGS FOR CERTAIN EXPENDITURES MADE OR TO BE
MADE IN CONNECTION WITH THE ACQUISITION, CONSTRUCTION OR
EQUIPPING OF CERTAIN CAPITAL IMPROVEMENTS

WHEREAS, Hampton Roads Sanitation District (the “District”) is a political subdivision organized and existing under the laws of the Commonwealth of Virginia; and

WHEREAS, the District prepares a Capital Improvement Program (“CIP”) each year for capital projects currently underway and proposed to be undertaken over the next 10 fiscal years (each, a “Fiscal Year” or “FY”) and a draft CIP is reviewed by the Hampton Roads Sanitation District Commission (the “Commission”) in late March or early April with a final CIP typically adopted in May; and

WHEREAS, in connection with the preparation of the annual CIP, the District prepares annual cash flow projections, setting forth the cash flow needs for capital projects and funding sources for such projects broken down into categories of (a) cash from the District’s operation of its facilities, (b) loans from the Virginia Clean Water Revolving Loan Program (such loans, “Clean Water Revolving Fund Loans”), which is administered by the Virginia Resources Authority (“VRA”), and (c) amounts expected to be raised from the issuance of bonds or other obligations (which, for purposes hereof, may include draws from the District’s Credit Agreement by and between the District and Bank of America, N.A., dated as of October, 30, 2015, as heretofore or hereinafter amended); and

WHEREAS, the District has paid, beginning on a date no more than 60 days prior to the date hereof, and will pay, on and after the date hereof, certain expenditures (the “Expenditures”) in connection with the acquisition, construction and/or equipping of the capital projects for FY2021 and FY2022, as listed in the District’s FY2021 – FY2030 CIP, which was adopted on the date hereof, and attached as Exhibit A hereto (the “Projects”); and

WHEREAS, the Commission has determined that those moneys previously advanced no more than 60 days prior to the date hereof and to be advanced on and after the date hereof to pay the Expenditures are available only for a temporary period and it is necessary to reimburse the District for the Expenditures from the proceeds of the Clean Water Revolving Fund Loans, or one or more issues of tax-exempt bonds (the “Bonds”);

NOW, THEREFORE, THE HAMPTON ROADS SANITATION DISTRICT COMMISSION DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The Commission hereby declares the District's intent to reimburse the District with the proceeds of the Bonds or Clean Water Revolving Fund Loans for the Expenditures with respect to the Projects made on or after March 27, 2020, which date is no more than 60 days prior to the date hereof. The District reasonably expects on the date hereof that it will reimburse the Expenditures with the proceeds of the Bonds or Clean Water Revolving Fund Loans.

Section 2. Each Expenditure was and will be (a) of a type properly chargeable to capital account under general federal income tax principles (determined in each case as of the date of the Expenditure), (b) a cost of issuance with respect to the Clean Water Revolving Fund Loans or the Bonds, (c) an extraordinary nonrecurring item that is not customarily payable from current revenues, or (d) a grant to a party that is not related to or an agent of the District so long as such grant does not impose any obligation or condition (directly or indirectly) to repay any amount to or for the benefit of the District.

Section 3. The maximum principal amount of the Clean Water Revolving Fund Loans and Bonds expected to be issued for the Projects is \$175,000,000.

Section 4. The District will make a reimbursement allocation, which is a written allocation by the District that evidences the District's use of proceeds of the Clean Water Revolving Fund Loans or the Bonds to reimburse an Expenditure, no later than 18 months after the later of the date on which the Expenditure is paid or the related Projects are placed in service or abandoned, but in no event more than three years after the date on which the Expenditure is paid. The District recognizes that exceptions are available for certain "preliminary expenditures," costs of issuance, certain *de minimis* amounts, and expenditures for construction projects of at least five years.

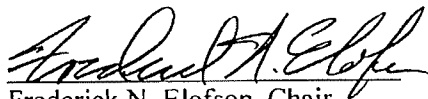
Section 5. This resolution shall take effect immediately upon its passage.

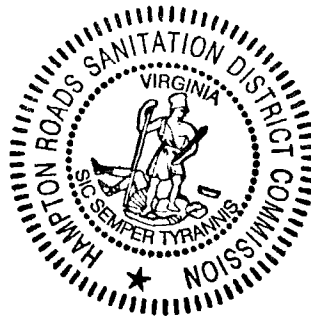
[End of Resolution]

**RESOLUTION OF THE HAMPTON ROADS SANITATION DISTRICT
COMMISSION OF HAMPTON ROADS SANITATION DISTRICT DECLARING
ITS INTENTION TO REIMBURSE ITSELF FROM THE PROCEEDS OF ONE
OR MORE TAX-EXEMPT FINANCINGS FOR CERTAIN EXPENDITURES
MADE OR TO BE MADE IN CONNECTION WITH THE ACQUISITION,
CONSTRUCTION OR EQUIPPING OF CERTAIN CAPITAL IMPROVEMENTS**

PASSED AND ADOPTED this 26th day of May 2020.

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


Frederick N. Eloffson, Chair



**EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM
FY-2021 TO FY-2030 CASH FLOW PROJECTION (\$,000)**

| CIP No | Project Name | Total FY-21 to FY-30 | FY-21 | FY-22 | FY-23 | FY-24 |
|-----------------------------|--|-------------------------|-----------|-----------|-----------|-----------|
| Administration | | | | | | |
| PR_AD012100 | Asset Management Implementation | \$ 482 | \$ 482 | \$ - | \$ - | \$ - |
| PR_AD012200 | Water Quality Services Building Phase II | \$ 9,154 | \$ 9,154 | \$ - | \$ - | \$ - |
| PR_AD012300 | Central Environmental Laboratory Phase II | \$ 2,075 | \$ 275 | \$ 1,440 | \$ 360 | \$ - |
| PR_AD012500 | Cybersecurity Practice & Procedure Initiative | \$ 15,500 | \$ 3,100 | \$ 3,100 | \$ 3,100 | \$ 3,100 |
| | Subtotal | \$ 27,211 | \$ 13,011 | \$ 4,540 | \$ 3,460 | \$ 3,100 |
| Army Base | | | | | | |
| PR_AB010000 | Army Base 24-Inch and 20-Inch Transmission Main Replacements | \$ 19,775 | \$ 782 | \$ 8,453 | \$ 10,541 | \$ - |
| PR_AB010500 | Section W Force Main Replacement | \$ 2,112 | \$ 81 | \$ 908 | \$ 1,122 | \$ - |
| PR_AB011800 | Army Base to VIP Transmission Force Main | \$ 49,927 | \$ - | \$ - | \$ - | \$ - |
| PR_AB011900 | Army Base Treatment Plant Administration Building Renovation (2021) | \$ 900 | \$ 425 | \$ 475 | \$ - | \$ - |
| | Subtotal | \$ 71,407 | \$ 1,288 | \$ 9,835 | \$ 11,663 | \$ - |
| Atlantic | | | | | | |
| PR_AT011520 | Shipps Corner Pressure Reducing Station Modifications | \$ 1,476 | \$ 109 | \$ 683 | \$ 683 | \$ - |
| PR_AT011900 | Great Bridge Interceptor Extension 16-Inch Replacement | \$ 4,524 | \$ - | \$ 64 | \$ 232 | \$ 2,135 |
| PR_AT012910 | Atlantic Treatment Plant FOG Receiving Station | \$ 301 | \$ 301 | \$ - | \$ - | \$ - |
| PR_AT012920 | Atlantic Treatment Plant Access Road Extension | \$ 10,278 | \$ 822 | \$ 925 | \$ 4,084 | \$ 4,447 |
| PR_AT013000 | Washington District Pump Station Area Sanitary Sewer Improvements | \$ 3,587 | \$ 425 | \$ 3,163 | \$ - | \$ - |
| PR_AT013100 | South Norfolk Area Gravity Sewer Improvements | \$ 5,558 | \$ 340 | \$ 302 | \$ 3,278 | \$ 1,639 |
| PR_AT013200 | Dozers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements | \$ 263 | \$ - | \$ - | \$ 17 | \$ 40 |
| PR_AT013500 | Atlantic Treatment Plant Thermal Hydrolysis Process | \$ 2,599 | \$ 2,599 | \$ - | \$ - | \$ - |
| PR_AT013700 | Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment) | \$ 93 | \$ 93 | \$ - | \$ - | \$ - |
| PR_AT014000 | Lynnhaven-Great Neck IFM (SF-021) Relocation | \$ 810 | \$ 810 | \$ - | \$ - | \$ - |
| PR_AT014100 | Suffolk Regional Landfill Transmission Force Main | \$ 12,900 | \$ 133 | \$ 2,994 | \$ 6,545 | \$ 3,227 |
| PR_AT014301 | Atlantic Service Area I-I Reduction Phase I (CHES) | \$ 10,970 | \$ - | \$ - | \$ - | \$ 1,609 |
| PR_AT014302 | Atlantic Service Area I-I Reduction Phase II (CHES) | \$ 9,334 | \$ - | \$ 936 | \$ 2,160 | \$ 6,218 |
| PR_AT014303 | Chesapeake Pump Station Capacity Improvements (AT-HPP-01C) | \$ 849 | \$ - | \$ - | \$ - | \$ - |
| PR_AT014500 | Atlantic Treatment Plant Influent Screens (1-3) Replacement | \$ 3,440 | \$ 662 | \$ 2,778 | \$ - | \$ - |
| PR_AT014600 | Kempsville Interceptor Force Main Replacement - Phase I | \$ 5,350 | \$ 338 | \$ 746 | \$ 2,838 | \$ 1,429 |
| | Subtotal | \$ 72,332 | \$ 6,631 | \$ 12,591 | \$ 19,837 | \$ 20,744 |
| Boat Harbor | | | | | | |
| PR_BH013020 | Willard Avenue Pump Station Replacement | \$ 9,354 | \$ 3,748 | \$ 5,601 | \$ 5 | \$ - |
| PR_BH014000 | West Avenue and 35th Street Interceptor Force Main Replacement | \$ 3,627 | \$ 265 | \$ 1,108 | \$ 2,252 | \$ 3 |
| PR_BH014220 | Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II | \$ 14,492 | \$ 6,300 | \$ 7,548 | \$ 644 | \$ - |
| PR_BH014500 | Ivy Home-Shell Road Sewer Extension Division I Replacement | \$ 2,014 | \$ 16 | \$ 585 | \$ 1,414 | \$ - |
| PR_BH014600 | 46th Street Diversion Sewer Rehabilitation Replacement | \$ 10,747 | \$ 3,111 | \$ 7,039 | \$ 597 | \$ - |
| PR_BH014700 | Boat Harbor Outlet Sewer Improvements | \$ 3,483 | \$ 3,483 | \$ - | \$ - | \$ - |
| PR_BH014800 | Jefferson Avenue Extension Gravity Improvements | \$ 441 | \$ 441 | \$ - | \$ - | \$ - |
| PR_BH014900 | Hampton Trunk Sewer Extension Division K Gravity Improvements | \$ 4,326 | \$ 748 | \$ 3,573 | \$ 5 | \$ - |
| PR_BH015000 | Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements | \$ 4 | \$ 4 | \$ - | \$ - | \$ - |
| PR_BH015300 | Boat Harbor Treatment Plant Switchgear and Controls Replacements | \$ 1,723 | \$ 1,723 | \$ - | \$ - | \$ - |
| PR_BH015500 | LaSalle Avenue Interceptor Force Main Replacement | \$ 1,920 | \$ - | \$ - | \$ - | \$ 83 |
| PR_BH015600 | Hampton Trunk A and B Replacement-Jefferson Avenue to Walnut Avenue | \$ 15,121 | \$ 10,667 | \$ 4,454 | \$ - | \$ - |
| PR_BH015700 | Boat Harbor Treatment Plant Pump Station Conversion | \$ 62,111 | \$ 926 | \$ 2,241 | \$ 556 | \$ 18,760 |
| PR_BH015710 | Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous) | \$ 65,649 | \$ 947 | \$ 594 | \$ 4,094 | \$ 30,196 |
| PR_BH015720 | Boat Harbor Treatment Plant Transmission Force Main Section 2 (Land) | \$ 16,412 | \$ 282 | \$ 1,060 | \$ 150 | \$ 3,656 |
| PR_BH015801 | 14th Street Offline Storage (BH-HPP-01A) | \$ 14,828 | \$ - | \$ - | \$ 868 | \$ 822 |
| PR_BH015802 | Claremont Pump Station Upgrade (BH-HPP-01B) | \$ 10,938 | \$ - | \$ - | \$ - | \$ 535 |
| PR_BH015803 | Chesapeake Avenue Interceptor Improvements (BH-HPP-01C) | \$ 14,776 | \$ - | \$ - | \$ - | \$ - |
| PR_BH015900 | Bloxoms Corner Force Main Replacement | \$ 2,760 | \$ 182 | \$ 778 | \$ 1,800 | \$ - |
| | Subtotal | \$ 254,724 | \$ 32,842 | \$ 34,581 | \$ 12,384 | \$ 54,056 |
| Chesapeake-Elizabeth | | | | | | |
| PR_CE010400 | Independence Boulevard Pressure Reducing Station Modifications | \$ 523 | \$ 523 | \$ - | \$ - | \$ - |
| PR_CE010520 | Newtown Road Interceptor Force Main Relocation | \$ 3,711 | \$ 2,972 | \$ 738 | \$ - | \$ - |
| PR_CE011300 | Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II | \$ 1,062 | \$ - | \$ 69 | \$ 993 | \$ - |
| PR_CE011600 | Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements | \$ 1,822 | \$ 22 | \$ 136 | \$ 655 | \$ 1,009 |
| PR_CE011700 | Western Trunk Force Main Replacement | \$ 1,766 | \$ 1,454 | \$ 311 | \$ - | \$ - |
| PR_CE011810 | Chesapeake-Elizabeth Treatment Plant Decommissioning | \$ 11,082 | \$ - | \$ 1,000 | \$ 1,000 | \$ 1,000 |
| PR_CE011821 | Elbow Road Pressure Reducing Station | \$ 4,391 | \$ 4,389 | \$ 3 | \$ - | \$ - |
| PR_CE011822 | Providence Road PRS Upgrades and Interconnect Force Main | \$ 4,800 | \$ 4,800 | \$ - | \$ - | \$ - |
| PR_CE011823 | Virginia Beach Boulevard Force Main Phase VI | \$ 17,189 | \$ 12,131 | \$ 5,058 | \$ - | \$ - |
| PR_CE011825 | Salem Road Interconnect Force Main | \$ 1,110 | \$ 1,110 | \$ - | \$ - | \$ - |
| PR_CE011826 | Providence Road Off-Line Storage Facility | \$ 17,964 | \$ 17,964 | \$ - | \$ - | \$ - |
| PR_CE011827 | Atlantic PRS Reliability Modifications | \$ 2,565 | \$ 2,565 | \$ - | \$ - | \$ - |
| PR_CE011830 | Little Creek Pump Station Modifications | \$ 317 | \$ 317 | \$ - | \$ - | \$ - |
| PR_CE011835 | Virginia Beach City Pump Station Upgrades, Phase V | \$ 1,510 | \$ - | \$ 1,510 | \$ - | \$ - |
| PR_CE011836 | Norfolk City Pump Station Upgrades | \$ 993 | \$ 380 | \$ 613 | \$ - | \$ - |
| PR_CE011840 | Oceana Off-Line Storage Facility | \$ 72 | \$ 67 | \$ 6 | \$ - | \$ - |
| PR_CE011850 | Atlantic Service Area Automated Diversion Facilities Phase I | \$ 1,931 | \$ 1,181 | \$ 750 | \$ - | \$ - |
| PR_CE012100 | Witchduck Road Interceptor Force Main Improvements | \$ 3,622 | \$ 3 | \$ 135 | \$ 234 | \$ 717 |
| PR_CE012200 | Pine Tree PRS Reliability Modifications | \$ 5 | \$ 5 | \$ - | \$ - | \$ - |
| | Subtotal | \$ 70,776 | \$ 49,883 | \$ 10,329 | \$ 2,881 | \$ 2,726 |
| Eastern Shore | | | | | | |
| PR_ES010000 | Eastern Shore Infrastructure Improvements - Interim Plant Improvements | \$ 1,200 | \$ 1,200 | \$ - | \$ - | \$ - |
| PR_ES010100 | Eastern Shore Infrastructure Improvements - Transmission Force Main Phase I | \$ 14,000 | \$ - | \$ 1,000 | \$ 5,000 | \$ 8,000 |
| PR_ES010200 | Eastern Shore Infrastructure Improvements - Transmission Force Main Phase II | \$ 8,000 | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 23,200 | \$ 1,200 | \$ 1,000 | \$ 5,000 | \$ 8,000 |

**EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM
FY-2021 TO FY-2030 CASH FLOW PROJECTION (\$,000)**

| CIP No | Project Name | FY-25 | FY-26 | FY-27 | FY-28 | FY-29 | FY-30 |
|-----------------------------|--|-----------|-----------|-----------|----------|-----------|-----------|
| Administration | | | | | | | |
| PR_AD012100 | Asset Management Implementation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AD012200 | Water Quality Services Building Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AD012300 | Central Environmental Laboratory Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AD012500 | Cybersecurity Practice & Procedure Initiative | \$ 3,100 | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 3,100 | \$ - | \$ - | \$ - | \$ - | \$ - |
| Army Base | | | | | | | |
| PR_AB010000 | Army Base 24-Inch and 20-Inch Transmission Main Replacements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AB010500 | Section W Force Main Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AB011800 | Army Base to VIP Transmission Force Main | \$ - | \$ 642 | \$ 1,638 | \$ 365 | \$ 18,452 | \$ 27,523 |
| PR_AB011900 | Army Base Treatment Plant Administration Building Renovation (2021) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ - | \$ 642 | \$ 1,638 | \$ 365 | \$ 18,452 | \$ 27,523 |
| Atlantic | | | | | | | |
| PR_AT011520 | Shippis Corner Pressure Reducing Station Modifications | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT011900 | Great Bridge Interceptor Extension 16-Inch Replacement | \$ 2,094 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT012910 | Atlantic Treatment Plant FOG Receiving Station | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT012920 | Atlantic Treatment Plant Access Road Extension | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT013000 | Washington District Pump Station Area Sanitary Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT013100 | South Norfolk Area Gravity Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT013200 | Dozers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements | \$ 206 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT013500 | Atlantic Treatment Plant Thermal Hydrolysis Process | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT013700 | Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT014000 | Lynnhaven-Great Neck IFM (SF-021) Relocation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT014100 | Suffolk Regional Landfill Transmission Force Main | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT014301 | Atlantic Service Area I-I Reduction Phase I (CHES) | \$ 8,119 | \$ 1,242 | \$ - | \$ - | \$ - | \$ - |
| PR_AT014302 | Atlantic Service Area I-I Reduction Phase II (CHES) | \$ 13 | \$ 7 | \$ - | \$ - | \$ - | \$ - |
| PR_AT014303 | Chesapeake Pump Station Capacity Improvements (AT-HPP-01C) | \$ - | \$ - | \$ 53 | \$ 297 | \$ 498 | \$ - |
| PR_AT014500 | Atlantic Treatment Plant Influent Screens (1-3) Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_AT014600 | Kempsville Interceptor Force Main Replacement - Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 10,432 | \$ 1,249 | \$ 53 | \$ 297 | \$ 498 | \$ - |
| Boat Harbor | | | | | | | |
| PR_BH013020 | Willard Avenue Pump Station Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014000 | West Avenue and 35th Street Interceptor Force Main Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014220 | Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014500 | Ivy Home-Shell Road Sewer Extension Division I Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014600 | 46th Street Diversion Sewer Rehabilitation Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014700 | Boat Harbor Outlet Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014800 | Jefferson Avenue Extension Gravity Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH014900 | Hampton Trunk Sewer Extension Division K Gravity Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH015000 | Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH015300 | Boat Harbor Treatment Plant Switchgear and Controls Replacements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH015500 | LaSalle Avenue Interceptor Force Main Replacement | \$ 1,144 | \$ 692 | \$ - | \$ - | \$ - | \$ - |
| PR_BH015600 | Hampton Trunk A and B Replacement-Jefferson Avenue to Walnut Avenue | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH015700 | Boat Harbor Treatment Plant Pump Station Conversion | \$ 38,778 | \$ 850 | \$ - | \$ - | \$ - | \$ - |
| PR_BH015710 | Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous) | \$ 29,818 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH015720 | Boat Harbor Treatment Plant Transmission Force Main Section 2 (Land) | \$ 11,264 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_BH015801 | 14th Street Offline Storage (BH-HPP-01A) | \$ 8,260 | \$ 4,878 | \$ - | \$ - | \$ - | \$ - |
| PR_BH015802 | Claremont Pump Station Upgrade (BH-HPP-01B) | \$ 751 | \$ 6,265 | \$ 3,387 | \$ - | \$ - | \$ - |
| PR_BH015803 | Chesapeake Avenue Interceptor Improvements (BH-HPP-01C) | \$ 815 | \$ 2,438 | \$ 8,642 | \$ 2,881 | \$ - | \$ - |
| PR_BH015900 | Bloxoms Corner Force Main Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 90,830 | \$ 15,123 | \$ 12,028 | \$ 2,881 | \$ - | \$ - |
| Chesapeake-Elizabeth | | | | | | | |
| PR_CE010400 | Independence Boulevard Pressure Reducing Station Modifications | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE010520 | Newtown Road Interceptor Force Main Relocation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011300 | Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011600 | Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011700 | Western Trunk Force Main Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011810 | Chesapeake-Elizabeth Treatment Plant Decommissioning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 2,424 |
| PR_CE011821 | Elbow Road Pressure Reducing Station | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011822 | Providence Road PRS Upgrades and Interconnect Force Main | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011823 | Virginia Beach Boulevard Force Main Phase VI | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011825 | Salem Road Interconnect Force Main | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011826 | Providence Road Off-Line Storage Facility | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011827 | Atlantic PRS Reliability Modifications | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011830 | Little Creek Pump Station Modifications | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011835 | Virginia Beach City Pump Station Upgrades, Phase V | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011836 | Norfolk City Pump Station Upgrades | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011840 | Oceana Off-Line Storage Facility | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE011850 | Atlantic Service Area Automated Diversion Facilities Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_CE012100 | Witchduck Road Interceptor Force Main Improvements | \$ 1,321 | \$ 1,211 | \$ - | \$ - | \$ - | \$ - |
| PR_CE012200 | Pine Tree PRS Reliability Modifications | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 1,321 | \$ 1,211 | \$ - | \$ - | \$ - | \$ 2,424 |
| Eastern Shore | | | | | | | |
| PR_ES010000 | Eastern Shore Infrastructure Improvements - Interim Plant Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_ES010100 | Eastern Shore Infrastructure Improvements - Transmission Force Main Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_ES010200 | Eastern Shore Infrastructure Improvements - Transmission Force Main Phase II | \$ 1,000 | \$ 3,000 | \$ 4,000 | \$ - | \$ - | \$ - |
| | Subtotal | \$ 1,000 | \$ 3,000 | \$ 4,000 | \$ - | \$ - | \$ - |

**EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM
FY-2021 TO FY-2030 CASH FLOW PROJECTION (\$,000)**

| CIP No | Project Name | Total FY-21 to FY-30 | FY-21 | FY-22 | FY-23 | FY-24 |
|----------------------------------|---|-------------------------|-----------|-----------|-----------|------------|
| James River | | | | | | |
| PR_JR010600 | Lucas Creek Pump Station Upgrade | \$ 6,215 | \$ 303 | \$ 2,706 | \$ 2,950 | \$ 256 |
| PR_JR011300 | Patrick Henry Pump Station Interconnection Force Main | \$ 1,262 | \$ 1,262 | \$ - | \$ - | \$ - |
| PR_JR011730 | Jefferson Avenue Interceptor Force Main Replacement Phase III | \$ 11,598 | \$ 9,933 | \$ 1,665 | \$ - | \$ - |
| PR_JR012100 | Huxley to Middle Ground Force Main Extension | \$ 1,847 | \$ 1,845 | \$ 2 | \$ - | \$ - |
| PR_JR013000 | Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements | \$ 1,405 | \$ 1,077 | \$ 328 | \$ - | \$ - |
| PR_JR013200 | Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II | \$ 2,211 | \$ 36 | \$ 406 | \$ 1,512 | \$ 257 |
| PR_JR013400 | James River Treatment Plant Advanced Nutrient Reduction Improvements | \$ 160,338 | \$ 2,108 | \$ 14,376 | \$ 58,284 | \$ 64,918 |
| | Subtotal | \$ 184,876 | \$ 16,564 | \$ 19,483 | \$ 62,746 | \$ 65,431 |
| Middle Peninsula | | | | | | |
| PR_MP011700 | Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements | \$ 2,689 | \$ 500 | \$ 500 | \$ 500 | \$ 689 |
| PR_MP012000 | King William Treatment Plant Improvements Phase I | \$ 2,001 | \$ 1,996 | \$ 5 | \$ - | \$ - |
| PR_MP012400 | West Point Treatment Plant Tertiary Filter | \$ 357 | \$ 357 | \$ - | \$ - | \$ - |
| PR_MP012500 | Mathews Main Vacuum Pump Station Replacement | \$ 5 | \$ 5 | \$ - | \$ - | \$ - |
| PR_MP013000 | Small Communities Collection System Rehabilitation Phase I | \$ 15 | \$ 15 | \$ - | \$ - | \$ - |
| PR_MP013020 | Small Communities Collection System Rehabilitation Phase III | \$ 709 | \$ 704 | \$ 5 | \$ - | \$ - |
| PR_MP013100 | Small Communities Mobile Dewatering Facilities Installation | \$ 849 | \$ 849 | \$ - | \$ - | \$ - |
| PR_MP013300 | King William Treatment Plant Improvements Phase II | \$ 13,996 | \$ 492 | \$ 439 | \$ 6,520 | \$ 6,520 |
| PR_MP013400 | Small Communities Operation Center Parking and Laydown Area | \$ 400 | \$ 400 | \$ - | \$ - | \$ - |
| PR_MP013500 | Middlesex Collection System-Cooks Corner | \$ 1,021 | \$ 1,021 | \$ - | \$ - | \$ - |
| PR_MP013600 | Middlesex Interceptor Force Main Phase I-Cooks Corner | \$ 1,340 | \$ 1,340 | \$ - | \$ - | \$ - |
| PR_MP013700 | Middlesex Interceptor System Program Phase II-Urbanna to Mathews Transmission Force Main | \$ 26,206 | \$ 1,097 | \$ 1,043 | \$ 12,021 | \$ 12,021 |
| PR_MP013800 | Middlesex Interceptor System Program Phase III | \$ 5,510 | \$ - | \$ 139 | \$ 370 | \$ 3,749 |
| PR_MP013900 | Urbanna Wastewater Treatment Plant Reliability Improvements | \$ 250 | \$ 250 | \$ - | \$ - | \$ - |
| PR_MP014100 | Middlesex Collection System-Christ's Church Service Area | \$ 1,017 | \$ 73 | \$ 173 | \$ 575 | \$ 197 |
| PR_MP014200 | Middlesex Collection System-Topping Service Area | \$ 5,578 | \$ - | \$ 201 | \$ 269 | \$ 683 |
| PR_MP014300 | Middlesex Collection System-Locust Hill Service Area | \$ 3,515 | \$ 253 | \$ 477 | \$ 1,511 | \$ 1,269 |
| PR_MP014400 | Middlesex Collection System-Hartfield Service Area | \$ 4,086 | \$ 295 | \$ 553 | \$ 1,758 | \$ 1,475 |
| PR_MP014500 | Middlesex Collection System-Saluda Service Area | \$ 4,092 | \$ 295 | \$ 554 | \$ 1,761 | \$ 1,478 |
| PR_MP014600 | Middlesex Collection System-Deltaville Service Area | \$ 27,905 | \$ - | \$ - | \$ - | \$ - |
| PR_MP014700 | Small Communities Rehabilitation Phase IV | \$ 705 | \$ 82 | \$ 623 | \$ - | \$ - |
| PR_MP014800 | Small Communities Rehabilitation Phase V | \$ 411 | \$ - | \$ 52 | \$ 358 | \$ - |
| PR_MP014900 | Middle Peninsula Operations Center Locker Room and Administrative Facilities | \$ 600 | \$ 60 | \$ 540 | \$ - | \$ - |
| PR_MP015000 | Sharon Road Gravity Sewer Improvements | \$ 351 | \$ 101 | \$ 250 | \$ - | \$ - |
| PR_MP015100 | West Point Pump Station 4 (Thompson Avenue) Rehabilitation | \$ 771 | \$ 95 | \$ 671 | \$ 5 | \$ - |
| PR_MP015200 | West Point Treatment Plant Improvements (2021) | \$ 30,250 | \$ - | \$ 563 | \$ 2,271 | \$ 8,292 |
| | Subtotal | \$ 106,723 | \$ 10,279 | \$ 6,787 | \$ 27,918 | \$ 36,372 |
| Nansemond | | | | | | |
| PR_NP010620 | Suffolk Pump Station Replacement | \$ 15,368 | \$ 4,521 | \$ 10,013 | \$ 834 | \$ - |
| PR_NP011300 | Suffolk Interceptor Force Main Section I Main Line Valving Replacement | \$ 783 | \$ 783 | \$ - | \$ - | \$ - |
| PR_NP012400 | Western Branch Sewer System Gravity Improvements | \$ 2,838 | \$ - | \$ 164 | \$ 164 | \$ 2,511 |
| PR_NP012500 | Shingle Creek and Hickman's Branch Gravity Sewer Improvements | \$ 856 | \$ 856 | \$ - | \$ - | \$ - |
| PR_NP012600 | Deep Creek Interceptor Force Main Replacement | \$ 2,152 | \$ 2,152 | \$ - | \$ - | \$ - |
| PR_NP013000 | Nansemond Treatment Plant Motor Control Center Replacements | \$ 1,722 | \$ 608 | \$ 608 | \$ 506 | \$ - |
| PR_NP013400 | Deep Creek Interceptor Force Main Risk Mitigation Project | \$ 857 | \$ 857 | \$ - | \$ - | \$ - |
| PR_NP013500 | Nansemond Treatment Plant Land Acquisition-Land Stabilization | \$ 2,749 | \$ 2,742 | \$ 7 | \$ - | \$ - |
| PR_NP013600 | Nansemond Treatment Plant Land Acquisition-Structure Demolition | \$ 662 | \$ 662 | \$ - | \$ - | \$ - |
| PR_NP013700 | Nansemond Treatment Plant Struvite Recovery Facility Improvements Phase | \$ 8,565 | \$ 96 | \$ 2,140 | \$ 5,059 | \$ 1,270 |
| PR_NP013810 | Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph I | \$ 801 | \$ 801 | \$ - | \$ - | \$ - |
| PR_NP013820 | Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph II | \$ 219,082 | \$ 3,764 | \$ 2,447 | \$ 16,346 | \$ 93,184 |
| PR_NP013901 | Nansemond Service Area I-I Reduction Phase II (CHES) | \$ 15,539 | \$ - | \$ - | \$ - | \$ - |
| PR_NP013902 | Nansemond Service Area I-I Reduction Phase III (CHES) | \$ 15,464 | \$ - | \$ - | \$ - | \$ - |
| PR_NP014000 | Wilroy Pressure Reducing Station and Offline Storage (NP-HPP-03) | \$ 16,216 | \$ 955 | \$ 959 | \$ 7,529 | \$ 6,774 |
| PR_NP014100 | Nansemond Treatment Plant Shoreline Improvements Phase II | \$ 2,941 | \$ - | \$ - | \$ - | \$ - |
| PR_NP014400 | Nansemond Treatment Plant Influent Screen Replacement | \$ 2,759 | \$ 2,749 | \$ 10 | \$ - | \$ - |
| PR_NP014500 | Nansemond Treatment Plant Regional Residuals Facility Upgrade | \$ 1,770 | \$ 234 | \$ 1,536 | \$ - | \$ - |
| PR_NP014600 | West Road Interceptor Force Main Extension | \$ 6,042 | \$ 318 | \$ 3,578 | \$ 2,147 | \$ - |
| | Subtotal | \$ 317,153 | \$ 22,097 | \$ 21,460 | \$ 32,584 | \$ 103,738 |
| Surry | | | | | | |
| PR_SU010200 | Surry Hydraulic Improvements and Interceptor Force Main | \$ 29,722 | \$ 15,507 | \$ 14,215 | \$ - | \$ - |
| PR_SU010300 | Surry Water and Sewer Infrastructure Improvements - Phase 1 | \$ 1,901 | \$ 992 | \$ 908 | \$ - | \$ - |
| | Subtotal | \$ 31,623 | \$ 16,499 | \$ 15,123 | \$ - | \$ - |
| Virginia Initiative Plant | | | | | | |
| PR_VP010920 | Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2 | \$ 1,816 | \$ 120 | \$ 93 | \$ 892 | \$ 711 |
| PR_VP014010 | Ferebee Avenue Pump Station Replacement | \$ 6,343 | \$ 138 | \$ - | \$ 2,387 | \$ 3,524 |
| PR_VP014020 | Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement | \$ 8,805 | \$ 570 | \$ 2,954 | \$ 3,514 | \$ 1,767 |
| PR_VP014700 | Ingleside Road Pump Station Replacement | \$ 3,070 | \$ 1,158 | \$ 1,913 | \$ - | \$ - |
| PR_VP014800 | Lee Avenue-Wesley Street Horizontal Valve Replacement | \$ 1,608 | \$ - | \$ 215 | \$ 1,393 | \$ - |
| PR_VP015320 | Larchmont Area Sanitary Sewer Improvements | \$ 33,384 | \$ 2,665 | \$ 2,798 | \$ 3,992 | \$ 8,954 |
| PR_VP015400 | Lafayette Norview-Estabrook Pump Station Replacements | \$ 16,222 | \$ 1,898 | \$ 4,817 | \$ 5,704 | \$ 3,803 |
| PR_VP016500 | Norview-Estabrook Division I 12-Inch Force Main Replacement | \$ 1,805 | \$ 82 | \$ 62 | \$ 922 | \$ 738 |
| PR_VP016700 | Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III | \$ 2,520 | \$ 101 | \$ 77 | \$ 1,301 | \$ 1,041 |
| PR_VP017110 | Central Norfolk Area Gravity Sewer Improvements Phase I | \$ 110 | \$ 110 | \$ - | \$ - | \$ - |
| PR_VP017120 | Central Norfolk Area Gravity Sewer Improvements Phase II | \$ 2,579 | \$ - | \$ 50 | \$ 215 | \$ 1,086 |
| PR_VP018000 | Park Avenue Pump Station Replacement | \$ 7,443 | \$ 367 | \$ 4,043 | \$ 3,033 | \$ - |
| PR_VP018200 | Effingham Interceptor Vault Removal | \$ 2,081 | \$ 1,122 | \$ 959 | \$ - | \$ - |
| PR_VP018301 | VIP Service Area I-I Reduction Phase I (PORTS) | \$ 12,659 | \$ 1,096 | \$ 1,546 | \$ 5,713 | \$ 4,305 |
| PR_VP018302 | Portsmouth Pump Station Upgrades (VIP-HPP-04B) | \$ 10,320 | \$ - | \$ - | \$ - | \$ - |
| PR_VP018303 | VIP Service Area I-I Reduction Phase III (PORTS) | \$ 9,090 | \$ 1,000 | \$ 1,087 | \$ 3,990 | \$ 3,012 |
| PR_VP018304 | Camden Avenue Pump Station Upgrades (VIP-HPP-04D) | \$ 5,371 | \$ - | \$ - | \$ - | \$ - |
| PR_VP018305 | Camden Avenue Gravity Improvements (VIP-HPP-04E) | \$ 2,569 | \$ - | \$ - | \$ - | \$ - |
| PR_VP018400 | State Street Pressure Reducing Station and Offline Storage (VIP-HPP-05) | \$ 17,555 | \$ - | \$ - | \$ - | \$ - |
| PR_VP018500 | Elizabeth River Crossing Reliability Improvements | \$ 1,043 | \$ 793 | \$ 250 | \$ - | \$ - |
| PR_VP018800 | Virginia Initiative Plant Administration Building Renovation | \$ 1,862 | \$ 386 | \$ 1,476 | \$ - | \$ - |
| PR_VP018900 | Norchester Pump Station Screening Improvements | \$ 460 | \$ 88 | \$ 290 | \$ 83 | \$ - |
| | Subtotal | \$ 145,625 | \$ 11,694 | \$ 22,628 | \$ 33,141 | \$ 28,942 |

**EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM
FY-2021 TO FY-2030 CASH FLOW PROJECTION (\$,000)**

| CIP No | Project Name | FY-25 | FY-26 | FY-27 | FY-28 | FY-29 | FY-30 |
|----------------------------------|---|-----------|-----------|----------|-----------|-----------|----------|
| James River | | | | | | | |
| PR_JR010600 | Lucas Creek Pump Station Upgrade | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_JR011300 | Patrick Henry Pump Station Interconnection Force Main | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_JR011730 | Jefferson Avenue Interceptor Force Main Replacement Phase III | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_JR012100 | Huxley to Middle Ground Force Main Extension | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_JR013000 | Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_JR013200 | Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_JR013400 | James River Treatment Plant Advanced Nutrient Reduction Improvements | \$ 20,652 | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 20,652 | \$ - | \$ - | \$ - | \$ - | \$ - |
| Middle Peninsula | | | | | | | |
| PR_MP011700 | Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements | \$ 500 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP012000 | King William Treatment Plant Improvements Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP012400 | West Point Treatment Plant Tertiary Filter | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP012500 | Mathews Main Vacuum Pump Station Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013000 | Small Communities Collection System Rehabilitation Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013020 | Small Communities Collection System Rehabilitation Phase III | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013100 | Small Communities Mobile Dewatering Facilities Installation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013300 | King William Treatment Plant Improvements Phase II | \$ 25 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013400 | Small Communities Operation Center Parking and Laydown Area | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013500 | Middlesex Collection System-Cooks Corner | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013600 | Middlesex Interceptor Force Main Phase I-Cooks Corner | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013700 | Middlesex Interceptor System Program Phase II-Urbanna to Mathews Transmission Force Main | \$ 25 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013800 | Middlesex Interceptor System Program Phase III | \$ 1,253 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP013900 | Urbanna Wastewater Treatment Plant Reliability Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014100 | Middlesex Collection System-Christ's Church Service Area | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014200 | Middlesex Collection System-Topping Service Area | \$ 2,405 | \$ 2,014 | \$ 5 | \$ - | \$ - | \$ - |
| PR_MP014300 | Middlesex Collection System-Locust Hill Service Area | \$ 5 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014400 | Middlesex Collection System-Hartfield Service Area | \$ 5 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014500 | Middlesex Collection System-Saluda Service Area | \$ 5 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014600 | Middlesex Collection System-Deltaville Service Area | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014700 | Small Communities Rehabilitation Phase IV | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014800 | Small Communities Rehabilitation Phase V | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP014900 | Middle Peninsula Operations Center Locker Room and Administrative Facilities | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP015000 | Sharon Road Gravity Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP015100 | West Point Pump Station 4 (Thompson Avenue) Rehabilitation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_MP015200 | West Point Treatment Plant Improvements (2021) | \$ 13,500 | \$ 5,625 | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 17,723 | \$ 7,639 | \$ 5 | \$ - | \$ - | \$ - |
| Nansemond | | | | | | | |
| PR_NP010620 | Suffolk Pump Station Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP011300 | Suffolk Interceptor Force Main Section I Main Line Valving Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP012400 | Western Branch Sewer System Gravity Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP012500 | Shingle Creek and Hickman's Branch Gravity Sewer Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP012600 | Deep Creek Interceptor Force Main Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013000 | Nansemond Treatment Plant Motor Control Center Replacements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013400 | Deep Creek Interceptor Force Main Risk Mitigation Project | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013500 | Nansemond Treatment Plant Land Acquisition-Land Stabilization | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013600 | Nansemond Treatment Plant Land Acquisition-Structure Demolition | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013700 | Nansemond Treatment Plant Struvite Recovery Facility Improvements Phase | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013810 | Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP013820 | Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph II | \$ 88,121 | \$ 15,220 | \$ - | \$ - | \$ - | \$ - |
| PR_NP013901 | Nansemond Service Area I-I Reduction Phase I (CHES) | \$ 257 | \$ 1,569 | \$ 2,902 | \$ 8,093 | \$ 2,718 | \$ - |
| PR_NP013902 | Nansemond Service Area I-I Reduction Phase III (CHES) | \$ - | \$ 1,349 | \$ 1,850 | \$ 8,163 | \$ 4,082 | \$ 8 |
| PR_NP014000 | Wilroy Pressure Reducing Station and Offline Storage (NP-HPP-03) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP014100 | Nansemond Treatment Plant Shoreline Improvements Phase II | \$ - | \$ - | \$ 205 | \$ 620 | \$ 2,117 | \$ - |
| PR_NP014400 | Nansemond Treatment Plant Influent Screen Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP014500 | Nansemond Treatment Plant Regional Residuals Facility Upgrade | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_NP014600 | West Road Interceptor Force Main Extension | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 88,378 | \$ 18,138 | \$ 4,957 | \$ 16,876 | \$ 8,916 | \$ 8 |
| Surry | | | | | | | |
| PR_SU010200 | Surry Hydraulic Improvements and Interceptor Force Main | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_SU010300 | Surry Water and Sewer Infrastructure Improvements - Phase 1 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Virginia Initiative Plant | | | | | | | |
| PR_VP010920 | Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP014010 | Ferebee Avenue Pump Station Replacement | \$ 294 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP014020 | Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP014700 | Ingleside Road Pump Station Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP014800 | Lee Avenue-Wesley Street Horizontal Valve Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP015320 | Larchmont Area Sanitary Sewer Improvements | \$ 8,954 | \$ 6,020 | \$ - | \$ - | \$ - | \$ - |
| PR_VP015400 | Lafayette Norview-Estabrook Pump Station Replacements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP016500 | Norview-Estabrook Division I 12-Inch Force Main Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP016700 | Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP017110 | Central Norfolk Area Gravity Sewer Improvements Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP017120 | Central Norfolk Area Gravity Sewer Improvements Phase II | \$ 1,229 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018000 | Park Avenue Pump Station Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018200 | Effingham Interceptor Vault Removal | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018301 | VIP Service Area I-I Reduction Phase I (PORTS) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018302 | Portsmouth Pump Station Upgrades (VIP-HPP-04B) | \$ - | \$ 283 | \$ 747 | \$ 6,057 | \$ 3,233 | \$ - |
| PR_VP018303 | VIP Service Area I-I Reduction Phase III (PORTS) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018304 | Camden Avenue Pump Station Upgrades (VIP-HPP-04D) | \$ - | \$ 207 | \$ 249 | \$ 2,054 | \$ 2,861 | \$ - |
| PR_VP018305 | Camden Avenue Gravity Improvements (VIP-HPP-04E) | \$ - | \$ 44 | \$ 237 | \$ 1,644 | \$ 644 | \$ - |
| PR_VP018400 | State Street Pressure Reducing Station and Offline Storage (VIP-HPP-05) | \$ - | \$ - | \$ 557 | \$ 639 | \$ 4,068 | \$ 9,199 |
| PR_VP018500 | Elizabeth River Crossing Reliability Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018800 | Virginia Initiative Plant Administration Building Renovation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_VP018900 | Norchester Pump Station Screening Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 10,477 | \$ 6,553 | \$ 1,790 | \$ 10,395 | \$ 10,806 | \$ 9,199 |

**EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM
FY-2021 TO FY-2030 CASH FLOW PROJECTION (\$,000)**

| CIP No | Project Name | Total FY-21 to FY-30 | FY-21 | FY-22 | FY-23 | FY-24 |
|----------------------------|---|-------------------------|------------|------------|------------|------------|
| Williamsburg | | | | | | |
| PR_WB012400 | Williamsburg Treatment Plant Generator and Switchgear Replacement | \$ 8,972 | \$ 8,972 | \$ - | \$ - | \$ - |
| PR_WB012500 | Lodge Road Pump Station Upgrades | \$ 1,534 | \$ 159 | \$ 537 | \$ 839 | \$ - |
| PR_WB012600 | Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation | \$ 3,443 | \$ 3,086 | \$ 357 | \$ - | \$ - |
| PR_WB012900 | Williamsburg Treatment Plant Administration Building Renovation | \$ 1,114 | \$ 406 | \$ 708 | \$ - | \$ - |
| | Subtotal | \$ 15,063 | \$ 12,622 | \$ 1,602 | \$ 839 | \$ - |
| York River | | | | | | |
| PR_YR010300 | Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation | \$ 3,178 | \$ - | \$ 231 | \$ 1,528 | \$ 1,418 |
| PR_YR010520 | Magruder Mercury Interceptor Force Main Replacement - Section B | \$ 4,301 | \$ 40 | \$ 322 | \$ 1,438 | \$ 2,498 |
| PR_YR010530 | Magruder Mercury Interceptor Force Main Replacement - Section C | \$ 5,693 | \$ - | \$ 33 | \$ 59 | \$ 518 |
| PR_YR010900 | Tabb Pressure Reducing Station and Offline Storage Facility | \$ 11,602 | \$ 566 | \$ 2,031 | \$ 6,000 | \$ 3,005 |
| PR_YR011900 | Bethel-Poquoson Force Main Part III Replacement | \$ 399 | \$ 399 | \$ - | \$ - | \$ - |
| PR_YR013600 | York River Treatment Plant Solids Handling Electrical Improvements | \$ 5 | \$ 5 | \$ - | \$ - | \$ - |
| PR_YR013710 | York River Treatment Plant Advanced Nutrient Reduction Improvements Phase I | \$ 643 | \$ 643 | \$ - | \$ - | \$ - |
| PR_YR013900 | York River System Isolation Valve Installation and Replacement | \$ 1,773 | \$ 1,474 | \$ 299 | \$ - | \$ - |
| PR_YR014000 | York River Treatment Plant Administration Building Renovation | \$ 1,149 | \$ 109 | \$ 1,040 | \$ - | \$ - |
| PR_YR014100 | Coliseum Pressure Reducing Station Enhanced Storage | \$ 8,078 | \$ 204 | \$ - | \$ - | \$ 548 |
| PR_YR014200 | LaSalle Avenue Boat Harbor to York River Interconnect Force Main | \$ 6,974 | \$ 203 | \$ - | \$ 90 | \$ 456 |
| PR_YR014300 | Bethel-Poquoson Force Main Phase II (Wythe Creek Road) Replacement | \$ 2,700 | \$ 1,314 | \$ 1,386 | \$ - | \$ - |
| | Subtotal | \$ 46,496 | \$ 4,958 | \$ 5,343 | \$ 9,115 | \$ 8,444 |
| General | | | | | | |
| PR_GN010730 | Horizontal Valve Replacement Phase III | \$ 1,101 | \$ 82 | \$ 88 | \$ 260 | \$ 260 |
| PR_GN011700 | Pump Station Generators and Standby Pump Upgrades | \$ 3,091 | \$ 3,091 | \$ - | \$ - | \$ - |
| PR_GN012130 | Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I | \$ 5,721 | \$ 5,721 | \$ - | \$ - | \$ - |
| PR_GN013300 | Treatment Plant Grease Handling Facilities | \$ 8,120 | \$ 4,507 | \$ 3,613 | \$ - | \$ - |
| PR_GN014900 | North Shore Gravity Sewer Improvements Phase I | \$ 4,377 | \$ 288 | \$ 2,551 | \$ 1,538 | \$ - |
| PR_GN015000 | South Shore Gravity Sewer Improvements Phase I | \$ 767 | \$ 39 | \$ 68 | \$ 247 | \$ 413 |
| PR_GN015300 | Interceptor System Valve Improvements Phase I | \$ 2,673 | \$ 157 | \$ 138 | \$ 884 | \$ 1,280 |
| PR_GN015400 | South Shore Aerial Crossing Improvements | \$ 269 | \$ 15 | \$ 11 | \$ 125 | \$ 119 |
| PR_GN015800 | North Shore Automated Diversion Facilities | \$ 1,394 | \$ 223 | \$ 1,170 | \$ - | \$ - |
| PR_GN016310 | Integrated Planning of SWIFT | \$ 5,073 | \$ 903 | \$ 900 | \$ 903 | \$ 905 |
| PR_GN016311 | Outfall Dispersion Modeling for Full Scale SWIFT | \$ 1,095 | \$ 570 | \$ 175 | \$ 175 | \$ 175 |
| PR_GN016320 | Program Management of SWIFT Full Scale Implementation | \$ 69,679 | \$ 5,360 | \$ 5,360 | \$ 5,360 | \$ 5,360 |
| PR_GN016341 | VIP SWIFT Land Acquisition | \$ 15,000 | \$ - | \$ - | \$ 15,000 | \$ - |
| PR_GN016342 | Williamsburg SWIFT Land Acquisition | \$ 1,498 | \$ - | \$ - | \$ - | \$ - |
| PR_GN016344 | James River Land Improvements | \$ 2,031 | \$ 31 | \$ - | \$ 1,000 | \$ - |
| PR_GN016350 | Williamsburg SWIFT Facility | \$ 122,180 | \$ - | \$ - | \$ - | \$ - |
| PR_GN016351 | Williamsburg Recharge Wells | \$ 24,444 | \$ - | \$ - | \$ - | \$ - |
| PR_GN016360 | James River SWIFT Facility | \$ 180,858 | \$ 1,492 | \$ 15,270 | \$ 67,252 | \$ 73,255 |
| PR_GN016361 | James River Recharge Wells | \$ 28,962 | \$ 1,263 | \$ 2,489 | \$ 10,181 | \$ 11,529 |
| PR_GN016370 | York River SWIFT Facility | \$ 164,412 | \$ - | \$ - | \$ 1,992 | \$ 995 |
| PR_GN016371 | York River Recharge Wells | \$ 27,500 | \$ - | \$ - | \$ - | \$ 219 |
| PR_GN016380 | Nansemond SWIFT Facility | \$ 287,525 | \$ - | \$ 1,964 | \$ 3,258 | \$ 4,234 |
| PR_GN016381 | Nansemond Recharge Wells | \$ 48,888 | \$ - | \$ - | \$ - | \$ 764 |
| PR_GN016390 | VIP SWIFT Facility | \$ 312,923 | \$ - | \$ - | \$ 1,911 | \$ 3,595 |
| PR_GN016391 | VIP Recharge Wells | \$ 73,332 | \$ - | \$ 50 | \$ 818 | \$ 665 |
| PR_GN016392 | VIP SWIFT Site Work | \$ 38,891 | \$ - | \$ - | \$ 356 | \$ 1,386 |
| PR_GN016400 | Treatment Plant Dewatering Replacement Phase I | \$ 1,522 | \$ 1,522 | \$ - | \$ - | \$ - |
| PR_GN016600 | South Shore High Point Air Vent Installation Phase I | \$ 270 | \$ 270 | \$ - | \$ - | \$ - |
| PR_GN016700 | Treatment Plant Solids Handling Replacement Phase II | \$ 5,324 | \$ 467 | \$ 4,857 | \$ - | \$ - |
| PR_GN017100 | Climate Change Planning | \$ 1,983 | \$ 1,831 | \$ 153 | \$ - | \$ - |
| PR_GN017200 | Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements Phase II | \$ 9,005 | \$ 3,000 | \$ 3,000 | \$ 3,005 | \$ - |
| PR_GN017300 | Treatment Plant Dewatering Replacement Program | \$ 35,000 | \$ - | \$ - | \$ - | \$ 3,889 |
| PR_GN017500 | Fleet Management Program | \$ 15,095 | \$ - | \$ 1,887 | \$ 1,887 | \$ 1,887 |
| PR_GN017700 | Fleet Management (FY21) | \$ 1,200 | \$ 1,200 | \$ - | \$ - | \$ - |
| PR_GN017800 | Water Quality Department Instrumentation Equipment (FY21) | \$ 435 | \$ 435 | \$ - | \$ - | \$ - |
| PR_GN017900 | Solids System Improvements for Army Base MHI Offline | \$ 3,800 | \$ 2,436 | \$ 1,364 | \$ - | \$ - |
| PR_GN018000 | Inflow Reduction Program - Phase I | \$ 2,000 | \$ 531 | \$ 375 | \$ 375 | \$ 375 |
| | Subtotal | \$ 1,366,723 | \$ 35,432 | \$ 45,482 | \$ 116,527 | \$ 111,304 |
| Future Improvements | | | | | | |
| PR_IP011000 | Advanced Treatment Infrastructure Upgrades | \$ 59,473 | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 59,473 | \$ - | \$ - | \$ - | \$ - |
| | CIP TOTALS | \$ 2,793,403 | \$ 235,000 | \$ 210,784 | \$ 338,095 | \$ 442,857 |

**EXHIBIT A
CAPITAL IMPROVEMENT PROGRAM
FY-2021 TO FY-2030 CASH FLOW PROJECTION (\$,000)**

| CIP No | Project Name | FY-25 | FY-26 | FY-27 | FY-28 | FY-29 | FY-30 |
|----------------------------|---|------------|------------|------------|------------|------------|------------|
| Williamsburg | | | | | | | |
| PR_WB012400 | Williamsburg Treatment Plant Generator and Switchgear Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_WB012500 | Lodge Road Pump Station Upgrades | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_WB012600 | Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_WB012900 | Williamsburg Treatment Plant Administration Building Renovation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| York River | | | | | | | |
| PR_YR010300 | Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR010520 | Magruder Mercury Interceptor Force Main Replacement - Section B | \$ 3 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR010530 | Magruder Mercury Interceptor Force Main Replacement - Section C | \$ 1,630 | \$ 2,437 | \$ 1,016 | \$ - | \$ - | \$ - |
| PR_YR010900 | Tabb Pressure Reducing Station and Offline Storage Facility | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR011900 | Bethel-Poquoson Force Main Part III Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR013600 | York River Treatment Plant Solids Handling Electrical Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR013710 | York River Treatment Plant Advanced Nutrient Reduction Improvements Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR013900 | York River System Isolation Valve Installation and Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR014000 | York River Treatment Plant Administration Building Renovation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_YR014100 | Coliseum Pressure Reducing Station Enhanced Storage | \$ 5,856 | \$ 1,469 | \$ - | \$ - | \$ - | \$ - |
| PR_YR014200 | LaSalle Avenue Boat Harbor to York River Interconnect Force Main | \$ 4,665 | \$ 1,560 | \$ - | \$ - | \$ - | \$ - |
| PR_YR014300 | Bethel-Poquoson Force Main Phase II (Wythe Creek Road) Replacement | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 12,154 | \$ 5,466 | \$ 1,016 | \$ - | \$ - | \$ - |
| General | | | | | | | |
| PR_GN010730 | Horizontal Valve Replacement Phase III | \$ 260 | \$ 152 | \$ - | \$ - | \$ - | \$ - |
| PR_GN011700 | Pump Station Generators and Standby Pump Upgrades | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN012130 | Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN013300 | Treatment Plant Grease Handling Facilities | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN014900 | North Shore Gravity Sewer Improvements Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN015000 | South Shore Gravity Sewer Improvements Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN015300 | Interceptor System Valve Improvements Phase I | \$ 213 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN015400 | South Shore Aerial Crossing Improvements | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN015800 | North Shore Automated Diversion Facilities | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN016310 | Integrated Planning of SWIFT | \$ 900 | \$ 505 | \$ 1 | \$ - | \$ - | \$ - |
| PR_GN016311 | Outfall Dispersion Modeling for Full Scale SWIFT | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN016320 | Program Management of SWIFT Full Scale Implementation | \$ 5,360 | \$ 5,360 | \$ 5,360 | \$ 5,360 | \$ 5,360 | \$ 5,360 |
| PR_GN016341 | VIP SWIFT Land Acquisition | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN016342 | Williamsburg SWIFT Land Acquisition | \$ - | \$ - | \$ - | \$ 1,498 | \$ - | \$ - |
| PR_GN016344 | James River Land Improvements | \$ 518 | \$ 482 | \$ - | \$ - | \$ - | \$ - |
| PR_GN016350 | Williamsburg SWIFT Facility | \$ - | \$ - | \$ - | \$ 2,215 | \$ 2,034 | \$ 24,427 |
| PR_GN016351 | Williamsburg Recharge Wells | \$ - | \$ - | \$ - | \$ - | \$ 292 | \$ 856 |
| PR_GN016360 | James River SWIFT Facility | \$ 23,590 | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN016361 | James River Recharge Wells | \$ 3,250 | \$ 250 | \$ - | \$ - | \$ - | \$ - |
| PR_GN016370 | York River SWIFT Facility | \$ 5,206 | \$ 78,426 | \$ 73,552 | \$ 4,241 | \$ - | \$ - |
| PR_GN016371 | York River Recharge Wells | \$ 1,063 | \$ 13,696 | \$ 12,522 | \$ - | \$ - | \$ - |
| PR_GN016380 | Nansemond SWIFT Facility | \$ 7,045 | \$ 44,561 | \$ 76,659 | \$ 80,863 | \$ 55,727 | \$ 13,214 |
| PR_GN016381 | Nansemond Recharge Wells | \$ 1,390 | \$ 1,717 | \$ 20,536 | \$ 22,571 | \$ 1,910 | \$ - |
| PR_GN016390 | VIP SWIFT Facility | \$ 2,651 | \$ 6,026 | \$ 97,367 | \$ 95,340 | \$ 55,502 | \$ 50,531 |
| PR_GN016391 | VIP Recharge Wells | \$ 1,887 | \$ 2,787 | \$ 16,073 | \$ 32,276 | \$ 15,990 | \$ 2,786 |
| PR_GN016392 | VIP SWIFT Site Work | \$ 8,289 | \$ 28,860 | \$ - | \$ - | \$ - | \$ - |
| PR_GN016400 | Treatment Plant Dewatering Replacement Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN016600 | South Shore High Point Air Vent Installation Phase I | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN016700 | Treatment Plant Solids Handling Replacement Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN017100 | Climate Change Planning | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN017200 | Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements Phase II | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN017300 | Treatment Plant Dewatering Replacement Program | \$ 3,889 | \$ 3,889 | \$ 3,889 | \$ 3,889 | \$ 3,889 | \$ 3,889 |
| PR_GN017500 | Fleet Management Program | \$ 1,887 | \$ 1,887 | \$ 1,887 | \$ 1,887 | \$ 1,887 | \$ - |
| PR_GN017700 | Fleet Management (FY21) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN017800 | Water Quality Department Instrumentation Equipment (FY21) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN017900 | Solids System Improvements for Army Base MHI Offline | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| PR_GN018000 | Inflow Reduction Program - Phase I | \$ 344 | \$ - | \$ - | \$ - | \$ - | \$ - |
| | Subtotal | \$ 67,741 | \$ 188,597 | \$ 307,846 | \$ 250,139 | \$ 142,591 | \$ 101,063 |
| Future Improvements | | | | | | | |
| PR_IP011000 | Advanced Treatment Infrastructure Upgrades | \$ - | \$ - | \$ - | \$ - | \$ 9,214 | \$ 50,259 |
| | Subtotal | \$ - | \$ - | \$ - | \$ - | \$ 9,214 | \$ 50,259 |
| | CIP TOTALS | \$ 323,810 | \$ 247,619 | \$ 333,333 | \$ 280,952 | \$ 190,476 | \$ 190,476 |

HRSD COMMISSION MEETING MINUTES
May 26, 2020

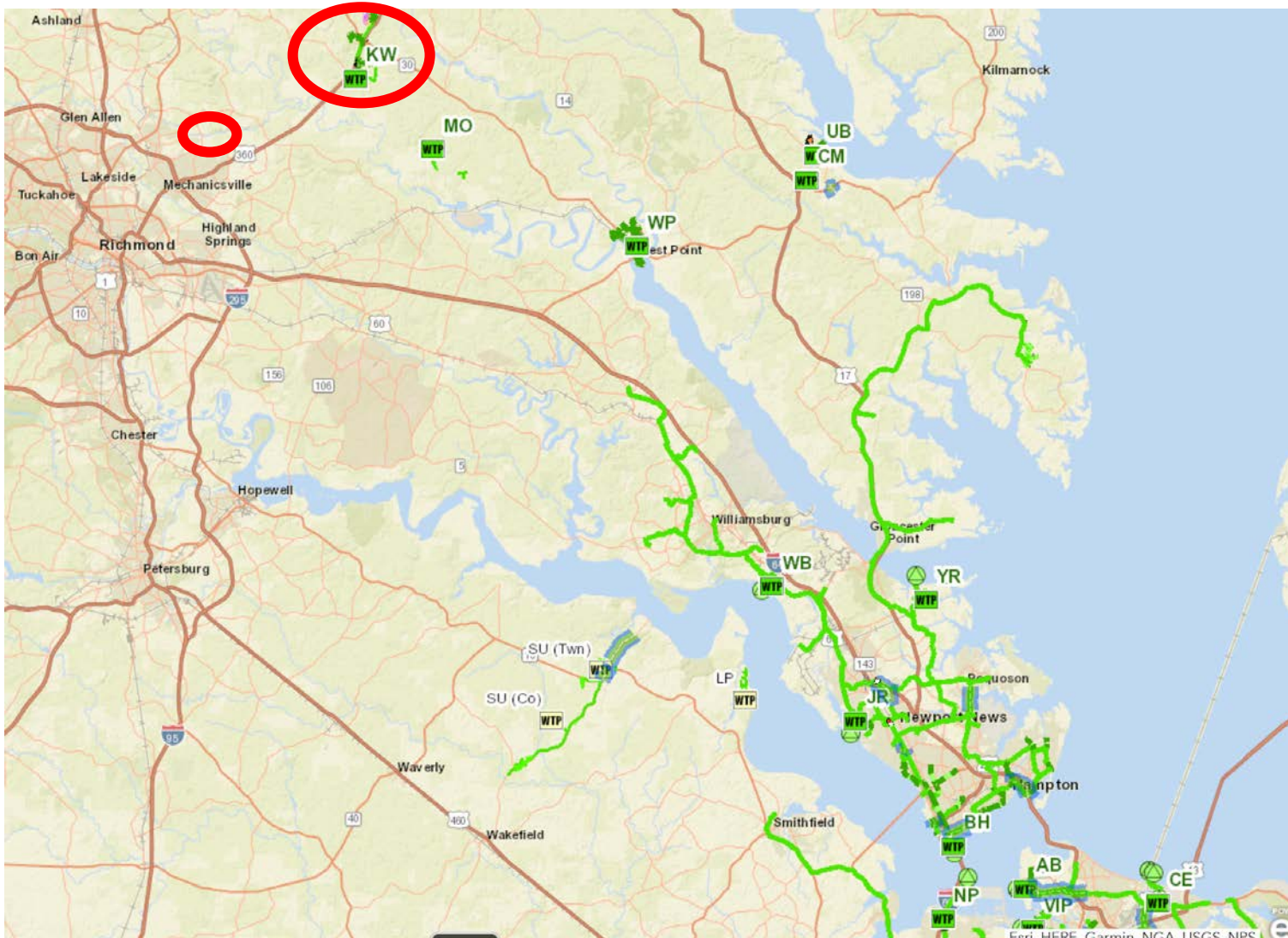
ATTACHMENT #4

AGENDA ITEM 6. KING WILLIAM TO HANOVER WASTEWATER TREATMENT
PRESENTATION

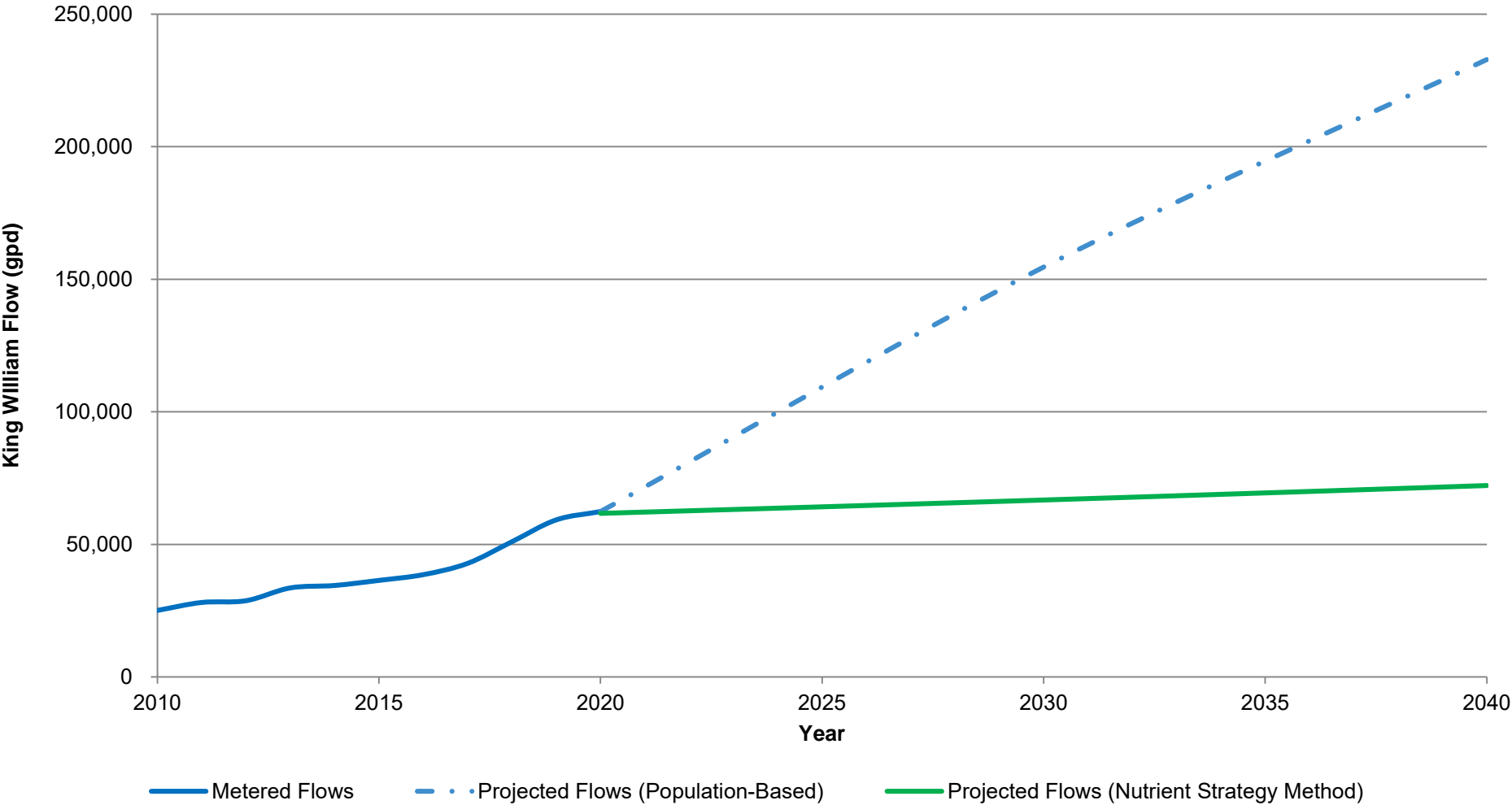


King William Flow to Hanover
Wastewater Treatment Plant
May 26, 2020

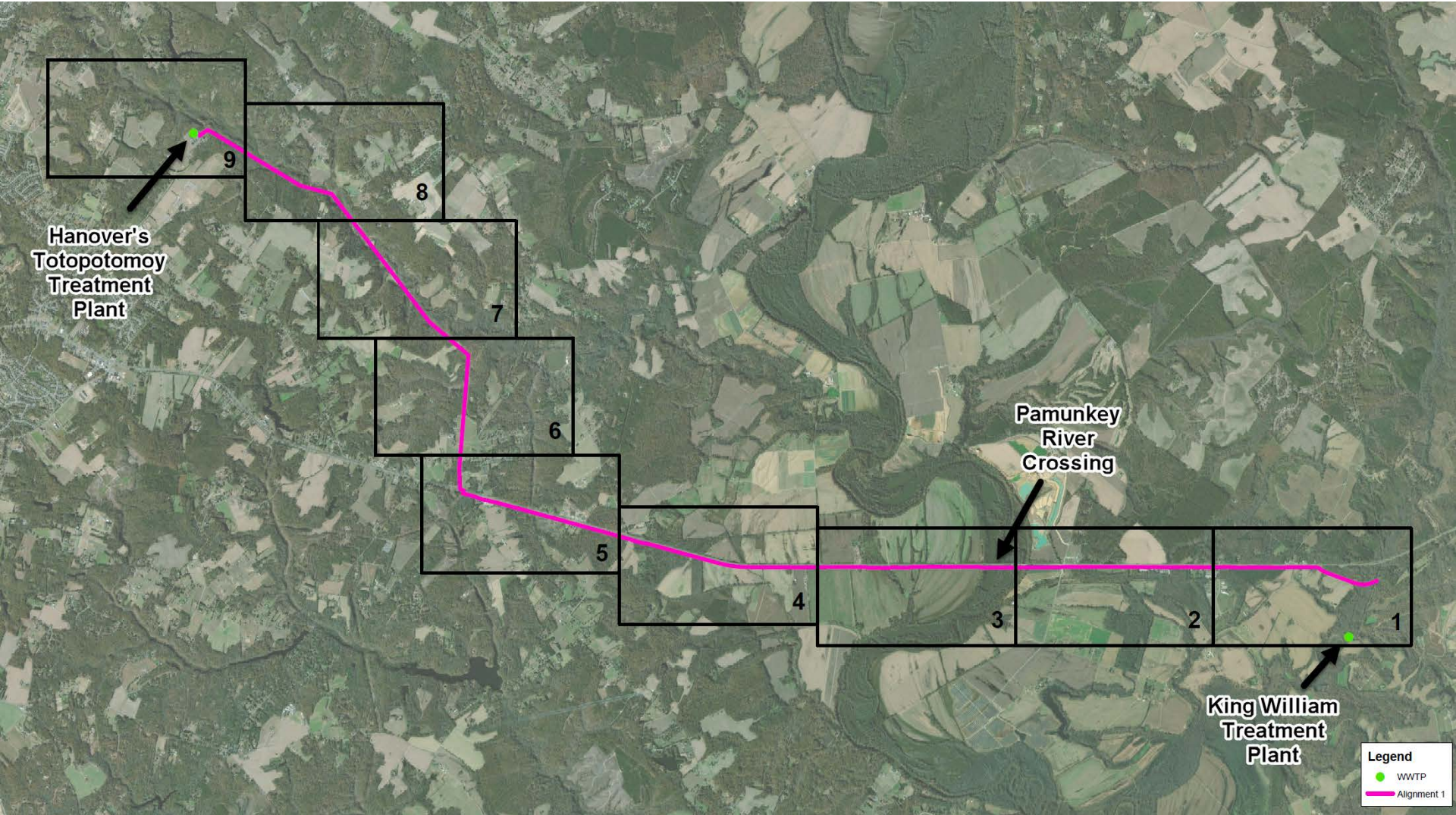
King William Treatment Plant



King William Flow Projections

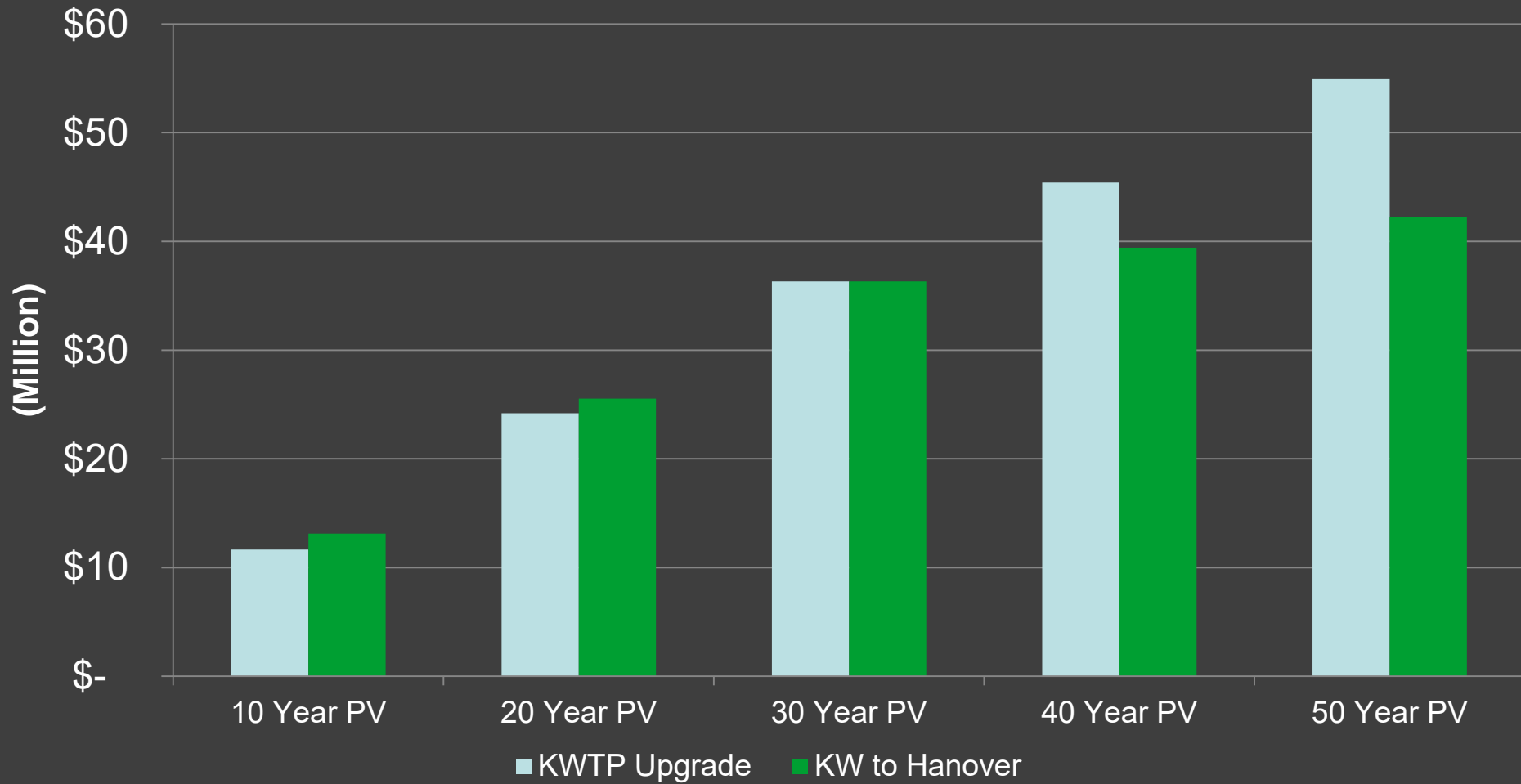


Recommended 8" HDPE TFM Alignment



50YR PV Analysis

KW Service Options



- Approve entering into negotiations with Hanover County to develop an agreement for sending King William County flows to Hanover County for wastewater treatment.

HRSD COMMISSION MEETING MINUTES
May 26, 2020

ATTACHMENT #5

AGENDA ITEM 8. MIDDLESEX COUNTY AGREEMENTS

- [SEWER SERVICE](#)
- [SEWER EXTENSION](#)

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

This AGREEMENT, made on this 26th day of May, 2020 by and between Middlesex County, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as the “COUNTY”, and the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as “HRSD.”

WITNESSETH

WHEREAS, COUNTY has determined that it would be in the best interests of the citizens of the COUNTY to request that HRSD assume ownership and operation of the wastewater system and HRSD has indicated a willingness to do so under certain terms and conditions;

That for and in consideration of Ten and 00/100 Dollars, and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows;

1. COUNTY agrees to convey by general warranty deed, with English covenants of title, which shall be delivered as herein provided, and HRSD agrees to accept all County owned real property that the parties have determined are needed for the operation of a wastewater system in the County. Said properties shall include the improvements thereon and fixtures thereto attached owned by the COUNTY, as of the date of this Agreement, including but not limited to all future wastewater collection systems, pumping stations and appurtenances, together with all easements, highway permits and all rights including rights for installation, operation, maintenance, repair, relocation, renewal of, and access to, sewers and force mains that lie either within or without public streets or public places of rights of way. All of the foregoing properties, real and personal, are referred to herein as the “FACILITIES”.
2. Easements conveyed to HRSD shall be available without additional compensation for use by the COUNTY for water utility facilities only with the written approval of HRSD. HRSD shall not unreasonably withhold approval, provided HRSD’s use and enjoyment of the easement is not negatively impacted by the COUNTY water facilities and appropriate separation can be maintained between water and sanitary sewer facilities within the same easement.
3. Title to the FACILITIES shall be marketable and free and clear of any liens or encumbrances which, in the reasonable judgment of HRSD, has a materially adverse effect upon the right of HRSD to use such lands or property in the performance of the functions of HRSD or would preclude HRSD from obtaining owners title insurance on the FACILITIES at reasonable rates.

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

4. HRSD agrees to provide sewer service, beginning on the date of this Agreement or at such time as all of the Facilities are transferred to HRSD, whichever is later, to all areas designated as Sewer Service Areas by the COUNTY as well as those which may be designated by the COUNTY in the future as “Sewer Service Area” in the COUNTY’s Comprehensive Plan.
 - a. No service will be provided to any area of the COUNTY without an approved resolution of the COUNTY Board of Supervisors authorizing sewer service.
 - b. HRSD agrees to provide adequate capacity to treat all sewage generated within the areas currently designated by the COUNTY as Sewer Service Areas and all future “Sewer Service Areas” within the COUNTY in accordance with all applicable laws and regulations at HRSD cost.
 - c. Adequate capacity will be based upon land use as approved in the COUNTY Comprehensive Plan.
5. The COUNTY shall be responsible for the construction of new sewer collection systems and/or extensions of existing collection systems.
 - a. Collection systems shall be built to HRSD standards and connected to HRSD facilities in accordance with HRSD requirements.
 - b. Upon meeting final inspection requirements and before being placed in service, sewer collection systems shall be conveyed to HRSD in accordance with the terms and conditions as prescribed in Paragraphs 1 and 2 herein.
6. HRSD shall maintain and operate the sewer collection system, interceptor system and all treatment facilities in accordance with all applicable laws and regulations. HRSD will strive to meet the following levels of service:
 - a. Treatment Facilities: Permit compliance for 99 percent of all permit parameters in a calendar year.
 - b. Interceptor System Facilities: Investigation into system failures and/or overflows within 2 hours of notification. Corrective action to remediate as soon as possible thereafter.
 - c. Collection System Facilities: Investigation into system failures and/or overflows within 4 hours of notification. Corrective action to remediate as soon as possible thereafter.
 - d. System Odors: Investigation into source and or cause of odor complaints within 2 days of notification. Corrective action to remediate as soon as possible thereafter.

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

7. The COUNTY shall assist and support HRSD in the planning, scheduling, locating and constructing of new or replacement facilities required for HRSD's services.
 - a. COUNTY shall promptly notify HRSD of any proposed changes to the COUNTY's Comprehensive Plan as well as any proposed developments in accordance with the existing Comprehensive Plan with potential to add sewer flow to HRSD facilities. Failure to provide adequate notice and coordination may delay HRSD's ability to serve new or expanded service areas.

Additional treatment capacity, beyond current permitted capacity, requires a minimum of 2 years advance notice unless waived by HRSD.
 - b. COUNTY owned real property required for new or expanding HRSD facilities, including easements and fee simple title transfers shall be provided to HRSD at no cost to HRSD.
8. Any relocation of HRSD facilities at the request of the COUNTY shall be at the COUNTY's cost including facilities on COUNTY owned land or within public rights-of-way.
9. All sewer customers shall be billed for services in accordance with the current HRSD Rate Schedule and applicable policies.
 - a. COUNTY customers shall be billed in accordance with HRSD established billing policies at a frequency established by the Middlesex Water Authority water meter reading schedule.
 - b. COUNTY acknowledges HRSD's authority to cut off water service to delinquent accounts should the Middlesex Water Authority not cut off water service in accordance with Section 25 of the HRSD Enabling Legislation. Likewise, HRSD shall restore service upon receiving full payment from the delinquent accounts.
 - c. COUNTY agrees to assist HRSD in debt collection efforts within the COUNTY's authority if HRSD handles the billing for both sewer and water.
 - d. COUNTY may, at its discretion, subsidize the sewer rates of the residents of the COUNTY under a separate contract with HRSD in accordance with Section 27 of the HRSD Enabling Legislation. Any subsidy will be ratably applied to all HRSD ratepayers within the COUNTY in accordance with Section 22 of the HRSD Enabling Legislation.
10. HRSD, at its sole discretion, may self-perform or contract for provision of any or all services required to fulfill HRSD's obligations under this agreement.
11. At such time as HRSD shall determine that any real property portion of the FACILITIES is no longer useful in the performance by HRSD in its function or to fulfill any obligations under this agreement, HRSD shall offer to convey to the COUNTY, at no cost and liability to the COUNTY, said portion of real property.

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

12. The parties signed a MOU Concerning Wastewater Service for Central Middlesex dated September 3, 2013, a Memorandum of Agreement Between The Hampton Roads Sanitation District and Middlesex County for Cost Sharing Of Sewer System Projects, dated July 21, 2017, and a First Amendment of Agreement Between the Hampton Roads Sanitation District and Middlesex County For Cost Sharing of Sewer System Projects, dated March 15, 2018. These three agreements are attached hereto and incorporated by reference to this Agreement ([Attachment 1](#)). Should a provision of this Agreement be in conflict with one of the prior signed agreements, then the prior agreement shall control with reference to the conflict.
13. The parties' executed a Sewer Extension Agreement, dated May 26, 2020. That agreement is attached hereto ([Attachment 2](#)) and incorporated by reference herein. Should this Agreement have a conflict with the Sewer Extension Agreement, then the Sewer Extension Agreement shall control with reference to the conflict.
14. This AGREEMENT represents the full Sewer Service AGREEMENT and understanding of the parties hereto.
15. This AGREEMENT may be amended only with written approval of both of the parties hereto.
16. This AGREEMENT may be terminated by the COUNTY with 12 months written notice. COUNTY shall reimburse HRSD for all facilities constructed and financed by HRSD based on current depreciated value as carried on HRSD's last Comprehensive Annual Financial Report. HRSD will return all of the property transferred by the COUNTY to HRSD when this Agreement was executed (the Facilities) at no cost to the COUNTY. Upon termination, the COUNTY shall prospectively assume all regulatory liability for all sewer facilities within the COUNTY.
17. This AGREEMENT may be not be terminated by HRSD without the express written consent of the COUNTY.
18. HRSD may transfer this AGREEMENT in whole or in part with written approval from the COUNTY.
19. The parties warrant they have the permission and authority derived under general law to execute the AGREEMENT and that all necessary actions of the parties' governing bodies to allow execution of the AGREEMENT have been completed.

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

20. Any notices required pursuant to the terms of this AGREEMENT shall be deemed effective when delivered to:
- a. For the COUNTY: County Administrator, County of Middlesex, 877 General Puller Highway, Saluda, VA 23149
 - b. For HRSD: General Manager, HRSD, PO Box 5911, Virginia Beach, VA 23471

IN WITNESS WHEREOF, the parties have caused this AGREEMENT to be signed by their duly authorized officers as of the day, month and year first above written.

COUNTY of Middlesex

By Wayne H. Jessie Sr.

Date 7/23/2020

Print Wayne H. Jessie, Sr.

Title Chairman

HRSD

By Edward G. Henifin

Date 5/26/2020

Edward G. Henifin, P.E.
General Manager

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

Attachment 1

MOU Concerning Wastewater Service for Central Middlesex dated September 3, 2013, a Memorandum of Agreement Between The Hampton Roads Sanitation District and Middlesex County for Cost Sharing Of Sewer System Projects, dated July 21, 2017, and a First Amendment of Agreement Between the Hampton Roads Sanitation District and Middlesex County For Cost Sharing of Sewer System Projects, dated March 15, 2018

Middlesex County and HRSD
MOU concerning Wastewater Service for
Central Middlesex

HRSD has determined that the equipment and structures that constitute the Urbanna Treatment Plant is near the end of their useful life and requires replacement.

Middlesex County (County) has expressed an interest in providing wastewater service to selected areas of the County. To that end the County has developed a prioritization of potential service areas.

Through a series of meetings HRSD and the County has determined that is in their respective best interest to proceed as follows:

1. HRSD will perform a preliminary engineering study to determine feasible alternatives and associated costs for replacement of the Urbanna Treatment Plant facilities considering:
 - a. Replacing the existing facilities that constitute the Urbanna Wastewater Treatment Plant.
 - b. Determining suitable sites for facilities to replace the Urbanna Wastewater Treatment Plant.
 - c. Determine suitable effluent disposal or re-use sites and methods for facilities to replace the Urbanna Wastewater Treatment Plant.

2. HRSD will perform a preliminary engineering study to determine feasible alternatives and associated costs to provide wastewater collection services to designated areas of the County considering:
 - a. The areas considered and designated by the county as wastewater service areas at their public hearing held July 2, 2013, with prioritization given the study of the identified "phase 1" areas within the Saluda, Deltaville, Harmony Village, Hartfield and Jamaica service areas, as shown on the maps of those service areas developed by the County and approved on the above referenced date, before the end of calendar year 2014.
 - b. Some of the homeowner's associations representing their respective developments have expressed interest in having their utilities managed by a governmental body.
 - c. That some areas may be more amenable to decentralized and distributed wastewater management alternatives.
 - d. The incremental costs of including additional service areas.

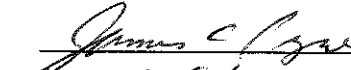
3. Prior to proceeding with the final design and construction of contemplated wastewater management alternatives the County and HRSD will negotiate and execute a binding agreement for HRSD to construct collection system improvements considering:
 - a. The selected areas to be served.
 - b. The estimated costs of constructing the facilities to serve the top priority areas and the incremental costs of serving additional areas.
 - c. Financial arrangements for the design and construction of the selected wastewater collection facilities.

- d. A proposed construction schedule.
- e. Necessary County ordinances and regulations to facilitate the funding, construction and operation of the wastewater collection system.

Signatures:

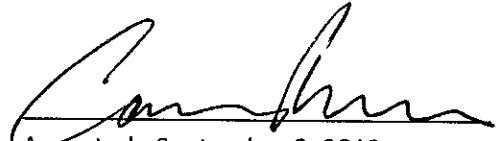
Hampton Roads Sanitation District

~~Area Manager~~ *CHIEF OF
SMALL CONSTRUCTION*


Accepted: 9/10/13

Middlesex County

Chairman, Board of Supervisors


Accepted: September 3, 2013

**MEMORANDUM OF AGREEMENT
BETWEEN
THE HAMPTON ROADS SANITATION DISTRICT
AND
MIDDLESEX COUNTY
FOR
COST SHARING OF SEWER SYSTEM PROJECTS**

This Memorandum of Agreement for Cost Sharing of Sewer Collection System Projects defines the responsibilities of the Hampton Roads Sanitation District (HRSD) and Middlesex County (the COUNTY) related to study, design and construction of sanitary sewer collection systems within Middlesex County to be connected to HRSD interceptor and treatment facilities.

BACKGROUND

1. HRSD is a political subdivision of the Commonwealth responsible for the effective treatment and disposal of wastewater in the communities that are within the HRSD service area to protect public health and the waters of the Commonwealth. HRSD is responsible for treatment capacity and piping to "intercept" local collection systems and convey those flows to the HRSD treatment facilities. HRSD owns and operates one treatment facility in Middlesex County that serves the Courthouse and County jail facilities.
2. Middlesex County is within the territory that has been legislatively and court ordered to be within the Hampton Roads Sanitation District. Middlesex County is responsible for determining where sewer service will be provided within the COUNTY and land use designations that determine the potential sewage flow from each area so designated. There are currently no sanitary sewer collection systems within the COUNTY connected to the HRSD system with the exception of the independent Town of Urbanna.
3. The COUNTY is interested in providing sewer service to other areas of the COUNTY. The COUNTY would like to take advantage of the expertise of HRSD to help determine feasibility, design and construct collection systems within the COUNTY.
4. HRSD has previously funded studies that have investigated the feasibility of adding sewer facilities to various parts of the COUNTY. These studies have been accomplished at HRSD's cost and have demonstrated that construction of collection system facilities within the COUNTY was cost prohibitive at that time. As a result the COUNTY has not moved forward on any specific project to date.

FEASIBILITY STUDIES

5. At the request of the COUNTY with appropriate approvals and in consultation with HRSD, HRSD will commission and conduct sewer feasibility studies up to and including development of a Preliminary Engineering Report (PER). Such studies shall be funded by HRSD (subject to funds availability) upon authorization by the COUNTY and completed accordance mutually agreed upon terms, cost and time schedules. Should a project not move forward within 24 months of completion of a study requested and authorized by the COUNTY, the COUNTY shall reimburse HRSD for the agreed cost of the study authorized by the County.

Project Design

6. If upon completion of a feasibility study and PER, the COUNTY desires to move a project through to detailed design and preparation of contract documents, HRSD shall fund (subject to funds availability) and manage that work on behalf of the COUNTY. All costs incurred by HRSD related to the collection system of any such project shall be reimbursed by the project funds once financing is secured by the COUNTY for construction of the collection system. Costs associated with interceptors and treatment facilities shall be HRSD's responsibility.

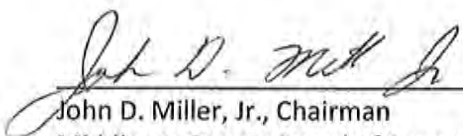
Construction

7. HRSD will manage the bidding process and construction on behalf of the COUNTY for any sanitary sewer project, including collection system projects. All costs associated with construction, inspection and administration related to the collection system portion of the project shall be included in the project cost and reimbursed to HRSD by the County. HRSD shall be responsible for all costs associated with transmission force mains, interceptors and treatment to be provided per HRSD policy.


Reimbursement

8. All payments due under this agreement shall be made within 60 days of demand. HRSD shall provide access to all records and support all payment requests with appropriate documentation (contracts, internal time accounting and hourly rates, etc.) HRSD labor will be reimbursed at the fully burdened labor rate established by HRSD during the applicable fiscal year. Should HRSD terminate the study prior to completion, HRSD forfeits all claims for reimbursement.

Signatures



John D. Miller, Jr., Chairman
Middlesex County Board of Supervisors
Date: 7/11/17



Ted Henifin
Hampton Roads Sanitation District
Date: 7/21/2017

**FIRST AMENDMENT TO MEMORANDUM OF AGREEMENT BETWEEN THE
HAMPTON ROADS SANITATION DISTRICT AND MIDDLESEX COUNTY FOR
COST SHARING OF SEWER SYSTEM PROJECTS**

This First Amendment to Memorandum of Agreement Between the Hampton Roads Sanitation District and Middlesex County For Cost Sharing of Sewer System Projects (hereinafter "MOU"), which was fully executed on July 21, 2017, is effective as of the latter signature date hereof by and between The Board of Supervisors of Middlesex County, Virginia (County) and Hampton Roads Sanitation District (HRSD), sometimes collectively referred herein as "the parties".

WHEREAS, the parties desire to amend the MOU as set forth in this First Amendment.

NOW THEREFORE, in consideration of the foregoing recitals and mutual covenants set forth herein and other good and valuable consideration, the parties hereby agree as follows:

1. The following sentence shall be added to the end of paragraph 5, entitled Feasibility Studies:

However, if the estimated project costs as determined by the Preliminary Engineering Report (PER) (based on the original scope as defined in the task order) are twenty-five (25%) percent higher or more than the initial concept project estimates provided to the County by Bowman Consulting, and if the County decides not to proceed with such project(s), then the parties shall split equally the costs of said studies.

2. All of the other terms and conditions of the MOU not in conflict with the provisions of this First Amendment shall remain in full force and effect.

Signatures:

Middlesex County Board of Supervisors

Date: 3/15/18

By: 

Name: Mark E. Holt III

Title: Chairman of Middlesex County
Board of Supervisors

HRSD

Date: 3/15/2018

By: 

Name: Ted Henifin

Title:

Approved as to form:


County Attorney

SEWER SERVICE AGREEMENT WITH MIDDLESEX COUNTY

Attachment 2

Sewer Extension Agreement among HRSD, Middlesex County and Middlesex County Water
Authority dated May 26, 2020

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

This AGREEMENT, made on this 26th day of May, 2020 among County of Middlesex, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as “COUNTY”, the Middlesex Water Authority, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as “AUTHORITY”, and the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia, hereinafter referred to as “HRSD.”

WITNESSETH

WHEREAS, COUNTY is within the territory served by HRSD.

WHEREAS, SEWERS shall refer to all public sanitary sewer infrastructure including gravity and vacuum collection systems and appurtenances, pump station facilities, force mains, booster stations, regional interceptors and treatment works; and,

WHEREAS, COLLECTION SYSTEMS shall refer to sanitary sewer infrastructure including gravity and vacuum collection systems and appurtenances, local pump station facilities, and local force mains; and,

WHEREAS, HRSD is currently operating and maintaining all existing public SEWERS in COUNTY and is responsible for the proper operations and maintenance of these SEWERS in compliance to applicable State and Federal Regulations; and,

WHEREAS, COUNTY has determined that it would be in the best interests of the citizens of COUNTY to request that HRSD assume ownership, operation & maintenance of all existing and future public SEWERS in the COUNTY; and,

WHEREAS, the “Middlesex County Sewer Preliminary Engineering Report (MP013200)” developed by Bowman Consulting Engineers and under a joint effort by HRSD and COUNTY, shall be referred to as STUDY; and,

WHEREAS, the parties have signed three (3) previous agreements, namely, “MOU Concerning Wastewater Service for Central Middlesex” dated September 3, 2013, “Memorandum of Agreement between the Hampton Roads Sanitation District and Middlesex County for Cost Sharing of Sewer System Projects”, executed on July 21, 2017 and a “First Amendment of Agreement between the Hampton Roads Sanitation District and Middlesex County for Cost Sharing of Sewer System Projects dated March 15, 2018. These three agreements are attached hereto (Attachment 1) and incorporated by reference to this Agreement. Should a provision of this Agreement be in conflict with one of the prior signed agreements, then the prior agreement shall control with reference to the conflict; and,

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

WHEREAS, the COUNTY and HRSD have executed a SEWER SERVICE AGREEMENT dated May 26, 2020, to assume ownership and operation of the wastewater system. A copy of said agreement is attached (Attachment 2) hereto and incorporated by reference to this Agreement; and

WHEREAS, HRSD has made a commitment to COUNTY to assume ownership along with all responsibilities to operate and maintain public SEWER extensions pursuant to the terms and conditions described herein.

TERMS AND CONDITIONS

1. COUNTY shall be responsible to identify where sewer service is needed and establish new Water and Sewer service areas based on planning and in coordination with HRSD. Future sewage flows shall be estimated based on land use designation and densities identified in the COUNTY's Comprehensive Plan and Land Use Ordinances and HRSD's Regional Sewage Flow Projection Data Policy.
2. HRSD shall manage the planning, design and construction of SEWERS and upon completion be responsible for the operation and maintenance of SEWERS in accordance with applicable State and Federal laws and regulations.
3. Placement of SEWERS in VDOT Right-Of-Ways shall be in accordance with the terms and conditions as described in an Agreement between COUNTY and Virginia Department of Transportation (VDOT) or through established VDOT permitting procedures.
4. All Collection systems shall be built in conformance to HRSD Design & Construction Standards and Small Communities Sewer Design Guidelines.
5. All new sewer collection systems and appurtenances, as specified in the Middlesex County Sewer Preliminary Engineering Report (MP013200) developed by Bowman Consulting Engineers dated August 30, 2019 and in the HRSD Memorandum entitled Deltaville Sanitary Sewer Alternatives Evaluation and Recommendation dated October 31, 2019, shall be funded by COUNTY or developers and conveyed to HRSD in accordance with the terms and conditions as prescribed herein.
6. Future collection systems shall be funded by COUNTY or developers and conveyed to HRSD in accordance with the terms and conditions as prescribed herein.
7. HRSD, at its sole discretion, may self-perform or contract for provision of any or all services required to fulfill HRSD's obligations under this AGREEMENT.

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

8. EASEMENT AND PROPERTY ACQUISITIONS (FACILITIES)

- a. COUNTY owned real property required for new or expanding collection systems, including easements and title transfers shall be provided to HRSD at no cost to HRSD.
- b. HRSD is responsible for obtaining all the necessary private easements to install the collection systems in Middlesex County. The COUNTY shall be consulted with, concur with offer(s), and reimburse HRSD for all private easements associated with the collection systems.

9. PROJECT COST LIABILITIES

- a. **REIMBURSEMENTS:** All payments due to HRSD under sections 9b, 9c and 9d of this agreement shall be made within sixty (60) days of demand or as the funds are disbursed by the Virginia Clean Water Revolving Loan Fund (VCWRLF). The County has identified (VCWRLF) Program administered by the Virginia Department of Environment Quality (DEQ) as a preferred funding source for its reimbursement obligation to HRSD. All allowable costs associated with design, easement acquisition, construction, inspection and administration related to the collection system portion of the project shall be included in the project cost and reimbursed to HRSD by COUNTY per Section 11 herein. HRSD labor will be reimbursed at the fully burdened rate established by HRSD during the applicable fiscal year. HRSD shall provide access to all records and support all payment requests with appropriate documentation (contracts, internal time accounting and hourly rates, etc.)
- b. **MASTER PLANNING STUDIES & PRELIMINARY ENGINEERING:**
 - (1) At the request of COUNTY, for future projects, with appropriate approvals and in consultation with HRSD, HRSD will commission a Consulting Engineer to conduct studies up to and including development of a Preliminary Engineering Report (PER). Such future studies shall be initially funded by HRSD (subject to funds availability) upon authorization by COUNTY and completed in accordance with a mutually agreed upon terms, cost and schedule. Should a future project not move forward due to COUNTY'S delay within 24 months of completion of a study requested and authorized by the COUNTY, the COUNTY shall reimburse HRSD for the agreed cost of the study and previously authorized by the COUNTY. However, if the estimated project costs as determined by the Preliminary Engineering Report (PER) (based on the original scope) are twenty five percent (25%) higher or more than the initial concept project estimates provided by HRSD as part of a sewer

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

feasibility study, and if the County decides not to proceed with such project(s), then the parties shall split equally the costs of said studies. Should HRSD terminate the study prior to completion, HRSD forfeits all claims for reimbursement by COUNTY.

- (2) HRSD shall support and consider providing sewer service in areas the COUNTY has identified as water and sewer service areas only when metered public or community water service is available or is programmed with secured funding to be available to the service area.
- (3) COUNTY shall be responsible for coordinating and providing HRSD a minimum of 2 years notice should additional treatment capacity be needed beyond current permitted capacity. HRSD may waive this requirement at its discretion.

c. **DESIGN:** Upon completion of a feasibility study and/or PER, if COUNTY desires to move a project through to detailed design and preparation of contract documents, both parties herein agree to the following:

- (1) COUNTY shall submit to HRSD a written authorization to commence design and an acknowledgement identifying an available funding source by which the design cost will be reimbursed to HRSD at the completion of the project design or as funds are disbursed by VCWRLF.
- (2) COUNTY shall be responsible for the actual cost of the design for all new collection systems and/or future extensions of existing collection systems including pump station facilities and force mains discharging to the “Regional” HRSD Interceptor Force Main network and shall reimburse HRSD as described in Section 11 above.
- (3) HRSD agrees to front the total cost, subject to availability, to commence COLLECTION SYSTEM project design as authorized by COUNTY.
- (4) HRSD shall be responsible for the costs associated with the design of regional interceptors and treatment works.

d. **CONSTRUCTION:** Both parties herein agree to the following:

- (1) COUNTY shall submit to HRSD a written authorization to commence construction and an acknowledgement of commitment identifying an available funding source by which actual construction cost will be reimbursed to HRSD in full. The County will identify a preferred funding

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

source for its reimbursement obligation to HRSD to ensure needed provisions are incorporated into the construction procurement documents.

- (2) HRSD will manage the bidding process and construction on behalf of the COUNTY for sanitary sewer projects. All costs associated with construction, inspection and administration related to the collection system portion of projects shall be included in the project cost and reimbursed to HRSD by the COUNTY per Section 9 herein. HRSD shall be responsible for all costs associated with transmission force mains, regional interceptors and treatment works to be provided per HRSD policy.
- e. **SEWERS RELOCATION:** Any relocation of HRSD facilities at the request of COUNTY shall be at COUNTY's cost including facilities on COUNTY owned land or within public rights-of way.
- f. **FUTURE SEWER COLLECTION SYSTEMS/EXTENSIONS:**
- (1) Future sewer extensions that the County or Developer elects to convey to HRSD shall be in compliance to HRSD Design & Construction Standards and Small Communities Sewer Design Guidelines.
 - (2) Future extension applications shall be submitted and processed by HRSD for review and final approval. All Applicants must use the process identified under HRSD's web site at www.hrsd.com.
 - (3) No person or entity shall be allowed to connect to HRSD SEWERS prior to final approval and written Authorization by HRSD.
 - (4) All future applicants requesting a connection to the existing or future SEWERS must also apply for public water service connection with the Middlesex Water Authority or with the County's other metered public or community water provider(s). HRSD will not consider nor will it approve applications without adhering to this requirement without written authorization by the COUNTY and AUTHORITY.

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

- g. **BILLING ACCOUNTS:** HRSD shall be responsible for billing and collecting all HRSD's wastewater charges. All wastewater customers shall be billed for services in accordance with the current HRSD Rate Schedule and applicable policies.
- (1) The COUNTY and/or AUTHORITY agrees to be supportive of HRSD's authority to collect payment for services rendered.
 - (2) AUTHORITY hereby acknowledges HRSD's authority to cut off water service to HRSD's delinquent sewer accounts in accordance with Section 25 of the HRSD Enabling Act. Likewise, service shall be restored by HRSD upon full payment of past due balance on such account and any AUTHORITY fees.
 - (3) HRSD shall reimburse AUTHORITY for expenses incurred while assisting HRSD in the suspension of water service to delinquent HRSD subscribers.
 - (4) AUTHORITY is responsible for billing and collecting water related charges. Authority customers shall be billed in accordance with its established billing policies at a frequency established and accepted by the Authority.
 - (5) AUTHORITY customers that are also HRSD wastewater customers shall be billed by HRSD for wastewater services in accordance with HRSD established billing policies at a frequency established by the AUTHORITY water meter reading schedule.
 - (6) HRSD Facility Charges for all existing single family residential homes converting from an on-site septic tank system to HRSD SEWERS connection shall be waived for the duration of this Agreement. All others must pay applicable facility charges per the HRSD Rate Schedule.
 - (7) COUNTY or AUTHORITY may establish facility charges to recover County or Authority costs associated in providing collection systems or water.

10. COUNTY or AUTHORITY OWNED AND OPERATED SEWER SYSTEMS

Nothing in this agreement shall prohibit the County or Authority from planning, designing, constructing, owning, operating and maintaining its own sewer system.

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

11. AGREEMENT AMENDMENTS & TERMINATION

- a. This AGREEMENT may be amended only with written approval of ~~both~~ of the parties hereto. *GM*
WTH
- b. This AGREEMENT may be terminated by COUNTY with 12 months written notice. COUNTY shall reimburse HRSD for all facilities constructed by HRSD based on current depreciated value as carried on HRSD's last Comprehensive Annual Financial Report. HRSD will return all of the property transferred by COUNTY to HRSD when this Agreement was executed (the Facilities) at no cost to the COUNTY. Upon termination, the COUNTY shall prospectively assume all regulatory liability for all sewer facilities within the COUNTY.
- c. This AGREEMENT may be not be terminated by HRSD without the express written consent of COUNTY.
- d. HRSD may transfer this AGREEMENT in whole or in part with written approval from COUNTY.
- e. The parties warrant they have the permission and authority derived under general law to execute the AGREEMENT and that all necessary actions of the parties' governing bodies to allow execution of the AGREEMENT have been completed.
- f. Any notices required pursuant to the terms of this AGREEMENT shall be deemed effective when delivered to:
- (1) For the COUNTY: County Administrator, County of Middlesex, 877 General Puller Highway, Saluda, VA 23149
 - (2) For the AUTHORITY: Executive Director, Middlesex Water Authority, 877 General Puller Highway, Saluda, Va. 23149
 - (3) For HRSD: General Manager, HRSD, PO Box 5911, Virginia Beach, VA 23471

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

IN WITNESS WHEREOF, the parties have caused this AGREEMENT to be signed by their duly authorized officers as of the day, month and year first above written.

COUNTY OF MIDDLESEX

By Wayne H. Jessie, Sr. Date 7-23-2020
Print Wayne H. Jessie, Sr.
Title Chairman

MIDDLESEX WATER AUTHORITY

By Greg R. Chambers Date 8-11-2020
Print Greg R. Chambers
Title Chairman

Approved as to form:

Heather W. Lewis
Heather W. Lewis
County Attorney

HRSD

By Edward G. Henifin Date 5/26/2020
Edward G. Henifin, P.E. General Manager

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

Attachment 1

MOU Concerning Wastewater Service for Central Middlesex” dated September 3, 2013, “Memorandum of Agreement between the Hampton Roads Sanitation District and Middlesex County for Cost Sharing of Sewer System Projects”, executed on July 21, 2017 and a “First Amendment of Agreement between the Hampton Roads Sanitation District and Middlesex County for Cost Sharing of Sewer System Projects dated March 15, 2018.

**SEWER EXTENSION AGREEMENT AMONG HAMPTON ROADS SANITATION
DISTRICT, MIDDLESEX COUNTY AND MIDDLESEX COUNTY WATER
AUTHORITY**

Attachment 2

SEWER SERVICE AGREEMENT with Middlesex County dated May 26, 2020

HRSD COMMISSION MEETING MINUTES
May 26, 2020

ATTACHMENT #6

AGENDA ITEM 12. LUCAS CREEK PUMP STATION REPLACEMENT ACQUISITION
OF REAL PROPERTY – 748 OLD LUCAS CREEK ROAD, NEWPORT NEWS

- [PURCHASE AGREEMENT](#)
- [DEED \(added 01/06/2022\)](#)
- [LOCATION MAP](#)

PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (this "Agreement") made this 16th day of May, 2020, by and **TED R. EHRENFRIED and DORIS F. EHRENFRIED**, husband and wife, hereinafter referred to as Seller, and **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia ("HRSD"), Purchaser.

RECITALS

- A. Seller is the owner in fee simple absolute of a certain parcel of property approximately .29 acres in area (more or less), located at 748 Old Lucas Creek Road in the City of Newport News, such property being more particularly described in Exhibit A which is attached to and made a part of this Agreement (the "Property").
- B. HRSD desires to purchase the Property from the Seller for the purpose of the Lucas Creek Pump Station Replacement Project.
- C. Seller is willing to sell the Property to HRSD subject to the terms and conditions set forth in this Agreement.
- D. These recitals are incorporated by this reference into this Agreement.

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

- 1. **SALE.** Seller agrees to sell and HRSD agrees to purchase the Property, together with all rights and appurtenances thereto, including all right, title and interest of Seller in and to any land lying in the bed of any highway, street, road, or avenue, open or proposed, in front of or abutting, or adjoining such tract or piece of land and any riparian rights, if any, and any rights, easements, and appurtenances pertaining thereto, and any building and other property situated thereon, (excluding personal property except to the extent that Seller chooses to leave on premises upon vacation) attached or appurtenant to, located in or on, or used in connection with the real property, if any. The real property and the personal property are called "the Property".
- 2. **PURCHASE PRICE.** The purchase price ("Purchase Price") for the Property is **TWO HUNDRED, TWENTY FIVE THOUSAND and 00/100 DOLLARS** (\$225,000.00); and shall be paid by HRSD to the Seller at Settlement by cash or certified funds.

3. CONVEYANCE.

- a. At the Closing, Seller shall convey title to the Property in fee simple, by general warranty deed, free and clear of any and all liens, mortgages, deeds of trust, security interests, leases, covenants, conditions, restrictions, easements, rights-of-way, licenses, encroachments, judgments or encumbrances of any kind, except for the following permitted exceptions: (a) the lien of real estate taxes not yet due and payable; (b) zoning and building restrictions and other laws, ordinances, and regulations of governmental bodies having jurisdiction over the Property; and (c) matters of record affecting title to the property, as reviewed and approved (or deemed approved) by HRSD in accordance with this Agreement. Except as expressly stated in this Agreement, the Property shall be conveyed in "AS IS" condition, and with all defects.

- b. Title to the Property shall be good and marketable and, if HRSD chooses to obtain title insurance, insurable by a nationally recognized ALTA title insurance company of HRSD's choice at or below normal rates. In the event that a title examination discloses defects of title or other matters unsatisfactory to HRSD, HRSD shall notify Seller in writing (an "Objection Notice"), within 15 days of the Effective Date, of such title defects or other matters to which HRSD objects. Seller covenants that it shall cure all monetary encumbrances and all title objections which may be cured by execution of a document requiring the signature of no party other than Seller (including any affidavits which may reasonably be required by the title insurer). Seller may notify HRSD in writing (an "Objection Response"), within ten (10) business days after receiving an Objection Notice if it believes that the Objection Notice makes reference to any title defect or other matter that Seller cannot or elects not to cure. Upon receipt of an Objection Response from Seller, HRSD shall have the option either to (i) terminate this Agreement by notice to Seller given within ten (10) business days of the Objection Response or (ii) accept the defects, exceptions or other matters referenced in such Objection Response and proceed to Closing hereunder with no reduction of the Purchase Price. Seller shall have the period until the Closing date within which to correct all defects, exceptions or other matters that it is required or elects to cure. Seller shall provide such documents (including evidence of authority), affidavits, and other instruments that may be reasonably required for the issuance of a title insurance policy to HRSD.

- c. Possession of the Property will be given to HRSD at Closing, per attached Possession Agreement (attached as Exhibit B) except that HRSD will have access to the Property for the purposes specified herein.
 - d. Seller agrees to pay proration of real estate taxes and storm water fees and agrees to deliver possession of the Property to HRSD at settlement, or as per Exhibit B. HRSD will pay all other fees charged in connection with preparation and recordation of the deed, including grantor's tax and other applicable closing costs.
 - e. Seller and HRSD agree that the attorney selected by HRSD shall act as the Settlement Agent at HRSD's expense. The Settlement Agent shall prepare the settlement statement, update and record the deed, collect and disburse settlement funds in accordance with this Agreement and the settlement statement, and file any required state and federal tax forms or other certifications.
 - f. HRSD will pay in full Seller's existing mortgage to Nationstar Mortgage, LLC, d/b/a Champion Mortgage Company. Total payoff estimated at approximately \$200,000.
4. RIGHT OF ENTRY. HRSD and HRSD's authorized representatives may at any reasonable time and after giving reasonable notice to Seller, enter upon the Property for the purpose of making inspections, appraisals, surveys, including the cutting of survey lines and putting up markers and driving stubs and stakes, site analysis, engineering studies, core sampling for engineering reports, and locating existing rights of way, easements, and utilities. HRSD will exercise this right of entry in such a way so as to not cause unreasonable damage to the Property. HRSD agrees to indemnify and save harmless the Seller from all claims of liability for any personal injury or property damage or otherwise to any person or property caused by any action or omission of HRSD or its agents on the Property before or after Closing.
5. CONDITIONS PRECEDENT.
- a. Seller hereby acknowledges that Buyer is acquiring the property for the purpose of operating twenty-four hours a day a pump station for use and the infrastructure of the HRSD sewage treatment facilities, in accordance with the ordinances of the City of Newport News,

and the parties agree that all Conditions Precedent that are relevant to the Buyer must be satisfied within 180 days of the effective date of this Agreement. Should the Conditions Precedent mentioned herein not be satisfied within the 180-day timeframe, Seller may keep the deposit as liquidated damages, and shall have no other remedies should Buyer terminate this Agreement. Accordingly, during the period of 180 days from the date of the full execution of this Agreement, or as such period may be extended in accordance with the mutual extension agreement of the parties to this Agreement, the parties shall use commercially reasonable efforts to satisfy the following Conditions Precedent: (i) the receipt of satisfactory construction bids and/or cost estimates for Buyer's construction in connection with Buyer's intended use of the property having been obtained which in Buyer's sole opinion makes Buyer's construction and use for its intended use of the property economically feasible; (ii) all permits, licenses, and approvals with conditions acceptable to Buyer required for the construction or installation of Buyer's pump station in accordance with its intended use of the property having been obtained at the expense of Buyer, including without limitation, approvals required under all applicable zoning, environmental, wetlands, subdivision control, sanitary, health, safety and land-use law and regulations of the City of Newport News; (iii) all other operational licenses City and Governmental approvals and conditions acceptable to Buyer required for the completion of construction and operation of the pump station anticipated in accordance with Buyer's intended use; (iv) environmental testing to include wetlands delineation, which reports are satisfactory, in Buyer's sole discretion, to the completion of Buyer's intended use of the property.

- b. In the event these initial Conditions Precedent have not been satisfied or waived by Buyer on or before the conclusion of the 180th day from the effective date of this Agreement, this Agreement may be terminated in its entirety by Buyer sending written notice to Seller of the same in accordance with the Notices paragraph in this Agreement (Paragraph 7).
- c. This Agreement is contingent on the review and approval of the Hampton Roads Sanitation District Commission and upon such Commission granting authorization to the General Manager to proceed under the terms of this Agreement.

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

Seller further represents and warrants and shall deliver to HRSD at or prior to the Settlement, an Owner's Affidavit (prepared by HRSD) and all other documents required by the title company to issue an owner's policy evidencing the following facts:

- (i) Other than this Agreement, there are no other contracts for sale or options involving the Property now in effect;
- (ii) To the best of Seller's knowledge, no other party has any right, title or interest in the Property; other than deeds of trust or other documents of record.
- (iii) There are no unrecorded leases, options, licenses or easements existing in connection with the property to which the Seller has knowledge;
- (iv) There are no adverse government notifications or proceedings and there is no pending or threatened litigation or any other potentially adverse claims affecting the property to which the Seller has knowledge.
- (v) Foreign Status. Seller is not a foreign corporation, person or entity and is a "United States Corporations, Person or Entity" as such terms is defined in Section 1445 and in Section 7701 (a)(30) of the Internal Revenue Code of 1986, as amended (the "Code") and shall deliver to HRSD at or prior to the Settlement an Affidavit prepared by HRSD evidencing such fact and such other documents as may be required under the Code.
- (vi) From and after the date of this Agreement, Seller shall not transfer any interest in, or grant any easements or enter into any contractual agreement or understanding, written or oral, with respect to the Property or any portion thereof or make any changes at all that require recordation and therefore modifications to title, without the prior written consent of HRSD.

7. NOTICES. All notices to the parties hereto will be delivered by hand, via certified mail return receipt requested, or via facsimile and all be deemed effective upon delivery if by hand and upon confirmation of receipt if by other means, to the following address until the address is changed by notice in writing to the other party:
- HRSD: Ayanna R. Williams, R.E. Manager
1434 Air Rail Avenue
Virginia Beach, Virginia 23471-0911
- Copy to: Conway Sheild, III, Esq.
Jones, Blechman, Woltz & Kelly, P.C.
701 Town Center Drive, Suite 800
Newport News, Virginia 23606
- Seller: Ted and Doris Ehrenfried
748 Old Lucas Creek Road
Newport News, VA 2362
8. CLOSING. Unless this Agreement is terminated pursuant to its terms or by mutual agreement of the parties, Closing will be made at the offices of the Settlement Agent on or about May 27, 2020.
9. SURVIVAL. The provisions contained in this Agreement will be true as of the date of this Agreement and as of the date of Closing.
10. PRORATIONS. All rents, interest, taxes, insurance premiums, utility bills, and fuel oil, if any, will be prorated as of the date of Closing.
11. RISK OF LOSS. All risk of loss or damage to the Property by fire, windstorm, casualty, or other cause is assumed by Seller until Closing. In the event of substantial loss or damage to the Property before Closing, HRSD will have the option of either:
- a. Terminating this Agreement, or
 - b. Affirming this Agreement and proceeding to Closing.
12. RIGHT OF FIRST REFUSAL. In the event that HRSD shall determine to sell all or a portion of the property for private development within two (2) years of the Settlement Date, it agrees to notify Seller and give Seller first opportunity to purchase the property on such terms as the parties shall mutually agree. Such notice shall be writing addressed in accordance

with the provisions of Section 8 herein or such other address provided to HRSD by the Seller and shall provide Seller with at least thirty (30) calendar days to present HRSD with an offer to purchase the property.

13. CONDEMNATION. Seller covenants and warrants that Seller has not heretofore received any notice of any condemnation proceeding or other proceeding in the nature of eminent domain in connection with the Property. If prior to Settlement any such proceeding is commenced or any change is made, or proposed to be made, to the current means of ingress and egress to the Property or to the roads or driveways adjoining the Property, or to change such ingress or egress or to change the grade thereof, Seller agrees immediately to notify HRSD thereof. HRSD then shall have the right, at HRSD's option, to terminate this Agreement by giving written notice to Seller within thirty (30) days after receipt of such notice.

14. DEFAULT AND REMEDIES.
 - a. If the sale and purchase contemplated by this Agreement is not consummated because of Seller's or HRSD's default, the non-defaulting party may elect to:
 - i Terminate this Agreement;
 - ii Seek and obtain specific performance of this Agreement; or
 - iii Pursue all other rights or remedies available at law or in equity, including an action for damages.

 - b. If either Seller or HRSD defaults under this Agreement, the defaulting party will be liable for any expenses incurred by the non-defaulting party in connection with the enforcement of its rights under this Agreement.

 - c. These remedies are cumulative and non-exclusive and may be pursued at the option of the non-defaulting party without a requirement of election of remedies.

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

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

16. WAIVER. Failure to insist upon strict compliance with any of the terms, covenants, or conditions hereof will not be deemed a waiver of the term, covenant, or condition, nor will any waiver or relinquishment of any right or power at any one time or more times be deemed a waiver or relinquishment of the right or power at any other time or times.
17. SEVERABILITY. This Agreement will be construed in its entirety and will not be divisible, except that the invalidity or unenforceability of any provision hereof will in no way affect the validity or enforceability of any other provision.
18. CAPTIONS. Captions are used in this Agreement for convenience only and will not be used to interpret this Agreement or any part of it.
19. GOVERNING LAW. This Agreement is to be construed in accordance with the laws of the Commonwealth of Virginia.
20. CHOICE OF FORUM/JURISDICTION. The parties hereby consent to the jurisdiction and venue of the courts of the Commonwealth of Virginia, specifically to the courts of the City of Newport News, Virginia, and to the jurisdiction and venue of the United States District Court for the Eastern District of Virginia in connection with any action, suit, or proceeding arising out of or relating to this Agreement and further waive and agree not to assert in any action, suit, or proceeding brought in the City of Newport News, Virginia, or the Eastern District of Virginia that the parties are not personally subject to the jurisdiction of these courts, that the action, suit, or proceeding is brought in an inconvenient forum or that venue is improper.
22. WAIVER OF TRIAL BY JURY. THE PARTIES WAIVE TRIAL BY JURY IN ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY EITHER PARTY AGAINST THE OTHER ON ANY MATTER WHATSOEVER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ANY RELATED AGREEMENTS OR INSTRUMENTS AND THE ENFORCEMENT THEREOF, INCLUDING ANY CLAIM OF INJURY OR DAMAGE TO ANY PARTY OR THE PROPERTY OF ANY PARTY.

23. SUCCESSOR/ASSIGNMENT. This Agreement will be binding upon and the obligations and benefits hereof will accrue to the parties hereto, their heirs, personal representatives, successors, and assigns. This Agreement is assignable by HRSD only upon written consent of the Seller, which consent will not be unreasonably withheld. If this Agreement is assigned by HRSD with Seller's consent, HRSD will nevertheless remain fully liable for its performance.
24. COUNTERPARTS. This Agreement may be executed in any number of counterparts, each will be considered an original, and together they will constitute one Agreement.
25. FACSIMILE SIGNATURES. Facsimile signatures will be considered original signatures for the purpose of execution and enforcement of the rights delineated in this Agreement.

[SIGNATURE PAGES TO FOLLOW]

SELLER:


Ted R. Ehrenfried (signature)

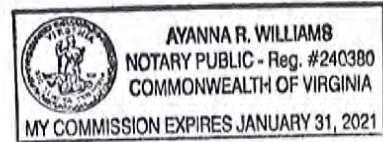
COMMONWEALTH OF VIRGINIA
CITY OF Newport News, to-wit:

I, Ayanna R. Williams, do hereby certify that Ted R. Ehrenfried,
Seller herein, whose name is signed to the foregoing Purchase and Sale Agreement,
has acknowledged the same before me in my City and State aforesaid.

Given under my hand this 16th day of May, 2020.

Ayanna R. Williams
Notary Public

My Commission Expires: Jan. 31, 2021
Registration Number: 240380



SELLER:


Doris F. Ehrenfried (signature)

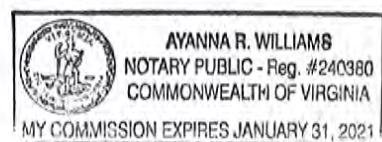
COMMONWEALTH OF VIRGINIA
CITY OF Newport News, to-wit:

I, Ayanna R. Williams, do hereby certify that Doris F. Ehrenfried,
Seller herein, whose name is signed to the foregoing Purchase and Sale Agreement,
has acknowledged the same before me in my City and State aforesaid.

Given under my hand this 16th day of May, 2020.

Ayanna R. Williams
Notary Public

My Commission Expires: Jan. 31, 2021
Registration Number: 240380



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 May 26, 2020. This Agreement is expressly subject to approval by the HRSD Commission.

HAMPTON ROADS SANITATION DISTRICT

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

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

The foregoing Purchase and Sale Agreement was acknowledged before me this 26th day of May, 2020, by Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District.


Notary Public

My Commission Expires: _____
Registration No.: _____

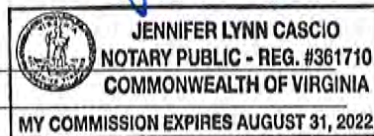


Exhibit "A"

Legal Property Description

ALL THAT certain lot, piece or parcel of land, situate, lying and being in the City of Newport News, Virginia, known and designated as Lot Ninety-Eight (98) as shown on that certain plat entitled "Denbigh Shores, Section One," made by Coenen & Associates, Engineers, dated February 25, 1969, duly recorded in the Clerk's Office of the Circuit Court for the City of Newport News, Virginia, on March 25, 1970 in Plat Book 8 Page 20.

Together with all and singular the buildings and improvements thereon, the rights and privileges, the tenements, hereditaments, easements and appurtenances unto the said land belonging or in anywise appertaining.

Subject to restrictions, covenants, conditions and easements of record.

It being the same property conveyed to Harvey L. Hale and Lynnece P. Hale, husband and wife, by deed from Robert W. Mackey, Sr. and Shirley A. Mackey, husband and wife, dated May 25, 1995, and recorded in the Clerk's Office of the Circuit Court for the City of Newport News on June 9, 1995 in Deed Book 1401, page 0080.

Exhibit "B"

Post-Closing Agreement

POST-CLOSING POSSESSION AGREEMENT

PURCHASER: HAMPTON ROADS SANITATION DISTRICT (HRSD), a political subdivision of the Commonwealth of Virginia

SELLER: TED AND DORIS EHRENFRIED

PROPERTY: 748 Old Lucas Creek Road, Newport News, VA 23663
Parcel Identification: 127000134

DATES OF POSSESSION: June 1, 2020 to August 31, 2020

WHEREAS, the Seller has entered into a Contract for the purchase of the above captioned property from the Purchaser, which contract is dated May 16th, 2020; and

WHEREAS, the Seller wishes to possess and occupy the property after the closing date; June 1, 2020.

NOW, THEREFORE, in consideration of mutual promises, the parties agree as follows:

1. During the Dates of Possession, June 1, 2020 to August 31, 2020, Seller may occupy the property at the rate of \$ 0.00 per day.
2. The Seller agrees to procure and maintain in effect, prior to entering into possession, a policy or policies of insurance adequately covering the subject property satisfactory to Purchaser and insuring against fire and any casualty and/or public liability which may arise out of or by virtue of the use and occupancy of the subject property by the Seller.
3. The Seller hereby agrees to indemnify and hold the Purchaser harmless from any and all claims, demands, action, causes of action, damages, expenses, losses, attorney's fees or liabilities arising in any way from or out of this occupancy, use or enjoyment of the subject property after closing.
4. The Seller accepts the subject property “as is” as of the Date of Possession, and will take no action to damage the property during Seller's tenancy. If damage occurs to the property, or any deterioration which is beyond reasonable wear and tear, the Seller shall remediate the property immediately, at his expense.
5. Should Seller maintain possession, or not turn possession over to Purchaser on or before September 15, 2020, Seller owes Purchaser \$50.00 per day for rent. Further should Seller not vacate the premises by September 30, 2020, Seller agrees to be responsible for the expenses of Purchaser in any legal

- proceedings to evict Seller from premises, to include attorney's fees and costs.
6. The Seller agrees to pay all expenses in connection with his occupancy of the subject property, including, but not limited to, utilities and fuel during possession.
 7. This agreement may be executed in counterparts.

IN WITNESS WHEREOF, the parties have caused their hands and seals to be affixed this _____ day of June 1, 2020.

Purchaser: HAMPTON ROADS SANITATION
DISTRICT

By: Ayanna R. Williams
Ayanna R. Williams, SR/WA
Real Estate Manager, HRSD

Seller: Ted R. Ehrenfried
Ted R. Ehrenfried

Seller: Doris F. Ehrenfried
Doris F. Ehrenfried

POST-CLOSING POSSESSION AGREEMENT

PURCHASER: HAMPTON ROADS SANITATION DISTRICT (HRSD), a political subdivision of the Commonwealth of Virginia

SELLER: TED AND DORIS EHRENFRIED

PROPERTY: 748 Old Lucas Creek Road, Newport News, VA 23663
Parcel Identification: 127000134

DATES OF

POSSESSION: June 1, 2020 to August 31, 2020

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3. The Seller hereby agrees to indemnify and hold the Purchaser harmless from any and all claims, demands, action, causes of action, damages, expenses, losses, attorney's fees or liabilities arising in any way from or out of this occupancy, use or enjoyment of the subject property after closing.
4. The Seller accepts the subject property “as is” as of the Date of Possession, and will take no action to damage the property during Seller's tenancy. If damage occurs to the property, or any deterioration which is beyond reasonable wear and tear, the Seller shall remediate the property immediately, at his expense.
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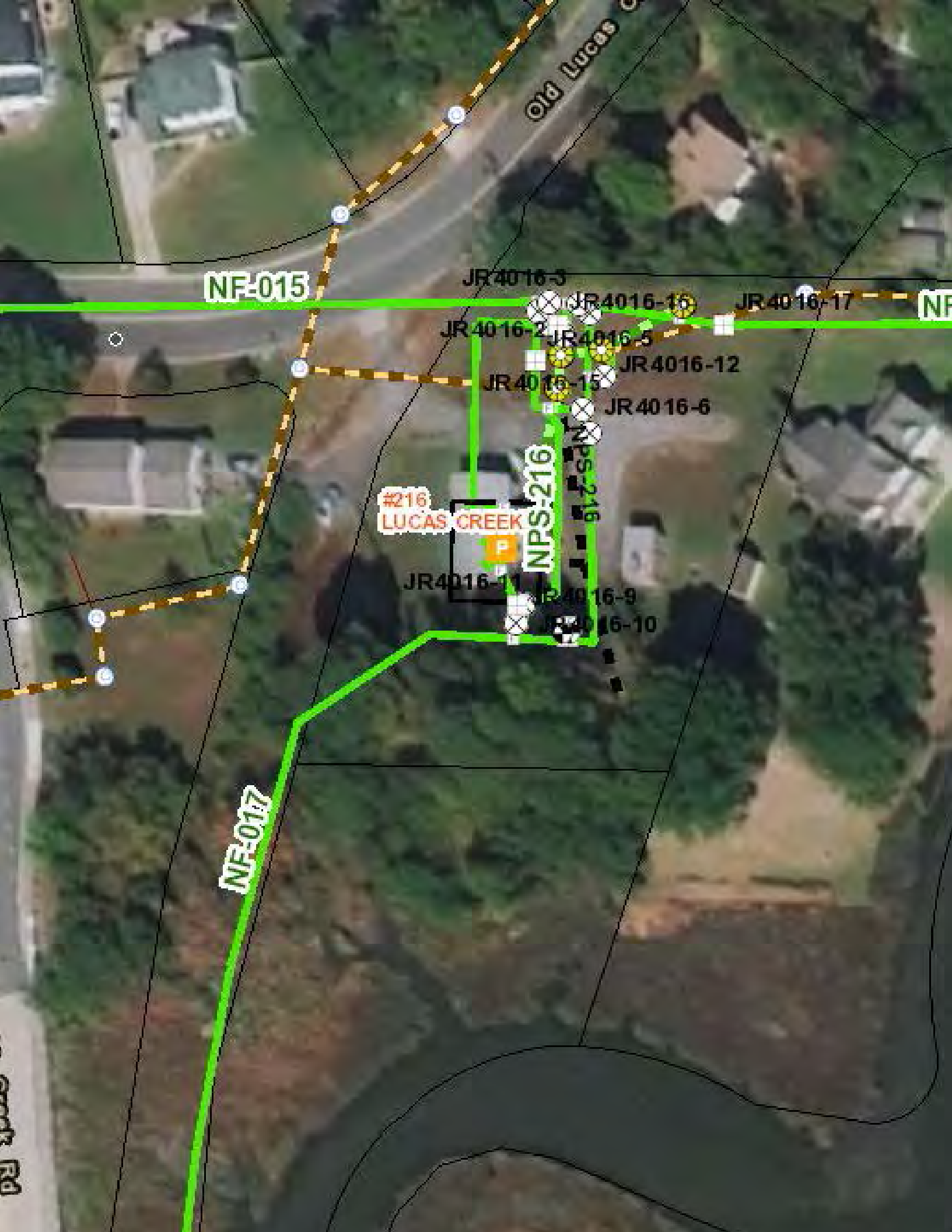
IN WITNESS WHEREOF, the parties have caused their hands and seals to be affixed this 1st day of June, 2020.

Purchaser: HAMPTON ROADS SANITATION DISTRICT

By: Ayanna R. Williams
Ayanna R. Williams, SR/WA
Real Estate Manager, HRSD

Seller: Ted R. Ehrenfried
Ted R. Ehrenfried

Seller: Doris F. Ehrenfried
Doris F. Ehrenfried



Old Lucas C...

NF-015

JR 4016-3

JR 4016-15

JR 4016-17

NF

JR 4016-2

JR 4016-5

JR 4016-12

JR 4016-15

JR 4016-6

#216
LUCAS CREEK

NPS-216

NPS-216

JR 4016-11

JR 4016-9

JR 4016-10

NF-017

Creek Rd



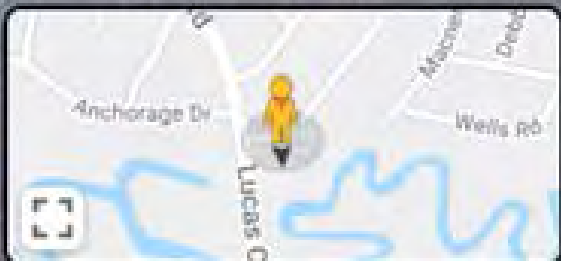


Google

Image capture: Aug 2015 © 2020 Google United States Term

Google

Street View



HRSD COMMISSION MEETING MINUTES
May 26, 2020

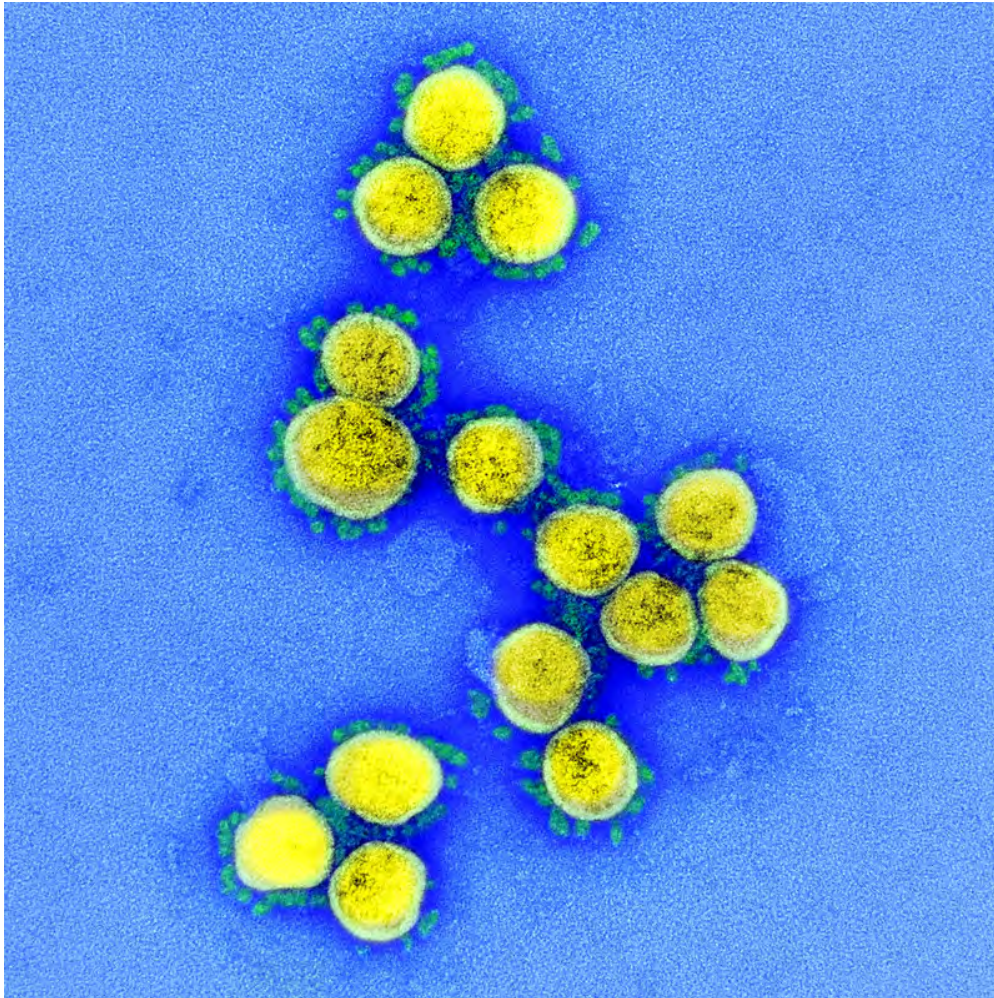
ATTACHMENT #7

AGENDA ITEM 13. COVID-19 WASTEWATER SURVEILLANCE STUDY
PRESENTATION



COVID-19 Surveillance using Wastewater-Based Epidemiology

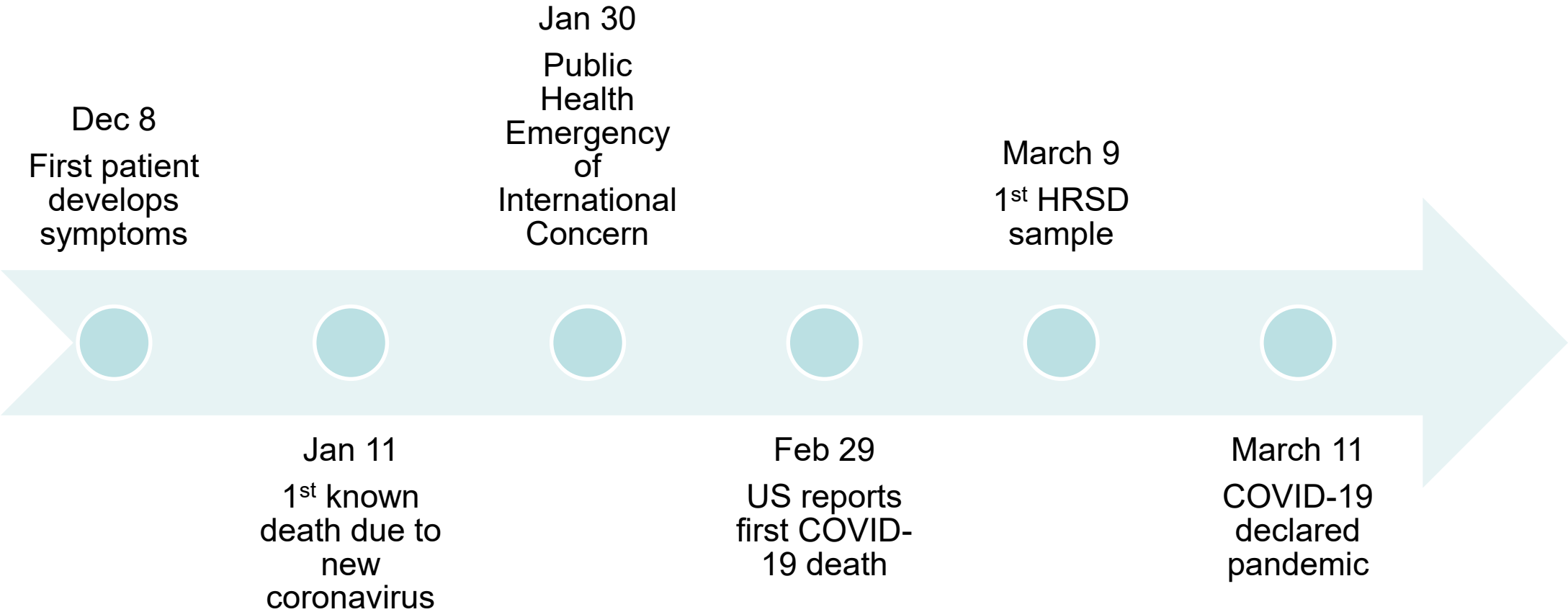
May 26, 2020

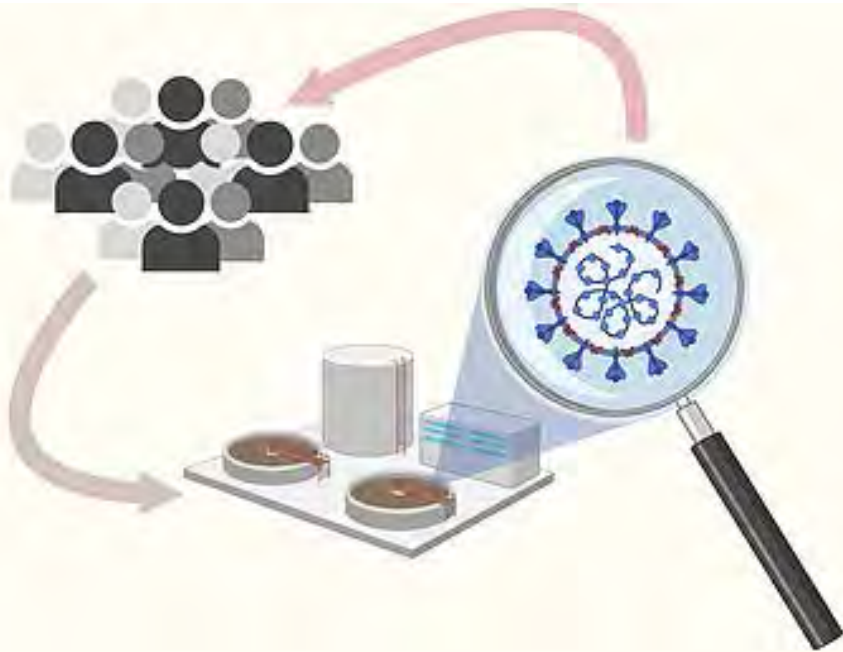


Source: NIAID

- Coronavirus disease 2019
- Viral agent: severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
- high infectivity, relatively high asymptomatic ratio in the population, and potential to result in serious health complications

COVID-19 Timeline





- Observe community-level trends through biomarkers in raw wastewater
- Past studies:
 - Pharmaceuticals
 - Illicit drugs
 - Industrial chemicals
 - Emerging contaminants
 - Population health markers

[Euro Surveill.](#) 2018 Feb 15; 23(7): 17-00237.

doi: [10.2807/1560-7917.ES.2018.23.7.17-00237](https://doi.org/10.2807/1560-7917.ES.2018.23.7.17-00237)

PMCID: PMC5824128

PMID: [29471623](https://pubmed.ncbi.nlm.nih.gov/29471623/)

Monitoring human enteric viruses in wastewater and relevance to infections encountered in the clinical setting: a one-year experiment in central France, 2014 to 2015

Environmental Microbiology

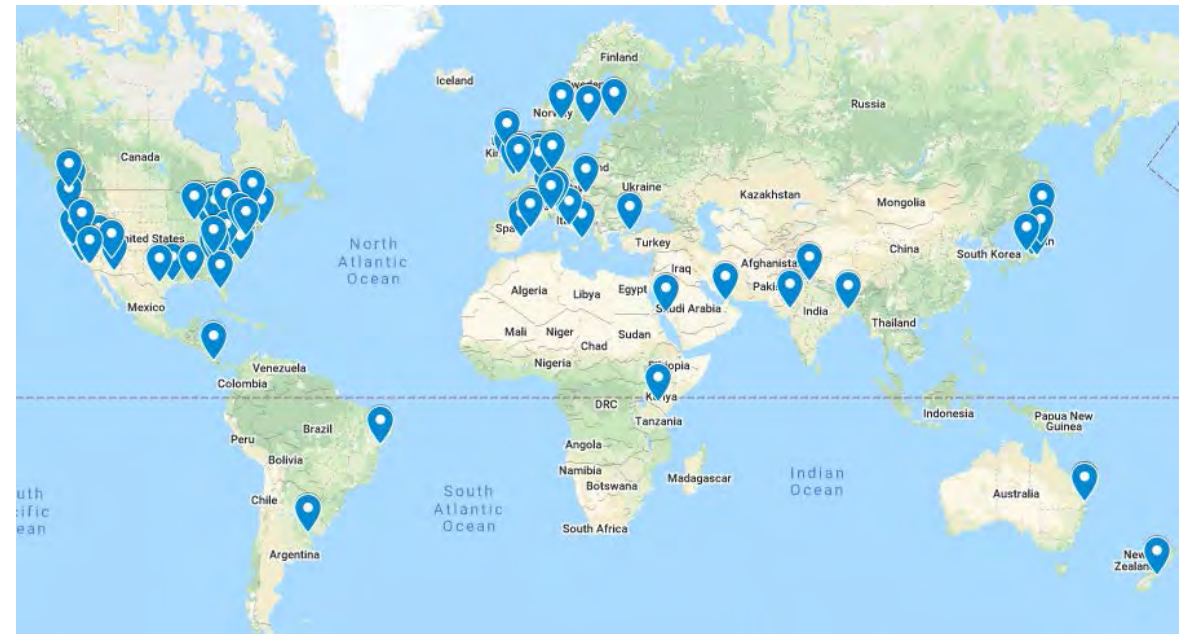
Detection of Pathogenic Viruses in Sewage Provided Early Warnings of Hepatitis A Virus and Norovirus Outbreaks

Maria Hellmér, Nicklas Paxéus, Lars Magnus, Lucica Enache, Birgitta Arnholm, Annette Johansson, Tomas Bergström, Heléne Norder
D. W. Schaffner, Editor

REVIEW ARTICLE

Role of environmental poliovirus surveillance in global polio eradication and beyond

T. HOVI^{1*}, L. M. SHULMAN², H. VAN DER AVOORT³, J. DESHPANDE⁴,
M. ROIVAINEN¹ AND E. M. DE GOURVILLE⁵

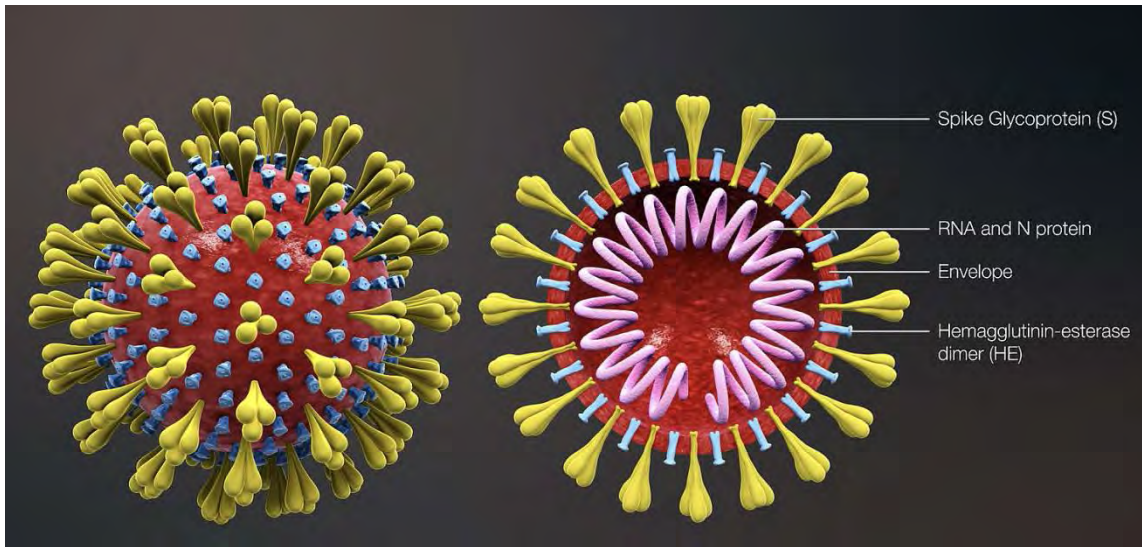


Goal: Regional study that fully captures the rise and fall of COVID-19 cases

Objectives:

1. describe the trends in SARS-CoV-2 occurrence
2. assess the 'true' prevalence of COVID-19

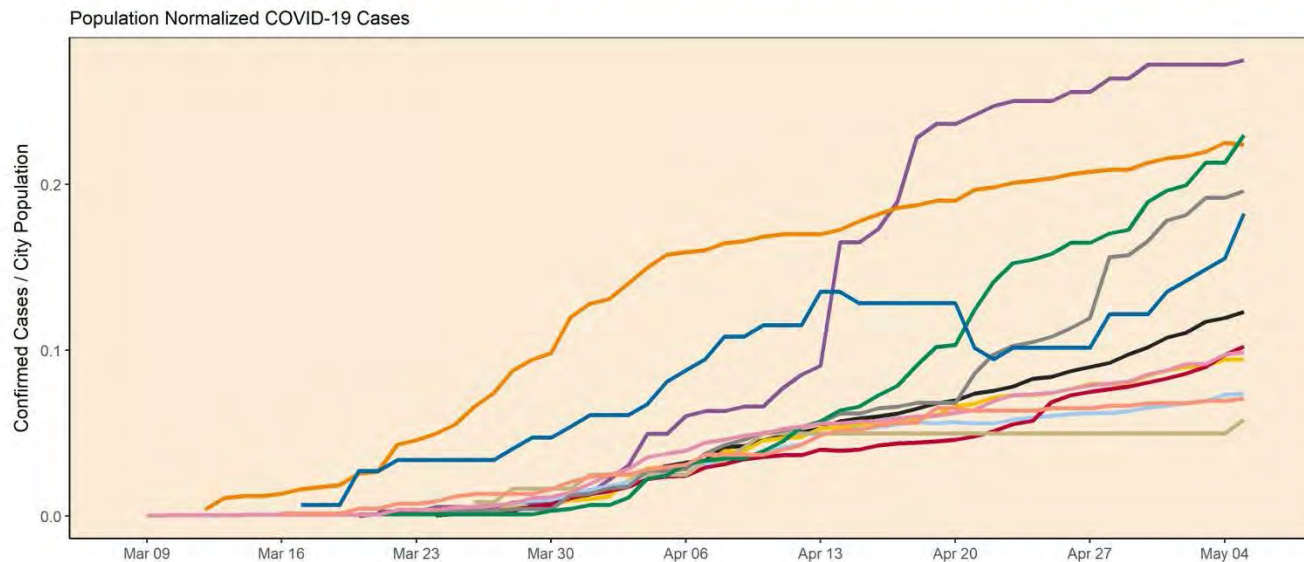
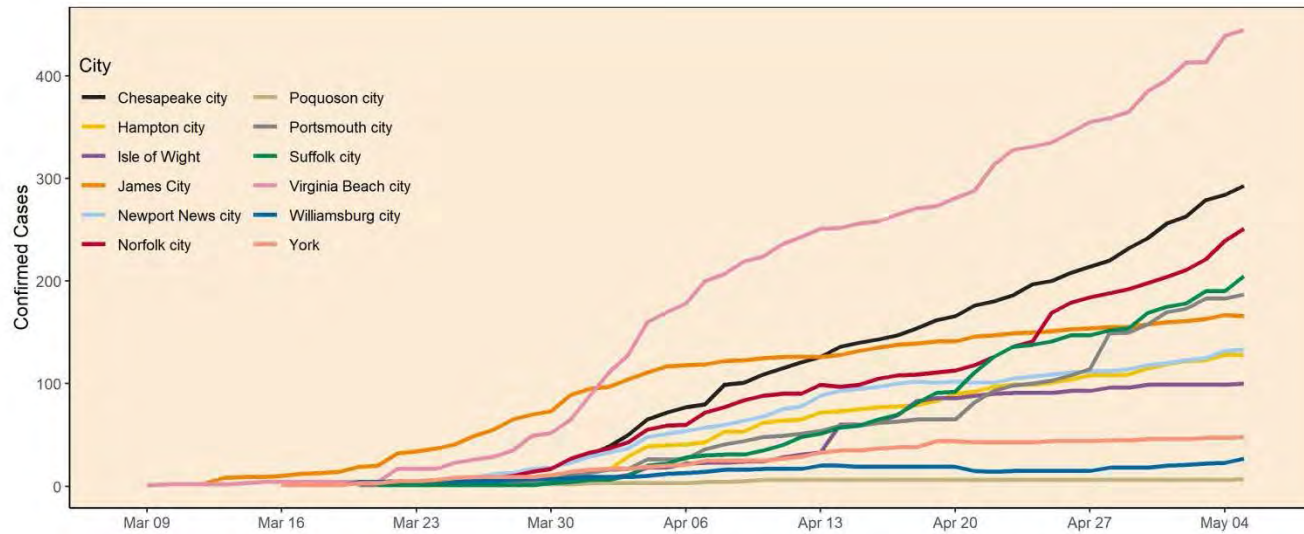




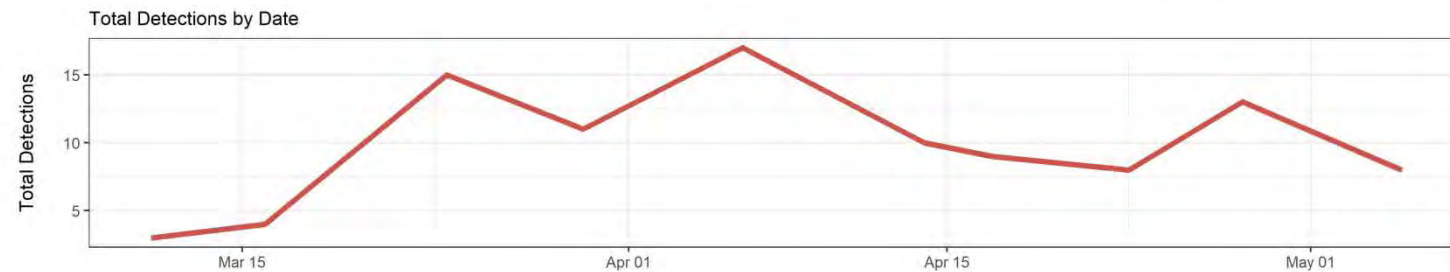
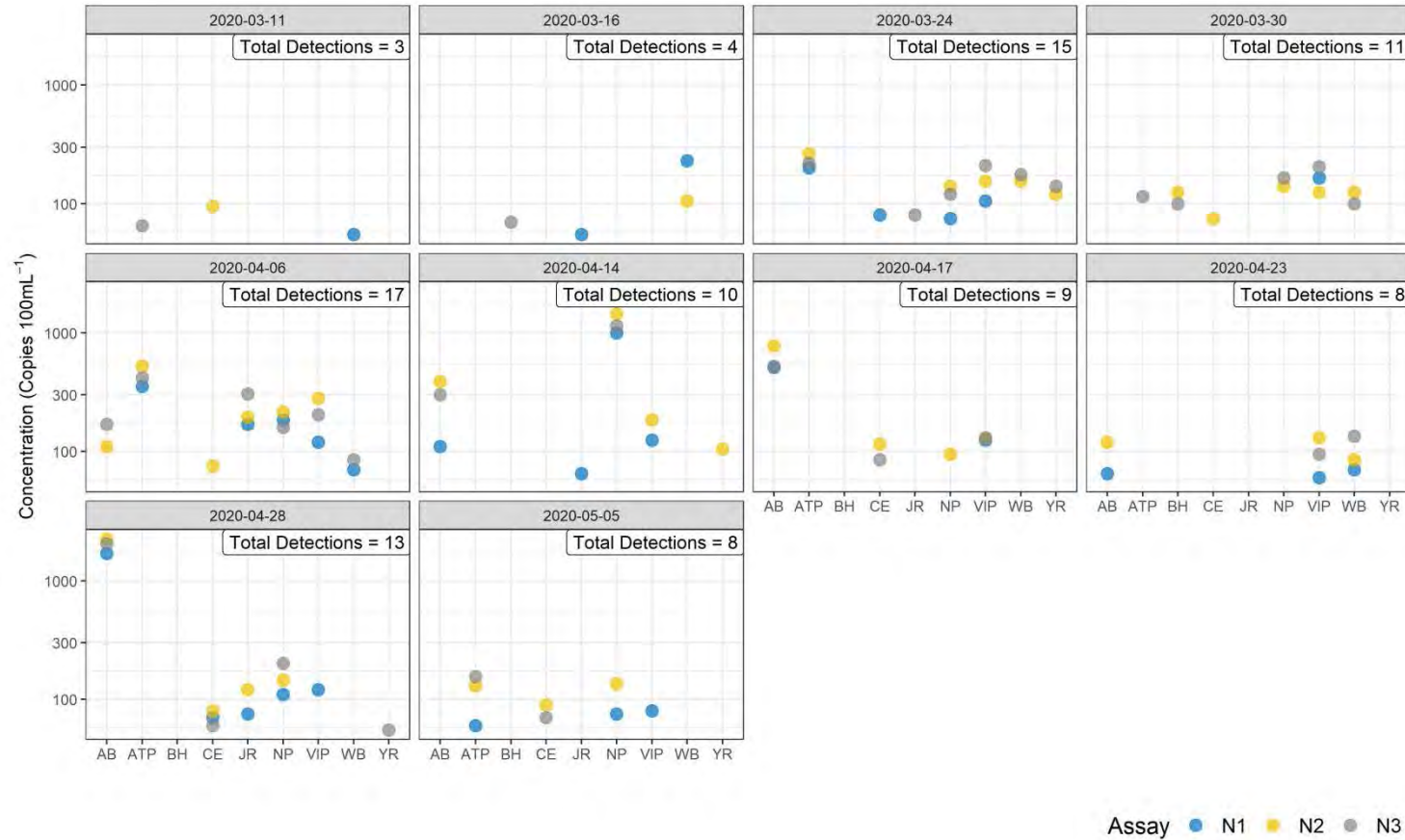
Source: https://commons.wikimedia.org/wiki/File:3D_medical_animation_corona_virus.jpg

- Weekly monitoring of 9 major facilities
 - Final effluent monitoring of some facilities
 - SWIFT monitoring
- Quantification of CDC's clinical diagnostic panel
- VDH engagement from the beginning

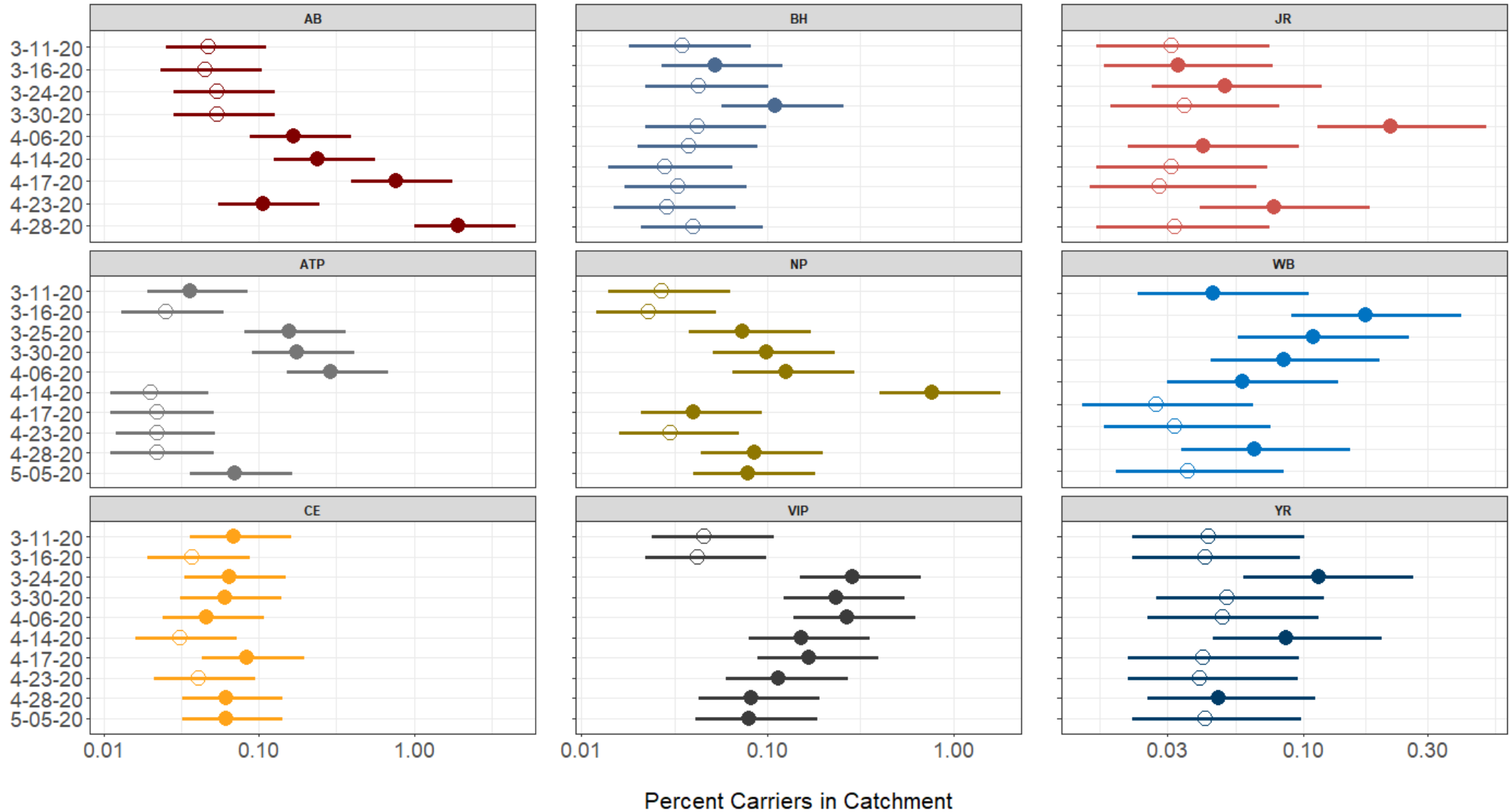
COVID-19 Cases in Hampton Roads



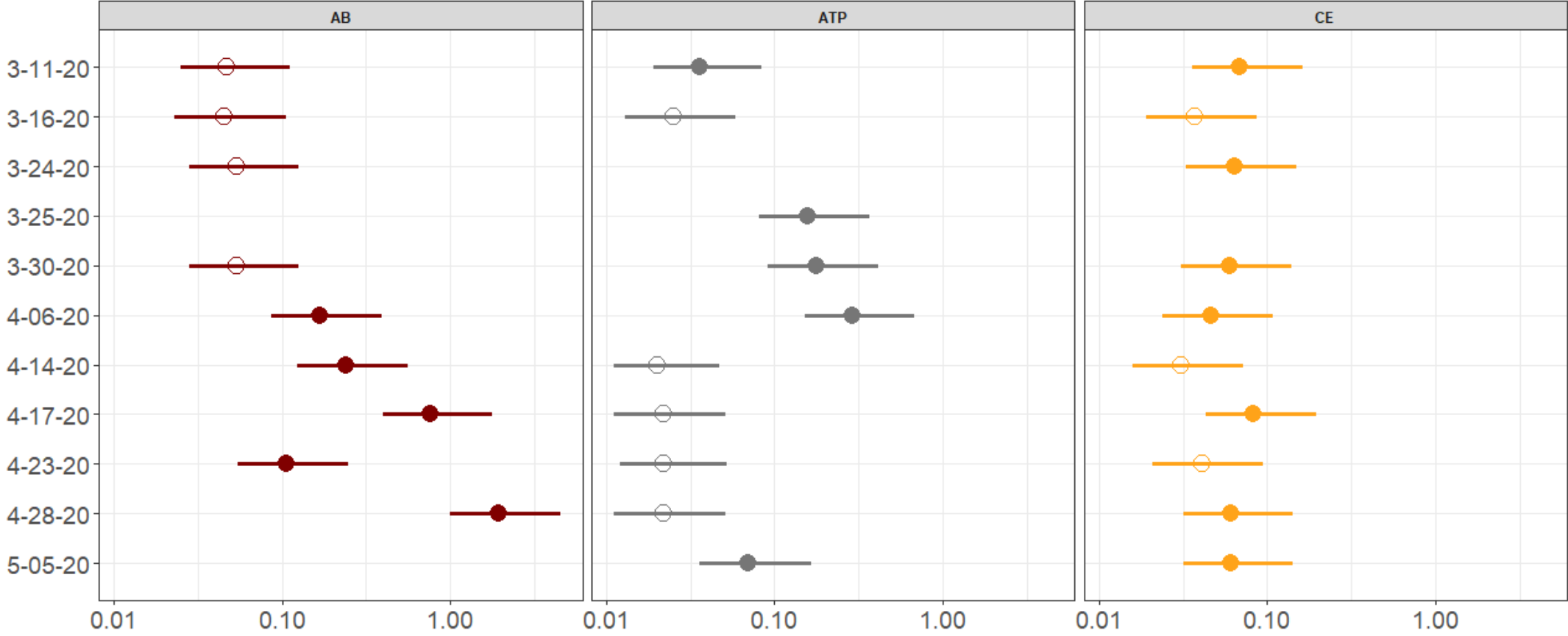
SARS-CoV-2 Detection at HRSD Facilities



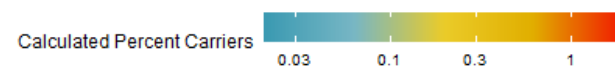
Estimated Percent Carriers by Catchment



Ability to Observe Differing Trends

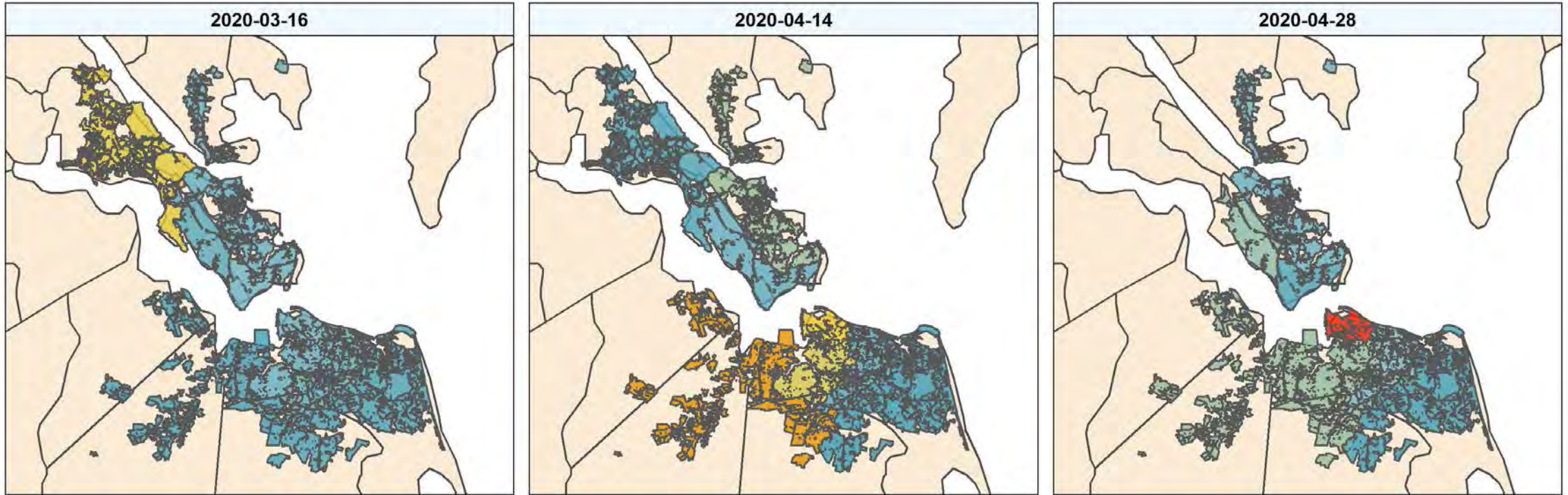


A Spatial Look at SARS-CoV-2 Prevalence During our Study

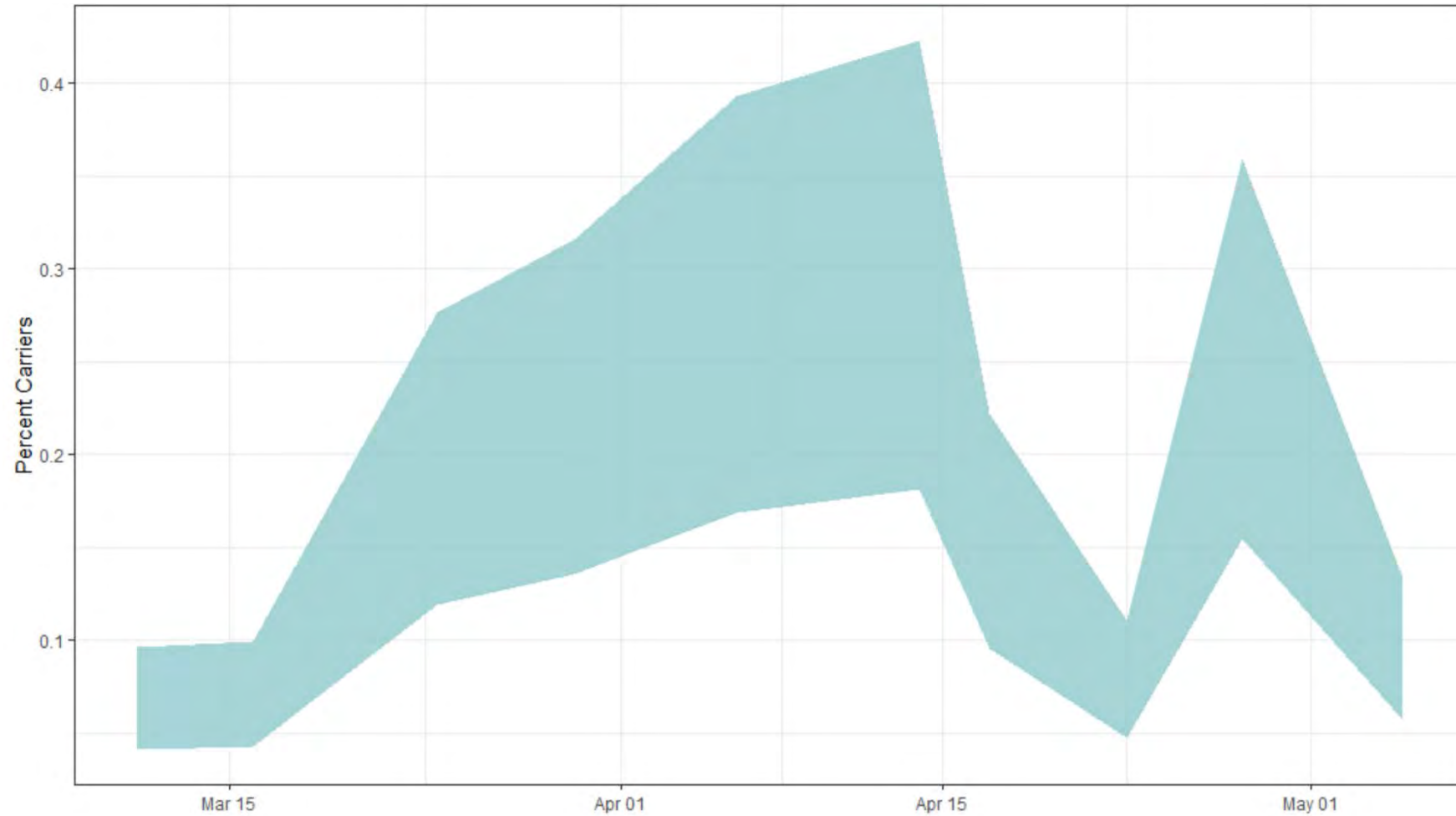


A Closer Look at 3 Dates

SARS CoV2 Percent Carriers by TP Service Area



Regional Percent Carriers



Questions?

HRSD COMMISSION MEETING MINUTES
May 26, 2020

ATTACHMENT #8

AGENDA ITEM 19. INFORMATIONAL ITEMS

- a. Management Reports
 - (1) [General Manager](#)
 - (2) [Communications](#)
 - (3) [Engineering](#)
 - (4) [Finance](#)
 - (5) [Information Technology](#)
 - (6) [Operations](#)
 - (7) [Talent Management](#)
 - (8) [Water Quality](#)
 - (9) [Report of Internal Audit Activities](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)



May 19, 2020

Re: General Manager's Report

Dear Commissioners:

Masked faces, empty offices, limited lunchroom seating, scented hand soaps and easy commutes to meetings held virtually became the new normal at HRSD in April. The staff has adjusted well to social distancing requirements. We continue to stress the need to stay home when not feeling well, to wash hands frequently and to wipe down surfaces regularly. As a result, there have been only two HRSD employee COVID-19 cases. Household and indirect contacts are more challenging to manage, but we have done pretty well with only nine quarantines required due to household contacts and ten quarantines due to indirect contacts. Of those 19 quarantine instances, six were already working from home and five others were able to telework during their quarantines which ranged from one to 14 days. We will continue to stress personal responsibility and celebrate the success of those efforts.

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

- A. **Treatment Compliance and System Operations:** Surry County exceeded the weekly average loading limit for Total Suspended Solids (TSS) as a result of high flows due to rain combined with maintenance activities on the sand filter. Inflow and infiltration (I/I) rates at the Surry County and Town of Surry treatment plants are an issue, regularly resulting in monthly flow averages in excess of the plants' rated capacities. Inspection and evaluation of the collection systems serving those plants is on-going with the goal of reducing I/I at those facilities. There were three interceptor breaks, all due to corrosion related failures. Other highlights for the month are included in the attached monthly reports.
- B. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel (all conducted remotely unless otherwise noted):
1. Four HRSD-wide leadership meetings to provide COVID-19 related updates (these have become regular weekly meetings with over 100 leaders in virtual attendance)
 2. A meeting to discuss property issues related to the Off-Line Storage Tank proposed for the Great Neck Road area in Virginia Beach
 3. A meeting to discuss potential use of Surry easements for a bike trail

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

4. A meeting to review continued debt collection activity
5. A meeting to review options and next steps related to a future use of the Chesapeake-Elizabeth Treatment Plant post-closure
6. Multiple meetings to review student debt benefit options
7. A meeting to review minimum charges in light of COVID related business shutdowns
8. Two new employee orientations (in person)

C. **External Communications:** I participated in the following meetings/activities (all conducted remotely unless otherwise noted):

1. A meeting of the Board of Directors of the Virginia Association of Municipal Wastewater Agencies (VAMWA) to discuss COVID-19 related relief funding
2. The quarterly meeting of the Executive Board of Virginia Forever
3. Bi-weekly meetings of the Hampton Roads Planning District Commission (HRPDC) Director of Utilities Committee
4. A review of the draft final report of HRSD's financial management as a case study for EPA
5. The quarterly meeting of the Board of Directors of the National Association of Clean Water Agencies (NACWA)
6. Chaired the monthly meeting of the US Water Alliance's One Water Council via webinar
7. The review of the US Water Alliance's Value of Water Campaign's annual bi-partisan survey on infrastructure investment
8. Two meetings to prepare for a workshop, originally to be presented at WEFTEC 2020
9. A meeting to discuss HRSD's response to the Virginia Department of Environmental Quality's annual Water Quality Improvement Fund needs survey
10. A meeting with leadership from AECOM to discuss COVID-19 impacts on their business and their commitment to continue to support HRSD
11. As a panelist of industry leaders moderated by the Water Environment Federation's CEO, Walt Marlowe
12. A meeting with Congresswoman Luria to discuss COVID impacts and a follow up with her Legislative staff

D. Consent Decree Update:

We received a response to our request that an additional two years be added to the proposed compliance dates submitted with the updated Integrated Plan as a result of the COVID-19 impacts and uncertainties. EPA/DOJ declined to provide that relief at this time and recommended we address specific impacts during the proposed 2030 check-in.

We received a response to our notification of EPA/DOJ of a force majeure event in accordance with the requirements of the Consent Decree. While no specific relief was requested and none was granted, the response was largely a restatement of the force majeure provisions in the Consent Decree. We have met requirements of an initial notice within 15-days of the event (State of Emergency) and have preserved our right to assert force majeure should we experience any COVID-19-related delays with our Rehab Action Plan projects or any other compliance date in the Consent Decree.

We continue to wait for approval of the revised Integrated Plan submitted to DOJ/EPA on March 6, 2020 in response to their term sheet received on February 4, 2020. HRSD agreed to the nine terms, revised the Integrated Plan to conform to those requirements and resubmitted the plan. Upon agency approval, a fifth amendment to the Consent Decree will be drafted and lodged with the court. Final approval by the court may come in the fall of 2020.

As of this time, we have had few direct costs associated with COVID-19 response. Our costs have primarily been associated with Personal Protective Equipment (masks) and additional cleaning supplies. These costs have been easily absorbed within existing budgets.

The CARES Act included a provision that allows student loan debt payments to be included as educational assistance subject to the exclusion from income limits for educational benefits (\$5,250 per year). HRSD has a strong educational assistance program with many employees using this benefit to further their education. The provision in the CARES Act expires at the end of 2020. As a result, we have temporarily amended our educational benefit program to include debt payments as an eligible educational assistance expense for 2020.

Without a vaccine, there is little impetus to change our current operating practices. We cannot risk a significant outbreak of COVID-19 among our critically necessary essential employees. HRSD cannot stop treating wastewater. Our critical work protecting public health cannot be accomplished without our highly trained and skilled staff reporting to

work every hour of every day. As a result, we need to limit exposure every way possible. We will continue to require teleworking from everyone whose job can be effectively accomplished remotely. Additionally, we will continue social distancing, mask wearing, and the intensive hygiene practices instituted at the beginning of the pandemic through at least Labor Day, 2020. We have cancelled all attendance at large gatherings and travel through the end of calendar year 2020. That does include WEFTEC, which as of today has not been cancelled but WEF is likely to announce cancellation of the in-person event very soon.

As we did last month, we will meet virtually next week. My plan is to continue virtual meetings until the Governor declares the State of Emergency over. As this is only our second virtual meeting, please be patient as we all are still developing our virtual skills!

The leadership and support you provide are the keys to our success as an organization. Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth and the environment. **I look forward to seeing you (virtually) on Tuesday, May 26.**

Respectfully submitted,

Ted Henifin, P.E.
General Manager

TO: General Manager
 FROM: Director of Communications
 SUBJECT: Monthly Report for April 2020
 DATE: May 8, 2020





A. Publicity and Promotion

HRSD and or/SWIFT were featured in three news stories and editorials on topics that included:

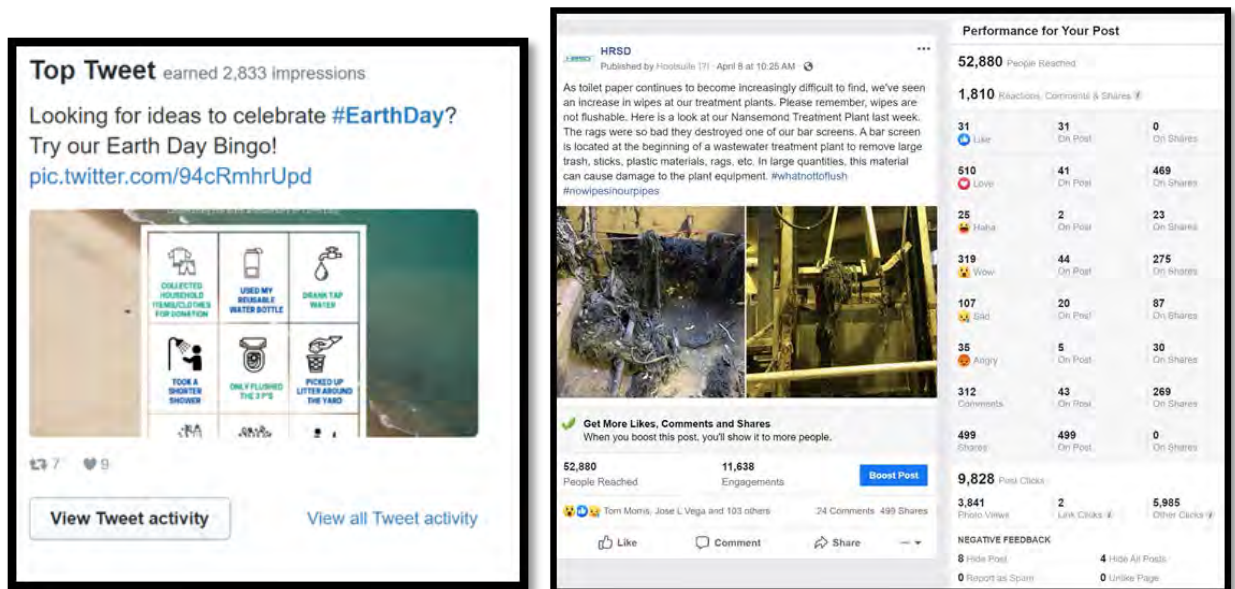
1. Increased use of flushable wipes and effects on sewer system (4 stories)
2. HRSD participation in US-Israel Center's development of water technologies
3. Status of HRSD service expansion to Eastern Shore

B. Social Media and Online Engagement

1. Metrics

| Social Media Metrics April 2020 | | | | |
|---|--|---|---|---|
| METRIC |  FACEBOOK |  LINKEDIN |  TWITTER |  YOUTUBE |
| Number of Posts *number of published posts | 38 +2 | 0 -0 | 33 +4 | 1:46 average view duration |
| Number of Followers/Likes *total number of fans | 1,314 +102 | 4,896 +10 | 431 +11 | 179 +3 |
| Engagement *sum of reactions comments and shares | 2,714 +1,688 | 0 -34 | 154 +72 | 1,356 unique viewers +666 |
| Traffic *total clicks on links posted | 95 +45 | 24 -63 | 38 +33 | 4.3% click through +.2% |

2. Top posts on Facebook, Twitter and YouTube



| Rank | Video Title | Impressions | Views |
|------|---|--------------|-------|
| 1 | The Wastewater Treatment Process Jan 22, 2017 | 1:51 (56.7%) | 890 |
| 2 | HRSD Thank You Video Apr 28, 2020 Recent upload | 1:52 (76.9%) | 674 |
| 3 | SWIFT Research Center: What is the Potomac Aquifer? Jan 6, 2014 | 2:32 (64.9%) | 61 |
| 4 | HRSD's Woodstock Park Well Weather Storage Tank Oct 18, 2017 | 0:41 (77.9%) | 37 |
| 5 | Virtual Tour of HRSD's Virginia Initiative Plant Nutrient Reduction Improvement Pt. May 12, 2018 | 1:53 (65.8%) | 29 |
| 6 | SWIFT on WFYC, 13 News Now with Rogers Mobley Feb 27, 2017 | 1:34 (58.4%) | 24 |
| 7 | SWIFT Research Center Ribbon Cutting Ceremony, May 2018 Jun 1, 2018 | 2:00 (50.6%) | 22 |
| 8 | HRSD Employee Testimonials - Robert Jan 9, 2017 | 0:15 (40.9%) | 21 |
| 9 | Amazing Aquifers: How To Make an Aquifer at Home Apr 1, 2020 | 0:27 (67.1%) | 18 |
| 10 | Overview of HRSD's Sustainable Wastewater Initiative for Tomorrow Pilot Project May 28, 2020 | 2:27 (61.1%) | 17 |

3. Impressions and Visits – HRSD has seen a significant increase in engagement on Facebook in correlation with the COVID-19 pandemic and stay-at-home orders – over 100 percent increases across the board, as well as a 30 percent increase on Twitter and a 100 percent increase in views on YouTube.

- a. Facebook: 86,604 page impressions, 83,271 post impressions reaching 71,399 users and Facebook engagement of 2,714 (1,674 reactions, 631 shares and 409 comments).
- b. Twitter: 24,200 tweet impressions; 227 profile visits and 11 mentions

- c. HRSD.com/SWIFTVA.com: 831 page visits
- d. LinkedIn Impressions: 458 page impressions and 0 post impressions
- e. YouTube: 1,957 views
- f. Next Door unique impressions: 67,985 post impressions
- g. Blog Posts: 2
 - (1) [50 Ways to Celebrate Earth Day While Still Social Distancing, Why Recycling Right Matters More Than Recycling Everything](#)
 - (2) [50 Ways to Celebrate Earth Day During Social Distancing](#)
- h. Construction Project Page Visits – 857 total visits (not including direct visits from home page, broken down as follows:
 - (1) 367 visits to individual pages
 - (2) 490 to the status page

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

- 1. News Releases/Traffic Advisories/Construction Notices: 2 (one traffic advisory, one news release)
- 2. Advertisements: 0
- 3. Project Notices: 13 (via door hanging/door knocking with postings reaching approximately 145 residents)
- 4. Project/Community Meetings: 0
- 5. New Project Web Pages /Videos: 1
 - a. [Diamond Springs Sewer Replacement](#)

C. Special Projects and Highlights

Director participated in the Hampton Roads Planning District Commission's Regional Public Information subcommittee emergency planning call for COVID-19 communication.

Director and staff worked with HRSD's contracted videographer to develop a staff thank-you video to express appreciation for their continued service through difficult circumstances. The General Manager shared the [video](#) with staff in his May 1 COVID-19 update.

Director and finance leadership met with representatives from Southeastern Institute of Research (SIR) to discuss HRSD's biannual customer service survey, its implementation timing (given current events), survey questions and methodology.

D. Internal Communications

1. Director participated in the following internal meetings and events:
 - a. Weekly Leadership and COVID-19 meetings
 - b. Planning meeting for the proposed Atlantic Treatment Plant Interpretive Park
 - c. Weekly status calls with IT for phase two web updates
 - d. DMR, SWIFT QST and QST meetings
2. Director conducted bi-weekly communications department status meetings and one-on-one weekly staff check in meetings

E. Metrics

1. Educational and Outreach Activities: 0
2. Number of Community Partners: 0
3. Additional Activities Coordinated by Communications Department: 0
4. Monthly Metrics Summary

| Item # | Strategic Planning Measure | Unit | April 2020 |
|--------|--|--------------|------------|
| M-1.4a | Total Training Hours per Full Time Employee (3) - Current Month | Hours / #FTE | 7.5 |
| M-1.4b | Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date | Hours / #FTE | 67.04 |
| M-5.2 | Educational and Outreach Events | Number | 0 |
| M-5.3 | Number of Community Partners | Number | 0 |

Respectfully,

Leila Rice, APR
 Director of Communications

TO: General Manager
FROM: Director of Engineering
SUBJECT: Engineering Monthly Report for April 2020
DATE: May 13, 2020

A. General

1. Capital Improvement Program (CIP) spending for the ninth month of Fiscal Year (FY) 2020 was below planned spending target. Year-to-date spending is still below the targeted amount for FY 2020.

CIP Spending (\$M):

| | Current Period | FYTD |
|--------|----------------|--------|
| Actual | 18.60 | 111.56 |
| Plan | 20.00 | 144.00 |

2. Working with SC&H, the Engineering Department has begun a new audit focused on SWIFT Program Management. SC&H will be reviewing the Program Management Plan and assisting HRSD with compliance for the expected federal loan program funding. They will be reviewing potential risks, controls, best practices and compliance with HRSD policies and procedures. This audit is an early effort for the SWIFT Program to be sure we start properly and have the systems in place to be successful.

B. Asset Management Division

1. Staff recently completed the creation of a list of likely unvented high spots within the interceptor sewer system. This list focused on areas near locality connections with adjacent air vents that experience limited air release times when maintained by field staff. Subsurface exploration surveys of the existing force main system will be performed to determine if the existing air vents are located at true high points. We have found in some cases that high points exist in the sewer system that do not have air vents which create opportunities for corrosion and pipe failures. The field surveys will take place in the next few months, and additional air vents will be installed on high points that are identified.
2. The Operations Department has successfully used the Computerized Maintenance Management System (CMMS) for many years to maintain HRSD assets. Updates to the CMMS have been implemented to keep this

system current and provide new features. A recent update to the CMMS included a Case Management Module. This module allows the Operations Department to enter customer complaints. The previous process was a paper-based system; the new module allows for querying and associating a complaint with a work order that addresses the issue. This new module will be rolled out to each division within the Operations Department in the coming months.

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

1. The Mathews Pump Station Replacement project is nearing completion. The new building is substantially complete and the final mechanical and electrical systems should be completed soon. The exterior piping serving the pump station is being installed and should be completed in the next month. Start-Up and testing should begin in May with all remaining work to be done by this summer. The final task will be to demolish the existing pump station once the new station is tested and performs satisfactorily.
2. Construction continues for the Virginia Beach Boulevard Force Main Phase VI project. Work has begun in the Southern Boulevard right-of-way and in the materials storage yard just to the west of Lowe's on Parker Lane. The work is focused on the installation of the needed bored road crossings using a micro-tunneling method. Despite originally permitted night work, the Virginia Beach Traffic Engineer has permitted day work along Virginia Beach Boulevard due to the reduced traffic volume. This has allowed the contractor to install an 8-inch City force main and a portion of the HRSD 42-inch force main. This relaxation of the City work hours should allow the contractor to exceed the productivity rate originally planned. We expect this change in work condition to stay in effect for the next month. Negotiations for easement acquisitions with the three remaining property owners continues, although it is likely that the condemnation process will continue if the remaining issues are not resolved.
3. The Design-Build Team selection process for the James River SWIFT project continues. The short-listed teams are addressing the steps necessary for HRSD to make a final selection. Coordination continues with the City of Newport News for addressing impacts to the Riverview Farm Park. Survey and environmental field work to address issues on the park property are ongoing. The selection of a Design-Build Team should be completed later this year with a final recommendation to the Commission planned for December 2020.

D. Planning & Analysis Division

1. The Chief of Planning & Analysis has been working closely with staff from Middlesex County to negotiate an agreement to transfer all real property associated with the public gravity and vacuum collection sewer systems, along with pump stations and other sewer appurtenances to HRSD. As we have done with other small systems, property is conveyed to HRSD at no cost. We have agreed to provide interceptor sewers, including necessary treatment capacity to within two miles of a sewer service area (provided it is in accordance with the County's Comprehensive Plan and the County water system is extended to serve the area). A second agreement has also been negotiated that describes how gravity and vacuum sewer collection systems should be planned, designed, and constructed in the future. These agreements will be provided to the Commission for approval in the coming months.
2. The Data Analysis Section has completed an update to the HRSD Nutrient Strategy Model for use as part of the upcoming submission to the Virginia Nutrient Credit Trading Program. The model was updated to reflect population predictions provided by the localities in the region and the corresponding flow that will be generated and ultimately handled at each HRSD treatment plant.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 3
 - a. 04/06/2020 – Staff participated as a guest speaker as part of a Virginia Tech Municipal Engineering course on Management Planning.
 - b. 04/10/2020 – Staff participated as a panelist in a virtual meeting conducted by the Design-Build Institute of America (DBIA) on the subject of PublicSector Challenges Related to COVID-19.
 - c. 04/10/2020 – Staff participated in a Virtual Career Day at Indian Lakes Elementary School.
2. Number of Community Partners: 3
 - a. Virginia Tech
 - b. DBIA

c. Virginia Beach Public Schools

3. Number of Research Partners: 0

4. Metrics Summary:

| Item # | Strategic Planning Measure | Unit | April 2020 |
|---------------|---|--------------|-------------------|
| M-1.4a | Total Training Hours per Full Time Employee (44) - Current Month | Hours / #FTE | 3.57 |
| M-1.4b | Total Training Hours per Full Time Employee (44) - Cumulative Fiscal Year-to-Date | Hours / #FTE | 31.70 |
| M-5.2 | Educational and Outreach Events | Number | 3 |
| M-5.3 | Number of Community Partners | Number | 3 |
| M-5.4 | Number of Research Partners | Number | 0 |

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, P.E.

TO: General Manager

FROM: Director of Finance

SUBJECT: Monthly Report for April 2020

DATE: May 13, 2020

A. General

1. After a roller coaster ride with our variable rate debt, the most recent rate dropped to 0.21 percent at the end of April after spiking to 4.95 percent on March 20. It's clear that the Federal Reserve's intervention has normalized this market segment.
2. PFM, our investment manager for our Retiree Health Trust, continues to maintain a cautious stance. They are maintaining a defensive allocation of 85 percent equities relative to our investment policy target. They recently added municipal bonds due to attractive valuations.
3. In the Hampton Roads Planning District Commission's most recent economic report, Initial Unemployment claims spiked to over 55,000, which was literally off the chart. During the 2008/2009 Financial Crisis, the peak initial unemployment was 6,500 in the summer of 2009. Although cumulative unemployment claims will continue to increase, the data suggests the initial wave of job loss may have peaked as it was primarily due to the closure of businesses.
4. Revenues are higher than budget as water consumption appears to be in-line. Any declines due to tourism or industrial companies are being offset by the stay-at-home order. The looming questions are how the historic unemployment rate will impact customers' ability to pay their bills, and how much the stimulus payments will help. The glimmer of hope in the most recent unemployment report is that many people see this as temporary; time will tell. Our Accounts Receivable has remained fairly steady; however we expect an increase as our economy slowly reopens. Other non-operating revenue includes insurance reimbursements of over \$275,000 for better than anticipated workers compensation claims experience. Personal services and fringe benefit expenses are generally on budget at 87 percent and 83 percent, respectively - roughly consistent with the prior year's 86 percent and 82 percent. Major repairs expenses continue to be significantly lower than budget at this time, since many purchases earlier in the fiscal year related to prior year encumbrances and expenses have been lower than anticipated. Miscellaneous Expense, at 113 percent, is significantly higher than budget as a result of the costs

associated with issuing new bonds to take advantage of lower rates, which will substantially decrease debt service costs in future years. Overall, revenues are above target at 85 percent and expenses and transfers are under budget at 79 percent and continue to be controlled.

5. Customer Care continues to serve our customers daily throughout the COVID-19 pandemic. Our payment lobby has remained open to accept payments; however we encourage customers to consider making payments by phone, mail or online to limit potential exposure to COVID-19. All Field Activities, including termination of service and door tag payment reminders, have been suspended indefinitely. Customers with financial hardship as a result of COVID-19 are being set up with a flexible payment plan. Staff continues to monitor the situation and develop proactive plans to assist our customers with these financial challenges.
6. The Quarterly investment summary for [HRSD's Operating Cash Strategies and Retiree Health Trust \(OPEB\)](#) is attached.

B. Interim Financial Report

1. Operating Budget for the Period Ended April 30, 2020

| | Amended Budget | Current YTD | Current YTD as % of Budget (83% Budget to Date) | Prior YTD as % of Prior Year Budget |
|---|-----------------------|-----------------------|---|---|
| Operating Revenues | | | | |
| Wastewater | \$ 316,217,000 | \$ 264,308,372 | 84% | 84% |
| Surcharge | 1,500,000 | 1,349,274 | 90% | 88% |
| Indirect Discharge | 2,750,000 | 2,605,443 | 95% | 89% |
| Fees | 2,858,000 | 2,466,418 | 86% | 85% |
| Municipal Assistance | 725,000 | 551,824 | 76% | 59% |
| Miscellaneous | 600,000 | 1,286,876 | 214% | 158% |
| Total Operating Revenue | 324,650,000 | 272,568,207 | 84% | 84% |
| Non Operating Revenues | | | | |
| Facility Charge | 6,160,000 | 5,321,225 | 86% | 88% |
| Interest Income | 4,000,000 | 5,525,994 | 138% | 258% |
| Build America Bond Subsidy | 2,400,000 | 2,215,848 | 92% | 94% |
| Other | 595,000 | 829,948 | 139% | 171% |
| Total Non Operating Revenue | 13,155,000 | 13,893,015 | 106% | 131% |
| Total Revenues | 337,805,000 | 286,461,222 | 85% | 86% |
| Transfers from Reserves | 10,857,750 | 9,048,125 | 83% | 83% |
| Total Revenues and Transfers | \$ 348,662,750 | \$ 295,509,347 | 85% | 86% |
| Operating Expenses | | | | |
| Personal Services | \$ 57,346,225 | \$ 49,636,778 | 87% | 86% |
| Fringe Benefits | 24,232,400 | 20,222,648 | 83% | 82% |
| Materials & Supplies | 8,838,801 | 7,115,786 | 81% | 81% |
| Transportation | 1,579,921 | 968,260 | 61% | 73% |
| Utilities | 12,774,299 | 10,089,137 | 79% | 84% |
| Chemical Purchases | 10,979,218 | 7,161,249 | 65% | 63% |
| Contractual Services | 45,953,753 | 25,857,623 | 56% | 54% |
| Major Repairs | 11,267,604 | 5,107,749 | 45% | 54% |
| Capital Assets | 458,825 | 175,580 | 38% | 41% |
| Miscellaneous Expense | 3,085,523 | 3,481,875 | 113% | 73% |
| Total Operating Expenses | 176,516,569 | 129,816,685 | 74% | 73% |
| Debt Service and Transfers | | | | |
| Debt Service | 63,544,841 | 54,325,543 | 85% | 91% |
| Transfer to CIP | 108,341,340 | 90,284,450 | 83% | 83% |
| Transfer to Risk management | 260,000 | 216,670 | 83% | 83% |
| Total Debt Service and Transfers | 172,146,181 | 144,826,663 | 84% | 86% |
| Total Expenses and Transfers | \$ 348,662,750 | \$ 274,643,348 | 79% | 79% |

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; expenses are generally recorded on a cash basis. No provision is made for non-cash items such as depreciation and bad debt expense.

This interim report does not reflect financial activity for capital projects contained in HRSD's Capital Improvement Program (CIP).

Transfers represent certain budgetary policy designations as follows:

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

3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended April 30, 2020

HRSD - RESERVE AND CAPITAL ACTIVITY

April 30, 2020

| | General Reserve | | | Reserve | Capital | |
|---------------------------------------|-----------------------|----------------------|---------------------|----------------------|-----------------------|----------------------|
| | General | Debt Service | Risk Mgmt Reserve | | Paygo | Debt Proceeds |
| | Unrestricted | Restricted | Unrestricted | | Unrestricted | Restricted |
| Beginning - July 1, 2019 | \$ 178,937,154 | \$ 28,553,343 | \$ 3,499,535 | \$ 15,266,324 | \$ 86,279,809 | \$ 14,334,553 |
| Current Year Sources of Funds | | | | | | |
| Current Receipts | 221,933,359 | | | | | |
| Capital Grants | | | | | - | |
| VRA Draws | | | | | 26,675,802 | |
| Bond Proceeds (includes interest) | | | | | | 36,364 |
| Transfers In | 66,355,163 | | 216,670 | | 90,284,450 | |
| Sources of Funds | 288,288,522 | - | 216,670 | - | 116,960,252 | 36,364 |
| Total Funds Available | \$ 467,225,676 | \$ 28,553,343 | \$ 3,716,205 | \$ 15,266,324 | \$ 203,240,061 | \$ 14,370,917 |
| Current Year Uses of Funds | | | | | | |
| Cash Disbursements | 189,894,805 | | | | 106,796,681 | 14,370,917 |
| Series 2019A Refunding | - | | | | 66,355,163 | |
| Transfers Out | 90,501,120 | | | | | |
| Uses of Funds | 280,395,925 | - | - | - | 173,151,844 | 14,370,917 |
| End of Period - April 30, 2020 | \$ 186,829,751 | \$ 28,553,343 | \$ 3,716,205 | \$ 15,266,324 | \$ 30,088,217 | \$ - |
| Unrestricted Funds | \$ 235,900,497 | | | | | |

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended April 30, 2020

| Classification/ Treatment Service Area | Expenditures Year to Date | | | | | |
|--|---------------------------|---------------------------------|-----------------------|-------------------------|--------------------------|------------------------|
| | Budget | Expenditures prior to 6/30/2019 | Expenditures FY 2020 | Total Expenditures | Outstanding Encumbrances | Available Balance |
| Administration | \$ 75,199,313 | \$ 43,226,275 | \$ 5,133,968 | \$ 48,360,243 | \$ 13,780,501 | \$ 13,058,569 |
| Army Base | 158,584,000 | 125,110,560 | 451,955 | 125,562,515 | 2,451,586 | 30,569,899 |
| Atlantic | 132,843,059 | 88,977,629 | 15,968,107 | 104,945,736 | 5,437,087 | 22,460,236 |
| Boat Harbor | 147,344,220 | 60,512,133 | 13,965,354 | 74,477,487 | 11,486,347 | 61,380,386 |
| Ches-Eliz | 193,819,583 | 21,557,919 | 38,133,912 | 59,691,831 | 62,134,308 | 71,993,444 |
| James River | 288,758,687 | 58,557,889 | 3,790,230 | 62,348,119 | 7,115,286 | 219,295,282 |
| Middle Peninsula | 89,204,684 | 10,996,758 | 4,337,585 | 15,334,343 | 6,590,257 | 67,280,084 |
| Nansemond | 92,993,127 | 42,439,857 | 3,243,097 | 45,682,954 | 17,631,824 | 29,678,349 |
| Surry | 45,747,598 | 1,905,064 | 6,853,988 | 8,759,052 | 28,672,675 | 8,315,871 |
| VIP | 306,778,873 | 259,851,080 | 2,353,810 | 262,204,890 | 4,760,515 | 39,813,468 |
| Williamsburg | 36,212,622 | 12,215,243 | 4,575,513 | 16,790,756 | 12,536,220 | 6,885,646 |
| York River | 72,798,339 | 44,185,737 | 2,467,203 | 46,652,940 | 918,375 | 25,227,024 |
| General | 697,921,094 | 233,236,782 | 10,285,787 | 243,522,569 | 37,449,607 | 416,948,918 |
| | <u>\$2,338,205,199</u> | <u>\$1,002,772,926</u> | <u>\$ 111,560,509</u> | <u>\$ 1,114,333,435</u> | <u>\$ 210,964,588</u> | <u>\$1,012,907,176</u> |

5. Debt Management Overview

| HRSD - Debt Outstanding (\$000's) | | | | | | April 30, 2020 | |
|-----------------------------------|--------------------|--------------------|-----------------|-----------------|--------------------|-------------------|--|
| | Principal Mar 2020 | Principal Payments | Principal Draws | Trust Agreement | Principal Apr 2020 | Interest Payments | |
| Fixed Rate | | | | | | | |
| Senior | \$214,212 | \$ - | \$ - | | \$ 214,212 | \$ - | |
| Subordinate | 541,882 | (132) | 4,555 | | 546,305 | (2,119) | |
| Variable Rate | | | | | | | |
| Subordinate | 50,000 | - | - | | 50,000 | (109) | |
| Line of Credit | | | | | | | |
| Total | <u>\$806,094</u> | <u>\$ (132)</u> | <u>\$ 4,555</u> | <u>\$ -</u> | <u>\$ 810,517</u> | <u>\$ (2,228)</u> | |

| HRSD- Series 2016VR Bond Analysis | | | May 1, 2020 |
|-----------------------------------|-------------|-------|-----------------|
| | SIFMA Index | HRSD | Spread to SIFMA |
| Maximum | 4.71% | 4.95% | 0.24% |
| Average | 0.57% | 0.57% | 0.00% |
| Minimum | 0.01% | 0.01% | 0.00% |
| As of 05/01/20 | 0.22% | 0.21% | -0.01% |

* Since October 20, 2011 HRSD has averaged 57 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended April 30, 2020

HRSD - UNRESTRICTED CASH

April 30, 2020

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

| | | Days Cash on | |
|--------------------------------|-----------------|--------------|-------------------|
| | | Hand | Days Cash on Hand |
| Total Unrestricted Cash | \$ 235,900,497 | | 488 |
| Risk Management Reserve | \$ (3,716,205) | (8) | 480 |
| Reserve | \$ (15,266,324) | (32) | 448 |
| Capital (PAYGO only) | \$ (30,088,217) | (62) | 386 |
| Net Unassigned Cash | \$ 186,829,751 | | 386 |

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

HRSD - SOURCES OF FUNDS

April 30, 2020

| Primary Source | Beginning | YTD | | | Ending | Allocation of Funds | Credit Quality | Current Mo Avg Yield |
|--------------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|---------------------|----------------|----------------------|
| | Market Value | Contributions | Withdrawals | Income Earned | Market Value | | | |
| | July 1, 2019 | | | | April 30, 2020 | | | |
| BAML Corp Disbursement Account | 7,755,006 | 454,046,048 | 452,146,082 | 54,948 | 9,709,920 | 5.1% | N/A | 0.55% |
| VIP Stable NAV Liquidity Pool | 163,658,801 | 146,355,162 | 131,355,162 | 2,830,871 | 181,489,672 | 94.9% | AAAm | 1.06% |
| Total Primary Source | \$ 171,413,807 | \$ 600,401,210 | \$ 583,501,244 | \$ 2,885,819 | \$ 191,199,592 | 100.0% | | |

VIP Stable NAV Liquidity Pool out performance Va Local Government Investment Pool (the market benchmark) by 0.06% in the month of April.

| Secondary Source | Beginning | YTD | | | Ending | YTD Ending Cost | YTD Mkt Adj | Yield to Maturity at Market |
|-------------------------------------|-----------------------|---------------|----------------------|------------------------------|----------------------|----------------------|---------------------|-----------------------------|
| | Market Value | Contributions | Withdrawals | Income Earned & Realized G/L | Market Value | | | |
| | July 1, 2019 | | | | April 30, 2020 | | | |
| VIP 1-3 Year High Quality Bond Fund | 128,529,607 | - | 66,369,439 | 1,546,756 | 64,731,722 | 62,545,078 | 2,186,643 | 0.41% |
| Total Secondary Source | \$ 128,529,607 | \$ - | \$ 66,369,439 | \$ 1,546,756 | \$ 64,731,722 | \$ 62,545,078 | \$ 2,186,643 | |

VIP 1-3 Year High Quality Bond Fund out performed ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) by 0.15% in the month of April.

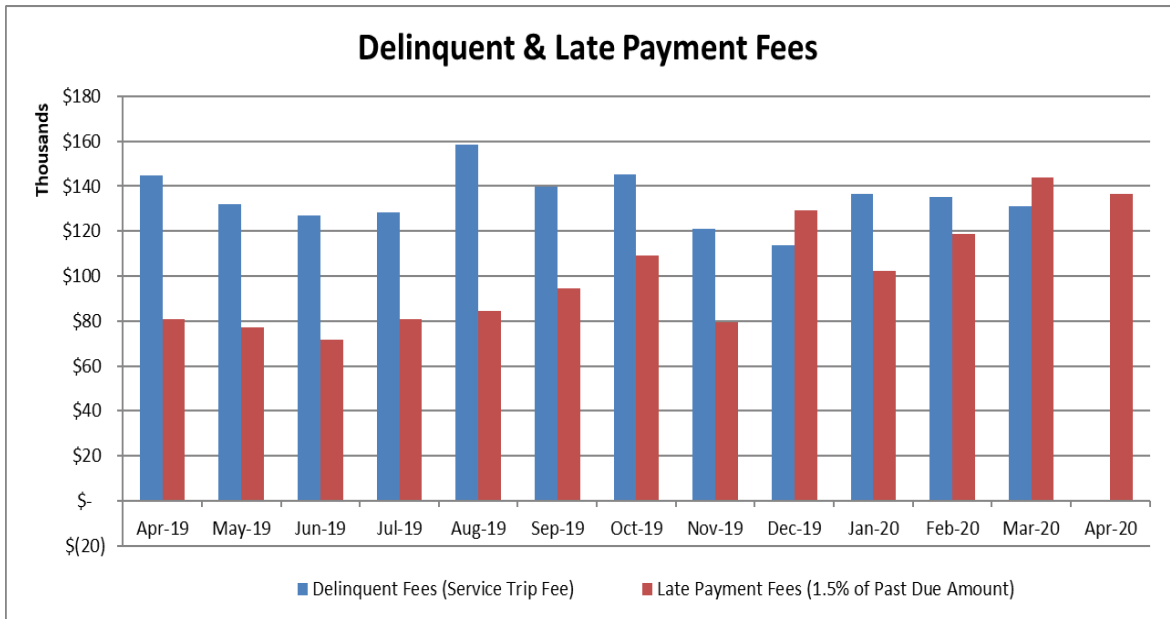
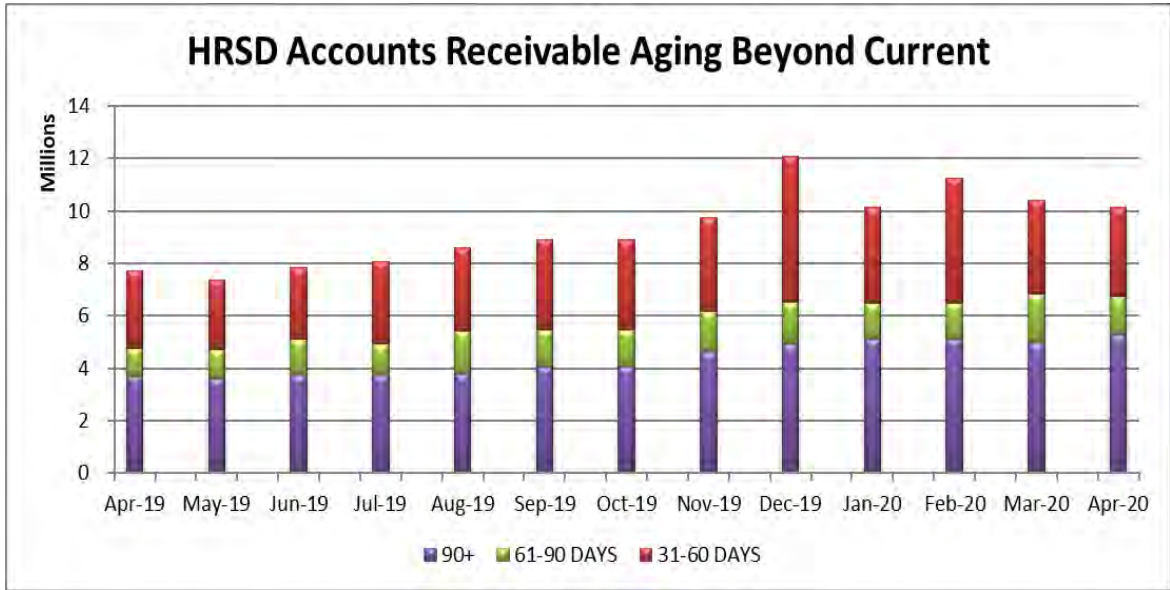
| | Total | Fund Alloc |
|------------------------|-----------------------|---------------|
| Total Primary Source | \$ 191,199,592 | 74.7% |
| Total Secondary Source | \$ 64,731,722 | 25.3% |
| TOTAL SOURCES | \$ 255,931,314 | 100.0% |

7. Summary of Billed Consumption

| Summary of Billed Consumption (,000s ccf) | | | | | | | |
|---|-----------------------------------|--------------------------|--------------|--------------------------|--------------|---------------------------|---------------------|
| Month | FY2020 Cumulative Budget Estimate | FY2020 Cumulative Actual | % Difference | | % Difference | | % Difference |
| | | | From Budget | Cumulative FY2019 Actual | From FY2019 | Cumulative 3 Year Average | From 3 Year Average |
| July | 4,845 | 5,135 | 6.0% | 5,175 | -0.8% | 4,940 | 4.0% |
| Aug | 9,649 | 10,009 | 3.7% | 10,233 | -2.2% | 9,815 | 2.0% |
| Sept | 14,488 | 14,571 | 0.6% | 14,294 | 1.9% | 14,384 | 1.3% |
| Oct | 18,842 | 19,169 | 1.7% | 19,087 | 0.4% | 19,036 | 0.7% |
| Nov | 22,952 | 23,309 | 1.6% | 23,249 | 0.3% | 23,278 | 0.1% |
| Dec | 27,344 | 27,735 | 1.4% | 27,376 | 1.3% | 27,532 | 0.7% |
| Jan | 31,535 | 32,318 | 2.5% | 32,010 | 1.0% | 32,003 | 1.0% |
| Feb | 36,079 | 36,222 | 0.4% | 36,551 | -0.9% | 36,443 | -0.6% |
| March | 40,427 | 40,325 | -0.3% | 40,187 | 0.3% | 40,480 | -0.4% |
| Apr | 44,149 | 44,463 | 0.7% | 44,551 | -0.2% | 44,554 | -0.2% |
| May | 48,421 | - | N/A | 48,790 | N/A | 48,786 | N/A |
| June | 52,985 | - | N/A | 53,172 | N/A | 53,280 | N/A |

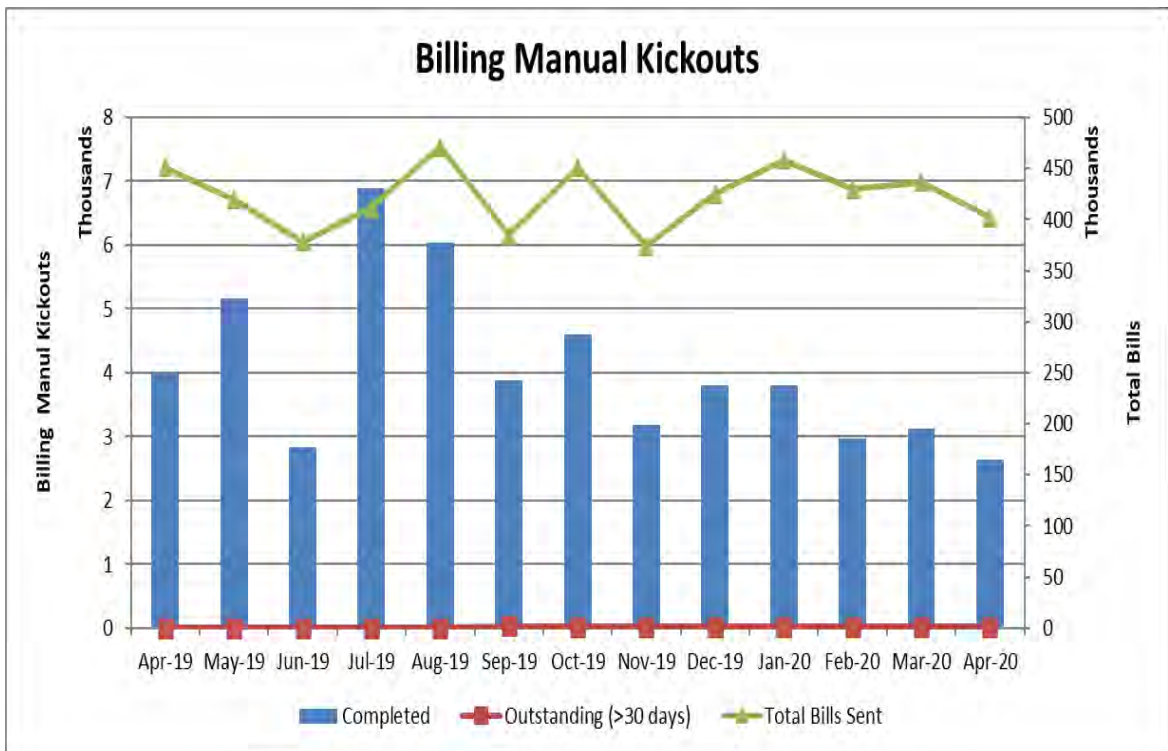
C. Customer Care Center

1. Accounts Receivable Overview



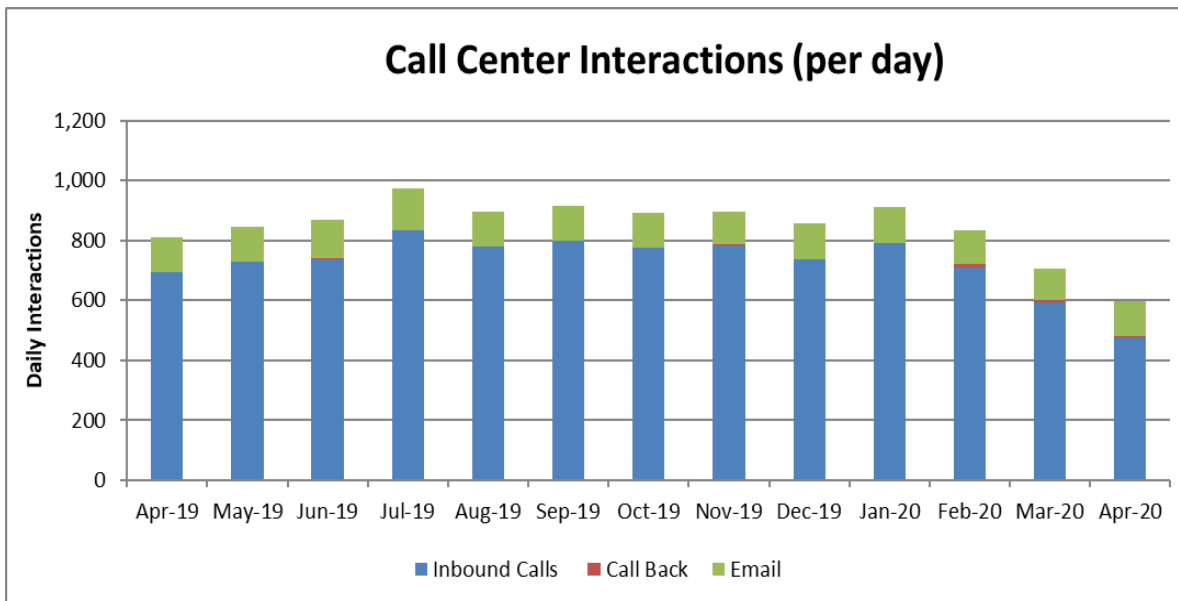
Apr-20 Field Activity was suspended late March in response to COVID-19

2. Customer Care Center Statistics



Jun-19 Billing Activity was affected by Virginia Beach tragedy.

Jul-19 A formatting change caused an increase in manual kickouts. We expect the levels to normalize in the next few months.



| Customer Interaction Statistics | Nov | Dec | Jan | Feb | Mar | Apr |
|---------------------------------|------|------|------|------|------|------|
| Calls Answered within 3 minutes | 87% | 83% | 83% | 86% | 90% | 97% |
| Average Wait Time (seconds) | 0:65 | 0:83 | 0:78 | 0:68 | 0:51 | 0:22 |
| Calls Abandoned | 6% | 7% | 7% | 6% | 5% | 3% |

D. Procurement Statistics

| ProCard Fraud | External Fraud Transactions * | Comments |
|---------------|-------------------------------|---------------------------------------|
| July | 2 | Caught by Bank Immediately |
| August | 0 | |
| September | 0 | |
| October | 1 | Caught by Bank Immediately |
| November | 0 | |
| December | 1 | Employee caught during reconciliation |
| January | 1 | Caught by Bank Immediately |
| February | 0 | |
| March | 0 | |
| April | 3 | |
| Total | 8 | |

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

E. Strategic Planning Metrics Summary

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

3. Monthly Metrics

| Item # | Strategic Planning Measure | Unit | April 2020 |
|---------------|--|--|-------------------|
| M-1.4a | Training During Work Hours Per Full Time Employee (102) – Current Month | Hours / #FTE | 0.61 |
| M-1.4b | Total Training During Work Hours Per Full Time Employee (102) – Cumulative Fiscal Year-to-Date | Hours / #FTE | 17.68 |
| 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 | 122% |
| | Liquidity | Days Cash on Hand | 488 Days |
| | Accounts Receivable (HRSD) | Dollars | \$26,089,125 |
| | Aging Accounts Receivable | Percentage of receivables greater than 90 days | 20% |

Respectfully,

Jay A. Bernas

Jay A. Bernas, P.E.

Director of Finance

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

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

Total Portfolio Summary

| Operating Strategies | March 31, 2020 | December 31, 2019 |
|----------------------|-----------------------|-----------------------|
| Primary Source | \$ 191,732,856 | \$ 195,941,918 |
| Secondary Source | 64,497,362 | 63,412,110 |
| SNAP Investment | - | - |
| | \$ 256,230,218 | \$ 259,354,028 |

Primary Source Summary

The Primary Source Portfolio consists of BAML Corp Disbursement Account \$5.4m and VaCo/VML VIP Stable NAV Liquidity Pool \$186.3m. BAML Corp Disbursement Account returned 0.55% for the quarter ending March 31, 2020. VaCo/VML VIP Stable NAV Liquidity Pool 30 Day Average Net Yield was 1.38% for the quarter ending March 31, 2020, a decrease from 1.79% at the beginning of the quarter. VaCo/VML VIP Stable NAV Liquidity Pool's weighted average credit rating was A-1 for the quarter.

Secondary Source Summary

The Secondary Source Portfolio consists of VaCo/VML VIP 1-3 Year High Quality Bond Fund. The gross book yield of the 1-3 Year portfolio was 2.05% for the quarter ending March 31, 2020, a decrease from 2.28% at the beginning of the quarter. The weighted average credit rating for VaCo/VML VIP 1-3 Year High Quality Bond Fund's portfolio is AA for the quarter.

SNAP Investment

HRSD exhausted all SNAP funds during the quarter ending September 30, 2019.

| Retirement Health Plan Trust | March 31, 2020 | December 31, 2019 |
|------------------------------|----------------------|----------------------|
| Investment Assets | 49,846,627 | 56,414,486 |
| Liquidity Assets | 31,705 | 5,468 |
| Combined Assets | \$ 49,878,332 | \$ 56,419,954 |

Retiree Health Plan Trust Summary

The Retiree Health Plan Trust portfolio ("Total Fund - Combined Assets") returned -11.92% for the quarter ended March 31, 2020, which is above the -12.27% return of the Blended Benchmark. The one-year trailing return for the portfolio was -2.92% compared to the Blended Benchmark return of -3.21%. Since its inception date of September 1, 2009, the portfolio trailing annual return of 6.82% is ahead of the Benchmark return of 6.61%. As of March 31, 2020, the weighted average credit quality of fixed income holdings for the portfolio is AA.

TO: General Manager
FROM: Director of Information Technology
SUBJECT: Information Technology Department Report for April 2020
DATE: May 12, 2020

A. General

1. Staff completed an upgrade of the enterprise storage platform, adding 30 terabytes of capacity, as well as enhanced administrative and storage management tools.
2. HRSD is working with Microsoft Corporation and one of its business partners, Marathon Consulting, to upgrade and transition the existing on-premise version of SharePoint, to the cloud-based version, SharePoint Online.
3. Staff has been working with all departments to prepare for the upgrade of the network's core switches scheduled for May. The upgrade requires that all applications and data bases be taken offline while the switches and management software are replaced. Once systems are restored, representatives from each department will complete pre-determined test scripts, ensuring full functionality has been restored.
4. User acceptance testing of the enhanced interface between the E-Business Suite and the Primavera Unifier project management software passed user acceptance testing. The enhancements go into production in May and will provide streamlined invoice management, payment processing, and better project visibility.
5. Due to social distancing challenges and scheduling impacts related to the COVID-19 pandemic, the Customer Care & Billing upgrade project will be delayed. A new Go-Live for this project will be established in order to provide adequate time for platform testing by HRSD with our jurisdiction partners.

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 | April 2020 |
|---------------|---|------------------------------|-------------------|
| M-1.4a | Training During Work Hours Per Full-Time Employee (50) – Current Month | Total Training Hours / # FTE | 0.61 |
| M-1.4b | Total Training During Work Hours Per Full-Time Employee (50) – Cumulative Fiscal Year-to-Date | Total Training Hours / # FTE | 35.74 |
| 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 April 2020
DATE: May 12, 2020

A. Interceptor Systems

1. South Shore (SS) Interceptor Systems

a. There were three Sanitary Sewer Overflows (SSO) this month:

- (1) On April 10, the City of Virginia Beach reported a force main failure along the Little Neck Interceptor Force Main near the intersection of Little Neck Road and North Lynnhaven Road. External corrosion of the full circle clamp bolts caused a failure on the 16-inch asbestos cement pipe. The failure leaked approximately 78,000 gallons into Buchanan Creek, a tributary of the Western Branch of the Lynnhaven River. A contractor repaired the pipe with a new full circle clamp with stainless steel bolts.
- (2) On April 21, the City of Portsmouth reported a force main failure along the Cedar Lane Interceptor Force Main near the intersection of Cedar Lane and West Norfolk Road. Internal corrosion at the top of approximately 120 linear feet of 12-inch ductile iron pipe caused the failure. The failure leaked approximately 3,800 gallons into Lilly Creek, a tributary of the Western Branch of the Elizabeth River. A contractor is replacing the pipe and installing a new air vent.
- (3) On April 22, the City of Chesapeake reported a force main failure along the Cedar Road Interceptor Force Main near the intersection of Cedar Road and Cedar Commons. External corrosion created multiple holes and a circumferential crack along the 12-inch ductile iron pipe. The failure leaked approximately 100 gallons to the a nearby storm drain. Staff replaced a 3-foot section of pipe.

- b. There were two odor complaints reported this month.
 - (1) On April 9, staff received a complaint about odors near an air vent on Scotchtown Road in Virginia Beach. Staff explained the process and need for the air vent to the resident and explained that staff will utilize a mobile carbon unit to help prevent off-site odors in the future.
 - (2) On April 28, the City of Suffolk received a complaint about odors near the Suffolk Pump Station on Wilroy Road. Staff found that the odors were attributed to wet well cleaning at the pump station and the gravity sewer manhole rehabilitation project upstream of the pump station.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Staff retested the furnace for MACT 129 due to a previous hydrogen chloride (HCL) parameter failure. All indicators are that the testing was successful.
- b. Staff installed a conductivity meter to continue monitoring saltwater intrusion at the plant.
- c. Contractor completed repairs and replacement of all columns in primary clarifier #2.

2. Atlantic Treatment Plant (ATP)

- a. Construction of the Thermal Hydrolysis Process (THP) continues. Work was completed on the rags screening load out. Staff worked with the contractors to continue loop checks. Staff also worked with contractors to complete final tie-ins. Seeding is set for mid-May.
- b. Staff shut down the CHP (Combined Heat & Power) so repairs and upgrades could be completed. It will remain shut down for three-four months while the media is changed out in the bioscrubber and repairs are made to the digester gas piping. Upgrades will also be made to the Preliminary Treatment Unit while it is offline to help better control gas conditioning ahead of digester gas usage for the steam boiler.

- c. Contractors continued the installation of the new influent screen. Startup date is anticipated in mid-May.

3. Boat Harbor Treatment Plant (BHTP)

With lower influent flows this month, staff took the Secondary clarifier #4 out of service and replaced the center column seal.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

- a. On April 2, a pH probe on the #2 incinerator's off-gas scrubber system failed. Staff replaced the pH probe on the same day as the failure.
- b. High winds on April 13, caused a large vent cover to blow off the hypochlorite storage building roof and onto the Navy property. A contractor reinstalled the cover the next day.
- c. Staff extended baffle walls in four aeration tanks to prevent back-mixing that was interfering with biological phosphorus removal (BioP) efforts.

5. James River Treatment Plant (JRTP)

- a. There was one odor scrubber deviation when influent hydrogen sulfide gas was elevated.
- b. Staff continued to work on improving flow distribution across the Integrated Activated Solids (IFAS) tanks. Flow diversion plates on IFAS tanks #2 and #3 were extended further into the IFAS influent channel to provide more flow to the two tanks. The diversion plate on IFAS tank #1 is providing the proper amount of flow to the tank in its current position.

6. Nansemond Treatment Plant (NTP)

- a. Installation of the of Hydrograv Adapt system for Secondary Clarifier #5 is complete.
- b. Bar screen #3 failed; most likely because of an increase of rags appearing in the raw influent. The bar screen will need to be rebuilt.
- c. SWIFT Research Center (SWIFT RC)

- (1) The total volume of SWIFT recharge into the Potomac aquifer for the month of March was 15.88 MG.
- (2) At the beginning of April, the membrane filtration index (MFI) was higher than the recharge operation limit (20 s/L2), indicating that well injectivity was losing its effectiveness. Staff backwashed both Granular Activated Carbon (GAC) vessels and the MFI went back to normal readings within 24 hrs.
- (3) In the middle of April, automatic control on one of the GAC influent failed, making recharge operations very difficult. Staff replaced a control card inside the valve and operations returned to normal.

7. Virginia Initiative Plant (VIP)

- a. On April 14, air buildup in a hypochlorite feed pump discharge feed line caused back pressure on the pump, restricting hypochlorite flow to the contact tank and resulting in a loss of adequate chlorination. The chlorination feed rate during this time was reduced and inadequate to maintain proper chlorination; however, there was not a complete loss of chlorination. The air was vented from the hypochlorite feed pump discharge line to allow unrestricted hypochlorite flow to the contact tank.
- b. There were two hydrogen sulfide readings greater than 2 parts per million (ppm) due to low scrubber pH levels. Staff corrected the problem by repairing leaking caustic lines.
- c. Staff completed troubleshooting and reconfiguring the variable frequency control of the raw influent motors. Contractors removed one influent pump motor for inspection and repairs. Three influent pumps are now available for service.

8. Williamsburg Treatment Plant (WBTP)

The contractor for the Switchgear Project completed concrete foundation work on the main switchgear portion of the building. The contractor also completed some ground preparation for the emergency generator portion of the building. Construction continued on electrical duct banks to various power distribution locations throughout the plant.

9. York River Treatment Plant (YRTP)

Staff prepared digester #2 for a contractor to coat various spots where the coating cracked on the digester cover. The digester cover was coated within the past year and all work is covered under warranty. Cracking of the coating was likely due to thermal expansion of the steel cover. Staff relieved digester gas pressure and provided ventilation.

10. Incinerator Operations Events Summary

- a. Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all five plants with incinerators. Certified THC valid data capture for the month exceeded 97 percent for all facilities.
- b. There were two deviations from the required minimum operating parameters and four minor (<60 minute) non-reportable bypass events.

D. Small Communities (SC)

1. Middle Peninsula Small Communities Treatment and Collections

Several cBOD and BOD samples did not meet QA/QC method requirements and were deemed invalid. Staff consistently collects additional samples where possible, and the required frequency of valid cBOD/BOD sample analysis was met at all facilities except for the following:

- King William, Outfall, week of April 26
- King William, Reuse, week of April 5
- West Point, week of April 12

2. Small Communities – Surry Systems

- a. On April 30, heavy rains (2.82 inches in a seven-hour period) resulted in a Sanitary Sewer Overflow (SSO) of approximately 1,540 gallons.
- b. On April 23, a total suspended solids (TSS) sample was collected and the results were elevated. Although the monthly concentration limit was met, the weekly average loading limit was exceeded. The elevated TSS value was attributed to maintenance activities on the sand filter and elevated flows from spring rain events.

3. Small Communities - Lawnes Point

Pond elevations continue to rise. An addition 700,000 gallons of rainwater has accumulated in the ponds since August 2019.

E. Support Systems - Infrastructure Assessment

The gravity inspection contractor has nearly completed field activities for both the NS and SS gravity lines. There is also 51,407 LF of gravity line inspection work ongoing for the Small Communities service areas. Total footage work orders issued for the fiscal year is 94,193 LF.

F. Electrical & Instrumentation (E&I)

While working with consultants and contractors on the new medium voltage (MV) switchgear project for the WBTP, staff discovered a MV breaker on the switchgear failed in the closed position. While this poses no threat to normal operation of the equipment, an electrical fault downstream of the breaker could result in a failure of the equipment. Staff is working on a short-term fix until the new switchgear is operational later this summer.

G. Water Technology and Research

In the US and at HRSD, the water and wastewater fields use a mix of metric and imperial units. For example, we routinely report contaminant concentrations and chemical doses in mg/L (metric), but we use gallons, million gallons, and cubic feet to report volumes and flow rates (imperial). This makes little sense, if one considers that the denominator in the metric unit of concentration is L (liters), which is of course a metric unit of volume. Contaminant mass, solids production, and chemical feed rates are frequently reported in the US as lbs/day, 1000's of lbs/day, and imperial tons/unit time. Rarely, do we use metric units of mass when reporting these quantities, including kg or metric tons.

Mass and hydraulic loading rate units are a mixed bag, but in the last ten years or so, there has been some transition to metric units in the US. For example, we use gpm/ft² and lbs/day/ft² in the US, while the rest of the world uses m/hr and kg/day/m² to communicate secondary clarifier loading rates. Some wastewater professionals in the US are equally comfortable using both sets of units. On the other hand, there has been a slow transition away from imperial units of biological process loading such as lbs/ft³/day to the metric standard of kg/m³/day. In some cases, there is no difference between units. For example, the consumption of energy is measured in units of kW-hr or MW-hr worldwide, though in the US we rate motor power in horsepower, while the rest of the world uses kW. With globalization and international collaboration, universities and

utilities are often leading the transition in the US to the application of metric units, while state and federal regulatory agencies and other US-based wastewater standards (e.g. “Ten States Standards”) consistently use imperial units.

There are several reasons for shifting toward metric units. First, and most obvious, benchmarking and communication with the rest of the world are made much easier by using the same language. Second, metric units allow the normal math and calculations we do as operators and engineers to be dramatically simplified. And finally, we avoid the common (and sometimes very embarrassing) mistakes that are made as a result of having to routinely convert units.

One transition that we are slowly making at HRSD is the conversion of temperature units to degrees Celsius (C). Most of us think in degrees Fahrenheit (F) at home. However, at HRSD, the majority communicates wastewater temperature in C, but solids handling processes are quite oddly still reliant on F measurements. There is really no logic for this, and in fact, it is a constant source of confusion and mistakes. HRSD will continue to modernize in this regard along with other global US industries and the US water and wastewater sector.

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) | 1 | 4 | 8 | 4 | 2 | 3 | 5 | 2 | 8 | 5 | | |
| 2.7 | # of PS Annual PMs Performed (SS) | 6 | 5 | 4 | 5 | 4 | 5 | 5 | 4 | 7 | 2 | | |
| 2.7 | # of Backup Generator PMs Performed (Target is 4.6) | 10 | 13 | 17 | 11 | 9 | 9 | 9 | 14 | 12 | 13 | | |
| 2.8 | # of FM Air Release Valve PMs Performed (NS) | 209 | 77 | 70 | 127 | 139 | 111 | 157 | 168 | 412 | 304 | | |
| 2.8 | # of FM Air Release Valve PMs Performed (SS) | 311 | 318 | 365 | 334 | 97 | 247 | 300 | 199 | 409 | 355 | | |
| 2.9 | # of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD) | 6,248 | 2,681 | 1,426 | 638 | 2,079 | 3,454 | 7,161 | 4,149 | 4,070 | 2,832 | | |
| 2.9 | # of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD) | 1,064 | 13,240 | 1,551 | 1,365 | 4,365 | 3,454 | 3,415 | 3,714 | 7,196 | 4,800 | | |
| 2.9 | # of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF) | 610 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34,359 | 35,173 | | |

I. Strategic Measurement Data

1. Education and Outreach Events:

None

2. Community Partners:

- a. Chesapeake Bay Foundation – oyster cage maintenance at BHTP for oyster gardening program
- b. United Way

3. Monthly Metrics

| Item # | Strategic Planning Measure | Unit | April 2020 |
|---------|---|--|------------|
| M-1.4a | Training During Work Hours per Full Time Employee (FTE) (516) – Current Month | Hours / FTE | 1.62 |
| M-1.4b | Total Training During Work Hours per FTE (516) – Cumulative Year-to-Date | Hours / FTE | 29.94 |
| M-2.3a | Planned Maintenance Total Maintenance Hours | Total Recorded Maintenance Labor Hours | 35,493.75 |
| M-2.3b | Planned Maintenance – Preventive and Condition Based | % of Total Maintenance Hours | 62.70% |
| M-2.3c | Planned Maintenance - Corrective Maintenance | % of Total Maintenance Hours | 13.46% |
| M-2.3d | Planned Maintenance - Projects | % of Total Maintenance Hours | 23.84% |
| M- 4.1a | Energy Use: Treatment *reported for March 2020 | kWh/MG | 2,257 |
| M-4.1b | Energy Use: Pump Stations *reported for March 2020 | kWh/MG | 156 |

| Item # | Strategic Planning Measure | Unit | April 2020 |
|--------|---|--------|------------|
| M-4.1c | Energy Use: Office Building *reported for March 2020 | kWh/MG | 78 |
| M-5.2 | Educational and Outreach Events | Number | 0 |
| M-5.3 | Number of Community Partners | Number | 2 |

Respectfully submitted,
Steve de Mik
Director of Operations

TO: General Manager
FROM: Director of Talent Management (TM)
SUBJECT: Monthly Report for April 2020
DATE: May 13, 2020

A. Talent Management Executive Summary

1. Recruitment

| | |
|---|----|
| New Recruitment Campaigns | 10 |
| Job Offers Accepted – Internal Selections | 8 |
| Job Offers Accepted – External Selections | 12 |
| Average Days to Fill Position | 62 |

2. The following was performed in response to the COVID-19 pandemic:
- a. Finalized and implemented COVID-19 pandemic temporary policies including Leave and Telework policies to provide relief to HRSD employees and ensure HRSD can maintain operations.
 - b. Updated and implemented self-disclosure and response guidelines for employees suspected or known to have COVID-19 or who have been exposed through close contact based on Virginia Department of Health recommendations
 - c. Worked with the General Manager (GM), Safety and Procurement staff to develop COVID-19 safety guidelines for vendors working or meeting on-site with HRSD employees
 - d. Worked with Communications to establish a COVID-19 Resources page on SharePoint
 - e. Met with GM and Finance staff to develop a temporary policy for employee student loan assistance based on a Coronavirus Aid, Relief, and Economic Security (CARES) Act provision
 - f. Continued refining the Recruitment processes including skills testing to minimize frequency of in-person interactions for applicants

- g. The medical plan provider expanded emotional health coverage offering no-cost emotional wellbeing sessions to plan participants.
 - h. Developed a SharePoint online training library for monthly work center safety training.
 - i. Developed a Safety Notice for Use of Disposable and Re-Usable Face Masks.
3. Human Resources (HR) staff worked with the Benefits consultant on the following:
- a. Final preparations for May open enrollment including development of a virtual presentation and meeting formats
 - b. Projecting COVID-19 impact on claims costs and COBRA rates
4. Wellness Program Participation

| Participation Activities | Unit | April 2020 | Year to Date (March 2020–February 2021) |
|------------------------------------|-------------|-------------------|--|
| Biometric Screenings | Number | 0 | 65 |
| Preventive Health Exams | Number | 1 | 95 |
| Preventive Health Assessments | Number | 6 | 33 |
| Online Health Improvement Programs | Number | 7 | 23 |
| Online Health Tracking | Number | 68 | 167 |
| Challenges (In Progress) | Number | 116 | 116 |
| Fit-Bit Promotion | Number | 7 | 19 |

5. *Move More Month* was promoted throughout April, providing several opportunities for employees to earn health improvement credits through various activities. Sixty-nine people participated in *National Walk at Lunch Day* on April 24th. Employees were encouraged to walk (socially distanced) during lunch.
6. The Wellness Specialist began sending weekly Mindful Monday communications containing resources for employee emotional wellbeing.
7. TM, HR and Organizational Development & Training (OD&T) staff met with SC&H to discuss an upcoming audit on Succession Planning.

8. OD&T worked with internal and external presenters to develop a virtual Learning Week, 2020 VISION. The program will include information on Wellness, the Sustainable Environment Advocacy (SEA) team, Toastmasters, mortgage assistance, tuition reimbursement and others.
9. The online HRSD Ethics Policy training was completed and implemented.
10. Several Apprenticeship e-learning courses are in development: *Odor Control and Chemical Addition, Stream Ecology, Instrumentation and Controls, and Pre-Apprenticeship Orientation.*
11. The Training Superintendent worked with Apprenticeship Program Instructors on tools to implement secure testing within the Learning Management software environment.
12. The Safety Manager provided a virtual presentation to the Quality Steering Team of annual work-related accidents and injuries, claims, data trends, safety activities and safety recognition programs. Due to an increase in eye injuries, a safety notice on Eye Protection will be developed.
13. Mishaps and Work-Related Injuries Status to Date (OSHA Recordable)

| | <u>2019</u> | <u>2020</u> |
|--|--------------------|--------------------|
| Mishaps | 37 | 10 |
| Lost Time Mishaps | 6 | 1 |
| <i>Numbers subject to change pending HR review of each case.</i> | | |

14. Safety Division Monthly Activities

| | |
|--|-----|
| Safety Training Classes | 9 |
| Work Center Safety Inspections | 11 |
| Reported Accident Investigations | 3 |
| Construction Site Safety Evaluations | 36 |
| Contractor Safety Briefings | 10 |
| Hot Work Permits Issued | 50 |
| Confined Space Permits Issued/Reviewed | 109 |
| Industrial Hygiene Monitoring Events | 2 |

B. Monthly Strategic Planning Metrics Summary

1. Education and Outreach Events: (1)

04/21/2040 - Hampton Roads Society of Human Resources Management (HR-SHRM) Board of Directors meeting

2. Community Partners: (1)

HR-SHRM

3. Monthly Metrics

| Item # | Strategic Planning Measure | Unit | April 2020 |
|--------|---|---------------------------|------------|
| M-1.1a | Employee Turnover Rate (Total) | Percentage | 0.74 |
| M-1.1b | Employee Turnover - Service Retirements | Percentage | 0.66 |
| M-1.4a | Total Training Hours Per Full Time Employee (17) – April | Total Training Hours/ FTE | 3.35 |
| M-1.4b | Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date | Hours / FTE | 45.11 |
| M-5.2 | Educational and Outreach Events | Number | 1 |
| M-5.3 | Community Partners | Number | 1 |

Respectfully submitted,
Paula A. Hogg
Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for April 2020
DATE: May 14, 2020

A. General

1. Pretreatment and Pollution Prevention division staff assessed no civil penalties this month.
2. The Director supported and participated in the Water Research Foundation's Virtual International Water Research Summit on Environmental Surveillance of COVID-19 Indicators in Sewersheds. The Director co-chaired one of four workgroups assembled to develop recommendations and best practices regarding wastewater surveillance. HRSD's program to monitor SARS-CoV-2 genetic material in untreated wastewater continues. HRSD has communicated the most recent results of monitoring to the Virginia Department of Health.
3. The Director chaired a virtual meeting of the Water Environment Federation's Integrated Planning Subcommittee. The subcommittee's primary efforts focus on how to promote integrated planning across the country. This has recently included dialogue with the Environmental Protection Agency's Municipal Ombudsman office addressing integrated planning as well as the Association of Clean Water Agencies, which represents the position of state environmental regulatory agencies.

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy (SEA) Group reported the following activities for the month of April:
 - a. Communications: April's Sustainable Spotlight shared COVID-19 Sustainable Solutions available to all staff on SharePoint, the SEA plan regarding Earth Week festivities, and ways employees and their families can celebrate Earth Week while following COVID-19 social distancing guidelines.
 - b. Trash Collector Design: SEA coordinated with the Virginia Department of Transportation on the Joint Permit Application for the proposed trash collector.

- c. SharePoint: SEA assembled and posted a collection of sustainable solutions for employees feeling the impacts of the lack of toilet paper, cleaning and safety products due to COVID-19.
2. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department.

C. Municipal Assistance

HRSD provided sampling and analytical services to Hanover County, New Kent County, Northumberland County, and Westmoreland County to support monitoring required for their respective Virginia Pollution Discharge Elimination System (VPDES) permits.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 2

- a. 04/07/2020 & 4/8/2020 – Central Environmental Laboratory staff supported a Chesapeake Bay Governor’s School for Marine and Environmental Science high school student by providing sampling training and guidance for a Senior Project.
- b. 04/10/2020 – Technical Services Division staff supported a Chesapeake Bay Governor’s School for Marine and Environmental Science high school student’s effort to plan a water quality capstone project.

2. Community Partners: 6

- a. City of Chesapeake
- b. City of Hampton
- c. City of Newport News
- d. City of Suffolk
- e. City of Virginia Beach
- f. Virginia Department of Health Division of Shellfish Sanitation

3. Odor Complaints: 2

- a. South Shore Operations (SS Ops) received a complaint on April 9 that likely stemmed from odors related to HRSD's venting of force main gas at 2341 Scotchtown Drive, Virginia Beach. Air was vented for a total of three minutes at the two air vents at this location without odor control. Odor control will be used for any venting performed at this location in the future to preclude further complaints.

- b. HRSD received a complaint on April 28 from a local resident via the City of Suffolk regarding odors from an HRSD pump station (PS) at Shingle Creek. TSD and SS Ops responded and discovered that the wet well at the Suffolk PS was open for required maintenance and cleaning, and odors were detected at that time. HRSD also has a contractor rehabilitating a siphon chamber and manhole that is near the station. The contractor, who was not actively working at the time, had left the manhole uncovered; this would have allowed odors to be emitted in and around that area of Shingle Creek. HRSD concluded that this complaint was associated with the odors likely related to these construction and maintenance activities. HRSD has instructed the contractor to keep the manhole cover on the manhole when not actively working. No further complaints have been received.

4. Monthly Metrics

| Item # | Strategic Planning Measure | Unit | April 2020 |
|---------------|--|--|-------------------|
| M-1.4a | Training During Work Hours Per Full Time Employee (114) (Current Month) | Total Hours / # FTE | 6.31 |
| M-1.4b | Total Training During Work Hours Per Full Time Employee (114) (Cumulative Fiscal Year-to-Date) | Total Hours / # FTE | 51.37 |
| 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 | 9:50,733 |
| M-3.2 | Odor Complaints | # | 2 |
| M-3.4 | Pollutant Removal | Total Pounds Removed | 152,314,145 |
| M-3.5 | Pollutant Discharge | % Pounds Discharged/ Pounds Permitted | 19% |
| M-5.2 | Educational and Outreach Events | # | 2 |
| M-5.3 | Community Partners | # | 6 |
| | Average Daily Flow | Total MGD for all Treatment Plants | 148.95 |
| | Pretreatment Related System Issues | # | 0 |

Respectfully submitted,

James Pletch, Ph.D

Director of Water Quality



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

I. Projects in Process

Pollution Source Control

- **Tasks Completed (April 2020)**
 - Completed and finalized fieldwork procedures
 - Finalized audit findings and obtained validation
 - Completed the draft audit report and sent to P3 Management for management action plan responses

- **Upcoming Tasks (May 2020)**
 - Review management action plans
 - Finalize audit report

SWIFT Program Management Plan

- **Tasks Completed (April 2020)**
 - Received current version of the SWIFT Program Management Plan
 - Held a second planning with HRSD SWIFT Leadership

- **Upcoming Tasks (May 2020)**
 - Schedule and conduct Entrance Meeting with HRSD and AECOM
 - Begin planning phase of the audit, review of SWIFT Program Management Plan

Fleet Services

- **Tasks Completed (April 2020)**
 - Held planning meeting with HRSD Director of Operations and HRSD Support Systems Manager
 - Drafted Entrance Meeting Materials

- **Upcoming Tasks (May 2020)**
 - Schedule and conduct Entrance Meeting
 - Begin planning phase of the audit
 - Receive and review initial documentation requests
 - Schedule and conduct process understanding meetings

Succession Planning

- **Tasks Completed (April 2020)**
 - Held planning meeting with HRSD Director of Talent Management to announce and discuss the planned audit

- **Upcoming Tasks (May 2020)**
 - Draft Entrance Meeting Materials
 - Schedule and conduct Entrance Meeting
 - Begin planning phase of the audit
 - Receive and review initial documentation requests



- Schedule and conduct process understanding meetings

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

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

II. Upcoming Projects (FY2020)

All planned upcoming projects have been initiated and are now in progress.

III. Management Action Plan (MAP) Monitoring

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

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

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

| Audit | Report Date | Next Follow-up | Recommendations | | |
|---------------------------------------|-------------|----------------|-----------------|-----------|-----------|
| | | | Closed | Open | Total |
| D&C: CIP Project Management | 5/11/2016 | September 2020 | 11 | 2 | 13 |
| Biosolids Recycling | 10/8/2016 | Pending Permit | 7 | 1 | 8 |
| HR Benefits | 11/22/2016 | Closed | 15 | 0 | 15 |
| Inventory | 4/20/2017 | Closed | 5 | 0 | 5 |
| Procurement/ ProCard | 8/23/2017 | June 2020 | 8 | 3 | 11 |
| Engineering Procurement | 4/20/2018 | In process | 4 | 4 | 8 |
| Corporate Governance: Ethics Function | 3/21/18 | June 2020 | 3 | 2 | 5 |
| Treatment Plant Operations | 10/15/18 | In process | 0 | 9 | 9 |
| Customer Care Division* | 7/26/19 | August 2020 | 0 | 4 | 4 |
| Safety Division* | 9/12/19 | September 2020 | 0 | 3 | 3 |
| Permitting* | 2/4/20 | August 2020 | 0 | 2 | 2 |
| Payroll* | 3/27/20 | November 2020 | 0 | 1 | 1 |
| Totals | | | 53 | 31 | 84 |

*SC&H has not yet performed formal follow-up procedures for the implementation status of these MAPs. Actual status may vary within the associated process areas and will be updated upon follow-up.

| 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 |
| 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% |
| 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% |
| M-1.2 | Internal Employee Promotion Eligible | Percentage | 100% | | 59% | 80% | 69.57% | 71.43% | 64.00% | 69.00% | 68.00% | 85.00% | 85.00% |
| M-1.3 | Average Time to Fill a Position | Calendar Days | < 30 | | 70 | 60 | 52 | 43.76 | 51 | 56 | 67 | 67 | 66 |
| 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 |
| 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 |
| 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 |
| 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 |
| M-2.1 | CIP Delivery - Budget | Percentage | | | 113% | 96% | 124% | 149% | 160% | 151% | 156% | 160% | 170% |
| M-2.2 | CIP Delivery - Schedule | Percentage | | | 169% | 169% | 161% | 150% | 190% | 172% | 173% | 167% | 159% |
| M-2.3a | Total Maintenance Hours | Total Available Mtc Labor Hours Monthly Avg | | | 16,495 | 22,347 | 27,615 | 30,863 | 35,431 | 34,168 | 28,786 | 28,372 | 31,887 |
| M-2.3b | Planned Maintenance | Percentage of Total Mtc Hours Monthly Avg | | | 20% | 27% | 70% | 73% | 48% | 41% | 43% | 44% | 59% |
| M-2.3c | Corrective Maintenance | Percentage of Total Mtc Hours Monthly Avg | | | 63% | 51% | 12% | 10% | 18% | 25% | 25% | 24% | 18% |
| M-2.3d | Projects | Percentage of Total Mtc Hours Monthly Avg | | | 18% | 22% | 20% | 18% | 32% | 34% | 32% | 32% | 27% |
| M-2.4 | Infrastructure Investment | Percentage of Total Cost of Infrastructure | 2% | | 8.18% | 6% | 6% | 4% | 7% | 7% | 5% | 5% | 4 |
| 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 |
| 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 |
| 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 |
| M-4.1b | Energy Use: Pump Stations | kWh/MG Monthly Avg | | | 197 | 173 | 152 | 159 | 168 | 163 | 173 | 170 | 181 |
| M-4.1c | Energy Use: Office Buildings | kWh/MG Monthly Avg | | | 84 | 77 | 102 | 96 | 104 | 97 | 104 | 104 | 95 |
| 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% |
| M-4.3 | Total Labor Cost/MGD | Personal Services + Fringe Benefits/365/5-Year Average Daily Flow | | \$1,028 | \$1,095 | \$1,174 | \$1,232 | \$1,249 | \$1,279 | \$1,246 | \$1,285 | \$1,423 | \$1,348 |
| M-4.4 | Affordability | 8 CCF Monthly Charge/Median Household Income | < 0.5% | | 0.48% | 0.48% | 0.41% | 0.43% | 0.53% | 0.55% | 0.59% | 0.60% | 0.64% |
| M-4.5 | Total Operating Cost/MGD | Total Operating Expense/365/5-Year Average Daily Flow | | \$2,741 | \$2,970 | \$3,262 | \$3,316 | \$3,305 | \$3,526 | \$3,434 | \$3,592 | \$3,959 | \$3,823 |
| M-5.1 | Name Recognition | Percentage (Survey Result) | 100% | 67% | 71% | N/A | 62% | N/A | 60% | N/A | N/A | 53% | N/A |
| M-5.4 | Value of Research | Percentage - Total Value/HRSD Investment | | | 129% | 235% | 177% | 149% | 181% | 178% | 143% | 114% | 117% |
| M-5.5 | Number of Research Partners | Annual Total Number | | | 42 | 36 | 31 | 33 | 28 | 35 | 15 | 20 | 26 |
| | 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 |
| | Rainfall | Annual Total Inches | | 66.9 | 44.21 | 56.21 | 46.65 | 46.52 | 51.95 | 54.14 | 66.66 | 49.24 | 53.1 |
| | Billed Flow | Annual Percentage of Total Treated | | 71.9% | 82.6% | 78% | 71% | 73% | 74% | 72% | 73% | 76% | 72% |
| | Senior Debt Coverage | Net Revenue/Senior Annual Debt Service | > 1.5 | 2.51% | 2.30% | 2.07% | 1.88% | 1.72% | 1.90% | 2.56% | 3.10% | 3.59% | 4.84% |
| | 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% |

| Monthly Updated Metrics | | | | | | | | | | | | | | FY-20 | FY-20 |
|-------------------------|--|--|------------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 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 | Mar-20 | Apr-20 |
| | 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 | 152.4 | 149.0 |
| | Industrial Waste Related System Issues | Number | 0 | | 3 | 6 | 6 | 6 | 2 | 4 | 7 | 4 | 7 | 0 | 0 |
| | Wastewater Revenue | Percentage of budgeted | 100% | | 97% | 96% | 98% | 107% | 102% | 104% | 103% | 103% | 104% | 101% | 101% |
| | General Reserves | Percentage of Operating and Improvement Budget | 75% - 100% | | 72% | 82% | 84% | 92% | 94% | 95% | 104% | 112% | 117% | 121% | 122% |
| | 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 | \$25,174,836 | \$26,089,125 |
| | Aging Accounts Receivable | Percentage of receivables greater than 90 days | | | 21% | 20% | 18% | 19% | 21% | 20% | 18% | 18% | 17% | 20% | 20% |
| M-2.5 | Capacity Related Overflows | Number within Level of Service | 0 | | 25 | 1 | 30 | 5 | 11 | 16 | 6 | 10 | 5 | 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 | 8:45659 | 0:50733 |
| M-3.2 | Odor Complaints | Number | 0 | | 6 | 2 | 7 | 11 | 5 | 9 | 7 | 6 | 9 | 0 | 2 |
| 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 | 139,767,440 | 152,314,145 |
| M-3.5 | Pollutant Discharge (% of permitted) | Pounds Discharged/Pounds Removed | < 40% | | 25% | 22% | 25% | 22% | 22% | 20% | 22% | 17% | 17% | 19% | 19% |
| M-5.2 | Educational and Outreach Events | Number | | | 302 | 184 | 238 | 322 | 334 | 443 | 502 | 432 | 367 | 15 | 6 |
| M-5.3 | Number of Community Partners | Number | | | 280 | 289 | 286 | 297 | 321 | 354 | 345 | 381 | 293 | 16 | 12 |

EFFLUENT SUMMARY FOR APRIL 2020

| PLANT | FLOW mgd | % of Design | BOD mg/l | TSS mg/l | FC #/UBI | ENTERO #/UBI | TP mg/l | TP CY Avg | TN mg/l | TN CY Avg | TKN mg/l | NH3 mg/l | CONTACT TANK EX |
|-----------------|---------------|----------------|-------------|-------------|-------------|-----------------|------------|--------------|------------|--------------|-------------|-------------|--------------------|
| ARMY BASE | 11.54 | 64% | 2 | 3.3 | 3 | 2 | 0.79 | 0.73 | 3.0 | 4.2 | NA | NA | 7 |
| ATLANTIC | 21.76 | 40% | 7 | 9.8 | 6 | 1 | NA | NA | NA | NA | NA | NA | 0 |
| BOAT HARBOR | 14.28 | 57% | 6 | 6.4 | 1 | <1 | 0.49 | 0.51 | 21 | 20 | NA | NA | 10 |
| CENT. MIDDLESEX | 0.010 | 41% | <2 | 1.8 | 1 | <1 | NA | NA | NA | NA | 1.2 | 0.04 | NA |
| CHES-ELIZ | 20.46 | 85% | 13 | 15 | 22 | 13 | 1.5 | 1.5 | 32 | 33 | NA | NA | 6 |
| JAMES RIVER | 13.46 | 67% | 5 | 3.7 | 2 | <1 | 0.38 | 0.47 | 9.0 | 9.7 | NA | NA | 1 |
| KING WILLIAM | 0.053 | 53% | <2 | <1.0 | NA | <1 | 0.025 | 0.028 | 1.7 | 2.1 | 1.5 | NA | NA |
| NANSEMOND | 16.94 | 56% | 3 | 4.3 | 3 | 1 | 0.60 | 0.63 | 3.4 | 3.9 | NA | NA | 0 |
| SURRY, COUNTY | 0.074 | 114% | 3 | 20 | NA | NA | NA | NA | NA | NA | NA | NA | 0 |
| SURRY, TOWN | 0.064 | 107% | 6 | 10 | NA | 20 | NA | NA | NA | NA | 1.5 | 0.22 | NA |
| URBANNA | 0.041 | 41% | 2 | 7.7 | 2 | 1 | 3.6 | 3.4 | 15 | 11 | NA | 0.77 | NA |
| VIP | 28.75 | 72% | 3 | 3.8 | 2 | 2 | 0.22 | 0.34 | 2.5 | 3.0 | NA | NA | 1 |
| WEST POINT | 0.459 | 76% | 21 | 22 | 2 | 2 | 2.3 | 2.3 | 16 | 16 | NA | NA | 0 |
| WILLIAMSBURG | 6.97 | 31% | 2 | 2.6 | 4 | 2 | 0.81 | 0.52 | 2.3 | 3.3 | NA | NA | 4 |
| YORK RIVER | 14.08 | 94% | 1 | 0.19 | 1 | <1 | 0.28 | 0.30 | 5.1 | 4.9 | NA | NA | 0 |
| | <u>148.95</u> | | | | | | | | | | | | |

Tributary Summary

| | |
|-------------------|------------------|
| | % of Capacity |
| North Shore | 59% |
| South Shore | 60% |
| Small Communities | 70% |

| Tributaries | Annual Total Nitrogen | | | Annual Total Phosphorus | | |
|--------------|-----------------------|-----------------|-----|-------------------------|-----------------|-----|
| | Discharged | Operational | | Discharged | Operational | |
| | YTD | Projection CY20 | | YTD | Projection CY20 | |
| | % | Lbs | % | % | Lbs | % |
| James River | 30% | 3,990,617 | 88% | 25% | 283,192 | 89% |
| York River | 28% | 255,436 | 89% | 29% | 16,474 | 85% |
| Rappahannock | 34% | NA | NA | 141% | NA | NA |

Rainfall (inch)

| | | |
|--------------|--------------|--------------------|
| <u>North</u> | <u>South</u> | <u>Small</u> |
| <u>Shore</u> | <u>Shore</u> | <u>Communities</u> |
| <u>(PHF)</u> | <u>(ORF)</u> | <u>(FYJ)</u> |

Permit Exceedances: Total Possible Exceedances, FY20 to Date: 9:50,733
Pounds of Pollutants Removed in FY20 to Date: 152,314,145
Pollutant Lbs Discharged/Permitted Discharge FY20 to Date: 19%

| | | | |
|--------------------|--------|--------|--------|
| Month | 5.03" | 4.59" | 5.16" |
| Normal for Month | 4.27" | 3.36" | 4.21" |
| Year to Date Total | 17.23" | 17.84" | 15.81" |
| Normal for YTD | 14.32" | 12.57" | 13.75" |

AIR EMISSIONS SUMMARY FOR APRIL 2020

| | 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 | 1 | 36 | 99 | 0 |
| BOAT HARBOR | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 1 | 23 | 98 | 0 |
| CHES-ELIZ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 16 | 99 | 0 |
| VIP | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 1 | 62 | 97 | 0 |
| WILLIAMSBURG | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 1 | 16 | 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: | 2 |
| HRSD Odor Scrubber H2S Exceptions: | 3 |