

HRSD Commission Meeting Agenda
9:00 a.m. – May 25, 2021

Location: Electronic Meeting via Zoom in Accordance with Chapter 1289, Virginia 2020 Acts of Assembly

Limited electronic observation is available by reservation and must be received by Jennifer Cascio at jcascio@hrsd.com by noon one business day prior to the meeting.

Public Comments to be made during the meeting should be submitted to Jennifer Cascio by email to jcascio@hrsd.com or by phone to 757.460.7003, and must be received by noon one business day prior to the meeting.

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
	Call to Order	Elofson
	Roll Call of HRSD Commission	Cascio
1.	Awards and Recognition	Henifin
2.	Consent Agenda	Henifin
	a. Approval of Minutes	
	b. Contract Awards	
	c. Task Order	
	d. Contract Change Order	
	e. Sole Source	
3.	Revenue Policy Commission Adopted Policy	Bernas
4.	Fiscal Year-2022 (July 1, 2021 – June 30, 2022) Budgets	Bernas
5.	Tax Exempt Bond Proceeds Expenditure for Fiscal Year (FY) 2020 - 2021 Reimbursement Resolution	Bernas
6.	Ostara Byproduct Removal Agreement Amendment	Bott
7.	Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous) Proposal Compensation	Husselbee
8.	James River SWIFT Land Acquisition Initial Appropriation	Husselbee
9.	Private Pump Station Improvements New CIP, Initial Appropriation and Task Order (>\$200,000)	Husselbee

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
10.	<u>South Norfolk Area Gravity Sewer Improvements, Phase 1 (Interstate Crossing) Additional Appropriation and Task Order</u>	Husselbee
11.	<u>Treatment Plant Grease Handling Facilities Additional Appropriation</u>	Husselbee
12.	<u>Williamsburg Treatment Plant Generator and Switchgear Replacement Additional Appropriation</u>	Husselbee
13.	<u>COVID-19 Wastewater Surveillance Study Update</u>	Curtis
14.	<u>Operations & Nominations (O&N) Committee Appointment</u>	Henifin
15.	<u>Unfinished Business</u>	Henifin
16.	<u>New Business</u>	Henifin
17.	<u>Commissioner Comments</u>	
18.	<u>Public Comments Not Related to Agenda</u>	Cascio
19.	<u>Informational Items</u>	Henifin
	a. <u>Management Reports</u>	
	b. <u>Strategic Planning Metrics Summary</u>	
	c. <u>Effluent Summary</u>	
	d. <u>Air Summary</u>	
20.	<u>Closed Meeting – Personnel Matter</u>	Henifin
21.	<u>Reconvened Meeting</u>	Henifin

Next Regular Commission Meeting Date: June 22, 2021

AGENDA ITEM 1. – May 25, 2021

Subject: Awards and Recognition

Recommended Action: No action is required.

Brief: Chair Elofson will recognize a service award for Gary Call, Chesapeake-Elizabeth Treatment Plant Operator, who marked his 20th year of service with HRSD on May 21, 2021. Gary was hired in May 2001 as a Plant Operator at the Chesapeake-Elizabeth Treatment Plant. He transferred to the Virginia Initiative Plant in January 2002 and then returned to the Chesapeake-Elizabeth Treatment Plant in June of 2002 as a Maintenance Operator. In September 2006 he returned to the Plant Operator role, a position he still holds today.

AGENDA ITEM 2. – May 25, 2021

Subject: Consent Agenda

Recommended Action: Approve the Consent Agenda.

Brief: The items listed below are presented on the following pages for Commission action.

a. Approval of Minutes

The draft minutes of the previous Commission Meeting were distributed electronically prior to the meeting.

b. Contract Awards

- | | | |
|----|---|-----------|
| 1. | Insurance Broker Services | \$375,000 |
| 2. | Larchmont Area Sanitary Sewer Improvements | \$397,500 |
| 3. | mDataManager™ Enterprise Software Application | \$235,000 |

c. Task Orders

- | | | |
|----|--|-----------|
| 1. | Boat Harbor Treatment Plant Sidestream Piping and Installation | \$337,619 |
|----|--|-----------|

d. Contract Change Orders

- | | | |
|----|---|---------|
| 1. | James River Treatment Plant Gravity Thickener #1 Rake Replacement and Coating | \$4,629 |
|----|---|---------|

e. Sole Source

- | | | |
|----|---|--|
| 1. | Gas Mastrrr Submersible Chemical Mixers | |
| 2. | inDENSE™ Technology and Parts | |

CONSENT AGENDA ITEM 2.b.1. – May 25, 2021

Subject: Insurance Broker Services
Contract Award (>\$200,000)

Recommended Action: Award a blanket purchase contract for Insurance Broker services to Towne Insurance Agency, LLC. in the estimated amount of \$75,000 for year one with four annual renewal options and an estimated cumulative value in the amount of \$375,000.

Type of Procurement: Competitive Negotiation

Proposers	Technical Points	Recommended Selection Ranking
Towne Insurance Agency, LLC	92	1
Willis, Towers, Watson Southeast, Inc.	83	2
AON Risk Services South, Inc.	79	3

Contract Description: This contract is an agreement for insurance broker services which includes risk analysis, preparation of underwriting submissions/specifications, marketing, program design, and carrier selection. The contract will also support HRSD's efforts in continued development of risk management policies, risk assessments, and controls. The broker will negotiate HRSD's insurance policies on an annual basis and provide loss management services.

A Public Notice was issued on February 17, 2021. Three firms submitted proposals on March 12, 2021 and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the requirements in the Request for Proposal. Two firms were short listed, interviewed and technically ranked. The proposal submitted by Towne Insurance Agency, LLC. was ranked by technical points to be the highest qualified.

CONSENT AGENDA ITEM 2.b.1. – May 25, 2021

Subject: Larchmont Area Sanitary Sewer Improvements
Contract Award (>\$200,000)

Recommended Action: Award a contract to Ulliman Schutte Construction, LLC in the amount of \$397,500.

CIP Project: VP015320

Budget	\$38,734,000
Previous Expenditures and Encumbrances	(\$420,402)
Available Balance	\$38,313,598

Type of Procurement: RFQ/RFP

Proposers	SOQ	Technical Proposal	Price Proposal	Total Points	Recommended Selection Ranking
Ulliman Schutte Construction, LLC	21.17	21.33	48.32	90.82	1
MEB General Contractors, Inc.	20.42	19.65	50	90.06	2
Crowder Construction Company	21.20	20.80	46.51	88.51	3

Contract Description: This selection is for a Construction Manager to enter into a contract for pre-construction services for the Larchmont Area Sanitary Sewer Improvements project. Construction and post-construction phase services will be added to this contract by amendment following negotiation of the guaranteed maximum price (GMP) at the final design phase.

A Public Notice was issued on February 7, 2021. Six firms submitted Statements of Qualifications on March 2, 2021, and all firms that submitted were determined to be responsive and deemed fully qualified, responsible and suitable as per the requirements in the Request for Qualifications. Three firms were short listed, and those firms received Requests for Proposals, submitted Technical Proposals, were interviewed, and submitted price proposals. The Selection Committee recommends Ulliman Schutte Construction LLC as the construction manager for this project.

Project Description: This project involves design and construction of five new sanitary sewer pump stations, approximately 3,700 linear feet of 6-inch, 8-inch, and 10-inch force mains, and approximately 10,000 linear feet of 8-inch and 10-inch gravity mains and appurtenances. The new infrastructure will replace:

- five existing HRSD pump stations: Monroe Place PS #114, Powhattan Avenue PS #122, Richmond Crescent #124, Hanover Avenue PS #141, and Jamestown Crescent PS #142, and
- City of Norfolk (City) pump stations: Larchmont Eleanor Court PS #122; Larchmont Walnut Hill Street PS #113; and Larchmont Westwood Terrace PS #114.

This project is part of the EPA Rehabilitation Action Plan Phase 2 with a required substantial completion date of May 5, 2025.

Schedule:

PER	July 2020
Design	June 2021
Bid	May 2021
Construction	September 2022
Project Completion	February 2026

CONSENT AGENDA ITEM 2.b.3. – May 25, 2021

Subject: mDataManager™ Enterprise Software Application
Contract Award (>\$200,000)

Recommended Action: Award a contract for mDataManager™ Enterprise Software Application to Margolis, Ainsworth, & Kinlaw Inc. DBA MAK Solutions in the estimated amount of \$47,000 for year one with four annual renewal options and an estimated cumulative value in the amount of \$235,000.

Type of Procurement: Sole Source

All software implemented was previously approved as a sole source with Margolis, Ainsworth, & Kinlaw Inc. DBA MAK Solutions in April 2017 for a four-year contract term.

HRSD Estimate: \$235,000

Contract Description: This contract is an agreement for mDataManager™ enterprise software application. This software is used to archive data off the CC&B production database into a secondary archive database. The software makes it possible for the Customer Service representative to still view data and move data back into the production database if necessary. It also provides HRSD the ability to purge data out of the archive database without causing data corruption based on a retention schedule. This will allow us to comply with the Library of Virginia Data Retention.

Project Description: Product includes data conversion, archive and purge, data integrity analysis, data sub-setting and a support environment productivity tool. Without this product, the Customer Care and Billing (CC&B) database responsiveness will deteriorate. There is currently no other product on the market that will archive the CC&B database records.

Analysis of Cost: The cost is based off the original negotiation with Margolis, Ainsworth, & Kinlaw Inc. DBA MAK Solutions created with the original purchase in April 2017.

CONSENT AGENDA ITEM 2.c.1. – May 25, 2021

Subject: Boat Harbor Treatment Plant Sidestream Piping and Installation
Task Order (>\$200,000)

Recommended Action: Approve a task order with Tidewater Utility Construction, Inc. in the amount of \$337,619.

Contract Status:	Amount
Original Contract with Tidewater Utility Construction, Inc.	\$0
Total Value of Previous Task Orders	\$2,036,240
Requested Task Order	\$337,619
Total Value of All Task Orders	\$2,373,859
Revised Contract Value	\$2,373,859

Project Description: The purpose of this project is to minimize the impacts of cyanide on the biological process by treating sidestream scrubber water with a "separate biomass." Historically, Boat Harbor Treatment Plant has treated mainstream and sidestream wastewater with the same biomass, resulting in less-than-ideal biological process performance. This project will separate the two biomasses, providing for sidestream treatment resembling that at other HRSD treatment plants with incinerators. To accomplish this, two new pumps are required along with associated discharge piping and valves. Instrumentation and electrical components of the project are to support the operation of pumps and valve actuators.

Task Order Description: This task order will provide for the installation of an eight inch and three inch ductile iron pipe along with the required pipe stands and core drilling of a suction hole on top of the aeration tanks at the Boat Harbor Treatment Plant.

Analysis of Cost: The cost for this task order is based on the unit prices and labor rates in the Sewer Repairs and On-Call Services contract with Tidewater Utility Construction, Inc., and other similar projects.

CONSENT AGENDA ITEM 2.d.1. – May 25, 2021

Subject: James River Treatment Plant Gravity Thickener #1 Rake Replacement and Coating Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with Commonwealth Epoxy Coatings Inc. in the amount of \$4,629.

Contract Status:	Amount	Cumulative % of Contract
Original Contract with Commonwealth Epoxy Coatings Inc.	\$172,525	
Total Value of Previous Change Orders	\$49,665	29%
Requested Change Order No. 2	\$4,629	
Total Value of All Change Orders	\$54,294	31%
Revised Contract Value	\$226,819	

Time (Additional Calendar Days)		1
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Project Description: The project consisted of removing and disposing of old rake assembly, installing new rake assembly, center cage, and center shaft on the Gravity Thickener #1 at James River Treatment Plant in accordance with the plans from Collins Engineers. Additionally, there was abrasive blasting and coating of new steel for Gravity Thickener #1 at James River Treatment Plant.

Change Order Description: This change order was due to modifications needed for the installation of the rake arm. The drawings originally proposed were found to be slightly off with the section that connects the rake arm to the center cage. This resulted in Collins Engineering being called to meet with an HRSD and the Contractor representative to discuss how to remedy the situation. This meeting and new drawing created an additional day rental of crane and labor cost.

Analysis of Cost: The cost of this change order is based on the pre-negotiated contract pricing.

CONSENT AGENDA ITEM 2.e.1. – May 25, 2021

Subject: Gas Mastrrr Submersible Chemical Mixers
Sole Source (>\$10,000)

Recommended Action: Approve the use of Gas Mastrrr Submersible Chemical Mixers by Geiger Pump and Equipment Company for all of HRSD.

Sole Source Justification:

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

Details: Product includes the purchase of a Gas Mastrrr submersible aluminum sulfate mixer. The Williamsburg Treatment Plant currently uses the mixer in the aeration influent tanks as a chemical feed to remove phosphorus from the wastewater.

This purchase is for inventory to act as a drop-in replacement as needed. If the current installed mixer becomes inoperable, it must be sent to the manufacturer for rebuild. If there is no backup mixer, additional amounts of aluminum sulfate would need to be purchased to keep up with the demand of the phosphorus removal. Having a spare mixer in inventory will alleviate downtime, additional expenses, as well as allow for continued process.

The original purchase at Williamsburg Treatment Plant was done via ProCard in 2017. Several HRSD Treatment Plants use the Gas Mastrrr chemical mixers. Those mixers were advertised in a competitive Solicitation accepting equal brands in 2018 and 2020. However, the only response received was from Gas Mastrrr.

CONSENT AGENDA ITEM 2.e.2. – May 25, 2021

Subject: inDENSE™ Technology and Parts
Sole Source (>\$10,000)

Recommended Action: Approve the use of inDENSE™ Technology and Related Parts by World Water Works, Inc. 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 inDENSE™ hydrocyclones and related parts associated with this technology, for which HRSD was one of the developers. The purpose of the inDENSE™ technology is to improve mixed liquor settleability thereby improving secondary clarifier performance and increasing solids loading rate. This is done through the use of hydrocyclones for selective wasting of biomass from the process. This purchase includes the replacement of six larger hydrocyclones at the James River Treatment Plant with 12 smaller hydrocyclones, which are anticipated to improve the performance of the process.

The Commission previously approved sole source authority for S-Select Technology and Related Parts for the Urbanna Treatment Plant. This action supersedes previous actions to include changing the technology name from S-Select to inDENSE™, implementing the new sole source recommended action of approving the product (instead of the provider), and including all of HRSD facilities.

AGENDA ITEM 3. – May 25, 2021

Subject: Revised Revenue Policy
Commission Adopted Policy

Recommended Action: Approve the revised Revenue Policy.

Brief: The purpose of the Revenue Policy is to ensure that there is sufficient revenue to support direct and indirect operating, capital, reserves and current and future debt service costs. The Policy covers areas such as the basis of charges, how charges are determined, how rates are approved, revenue forecasts, collections and an overview of HRSD's Rate Model. It was originally adopted in May 2017 and last revised in May 2019.

The [revised policy](#) includes additional definitions for new rates and clarifications. The following key changes were presented at the March 23, 2021 Commission Workshop, April 15, 2021 Finance Committee and April 27, 2021 Commission meetings:

- Added a new **Fats, Oils, and Grease (FOG) Rate** and defined **FOG** as wastewater created from the cleaning of a grease control device (GCD) and transported and discharged to a wastewater treatment plant by conveyance other than pipelines.
- Modified the definition of **Hauled Wastewater** to exclude **FOG**.
- Added a new rate, **Town Wholesale Rate** that is limited to towns with a population less than 2,000 where the town is billed based on effluent meter data as opposed to billing individual properties based on their own water meters.
- Modified the method used to set **Surcharge Rates**. Surcharge rates will now be set using moving averages to dampen year-over-year volatility

COMMISSION ADOPTED POLICY
Revenue Policy



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1.0 Purpose and Need

The purpose of this revenue policy is to ensure that there is sufficient revenue to support direct and indirect operating, capital, reserves and current and future debt service costs.

2.0 Definitions

2.1 Domestic Quality Wastewater. Defined in accordance with HRSD's Domestic Wastewater Survey that specifies the primary pollutants and the corresponding concentration levels for domestic wastewater.

2.2 Domestic Quality Wastewater Survey. A sampling evaluation of wastewater to define Domestic Quality Wastewater concentrations of primary pollutants conducted in residential neighborhoods in various localities (cities/counties) served by HRSD.

2.3 Facility Charges. Charges to cover the cost of treatment and conveyance capacity consumed by new connections or redevelopment. Facility charges are applied to any sewer or sewer system discharging into HRSD facilities and any increase to existing service.

2.4 Fats, Oils, and Grease (FOG). Wastewater created from the cleaning of a grease control device (GCD) and transported and discharged to a wastewater treatment plant by conveyance other than pipelines.

2.5 Flat Rate. A constant rate applied to customer accounts in lieu of a metered based bill. The rate is based on the winter average water consumption of existing flat rate accounts as determined periodically.

2.6 Hauled Wastewater. Wastewater transported and discharged to a wastewater treatment plant by conveyance other than pipelines, excluding Fats, Oils and Grease (FOG) waste from a grease control device (GCD).

2.7 High Strength or Unusual Waste. Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Phosphorus (TP), and Total Kjeldahl Nitrogen (TKN) discharged waste concentrations that exceed those defined as Domestic Quality Wastewater or unusual wastes not covered by the Rate Schedule that may be considered separately and may be assigned a special rate.

2.8 HRSD Charges. Any and all charges or fees billed to customers for wastewater services provide by HRSD.

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- 2.9 HRSD Collection System.** All infrastructure conveying flow to the Interceptor System in localities where HRSD owns or operates a collection system.
- 2.10 HRSD Collection System Charges.** Rates for HRSD Collection System operating and maintenance costs that are in addition to Wastewater Treatment Charges.
- 2.11 HRSD Enabling Act.** The Commonwealth of Virginia 1960 Acts of the Assembly, c. 66 as amended.
- 2.12 HRSD Rate Schedule.** Published listing of rates, fees and charges applicable for specified time frame.
- 2.13 Interceptor System.** Larger diameter pipelines conveying flow from the collection system to the Wastewater Treatment Plant.
- 2.14 NAICS Surcharge Categories.** The North American Industry Classification System (NAICS) standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.
- 2.15 Rational Nexus Criteria.** These ensure that there is a reasonable connection between HRSD Charges and the actual cost of operating the wastewater system. These criteria ensure: (1) the charges are not arbitrary, (2) the charges are equitable, and (3) the charges are not discriminatory.
- 2.16 Regional Sanitary Sewer System.** All portions of the individual locality and HRSD wastewater collection and interceptor systems and appurtenances thereto.
- 2.17 Surcharge Rate.** Rates for High Strength or Unusual Wastes to recover costs in direct proportion to volume and pollutant concentrations. Surcharge rates are based on a marginal cost approach for the variable costs associated with the incremental costs to treat High Strength or Unusual Wastes.
- 2.18 Wastewater Treatment Charges.** Charges to convey and treat Domestic Quality Wastewater that are based on billed water consumption, an effluent wastewater meter, or a Flat Rate.
- 2.19 Wastewater Treatment Rate.** Rate per specified unit of measure to recover the costs of conveyance and treatment of Domestic Quality Wastewater.

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2.20 Town Wholesale Treatment Rate. Rate paid by an incorporated town per specified unit of measure to recover the costs of conveyance and treatment of Domestic Quality Wastewater when the town does not use all HRSD facilities or need all of the services provided to a typical customer. This rate is only applicable to incorporated towns with a population less than 2,000.

3.0 Guiding Principles

3.1 General.

3.1.1 To the extent feasible, HRSD is a cost recovery enterprise and supports a uniform rate structure for interception and treatment regardless of which wastewater treatment plant treats a customer's wastewater.

3.1.2 Wastewater Treatment and Collection Charges shall not be waived. However, payment extensions may be established for the collection of HRSD Charges.

3.1.3 All new connections and redevelopment shall pay an equitable share for the treatment and conveyance capacity consumed by their wastewater discharge to the Regional Sanitary Sewer System.

3.1.4 All HRSD rates shall be reviewed and revised (if required) at least annually and approved by the Commission. Changes shall be publicly advertised in accordance with HRSD's Enabling Act and posted on HRSD's web site.

3.1.5 Surcharge rates are set to recover costs in direct proportion to volume and pollutant concentrations in excess of Domestic Quality Wastewater.

3.1.6 Facility Charges ensure that an unfair burden is not placed on existing users that would otherwise pay higher rates to expand the system to accommodate new flows and loads to HRSD's facilities. HRSD uses the Rational Nexus Criteria as one of the guiding principles to derive Facility Charges.

3.1.7 HRSD will not depend on temporary revenues such as grants to fund operating costs. One-time temporary revenues or grants should typically be used to fund one-time expenses.

3.1.8 Surcharge rates are applied to non-permitted commercial facilities using sampling data for groups of businesses that produce similar goods or services using the North American Industry Classification System (NAICS).

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3.2 Basis of Charges.

3.2.1 Wastewater Treatment Charges

- (1) The Wastewater Treatment Rate is derived from the Rate Model, see Appendix A.
- (2) Volumetric Accounts
 - a. Volume of water purchased by the customer (as recorded by a water meter); or,
 - b. Volume of effluent discharged to the sewer system (as recorded by an effluent meter)
- (3) A rate based on facility use and billing period.
- (4) A single family residential Flat Rate as defined herein.
- (5) HRSD treatment plants are designed to treat domestic quality wastewater. Additional charges may be assessed for wastewater with qualities that differ from the current definition of Domestic Quality Wastewater.
- (6) Minimum charges apply to all accounts, except as specified herein.

3.2.2 Facility Charges.

- (1) HRSD shall establish Facility Charges for new connections based upon the size of the water meter serving the new connection. If the locality does not offer a specific meter size, a combination meter is proposed, or another similar scenario exists, the Facility Charge may be based on a calculated meter size using the AWWA M22 Sizing Water Service Lines and Meters manual. Additional special exceptions, including redevelopment provisions, may be outlined in the HRSD Rate Schedule.
- (2) The Facility Charge for each meter size is based on the total net replacement value of all HRSD's assets, HRSD's total hydraulic capacity, and the average water consumption for each meter size.
- (3) HRSD reserves the right to require Facility Charges based upon wastewater that differs from domestic quality wastewater and that consumes loading capacity in excess of capacity consumed by the equivalent volume of Domestic Quality Wastewater.

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- 3.2.3 HRSD Collection System Rate.** A rate to recover HRSD costs for maintenance and operation of HRSD owned collection systems. The rate shall be based upon the weighted average rate charged by localities within the HRSD service area for collection system operation and maintenance of locality owned collection systems. Localities that do not charge a Locality collection rate will be excluded from this calculation. The weighted average will be based on the latest population estimates provided by the Welden Cooper Center for Public Service or other Commonwealth designated demographics agency. HRSD may establish separate collection system maintenance charges for each locality within the HRSD Collection System where warranted by unique circumstances.
- 3.2.4 Hauled Wastewater Rate.** This rate is based on five individual charges specific to Hauled Wastewater: BOD, TSS, TP, TKN and volume as derived from the HRSD Rate Model and may include applicable credits, see Appendix A, and are not subject to a minimum charge. Since waste haulers do not use the Interceptor System, those costs are excluded from the volume rate.
- 3.2.5 Fats, Oils, and Grease (FOG) Rate.** This rate is based on five individual charges specific to FOG: BOD, TSS, TP, TKN and volume as derived from the HRSD Rate Model and may include applicable credits, see Appendix A, and are not subject to a minimum charge. Since waste haulers do not use the Interceptor System, those costs are excluded from the volume rate.
- 3.2.6 Town Wholesale Treatment Rate.** This rate is based on HRSD's average unit costs to: (1) treat wastewater in all of its major wastewater plants, (2) transport wastewater from HRSD's member municipalities through its interceptor systems, and (3) the management, administration, and support costs applicable to these services. This charged volume is based on an effluent meter where a town discharges into the HRSD System, which will include infiltration and inflow.

4.0 Procedures

- 4.1** Determining Costs Used in the HRSD Rate Model, See Appendix A.
- 4.1.1** The budgeted annual costs shall be used to calculate rates that will be in effect for the budget fiscal year.
- 4.1.2** Budgeted costs shall be loaded into a comprehensive rate model to allocate costs to applicable categories annually. This model shall allocate costs to volume and each pollutant identified in the most recent Domestic Wastewater Survey.

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4.1.3 The Domestic Wastewater Survey shall be updated every five years or more frequently if permit requirements or treatment technology changes warrant revisiting.

4.2 Determining Total Wastewater Volume.

The total volume of wastewater to be billed during a budget year shall be estimated based upon the water consumption trends within the HRSD service area and other information when available.

4.3 Calculating Rates.

4.3.1 The model shall calculate the Wastewater Treatment Rate based on total budgeted cost divided by the estimated volume of wastewater to be billed in the fiscal year. The rate shall be expressed in dollars per hundred cubic feet or per 1,000 gallons.

4.3.2 The HRSD Rate Model shall calculate the Surcharge Rate for High Strength Waste based on the incremental cost to treat each additional pound of each pollutant in excess of the pounds of pollutants identified for Domestic Quality Wastewater in the most recent HRSD Domestic Quality Wastewater Survey. The rates shall be expressed in dollars per 100 pounds or per milligrams per liter per hundred cubic feet of wastewater.

4.3.3 Facility Charges shall be calculated by dividing the replacement cost for all HRSD facilities by HRSD's total hydraulic capacity to obtain the replacement cost per gallon. This replacement cost per gallon shall be multiplied by the estimated flow expected from new connections and redevelopment and expressed in dollars per meter size. The estimated flow is based on the average daily flows for each size water meter using actual historical data from HRSD's meter database and any additional information available.

4.3.4 Flat Rate shall be calculated by determining the average water consumption for the months of January, February, and March for all existing flat rate accounts for a 30-day period multiplied by the Wastewater Treatment Rate.

4.3.5 Daily Minimum shall be calculated by dividing the total labor costs (not dependent on volume of wastewater conveyed or treated) of the Operations Department by the total number of accounts' ten-year rolling average divided by 365.

4.3.6 Surcharge Rates shall be calculated using moving averages using historical data to dampen the year-over-year volatility.

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4.4 Implementation.

4.4.1 All rates shall be approved by the Commission.

4.4.2 Rates shall be advertised for four consecutive weeks in a newspaper of general circulation within the District.

4.5 Financial Forecast.

HRSD will analyze water consumption, regional economic and population data periodically to identify any trends that may impact its long-range financial forecast. HRSD will also analyze and conservatively project major expense drivers, such as construction costs, inflation, operating cost increases, and borrowing costs. The forecast should target financial metrics, across the twenty-year period, that are consistent with rating agency metrics for a strong, double-A rated credit. This approach will ensure the long-range forecast is resilient and maintains HRSD's strong financial framework.

4.6 Collections.

4.6.1 HRSD will monitor all collections to ensure they are equitably administered, timely and accurate. The cost of collections shall not exceed the marginal incremental revenue and it should not be a large percentage of the amount to be collected.

4.6.2 Charges shall be collected for all services rendered unless determined to be uncollectable.

4.6.3 Charges may be assessed for services received but not billed (for any reason) for a period of up to three prior years. The rate in effect in the year treatment services were provided shall be applied. If necessary, at HRSD's sole discretion, billing adjustments and/or payment plans may be established for payment of delayed billing or unbilled previous service.

4.6.4 Past due charges for services received and billed shall be pursued for up to 10-years after write-off.

4.6.5 If a customer has past due charges on any account for services received, and establishes a new account within HRSD's service area, customer will be subject to the past due charges being transferred to their active account, and collection will be pursued.

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5.0 Responsibility and Authority

- 5.1 The General Manager shall ensure the Commission reviews all rates annually as part of the annual budget process.
- 5.2 Rates may only be changed with an affirmative vote of a majority of the Commission at a legally noticed public meeting of the Commission.
- 5.3 The General Manager shall ensure any rate revisions are advertised and published in accordance with the HRSD Enabling Act.
- 5.4 The Director of Finance will present an updated Financial Forecast to the Commission and manage the update to the Rate Model on an annual basis.

Approved: _____
Frederick N. Elofson
Commission Chair
Date

Attest: _____
Jennifer L. Cascio
Commission Secretary
Date

COMMISSION ADOPTED POLICY
Appendix A – Rate Model Summary



Adopted:	May 23, 2017
Revision:	May 25, 2021
Effective:	July 1, 2021

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1.0 HRSD's Rate Model Summary

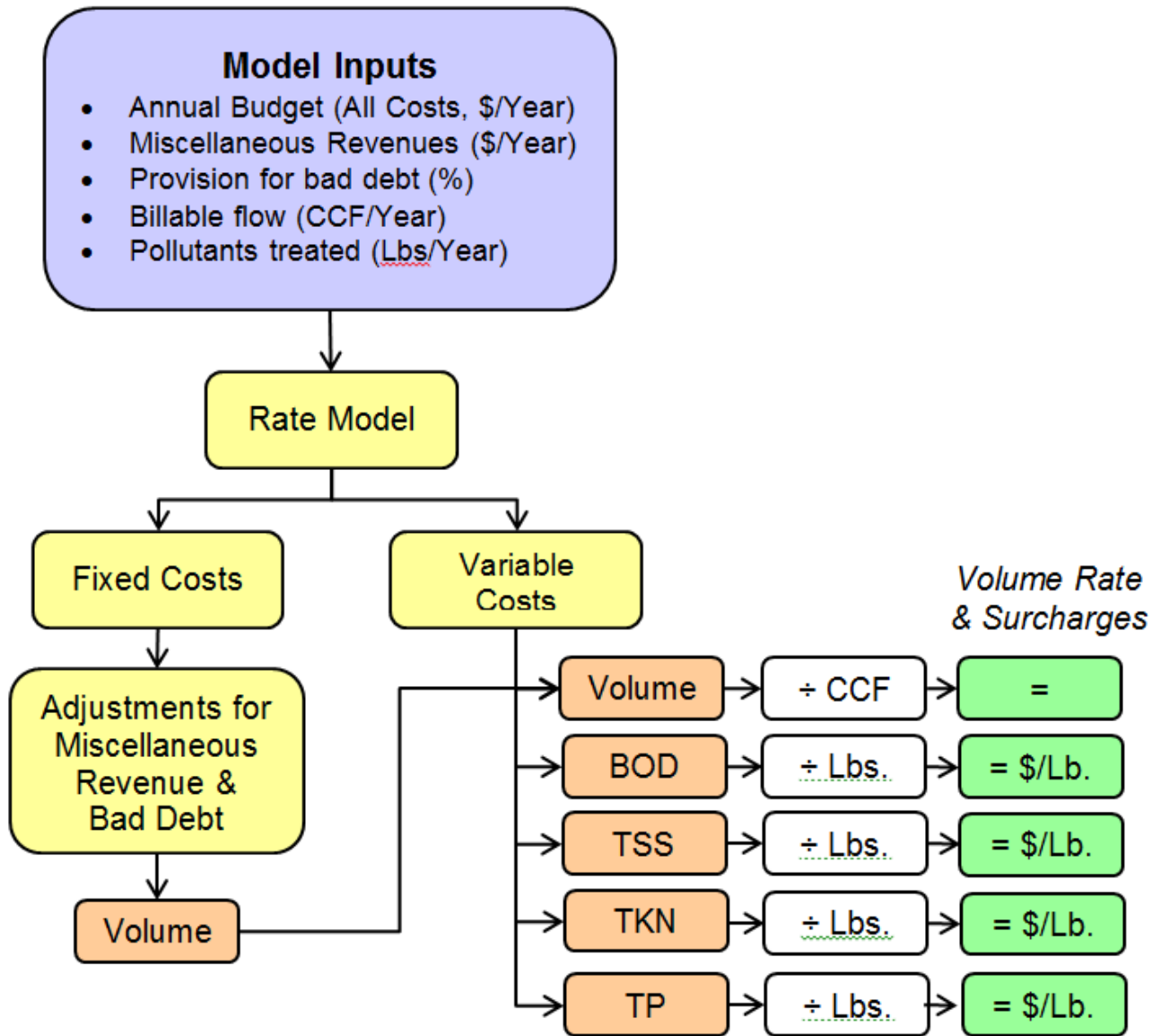
HRSD's Rate Model uses a cost accounting process to allocate all operating costs to volume and each of four specific pollutants. The model designates each line item cost as fixed or variable. Fixed costs are those that are not influenced, in the short run, by volume or the quantity of pollutants in the wastewater being treated. These include for example, personnel costs, office, administrative, customer service, billing and collection expenses, and debt service. Conversely, variable costs are those that are affected by the volume and the amount of pollutants present; these include treatment plant expenditures for chemicals, electricity, fuel, and solids disposal. The rate model uses engineering criteria to allocate the variable costs to each of the four pollutants. Once the operating costs have been allocated, the model deducts miscellaneous revenues, includes a provision for bad debt, and derives rates for volume (\$/CCF) and high strength surcharges (\$/pound); the latter equates to HRSD's marginal or incremental cost attributable to treating each pollutant in excess of the amount present in typical domestic wastewater and is also presented as the equivalent \$ per mg/l per 100 CF to facilitate calculation by customers. Net fixed costs and the variable costs to treat the four pollutants present in typical domestic sewage are recovered via the volume rate and surcharges.

COMMISSION ADOPTED POLICY
Appendix A – Rate Model Summary



Adopted: May 23, 2017
 Revision: May 25, 2021
 Effective: July 1, 2021

2.0 Rate Model Schematic



AGENDA ITEM 4. – May 25, 2021

Subject: Fiscal Year-2022 (July 1, 2021 – June 30, 2022) Budgets

Recommended Actions:

- a. Approve the [FY-2022 to FY-2041 Financial Forecast](#)
- b. Approve the [Operating Budget for FY-2022](#), which includes the Operating, Debt Service and Transfer Appropriations, and authorize distribution of the Budget in accordance with the Trust Agreement.
- c. Approve the [Capital Budget](#) for FY-2022
- d. Approve the Capital Improvement Program for FY-2022 to FY-2031 ([Summary Capital Improvement Program](#))
- e. Approve the [Rate Schedule](#) to be effective July 1, 2021 subject to the requirements of the Enabling Act.

Attachment: [FY-2022 Annual Budget](#)

Brief: The annual budgeting process includes updating the 20-year Financial Forecast and preparing the Operating Budget (which includes the operating, debt service and transfer appropriations), the Capital Budget and the Capital Improvement Program (CIP) as well as the corresponding Rate Schedule to support these budgets. The Commission is required to approve an annual budget in sufficient time to ensure the proposed rates, fees and charges are published in a newspaper of general circulation within the District for four consecutive weeks.

A budget work session to review components of the budget was held after the regular Commission meeting on March 23. The Finance Committee (comprised of Commissioners Rodriguez and Lynch) and several other commissioners participated in the March 4 CIP review meeting and detailed budget presentation on April 15. The Finance Committee reported to the Commission at the April 27 meeting.

The FY-2022 Capital Budget is \$290 million and represents the first year of the \$3.0 billion ten-year CIP. Projects in the CIP are individually presented to the Commission for full project funding authorization specific to each project at the time the first dollar is spent. Changes to the CIP, which may be required by changing conditions, are presented to the Commission as amendments. The CIP will be available on the HRSD website upon Commission approval.

The Financial Forecast model was updated to project major expense drivers, such as construction costs, inflation, operating cost increases, and borrowing costs and the revenue requirements needed to ensure financial sustainability. In the latest forecast, this is the first time the pending Consent Decree approval was reflected in the model, where approximately \$2.9 billion was removed between FY-2031 to FY-2053 and replaced with a second set of high priority wet weather projects between FY-2031 to FY-2040. As result of the reduced capital spend and rate certainty with the recent WIFIA loan closing, projected rate increases from FY-2028 and beyond were reduced to 4.5% annually, which saves ratepayers approximately \$2.8 billion through FY-2053.

The Rate Schedule contains the rates necessary to generate sufficient revenue to cover expenses and reserve requirements for the next fiscal year. HRSD's Rate Model (the Model) uses a cost accounting process to allocate all operating costs to volume and each of four specific pollutants: Biochemical Oxygen Demand (BOD), total suspended solids, phosphorus and nitrogen. The Model designates each line item cost as fixed or variable and uses engineering criteria to allocate the variable costs to each of the four pollutants. Once the operating costs have been allocated, the Model derives rates for volume (\$/CCF) and high strength surcharges (\$/pound); the latter equate to HRSD's marginal or incremental cost attributable to treating each pollutant in excess of the amount present in typical domestic wastewater. The result is that the Model calculates rates sufficient to recover expenses. To meet the requirements of the Financial Forecast, the FY-2022 wastewater charge will increase from \$5.86 per 100 cubic feet to \$6.39 per 100 cubic feet. The current average residential customer (as measured by a 5/8-inch meter) uses approximately 5.6 CCF of water per month, resulting in an average monthly increase of \$2.96 (approximately \$0.10 per day increase). Our charges for wastewater treatment remain reasonable, with the average residential customer paying about \$1.18 per day to ensure future generations will inherit clean waterways and be able to keep them clean.

With the increased costs to treat Fats, Oils and Grease (FOG) that come from restaurant grease control devices, HRSD introduced a new FOG rate at \$0.2737 per gallon. The Hauled Waste rate (septic tanks and portable toilets) will remain the same at \$0.1717 per gallon.

Rates to provide wastewater services to the Small Communities include both the cost of the treatment and the collection systems. Small Community residents pay the HRSD regional treatment rate, the weighted average sewer collection system rate for the metro area, plus the capital costs (Capital Recovery Rate) of the collection systems, if required. The capital cost component generally includes the amortized cost incurred by HRSD when the systems were acquired. With the addition of the Eastern Shore, HRSD included a new rate for Accomack County and the Town of Exmore. Accomack County's rate will be similar to the other Small Communities. The Town of Exmore will be charged a new wholesale rate limited to towns with a population less than 2,000 and where the town is billed based on effluent meter data, which will include infiltration and inflow. The wholesale rate is \$3.55 per 1,000 and is set for 10-years.



Annual Budget

Fiscal Year 2022

(July 1, 2021 - June 30, 2022)

HRSD Annual Budget For
Fiscal Year 2022
(July 1, 2021 – June 30, 2022)

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Introduction

General Manager's Introduction

The voters of Virginia took the bold step in 1940 to address pollution in the Hampton Roads by approving a referendum creating the Hampton Roads Sanitation District (HRSD). That public approval capped a 15-year grassroots campaign that began when the shell-fishing beds in the Hampton Roads were closed by the Virginia Department of Health. At the time, over 30 million gallons of untreated sewage was being dumped into the waters of the Hampton Roads each day. It would take the United States Congress another 32 years to tackle the issue of water pollution on a national scale, finally passing the Clean Water Act in 1972.

Over the past 81 years, HRSD has developed into one of the premier wastewater treatment organizations in the nation. With 17 treatment facilities capable of treating 249 million gallons of wastewater each day, HRSD has eliminated the discharge of untreated sewage into the waters of Hampton Roads from the homes and businesses within our region. However, there is more work to be done to further improve water quality as well as preserve our 81-year investment in wastewater infrastructure.

The Governor-appointed, eight-member HRSD Commission approved this Fiscal Year 2022 budget at its regular meeting on March 25, 2021. The Commission and the HRSD staff worked diligently to balance our focus on stewardship of our ratepayers' hard earned dollars with our mission of stewardship of the waters of the Hampton Roads. The cost of wastewater treatment continues to rise here, as it does across the nation. However, wastewater treatment is still a bargain in Hampton Roads, with the typical household paying about \$1.25 per day for this essential service, protecting public health and our treasured local waterways.

Federal Mandates Drive HRSD Spending

The regional sewer system, although never designed to handle storm water, fills with rainwater runoff, ground water and tidal water during larger storms. At times, the regional system fills beyond capacity and overflows onto local streets. While these occasional overflows have minimal impact on water quality, the U.S. Environmental Protection Agency has made minimizing these types of events a national priority, and HRSD is under a Federal mandate to further reduce the number and volume of overflows from the regional sewer system. In response to this mandate, HRSD is working throughout the region, in partnership with the local governments we serve, to minimize the impact of storm events on the regional sewer system and the waterways we value so greatly.

The Federally mandated requirement to reduce the amount of nutrients that HRSD's treatment plants discharge into the Chesapeake Bay has also required a significant investment in infrastructure and process improvements. The investments by HRSD along with all of Virginia's wastewater treatment plants in the Bay watershed have resulted in Virginia meeting the 2025 goal for nutrient reductions from wastewater treatment plants a full seven years ahead of the 2025 target date ([Chesapeake Bay Foundation's 2017 Virginia Midpoint Assessment](#)). Unfortunately, that is not enough, and the Commonwealth has focused efforts on removing more nutrients from the HRSD wastewater facilities to meet statewide commitments required in the upper portions of the Bay, particularly in the Potomac River watershed, and to offset delays in meeting nutrient reduction goals largely in unregulated sectors such as agriculture. As a result, the General Assembly passed legislation creating the Enhanced Nutrient Removal Certainty Program during the 2021 Special Session. This legislative mandate commits HRSD to invest nearly \$2 billion in nutrient removal and related treatment upgrades, with a major portion by 2025 and additional amounts by 2032. These projects, many of which HRSD planned to accomplish, are now tied to a compliance schedule, eliminating any flexibility HRSD had with implementation (e.g., the option to defer or cancel a project for various reasons), potentially increasing the overall costs to meet the compressed compliance schedule. As a result of this combination of state-controlled factors, HRSD ratepayers will be carrying a disproportionately high percentage of the cost for the entire Commonwealth to accomplish its nutrient reduction goals by the 2025 target date under US EPA oversight.

Pursuing Innovative Solutions to Reduce Costs and Protect Water Quality

HRSD continues to lead international research efforts to reduce the cost of removing nutrients from wastewater. HRSD's research work is leveraged through partnerships with leading universities and other innovative wastewater utilities throughout the world. Putting the knowledge gained into practice has already yielded a significant return on our investment by reducing operational costs for nutrient removal as well as minimizing the capital investment required to construct new systems. A recent estimate of the value of this research found that implementation of these practices has kept energy and chemical costs from rising nearly \$40 million over the past 10 years.

Throughout HRSD's history, changing regulations have required development and implementation of innovative solutions to meet new standards to protect and restore the quality of the waters of Hampton Roads. Treatment processes have progressed from primary, to secondary, to our current advanced nutrient removal processes. Each regulatory change has required significant investment in new treatment processes. Under current regulations, the treated water HRSD discharges to area waterways is nearly clean enough to drink and substantially cleaner than the waterways themselves. With the addition of a few more treatment processes, HRSD can produce water that exceeds drinking water standards, likely to be the ultimate regulatory mandate at some point in the future.

With the various water-related challenges facing Hampton Roads and the Commonwealth, it appears there could be significant benefit from HRSD investing in additional treatment processes to treat water to meet drinking water standards as soon as possible, even before that becomes a regulatory requirement. The challenges of restoring the Chesapeake Bay, the depletion of our groundwater reserves, the impact of sea level rise and the threat of salt-water contamination of coastal groundwater may all be addressed with HRSD's Sustainable Water Initiative for Tomorrow (SWIFT). HRSD's SWIFT program will treat water to meet drinking water standards and use it to recharge the groundwater aquifer, providing a sustainable source of groundwater, slowing the rate of land subsidence due to over withdrawal of the groundwater, blocking salt water intrusion with a pressurized fresh water barrier and practically eliminating HRSD nutrient discharges to the York, James and Elizabeth Rivers. The benefits of SWIFT are significant and are needed immediately.

Financing a Sustainable Water Future

HRSD is pursuing SWIFT with a goal of obtaining required approvals to construct full-scale facilities beginning in 2022. The SWIFT Research Center began operations in May 2018 and has already recharged the aquifer with over 400 million gallons of SWIFT Water, wastewater treated to meet drinking water standards. HRSD is committed to full scale implementation of this initiative only if it can be accomplished within the financial framework laid out in the Financial Forecast as presented in this budget. In a rare bipartisan move, Congress passed [H.R. 7279](#) in December 2018 and signed by the President in January 2019, amending the Federal Water Pollution Control Act ***“to provide for an integrated planning process, to promote green infrastructure, and for other purposes.”*** This new law codifies the integrated planning process HRSD has already been using to prioritize our investments in clean water mandates. Integrated planning provides the ability to defer many of the proposed capital improvements related to reducing system overflows until after SWIFT is complete. HRSD remains committed to eliminating system overflows; however, the impact of those transient events on local water quality is minimal and the benefits nearly unperceivable. In contrast, the positive impact SWIFT will have on local waterways, eastern Virginia and the entire Chesapeake Bay is significant, will be immediately evident and critical to sustaining the vitality and prosperity of Hampton Roads and all of eastern Virginia for generations to come.

Reducing overflows from the regional sewer system and reducing the amount of nutrients discharged by our treatment plants are both driven by regulations with which HRSD must comply. These regulatory mandates consume over 80 percent of the \$3.0 billion 10-year Capital Improvement Plan. It is within that

portion of our capital improvement plan that we will reprioritize mandated projects to allow construction of SWIFT, to achieve significantly more environmental benefits without influencing our Financial Forecast.

HRSD finances its capital projects by issuing bonds and using cash on hand. Over the past 10 years, the annual investment in capital projects (debt payments and cash funded) has grown from less than 38 percent of HRSD's total revenue to more than 50 percent with the Fiscal Year 2022 budget. HRSD is investing in the regional wastewater infrastructure to ensure we leave a fully functional system to the next generation. While HRSD continues to focus on making the right investments in Hampton Roads, across the nation the need for investment in all infrastructure continues to grow. The [American Society of Civil Engineers' 2021 Infrastructure Report Card](#) graded the current state of wastewater infrastructure at a D+. [The US Water Alliance's Report, The Economic Benefits of Investing in Water Infrastructure](#), estimates the unmet water investment at over \$81 billion per year. The report highlights the lack of adequate federal investment in wastewater infrastructure, showing the drop in federal investment from 63 percent in 1977 to less than 4 percent in 2017. State, regional and local governments have had to fill the funding gap, passing on significant rate increases as utilities must price service to recover full costs.

The Community's Role

Our ratepayers can help control their costs by helping us control ours. Ensuring storm water runoff from downspouts, area drains and sump pumps is not directed to the sanitary sewer system, and ensuring privately owned service piping is well maintained and leak free will reduce the amount of water in the sewer system. This ultimately lowers our costs to pump and treat the region's wastewater. Collecting fats, oils and grease in a container for disposal in the trash, as opposed to pouring them down the drain, reduces wastewater system maintenance and operating costs. Proper disposal of unused medications (and other substances) prevents them from reaching our treatment plants, which are not designed for removal of such substances. Our ratepayers can make a difference by not flushing unused medications down the sink or the toilet. Every flush counts.

As we reflect on 81 years of protecting public health and the waters of Hampton Roads, we remember the mandate so boldly declared by those environmentally concerned Virginians in 1940. It was their foresight that allows us to enjoy the waters of Hampton Roads today. It will take our continued innovation, investment and foresight to ensure future generations will inherit clean waterways and be able to keep them clean.

Sincerely,



Ted Henifin, P.E.
General Manager

Principal Officials

May 25, 2021

COMMISSIONERS

Frederick N. Elofson, CPA, Chair

Maurice P. Lynch, PhD, Vice-Chair

Michael E. Glenn
Stephen C. Rodriguez

Vishnu K. Lakdawala, PhD
Elizabeth A. Taraski, PhD

Willie Levenston, Jr.
Molly J. Ward

COMMISSION SECRETARY

Jennifer L. Cascio

SENIOR STAFF

Edward G. Henifin, PE
General Manager

Jay A. Bernas, PE
Director of Finance
and Treasurer

Charles B. Bott, PhD, PE
Director of Water Technology
And Research

Donald C. Corrado
Director of Information
Technology

Steven G. de Mik, CPA
Director of Operations

Paula A. Hogg
Director of Talent Management

Bruce W. Husselbee, PE
Director of Engineering

James J. Pletl, PhD
Director of Water Quality

Leila Rice, APR
Director of Communications

COUNSEL

Sands Anderson, PC
General Counsel

AquaLaw, PLC
Special Counsel

Norton Rose Fulbright US, LLP
Bond Counsel

Key Facts

Service Area and Operations

Date Established	November 5, 1940
Communities Served	20 communities encompassing 4,998 square miles
	HRSD is a political subdivision of the Commonwealth of Virginia, created for the specific purpose of water pollution abatement in Hampton Roads by providing a system of interceptor mains and wastewater treatment plants.
Population Served	About 1.7 million, nearly one-fifth of Virginia's population, reside in HRSD's service area.

Operation and Facilities

No. of Positions (FY-2022)	872
Miles of Interceptor Systems	541 Miles
Wastewater Treated	141 million gallons per day average
Wastewater Capacity	249 million gallons per day average

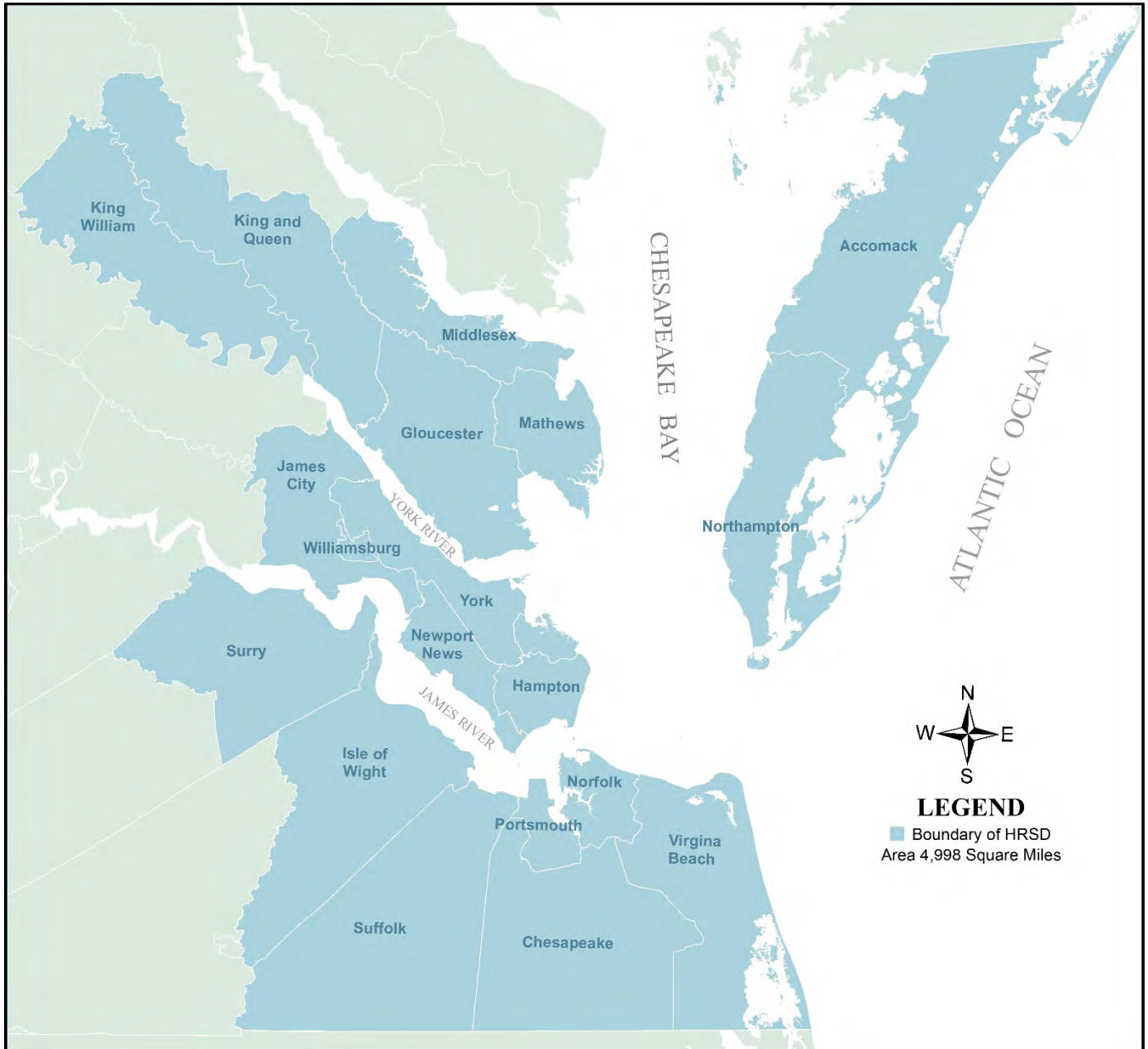
Financial Information

Bond Ratings

Ratings Agency	Senior Debt	Subordinate Long-term	Subordinate Short-term
Standard & Poor's	AA+	AA+	A-1+
Fitch Ratings	AA+	AA	F1+
Moody's Investors Service	Aa1	Aa1	n/a

Operating Budget (FY-2022)	\$357,495,000
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HRSD Service Area

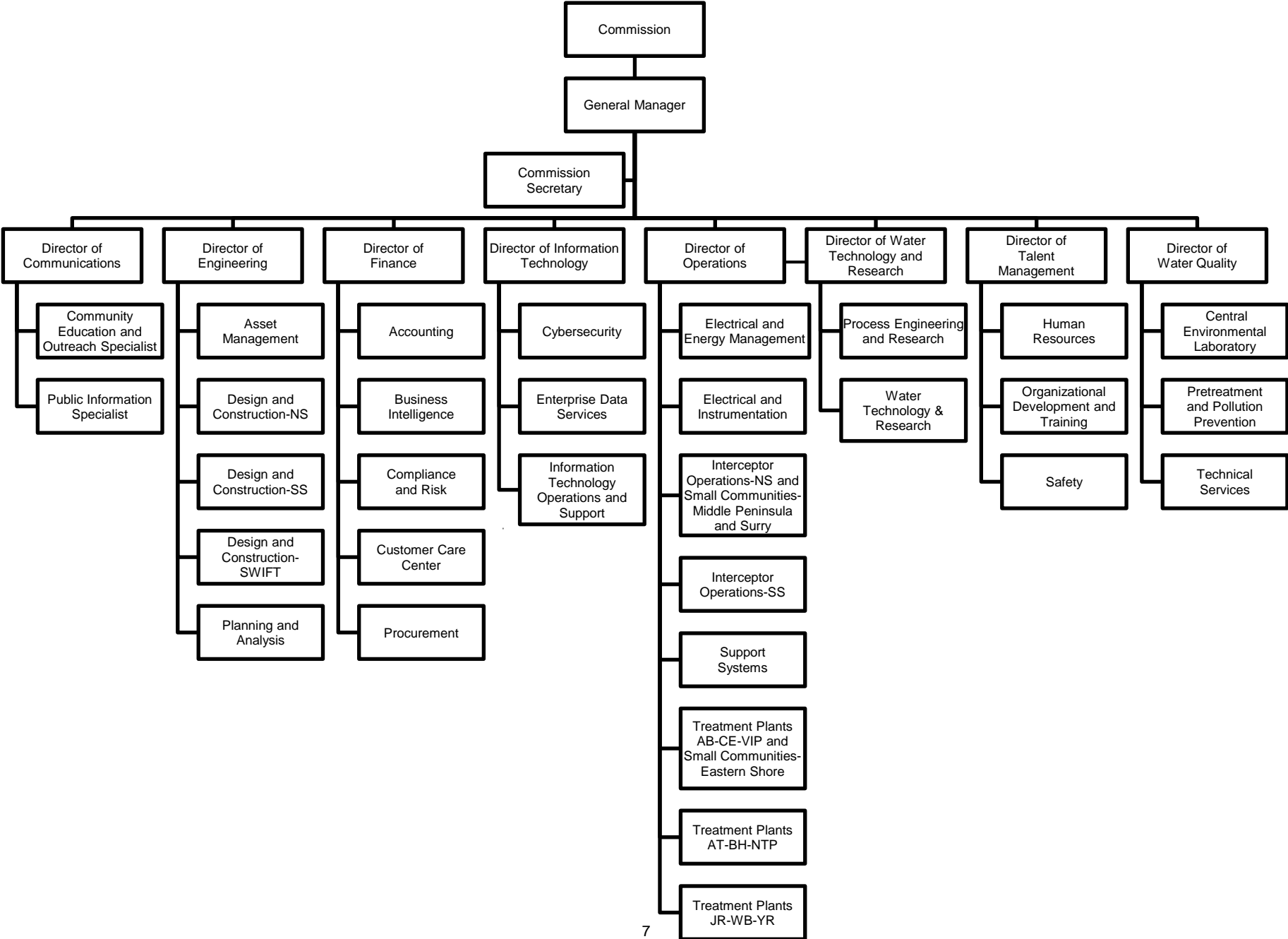


10/2020

HRSD Organization Chart

July 1, 2021

DRAFT



History of HRSD

HRSD can trace its beginnings to 1925 when the Virginia Department of Health condemned a large oyster producing area in Hampton Roads. The closure resulted in the Virginia General Assembly creating in 1927 a "Commission to Investigate and Survey the Seafood Industry of Virginia." Other studies recommended a public body to construct and operate a sewage system in the area. HRSD was named after Hampton Roads, a ship anchorage used for five centuries located near the convergence of the James, Elizabeth and Nansemond Rivers, before they flow into the Chesapeake Bay in southeastern Virginia.

In 1934, the Virginia General Assembly created the Hampton Roads Sanitation Disposal Commission with instructions to plan the elimination of pollution in Hampton Roads. Recommendations were made to the General Assembly, which resulted in the Sanitary Districts Law of 1938, along with "an Act to provide for and create the Hampton Roads Sanitation District." This Act required the qualified voters within HRSD to decide in a general election on November 8, 1938, if they favored creation of such a District. This referendum failed to gain a majority by about 500 votes out of nearly 20,000 votes cast. This led to a revision of the Act and another referendum was held on November 5, 1940, which resulted in a majority vote for the creation of the Hampton Roads Sanitation District.

The Enabling Act provides for HRSD to operate as a political subdivision of the Commonwealth of Virginia for the specific purpose of water pollution abatement in Hampton Roads by providing a system of interceptor mains and wastewater treatment plants. Its affairs are controlled by a Commission of eight members appointed by the Governor for four-year terms. Administration is under the direction of a General Manager, supported by department directors and their staffs.

HRSD began operations on July 1, 1946, using facilities acquired from the United States Government. The Warwick County Trunk Sewer, HRSD's first construction project, began on June 26, 1946, and was funded by HRSD's \$6.5 million Primary Pledge Sewer Revenue Bonds, dated March 1, 1946. The first treatment plant, the Army Base Plant, began operation on October 14, 1947. Since that time, the facilities of HRSD have grown to provide sanitary sewer service to all major population centers in southeastern Virginia. The population served has increased from nearly 288,000 in 1940 to about 1.7 million in 2020.

Throughout its rich history HRSD has earned many of its industry's most prestigious awards. This tradition continued as the National Association of Clean Water Agencies (NACWA) presented Peak Performance Awards for outstanding compliance with National Pollutant Discharge Elimination System (NPDES) permits to the following HRSD treatment plants during the year ended June 30, 2020: Atlantic—Platinum Award (5 consecutive years of compliance), Boat Harbor—Platinum (18 consecutive years), James River—Platinum (6 consecutive years), Nansemond—Platinum (18 consecutive years), Virginia Initiative Plant—Platinum (24 consecutive years), Williamsburg—Platinum (25 consecutive years) and York River—Platinum (12 consecutive years).

Additional awards and honors received during the year ended June 30, 2020 include NACWA National Environmental Achievement Awards in the categories of Public Information and Education, and Workforce Development. HRSD also received the 2019 Oracle Construction and Engineering Excellence Award for Systems Integration in Public Infrastructure. The Virginia Initiative Plant was awarded the Virginia 2020 Pinnacle Award from the American Council of Engineering Companies for the plant's Nutrient Reduction Improvements Project. HRSD was also awarded a Design-Build Institute of America National Award in the "Water/Wastewater" Category and an Honorable Mention in the "Best in Process" Category for the SWIFT Research Center. The SWIFT Program and SWIFT Research Center also earned the 2019 Engineering Achievement Award from the Engineers Club of Hampton Roads.

Rate Schedules

WASTEWATER TREATMENT RATE SCHEDULE

<u>Service</u>	<u>FY-2022</u>		<u>FY-2021</u>	
Flow (monthly basis)				
Per CCF *	\$	6.39	\$	5.86
Minimum charge (per day)		0.30		0.30
Surcharge, per milligrams/liter per CCF				
	<u>In Excess of</u>		<u>In Excess of</u>	
Biochemical Oxygen Demand (BOD)	297 mg/L	\$ 0.000176	282 mg/L	\$ 0.000129
Total Suspended Solids (TSS)	282 mg/L	0.000584	261 mg/L	0.000630
Total Phosphorus (TP)	7 mg/L	0.010050	6 mg/L	0.009871
Total Kjeldahl Nitrogen (TKN)	57 mg/L	0.002660	47 mg/L	0.003378
Surcharge, per 100 pounds				
BOD	297 mg/L	\$ 2.83	282 mg/L	\$ 2.07
TSS	282 mg/L	9.34	261 mg/L	10.08
TP	7 mg/L	160.99	6 mg/L	158.12
TKN	57 mg/L	42.61	47 mg/L	54.11
Septic, per gallon	\$	0.1717	\$	0.1717
Fats, Oils, and Grease (FOG), per gallon	\$	0.2737	\$	n/a
Town Wholesale Treatment, per 1000 gallons	\$	3.55	\$	n/a
Residential flat rate (per day)	\$	1.74	\$	1.62

* CCF = 100 Cubic Feet (approximately 748 gallons)

VOLUME BASED FACILITY RATE SCHEDULE

<u>Meter Size</u>	<u>FY-2022</u>	<u>FY-2021</u>
5/8 Inch	\$ 2,055	\$ 1,905
3/4 Inch	4,210	4,210
1 Inch	7,410	7,410
1 ½ Inch	16,645	16,645
2 Inch	31,465	30,505
3 Inch	80,405	73,810
4 Inch	156,530	138,445
6 Inch	400,625	336,960
8 Inch	780,840	634,710
10 Inch	1,310,665	1,038,525
12 Inch	2,001,460	1,554,120
14 Inch	2,863,155	2,186,505
16 Inch	3,904,635	2,940,135

SMALL COMMUNITIES RATE SCHEDULE

<u>Flow (monthly basis) per 1,000 gallons</u>	<u>FY-2022</u>	<u>FY-2021</u>
Accomack	\$ 14.28	\$ n/a
King William	14.54	13.82
Mathews	14.28	13.43
Middlesex/Urbanna	14.28	13.43
Surry	14.28	13.43
West Point	14.28	13.62
Residential flat rate (per day)		
Accomack	\$ 1.90	\$ n/a
King William	1.94	1.84
Mathews	1.90	1.79
Middlesex/Urbanna	1.90	1.79
Surry	1.90	1.79
West Point	1.90	1.82
Minimum charge - metered accounts (per day)	\$ 0.30	\$ 0.30

FEES

	<u>FY-2022</u>	<u>FY-2021</u>
Damaged meter/antenna (plus cost of meter/antenna)	\$ 250	\$ n/a
Damaged lock	100	100
Service restoration	100	100
Meter reading (customer-owned meter)	75	75
Inaccessible meter	50	50
Access card replacement	25	25
Returned payments	25	25
Delinquency service trip	15	15
Account documentation	10	10
Deduction meter	2	2

Reader's Guide to the Annual Budget

PURPOSE

The Annual Budget is an instrument that sets HRSD's budgetary policy and authorization to raise revenues and spend funds each fiscal year. The development of the Annual Budget is guided by HRSD's mission and vision statements:

- HRSD's mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively.
- HRSD's vision is future generations will inherit clean waterways and be able to keep them clean.

ANNUAL BUDGET OVERVIEW

HRSD's Annual Budget contains the following sections:

Financial Forecast

This section provides a high level, 20-year forecast of projected wastewater treatment rate increases, operating revenues and expenses, capital improvements and related funding sources, amounts contributed to and fiscal year-end balances of cash and investment reserves, and selected financial ratios that help to measure the financial health of HRSD.

The forecast is an inflationary based model where trends from past fiscal years and proposed operating budgets are used to forecast future operating needs. Transfers to reserves and to the Capital budget are forecast to be in amounts that are not less than parameters established within HRSD's Financial Policy. Debt service is based on different sources of future funding: Virginia Clean Water Revolving Fund, Water Infrastructure Finance and Innovation Act (WIFIA), interim financing and revenue bonds. Interest rates are based on known rates or historical averages.

Operating Budget

The Operating Budget represents the authorization by the HRSD Commission to spend funds directly related to operating and maintaining HRSD's programs and assets during the fiscal year. This section includes each department's annual operating budgets. Those expenses that are not attributable to a specific department are assigned to "General Expenses." Transfers represent authorization to transfer revenues raised from operations to either the Capital Budget or to various reserves established in HRSD's Financial Policy. The Operating Budget Summary provides the budget by department and major object code classification. Department Budgets and General Expenses, Debt Service and Transfers detail budget expenditures by major object code classification. The number of full-time positions authorized for the fiscal year is provided by department.

Capital Budget

The Capital Budget represents a plan of specific, major capital improvements over a period of ten fiscal years. The Capital Budget is not an approval or appropriation of funds for individual projects. There is no authorization or funding for individual projects until the Commission acts on the specific project. The Commission formally authorizes spending for individual projects throughout a fiscal year and generally upon project initiation.

The Summary Schedule details the funding sources for capital improvements as well as planned expenditures.

A formal, detailed, Capital Improvement Program with more specific project information is available at <https://www.hrsd.com/cip>

HRSD's budget authorizations, capital improvement plans, user rate setting practices and other significant financial practices are guided by HRSD's Financial Policy and Revenue Policy. The Financial Policy and Revenue Policy are available at <http://www.hrsd.com/finance>

HRSD's Rate Schedule is available at <http://www.hrsd.com/finance>

BUDGETARY PROCESS

HRSD prepares its Annual Budget under the provisions of its enabling legislation and its Trust Agreement, dated March 1, 2008. In accordance with those provisions, the following process is used to adopt the Annual Budget:

The process begins in late December with the issuance of the Annual Budget Instructions by the General Manager. Each department completes its Operating Budget by March 1 for the General Manager's review.

The HRSD Commission appoints a Finance Committee which typically consists of two Commissioners. The committee meets in early April to review the budgets. The Commission reviews these budgets during its April meeting.

The final Annual Budget, which incorporates the Operating and Capital Budgets, is presented at the May Commission meeting for adoption. The Commission simultaneously adopts the budget and any resulting wastewater rate schedule changes. All rate adjustments must be publically advertised four consecutive weeks before they can take effect.

The HRSD Commission approves any budget amendments during the fiscal year.

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.

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.

The Capital Budget represents a ten-year plan. Funds for the Capital Budget are adopted throughout a fiscal year on a project basis. Transfers among projects require approval by the Commission. Appropriations for these budgets continue until the purpose of the appropriation has been fulfilled.

Glossary of Financial Terms

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.

Appropriation: An authorization granted by the Commission to incur obligations for specific purposes. Appropriations are usually limited to amount, purpose and time.

Basis of Accounting: HRSD's financial statements report the financial position and results of operations of HRSD in accordance with generally accepted accounting principles in the United States of America (GAAP).

Bond Ratings: A grade given to bonds that represents a measure of their credit quality. Private independent rating services such as Standard & Poor's, Moody's and Fitch provide these evaluations of a bond issuer's financial strength, or its the ability to pay a bond's principal and interest in a timely fashion.

Capital Improvement Program (CIP): Ten-year plan for major non-recurring facility, infrastructure, or acquisition expenditures that expand or improve HRSD and/or locality assets. Projects included in the CIP include physical descriptions, implementation schedules, year of expenditure cost and funding source estimates, and an indication of HRSD Commission priorities and community benefits

Centum Cubic Feet (CCF): Typical unit in which industrial-consumption of natural gas or water is measured; each CCF being 100 cubic-feet.

CIP Percent Cash Funded: Percent of each year's capital improvement plan funded with cash through transfers from operations. HRSD's Financial Policy requires that at least 15 percent of each year's planned capital improvements be funded with cash. This ratio indicates the amount of capital improvements that are not leveraged.

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.

Debt Service: Amount of money necessary to pay principal and interest on bonds outstanding.

Debt Service as a Percent of Revenues: Total revenues divided by total debt service. This ratio measures the debt service burden compared to total revenues.

Risk Management Reserve: HRSD maintains a self-insurance program for some of its risk exposures. HRSD'S Financial Policy requires HRSD to maintain a Risk Management 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.

Senior Debt Service Coverage: Current-year revenues available for debt service divided by current-year senior lien debt service. This ratio indicates the financial margin to meet current

senior lien debt service with current revenues available. HRSD's Financial Policy requires that Senior Debt Service Coverage will not be less than 1.5 times senior lien debt service. When calculating compliance with this coverage requirement, HRSD may make reasonable adjustments to the net revenues as presented on a basis consistent with generally accepted accounting principles. HRSD's Senior Trust Agreement requires Senior Debt Service Coverage, which is determined by dividing the Income Available for Debt Service by the Maximum Annual Debt Service, will not be less than 1.2 times.

Total Debt Service (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).

Total 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).

Trust Agreement: The formal agreement between bond holders, acting through a trustee, and HRSD.

Unrestricted Cash: Unrestricted cash and investments at fiscal year-end that are not earmarked for another purpose.

Financial Forecast

Financial Forecast (in thousands) 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041

Operating Budget Forecast																					
<i>Projected Annual Water Consumption Decline</i>																					
<i>Projected Wastewater Rate Increase</i>		9.0%	9.0%	9.0%	7.0%	7.0%	7.0%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	0.0%	
<i>Projected Wastewater Rate, \$/ccf</i>		\$6.39	\$6.97	\$7.60	\$8.13	\$8.70	\$9.31	\$9.73	\$10.17	\$10.63	\$11.11	\$11.61	\$12.13	\$12.68	\$13.25	\$13.85	\$14.47	\$15.12	\$15.80	\$16.51	\$17.25
Revenues																					
Operating Revenues	\$ 345,560	\$ 371,917	\$ 400,246	\$ 422,964	\$ 447,173	\$ 472,821	\$ 488,681	\$ 505,139	\$ 522,175	\$ 539,765	\$ 557,886	\$ 576,518	\$ 596,096	\$ 616,133	\$ 637,057	\$ 658,391	\$ 680,555	\$ 703,518	\$ 727,248	\$ 759,145	
Non-operating Revenues	11,935	13,536	14,614	15,727	17,298	17,427	19,417	19,750	21,046	22,559	22,942	23,336	23,740	24,156	25,138	25,986	26,527	26,981	27,500	28,175	
Total Revenues	357,495	385,513	414,860	438,691	464,471	490,249	508,097	524,889	543,221	562,324	580,828	599,854	619,836	640,288	662,195	684,377	707,082	730,499	754,748	787,320	
Operating Expenses																					
Personal Services	62,776	64,910	67,117	69,399	71,759	74,199	76,722	79,330	82,027	84,816	87,361	89,982	92,681	95,461	98,325	101,275	104,313	107,443	110,666	113,986	
Fringe Benefits	25,157	25,547	26,339	27,179	28,071	30,216	31,516	32,876	34,296	35,781	37,289	38,864	40,510	42,231	44,029	45,908	47,873	49,928	52,076	54,322	
Materials And Supplies	20,106	20,858	21,638	22,448	23,287	24,158	25,062	25,999	26,971	27,980	28,819	29,684	30,574	31,492	32,438	33,414	34,419	35,444	36,508	37,603	
Transportation	863	878	893	908	923	939	955	971	988	1,004	1,034	1,065	1,097	1,130	1,164	1,199	1,235	1,272	1,310	1,350	
Transportation Fuels	636	647	658	669	680	692	704	716	728	740	762	785	809	833	858	884	910	937	965	995	
Utilities	12,289	12,655	13,033	13,421	13,821	14,233	14,657	15,094	15,544	16,007	16,487	16,982	17,491	18,016	18,556	19,113	19,686	20,278	20,885	21,512	
Chemical Purchases	8,652	8,911	9,177	9,451	9,734	10,025	10,325	10,634	10,952	11,279	11,617	11,966	12,325	12,695	13,075	13,463	13,872	14,288	14,716	15,158	
Contractual Services	38,055	39,958	41,956	44,054	46,257	48,569	50,988	53,548	56,255	59,067	60,807	62,632	64,511	66,446	68,439	70,493	72,607	74,786	77,029	79,340	
Consulting Services	2,243	2,355	2,472	2,596	2,726	2,862	3,005	3,156	3,313	3,479	3,583	3,691	3,802	3,916	4,033	4,154	4,279	4,407	4,539	4,675	
Miscellaneous Expenses	6,716	6,905	7,100	7,301	7,508	7,720	7,939	8,165	8,397	8,636	8,895	9,162	9,437	9,720	10,011	10,312	10,621	10,940	11,268	11,606	
Bond Issuance Cost	500	-	1,685	-	-	-	-	-	-	-	-	-	-	-	-	1,355	-	-	-	1,556	
Capital Assets	470	484	499	514	529	545	561	578	595	613	632	651	670	690	711	732	754	777	800	824	
Other Costs (SWIFT O&M, Plant Consolidation)	-	-	-	-	11,679	8,146	8,632	9,138	35,063	66,495	69,315	72,247	75,297	78,469	81,766	85,196	88,761	92,463	96,305	100,287	
Total Operating Appropriations from Budget	178,463	184,108	192,866	198,540	217,874	222,305	231,076	240,202	275,099	315,867	326,602	337,710	349,204	361,098	388,215	411,862	427,430	440,791	456,027	473,361	
Existing Debt Service	61,690	66,099	70,080	70,892	70,746	70,654	67,109	67,069	66,781	67,196	62,216	60,251	58,130	57,587	58,302	78,302	78,281	84,080	83,491	74,562	
Projected Debt Service (Clean Water, WIFIA, LOC)	2,618	11,018	34,895	37,848	38,377	38,689	37,855	37,849	37,859	37,858	37,846	39,629	41,008	41,161	38,760	39,785	58,405	52,762	56,523	77,659	
Total Debt Service	64,308	77,117	104,975	108,738	109,123	109,342	104,964	104,918	104,640	105,054	100,062	99,880	99,138	98,748	117,061	118,087	136,686	136,842	140,014	152,221	
Transfer to Risk Management Reserve	260	131	135	139	143	147	152	156	161	166	171	176	181	187	192	198	204	210	216	223	
Transfer to General Reserve (Unrestricted Cash)	-	2,671	5,674	19,334	4,431	8,771	9,126	34,896	40,768	10,735	11,108	11,494	11,894	27,117	23,647	15,668	13,361	15,237	17,334	17,334	
Transfer to Capital Improvement Plan (PAYGO)	114,464	124,157	114,213	125,600	117,997	154,024	163,135	170,486	128,425	100,469	143,259	150,981	159,819	168,362	129,609	130,583	127,195	139,296	143,253	144,181	
Total Appropriations for Debt Service and Transfers	179,032	201,405	221,994	240,150	246,597	262,944	277,022	284,687	268,123	246,457	254,226	262,144	270,632	279,190	273,980	272,515	279,652	289,706	298,721	313,959	
Total Appropriations	\$ 357,495	\$ 385,513	\$ 414,860	\$ 438,691	\$ 464,471	\$ 490,249	\$ 508,097	\$ 524,889	\$ 543,221	\$ 562,324	\$ 580,828	\$ 599,854	\$ 619,836	\$ 640,288	\$ 662,195	\$ 684,377	\$ 707,082	\$ 730,499	\$ 754,748	\$ 787,320	

Capital Improvement Budget Forecast																				
Beginning Capital Reserves		\$ 7,530	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,856	\$ 38,240	\$ 92,962	\$ 78,183	\$ 2,933	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sources of Funds																				
Debt funded (Revenue Bonds and Interim Financing)	-	-	285,791	-	-	-	-	-	-	-	-	-	-	-	-	-	-	229,204	-	263,270
Va Clean Water Revolving Loan Fund	100,000	100,000	100,000	100,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WIFIA	40,659	86,314	169,495	149,751	75,575	75,135	99,706	82,092	49,953	21,781	10,891	15,664	36,349	89,766	45,386	-	-	-	-	-
Water Quality Improvement Fund (WQIF) Grants	-	2,500	15,000	17,500	27,500	25,000	25,000	7,500	5,000	2,500	-	-	-	-	-	-	-	-	-	-
HRSD - Cash	114,464	124,157	114,213	125,600	117,997	154,024	163,135	170,486	128,425	100,469	143,259	150,981	159,819	168,362	129,609	130,583	127,195	139,296	143,253	144,181
Reimbursements	-	2,055	7,618	9,278	7,409	8,087	7,543	1,843	-	-	-	-	-	-	-	-	-	-	-	-
Line of Credit (Negative = Paid Off)	27,347	94,974	(157,317)	17,572	6,518	(24,390)	-	-	-	-	42,917	33,356	3,832	(58,128)	25,005	89,417	(136,399)	90,704	96,747	(187,451)
Total Capital Resources	290,000	410,000	535,000	420,000	235,000	237,856	298,240	302,962	278,183	202,933	200,000	200,000	200,000	200,000	200,000	200,000	200,000	220,000	220,000	230,000
Uses of Funds - Capital Expenditures	290,000	410,000	535,000	420,000	235,000	237,856	298,240	302,962	278,183	202,933	200,000	200,000	200,000	200,000	200,000	200,000	200,000	220,000	220,000	230,000
Ending Capital Resources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,856	\$ 38,240	\$ 92,962	\$ 78,183	\$ 2,933	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Reserves Balance Forecast																					
Total Unrestricted Cash		\$ 316,554	\$ 318,848	\$ 311,710	\$ 328,909	\$ 340,784	\$ 381,388	\$ 402,278	\$ 454,297	\$ 502,015	\$ 500,214	\$ 478,660	\$ 494,732	\$ 515,246	\$ 535,870	\$ 524,427	\$ 549,245	\$ 561,629	\$ 587,301	\$ 606,711	\$ 625,196
PAYGO (includes beginning balance, if available)	121,994	124,157	114,213	125,600	117,997	154,024	165,991	208,726	200,000	178,652	146,192	150,981	159,819	168,362	129,609	130,583	127,195	139,296	143,253	144,181	
Risk Reserve	4,365	4,496	4,631	4,770	4,913	5,060	5,212	5,368	5,529	5,695	5,866	6,042	6,223	6,410	6,602	6,800	7,004	7,214	7,431	7,654	
Adjusted Unrestricted Cash	\$ 190,196	\$ 190,196	\$ 192,866	\$ 198,540	\$ 217,874	\$ 222,305	\$ 231,076	\$ 240,202	\$ 296,486	\$ 315,867	\$ 326,602	\$ 337,710	\$ 349,204	\$ 361,098	\$ 388,215	\$ 411,862	\$ 427,430	\$ 440,791	\$ 456,027	\$ 473,361	
Daily Cost to Operate	\$ 489	\$ 504	\$ 528	\$ 544	\$ 597	\$ 609	\$ 633	\$ 658	\$ 754	\$ 865	\$ 895	\$ 925	\$ 957	\$ 989	\$ 1,064	\$ 1,128	\$ 1,171	\$ 1,208	\$ 1,249	\$ 1,297	
Adjusted Days Cash on Hand (excludes PAYGO and Risk)	389 days	377 days	365 days	365 days	365 days	365 days	365 days	365 days	393 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	

Financial Ratios Forecast																					
Total Debt Service Coverage (GAAP)		2.23	2.28	1.83	1.80	1.90	2.08	2.36	2.56	2.47	2.29	2.37	2.55	2.61	2.66	2.14	2.11	1.88	1.90	1.90	2.02
Total Debt Service Coverage (Adjusted)		2.33	2.44	1.96	1.87	2.02	2.14	2.56	2.67	2.50	2.29	2.48	2.56	2.67	2.77	2.29	2.26	2.00	2.07	2.09	2.02
CIP % Cash Funded (current year contributions)		42%	30%	21%																	

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Operating Budget

Operating Budget

	FY-2022	Adopted FY-2021	Increase/ (Decrease)	Percent Change
Operating Revenues				
Wastewater Treatment Charges	\$ 344,370,000	\$ 320,035,000	\$ 24,335,000	8%
Miscellaneous	1,190,000	1,140,000	50,000	4%
Total Operating Revenue	345,560,000	321,175,000	24,385,000	8%
Non-Operating Revenues				
Wastewater Facility Charges	7,320,000	6,160,000	1,160,000	19%
Investment Earnings	1,210,000	1,510,000	(300,000)	(20%)
Build America Bond Subsidy	2,095,000	2,292,000	(197,000)	(9%)
Other	1,310,000	1,260,000	50,000	4%
Total Non-Operating Revenues	11,935,000	11,222,000	713,000	6%
Total Revenues	\$ 357,495,000	\$ 332,397,000	\$ 25,098,000	8%
Operating Appropriations				
General Management	\$ 465,516	\$ 466,020	\$ (504)	(0%)
Communications	456,003	472,519	(16,516)	(3%)
Finance	15,303,085	15,061,142	241,943	2%
Information Technology	16,711,258	16,719,711	(8,453)	(0%)
Talent Management	2,532,647	2,574,769	(42,122)	(2%)
Operations	111,349,610	110,546,153	803,457	1%
Engineering	7,108,883	6,521,954	586,929	9%
Water Quality	15,896,141	15,676,912	219,229	1%
General Expenses	8,639,727	7,736,886	902,841	12%
Total Operating Appropriations	178,462,870	175,776,066	2,686,804	2%
Appropriations for Debt Service and Transfers				
Debt Service	64,308,209	61,407,822	2,900,387	5%
Transfer to Capital Improvement Program (CIP)	114,463,921	94,953,112	19,510,809	21%
Transfer to Risk Management Reserve	260,000	260,000	-	0%
Total Appropriations for Debt Service and Transfers	179,032,130	156,620,934	22,411,196	14%
Total Appropriations	\$ 357,495,000	\$ 332,397,000	\$ 25,098,000	8%

Operating Budget Summary

	General		Finance	Information		Talent		Engineering	Water	General
	Management	Communications		Technology	Management	Operations	Quality		Expenses	
Personal Services	\$ 342,585	\$ 295,334	\$ 6,290,168	\$ 5,054,686	\$ 1,620,907	\$ 35,998,001	\$ 4,439,309	\$ 8,459,559	\$ 275,506	
Fringe Benefits	83,431	\$ 94,169	2,526,643	1,652,512	606,870	15,394,579	1,576,016	3,424,426	(201,900)	
Materials & Supplies	10,000	\$ 45,000	104,205	1,099,750	56,500	5,752,726	38,547	1,623,700	26,000	
Transportation	7,000	\$ 8,500	8,100	12,700	27,600	1,385,430	23,270	26,206	-	
Utilities	-	\$ -	323,000	1,176,000	-	10,347,561	-	2,700	440,000	
Chemical Purchases	-	\$ -	-	-	-	8,651,935	-	-	-	
Contractual Services	9,000	\$ -	5,778,819	6,292,500	22,000	22,260,313	912,241	1,700,500	7,500,221	
Major Repairs	-	\$ -	-	1,125,000	-	10,148,820	-	76,000	-	
Capital Assets	-	\$ -	-	-	-	470,000	-	-	-	
Miscellaneous Expense	13,500	\$ 13,000	272,150	298,110	198,770	940,245	119,500	583,050	599,900	
Operating Appropriations	\$ 465,516	\$ 456,003	\$ 15,303,085	\$ 16,711,258	\$ 2,532,647	\$ 111,349,610	\$ 7,108,883	\$ 15,896,141	\$ 8,639,727	

Full-time Positions:

Current	2	3	102	49	17	534	45	118
Changes	-	-	-	2	-	(1)	-	1
Budgeted	2	3	102	51	17	533	45	119

Operating Budget Summary

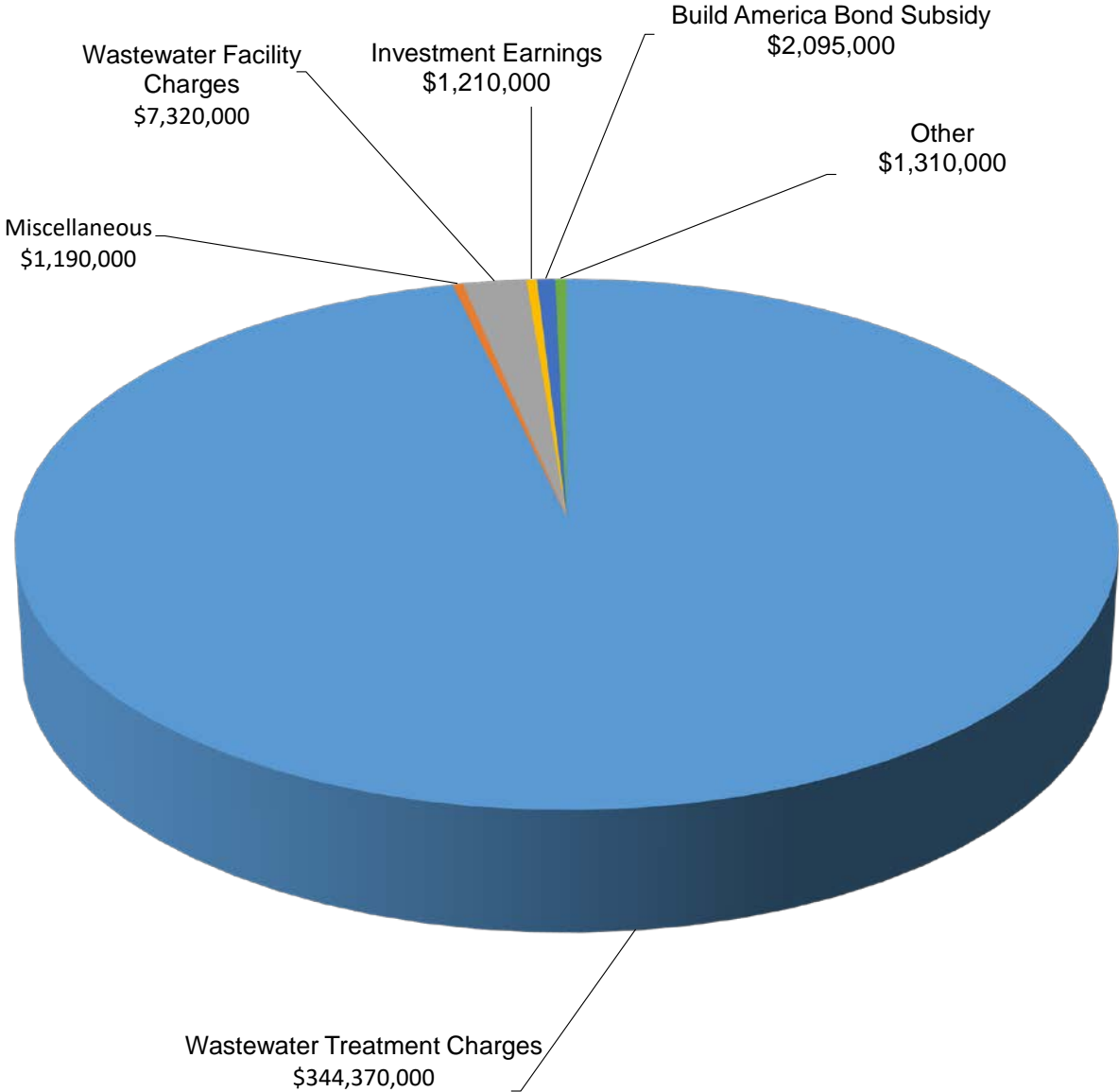
	FY-2022	Percent of Budget	FY-2021 Budget	Increase/ Decrease	Percent Inc/(Dec)
Personal Services	\$ 62,776,055	17.6%	\$ 60,952,503	\$ 1,823,552	3%
Fringe Benefits	25,156,746	7.0%	24,930,765	225,981	1%
Materials & Supplies	8,756,428	2.4%	9,067,856	(311,428)	(3%)
Transportation	1,498,806	0.4%	1,578,011	(79,205)	(5%)
Utilities	12,289,261	3.4%	12,954,307	(665,046)	(5%)
Chemical Purchases	8,651,935	2.4%	10,288,858	(1,636,923)	(16%)
Contractual Services	44,475,594	12.4%	41,786,166	2,689,428	6%
Major Repairs	11,349,820	3.2%	10,075,960	1,273,860	13%
Capital Assets	470,000	0.1%	600,000	(130,000)	(22%)
Miscellaneous Expense	3,038,225	0.8%	3,541,640	(503,415)	(14%)
Operating Appropriations	<u>\$ 178,462,870</u>	49.9%	<u>\$ 175,776,066</u>	<u>\$ 2,686,804</u>	2%
Debt Service Costs	\$ 64,308,209	18.0%	\$ 61,407,822	\$ 2,900,387	5%
Transfer to Capital Improvement Program (CIP)	114,463,921	32.0%	94,953,112	19,510,809	21%
Transfer to Risk Management	260,000	0.1%	260,000	\$ -	0%
Appropriations for Debt Service and Transfers	<u>\$ 179,032,130</u>	50.1%	<u>\$ 156,620,934</u>	<u>\$ 22,411,196</u>	14%
	<u>\$ 357,495,000</u>	100.0%	<u>\$ 332,397,000</u>	<u>\$ 25,098,000</u>	8%

Full-time Positions:

Current	870
Changes	2
Budgeted	872

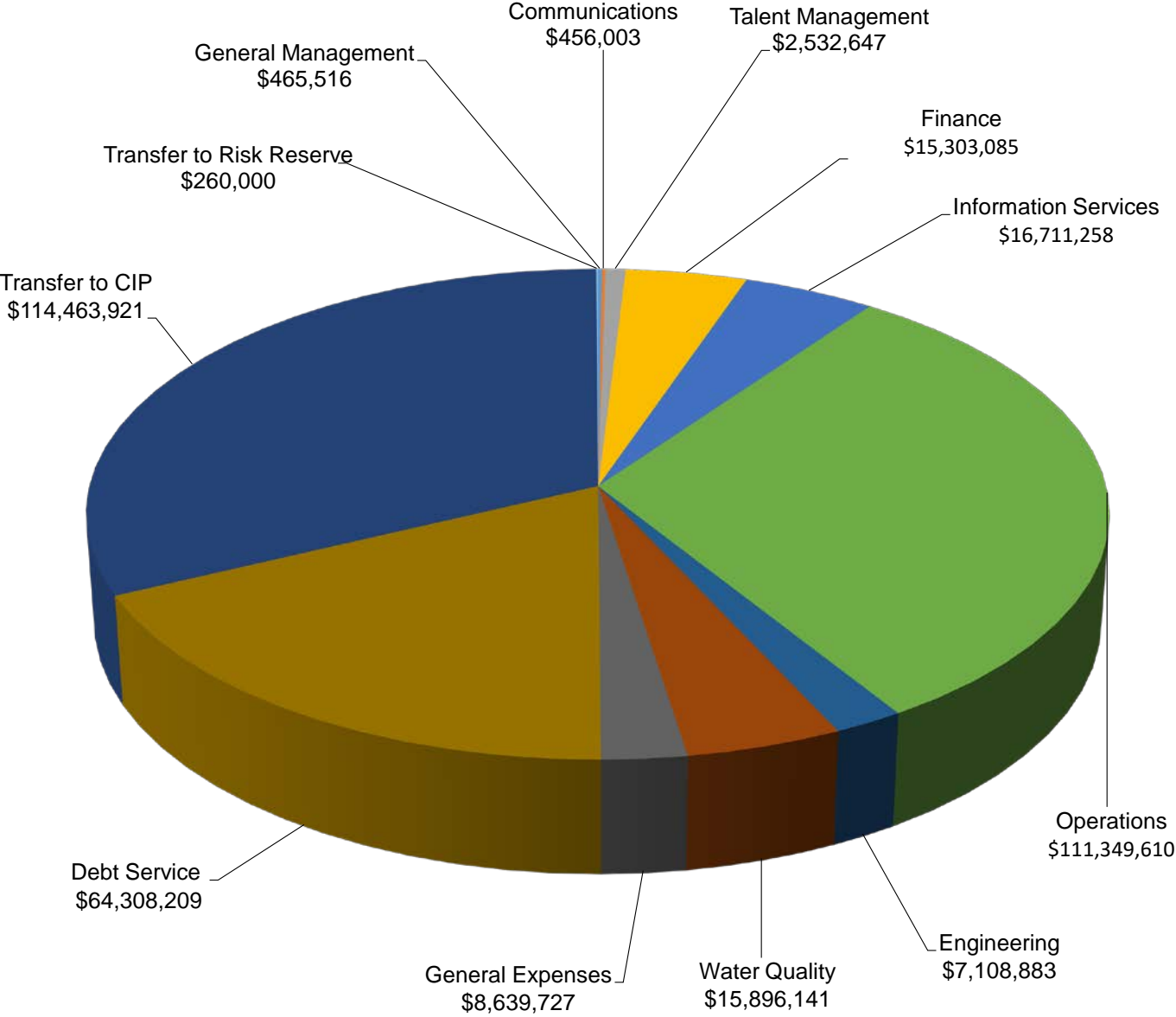
Operating Budget Charts

Revenues and Transfers In \$357,495,000



Operating Budget Charts

Expenses and Transfers Out \$357,495,000



General Management Department

The General Manager supervises the department directors and the Commission Secretary. The Commission Secretary provides administrative support to the General Manager as well as the HRSD Commission.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 342,585	\$ 335,927	\$ 6,658	2%
Fringe Benefits	83,431	83,593	(162)	(0%)
Material & Supplies	10,000	10,000	-	0%
Transportation	7,000	7,000	-	0%
Contractual Services	9,000	9,000	-	0%
Miscellaneous	13,500	20,500	(7,000)	(34%)
Total	\$ 465,516	\$ 466,020	\$ (504)	(0%)

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
General Manager		1		1		1
Commission Secretary	6	1		1		1
Total		2	0	2	0	2

Communications Department

The Communications Department supports HRSD's mission and vision through public outreach, community engagement, educational programming and environmental and locality partnerships. The department manages communications strategy, internal and external communications, media relations and branding through numerous channels and resources - including publications, traditional media, social media and web, graphic design, speaking engagements, tours, and special events.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 295,334	\$ 304,517	\$ (9,183)	(3%)
Fringe Benefits	94,169	96,002	(1,833)	(2%)
Material & Supplies	45,000	45,000	-	0%
Transportation	8,500	9,000	(500)	(6%)
Contractual Services	-	2,000	(2,000)	(100%)
Miscellaneous	13,000	16,000	(3,000)	(19%)
Total	\$ 456,003	\$ 472,519	\$ (16,516)	(3%)

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Communications	12	1		1		1
Public Information Specialist	6	1		1		1
Community Education and Outreach Specialist	6	1		1		1
Total		3	0	3	0	3

Finance Department

The Finance Department is responsible for HRSD's general financial and business functions, including financial reporting, investment portfolio, debt and risk management and customer billing. The Accounting Division handles fiscal affairs such as preparing statements, budgets, management reports and payroll. The Business Intelligence Division is the functional lead for the Enterprise Resource Process system and prepares the annual Capital Improvement Program update as part of the budget process. The Compliance and Risk Division ensures all financial related regulations, covenants and requirements are met and manages all of HRSD's property and casualty insurance programs. The Customer Care Center Division handles billing, payments, collections, maintenance of customer accounts and liaison with HRSD's customers. The Procurement Division is responsible for purchasing, renting, leasing or otherwise acquiring goods, professional and non-professional services, and certain construction services, managing supplier relationships and disposing of surplus property.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 6,290,168	\$ 6,160,559	\$ 129,609	2%
Fringe Benefits	2,526,643	2,651,686	(125,043)	(5%)
Material & Supplies	104,205	72,213	31,992	44%
Transportation	8,100	7,850	250	3%
Utilities	323,000	279,000	44,000	16%
Contractual Services	5,778,819	5,633,530	145,289	3%
Miscellaneous	272,150	256,304	15,846	6%
Total	\$ 15,303,085	\$ 15,061,142	\$ 241,943	2%

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Finance	12	1		1		1
Chief of Accounting & Finance	11	1		1		1
Chief of Compliance & Risk	11	0	1	1		1
Chief of Customer Care Center	11	1		1		1
Chief of Procurement	11	1		1		1
Accounting Manager	9	3		3		3
Capital Program Manager	9	1		1		1
Customer Technology Manager	9	2		2		2
Customer Care Manager	9	2		2		2
Business Analyst	8	3		3		3
Financial Analyst	8	2		2		2
Procurement Analyst	8	2		2		2
Capital Program Analyst	7	1		1		1
Customer Care Supervisor	7	4		4		4
Delinquency Management Analyst	7	1		1		1
Accounts Payable Supervisor	6	1		1		1
Accounts Receivable Specialist	6	2		2		2
Payroll Specialist	6	1		1		1
ProCard & Contract Administrator	6	1		1		1
Procurement Specialist	6	4	1	5		5
Accounting Coordinator	4	1		1		1
Accounts Receivable Technician	4	3		3		3
Customer Care Administrative Coordinator	4	1		1		1
Customer Care Coordinator	4	4		4		4
Procurement Coordinator	4	1		1		1
Account Investigator	3	11		11		11
Accounts Payable Associate	3	3		3		3
Customer Care Account Representative	3	40	(2)	38		38
Procurement Administrative Assistant	3	2		2		2
Mail Processing Clerk	2	2		2		2
Total		102	0	102	0	102

Information Technology Department

The Information Technology (IT) Department is responsible for HRSD's computer systems, communication systems, network infrastructure, cellular communications, cyber security, and data management functions. Staff also provides guidance and assistance in the identification and implementation of new technologies, enhancing both organizational efficiency and efficacy. The Cybersecurity Division is responsible for ensuring the safety, integrity, and availability of all HRSD information systems and business data. The Enterprise Data Services Division is responsible for application integration and support, data management, and systems analysis and support. The Information Technology Operations Division supports departments in achieving their goals and objectives, providing the requisite hardware, software, storage, and network connectivity, to meet business and operational requirements.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 5,054,686	\$ 4,828,740	\$ 225,946	5%
Fringe Benefits	1,652,512	1,621,071	31,441	2%
Material & Supplies	1,099,750	994,250	105,500	11%
Transportation	12,700	23,700	(11,000)	(46%)
Utilities	1,176,000	1,340,000	(164,000)	(12%)
Contractual Services	6,292,500	6,333,050	(40,550)	(1%)
Major Repairs	1,125,000	1,250,000	(125,000)	(10%)
Miscellaneous	298,110	328,900	(30,790)	(9%)
Total	\$ 16,711,258	\$ 16,719,711	\$ (8,453)	(0%)

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Information Technology	12	1		1		1
Chief Information Security Officer	11	1		1		1
Chief of Enterprise Data Services	11	1		1		1
Chief of IT Operations and Support	11	1	(1)	0		0
Database Administrator	9	3		3		3
Enterprise Architect	9	3		3		3
IT Systems Security Manager	9	1		1		1
Oracle Developer	9	2		2		2
Programming Development Manager	9	1		1		1
Senior Systems Engineer	9	7		7		7
Systems Analysis Manager	9	1		1		1
Senior Programmer Analyst	8	8		8		8
Senior Systems Analyst	8	3		3	2	5
SharePoint Web Developer	8	1		1		1
Linux Systems Administrator	8	2		2		2
IT HelpDesk Supervisor	7	1		1		1
Desktop Support Analyst	6	6		6		6
Systems Analyst	6	1		1		1
Web Portal Programmer	6	1		1		1
Telecommunications Coordinator	5	0	1	1		1
IT Administrative Coordinator	4	1		1		1
Telecommunications Support Coordinator	4	1	(1)	0		0
Computer Operator	3	3		3		3
Total		50	(1)	49	2	51

Talent Management Department

The Talent Management Department attracts new talent, develops talent and retains existing talent. The Human Resources Division maintains employee records, handles employee recruiting and orientation, and administers employee benefits and workers compensation. The Organizational Development and Training (ODT) Division oversees training and the apprenticeship program. The Safety Division monitors risk, conducts safety training and works to ensure employee safety.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 1,620,907	\$ 1,577,738	\$ 43,169	3%
Fringe Benefits	606,870	631,674	(24,804)	(4%)
Material & Supplies	56,500	58,500	(2,000)	(3%)
Transportation	27,600	28,500	(900)	(3%)
Contractual Services	22,000	41,000	(19,000)	(46%)
Miscellaneous	198,770	237,357	(38,587)	(16%)
Total	\$ 2,532,647	\$ 2,574,769	\$ (42,122)	(2%)

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Talent Management	12	1		1		1
ODT Manager	10	1		1		1
Human Resources Manager	9	1		1		1
Safety Manager	9	1		1		1
Human Resources Business Analyst	8	1		1		1
Human Resources Business Partner	8	3		3		3
Industrial Hygienist	8	2		2		2
Training Superintendent	8	1		1		1
ODT Resource Specialist	6	1		1		1
Safety Technician	5	2		2		2
Human Resources Coordinator	4	2		2		2
ODT Coordinator	4	1		1		1
Total		17	0	17	0	17

Operations Department

The Operations Department is responsible for operating and maintaining HRSD's treatment plants, pump stations, pipelines, buildings and equipment. HRSD provides wastewater treatment services for over 1.7 million people in 20 cities, counties and towns. The department includes the Division of Water Technology and Research whose primary purpose is to research new technologies with a focus on rapid deployment of innovative solutions and water quality. Services are delivered through 11 divisions. There are three major treatment plant divisions (each with three treatment plants). Services to small communities that are in the HRSD service area are provided by the Small Communities Division (SCD) – Middle Peninsula which operates four smaller treatment plants and the associated sewer collection systems for four counties on the Middle Peninsula and the Town of West Point. The SCD – Surry includes the operation of two treatment plants and the associated sewer collection systems in the County of Surry. The SCD – Eastern Shore includes the operation of two treatment plants and the associated sewer collection services for the Towns of Nassawadox and Onancock. The Electrical and Instrumentation Division supports the electrical and instrumentation maintenance and construction needs of all HRSD facilities as well as programming industrial controls and automation at HRSD facilities. The two Interceptor Divisions operate and maintain over 500 miles of interceptor pipelines and over 100 pump stations ensuring wastewater is conveyed to each treatment plant. The Support Systems Division is responsible for the maintenance of the HRSD fleet, all buildings, operation of two carpentry shops, a full-service machine shop and managing an infrastructure assessment team. The department is also responsible for energy management and research to find innovative, cost effective ways of managing our energy consumption more effectively.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 35,998,001	\$ 35,856,970	\$ 141,031	0%
Fringe Benefits	15,394,579	15,788,890	(394,311)	(2%)
Material & Supplies	5,752,726	6,301,473	(548,747)	(9%)
Transportation	1,385,430	1,439,620	(54,190)	(4%)
Utilities	10,347,561	10,852,607	(505,046)	(5%)
Chemical Purchases	8,651,935	10,288,858	(1,636,923)	(16%)
Contractual Services	22,260,313	19,632,815	2,627,498	13%
Major Repairs	10,148,820	8,738,360	1,410,460	16%
Capital Assets	470,000	600,000	(130,000)	(22%)
Miscellaneous	940,245	1,046,560	(106,315)	(10%)
Total	\$ 111,349,610	\$ 110,546,153	\$ 803,457	1%

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Operations	12	1		1		1
Director of Water Technology and Research	12	1		1		1
Chief of Electrical & Instrumentation Division	11	1		1		1
Chief of Interceptor Operations	11	1		1		1
Chief of NS Interceptors & SCD	11	1		1		1
Chief of Process Engineering & Research	11	1		1		1
Chief of Treatment	11	3		3		3
Energy Manager	11	1		1		1
Treatment Process Engineer	10	5	0	5		5
Electrical Manager	9	1		1		1
Industrial Automation Manager	9	1		1		1
Instrumentation Manager	9	1		1		1
Interceptor Engineer	9	2		2		2
Plant Manager	9	1		1		1
Project Manager	9	2	1	3		3
Support Systems Manager	9	1		1		1
SWIFT Project Manager	9	1		1		1
Systems Manager	9	2		2		2
Automotive Superintendent	8	1		1		1
Coating, Concrete and Roofing Chief Inspector	8	1		1		1
Condition Assessment Superintendent	8	1		1		1
Electrical & Instrumentation Superintendent	8	5		5		5
Facility Superintendent	8	1		1		1
Industrial Automation Programmer	8	6		6		6
Interceptor Superintendent	8	2		2		2
Plant Superintendent	8	18		18	(1)	17

Operations Department Positions (continued)

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Chief Foreman	7	2		2		2
Chief Maintenance Management	7	2		2		2
Chief Systems Operator	7	2		2		2
Electrical & Instrumentation Process Specialist	7	1		1		1
Electrical & Instrumentation Specialist	7	64		64		64
Interceptor Specialist	7	0	2	2		2
Lead Operator	7	33		33		33
Operations Support Specialist	7	1		1		1
Automotive Foreman	6	2		2		2
Coatings Inspector	6	2		2		2
Condition Assessment Supervisor	6	1		1		1
Interceptor Foreman	6	7		7		7
Interceptor Inspector	6	4	(2)	2		2
Interceptor Systems Supervisor	6	2		2		2
Machinist Foreman	6	1		1		1
Maintenance Planner	6	7		7		7
Pump Station Supervisor	6	2		2		2
Automotive Technician	5	5		5		5
Carpenter	5	4		4		4
Equipment Technician	5	3		3		3
Facility Maintenance Technician	5	2		2		2
Interceptor Technician	5	30		30		30
Machinist	5	2		2		2
Maintenance Operator	5	69	1	70	(1)	69
Plant Operator	5	78	7	85	(3)	82
Automotive Coordinator	4	1		1		1
Heavy Equipment Operator 1	4	19		19		19
Materials Operations Coordinator	4	2		2		2
Operations Admin Coordinator	4	1		1		1
Operations Coordinator	4	2		2		2
Plant Administrative Assistant	3	0	9	9	1	10
Utility Administrative Assistant	3	1		1		1
SCADA Administrative Assistant	3	1		1		1
Interceptor Assistant	2	28		28		28
Maintenance Operations Assistant	2	46	(1)	45	(1)	44
Plant Clerk	2	9	(9)	0		0
Facility Assistant	1	1		1		1
Custodian	1	4		4		4
Subtotal - Operations		503	8	511	(5)	506
Small Communities						
Systems Manager	9	1		1		1
Systems Superintendent	8	1		1	1	2
Systems Chief Foreman	7	1		1		1
Systems Lead Operator	7	3		3		3
Systems Foreman	6	1		1	1	2
Systems Operator	5	10		10	2	12
Administrative Coordinator	4	1		1		1
Heavy Equipment Operator 1	4	1		1		1
Maintenance Operations Assistant	2	3		3		3
SCD Lab Assistant	2	1		1		1
Facility Assistant	1	0		0		0
Subtotal - Small Communities		23	0	23	4	27
Total		526	8	534	(1)	533

Engineering Department

The Engineering Department is responsible for facility planning, design and construction and related support. The Asset Management Division is responsible for the Computerized Maintenance Management System (CMMS), Condition Assessment, and Emergency Management procedures to extend the life of assets at the lowest life cycle cost. The Design and Construction Divisions deliver capital projects in a manner consistent with HRSD's quality standards. The Planning and Analysis Division manages numerous diverse functions including Hydraulic Modeling, Geographic Information System (GIS), Data Analysis and Records Management System and plans the capital infrastructure required to meet the region's future wastewater needs. The department is also responsible for all property and land acquisition to meet the needs of HRSD.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 4,439,309	\$ 4,063,953	\$ 375,356	9%
Fringe Benefits	1,576,016	1,497,746	78,270	5%
Material & Supplies	38,547	42,320	(3,773)	(9%)
Transportation	23,270	26,635	(3,365)	(13%)
Contractual Services	912,241	707,681	204,560	29%
Miscellaneous	119,500	183,619	(64,119)	(35%)
Total	\$ 7,108,883	\$ 6,521,954	\$ 586,929	9%

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Engineering	12	1		1		1
Chief of Asset Management	11	1		1		1
Chief of Design & Construction	11	2		2		2
Chief of Design & Construction - SWIFT	11	1		1		1
Chief of Planning & Analysis	11	1		1		1
Condition Assessment Manager	9	2		2		2
Data Analysis Manager	9	1		1		1
Enterprise Data Scientist	9	0	1	1		1
GIS Manager	9	1		1		1
Hydraulic Analysis Manager	9	4		4		4
Project Manager	9	10		10		10
Real Estate Manager	8	2		2		2
CMMS Analyst	7	2		2		2
Data Analyst	7	5		5		5
GIS Analyst	7	2		2		2
Planning Engineer	7	2		2		2
Contract Specialist	6	3		3		3
GIS CAD Technician	5	2		2		2
Administrative Coordinator	4	1		1		1
Engineering Clerk	2	1		1		1
Total		44	1	45	0	45

Water Quality Department

The Water Quality (WQ) Department's mission is to provide quality environmental services to support HRSD and its partners. This department helps ensure compliance with HRSD environmental permits and leads regulatory advocacy through the work of three divisions. The Central Environmental Laboratory (CEL) Division uses the Environmental Data Management System (EDMS) and other tools to provide analytical support for numerous monitoring, research and regulatory purposes. The Pretreatment and Pollution Prevention (P3) Division monitors wastewater conveyed to treatment plants using the Pretreatment Information Management System (PIMS) and other tools, and implements its Industrial Wastewater Discharge Regulations to protect treatment plant staff, facilities and processes. The Technical Services Division (TSD) is responsible for activities including environmental monitoring, specialized sampling, treatment process and research studies, the Municipal Assistance Program (MAP) to assist localities, as well as all reporting required by HRSD permits.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 8,459,559	\$ 8,324,104	\$ 135,455	2%
Fringe Benefits	3,424,426	3,346,602	77,824	2%
Material & Supplies	1,623,700	1,518,100	105,600	7%
Transportation	26,206	35,706	(9,500)	(27%)
Utilities	2,700	2,700	-	0%
Contractual Services	1,700,500	1,726,700	(26,200)	(2%)
Major Repairs	76,000	87,600	(11,600)	(13%)
Miscellaneous	583,050	635,400	(52,350)	(8%)
Total	\$ 15,896,141	\$ 15,676,912	\$ 219,229	1%

Positions

	Grade	Adopted FY-2021	Adjustments	Final FY-2021	Adjustments	FY-2022
Director of Water Quality	12	1		1		1
Chief of Lab	11	1		1		1
Chief of P3	11	1		1		1
Chief of TSD	11	1		1		1
TSD Geologist	10	1		1		1
Environmental Scientist	9	7		7		7
Lab Manager	9	4		4		4
Lab Quality Assurance Manager	9	1		1		1
LIMS Optimization Manager	9	1		1		1
P3 Manager	9	4		4		4
WQ/Ops Quality Assurance Manager	9	1		1		1
Lab EDMS Administrator	8	1		1		1
Lab Operations Manager	8	1		1		1
Lab Supervising Chemist	8	13		13		13
P3 Supervising Specialist	8	3		3		3
TSD Operations Manager	8	1		1		1
TSD Supervising Specialist	8	3		3		3
P3 Administrative Supervising Specialist	7	1		1		1
P3 PIMS Analyst	7	1		1		1
TSD Specialist	7	12		12		12
Lab EDMS Analyst	6	1		1		1
Lab Quality Assurance Specialist	6	1		1		1
Lab Specialist	6	14		14		14
P3 Specialist	6	4		4	1	5
Lab Data Technician	5	1		1		1
Lab Technician	5	5		5		5
P3 Administrative Technician	5	1		1		1
P3 Technician	5	10		10		10
TSD Technician	5	8		8		8
CEL Operations Coordinator	4	1		1		1
Lab Assistant	4	0	7	7		7
Lab Data Coordinator	4	1		1		1
TSD Operations Coordinator	4	1		1		1
WQ Administrative Coordinator	4	1		1		1
P3 Administrative Assistant	3	2		2		2
Lab Assistant	2	7	(7)	0		0
TSD Assistant	2	1		1		1
Total		118	0	118	1	119

General Expenses, Debt Service and Transfers

General Expenses includes operating expenditures not assigned to any specific HRSD Department. Debt Service includes payments on bonds issued by HRSD and through the Virginia Clean Water Revolving Loan Fund (VCWRLF). Transfers are made to fund the Capital Improvement Program (CIP) and the Risk Management reserve. The costs incurred to issue bonds are included in General Expenses - Miscellaneous.

Expenditure Budget

	FY-2022 Budget	FY-2021 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	\$ 275,506	\$ (500,005)	\$ 775,511	(155%)
Fringe Benefits	(201,900)	(786,499)	584,599	(74%)
Material & Supplies	26,000	26,000	-	0%
Utilities	440,000	480,000	(40,000)	(8%)
Contractual Services	7,500,221	7,700,390	(200,169)	(3%)
Miscellaneous	599,900	817,000	(217,100)	(27%)
Total General Expenses	\$ 8,639,727	\$ 7,736,886	\$ 902,841	12%
Publically Sold Bonds - Principal	\$ 22,430,000	\$ 21,545,000	\$ 885,000	4%
Publically Sold Bonds - Interest	22,730,000	23,759,200	(1,029,200)	(4%)
VCWRLF Bonds	19,148,209	16,103,622	3,044,587	19%
<i>Subtotal - Debt Service</i>	<u>64,308,209</u>	<u>61,407,822</u>	<u>2,900,387</u>	5%
Transfer to CIP	114,463,921	94,953,112	19,510,809	21%
Transfer to General Reserve	-	-	-	0%
Transfer to Risk Management	260,000	260,000	-	0%
<i>Subtotal - Transfers</i>	<u>114,723,921</u>	<u>95,213,112</u>	<u>19,510,809</u>	20%
Total Debt Service and Transfers	\$ 179,032,130	\$ 156,620,934	\$ 22,411,196	14%

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Capital Budget

Capital Budget

HRSD prepares a Capital Improvement Program (CIP) each year for the capital projects currently underway or proposed for the future. The first year of the CIP is authorized as the Capital Budget for FY-2022 in the amount of \$290 million. The remaining years (FY-2023 to FY-2031) include all known projects planned for these years; however, approval of the plan does not authorize the Capital Budgets for those years. Each year's Capital Budget will be approved during the budget process for the specific year.

The ten-year Capital Improvement Program for FY-2022 to FY-2031 highlights the anticipated cost of each project and the fiscal year(s) in which the work is expected to occur. All costs listed in the CIP are stated in current year dollars and total approximately \$3.0 billion.

The bond component of the plan may include one or all of the following:

- Interim or construction financings
- Federally subsidized borrowing programs administered by the Virginia Resource Authority and the Environmental Protection Agency
- HRSD Revenue Bonds or Notes

The grant component represents funds estimated to be received from a federal or state agency for specific projects. Other reimbursements, if any, include amounts paid by other parties who may participate in a project.

Capital Budget

CIP Budget Forecast (in thousands)	Total FY-2022					
	to FY-2031	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026
Beginning Capital Reserves	\$ 190,854	\$ -	\$ -	\$ -	\$ -	\$ -
Bonds	285,791	-	-	285,791	-	-
VCWRLF	400,000	100,000	100,000	100,000	100,000	-
WIFIA	850,460	40,659	86,314	169,494	149,751	75,575
WQIF	127,500	-	2,500	15,000	17,500	27,500
Grants and Other Reimbursements	48,677	-	2,055	7,818	9,278	7,409
Cash	1,320,500	121,994	124,157	114,213	125,600	117,997
Transfer from Line of Credit	(34,995)	27,347	94,974	(157,316)	17,871	6,519
Total Capital Resources	3,188,787	290,000	410,000	535,000	420,000	235,000
Capital Expenditures	2,995,000	290,000	410,000	535,000	420,000	235,000
Ending Capital Reserves	\$ 193,787	\$ -	\$ -	\$ -	\$ -	\$ -

Capital Expenditures (in thousands)	Total FY-2022					
	to FY-2031	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026
Administration	\$ 16,186	\$ 3,750	\$ 3,659	\$ 4,537	\$ 4,239	\$ -
Army Base	17,970	6,567	6,381	5,022	-	-
Atlantic	77,729	12,119	18,754	23,398	11,962	7,485
Boat Harbor	273,563	41,379	46,859	74,549	52,827	16,741
Chesapeake-Elizabeth	24,739	6,997	3,978	2,586	2,367	2,859
Eastern Shore	24,630	4,394	6,051	2,885	5,000	545
James River	257,741	32,339	70,135	81,947	59,844	13,475
Middle Peninsula	106,433	18,276	30,437	29,355	6,836	7,305
Nansemond	343,124	35,520	46,578	102,990	98,085	28,567
Surry	29,442	15,959	7,566	2,343	3,541	33
Virginia Initiative Plant	172,362	24,536	48,749	41,265	13,928	7,897
Williamsburg	12,706	4,299	3,812	856	-	-
York River	55,784	12,164	14,886	9,723	10,399	7,575
General	1,248,254	71,701	94,116	128,068	128,733	128,723
Future Improvements	217,014	-	-	-	2,239	2,604
Sub-Total	2,877,675	290,000	401,961	509,524	400,000	223,810
Contingency	117,325	-	8,039	25,476	20,000	11,190
Total Expenditures	\$ 2,995,000	\$ 290,000	\$ 410,000	\$ 535,000	\$ 420,000	\$ 235,000

Capital Budget

CIP Budget Forecast (in thousands)	FY-2027	FY-2028	FY-2029	FY-2030	FY-2031
Beginning Capital Reserves	\$ -	\$ 2,856	\$ 38,240	\$ 92,962	\$ 56,796
Bonds	-	-	-	-	-
VCWRLF	-	-	-	-	-
WIFIA	75,135	99,706	82,092	49,953	21,781
WQIF	25,000	25,000	7,500	5,000	2,500
Grants and Other Reimbursements	8,087	7,543	4,644	1,843	-
Cash	154,024	163,135	170,486	107,038	121,856
Transfer from Line of Credit	(24,390)				
Total Capital Resources	237,856	298,240	302,962	256,796	202,933
Capital Expenditures	235,000	260,000	210,000	200,000	200,000
Ending Capital Reserves	\$ 2,856	\$ 38,240	\$ 92,962	\$ 56,796	\$ 2,933

Capital Expenditures (in thousands)	FY-2027	FY-2028	FY-2029	FY-2030	FY-2031
Administration	\$ -	\$ -	\$ -	\$ -	\$ -
Army Base	-	-	-	-	-
Atlantic	1,321	303	508	-	1,880
Boat Harbor	37,273	3,934	-	-	-
Chesapeake-Elizabeth	3,476	2,477	-	-	-
Eastern Shore	5,455	300	-	-	-
James River	-	-	-	-	-
Middle Peninsula	7,736	4,644	1,843	-	-
Nansemond	4,739	13,407	9,451	3,780	7
Surry	-	-	-	-	-
Virginia Initiative Plant	1,826	10,603	11,022	9,383	3,153
Williamsburg	-	-	-	-	3,739
York River	1,037	-	-	-	-
General	160,173	209,258	173,308	105,834	48,340
Future Improvements	774	2,693	3,868	71,479	133,358
Sub-Total	223,810	247,619	200,000	190,476	190,476
Contingency	11,190	12,381	10,000	9,524	9,524
Total Expenditures	\$ 235,000	\$ 260,000	\$ 210,000	\$ 200,000	\$ 200,000

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2022 to FY-2031	FY-2022	FY-2023	FY-2024	FY-2025
Administration						
AD012300	Central Environmental Laboratory Phase II	\$ 2,126	\$ 124	\$ 82	\$ 960	\$ 960
AD012310	Central Environmental Laboratory Phase II - Study	\$ 50	\$ 50	\$ -	\$ -	\$ -
AD012500	Cybersecurity Practice & Procedure Initiative	\$ 14,010	\$ 3,577	\$ 3,577	\$ 3,577	\$ 3,279
	Subtotal	\$ 16,186	\$ 3,750	\$ 3,659	\$ 4,537	\$ 4,239
Army Base						
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	\$ 7,800	\$ 588	\$ 3,616	\$ 3,596	\$ -
AB010500	Section W Force Main Replacement	\$ 3,036	\$ 177	\$ 1,435	\$ 1,425	\$ -
AB011800	Army Base to VIP Transmission Force Main	\$ 49,930	\$ -	\$ -	\$ -	\$ -
AB011900	Army Base Treatment Plant Administration Building Renovation (2021)	\$ 1,134	\$ 1,002	\$ 130	\$ 2	\$ -
AB012000	Wards Corner Sanitary Sewer Pumping Station	\$ 6,000	\$ 4,800	\$ 1,200	\$ -	\$ -
	Subtotal	\$ 17,970	\$ 6,567	\$ 6,381	\$ 5,022	\$ -
Atlantic						
AT011520	Shipp's Corner Pressure Reducing Station Modifications	\$ 1,486	\$ 87	\$ 1,278	\$ 116	\$ -
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	\$ 4,615	\$ 65	\$ 236	\$ 2,177	\$ 2,136
AT012920	Atlantic Treatment Plant Access Road Extension	\$ 9,654	\$ 1,123	\$ 4,084	\$ 4,447	\$ -
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	\$ 6,050	\$ 1,856	\$ 2,784	\$ 1,264	\$ 146
AT013110	South Norfolk Area Gravity Sewer Improvements, Phase II	\$ 7,830	\$ 497	\$ 3,676	\$ 3,656	\$ -
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	\$ 2,837	\$ -	\$ 57	\$ 425	\$ 2,356
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	\$ 351	\$ 61	\$ 61	\$ 130	\$ 100
AT014000	Lynnhaven-Great Neck IFM (SF-021) Relocation	\$ 987	\$ 395	\$ 395	\$ 197	\$ -
AT014301	Atlantic Service Area I-I Reduction Phase I (CHES)	\$ 11,911	\$ -	\$ 721	\$ 998	\$ 1,447
AT014302	Atlantic Service Area I-I Reduction Phase II (CHES)	\$ 9,770	\$ 1,045	\$ 1,728	\$ 3,806	\$ 3,185
AT014303	Chesapeake Pump Station Capacity Improvements (AT-HPP-01C)	\$ 866	\$ -	\$ -	\$ -	\$ -
AT014500	Atlantic Treatment Plant Influent Screens (1-3) Replacement	\$ 2,441	\$ 2,441	\$ -	\$ -	\$ -
AT014600	Kempsville Interceptor Force Main Replacement - Phase I	\$ 5,393	\$ 281	\$ 760	\$ 2,895	\$ 1,458
AT014800	Atlantic Treatment Plant Electrical Workspace Renovation	\$ 514	\$ 514	\$ -	\$ -	\$ -
AT014900	Atlantic Treatment Plant Gravity Belt Thickener Expansion	\$ 1,475	\$ 1,082	\$ 393	\$ -	\$ -
AT015000	Atlantic Treatment Plant Polymer System Replacement	\$ 3,375	\$ 1,902	\$ 1,473	\$ -	\$ -
AT015100	Atlantic Treatment Plant Solids Storage Pad Improvements	\$ 672	\$ 422	\$ 250	\$ -	\$ -
AT015200	Cedar Road Interceptor Force Main Replacement Phase I	\$ 5,628	\$ 349	\$ 857	\$ 3,287	\$ 1,136
AT015300	High Priority Projects Round 2 Project 2	\$ 26,850	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 77,729	\$ 12,119	\$ 18,754	\$ 23,398	\$ 11,962
Boat Harbor						
BH013020	Willard Avenue Pump Station Replacement	\$ 11,979	\$ 7,562	\$ 4,413	\$ 3	\$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	\$ 2,391	\$ 1,040	\$ 1,352	\$ -	\$ -
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	\$ 12,451	\$ 6,218	\$ 6,218	\$ 9	\$ 6
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	\$ 1,998	\$ 585	\$ 1,410	\$ 4	\$ -
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	\$ 6,836	\$ 4,311	\$ 2,521	\$ 4	\$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	\$ 5,722	\$ 3,611	\$ 2,109	\$ 3	\$ -
BH015600	Hampton Trunk A and B Replacement-Jefferson Avenue to Walnut Avenue	\$ 6,688	\$ 6,680	\$ 8	\$ -	\$ -
BH015700	Boat Harbor Treatment Plant Pump Station Conversion	\$ 65,382	\$ 5,752	\$ 5,205	\$ 26,940	\$ 24,840
BH015710	Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous)	\$ 64,498	\$ 2,394	\$ 12,637	\$ 33,375	\$ 16,092
BH015720	Boat Harbor Treatment Plant Transmission Force Main Section 2 (Land)	\$ 22,020	\$ 1,973	\$ 7,739	\$ 12,308	\$ -
BH015730	Boat Harbor Treatment Plant Decommission and Demolition	\$ 28,626	\$ -	\$ -	\$ 516	\$ 1,866
BH015801	14th Street Offline Storage (BH-HPP-01A)	\$ 15,124	\$ -	\$ 885	\$ 839	\$ 8,425
BH015802	Claremont Pump Station Upgrade (BH-HPP-01B)	\$ 11,157	\$ -	\$ -	\$ 546	\$ 766
BH015803	Chesapeake Avenue Interceptor Improvements (BH-HPP-01C)	\$ 15,071	\$ -	\$ -	\$ -	\$ 831
BH015900	Bloxoms Corner Force Main Replacement	\$ 3,620	\$ 1,254	\$ 2,362	\$ 4	\$ -
BH016100	High Priority Projects Round 2 Project 3	\$ 26,380	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 273,563	\$ 41,379	\$ 46,859	\$ 74,549	\$ 52,827
Chesapeake-Elizabeth						
CE010520	Newtown Road Interceptor Force Main Relocation	\$ 1,728	\$ 1,645	\$ 83	\$ -	\$ -
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	\$ 1,548	\$ 381	\$ 1,167	\$ -	\$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	\$ 1,836	\$ 139	\$ 668	\$ 1,029	\$ -
CE011700	Western Trunk Force Main Replacement	\$ 83	\$ 83	\$ -	\$ -	\$ -
CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	\$ 11,304	\$ 204	\$ 2,057	\$ 1,419	\$ 2,128
CE011821	Elbow Road Pressure Reducing Station	\$ 227	\$ 227	\$ -	\$ -	\$ -
CE011823	Virginia Beach Boulevard Force Main Phase VI	\$ 1,088	\$ 1,088	\$ -	\$ -	\$ -
CE011825	Salem Road Interconnect Force Main	\$ 925	\$ 925	\$ -	\$ -	\$ -
CE011830	Little Creek Pump Station Modifications	\$ 6	\$ 6	\$ -	\$ -	\$ -
CE011835	Virginia Beach City Pump Station Upgrades, Phase V	\$ 1,200	\$ 1,200	\$ -	\$ -	\$ -
CE011836	Norfolk City Pump Station Upgrades	\$ 615	\$ 615	\$ -	\$ -	\$ -
CE011840	Oceana Off-Line Storage Facility	\$ 82	\$ 82	\$ -	\$ -	\$ -
CE011850	Atlantic Service Area Automated Diversion Facilities Phase I	\$ 402	\$ 402	\$ -	\$ -	\$ -
CE012100	Witchduck Road Interceptor Force Main Improvements	\$ 3,694	\$ -	\$ 3	\$ 138	\$ 239
	Subtotal	\$ 24,739	\$ 6,997	\$ 3,978	\$ 2,586	\$ 2,367
Note:	VIP - Virginia Initiative Plant VDOT - Virginia Department of Transportation IFM - Interceptor Force Main CHES - City of Chesapeake BH - Boat Harbor Treatment Plant HPP - High Priority Project					

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2026	FY-2027	FY-2028	FY-2029	FY-2030	FY-2031
Administration							
AD012300	Central Environmental Laboratory Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AD012310	Central Environmental Laboratory Phase II - Study	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AD012500	Cybersecurity Practice & Procedure Initiative	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Army Base							
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AB010500	Section W Force Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AB011800	Army Base to VIP Transmission Force Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AB011900	Army Base Treatment Plant Administration Building Renovation (2021)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AB012000	Wards Corner Sanitary Sewer Pumping Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Atlantic							
AT011520	Shippo's Corner Pressure Reducing Station Modifications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT012920	Atlantic Treatment Plant Access Road Extension	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT013110	South Norfolk Area Gravity Sewer Improvements, Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT014000	Lynnhaven-Great Neck IFM (SF-021) Relocation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT014301	Atlantic Service Area I-I Reduction Phase I (CHES)	\$ 7,478	\$ 1,267	\$ -	\$ -	\$ -	\$ -
AT014302	Atlantic Service Area I-I Reduction Phase II (CHES)	\$ 7	\$ -	\$ -	\$ -	\$ -	\$ -
AT014303	Chesapeake Pump Station Capacity Improvements (AT-HPP-01C)	\$ -	\$ 54	\$ 303	\$ 508	\$ -	\$ -
AT014500	Atlantic Treatment Plant Influent Screens (1-3) Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT014600	Kempsville Interceptor Force Main Replacement - Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT014800	Atlantic Treatment Plant Electrical Workspace Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT014900	Atlantic Treatment Plant Gravity Belt Thickener Expansion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT015000	Atlantic Treatment Plant Polymer System Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT015100	Atlantic Treatment Plant Solids Storage Pad Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT015200	Cedar Road Interceptor Force Main Replacement Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
AT015300	High Priority Projects Round 2 Project 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,880
	Subtotal	\$ 7,485	\$ 1,321	\$ 303	\$ 508	\$ -	\$ 1,880
Boat Harbor							
BH013020	Willard Avenue Pump Station Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH015600	Hampton Trunk A and B Replacement-Jefferson Avenue to Walnut Avenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH015700	Boat Harbor Treatment Plant Pump Station Conversion	\$ 2,645	\$ -	\$ -	\$ -	\$ -	\$ -
BH015710	Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH015720	Boat Harbor Treatment Plant Transmission Force Main Section 2 (Land)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH015730	Boat Harbor Treatment Plant Decommission and Demolition	\$ 244	\$ 25,004	\$ 996	\$ -	\$ -	\$ -
BH015801	14th Street Offline Storage (BH-HPP-01A)	\$ 4,975	\$ -	\$ -	\$ -	\$ -	\$ -
BH015802	Claremont Pump Station Upgrade (BH-HPP-01B)	\$ 6,390	\$ 3,454	\$ -	\$ -	\$ -	\$ -
BH015803	Chesapeake Avenue Interceptor Improvements (BH-HPP-01C)	\$ 2,487	\$ 8,815	\$ 2,938	\$ -	\$ -	\$ -
BH015900	Bloxoms Corner Force Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
BH016100	High Priority Projects Round 2 Project 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 16,741	\$ 37,273	\$ 3,934	\$ -	\$ -	\$ -
Chesapeake-Elizabeth							
CE010520	Newtown Road Interceptor Force Main Relocation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011700	Western Trunk Force Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	\$ 2,128	\$ 2,128	\$ 1,241	\$ -	\$ -	\$ -
CE011821	Elbow Road Pressure Reducing Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011823	Virginia Beach Boulevard Force Main Phase VI	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011825	Salem Road Interconnect Force Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011830	Little Creek Pump Station Modifications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011835	Virginia Beach City Pump Station Upgrades, Phase V	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011836	Norfolk City Pump Station Upgrades	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011840	Oceana Off-Line Storage Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE011850	Atlantic Service Area Automated Diversion Facilities Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CE012100	Witchduck Road Interceptor Force Main Improvements	\$ 731	\$ 1,348	\$ 1,236	\$ -	\$ -	\$ -
	Subtotal	\$ 2,859	\$ 3,476	\$ 2,477	\$ -	\$ -	\$ -
Note:	VIP - Virginia Initiative Plant VDOT - Virginia Department of Transportation IFM - Interceptor Force Main CHES - City of Chesapeake BH - Boat Harbor Treatment Plant HPP - High Priority Project						

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2022 to FY-2031	FY-2022	FY-2023	FY-2024	FY-2025
Eastern Shore						
ES010100	Eastern Shore Infrastructure Improvements - Transmission Force Main Phase I	\$ 12,860	\$ 4,204	\$ 5,771	\$ 2,885	\$ -
ES010200	Eastern Shore Infrastructure Improvements - Transmission Force Main Phase II	\$ 11,300	\$ -	\$ -	\$ -	\$ 5,000
ES010300	Onancock Treatment Plant Administration Building Upgrade	\$ 470	\$ 190	\$ 280	\$ -	\$ -
	Subtotal	\$ 24,630	\$ 4,394	\$ 6,051	\$ 2,885	\$ 5,000
James River						
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	\$ 17,474	\$ 9,709	\$ 7,758	\$ 7	\$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	\$ 1,437	\$ 1,435	\$ 3	\$ -	\$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	\$ 2,107	\$ 160	\$ 1,776	\$ 171	\$ 1
JR013400	James River Treatment Plant Advanced Nutrient Reduction Improvements	\$ 215,992	\$ 17,862	\$ 50,187	\$ 74,628	\$ 59,840
JR013500	Lucas Creek Pump Station Replacement	\$ 9,278	\$ 1,933	\$ 4,404	\$ 2,938	\$ 3
JR013600	James River Treatment Plant Primary Treatment and Automation Improvements	\$ 11,452	\$ 1,240	\$ 6,008	\$ 4,204	\$ -
JR013700	High Priority Projects Round 2 Project 6	\$ 17,090	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 257,741	\$ 32,339	\$ 70,135	\$ 81,947	\$ 59,844
Middle Peninsula						
MP011700	Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	\$ 2,520	\$ 1,149	\$ 1,149	\$ 222	\$ -
MP012000	King William Treatment Plant Improvements Phase I	\$ 1,615	\$ 1,612	\$ 3	\$ -	\$ -
MP013000	Small Communities Collection System Rehabilitation Phase I	\$ 14	\$ 14	\$ -	\$ -	\$ -
MP013020	Small Communities Collection System Rehabilitation Phase III	\$ 1,002	\$ 995	\$ 7	\$ -	\$ -
MP013300	King William Treatment Plant Improvements Phase II	\$ 13,844	\$ 518	\$ 6,650	\$ 6,650	\$ 26
MP013500	Middlesex Collection System-Cooks Corner	\$ 1,757	\$ 1,754	\$ 3	\$ -	\$ -
MP013600	Middlesex Interceptor Force Main Phase I-Cooks Corner	\$ 240	\$ 239	\$ 0	\$ -	\$ -
MP013710	Middlesex Interceptor System Program Phase II-Saluda Pump Station	\$ 1,756	\$ 213	\$ 839	\$ 703	\$ 2
MP013720	Middlesex Interceptor System Program Phase II-Hartfield Pump Station	\$ 4,272	\$ 688	\$ 1,952	\$ 1,630	\$ 2
MP013730	Middlesex Interceptor System Program Phase II-Transmission Force Main	\$ 26,922	\$ 5,041	\$ 10,938	\$ 10,938	\$ 5
MP013800	Middlesex Interceptor System Program Phase III	\$ 3,448	\$ 20	\$ 330	\$ 2,319	\$ 780
MP013900	Urbanna Wastewater Treatment Plant Reliability Improvements	\$ 257	\$ 257	\$ -	\$ -	\$ -
MP014100	Middlesex Collection System-Christ's Church Service Area	\$ 1,043	\$ 18	\$ 18	\$ 18	\$ 18
MP014200	Middlesex Collection System-Topping Service Area Phase I	\$ 3,420	\$ 330	\$ 1,160	\$ 1,540	\$ 390
MP014300	Middlesex Collection System-Locust Hill Service Area	\$ 3,593	\$ 80	\$ 80	\$ 80	\$ 80
MP014410	Middlesex County Hartfield Collection System Phase I	\$ 551	\$ 99	\$ 214	\$ 214	\$ 22
MP014500	Middlesex Collection System-Saluda Service Area	\$ 3,015	\$ 107	\$ 107	\$ 526	\$ 1,133
MP014510	Middlesex County Saluda Collection System Phase I	\$ 139	\$ 32	\$ 51	\$ 51	\$ 5
MP014600	Middlesex Collection System-Deltaville Service Area	\$ 25,963	\$ 448	\$ 3,320	\$ 4,204	\$ 4,259
MP014700	Small Communities Rehabilitation Phase IV	\$ 1,436	\$ 1,432	\$ 4	\$ 1	\$ -
MP014800	Small Communities Rehabilitation Phase V	\$ 419	\$ 53	\$ 366	\$ -	\$ -
MP014900	Middle Peninsula Operations Center Locker Room and Administrative Facilities	\$ 1,460	\$ 1,455	\$ 5	\$ -	\$ -
MP015000	Sharon Road Gravity Sewer Improvements	\$ 1,020	\$ 1,016	\$ 4	\$ -	\$ -
MP015100	West Point Pump Station 4 (Thompson Avenue) Rehabilitation	\$ 706	\$ 313	\$ 391	\$ 3	\$ -
MP015300	King William Central Crossing Pump Station Rehabilitation	\$ 975	\$ 107	\$ 760	\$ 108	\$ -
MP015400	Middlesex Interceptor System Program Phase IV	\$ 2,527	\$ -	\$ -	\$ -	\$ 115
MP015500	Small Communities Rehabilitation Phase VI	\$ 1,210	\$ 141	\$ 1,069	\$ -	\$ -
MP015600	West Point Treatment Plant Final Effluent Pump Station Improvements	\$ 665	\$ 73	\$ 517	\$ 75	\$ -
MP015700	West Point Treatment Plant Secondary Clarifier Improvements	\$ 644	\$ 71	\$ 500	\$ 73	\$ -
	Subtotal	\$ 106,433	\$ 18,276	\$ 30,437	\$ 29,355	\$ 6,836
Nansemond						
NP010620	Suffolk Pump Station Replacement	\$ 22,151	\$ 7,860	\$ 8,575	\$ 5,716	\$ -
NP012400	Western Branch Sewer System Gravity Improvements	\$ 2,895	\$ 167	\$ 167	\$ 2,561	\$ -
NP012600	Deep Creek Interceptor Force Main Replacement	\$ 50	\$ 50	\$ -	\$ -	\$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	\$ 1,513	\$ 825	\$ 688	\$ -	\$ -
NP013400	Deep Creek Interceptor Force Main Risk Mitigation Project	\$ 591	\$ 542	\$ 49	\$ -	\$ -
NP013700	Nansemond Treatment Plant Struvite Recovery Facility Improvements	\$ 15,016	\$ 9,480	\$ 5,535	\$ -	\$ -
NP013820	Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph II	\$ 214,610	\$ 3,716	\$ 23,471	\$ 85,588	\$ 84,401
NP013901	Nansemond Service Area I-I Reduction Phase II (CHES)	\$ 15,849	\$ -	\$ -	\$ -	\$ 262
NP013902	Nansemond Service Area I-I Reduction Phase III (CHES)	\$ 15,773	\$ -	\$ -	\$ -	\$ -
NP014000	Wilroy Pressure Reducing Station and Offline Storage (NP-HPP-03)	\$ 27,441	\$ 1,173	\$ 1,514	\$ 5,723	\$ 10,875
NP014100	Nansemond Treatment Plant Shoreline Improvements Phase II	\$ 3,000	\$ -	\$ -	\$ -	\$ -
NP014400	Nansemond Treatment Plant Influent Screen Replacement	\$ 559	\$ 553	\$ 6	\$ -	\$ -
NP014500	Nansemond Treatment Plant Regional Residuals Facility Upgrade	\$ 1,545	\$ 1,545	\$ -	\$ -	\$ -
NP014600	West Road Interceptor Force Main Extension	\$ 7,103	\$ 218	\$ 940	\$ 3,397	\$ 2,548
NP014700	Nansemond Treatment Plant Digester Capacity Upgrade	\$ 15,027	\$ 9,390	\$ 5,633	\$ 4	\$ -
NP014800	High Priority Projects Round 2 Project 8	\$ 28,150	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 343,124	\$ 35,520	\$ 46,578	\$ 102,990	\$ 98,085
Note:	SCADA - Supervisory Control and Data Acquisition NP - Nansemond Treatment Plant CHES - City of Chesapeake					

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2026	FY-2027	FY-2028	FY-2029	FY-2030	FY-2031
Eastern Shore							
ES010100	Eastern Shore Infrastructure Improvements - Transmission Force Main Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ES010200	Eastern Shore Infrastructure Improvements - Transmission Force Main Phase II	\$ 545	\$ 5,455	\$ 300	\$ -	\$ -	\$ -
ES010300	Onancock Treatment Plant Administration Building Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 545	\$ 5,455	\$ 300	\$ -	\$ -	\$ -
James River							
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JR013400	James River Treatment Plant Advanced Nutrient Reduction Improvements	\$ 13,475	\$ -	\$ -	\$ -	\$ -	\$ -
JR013500	Lucas Creek Pump Station Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JR013600	James River Treatment Plant Primary Treatment and Automation Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JR013700	High Priority Projects Round 2 Project 6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 13,475	\$ -	\$ -	\$ -	\$ -	\$ -
Middle Peninsula							
MP011700	Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP012000	King William Treatment Plant Improvements Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013000	Small Communities Collection System Rehabilitation Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013020	Small Communities Collection System Rehabilitation Phase III	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013300	King William Treatment Plant Improvements Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013500	Middlesex Collection System-Cooks Corner	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013600	Middlesex Interceptor Force Main Phase I-Cooks Corner	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013710	Middlesex Interceptor System Program Phase II-Saluda Pump Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013720	Middlesex Interceptor System Program Phase II-Hartfield Pump Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013730	Middlesex Interceptor System Program Phase II-Transmission Force Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013800	Middlesex Interceptor System Program Phase III	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP013900	Urbanna Wastewater Treatment Plant Reliability Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP014100	Middlesex Collection System-Christ's Church Service Area	\$ 18	\$ 207	\$ 467	\$ 277	\$ -	\$ -
MP014200	Middlesex Collection System-Topping Service Area Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP014300	Middlesex Collection System-Locust Hill Service Area	\$ 1,231	\$ 1,622	\$ 420	\$ -	\$ -	\$ -
MP014410	Middlesex County Hartfield Collection System Phase I	\$ 0	\$ -	\$ -	\$ -	\$ -	\$ -
MP014500	Middlesex Collection System-Saluda Service Area	\$ 1,133	\$ 10	\$ -	\$ -	\$ -	\$ -
MP014510	Middlesex County Saluda Collection System Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP014600	Middlesex Collection System-Deltaville Service Area	\$ 4,204	\$ 4,204	\$ 3,757	\$ 1,565	\$ -	\$ -
MP014700	Small Communities Rehabilitation Phase IV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP014800	Small Communities Rehabilitation Phase V	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP014900	Middle Peninsula Operations Center Locker Room and Administrative Facilities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP015000	Sharon Road Gravity Sewer Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP015100	West Point Pump Station 4 (Thompson Avenue) Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP015300	King William Central Crossing Pump Station Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP015400	Middlesex Interceptor System Program Phase IV	\$ 718	\$ 1,693	\$ -	\$ -	\$ -	\$ -
MP015500	Small Communities Rehabilitation Phase VI	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP015600	West Point Treatment Plant Final Effluent Pump Station Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MP015700	West Point Treatment Plant Secondary Clarifier Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 7,305	\$ 7,736	\$ 4,644	\$ 1,843	\$ -	\$ -
Nansemond							
NP010620	Suffolk Pump Station Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP012400	Western Branch Sewer System Gravity Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP012600	Deep Creek Interceptor Force Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP013400	Deep Creek Interceptor Force Main Risk Mitigation Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP013700	Nansemond Treatment Plant Struvite Recovery Facility Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP013820	Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph II	\$ 17,434	\$ -	\$ -	\$ -	\$ -	\$ -
NP013901	Nansemond Service Area I-I Reduction Phase II (CHES)	\$ 1,601	\$ 2,961	\$ 8,255	\$ 2,772	\$ -	\$ -
NP013902	Nansemond Service Area I-I Reduction Phase III (CHES)	\$ 1,376	\$ 1,570	\$ 4,520	\$ 4,520	\$ 3,780	\$ 7
NP014000	Wilroy Pressure Reducing Station and Offline Storage (NP-HPP-03)	\$ 8,156	\$ -	\$ -	\$ -	\$ -	\$ -
NP014100	Nansemond Treatment Plant Shoreline Improvements Phase II	\$ -	\$ 209	\$ 632	\$ 2,159	\$ -	\$ -
NP014400	Nansemond Treatment Plant Influent Screen Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP014500	Nansemond Treatment Plant Regional Residuals Facility Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP014600	West Road Interceptor Force Main Extension	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP014700	Nansemond Treatment Plant Digester Capacity Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NP014800	High Priority Projects Round 2 Project 8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 28,567	\$ 4,739	\$ 13,407	\$ 9,451	\$ 3,780	\$ 7
Note:	SCADA - Supervisory Control and Data Acquisition NP - Nansemond Treatment Plant CHES - City of Chesapeake						

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2022 to FY-2031	FY-2022	FY-2023	FY-2024	FY-2025
Surry						
SU010200	Surry Hydraulic Improvements and Interceptor Force Main	\$ 21,349	\$ 14,232	\$ 7,116	\$ -	\$ -
SU010300	Surry Water and Sewer Infrastructure Improvements – Phase 1	\$ 1,426	\$ 1,426	\$ -	\$ -	\$ -
SU010400	Surry Force Main and Pump Station-Dominion Power Extension	\$ 6,667	\$ 300	\$ 450	\$ 2,343	\$ 3,541
	Subtotal	\$ 29,442	\$ 15,959	\$ 7,566	\$ 2,343	\$ 3,541
Virginia Initiative Plant						
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	\$ 3,043	\$ 165	\$ 974	\$ 1,428	\$ 476
VP014010	Ferebee Avenue Pump Station Replacement	\$ 7,565	\$ -	\$ 2,775	\$ 4,106	\$ 684
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	\$ 10,250	\$ 2,317	\$ 4,533	\$ 3,400	\$ -
VP014700	Ingleside Road Pump Station Replacement	\$ 2,969	\$ 2,969	\$ -	\$ -	\$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	\$ 3,267	\$ 381	\$ 2,886	\$ -	\$ -
VP015320	Larchmont Area Sanitary Sewer Improvements	\$ 34,924	\$ 1,463	\$ 8,923	\$ 10,410	\$ 8,922
VP015400	Lafayette Norview-Estabrook Pump Station Replacements	\$ 18,342	\$ 3,963	\$ 7,843	\$ 6,536	\$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	\$ 2,720	\$ 148	\$ 870	\$ 1,277	\$ 426
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	\$ 3,667	\$ 201	\$ 1,172	\$ 1,721	\$ 574
VP017110	Central Norfolk Area Gravity Sewer Improvements Phase I	\$ 15	\$ 15	\$ -	\$ -	\$ -
VP017120	Central Norfolk Area Gravity Sewer Improvements Phase II	\$ 6,325	\$ 630	\$ 2,439	\$ 3,193	\$ 63
VP018000	Park Avenue Pump Station Replacement	\$ 10,380	\$ 3,490	\$ 5,168	\$ 1,723	\$ -
VP018200	Effingham Interceptor Vault Removal	\$ 2,072	\$ 1,624	\$ 448	\$ -	\$ -
VP018301	VIP Service Area I-I Reduction Phase I (PORTS)	\$ 11,564	\$ 1,546	\$ 5,713	\$ 4,305	\$ -
VP018302	Portsmouth Pump Station Upgrades (VIP-HPP-04B)	\$ 10,527	\$ -	\$ -	\$ -	\$ -
VP018303	VIP Service Area I-I Reduction Phase III (PORTS)	\$ 9,015	\$ 925	\$ 859	\$ 2,622	\$ 2,622
VP018304	Camden Avenue Pump Station Upgrades (VIP-HPP-04D)	\$ 5,478	\$ -	\$ -	\$ -	\$ -
VP018305	Camden Avenue Gravity Improvements (VIP-HPP-04E)	\$ 2,621	\$ -	\$ -	\$ -	\$ -
VP018400	State Street Pressure Reducing Station and Offline Storage (VIP-HPP-05)	\$ 18,711	\$ 161	\$ 161	\$ 161	\$ 161
VP018500	Elizabeth River Crossing Reliability Improvements	\$ 1,661	\$ 1,511	\$ 150	\$ -	\$ -
VP018800	Virginia Initiative Plant Administration Building Renovation	\$ 2,462	\$ 1,671	\$ 777	\$ 13	\$ -
VP018900	Norchester Pump Station Screening Improvements	\$ 469	\$ 89	\$ 310	\$ 70	\$ -
VP019000	Colley Ave Pump Station Pump Replacement	\$ 640	\$ 64	\$ 576	\$ -	\$ -
VP019100	Virginia Initiative Plant Incinerator Burner Replacement	\$ 1,800	\$ 600	\$ 900	\$ 300	\$ -
VP019200	Virginia Initiative Plant Motor Control Center Replacements	\$ 1,875	\$ 604	\$ 1,271	\$ -	\$ -
VP019300	High Priority Projects Round 2 Project 4	\$ 12,380	\$ -	\$ -	\$ -	\$ -
VP019400	High Priority Projects Round 2 Project 5	\$ 14,940	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 172,362	\$ 24,536	\$ 48,749	\$ 41,265	\$ 13,928
Williamsburg						
WB012400	Williamsburg Treatment Plant Generator and Switchgear Replacement	\$ 335	\$ 333	\$ 2	\$ -	\$ -
WB012500	Lodge Road Pump Station Upgrades	\$ 1,489	\$ 102	\$ 532	\$ 855	\$ -
WB012600	Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation	\$ 1,146	\$ 1,146	\$ -	\$ -	\$ -
WB012900	Williamsburg Treatment Plant Administration Building Renovation	\$ 2,406	\$ 2,212	\$ 193	\$ 1	\$ -
WB013000	Williamsburg Treatment Plant Intermediate Clarifier Wet Weather System	\$ 1,933	\$ 381	\$ 1,553	\$ -	\$ -
WB013100	Williamsburg Treatment Plant Outfall Flow Control System Repairs	\$ 1,657	\$ 125	\$ 1,532	\$ -	\$ -
WB013200	High Priority Projects Round 2 Project 1	\$ 53,410	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 12,706	\$ 4,299	\$ 3,812	\$ 856	\$ -
York River						
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	\$ 3,242	\$ 236	\$ 1,559	\$ 1,447	\$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	\$ 4,261	\$ 322	\$ 1,438	\$ 2,496	\$ 5
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	\$ 5,807	\$ 33	\$ 60	\$ 529	\$ 1,663
YR010900	Tabb Pressure Reducing Station and Offline Storage Facility	\$ 17,004	\$ 2,711	\$ 10,716	\$ 3,577	\$ -
YR011900	Bethel-Poquoson Force Main Part III Replacement	\$ 405	\$ 97	\$ 194	\$ 113	\$ -
YR013710	York River Treatment Plant Advanced Nutrient Reduction Improvements Phase I	\$ 200	\$ 200	\$ -	\$ -	\$ -
YR013900	York River System Isolation Valve Installation and Replacement	\$ 4,452	\$ 4,452	\$ -	\$ -	\$ -
YR014000	York River Treatment Plant Administration Building Renovation	\$ 1,912	\$ 1,364	\$ 547	\$ 1	\$ -
YR014100	Coliseum Pressure Reducing Station Enhanced Storage	\$ 8,031	\$ -	\$ -	\$ 559	\$ 5,271
YR014200	LaSalle Avenue Boat Harbor to York River Interconnect Force Main	\$ 6,948	\$ 41	\$ -	\$ 557	\$ 3,461
YR014300	Bethel-Poquoson Force Main Phase II (Wythe Creek Road) Replacement	\$ 2,493	\$ 2,488	\$ 5	\$ -	\$ -
YR014500	York River Treatment Plant Headworks Motor Control Center Replacement	\$ 184	\$ 184	\$ -	\$ -	\$ -
YR014600	Bethel-Poquoson Force Main Part IV Replacement-Wythe Creek Exposed Crossing	\$ 845	\$ 35	\$ 366	\$ 444	\$ -
	Subtotal	\$ 55,784	\$ 12,164	\$ 14,886	\$ 9,723	\$ 10,399
Note:	PORTS - City of Portsmouth VIP - Virginia Initiative Plant HPP - High Priority Project					

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2026	FY-2027	FY-2028	FY-2029	FY-2030	FY-2031
Surry							
SU010200	Surry Hydraulic Improvements and Interceptor Force Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SU010300	Surry Water and Sewer Infrastructure Improvements – Phase 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SU010400	Surry Force Main and Pump Station-Dominion Power Extension	\$ 33	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 33	\$ -	\$ -	\$ -	\$ -	\$ -
Virginia Initiative Plant							
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP014010	Ferebee Avenue Pump Station Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP014700	Ingleside Road Pump Station Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP015320	Larchmont Area Sanitary Sewer Improvements	\$ 5,205	\$ -	\$ -	\$ -	\$ -	\$ -
VP015400	Lafayette Norview-Estabrook Pump Station Replacements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP017110	Central Norfolk Area Gravity Sewer Improvements Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP017120	Central Norfolk Area Gravity Sewer Improvements Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP018000	Park Avenue Pump Station Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP018200	Effingham Interceptor Vault Removal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP018301	VIP Service Area I-I Reduction Phase I (PORTS)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP018302	Portsmouth Pump Station Upgrades (VIP-HPP-04B)	\$ 289	\$ 762	\$ 6,178	\$ 3,298	\$ -	\$ -
VP018303	VIP Service Area I-I Reduction Phase III (PORTS)	\$ 1,986	\$ -	\$ -	\$ -	\$ -	\$ -
VP018304	Camden Avenue Pump Station Upgrades (VIP-HPP-04D)	\$ 211	\$ 254	\$ 2,095	\$ 2,918	\$ -	\$ -
VP018305	Camden Avenue Gravity Improvements (VIP-HPP-04E)	\$ 45	\$ 242	\$ 1,677	\$ 656	\$ -	\$ -
VP018400	State Street Pressure Reducing Station and Offline Storage (VIP-HPP-05)	\$ 161	\$ 569	\$ 652	\$ 4,149	\$ 9,383	\$ 3,153
VP018500	Elizabeth River Crossing Reliability Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP018800	Virginia Initiative Plant Administration Building Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP018900	Norchester Pump Station Screening Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP019000	Colley Ave Pump Station Pump Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP019100	Virginia Initiative Plant Incinerator Burner Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP019200	Virginia Initiative Plant Motor Control Center Replacements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP019300	High Priority Projects Round 2 Project 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VP019400	High Priority Projects Round 2 Project 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 7,897	\$ 1,826	\$ 10,603	\$ 11,022	\$ 9,383	\$ 3,153
Williamsburg							
WB012400	Williamsburg Treatment Plant Generator and Switchgear Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WB012500	Lodge Road Pump Station Upgrades	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WB012600	Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WB012900	Williamsburg Treatment Plant Administration Building Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WB013000	Williamsburg Treatment Plant Intermediate Clarifier Wet Weather System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WB013100	Williamsburg Treatment Plant Outfall Flow Control System Repairs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WB013200	High Priority Projects Round 2 Project 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,739
	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,739
York River							
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	\$ 2,486	\$ 1,036	\$ -	\$ -	\$ -	\$ -
YR010900	Tabb Pressure Reducing Station and Offline Storage Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR011900	Bethel-Poquoson Force Main Part III Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR013710	York River Treatment Plant Advanced Nutrient Reduction Improvements Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR013900	York River System Isolation Valve Installation and Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR014000	York River Treatment Plant Administration Building Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR014100	Coliseum Pressure Reducing Station Enhanced Storage	\$ 2,200	\$ 1	\$ -	\$ -	\$ -	\$ -
YR014200	LaSalle Avenue Boat Harbor to York River Interconnect Force Main	\$ 2,889	\$ -	\$ -	\$ -	\$ -	\$ -
YR014300	Bethel-Poquoson Force Main Phase II (Wythe Creek Road) Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR014500	York River Treatment Plant Headworks Motor Control Center Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
YR014600	Bethel-Poquoson Force Main Part IV Replacement-Wythe Creek Exposed Crossing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 7,575	\$ 1,037	\$ -	\$ -	\$ -	\$ -
Note:	PORTS - City of Portsmouth VIP - Virginia Initiative Plant HPP - High Priority Project						

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2022 to FY-2031	FY-2022	FY-2023	FY-2024	FY-2025
General						
GN010730	Horizontal Valve Replacement Phase III	\$ 1,039	\$ 113	\$ 337	\$ 337	\$ 253
GN013300	Treatment Plant Grease Handling Facilities	\$ 7,059	\$ 5,640	\$ 1,419	\$ -	\$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	\$ 4,208	\$ 1,890	\$ 2,311	\$ 7	\$ -
GN015000	South Shore Gravity Sewer Improvements Phase I	\$ 743	\$ 70	\$ 252	\$ 422	\$ -
GN015300	Interceptor System Valve Improvements Phase I	\$ 2,566	\$ 141	\$ 902	\$ 1,306	\$ 218
GN015400	South Shore Aerial Crossing Improvements	\$ 260	\$ 11	\$ 127	\$ 121	\$ -
GN015800	North Shore Automated Diversion Facilities	\$ 1,993	\$ 748	\$ 1,246	\$ -	\$ -
GN016210	SWIFT Nansemond Full Scale MAR Well Installation	\$ 1,513	\$ 1,513	\$ -	\$ -	\$ -
GN016220	SWIFT Research Center Full Scale MAR Well Integration	\$ 782	\$ 782	\$ -	\$ -	\$ -
GN016310	Integrated Planning of SWIFT	\$ 4,444	\$ 904	\$ 902	\$ 913	\$ 904
GN016311	Outfall Dispersion Modeling for Full Scale SWIFT	\$ 596	\$ 177	\$ 175	\$ 176	\$ 68
GN016320	Program Management of SWIFT Full Scale Implementation	\$ 67,805	\$ 5,705	\$ 5,448	\$ 5,688	\$ 5,688
GN016342	Williamsburg SWIFT Land Acquisition	\$ 1,497	\$ -	\$ -	\$ -	\$ -
GN016343	James River SWIFT Land Acquisition	\$ 9,561	\$ 9,561	\$ -	\$ -	\$ -
GN016344	James River Land Improvements	\$ 4,675	\$ 288	\$ 758	\$ 1,308	\$ 1,314
GN016345	Boat Harbor Pump Station Land Acquisition	\$ 3,000	\$ 3,000	\$ -	\$ -	\$ -
GN016346	Boat Harbor Transmission Force Main Land Acquisition	\$ 2,500	\$ 2,500	\$ -	\$ -	\$ -
GN016350	Williamsburg SWIFT Facility	\$ 130,508	\$ -	\$ -	\$ -	\$ -
GN016351	Williamsburg Recharge Wells	\$ 24,444	\$ -	\$ -	\$ -	\$ -
GN016360	James River SWIFT Facility	\$ 251,225	\$ 20,940	\$ 55,964	\$ 88,623	\$ 69,586
GN016361	James River Recharge Wells	\$ 27,914	\$ 2,106	\$ 7,503	\$ 9,445	\$ 7,260
GN016370	York River SWIFT Facility	\$ 175,556	\$ -	\$ -	\$ -	\$ -
GN016371	York River Recharge Wells	\$ 27,500	\$ -	\$ -	\$ -	\$ -
GN016380	Nansemond SWIFT Facility	\$ 307,013	\$ 1,398	\$ 3,788	\$ 3,499	\$ 14,983
GN016381	Nansemond Recharge Wells	\$ 48,888	\$ -	\$ -	\$ 1,412	\$ 801
GN016390	VIP SWIFT Facility	\$ 334,132	\$ -	\$ -	\$ 5,507	\$ 342
GN016391	VIP Recharge Wells	\$ 73,332	\$ 170	\$ 1,942	\$ 684	\$ 609
GN016392	VIP SWIFT Site Work	\$ 38,894	\$ 692	\$ 327	\$ 731	\$ 21,718
GN016700	Treatment Plant Solids Handling Replacement Phase II	\$ 5,479	\$ 1,409	\$ 2,714	\$ 1,357	\$ -
GN017100	Climate Change Planning	\$ 892	\$ 892	\$ -	\$ -	\$ -
GN017200	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements Phase II	\$ 5,581	\$ 3,312	\$ 2,235	\$ 34	\$ -
GN017300	Treatment Plant Dewatering Replacement Program	\$ 35,000	\$ -	\$ -	\$ 3,889	\$ 3,889
GN017400	Treatment Plant Dewatering Replacement Phase III	\$ 3,563	\$ 748	\$ 2,346	\$ 469	\$ -
GN017500	Fleet Management Program	\$ 11,647	\$ -	\$ 1,500	\$ 1,500	\$ 1,100
GN017900	Solids System Improvements for Army Base MHI Offline	\$ 3,549	\$ 989	\$ 1,920	\$ 640	\$ -
GN018000	Inflow Reduction Program - Phase I	\$ 1,544	\$ 1,544	\$ -	\$ -	\$ -
GN018100	Fleet Management (FY22)	\$ 3,600	\$ 3,600	\$ -	\$ -	\$ -
GN018200	Water Quality Department Instrumentation Equipment (FY22)	\$ 463	\$ 463	\$ -	\$ -	\$ -
GN018300	High Risk Clamp Replacement Program-Phase 1	\$ 395	\$ 395	\$ -	\$ -	\$ -
	Subtotal	\$ 1,248,254	\$ 71,701	\$ 94,116	\$ 128,068	\$ 128,733
Future Improvements						
IP010400	Interceptor System Rehabilitation and Replacement	\$ 217,014	\$ -	\$ -	\$ -	\$ 2,239
	Subtotal	\$ 217,014	\$ -	\$ -	\$ -	\$ 2,239
CIP TOTALS		\$ 2,877,675	\$ 290,000	\$ 401,961	\$ 509,524	\$ 400,000
Note:	SWIFT - Sustainable Water Initiative for Tomorrow MAR - Managed Aquifer Recharge VIP - Virginia Initiative Plant SCADA - Supervisory Control and Data Acquisition MHI - Multiple Hearth Incinerator					

FY-2022 to FY-2031 Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2026	FY-2027	FY-2028	FY-2029	FY-2030	FY-2031
General							
GN010730	Horizontal Valve Replacement Phase III	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN013300	Treatment Plant Grease Handling Facilities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN015000	South Shore Gravity Sewer Improvements Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN015300	Interceptor System Valve Improvements Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN015400	South Shore Aerial Crossing Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN015800	North Shore Automated Diversion Facilities	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016210	SWIFT Nansemond Full Scale MAR Well Installation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016220	SWIFT Research Center Full Scale MAR Well Integration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016310	Integrated Planning of SWIFT	\$ 627	\$ 194	\$ -	\$ -	\$ -	\$ -
GN016311	Outfall Dispersion Modeling for Full Scale SWIFT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016320	Program Management of SWIFT Full Scale Implementation	\$ 5,688	\$ 5,688	\$ 5,688	\$ 5,688	\$ 5,688	\$ 5,688
GN016342	Williamsburg SWIFT Land Acquisition	\$ 632	\$ 865	\$ -	\$ -	\$ -	\$ -
GN016343	James River SWIFT Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016344	James River Land Improvements	\$ 1,007	\$ -	\$ -	\$ -	\$ -	\$ -
GN016345	Boat Harbor Pump Station Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016346	Boat Harbor Transmission Force Main Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016350	Williamsburg SWIFT Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016351	Williamsburg Recharge Wells	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,065
GN016360	James River SWIFT Facility	\$ 16,112	\$ -	\$ -	\$ -	\$ -	\$ -
GN016361	James River Recharge Wells	\$ 1,600	\$ -	\$ -	\$ -	\$ -	\$ -
GN016370	York River SWIFT Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,412
GN016371	York River Recharge Wells	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN016380	Nansemond SWIFT Facility	\$ 60,565	\$ 91,555	\$ 86,265	\$ 40,669	\$ 4,291	\$ -
GN016381	Nansemond Recharge Wells	\$ 1,761	\$ 12,129	\$ 17,142	\$ 13,063	\$ 2,580	\$ -
GN016390	VIP SWIFT Facility	\$ 9,361	\$ 33,193	\$ 83,586	\$ 97,342	\$ 78,613	\$ 25,514
GN016391	VIP Recharge Wells	\$ 10,167	\$ 10,772	\$ 10,801	\$ 10,772	\$ 10,772	\$ 10,772
GN016392	VIP SWIFT Site Work	\$ 15,426	\$ -	\$ -	\$ -	\$ -	\$ -
GN016700	Treatment Plant Solids Handling Replacement Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN017100	Climate Change Planning	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN017200	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements Phase II	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN017300	Treatment Plant Dewatering Replacement Program	\$ 3,889	\$ 3,889	\$ 3,889	\$ 3,889	\$ 3,889	\$ 3,889
GN017400	Treatment Plant Dewatering Replacement Phase III	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN017500	Fleet Management Program	\$ 1,887	\$ 1,887	\$ 1,887	\$ 1,886	\$ -	\$ -
GN017900	Solids System Improvements for Army Base MHI Offline	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN018000	Inflow Reduction Program - Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN018100	Fleet Management (FY22)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN018200	Water Quality Department Instrumentation Equipment (FY22)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GN018300	High Risk Clamp Replacement Program-Phase 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal	\$ 128,723	\$ 160,173	\$ 209,258	\$ 173,308	\$ 105,834	\$ 48,340
Future Improvements							
IP010400	Interceptor System Rehabilitation and Replacement	\$ 2,604	\$ 774	\$ 2,693	\$ 3,868	\$ 71,479	\$ 133,358
	Subtotal	\$ 2,604	\$ 774	\$ 2,693	\$ 3,868	\$ 71,479	\$ 133,358
CIP TOTALS		\$ 223,810	\$ 223,810	\$ 247,619	\$ 200,000	\$ 190,476	\$ 190,476
Note:	SWIFT - Sustainable Water Initiative for Tomorrow MAR - Managed Aquifer Recharge VIP - Virginia Initiative Plant SCADA - Supervisory Control and Data Acquisition MHI - Multiple Hearth Incinerator						

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HRSD

1434 Air Rail Avenue
Virginia Beach, VA 23455
www.hrsd.com

*Photos used for this publication feature
HRSD's Thermal Hydrolysis Process for biosolids processing
at the Atlantic Treatment Plant in Virginia Beach, Virginia.
Printed on recycled paper using environmentally friendly ink.*

AGENDA ITEM 5. – May 25, 2021

Subject: Expenditure of Tax-Exempt Bond Proceeds
Reimbursement Resolution for Fiscal Year (FY) 2022 - 2023

Recommended Action: Adopt reimbursement resolution.

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 expenditures to be reimbursed cannot be more than 60 days prior to the date of the [resolution](#). 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 and would appear that HRSD is trying to profit from this transaction.

The reimbursement resolution amount of \$340 million is based on the FY 2022-2031 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 Virginia Clean Water Revolving Loan Fund (VCWRLF) in 2020 and staff will be applying for an additional \$100 million in July 2021. HRSD recently closed on the \$50 million Line of Credit (LOC), which could be increased to \$200 million. Both the VCWRLF and LOC are tax-exempt.

In FY-2022, 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. An additional provision was added in case HRSD draws on the WIFIA loan, which is taxable, and decides to use tax-exempt proceeds to pay it off.

Hampton Roads Sanitation District
Resolution of
May 25, 2021

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 25, 2021

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 Amended and Restated Credit Agreement by and between the District and Bank of America, N.A., dated as of April 29, 2021, 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 FY2022 and FY2023, as listed in the District’s FY2022 – FY2031 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 26, 2021, 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 \$340,000,000.

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 25th day of May, 2021.

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. Elofson, Chair

CAPITAL IMPROVEMENT PROGRAM
FY2022-FY2031 (10-Year Plan)

Project Number	Project Name	Sub-Total	Contingency	Total with Contingency
PR_AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	\$ 685,858	\$ 137,172	\$ 823,029
PR_AB010500	Section W Force Main Replacement	\$ 206,702	\$ 41,340	\$ 248,042
PR_AB011900	Army Base Treatment Plant Administration Building Renovation (2021)	\$ 1,110,932	\$ 222,186	\$ 1,333,118
PR_AB012000	Wards Corner Sanitary Sewer Pumping Station	\$ 4,800,000	\$ 960,000	\$ 5,760,000
PR_AD012300	Central Environmental Laboratory Phase II	\$ 144,088	\$ 28,818	\$ 172,906
PR_AT011520	Shippo Corner Pressure Reducing Station Modifications	\$ 95,994	\$ 19,199	\$ 115,193
PR_AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	\$ 65,436	\$ 13,087	\$ 78,523
PR_AT012920	Atlantic Treatment Plant Access Road Extension	\$ 1,372,555	\$ 274,511	\$ 1,647,066
PR_AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	\$ 1,922,000	\$ 384,400	\$ 2,306,400
PR_AT013110	South Norfolk Area Gravity Sewer Improvements, Phase II	\$ 580,000	\$ 116,000	\$ 696,000
PR_AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	\$ 70,680	\$ 14,136	\$ 84,816
PR_AT014302	Atlantic Service Area I-I Reduction Phase II (CHES)	\$ 1,293,809	\$ 258,762	\$ 1,552,570
PR_AT014500	Atlantic Treatment Plant Influent Screens (1-3) Replacement	\$ 2,884,559	\$ 576,912	\$ 3,461,471
PR_AT014600	Kempsville Interceptor Force Main Replacement - Phase I	\$ 306,000	\$ 61,200	\$ 367,200
PR_AT014800	Atlantic Treatment Plant Electrical Workspace Renovation	\$ 513,950	\$ 102,790	\$ 616,740
PR_AT014900	Atlantic Treatment Plant Gravity Belt Thickener Expansion	\$ 1,081,667	\$ 216,333	\$ 1,298,000
PR_AT015000	Atlantic Treatment Plant Polymer System Replacement	\$ 1,902,273	\$ 380,455	\$ 2,282,727
PR_AT015100	Atlantic Treatment Plant Solids Storage Pad Improvements	\$ 422,000	\$ 84,400	\$ 506,400
PR_AT015200	Cedar Road Interceptor Force Main Replacement Phase I	\$ 351,872	\$ 70,374	\$ 422,246
PR_BH013020	Willard Avenue Pump Station Replacement	\$ 7,585,556	\$ 1,517,111	\$ 9,102,667
PR_BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	\$ 1,075,773	\$ 215,155	\$ 1,290,927
PR_BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	\$ 7,254,150	\$ 1,450,830	\$ 8,704,980
PR_BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	\$ 600,335	\$ 120,067	\$ 720,402
PR_BH014600	46th Street Diversion Sewer Rehabilitation Replacement	\$ 4,675,309	\$ 935,062	\$ 5,610,370
PR_BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	\$ 4,217,846	\$ 843,569	\$ 5,061,416
PR_BH015600	Hampton Trunk A and B Replacement-Jefferson Avenue to Walnut Avenue	\$ 8,015,299	\$ 1,603,060	\$ 9,618,359
PR_BH015700	Boat Harbor Treatment Plant Pump Station Conversion	\$ 5,944,246	\$ 1,188,849	\$ 7,133,096
PR_BH015710	Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous)	\$ 2,800,484	\$ 560,097	\$ 3,360,581
PR_BH015720	Boat Harbor Treatment Plant Transmission Force Main Section 2 (Land)	\$ 1,973,000	\$ 394,600	\$ 2,367,600
PR_BH015900	Bloxoms Corner Force Main Replacement	\$ 1,331,731	\$ 266,346	\$ 1,598,077
PR_CE010520	Newtown Road Interceptor Force Main Relocation	\$ 2,256,218	\$ 451,244	\$ 2,707,462
PR_CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	\$ 380,500	\$ 76,100	\$ 456,600
PR_CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	\$ 149,962	\$ 29,992	\$ 179,955
PR_CE011700	Western Trunk Force Main Replacement	\$ 100,000	\$ 20,000	\$ 120,000
PR_CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	\$ 204,000	\$ 40,800	\$ 244,800
PR_CE011821	Elbow Road Pressure Reducing Station	\$ 527,334	\$ 105,467	\$ 632,801
PR_CE011823	Virginia Beach Boulevard Force Main Phase VI	\$ 3,098,607	\$ 619,721	\$ 3,718,328
PR_CE011825	Salem Road Interconnect Force Main	\$ 1,112,795	\$ 222,559	\$ 1,335,354
PR_CE011850	Atlantic Service Area Automated Diversion Facilities Phase I	\$ 1,042,400	\$ 208,480	\$ 1,250,880
PR_ES010100	Eastern Shore Infrastructure Improvements - Transmission Force Main Phase I	\$ 4,204,250	\$ 840,850	\$ 5,045,100
PR_ES010300	Onancock Treatment Plant Administration Building Upgrade	\$ 190,000	\$ 38,000	\$ 228,000
PR_GN010730	Horizontal Valve Replacement Phase III	\$ 113,453	\$ 22,691	\$ 136,144
PR_GN013300	Treatment Plant Grease Handling Facilities	\$ 6,580,571	\$ 1,316,114	\$ 7,896,685
PR_GN014900	North Shore Gravity Sewer Improvements Phase I	\$ 1,963,343	\$ 392,669	\$ 2,356,011
PR_GN015000	South Shore Gravity Sewer Improvements Phase I	\$ 79,292	\$ 15,858	\$ 95,151
PR_GN015300	Interceptor System Valve Improvements Phase I	\$ 176,019	\$ 35,204	\$ 211,223
PR_GN015400	South Shore Aerial Crossing Improvements	\$ 13,202	\$ 2,640	\$ 15,843
PR_GN015800	North Shore Automated Diversion Facilities	\$ 807,208	\$ 161,442	\$ 968,650
PR_GN016210	SWIFT Nansemond Full Scale MAR Well Installation	\$ 1,673,935	\$ 334,787	\$ 2,008,722
PR_GN016220	SWIFT Research Center Full Scale MAR Well Integration	\$ 1,002,000	\$ 200,400	\$ 1,202,400
PR_GN016320	Program Management of SWIFT Full Scale Implementation	\$ 6,108,366	\$ 1,221,673	\$ 7,330,039
PR_GN016343	James River SWIFT Land Acquisition	\$ 12,530,000	\$ 2,506,000	\$ 15,036,000
PR_GN016345	Boat Harbor Pump Station Land Acquisition	\$ 3,000,000	\$ 600,000	\$ 3,600,000
PR_GN016346	Boat Harbor Transmission Force Main Land Acquisition	\$ 2,500,000	\$ 500,000	\$ 3,000,000
PR_GN016360	James River SWIFT Facility	\$ 21,437,981	\$ 4,287,596	\$ 25,725,577
PR_GN016361	James River Recharge Wells	\$ 2,454,991	\$ 490,998	\$ 2,945,989
PR_GN016380	Nansemond SWIFT Facility	\$ 1,398,388	\$ 279,678	\$ 1,678,066
PR_GN016391	VIP Recharge Wells	\$ 170,000	\$ 34,000	\$ 204,000
PR_GN016392	VIP SWIFT Site Work	\$ 692,000	\$ 138,400	\$ 830,400
PR_GN016700	Treatment Plant Solids Handling Replacement Phase II	\$ 1,431,119	\$ 286,224	\$ 1,717,343
PR_GN017400	Treatment Plant Dewatering Replacement Phase III	\$ 748,230	\$ 149,646	\$ 897,876
PR_GN017900	Solids System Improvements for Army Base MHI Offline	\$ 1,116,978	\$ 223,396	\$ 1,340,373
PR_GN018300	High Risk Clamp Replacement Program-Phase 1	\$ 395,000	\$ 79,000	\$ 474,000
PR_JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	\$ 9,735,746	\$ 1,947,149	\$ 11,682,896
PR_JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	\$ 1,565,848	\$ 313,170	\$ 1,879,018
PR_JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	\$ 190,000	\$ 38,000	\$ 228,000
PR_JR013400	James River Treatment Plant Advanced Nutrient Reduction Improvements	\$ 18,331,000	\$ 3,666,200	\$ 21,997,200
PR_JR013500	Lucas Creek Pump Station Replacement	\$ 2,112,621	\$ 422,524	\$ 2,535,146

CAPITAL IMPROVEMENT PROGRAM
FY2022-FY2031 (10-Year Plan)

Project Number	Project Name	Sub-Total	Contingency	Total with Contingency
PR_JR013600	James River Treatment Plant Primary Treatment and Automation Improvements	\$ 1,240,000	\$ 248,000	\$ 1,488,000
PR_MP013000	Small Communities Collection System Rehabilitation Phase I	\$ 42,356	\$ 8,471	\$ 50,827
PR_MP013020	Small Communities Collection System Rehabilitation Phase III	\$ 995,756	\$ 199,151	\$ 1,194,907
PR_MP013300	King William Treatment Plant Improvements Phase II	\$ 641,594	\$ 128,319	\$ 769,912
PR_MP013600	Middlesex Interceptor Force Main Phase I-Cooks Corner	\$ 708,724	\$ 141,745	\$ 850,469
PR_MP013730	Middlesex Interceptor System Program Phase II-Transmission Force Main	\$ 5,582,364	\$ 1,116,473	\$ 6,698,836
PR_MP013800	Middlesex Interceptor System Program Phase III	\$ 24,000	\$ 4,800	\$ 28,800
PR_MP013900	Urbanna Wastewater Treatment Plant Reliability Improvements	\$ 271,883	\$ 54,377	\$ 326,259
PR_MP014700	Small Communities Rehabilitation Phase IV	\$ 1,445,343	\$ 289,069	\$ 1,734,411
PR_MP014800	Small Communities Rehabilitation Phase V	\$ 53,210	\$ 10,642	\$ 63,852
PR_MP014900	Middle Peninsula Operations Center Locker Room and Administrative Facilities	\$ 1,488,764	\$ 297,753	\$ 1,786,517
PR_MP015100	West Point Pump Station 4 (Thompson Avenue) Rehabilitation	\$ 332,667	\$ 66,533	\$ 399,200
PR_MP015300	King William Central Crossing Pump Station Rehabilitation	\$ 107,467	\$ 21,493	\$ 128,960
PR_MP015500	Small Communities Rehabilitation Phase VI	\$ 141,167	\$ 28,233	\$ 169,400
PR_MP015600	West Point Treatment Plant Final Effluent Pump Station Improvements	\$ 73,000	\$ 14,600	\$ 87,600
PR_MP015700	West Point Treatment Plant Secondary Clarifier Improvements	\$ 70,633	\$ 14,127	\$ 84,760
PR_MP010620	Suffolk Pump Station Replacement	\$ 7,873,515	\$ 1,574,703	\$ 9,448,219
PR_NP012400	Western Branch Sewer System Gravity Improvements	\$ 167,015	\$ 33,403	\$ 200,418
PR_NP012600	Deep Creek Interceptor Force Main Replacement	\$ 63,988	\$ 12,798	\$ 76,785
PR_NP013000	Nansemond Treatment Plant Motor Control Center Replacements	\$ 962,967	\$ 192,593	\$ 1,155,561
PR_NP013700	Nansemond Treatment Plant Struvite Recovery Facility Improvements	\$ 11,060,427	\$ 2,212,085	\$ 13,272,512
PR_NP013820	Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Ph II	\$ 4,452,000	\$ 890,400	\$ 5,342,400
PR_NP014000	Wilroy Pressure Reducing Station and Offline Storage (NP-HPP-03)	\$ 1,173,167	\$ 234,633	\$ 1,407,800
PR_NP014400	Nansemond Treatment Plant Influent Screen Replacement	\$ 710,201	\$ 142,040	\$ 852,241
PR_NP014500	Nansemond Treatment Plant Regional Residuals Facility Upgrade	\$ 1,636,125	\$ 327,225	\$ 1,963,350
PR_NP014700	Nansemond Treatment Plant Digester Capacity Upgrade	\$ 9,767,885	\$ 1,953,577	\$ 11,721,462
PR_SU010200	Surry Hydraulic Improvements and Interceptor Force Main	\$ 16,604,478	\$ 3,320,896	\$ 19,925,374
PR_SU010300	Surry Water and Sewer Infrastructure Improvements – Phase 1	\$ 1,771,856	\$ 354,371	\$ 2,126,227
PR_VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	\$ 192,507	\$ 38,501	\$ 231,008
PR_VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	\$ 380,718	\$ 76,144	\$ 456,862
PR_VP015400	Lafayette Norview-Estabrook Pump Station Replacements	\$ 3,990,736	\$ 798,147	\$ 4,788,883
PR_VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	\$ 172,086	\$ 34,417	\$ 206,503
PR_VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	\$ 234,171	\$ 46,834	\$ 281,005
PR_VP017110	Central Norfolk Area Gravity Sewer Improvements Phase I	\$ 44,902	\$ 8,980	\$ 53,882
PR_VP017120	Central Norfolk Area Gravity Sewer Improvements Phase II	\$ 642,500	\$ 128,500	\$ 771,000
PR_VP018000	Park Avenue Pump Station Replacement	\$ 3,502,980	\$ 700,596	\$ 4,203,576
PR_VP018301	VIP Service Area I-I Reduction Phase I (PORTS)	\$ 1,709,636	\$ 341,927	\$ 2,051,563
PR_VP018303	VIP Service Area I-I Reduction Phase III (PORTS)	\$ 1,092,408	\$ 218,482	\$ 1,310,890
PR_VP018400	State Street Pressure Reducing Station and Offline Storage (VIP-HPP-05)	\$ 196,842	\$ 39,368	\$ 236,211
PR_VP018500	Elizabeth River Crossing Reliability Improvements	\$ 1,511,160	\$ 302,232	\$ 1,813,393
PR_VP018800	Virginia Initiative Plant Administration Building Renovation	\$ 1,840,328	\$ 368,066	\$ 2,208,394
PR_VP018900	Norchester Pump Station Screening Improvements	\$ 89,250	\$ 17,850	\$ 107,100
PR_VP019000	Colley Ave Pump Station Pump Replacement	\$ 70,417	\$ 14,083	\$ 84,500
PR_VP019100	Virginia Initiative Plant Incinerator Burner Replacement	\$ 600,000	\$ 120,000	\$ 720,000
PR_VP019200	Virginia Initiative Plant Motor Control Center Replacements	\$ 604,167	\$ 120,833	\$ 725,000
PR_WB012400	Williamsburg Treatment Plant Generator and Switchgear Replacement	\$ 658,349	\$ 131,670	\$ 790,019
PR_WB012500	Lodge Road Pump Station Upgrades	\$ 118,924	\$ 23,785	\$ 142,709
PR_WB012600	Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation	\$ 2,291,241	\$ 458,248	\$ 2,749,489
PR_WB012900	Williamsburg Treatment Plant Administration Building Renovation	\$ 2,217,672	\$ 443,534	\$ 2,661,206
PR_WB013000	Williamsburg Treatment Plant Intermediate Clarifier Wet Weather System	\$ 380,621	\$ 76,124	\$ 456,745
PR_WB013100	Williamsburg Treatment Plant Outfall Flow Control System Repairs	\$ 124,700	\$ 24,940	\$ 149,640
PR_YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	\$ 235,986	\$ 47,197	\$ 283,184
PR_YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	\$ 322,234	\$ 64,447	\$ 386,681
PR_YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	\$ 33,332	\$ 6,666	\$ 39,999
PR_YR010900	Tabb Pressure Reducing Station and Offline Storage Facility	\$ 2,974,125	\$ 594,825	\$ 3,568,950
PR_YR011900	Bethel-Poquoson Force Main Part III Replacement	\$ 97,606	\$ 19,521	\$ 117,127
PR_YR013710	York River Treatment Plant Advanced Nutrient Reduction Improvements Phase I	\$ 239,669	\$ 47,934	\$ 287,603
PR_YR013900	York River System Isolation Valve Installation and Replacement	\$ 4,455,043	\$ 891,009	\$ 5,346,052
PR_YR014000	York River Treatment Plant Administration Building Renovation	\$ 1,455,750	\$ 291,150	\$ 1,746,900
PR_YR014100	Coliseum Pressure Reducing Station Enhanced Storage	\$ 83,171	\$ 16,634	\$ 99,805
PR_YR014200	LaSalle Avenue Boat Harbor to York River Interconnect Force Main	\$ 124,236	\$ 24,847	\$ 149,083
PR_YR014300	Bethel-Poquoson Force Main Phase II (Wythe Creek Road) Replacement	\$ 2,490,000	\$ 498,000	\$ 2,988,000
PR_YR014500	York River Treatment Plant Headworks Motor Control Center Replacement	\$ 276,667	\$ 55,333	\$ 332,000
PR_YR014600	Bethel-Poquoson Force Main Part IV Replacement-Wythe Creek Exposed Crossing	\$ 35,000	\$ 7,000	\$ 42,000
Total		\$ 281,829,140.70	\$ 56,365,828	\$ 338,194,969

AGENDA ITEM 6. – May 25, 2021

Subject: Ostara Byproduct Removal
Agreement Amendment

Recommended Action: Approve the terms and conditions of the agreement amendment with Ostara USA, LLC 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.

THE AGREEMENTS AND THE INFORMATION IN THE BRIEF CONTAIN PROPRIETARY INFORMATION THAT IS TO REMAIN CONFIDENTIAL AND IS EXEMPT FROM DISCLOSURE IN ACCORDANCE WITH THE VIRGINIA FREEDOM OF INFORMATION ACT (FOIA) SECTION §2.2-3705.6.11.b.

AGENDA ITEM 7. – May 25, 2021

Subject: Boat Harbor Treatment Plant Transmission Force Main Section 1 (Subaqueous)
Proposal Compensation

Recommended Action: Approve the proposal compensation of \$150,000 for each responsive short-listed team not selected for the Boat Harbor Treatment Plant Transmission Force Main Section 1 project.

CIP Project: BH015710

Brief: The project consists of the subaqueous crossing of the James River to convey flow from the Boat Harbor service area to the Nansemond Treatment Plant. This project is anticipated to be delivered by the Design-Build procurement method due to the unique construction techniques required and coordination of construction schedule and permit requirements. Horizontal directional drilling will be used under the shipping channel and marine open-cut construction will be used for the remaining pipe, shallow depth areas. Significant engineering will be required to develop an approach that addresses the technical challenges associated with the horizontal direction drill due to its long length and large diameter. Significant planning will be required to address the logistical challenges of working in a wide river, including frequent marine vessel traffic. There will be significant coordination required with stakeholders and permitting agencies. The project has an estimated total contract cost limit (CCL) of \$85,732,000.

The Commission approved the use of the Design-Build project delivery method for the project at the August 2020 meeting. The teams competing for this challenging project will incur significant cost to develop approaches that address the technical and logistical approaches described above.

In accordance with HRSD's Procurement Policy, the offer of proposal compensation may be used for this selection to provide the following benefits:

- Provides a financial incentive to increase competition from the best firms in the industry.
- Encourages proposers to explore innovative ideas during the proposal stage.
- Follows an industry standard and process used by other large public sector organizations.
- Allows HRSD to retain the rights to use innovative ideas from unsuccessful proposers.

For this procurement, proposal compensation of \$150,000 is recommended for each unsuccessful, responsive short-listed team.

<u>Schedule:</u>	Preliminary design approval and begin RFQ/RFP process	June 2021
	Selection of Design-Build firm / establish CCL	January 2022
	Detailed design development/Stipulated Fixed Final Price	October 2022
	Construction Completion	June 2025

AGENDA ITEM 8. – May 25, 2021

Subject: James River SWIFT Land Acquisition
Initial Appropriation

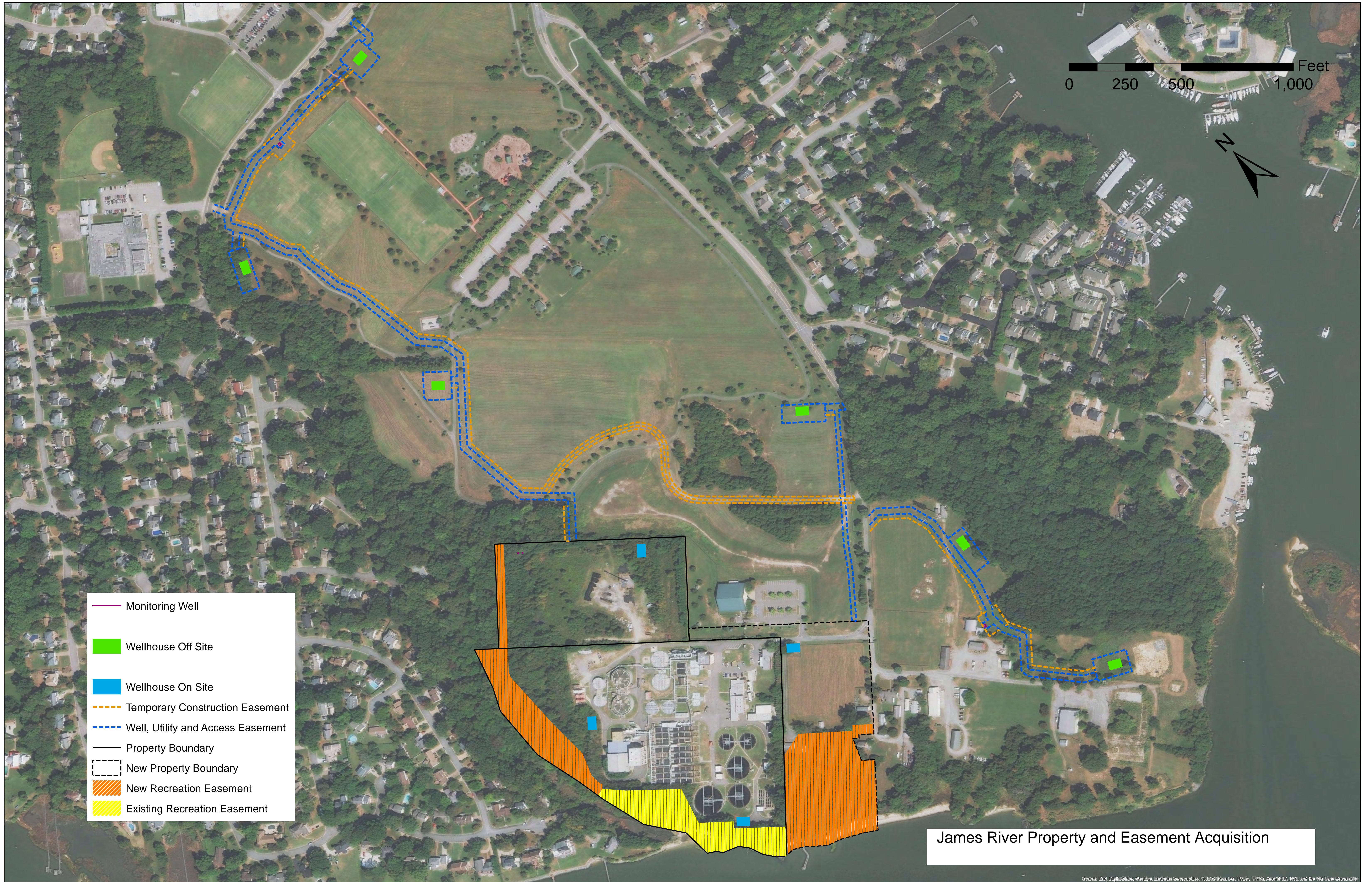
Recommended Action: Appropriate total project funding in the amount of \$12,530,000.

CIP Project: GN016343

Project Description: This appropriation will fund the purchase of land adjacent to James River Treatment Plant and easements within Riverview Farm Park from the City of Newport News. This purchase is necessary to support facility expansion, including SWIFT advanced treatment facilities. Acquisition of the easements is necessary to support construction and operation of the managed aquifer recharge wells, monitoring wells, and associated infrastructure. The Commission approved the agreement with the City of Newport News to purchase the property at its meeting on January 28, 2020.

Funding Description: The total cost for the land acquisition is \$12,530,000 based on the Agreement negotiated with the City of Newport News. The initial capital project budget was established prior to an agreement being reached with the City of Newport News. An option fee of \$100,000 will be transferred to the City of Newport News in summer 2021. The proposed schedule for property closing is summer 2021, which will result in payment of the remaining costs associated with the Agreement. The land purchase facilitates HRSD's long term goals to support the SWIFT Program providing long term benefits with nutrients reduction to the bay, land subsidence and providing benefits to the region.

Schedule: Design June 2021



- Monitoring Well
- Wellhouse Off Site
- Wellhouse On Site
- Temporary Construction Easement
- Well, Utility and Access Easement
- Property Boundary
- New Property Boundary
- New Recreation Easement
- Existing Recreation Easement

0 250 500 1,000 Feet



James River Property and Easement Acquisition

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Agreement with City of Newport News includes:

New walking trails (approximately 2 miles) with public access to river views and the marina

Buffer to the plant provided by an Administration Building which includes rest rooms and community use of a meeting space

Open Space easement on the waterfront portion of HRSD property

Cash payment of \$10 million

Transfer of 10-acre site on G Avenue to the City

Additional funding for City trail maintenance and other park assets



Legend

- Proposed Parcel Boundary
- Proposed Development
- Proposed Easement
- Existing Easement
- Existing Parcel Lines

AGENDA ITEM 9. – May 25, 2021

Subject: Private Pump Station Improvements
New CIP, Initial Appropriation and Task Order (>\$200,000)

Recommended Actions:

- a. Approve a new CIP project (**CE011837**) for the Private Pump Station Improvements.
- b. Appropriate total project funding in the amount of \$1,500,000.
- c. Approve a task order with Hazen & Sawyer in the amount of \$500,000.

CIP Project: CE011837

Project Description: This project will complete upgrades on private pump stations that cannot meet the new pressure policy when the Chesapeake-Elizabeth Treatment Plant is closed and all flow is diverted to the Atlantic Treatment Plant at the end of calendar year 2021. Approximately 80 pump stations have been identified as potential at-risk stations. HRSD and their consultant will gather more information about these stations to determine improvements needed, such as changing out pumps or pump components. The project budget includes improvements for up to 40 private pumping stations, some of which may be completed in 2021, while other pump stations may be monitored after the flow diversion if these facilities are determined by our Engineer to be hydraulically adequate. HRSD will work with local maintenance service providers to make improvements now through the end of 2022 after the diversion has been implemented for up to one year.

Funding Description: The total cost for this project is estimated at \$1,500,000 based on a Class 5 cost estimate and a twenty percent contingency included in the requested appropriation.

Task Order Description: This task order will provide services to gather pump station information, to design improvements and to assist with contractor procurement.

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

<u>Schedule:</u>	Data Collection	May 2021
	Design	July 2021
	Construction	October 2021
	Completion	December 2022

AGENDA ITEM 10. – May 25, 2021

Subject: South Norfolk Area Gravity Sewer Improvements, Phase 1 (Interstate Crossing)
Additional Appropriation and Task Order

Recommended Actions:

- a. Appropriate additional funding in the amount of \$208,961.
- b. Approve a task order with Bridgeman Civil, Inc in the amount of \$498,000.

CIP Project: AT013100

Budget	\$805,000
Previous Expenditures and Encumbrances	(\$365,961)
Available Balance	\$439,039
Proposed Task Order to Bridgeman Civil, Inc.	(\$498,000)
Proposed Contingency	(\$150,000)
Project Shortage/Requested Additional Funding	(\$208,961)
Revised Total Project Authorized Funding	<u>\$ 1,013,961</u>

Contract Status with Task Orders:	Amount
Original Contract with Bridgeman Civil	\$0
Total Value of Previous Task Orders	\$10,034,238
Requested Task Order	\$498,000
Total Value of All Task Orders	\$10,532,238

Project Description: The project will rehabilitate gravity sewer segments and manholes in the South Norfolk area. Condition assessment activities indicate that these assets present a material risk of failure due to Inflow/Infiltration and physical condition defects. This work is listed in Phase 2 of the U.S. EPA Consent Decree Rehabilitation Action Plan and must be complete by May 5, 2025. The project encompasses the gravity pipeline and manholes that run under I-264 and presents a high consequence of failure. Due to the poor condition of the pipeline, the portion of the project will be expedited ahead of other assets in the South Norfolk area.

Funding Description: The original CIP project budget underestimated a number of costs and did not include the risk associated with this effort. This request includes a \$150,000 contingency to accommodate any additional unforeseen condition.

Analysis of Cost: The cost for this task order is based on the unit prices and labor rates in the Sewer Repair On-Call Contract with Bridgeman Civil.

Task Order Description: This task order will provide for the application of grout to infiltration sources, CIPP lining to the pipeline segments, and a coating to the manholes. All associated bypass pumping and heavy equipment to support the rehabilitation work is also included.

Schedule: Construction June 2021
Project Completion September 2021

AGENDA ITEM 11. – May 25, 2021

Subject: Treatment Plant Grease Handling Facilities
Additional Appropriation

Recommended Actions: Appropriate additional funding in the amount of \$442,086.

CIP Project: GN013300

Budget	\$11,382,450
Previous Expenditures and Encumbrances	(\$10,984,808)
Available Balance	\$397,642
Change Order No. 1 to MEB	(\$339,728)
Proposed Contingency	(\$500,000)
Project Shortage/Requested Additional Funding	(\$442,086)
Revised Total Project Authorized Funding	\$11,824,536

Project Description: This project involves installation of a facility at Nansemond Treatment Plant to receive FOG (Fats, Oils, and Grease) from indirect haulers. The facility will screen, decant, and process the FOG in a manner that will convert a portion to bio-fuel using the Greasezilla system. The portion of FOG converted to bio-fuel will be sold to Greasezilla per a separate by product (off-take) agreement. The decanted FOG water will be sent to headworks for normal wastewater treatment, and the remaining processed FOG will be sent to the digesters.

Funding Description: Prior to bidding this project, the intention was to complete the control system integration in-house. As the workload of HRSD staff has increased the decision was recently made for Emerson to provide these services through a contract with MEB, which will result in a change order in the amount of \$339,728. The change order is 4.3% on the total contract value. This request includes a \$500,000 contingency to accommodate additional unforeseen conditions and owner requested changes that will most certainly arise over the course of this unique and challenging project.

Analysis of Cost: The cost of Emerson's services is in agreement with similar efforts from previous projects.

Change Order Description: This change order includes funding for Emerson to complete services and provide the hardware associated with the control system integration. There are various minor changes being considered to ensure optimal operation of this future facility, which is the reasoning for increasing the project contingency. This project is unique and has not been implemented elsewhere, so it is anticipated that moving into more complex phases of construction, additional contingency will be needed to accommodate these changes.

<u>Schedule:</u>	PER	April 2015
	Design	December 2018
	Bid	July 2020
	Construction	October 2020
	Project Completion	November 2022

AGENDA ITEM 12. – May 25, 2021

Subject: Williamsburg Treatment Plant Generator and Switchgear Replacement
Additional Appropriation

Recommended Actions: Appropriate additional funding in the amount of \$477,000.

CIP Project: WB012400

Budget	\$17,003,382
Previous Expenditures and Encumbrances	(\$16,730,090)
Available Balance	<u>\$273,292</u>
Change Order No. 5 to MEB	(\$652,000)
Proposed Contingency	(\$98,292)
Project Shortage/Requested Additional Funding	<u>(\$477,000)</u>
Revised Total Project Authorized Funding	<u><u>\$17,480,382</u></u>

Project Description: The project is to design, and construct needed replacement of the treatment plant main switchgear, generator, generator switchgear, controls and appurtenances. The replacement of the switchgear will require the construction of a new switchgear building. The project also includes the replacement of three substations (transformer, switch, distribution panel) and electrical provisions to accommodate the future SWIFT Facility.

This project will replace 43-year-old switchgear and transformers nearing the end of its useful life. The switchgear is starting to become unreliable; switchgear breakers have failed to open and experienced nuisance tripping, and many of the component parts are difficult to obtain. An independent engineering evaluation has concluded a new building is required to house the switchgear due to the limited available space in the existing building and the need to maintain plant operations during construction. The SWIFT project requires additional generator capacity thus making it appropriate to replace the generator at the time.

Funding Description: This project requires additional funding for the replacement of aging electrical conductors. During third party testing of the conductors, prior to the installation of new equipment, it was determined that the conductors for the Non-Potable Water (NPW) Pump Station had fallen below acceptable testing values. As these conductors are necessary for the operation of the NPW Pump Station, the conductors will require replacement. Additionally, conductors feeding the Recycle Pump Station, Chemical Building and Odor Control Station are proposed to be replaced. These conductors are approximately the same age as the failed NPW Pump Station conductors and will require de-energization for the replacement of the NPW Pump Station conductors, thereby providing an opportunity to replace all conductors at the same time, with the same temporary power system. Additionally, a condition and risk assessment was completed for each of these conductors and it was determined that failure was likely to occur within the next 1 to 5 years. Replacing these conductors under the current construction contract, with an electrical contractor already mobilized to the site, provides a cost savings opportunity compared to completing this effort in the next 1 to 5 years under a new contract. The negotiated amount for this work is \$652,000 and exceeds the balance available for this CIP project. The amount for all change orders is 7% of the original contract amount. This will likely be the final Change Order for the project.

Analysis of Cost: The cost for the subject effort, as submitted by the Contractor, is \$652,000. An Engineer's Opinion of Probable Construction Cost was prepared with a cost of \$650,700. Other existing feeders have been replaced under this contract as a part of the original scope and costs for this effort are in line with costs associated with the original project scope.

Schedule: Construction July 2021
Project Completion September 2021

AGENDA ITEM 13. – May 25, 2021

Subject: COVID-19 Wastewater Surveillance Study Update

Recommended Action: No action is required.

Brief: Staff will present the latest data and status of the COVID-19 surveillance work.

AGENDA ITEM 14. – May 25, 2021

Subject: Operations & Nominations (O&N) Committee Appointment

Recommended Action: Chair to appoint an O&N Committee to recommend nominations for Chair and Vice-Chair of the Commission for the coming year.

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 25 Commission meeting.

AGENDA ITEM 15. – May 25, 2021

Subject: Unfinished Business

AGENDA ITEM 16. – May 25, 2021

Subject: New Business

AGENDA ITEM 17. – May 25, 2021

Subject: Commissioner Comments

AGENDA ITEM 18. – May 25, 2021

Subject: Public Comments Not Related to Agenda

AGENDA ITEM 19. – May 25, 2021

Subject: Informational Items

Recommended Action: No action is required.

Brief: The following items listed below are presented for information.

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



May 18, 2021

Re: General Manager's Report

Dear Commissioners:

April was an uneventful month. All plants met permit with few operational issues. Flows in the regional system returned to normal levels and COVID-related impacts trended downward. We continue to work with Onancock on reaching an agreement for ownership and operation of their system. Community leaders on the Eastern Shore continue to express interest in HRSD studying regionalization of sewer in Northern Accomack and Southern Northampton Counties. Work on the Surry transmission force main continues, and in Middlesex County work is just beginning on the first system extension providing service to the Cook's Corner community from Central Middlesex (Saluda). It is amazing how much time and resources are dedicated to our small community work.

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

- A. **Treatment Compliance and System Operations:** All plants met permit and there were two spills in the Interceptor System, one due to failed infrastructure and the other due to third party damage.
- B. **Internal Communications:** I participated in the following meetings/activities (all virtual unless otherwise noted) with HRSD personnel:
1. A meeting to discuss results of CARES Act assistance funding
 2. A tour of the new Water Quality Building
 3. Two new employee orientation sessions
 4. A meeting to discuss the WQIF needs assessment survey response
 5. The Finance Committee meeting
 6. A meeting to discuss public outreach planning for James River SWIFT
 7. A meeting to discuss needed courier services to support Eastern Shore wastewater facilities
 8. A meeting to review the staffing impact of new CIP projects
 9. A meeting to review the WIP3 impact on SWIFT program schedule
 10. A meeting to discuss grease hauling options
 11. A meeting to review status of the new Atlantic Treatment Plant access road
- C. **External Communications:** I participated in the following meetings/activities (all virtual unless otherwise noted):
1. A meeting with representatives from the Eastern Shore to discuss opportunities in Southern Northampton County



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2. A meeting with Congresswoman Luria to discuss the community project process and opportunities related to HRSD
3. Presented SWIFT to the Garden Club of the Middle Peninsula
4. A discussion with the Secretary of Natural Resources focused on the James River spill
5. Follow up calls with the Deputy Secretary of Natural Resources and the Deputy Commissioner for the VMRC to discuss impacts of emergency closures
6. The quarterly meeting of the Potomac Aquifer Recharge Oversight Committee
7. The semi-annual meeting of the US EPA Environmental Financial Advisory Board
8. The quarterly meeting of the Executive Board for Virginia Forever
9. A meeting with the Newport News City Manager
10. A meeting with the operator of the community water system in Sun Ray Farms in Chesapeake
11. Presented a SWIFT update to the State Water Commission
12. The US Water Alliances presentation of the annual survey for the Value of Water Campaign
13. A meeting of the Water Agency Leaders Alliance

D. Consent Decree Update:

- The Commonwealth has signed off on the Fifth Amendment. I confirmed that EPA has also signed off on the Fifth Amendment, but we are still waiting for DOJ final signatures before lodging with the Norfolk District Court. We continue to anticipate final signatures will be forthcoming, but this unusual delay now threatens the compliance schedule HRSD committed to meeting in the submitted plan. At this pace we will be two years into the first 10-year compliance period before we get approval, effectively reducing our compliance period to eight years.
- HRSD received a stipulated penalty demand related to the January spill in the James River. This unusual demand was limited to only that event. Historically stipulated penalty demands cover periods ranging from 6 to 12 months and are received months after the end of the covered period. We have not received a demand for overflows that occurred during calendar year 2020. As a result, we plan to include those in our response to this recent demand.

The meeting next week will be another fully electronic meeting using Zoom. At our meeting next week, we will discuss plans to return to in-person meetings in July. Ideally, we will be able to use a virtual format as needed going forward, subject to FOIA regulations changing after the Governor's Emergency Declaration expires.

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 25, 2021.**

Respectfully submitted,

Ted Henifin, P.E.
General Manager

TO: General Manager
 FROM: Director of Communications
 SUBJECT: Monthly Report for April 2021
 DATE: May 11, 2021





A. Publicity and Promotion

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

1. Water infrastructure and the American Jobs Plan
2. Woodstock Park reopening with new skatepark atop HRSD offline storage tank
3. HRSD tracking COVID-19 in wastewater
4. Exmore/Eastern Shore developments related to HRSD wastewater treatment

B. Social Media and Online Engagement

1. Metrics

Social Media Metrics April 2021				
METRIC #Earth Month	 FACEBOOK	 LINKEDIN	 TWITTER	 YOUTUBE
Number of Posts *number of published posts	29 +7	6 +3	25 +5	2:21 average view duration
Number of Followers/Likes *total number of fans	1,589 +0	5,259 +22	553 +7	220 +5
Engagement *sum of reactions comments and shares	374 -278	127 -25	34 +2	759 unique viewers -78
Traffic *total clicks on links posted	78 -57	188 -1	86 -54	3.9% click-through -0.8%

2. Top posts on Facebook, Twitter, and YouTube

a. Top Facebook post

HRSD
April 8

HRSD's Sustainable Environment Advocacy (SEA) Group is hosting cleanups every Saturday in April. This past Saturday, five employees volunteered to clean Chatham Trail in Newport News. They collected 16 bags and 3 boxes total! Can you guess what Madison is holding? This was the most interesting find of the day!

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

685 People Reached 67 Engagements [Boost Post](#)

Ashleigh Anne, Cyndi Masterstaff and 13 others 1 Comment 3 Shares

Like Comment Share

Performance for Your Post

685 People Reached

33 Reactions, Comments & Shares

26 Like	14 On Post	12 On Shares
1 Love	1 On Post	0 On Shares
3 Comments	2 On Post	1 On Shares
3 Shares	3 On Post	0 On Shares

34 Post Clicks

17 Photo Views	0 Link Clicks	17 Other Clicks
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NEGATIVE FEEDBACK

0 Hide Post	0 Hide All Posts
0 Report as Spam	0 Unlike Page

Reported stats may be delayed from what appears on posts

b. Top Tweet

Top Tweet earned 1,458 impressions

HRSD has spent the past year tracking COVID-19 through wastewater. Here's what we learned:
pilotonline.com/news/health/vp...

4 4

[View Tweet activity](#) [View all Tweet activity](#)

c. Top YouTube Videos

- (1) [The Wastewater Treatment Process](#) (474 views)
- (2) [What is Asset Management? HRSD Celebrates Infrastructure Week | United for Infrastructure](#) (80 views)
- (3) [SWIFT Research Center: What is the Potomac Aquifer?](#) (54 views)
- (4) [HRSD | Water Quality Career Opportunities](#) (52 views)
- (5) [HRSD Atlantic Treatment Plant Cambi Tour](#) (50 views)

3. Impressions and Visits

- a. Facebook: 11,153 page impressions, 8,253 post impressions reaching 7,810 users and Facebook engagement of 374 (272 reactions, 52 shares and 50 comments)
- b. Twitter: 10,700 tweet impressions; 285 profile visits and 9 mentions
- c. HRSD.com/SWIFTVA.com: 905 page visits
- d. LinkedIn Impressions: 4,273 page impressions and 3,585 post impressions
- e. YouTube: 954 views
- f. Next Door unique impressions: 1,570 post views from 8 targeted neighborhood postings
- g. Blog Posts: (1) [How to Celebrate Water on Earth Day](#)
- h. Construction Project Page Visits – 1056 total visits (not including direct visits from home page, broken down as follows:
 - (1) 708 visits to individual pages
 - (2) 348 to the status page

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

1. News Releases: 1
2. Traffic Advisories: 2
3. Construction Notices and or notices to neighbors: 7
4. Advertisements: 0
5. Project Notices: 8 (via door hangings reaching approximately 355 residents)
6. Project/Community Meetings: 0
7. New Project Web Pages: 1
 - [Boat Harbor Treatment Plant Conversion and Transmission](#)
8. New Project Videos: 0

D. Special Projects and Highlights

1. Director and staff continued working with the City of Virginia Beach Parks & Recreation staff in planning the upcoming official reopening of Woodstock Park and the new skatepark atop HRSD's offline storage facility. This event is scheduled for June 16, 2021 at 10:00 a.m.
2. Director participated in the Hampton Roads Planning District Commission Regional Public Information Subcommittee meeting.
3. Director continued the 14-hour certification "Diversity, Equity, and Inclusion (DEI) in the Workplace" through the University of Southern Florida Muma College of Business.
4. Staff participated in the Hampton Roads Planning District Commission (HRPDC) askHRGreen FOG meeting.
5. Director and staff participated in the April Value of Water (VOW) meeting.

E. Internal Communications

1. Director participated in the following internal meetings and events:
 - a. Weekly Leadership and COVID-19 meetings
 - b. Community outreach planning and update meetings related to several projects, including Larchmont Area Sanitary Sewer improvements, South Norfolk projects at Ferebee and Park and the SWIFT full-scale implementation at the James River Treatment Plant
 - c. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST) and QST meetings
 - d. Several meetings related to the Atlantic Treatment Plant mural project
 - e. Planning meetings with staff and Director of Engineering to develop HRSD's participation in United for Infrastructure 2021 which takes place mid-May.
 - f. Video planning meetings for the Woodstock Park Improvement Project
 - g. Video shoots with staff to encourage COVID-19 vaccinations
 - h. Finance Committee budget review meeting
2. Director conducted biweekly communications department status meetings and weekly one-on-one and team check-in meetings.
3. Staff attended project progress meetings and presentation and outreach development meetings with various project managers.

F. Metrics

1. Educational and Outreach Activities (all virtual unless otherwise noted): 8
 - a. Self-guided SWIFT Virtual Tours – two views (represents survey access at the beginning of each tour but does not necessarily represent the actual number of people who may have been watching/participating in the virtual tour at the time)
 - b. 04/12/2021 – "Edible Aquifer" recorded activity for Chesapeake Public Schools

- c. 04/15/2021 – Earth Day Social Media activity/giveaway – reach: 475 people
 - d. 04/20/2021 – CHROME Water Filter Challenge video judging
 - e. 04/21/2021 – CHROME Water Filter Challenge video judging
 - f. 04/23/2021 – CHROME Virtual Award presentation
 - g. 04/27/2021 – Water Cycle in a Bag activity/How-to post – reach: 206 people
 - h. 04/28/2021 – SWIFT Virtual Tour and presentation to Virginia Cooperative Extension Office Well Water Clinic results meeting
2. Number of Community Partners: 3
- a. City of Chesapeake Public Schools
 - b. City of Portsmouth Public Schools
 - c. Virginia Cooperative Extension
3. Additional Activities Coordinated by Communications Department: 2
- a. 04/13/2021- Washing Water recording for Hampton Roads Public Works Academy
 - b. 04/22/2021 – Supplied materials for United States Navy Children’s Earth Day Event
4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	April 2021
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	6.5
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	62.83
M-5.2	Educational and Outreach Events	Number	8
M-5.3	Number of Community Partners	Number	3

Respectfully,

Leila Rice, APR
 Director of Communications

TO: General Manager
FROM: Director of Engineering
SUBJECT: Engineering Monthly Report for April 2021
DATE: May 13, 2021

A. General

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

CIP Spending (\$M):

	Current Period	FYTD
Actual	16.82	148.47
Plan	18.10	185.00

2. United for Infrastructure 2021 will be observed May 10 thru May 14. This is a national effort to bring attention to the importance of funding the infrastructure needs of the country. This initiative is led by a diverse group of organizations including business, labor and trade organizations. At HRSD, we are providing information through social media, HRSD's SharePoint site and a Letter to the Editor which will be sent to several local newspapers. This year we focused on the Atlantic Treatment Plant's Thermal Hydrolysis Process. This is a recently completed project that highlights the importance of investing in infrastructure and the benefits to the citizens of Hampton Roads.

B. Asset Management Division

1. The Asset Management Division has hired a new intern, Mr. Stephen Spivey. Stephen is a Junior at Old Dominion University studying Mechanical Engineering. Stephen will be supporting the Asset Management Division with database entry of asset information, review of database problems and support for special studies related to operational and maintenance issues within HRSD. The Asset Management Division has employed interns for the last few years to successfully augment limited staff resources and provide real-world experience for students studying at local colleges.
2. Creation of a new Interceptor System Asset Database is underway. An initial prototype will be presented in May which will outline the features and benefits of this tool. The goal is to create a centralized archive of all data and related reports for interceptor system assets. Existing information is stored in multiple locations and lacks consistent procedures for data naming. Information is also not available to all individuals who might need access to the existing data. The new database will become a central repository for all critical interceptor system data and the platform will be located on the HRSD SharePoint site for easy access.

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

1. Construction has begun on the initial phase to address the sewer issues in Middlesex County. The first phase is the Middlesex Interceptor Force Main Phase I – Cooks Corner project. This project will provide a 1.8-mile force main which will convey flow from the Cooks Corner Area to the Central Middlesex Treatment Plant. The contractor recently mobilized on site, and pipe installation has begun. This project is projected for completion in August 2022.
2. Construction is nearing completion on the Virginia Beach Boulevard Force Main Phase VI project. The last section of new pipe will be installed over two consecutive weekends after Memorial Day. This last section of pipe is in a very congested area at the intersection of Great Neck Road and Virginia Beach Boulevard. Maintenance of traffic and limiting impacts to commercial businesses in this area are a significant challenge. This is a critical part of the larger project to redirect flows from the Chesapeake-Elizabeth Treatment Plant (CETP) to the Atlantic Treatment Plant later this year to allow for closure of CETP.
3. We recently conducted two full-day training sessions for staff and consultants related to best practices on the use of the Design-Build project delivery method. This training was based on the Design-Build Institute of America (DBIA) training entitled, “Design-Build Done Right.” Two certified DBIA trainers conducted the virtual training. Since many of the projects related to the SWIFT Program will use this project delivery method, advanced training to staff was needed to be sure that the differences between Design-Build and the more traditional Design-Bid-Build delivery methods were clearly understood.

D. Planning & Analysis Division

1. The Planning & Analysis Division has hired a new intern, Ms. Sarah Bohn. Sarah is a senior at Old Dominion University studying Civil Engineering. Sarah will be supporting the Hydraulics & Capacity Analysis Section with development services and hydraulic analyses. The Hydraulics & Capacity Section has employed interns for the last decade to successfully augment limited staff resources and provide real-world experience for students studying at local colleges.
2. Staff began to automate the extraction of results from water quality sampling at the SWIFT Research Center. This work is being coordinated with both the Information Technology and Water Quality Departments. This data visualization process will also include a geographic information system component that will allow staff to view the data in both space and time.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 7
 - a. 04/01/2021 – Workshop for an effort entitled, “Digital Maturity Research Project” with the Water Research Foundation.
 - b. 04/07/2021 – Presentation entitled, “Finally an Easy Button for Force Mains” at the Virginia Water Environment Association Collections Systems Virtual Conference.
 - c. 04/10/2021 – Neighborhood Cleanup organized by the HRSD SEA Team.

- d. 04/13/2021 – Panel Discussion on the topic of Contact Terms and Conditions at the Design-Build Institute of America Water/Wastewater Specialty Conference.
- e. 04/17/2021 - Neighborhood Cleanup organized by the HRSD SEA Team.
- f. 04/27/2021 – Judge for the Stockholm Junior Water Prize sponsored by the Virginia Water Environment Association.
- g. 04/30/2021 – Presentation to students from the Virginia Tech Environmental and Water Resources Club on HRSD and the SWIFT Program.

2. Number of Community Partners: 3

- a. Virginia Water Environment Association
- b. Design-Build Institute of America
- c. Virginia Tech – Environmental and Water Resources Club

3. Number of Research Partners: 1

- a. Water Research Foundation

4. Monthly Metrics Summary:

Item #	Strategic Planning Measure	Unit	April 2021
M-1.4a	Total Training Hours per Full Time Employee (44) - Current Month	Hours / #FTE	3.60
M-1.4b	Total Training Hours per Full Time Employee (44) - Cumulative Fiscal Year-to-Date	Hours / #FTE	18.50
M-5.2	Educational and Outreach Events	Number	7
M-5.3	Number of Community Partners	Number	3
M-5.4	Number of Research Partners	Number	1

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, PhD, PE

TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for April 2021
DATE: May 12, 2021

A. General

1. Water consumption remains high as it is 3.9 percent higher than budget and 1.6 percent higher than the 3-year average. As a result, billed Wastewater Revenues are at 85 percent versus the 83 percent target for this point in the fiscal year. Facility Charges remain strong with the hot residential real estate market as the revenue received exceeds the budget. HRSD finally received our Build America Bond Subsidies from the IRS. Other Non-Operating Revenues are higher due to the annual workers' compensation reconciliation. HRSD received over \$600,000 for the better-than-expected worker's compensation experience. Personal Services are in-line and Fringe Benefits are under budget due to lower medical claims experience. All other expenses should remain below budget through the end of the fiscal year.
2. Staff continues working with PromisePay on the second phase of the Municipal Utility Relief program. This will involve an integrated payment plan solution, COVID-19 attestation process, and distribution of the remaining grant funds.
3. Staff closed on the \$50 million Line of Credit (LOC) with Bank of America on April 29, 2021 and requested an initial draw of approximately \$15 million. Staff will continue monitoring cash balances to ensure liquidity balances are within policy, using the LOC as needed.
4. HRSD's overall Accounts Receivable appear to be stabilizing but are still much higher than pre-pandemic levels. The 31-60 day aging accounts receivable has grown month-over-month but is generally in-line historically. There is a decline in the 61-90 day aging accounts receivable, which could mean some customers are spilling into the 90+ aging accounts receivable, but it could also indicate more 31-60 day aging accounts receivable customers are staying current. This could be due to the first phase on the Municipal Utility Relief program. The 90+ day aging accounts receivable is growing slightly as many customers who are struggling to pay bills continue to struggle.
5. HRSD's Retiree Health Plan Trust continues to increase as it returned 1.91 percent for the quarter, above the 1.81 percent benchmark. The one-year trailing return for the Retiree Health Plan Trust portfolio was 34.82 percent compared to the Blended Benchmark return of 32.46 percent. PFM, our investment manager, is expecting strong growth across the economy with consumer discretionary and financial and material sectors leading the way. The Federal Reserve updated its Gross Domestic Product (GDP) projection from 4.2 percent to 6.5 percent for 2021. The Quarterly investment summary for [HRSD's Operating Cash Strategies and Retiree Health Trust \(OPEB\)](#) are attached.

B. Interim Financial Report

1. Operating Budget for the Period Ended April 30, 2021

	Amended Budget	Current YTD	Current YTD as % of Budget (83% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 312,218,000	\$ 265,701,656	85%	84%
Surcharge	1,522,000	1,359,091	89%	90%
Indirect Discharge	3,200,000	2,517,639	79%	95%
Fees	3,020,000	(398,369)	-13%	86%
Municipal Assistance	700,000	607,866	87%	76%
Miscellaneous	1,165,000	1,584,851	136%	214%
Total Operating Revenue	321,825,000	271,372,734	84%	84%
Non Operating Revenues				
Facility Charge	6,160,000	6,424,595	104%	86%
Interest Income	1,510,000	489,267	32%	138%
Build America Bond Subsidy	2,292,000	2,167,225	95%	92%
Other	610,000	1,056,413	173%	139%
Total Non Operating Revenue	10,572,000	10,137,500	96%	106%
Total Revenues	332,397,000	281,510,234	85%	85%
Transfers from Reserves	28,765,873	26,369,135	92%	83%
Total Revenues and Transfers	\$ 361,162,873	\$ 307,879,368	85%	85%
Operating Expenses				
Personal Services	\$ 60,952,502	\$ 50,537,098	83%	87%
Fringe Benefits	24,945,953	19,932,460	80%	83%
Materials & Supplies	9,663,402	7,289,494	75%	81%
Transportation	1,579,254	878,231	56%	61%
Utilities	13,019,361	10,294,730	79%	79%
Chemical Purchases	10,500,337	6,453,369	61%	65%
Contractual Services	51,831,008	29,077,129	56%	56%
Major Repairs	13,076,208	5,879,503	45%	47%
Capital Assets	867,079	243,668	28%	38%
Miscellaneous Expense	3,721,391	2,614,881	70%	113%
Total Operating Expenses	190,156,495	133,200,563	70%	74%
Debt Service and Transfers				
Debt Service	61,407,822	54,478,471	89%	85%
Transfer to CIP	109,338,556	91,400,275	84%	83%
Transfer to Risk management	260,000	216,670	83%	83%
Total Debt Service and Transfers	171,006,378	146,095,416	85%	84%
Total Expenses and Transfers	\$ 361,162,873	\$ 279,295,979	77%	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**, and expenses are generally recorded on a cash basis. No provision is made for non-cash items such as depreciation and bad debt expense.

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

Transfers represent certain budgetary policy designations as follows:

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

3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended April 30, 2021

HRSD - RESERVE AND CAPITAL ACTIVITY								April 30, 2021	
	General Reserve					Reserve		Capital	
	General	CARES - HRSD	CARES - JCSA	Debt Service	Risk Mgmt Reserve		Paygo	Debt Proceeds	
	Unrestricted	Restricted	Restricted	Restricted	Unrestricted	Unrestricted	Unrestricted	Restricted	
Beginning - July 1, 2020	\$ 198,874,822	\$ -	\$ -	\$ 28,154,541	\$ 3,759,535	\$ 15,266,324	\$ 22,209,680	\$ -	
Current Year Sources of Funds									
Current Receipts	266,419,639	8,737,113	315,872					-	
Line of Credit								25,298,874	
VRA Draws							28,760,024		
CARES Transfer In	4,163,167							-	
Days Cash on Hand Transfer In							14,385,444		
Transfers In	-				216,670		92,281,155		
Sources of Funds	270,582,806	8,737,113	315,872	-	216,670	-	135,426,623	25,298,874	
Total Funds Available	\$ 469,457,628	\$ 8,737,113	\$ 315,872	\$ 28,154,541	\$ 3,976,205	\$ 15,266,324	\$ 157,636,303	\$ 25,298,874	
Current Year Uses of Funds									
Cash Disbursements	203,148,655						144,475,949	25,298,874	
CARES Transfer Out		7,364,135	147,747						
Days Cash on Hand Transfer Out	14,385,444								
Transfers Out	77,231,501					15,266,324		-	
Uses of Funds	294,765,600	7,364,135	147,747	-	-	15,266,324	144,475,949	25,298,874	
End of Period - April 30, 2021	\$ 174,692,028	\$ 1,372,978	\$ 168,125	\$ 28,154,541	\$ 3,976,205	\$ -	\$ 13,160,354	\$ -	
Unrestricted Funds	\$ 191,828,587								

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended April 30, 2021

HRSD - PROJECT ANALYSIS April 30, 2021

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2020	Expenditures Year to Date FY2021	Total Project Expenditures	Encumbrances	Available Funds
Administration	47,227,240	15,313,091	10,562,655	25,875,746	3,604,098	17,747,396
Army Base	155,448,800	123,095,232	408,012	123,503,244	2,995,339	28,950,217
Atlantic	113,833,722	76,561,802	4,731,449	81,293,251	5,961,518	26,578,953
Boat Harbor	262,090,388	36,048,636	12,947,578	48,996,214	13,004,426	200,089,748
Ches-Eliz	164,907,309	67,782,112	34,595,897	102,378,009	23,339,763	39,189,537
Eastern Shore	14,000,000	-	40,655	40,655	52,114	13,907,231
James River	309,704,973	38,156,333	4,273,972	42,430,305	219,655,739	47,618,929
Middle Peninsula	70,401,456	10,777,028	2,211,314	12,988,342	10,112,759	47,300,355
Nansemond	347,091,385	23,061,497	15,003,639	38,065,136	9,591,278	299,434,971
Surry	55,505,027	10,875,464	12,689,020	23,564,484	17,968,792	13,971,751
VIP	304,192,874	178,705,768	3,986,617	182,692,385	2,298,409	119,202,080
Williamsburg	34,145,622	17,684,308	8,713,251	26,397,559	5,790,326	1,957,737
York River	76,430,343	25,864,189	4,224,177	30,088,366	3,713,129	42,628,848
General	759,069,118	155,776,300	34,389,837	190,166,137	294,881,254	274,021,727
	\$ 2,714,048,257	\$ 779,701,760	\$ 148,778,073	\$ 928,479,833	\$ 612,968,944	\$ 1,172,599,480

5. Debt Management Overview

HRSD - Debt Outstanding (\$000's) April 30, 2021

	Principal Mar 2021	Principal Payments	Principal Draws	Principal Apr 2021	Interest Payments
Fixed Rate					
Senior	198,670	-	-	198,670	-
Subordinate	556,481	(135)	4,640	560,986	(2,094)
Variable Rate					
Subordinate	50,000	-	-	50,000	(1)
Line of Credit	-	-	15,299	15,299	-
Total	\$ 805,151	\$ (135)	\$ 19,939	\$ 824,955	\$ (2,095)

HRSD- Series 2016VR Bond Analysis April 30, 2021

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	4.71%	4.95%	0.24%
Average	0.42%	0.52%	0.10%
Minimum	0.01%	0.01%	0.00%
As of 04/30/21	0.06%	0.08%	0.02%

* Since October 20, 2011 HRSD has averaged 52 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended April 30, 2021

HRSD - UNRESTRICTED CASH

April 30, 2021

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

		Adjust Days Cash	
		on Hand	Days Cash on Hand
Total Unrestricted Cash	\$ 191,828,587		368
Risk Management Reserve	\$ (3,976,205)	(8)	360
Capital (PAYGO only)	\$ (13,160,354)	(25)	335
Adjusted Days on Cash	\$ 174,692,028		335

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

HRSD - SOURCES OF FUNDS

April 30, 2021

Primary Source	Beginning	YTD	YTD	YTD	Ending	Allocation of	Credit Quality	Current
	Market Value				Market Value			
	July 1, 2020	Contributions	Withdrawals		April 30, 2021	Funds		Yield
BAML Corp Disbursement Account	7,339,242	414,875,567	385,740,184	26,084	36,500,709	25.1%	N/A	0.55%
VIP Stable NAV Liquidity Pool	178,660,390	10,000,000	80,000,000	215,816	108,876,206	74.9%	AAAm	0.10%
Total Primary Source	\$ 185,999,632	\$ 424,875,567	\$ 465,740,184	\$ 241,900	\$ 145,376,915	100.0%		

VIP Stable NAV Liquidity Pool out performed Va Local Government Investment Pool (the market benchmark) by 0.01% in the month of April.

Secondary Source	Beginning	YTD	YTD	YTD	Ending	LTD	Yield to	
	Market Value				Market Value			Income Earned
	July 1, 2020	Contributions	Withdrawals	& Realized G/L	April 30, 2021	Mkt Adj	at Market	
VIP 1-3 Year High Quality Bond Fund	64,899,667	-	10,808	608,341	65,105,469	63,334,088	1,771,381	0.17%
Total Secondary Source	\$ 64,899,667	\$ -	\$ 10,808	\$ 608,341	\$ 65,105,469	\$ 63,334,088	\$ 1,771,381	

VIP 1-3 Year High Quality Bond Fund was out performed by ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) by 0.01% in the month of April.

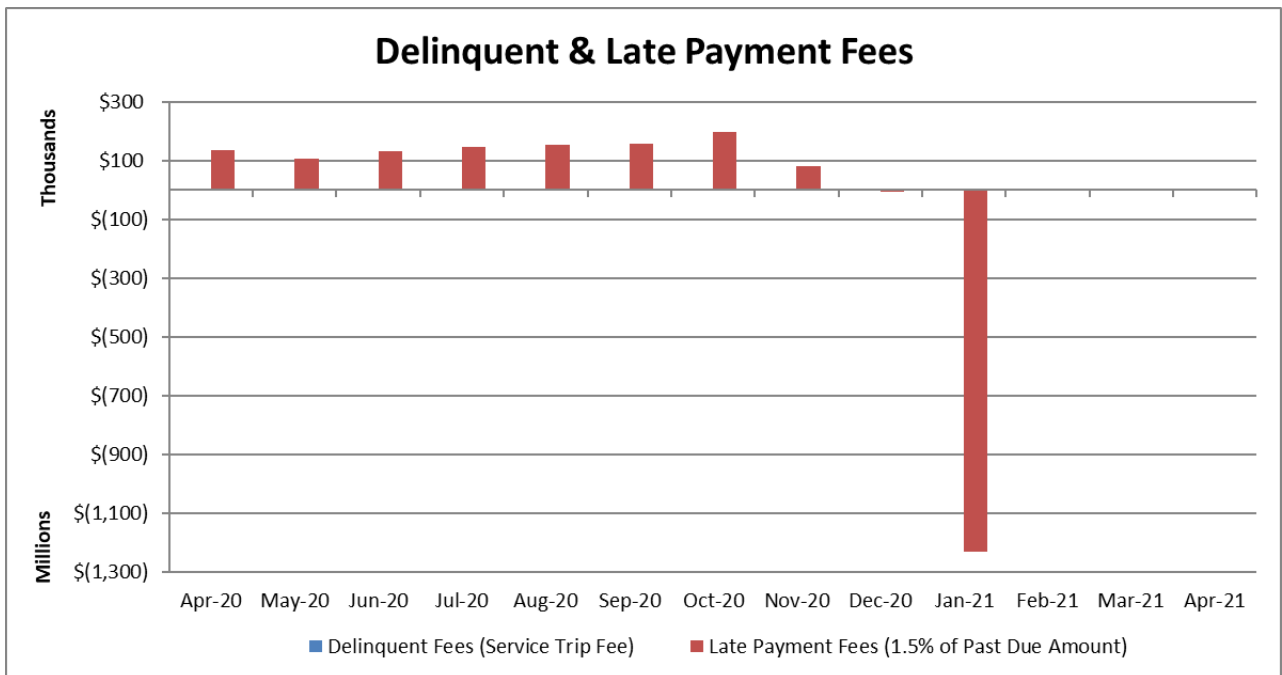
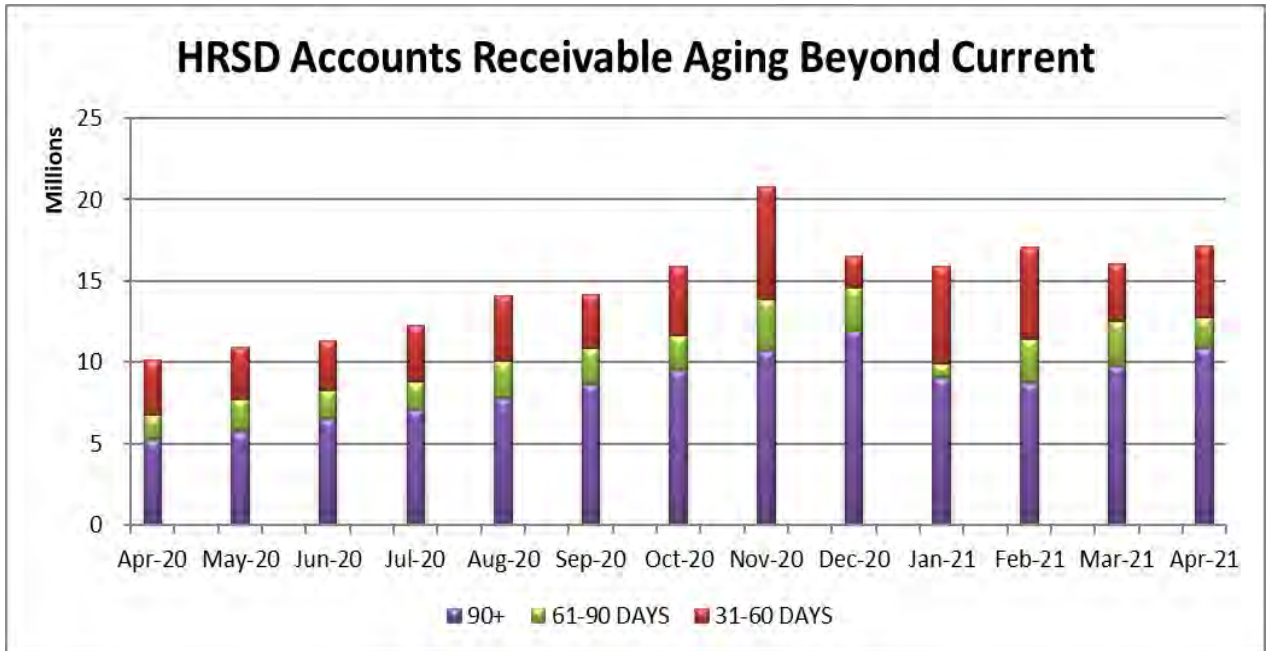
	Total	Fund Alloc
Total Primary Source	\$ 145,376,915	69.1%
Total Secondary Source	\$ 65,105,469	30.9%
TOTAL SOURCES	\$ 210,482,384	100.0%

7. Summary of Billed Consumption

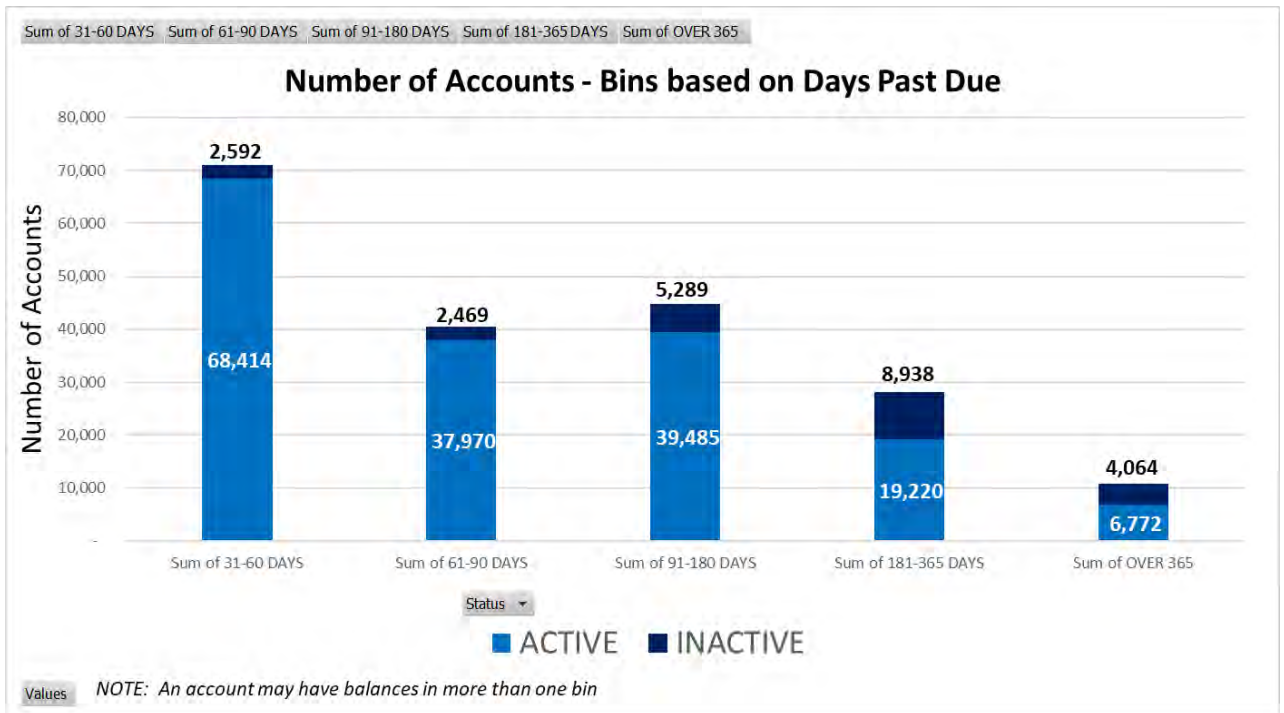
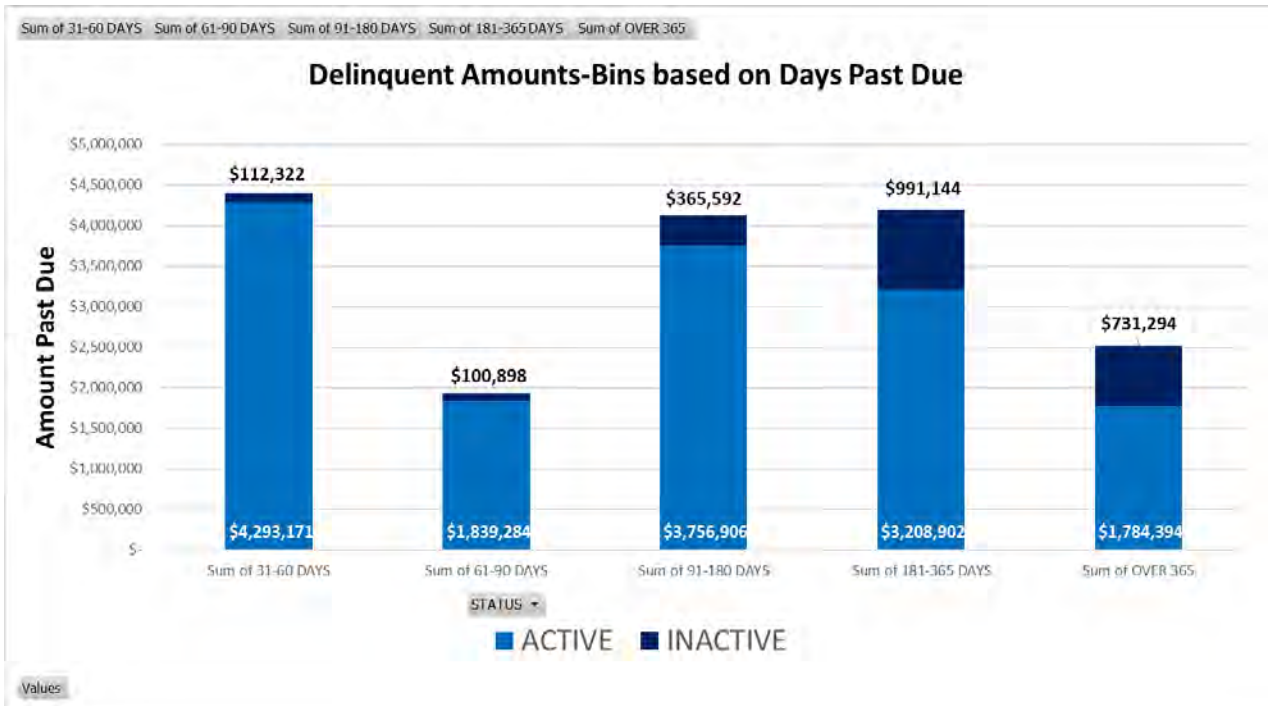
Summary of Billed Consumption (,000s ccf)							
Month	FY2021 Cumulative Budget Estimate	FY2021 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2020 Actual	From FY2020	Cumulative 3 Year Average	From 3 Year Average
July	5,086	4,751	-6.6%	5,114	-7.1%	5,045	-5.8%
Aug	10,047	9,459	-5.8%	9,944	-4.9%	10,026	-5.7%
Sept	14,477	14,335	-1.0%	14,354	-0.1%	14,389	-0.4%
Oct	18,951	18,863	-0.5%	18,952	-0.5%	18,966	-0.5%
Nov	22,937	21,192	-7.6%	23,092	-8.2%	23,160	-8.5%
Dec	27,268	27,614	1.3%	27,518	0.3%	27,383	0.8%
Jan	31,818	32,477	2.1%	32,101	1.2%	31,920	1.7%
Feb	36,287	36,067	-0.6%	36,005	0.2%	36,236	-0.5%
March	39,495	41,017	3.9%	40,108	2.3%	40,223	2.0%
Apr	43,441	45,115	3.9%	44,246	2.0%	44,387	1.6%
May	47,762	-	N/A	48,397	N/A	48,604	N/A
June	52,222	-	N/A	52,535	N/A	52,869	N/A

C. Customer Care Center

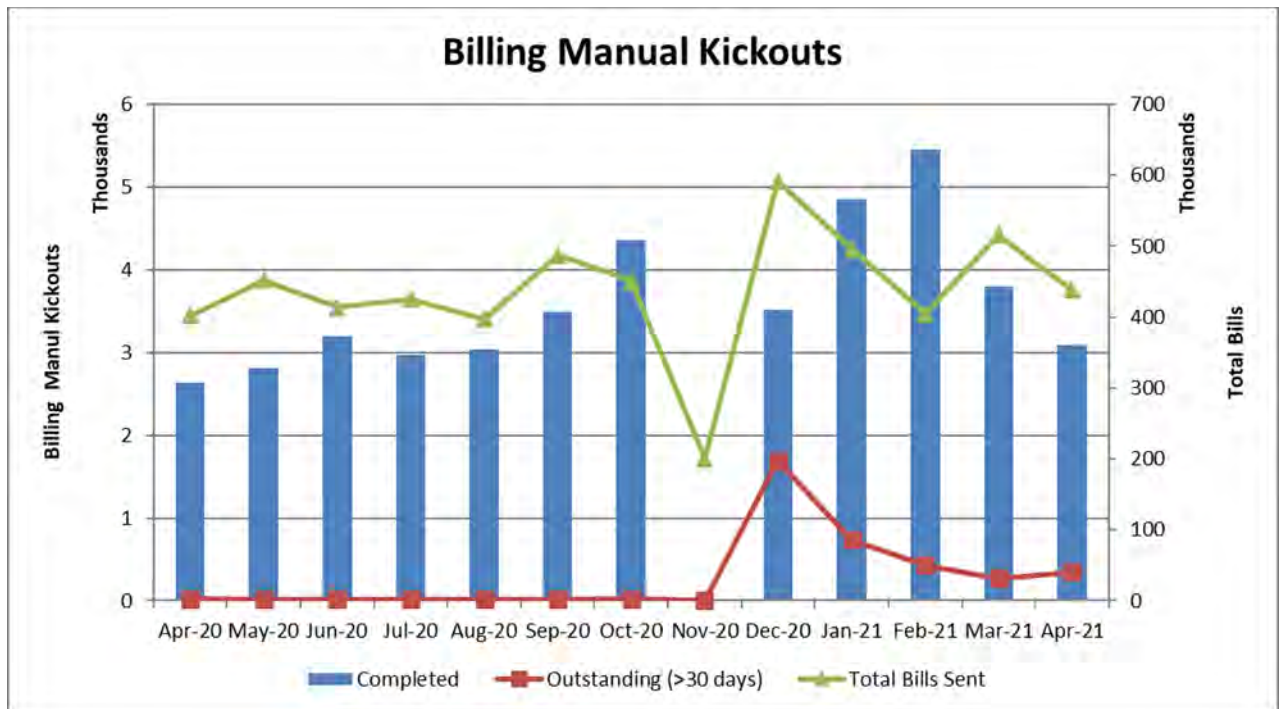
1. Accounts Receivable Overview



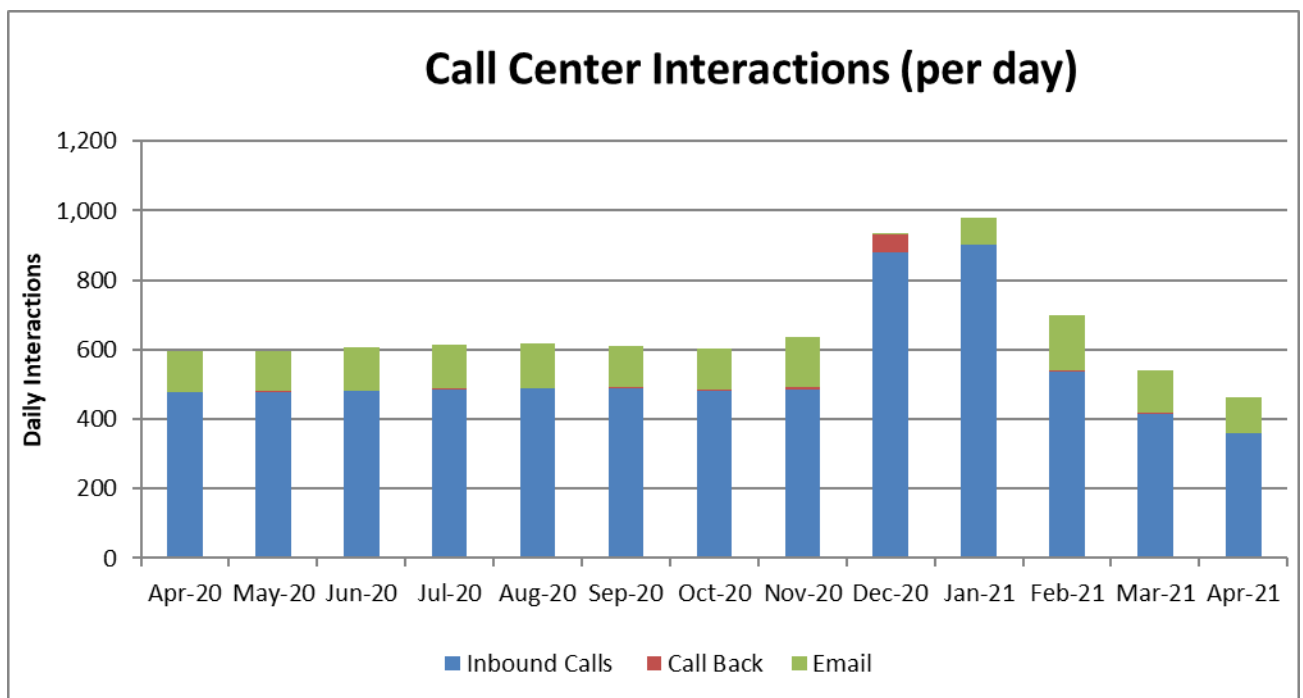
Apr 20-Apr 21 Field Activity was suspended late March 2020 in response to COVID-19.



2. Customer Care Center Statistics



November data not available due to Ransomware attack



Customer Interaction Statistics	Nov	Dec	Jan	Feb	Mar	Apr
Calls Answered within 3 minutes	86%	30%	41%	90%	97%	98%
Average Wait Time (seconds)	37	378	803	48	26	20
Calls Abandoned	8%	28%	39%	7%	3%	3%

D. Procurement Statistics

ProCard Fraud	External Fraud Transactions *	Comments
July	0	
August	3	One transaction was caught by the card holder and two transactions were caught by the bank immediately.
September	3	Three caught by card holder
October	2	Caught by bank immediately
November	0	
December	0	
January	1	Caught by bank immediately
February	0	
March	0	
April	1	Transaction was caught by the card holder
Total	10p	

***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 2021
M-1.4a	Training During Work Hours Per Full Time Employee (102) – Current Month	Hours / #FTE	1.66
M-1.4b	Total Training During Work Hours Per Full Time Employee (102) – Cumulative Fiscal Year-to-Date	Hours / #FTE	8.34
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	102%
	General Reserves	Percentage of Operating Budget less Depreciation	107%
	Liquidity	Days Cash on Hand	368 Days
	Accounts Receivable (HRSD)	Dollars	\$31,888,280
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	34%

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

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

**Hampton Roads Sanitation District
Quarterly Performance Report
For the Quarter Ending March 31, 2021**

Total Portfolio Summary

Operating Strategies	March 31, 2021	December 31, 2020
Primary Source	\$ 130,050,229	\$ 131,677,563
Secondary Source	65,080,006	65,101,937
	\$ 195,130,235	\$ 196,779,500

Primary Source Summary

The Primary Source Portfolio consists of BAML Corp Disbursement Account \$21.18m and VaCo/VML VIP Stable NAV Liquidity Pool \$108.87m. BAML Corp Disbursement Account returned 0.55% for the quarter ending March 31, 2021. VIP LIQ Pool Fund 30 Day Avg Net Yield was 0.11% as of March 31, 2021. VIP Stable NAV Liquidity Pool out performed Va Local Government Investment Pool (the market benchmark) by 0.01% in the month of March. VaCo/VML VIP Stable NAV Liquidity Pool's weighted average credit rating was A-1 for the quarter.

Secondary Source Summary

The Secondary Source Portfolio consists of VaCo/VML VIP 1-3 Year High Quality Bond Fund. The VIP 1-3 Yield to Maturity at Market was 0.20% as of March 31, 2021, which out performed the benchmark, ICE BofA ML 1-3 Yr AAA-AA Corp/Gov Index, by 0.01%. The weighted average credit rating for VaCo/VML VIP 1-3 Year High Quality Bond Fund's portfolio was AA for the quarter.

Retirement Health Plan Trust	March 31, 2021	December 31, 2020
Investment Assets	68,006,818	66,657,247
Liquidity Assets	89,314	19,830
Combined Assets	\$ 68,096,132	\$ 66,677,077

Retiree Health Plan Trust Summary

The Retiree Health Plan Trust portfolio returned 1.91% (investment assets) for the quarter ended March 31, 2021, above the 1.81% return of the Blended Benchmark.* The one-year trailing return for the Retiree Health Plan Trust portfolio was 34.82% compared to the Blended Benchmark return of 32.46%. As of March 31, 2021, the weighted average credit quality of fixed income holdings for the Retiree Health Plan Trust portfolio was A.

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

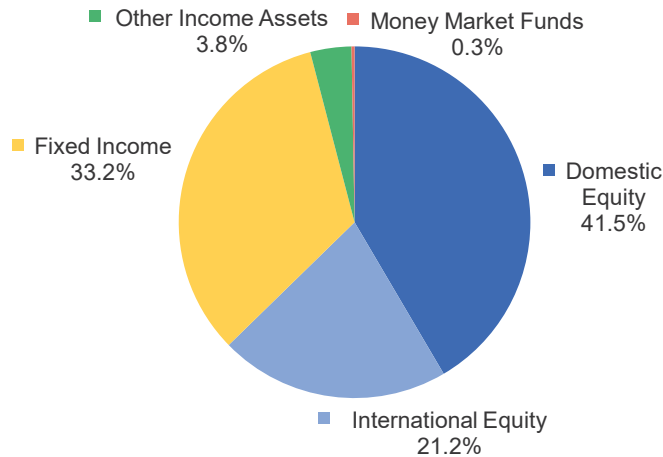
	Total Portfolio Value	
	March 31, 2021	December 31, 2020
Investment Assets	\$ 68,006,818	\$ 66,657,247
Combined Assets	\$ 68,096,132	\$ 66,677,077

Portfolio Recap & Strategy

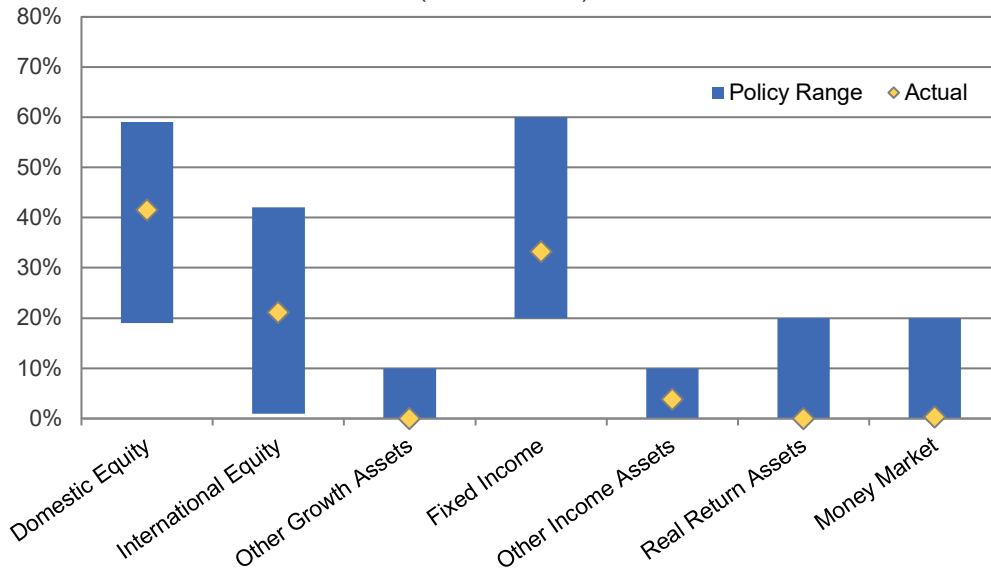
- The Retiree Health Plan Trust portfolio returned 2.02% (investment assets) for the quarter ended March 31, 2021, above the 1.81% return of the Blended Benchmark. The one-year trailing return for the Retiree Health Plan Trust portfolio was 35.10% compared to the Blended Benchmark return of 32.46%. As of March 31, 2021, the weighted average credit quality of fixed income holdings for the Retiree Health Plan Trust portfolio was A. Over the quarter, the Multi-Asset Class Investment Committee (“the Committee”) adopted a cautious approach that sought to add value to the portfolio with a clear eye on downside risks. On a relative basis, the Committee remains constructive on equity markets over fixed-income.
- The advance estimate of the United States’ first quarter GDP growth released on April 29, 2021 by the Bureau of Economic Analysis reflected a quickly recovering economy. While the United States has yet to vaccinate a critical mass of Americans, the \$1.9 trillion in fiscal stimulus signed into law in mid-March and significant reduction in COVID-19 cases and deaths served as major upside catalysts. Armed with more financial resources and established vaccination programs, state and local governments began to reduce restrictions on their economies. Such policy actions played a significant role in the 916,000 jobs added in March, highlighted by the leisure and hospitality sector driving gains for the month.
- Throughout the first quarter, the Federal Open Market Committee (“FOMC”) reiterated its commitment to using its full range of tools to support the U.S. economy, thereby promoting its maximum employment and price stability mandates. With the economy recovering more quickly than most - including the FOMC - expected, there are growing concerns about the potential inflationary impacts of both monetary- and fiscal stimulus. This dovetails with the central bank’s revised policy approach, which suggests reducing accommodation only when inflation is observed to run slightly above its 2% target for an extended period. While the central bank acknowledges that inflationary pressures may materialize, it believes such pressures would be transitory and not persistent enough to force a premature departure from accommodative policy.
- Domestic equity markets ended the first quarter in positive territory, primarily driven by COVID-19 vaccination rollouts, strong consumer spending, and additional fiscal stimulus. The S&P 500 Index’s 6.17% return reflects a tale of two segments: value stocks, as represented by the Russell 1000 Value Index, returned 11.26% and outperformed the 0.94% return for growth stocks, as represented by the Russell 1000 Growth Index. International equity markets underperformed against their domestic equity counterparts. Non-U.S. developed markets, as measured by the MSCI EAFE Index, returned 3.48% and emerging markets, as measured by the MSCI Emerging Markets Index, returned 2.29% for the quarter.
- The U.S. bond market, represented by the Bloomberg Barclays U.S. Aggregate Index, fell 3.38%, marking its worst quarterly performance since 1981. Mortgage-backed securities, as measured by the Bloomberg Barclays U.S. Mortgage-Backed Securities Index, also detracted from overall portfolio performance after posting a -1.10% first quarter return. Corporate credit presented mixed results for the quarter. The Bloomberg Barclays U.S. Corporate Index fell 4.65%, due to the high duration of investment grade debt. The Bloomberg Barclays U.S. Corporate High Yield Index, the only asset class to contribute positively to performance for the quarter, posted a 0.85% return. Finally, emerging market sovereign debt, represented by the JP Morgan EMBI Global Diversified Index, detracted from portfolio performance as rising U.S. rates drove a -4.54% return.

Security Type	March 31, 2021	% of Portfolio	December 31, 2020	% of Portfolio	Permitted by Policy
Domestic Equity	\$ 28,284,038	41.5%	\$ 26,955,686	40.4%	19% - 59%
International Equity	\$ 14,409,770	21.2%	\$ 14,623,707	21.9%	1% - 41%
Fixed Income	\$ 22,638,295	33.2%	\$ 22,474,215	33.7%	20% - 60%
Other Income Assets	\$ 2,573,644	3.8%	\$ 2,497,473	3.7%	0% - 10%
Money Market Funds	\$ 190,385	0.3%	\$ 125,996	0.2%	0% - 20%
Totals	\$ 68,096,132	100.0%	\$ 66,677,077	100.0%	

Portfolio Composition
(as of 3/31/21)

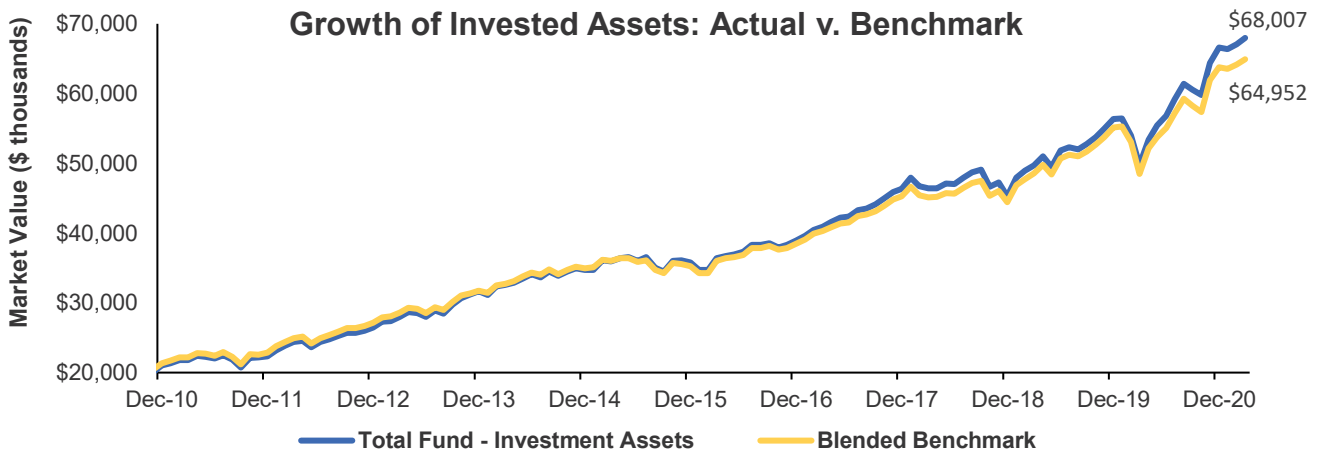


Asset Allocation
(as of 3/31/21)



Performance as of March 31, 2021.

	Allocation		Performance(%)								
	Market Value (\$)	%	1 Quarter	Year To Date	Fiscal Year To Date	1 Year	3 Years	5 Years	Apr-2013 To Mar-2021+	Since Inception	Inception Date
Total Fund - Investment Assets	68,006,818	100.00	2.02	2.02	19.02	35.10	10.99	10.61	8.77	9.07	09/01/2009
Blended Benchmark			1.81	1.81	17.26	32.46	10.26	9.79	7.83	8.63	09/01/2009
Domestic Equity	28,284,038	41.59									
Vanguard Total Stock Market ETF	22,490,352	33.07	6.43	6.43	33.28	62.72	17.13	16.66	14.54	62.72	04/01/2020
Russell 3000 Index			6.35	6.35	33.19	62.53	17.12	16.64	14.55	62.53	04/01/2020
Jensen Quality Growth Fund	2,726,731	4.01	2.81	2.81	25.55	47.31	17.37	16.13	14.98	17.39	04/01/2019
S&P 500			6.17	6.17	29.71	56.35	16.78	16.29	14.60	20.60	04/01/2019
Touchstone Mid Cap Fund	1,144,346	1.68	5.92	5.92	30.52	53.70	16.05	16.19	12.91	30.52	07/01/2020
Russell Midcap Index			8.14	8.14	39.35	73.64	14.73	14.67	13.07	39.35	07/01/2020
iShares Core S&P Small-Cap ETF	1,922,609	2.83	18.21	18.21	60.05	95.23	13.68	15.58	13.59	18.21	01/01/2021
S&P SmallCap 600			18.24	18.24	60.18	95.33	13.71	15.60	13.61	18.24	01/01/2021
International Equity	14,409,770	21.19									
Vanguard Total International Stock ETF	4,385,802	6.45	3.95	3.95	29.40	52.85	6.55	10.00	6.46	52.85	04/01/2020
MSCI AC World ex USA (Net)			3.49	3.49	28.67	49.41	6.51	9.76	6.12	49.41	04/01/2020
J. O. Hambro International Select	3,248,992	4.78	0.26	0.26	24.61	53.81	11.13	12.55	10.87	12.27	01/01/2018
MSCI AC World ex USA (Net)			3.49	3.49	28.67	49.41	6.51	9.76	6.12	9.19	01/01/2016
Harding Loevner International Equity	3,283,219	4.83	0.84	0.84	27.22	50.49	9.01	12.17	8.59	27.22	07/01/2020
MSCI AC World ex USA (Net)			3.49	3.49	28.67	49.41	6.51	9.76	6.12	28.67	07/01/2020
Artisan International Small-Mid	743,392	1.09	-1.36	-1.36	31.75	67.14	13.72	N/A	N/A	-1.36	01/01/2021
MSCI AC World ex USA Smid Cap Index (Net)			4.22	4.22	33.71	62.05	6.07	9.62	7.21	4.22	01/01/2021
Virtus KAR International Small-Cap	1,030,641	1.52	0.47	0.47	36.20	67.88	12.19	17.67	N/A	0.47	01/01/2021
MSCI AC World ex USA Small Cap (Net)			5.53	5.53	38.25	69.82	6.61	10.40	7.83	5.53	01/01/2021
Hartford Schroders Emerging Markets Equity	1,717,724	2.53	3.54	3.54	39.64	66.60	8.79	14.77	6.98	8.35	03/01/2018
MSCI EM (net)			2.29	2.29	34.13	58.39	6.48	12.07	5.54	5.65	03/01/2018
Fixed Income	22,638,295	33.29									
Baird Core Plus	6,029,889	8.87	-3.10	-3.10	-0.35	5.38	5.41	4.20	3.62	3.96	05/01/2014
Bimbg. Barc. U.S. Aggregate			-3.38	-3.38	-2.13	0.71	4.65	3.10	2.88	3.22	05/01/2014
DoubleLine Core Fixed Income	2,807,858	4.13	-2.08	-2.08	1.45	6.94	4.00	3.46	3.20	3.15	09/01/2017
PGIM Total Return Bond	7,095,957	10.43	-4.44	-4.44	-0.42	6.33	4.97	4.34	3.83	3.97	09/01/2017
Bimbg. Barc. U.S. Aggregate			-3.38	-3.38	-2.13	0.71	4.65	3.10	2.88	3.43	09/01/2017
Voya Intermediate Bond	3,871,818	5.69	-3.08	-3.08	0.40	6.51	5.27	4.10	N/A	3.89	01/01/2020
Bimbg. Barc. U.S. Aggregate			-3.38	-3.38	-2.13	0.71	4.65	3.10	2.88	3.09	01/01/2020
iShares Intermediate-Term Corporate Bond ETF	1,465,824	2.16	-3.85	-3.85	0.29	10.63	6.75	4.57	3.64	4.46	10/01/2019
ICE BofAML U.S. Corporate 5-10 Year Index			-3.81	-3.81	0.53	10.99	6.76	5.04	4.40	4.69	10/01/2019
iShares JP Morgan USD Emerging Mkts Bond ETF	686,597	1.01	-5.41	-5.41	2.64	15.62	3.59	4.48	3.73	2.64	07/01/2020
JPM EMBI Global Diversified			-4.54	-4.54	3.33	16.00	4.04	5.05	4.45	3.33	07/01/2020
iShares iBoxx \$ High Yield Corporate Bond ETF	680,353	1.00	0.63	0.63	10.70	18.92	5.88	6.67	4.44	10.70	07/01/2020
Bloomberg Barclays U.S. High Yield Very Liquid Ind			0.57	0.57	11.41	21.43	6.58	7.52	5.21	11.41	07/01/2020
Other Income	2,573,644	3.78									
Boyd Waterson GSA Fund	2,573,644	3.78	3.05	3.05	6.69	8.67	N/A	N/A	N/A	7.47	07/01/2019
NCREIF Property Income			1.04	1.04	3.10	4.14	4.40	4.52	4.79	4.29	07/01/2019
Cash Equivalent	101,071	0.15									
First American Government Obligation - Z	101,071	0.15	0.01	0.01	0.03	0.06	1.28	1.02	0.64	1.27	01/01/2004



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

TO: General Manager
FROM: Director of Information Technology
SUBJECT: Information Technology Department Report for April 2021
DATE: May 12, 2021

A. General

1. Customer Care and ITD continue to work on the Promise Pay solution initiative, which will provide financially distressed customers additional ways to create payment plans and make alternate payment arrangements.
2. As the new Water Quality Services Building nears completion, staff are finishing up the configuration and testing of the network connections and equipment in the new building.
3. Staff continues work on the migration of Microsoft Exchange, Outlook, Office 365, and other applications to the cloud. Microsoft Teams has been deployed to the organization, and migration for Microsoft Exchange Online is in progress.
4. In April, the IT Help Desk staff completed over 386 work orders, ensuring availability of computing resources to those working locally and remotely.
5. Installation and testing of the new scale system discharge ticketing system (at each of the treatment plants that accept septic discharge) was completed in April.
6. Staff is working on implementation of software and processes to assist in more efficient tracking and management of IT and IT-related projects in the current decentralized workforce environment

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 2021
M-1.4a	Training During Work Hours Per Full-Time Employee (50) – Current Month	Total Training Hours / # FTE	2.31
M-1.4b	Total Training During Work Hours Per Full-Time Employee (50) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	11.36
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 2021
DATE: May 10, 2021

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

- a. There was one Sanitary Sewer Overflow (SSO) when a force main failed along Armistead Avenue in Hampton. The failure resulted in 9,425 gallons of sewage lost. This section of pipe is scheduled for replacement as part of an existing Capital Improvement Project (CIP).
- b. Staff approved the ControlWave technology as HRSD's top-end SCADA software platform after the successful completion of site demonstration and penetration tests in April. Staff will now begin the extensive effort of the site-by-site implementation/deployment of the panel installations and ControlWave program deployment throughout HRSD.

2. South Shore (SS) Interceptor Systems

There was one SSO after a contractor for the City of Suffolk mistakenly cut into an HRSD 30-inch prestressed concrete cylinder pipe located along Wilroy Road near Burnett's Mill Creek. Staff repaired the pipe. The failure spilled approximately 20,500 gallons into Burnett's Mill Creek.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Staff completed installation of a new motor control center (MCC) for odor control station A.
- b. Staff installed a new effluent stainless-steel weir gate. This new plate will ensure accurate flow readings for the plant's discharge.
- c. A contractor completed coating of the #2 primary clarifier. The coating will restore and protect the concrete surface.

2. Atlantic Treatment Plant (ATP)

- a. Staff received an odor complaint on April 9. An investigation determined that the most likely cause was contractor hauling of biosolids for land application. A second odor complaint was received on April 17 when a neighbor reported a smell like "burning tires." Staff found a condensate trap for the digester gas full of water thereby restricting gas flow, causing the gas to release at the pressure,

vent, and relief valve. The condensate trap actuator lost power preventing the water from draining. The issue was resolved once power was restored.

- b. Staff met with Virginia Occupational Safety and Health Administration (VOSHA) for an informal conference to appeal a citation that was issued during a recent inspection. VOSHA cited HRSD for a floor drain cover not being fully covered. The drain was being flushed due to foam backing up and an employee was in the area working on it. The issue was immediately addressed and a permanent solution was put in place to correct the issue. After discussing with VOSHA, the fine associated with the citation was removed.
- d. Staff started seeding digester #3 using Thermal Hydrolysis Process (THP) solids from digesters #1 & 2. The seeding is expected to take three to four weeks. Once complete there will be three THP digesters available to handle the additional flow coming from the closure of the Chesapeake-Elizabeth Treatment Plant (CETP).

3. Boat Harbor Treatment Plant (BHTP)

After suspending the discharge of fats, oils and grease (FOG) at the Williamsburg Treatment Plant (WTP) for needed maintenance activities, grease haulers began discharging more frequently at BHTP and Nansemond Treatment Plant (NTP). These additional loads started to take a toll on both BHTP and NTP. At BHTP, the primary clarifier flights failed because of a thick buildup of scum, along with the development of a heavy layer of settled solids at the bottom of the tanks. A contractor cleaned the effluent scum troughs and the scum hopper. The dissolved oxygen levels in the aeration tanks dropped to low levels, with the mixers unable to meet setpoints due to the concentrated loading of the FOG loads. As a result, staff from the Water Quality Department directed all grease loads to the ATP, which has a designated FOG receiving facility and can best handle these concentrated discharges.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

The chemical supply line for the sodium hypochlorite feed mixer broke off the mixer. During the repair, the retrieval cable broke but staff were able to retrieve the old mixer out of the contact tank influent chamber. Staff replaced the mixer, reconnected the chemical supply line, and repaired the retrieval cable. This repair resulted in a more efficient disinfection chemical mixing and lower chemical use.

5. James River Treatment Plant (JRTP)

- a. Staff installed two new primary solids pumps and an actuator on a centrifuge discharge gate.
- b. Staff started work on a new materials storage yard near the administration building. This storage yard will temporarily replace the existing yard that must be moved for SWIFT construction.
- c. The existing #3 centrifuge was removed by the contractor as part of the centrifuge replacement project. This is the second of three centrifuges to be replaced.

6. NTP

- a. Secondary clarifier #5, which is the tank with the Hydrograv installation, was taken out of service for a suspected seal failure. After taking the tank out of service, it was confirmed that both the lower and upper seal of the suction header had failed. Repairs are expected to be complete in May.
- b. On April 23, primary clarifier #4 malfunctioned and upon investigation, staff found a broken scum arm. There was a large accumulation of scum in the clarifier due in part to increased FOG discharges at the plant. Staff removed the clarifier from service and continued to work on cleaning and repairing the clarifier with an expected completion in early May.
- c. On April 21, the granular activated carbon (GAC) backwash check valve failed and overflowed the GAC pump station. This caused approximately 150 gallons of biofilter combined effluent water to be released to nearby asphalt/grass.
- d. Sustainable Water Initiative for Tomorrow (SWIFT) Research Center (RC)
 - (1) The total volume of SWIFT recharge into the Potomac aquifer for the month of April was 9.45 MG (31.5% Recharge Time).
 - (2) Staff resumed recharge operations on April 11 at 700 gallons per minute (approximately 1 million gallons per day), however injectivity had not completely recovered, indicating that the rehabilitation had limited effect on the well. Staff decided to drop the recharge flow rate to 600 gpm and are actively working on a plan to better understand the potential clogging agent(s) and how to mitigate them.

7. Virginia Initiative Plant (VIP)

- a. Contractors and staff coordinated an upgrade of the distributed control system in April. The upgrade caused intermittent process control interruptions and loss of programming to the dewatering centrifuge control panels, resulting in a shutdown of the solids handling facility.
- b. Staff completed rehabilitation work on one primary clarifier and placed it in service.

8. WBTP

- a. The oxidation tower #2 was flushed of solids in preparation for cleaning and inspection.
- b. Discharge of FOG by haulers remained suspended this month so staff could remove FOG from system tanks for repair and inspection. The FOG receiving, thickening and water tanks were all emptied. Cleaning of the tanks continued in preparation for entry and inspection.
- c. A contractor was used to haul solids to a disposal site to get secondary solids under control and improve secondary clarifier settling. The volume of solids

requiring removal from secondary treatment was beyond the normal capacity of the plant's solids handling system.

- d. The incinerator and administration buildings were tied into the new power distribution system as part of the switchgear project. The existing feeder cable to the non-potable water building failed testing and will need to be replaced. Feeder cables with similar service life to those of the headworks building, odor control and chemical building are being evaluated for replacement.

9. York River Treatment Plant (YRTP)

- a. Staff is investigating the source of a sulfur-type odor complaint from a resident in the Summerville neighborhood.
- b. Staff finished running cable and connecting valve actuators and other equipment on aeration tanks #3 and #4 that will be used to monitor and control air on the tanks. Programming of control equipment was also completed.
- c. Flow was put on the new pipeline between the headworks and primary distribution chamber. The new pipeline replaces approximately 300 linear feet of corroded 60-inch pipe that failed this past September. The contractor worked on replacing sidewalks, landscaping, and extending the temporary piping used during construction from the headworks to aeration influent chamber. Flow will be diverted to the temporary piping for a short period of time to allow for inspection of influent piping to each primary clarifier.

10. Incinerator Operations Events Summary

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all five plants with multiple hearth incinerators (Army Base, Boat Harbor, Chesapeake-Elizabeth, Virginia Initiative, and Williamsburg) with a THC continuous emissions monitoring (CEM) valid data captured of greater than 94%. There was one deviation from the required minimum operating parameters and seven minor bypass events (<60 minute).

C. Small Communities (SC)

1. Middle Peninsula Small Communities Treatment and Collections

a. West Point Treatment Plant (WPTP) and Collections

The tertiary filter is in full operation. The filter has helped reduce total suspended solids to an average concentration of approximately 10 mg/l.

b. King Williams Treatment Plant (KWTP) and Collections

(1) There were no pump and haul operations of the auxiliary equalization tank this month. Staff made mechanical and process adjustments contributing to increased plant flow output.

(2) Total flow for the month of March was 2.297 MG, of which 1.791 MG was

pumped to Nestle-Purina as reuse/reclaimed water and 0.510 MG was effluent flow to the outfall.

- (3) Staff installed a new pump station control panel at the Commerce Lane Pump Station. This panel was fully designed, procured, built, tested and installed by staff.

c. Urbanna Treatment Plant (UBTP) and Collections

- (1) During a quality control check, staff determined the calibration for the pH probe was not completed on April 19 and April 20, thus invalidating the analyzed value and generating a sampling frequency violation for all four events. The permit-required pH sample frequency is one valid sample per day. Staff was retrained on pH probe calibration, specifically on completion of the calibration process for the pH analyzer. Additionally, the internal quality control program was enhanced to require additional verifications of calibrations in the pH probe log.
- (2) Staff decided to forgo the installation of infrastructure for the mobile dewatering pad at the plant due to the closure of the treatment plant in the next three to four years. The drying beds will remain and digested sludge will be hauled to the WBTP for processing

2. Small Communities – Surry Systems

- a. On April 4, a customer complaint was received about a manhole overflow near 146 Elberon Heights Road in Surry. Staff located and cleared a line blockage. Approximately 3,500 gallons were released with 250 gallons recovered.
- b. The project to connect the Surry system to Smithfield continues to progress well. The new 250,000-gallon storage tank was installed at the Industrial Park Pump Station.

D. Energy Management (EM)

The solar array construction on the NS Operations Center is fully operational. It generated 12,580 kilowatts (kWh) in April, which is about 30 percent of the monthly consumption of that facility. A solar project is under consideration for the Water Quality (WQ) Services Building as well as other potential sites.

E. Electrical & Instrumentation (E&I)

1. Staff installed a Nitrite (NO₂), Nitrate (NO₃), Ammonia (NH₄), and Phosphate (PO₄) analyzer for the north side aeration tanks at BHTP. The analyzer is online and will control aeration when BHTP begins nitrification this summer.
2. Staff continues to work with contractors to complete several pressure reducing station (PRS) upgrades in preparation for the CETP closure. Testing control functions are underway at the Atlantic PRS, Providence PRS and Providence Offline Storage Facility.

F. Water Technology and Research

It was necessary to move the Biological Nutrient Removal (BNR) pilot facility with the closure of the CETP. Construction of a new pilot is occurring at VIP within an available space in the incineration building complex. This new pilot facility includes a flexible space for pilot reactors and equipment, a small laboratory place, and an integrated office and control room. Remaining work includes electrical, instrumentation and control system integration, as well as the installation of the raw wastewater feed pump station. The first project targeted for this facility involves the evaluation of BNR process operation at consistently very low dissolved oxygen (DO) concentrations. This work will answer lingering fundamental questions associated with low DO nitrogen and phosphorus removal.

G. MOM reporting numbers

MOM Reporting #	Measure Name	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
2.7	# of PS Annual PMs Performed (NS)	4	2	4	3	3	3	4	4	3	2		
2.7	# of PS Annual PMs Performed (SS)	5	7	5	5	5	3	4	5	4	2		
2.7	# of Backup Generator PMs Performed (Target is 4.6)	7	15	6	17	10	5	7	9	15	3		
2.8	# of FM Air Release Valve PMs Performed (NS)	114	42	187	264	182	186	161	43	185	235		
2.8	# of FM Air Release Valve PMs Performed (SS)	220	243	200	316	108	152	249	163	309	244		
2.9	# of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD)	9,394	3,605	5,057	6,050	1,467	3,320	2,062	4,862	3,404	2,692		
2.9	# of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD)	10,686	2,217	1,100	6,245	3,687	3,370	1,876	756	759	4,637		
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	0	0	0	0	0	0	0	0	0	3,589		

H. Strategic Measurement Data

1. Education and Outreach Events: 1

04/10/2021: Chief of Special Projects and Energy Management (CEM) attended New Horizons Technical Center.

2. Community Partners: 4

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

b. Jefferson Lab

c. Old Dominion University (ODU)

d. United Way Williamsburg House

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	April 2021
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (526) – Current Month	Hours / FTE	3.19
M-1.4b	Total Training During Work Hours per FTE (526) – Cumulative Year-to-Date	Hours / FTE	21.61
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	31,686.41
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	63.6%
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	13.96%
M-2.3d	Planned Maintenance - Projects	% of Total Maintenance Hours	22.44%
M- 4.1a	Energy Use: Treatment *reported for March 2021	kWh/MG	2,436

Item #	Strategic Planning Measure	Unit	April 2021
M-4.1b	Energy Use: Pump Stations *reported for March 2021	kWh/MG	252
M-4.1c	Energy Use: Office Building *reported for March 2021	kWh/MG	79
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	4

Respectfully submitted,
Steve de Mik
Director of Operations

TO: General Manager
 FROM: Director of Talent Management (TM)
 SUBJECT: Monthly Report for April 2021
 DATE: May 12, 2021

A. Talent Management Executive Summary

1. Recruitment Summary

New Recruitment Campaigns	20
Job Offers Accepted – Internal Selections	4
Job Offers Accepted – External Selections	9
Average Days to Fill Position	70

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

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

Description	April 2021	Total (March 2020- April 2021)
Quarantines due to illness or direct exposure (household or external)	8	325
Work Related Quarantines	9	34
Personal Travel Quarantines	4	52
Confirmed Employee COVID-19 Cases	4	67
Work Related COVID-19 Cases	0	1
Contractor COVID-19 Cases on HRSD Work Sites*	0	11
Vaccine Acknowledgements	263	263

*No direct exposure to HRSD employees

- b. Finalized *HRSD's Infectious Disease Preparedness and Response Plan* and updated required on-line training based on Virginia Occupational Safety and Health Administration's (VOSHA) permanent standard. An ERP training acknowledgement was developed in Employee Self Service.

- d. HR and Procurement staff worked to plan on-site vaccination clinics.

3. Benefits and Compensation

- a. TM and Finance staff worked on the following with HRSD's Benefit consultant:

- (1) 2021/2022 medical, vision and dental plan renewal
- (2) Implementation of voluntary supplemental health care plan options
- (3) Development of an Open Enrollment presentation

- (4) Implementation of a new benefit app, iNGAGED
 - b. Information on evaluation of the voluntary long-term disability benefit was compiled and presented to the HRSD QST. The benefit will be offered through Fiscal Year 2022 and HR will research available replacement plans.
 - c. TM and Finance staff worked on implementing a \$15 per hour minimum wage for full time and part time positions.
4. HR staff began reviewing and revising policies based on new Virginia legislation:
- (1) Reviewed overtime pay policies and payroll set-up with Accounting based on the Virginia Overtime Wage Act
 - (2) Began revising the Substance Abuse Policy and met with the drug testing provider to discuss recommendations for HRSD's testing program
5. Wellness Program
- a. Participation

Year Nine Participation Activities	Unit	April 2021	Year to Date (March 2021– February 2022)
Biometric Screenings	Number	1	183
Preventive Health Exams	Number	5	159
Preventive Health Assessments	Number	3	27
Online Health Improvement Programs	Number	0	36
Web-MD Online Health Tracking	Number	30	55
Challenges: W.M. Jordon Team to Team Weight Loss Challenge	Number	91	106
Fit-Bit Promotion	Number	2	8

- b. Wellness Program Year Eight close out activities were completed. The appeals process concluded, and Optima staff sent electronic files identifying employees earning the lowest health plan deductible and the employees and spouses who earned incentives which are scheduled for payout in May.
- c. Wellness Program Challenges:
 - (1) Established an HRSD team for the *Walk the Watershed Challenge* which runs from April 5 through May 15
 - (2) Promoted American Heart Association's *National Walking Day* held on April 7, with 91 employees and spouses participating.

7. Organization Development and Training (OD&T)
 - a. Continued working with OD&T consultant Hicks Carter Hicks on:
 - (1) Development of online training for an introductory Supervisory Knowledge and Information Program and communication to potential candidates.
 - (2) Development of a virtual coaching program including recruitment of candidates and deployment of a pulse survey for program development.
 - (3) Work with HRSD Leadership on several diversity and inclusion actions and strategies including recruitment of Diversity, Equity and Inclusion Council members as a follow-up to *Courageous Conversations*.
 - b. The Facilitator team conducted the fifth Leadership and Management Academy (LAMA) workshop, *Situational Leadership*.
 - c. OD&T and Workplace Facilitators deployed the first virtual *Your Role in Quality* (YRIQ) workshop. The overall feedback was positive.
 - d. Conducted two 360 Communication employee evaluations. Results will be reviewed with participants to use for future professional development.
8. Apprenticeship Program
 - a. Shelby Creeley, Nansemond Treatment Plant Operator, received the Department of Labor and Industry *Outstanding Apprentice for 2020* and was recognized at a work center breakfast held in her honor.
 - b. Progress was made on on-going improvements and the following improvements were initiated:
 - (1) Simulation Development- Operations
 - (2) Wastewater Lab Video – Sampling and Analytical Balancing
 - (3) Pipeline and Condition Assessment Video
 - (4) Lock-Down Instructor Training
9. The Safety Manager and Industrial Hygienist attended an online Informal Conference with VOSHA staff regarding an Atlantic TP citation. Corrective actions were completed.
10. Safety Notice #174 regarding a rigging incident was prepared and distributed.
11. The Safety Division continued conducting respirator fit testing and coordinating medical screenings and onsite physicals to meet Respiratory Protection Program requirements.

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

	<u>2020</u>	<u>2021</u>
Mishaps	32	11
Lost Time Mishaps	8	4
<i>Numbers subject to change pending HR review of each case.</i>		

13. Safety Division Monthly Activities

Safety Training Classes	24
Work Center Safety Inspections	8
Reported Accident Investigations	2
Construction Site Safety Evaluations	20
Contractor Safety Briefings	7
Hot Work Permits Issued	15
Confined Space Permits Issued/Reviewed	200
Industrial Hygiene Monitoring Events	4

14. Staff participated in the following external activities:

- a. The OD&T Manager worked with the Water Environment Federation (WEF) Utility Management subcommittee on an article, *The Importance of Organizational Culture in Stressful Times* for publication in the WEF Magazine.
- b. WEF Utility Management Committee and subcommittee meetings
- c. A quarterly Former Nansmond Ordnance Depot meeting
- d. A monthly Hampton Roads Society of Human Resources Management (HR-SHRM) Board of Directors meeting
- e. An Intergovernmental Public Association for Compensation committee meeting
- f. A *Canvas* Learning Management System Executive Business Review Meeting

B. Monthly Strategic Planning Metrics Summary

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

Item #	Strategic Planning Measure	Unit	April 2021
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.49
M-1.1b	Employee Turnover - Service Retirements	Percentage	0.25
M-1.4a	Total Training Hours Per Full Time Employee (17)	Total Training Hours/ FTE	6.44
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / FTE	28.08
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Community Partners	Number	0

Respectfully submitted,

Paula A. Hogg

Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for April 2021
DATE: May 13, 2021

A. General

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

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy (SEA) Group reported the following activities for the month of April.
 - a. Earth Day Team: Engaged HRSD employees by providing resources for them to calculate their carbon footprint. Fifty-three employees participated and the results indicated that the collective average carbon footprint was lower than the US national average.
 - b. Partnered with the Community Clean Up Team to clean Fort Monroe in Hampton.
 - c. Community Cleans Ups Team: Sponsored a community cleanup event every Saturday during the month of April at various locations in Hampton Roads. This included 41 volunteers who collected over 1,600 lbs. of trash at four different locations.
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 the Town of Lawrenceville, the City of Hopewell, Dale City, Northumberland County, Westmoreland County, and Prince William 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: 0
2. Community Partners: 2
 - a. Centers for Disease Control (CDC)
 - b. Hampton Roads Planning District Commission

3. Odor Complaints

- April 12 – Operations and TSD staff responded to odor complaints at the Atlantic Treatment Plant. The source of the odor was determined to be associated with operation of the facility’s class B land application biosolids program. The solids handling, truck loading, and hauling of the solids generated odors that were transported, based on the meteorological conditions at that time, to the neighboring Ocean Lakes community. This complaint was received after the biosolids pad had been cleared and the biosolids hauled out for the spring farm application. No further complaints have been received since April 12.
- April 19 – Operations and TSD staff responded to odor complaints at the Atlantic Treatment Plant. The primary source of odors was determined to be raw digester gas emitted from the digester pressure relief vent (PRV). A power failure to digester No. 5 automatic condensate drain caused water buildup and ultimately stopped normal gas flow and diverted the gas to the PRV. This system failure, coupled with prevailing easterly winds, resulted in odors in the Ocean Lakes community. Shortly after this complaint was received plant staff identified the problem and restored power to the auto-drain which ended the event. The complaint did have unique odor descriptors “burning tires and the spray used to keep animals away from vegetable gardens” that lends itself to a possible unknown secondary source of odors. No further complaints have been received since April 19.
- April 30 – The York River Treatment Plant received a complaint from the nearby Sommerville neighborhood. A complaint from January 27, 2021 identified excess odors from bypass pumping used during a line repair at the facility and in response, plant staff increased the iron feed which ended that odor complaint event. By April 22, the plant line repair was completed, bypass pumping had stopped, and iron feed was decreased to normal operating levels. There were still odors onsite coming from the primaries and aeration tanks that, coupled with worse case meteorological conditions, resulted in offsite odors and a new complaint. In response, plant staff increased the iron feed to the primary clarifier distribution box to help reduce onsite odors. No further complaints have been received to date.

4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	April 2021
M-1.4a	Training During Work Hours Per Full Time Employee (118) (Current Month)	Total Hours / # FTE	5.10
M-1.4b	Total Training During Work Hours Per Full Time Employee (118) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	43.93
M-2.5	North Shore/South Shore Capacity Related Overflows	# within Level of Service	0

Item #	Strategic Planning Measure	Unit	April 2021
M-3.1	Permit Compliance	# of Exceedances: # of Permitted Parameters	20:50,733
M-3.2	Odor Complaints	#	3
M-3.4	Pollutant Removal	Total Pounds Removed	152,752,514
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	21%
M-5.2	Educational and Outreach Events	#	0
M-5.3	Community Partners	#	2
	Average Daily Flow	Total MGD for all Treatment Plants	143.06
	Pretreatment Related System Issues	#	0

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



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

I. Projects in Process

Succession Planning

- **Upcoming Tasks (May 2021)**
 - Finalize report

WIFIA Compliance

- **Tasks Completed (April 2021)**
 - Continued to draft and refine in-process deliverables
- **Upcoming Tasks (May 2021)**
 - Conduct follow-up meetings as necessary
 - Continue to draft and refine in-process deliverables
 - Schedule interviews with anticipated responsible parties

Emergency Repairs

- **Tasks Completed (April 2021)**
 - Received and reviewed process and background documentation
 - Scheduled and conducted initial process interviews
 - Began documenting process flowcharts and risk and control matrices
- **Upcoming Tasks (May 2021)**
 - Schedule follow-up process understanding meetings
 - Complete draft flowcharts and risk and control matrices
 - Submit planning phase documentation for validation
 - Develop Fieldwork Audit Program

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

- SC&H is working with HRSD process owners and management to finalize the audit report, incorporating management action plans.

II. Management Action Plan (MAP) Monitoring

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

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

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



Audit	Report Date	Next Follow-up	Recommendations		
			Closed	Open	Total
D&C: CIP Project Management	5/11/16	Closed	13	0	13
Biosolids Recycling	10/8/16	Pending Permit	7	1	8
HR Benefits	11/22/16	Closed	15	0	15
Inventory	4/20/17	Closed	5	0	5
Procurement/ ProCard	8/23/17	In process	8	3	11
Engineering Procurement	4/20/18	Closed	8	0	8
Corporate Governance: Ethics Function	3/21/18	January 2021	3	2	5
Treatment Plant Operations	10/15/18	July 2021	5	4	9
Customer Care Division	7/26/19	December 2022	2	2	4
Safety Division	9/12/19	February 2022	0	3	3
Permitting	2/4/20	April 2021	0	2	2
Payroll	3/27/20	April 2021	0	3	3
Pollution Source Control	6/2/20	January 2022	3	5	8
SWIFT Program	2/24/2021	February 2022	0	12	12
Fleet Services	2/24/2021	February 2022	0	17	17
Totals			69	54	123

Annual Metrics														
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%	6.66%	9.99%	6.63%	6.78%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%	0.90%	1.01%	2.10%	3.08%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	70%	71%	64%	69%	68%	85%	85%	63%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67	67	66	60
M-1.4	Training Hours per Employee - cumulative fiscal year-to-date	Hours	> 40		30.0	43.8	37.5	35.9	42.8	49.0	48.4	41.1	40.9	39.3
M-1.5a	Safety OSHA 300 Incidence Rate Total Cases	# per 100 Employees	< 3.5	6.57	6.15	5.8	11.2	5.07	3.87	7	5.5	5.7	4.1	4.8
M-1.5b	Safety OSHA 300 Incidence Rate Cases with Days Away	# per 100 Employees	< 1.1	0.74	1.13	1.33	0.96	1.4	0.82	1.9	1	1.1	0.8	1.34
M-1.5c	Safety OSHA 300 Incidence Rate Cases with Restriction, etc.	# per 100 Employees	< 0.8	3.72	4.27	2.55	4.5	2	1.76	3.6	2.8	2.8	1.8	1.6
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%	156%	160%	170%	170%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%	167%	159%	159%
M-2.3a	Total Maintenance Hours	Total Available Mtc Labor Hours Monthly Avg			16,495	22,347	27,615	30,863	35,431	34,168	28,786	28,372	31,887	29,596
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%	44%	59%	59%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%	24%	18%	19%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%	32%	27%	25%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%	5%	4	5%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45	1.58	1.66	1.58	1.7
M-3.6	Alternate Energy (Incl. Green Energy as of FY19)	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096	6,052,142	5,862,256	47,375,940	56,473,800
M-4.1a	Energy Use: Treatment	kWh/MG Monthly Avg			2,473	2,571	2,229	2,189	2,176	2,205	2,294	2,395	2,277	2,408
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163	173	170	181	174
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97	104	104	95	102
M-4.2	R&D Budget	Percentage of Total Revenue	> 0.5%		1.0%	1.4%	1.0%	1.3%	1.0%	0.8%	1.3%	1.4%	1.8%	1.3%
M-4.3	Total Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow		\$1,028	\$1,095	\$1,174	\$1,232	\$1,249	\$1,279	\$1,246	\$1,285	\$1,423	\$1,348	\$1,487
M-4.4	Affordability	8 CCF Monthly Charge/ Median Household Income	< 0.5%		0.48%	0.48%	0.41%	0.43%	0.53%	0.55%	0.59%	0.60%	0.64%	0.71%
M-4.5	Total Operating Cost/MGD	Total Operating Expense/ 365/5-Year Average Daily Flow		\$2,741	\$2,970	\$3,262	\$3,316	\$3,305	\$3,526	\$3,434	\$3,592	\$3,959	\$3,823	\$4,048
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A	N/A	53%	N/A	53%
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%	143%	114%	117%	143%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35	15	20	26	32
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09	154.24	152.8	152.23	149.84
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14	66.66	49.24	53.1	48.49
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%	76%	72%	78%
	Senior Debt Coverage	Net Revenue/Senior Annual Debt Service	> 1.5	2.51%	2.30%	2.07%	1.88%	1.72%	1.90%	2.56%	3.10%	3.59%	4.84%	5.80%
	Total Debt Coverage	Net Revenue/Total Annual Debt	>1.4	1.67%	1.67%	1.46%	1.45%	1.32%	1.46%	1.77%	1.93%	2.03%	2.62%	2.81%

*to be reported

Monthly Updated Metrics															FY-21	FY-21
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20	Mar-21	Apr-21
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	145.8	152.7	141.5	156.0	143.1
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	4	7	1	1	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	103%	104%	104%	103%	102%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	117%	119%	104%	107%
	Accounts Receivable (HRSD)	Dollars (Monthly Avg)			\$17,013,784	\$17,359,488	\$18,795,475	\$20,524,316	\$20,758,439	\$22,444,273	\$22,572,788	\$22,243,447	\$23,900,803	\$27,335,100	\$31,799,579	\$31,888,280
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	18%	17%	18%	31%	34%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	10	5	2	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	9:53236	9:58338	2:60879	9:60879	20:45659	20:50733
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	6	9	15	0	3
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	189,765,922	190,536,910	187,612,572	182,759,003	137,611,234	152,752,514
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	22%	17%	17%	17%	22%	21%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	367	256	9	16
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	293	230	17	12

EFFLUENT SUMMARY FOR APRIL 2021

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	TKN mg/l	NH3 mg/l	CONTACT TANK EX
ARMY BASE	8.30	46%	6	5.1	4	2	0.27	0.60	3.5	4.8	NA	NA	4
ATLANTIC	30.65	57%	12	8.2	2	2	NA	NA	NA	NA	NA	NA	7
BOAT HARBOR	13.06	52%	10	7.5	1	1	0.50	0.41	20	18	NA	NA	4
CENT. MIDDLESEX	0.010	38%	<2	7.0	<1	1	NA	NA	NA	NA	1.8	0.05	NA
CHES-ELIZ	10.79	45%	16	13	4	1	1.0	1.3	31	30	NA	NA	6
JAMES RIVER	14.14	71%	4	3.5	2	1	0.23	0.36	7.0	6.5	NA	NA	0
KING WILLIAM	0.077	77%	0	<1.0	NA	<1	0.047	0.032	0.76	2.8	0.70	NA	NA
NANSEMOND	16.64	55%	3	3.7	1	2	0.44	0.63	4.4	5.0	NA	NA	0
SURRY, COUNTY	0.046	71%	4	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	0
SURRY, TOWN	0.078	130%	3	5.6	NA	7	NA	NA	NA	NA	1.6	<0.10	NA
URBANNA	0.050	50%	3	6.3	6	2	0.15	0.53	6.2	11	NA	3.75	NA
VIP	26.90	67%	2	2.0	2	1	0.29	0.38	2.4	3.5	NA	NA	1
WEST POINT	0.536	89%	23	11	1	1	2.8	2.1	16	13	NA	NA	0
WILLIAMSBURG	8.49	38%	5	5.0	2	1	0.93	0.50	4.4	5.1	NA	NA	3
YORK RIVER	13.30	89%	3	0.26	<1	<1	0.16	0.17	4.3	5.3	NA	NA	2
	<u>143.06</u>												

	% of Capacity
North Shore	59%
South Shore	56%
Small Communities	80%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection CY21		YTD	Projection CY21	
	%	Lbs	%	%	Lbs	%
James River	27%	3,742,986	82%	24%	260,388	82%
York River	33%	263,659	91%	22%	15,639	81%
Rappahannock	21%	NA	NA	4%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY21 to Date: 20:50,733
Pounds of Pollutants Removed in FY21 to Date: 152,752,514
Pollutant Lbs Discharged/Permitted Discharge FY21 to Date: 21%

	Rainfall (inch)		
	<u>North Shore (PHF)</u>	<u>South Shore (ORF)</u>	<u>Small Communities (FYJ)</u>
Month	1.56"	2.68"	2.21"
Normal for Month	4.15"	3.33"	4.11"
Year to Date Total	15.72"	14.91"	16.88"
Normal for YTD	14.39"	12.69"	13.91"

AIR EMISSIONS SUMMARY FOR APRIL 2021

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave (F)	12 hr ave (in. WC)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	pH 3 hr ave	Bypass Stack Use	Mo. Ave (PPM)	DC (%)	Daily Ave Days >Max
ARMY BASE	0	0	0	0	0	0	0	3	63	99	0
BOAT HARBOR	0	0	0	n/a	1	0	0	0	5	100	0
CHES-ELIZ	0	0	0	0	0	0	0	0	15	94	0
VIP	0	0	0	n/a	0	0	0	1	12	96	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	3	24	100	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:	3
HRSD Odor Scrubber H2S Exceptions:	3

AGENDA ITEM 20. - May 25, 2021

Subject: Closed Meeting

Recommended Action: Approve motion to go into a closed meeting to consider the following:

Item: Personnel matter

Purpose: (1) To review the performance, terms and conditions of employment of certain employees; and (2) discuss employment issues involving separation and discipline of certain employees.

Specific Exemptions: Va. Code §2.2-3711.A1

AGENDA ITEM 21. – May 25, 2021

Subject: Reconvened Meeting

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