



COMMISSION MEETING MINUTES
April 23, 2019

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Attachments (8)



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Name	Title	Present for Item Nos.
Elofson, Frederick N.	Commission Chair	Absent
Lynch, Maurice P.	Commission Vice-Chair	1-18
Glenn, Michael E.	Commissioner	1-18
Lakdawala, Vishnu K.	Commissioner	1-18
Levenston, Jr., Willie	Commissioner	1-18
Rodriguez, Stephen C.	Commissioner	1-18
Taraski, Elizabeth	Commissioner	Absent
Templeman, Ann	Commissioner	1-18

Prior to the start of the agenda, Mr. Henifin explained an advertisement was published in The Virginian Pilot on April 14, 2019 for a public hearing on determination of public need on the proposed acquisition of a portion of property located at 2954 Virginia Beach Boulevard. This 7,074 square foot parcel is needed to support facilities needed for the Virginia Beach Boulevard Force Main Phase VI project. Mr. Henifin said the acquisition has been successfully negotiated with the property owner and a public hearing will not be necessary.

1. **AWARDS AND RECOGNITION**

Action: No action required.

Brief:

a. Governor’s Environmental Excellence Award

HRSD has received the 2019 Governor’s Environmental Excellence [Award](#), earning the Gold Medal for the environmental project category for the SWIFT Research Center. [Winners](#) were announced March 28 at this year’s Environment Virginia Symposium in Lexington. The awards recognize significant contributions of environmental and conservation leaders in four categories: sustainability, environmental project, land conservation and implementation of the Virginia Outdoors Plan.

b. HRSD Environmental Improvement Fund Awards

Mr. Henifin announced the [winners](#) of the HRSD Environmental Improvement Fund Awards that were presented March 3 during the 68th Annual Tidewater Science and Engineering Fair. The following recipients were selected by a team of HRSD scientists led by Water Quality Director Jim Pletl:



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Junior Division (Middle School)

1st Place – Jack Speth; York High Schools, York School, York County *“Using Biodegradable Fuels as an Alternative Source to Coal”*

2nd Place – Hannah Bunting; Spratley Gifted Center, Hampton *“Caring for Our Watersheds – Which Property Types Contribute Most to Stormwater Runoff”*

Senior Division (High School)

1st Place – Anna Vargas; Governor’s School for Science and Technology, Tabb High School, Newport News *“Microbial Fuel Cell Biosensors”*

2nd Place – Corey Comba; Math and Science Academy at Ocean Lakes, Virginia Beach *“The Effect of Temperature and pH on Metabolic Rates of Seagrass”*

The prizes are:

Junior Division: First Place – \$400 cash and a trophy; Second Place – \$300 cash and a trophy

Senior Division: First Place – \$700 cash and a trophy; Second Place – \$500 cash and a trophy

HRSD also presents a \$75 cash honorarium to the teacher that mentored and supported each winner.

Attachment #1: [Presentations and Resolution](#)

Public Comment: None



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2. **CONSENT AGENDA**

Action: Approve the items listed in the Consent Agenda.

Moved: Willie Levenston **Ayes:** 6
Seconded: Vishnu Lakdawala **Nays:** 0

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Awards
 - 1. [Granular Activated Carbon](#) \$351,000
 - 2. [Protective Coatings and Linings Rehabilitation of Virginia Initiative Plant Secondary Clarifiers #2 and #5](#) \$233,500
- c. Task Orders
 - 1. [Hampton Trunk A and B Replacement – Jefferson Avenue to Walnut Avenue](#) \$613,323
 - 2. [Jefferson Avenue Interceptor Force Main Replacement Phase III](#) \$923,852
 - 3. [Manhole and Wet Well Rehabilitation](#) \$338,172
- d. Sole Source
 - 1. [Illumina Inc., iSeq™ Next Generation Sequencing System](#)
 - 2. [Sydnor Hydro, Inc., Pentair/Fairbanks Morse Turbo Free Elbows](#)
 - 3. [Commonwealth Engineering and Sales, Inc., Yeoman Pump Parts](#)

Item(s) Removed for Discussion: None

Attachment #2: [Consent Agenda](#)

Public Comment: None



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3. **REVENUE POLICY**

Action: No action required.

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.

The revised policy includes clarifications and definitions. The following key changes were presented at the February 26 and March 26 Commission Workshops:

- The Facility Charge waiver for residential septic tanks was clarified to be for single family residential properties.
- The Financial Forecast should target financial metrics, across the twenty-year period, that are consistent with rating agency metrics for a strong, double-A rated credit.
- Flat Rate accounts are based on the winter average (January, February, March) water consumption, which is 8.3 ccf based on the most recent water meter analysis. This was previously 6.5 ccf, which is the regional benchmark.
- Non-permitted commercial facilities will be charged based on surcharge categories and assigned average concentrations using sampling data for groups of businesses that produce similar goods or services using the North American Industry Classification System (NAICS).
- The minimum charge will be based on Operations' labor costs and the 10-year rolling average number of accounts.

The [revised policy](#) is provided for Commission review and comment. The revised policy will be presented to the Commission for action at the May meeting.

Attachment #3: [Policy](#)

Public Comment: None



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4. **ANNUAL BUDGET AND RELATED COMPONENTS**

Action: Receive the Financial Committee's report for the proposed Fiscal Year 2020 Annual Budget and Capital Improvement Program (CIP).

Brief: Commission workshops were held on February 26 and March 26 to review the draft Fiscal Year 2020 Annual Budget. The Finance Committee (comprised of Commissioners Rodriguez and Lynch) and other Commissioners attended the Capital Improvement Program (CIP) review meeting on February 28, 2019 and the Fiscal Year 2020 Annual Budget review meeting on April 12, 2019.

The final budget package will be presented to the Commission for approval during the May Commission meeting. In accordance with Commission governance guidelines, the Commission must adopt an operating budget on or before the first day of June for the fiscal year beginning July 1.

The annual budgeting process includes updating a long-range financial forecast as well as developing an Annual Budget, CIP and Rate and Facility Charge Schedules. Because these components are inter-related, they are presented together to evaluate the overall budget and financial condition of HRSD.

The long-range financial forecast is a planning tool used to project the need, timing and amount of rate adjustments and debt requirements to fund the CIP and maintain financial resiliency. The revenue and expense projections are developed using inflationary assumptions, past experience, the Annual Budget and the CIP.

The 10-year CIP, a long-range planning tool used to summarize needed projects, includes a description, cost estimate and schedule for each project. The Commission approves the 10-year plan along with the planned expenditures for the first fiscal year in the plan. Each project is reviewed prior to commencement to reevaluate the need, timing, location, capacity, cost and schedule for the project. Individual projects in the approved CIP are presented to the Commission for appropriation of project funding when the first dollar is proposed to be spent. As individual projects proceed, the Commission remains informed through regular reports and briefings. The proposed CIP totals approximately \$2.8 billion over the next 10 years.

Discussion Summary: Commissioner Rodriguez, chair of the Finance Committee, provided a report on the entire annual budget process. He thanked staff for the thorough, well organized and streamlined presentation of the CIP and budget information.

Attachment #4: [Presentation](#)

Public Comment: None



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5. **CAPITAL IMPROVEMENT PROGRAM (CIP)
QUARTERLY UPDATE**

Action: No action required.

Brief: Implementing the CIP continues to be a significant challenge as we address numerous regulatory requirements, SWIFT Program implementation and the need to replace aging infrastructure. Staff provided a briefing describing the status of the CIP, financial projections, projects of significance and other issues affecting the program.

Attachment #5: [Presentation](#)

Public Comment: None



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6. ATLANTIC PRESSURE REDUCING STATION (PRS) RELIABILITY MODIFICATIONS
ADDITIONAL APPROPRIATION AND TASK ORDER (>\$200,000)

Actions:

- a. Appropriate additional funding in the amount of \$2,147,130.
- b. Approve a task order for Kimley-Horn and Associates in the amount of \$614,750.

Moved: Stephen Rodriguez **Ayes:** 6
Seconded: Willie Levenston **Nays:** 0

CIP Project: CE011827

Budget	\$7,586,000
Previous Expenditures and Encumbrances	(\$2,243,980)
Available Balance	\$5,342,020
Proposed Task Order to Kimley-Horn	(\$614,750)
Proposed Task Order to HDR	(\$95,400)
Proposed Guaranteed Maximum Price	(\$6,779,000)
Project Shortage/Requested Additional Funding	(\$2,147,130)
Revised Total Project Authorized Funding	\$9,733,130

Contract Status	Amount
Original Contract with Kimley-Horn and Associates	\$193,200
Total Value of Previous Task Orders	\$659,635
Requested Task Order	\$614,750
Total Value of All Task Orders	\$1,274,385
Revised Contract Value	\$1,467,585
Engineering Services as % of Construction	18.2%

Project Description: This project will make reliability improvements to the existing Atlantic Pressure Reducing Station (PRS) including new pumps, and interior piping and electrical modifications associated with the new pumps. Structural modifications for items including equipment access platforms, pump pads and construction of an electrical control room are also included. Minor modifications to the interior mechanical equipment are also to be provided.

Funding Description: The original CIP project scope and cost estimate did not anticipate the use of a Consultant Program Manager and several miscellaneous improvements to facilitate operation and maintenance of the facility. These additional expenditures are justified because they will help meet the aggressive schedule of the Chesapeake-Elizabeth Treatment Plant permanent closure and diversion program and further improve future



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reliability of the facility. As a result, this project requires additional funding because cost exceeds the balance available for this CIP project. The approval of the Guaranteed Maximum Price (GMP) for construction of the improvements at this PRS is the subject of a separate agenda item. The proposed GMP amount is included in the requested amount of additional appropriation.

Task Order Description and Analysis of Cost: The task order for Kimley-Horn will provide contract administration and construction inspection services. Discussions occurred among Kimley-Horn, HDR (consultant program manager) and HRSD staff to develop and review the project and scope of services. A fee of \$614,750 was negotiated, which will provide the required services.

The cost for this task order is based on 1,853 labor hours for contract administration at an average raw hourly labor rate of \$53.25. Construction inspection is based on an average raw hourly labor rate of \$35.42. The proposed amendment amount is approximately 7.6% of the estimated construction cost which is \$8,058,749. This cost is in agreement with historical costs for similar efforts from other firms.

<u>Schedule:</u>	Construction	May 2019
	Project Completion	June 2021

Attachment: None

Public Comment: None



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7. **KEMPSVILLE PRS RELIABILITY MODIFICATIONS
ADDITIONAL APPROPRIATION AND TASK ORDER (>\$200,000)**

Actions:

- a. **Appropriate additional funding in the amount of \$2,153,940.**
- b. **Approve a task order for Kimley-Horn and Associates in the amount of \$444,600.**

Moved: Vishnu Lakdawala **Ayes:** 6
Seconded: Willie Levenston **Nays:** 0

CIP Project: CE011828

Budget	\$3,208,000
Previous Expenditures and Encumbrances	(1,162,540)
Available Balance	\$2,045,460
Proposed Task Order to Kimley-Horn	(\$444,600)
Proposed Task Order to HDR	(\$71,800)
Proposed Guaranteed Maximum Price	(\$3,683,000)
Project Shortage/Requested Additional Funding	(2,153,940)
Revised Total Project Authorized Funding	\$5,361,940

Contract Status	Amount
Original Contract with Kimley-Horn and Associates	\$149,900
Total Value of Previous Task Orders	\$439,534
Requested Task Order	\$444,600
Total Value of All Task Orders	\$884,134
Revised Contract Value	\$1,034,034
Engineering Services as % of Construction	24.9%

Project Description: This project will make reliability improvements to the existing Kempsville Pressure Reducing Station (PRS) including new pumps, and interior piping and electrical modifications associated with new pumps. Some minor structural modifications including equipment access platforms, pump pads and construction of an electrical control room. Minor modifications to the interior mechanical equipment are also to be provided.

Funding Description: The original CIP project estimate did not anticipate the use of a Consultant Program Manager and several miscellaneous improvements to facilitate operation and maintenance of the facility. These additional expenditures are justified because they will help meet the aggressive schedule of the Chesapeake-Elizabeth Treatment Plant permanent closure and diversion program and further improve future



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reliability of the facility. As a result, this project requires additional funding because cost exceeds the balance available for this CIP project. The approval of the Guaranteed Maximum Price (GMP) for construction of the improvements at this PRS is the subject of a separate agenda item. The proposed GMP amount is included in the requested amount of additional appropriation.

Task Order Description and Analysis of Cost: The task order for Kimley-Horn will provide contract administration and construction inspection services. Discussions occurred among Kimley-Horn, HDR (consultant program manager) and HRSD staff to develop and review the project and scope of services. A fee of \$444,600 was negotiated, which will provide the required services.

The cost for this task order is based on 1,049 labor hours for contract administration at an average raw hourly labor rate of \$54.97. Construction inspection is based on an average raw hourly labor rate of \$35.42. The proposed amendment amount is approximately 10.7% of the estimated construction cost which is \$4,144,710. This cost is in agreement with historical costs for similar efforts from other firms.

<u>Schedule:</u>	Construction	May 2019
	Project Completion	December 2020

Attachment: None

Public Comment: None



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8. ATLANTIC PRS RELIABILITY MODIFICATIONS AND
KEMPSVILLE PRS RELIABILITY MODIFICATIONS
APPROVAL OF GUARANTEED MAXIMUM PRICE (GMP)

Action: Approve a Guaranteed Maximum Price of \$10,462,000 to the Comprehensive Agreement with Ulliman Schutte Construction, LLC.

Moved: Willie Levenston **Ayes:** 6
Seconded: Stephen Rodriguez **Nays:** 0

CIP Project: CE011827/CE011828

Project Descriptions: The objective of these two projects is to upgrade the existing Pressure Reducing Station (PRS) facilities to provide the newly defined hydraulic capacity. The improvements at these PRS facilities are critical to the successful diversion of the Chesapeake-Elizabeth Treatment Plant to the Atlantic Treatment Plant by the end of 2021. Similar projects in this flow diversion program are also underway at the Independence Boulevard PRS, Laskin Road PRS, Pine Tree PRS, and Providence Road PRS and are included in the Comprehensive Agreement with Ulliman Schutte, LLC. The estimated costs listed below apply only to the two projects covered in this agenda item.

Guaranteed Maximum Price: These two projects are being procured through the Construction Management delivery process. On May 22, 2018, the Commission approved a Comprehensive Agreement with Ulliman Schutte Construction, LLC that included the amount of \$119,446 for preconstruction phase services associated with these projects. On September 25, 2018, the Commission approved a GMP for the procurement of pumps for these two pressure reducing stations in the amount of \$1,741,459. The Construction Manager has completed the competitive bidding for the construction of these projects. The GMP for the construction at these two stations is \$10,462,000 broken down as follows:

<u>Project</u>	<u>Estimated Cost</u>
Atlantic PRS Reliability Modifications	\$6,779,000
Kempsville PRS Reliability Modifications	\$3,683,000

Analysis of Cost: The bid prices for the construction of these projects are close to the detailed estimates prepared by the Engineer. A detailed breakdown of the bid prices was provided to and reviewed by the Engineer and Consultant Program Manager. The costs were judged to be appropriate for the project. Staff agrees and recommends the Comprehensive Agreement be amended to include the new GMP.

Attachment: None

Public Comment: None



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9. **FLEET MANAGEMENT
ADDITIONAL APPROPRIATION AND CONTRACT AWARD (>\$200,000)**

Action:

- a. **Appropriate additional funding in the amount of \$419,440.**
- b. **Award a contract to Atlantic Machinery Inc. in the amount of \$419,440.**

<u>Moved:</u>	Michael Glenn	<u>Ayes:</u>	6
<u>Seconded:</u>	Willie Levenston	<u>Nays:</u>	0

CIP Project: GN016800

Budget	\$612,000
Previous Expenditures and Encumbrances	(\$ 486,650)
Available Balance	<u>\$125,349</u>
Proposed Contract Award to Contractor	(\$419,440)
Proposed Contingency	\$0
Project Shortage/Requested Additional Funding	<u>(\$419,440)</u>
Revised Total Project Authorized Funding	<u><u>\$1,031,440</u></u>

Type of Procurement: HRSD Use of Existing Competitively Awarded Contract Vehicle

Contract Description: The purchases of Combination Jet/Vacuum Sewer Cleaners are an integral component to Interceptor Operations. Interceptors maintain sewage lines using the high pressure water jets of the Combination Jet/Vacuum Sewer Cleaner to loosen debris and clear lines. The loosened debris is then captured via on board high suction vacuum.

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

Funding Description: The original CIP project estimate did not anticipate bringing forward the Sewer Flusher Truck from FY-2020 budget year.

Analysis of Cost: Cost is fair based on price of similar goods.

Attachment: None

Public Comment: None



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10. **HAMPTON TRUNK SEWER EXTENSION DIVISION K GRAVITY IMPROVEMENTS
INITIAL APPROPRIATION**

Action: Appropriate total project funding in the amount of \$4,644,400.

Moved: Stephen Rodriguez **Ayes:** 6
Seconded: Ann Templeman **Nays:** 0

CIP Project: BH014900

Project Description: This project includes the rehabilitation and/or replacement of 3,700 linear feet of 30-inch gravity sewer pipe with associated manholes on Willard Avenue in Hampton. The project is located in the City of Hampton and extends from Taylor Avenue East to the Willard Avenue Pump Station. Condition assessment activities indicate that these assets present a material risk of failure due to inflow and infiltration. This project is included in the Inflow and Infiltration Abatement Rehabilitation – Phase II, which is part of the Federal Consent Decree to address sanitary sewer overflows in the region.

Funding Description: The estimated total project cost is \$4,644,400. The estimated project cost is based on a construction cost estimate of \$3,200,000 combined with an engineering services estimate of \$800,000 and a 25 percent contingency allowance of \$644,400. Engineering services will be provided by Rummel, Klepper and Kahl, LLP and include preliminary engineering, design and construction phase services.

Schedule:

PER	May 2019
Design	September 2019
Bid	April 2020
Construction	June 2020
Project Completion	August 2021

Attachment: None

Public Comment: None



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11. YORK RIVER TREATMENT PLANT ADVANCED NUTRIENT REDUCTION IMPROVEMENTS PHASE I
NEW CIP AND INITIAL APPROPRIATION

Actions:

- a. Approve a new CIP project for York River Treatment Plant Advanced Nutrient Reduction Improvements Phase I.
- b. Appropriate total funding for a new project in the amount of \$2,200,000.

Moved: Vishnu Lakdawala **Ayes:** 6
Seconded: Willie Levenston **Nays:** 0

CIP Project: YR013710

Project Description: This new CIP project will optimize the existing secondary treatment process at the York River Treatment Plant. Optimization of the secondary treatment process is required to provide stable source water quality that meets the influent requirements of the full scale SWIFT facility at the York River Treatment Plant. Based on performance of the current secondary treatment configuration, the proposed improvements include installation of ammonia based aeration control and all required appurtenances such as actuators, instrumentation, baffle walls, large bubble mixers, conduits and wiring.

Analysis of Cost: The total cost for this project is estimated at \$2,200,000 based on a Class 5 cost estimate for distributed control system modifications, quotes for equipment that will be directly purchased, and a quote for contractor services to install associated conduits, supports, and wiring. A ten percent project contingency is included in the requested appropriation.

Schedule: Construction April 2019
Project Completion June 2021

Attachment: None

Public Comment: None



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12. **4707 VICTORIA BOULEVARD, HAMPTON, VIRGINIA
QUITCLAIM DEED OF VACATION OF ACCESS EASEMENT**

Actions:

- a. **Authorize Vacation and Quitclaim of existing easement at 4707 Victoria Boulevard, Hampton, Virginia**
- b. **Authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.**

Moved: Ann Templeman **Ayes:** 6
Seconded: Willie Levenston **Nays:** 0

Project Description: As part of the negotiations to acquire the land for the new Bridge Street Pump Station site at 515 Bridge Street in Hampton, Virginia (2014), HRSD agreed to sell the existing pump station site at 4701 Victoria Boulevard. Adjacent to the old pump station site is a 20' x 90' foot easement located at 4707 Victoria Boulevard that was used primarily for access to the pump station. The underlying fee interest is owned by Hampton Yacht Club, Inc.

Since the old pump station has been decommissioned, HRSD staff has determined that this easement is no longer needed.

Funding Description: No funding required.

Agreement Description: The attached [Quitclaim Deed of Vacation of Easement](#) has been reviewed by HRSD legal counsel. [Facilities Orientation Maps](#) are also provided for clarification purposes.

Attachment #6: [Quitclaim Deed of Vacation of Easement and Maps](#)

Public Comment: None



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13. **PROPERTY DISPOSITION – OLD BRIDGE STREET PUMP STATION SITE
CONVEYANCE OF 4701 VICTORIA BOULEVARD, HAMPTON, VA**

Actions:

- a. **Accept the terms and conditions of the Deed between HRSD and Hampton Yacht Club, Inc. for the conveyance of 4701 Victoria Boulevard for \$110,000.**
- b. **Authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.**

Moved: Vishnu Lakdawala **Ayes:** 6
Seconded: Willie Levenston **Nays:** 0

Project Description: As part of the negotiations to acquire the land for the new Bridge Street Pump Station site at 515 Bridge Street in Hampton, Virginia (2014), HRSD agreed to sell the existing pump station site at 4701 Victoria Boulevard. The sale included several contingencies:

- Successful subdivision of the Bridge Street parcel
- Construction and operation of the new HRSD pump station at 515 Bridge Street
- Purchase price of \$750,000 for 515 Bridge Street
- Selling price of \$110,000 for 4701 Victoria Boulevard

The conveyance of 4701 Victoria Boulevard to Hampton Yacht Club represents the satisfaction of all obligations contained within the Contract for Purchase and Sale dated June 16, 2014 and amended September 21, 2018 (attached).

Agreement Description: The [Purchase Agreement](#) and [Addendum #1](#) are attached. The attached [Deed](#) was reviewed by HRSD legal counsel. A [Facilities Orientation Map](#) is also provided for clarification purposes.

Attachment #7: [Purchase Agreement, Addendum #1, Deed and Map](#)

Public Comment: None



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14. **UNFINISHED BUSINESS**

Jefferson Avenue Extension Gravity Improvements, Public Hearing on Determination of Public Need for Easement Acquisition – At the March 26, 2019 meeting, the Commission conducted a public hearing to determine the public need for the easement acquisition and acquisition by condemnation or other means. Mr. Henifin said the acquisition of the easement has been successfully negotiated with the property owner and condemnation will not be necessary.

15. **NEW BUSINESS**

September 2019 Commission Meeting Date – Mr. Henifin discussed changing the regularly scheduled Commission meeting date to September 30, 2019. This date will accommodate staff and Commission participation in the Water Environment Federation Technical Exhibition and Conference. The Commission meeting time and location would remain as scheduled. Formal action to change the date will be presented at the May 28, 2019 Commission meeting after all Commissioners have had an opportunity to check their schedules.

16. **COMMISSIONER COMMENTS**

Commissioner Levenston commended staff on the excellent advertising of the SWIFT project. He believes the communications are “getting the job done!”

Commissioner Lakdawala stated he is also receiving excellent comments from his colleagues about the SWIFT project. He said they are opening the topic with him for discussions and seem to be very knowledgeable.

Commissioner Lynch inquired about additional land that may be needed for the SWIFT projects. Mr. Henifin said the available land at all treatment plants is adequate to build the SWIFT facilities. However, staff is working with the City of Newport News on options to provide a little more space at the James River Treatment Plant

17. **PUBLIC COMMENTS NOT RELATED TO AGENDA – None**



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18. **INFORMATIONAL ITEMS**

Action: No action required.

Brief: The items listed below were presented for information.

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

Attachment #8: [Informational Items](#)

Public Comment: None

Next Commission Meeting Date: **May 28, 2019** at the HRSD South Shore Operations Complex, 1434 Air Rail Avenue, Virginia Beach, VA 23455

Meeting Adjourned: 10:03 a.m.

SUBMITTED:

Jennifer L. Cascio

Jennifer L. Cascio
Secretary

APPROVED:

Frederick N. Elofson

Frederick N. Elofson, CPA
Chair

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #1

AGENDA ITEM 1. – Awards and Recognition

- [Governor's Environmental Excellence Award](#)
- [HRSD Environmental Improvement Fund Awards](#)



2019 GOVERNOR'S ENVIRONMENTAL EXCELLENCE AWARD

HRSD

WHEREAS, Article XI of the Constitution of Virginia states that "it shall be the Commonwealth's policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth;" and

WHEREAS, the Commonwealth seeks to recognize those who have demonstrated leadership, innovation, and commitment to implement pollution prevention practices to reduce environmental impacts and improve our natural environment; and

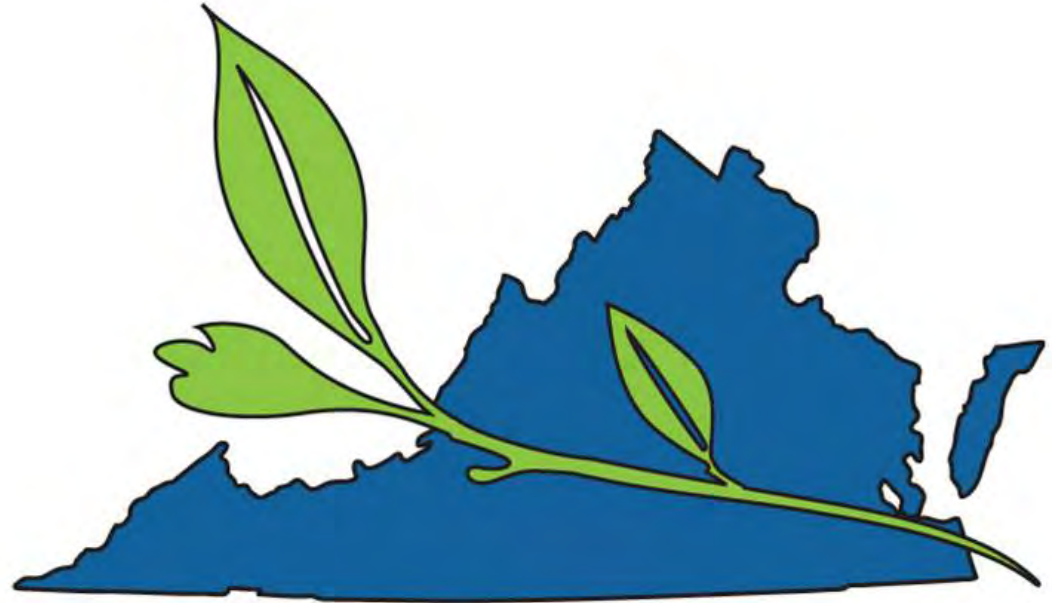
WHEREAS, pollution prevention is a cost-effective and environmentally sound approach to environmental management that strives to eliminate or reduce pollution at its source by minimizing the use of energy, water, and other natural resources through increased efficiency and conservation;

NOW, THEREFORE, I, Ralph S. Northam, Governor, do recognize HRSD as a Gold Medal recipient of the 2019 Governor's Environmental Excellence Award for its demonstrated commitment to the stewardship of Virginia's natural resources through its Sustainable Water Initiative for Tomorrow (SWIFT) Research Center.


Governor


Secretary of Natural Resources

2019



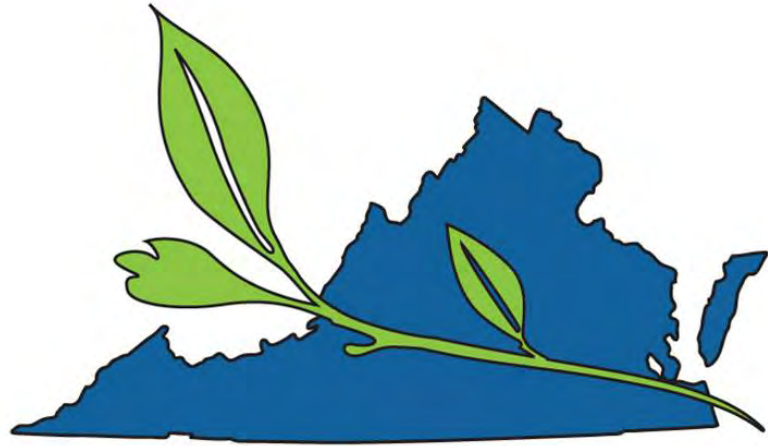
Governor's Environmental Excellence Awards

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Thank you judges!

- Sharon Baxter, DEQ
- Eunice Kulesza, Fareva
- Janit Llewellyn, Chesterfield Parks and Rec.
- Danette Poole, DCR
- Robbie Rhur, DCR
- Tom Smith, DCR
- Valerie Thomson, DEQ
- Rick Weeks, Dominion
- Jess Wenger, University of Virginia
- Mark Williams, Luck Companies



HONORABLE MENTIONS

Wild Wolf Brewing Every Day is Earth Day

SUSTAINABILITY PROGRAM



2018 GOVERNOR'S ENVIRONMENTAL EXCELLENCE GOLD MEDAL

2015-2016-2017

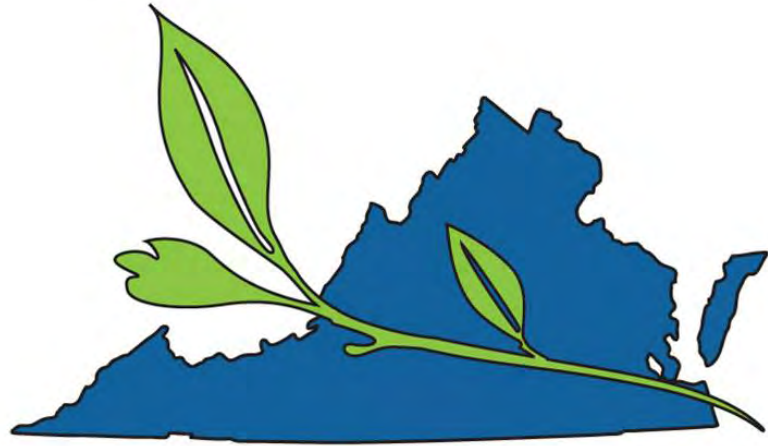
BREWERY OF THE YEAR!

EVERYDAY IS EARTH DAY!

Virginia Green

OUR CORE MISSION IS TO BE A STEWARD OF THE EARTH!





GOLD MEDAL WINNERS

HRSD SWIFT Research Center

ENVIRONMENTAL PROJECT





2019 HRSD Environmental Improvement Fund Awards

April 23, 2019

The HRSD Environmental Improvement Fund Awards were presented to winners on March 16, 2019 during the 67th Annual Tidewater Science and Engineering Fair.

Participants were judged on originality of research, scientific approach, data interpretation and the entrant's understanding of the study's value to environmental improvement.

The team of judges included HRSD scientists led by Water Quality Director Jim Pletl



Jamie Mitchell - Chief of Technical Services Division

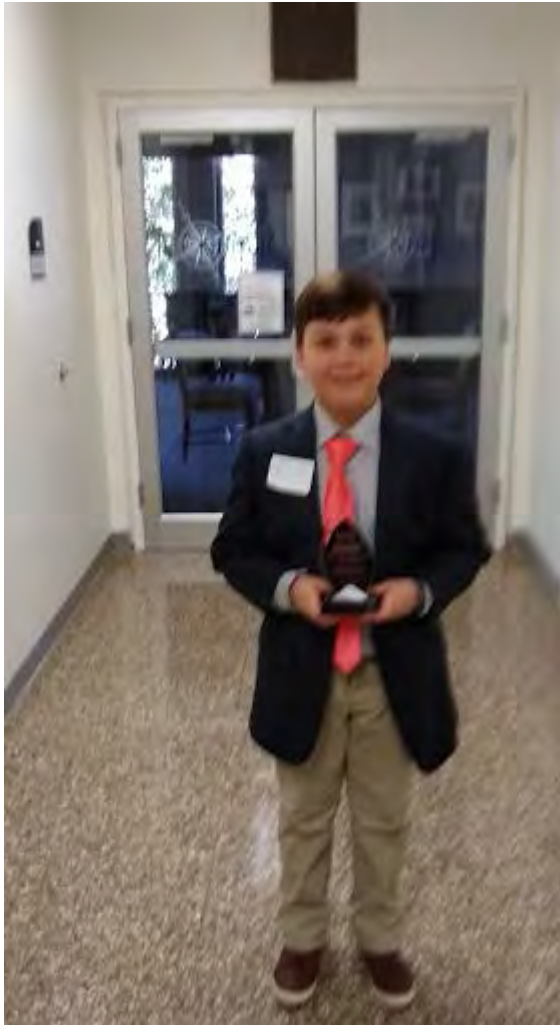


Ashley Roberts - CEL Supervising Chemist



Andrew Simmons - CEL Technician

Junior Division – 1st place



Jack Speth

York High School, York
County

*“Using Biodegradable
Fuels as an Alternative
Source to Coal”*



Hannah Bunting

Spratley Gifted Center,
Hampton

*“Caring for Our
Watersheds – Which
Property Types
Contribute Most to
Stormwater Runoff”*

Senior Division – 1st Place



Anna Vargas

Governor's School for
Science & Technology
Tabb High School

*"Microbial Fuel Cell
Biosensors"*

Senior Division – 2nd Place



Corey Comba

Ocean Lakes High School, Virginia Beach

“The Effect of Temperature and pH on Metabolic Rates of Seagrass”

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #2

AGENDA ITEM 2. – Consent Agenda

CONSENT AGENDA ITEM 2.b.1. – April 23, 2019

Subject: Granular Activated Carbon
Contract Award (>\$200,000)

Recommended Action: Award a blanket purchase contract for the supply and delivery of Granular Activated Carbon (GAC) to Nichem Co. in the estimated amount of \$70,200 for year one with 4 year annual renewal options and an estimated cumulative value in the amount of \$351,000.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Nichem Co.	\$70,200
EWT Holdings III Corp DBA Evoqua Water Technologies LLC	\$84,000
Calgon Carbon Corporation	\$144,000

HRSD Estimate: \$90,000

Contract Description: This contract is an agreement for the supply and delivery of acid washed granular virgin activated carbon made out of coconut shell. The Granular Activated Carbon (GAC) is used in the tertiary treatment process. GAC is an absorbent material which targets heavy metals and other contaminants. The primary target is heavy metal Zinc, more specifically soluble zinc present in the wastewater stream. Soluble zinc is toxic to aquatic life in the receiving stream of King William Treatment Plant effluent and is monitored.

Analysis of Cost: Costs were compared to past purchase history and costs were determined to be fair and reasonable.

CONSENT AGENDA ITEM 2.b.2. – April 23, 2019

Subject: Protective Coatings and Linings Rehabilitation of Virginia Initiative Plant
Secondary Clarifiers #2 and #5
Contract Award (>\$200,000)

Recommended Action: Award a contract to Town Hall Painting Corp. in the amount of \$233,500.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Town Hall Painting Corp.	\$233,500

HRSD Estimate: \$280,000

Contract Description: This contract is an agreement for the coating and rehabilitation of secondary clarifiers #2 and #5 at the Virginia Initiative Plant. The scope of work includes complete removal of the entire coating system and replacement of multiple deteriorated steel angles of the rake arm.

Analysis of Cost: All unit costs for labor for multiple project personnel are similar to that of these types of projects completed at HRSD and were found to be fair and reasonable.

CONSENT AGENDA ITEM 2.c.1. – April 23, 2019

Subject: Hampton Trunk A and B Replacement – Jefferson Avenue to Walnut Avenue
Task Order (>\$200,000)

Recommended Action: Approve a task order with Whitman, Requardt & Associates, LLP (WRA) in the amount of \$613,323.

CIP Project: BH015600

Budget	\$12,230,742
Previous Expenditures and Encumbrances	(\$204,265)
Available Balance	\$12,026,477

Contract Status:	Amount
Original Contract with WRA	\$202,699
Total Value of Previous Task Orders	\$0
Requested Task Order	\$613,323
Total Value of All Task Orders	\$613,323
Revised Contract Value	\$816,022
Engineering Services as % of Construction	8.16%

Project Description: This project involves the replacement of approximately 5,000 linear feet of 36-inch ductile iron and 3,000 linear feet of 34-inch/36-inch reinforced concrete pressure pipe from just north of the intersection of 14th Street and Jefferson Avenue to the intersection of 16th Street and Walnut Avenue. This project will replace the existing force main from the upstream terminus of the Hampton Trunk A Replacement project to the downstream terminus of the Hampton Trunk B Claremont Force Main project.

Task Order Description and Analysis of Cost: This task order will provide design and bid phase services for the project. In addition, this task order will also provide construction phase services for the work being expedited along Jefferson Avenue as part of the City of Newport News Jefferson Avenue Phase II Utilities Relocation and Streetscape Improvements project. A cost share agreement was presented to the Commission in February 2019. HRSD will reimburse the City in accordance with the terms of the Agreement.

The cost for this task order is based on a negotiated price between WRA and HRSD. The design phase services as a percentage of construction is 5.6% which compares well with percentages from similar projects.

Schedule: Design

May 2019

Bid
Construction
Project Completion

March 2020
June 2020
February 2022

CONSENT AGENDA ITEM 2.c.2. – April 23, 2019

Subject: Jefferson Avenue Interceptor Force Main Replacement Phase III
Task Order (>\$200,000)

Recommended Action: Approve a task order with Rummel, Klepper & Kahl, LLP in the amount of \$923,852.

CIP Project: JR011730

Budget	\$11,039,588
Previous Expenditures and Encumbrances	(\$248,105)
Available Balance	\$10,791,483

Contract Status:	Amount
Original Contract with Rummel, Klepper & Kahl, LLP	\$53,220
Total Value of Previous Task Orders	\$144,924
Requested Task Order	\$923,852
Total Value of All Task Orders	\$1,068,776
Revised Contract Value	\$1,121,996
Engineering Services as % of Construction	11.5%

Project Description: This project will replace approximately 7,000 linear feet of 12-inch, 14-inch and 16-inch force main from the intersection of Route 171 (Oyster Point Road) and Jefferson Avenue to the proposed Patrick Henry Pump Station Interconnection Force Main. Preliminary hydraulic and capacity analysis show that pressures in the HRSD force main are hindering the City of Newport News' pump station from entering the HRSD system during high flow conditions. Future development is planned for the service area which will exacerbate the current problem. This force main segment will provide additional capacity and system flexibility when combined with other proposed improvements.

Task Order Description and Analysis of Cost: This task order will provide design and bid phase services for this project.

The cost for this task order is based on a negotiated price between RK&K and HRSD. The design phase services as a percentage of construction is 9.5% which compares well with percentages from similar projects.

Schedule:	Design	May 2019
	Bid	January 2020
	Construction	April 2020
	Project Completion	September 2021

CONSENT AGENDA ITEM 2.c.3. – April 23, 2019

Subject: Manhole and Wet Well Rehabilitation
Task Order (>\$200,000)

Recommended Action: Approve a task order with Lyttle Utilities Incorporated in the amount of \$338,172.

CIP Project: GN012130

Budget	\$2,834,000
Previous Expenditures and Encumbrances	(\$1,690,039)
Available Balance	\$1,143,961

Contract Status:	Amount
Original Contract with Lyttle	\$123,338
Total Value of Previous Task Orders	\$0
Requested Task Order	\$338,172
Total Value of All Task Orders	\$338,172
Revised Contract Value	\$461,510

Project Description: This project includes engineering services associated with rehabilitation of numerous manholes and several siphon chambers identified as having material risk of failure or significant I/I during condition assessment activities. These manholes and siphon chambers have isolated issues with respect to the surrounding system and are not currently known to be included in any existing capital improvement projects for rehabilitation or replacement. This project is included in the Inflow and Infiltration Abatement Rehabilitation – Phase I, which is part of the Federal Consent Decree to address sanitary sewer overflows in the region.

Task Order Description: This task order will continue rehabilitation efforts for 19 additional manholes as part of Phase 1A.

Analysis of Cost: The cost for this task order is based on the unit rates provided in the cooperative contract with James City County Authority.

Schedule:	PER	June 2013
	Design	April 2014
	Bid	December 2018
	Construction	February 2018
	Project Completion	September 2020

CONSENT AGENDA ITEM 2.d.1. – April 23, 2019

Subject: Illumina Inc.
iSeq™ Next Generation Sequencing System
Sole Source (>\$10,000)

Recommended Action: Approve Illumina Inc. as the provider of iSeq™ Next Generation Sequencing (NGS) System for use at the Central Environmental Laboratory.

Sole Source Justification:

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

Details: The Illumina iSeq Next Generation Sequencing (NGS) System can analyze and identify all microbes (bacteria, viruses, eukaryotes) including high profile pathogens, antibiotic resistance, and harmful algal bloom organisms in wastewater and receiving water samples. Currently, Central Environmental Laboratory equipment is limited to the identification and quantification of only one microbe of interest at a time. Next Generation Sequencing capabilities are essential to HRSD's future monitoring of microbial water quality.

HRSD will have the capability of answering a more diverse set of microbial water quality questions with NGS using the more robust data generated. NGS will fill industry knowledge gaps related to upcoming regulatory (microbial) criteria by answering time sensitive questions required to evaluate the appropriateness of future criteria to our region. Additionally, in-house NGS capabilities will open the possibility of monitoring HRSD wastewater facilities for key treatment microbes to make near real-time operational decisions.

The iSeq™ NGS System will improve the current effectiveness of HRSD'S microbial source tracking (MST) program. There are other manufactures of NGS instruments but this instrument fits within the current space constraints and uses the patented Illumina sequencing by synthesis chemistry and complementary metal-oxide-semiconductor

technology that has been proven to generate the most accurate data of all NGS technologies.

Illumina is the direct manufacturer of equipment.

CONSENT AGENDA ITEM 2.d.2 - April 23, 2019

Subject: Sydnor Hydro, Inc.
Pentair/Fairbanks Morse Turbo Free Elbows
Sole Source (>\$10,000)

Recommended Action: Approve Sydnor Hydro, Inc. as the provider of the Turbo Free Elbows™ for use at HRSD.

Sole Source Justification:

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

Details: Product includes purchase of Turbo Free Elbows™. The elbow provides a smoother inlet flow, improving hydraulic performance and overall efficiency in pumping units. With the added benefit of reduced height, the lower profile elbow provides a more stable mounting arrangement for the pump and motor, freeing up more head room in cramped dry wells and alleviating the need for pump and piping modifications.

Sydnor Hydro, Inc. is the only authorized distributor of Pentair/Fairbanks Morse for Virginia.

CONSENT AGENDA ITEM 2.d.3 – April 23, 2019

Subject: Commonwealth Engineering and Sales, Inc.
Yeoman Pump Parts
Sole Source (>\$10,000)

Recommended Action: Approve Commonwealth Engineering and Sales, Inc. as the provider of Yeoman pump parts for use at HRSD.

Sole Source Justification:

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

Details: Product includes replacement parts for Yeoman pumps. Yeoman pumps have been installed at multiple pump stations. Specific brand replacement parts are required in order to maintain the pumps warranty.

Commonwealth Engineering and Sales, Inc. is the current authorized distributor for Virginia.

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #3

AGENDA ITEM 3. – HRSD Revenue Policy

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 ~~through sampling~~ and the corresponding concentration limits for domestic wastewater.

~~2.1.2~~ **2.1.2 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.*

~~2.2.3~~ **2.2.3 Facility Charges.** Charges to cover the cost of treatment and conveyance capacity consumed by new ~~development~~*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 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 accounts as determined periodically.*

~~2.3.2~~ **2.3.2 Hauled Wastewater.** Wastewater transported *and discharged* to a wastewater treatment plant ~~and discharged that is subject to a fee~~ *by conveyance other than pipelines.*

~~2.4.2~~ **2.4.2 High Strength or Unusual Waste.** Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Phosphorus (TP), and Total Kjeldahl Nitrogen (TKN) discharged waste ~~requiring a Surcharge Rate when~~ concentrations *that exceed the published levels in the Rate Schedule* ~~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~~*unique* rate.

~~2.5.2~~ **2.5.2 HRSD Charges.** Any and all charges or fees billed to customers for wastewater services provide by HRSD.

~~2.6.2~~ **2.6.2 HRSD Collection System.** All infrastructure conveying flow ~~from homes, businesses and industries~~ to the Interceptor System in localities where HRSD owns or operates a collection system.

2.9 *HRSD Collection System Charges. Rates for HRSD Collection System operating and maintenance costs that are in addition to Wastewater Treatment Charges.*

2.7.2.10 **HRSD Enabling Act.** The Commonwealth of Virginia 1960 Acts of the Assembly, c. 66 as amended.

2.11 *HRSD Rate Schedule. Published listing of rates, fees and charges applicable for specified time frame*

2.8.2.12 **Interceptor System.** ~~Large~~*Larger diameter* pipelines conveying flow from the ~~Collection System~~*collection system* to the Wastewater Treatment Plant.

2.13 *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.*

2.9.2.14 **Rational Nexus Criteria.** ~~This ensures~~*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.

2.40.2.15 **Regional Sanitary Sewer System.** All portions of the individual locality and HRSD wastewater collection and ~~transmission~~*interceptor* systems and appurtenances thereto.

2.41.2.16 **Surcharge Rate.** Rates for ~~high-strength-wastes~~*High Strength or Unusual Wastes* to recover costs in direct proportion to volume and pollutant concentrations. ~~Since the majority of HRSD's costs are fixed,~~
~~surcharge~~*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.

2.42.2.17 **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~~*Flat Rate*.

2.18 *Wastewater Treatment Rate. Rate per specified unit of measure to recover the costs of conveyance and treatment of Domestic Quality Wastewater.*

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 ~~as part of the annual budget process~~. Changes shall be ~~publically~~*publicly* advertised in accordance with HRSD's Enabling Act ~~as well as and~~ posted on ~~the HRSD~~*HRSD's* web site.

3.1.5 Surcharge rates ~~for high strength wastes~~ are set to recover costs in direct proportion to volume and pollutant concentrations. ~~Since the majority of HRSD's costs are fixed, surcharge rates are based on a marginal cost approach for the variable costs associated with the incremental costs to treat high strength wastes.~~ *in excess of Domestic Quality Wastewater.*

3.1.6 ~~Facility Charges are an up-front charge proportional to the cost of treatment and conveyance capacity consumed by each new user. This charge ensures~~*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 ~~growth.~~*flows and loads to HRSD's facilities.* HRSD uses the Rational Nexus Criteria ~~as one of the guiding principles~~ to derive ~~facility charges~~*Facility Charges.*

3.1.7 HRSD will ~~avoid dependence~~*not depend* on temporary revenues such as grants to fund operating costs. One-time temporary revenues or grants should typically be used to fund ~~capital projects~~*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).*

3.2 Basis of Charges.

3.2.1 Wastewater Treatment Charges ~~HRSD shall establish rates based on~~

- (1) *The Wastewater Treatment Rate is derived from* the ~~wastewater quality and one of the following factors:~~ *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)
- ~~(2)~~(3) A rate based on facility use and billing period.
- ~~(3)~~(4) A single family residential ~~flat rate~~ *Flat Rate as defined herein.*
- ~~(4)~~(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.
- ~~(5)~~(6) Minimum charges apply to all accounts, except as specified herein.

~~3.2.1~~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~~ *locality* does not offer a specific meter size, a combination meter is proposed, or ~~other~~ *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~~ *Rate Schedule*.
- (2) The Facility Charge for each meter size is based on the ~~unit volume rate, which is the~~ total net replacement value of all HRSD's assets ~~divided by,~~ HRSD's total hydraulic capacity, ~~times~~ *and* the average water consumption for each meter size.
- (3) HRSD reserves the right to ~~establish facility charges for new connections~~ *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.

3.2.3.2.3 HRSD Collection System ~~Maintenance Charges~~ ~~HRSD may establish separate collection system rates~~ - *A rate to recover HRSD costs for maintenance charges for each Locality and operation of HRSD owned collection systems. The rate shall be based upon the weighted average rate charged by localities within the HRSD Collection System. A weighted average cost of HRSD Locality collection rates will be used to develop the service area for collection system operation and maintenance of locality owned collection rate annually 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.*

3.2.3.2.4 Hauled Wastewater ~~Charges are~~ *Rate* - *This rate is based on a common charge across all plants five individual charges: BOD, TSS, TP, TKN and volume as derived from the HRSD rate model Rate Model, 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.*

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 ~~(see Appendix A).~~ *The. This model shall allocate costs to volume and each pollutant identified in the current HRSD most recent Domestic Wastewater Survey.*

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 ~~a wastewater treatment rate~~ *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 ~~model~~ *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 current HRSD Domestic 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 ~~The new connection charges~~ *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~~ *The estimated flow is based on the* average daily flows for each size water meter ~~shall be determined~~ using actual historical data from HRSD's meter database *and any additional information available.*

4.3.4 Flat Rate ~~Accounts are for single family residential accounts with water meters 1" and smaller that do not have a water meter or that use a significant amount of water that is not discharged to~~ *shall be calculated by determining the sanitary sewer. The Flat Rate is based on* average residential water consumption for *the months of January, February, and March for all existing flat rate accounts for* a 30-day period ~~times multiplied by~~ the ~~prevailing~~ Wastewater Treatment Rate. ~~The General Manager or Director~~

~~4.3.4~~ 4.3.5 *Daily Minimum shall be calculated by dividing the total labor costs (not dependent on volume of* Finance ~~may approve a flat rate account for water meters greater than 1" if the requestor provides sufficient evidence that there is a significant portion~~ *wastewater conveyed or treated) of* ~~water that is not discharged into the sanitary sewer system relative to~~ *the Operations Department by the total*

COMMISSION ADOPTED POLICY
Revenue Policy



Adopted: May 23, 2017

Revised: *May X, 2019*

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number of accounts' ten-year rolling average residential water consumption divided by 365.

~~4.3.5 The minimum charge for all accounts will be specified in the Rate Schedule.~~

4.4 Implementation.

4.4.1 All rates shall be approved by the Commission ~~as part of the annual budget process.~~

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 ~~the long-range financial forecast. Based on this analysis, a conservative approach will be used to project revenues in the long-range financial forecast~~ *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.

COMMISSION ADOPTED POLICY
Revenue Policy



Adopted: May 23, 2017

Revised: *May X, 2019*

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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.

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
DRAFT Revenue Policy
Appendix A – Rate Model Summary



Adopted: May 23, 2017

Revised: *May X, 2019*

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1.0 HRSD's Rate Model Summary

HRSD's ~~rate model~~ *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
DRAFT Revenue Policy
Appendix A – Rate Model Summary

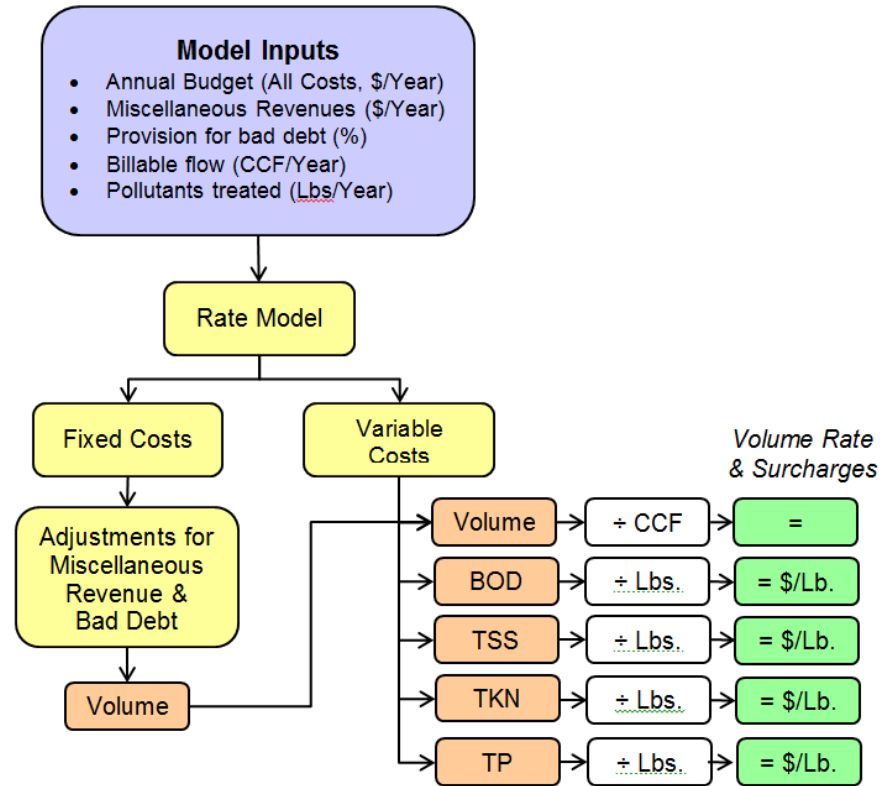


Adopted: May 23, 2017

Revised: May X, 2019

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2.0 Rate Model Schematic



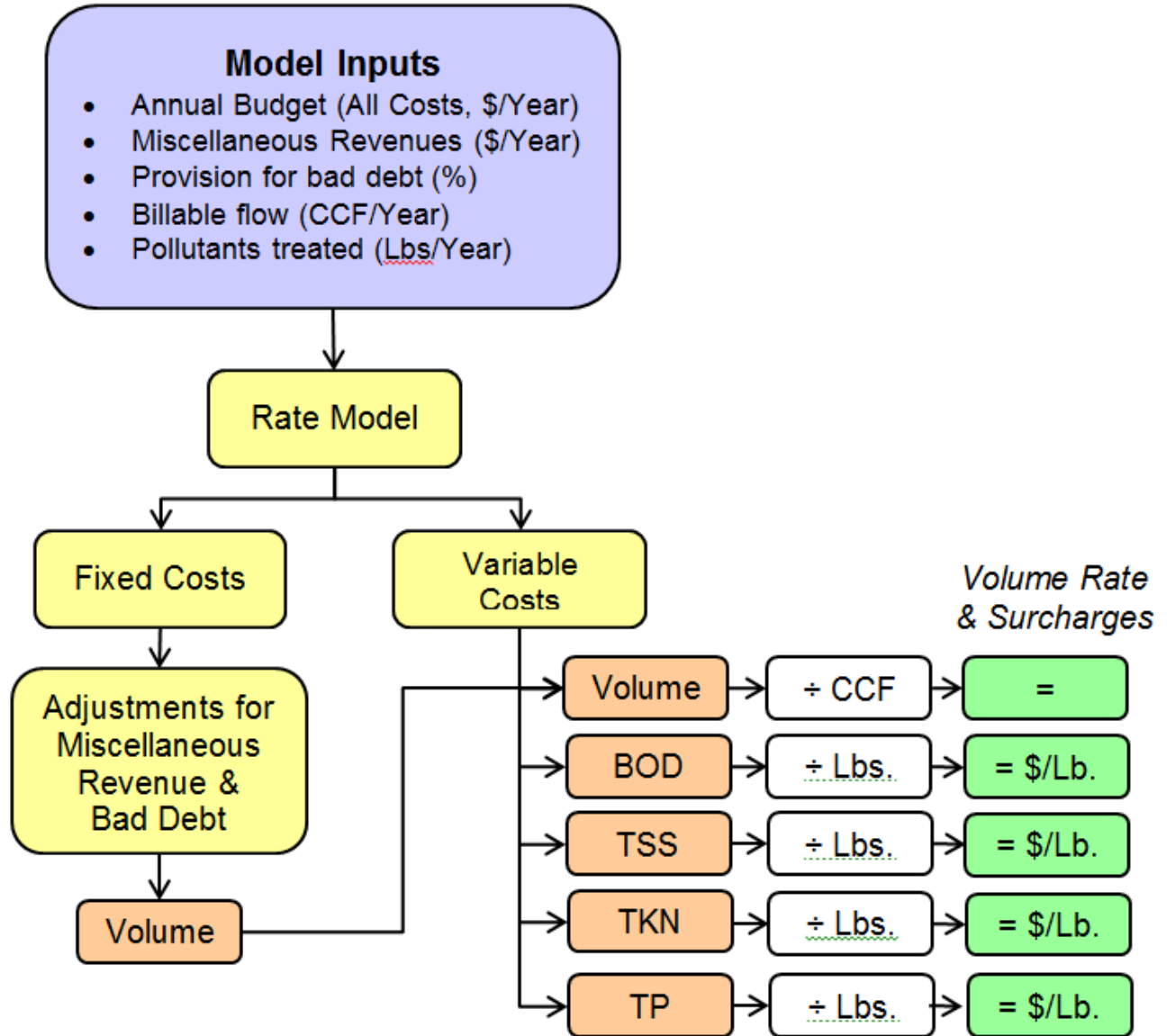
COMMISSION ADOPTED POLICY
DRAFT Revenue Policy
Appendix A – Rate Model Summary



Adopted: May 23, 2017

Revised: *May X, 2019*

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HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #4

AGENDA ITEM 4. – Annual Budget and Related Components Presentation



FY2020 Annual Budget
April 23, 2019

- Review Financial Forecast
- FY20 Budget and Proposed Rates
 - Wastewater
 - Small Communities
 - Surcharge
 - Hauled Waste
 - Facility Charges

Financial Forecast

REVENUES

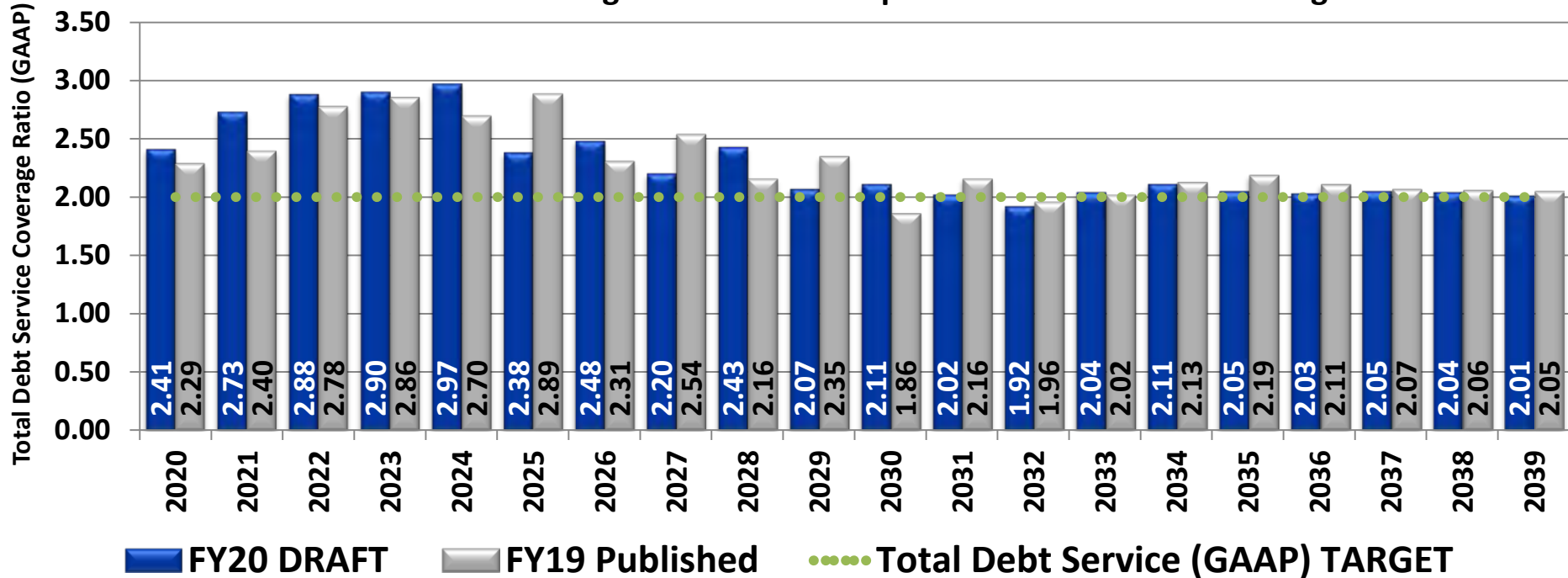
- Projected rate increases unchanged

EXPENSES

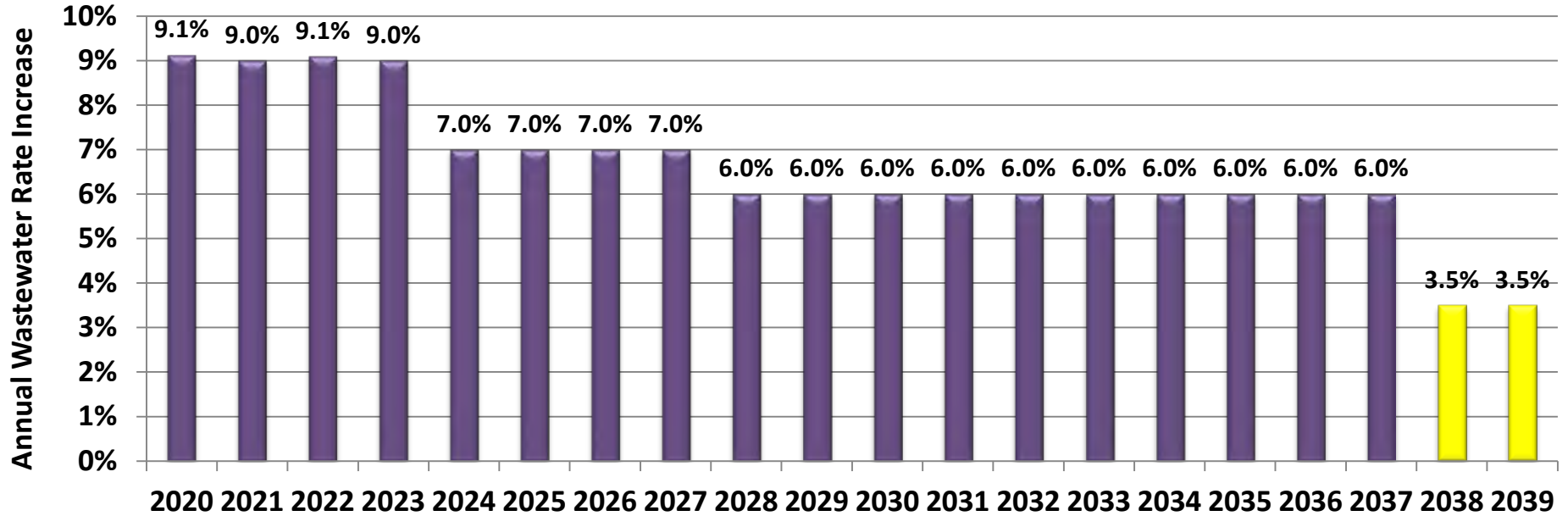
- Financial Plan - Budget process guided by forecast
 - Keep spending within targets

20-Year Financial Forecast – Target 2.0x

Total Debt Service Coverage Ratio - FY20 Proposed vs FY19 Published Budget



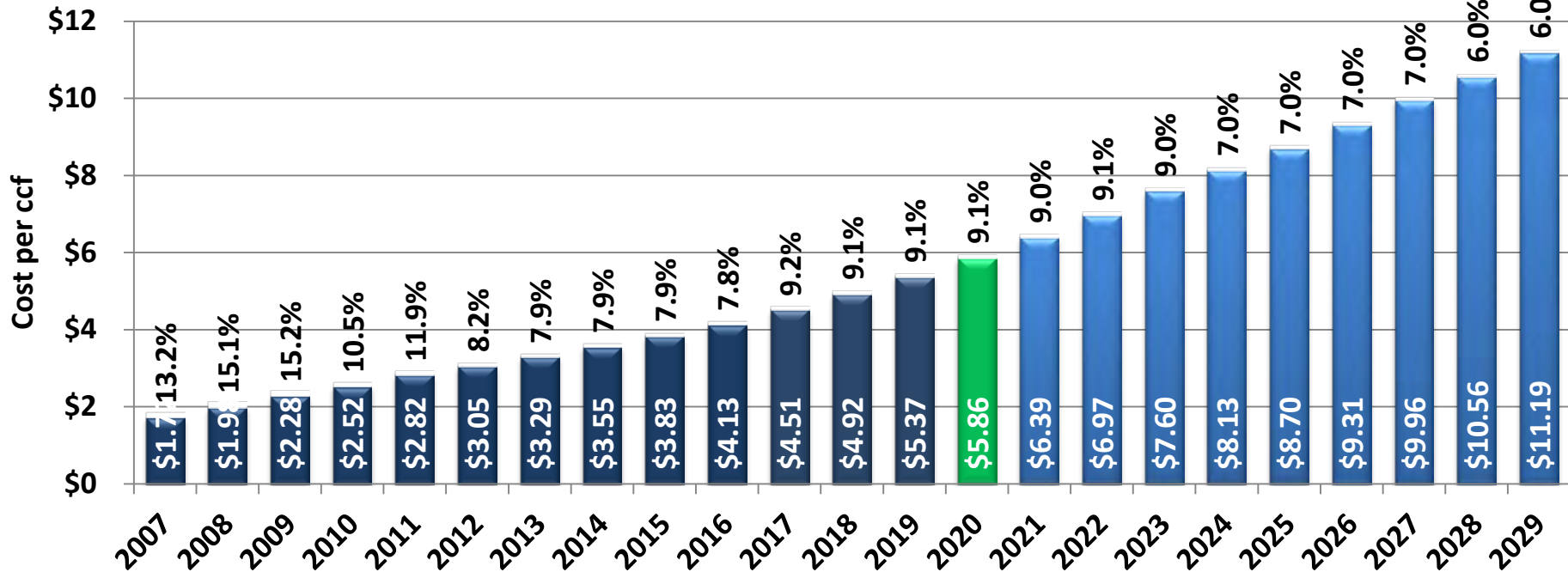
Projected Wastewater Rate Increases



- FY20 – 9.1% rate increase
 - \$5.86 per ccf (up from \$5.37 per ccf)
 - Avg monthly bill = \$32.82 @ 5.6 ccf
 - Up @\$2.75 from last year
 - About \$0.09 per day

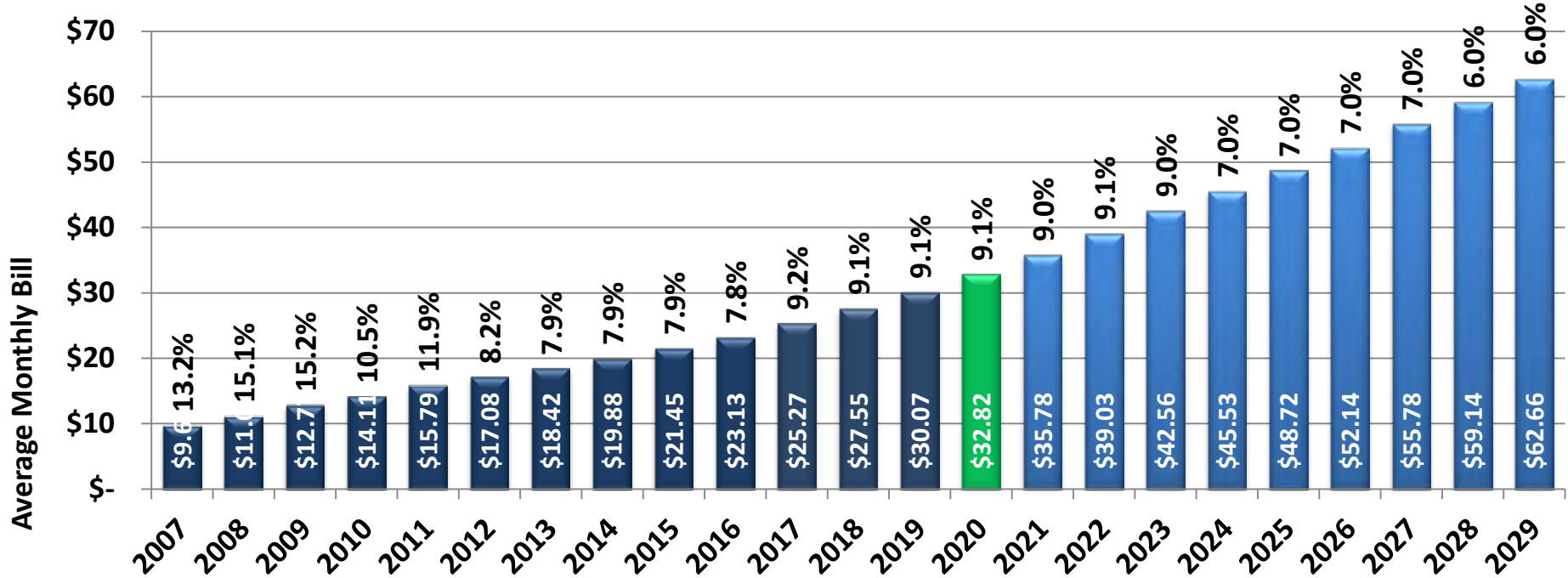
Historical and Projected Rate Increases

Historical Wastewater Rate



Average Monthly Bill @ 5.6 ccf

Historical Wastewater Rate



FY20 Budget

Revenues

	FY-2020	Adopted FY-2019	Increase/ (Decrease)	Percent Change	
Operating Revenues					
Wastewater Treatment Charges	\$ 323,395,000	\$ 297,062,000	\$ 26,333,000	9%	Municipal Assistance
Miscellaneous	1,255,000	1,405,000	(150,000)	(11%)	
Total Operating Revenue	324,650,000	298,467,000	26,183,000	9%	
Non-Operating Revenues					
Wastewater Facility Charges	6,160,000	6,075,000	85,000	1%	IPA Agreement Revenue
Investment Earnings	4,000,000	2,500,000	1,500,000	60%	
Build America Bond Subsidy	2,400,000	2,400,000	-	0%	
Other	595,000	820,000	(225,000)	(27%)	
Total Non-Operating Revenues	13,155,000	11,795,000	1,360,000	12%	
Total Revenues	\$ 337,805,000	\$ 310,262,000	\$ 27,543,000	9%	

Expenses

	FY-2020	Adopted FY-2019	Increase/ (Decrease)	Percent Change
Operating Appropriations				
General Management	\$ 460,252	\$ 624,583	\$ (164,331)	(26%)
Communications	444,116	423,764	20,352	5%
Finance	14,566,681	13,884,533	682,148	5%
Information Technology	15,854,415	15,089,692	764,723	5%
Talent Management	2,515,281	2,293,202	222,079	10%
Operations	103,821,084	98,842,274	4,978,810	5%
Engineering	7,689,863	7,903,702	(213,839)	(3%)
Water Quality	14,778,035	14,913,423	(135,388)	(1%)
General Expenses	5,529,093	5,761,766	(232,673)	(4%)
Total Operating Appropriations	165,658,820	159,736,939	5,921,881	4%
Appropriations for Debt Service and Transfers				
Debt Service	63,544,840	62,811,000	733,840	1%
Transfer to Capital Improvement Program (CIP)	108,341,340	87,475,061	20,866,279	24%
Transfer to General Reserve	-	-	-	0%
Transfer to Risk Management Reserve	260,000	239,000	21,000	9%
Total Appropriations for Debt Service and Transfers	172,146,180	150,525,061	21,621,119	14%
Total Appropriations	\$ 337,805,000	\$ 310,262,000	\$ 27,543,000	9%

Forecast @ \$165.8M

What's the value of Research and Development?

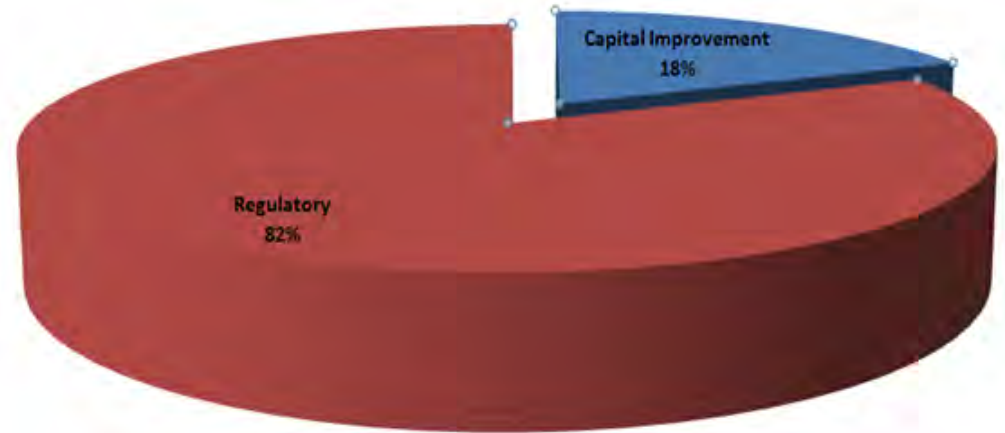
- 10 Year Annualized Rate of Increase
 - Utilities = 0.31%
 - Chemicals = 0.86%
- Estimated Cumulative Savings = **\$39.2M** since 2009
 - Relative to Bureau of Labor Statistics (BLS) inflation data

Capital Improvement Program

FY2020-2029 CIP Stats

- FY20-29 = \$2.8B
- 181 Projects
- 82% Regulatory
- Includes Integrated Plan
 - SWIFT projects through FY32
 - \$200M high priority wet weather improvements in FY20-31
 - Remaining wet weather projects FY31-53

FY20 to FY29 Proposed Spending - Grouped by Regulatory Driver



Small Communities Rates

Proposed Small Communities Rate (per k-gals)

\$5.86/ccf = \$7.83/k-gals

FY20 Small Communities Treatment and Collections Residential Bill

	HRSD Rate (\$/k-gals)	Collections (\$/k-gals)	Capital Recovery (\$/k-gals)	FY20 Rate	Minimum Monthly Bill - 3,000 gals	Minimum Bimonthly Bill - 6,000 gals	Flat Monthly Bill ¹	YOY Increase
King William	\$7.83	\$5.60	\$0.39	\$13.82	\$41.46	\$82.92	\$55.28	4.3%
Surry	\$7.83	\$5.60	N/A	\$13.43	\$40.29	\$80.58	\$53.72	5.7%
Urbanna	\$7.83	\$5.60	\$2.05	\$15.48	\$46.44	\$92.88	\$61.92	4.3%
West Point	\$7.83	\$5.60	\$2.28	\$15.71	\$47.13	\$94.26	\$62.84	5.1%

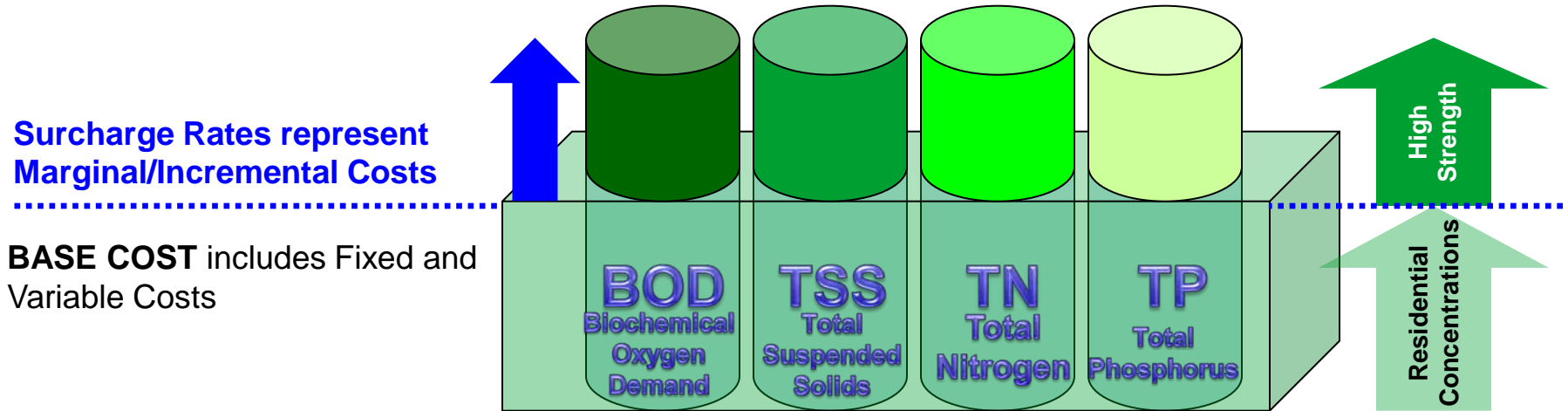
¹ Assumes 4,000 gals per month

	HRSD Rate (\$/k-gals)	Collections (\$/k-gals)	Capital Recovery (\$/k-gals)	FY20 Rate	Flat Monthly Bill based on ERU Usage Rate - 4,000 gals per month	YOY Increase
Mathews	\$7.83	\$5.60	N/A	\$13.43	\$53.72	5.7%

Surcharge Rates

Surcharges for High Strength or Unusual Wastes

- Domestic Quality Wastewater
- High Strength or Unusual Wastes



FY20 Surcharge Rates

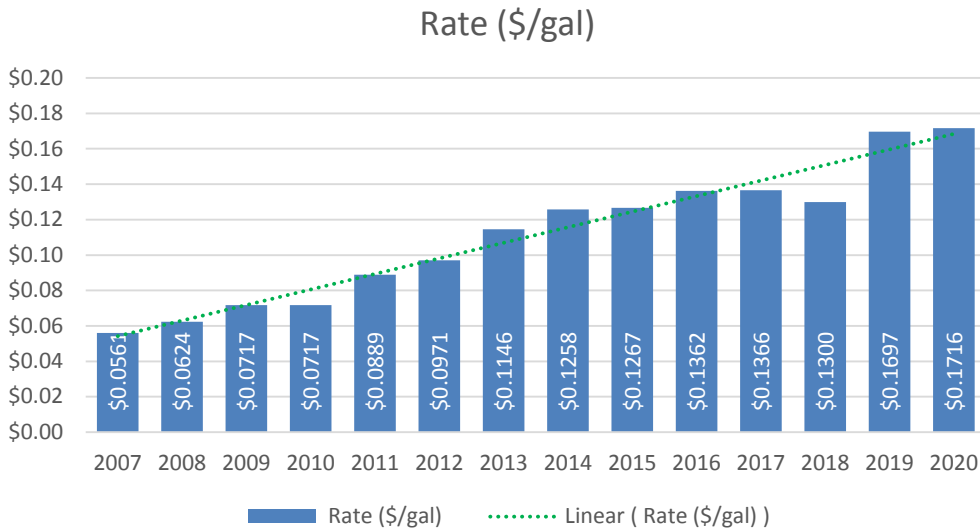
Surcharge Rate per 100 lbs Pollutant	FY19 Calculated	FY20 Calculated	FY19 vs FY20	
			\$ Differential	% Difference
Biochemical Oxygen Demand (BOD)	\$ 1.67	\$ 2.07	\$ 0.40	24.0%
Total Suspended Solids (TSS)	\$ 9.49	\$ 10.08	\$ 0.59	6.2%
Total Phosphorus (TP)	\$ 152.74	\$ 158.12	\$ 5.38	3.5%
Total Kjeldahl Nitrogen (TKN)	\$ 57.59	\$ 54.11	\$ (3.48)	-6.0%

FY20 CALCULATED					
PROJECTED TOTAL BILL (VOL, BOD, TSS, TN, TP)					
Top Ten Largest Surcharge Customers	FY19 Projected	FY20 Proposed	\$ Increase	% Increase	
SMITHFIELD FOODS INC	\$ 5,203,336	\$ 5,670,752	\$ 467,416	9.0%	
ANHEUSER BUSCH INC	\$ 3,098,256	\$ 3,385,328	\$ 287,072	9.3%	
PEPSI COLA COMPANY	\$ 327,074	\$ 358,406	\$ 31,332	9.6%	
MD VA MILK PRODUCERS ASSOC	\$ 295,384	\$ 321,452	\$ 26,068	8.8%	
37TH ST WATER TREATMENT PLANT	\$ 257,833	\$ 275,894	\$ 18,061	7.0%	
SENTARA HAMPTON GENERAL HOSP	\$ 248,703	\$ 270,496	\$ 21,793	8.8%	
BAE SYSTEMS-GUARD SHACK	\$ 224,266	\$ 242,960	\$ 18,694	8.3%	
BETHEL LANDFILL	\$ 143,203	\$ 153,234	\$ 10,031	7.0%	
SOUTHEASTERN PUBLIC SERVICE AUTHORITY	\$ 137,121	\$ 144,487	\$ 7,366	5.4%	
C & M INDUSTRIES INC	\$ 104,535	\$ 113,555	\$ 9,020	8.6%	

Hauled Waste Rate

FY20 Hauled Waste (Septage) Rate

- Cost to treat excluding conveyance
 - Volume
 - BOD
 - TSS
 - TN
 - TP
- FY19 = \$0.1697/gal
- FY20 = \$0.1717/gal (+1.1%)



Facility Charge Rates

Proposed FY20 Facility Charges – 3-Year Phase In

- Last updated in FY2017
- Chesapeake-Elizabeth will reduce both Net Replacement Value and HRSD's Plant Capacity by 24 MGD
- Propose a 3-year phase in
- Utilize a 10-year rolling average for average meter flow

Meter Size	FY 19	3-Year Phase In		% Change
	Published	CE Closure	Change	
5/8	\$1,895	\$1,905	\$10	0.5%
3/4	\$4,830	\$4,210	-\$620	-12.8%
1	\$8,170	\$7,410	-\$760	-9.3%
1½	\$17,260	\$16,645	-\$615	-3.6%
2	\$30,510	\$30,505	-\$5	0.0%
3	\$70,800	\$73,810	\$3,010	4.3%
4	\$128,660	\$138,445	\$9,785	7.6%
6	\$298,610	\$336,960	\$38,350	12.8%
8	\$542,680	\$634,710	\$92,030	17.0%
10	\$862,550	\$1,038,525	\$175,975	20.4%
12	\$1,259,520	\$1,554,120	\$294,600	23.4%
14	\$1,734,700	\$2,186,505	\$451,805	26.0%
16	\$2,289,010	\$2,940,135	\$651,125	28.4%

$$\frac{\text{Net Replacement Value}}{\text{HRSD's Plant Capacity}} \times \frac{\text{Meter Size}}{\text{Average Flow}}$$



- *March 26 – Budget Work Session*
- *April 1 – Final CIP Meeting*
- *April 12 – Finance Committee meeting (Atlantic Plant)*
- *April 23 – Draft Budget and Revenue Policy Submittal*
- **May 28 – Formal Budget Adoption**
- **Newspaper advertisement - 4 consecutive weeks**
- **July 1 – Budget Effective**

Questions?

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #5

AGENDA ITEM 5. – Capital Improvement Program (CIP) Quarterly Update
Presentation



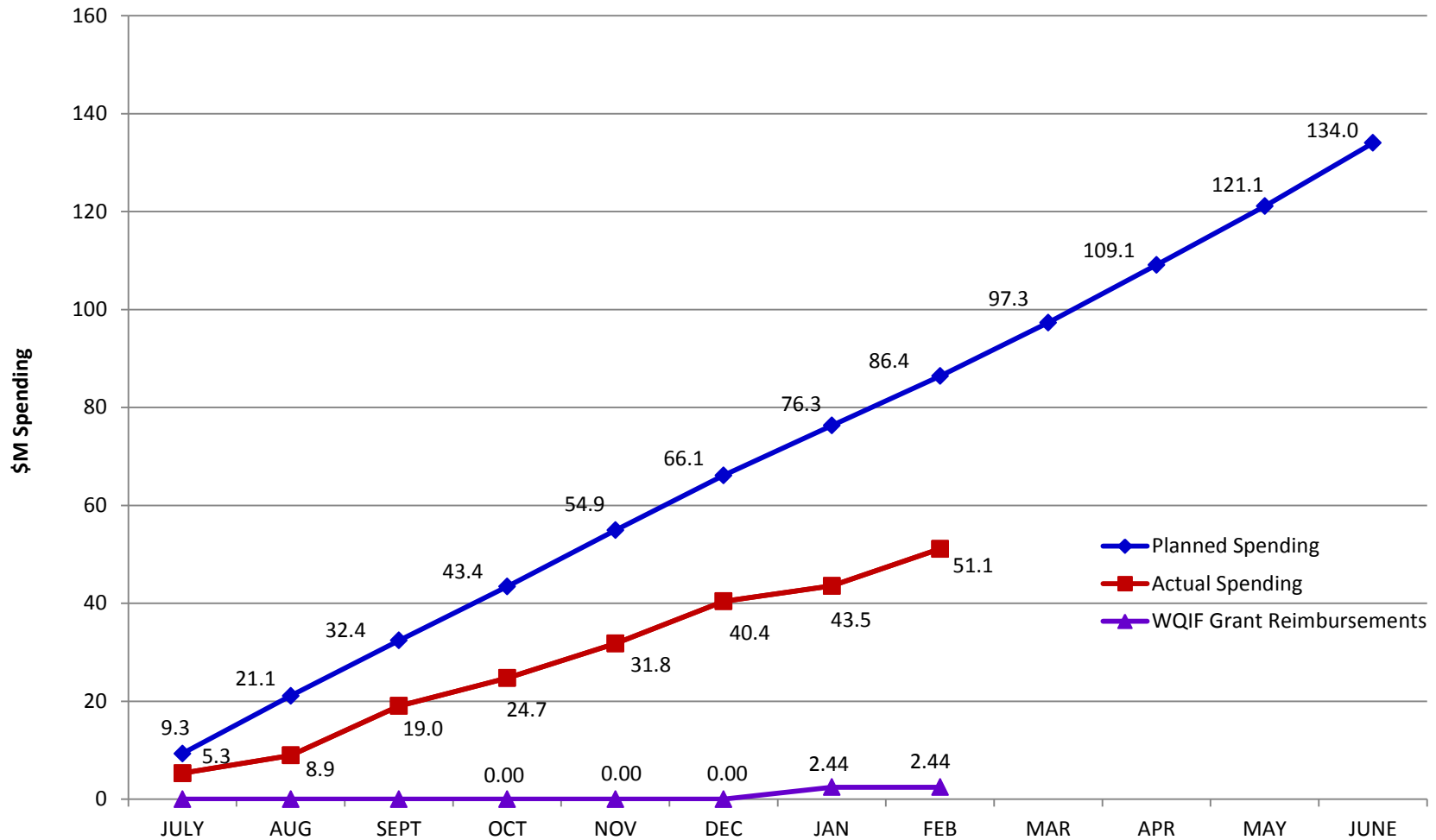
Capital Improvement Program Commission Briefing

April 23, 2019

- CIP Expenditures for FY-2019
- Asset Management Program Update
- Consent Decree/Sewer Rehabilitation Plan – Project Updates
- Significant Project Updates
- Project Focus:
 - Chesapeake-Elizabeth Treatment Plant Closure Interceptor System Diversion Improvements

CIP Expenditures for FY-2019

Cumulative Monthly Expenditures & Reimbursements



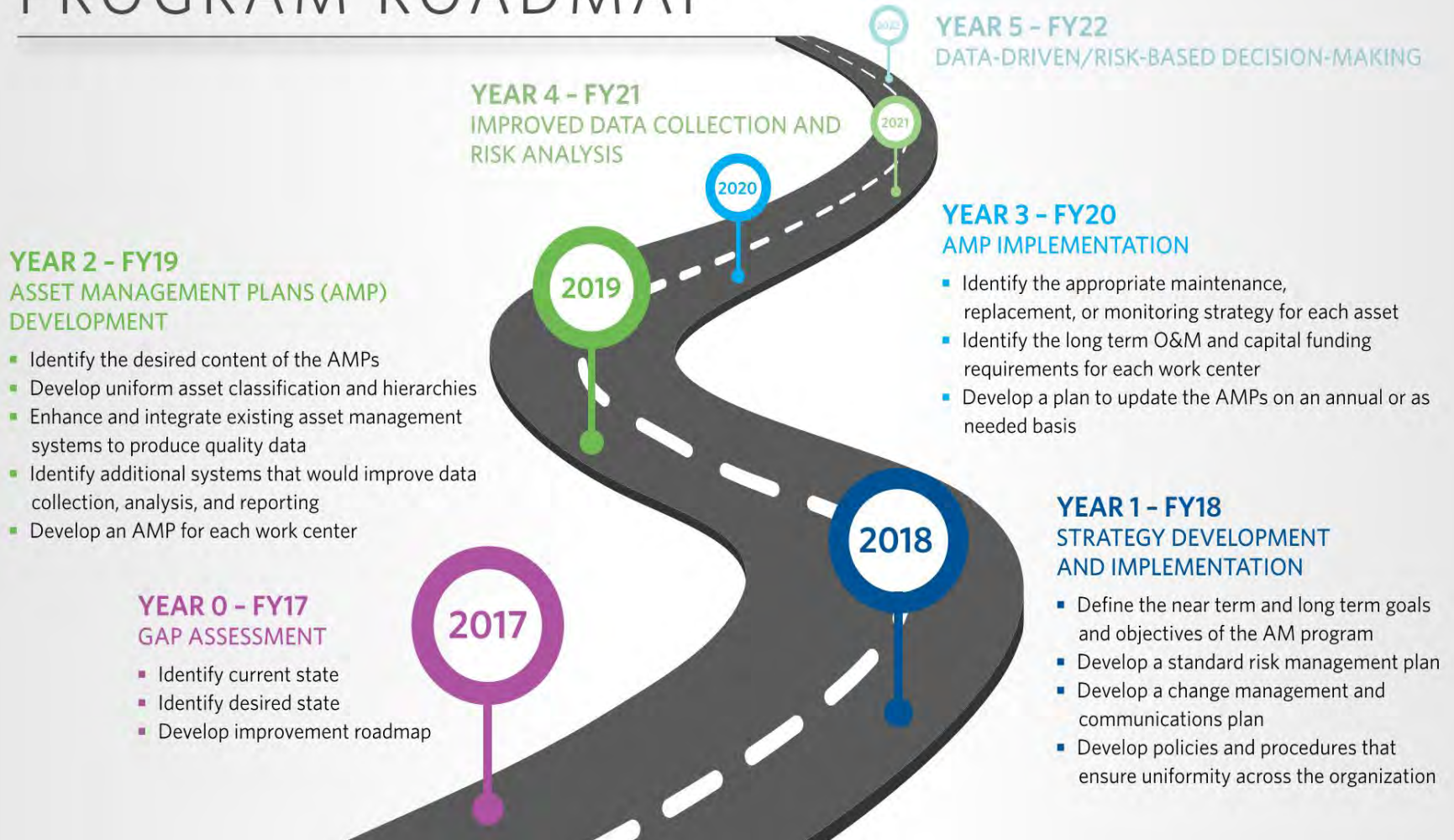
CIP Expenditures for FY-2019

CIP Projects with Largest Spending Projections in FY-2019:

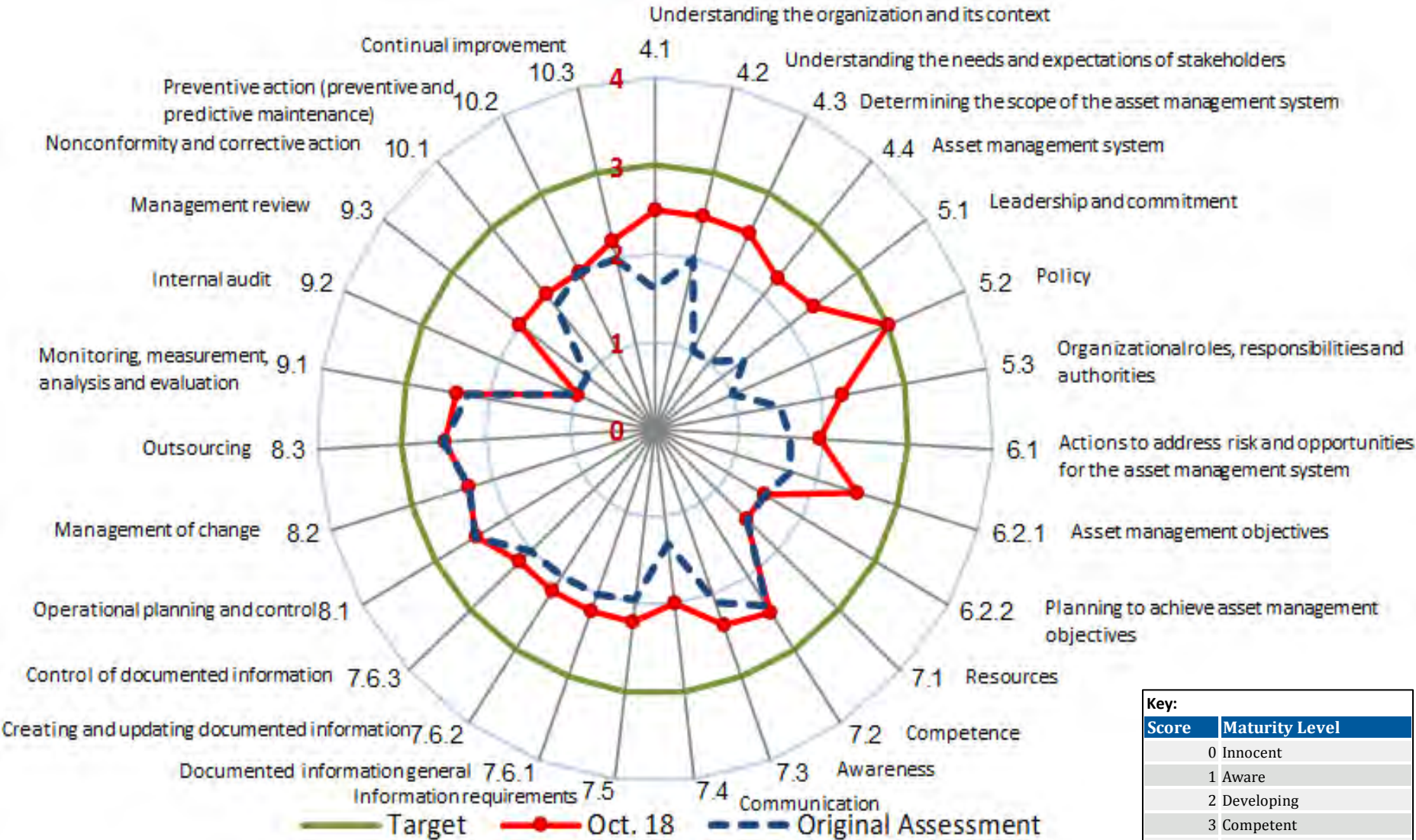
Project Name	Planned FY-2019 CIP Spending	Actual FY-2019 Spending
Atlantic Treatment Plant Thermal Hydrolysis Process (Cambi)	\$20,000,000	\$13,744,400
Virginia Initiative Plant Nutrient Reduction Improvements – Contact B	\$6,379,000	\$3,373,700
Program Management of SWIFT Full Scale Implementation	\$6,154,000	\$1,526,800

Asset Management Program Roadmap

HRSD ASSET MANAGEMENT PROGRAM ROADMAP



ISO 55001 Asset Management Maturity Score



Key:	
Score	Maturity Level
0	Innocent
1	Aware
2	Developing
3	Competent
4	Optimizing / Excellent

Progress October 2018 to April 2019

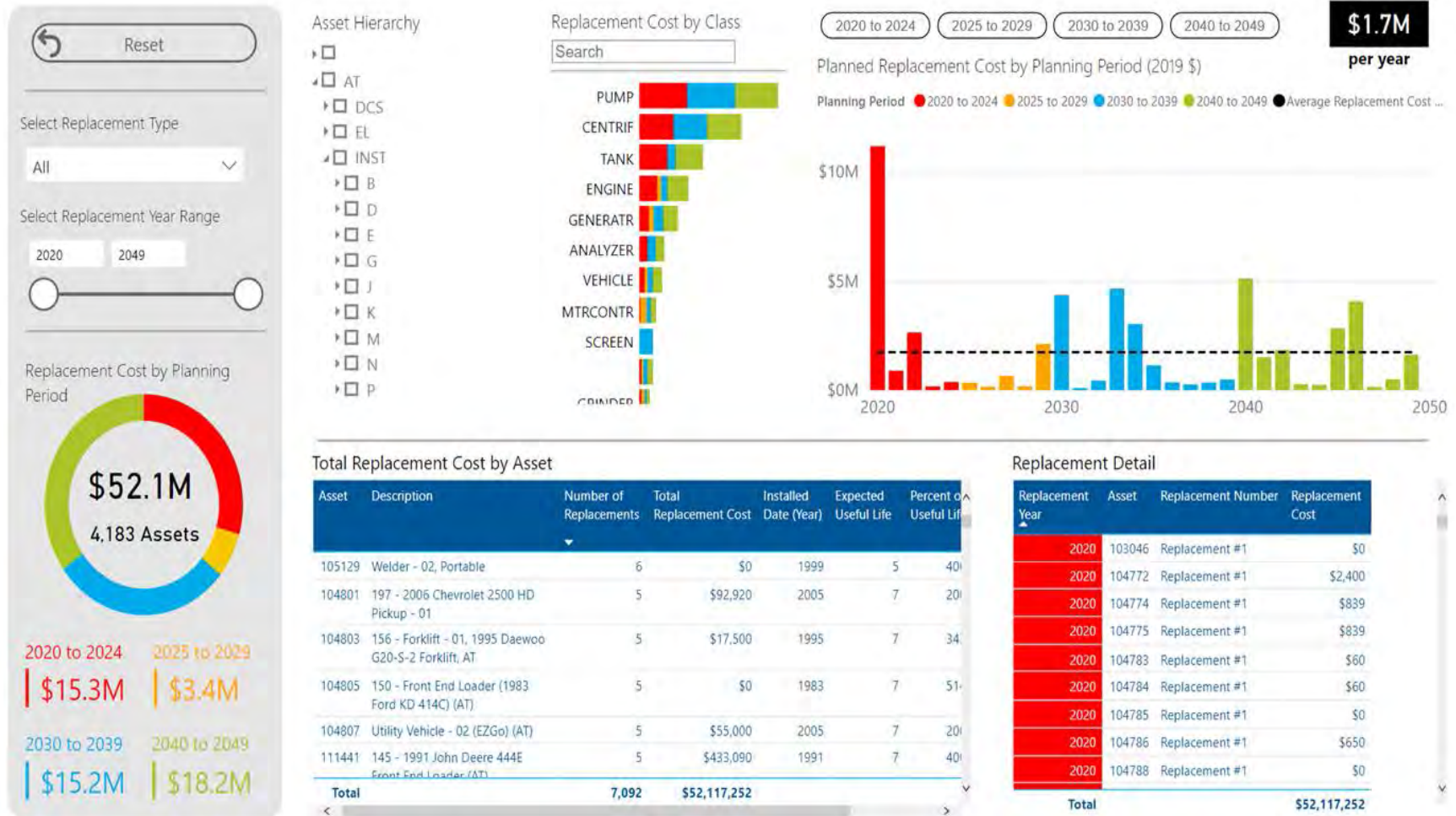
- Finalized the organization consequence of failure criteria using Triple Bottom Line factors
- Developed condition assessment manual for treatment plants
- Completed asset inventory and condition assessment at Atlantic Treatment Plant
 - Verified install dates, replacement costs, make, model, serial #, etc
 - Visual condition assessment and assigned a condition score for each asset

Progress October 2018 to April 2019 (cont.)

- Developed a draft dynamic Asset Management Plan for the Atlantic Treatment Plant using Business Intelligence (BI) dashboards
- Developed enhanced capital planning process and commencing capital portfolio optimization process
- Ongoing work with SWIFT team to implement BIM deliverable guidelines (3D as-built models with embedded asset data)

Example Asset Replacement Planning Dashboard

Replacement Planning Model



Plan for Next 6 Months

- Complete Atlantic Treatment Plant Asset Management Plan
- Develop Asset Replacement Planning Model (RPM)
 - Currently only have a RPM for pipeline assets (age and material only)
 - New RPM will be for all interceptor and treatment assets
 - New RPM will incorporate asset condition and risk factors
- Apply enhanced planning capital prioritization process to CIP projects
- The Atlantic AM Plan will be reviewed at the next Commission Meeting update

Plant Thermal Hydrolysis Process and FOG Receiving Station



HRSD Revenue Bond
VRLF Loan

Virginia Initiative Plant Nutrient Reduction Improvements

Engineer: HDR Engineering, Inc.

Contractor:

Contract A – PC Construction

Contract B – MEB General Contractors
Procurement – Emergency Generators

Schedule Completion (Contract B):

March 2017 – Nutrient Reduction
Improvements

November 2018 – Capacity
Improvements

December 2019 – Other Work

Project Value: \$161.4M

Funding: HRSD Revenue Bond
WQIF Grant (\$46.8M)



Program Management of SWIFT Full Scale Implementation

Consultants:

Technical Advisor – Jacobs

Program Management – AECOM/Hazen & Sawyer

Efforts Underway:

1. Program Management Plan
2. Program/Project Schedules and Budgets
3. Facility Plan for James River SWIFT
4. Advanced Recharge Well Installation



Consent Decree/Sewer Rehabilitation Plan – Project Updates

- Consent Decree Condition Assessment Program (CAP) identified condition defects in the regional sanitary sewer system.
- EPA/VDEQ approved the Rehabilitation Action Plan (RAP) in May 2015.
- RAP addresses improvements to gravity mains, force mains, pump stations and associated system compounds.
- RAP will be implemented in three phases:
 - Phase 0 (June 2017)
 - Phase 1 (May 2021)
 - Phase 2 (May 2025)

Consent Decree/Sewer Rehabilitation Plan – Project Updates

Phase 0

CIP	Project Name	Project Status	Total CIP Cost
GN014300	North Shore Operations Unvented High Spot Correction	Complete	\$1,602,832
VP012100	State Street Pump Station Electrical Modifications	Complete	\$2,089,201

Consent Decree/Sewer Rehabilitation Plan – Project Updates

Phase 1

CIP	Project Name	Project Status	Total CIP Cost
BH012700	Hampton Trunk Sewer Extension Division B - Claremont Force Main Replacement	Complete	\$4,876,709
BH014700	Boat Harbor Outlet Sewer Improvements	Design	\$6,486,452
BH014800	Jefferson Avenue Extension Gravity Improvements	Design	\$3,123,247
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	Construction	\$6,607,042
CE010400	Independence Boulevard Pressure Reducing Station Modifications	Construction	\$1,869,200
CE011700	Western Trunk Force Main Replacement	Design	\$1,987,802
GN011700	Pump Station Generators and Standby Pump Upgrades	Design	\$7,106,157
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	Construction	\$608,725
GN012131	Manhole Rehabilitation Phase 1A (North Shore)	Proposed	\$1,631,203
GN012132	Manhole Rehabilitation Phase 1B	Proposed	\$1,631,203
GN012133	Manhole Rehabilitation Phase 1C	Proposed	\$1,631,203
GN012134	North Shore Siphon Chamber Rehabilitation Phase 1	Proposed	\$1,631,203
GN012140	Pump Station Wet Well Rehabilitation Phase I	Construction	\$3,388,665
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	Proposed	\$615,812
JR012100	Huxley to Middle Ground Force Main Extension	Design	\$4,932,185
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	Design	\$1,483,109
NP012600	Deep Creek Interceptor Force Main Replacement	Design	\$6,232,922
VP014010	Ferebee Avenue Pump Station Replacement	Design	\$5,852,747
WB012200	North Trunk Force Main Part B Replacement	Construction	\$1,735,250

Consent Decree/Sewer Rehabilitation Plan – Project Updates

Phase 2

CIP	Project Name	Project Status	Total CIP Cost
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	Design	\$27,249,474
AT011510	Shipp's Corner Interim Pressure Reducing Station	Construction	\$2,972,422
AT011520	Shipp's Corner Pressure Reducing Station Modifications	Proposed	\$1,741,875
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	Proposed	\$5,313,344
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	Proposed	\$2,496,266
AT013100	South Norfolk Area Gravity Sewer Improvements	Proposed	\$6,472,759
AT013200	Dozier's Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	Proposed	\$305,202
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	Proposed	\$4,275,739
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	Design	\$2,243,889
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	Design	\$11,823,129
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	Proposed	\$4,509,141
BH015100	Bloxom's Corner Force Main Replacement	Proposed	\$3,393,988
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	Proposed	\$1,686,224
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	Proposed	\$2,115,354
CE012000	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements (I-264 VDOT Betterment)	Complete	\$121,859
GN010730	Horizontal Valve Replacement Phase III	Proposed	\$3,878,866

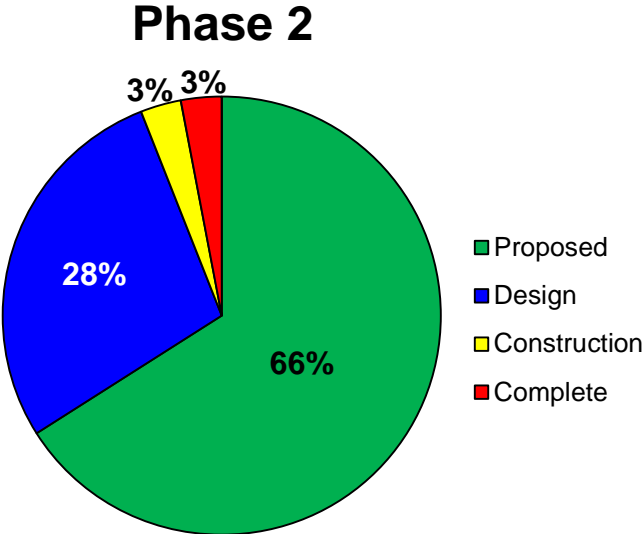
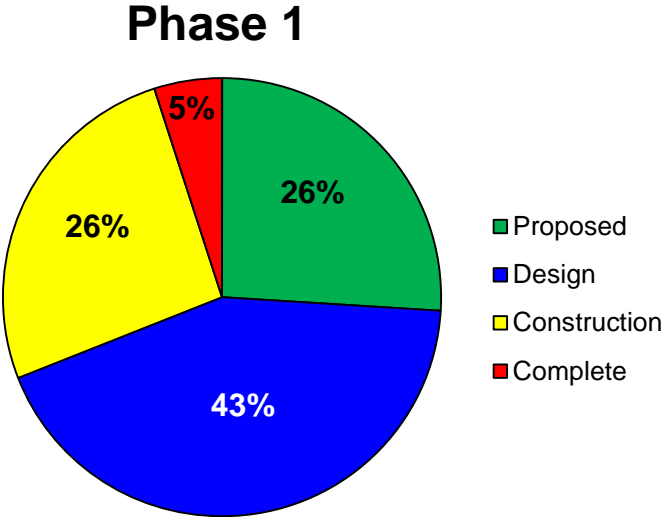
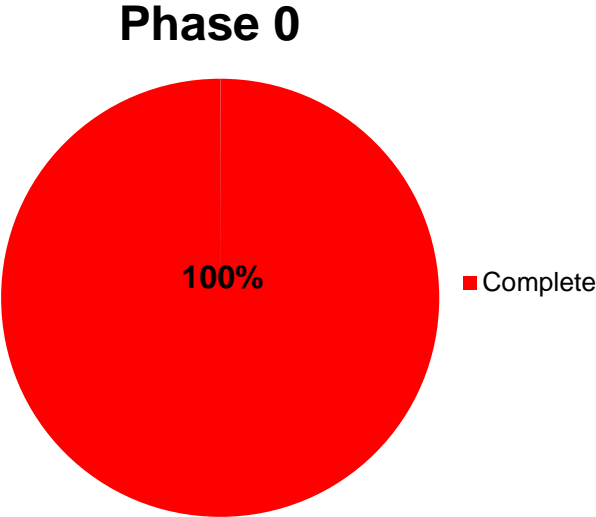
Consent Decree/Sewer Rehabilitation Plan – Project Updates

Phase 2 (cont.)

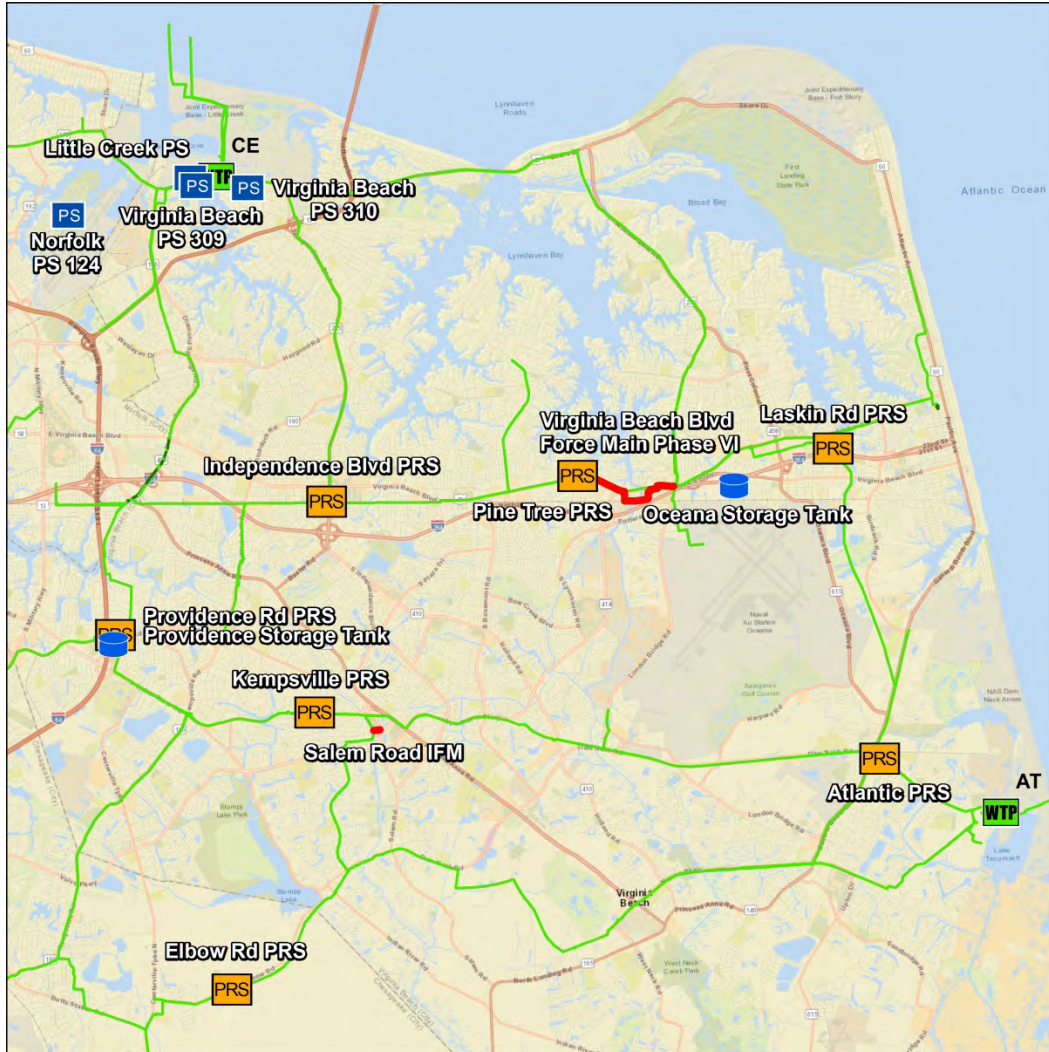
CIP	Project Name	Project Status	Total CIP Cost
GN014900	North Shore Gravity Sewer Improvements Phase I	Proposed	\$5,475,637
GN014900	North Shore Gravity Sewer Improvements Phase I	Proposed	\$5,475,637
GN015000	South Shore Gravity Sewer Improvements Phase I	Proposed	\$886,778
GN015300	Interceptor System Valve Improvements Phase I	Proposed	\$3,161,886
GN015400	South Shore Aerial Crossing Improvements	Proposed	\$317,091
JR010600	Lucas Creek Pump Station Upgrade	Design	\$6,824,774
NP010620	Suffolk Pump Station Replacement	Design	\$12,080,669
NP012400	Western Branch Sewer System Gravity Improvements	Proposed	\$3,305,390
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	Design	\$9,070,795
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	Proposed	\$1,719,631
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	Design	\$7,179,000
VP014700	Ingleside Road Pump Station Replacement	Proposed	\$3,699,465
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	Design	\$1,109,112
VP015320	Larchmont Area Sanitary Sewer Improvements	Proposed	\$16,265,000
VP015400	Lafayette Norview-Estabrook Pump Station Replacements	Design	\$18,495,895
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	Proposed	\$2,418,329
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	Proposed	\$2,972,071
VP017100	Central Norfolk Area Gravity Sewer Improvements	Proposed	\$3,004,023
VP018000	Park Avenue Pump Station Replacement	Design	\$5,955,271
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	Proposed	\$3,704,967

\$255,368,184

Consent Decree / Sewer Rehabilitation Plan – Project Updates



CETP Closure - Interceptor System Diversion Improvements



Program Budget

\$ 137 million

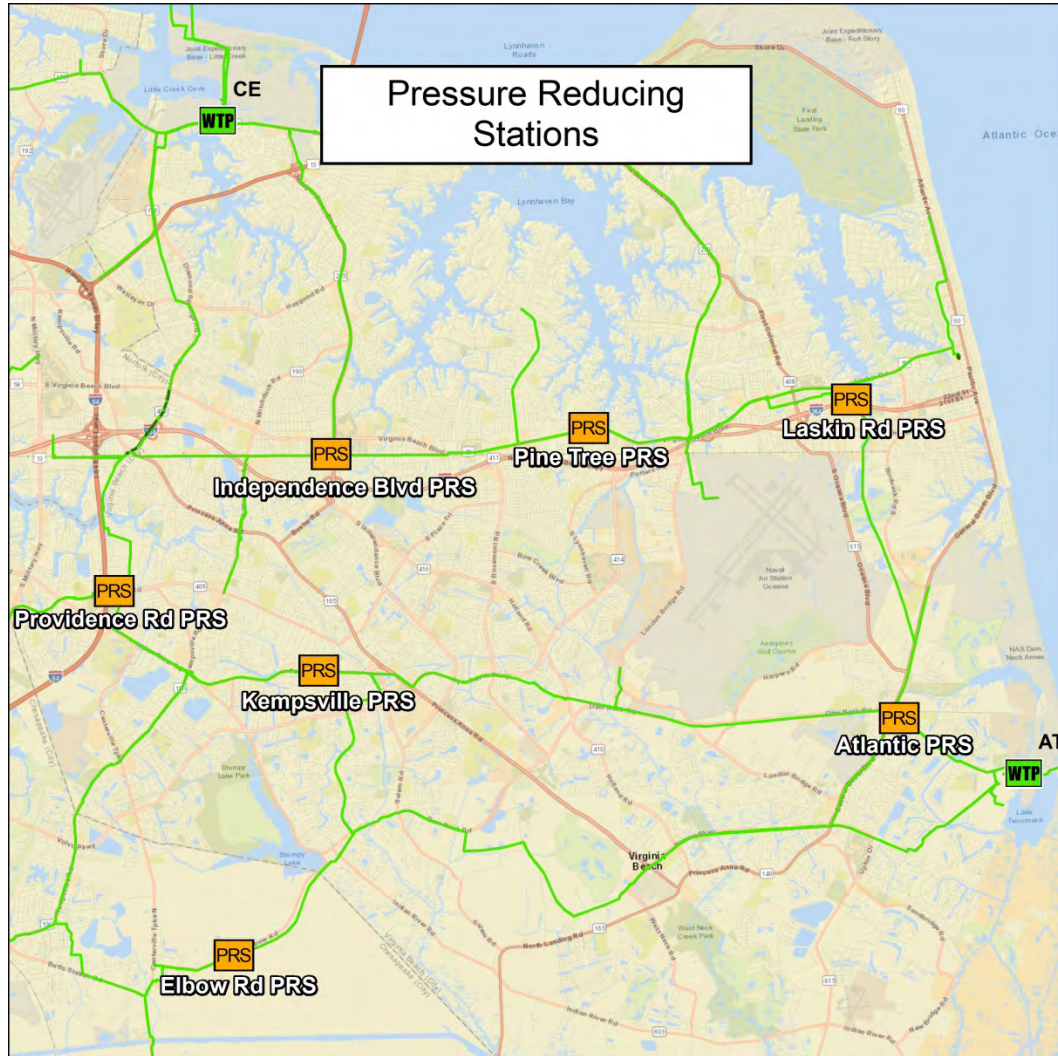
Program Schedule

Start: September 2016

End: November 2021

Diversions Improvements: Pressure Reducing Station Projects

Pressure Reducing Stations



Budget

\$ 55 million

Schedule

Start: September 2016

End: June 2021

Project Delivery Method

6 PRS's – CMAR

Elbow Road PRS – Design/Bid/Build

Elbow Road PRS Rendering



Diversion Improvements: City/Navy Pump Stations



Budget

\$ 3.5 million

Schedule

Start: September 2016

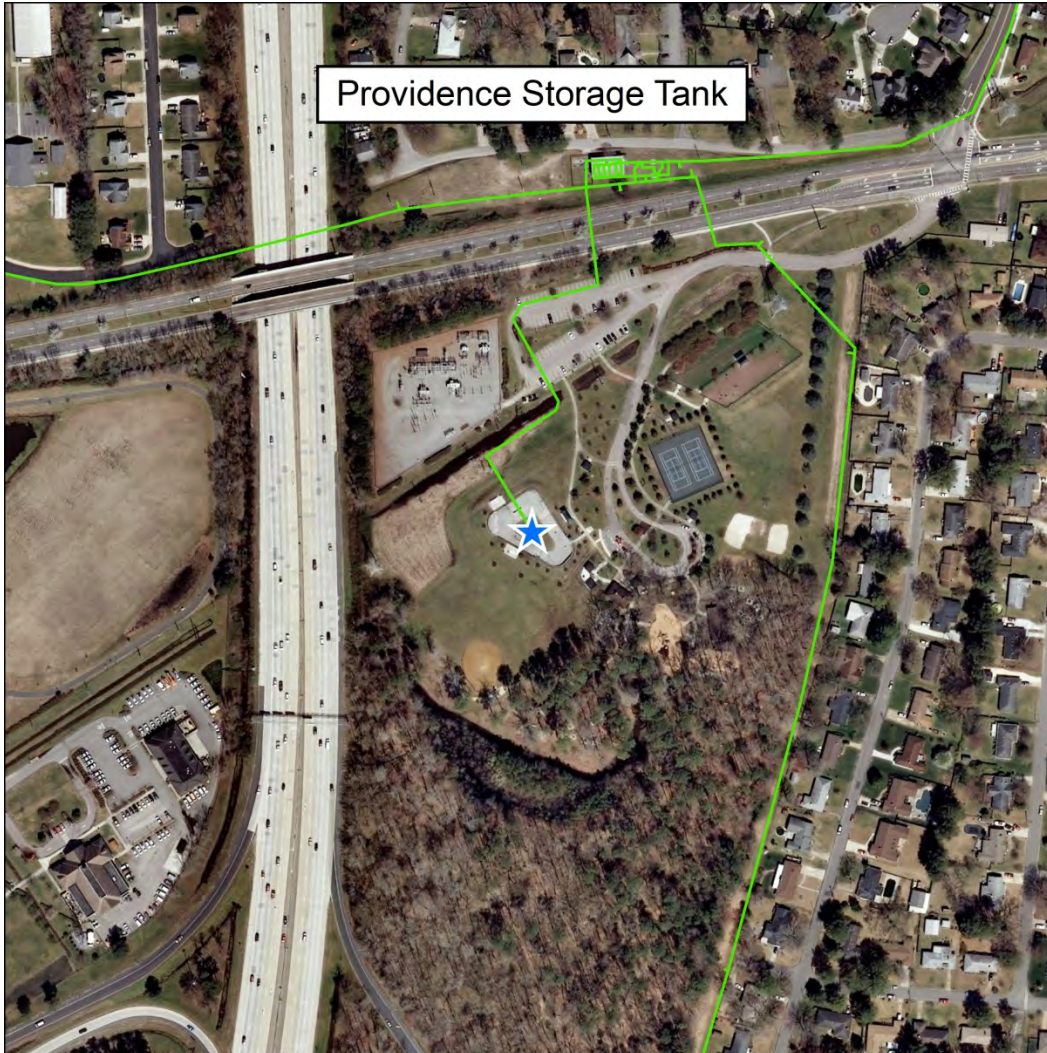
End: June 2021

Project Delivery Method

City PS's – Reimbursement

Navy PS – Design/Bid/Build

Diversion Improvements: Providence Rd Off-line Storage Facility



Budget
\$ 32 million

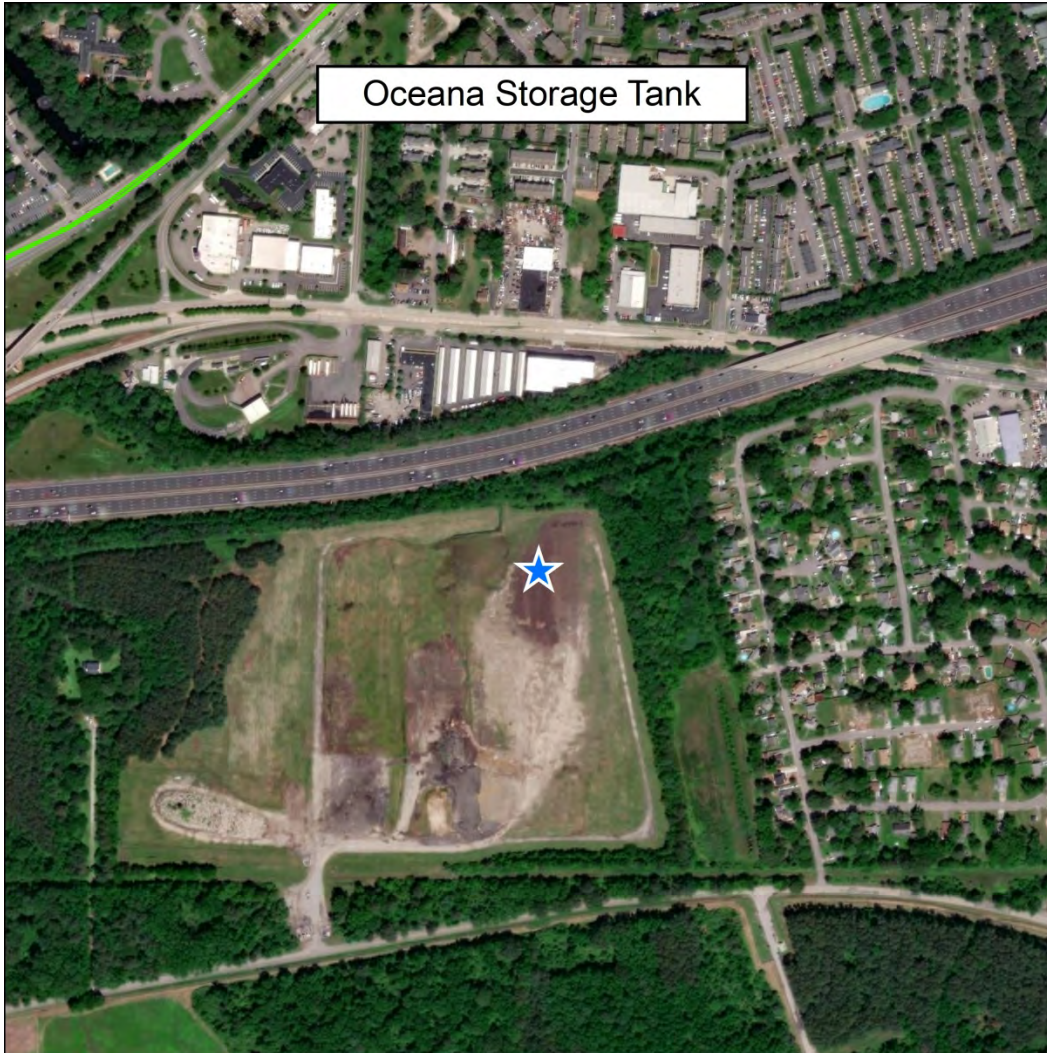
Schedule
Start: September 2016
End: March 2021

Project Delivery Method
Design/Build

Providence Rd Off-line Storage Facility Rendering



Diversion Improvements: Oceana Off-line Storage Facility



Budget
\$ 17 million

Schedule
Start: November 2018
End: November 2021

Project Delivery Method
Design/Bid/Build

Diversion Improvements: Virginia Beach Blvd Force Main



Budget

\$ 28 million

Schedule

Start: September 2016

End: November 2021

Project Delivery Method

Design/Bid/Build

Diversion Improvements: Salem Road Interconnect Force Main



Budget

\$ 1.5 million

Schedule

Start: September 2016

End: June 2020

Project Delivery Method

Design/Bid/Build

Chesapeake-Elizabeth Treatment Plant Decommissioning



Chesapeake-Elizabeth
Treatment Plant

Budget

\$ 10.7 million

Schedule

Start: July 2019

End: Feb. 2026

Project Delivery Method

TBD

Questions?

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #6

AGENDA ITEM 12. – Deed of Vacation and Quitclaim for Access Easement located at
4707 Victoria Boulevard, Hampton, VA

PREPARED BY:
Conway H. Sheild, III, Esq. (VSB # 06893)
Jones, Blechman, Woltz & Kelly, P.C.
701 Town Center Drive #800
Newport News, Virginia 23606
Tax ID Number: Part of 2003823

RETURN TO:
Lawrence G. Cumming
Kaufman & Canoles
2236 Cunningham Drive
Hampton, Virginia 23666

THIS QUITCLAIM DEED OF VACATION OF EASEMENT, made this 23rd day April, 2019 by and between the HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia, Grantor; and HAMPTON YACHT CLUB, INCORPORATED, a Virginia corporation, Grantee, whose mailing address is: 4707 Victoria Blvd., Hampton, Virginia 23669.

WHEREAS, Grantor has an existing easement on the property owned by the Grantee herein, and desires to vacate the easement of Grantor as hereinafter more particularly described.

NOW, THEREFORE, Grantor does by these presents quitclaim all of its right, title and interest in said easement unto the said Grantee the following described interest in real estate, to-wit:

All its right, title and interest in an easement that encumbers that certain piece or parcel of land, situate, lying and being in the City of Hampton, Commonwealth of Virginia, and being more particularly described as follows:

That certain twenty (20) foot by ninety (90) foot (20' x 90') easement as shown on that certain map for the Pump Station Site for Hampton Trunk Sewer Extension, made by Greeley & Hansen, Engineers, dated November, 1944, said map being recorded in Elizabeth City County (now City of Hampton, Virginia), Circuit Court, Clerk's Office, in Volume 132, page 56.

It being the same easement conveyed as Parcel No. 18-A by deed dated June 20, 1950 from the United States of America, acting by and through the Housing and Home Finance Administrator, to Hampton Roads Sanitation District Commission, a public body created and organized under the laws of the Commonwealth of Virginia, recorded

July 19, 1950, in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 175, page 177.

IN WITNESS WHEREOF, the Hampton Roads Sanitation District (HRSD) Commission has caused this document to be signed on its behalf by its General Manager in accordance with authorization granted at its regular meeting held on April 23, 2019.

WITNESS the following signature and seal:

HAMPTON ROADS SANITATION DISTRICT

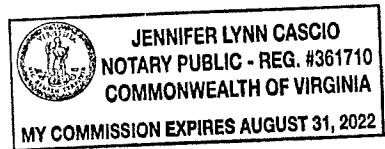
BY *EMM*
Edward G. Henifin, PE
General Manager

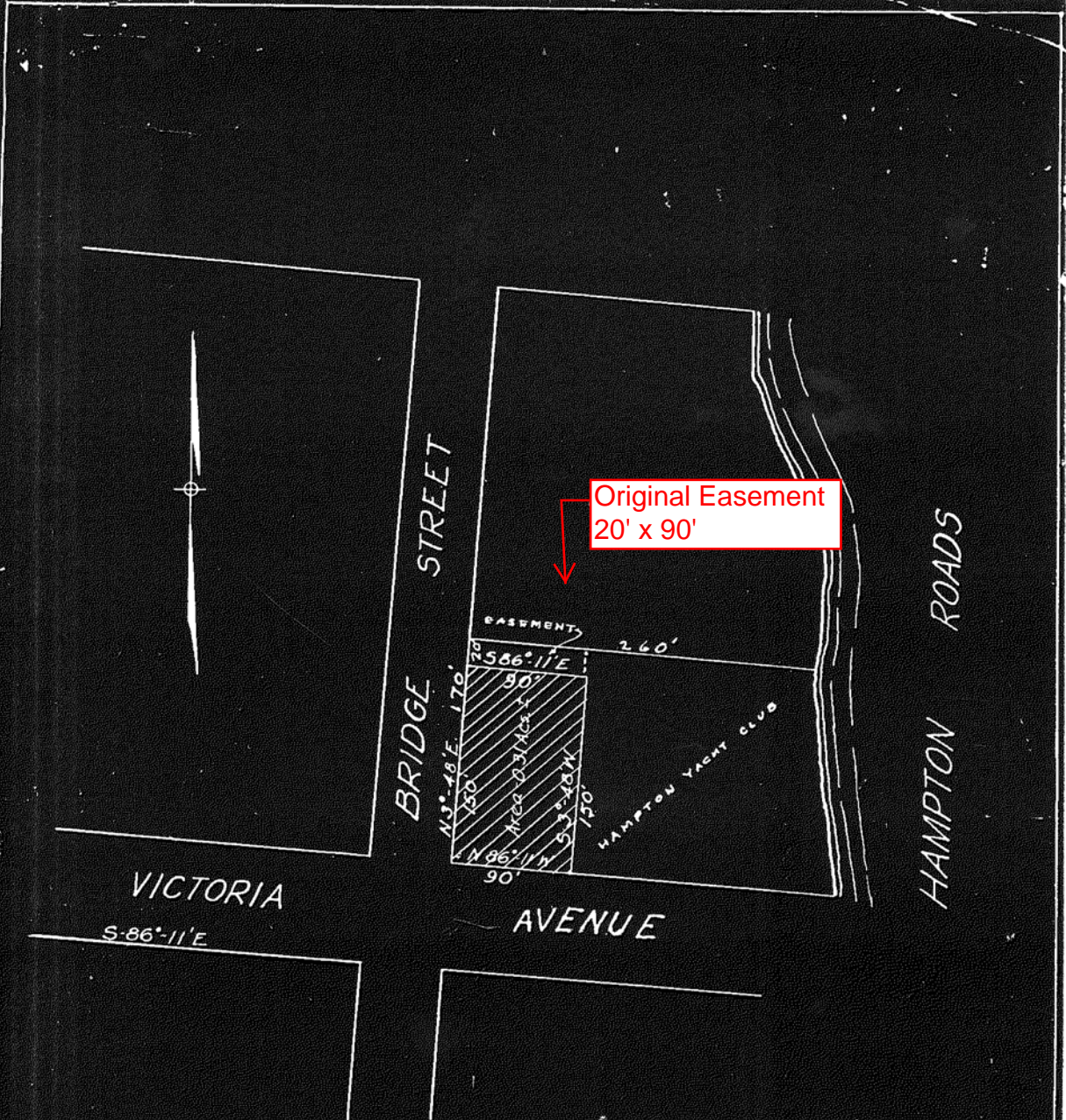
STATE OF VIRGINIA
CITY OF VIRGINIA BEACH, to-wit:

I hereby certify on this 23rd day of April, 2019, that Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District, acknowledged the foregoing Quitclaim Deed of Vacation of Easement before me. He is personally known to me.

My commission expires: August 31, 2022

Jennifer Lynn Cascio
Notary Public
Registration No: 361710





Original Easement
20' x 90'

See Deed Page 11

FEDERAL WORKS AGENCY
PROJECT NO. VA 44-408.1

PUMP STATION SITE FOR
HAMPTON TRUNK SEWER EXT.
ACQUIRED FROM
HAMPTON YACHT CLUB
HAMPTON, VIRGINIA.

GREELEY & HANSEN, ENGINEERS
SCALE 1"=100' NOV. 1944
PARCEL NO. 1

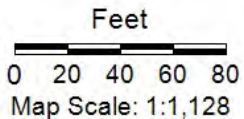
Legend

- Parcels
- Lot Lines
- Boundary



Title: 4707 Victoria Boulevard

Date: 4/14/2019



DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Hampton is not responsible for its accuracy or how current it may be.

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #7

AGENDA ITEM 13. – Property Disposition for the Old Bridge Street Pump Station Site
Conveyance of 4701 Victoria Boulevard, Hampton, VA

CONTRACT FOR PURCHASE AND SALE

THIS CONTRACT FOR PURCHASE AND SALE, made as of June 16, 2014, between **HAMPTON ROADS SANITATION DISTRICT (“HRSD”)**; and **HAMPTON YACHT CLUB, INC.**, a Virginia corporation (“**HYC**”).

AGREEMENT

In consideration of the two conveyances as hereinafter defined, the mutual covenants herein contained, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. **EFFECTIVE DATE:** The “Effective Date” of this Contract shall be the date on which all parties have signed this Contract.

2. **BRIDGE STREET PARCEL:** HRSD agrees to buy and HYC agrees to sell the real property which comprises approximately the westerly one-half of the parcel known as 515 Bridge Street, Hampton, Virginia, RPC 2003828 (the “Bridge Street Parcel”) which fronts along Bridge Street (the “New Pump Station Property”), in its current AS IS condition. HYC shall retain approximately the easterly one-half of the aforesaid parcel which fronts along the Hampton River, and shall include all riparian rights associated with the Bridge Street Parcel (the “HYC Retained Property”). The New Pump Station Property shall be approximately 0.68 acre; however, the New Pump Station Property shall be no more than one-half of the acreage of the Bridge Street Parcel. A complete description of the Bridge Street Parcel is attached hereto as **Exhibit “A”**.

3. **VICTORIA BOULEVARD PROPERTY:** After Settlement and closing on the New Pump Station Property, HRSD shall construct a new pump station on the New Pump Station Property. After the new pump station is operating, which shall be no later than December 31, 2020, HYC agrees to buy and HRSD agrees to sell the real property which is commonly known as 4701 Victoria Boulevard, Hampton, Virginia, RPC 2003824 (the “Victoria Boulevard Property”). The Victoria Boulevard Property shall include any present or future rights in or to any portion of Victoria Boulevard previously vacated or if vacated in the future by the City of Hampton. Prior to this conveyance, HRSD shall demolish the building on the Victoria Boulevard Property, fill in the “wet well” and level the land, such that it will convey the Victoria Boulevard Property to HYC in a clean, level condition.

4. **PURCHASE PRICE FOR NEW PUMP STATION PROPERTY:** The purchase price (“Purchase Price”) for the New Pump Station Property is Seven Hundred Fifty Thousand Dollars (\$750,000.00); and shall be paid by HRSD to HYC as follows:

\$	5,000.00	Deposit with this Contract (the “Deposit”)
\$	<u>745,000.00</u>	Additional amount to be paid at Settlement by cash or certified funds
\$	750,000.00	Total Purchase Price

5. **DEPOSIT:** Simultaneous with the execution of this Contract, HRSD shall make a deposit of \$5,000.00 (the "Deposit"), by check payable to Kaufman & Canoles, P.C. ("Escrow Agent"). From the Deposit, Escrow Agent shall pay \$2,500.00 (the "Nonrefundable Deposit") to HYC. It is the understanding and intent that the Nonrefundable Deposit shall be used by HYC as one-half (1/2) of the non-refundable deposits to be paid by HYC for purchase of the Bridge Street Parcel. Accordingly, HRSD understands and agrees that the Nonrefundable Deposit also is non-refundable under this Contract. The balance of the Deposit (the "Remaining Deposit") shall be held by Escrow Agent in escrow until the date of Settlement. If this Contract is not consummated and a dispute exists between HYC and HRSD, the Remaining Deposit will be held in escrow by Escrow Agent until HYC and HRSD have agreed to the disposition thereof, or a court of competent jurisdiction orders disbursement. One-half of any additional deposits required under the contract between HYC and the current owner of the Bridge Street Parcel (up to but not to exceed an additional \$10,000.00 to be paid by HRSD) shall be paid by HRSD to HYC and shall be added to the Nonrefundable Deposit and treated in the same manner.

6. **PURCHASE PRICE FOR VICTORIA BOULEVARD PROPERTY:** The purchase price ("Purchase Price") for the Victoria Boulevard Property shall One Hundred Twenty-Three Thousand Dollars (\$123,000.00); and shall be paid by HYC to HRSD in cash or certified funds at closing.

7. **DUE DILIGENCE AND INSPECTION PERIOD OF BRIDGE STREET PARCEL:** HRSD shall have a due diligence period (the "Bridge Street Parcel Due Diligence Inspection Period") of forty (40) days after the effective date of the contract between HYC and the current owner of the Bridge Street Parcel to conduct such tests, studies, inspections and other examinations (collectively "Examinations") of the Bridge Street Parcel as HRSD may elect in its sole judgment, to determine the suitability of the properties for its purposes. Such Examinations may include, but shall not be limited to, soil tests, borings, engineering studies, environmental studies, feasibility studies, surveys, drainage plans, utility services, and ability to obtain all required permits or licenses.

A. During the Bridge Street Parcel Due Diligence Inspection Period, HRSD, its employees, agents and representatives shall have the right to enter upon the Bridge Street Parcel at all times to conduct the Examinations, subject, however, to providing HYC with prior notice and an opportunity to be present.

B. In connection with the right to enter upon the Bridge Street Parcel, HRSD agrees (i) to restore the Bridge Street Parcel to its prior condition after the performance of any such inspections or tests and (ii) to indemnify, defend and hold the current owner and HYC harmless from and against all costs, losses, damages and expenses, including reasonable attorneys' fees, arising out of the activities of HRSD and/or its employees, agents and representatives on the Bridge Street Parcel.

C. HYC and HRSD shall obtain a Phase I Environmental Assessment of the Bridge Street Parcel during the Bridge Street Parcel Due Diligence Inspection Period, the cost of which shall be shared equally between HYC and HRSD.

D. HRSD may terminate this Contract by giving written notice to HYC prior to 5:00 p.m. on the last day of the Bridge Street Parcel Due Diligence Inspection Period, in which event the Nonrefundable Deposit shall be retained by HYC and the Remaining Deposit will be paid to HRSD, and neither party will have any further liability to the other.

E. HYC agrees to fully cooperate with HRSD to join in any and all applications for licenses, permits, approvals, and consents which may be necessary or desirable.

8. DUE DILIGENCE AND INSPECTION PERIOD OF VICTORIA BOULEVARD PROPERTY: HYC shall have a due diligence period (the "Victoria Boulevard Property Due Diligence Inspection Period") of forty (40) days after the effective date of the contract between HYC and the current owner of the Bridge Street Parcel to conduct such tests, studies, inspections and other examinations (collectively "Examinations") of the Victoria Boulevard Property as HYC may elect in its sole judgment, to determine the suitability of the properties for its purposes. Such Examinations may include, but shall not be limited to, soil tests, borings, engineering studies, environmental studies, feasibility studies, roof and building inspections, surveys, drainage plans, utility services, and ability to obtain all required permits or licenses.

A. During the Victoria Boulevard Due Diligence Inspection Period, HYC, its employees, agents and representatives shall have the right to enter upon the Victoria Boulevard Property at all times to conduct the Examinations, subject, however, to providing HRSD with prior notice and an opportunity to be present.

B. In connection with the right to enter upon the Victoria Boulevard Property, HYC agrees (i) to restore the Victoria Boulevard Property to its prior condition after the performance of any such inspections or tests and (ii) to indemnify, defend and hold HRSD harmless from and against all costs, losses, damages and expenses, including reasonable attorneys' fees, arising out of the activities of HYC and/or its employees, agents and representatives on the Victoria Boulevard Property.

C. HYC may elect to not purchase the Victoria Boulevard Property by giving written notice to HRSD prior to 5:00 p.m. on the last day of the Due Diligence Inspection Period, in which event the remainder of this Contract shall remain in full force and effect. HYC and HRSD shall have no further obligations to one another regarding the Victoria Boulevard Property, except that HYC's current lease of a portion the Victoria Boulevard Property shall continue upon the same terms and conditions as long as HRSD remains the owner of such property.

D. HRSD agrees to fully cooperate with HYC to join in any and all applications for licenses, permits, approvals, and consents which may be necessary or desirable.

9. **CONTINGENCIES:** Both purchases contemplated in this Agreement are contingent upon the occurrence of the following events. In the event that either one of these events does not occur by June 30, 2015, then this Contract shall become null and void, the Nonrefundable Deposit (\$2,500.00) shall be retained by HYC, the Remaining Deposit (also \$2,500.00) shall be paid to HRSD, and neither party shall have any further liability to the other.

A. HYC closes on and purchases the entire Bridge Street Parcel.

B. HYC is able to legally subdivide the Bridge Street Parcel into the New Pump Station Property and the HYC Retained Property, as more particularly provided below.

10. **SUBDIVISION OF THE BRIDGE STREET PARCEL:** After HYC closes on its purchase of the Bridge Street Parcel, it will proceed to have the Bridge Street Parcel legally subdivided into the New Pump Station Property and the HYC Retained Property, with the HYC Retained Property being approximately the easterly one-half of the Bridge Street Parcel which includes all of the frontage along Hampton River as well as all riparian rights associated with the Bridge Street Parcel, and the New Pump Station Property being approximately the westerly one-half of the Bridge Street Parcel which fronts along Bridge Street. HYC and HRSD each shall pay one-half of the cost of preparation and recordation of the subdivision plat. The subdivision plat also shall include easements as necessary for access and utilities, including (but not limited to) water, sewer, electricity, gas, telephone and cable over the New Pump Station Property for the benefit of the HYC Retained Property. If required by the City of Hampton, the subdivision plat also may include (a) fee simple access from the HYC Retained Property to Bridge Street, and/or (b) a joint BMP to serve both parcels with cross easements as necessary based on the proposed site development plans. The aforementioned easements, as well as any required fee simple access and/or BMP shall be at locations and with configurations which are reasonably acceptable to both parties and do not materially interfere with the proposed construction of the new pump station.

11. **SETTLEMENT/POSSESSION OF THE NEW PUMP STATION PROPERTY:** Settlement on the purchase of the New Pump Station Property by HRSD (the "New Pump Station Property Settlement") shall be made at a location selected by HRSD within thirty (30) days after the contingencies set forth in Section 8 of this Contract have been met. Time is of the essence. Possession of the New Pump Station Property shall be given to HRSD at such Settlement. At the New Pump Station Property Settlement, HYC shall execute and deliver to HRSD the following:

A. A duly executed Special Warranty Deed conveying the New Pump Station Property to HRSD.

B. An owner's affidavit as customarily required by title companies pertaining to mechanic's liens and the absence of tenants in occupancy.

C. An owner's affidavit that is acceptable to the title company in order to provide standard "gap" coverage.

D. HYC's affidavit that HYC is not a foreign person for the purposes of Section 1445 of the Internal Revenue Code.

E. Such additional documents as HRSD or HRSD's title company may reasonably require in order to consummate this transaction and fully comply with this Contract.

12. SETTLEMENT/POSSESSION OF THE VICTORIA BOULEVARD PROPERTY: Settlement on the purchase of the Victoria Boulevard Property by HYC (the "Victoria Boulevard Property Settlement") shall be made at the office of Escrow Agent, 2236 Cunningham Drive, Hampton, Virginia 23666, no later than ninety (90) days after the new pump station is operating on the New Pump Station Property, however, in no event later than December 31, 2020. Time is of the essence. Possession of the Victoria Boulevard Property shall be given to HYC at Settlement. At the Victoria Boulevard Property Settlement, HRSD shall execute and deliver to HYC the following:

A. A duly executed Special Warranty Deed conveying the Property to HYC.

B. An owner's affidavit as customarily required by title companies pertaining to mechanic's liens and the absence of tenants in occupancy.

C. An owner's affidavit that is acceptable to the title company in order to provide standard "gap" coverage.

D. HRSD's affidavit that HRSD is not a foreign person for the purposes of Section 1445 of the Internal Revenue Code.

E. Such additional documents as HYC or HYC's title company may reasonably require in order to consummate this transaction and fully comply with this Contract.

13. USE OF THE NEW PUMP STATION PROPERTY: After HRSD closes on the purchase of the New Pump Station Property, but prior to the commencement of any work on the New Pump Station Property, HRSD shall permit HYC to utilize the New Pump Station Property for parking and access upon terms and conditions reasonably acceptable to both parties.

14. LEASE OF THE VICTORIA BOULEVARD PROPERTY PRIOR TO SETTLEMENT: Prior to HYC closing on the purchase of the Victoria Boulevard Property, HRSD shall permit HYC to continue to use the portion of the Victoria Boulevard Property

currently used by HYC upon the same lease terms and conditions as currently in effect between the parties.

15. **EXPENSES:** In each of the sales transactions, the seller shall pay only the expense of preparing the deed, the recordation tax applicable to grantors and seller's attorney's fees. Except as otherwise agreed herein, all other expenses incurred by the buyer in connection with the buyer's purchase, including (without limitation), title examination, surveys, appraisal fees, preparation of deeds of trust and notes, title insurance premiums, recording costs and fees of the buyer's attorney, shall be borne by the buyer. Notwithstanding the foregoing, HYC and HRSD shall split the cost of the preparation and recordation of the subdivision plat for the Bridge Street Parcel.

16. **ESCROW/PRORATION:** All taxes, storm water fees, utilities, insurance, and other periodic charges, if any, shall be prorated as of the date of each settlement.

17. **TITLE:** At each settlement, the seller shall convey marketable and insurable (at normal rates) fee simple title to the respective property to the buyer by a Special Warranty Deed, free of all encumbrances, tenancies, and liens (except the lien for current taxes), but subject to all covenants, restrictions, easements and rights-of-way currently of record or apparent on the ground which do not render the title unmarketable. If the examination reveals a title defect of a character that can be remedied by legal action or otherwise within a reasonable time, the buyer shall give written notice of the same to the seller. The seller shall have the option to either (i) terminate this Contract, or (ii) take such action as is necessary to cure such defect. If the defect is not cured within ninety (90) days after the seller receives notice of the defect, then either party may terminate this Contract at the expiration of such ninety (90) day period. In the event that the Contract is terminated under this paragraph, the Remaining Deposit shall be refunded to HRSD (if applicable) and neither party shall have any further liability to any other. The parties agree that the date of Settlement shall be extended if necessary to enable the seller to cure any title defect, but not for more than ninety (90) days, unless extended by written consent of both the seller and the buyer.

Notwithstanding any other provision of this Contract, HRSD shall examine the title to the Bridge Street Parcel within twenty (20) days after the Effective Date and unless HRSD notifies HYC otherwise within such twenty (20) day period, HRSD shall be deemed to accept the title to the Bridge Street Parcel, including the New Pump Station Property portion thereof, in its condition as of the Effective Date.

18. **MECHANICS LIENS:** The seller shall deliver to the buyer at Settlement an affidavit signed by the seller that no labor or materials have been furnished to the applicable property within the statutory period for the filing of mechanics' or materialmen's liens against the property. If labor or materials have been furnished during the statutory period, the seller shall deliver to the buyer an affidavit signed by the seller furnishing the labor or materials that the costs thereof have been paid.

19. **RISK OF LOSS:** All risk of loss or damage to the respective properties by fire, windstorm, casualty, or other cause are assumed by the sellers until Settlement.

20. **CONDEMNATION:** If any authority having the right of eminent domain commences negotiations with the seller or commences legal action against the seller for the damaging, taking or acquiring of all or a material part of the property, either temporarily or permanently, by condemnation or by exercise of the right of eminent domain, the seller shall immediately give notice of the same to the buyer, together with all information and documentation received by the seller regarding the same. Upon the occurrence of any of the foregoing events, the buyer shall have the right, at its option, to terminate this Contract by giving notice thereof to the seller on or before the date of Settlement, in which event the Remaining Deposit shall be returned to HRSD (if applicable) and neither party shall have any liability to any other. If the buyer does not elect to terminate this Contract, the purchase price for the property shall be reduced by the total of any awards, settlement proceeds or other compensation received by the seller at or prior to Settlement with respect to any damage, taking or acquisition. At Settlement, the seller shall assign to the buyer all rights of the seller in and to any awards, settlement proceeds or other compensation payable by reason of any such damage, taking or acquisition. The risk of condemnation or eminent domain shall be borne by the seller until Settlement. In the event of any negotiations with any authority regarding the payment of any awards or other sums or regarding any settlement on account of any damage, taking or acquisition through condemnation or eminent domain, the seller will inform the buyer of all such negotiations of which the seller has notice and will permit the buyer to take part therein.

21. **FLOOD ZONE:** Each buyer is aware that the property it will purchase either partially or wholly may lie in a Flood Zone which may require the buyer to purchase flood insurance.

22. **NOISE DISCLOSURE:** Each buyer is aware that the property it will purchase either partially or wholly may lie within a Noise Contour District, and may be subject to high noise levels due to its proximity to flight operations.

23. **ENVIRONMENTAL DISCLOSURE:** Each buyer is aware that the uses and development opportunities of the property it will purchase may be limited if such property is covered by the Chesapeake Bay Preservation Act, the Clean Water Act, the Virginia Water Control Act or any other federal, state or local regulations concerning the environment.

24. **DEFAULT:** If either party defaults under this Contract, the non-defaulting party shall have the right to compel specific performance and shall have all additional rights and remedies available to the non-defaulting party and the non-defaulting party shall be entitled to recover its reasonable attorney's fees, expert fees and costs.

25. **SURVIVAL:** Unless otherwise indicated, the representations, warranties, covenants, and agreements contained in this Contract shall survive settlement and delivery and recordation of the deeds provided for herein.

26. **AGENTS AND BROKERS:** The parties each represent to the other that they have not negotiated or dealt with any agent or broker regarding this transaction, and both parties agree to indemnify and save the other harmless from any liability or expense (including attorney's fees) arising from the claim of any other agent or broker for a sales commission, fee or other compensation arising from their respective actions.

27. **NOTICES:** Any notice to be given to any party as herein provided shall be deemed to be given when hand delivered, one (1) day after being sent by national courier delivery service (e.g. Federal Express or United Parcel Service), or three (3) days after being duly posted by U. S. registered or certified mail, return receipt requested, if sent to the addresses listed on the signature page of this Contract. Any party may change the place designated for the giving of such notices by written notice duly and timely given to all other parties.

28. **ASSIGNMENT:** This Contract only may be assigned by a party upon the written consent of the other party, which consent shall not be unreasonably withheld, conditioned or delayed. Within a reasonable time after such assignment, the name, address and telephone number of the assignee shall be provided to other party in writing. Furthermore, all provisions of this Contract shall be binding on a party's assignee as well as on the original assignor party.

29. **BINDING EFFECT:** All the provisions, conditions and agreements of this Contract shall be binding upon and inure to the benefit of the legal representatives, heirs, successors and assigns of the parties.

30. **CAPTIONS:** The headings appearing in each paragraph of this Contract are intended only for convenience or reference, and are not to be considered in construing this instrument or any paragraph hereof.

31. **GOVERNING LAW:** This Contract shall be governed, interpreted and construed in accordance with the laws of the Commonwealth of Virginia.

32. **WAIVER:** If on any occasion either party waives any term or condition of this Contract such waiver must be in writing and shall not be construed as a continuing waiver.

33. **SEVERABILITY:** If any provision of this Contract or the application thereof to any person or circumstance is determined to be invalid or unenforceable to any extent, then the remainder of this Contract or the application of such provision to other persons or circumstances shall be and remain valid and enforceable to the fullest extent permitted by law.

34. **ATTORNEYS FEES AND COSTS:** In the event a dispute arises between the parties under this Contract, the nonprevailing party in such dispute shall pay the prevailing party's costs and expenses, including, but not limited to, its reasonable attorney's fees and expert fees.

35. **COUNTERPARTS AND FACSIMILES:** This Contract may be entered into in multiple counterparts, all of which taken together shall constitute one complete agreement. To facilitate execution and delivery of this Contract, the parties may execute and exchange counterparts of this Contract by facsimile, email or other electronic transmission (collectively "Electronic Signature"). All parties agree that Electronic Signatures shall have the same effect as original signatures and shall be considered legally binding upon the parties. The signature or Electronic Signature of any party to any counterpart may be appended to any other counterpart. All counterparts so executed shall collectively constitute one agreement, binding on all of the parties, notwithstanding the fact that all the parties have not signed the same original or the same counterpart.

36. **COMPLETE AGREEMENT:** This Contract constitutes the entire agreement and understanding between the parties; all prior negotiations between them have been merged with this Contract; there are no understandings, representations, warranties or covenants, either oral or written, other than those set forth in this Contract; and no provision of this Contract shall be amended, altered or waived in any manner unless such amendment, alteration or waiver is in writing and signed by all parties.

37. **LIMITATION OF OFFER:** This Contract shall terminate at 5:00 p.m. on the tenth (10th) day after the date of this Contract, if not executed by both parties and delivered to both parties prior to such date and time.

WITNESS THE FOLLOWING SIGNATURES AND SEALS. ALL PARTIES HEREBY ACKNOWLEDGE RECEIPT OF A COPY OF THIS CONTRACT:

HAMPTON ROADS SANITATION DISTRICT

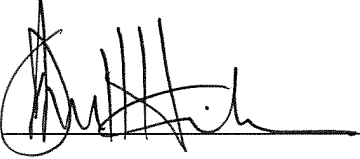
By:  Date: June 24, 2014

Name: Edward G. Henifin, P.E.

Title: General Manager

Contact Address: PO Box 5911, Virginia Beach, VA 23471-0911

HAMPTON YACHT CLUB, INC.,
a Virginia corporation

By:  _____

Date: June 16, 2014 _____

Name: John D. Heinke _____

Title: Commodore _____

Contact Address: 4707 Victoria Boulevard, Hampton, Virginia 23669 _____

Email: jheinke@msn.com

(This signature page is a part of the Agreement between HRSD and Hampton Yacht Club, Inc., a Virginia corporation "HYC" for the purchase and sale of a parcel known as 515 Bridge Street, Hampton)

Exhibit A
Legal Description of the Bridge Street Parcel

515 Bridge Street, Hampton VA
RPC 2003828

All that certain lot, piece or parcel of land, situate, lying and being in the City of Hampton, Virginia, as shown on that certain plat entitled "PLAT OF THE PROPERTY OF SANFORD & CHARLES, INCORPORATED", made by Reynolds & Miller, Certified Land Surveyors, dated December 1, 1967, and recorded in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 404, page 831.

Subject, however, to any easements and rights of way of record affecting said property.

Together with all and singular the buildings and improvements thereon, rights and privileges, tenements, hereditaments, riparian rights, easements and appurtenances belonging or in any way appertaining to said land.

It being the same property conveyed to H & H Holdings, LLC by Deed from 515 Bridge, LLC, dated March 6, 2014 and recorded March 7, 2014 as Instrument Number 140002623 in the Clerk's Office of the Circuit Court of Hampton, Virginia.

**ADDENDUM #1 to the
CONTRACT FOR PURCHASE AND SALE
BETWEEN THE
HAMPTON ROADS SANITATION DISTRICT ("HRSD")**

AND

HAMPTON YACHT CLUB, INC. a Virginia Corporation ("HYC")

THIS ADDENDUM is to the CONTRACT FOR PURCHASE AND SALE (the "Agreement"), dated June 16, 2014, between the HAMPTON YACHT CLUB, Inc. ("HYC") A Virginia corporation, and the HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia ("HRSD"), is entered into this 21 day of SEPTEMBER, 2018 (the "Effective Date").

This Addendum recites certain pertinent paragraphs of the Agreement which are germane to the amendment of the Agreement as follows:

AGREEMENT

2. **BRIDGE STREET PARCEL:** HRSD agrees to buy and HYC agrees to sell the real property, which comprises approximately the westerly one-half of the parcel known as 515 Bridge Street, Hampton, Virginia, RPC 2003828 (the "Bridge Street Parcel") which fronts along Bridge Street (the "New Pump Station Property"), in its current AS IS condition. HYC shall retain approximately the easterly one-half of the aforesaid parcel which fronts along the Hampton River, and shall include all riparian rights associated with the Bridge Street Parcel (the "HYC Retained Property"). The New Pump Station Property shall be approximately 0.68 acre; however, the New Pump Station Property shall be no more than one-half of the acreage of the Bridge Street Parcel. A complete description of the Bridge Street Parcel is attached hereto as **Exhibit "A"**.

3. **VICTORIA BOULEVARD PROPERTY:** After Settlement and closing on the New Pump Station Property, HRSD shall construct a new pump station on the New Pump Station Property. After the new pump station is operating, which shall be no later than December 31, 2020, HYC agrees to buy and HRSD agrees to sell the real property, which is commonly known as 4701 Victoria Boulevard, Hampton, Virginia, RPC 2003824 (the "Victoria Boulevard Property"). The Victoria Boulevard Property shall include any present or future rights in or to any portion of Victoria Boulevard previously vacated or if vacated in the future by the City of Hampton. Prior to this conveyance, HRSD shall demolish the building on the Victoria Boulevard Property, fill in the "wet well" and level the land, such that it will convey the Victoria Boulevard Property to HYC in a clean, level condition.

6. **PURCHASE PRICE FOR VICTORIA BOULEVARD PROPERTY:** The purchase price ("Purchase Price") for the Victoria Boulevard Property shall be One Hundred Twenty Three Thousand Dollars (\$123,000.00); and shall be paid by HYC to HRSD in cash or certified funds at closing.

TERMS

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

1. That this addendum is to provide for the addition to or extension of the work provided for under the aforesaid Agreement.
2. No provision of the original Agreement shall be modified except as expressly herein provided, otherwise, the original Agreement remains in full force and effect.
3. **6. PURCHASE PRICE FOR VICTORIA BOULEVARD PROPERTY** of the aforesaid Agreement shall be amended as follows:
 - a. HRSD will reduce the sales price of the Victoria Boulevard Property by Thirteen Thousand Dollars (\$13,000.00).
 - b. This reduction is to provide HYC with funding to address any grading and drainage issues required on their property upon completion of HRSD work at the Bridge Street Parcel.
 - c. HRSD, and HYC agrees thereto, will assume no additional responsibility or liability for drainage of the HYC property associated with HRSD development of the Bridge Street Parcel, provided the property is graded according to the agreed upon plan attached hereto as **Exhibit "B"**.
 - d. The final purchase price ("Purchase Price") for the Victoria Boulevard Property shall be One Hundred Ten Thousand Dollars (\$110,000.00); and shall be paid by HYC to HRSD in cash or certified funds at closing.

Addendum # 1 to the Contract for Purchase and Sale between Hampton Roads Sanitation District
(HRSD) and Hampton Yacht Club, Inc. (HYC)

IN WITNESS WHEREOF, the parties have executed this Addendum to the Agreement
as of the date first written above.

HAMPTON ROADS SANITATION DISTRICT

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

IN WITNESS WHEREOF, the parties have executed this Addendum to the Agreement
as of the date first written above.

HAMPTON YACHT CLUB, INC.

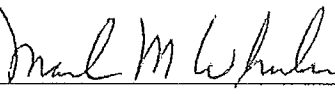
By: 
COMMODORE, HYC
(name)
(title)

EXHIBIT "A"
Legal Description of the Bridge Street Parcel
515 Bridge Street, Hampton VA
RPC 2003828

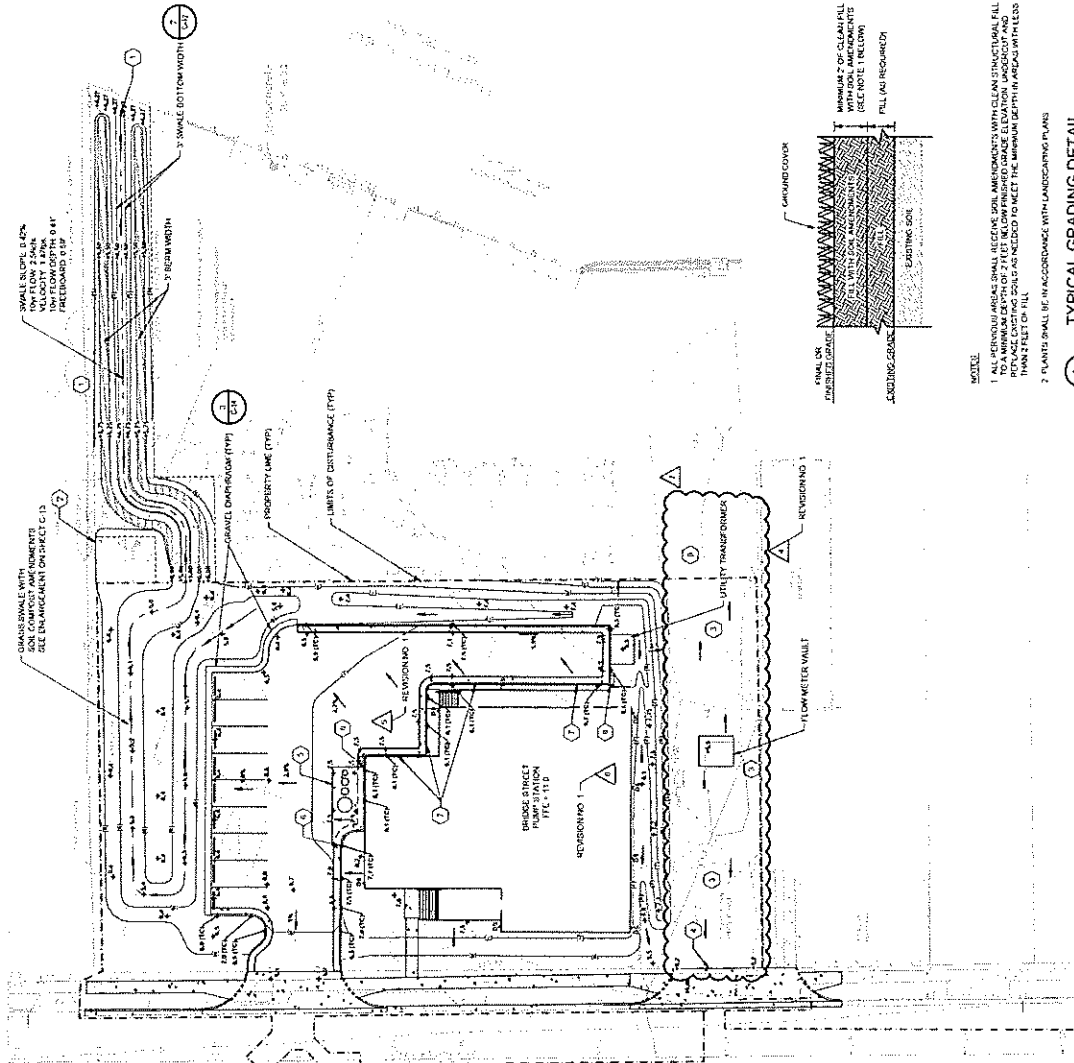
All that certain lot, piece or parcel of land situate, lying and being in the City of Hampton, Virginia, as shown on that certain plat entitled "PLAT OF THE PROPERTY OF SANFORD & CHARLES, INCORPORATED", made by Reynolds & Miller, Certified Land Surveyors, dated December 1, 1967, and recorded in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed Book 404, page 831.

Subject, however, to any easements and rights of way of record affecting said property.

Together with all and singular the buildings and improvements thereon, rights and privileges, tenements, hereditaments, riparian rights, easements and appurtenances belonging or in any way appertaining to said land.

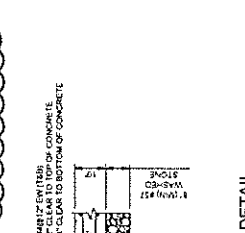
It being the same property conveyed to H & H Holdings, LLC by Deed from 515 Bridge, LLC, dated March 6, 2014 and recorded March 7, 2014 as Instrument Number 140002623 in the Clerk's Office of the Circuit Court of Hampton, Virginia.

EXHIBIT B
Page 5 of 5

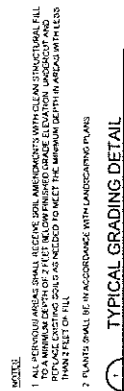


- GENERAL NOTES:**
1. EROSION CONTROL MEASURES AND APPROPRIATE NOTICES ARE LOCATED ON SHEETS C-1 TO C-50.
 2. SWALE GRASS SEEDING SHALL BE INSTALLED DURING FINAL STABILIZATION AFTER UPSTREAM AREAS ARE STABILIZED.
 3. APPROXIMATE EXCAVATION EXTENTS SHOWN FOR SURFACE UTILITIES LOCATED IN URDUDE EXCAVATION WITH NEW WORK AND UTILITY INSTALLATION DETAILS.
 4. GRADE SET IN ACCORDANCE WITH DETAIL 1 ON THIS SHEET.
 5. SLOPE TOP OF SWAL MINIMUM 1% TO EDGE OF CONCRETE.

- KEYNOTES:**
1. EXISTING UTILITIES TO BE MAINTAINED MUST BE CLEARLY IDENTIFIED AND PROTECTED DURING ALL CONSTRUCTION BY THE CONTRACTOR. ELEVATIONS SHALL BE PROVIDED FOR ALL EXISTING UTILITIES TO BE MAINTAINED.
 2. EXISTING DOMINION VIRGINIA POWER FACILITY GRADE SHALL BE MAINTAINED. THE TOP OF FLOW WATER VAULT AND SLOPE DOWN TO TOP OF FLOW WATER VAULT SHALL BE MAINTAINED SOUTH DOWN TO EDGE OF BRIDGE STREET DRIVEWAY TO THE WEST AND DOWN TO THE EAST (SEE KEY NOTE 3).
 3. ALL EXISTING GRADE AT EDGE OF PROPOSED DRIVEWAY APPROXIMATE ELEVATION +2.30.
 4. TANK CONCRETE SHALL REFER TO CONCRETE PAD AND INTEGRAL CURB AND GUTTER DETAIL 2. ELEVATION AND PROVIDE SMOOTH TRANSITION FROM CONCRETE TO ASPHALT.
 5. MATCH CURB ELEVATION AND PROVIDE SMOOTH TRANSITION WHERE INTEGRAL CURBS MEET SPILL CURB.
 6. PROVIDE SMOOTH TRANSITION WHERE SPILL CURB AND CUTTER ZONE COMBINATION CURB MEET TO WARD SIDE OF FLOW WATER VAULT.
 7. HYD ACCESS DRIVE PAVEMENT NOT SHOWN ON THIS SHEET. REFER TO EXISTING GRADE AT EDGE OF PAVEMENT.



CONCRETE PAD AND INTEGRAL CURB AND GUTTER DETAIL
NOT TO SCALE



TYPICAL GRADING DETAIL
NOT TO SCALE

- NOTES:**
1. ALL PERVIOUS AREAS SHALL RECEIVE SOIL AMENDMENTS WITH CLEAN STRUCTURAL FILL TO A MINIMUM OF 18\"/>
 - 2. PLANTS SHALL BE IN ACCORDANCE WITH LANDSCAPING PLANS.

PROJECT MANAGER: J. METZGER
DISCUSSED BY: M. LITTLE
DRAWN BY: C. YNELL
CHECKED BY: R. YNELL

BRIDGE STREET PUMP STATION REPLACEMENT
HAMPTON, VIRGINIA

SCALE: 1" = 20'



ISSUE	DATE	DESCRIPTION
1	04/20/16	FIELD ORDER NO. 15
2	05/20/16	FIELD ORDER NO. 11
3	05/20/16	WORK CHANGE DIRECTIVE NO. 13
4	05/20/16	WORK CHANGE DIRECTIVE NO. 1
5	05/20/16	WORK CHANGE DIRECTIVE NO. 2
6	05/20/16	WORK CHANGE DIRECTIVE NO. 3
7	05/20/16	WORK CHANGE DIRECTIVE NO. 4
8	05/20/16	WORK CHANGE DIRECTIVE NO. 5
9	05/20/16	WORK CHANGE DIRECTIVE NO. 6
10	05/20/16	WORK CHANGE DIRECTIVE NO. 7
11	05/20/16	WORK CHANGE DIRECTIVE NO. 8
12	05/20/16	WORK CHANGE DIRECTIVE NO. 9
13	05/20/16	WORK CHANGE DIRECTIVE NO. 10
14	05/20/16	WORK CHANGE DIRECTIVE NO. 11
15	05/20/16	WORK CHANGE DIRECTIVE NO. 12
16	05/20/16	WORK CHANGE DIRECTIVE NO. 14
17	05/20/16	WORK CHANGE DIRECTIVE NO. 15
18	05/20/16	WORK CHANGE DIRECTIVE NO. 16
19	05/20/16	WORK CHANGE DIRECTIVE NO. 17
20	05/20/16	WORK CHANGE DIRECTIVE NO. 18
21	05/20/16	WORK CHANGE DIRECTIVE NO. 19
22	05/20/16	WORK CHANGE DIRECTIVE NO. 20
23	05/20/16	WORK CHANGE DIRECTIVE NO. 21
24	05/20/16	WORK CHANGE DIRECTIVE NO. 22
25	05/20/16	WORK CHANGE DIRECTIVE NO. 23
26	05/20/16	WORK CHANGE DIRECTIVE NO. 24
27	05/20/16	WORK CHANGE DIRECTIVE NO. 25
28	05/20/16	WORK CHANGE DIRECTIVE NO. 26
29	05/20/16	WORK CHANGE DIRECTIVE NO. 27
30	05/20/16	WORK CHANGE DIRECTIVE NO. 28
31	05/20/16	WORK CHANGE DIRECTIVE NO. 29
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33	05/20/16	WORK CHANGE DIRECTIVE NO. 31
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83	05/20/16	WORK CHANGE DIRECTIVE NO. 81
84	05/20/16	WORK CHANGE DIRECTIVE NO. 82
85	05/20/16	WORK CHANGE DIRECTIVE NO. 83
86	05/20/16	WORK CHANGE DIRECTIVE NO. 84
87	05/20/16	WORK CHANGE DIRECTIVE NO. 85
88	05/20/16	WORK CHANGE DIRECTIVE NO. 86
89	05/20/16	WORK CHANGE DIRECTIVE NO. 87
90	05/20/16	WORK CHANGE DIRECTIVE NO. 88
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94	05/20/16	WORK CHANGE DIRECTIVE NO. 92
95	05/20/16	WORK CHANGE DIRECTIVE NO. 93
96	05/20/16	WORK CHANGE DIRECTIVE NO. 94
97	05/20/16	WORK CHANGE DIRECTIVE NO. 95
98	05/20/16	WORK CHANGE DIRECTIVE NO. 96
99	05/20/16	WORK CHANGE DIRECTIVE NO. 97
100	05/20/16	WORK CHANGE DIRECTIVE NO. 98
101	05/20/16	WORK CHANGE DIRECTIVE NO. 99
102	05/20/16	WORK CHANGE DIRECTIVE NO. 100

PROJECT NUMBER: 15742



BRIDGE STREET PUMP STATION REPLACEMENT
HAMPTON, VIRGINIA

623224 (04-17-2019)

Prepared by:

Conway H. Sheild, III (VSB # 06893)
Jones, Blechman, Woltz & Kelly, P.C.
701 Town Center Drive, Suite 800
Newport News, Virginia 23606
Tax Map No. 2003824
Consideration: \$110,000.00
Assessed Value: \$100,300.00
Title Insurance: Unknown

Return to:

Lawrence G. Cumming
Kaufman & Canoles
2236 Cunningham Drive
Hampton, Virginia 23666

Property Address: 4701 Victoria Blvd., Hampton, VA 23669

This deed exempt from tax pursuant to § 58.1-811 C4

THIS DEED is made this 23rd day of April, 2019, by and between **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia, ("Grantor"), to **HAMPTON YACHT CLUB, INCORPORATED**, a Virginia corporation, ("Grantee"), whose address is 4707 Victoria Blvd., Hampton, Virginia 23669.

NOW, THEREFORE, WITNESSETH: That the Grantor hereby conveys for and in consideration of the sum of Ten & 00/100 Dollars (\$10.00) and other good and valuable consideration paid to the Grantor by the Grantee, the receipt of which is hereby acknowledged, and does hereby bargain, sell and convey with **SPECIAL WARRANTY** of Title, unto the Grantee, the following described parcels of real property located in Hampton, Virginia, to-wit:

SEE ADDENDUM A ATTACHED

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

Subject to valid recorded easements, covenants, reservations and restrictions, in the chain of title to the property herein described, which have not expired or otherwise become ineffective.

WITNESS the following signature and seal:

HAMPTON ROADS SANITATION DISTRICT

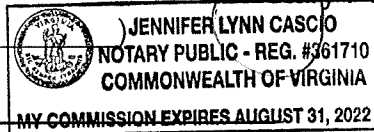
By: *Edward G. Henifin* (SEAL)
Edward G. Henifin, P.E.
General Manager

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

I hereby certify on this 23rd day of April, 2019 that Edward G. Henifin, P.E., General Manager of Hampton Roads Sanitation District, acknowledged the foregoing Deed before me. He is personally known to me.

Jennifer Lynn Cascio
Notary Public

Notary Public (Reg. No. _____



My Commission expires: _____

ADDENDUM A

All that certain piece, parcel or lot of land, situate, lying and being in the City of Hampton, Commonwealth of Virginia, and being more particularly described as follows:

Beginning at the northeast intersection of Bridge Street and Victoria Avenue, running thence, with the east line of said street, North 03 degrees 48 minutes E 150.0 feet to a 20 foot easement; thence with the south line of said easement, South 86 degrees 11 minutes E 90.00 feet; thence, with Hampton Yacht Club, South 03 degrees 48 minutes W 150.0 feet to the north line of said Avenue; thence, with the north line of said Avenue, North 86 degrees 11 minutes West 90.0 feet to the beginning, containing 0.31 of an acre, more or less, being a lot 90.0 feet by 150.0 feet off of the property of said Hampton Yacht Club, and being the shaded section appearing on a certain map for the Pump Station Site for Hampton Trunk Sewer Extension, made by Greeley & Hansen, Engineers, dated November 1944, designated as Parcel No. 1, said map being recorded in Elizabeth City County (now City of Hampton), Circuit Court, Clerk's Office, in Volume 132, page 56.

It being the same property conveyed as Parcel 18 by deed dated June 20, 1950 from the United States of America, acting by and through the Housing and Home Finance Administrator, to Hampton Roads Sanitation District Commission, a public body created and organized under the laws of the Commonwealth of Virginia, recorded July 19, 1950, in the Clerk's Office of the Circuit Court of the City of Hampton, Virginia, in Deed book 175, page 177.

Legend

- Parcels
- Lot Lines
- Boundary

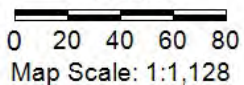
4701 Victoria Boulevard
(Former HRSD PS Site)



Title: 4701 Victoria Boulevard

Date: 4/14/2019

Feet



DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Hampton is not responsible for its accuracy or how current it may be.

HRSD COMMISSION MEETING MINUTES
APRIL 23, 2019

ATTACHMENT #8

AGENDA ITEM 18. – Informational Items

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



April 16, 2019

Re: General Manager's Report

Dear Commissioners:

Much of March was consumed by efforts to acquire property adjacent to the Williamsburg Treatment Plant in James City County (JCC). An obscure section of the Code of Virginia (**§ 15.2-4313 Proposals as to land acquisition or construction within district.**) requires the JCC Board of Supervisors to review our acquisition and make a determination as to the impact of the acquisition (excerpt of § 15.2-4313 follows):

“Unless the local governing body, by an affirmative vote of a majority of all the members elected to it, determines that the proposed action is necessary to provide service to the public in the most economic and practical manner and will not have an unreasonably adverse effect upon state or local policy, the order shall prohibit the agency, corporation or political subdivision from proceeding with the proposed action. If the agency, corporation or political subdivision is aggrieved by the final order of the local governing body, an appeal shall lie to the circuit court having jurisdiction of the territory wherein a majority of the land affected by the acquisition is located.”

We were unable to convince a majority of the JCC Board of Supervisors that the acquisition required to construct SWIFT facilities at Williamsburg met these requirements when they initially considered our request. The next step, as prescribed by the Code of Virginia, is for JCC to schedule a public hearing and, after receiving public comment, make a final decision.

Our request has largely become a referendum on condemnation, one we cannot win in a public hearing forum. For this reason, we have decided to withdraw our notice of acquisition and have shifted our full-scale implementation plan to begin with the James River Treatment Plant in Newport News. We will revisit full-scale implementation in Williamsburg at a later date.

While frustrating, this pivot will not create a significant delay in the overall schedule. We remain focused on submitting the required permit application for the recharge wells, now at James River Treatment Plant, to the Underground Injection Control Program at US EPA Region 3 this summer with a goal of receiving the permit in early 2020.

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

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

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

- A. **Treatment Compliance and System Operations:** All treatment plants met permit. We had one spill in the system related to contractor operations and no wet weather overflows. The details of the spill and highlights of the month are included in the attached monthly reports.
- B. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel:
1. One new employee orientation sessions
 2. Two length of service recognition breakfasts
 3. Several meetings on the Fiscal Year 2020 capital improvement program
 4. Multiple architectural review meetings for various pump station projects
 5. Delivered "TED Talk" at HRSD Supervisory Training
 6. Attended HRSD Incident Response Training
 7. A meeting to discuss subdivision of former NS Ops site and disposition plans for property
 8. A design review meeting for the new WQ Building
 9. A meeting to review a green roof proposal for the Providence Road Storage Tank
 10. Several calls discussing EPA/DEQ comments on the Integrated Plan submitted in September 2017
- C. **External Communications:** I participated in the following meetings/activities:
1. An interview by Municipal Water Leader Magazine
 2. Participated on a panel presentation at the WaterNOW Summit
 3. A conference call meeting of the NACWA Awards committee planning this year's review process for the Excellence in Management Awards
 4. Moderated a SWIFT panel at the Environment Virginia Symposium
 5. Provided a briefing on the functions of the USEPA Environmental Financial Advisory Board to the Ferguson CFO
 6. Met with HRSD and City of Norfolk Utilities staff regarding several coordination issues
 7. Attended the quarterly meeting of the Board of Directors for the Virginia Association of Municipal Wastewater Agencies (VAMWA)
 8. Hosted a tour of SWIFT during the second HRSD-sponsored well water testing clinic in partnership with the Virginia Cooperative Extension Service
 9. The Virginia Beach State of the City luncheon

10. The Stormwater Committee of the Hampton Roads Planning District Commission (HRPDC)
11. The Director of Utilities Committee of the Hampton Roads Planning District Commission (HRPDC)
12. Presented SWIFT to the annual Virginia Engineers Conference
13. Participated on a regional cooperation panel for the CIVIC Leadership Class of 2019
14. Met with the Newport News City Manager
15. Met with the new County Administrator for Surry County
16. A meeting with community leaders regarding the Eastern Shore sewer study
17. The City of Hampton Planning Commission as they considered the Willard Avenue Pump Station relocation
18. A meeting with senior leadership from Xylem focused on response to warranty issues at the SWIFT RC
19. A meeting with the Director of Virginia DEQ and senior staff regarding WIP III implications for wastewater plants in Virginia
20. A call with staff from Senator Kaine's office checking in on Federal water issues
21. A meeting with Jeanette Brown a former utility executive, Past President of WEF and professor at Manhattan College where she will be working with HRSD's Ali Gagnon on a controls project
22. Several calls and meetings with James City County staff and members of the Board of Supervisors focused on our proposed acquisition of property adjacent to the Williamsburg Treatment Plant

D. Consent Decree Update:

1. The revised demand letter, based on February's negotiations was not received in March but is expected in April. Payment of the \$73,575 penalty will be made upon receipt of the demand.
2. Staff is working with Brown and Caldwell and AquaLaw on a response to the comments on our Integrated Plan submitted in September 2017 that were received on February 15, 2019. The regional utility directors have been briefed and several are reviewing cost implications for their systems. This locality information will be included in our response.
3. The Semi-Annual Report is due on May 1, 2019. Staff is preparing the required report.

As I write this report, our SWIFT Research Center is getting closer to coming back on-line and should be recharging the aquifer next week. The warranty work was

challenging and ran longer than anticipated. Our staff has stepped up to assist the contractor with bringing the facility back on-line as efficiently as possible. The efforts by our staff have cut countless weeks from this process. Once again, it comes down to the outstanding, talented and dedicated staff we have at HRSD. We are really fortunate to have great people throughout HRSD.

That includes you. 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 on Tuesday, April 23, 2019 in Newport News.**

Respectfully submitted,

Ted Henifin

Ted Henifin, P.E.
General Manager

TO: General Manager
FROM: Director of Communications
SUBJECT: Monthly Report for March 2019
DATE: April 8, 2019

A. Publicity and Promotion

1. **Plan would send sewage out of county | March 1, 2019 | Southside Sentinel**
http://www.ssentinel.com/index.php/news/article/plan_would_send_sewage_out_of_county/
2. **Virginia's Aquifer Recharge Project Receives Oversight Overhaul | March 7, 2019 | Water Online**
<https://www.wateronline.com/doc/virginia-aquifer-recharge-project-receives-oversight-overhaul-0001>
3. **Board to consider HRSD land acquisition at Carter's Grove, proposed Wawa | March 8, 2019 | The Virginia Gazette**
<https://www.vagazette.com/news/va-vg-james-city-board-hrsd-wawa-0309-story.html>
4. **Here's what's on tap for the JCC Board of Supervisors meeting Tuesday | March 11, 2019 | Williamsburg Yorktown Daily**
<https://wydaily.com/local-news/2019/03/11/heres-whats-on-tap-for-the-jcc-board-of-supervisors-meeting-tuesday/>
5. **Concerns voiced over plan to discharge more treated effluent into Urbanna Creek | March 11, 2019 | Southside Sentinel**
http://www.ssentinel.com/index.php/news/article/concerns_voiced_over_plan_to_discharge_more_treated_effluent_into_urbanna_c/
6. **HRSD's request for Carter's Grove land delayed until April | March 13, 2019 | The Virginia Gazette**
<https://www.vagazette.com/news/va-vg-james-city-hrsd-carters-grove-0316-story.html>
7. **Who pays for sewer...and how much? | March 13, 2019 | Southside Sentinel**
http://www.ssentinel.com/index.php/news/article/who_pays_for_sewe

[r and how much/](#)

8. **Gary Szymanski: Consider coal ash alternatives | March 14, 2019 | The Virginian Pilot**
https://pilotonline.com/opinion/columnist/guest/article_87365c64-450b-11e9-a586-77fc6fd24b50.html
9. **'Canstruction' event at MacArthur Center helps local food bank | March 17, 2019 | WVEC TV**
<https://www.13newsnow.com/video/news/canstruction-event-at-macarthur-center-helps-local-food-bank/291-96a30b03-34ad-475d-87e0-1ddb4047d48c>
10. **Canstruction creations on display at MacArthur Center | March 18, 2019 | WAVY TV**
<https://www.wavy.com/news/local-news/norfolk/20th-annual-canstruction-creations-on-display-at-macarthur-center/1858000098>
11. **New pump station in Phoebus draws ire of nearby homeowners | March 22, 2019 | Daily Press**
<https://www.dailypress.com/news/hampton/dp-nws-phoebus-pump-station-20190322-story.html>

B. Social Media and Online Engagement

1. Facebook: 18,035 post impressions and Facebook Engagement of 452
2. Twitter: 9,736 impressions
3. SWIFT website visits: 658
4. LinkedIn Impressions: 244
5. Blog posts: 1
6. Construction Project Page Visits: 1182 total (this number does not include direct visits from home page), broken down as follows:
 - a. 526 visits to construction status page
 - b. 656 visits to individual project pages
7. Next Door unique impressions: 0 (no posts made in March)

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

1. News Releases/Traffic Advisories/Construction Notices: 4
2. Advertisements: 0
3. Project Notices: 10 (via door hanging/door knocking, and civic league emails)
4. Project/Community Meetings: 1
5. New Project Web Pages/Blogs/Videos: 1 new project web page for Mathews County – [Mathews County Vacuum Pump Station](#)

D. Special Projects and Highlights

1. Director attended and assisted with the coordination of a well water testing clinic sponsored and hosted by HRSD at the SWIFT Research Center and provided by the Virginia Tech Cooperative Extension Office.
2. Staff continued planning meetings with Ocean Lakes High School staff to for April's Earth Action Day activities and events.
3. Staff participated in the Virginia Water Environment Association (VWEA) monthly communications meeting.

E. Internal Communications

1. Director participated in the following internal meetings:
 - a. Senior Leadership meeting
 - b. Apprenticeship 40th anniversary celebration planning
 - c. Infrastructure Week communication planning meeting
 - d. New Employee Orientation
 - e. SWIFT QST and QST meetings
 - f. Preliminary design meeting for Water Quality building
 - g. Architectural review committee meetings
 - h. Woodstock Park Improvement project communication planning meetings and workshops
 - i. Planning meeting for Atlantic Treatment Plant Administration building ribbon cutting
 - j. United Way team update
 - k. Main office response procedure training by Safety Department

2. Director conducted bi-weekly communications department status meetings with staff and training check-in meetings with new Public Information Specialist.

Metrics

1. Educational and Outreach Activities: 4
 - a. 03/08/19 – STEM EXPO Portsmouth Public Schools (1000 attendees)
 - b. 03/14/19 – SWIFT Research Center Tour and interview for Environmental Communication student from Christopher Newport University
 - c. 03/22/19 – Career Day at Willard Elementary School, Norfolk (200 attendees)
 - d. 03/27/19 – Boat Harbor Plant Tour for Churchland High School students, Portsmouth (20 attendees)

2. Number of Community Partners: 2
 - a. Portsmouth Public Schools
 - b. Norfolk Public Schools

3. Additional Activities Coordinated by Communications Department: 6
 - a. Atlantic Plant Tours (3)
 - b. Guest speaker for Cox High School, Virginia Beach
 - c. Nansemond Plant Tour
 - d. Career and College Day at Fairlawn Elementary School, Virginia Beach

4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	March 2019
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	12.92
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	80.34
M-5.2	Educational and Outreach Events	Number	4
M-5.3	Number of Community Partners	Number	2

Respectfully,

Leila Rice, APR

Director of Communications

TO: General Manager

FROM: Director of Engineering

SUBJECT: Engineering Monthly Report for March 2019

DATE: April 9, 2019

A. General

1. Capital Improvement Program (CIP) spending for the eighth month of Fiscal Year (FY) 2019 was lower than the planned spending target.

CIP Spending (\$M):

	Current Period	FYTD
Actual	7.58	51.11
Plan	10.10	86.40

2. HRSD Staff participated with our SWIFT Program Management Consultant, AECOM, at the 2019 Canstruction Event held March 18 through 23 in Norfolk. This was HRSD's first time participating in this event benefitting the Foodbank of Southeastern Virginia and the Eastern Shore. Teams are challenged to construct a structure entirely of food cans. Each team's entry was judged and prizes were awarded in a variety of categories. Our entry highlighted the HRSD SWIFT Program and earned an Honorable Mention award. This was a good opportunity to raise awareness of the HRSD SWIFT Program and give to a worthy cause. This year's Canstruction Event collected over 27,000 cans of food.
3. Due to the ever increasing workload associated with property acquisition, Karen Scarano has rejoined the Engineering Department as a Real Estate Manager. Karen worked with the Communications Department as the Community Relations Liaison for the last few years. In her new role she will be working with Ayanna Williams to address the many property and easement acquisitions we will need in the coming years as we continue with our growing Capital Improvement Program. Her past experience negotiating claims with citizens impacted by our construction efforts will be an important skill as she works with property owners to acquire the needed land we need to construct infrastructure.

B. Asset Management Division

1. Staff has begun the process to create an Asset Management Plan dashboard. The dashboard will replace the existing Replacement Planning Model previously developed for the interceptor system and will include the

asset risk profile and the replacement schedule based on age, condition, and other risk factors. Estimated asset replacements costs will also be included in the dashboard to assist with business case analysis for operation/maintenance efforts and future capital replacement budgeting.

2. A Kick-Off Meeting was recently held with the newly formed SMART Ambassadors Team. SMART stands for Systematically Managing Assets for a Reliable Tomorrow. This team is made up of representatives from each work center and is a way to share information about HRSD's Asset Management Program directly with individuals who are key leaders and users of the tools necessary to manage key assets across the organization. This group will be an important part of the Communications and Change Management Plan used to implement asset management here at HRSD.

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

1. The design of the Willard Avenue Pump Station Replacement project continues to move forward. A site near the existing pump station location has been acquired for the new pump station. Coordination with the City of Hampton and local citizen groups is underway as we receive input for the design of this future pump station. Design and permitting efforts are scheduled to continue through the remainder of the year.
2. Construction continues on the Atlantic Treatment Plant Thermal Hydrolysis Process and FOG Receiving Station. An important milestone was reached in March as the CAMBI units were delivered to the project site and placed on the recently installed concrete support pads. The project is proceeding on schedule, despite a difficult and lengthy construction effort. The work is planned to continue through 2019 with a planned completion date of October 2020.
3. The SWIFT Full Scale Implementation Program (FSIP) efforts continue on a number of different fronts. A series of workshops have been recently held to address the following FSIP tasks:
 - Procurement of Services and Equipment
 - Recharge & Test Well Installation Services Procurement
 - Lamberts Point Landfill Program Development
 - Dilution Modeling and Outfall Diffuser Impacts
 - SWIFT Program Funding and Scheduling

D. Planning & Analysis Division

1. The efforts to finalize the FY 2020 CIP are nearing completion. The second CIP Review Meeting scheduled for April 1 was not required since little had changed from the first meeting and project scheduling delays were limited primarily to the SWIFT Program. The FY 2020 CIP has now been balanced to fiscal year spending limits. In order to fund all projects approved at the first CIP Review Meeting and address projects created since that meeting, several changes needed to be made. The SWIFT Program went through several iterations to come up with a final scenario that could most easily be accommodated; however, the SWIFT completion deadline has been extended to FY 2032. Several projects were delayed largely based on feedback from the first CIP Review Meeting. In addition, several future year FY caps were modified to allow for peak spending years largely driven by the SWIFT Program.
2. Staff has been tasked with developing a communications link between HRSD and other interested parties related to the sharing of SWIFT Program data. HRSD plans to use the PI Vision software interface since most of the SWIFT data is currently stored in the PI Historian. This data will be shared with approved external consultants, USGS and others working on the SWIFT Program.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 7
 - a. Staff co-presented a technical paper at the Utility Management Conference entitled, "Incorporating Programmatic Sustainability Into Your Utility," on March 7.
 - b. Staff presented at the STEM Expo held at Wilson High School on March 9.
 - c. Staff participated in the Canstruction Event held on March 17.
 - d. Staff made a presentation to students at Cox High School on SWIFT and careers at HRSD on March 21.
 - e. Staff presented at the Resiliency and Sustainability Symposium on March 21.
 - f. Staff participated in a College and Career Expo at Fairlawn Elementary School on March 29.

- g. Staff participated in the 5k Run/Walk for the Wounded Warrior Foundation held on March 30.
2. Number of Community Partners: 5
 - a. City of Portsmouth Public Schools
 - b. Food Bank of Southeastern Virginia and the Eastern Shore
 - c. City of Virginia Beach Public Schools
 - d. Hampton Roads Chapter of the American Society of Public Administration
 - e. City of Norfolk Public Schools
 3. Number of Research Partners: 0
 4. Metrics Summary

Item #	Strategic Planning Measure	Unit	March 2019
M-1.4a	Total Training Hours per Full Time Employee (43) - Current Month	Hours / #FTE	6.23
M-1.4b	Total Training Hours per Full Time Employee (43) - Cumulative Fiscal Year-to-Date	Hours / #FTE	24.33
M-5.2	Educational and Outreach Events	Number	7
M-5.3	Number of Community Partners	Number	5
M-5.4	Number of Research Partners	Number	0

Bruce W. Husselbee, P.E.
 Bruce W. Husselbee, P.E.

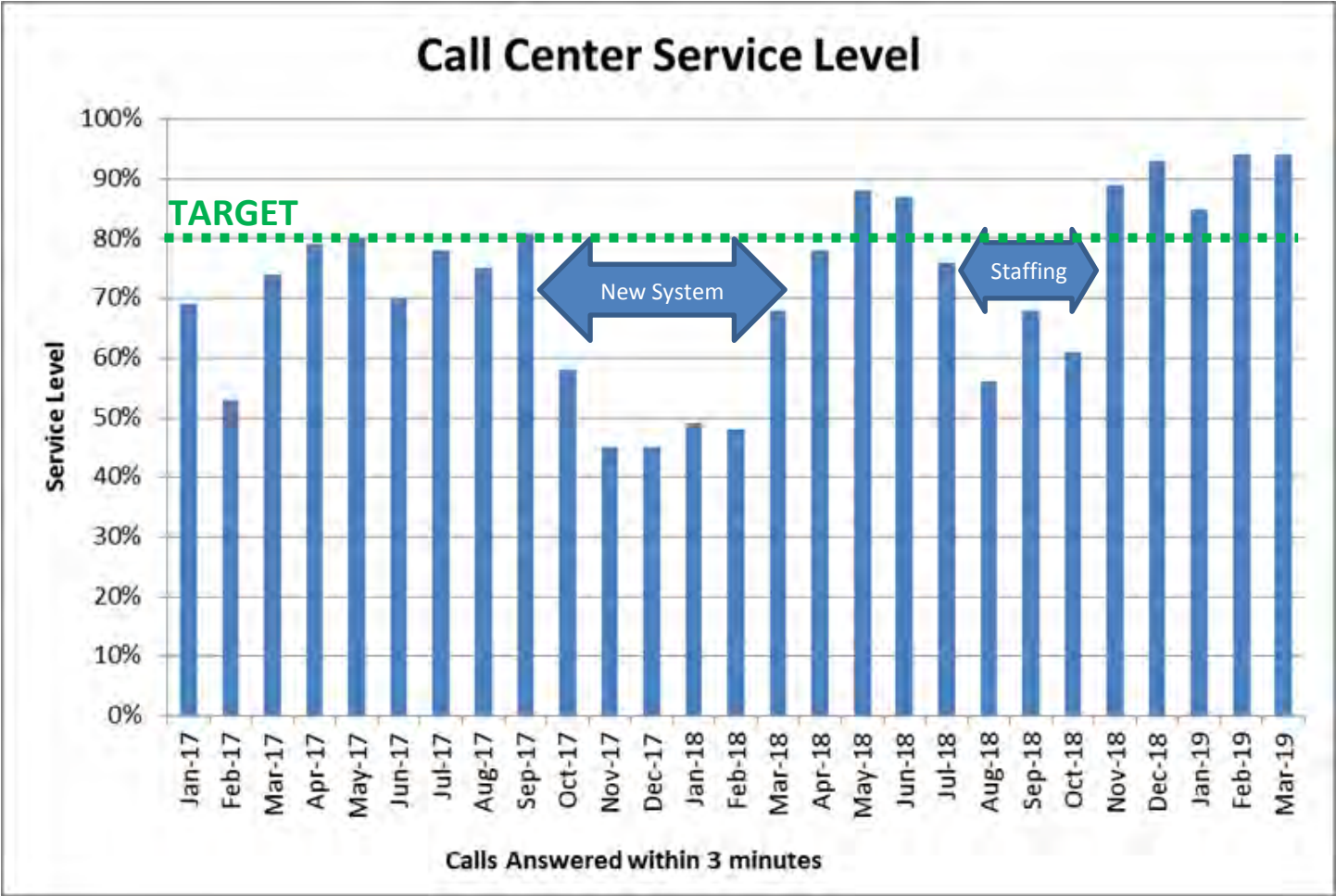
TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for March 2019
DATE: April 10, 2019

(1) General

1. HRSD engaged with Blue Delta Energy to sell the Renewable Energy Credits we are generating from the Atlantic Treatment Plant's plant digester gas engines on a commission basis. The first check was received for January and February 2019 in the amount of \$7,593. We are conservatively projecting to receive approximately \$40,000 annually depending on usage and environmental attribute market prices.
2. Water consumption declined in the last month resulting in a 1.4 percent decline on a cumulative basis compared to Fiscal Year 2018 actuals. This is still close to budget since we assumed a 1.2 percent decline. As a result, Wastewater Charges are essentially in-line with budget. Interest Income continues to outperform with the current interest rate environment. We received a \$145,945 insurance check for the Kempsville Road and Hunningdon Lakes Boulevard loss claim and it was included within Miscellaneous revenue. Overall, total revenues are slightly higher than budget. Personal Services are higher than budget due to the three pay periods in March. Fringe Benefits are slightly lower than budget as we received a pharmacy rebate in the amount of \$578,261, which is almost \$150,000 more than last year's rebate. Operating Expenses are generally lower than budget, but we expect them to be more in line before the end of the fiscal year.
3. On March 20, staff closed two Virginia Clean Water Revolving Loan Funds at very low interest rates. The Boat Harbor Switchgear closed at 1.85 percent for twenty years and Orcutt Ave closed at 2.85 percent for thirty years.
4. The Customer Interaction Center (CIC) staff is doing an outstanding job exceeding desired service level goals. Staff experienced some hurdles over the last two years, but remained focused on making improvements. In September 2017, HRSD went live with new vendors for bill, print, mail and phone/online payments. This conversion to a new bill presentment and payment system added significant volume to our CIC, pushing our service levels well below our desired targets. This has all turned around as customers are becoming more acquainted with the new payment portal, which has reduced lengthy technical support calls. In addition, the new and improved www.hrsd.com website has provided a better online experience for our customers. The web design has made it easy for customers to navigate and find answers which contributed to a reduction of call volume.

Unanticipated staffing issues between August 2018 and October 2018 presented another challenge. The leadership team focused on monitoring workforce management and ensuring vacancies were filled with representatives that had extensive customer service and collections experience.

With all of the challenges they faced, the CIC emerged with significantly improved performance metrics and great momentum to start 2019. Moving forward, staff will continue evaluating training and resources while providing excellent service to our customers.



(2) Interim Financial Report

1. Operating Budget for the Period Ended March 31, 2019

	Amended Budget	Current YTD	Current YTD as % of Budget (75% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 289,967,000	\$ 218,899,903	75%	77%
Surcharge	1,425,000	1,114,504	78%	58%
Indirect Discharge	2,750,000	2,180,548	79%	79%
Fees	2,855,000	2,187,605	77%	73%
Municipal Assistance	875,000	429,120	49%	70%
Miscellaneous	595,000	985,101	166%	92%
Total Operating Revenue	<u>298,467,000</u>	<u>225,796,781</u>	76%	77%
Non Operating Revenues				
Facility Charge	6,075,000	4,684,560	77%	83%
Interest Income	2,500,000	5,831,817	233%	128%
Build America Bond Subsidy	2,400,000	1,145,118	48%	49%
Other	820,000	349,533	43%	112%
Total Non Operating Revenue	<u>11,795,000</u>	<u>12,011,028</u>	102%	85%
Total Revenues	310,262,000	237,807,809	77%	77%
Transfers from Reserves	<u>8,847,824</u>	<u>6,635,868</u>	75%	75%
Total Revenues and Transfers	<u>\$ 319,109,824</u>	<u>\$ 244,443,677</u>	77%	77%
Operating Expenses				
Personal Services	\$ 55,331,886	\$ 43,437,244	79%	78%
Fringe Benefits	24,321,670	18,051,867	74%	76%
Materials & Supplies	7,686,154	5,493,939	71%	74%
Transportation	1,446,906	979,254	68%	62%
Utilities	12,306,952	9,288,502	75%	70%
Chemical Purchases	10,894,183	6,256,248	57%	58%
Contractual Services	42,104,030	20,421,305	49%	58%
Major Repairs	10,315,534	4,981,918	48%	41%
Capital Assets	1,232,144	520,852	42%	82%
Miscellaneous Expense	2,945,304	1,813,877	62%	78%
Total Operating Expenses	<u>168,584,763</u>	<u>111,245,006</u>	66%	69%
Debt Service and Transfers				
Debt Service	62,811,000	53,410,262	85%	76%
Transfer to CIP	87,475,061	65,606,292	75%	75%
Transfer to General Reserve	-	-	0%	75%
Transfer to Risk management	239,000	179,253	75%	75%
Total Debt Service and Transfers	<u>150,525,061</u>	<u>119,195,807</u>	79%	75%
Total Expenses and Transfers	<u>\$ 319,109,824</u>	<u>\$ 230,440,813</u>	72%	72%

2. Notes to Interim Financial Report

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

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

Transfers represent certain budgetary policy designations as follows:

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

3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended March 31, 2019

	General	Risk Management	Reserve	Capital
Beginning of Period - July 1, 2018	\$ 193,623,393	\$ 3,260,531	\$ 15,266,324	\$ 75,874,029
Add: Current Year Sources of Funds				
Cash Receipts	240,442,458			-
Capital Grants				2,444,140
VRA Draws				19,794,507
Bond Proceeds (includes interest)				810,926
Transfers In	-	179,253		65,606,292
Sources of Funds	240,442,458	179,253	-	88,655,865
Total Funds Available	\$ 434,065,851	\$ 3,439,784	\$ 15,266,324	\$ 164,529,894
Deduct: Current Year Uses of Funds				
Cash Disbursements	169,162,681			71,547,204
Transfers Out	65,785,545			-
Uses of Funds	234,948,226	-	-	71,547,204
End of Period - March 31, 2019	\$ 199,117,625	\$ 3,439,784	\$ 15,266,324	\$ 92,982,690

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended March 31, 2019

Classification/ Treatment Service Area	Expenditures		Year to Date		Total Expenditures	Outstanding Encumbrances	Available Balance
	Budget	prior to June 30, 2018	FY 2019 Expenditures				
Administration	\$ 74,586,023	\$ 40,373,105	\$ 711,587	\$ 41,084,692	\$ 3,352,980	\$ 30,148,351	
Army Base	158,584,000	124,056,440	742,988	124,799,428	1,873,856	31,910,716	
Atlantic	127,815,138	56,021,559	18,212,465	74,234,024	32,345,301	21,235,813	
Boat Harbor	132,009,450	55,186,498	3,113,530	58,300,028	16,626,232	57,083,190	
Ches-Eliz	170,731,513	10,416,092	5,255,133	15,671,225	59,424,651	95,635,637	
James River	89,151,802	55,333,203	2,521,894	57,855,097	1,387,891	29,908,814	
Middle Peninsula	54,774,891	7,951,942	1,752,750	9,704,692	7,237,909	37,832,290	
Nansemond	85,894,179	39,238,100	2,202,397	41,440,497	3,587,381	40,866,301	
Surry	13,236,000	101,724	337,405	439,129	9,510,367	3,286,504	
VIP	292,547,711	250,845,561	6,583,960	257,429,521	3,248,568	31,869,622	
Williamsburg	19,338,971	10,079,626	662,058	10,741,684	2,557,123	6,040,164	
York River	49,554,404	40,864,038	809,048	41,673,086	2,457,131	5,424,187	
General	482,765,843	216,595,238	8,206,585	224,801,823	26,112,399	231,851,621	
	<u>\$ 1,750,989,925</u>	<u>\$ 907,063,126</u>	<u>\$ 51,111,800</u>	<u>\$ 958,174,926</u>	<u>\$ 169,721,789</u>	<u>\$ 623,093,210</u>	

5. Debt Management Overview

	Debt Outstanding (\$000's)				
	Principal Feb 2019	Principal Payments	Principal Draws	Principal Mar 2019	Interest Payments
Fixed Rate					
Senior	\$ 310,461	\$ (2,366)	\$ -	\$ 308,095	\$ (832)
Subordinate	446,443	(1,304)	8,227	453,366	(382)
Variable Rate					
Subordinate	50,000	-	-	50,000	(63)
Line of Credit					
Total	<u>\$ 806,904</u>	<u>\$ (3,670)</u>	<u>\$ 8,227</u>	<u>\$ 811,461</u>	<u>\$ (1,277)</u>

Series 2016 Variable Rate Interest Summary - Variable Rate Debt
Benchmark (SIFMA) as of 3/29/19

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	1.81%	1.81%	0.00%
Average	0.46%	0.45%	-0.01%
Minimum	0.01%	0.01%	0.00%
As of 3/29/19	1.50%	1.55%	0.05%

* Since October 20, 2011 HRSD has averaged 45 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended March 31, 2019

HRSD - UNRESTRICTED CASH

March 31, 2019

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

		Days Cash on Hand	Days Cash on Hand
Total Unrestricted Cash	\$ 257,148,583		557
Risk Management Reserve	\$ (3,439,784)	(7)	550
Reserve	\$ (15,266,324)	(33)	517
Capital (PAYGO only)	\$ (67,867,537)	(148)	369
Net Unassigned Cash	\$ 170,574,938		369

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

HRSD - SOURCES OF FUNDS

March 31, 2019

Primary Source	Beginning Market Value July 1, 2018	YTD Contributions	YTD Withdrawals	YTD Income Earned	Ending Market Value Mar 31, 2019	Allocation of Funds	Credit Quality	Current Mo Avg Yield
BAML Corp Disbursement Account	10,669,597	408,355,413	411,727,941	41,451	7,338,520	4.9%	N/A	0.70%
VIP Stable NAV Liquidity Pool	-	176,000,000	36,000,000	1,686,540	141,686,540	95.1%	AAAm	2.58%
Va Local Government Investment Pool	68,984,048	5,000,000	74,115,221	131,173	-	0.0%	AAAm	2.57%
Total Primary Source	\$ 79,653,645	\$ 589,355,413	\$ 521,843,162	\$ 1,859,164	\$ 149,025,060	100.0%		

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

Secondary Source	Beginning Market Value July 1, 2018	YTD Contributions	YTD Withdrawals	YTD Income Earned & Realized G/L	Ending Market Value Mar 31, 2019	Ending Cost	YTD Mkt Adj	Yield to Maturity at Market
VIP 1-3 Year High Quality Bond Fund	-	124,728,039	1,015,786	1,994,736	126,787,477	125,706,989	1,080,488	2.35%
Total Secondary Source	\$ -	\$ 124,728,039	\$ 1,015,786	\$ 1,994,736	\$ 126,787,477	\$ 125,706,989	\$ 1,080,488	

VIP 1-3 Year High Quality Bond Fund performance equaled ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) in the month of March.

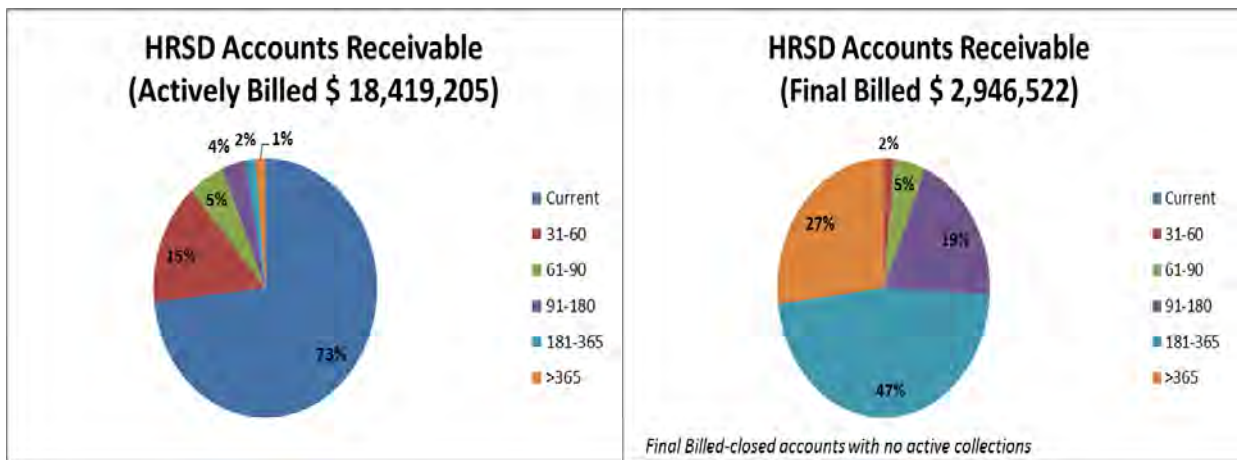
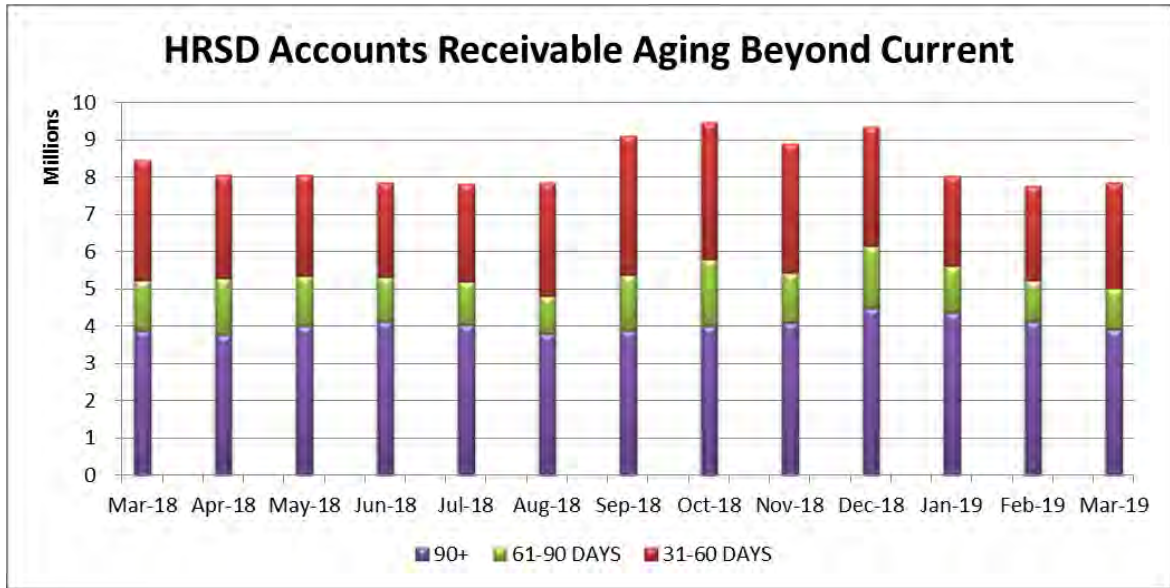
Total Primary Source	\$ 149,025,060	54.0%
Total Secondary Source	\$ 126,787,477	46.0%
TOTAL SOURCES	\$ 275,812,537	100.0%

7. Summary of Billed Consumption

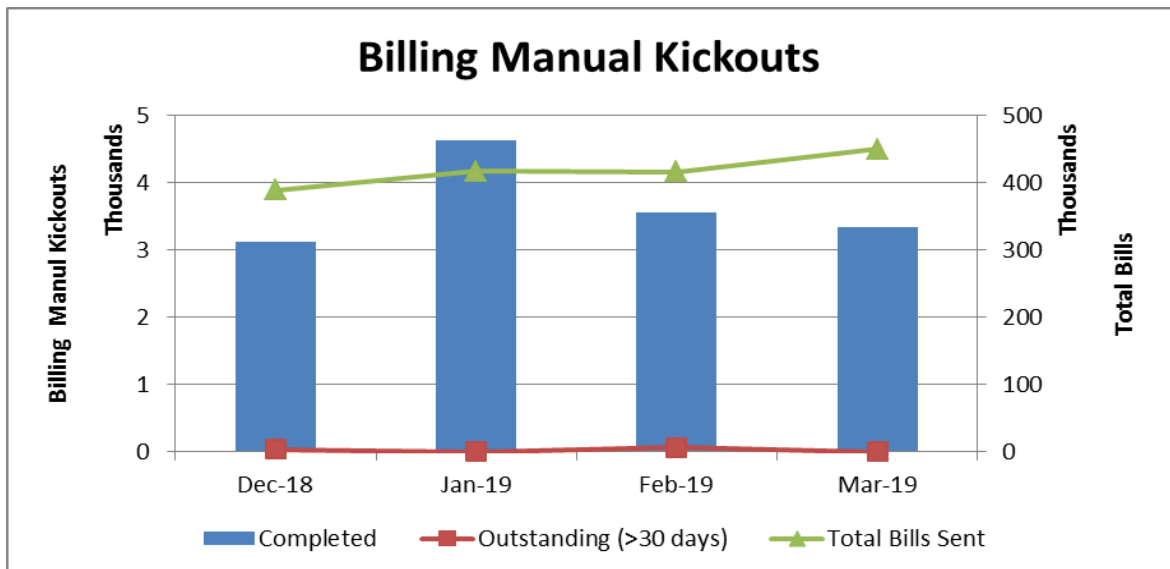
Summary of Billed Consumption (,000s ccf)							
Month	FY2019 Cumulative Budget Estimate	FY2019 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2018 Actual	From FY2018	Cumulative 3 Year Average	From 3 Year Average
July	4,737	5,175	9.3%	4,869	6.3%	4,821	7.3%
Aug	9,595	10,233	6.6%	9,939	3.0%	9,666	5.9%
Sept	14,442	14,294	-1.0%	14,632	-2.3%	14,383	-0.6%
Oct	18,768	19,087	1.7%	19,006	0.4%	18,999	0.5%
Nov	22,834	23,249	1.8%	23,305	-0.2%	23,358	-0.5%
Dec	27,166	27,376	0.8%	27,462	-0.3%	27,616	-0.9%
Jan	31,486	32,010	1.7%	31,965	0.1%	31,948	0.2%
Feb	36,154	36,551	1.1%	36,519	0.1%	36,247	0.8%
March	40,096	40,187	0.2%	40,741	-1.4%	40,654	-1.1%
Apr	43,612	-	N/A	44,732	N/A	44,649	N/A
May	47,887	-	N/A	49,018	N/A	48,864	N/A
June	52,927	-	N/A	53,298	N/A	53,391	N/A

(3) Customer Care Center

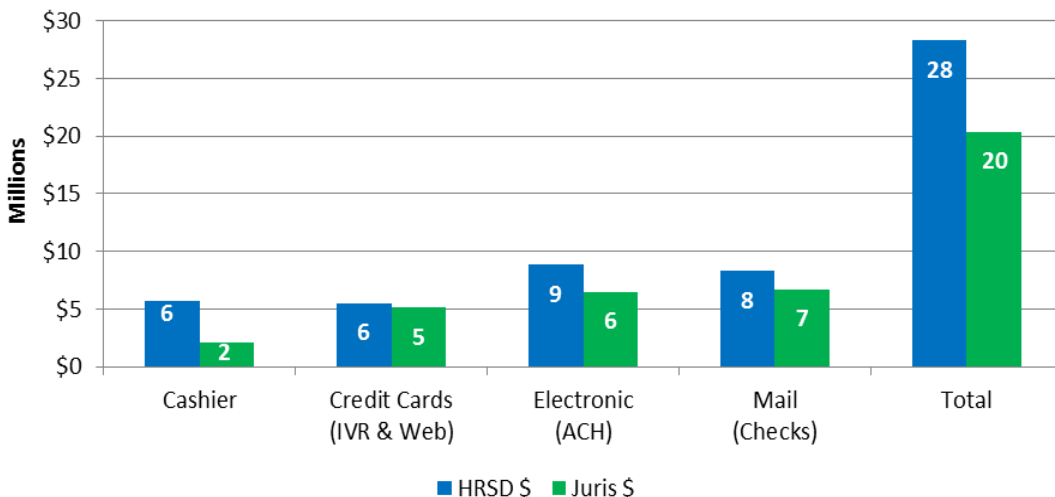
1. Accounts Receivable Overview



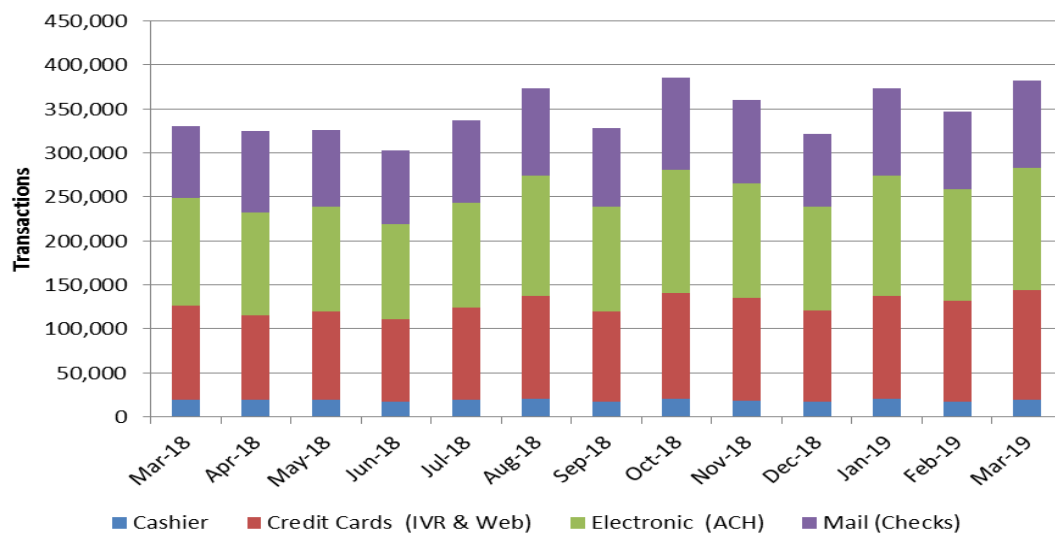
2. Customer Care Center Statistics



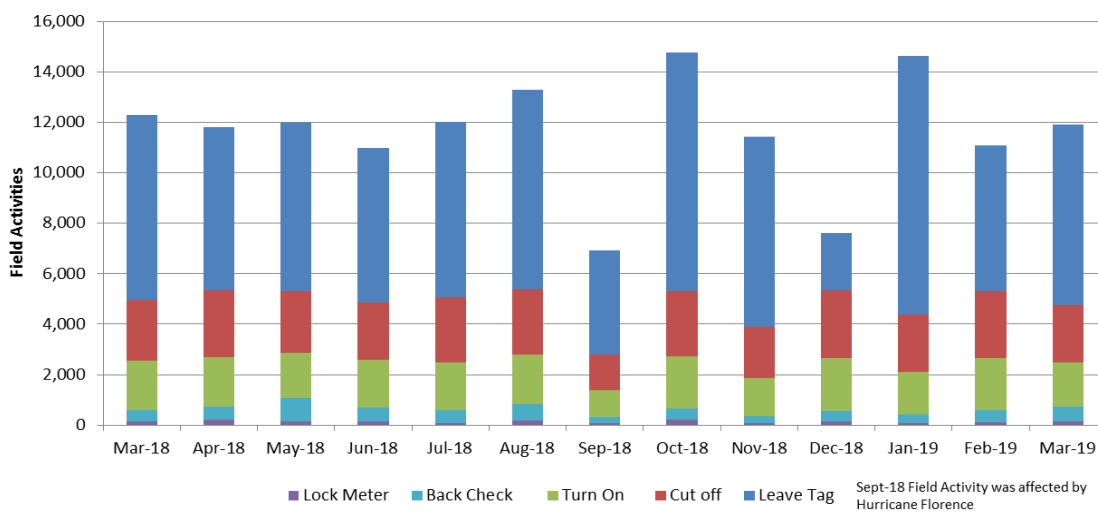
Payments Processed March 2019

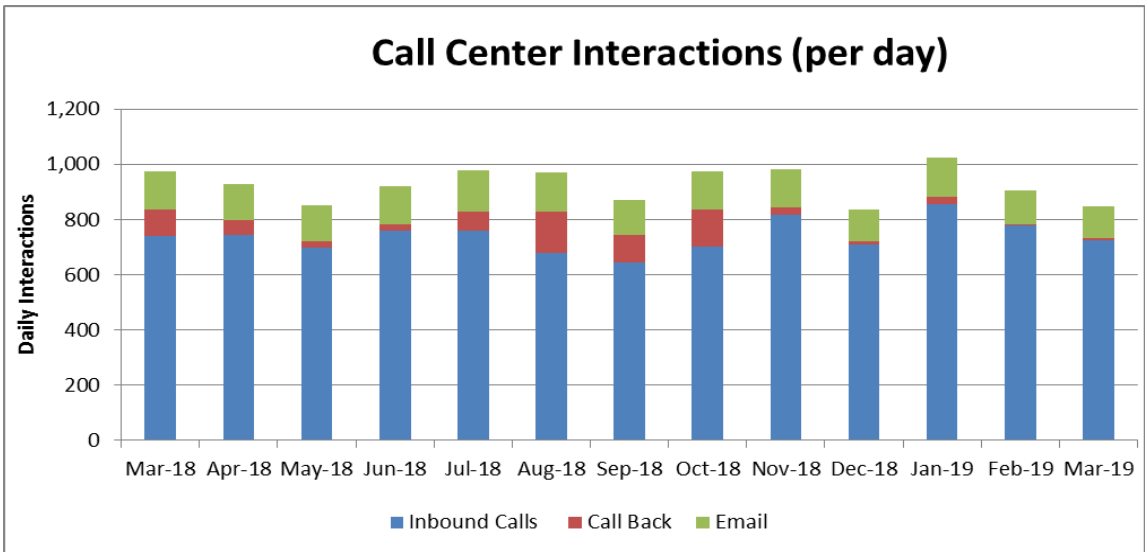
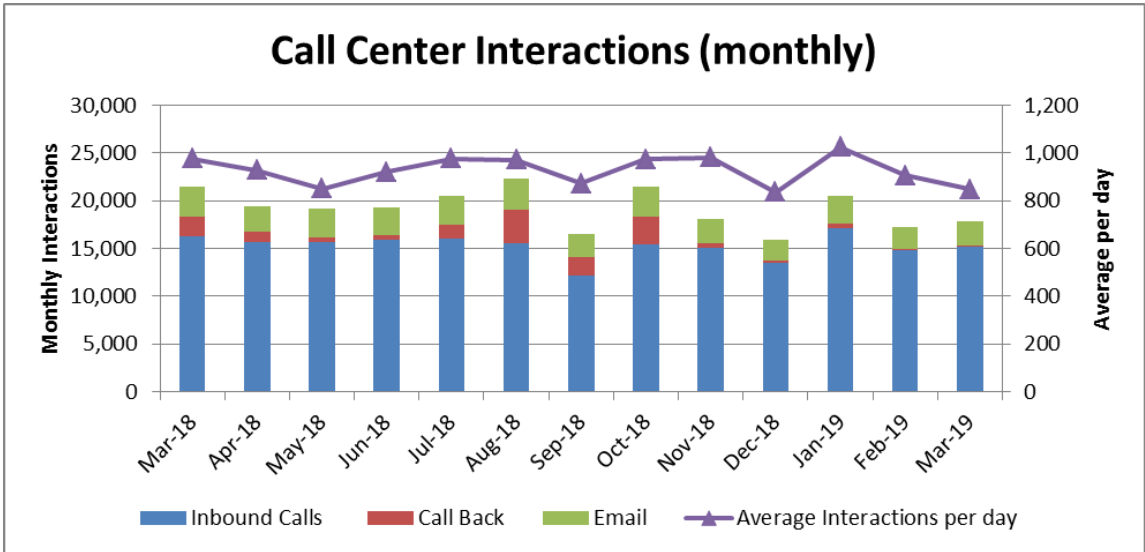
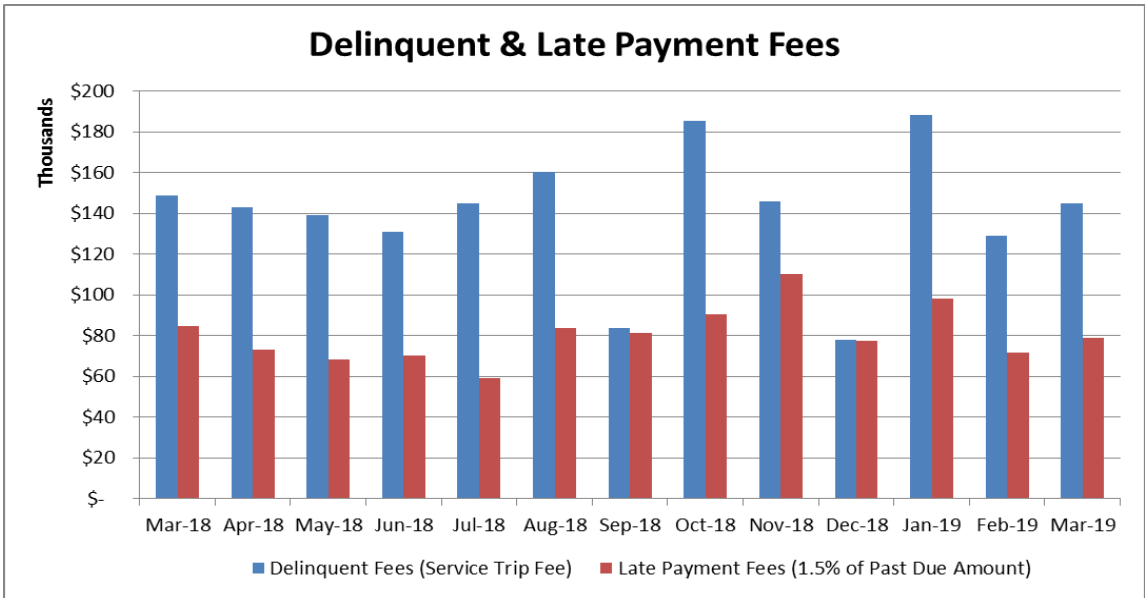


Payment Transactions



Field Activity

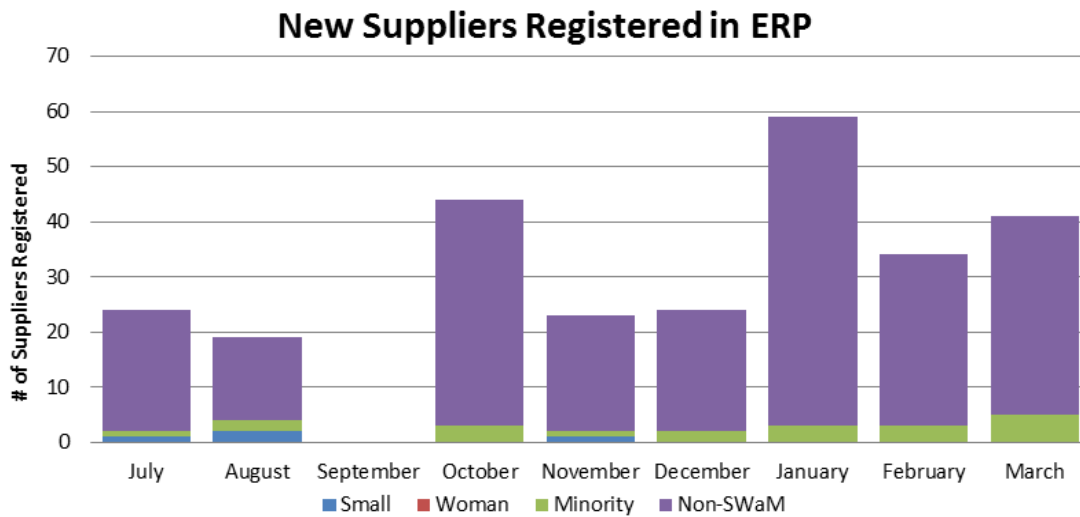




Customer Interaction Statistics	Oct	Nov	Dec	Jan	Feb	Mar
Calls Answered within 3 minutes	61%	89%	93%	85%	94%	94%
Average Wait Time (minutes)	3:50	1:12	0:38	1:20	0:37	0:39
Calls Abandoned	14%	6%	4%	6%	4%	4%

(4) Procurement Statistics

Savings	Current Period	FYTD
Competitive Savings ¹	\$41,408	\$1,192,916
Negotiated Savings ²	\$3,768	\$291,965
Salvage Revenues	\$294	\$137,195
Corporate VISA Card - Estimated Rebate	\$18,325	\$160,550

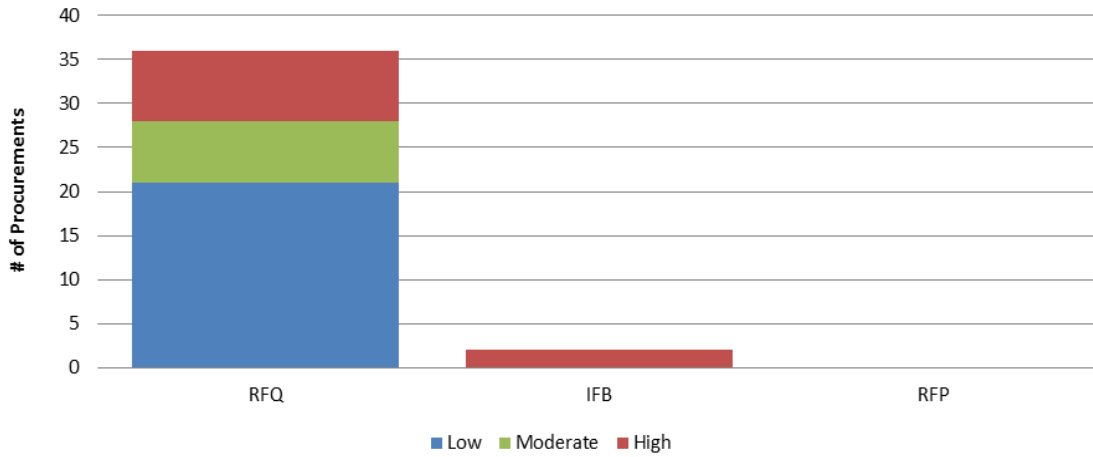


**Increased supplier registration due to supplier outreach at NIGP Forum 8/21/18, Water Jam 9/12/18, WEFTEC 10/2/18, VASCUPP® SWaMFest 10/4/18, DGS Public Procurement Forum 10/23/18, CNU SWaM Fair 11/7/18, Virginia Beach Minority Business Council Conference and Expo 11/8/18*

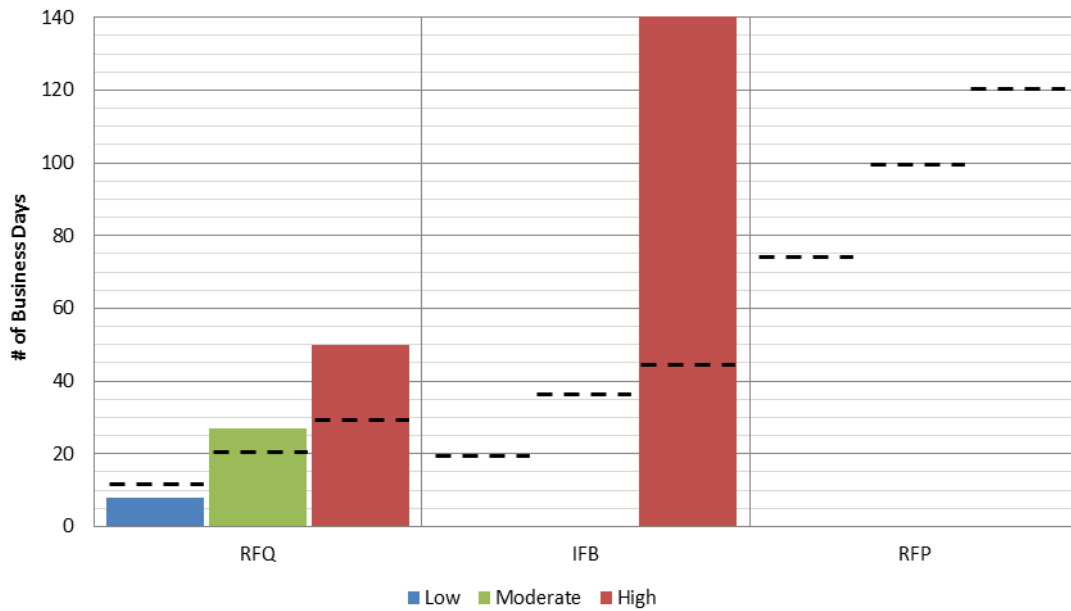
¹ Competitive savings are those savings obtained through the informal/formal bidding process. All bids received (except for the lowest responsive/responsible bid) added together and averaged. The average cost is subtracted from the apparent low responsive/responsible bidder.

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

Procurements Completed Based on Complexity



Cycle Time per Method of Procurement and Complexity

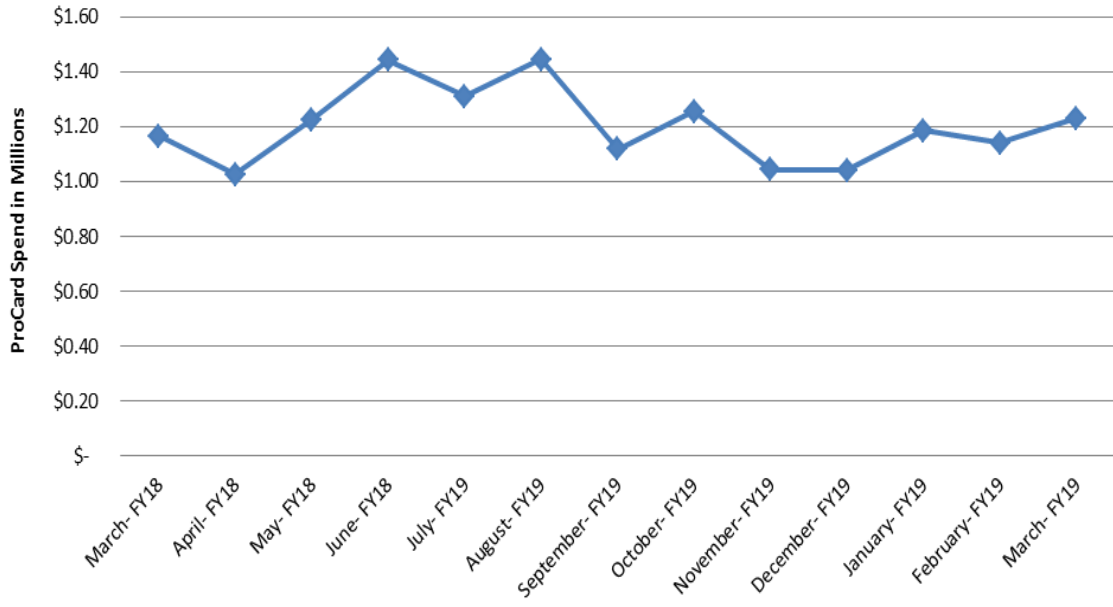


Dashed Line: Target Service Level Cycle Time

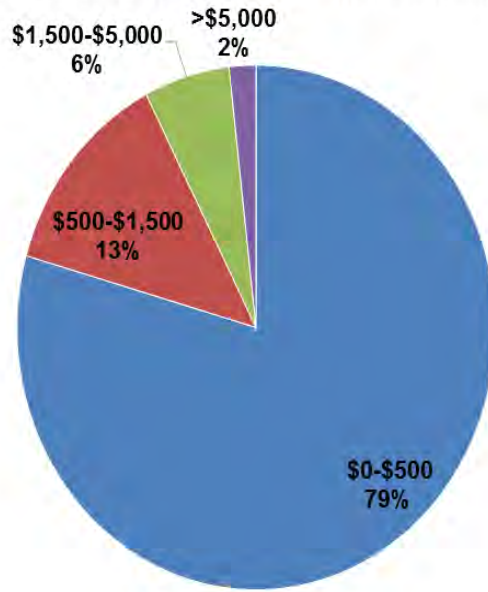
	Low	Moderate	High
RFQ	12	20	30
IFB	20	35	45
RFP	75	100	120

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

ProCard Spend



ProCard Transaction Dollar Amounts



ProCard Fraud	External Fraud Transactions *	Comments
July	3	1 Caught by Cardholder; 2 Caught by Bank Immediately
August	0	n/a
September	3	1 Caught by Cardholder; 2 Caught by Bank Immediately
October	1	Caught by Cardholder
November	2	1 Caught by bank immediately; 1 caught by cardholder
December	0	n/a
January	1	Caught by bank immediately
February	4	3 Caught by bank immediately; 1 caught by cardholder.
March	1	Caught by bank immediately
Total	15	

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

Accidental Use, which is anything that is not purchased for use and ownership by HRSD, was at 0 transactions (0%) out of the 2,487 March ProCard transactions, with a combined total of \$0.

Procurement Client Training		
	Current Period	YTD
ProCard Policy and Process	6	32
Procurement Cycle	0	21
Procurement 101- Sole Source	32	32
Procurement 101- Request for Proposal	37	37
Total	75	122

(5) Business Intelligence – Enterprise Resource Planning (ERP)

- ERP Helpdesk currently has 129 open work orders in the following statuses:

Escalated	2
In progress	61
On Hold	19
Open	44
Waiting on User	3

- ERP Helpdesk received 307 work orders in March. In March, 348 work orders were closed and 131 were closed within one hour.

- Projects

- AD012400 - Capital Program Management Improvements

- (1) P6 has been designed and mostly configured. Testing will occur in April and training/rollout in June

- (2) EBS/Unifier Interface is in high level design. Design will continue in April.
- (3) Data Visualization will begin configuration in May
- (4) Change Management issued first communication email in April.

b. CAFR/Reporting Software

- (1) We received responses from six vendors. We short listed four of them and demos are scheduled for 04/03-04/05.

4. Outreach

- a. On March 28th, we walked the City of Virginia Beach through our setup and a demonstration for Oracle Time & Labor and how HRSD utilizes this module for day to day operations.

(6) Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1

3/26/19-3/28/19 - 2019 Virginia Association of Governmental Purchasing (VAGP) Vendor Expo

2. Community Partners: 1

Virginia Association of Governmental Purchasing (VAGP)

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	March 2019
M-1.4a	Training During Work Hours Per Full Time Employee (101) – Current Month	Hours / #FTE	5.66
M-1.4b	Total Training During Work Hours Per Full Time Employee (101) – Cumulative Fiscal Year-to-Date	Hours / #FTE	24.09
M-5.2	Educational and Outreach Events	Number	2
M-5.3	Number of Community Partners	Number	2
	Wastewater Revenue	Percentage of budgeted	100%
	General Reserves	Percentage of Operating Budget less Depreciation	118%
	Liquidity	Days Cash on Hand	557 Days
	Accounts Receivable (HRSD)	Dollars	\$21,365,727

Item #	Strategic Planning Measure	Unit	March 2019
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	18%

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

TO: General Manager

FROM: Director of Information Technology

SUBJECT: Information Technology Department Report for March 2019

DATE: April 10, 2019

A. General

1. As part of the ongoing technology refresh program, staff is preparing to upgrade all existing wireless access points. This will ensure compatibility with the latest hardware, software, and security protocols in use at HRSD.
2. Reconfiguration of the fiber optic switching equipment was completed within the data center in order to maintain optimal efficiency and data throughput.
3. Several of the older virtualized server platforms have been upgraded, and the decommissioned hardware is being repurposed for use in the development and testing environments.
4. Staff is working closely with the design and construction team as plans for the new Water Quality building take shape. Network cabling, wireless access, data center connectivity, and audio-visual hardware and software are some of the items for which IT is responsible.

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	March 2019
M-1.4a	Training During Work Hours Per Full Time Employee (51) – Current Month	Total Training Hours / # FTE	6.33
M-1.4b	Total Training During Work Hours Per Full Time Employee (51) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	25.78

Item #	Strategic Planning Measure	Unit	March 2019
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 March 2019
DATE: April 4, 2019

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

- a. There was one Sanitary Sewer Overflow (SSO) this month. On March 20, a contractor was working on abandoning a force main with flowable fill on Warwick Boulevard in Newport News. The bulkhead for the flowable fill operation failed. Approximately 400 gallons of raw wastewater was released to the storm draining to Stony Run and could not be recovered.
- b. There were six system alarms during the month. Staff responded and resolved all the alarms.
- c. Staff provided support to the Small Communities Division (SCD) with the inspection of numerous development projects' connections.
- d. Staff found and repaired major sources of inflow and infiltration (I&I) in the Dendron Collection system in Surry County, potentially eliminating up to 25,000 gallons of wet weather I&I per day at the Surry County Treatment Plant.
- e. Staff continued to work with the Town of Smithfield on solutions for the high pressures experienced in that system.

2. South Shore (SS) Interceptor Systems

- a. There were six interceptor complaints this month. Staff responded and found that four were locality issues, one was a broken valve casting lid that was subsequently corrected, and the sixth was where a contractor hit a private force main.
- b. There were 28 system alarms reported this month. Staff responded and resolved all the alarms.

- c. Staff assisted the Chesapeake-Elizabeth Treatment Plant (CETP) by removing approximately nine yards of material from the septic well and cleaned the gravity thickener suction line.
- d. Staff aided the Nansemond Treatment Plant (NTP) by removing approximately three yards of material from the Regional Residuals Facility (RRF).
- e. Staff provided and installed an additional bypass pump at the Dovercourt Pump Station in Norfolk for the Wet Well Rehabilitation project.
- f. Staff operated system valves to assist the City of Virginia Beach in repairing a broken force main at Great Neck Road and Rose Hall Drive.
- g. Staff also operated system valves to assist the City of Chesapeake in installing a new valve and emergency pump connection at their pump station near Tyre Neck Road. Staff also operated system valves to help them repair a force main at Indian River Road and Wingfield Avenue.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Air permit stack testing on incinerator #1 is complete. We are awaiting test results. Preliminary results indicate a successful test.
- b. A contractor completed the installation of intermediate pump station pump #2, which makes two out of four installed. These pumps, like the influent pumps, are capable of causing a bypass event if they fail and are considered critical equipment.
- c. The level sensor for the methanol tank failed. Staff is working with the contractor to have the sensor replaced.
- d. Staff fabricated and installed a unit that screens material out of the ash removal process in the incinerator. This reduces the risk of system stoppage shutting down the ash screw and requiring a furnace burnout.

- e. There were numerous centrifuge shutdowns this month due to motor and other electrical component failures. In addition, the variable frequency drive (VFD) for #2 centrifuge drive motor failed. A new motor was ordered.
- f. With all the centrifuge problems this month and the resulting lack of needed redundancy, staff from CE and VIP assisted in rebuilding centrifuge #1. The centrifuge was rebuilt in a week and is now available for use.

2. Atlantic Treatment Plant (ATP)

- a. Construction of the Thermal Hydrolysis Process (THP) continues. The THP pulper, reactors and flash tanks were delivered and set in place. Block and brick work commenced on the Pre-dewatering building. Work continued on the steam boiler piping and digester gas piping upgrade.
- b. Staff met with DC Water staff to discuss THP digester seeding. Seeding the THP digester is set for November.
- c. Staff replaced a bad data link on emergency generator #3. The data link that was replaced allows the engine to communicate with the generator and is needed for the engine to adjust its speed based on demand. Repairs were also made to emergency generator #2 which had a small coolant leak.
- d. The Combined Heat and Power (CHP) was down all month for maintenance. The gas piping that connects the digester gas line to the new steam boiler was installed. This line will recirculate the digester gas through the Bioscubber to restart it if the system goes down. Staff cleaned the unit while it was down. Staff also discovered the engine's flame arrestors and a level transmitter need to be replaced. Parts are on order and once replaced the unit will be restarted.
- e. Biosolids continued to be hauled off plant site to be land applied. Contractors were able to remove about 70 percent of the biosolids from the north pad.
- f. Staff worked with Ocean Lakes High School staff to plan Earth Action Day. The plant will host this event on April 27th.

3. Boat Harbor Treatment Plant (BHTP)

- a. Process upsets during the month of March caused secondary clarifiers to be taken out of service because of higher than normal solids content. The tanks were cleaned and placed back into service while process changes were made.
- b. Air permit stack testing on the # 2 Incinerator is complete. Initial test results are promising.
- c. The #5 aeration tank was cleaned and inspected.
- d. On March 22nd staff made repairs to a leak in the waste pipe line.
- e. This month, there were periods of an extreme amount of solids settling in the secondary clarifiers. The solids compacted and formed a blanket thick enough that the secondary rake arm could not pass through, nor could the drafting mechanisms pull the solids out effectively. The secondary rake arms would eventually shut down to protect the equipment. Staff drained and cleaned the secondaries and returned them to service.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

- a. Staff rebuilt two polymer feed pumps.
- b. Staff repaired the #2 polymer blend system when the coupling broke and a motor failed.
- c. Staff unclogged the plugged venturi differential ports to correct erratic performance by the induced draft (ID) fan.
- d. Staff repaired #1 septic pump.
- e. Staff, along with a contractor replaced a leaking sodium hypochlorite tank with a new one.

5. James River Treatment Plant (JRTP)

- a. Staff spent a considerable amount of time on repairs and removing struvite throughout the centrate side stream treatment system. ANITA-Mox feed pump #1 was repaired and the struvite buildup was removed from the ANITA-Mox feed pump #2, the centrate equalization tank feed pump, valves, and a suction hose.

- b. Staff replaced the #2 gravity belt thickener belt (GBT) and pressure washed the area around both GBTs.
- c. Staff repaired scum raceway skirting on #3 secondary clarifier and replaced a leaking return activated solids line on the clarifier with a spool pipe until the valve can be repaired.
- d. Staff installed an ultrasonic level transmitter and pump control to serve primary clarifiers #3 and #4. The new equipment will save plant operators time by not having to constantly monitor and control pumps serving the two clarifiers.
- e. Testing of the magnesium hydroxide feed system for struvite removal continued. Staff constructed a carbon dioxide stripper to release carbon dioxide from the centrate stream and help form struvite in a controlled environment so that the struvite is removed and then captured in the biosolids dewatering.

6. Nansemond Treatment Plant (NTP)

- a. There was one reportable 200-gallon spill of non-potable water (NPW) when a reactor in the struvite recovery facility overflowed. The 200 gallons were not recovered.
- b. Coating of the Struvite Recovery Facility chemical containment tanks were completed.
- c. As a safety measure, staff installed time delay breakers on the generator and utility breakers.
- d. The distributed control system upgrade is now complete.
- e. At the Sustainable Water Initiative for Tomorrow Research Center (SWIFT RC), contractors finished the structural weld repair, cosmetic stitch welds, and the tack welds on the top of the lamella plates on the flocculation and sedimentation (Floc/Sed) tanks. The tanks will be tested in April to ensure there are no leaks.
- f. The spool piece on the Ozone contactor at the SWIFT RC was installed and the modifications for the flush lines were also completed. We plan to start Floc/Sed and Ozone operations the week of April 8th.

- g. The biofilters' underdrains were installed and grouted. The biofilter backwash and granular activated carbon (GAC) pumps were reinstalled. We plan to install the gravel and sand for a 24- hour disinfection test in April prior to installation of the carbon media.
- h. Rehabilitation of the injection wells should be complete by mid-April.

7. Virginia Initiative Plant (VIP)

- a. Contractors broke an underground final effluent sample line while excavating in the Parshall flume area of the plant on March 4 resulting in an unrecoverable spill of approximately 350 gallons.
- b. Air permit stack testing for Incinerator #2 is complete. Preliminary results are promising.
- c. Staff installed a rebuilt dewatering centrifuge rotating assembly and worked with a contractor to program a variable frequency drive for another dewatering centrifuge.
- d. Staff cleaned and inspected a primary clarifier and secondary clarifier. Staff continued the rehabilitation project on the scrubber fan for the main odor control system.

8. Williamsburg Treatment Plant (WBTP)

- a. Staff replaced a screw conveyor that feeds solids to the incinerator.
- b. Staff assisted with maintenance at the Town of Surry Treatment Plant. Two panels were replaced on the #1 micro screen.

9. York River Treatment Plant (YRTP)

- a. There was one odor deviation that occurred while performing maintenance on a caustic feed pump.
- b. A partial plant shutdown was performed during the early morning hours of March 1 to inspect and perform maintenance on a five-kilovolt breaker switch located in the aeration blower building. To accommodate the shutdown, staff coordinated with NS Interceptors to temporarily hold flow in the Coliseum Storage Tank in Hampton.

10. Minor Incinerator Operations Events Summary

- a. There were eight minor (less than 60 minute) non-reportable uses of the bypass stacks at the five multiple hearth incinerator plants.
- b. There was one reportable deviation at the BHTP because of operational challenges starting up a furnace.

C. Small Communities (SC)

1. Middle Peninsula Small Communities Treatment and Collections

- a. There was a reportable event during the week of March 24 when, the cBOD sample for the outfall at King William Treatment Plant was not valid. Since the reuse discharge only occurs once per week, there was not an opportunity to take an additional sample. Other sampling cBOD results for the reuse water were all within acceptable limits and were <2 milligrams per liter (mgL).
- b. One odor complaint this month was received from Tommy's Produce in King William County. An automatic air vent on the adjacent wastewater force main pipeline was found to be the cause of the odor. The automatic air vent was removed and the corporation stop valve and ball valve on the vent line were closed. Staff will manually vent through the valves and a mobile odor scrubber when doing preventative maintenance venting to avoid odor issues going forward.
- c. The West Point Treatment Plant was above the 95 percent design flow for the month, for the fifth consecutive month.
- d. Staff continues to work on the various projects at the Urbanna Treatment Plant (UBTP). The SCD Special Projects Crew (SPC) continues to work on the various UBTP projects. The replacement motor was installed on the re-purposed automatic bar screen (originally from Lawnes Point WWTP) and the unit has been put into activation; it has been performing very well.
- e. The new concrete pad for the storage tank improvement project at the Mount Olive Treatment Plant is complete.

2. Small Communities – Surry Systems

- a. Sussex Service Authority (SSA) continued contract operations of the Town of Surry TP and the Surry County TP.

- b. Both treatment plants were again well above their hydraulic capacity for the first part of the month. There were, however, no SSOs reported during the month.

3. Small Communities - Lawnes Point

Pump and Haul continues. There were five pump and haul operations of the Lawnes Point Treatment Plant.

From March 18-21 Lawnes Point Treatment Plant saw over double the average flow coming into the plant that required a significant amount of pump and haul. Working with Isle of Wight County, staff discovered that two homes had used over 4,000 gallons of water per day for at least some of that duration. Investigations are ongoing with the property owners to find and address the cause but flows have receded to normal since then.

- D. Support Systems

1. Automotive

Staff performed load bank tests at Ferguson Park, Triton Court, Rappahannock Ave., Church St., Gum Rd., Luxembourg Ave. pump stations (PS) and Atlantic Pressure Reducing Station (PRS). Staff performed monthly generator tests at the North Shore (NS) and South Shore (SS) Main Operations Complexes. All generators operated as designed and were returned to service.

2. Condition Assessment

- a. Staff reevaluated our Closed-Circuit Television (CCTV) Inspection program. We determined that it was more cost effective and practical to accomplish our CCTV obligations through a contracted services operation. The two staff members performing the CCTV function were reassigned to VIP and ABTP as Maintenance Operators.
- b. Staff coordinated Jefferson Avenue line cleaning with NS Interceptor Operations and Tri-State Utilities.
- c. Staff assisted with inspecting the coating and welding repairs at the SWIFT RC.

3. Facilities Maintenance

- a. Renovation continues on the NTP solids handling locker room. The project is 90 percent complete.
- b. Staff moved forward with preparing the warehouse at 1460 Air Rail Avenue for its demolition. Removal of trash and metal recycling is 90 percent complete.
- c. Staff rebuilt two pumps for SS Interceptors, one pump for NS Interceptors. Staff assisted Boat Harbor Treatment Plant with inspection of three centrifuge shafts for runout and bearing journals.

E. Energy Management

1. Installation of the diesel oxidation catalysts at the BHTP and the NTP generators began. These catalysts will reduce Carbon monoxide (CO) emissions and allow the generators greater operational flexibility. Without the catalysts, the diesel generators are operationally limited to 100 hours of non-emergency use annually. In addition, the ability to use the generators at the BHTP during the major switchgear upgrade project will greatly simplify the maintenance of plant operations during the construction phase.
2. The CHP engine at the ATP generates green power and provides an offset of the energy demand at the plant. For the first time, HRSD sold the associated Renewable Energy Credits (RECs) on the open market, receiving the first check totaling \$7,593 this month.
3. The impacts of starting and stopping major equipment can drastically affect our electric bills. Training is under development to help staff better understand the billing structure and avoid unneeded charges. The training will include understanding the billing structure, a breakdown of the component parts, ratchet clauses and riders.

F. Electrical and Instrumentation

1. The annual thermographic inspection was performed at ABTP, BHTP, NTP, SS Pump Stations (PSs), VIP, and WBTP. A few discrepancies were found. Repairs were made on site when possible.
2. Staff worked with a contractor to perform the five-year Evergreen (technology refresh) upgrade at ABTP. The project replaced all distributed control systems (DCS) hardware and software. These upgrades also provided a connection between the DCS and the Industrial Control System (ICS) domain, which allows for individual logins for each DCS user. This allows for enhanced cybersecurity on the DCS network.

3. Staff replaced the motor control center (MCC) Returned Activated Biosolids (RAS) 1 and began installation of MCC RAS 2 at the ATP. Work involved coordinating shutdowns, installing temporary power to critical equipment, removing old the MCC, and installing the new MCC.
4. Staff removed a transformer with damaged lightning arrestors identified during the annual thermographic inspection at VIP. Lightning arrestors are designed to protect the transformer from the damaging effects of a lightning strike. The transformer was inspected and tested to determine if the transformer was safe to re-energize. Test results identified the transformer bushings were damaged. The transformer will remain out of service until all recommended repairs and testing are complete. Another transformer is currently providing power to all process equipment impacted by the damaged transformer.
5. Staff responded to shutdowns on centrifuges #1 and #2 at WBTP. Faulty speed proximity sensors caused both centrifuges to shutdown. The faulty sensors were replaced.
6. Staff resolved an issue on the fuel oil generator programmable logic control (PLC) at YRTP. The work required hardware and PLC program modifications. The system was tested and returned to service.
7. Staff modified the PLC program that controls the aeration air valves at YRTP. The team also programmed the DCS interface to allow remote process monitoring and control. The system was tested and returned to service.
8. Staff worked with a contractor to repair control system issues at the Surry County Treatment Plant. The work involved replacing several system float balls, the PLC, and the local operator interface terminal (OIT). The system was tested and returned to service.
9. Staff installed and configured a connection for Technical Service Division (TSD) to collect raw influent (RWI) flow paced sampling data at the UBTP.
10. Staff discovered a faulty connection on the main circuit breaker at 25th Street PS. The team is coordinating with an electrical contractor to replace the main circuit breaker.
11. Staff work with a contractor to complete the upgrade of all power and control equipment at Newtown Road PS.

12. Staff responded to 13 Supervisory Control and Data Acquisition (SCADA) communication failures and 15 Telog communication failures. A communication failure is defined as a total loss of communication at a site, which requires staff response.

G. Water Technology and Research

Two important questions that we are trying to address at the SWIFT Research Center (SWIFT RC) are the travel time of the recharged water and the characteristics of the water after several months of transport through the aquifer. Our intention was to use conductivity (as a surrogate for chloride) and fluoride as tracers of SWIFT Water in the aquifer to judge travel time, specifically using data from the “FLUTE” well that is screened over the same intervals as the recharge well. Using tracer data and mathematical groundwater transport modeling tools would be expected to provide good information about the preferential movement of water in the aquifer. Due to both inconsistent recharge (starting, stopping, and backflushing), and due to tracer data suggesting preferential flow in some screened intervals and negligible flow into or out of other intervals, this has not worked as well as planned. The main question that needs to be answered is the actual flow contribution of each of the 11 screened intervals during both recharge and backflush conditions. This can then be incorporated into the model to simulate aquifer transport.

During the shutdown of the SWIFT RC, we decided to attempt to address these uncertainties by installing a borehole flow meter in the recharge well. The purpose of this flow meter is to measure the contribution of each screened interval during recharge or pumping. The flow meter is movable over the depth of the well from a winch at the surface, with cable and wire passing by the backflush/recharge column and backflush pump within the annular space. The flow meter will be lowered to a point just above the lowest screen, flow recorded, moved up, recording the contribution of the bottom two screens, and so on. This is not a normal application of this instrument, and this is a relatively unusual capability for managed aquifer recharge applications. It is a bit of an experiment but one that is well worth the investment. We are hopeful that this addresses most of our questions about water transport into and out of the aquifer and helps to validate groundwater modeling and travel time estimates.

H. MOM reporting numbers

MOM Reporting #	Measure Name	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
2.7	# of PS Annual PMs Performed (NS)	2	2	3	3	2	1	7	4	1			
2.7	# of PS Annual PMs Performed (SS)	6	3	5	4	6	3	5	6	6			
2.7	# of Backup Generator PMs Performed (Target is 4.6)	6	19	7	8	10	6*	11	11	12			
2.8	# of FM Air Release Valve PMs Performed (NS)	128	33	124	268	213	191	181	42	176			
2.8	# of FM Air Release Valve PMs Performed (SS)	193	221	222	275	161	230	225	326	265			
2.9	# of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD)	7,548	5,980	3,241	7,880	2,739	3,458	1,990	3,815	1,270			
2.9	# of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD)	5,990	7,971	2,460	11,882	3,938	5,029	4,680	10,109	10,728			
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	8,637	16,671	5,816*	5,062	9,115	340	869	148	329			

*Adjusted monthly total

I. Strategic Measurement Data

1. Education and Outreach Events: 13

- a. 3/28/19- Charles Bott provided a SWIFT Briefing at Environment Virginia Symposium
- b. 3/19/19- Charles Bott and Alexandria Gagnon hosted a visit by Professor Jeanette Brown of Manhattan College
- c. 3/11/19 – ATP Staff provided a tour of the plant to Landstown High School AP environmental science class- Chris Traylor and Scott Mattice
- d. 3/21/19 – SS Operations Staff attended the Old Dominion University Spring Career Fair in Norfolk.
- e. 3/25/19 – Tidewater Community College Environmental science class tour of Nansemond (15 people)
- f. 3/18/19 – Staff assisted with SWIFT well testing clinic.
- g. 3/26/19 – Staff provided a tour of the BHTP to students of Hampton university - Jesse Crowell and Billy Phelps
- h. 3/27/19 – Staff provided a tour of the BHTP to students of Churchland High School AP environmental Science Class-John Schrier
- i. 3/29/19 - Tour for ODU CEE 350 Class (28 students) – Led by Chris Raleigh, Garrett Clower and Scott Whitby
- j. 3/13/19 – SS Operations Staff met with City of Suffolk Public Utilities Operations staff to collaborate and discuss locality issues – quarterly meeting.
- k. 3/16/19 – E&I Staff assisted with Chrome Sponsorship and Planning of the 2019 Mega Genesis College & Career Fair.
- l. 3/19/19 – SS Operations Staff met with City of Portsmouth Public Utilities Operations staff to collaborate and discuss locality issues – quarterly meeting.

2. Community Partners: 7

- a. VIMS
- b. Old Dominion University (ODU)
- c. Chesapeake Bay Foundation – oyster cage maintenance at BHTP for oyster gardening program
- d. Landstown High School
- e. Tidewater Community College
- f. Hampton University
- g. Churchland High School

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	March 2019
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (515) – Current Month	Hours / FTE	3.03
M-1.4b	Total Training During Work Hours per FTE (515) – Cumulative Year-to-Date	Hours / FTE	21.01
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	29,637
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	60.2
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	17.2
M-2.3d	Planned Maintenance - Projects	% of Total Maintenance Hours	22.6
M- 4.1a	Energy Use: Treatment *reported for February 2019	kWh/MG	2,298
M-4.1b	Energy Use: Pump Stations *reported for February 2019	kWh/MG	207
M-4.1c	Energy Use: Office Building *reported for February 2019	kWh/MG	79
M-5.2	Educational and Outreach Events	Number	13
M-5.3	Number of Community Partners	Number	7

Respectfully submitted,
Steve de Mik
 Director of Operations

TO: General Manager
FROM: Director of Talent Management (TM)
SUBJECT: Monthly Report for March 2019
DATE: April 10, 2019

A. Human Resources (HR)

1. Recruitment Summary

New Recruitment Campaigns	11
Job Offers Accepted – Internal Selections	3
Job Offers Accepted – External Selections	10
Internal Applications	8
External Applications	113
Average Days to Fill Position	87

2. Enterprise Resource Planning (ERP)

- a. HRSD worked with the Managed Services consultant on updates to system setup for Short Term Disability.
- b. The Business Analyst worked with Information Technology staff on benefit interface updates.
- c. Staff worked with Oracle Support on iRecruitment notifications and appraisal functionality.
- d. Accounting, Talent Management and Information Technology staff successfully completed the required 2018 Internal Revenue Service Affordable Care Act reporting.

3. Benefits and Compensation

- a. Staff worked with the benefit consultant on Fiscal Year 2020 medical, dental and vision benefits renewal, including evaluation of several cost savings strategies.
- b. With the start of the new Wellness year, an online diabetes and heart disease prevention program was offered to qualifying employees participating in HRSD's health plan. *Omada* is a digital lifestyle

change program that helps participants lose weight and develop long-term healthy habits. Regular conference calls were held with HR, Wellness, *Omada* and Cigna staff to finalize communication and administrative processes and to discuss engagement and feedback.

- c. The Compensation and Classification team continued evaluating positions based on Department requests and budget proposals.
- d. Compensation information was provided for a Milwaukee Metropolitan Sewerage District salary study.

4. Wellness

a. Participation Activities

Year Six Participation Activities	Unit	March 2019	Year to Date (March 2019–February 2018)
Biometric Screenings	Number	2	2
Preventive Health Exams	Number	7	7
Preventive Health Assessments	Number	20	20
Coaching Calls	Number	0	0
Online Health Improvement Programs	Number	34	34
Web-MD Online Health Tracking	Number	71	71
Challenges Completed	Number	0	0
Fit-Bit Promotion	Number	18	18

- b. The Wellness Specialist worked with Optima Health staff on year-end close out including data evaluation to identify participants earning the lowest health plan deductible and/or incentives. Incentive and appeal letters were sent to employees and spouses.
- c. An eight-week boot camp began at the Air Rail Avenue complex.
- d. Wellness Committee team members attended an *Omada* diabetes prevention program webcast.

5. Workers Compensation

- a. Three new cases were opened with six cases remaining active.

- b. An introductory meeting was held with Accounting and HR staff, HRSD's insurance broker and a workers compensation carrier.

6. Employee Relations

- a. Staff continued partnering with work center supervisors and employees to support employee relations and address HR issues:
 - (1) Participated on interview panels and assisted with job descriptions for Operations
 - (2) Began working with Operations Quality Steering Team (QST) to evaluate shift scheduling options
 - (3) Provided ERP and HR Policy and Procedure training to several new supervisors
 - (4) Worked with Sustainable Environment Advocacy team on Standards of Conduct policy revisions to allow for reuse of packaging materials
 - (5) Assisted with revising a Water Quality job description

7. General

- a. HR and Accounting staff continued to meet to streamline and improve HR and payroll processes.
- b. The HR Manager continued work with Operations, Engineering and Accounting staff to implement organization changes affecting ERP position set-up and control to document changes for the budget.
- c. *A Your Role in Quality Project* was piloted: an electronic new hire package to streamline and reduce paperwork for New Employee Orientation.
- d. TM staff met with Toastmasters officers and Communications staff on program updates, goals and needs.
- e. Staff participated in the following HRSD activities:
 - (1) Leadership Forum
 - (2) Senior Leadership Meeting
 - (3) HRSD Safety Team
- f. Staff participated in the following training:

- (1) Mercer webinar, *Family Medical Leave Act and Employee Benefits*
- (2) Mercer's *Annual Healthcare Benefit Trends and Insights* seminar
- (3) International Public Management Association (IPMA) Virginia Annual Spring conference
- (4) *How Technology Changed Healthcare* webinar
- (5) IPMA Webinar, *Current Compensation Conditions in the Public Sector*
- (6) HRSD Main Office Emergency Response training
- (7) HRSD Procurement Workshop

B. Organization Development and Training (OD&T)

1. Training

- a. The Leadership facilitator team continues to review and finalize the newly formatted Leadership and Management Program (LAMP), to be presented to the HRSD QST.
- b. The Project Management team finalized the workshop and enrolled several participants in a pilot class.
- c. Staff continued compiling Work Center Planning Day results and creating a Parking Board listing for QST review.
- f. The Organizational Professional Services Request for Proposal (RFP) team worked on reviewing and scoring proposals.
- g. The OD&T Administrative Coordinator recruitment process began with several organizational stakeholders participating on the panel.
- h. Supervisor Training, Part I was held.
- i. A Supervisor Training participant shadowed the OD&T Manager.

2. Apprenticeship Program

- a. The Learning Management System (LMS) team continued to evaluate software functionality.
- b. Work continued with subject matter experts on developing a *Wastewater Analysis* e-Learning course.

- c. A potential vendor presented math tutoring program information.
- d. Work continued with General Management and Communications staff on planning the Apprenticeship Program graduation which will commemorate the 40th Anniversary.

3. General

- a. The internal Quality Facilitator recruitment process continued.
- b. Staff participated in the following training:
 - (1) Mentor Coach’s *Individual Intensive Coaching*
 - (2) HRSD Emergency Response training

C. Safety

1. Mishaps and Work Related Injuries

- a. HRSD-Wide Injury Mishap Status to Date (OSHA Recordable)

	<u>2018</u>	<u>2019</u>
Mishaps	45	8
Lost Time Mishaps	6	2
<i>Numbers subject to change pending HR review of each case.</i>		

- b. MOM Program Year Performance Measure Work-Related Injuries

March2019 Injuries For Operations	March 2019 Injuries for Other HRSD Departments	Total Lost Time Injuries Since July 2018	Total HRSD Injuries Since July 2018
2	1	4	34

- c. Follow-up investigations were performed on three reported work-related injuries and three auto incidents.

2. HRSD Safety Training

Strategic Planning Measure	Unit	March 2019
Total Safety Training Hours per Full Time Employee (836) All HRSD – March 2019	682.69 Hours / 836 FTE	0.82
Total Safety Training Hours Per Full Time Employee (836) – Cumulative July 2018	3540.16 Hours / 836 FTE	4.23

3. In addition to regularly scheduled safety training and medical monitoring, the following sessions were conducted:
- a. Seven external briefings for contractors working at treatment plants and pump stations
 - b. Chainsaw Safety Training and two Forklift Safety Training classes for North Shore Electrical and Instrumentation employees
 - c. Virginia Department of Transportation (VDOT) Work Zone Safety Training for Small Communities employees
 - d. Several sessions of Emergency Response Training for Main Office employees.
4. Safety Inspections, Testing and Monitoring
- a. Weekly onsite inspections of the following construction sites:
 - (1) Army Base Treatment Plant (TP)
 - (2) Atlantic TP
 - (3) Dover Court Pump Station
 - (4) Shippo Corner Pump Station
 - (5) SWIFT Research Center (SWIFT RC)
 - (6) Virginia Beach Boulevard Pump Station
 - (7) Virginia Initiative Plant (VIP)
 - b. Quarterly safety inspections of the following work centers:
 - (1) Atlantic TP
 - (2) Chesapeake-Elizabeth TP

- (3) Small Communities TPs and Pump Stations
- (4) South Shore Automotive, Electrical and Machine Shops
- (5) South Shore Interceptors
- (6) Williamsburg TP

c. Monitoring and testing for the following:

- (1) Monthly velocity tests on Central Environmental Laboratory and Technical Services Division lab hoods
- (2) Ventilation surveys of Lodge Road, Williamsburg, Triton Court, Langley Circle and Woodland Road pump stations
- (3) Escorted Applied Laboratory services on Asbestos Inspection and sampling of the 1460 Air Rail Avenue building

d. Safety walk-throughs and evaluations:

- (1) The Safety Manager and Safety Technician escorted Virginia Occupational Safety and Health Administration staff on a partial inspection of the York River TP
- (2) The Safety Manager escorted an insurance representative on a risk assessment inspection of the Chesapeake-Elizabeth TP and provided additional information related to fleet safety
- (3) An Industrial Hygienist and the Safety Coordinator escorted the Virginia Beach Fire Marshall on an annual inspection of Chesapeake-Elizabeth TP
- (4) Evaluated a minor liquid oxygen leak at the SWIFT RC

5. Safety Programs

a. The HRSD Safety Team met to:

- (1) Review and finalize information for the annual Safety Recognition Program QST presentation
- (2) Review the Safety Innovation award announcement
- (3) Discuss possible solutions to reduce or prevent accidents involving stationary objects

b. The following was performed for the Confined Space Entry Program:

- (1) Reviewed completed confined space entry permits for North and South Shore Interceptors
- (2) Evaluated a contractor permit for the Army Base TP
- (3) Evaluated a confined space entry at the SWIFT-RC

- c. Hot work permits were issued for contractors working at Shipps Corner, Dover Court and Virginia Beach Boulevard pump stations.
- d. Annual respirator fit testing and pulmonary function testing began.
- e. Air Rail Avenue Office Emergency Response procedures were updated.
- f. Staff began inventorying hurricane lockers at HRSD work centers.
- g. An Industrial Hygienist audited new chemical usage for SWIFT RC.

6. General

- a. The Safety Program internal audit process continued. A meeting was held with SC&H staff to review processes for several programs and several report samples were provided.
- b. Staff provided support to Design and Construction by attending a 60% Design Review meeting for the Providence Road Offline Storage facility.
- c. Staff worked with Procurement on renewal of First Aid and Fire Extinguisher service contracts.
- d. Staff began entering safety training rosters into ERP.
- e. Staff worked with Facilities Maintenance to relocate safety equipment into the new storage space.
- f. A meeting with Army Corps of Engineering staff regarding clean-up of the Nansemond adjacent property, March 25

D. Monthly Strategic Planning Metrics Summary

- 1. Education and Outreach Events: (13)
 - a. A meeting with City of Suffolk staff to discuss Hazardous Materials Response Plan updates, March 6
 - b. Former Nansemond Ordnance Depot meeting, March 7

- c. NexGen Opportunity Fair at the Chesapeake Conference Center, March 7
 - d. Hosted Hampton Roads Public Works Academy Meeting, March 15
 - e. Tallwood High School Career Fair, March 15
 - f. City of Norfolk Technical Education Center Mock Interviews, March 18
 - g. Norfolk State University Spring Career Expo, March 19
 - h. Youth Career Expo at the Hampton Convention Center, March 21
 - i. Old Dominion University Spring Career Fair, March 21
 - j. Tidewater Community College Spring Career Fair, March 21
 - k. Saint Helena Elementary School College and Career Expo, March 22
 - l. Consumer and Career Expo at the Ted Constant Convocation Center, March 28
 - m. Fairlawn Elementary Career and College Expo, March 29
2. Community Partners: (11)
- a. City of Suffolk
 - b. Hampton Roads Public Works Academy
 - c. City of Norfolk Technical Education Center
 - d. Norfolk State University
 - e. City of Hampton
 - f. Old Dominion University
 - g. Tidewater Community College
 - h. Army Corps of Engineers
 - i. City of Virginia Beach Public Schools

- j. City of Norfolk Public Schools
- k. Youth Career Center of Hampton Roads

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	March 2019
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.13
M-1.1b	Employee Turnover due to Service Retirements	Percentage	0.13
M-1.4a	Total Training Hours Per Full Time Employee (17) – Current Month	Total Training Hours/ FTE	3.76
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / FTE	35.7
M-5.2	Educational and Outreach Events	Number	13
M-5.3	Community Partners	Number	11

Respectfully submitted,
Paula A. Hogg
 Director of Talent Management

TO: General Manager

FROM: Director of Water Quality (WQ)

SUBJECT: Monthly Report for March, 2019

DATE: April 13, 2019

A. General

1. Pretreatment and Pollution Prevention (P3) division staff did not assess civil penalties this month.
2. The Director and staff met with Department of Environmental Quality (DEQ) staff from the Office of Land Application Programs to discuss HRSD's concerns regarding the biosolids management section of a draft VPDES permit for the Atlantic facility which is currently upgrading its operation to produce Class A biosolids. Though we were able to resolve many administrative issues, the primary concern regarding HRSD liability for third-party use of Class A materials remains unresolved. The Virginia Pollution Abatement (VPA) regulation stipulates the need for a nutrient management plan (NMP) for land application of bulk Class A biosolids, but it is unclear whether this requirement was intended for the permit holder only or any end-user. DEQ holds that this requirement extends to third parties who may purchase the Class A materials in bulk for land application. Therefore DEQ is assigning HRSD the responsibility for ensuring adherence to the NMP along with the land application requirements of the permit. Managing third-party use in this manner will require significantly more resources than what was originally contemplated with the transition to Class A materials and it is not clear that this was the original intent of the regulatory language. DEQ did acknowledge this concern and agrees with the need to place the responsibility for proper use on the end-user, not only the permittee. Virginia's poultry litter regulations incorporate a similar end-user approach to managing the land application of poultry litter.
3. The Director attended the Environment Virginia Symposium in Lexington, Virginia. One session of the Symposium titled "Water Management in Coastal Virginia" discussed the option of recycling stormwater for potable uses. Although there are benefits associated with this approach, there are significant hurdles to overcome, including storage prior to treatment and actual treatment costs. The estimated cost per gallon for collecting and treating stormwater per year exceeded the projected cost per gallon of

HRSD-produced SWIFT Water by more than 100 percent. Another session included representatives of the Virginia Departments of Environmental Quality, Conservation and Recreation, Health, and Agriculture and Consumer Services who discussed Virginia's plan to restore the Chesapeake Bay. This session addressed point source loads of nutrients like those of HRSD, but specifics regarding further regulatory controls for point sources were not suggested during the session.

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy Group (SEA) reported activities for the month of March.
 - a. Metrics Reporting: As part of measuring our communications impact, a first survey on recycling knowledge was sent to all staff and results were received.
 - b. Earth Day: Developed content for Earth Day on April 22nd, Theme: Save our Species
 - c. R³ (Reduce, reuse, recycle) Support:
 - 1) Currently conducting a Recycle Right campaign:
 - a) Recycle Right placards have been developed and distributed across HRSD to place in common areas.
 - b) The General Manager agreed to send an email to all HRSD to let all know the importance of paying attention to the issue of proper recycling.
 - 2) HRSD Packaging Recycling: QST granted approval for staff to take home and reuse packaging materials.
 - 3) HRSD Recycling On-the-Clock: QST agreed HRSD-supported recycling should be done on HRSD time; however, we need to set limits on what is and is not HRSD-supported recycling. SEA is to look into what HRSD recycles and present findings for HRSD support (refuse created by HRSD and/or items with limited recycling options outside HRSD) and what should not be HRSD supported (personal refuse that is easily recycled outside of HRSD).
 - d. HRSD Interactive Challenge – Trash Collector Design: Both teams that registered for the challenge have submitted their designs and will

present them for judging on May 29th. We plan to present the winning design at the June QST meeting.

2. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department.

C. Municipal Assistance

1. HRSD provided sampling and analytical services to Hanover County to support monitoring required for its Virginia Pollution Discharge Elimination System (VPDES) permit.
2. The [Municipal Assistance Billed Reimbursements](#) per service collected between January 1 and March 31, 2019 are attached.
3. The [Municipal Assistance Invoice Summary](#) for the first quarter of the 2019 calendar year is attached.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 4
 - a. Technical Services Division (TSD) staff presented the HRSD Microbial Source Tracking framework and case studies to the Virginia Association of Soil and Water Conservation Districts on March 21.
 - b. TSD staff Participated in Christopher Newport University's Wednesdays for Work on March 20.
 - c. Central Environmental Laboratory (CEL) staff hosted Victoria Ciavarra, related to professional development, and provided a tour of the CEL on March 8.
 - d. CEL staff hosted Nicole Miller, a college student interested in working for HRSD in the near future, and provided a tour of the CEL on March 15.
2. Community Partners: 10
 - a. City of Hampton
 - b. Norfolk State University
 - c. City of Suffolk
 - d. City of Virginia Beach
 - e. Elizabeth River Project
 - f. Virginia Department of Environmental Quality
 - g. Virginia Department of Health Division of Shellfish Sanitation
 - h. United Way

- i. Hampton Roads Planning District Commission Fats Oils and Grease
- j. City of Newport News

3. Odor Complaints: 1

One odor complaint was received by the Small Communities Division (SCD) due to odors coming from an auto-vent near Tommy's Produce on Route 360 in King William County. SCD removed the auto-vent and closed the ball valve and corporation stop. No further complaints have been received.

4. Monthly Metrics

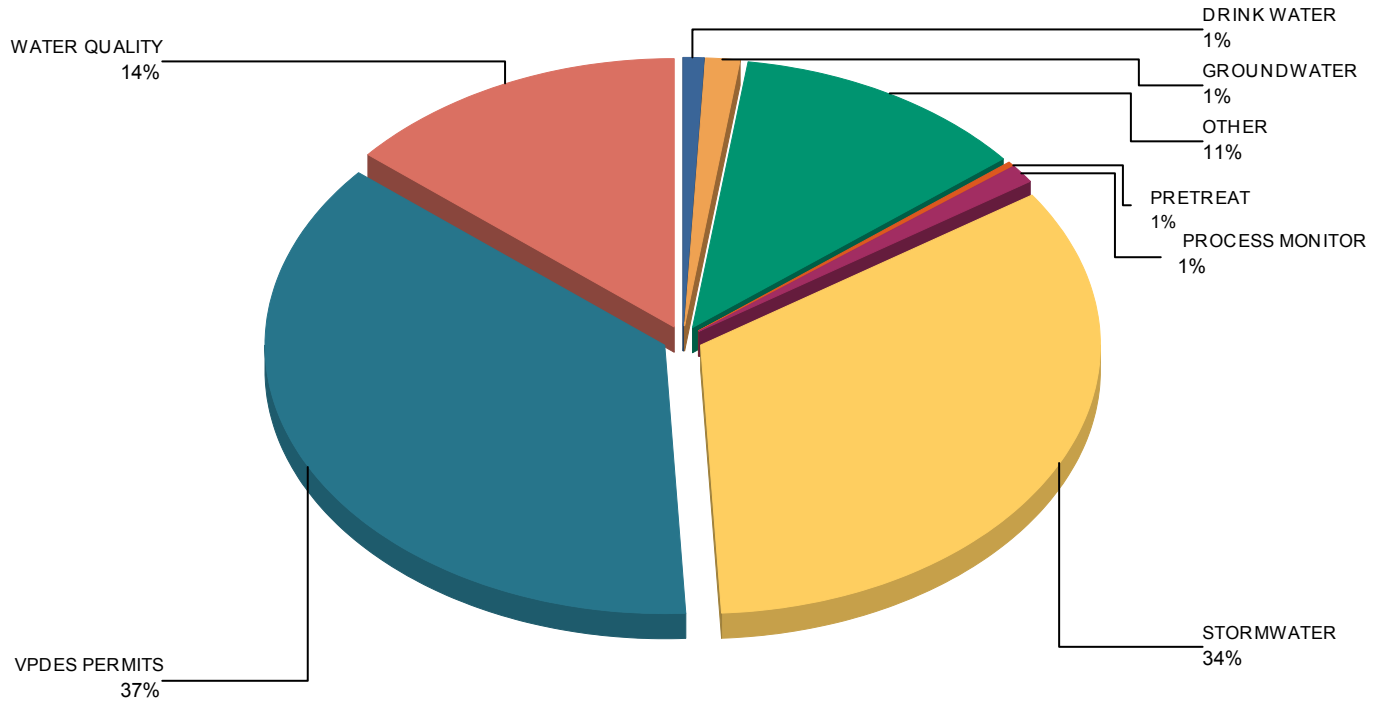
Item #	Strategic Planning Measure	Unit	March 2019
M-1.4a	Training During Work Hours Per Full Time Employee (109) (Current Month)	Total Hours / # FTE	8.03
M-1.4b	Total Training During Work Hours Per Full Time Employee (109) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	44.44
M-2.5	North Shore/South Shore Capacity Related Overflows	# within Level of Service	0
M-3.1	Permit Compliance	# of Exceedances: # of Permitted Parameters	1:45,659
M-3.2	Odor Complaints	#	1
M-3.4	Pollutant Removal	Total Pounds Removed	141,163,051
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	20%
M-5.2	Educational and Outreach Events	#	4
M-5.3	Community Partners	#	10
	Average Daily Flow	Total MGD for all Treatment Plants	166.56

Item #	Strategic Planning Measure	Unit	March 2019
	Industrial Waste Related System Issues	#	0

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

Municipal Assistance Billed Reimbursements per Service From 01/01/2019 to 03/31/2019

Attachment 1



Notes: Other = Equipment purchase, consultation, validation studies, boater pump-out program, etc.

Municipal Assistance Invoice Summary

From 01/01/2019 - 03/31/2019

Municipality	Reimbursements
Accomack County	\$2,015.95
Buckingham County	\$589.02
Chesterfield County	\$2,736.22
City of Chesapeake	\$7,266.54
City of Emporia	\$232.00
City of Fredericksburg	\$614.86
City of Hampton	\$5,310.61
City of Lynchburg	\$15,712.59
City of Norfolk	\$6,083.84
City of Portsmouth	\$7,515.63
City of Roanoke	\$4,611.39
City of Suffolk	\$5,493.72
City of Virginia Beach	\$4,761.71
HRPDC	\$50,076.60
Hanover County	\$537.87
METRO Wastewater Reclamation Dist	\$671.63
New Kent County	\$8,497.01
Northampton County WWTP	\$2,223.82
Northumberland Co. - Callao WWTP	\$1,755.01
Spotsylvania County	\$1,279.83
Stafford County	\$102.16
Town of Cape Charles	\$5,957.13
Upper Occoquan Service Authority	\$6,876.57
Virginia Department of Health	\$5,380.45
Western VA Water Authority	\$4,720.29
Westmoreland County	\$1,036.96
Totals:	<u>\$152,059.41</u>



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 projects, and the status of current management action plan (MAP) monitoring.

I. Projects in Process

Business Continuity and Disaster Recovery

- **Tasks Completed (March 2019)**
 - SC&H met with HRSD management to discuss timing, strategy, and expected completion of management action plans.

- **Upcoming Tasks (Q2 2019)**
 - SC&H will continue to work with HRSD process owners and management to finalize the audit report, incorporating management action plans. A specific completion date has not been identified at this time.

Customer Care

- **Tasks Completed (March 2019)**
 - Finalized fieldwork procedures and documentation
 - Drafted report and preliminary findings
 - Scheduled exit discussion with process owners

- **Upcoming Tasks (April 2019)**
 - Conduct exit discussion with process owners
 - Communicate final audit report and obtain management action plan responses
 - Work with process owners to finalize report

Safety

- **Tasks Completed (March 2019)**
 - Reviewed documentation provided by process owners
 - Scheduled and conducted process discussions
 - Documented process understanding via flowcharts and narrative documentation

- **Upcoming Tasks (April 2019)**
 - Finalize planning and understanding procedures
 - Finalize fieldwork objectives and prepare audit plan
 - Begin fieldwork testing procedures.

II. Upcoming Projects (FY2019)

SC&H's next audit will pertain to the Permitting/ Reporting/ QA functions at HRSD and is scheduled to begin in Q2 (April) of calendar year 2019.

III. Management Action Plan (MAP) Monitoring

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



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

The following describes the current project monitoring status.

Audit	Report Date	Next Follow-up	Recommendations		
			Closed	Open	Total
D&C: CIP Project Management	5/11/2016	June-19	11	2	13
Biosolids Recycling	10/8/2016	July-19 Pending Permit	7	1	8
HR Benefits	11/22/2016	Closed	15	0	15
Inventory	4/20/2017	May-19	1	4	5
Procurement/ ProCard	8/23/2017	In Process	In Process*	In Process*	11

*SC&H is currently in the process of performing management action plan follow up for the Procurement and ProCard Audit. An updated report on current open and closed recommendations will be provided with the April 2019 Internal Audit Status.

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
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%
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%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	69.57%	71.43%	64.00%	69.00%	68.00%	85.00%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67	67
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
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
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
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
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%	156%	160%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%	167%
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
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%	44%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%	24%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%	32%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%	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
M-3.6	Alternate Energy	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096	6,052,142	5,862,256
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
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163	173	170
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97	104	104
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%
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
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%
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
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A	N/A	53%
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%	143%	114%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35	15	20
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09	154.24	152.8
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14	66.66	49.24
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%	76%
	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%
	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%

Monthly Updated Metrics

Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-19
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	145.8	174.1	166.6
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	4	1	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	103%	103%	100%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	118%	118%
	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	\$24,422,279	\$21,365,727
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	17%	17%	18%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	10	3	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	1:40586	1:45659
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	6	3	1
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	189,765,922	190,536,910	125,131,342	141,163,051
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	20%	22%	17%	19%	19%	20%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	23	39
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	23	28

EFFLUENT SUMMARY FOR MARCH 2019

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	TKN mg/l	NH3 mg/l	CONTACT TANK EX
ARMY BASE	12.23	68%	6	6.8	3	5	0.30	0.29	3.1	3.7	NA	NA	15
ATLANTIC	28.09	52%	11	9.5	2	1	NA	NA	NA	NA	NA	NA	3
BOAT HARBOR	17.87	71%	11	12	5	1	0.78	0.57	22	20	NA	NA	11
CENT. MIDDLESEX	0.009	36%	<2	<1.0	<1	<1	NA	NA	NA	NA	NA	NA	NA
CHES-ELIZ	19.26	80%	19	15	12	4	1.3	1.0	31	30	NA	NA	9
JAMES RIVER	15.43	77%	5	4.2	1	<1	0.25	0.35	8.0	8.2	NA	NA	2
KING WILLIAM	0.061	61%	<2	<1.0	NA	<1	0.023	0.027	2.2	1.8	2.0	NA	NA
NANSEMOND	17.49	58%	6	8.9	2	2	0.77	0.99	4.5	5.5	NA	NA	7
SURRY, COUNTY	0.089	136%	4	5.0	NA	1	NA	NA	NA	NA	<0.50	NA	0
SURRY, TOWN	0.089	148%	5	13	NA	8	NA	NA	NA	NA	0.70	0.14	NA
URBANNA	0.042	42%	6	12	2	6	3.2	2.4	11	9.8	NA	0.12	NA
VIP	31.70	79%	7	5.1	6	<1	0.41	0.44	4.0	3.8	NA	NA	0
WEST POINT	0.666	111%	18	13	1	1	1.6	1.5	13	12	NA	NA	0
WILLIAMSBURG	8.82	39%	3	3.2	1	1	0.21	0.32	2.4	3.1	NA	NA	2
YORK RIVER	14.72	98%	5	0.93	1	<1	0.31	0.26	5.5	6.0	NA	NA	3
	<u>166.56</u>												

	% of Capacity
North Shore	69%
South Shore	66%
Small Communities	95%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY19	YTD	Projection	CY19
	%	Lbs	%	%	Lbs	%
James River	22%	4,110,004	90%	18%	274,557	86%
York River	26%	271,614	94%	20%	15,904	82%
Rappahannock	23%	NA	NA	83%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY19 to Date: 1:45,659
Pounds of Pollutants Removed in FY19 to Date: 141,163,051
Pollutant Lbs Discharged/Permitted Discharge FY19 to Date: 20%

	Rainfall (inch)		
	<u>North Shore (PHF)</u>	<u>South Shore (ORF)</u>	<u>Small Communities (FYJ)</u>
Month	4.34"	2.43"	3.66"
Normal for Month	3.80"	3.24"	3.44"
Year to Date Total	12.24"	10.93"	11.35"
Normal for YTD	9.94"	9.01"	9.48"

AIR EMISSIONS SUMMARY FOR MARCH 2019

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	BZ Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave (F)	12 hr ave (in. WC)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	pH 3 hr ave	Bypass Stack Use	Mo. Ave (PPM)	DC (%)	Daily Ave Days >Max
ARMY BASE	0	0	0	0	0	0	0	2	22	100	0
BOAT HARBOR	0	0	0	n/a	0	1	0	4	15	99	0
CHES-ELIZ	0	0	0	0	0	0	0	0	20	100	0
VIP	0	0	0	n/a	0	0	0	1	91	99	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	1	14	100	0

ALL OPERATIONS

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