



COMMISSION MEETING MINUTES
July 23, 2019

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Name	Title	Present for Item Nos.
Elofson, Frederick N.	Commission Chair	1-16
Lynch, Maurice P.	Commission Vice-Chair	1-16
Glenn, Michael E.	Commissioner	Absent
Lakdawala, Vishnu K.	Commissioner	Absent
Levenston, Jr., Willie	Commissioner	1-16
Rodriguez, Stephen C.	Commissioner	1-16
Taraski, Elizabeth	Commissioner	1-16
Ward, Molly Joseph	Commissioner	Absent

1. **CONSENT AGENDA**

Action: Approve the items listed in the Consent Agenda.

Moved:	Maurice Lynch	Ayes:	5
Seconded:	Willie Levenston	Nays:	0

- a. Approval of minutes from previous meeting.
- b. Contract Awards
 - 1. [Small Communities Collection System Rehabilitation Phase II](#) \$259,575
- c. Sole Source
 - 1. [Debt Collection Services](#)
 - 2. [Intuitech Granular Media Filtration Pilot Skid, Parts and Service](#)
 - 3. [Moyno EZStrip™ Pumps, Parts and Service](#)
 - 4. [Schweitzer Relays, Meters, Controllers and Associated Training](#)
- d. HRSD Use of Existing Competitively Awarded Contract Vehicle
 - 1. [Facility Maintenance, Repair and Operations-Related Supplies and Services](#) \$1,500,000

Item(s) Removed for Discussion: None

Attachment #1: [Consent Agenda](#)

Public Comment: None



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2. **PARALLEL THIMBLE SHOALS TUNNEL PROJECT NUTRIENT OFFSET AGREEMENT**

Action: Approve the terms and conditions of the nutrient offset agreement with the Chesapeake Tunnel Joint Venture (CTJV) operating on behalf of the Chesapeake Bay Bridge and Tunnel Commission, and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.

Moved:	Maurice Lynch	Ayes:	5
Seconded:	Willie Levenston	Nays:	0

Brief: The CTJV is a joint venture of Dragados USA, Inc. and Schiavone Construction Company, LLC that is expanding the Chesapeake Bay Bridge-Tunnel by constructing the Parallel Thimble Shoal Tunnel Project (“PTST Project”) on behalf of The Chesapeake Bay Bridge and Tunnel Commission (CBBTC). The Chesapeake Bay Bridge and Tunnel Commission is the governing body of the Chesapeake Bay Bridge and Tunnel District. The Commission consists of 11 members who are appointed by the Governor of the Commonwealth of Virginia. The project will add a new two-lane tunnel under the Thimble Shoal Channel of the Chesapeake Bay to carry two lanes of traffic southbound while the existing tunnel will carry two lanes of traffic northbound. CTJV is in the process of obtaining Watershed General Permit coverage from DEQ to authorize the discharge of TN and TP on a short-term basis for the period of construction.

The discharge associated with construction activities requires a temporary nutrient offset of 100 pounds per year (“lbs/yr”) of Total Nitrogen and 550 lbs/yr of Total Phosphorus for the duration of construction and is not anticipated to last more than five years.

Given the CBBTC is a regional public agency, the credit offset is offered at no cost. The CTJV is paying attorney’s fees for the drafting of the [agreement](#). Other key agreement considerations include:

- 5-year term on agreement; renewable after 5 years as needed;
- Credit reverts back to HRSD once the discharger no longer needs it for the purpose of constructing the PTST Project;
- In order to protect water quality, it is important that the CTJV meet all of its discharge permitted limitations associated with the PTST. If the PTST discharge is consistently violating permit conditions, HRSD reserves the right to withdraw its provision of credit.

Attachment #2: [Agreement](#)

Public Comment: None



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3. **SOUTHERN NEVADA WATER AUTHORITY
INVESTIGATION OF TREATMENT EFFECTIVENESS FOR SHORT-CHAIN PER AND
POLYFLUOROALKYL SUBSTANCES (PFAS) STUDY**

Action: No action required.

HRSD Estimate: \$73,200

Project Description: Per- and polyfluoroalkyl substances (PFAS) are man-made chemicals that were developed commercially starting in the 1940s. They are incorporated into many household items and consumer products, including non-stick cookware coatings, stain repellent sprays for clothing, carpets and upholstery, food wrapper coatings, and fire-fighting foam (aqueous film forming foam, AFFF). Various health concerns have been associated with exposure to PFAS including bioaccumulation, liver toxicity and cancer. Recent estimates indicate that there are nearly 5,000 different PFAS compounds present in the environment. This, in combination with the health risks associated with PFAS exposure, has led to increased interest in PFAS fate, transport, removal and destruction during wastewater and drinking water treatment processes.

In order to better understand PFAS dynamics in wastewater treatment and indirect potable reuse, HRSD staff will collaborate with Southern Nevada Water Authority (SNWA). This will be in support of a Water Research Foundation funded study entitled "Investigation of Treatment Alternatives for Short-Chain Poly and Perfluoroalkyl Substances" awarded to North Carolina State University and SNWA, with HRSD as a supporting partner.

SNWA is the wholesale water provider for Southern Nevada and is comprised of seven local water and wastewater agencies that serve a combined population of over 2.1 million residents. Staff from SNWA's Water Quality Research and Development section will analyze for PFAS in samples collected by HRSD in order to address two main objectives: Understand removal of PFAS across the SWIFT treatment train and Understand fate and transport of PFAS through wastewater treatment after a simulated lab-scale AFFF release.

The cost of this study was included in the FY-2020 Annual Operating Budget approved by the Commission in May.

Attachment: None

Public Comment: None



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4. **JAMES RIVER SWIFT FACILITY
INITIAL APPROPRIATION AND TASK ORDER**

Actions:

- a. **Appropriate total project funding in the amount of \$182,246,000.**
- b. **Approve a task order with AECOM in the amount of \$4,228,679.**

Moved: Stephen Rodriguez **Ayes:** 5
Seconded: Willie Levenston **Nays:** 0

CIP Project: GN016360

Budget	\$182,246,000
Previous Expenditures and Encumbrances	(\$0)
Available Balance	\$182,246,000

Contract Status:	Amount
Original Contract with AECOM	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$4,228,679
Total Value of All Task Orders	\$4,228,679
Revised Contract Value	\$4,228,679
Engineering Services as % of Construction	2.9%

Project Description: The James River SWIFT Facility project will include advanced water treatment facilities needed to produce SWIFT water at the James River Treatment Plant (JRTP). The scope includes advanced water treatment facilities, conveyance of SWIFT water to the recharge wells, and modifications to the non-potable water system. The scope does not include land acquisition, modifications to the existing outfall system or improvements to the existing wastewater treatment process to improve the quality of the secondary effluent or drilling of the recharge and monitoring wells.

Task Order Description: This task order will provide preliminary design development services required to support the design, procurement, and construction of the JRTP SWIFT advanced water treatment facilities. Commission approved the use of Design-Build project delivery in June 2019. This scope of work is focused on advancing the concept design to a level of sufficient detail that will convey project intent and requirements to perspective design-builders for pricing and successful delivery. The resulting deliverables from this task order will be complete Bridging Documents, including but not limited to a Basis of Design report, preliminary drawings, contract documents, contract conditions, and general requirements. The Bridging Documents package will be used to procure a design-build team to complete the final design and construct the project.



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Analysis of Cost: The cost for this task order is based on a detailed negotiated scope of work for design development services. The level of effort reflects the specific evaluations and coordination required for implementation of the first SWIFT facility at JRTP and takes into account the approaches and technical understanding developed for previous SWIFT design efforts. The raw average labor rate for this project is \$53.33 per hour, which reflects the participation of subject area experts that will be involved in this design development effort. The total fee for this task order was compared to PER efforts for large HRSD treatment plant projects. This task order reflects a higher engineering fee to construction cost ratio (2.9 percent) as this project includes complex coordination efforts the concurrent execution of the James River Treatment Plant Advanced Nutrient Reduction Improvements project (JR013400) and this specific design effort will develop the initial design framework and SWIFT technical requirements that will become a platform for future SWIFT facility development. Compensation for design development services will be on a lump sum basis.

<u>Schedule:</u>	Preliminary design begins	July 2019
	Preliminary design approval and begin RFQ/RFP process	February 2020
	Selection of Design-Build firm / establish Construction Cost Limit (CCL)	October 2020
	Detailed design development/Stipulated Fixed Final Price	July 2021
	Construction Completion	September 2025

Discussion Summary: Well drilling is a specialty area and will be bid separately.

Attachment: None

Public Comment: None



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5. **JAMES RIVER TREATMENT PLANT ADVANCED NUTRIENT REDUCTION IMPROVEMENTS INITIAL APPROPRIATION AND TASK ORDERS**

Actions:

- a. **Appropriate total project funding in the amount of \$194,476,000.**
- b. **Approve a task order with CH2M Hill (Jacobs) in the amount of \$2,295,663.**
- c. **Approve a task order with AECOM in the amount of \$510,799.**

Moved: Willie Levenston **Ayes:** 5
Seconded: Elizabeth Taraski **Nays:** 0

CIP Project: JR013400

Budget	\$194,476,000
Previous Expenditures and Encumbrances	(\$0)
Available Balance	\$194,476,000

Contract Status:	Amount
Original Contract with CH2M Hill (Jacobs)	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$2,295,663
Total Value of All Task Orders	\$2,295,663
Revised Contract Value	\$2,295,663
Engineering Services as % of Construction	1.25%

Contract Status:	Amount
Original Contract with AECOM	\$0
Total Value of Previous Task Orders	\$0
Requested Task Order	\$510,799
Total Value of All Task Orders	\$510,799
Revised Contract Value	\$510,799
Engineering Services as % of Construction	0.30%

Project Description: The James River Treatment Plant (JRTP) Advanced Nutrient Reduction Improvements project will include the design and construction of improvements to the secondary treatment process at the JRTP. The scope includes equalization of primary effluent, modifications to the Integrated Fixed Film Activated Sludge (IFAS) system, demolition of existing secondary clarifiers, replacement with new rectangular secondary clarifiers, construction of a post denitrification moving bed bio-reactor (MBBR), chemical



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storage and feed systems, and all pumping, piping, instrumentation, and site work required. The JRTP requires significant advanced secondary treatment improvements, including nutrient reduction measures, to provide stable source water quality that meets the influent requirements of SWIFT treatment.

The initial capital project budget estimate was developed in January 2019 based on the treatment process requirements as defined at that time. Since inclusion in the FY-2020 CIP, further development of the project scope and construction approach has occurred. Major additions to the project scope and budget include relocation of the administrative and maintenance structures to minimize risks associated with maintenance of plant operations during construction of the new secondary clarifiers, the need for expanded electrical service from Dominion Virginia Power to the JRTP to support increased plant electrical loads, and the potential for construction risks such as deep foundations. These changes have increased the overall project cost from \$120,750,000 to \$194,476,000.

Task Order Description: CH2M Hill (Jacobs) has conducted process modeling and evaluation of the treatment processes at the JRTP as the Owner's Technical Advisor for the SWIFT Full Scale Implementation program. Under this task order, Jacobs will provide design development services to support the design, procurement, and construction of the wastewater treatment improvements required at JRTP to provide stable source water quality as SWIFT influent. This scope of work is focused on advancing the concept design to a level of sufficient detail that will convey project intent and requirements to perspective design-builders for pricing and successful delivery. The resulting deliverables from this task order will be a Basis of Design report and preliminary drawings focused on the wastewater treatment improvements, electrical upgrades, and administrative facilities.

Task Order Description: AECOM has been providing Program Management services for the SWIFT Full Scale Implementation program. This project will be delivered under the program as a single, combined contract with the James River SWIFT Facility project (GN016360). Commission approved the use of Design-Build project delivery for this single, combined contract in June 2019. Under this task order, AECOM will provide limited design services related to the wastewater treatment upgrades. These items have been excluded from Jacobs's design services task order for this project. AECOM will also provide project management services, including coordination of the technical and contract requirements of the wastewater upgrades with SWIFT portion of the complete combined Bridging Documents.

Analysis of Cost: The cost for each these task orders is based on a detailed negotiated scope of work for design development and project management services. The coordinated level of effort reflects the specific evaluations and design development required for the wastewater treatment upgrades at JRTP. The cost evaluation considered the combined impact of these two scopes as they reflect the complete level of effort required. The raw average labor rate for the combined task orders is approximately \$65 per hour, which reflects the participation of subject area experts that will be involved in this design



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development effort. The total combined fee for these task orders reflects an engineering fee to construction cost ratio of 1.5 percent. This ratio compares well with other PER efforts for large HRSD wastewater treatment plant projects. Compensation for design development and project management services will be on a Time and Materials basis. The rates used to develop the task order limits are consistent with the approved rates in each firm's professional services agreements.

<u>Schedule:</u>	Preliminary design begins	July 2019
	Preliminary design approval and begin RFQ/RFP process	February 2020
	Selection of Design-Build firm / establish Construction Cost Limit (CCL)	October 2020
	Detailed design development/Stipulated Fixed Final Price	July 2021
	Construction Completion	September 2025

Discussion Summary: Staff explained the wastewater treatment requirements necessary in front of a SWIFT facility. The cost of this project has increased due to added scope of work and construction contingency for installation of necessary equipment to reliably and consistently meet influent nitrogen requirements. This new equipment will be installed in the area currently occupied by the administration building and maintenance shop. Relocating these facilities, adding new electrical feed and deep foundation work was not included in the original cost estimate. Staff will work to minimize cost throughout the design process. The pre-SWIFT work at James River Treatment Plant is the most intensive and expensive. Much less extensive work will be needed at other SWIFT facilities.

Attachment: None

Public Comment: None



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6. **JEFFERSON AVENUE EXTENSION GRAVITY IMPROVEMENTS
ADDITIONAL APPROPRIATION, CONTRACT AWARD AND TASK ORDER (>\$200,000)**

Actions:

- a. **Appropriate additional funding in the amount of \$196,992.**
- b. **Award a contract to Bridgeman Civil Inc. (formerly known as TA Sheets General Contractors, Inc.) in the amount of \$2,248,120.**
- c. **Approve a task order with Woolpert Inc. in the amount of \$323,783.**

Moved: Stephen Rodriguez **Ayes:** 5
Seconded: Willie Levenston **Nays:** 0

CIP Project: BH014800

Budget	\$2,870,400
Previous Expenditures and Encumbrances	(\$270,677)
Available Balance	\$2,599,723
Proposed Task Order to Woolpert Inc.	(\$323,783)
Proposed Contract Award to Bridgeman Civil Inc.	(\$2,248,120)
Proposed Contingency	(\$224,812)
Project Shortage/Requested Additional Funding	(\$196,992)
Revised Total Project Authorized Funding	<u>\$3,067,392</u>

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Bridgeman Civil Inc.	\$2,248,120
Shaw Construction Corp.	\$3,070,870
Tidewater Utility Construction, Inc.	\$3,775,075

HRSD/Engineer Estimate: \$2,412,771

Contract Status:	Amount
Original Contract with Woolpert	\$51,036
Total Value of Previous Task Orders	\$185,302
Requested Task Order	\$323,783
Total Value of All Task Orders	\$509,085
Revised Contract Value	\$560,121
Engineering Services as % of Construction	25%



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Contract Description: In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised June 11, 2019 and three bids were received on July 8, 2019. The design engineer, Woolpert, evaluated the bids and recommends award to the lowest responsive and responsible bidder Bridgeman Civil Inc. in the amount of \$2,248,120.

Project Description: This project consists of the rehabilitation of 22 manholes and approximately 60 linear feet of 8-inch, 1,850 linear feet of 27-inch, 2,500 linear feet of 33-inch, and 450 linear feet of 36-inch gravity sewer. This project will also include the abandonment of two manholes and the installation of a new manhole. The work is located within the City of Newport News along Jefferson Avenue from Sam Walton Way to Parkview Drive and from Arch Street to 50th Street. 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.

Funding Description and Analysis of Cost: The total cost estimate for this project is \$3,067,392. The estimate includes \$560,121 in engineering costs, \$2,248,120 in construction costs, \$34,339 in temporary construction easements and a 10 percent construction contingency of \$224,812. The apparent low bid of \$2,248,120 as submitted by Bridgeman Civil Inc. was reviewed by the Engineer and determined to be within seven percent of the Engineer's estimate of \$2,412,771. The Engineer believes this is reflective of current market conditions for the specialized installation of large diameter cured in place pipe and manhole rehabilitation.

Task Order Description and Analysis of Cost: This task order will provide construction administration and construction inspection services for Jefferson Avenue Extension Gravity Improvements. The cost for this task order compared well with other rehabilitation projects of similar size. The construction administration and construction inspection services for the project were negotiated, and a fee of \$323,783 was considered to be appropriate for the scope of work. With an apparent low bid of \$2,248,120 for construction, the engineering fee to construction cost ratio is approximately 14 percent, which is within range of similar HRSD projects.

<u>Schedule:</u>	Construction	August 2019
	Project Completion	July 2020

Attachment: None

Public Comment: None



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7. **TREATMENT PLANT GREASE HANDLING FACILITIES
ADDITIONAL APPROPRIATION, AGREEMENT, TASK ORDER AND CONTRACT
AWARD (>\$200,000)**

Actions:

- a. **Appropriate additional funding in the amount of \$7,656,150.**
- b. **Approve the terms and conditions of the offtake agreement with Downey Ridge Corporation, Greasezilla™, and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.**
- c. **Approve a task order with Jacobs in the amount of \$640,691.**
- d. **Award a Contract to Downey Ridge Corporation, Greasezilla™, in the amount of \$775,000.**

Moved: Maurice Lynch **Ayes:** 5
Seconded: Willie Levenston **Nays:** 0

CIP Project: GN013300

Budget	\$1,843,668
Previous Expenditures and Encumbrances	(\$499,127)
Available Balance	\$1,344,541
Proposed task order with Jacobs	(\$640,691)
Estimated construction	(\$7,160,000)
Proposed contingency	(\$1,200,000)
Project Shortage/Requested Additional Funding	(\$7,656,150)
Revised Total Project Authorized Funding	\$9,499,818

Contract Status:	Amount
Original Contract with Jacobs	\$99,879
Total Value of Previous Task Orders	\$388,460
Requested Task Order	\$640,691
Total Value of All Task Orders	\$1,129,030
Engineering Services as % of Construction Estimate	15%

Project Description: This project involves installation of a facility at the Nansemond Treatment Plant to receive FOG (Fats, Oils and Grease) from indirect haulers. The facility will screen, decant, and process the FOG to convert a portion to bio-fuel using the Greasezilla system. The portion of FOG converted to biofuel will be sold to Greasezilla



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under a separate offtake agreement. The decanted FOG water will be sent to the headworks for normal wastewater treatment, and the remaining processed FOG will be sent to the digesters.

Task Order Description and Analysis of Cost: This task order will provide detailed design and bid phase services for the project. The cost for this task order is based on a negotiated price between Jacobs and HRSD. The design phase services as a percentage of construction cost is 8.4 percent, which compares well with the percentages for other similar projects.

Agreement Description: The [attached agreement](#) between HRSD and Downey Ridge Corporation, Greasezilla™, facilitates the sale of processed grease from HRSD to Greasezilla. HRSD will purchase and operate the Greasezilla system as part of the new FOG handling facility and Greasezilla will pay HRSD for the processed grease based on index pricing. The agreement has been reviewed by HRSD legal counsel.

Contract Description: This contract is an agreement for purchase of the Greasezilla™ equipment in the amount of \$775,000. The equipment consists of two reactor tanks, two boilers, three processed FOG storage tanks, a Process Logic Controller/Human-Machine Interface (PLC/HMI) and all associated mechanical, structural and electrical/instrumentation elements. The contractor building the FOG facility will be responsible for placement of the major system components, but Greasezilla™ staff will complete system interconnections and startup for the equipment they supply. Greasezilla™ was previously sole sourced as an equipment supplier for this project.

Funding Description: The current appropriated budget for this CIP is \$1,843,668 based on installing a much simpler system that did not require a building. After the initial Preliminary Engineering Report, the HRSD project team acknowledged the need for a more robust facility to manage FOG efficiently, as well as finding a way to dispose of the byproducts responsibly. The original concept did not anticipate a facility of this size or complexity, however the project team believes the proposed facility will further diversify HRSD's ability to manage FOG effectively. This request includes \$7,160,000 for construction and engineering services during construction. The proposed contingency is \$1,200,000 which is approximately 20 percent of the estimated construction costs. This estimate is below the value listed in the CIP, but based on the current design, a total cost of \$9,499,818 is adequate to deliver this project.



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This project requires additional funding due to the desire to build a facility that efficiently manages FOG in a responsible way. The additional amount necessary for this work is \$7,656,150 and exceeds the balance available for this CIP project.

<u>Schedule:</u>	Design	February 2019
	Bid	April 2020
	Construction	June 2020
	Project Completion	December 2021

Discussion Summary: Downey Ridge is located in West Virginia and operates a few other small facilities in the United States. The biofuel produced has a high market value locally which is primarily used by large cargo ships. This biofuel can replace petroleum based bunker fuel which is considered a major source of worldwide air pollution.

Attachment #3: [Agreement](#)

Public Comment: None



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8. VIRGINIA BEACH BOULEVARD FORCE MAIN PHASE VI
EASEMENT ACQUISITION RESOLUTION

Action: Adopt the Resolution approving the public use determination and directing acquisition by condemnation, or other means, of permanent and temporary easements with respect to the upgrade and installation of a replacement force main in the Virginia Beach Boulevard corridor.

Moved: Stephen Rodriguez **Ayes:** 5
Seconded: Maurice Lynch **Nays:** 0

CIP Project: CE011823

Project Description: This project will upgrade the existing 24-inch reinforced concrete pipe to a 42-inch pipe from North Lynnhaven Road to North Great Neck Road. The new pipeline alignment falls within the Virginia Beach Boulevard right-of-way from North Lynnhaven Road to Eureka Avenue, travels through the Southern Boulevard right-of-way until it crosses London Bridge Creek and will connect back into the existing force main at Great Neck Road by way of Parker Lane. As a result, the total length of the new pipeline will be approximately 12,000 linear feet. This project must be substantially complete by June 2021. The project is needed to provide reliable capacity and maintain HRSD pressure policy when flow is diverted in support of the Chesapeake-Elizabeth Treatment Plant closure and for the eventual Regional Wet Weather Management Plan. This is a very significant effort with an estimated total program cost of \$25,000,000.

Brief: Seven permanent and five temporary construction easements are required to construct this project. The easements have not yet been acquired and are located at the following addresses:

Address	Tax Parcel ID Number	Property Name/Location
2924 N. Lynnhaven Road	1497-26-9301-0000	Susan Browney Dillon, Trustee / Golden Slippers Dance Academy
2533 Virginia Beach Boulevard	1497-74-4485-0000	CKC Properties, LLC.
2403 Virginia Beach Boulevard	1497-85-7195-0000	Lowe's
2858 Virginia Beach Boulevard	1497-36-7543-0000	Lynnhaven Shopping Center, LLC / McLeskey Group
207 Parker Lane	1497-74-8394-0000	Sadler Materials Corporation / Vulcan
2312 Virginia Beach Boulevard	2407-05-0493-0000	315 N. Great Neck Road / Pollard's Square
2300 Virginia Beach Boulevard	2407-05-2316-0000	Starbucks

In accordance with Section 15.2-1903.B. of the Code of Virginia, a public hearing was held on June 25, 2019 to review the scope of the project, to define the public need of the project and identify the specific impact to the properties where condemnation was being considered



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and to receive public input. No public comments were made at this hearing. Attempts to purchase the properties from the owners have been unsuccessful. While a purchase is still possible, condemnation will likely be necessary to keep the project on schedule. The attached [resolution](#) meets the requirements of the Code of Virginia should condemnation be necessary. The resolution has been reviewed by HRSD legal counsel. Staff provided a [briefing](#) on the current status of the acquisitions for this project.

Discussion Summary: Staff explained the reasoning for the selected alignment was due to other utilities in the existing right-of-way, impacts to buildings, city-required traffic planning, and multiple water crossing points. Staff will continue to negotiate the acquisition of the easements after the Certificate-of-Take is filed. Condemnation will only be used if the attempts to purchase the properties are unsuccessful. Construction can start as soon as 30 days after the certificate of take is filed.

Attachment #4: [Presentation and Resolution](#)

Public Comment: None



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9. **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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10. **UNFINISHED BUSINESS – None**

11. **NEW BUSINESS – None**

12. **COMMISSIONER COMMENTS**

Commissioner Lynch said he was very impressed by the Apprenticeship Graduation last week. He requested a detailed briefing about the Apprenticeship Program be presented at a future Commission Meeting.

Commissioner Taraski asked about the permit exceedance at the West Point Treatment Plant as mentioned in the General Manager's monthly report. Staff discussed the incident, the investigation underway and enforcement actions to be pursued.

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

14. **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 #6: [Informational Items](#)

Public Comment: None



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15. **CLOSED MEETING**

Actions: Motion to go into Closed Meeting for discussion with legal counsel and staff regarding:

- a. Actual litigation [Specific Exemption: Va. Code §2.2-3711.A7]
- b. Acquisition of real property for a public purpose of publicly held real property located in Newport News [Specific Exemption: Va. Code §2.2-3711.A3]

Moved:	Elizabeth Taraski	Ayes:	5
Seconded:	Willie Levenston	Nays:	0

Brief:

- a. Consultation with legal counsel and briefing by staff members or consultants pertaining to actual litigation, where such consultation or briefing in open meeting would adversely affect the negotiating or litigating posture of the public body.
- b. Discussion or consideration of the acquisition of real property for a public purpose of publicly held real property, where discussion in an open meeting would adversely affect the bargaining position or negotiating strategy of the public body.

Roll call vote to return to Open Session:	Ayes:	5	Nays:	0
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16. **RECONVENED MEETING**

Action: No action required.

Next Commission Meeting Date: August 27, 2019 at the HRSD South Shore Operations Complex, 1434 Air Rail Avenue, Virginia Beach, VA 23455

Meeting Adjourned: 11:15 a.m.

SUBMITTED:

Jennifer L. Cascio

Jennifer L. Cascio
Secretary

APPROVED:

Frederick N. Elofson

Frederick N. Elofson, CPA
Chair

HRSD COMMISSION MEETING MINUTES
JULY 23, 2019

ATTACHMENT #1

AGENDA ITEM 1. – Consent Agenda

CONSENT AGENDA ITEM 1.b.1. – July 23, 2019

Subject: Small Communities Collection System Rehabilitation Phase II
Contract Award (>\$200,000)

Recommended Actions: Award a contract to Prism Contractors and Engineers, Inc. in the amount of \$259,575.

CIP Project: MP013010

Budget	\$613,000
Previous Expenditures and Encumbrances	(\$123,849)
Available Balance	\$489,151

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Prism Contractors and Engineers, Inc.	\$259,575
Walter C. Via Enterprises	\$412,005
T.A. Sheets General Contractors, Inc.	\$580,839
Tidewater Utilities Construction, Inc.	\$715,109

HRSD/Engineer Estimate: \$482,510

Contract Description: In accordance with HRSD's competitive sealed bidding procedures, the Engineering Department advertised and solicited bids directly from potential bidders. The project was advertised June 9, 2019 and four bids were received on July 2, 2019. The design engineer, Whitman, Requardt & Associates (WRA), evaluated the bids and recommends award to the lowest responsive and responsible bidder Prism Contractors and Engineers, Inc. in the amount of \$ 259,575.

Project Description: This contract provides for the replacement of 47 linear feet of deteriorated sanitary sewer, trenchless rehabilitation of 1,464 linear feet of sanitary sewer, and rehabilitation of associated laterals and manholes. The project is located in the Town of West Point including the alley between Second and Third Street, part of Second Street, Mockingbird Street, Oak Lane and 20th Street.

Analysis of Cost: Four bids were received on July 2. The apparent low bidder was evaluated and a Letter of Recommendation received from the Design Engineer, WRA, on July 10, 2019 recommended award to Prism Contractors and Engineers, Inc. (Prism). The number of bids received indicates a significant level of interest on the part of local contractors. The Engineer's Estimate was within 15 percent of the second low bidder and within two percent of the average of the bids received. Due to the extremely low bid compared to the other bids received, WRA reviewed the scope of work with PRISM and has verified the bid is responsive and responsible.

Schedule: Construction August 2019
Project Completion February 2020

CONSENT AGENDA ITEM 1.c.1. – July 23, 2019

Subject: Debt Collection Services
Sole Source (>\$10,000)

Recommended Action: Approve the use of Transworld, Inc. third party Debt Collection Services for the Customer Care Center.

Sole Source Justification:

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

Details: Services include third party debt collection services for uncollected revenue under HRSD/HRUBS accounts receivable in the Customer Care Center (CCC). This will be an estimated use contract with HRSD's fees approximately 45 percent of the total annual estimated cost. The fee for collections services is approximately 11 percent of any type and dollar amount of debt collected. These fees associated with revenue collected from our jurisdictional partners, Norfolk and Suffolk, are billed to monthly to the jurisdiction.

This contract will be a continuation of services currently performed by Transworld that was previously covered under an existing competitively awarded contract vehicle through the Department of General Services (DGS). The DGS contract expired and, after advertising a new solicitation, awarded their contract to a different vendor. It was determined that transitioning to the new vendor would prove difficult with an upgrade to the Customer Care and Billing (CC&B) System not yet completed. This is due to necessary and extensive integration efforts that would be required by the new vendor.

This request is for limited sole source authority to contract for these services in an effort to minimize risk and unnecessary labor with transitioning to another vendor during this critical time, including custom programming and testing. The estimated contract period for Transworld will run from August 15, 2019 through March 31, 2021. This timeframe will allow for stabilization of the CC&B upgrade, development of requirements for an HRSD competitive negotiation, evaluation, negotiation, award and implementation. Transworld has agreed to maintain their current DGS contract rate through March of 2021.

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

Subject: Intuitech Granular Media Filtration Pilot Skid, Parts and Service
Sole Source (>\$10,000)

Recommended Action: Approve the use of Intuitech Granular Media Filtration Pilot Skid, Parts and Service at HRSD.

CIP Project: GN016310

Sole Source Justification:

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

Details: Product includes the purchase of a custom built two-column granular media filtration pilot plant skid for use at the SWIFT Research Center. This pilot skid will be operated in conjunction with the existing Intuitech flocc/sed skid and the HRSD staff-modified Intuitech ozone pilot skid to evaluate direct filtration versus conventional filtration purchased as part of the original SWIFT program feasibility study. Direct filtration excludes the sedimentation process resulting in an approximate 10 percent capital cost savings for full-scale SWIFT facilities. Initially, this testing will be focused on the full-scale SWIFT upgrade for the York River Treatment Plant.

Intuitech, Inc. manufactured the SWIFT carbon based treatment train pilot skids originally provided through our contract with Jacobs in 2016.

Services include general maintenance and repairs as needed.

Intuitech, Inc. is the direct manufacturer and authorized service provider.

CONSENT AGENDA ITEM 1.c.3. – July 23, 2019

Subject: Moyno EZStrip™ Pumps, Parts and Service
Sole Source (>\$10,000)

Recommended Actions: Approve the use of Moyno EZStrip™ Pumps, Parts and Service 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

Details: Product includes the purchase of a Moyno EZStrip™ W14BC scum pump complete with channel steel base and a close-coupled gear motor. Pump is used to move grease and scum from the primary clarifier to the incinerator at the Virginia Initiative Plant. Services include general maintenance and repairs as needed.

Daparak, Inc. is the current authorized provider of Moyno EZStrip™ Pumps, Parts and Service.

The Commission previously approved limited sole source authority for Moyno EZStrip™ Pumps for the James River Treatment Plant. This action supersedes previous actions and expands the scope to cover all HRSD locations.

CONSENT AGENDA ITEM 1.c.4.– July 23, 2019

Subject: Schweitzer Relays, Meters, Controllers and Associated Training
Sole Source (>\$10,000)

Recommended Action: Approve the use of Schweitzer Relays, Meters, Controllers and Associated Training 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

Details: Product includes the purchase of Schweitzer protective relays, power quality meters and automation controllers for the Electrical and Instrumentation Division (E&I). Schweitzer automation controllers are connected to the Distributed Control Systems throughout HRSD to provide real time data and alarms regarding the electric power system's health. The protective relays help to prevent irreversible damage to equipment such as feeder cables and generators.

Schweitzer products are currently installed in medium and/or low voltage switchgears throughout the treatment plants and E&I will continue to standardize on these products on switchgears throughout HRSD. Standardization will provide the ability to quickly exchange equipment between facilities to reduce downtime in the event of a catastrophic equipment failure, reducing overall parts inventory and allow E&I staff to get systems back on-line quickly due to the complex parameter setup within these devices.

Atlantic Power Sales is the current authorized provider of Schweitzer relays, meters and controllers.

Services include training on use of the protective relays, power quality meters and automation controllers for E&I. Schweitzer Engineering Laboratories is the authorized training representative for Schweitzer products. Any general maintenance required outside of the manufacturer warranty period will be completed under the existing HRSD Electrical Services Contract Agreement.

CONSENT AGENDA ITEM 1.d.1. – July 23, 2019

Subject: Facility Maintenance, Repair and Operations-Related Supplies and Services
HRSD Use of Existing Competitively Awarded Contract Vehicle (>\$200,000)

Recommended Action: Approve the use of the Sourcewell contract for Facility Maintenance, Repair and Operations-Related Supplies (MRO), Industrial and Building Supplies, Equipment, Accessories, Supplies and Related Services to W.W. Grainger, Inc. in the estimated amount of \$500,000 for one year with four annual renewal options and an estimated cumulative value in the amount of \$1,500,000.

HRSD Estimate: \$500,000 (based on previous years' expenditures)

Contract Description: This contract is for the supply and delivery of facility MRO supplies and services for use by all of HRSD in accordance with a cooperative contract competitively solicited by Sourcewell. Upon evaluation of the Sourcewell contract terms and conditions, as a public agency, HRSD is eligible to use the contract awarded to W.W. Grainger, Inc.

In-store and online ordering capabilities, access to the entire Grainger product catalog, special orders and an annual incentive rebate of one percent make this the most advantageous cooperative contract for HRSD. HRSD will receive varying discounts up to 40 percent off retail prices based on various product categories. In addition, HRSD will be eligible to receive additional annual discounts based on Sourcewell's hot list items purchased by all public agency Sourcewell cooperative contract users.

HRSD COMMISSION MEETING MINUTES
JULY 23, 2019

ATTACHMENT #2

AGENDA ITEM 2. – Parallel Thimble Shoals Tunnel Project Nutrient Offset Agreement

**NUTRIENT OFFSET AGREEMENT FOR CHESAPEAKE BAY BRIDGE-TUNNEL
PARALLEL THIMBLE SHOAL TUNNEL PROJECT**

THIS NUTRIENT OFFSET AGREEMENT (this “Agreement”) made this 23rd day of July, 2019, by and between the Hampton Roads Sanitation District (“HRSD”) and Chesapeake Tunnel Joint Venture (“CTJV”) (each a “Party” and jointly the “Parties”).

BACKGROUND

A. HRSD. HRSD owns and operates various wastewater treatment plants that are authorized to discharge the nutrients total nitrogen (“TN”) and total phosphorus (“TP”) to the James River in the Chesapeake Bay watershed (the “HRSD Plants”). The HRSD Plants have TN and TP waste load allocations (the “HRSD James River Basin Allocations”) assigned by the State Water Control Board and the Virginia Department of Environmental Quality (jointly, “DEQ”) pursuant to the Water Quality Management Planning Regulation, 9 VAC 25-720, and by the U.S. Environmental Protection Agency (“EPA”) pursuant to the Chesapeake Bay Total Maximum Daily Load (“TMDL”). The HRSD Plants are subject to the General Virginia Pollutant Discharge Elimination System (“VPDES”) Watershed Permit Regulation for TN and TP Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia, 9 VAC 25-820, most recently reissued by DEQ effective February 8, 2017, as hereafter modified or reissued from time to time (the “Watershed General Permit”).

B. CTJV. CTJV is a joint venture of Dragados USA, Inc. and Schiavone Construction Company, LLC that is expanding the Chesapeake Bay Bridge-Tunnel by constructing the Parallel Thimble Shoal Tunnel Project (“PTST Project”) on behalf of The Chesapeake Bay Bridge and Tunnel Commission. The project will add a new two-lane tunnel under the Thimble Shoal Channel of the Chesapeake Bay to carry two lanes of traffic southbound while the existing tunnel will carry two lanes of traffic northbound. CTJV is in the process of obtaining Watershed General Permit coverage from DEQ to authorize the discharge of TN and TP on a short-term basis for the period of construction.

C. Offset Authority. Through exceptional performance and current operating conditions at the HRSD Plants, HRSD discharges less TN and TP than the HRSD Plants are authorized to discharge under the Watershed General Permit while protecting Chesapeake Bay water quality and, therefore, HRSD currently has the ability to provide TN and TP offset allocations on a temporary basis to offset the nutrient loading associated with construction process for the Parallel Thimble Shoal Tunnel Project. Pursuant to Code of Virginia section 62.1-44.19:12 *et seq.*, 9 VAC 25-720-40 A, and 9 VAC 25-820-70, Part II A 1 b and B 1 a, HRSD is authorized to transfer in its discretion, and CTJV is authorized to acquire with HRSD’s consent, a portion of the HRSD James River Basin Allocations to satisfy CTJV’s temporary offset obligation under the Watershed General Permit.

AGREEMENT

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

1. Transfer of Offset Allocations. Beginning for the compliance year which starts January 1, 2019 and for each compliance year thereafter through and including compliance year 2023, HRSD hereby transfers from its HRSD James River Basin Allocations to CTJV, and CTJV hereby accepts, temporary allocations of 100 pounds per year (“lbs/yr”) of TN and 550 lbs/yr of TP (the “Offset Allocations”). HRSD shall have no obligation to extend the availability of the Offset Allocations beyond December 31, 2023, but may elect to do so in its discretion following a request for such an extension from CTJV. Any such extension shall be in writing as an amendment to this Agreement pursuant to Paragraph 18 below. Notwithstanding the other provisions of this Paragraph 1, this Agreement and the Offset Allocations transfer are expressly contingent upon the continued ability of HRSD to provide the Offset Allocations with its current facilities and technology and under current operating conditions, other existing nutrient trading agreements, and current laws and regulations including without limitation the HRSD James River Basin Allocations. If, by any order, law, regulation or changes thereto, such ability ceases, HRSD’s obligation to provide the Offset Allocations shall cease and this Agreement shall be renegotiated pursuant to Paragraph 17.

2. No Monetary Cost for Offset Allocations. In consideration of the unique circumstances described above, including the temporary nature of the offset need during construction of this important regional project benefiting HRSD’s ratepayers, there shall be no monetary cost charged by HRSD to CTJV for the Offset Allocations supplied under this Agreement.

3. Limitation on Use of Offset Allocations. CTJV agrees that its sole and limited use of the Offset Allocations shall be for CTJV PTST Project discharges under the Watershed General Permit and that it shall not transfer any portion of the Offset Allocations to any other person or entity. In the event that CTJV’s operations for any compliance year generate nutrient credits as a result of discharging less TN or TP than the Offset Allocations, CTJV shall, upon request of HRSD, transfer such credits to HRSD for HRSD’s use or exchange for that compliance year.

4. CTJV’s Watershed General Permit Registration. CTJV agrees that any Watershed General Permit Registration Statement and any related offset plan that it submits to DEQ under the provisions of the Watershed General Permit shall be consistent with the provisions of this Agreement, including but not limited to the temporary nature of the Offset Allocations.

5. HRSD’s Exchange Compliance Plan Modification. HRSD is a member of the Virginia Nutrient Credit Exchange Association, Inc. (the “Nutrient Exchange”) and a participant in the Exchange Compliance Plan previously submitted by the Nutrient Exchange to DEQ pursuant to the Watershed General Permit. During the next annual update of the Exchange Compliance Plan, HRSD shall request that the Nutrient Exchange modify such plan with respect

to the HRSD James River Basin Allocations to make appropriate revisions consistent with the temporary Offset Allocations provided under this Agreement.

6. CTJV's Regulatory Compliance. Recognizing the importance of complying with all applicable VPDES discharge permit requirements and of HRSD's mission to prevent discharges contributing to water pollution in the Hampton Roads region, CTJV agrees that HRSD shall have the right to terminate this Agreement if in its sole discretion HRSD determines that (a) CTJV routinely or frequently fails to comply with its VPDES discharge permit requirements and (b) CTJV is not working or has not worked with DEQ in a reasonable and timely manner to correct such failures.

7. Term and Survival. This Agreement shall be effective as of the date first shown above and shall terminate on December 31, 2023. Notwithstanding the preceding sentence, if either Party fails to perform a material obligation hereunder, and fails to cure such failure to perform within sixty (60) days of written notice from the non-defaulting Party, the non-defaulting Party may terminate this Agreement upon written notice to the other Party. HRSD shall be under no obligation to provide, or continue to provide, the Offset Allocations after termination and, upon termination, all Offset Allocations transferred under this Agreement shall revert to HRSD.

8. Permits and Approvals. HRSD shall have no responsibility for or as a result of the failure or refusal of DEQ or any other governmental authority to approve the transfer of the Offset Allocations contemplated under this Agreement.

9. Mutual Cooperation. The Parties shall continue to cooperate with each other in any manner reasonably necessary to confirm or bring about the transfer of the Offset Allocations as provided herein.

10. No Assignment. CTJV shall not transfer or assign this Agreement, or its rights or obligations hereunder, without the prior written consent of HRSD, which consent may be withheld in HRSD's sole discretion.

11. No Third Party Beneficiaries. This Agreement is solely for the benefit of the Parties hereto and their permitted successors and assignees and shall not confer any rights or benefits on any other person.

12. Expenses. Each Party shall pay its own fees and expenses, including its own counsel fees, incurred in connection with this Agreement or any transaction contemplated hereby, except that within ten (10) days of the date of this Agreement CTJV shall reimburse HRSD's counsel fees for developing this agreement in the amount of \$3,030.00 by check made payable to HRSD. Notwithstanding any other provision of this agreement, CTJV's failure to pay such amount by such deadline shall entitle HRSD to immediately terminate this Agreement in its sole discretion.

13. Brokerage Commissions. The Parties represent and warrant to each other that they have not dealt with any business broker or agent who would be entitled to a brokerage

commission or finders fee as a result of this Agreement or any related transactions. Each Party agrees, to the extent permitted under law and without waiving sovereign immunity, to indemnify and hold the other harmless from any and all claims for commissions of broker's or finder's fees claiming by, through or under the indemnifying Party, including any losses related to any such claim.

14. Notices. All notices, requests, demands, claims and other communications hereunder shall be in writing, shall be delivered in person or by mail (first class postage pre-paid), or overnight delivery and shall be deemed given when delivered in person or, if not delivered in person, when received (or delivery is refused) by the Party to whom such notice, request, demand, claim or other communication is directed, at the following address, or at such other address as a Party shall designate by written notice to the other Party:

If to CTJV: John Hellman
CTJV Project Executive
2377 Ferry Road
Virginia Beach, VA 23455

If to HRSD: General Manager
Hampton Roads Sanitation District
1436 Air Rail Avenue
Virginia Beach, VA 23455-3002

with a copy to the Director of Water Quality at the same address.

15. Governing Law; Venue; Severability. This Agreement shall be construed in accordance with and governed for all purposes by the laws of the Commonwealth of Virginia. This Agreement is a Virginia contract deemed executed and accepted in the City of Virginia Beach; and all questions with respect to any of its provisions shall be instituted, maintained, and contested in a court of competent jurisdiction in the City of Virginia Beach, Virginia or the U.S. District Court for the Eastern District of Virginia, Norfolk Division. If any word or provision of this Agreement as applied to any Party or to any circumstance is adjudged by a court to be invalid or unenforceable, the same shall in no way affect any other circumstance or the validity or enforceability of any other word or provision.

16. No Waiver. Neither any failure to exercise or any delay in exercising any right, power or privilege under this Agreement by either Party shall operate as a waiver, nor shall any single or partial exercise of any right, power or privilege hereunder preclude the exercise of any other right, power or privilege. No waiver of any breach of any provision shall be deemed to be a waiver of any preceding or succeeding breach of the same or any other provision, nor shall any waiver be implied from any course of dealing.

17. Change in Law. In the event of any material change in applicable laws or regulations, the Parties shall work together to amend this Agreement to conform to such change, while maintaining as closely as practical the provisions and intent of this Agreement. If in any such event HRSD is unable to transfer the Offset Allocations as provided herein, CTJV shall be

solely responsible for otherwise meeting its offset requirement under the Watershed General Permit.

18. Entire Agreement; Amendments. This Agreement contains the entire agreement between the Parties as to the subject matter hereof and supersedes all previous written and oral negotiations, commitments, proposals and writings. No amendments may be made to this Agreement except by a writing signed by both Parties.

19. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. The Parties further agree that a facsimile, scanned or electronic signature may substitute for and have the same legal effect as an original signature, and that any copy of this executed Agreement made by photocopy, facsimile or scanner shall be considered an original.

IN WITNESS WHEREOF, the Parties hereto have caused the execution of this Agreement as of the date first written above.

HAMPTON ROADS SANITATION DISTRICT

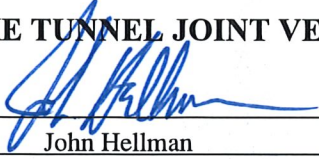
By: 

Edward G. Henifin
General Manager

[SIGNATURES CONTINUE ON FOLLOWING PAGE]

SIGNATURE PAGE OF NUTRIENT OFFSET AGREEMENT FOR CHESAPEAKE BAY
BRIDGE-TUNNEL PARALLEL THIMBLE SHOAL TUNNEL PROJECT

CHESAPEAKE TUNNEL JOINT VENTURE

By: 
Name: John Hellman
Title: CTJV Project Executive

[END OF SIGNATURES]

HRSD COMMISSION MEETING MINUTES
JULY 23, 2019

ATTACHMENT #3

AGENDA ITEM 7. – Treatment Plant Grease Handling Facilities Agreement



Agreement No. 6200313

By Product Removal Agreement

This By Product Removal Agreement (the "AGREEMENT") is made this 25th day of July 2019 by and between the HAMPTON ROADS SANITATION DISTRICT, ("HRSD"), a political subdivision of the Commonwealth of Virginia, with place of business at 1434 Air Rail Avenue, Virginia Beach, Virginia 23455, and Downey Ridge Environmental Company, Greasezilla™, ("EQUIPMENT SUPPLIER"), having a usual place of business at 16984 Midland Trail, Ansted, WV 25812.

The Equipment Supplier and HRSD, for the consideration of the mutual covenants, promises, and agreements herein contained, agree as follows:

HRSD owns and operates the Nansemond Treatment Plant located at 6909 Armstead Road, Suffolk, Virginia 23435("HRSD's Facility");

HRSD and the Equipment Supplier are entering into this Byproduct Removal Agreement to provide for terms and conditions on which HRSD will sell and the Equipment Supplier will buy Grease, as defined herein, produced from the facility using the Greasezilla™ System. Both parties understand that these conditions in this agreement are contingent on HRSD purchasing the Greasezilla™ System.

Definitions

The terms as used herein, will have the respective meanings assigned to them below:

"Access" means the right of the Equipment Supplier and all of its Affiliates, employees, contractors, hauling subcontractors and representatives to enter onto HRSD's Facility for the purpose of performing its obligations and exercising their rights under this Agreement upon advance request and reasonable prior notice to HRSD and subject to written or oral approval of such notice by HRSD. Approval of request for access will not be unreasonably withheld. Access shall include the storage area for the grease, and all roadways and driveways leading to and from the public roadways to the storage area for the Grease, in addition to standard bathroom facilities.

"Agreement" means this Byproduct Removal Agreement, including any exhibit, amendment, addenda, schedule or appendix to it.

"Business Day" means a day which is not a Saturday, Sunday or a public holiday recognized by the HRSD.

"Equipment Supplier" means Downey Ridge Environmental Company, the person, firm or corporation named as such in this Agreement and includes the plural number and the feminine gender when such are named in this Agreement as the Supplier.

"Facility" means Nansemond Treatment Plant or any other HRSD location where Grease is being produced for sale.

"Currency" all references to currency, unless otherwise specified, are to lawful money of the United States.

"Governmental Authority" means, for any country, such country and its government and any state, municipal, or federal ministry, department, political subdivision, instrumentality, agency, corporation, or commission, court, or tribunal under the direct or indirect control of such country.

"Grease" means product that was collected from grease traps and has been processed by the Greasezilla™ equipment. This is the final product that is pumped out of the Greasezilla™ tank (typically 10-20% of the dewatered grease that is heated in the Greasezilla™ tank)

"Parties" means the Equipment Supplier and HRSD and/or designated hauling subcontractor and "Party" means any one of them.

"Price" means the price payable by the Equipment Supplier to HRSD for the Grease supplied by HRSD and transported by the Equipment Supplier and/or designated hauling subcontractor.


"Hauling Subcontractor" means only those having a direct contract with the Equipment Supplier and it includes one who furnishes material work and/or services but does not include one who merely furnishes material not so worked.

"System" the Greasezilla™ equipment being used to produce the Grease.

Purchase and Sale of Grease

1. HRSD will sell to the Equipment Supplier, and the Equipment Supplier will purchase, transport, and accept from HRSD, one hundred percent (100%) of the total Grease produced by HRSD from the facility during the Term of Agreement provided, however, that nothing in this Agreement shall require HRSD to produce, sell or deliver a minimum quantity or any specific amount of Grease. HRSD's production of Grease shall be subject to HRSD's operation of HRSD's Facility, including without limitation compliance with applicable laws, permit requirements, and limitations or conditions of HRSD's Facility. HRSD shall provide access to HRSD's Facility to the Equipment Supplier for all purposes under this Agreement during normal business hours of 6:00 a.m. to 2:30 p.m. Monday through Friday.
2. If the Equipment Supplier is unable to transport 100% of the available Grease at any given time then the Equipment Supplier must transport a minimum of one full 5000 gallon tank within five (5) business days of receiving notification from HRSD of the availability of the Grease. HRSD will have 18,000 gallons capacity of offtake storage on hand.
3. If the Equipment Supplier fails to transport the Grease within five (5) business days of receiving notification from HRSD, the Equipment Supplier will be responsible for any costs/fees associated with disposal of the Grease if HRSD has to dispose of the Grease by any other means.
4. HRSD is responsible for operating the system and transferring the Grease to the heated storage tanks. The Equipment Supplier is responsible for transporting the Grease from the heated storage tanks to a transport vehicle and away from HRSD's facility, or coordinating with a broker to provide transportation services away from HRSD's facility.

Quality of Grease

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1. The Equipment Supplier shall purchase all Grease produced by the system, as long as HRSD is only introducing trap grease to the system, and abiding by the operation and maintenance instructions provided with the equipment when purchased.
2. Any Grease not able to be sold by the Equipment Supplier for reasons related to quality will be deemed as non-conforming grease. If the grease is deemed non-conforming due solely to a system issue and not related to how HRSD is operating the system, then such Grease shall be purchased by the Equipment Supplier as conforming grease in accordance with the terms of this Agreement. HRSD shall permit the Equipment Supplier open and full access to the system during the period following the date of the notice of the non-conforming Grease in order to allow the Equipment Supplier to evaluate the cause of its non-conformity.
3. If any Grease is determined to be non-conforming and it is determined the cause is from HRSD's improper use of the system or an unexpected source of contamination then the Equipment Supplier, at its sole discretion, may:
 - a. Accept the Grease for an adjusted price as mutually agreed;
 - b. Reject the non-conforming grease in a written notice to HRSD, as soon as practicable, but in no event longer than seventy-two (72) hours of rejection, HRSD shall instruct the Equipment Supplier to:
 - (i) Return the non-conforming Grease to HRSD;
 - (ii) Divert the non-conforming Grease to HRSD's designee; or
 - (iii) Otherwise store or transport the Grease.
 - c. The costs associated with the return or diversion of the non-conforming Grease shall be borne by HRSD. HRSD may dispose or sell rejected non-conforming Grease as HRSD sees fit.
4. If the Equipment Supplier reasonably determines through testing as set forth in this agreement, that all or a portion of the Grease is non-conforming, then the Equipment Supplier shall give HRSD written notice of its rejection of the non-conforming Grease, and the reasons for the rejection (including testing results) within ten (10) days of transporting the Grease.

Transportation of the Grease

1. The Grease shall be transported by the Equipment Supplier or designated hauling subcontractor, in bulk from HRSD's facility. HRSD shall ensure the availability of a suitable berth at HRSD's Facility for the Equipment Supplier or designated hauling subcontractor's trucks.
2. The Equipment Supplier or designated hauling subcontractor is responsible for loading and transporting the Grease from HRSD's Facility during normal business hours in accordance with proper loading instructions and without damage to the HRSD Facility. The Equipment Supplier is responsible for all costs of transporting the Grease from HRSD's Facility after the Grease has been loaded on the Equipment Supplier or designated hauling subcontractor's trucks. HRSD will provide onsite supervision and sign off on loading procedures as outlined.

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3. Transfer of Grease will be considered to have been made after the Grease has been completely loaded on the Equipment Supplier or designated hauling subcontractor's trucks at the HRSD Facility.
4. The Equipment Supplier shall provide all necessary trucks to transport the Grease from HRSD's Facility. The trucks shall be suitable for the normal method of loading and shall be subject to HRSD's approval, such approval not to be unreasonably withheld, conditioned or delayed.
5. The Equipment Supplier will provide HRSD with reasonable notice of the day a truck will arrive at HRSD's Facility to transport the Grease. This notice will be given in the form of an email or telephone call to an individual designated by HRSD. Transportation will be scheduled by the Equipment Supplier to occur between the hours of 6:00 a.m. to 2:30 p.m. Eastern Standard Time.
6. If HRSD anticipates a need to delay a transport and as long as a truck has not already been chartered by the Equipment Supplier, HRSD may delay the transport. However such delay may not extend beyond 10 days.

Title and Risk

1. Title to the Grease will pass from HRSD to the Equipment Supplier after the Equipment Supplier or designated hauling subcontractor's truck has been completely loaded at HRSD's Facility.
2. HRSD will be deemed to be in exclusive control and possession of the Grease and responsible for any loss, damage or injury to the Grease until title passes to the Equipment Supplier or designated hauling subcontractor, at which time, the Equipment Supplier will be deemed to be in exclusive control and possession of such Grease and responsible for any loss, damage or injury to the Grease not resulting from HRSD's willful misconduct or negligence. HRSD will lock and serialize offtake tankers.

Weights, Sampling, and Analysis

1. The weight of the Grease sold and transported shall be determined from scale(s) provided by HRSD at HRSD's Facility.
2. The scale(s) used to measure the Grease shall be maintained and operated by HRSD in accordance with written procedures established by HRSD prior to the first transport of Grease.
3. A net weight will be determined and reported by HRSD to the Equipment Supplier for each transport of Grease. The aggregate net weights determined during any payment period shall be accepted as the quantity of Grease sold and purchased during such period for which invoices are to be rendered and payment is to be made.
4. The Equipment Supplier shall have the right to have a representative present at any and all times to observe the determination of weights provided that the Equipment Supplier does not interfere with operation of HRSD's Facility. If the Equipment Supplier questions the accuracy of the weights, the Equipment Supplier shall so advise HRSD and HRSD shall permit the Equipment Supplier representative to test HRSD's scales and weighing methods.



5. If HRSD's scale(s) or weighing methods are determined to be in error, HRSD shall investigate the error and advise the Equipment Supplier of the amount and the estimated duration of the error. HRSD shall make adjustments to the affected invoices so that the weight paid for by the Equipment Supplier is as if there had been no error in HRSD's scales or weighing methods. If HRSD cannot establish the amount and duration of the error, the Parties shall attempt to reach an agreed resolution regarding the number of pounds and average content of each pick-up invoiced during the last half of the period since the most recent calibration of the weighing device.

Warranties

1. The Equipment Supplier hereby represents and warrants to HRSD, that:
 - a. Execution and delivery of this Agreement by the Equipment Supplier has been duly authorized by all necessary corporate action and constitutes a legal, valid and binding obligation of the Equipment Supplier;
 - b. The execution and delivery of this Agreement and the requirements hereunder do not require the consent of any third party nor will they result in a breach or default of any other agreement to which the Equipment Supplier is a party or by which the Equipment Supplier is bound.
2. HRSD hereby represents and warrants to the Equipment Supplier, that:
 - a. Execution and delivery of this Agreement has been duly authorized by all necessary action and constitutes a legal, valid and binding obligation of HRSD, enforceable against HRSD in accordance with its terms;
 - b. HRSD is organized as a political subdivision of the Commonwealth of Virginia validly existing and in good standing under of the laws of the Commonwealth of Virginia and is fully qualified to do business in such other jurisdictions in which its business and activities require qualification;
 - c. HRSD has received the approval of any public body having jurisdiction necessary to perform its obligation under this Agreement. The execution and delivery of this Agreement and the requirements here under do not require the consent of any third party nor will they result in a breach or default of any other agreement to which HRSD is a party or by which HRSD is bound.
 - d. Grease to be supplied under this Agreement shall be transported by the Equipment Supplier free and clear of any covenants, restrictions, liens or other encumbrances of any nature whatsoever.
3. Covenants of HRSD. Except as otherwise contemplated or permitted by this Agreement, HRSD shall do the following:

Use its reasonable commercial efforts to operate the Greasezilla™ System in accordance with the terms and conditions of this Agreement to produce Grease in accordance with the specifications; and operate and maintain the Greasezilla™ System in accordance with this Agreement, and instructions from the Equipment Supplier, including, but not limited to, those defined in the Equipment Supplier's Facility Operations and Maintenance Manual.

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Price

Subject to the terms and conditions of this Agreement, the Equipment Supplier shall pay HRSD on a dollar value /pound basis based on the previous 7 day average (previous 7 days from date the Equipment Supplier picks up Grease at HRSD facility) of the Jacobsen Index for No. 2 Brown Grease, for each pound of Grease transported, minus a 20% rate for managing the offtake process.

The price index for the purposes of this Agreement shall be the Jacobsen Index published by The Jacobsen Publishing Company. If the Jacobsen Index ceases to be published by The Jacobsen Publishing Company, then the calculation shall be based on the closest successor index as identified by HRSD and approved by the Parties, which approval shall not be unreasonably withheld, conditioned or delayed. If no such successor exists, the calculation shall be based on an index that is mutually agreed to by the Parties.

HRSD shall retain the permission to see documentation for the pricing being paid to the Equipment Supplier for the Grease produced by HRSD.

Invoice and Payment

1. HRSD will submit invoices to the Equipment Supplier on a monthly basis. The invoice will include a breakdown of the date the Grease was transported and number of pounds collected that day. The per pound rate will be based on the Jacobsen's No. 2 Brown Grease average price from the previous month as the base price. Depending on the quality, Free Fatty Acid (FFA), sulfur, and ash, the per pound rate may increase. Invoices will be sent to 16984 Midland Trail, Ansted, WV 25812.
2. The Equipment Supplier shall pay HRSD for the Grease transported at the price stated herein within thirty (30) days of receipt of each invoice by HRSD.
3. If HRSD does not receive payment within thirty (30) days of the Equipment Supplier's receipt of HRSD's invoice, interest will accrue from the date overdue at the rate of one percent (1%) per month.
4. The Equipment Supplier and HRSD will keep accurate and satisfactory records relevant to determining the weight, quality and price calculations of the Grease transported and will provide the other Party with copies of such records upon request. HRSD shall retain records in accordance with HRSD's record retention policy.

Entire Agreement

This Agreement and any other document or agreement between the Parties related thereto supersedes all other prior agreements, understandings or writings between the Parties, whether written or oral and whether legally enforceable or not, with respect to the subject matter of this Agreement. This Agreement contains the entire understanding of the Parties with respect to the matters contained herein, and there are no promises, covenants or undertakings other than those expressly set forth herein.

Contract Term

This Agreement will commence upon successful operation of the newly installed Greasezilla™ system and will remain in force for (3) three years. This Agreement term may be extended, and if necessary, its term amended, in writing, if mutually agreed to by both parties.



General Terms and Conditions

1. **Anti-Discrimination:** Equipment Supplier certifies to HRSD that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, as well as the Virginians With Disabilities Act, the Americans With Disabilities Act and Section 11-51 of the Virginia Public Procurement Act.

In every contract over \$10,000 the provisions in 1 and 2 below apply:

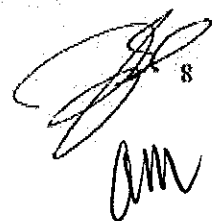
During the performance of this contract, the Equipment Supplier agrees as follows:

- a. The Equipment Supplier will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Equipment Supplier. The Equipment Supplier agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
 - b. The Equipment Supplier, in all solicitations or advertisements for employees placed by or on behalf of the Equipment Supplier, will state that such Equipment Supplier is an equal opportunity employer.
 - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
 - d. The Equipment Supplier will include the provisions of 1. above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each hauling subcontractor or vendor.
2. **Anti-Trust:** By entering into a contract, the Equipment Supplier conveys, sells, assigns, and transfers to HRSD all rights, title and interest in and to all causes of the action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular goods or services purchased or acquired by HRSD under said contract.
3. **Applicable Law and Courts:** This contract shall be governed in all respects by the laws of the Commonwealth of Virginia and any litigation with respect thereto shall be brought in the courts of the City of Virginia Beach, Virginia and the federal courts of the Eastern District of Virginia. The Equipment Supplier consents to the jurisdiction and venue of said courts. The Equipment Supplier shall comply with applicable federal, state and local laws and regulations. The Parties hereby agree to pursue any dispute regarding this Agreement or any other document or agreement between the Parties related thereto, their interpretation, or enforcement in one of those two courts.
4. **Assignment of Agreement:** This Agreement shall not be assignable by the Equipment Supplier in whole or in part without the written consent of HRSD.
5. **Audit:** The Equipment Supplier shall retain all books, records, and other documents relative to this Agreement for five (5) years after final payment, or until audit by HRSD, whichever is sooner.

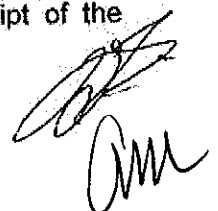
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HRSD, its authorized agents, and/or State auditors shall have full access to and the right to examine any of said materials during said period.

6. **Changes to the Agreement:** By written notice to the Equipment Supplier, HRSD may from time to time make changes, within the general scope of this Agreement, in the goods or services to be provided by the Equipment Supplier, the method of shipment or packing, or the place of delivery or the place of performance. The Equipment Supplier shall promptly comply with the notice and shall make all subsequent shipments of goods and performance of services in conformity to the notice. If any such change causes an increase or decrease in the Equipment Supplier's cost of performance or the time required for performance, an equitable adjustment in the contract price and/or the time allowed for performance of the contract shall be negotiated and this Agreement modified accordingly by written supplemental agreement. Any claim by the Equipment Supplier for adjustment under this clause must be asserted by written notice to the Chief of Procurement within (30) days from the date of receipt by the Equipment Supplier of the change notice giving rise to the increase/decrease condition. If the parties fail to agree to an adjustment, the question of an increase or decrease in the contract price or time allowed for performance shall be resolved in accordance with the procedures for resolving disputes provided by the disputes clause of the contract or, if there is none, in accordance with the disputes provisions of HRSD's procurement manual. Neither the existence of a claim, a dispute, submission of the dispute to HRSD resolution process, litigation or any portion of this provision or changes shall excuse the Equipment Supplier from promptly proceeding with performance of the contract as changed by the notice.
7. **Default:** It will be considered a "Default" hereunder if any of the following events occur and are not cured within the periods set forth in this agreement:
- a. if the Defaulting Party fails to pay any amount payable under this Agreement when due and payable;
 - b. if the Defaulting Party fails to perform or observe any material covenant or term of this Agreement;
 - c. if the Defaulting Party institutes voluntary liquidation, dissolution or winding-up procedures or takes any voluntary proceedings under any Bankruptcy or insolvency legislation to be adjudicated a bankrupt or for any other relief;
 - d. if the Defaulting Party makes a compromise with or an assignment for the benefit of its creditors;
 - c. if a receiver is appointed with regard to any material part of the Defaulting Party's property;
 - d. if a court adjudges the Defaulting Party to be bankrupt or makes an order requiring the liquidation, dissolution or winding-up of the Defaulting Party; or
 - e. if the entity existence of the defaulting part is otherwise terminated;
8. **Default Notice:** If a default occurs the non-defaulting party shall give to the defaulting party a notice that specifies and provides particulars of the default and:
- a. If the default is reasonably capable of being remedied, the defaulting party will:

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- i. remedy the default within ten (10) Business Days after the day on which the default notice is given; or
 - ii. if the default cannot reasonably be remedied within ten (10) Business Days, promptly commence, and diligently and in an uninterrupted fashion continue thereafter, to remedy the default;
 - b. if the default is not reasonably capable of being remedied the Parties will within the ten (10) Business Day period after the day on which the Default Notice is given attempt to determine whether there is a course of action on the part of the Defaulting Party not involving termination of this Agreement which, if pursued, would be sufficient to protect the Non-Defaulting Party's interests under this Agreement, which course of action may include the payment of money damages; and
 - c. if the Defaulting Party disputes the default it will, within five (5) Business Days after receiving the Default Notice, give to the Non-Defaulting Party a Notice confirming that the Defaulting Party disputes that a default has occurred (including reasons therefore in reasonable detail).
- 9. Remedies on Default:** If a default notice has been given and if the defaulting party does not proceed in the manner prescribed above then a default shall exist and the non-defaulting party may, without limiting any other right or remedy, terminate this agreement immediately by giving notice to the defaulting party and subject to the limitations set forth in this agreement, exercise any other rights or remedies available to the non-defaulting party at law or in equity including injunctive relief.
- 10. No Waiver:** No delay or omission by a non-defaulting party in exercising its rights or remedies hereunder will operate as a waiver of those rights or remedies or of any other right or remedy and no single or partial exercise thereof will preclude any other or future exercise thereof or the exercise of any other right or remedy.
- 11. Defaulting Party's Opportunity to Remedy:** If a defaulting party remedies a default at any time before the non-defaulting party terminates this Agreement and as long as the non-defaulting party is put in the position it would have been in had the default never occurred, including the reimbursement of all costs, expenses and losses (including legal fees and expenses), the non-defaulting party will, at the request of the defaulting party, cease termination of this Agreement.
- 12. Termination Due to Default by the Equipment Supplier or Bankruptcy of the Equipment Supplier:** If there is a termination due to default by the Equipment Supplier or (a) there is a bankruptcy of the Equipment Supplier and (b) during the pendency of the bankruptcy, the Equipment Supplier is in default as a result of its failure to pick-up/haul Grease from HRSD's Facility, then HRSD shall have the right, but not the obligation, to dispose of or sell the Grease as HRSD sees fit.
- 13. Disputes:** Contractual claims, whether for money or other relief, shall be submitted in writing to the issuing procurement office no later than (60) days after final payment; however, written notice of the Equipment Supplier's intention to file such claim shall have been given at the time of the occurrence of beginning of the work upon which the claim is based. Nothing herein shall preclude a Equipment Supplier from requiring submission of an invoice for final payment within a certain time after completion and acceptance of the work or acceptance of the goods. Pending claims shall not delay payment of amounts agreed due in the final payments (*Code of Virginia, Section 11-69*). A Equipment Supplier may not institute legal action prior to receipt of the



procurement office's decision on the claim, unless that office fails to render such decision within (30) days.

- a. The decision of the procurement office shall be final and conclusive unless the Equipment Supplier, within six months of the date of the final decision on the claim, institutes legal action as provided in the *Code of Virginia*, Section 11-70.
- b. If any default, dispute or difference should arise between the parties concerning this Agreement or any other document or agreement between the parties related thereto, including the parties' performance there under or the responsibility for any cost or Equipment Supplier claims, the parties shall use their best efforts to settle the dispute or difference without resort to litigation.
- c. If the dispute cannot be resolved, then either party shall have the right to commence an action in a court of law for any dispute under this Agreement.

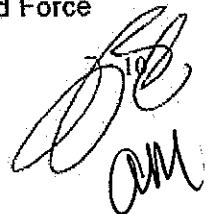
14. Ethics in Public Contracting: Equipment Supplier certifies that its proposal was made without collusion or fraud and that it has not offered or received any kickbacks or inducement from any other, supplier, manufacturer or hauling subcontractor in connection with its proposal, and that it has not conferred on any public employee having official responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than normal value, present or promised unless consideration of substantially equal or greater value was exchanged.

15. Force Majeure: An event or circumstance not within the reasonable control or resulting from the actions or omissions of the Party claiming Force Majeure, such as acts of God, including wind, ice and other storms, lightning, floods, earthquakes, volcanic eruptions and landslides; strikes, lockouts, picketing and other labor disturbances, disputes or work stoppages; epidemics, war (whether or not declared), blockades, acts of public enemies, acts of sabotage, civil insurrection, riots and civil disobedience; acts or omissions of federal, state, or local governments or any of their boards or agencies, including delays in regulatory process, and orders of a regulatory authority or court of competent jurisdiction; explosions and fires; extraordinary mechanical breakdowns, transportation disruptions, or lack or shortage of raw materials or supplies; or acts by a Governmental Authority.

Notwithstanding anything to the contrary, Force Majeure also includes process upsets, slowdowns or breakdowns of all or a portion of, HR.SD's Facility for any reason, including without limitation, mechanical, electrical or other system or process failures, plant maintenance, and regulatory (including permits) restrictions, and any other event or restriction affecting the operation of HRSD's Facility.

Neither Party will be in breach or default as to any obligation under this Agreement if that Party is unable to perform the obligation due to a Force Majeure Event, of which Notice is given as required.

Prompt Notice. If there is a Force Majeure Event affecting a Party's ability to perform an obligation under this Agreement, the Party will promptly notify in writing the other Party thereof. The Notice must identify the nature of the Force Majeure Event, its expected duration and the particular obligations affected by the Force Majeure Event. The affected Party will provide reports to the other Party with respect to the Force Majeure Event at such intervals as the other Party may reasonably request while the Force Majeure Event continues. A Party will be deemed to have invoked Force

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Majeure from the date when that Party gives Notice of the Force Majeure Event. The Party invoking Force Majeure will give prompt Notice to the other Party of the end of the Force Majeure Event. The Party invoking Force Majeure will promptly respond to any inquiry from the other Party regarding the efforts being undertaken to remedy the situation.

16. HRSD's Right to Terminate the Contract for Cause:

- a. If the Equipment Supplier should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, HRSD may terminate the contract. If the Equipment Supplier should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if it should fail to make prompt payment to hauling subcontractors or suppliers of material or labor, or persistently disregards laws, ordinances or the written instructions of HRSD, or otherwise be guilty of a substantial violation of any provision of this Agreement, then HRSD may terminate the Contract.
- b. Prior to termination of this Agreement, HRSD shall give the Equipment Supplier and/or its surety ten (10) calendar days written notice, during which the Equipment Supplier and/or its surety may rectify the cause of the proposed termination. If rectified to the satisfaction of HRSD with said ten (10) days, HRSD may rescind its notice of termination. If it does not, the termination for cause shall become effective at the end of the ten day (10) notice period. In the alternative, HRSD may postpone the effective date of the termination notice, at its sole discretion, if it should receive reassurances from the Equipment Supplier and/or its surety that the causes of termination will be remedied in a time and manner which HRSD finds acceptable. If at any time more than ten (10) days after the notice of termination, HRSD determines that Equipment Supplier and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then HRSD may immediately terminate this Agreement for cause by giving written notice to the Equipment Supplier and its surety.
- c. Notice of termination, whether initial or given after a period of postponement, may be served upon the Equipment Supplier and/or the surety by registered or certified mail at their last known places of business in Virginia or elsewhere, by delivery to any officer or management/supervisory employee of either wherever they may be found, or, if no such officer, employee or place of business is known or can be found by reasonable inquiry within three (3) days, by posting the notice at the job site. Failure to accept or pick up registered or certified mail addressed to the last known address shall be deemed to be delivery.
- d. Upon termination of this Agreement, the Equipment Supplier shall not be entitled to receive any further payment.
- e. Termination of this Agreement under this section is without prejudice to any other right or remedy of HRSD.

17. HRSD's Right to Terminate the Contract for Convenience: This Agreement may be terminated by HRSD in whole or in part for the convenience of HRSD without a breach of contract by delivering to the Equipment Supplier a written notice of termination specifying the extent to which performance under the contract is terminated and the effective date of the termination upon one hundred twenty (120) days notice. Upon receipt of such a notice of termination, the Equipment Supplier must stop work, including but not limited to work performed



by subs and consultants, at such time and to the extent specified in the notice of termination. If this Agreement is terminated in whole or in part for the convenience of HRSD, the Equipment Supplier shall be entitled to those fees earned for work done prior to the notice of termination and thereafter shall be entitled to any fees earned for work not terminated, but shall not be entitled to lost profits for the portions of this Agreement which were terminated. The Equipment Supplier will be compensated for reasonable costs or expenses arising out of the termination for the convenience of HRSD for delivery to HRSD of all products of the services for which the Equipment Supplier has or will receive compensation.

18. Immigration Reform and Control Act of 1986: Equipment Supplier certifies that it does not and will not during the performance of this Agreement employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986.

19. Indemnification: Equipment Supplier agrees to indemnify, defend and hold harmless HRSD, its officers, agents, and employees from any claims, damages and actions of any kind or nature, whether at law or in equity, arising from or caused by the use of any materials, goods, or equipment of any kind or nature furnished by the Equipment Supplier/any services of any kind or nature furnished by the Equipment Supplier, provided that such liability is not attributable to the sole negligence of HRSD or to failure of HRSD to use the materials, goods, or equipment in the manner already and permanently described by the Equipment Supplier on the materials, goods, or equipment delivered.

20. Limitation on Certain Damages: Damages for any claim arising under or related to this Agreement shall be limited as set forth herein and by applicable law, including without limitation the Virginia Tort Claims Act and the Virginia Constitution. Neither party will be liable for any incidental, special, punitive, indirect, or consequential damages of any kind, including lost profits, lost revenues, and loss of business opportunity, whether or not the other party was aware or should have been aware of the possibility of these damages. In carrying out any of the provisions of this agreement and in exercising any authority granted by this Agreement, there will be no personal liability whatsoever upon any public official.

21. No Other Warranties: HRSD does not make and hereby disclaims any warranties of merchantability or fitness for a particular purpose for any Grease sold to the Equipment Supplier under this agreement.

22. Notice: All notices shall be given in writing, by facsimile or other electronic communication to the following, unless otherwise stated:

(a) If to HRSD, to:

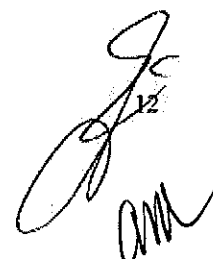
HRSD - Department of Finance
Attn: Procurement Division
1434 Air Rail Ave
Virginia Beach, Virginia 23455

(b) If to Downey Ridge Environmental Company, to:

Downey Ridge Environmental Company
16984 Midland Trail
Ansted, WV 25812

Notices to be sent to

Downey Ridge Environmental
PO Box 222
Lansing West Virginia
25862



23. Publicity: To the extent not prohibited by law, regulations, bylaws, or other legal obligations of the Parties, publicity concerning the transactions contemplated by this Agreement will be jointly planned and coordinated and no Party will act unilaterally in this regard without the approval of the other, such approval not to be unreasonably withheld, conditioned or delayed. Notwithstanding the preceding sentence, HRSD may provide public or private tours of HRSD's Facility or the System, and may publicize the process and equipment for HRSD's public relations efforts. Any marketing or public relations materials produced by the Equipment Supplier and/or its agents that mention HRSD and/or this project, system or facility shall be approved by HRSD. These materials include, but are not limited to, advertisements, news releases and published articles. HRSD's Chief of Communications shall review drafts of all marketing and public relations materials and provide the Equipment Supplier with approval of the final versions of such documents.

24. Severability: If any one or more of the provisions contained in this Agreement is invalid, illegal or unenforceable in any respect in any jurisdiction, the validity, legality and enforceability of such provision or provisions will not in any way be affected or impaired thereby in any other jurisdiction and the validity, legality and enforceability of the remaining provisions contained herein will not in any way be affected or impaired thereby, unless in either case as a result of such determination this Agreement would fail in its essential purpose.

25. Taxes: All taxes, duties, fees, and other charges of whatever nature imposed by any Governmental Authority in the United States or other countries in respect of a delivery shall be for HRSD's account, and all taxes, duties, fees, and other charges of whatever nature imposed by any Governmental Authority or other person on the Grease after it has been transported by the Equipment Supplier shall be the Equipment Supplier's responsibility.

26. Waiver: The failure of any Party to enforce any of the provisions of this Agreement or any rights with respect hereto shall in no way be considered as a waiver by that Party of such provisions or rights or in any way affect the validity of this Agreement. The waiver of any breach of this Agreement by any Party shall not operate or be construed as a waiver of any other prior or subsequent breach.

In witness whereof, the parties below execute this Contract as of the date first above written.

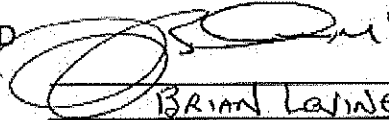
HRSD

Downey Ridge Environmental Company

AUTHORIZED
SIGNATURE



AUTHORIZED
SIGNATURE



NAME

Amy Murphy, CPPB, VCO

NAME

Brian Laine

TITLE

Chief of Procurement

TITLE

EVP

DATE

August 5, 2019

DATE

AUG 05 2019

HRSD COMMISSION MEETING MINUTES
JULY 23, 2019

ATTACHMENT #4

AGENDA ITEM 8. – Virginia Beach Boulevard Force Main Phase VI
Presentation and Resolution



RESOLUTION

***Providing for the acquisition by condemnation, if necessary,
of parcels and/or easements with respect to
Virginia Beach Boulevard Force Main Phase VI; CIP NO. CE011823***

WHEREAS, Hampton Roads Sanitation District (hereinafter "HRSD"), as part of its Capital Improvement Program, is proceeding with the project known as Virginia Beach Boulevard Force Main Phase VI Project (CIP No. CE011823) (the "Project"), and

WHEREAS, as a part of the said Project, HRSD has determined that it is necessary to acquire certain easements by condemnation (or other means) across the properties commonly known as Tax Parcel: #1497-26-9301-0000 (2924 N Lynnhaven Road), #1497-36-7543-0000 (2858 Virginia Beach Boulevard), #1497-74-4485-0000 (2533 Virginia Beach Boulevard), #1497-75-8394-0000 (207 Parker Lane), #1497-85-7195-0000 (2403 Virginia Beach Boulevard), #2407-05-0493-0000 (2312 Virginia Beach Boulevard), and #2407-05-2316-0000 (2300 Virginia Beach Boulevard); and

WHEREAS, HRSD provided proper public notice, duly published in a newspaper of general circulation in the City of Virginia Beach, and held a public hearing on this matter at 1434 Air Rail Avenue, Virginia Beach, Virginia on June 25, 2019; and

WHEREAS, at the public hearing, HRSD called for and heard no public input with respect to the proposed condemnation, if any, as well as information provided by HRSD staff, and considered whether the proposed use is a public use and whether the acquisition of the said property or easements in the said property by condemnation (or other means) should be authorized by the HRSD; and

WHEREAS, after holding a public hearing on the matter, HRSD has determined that a public necessity exists for the acquisition of permanent and/or temporary easements in the property for the Project and that the Project is in the public interest;

NOW, THEREFORE, BE IT RESOLVED, on the 23rd day of July, 2019, by *the HRSD Commission that:*

1. Virginia Beach Boulevard Force Main Phase VI project (CIP No. CE011823) is approved as a public use, necessary for the construction of an interceptor force main within HRSD's system; and said project is further declared to be in the public interest;

2. The acquisition of permanent and/or temporary easements by purchase or condemnation is necessary for the installation and operation of said interceptor force main and is hereby approved across the properties located at:

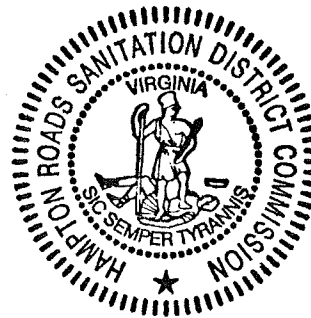
Address	Tax Parcel ID Number	Property Name/Location
2924 N. Lynnhaven Road	1497-26-9301-0000	Susan Browney Dillon, Trustee / Golden Slippers Dance Academy
2533 Virginia Beach Boulevard	1497-74-4485-0000	CKC Properties, LLC.
2403 Virginia Beach Boulevard	1497-85-7195-0000	Lowe's
2858 Virginia Beach Boulevard	1497-36-7543-0000	Lynnhaven Shopping Center, LLC / McLeskey Group
207 Parker Lane	1497-74-8394-0000	Sadler Materials Corporation / Vulcan
2312 Virginia Beach Boulevard	2407-05-0493-0000	315 N. Great Neck Road / Pollard's Square
2300 Virginia Beach Boulevard	2407-05-2316-0000	Starbucks

3. This resolution shall take effect immediately upon its adoption.

Adopted by the HRSD Commission on the 23rd day of July, 2019.

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


 Frederick N. Elofson, Chair





Virginia Beach Boulevard Force Main Phase VI Project Briefing

July 23, 2019

- Numerous alignment alternatives were considered as part of the preliminary engineering design. The chosen alignment for the 42” diameter pipe is located in the Virginia Beach Boulevard right-of-way except where conflicts exist with other utilities and structures within the roadway.
- Several drilling/tunneling efforts are needed throughout the alignment to facilitate this work and additional temporary construction easements are required for these efforts.

What is Microtunneling?



Photo Reference: Herrenknecht Tunneling Systems

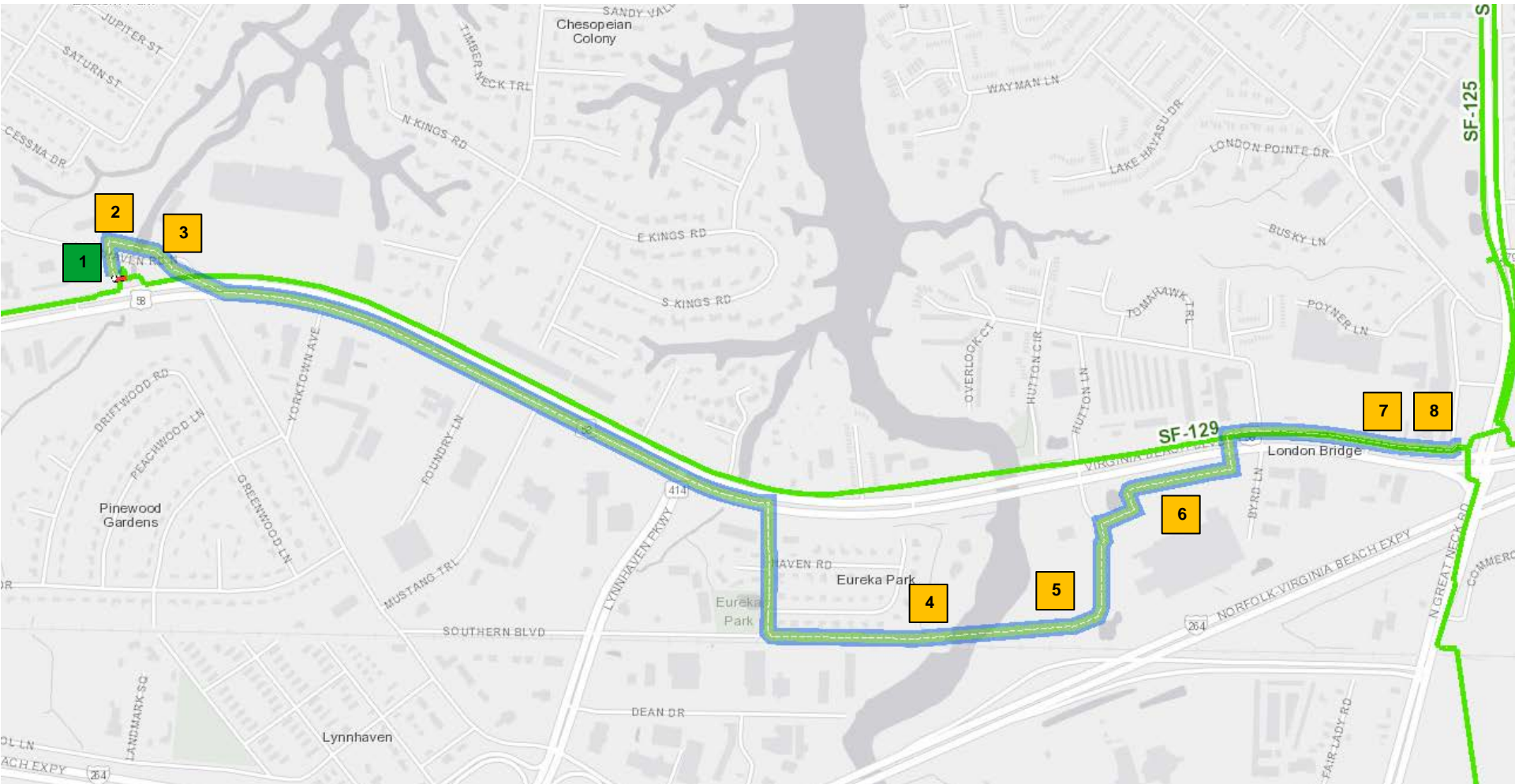
Microtunneling



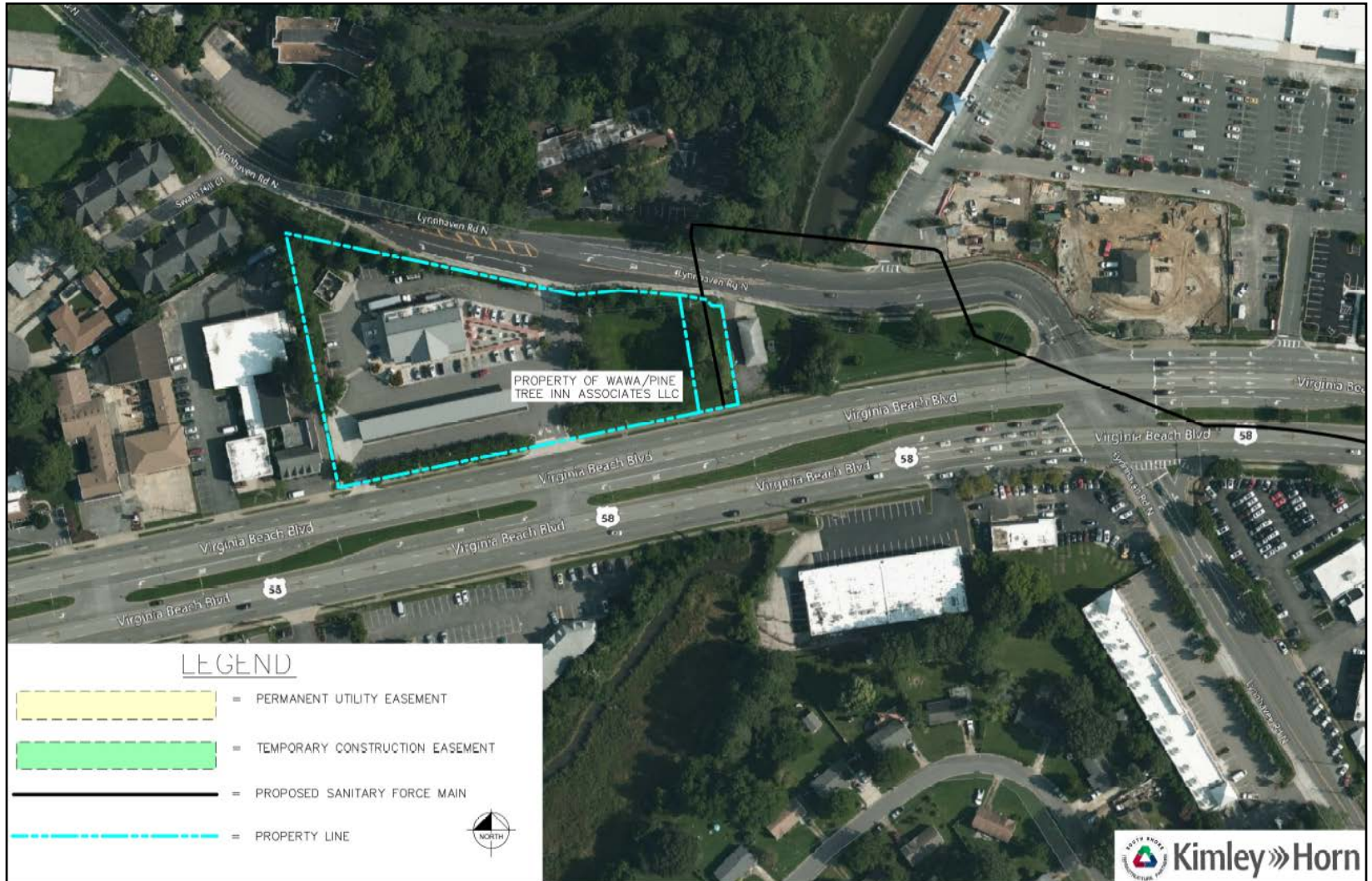
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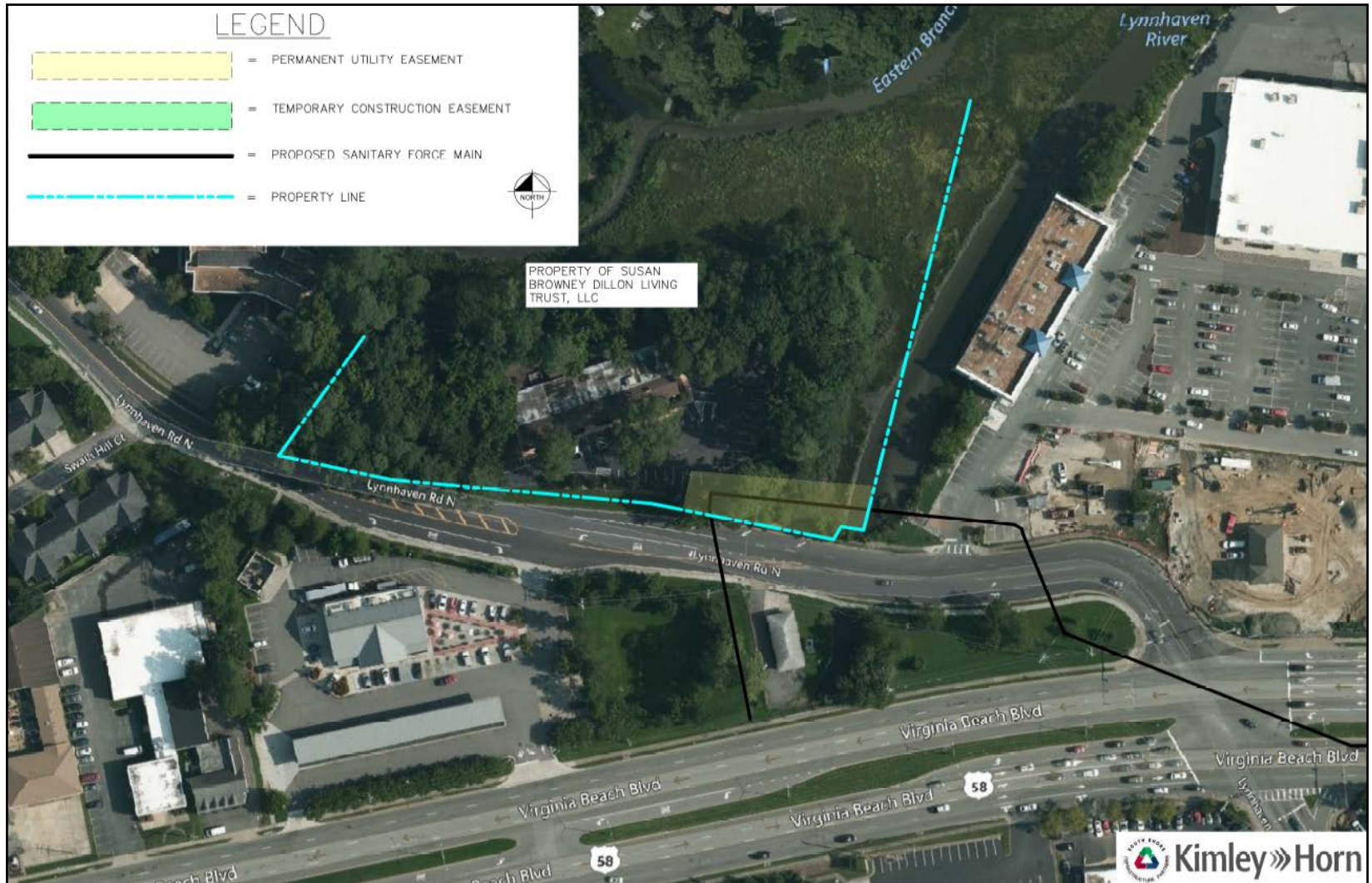
Project Alignment and Easement Sites



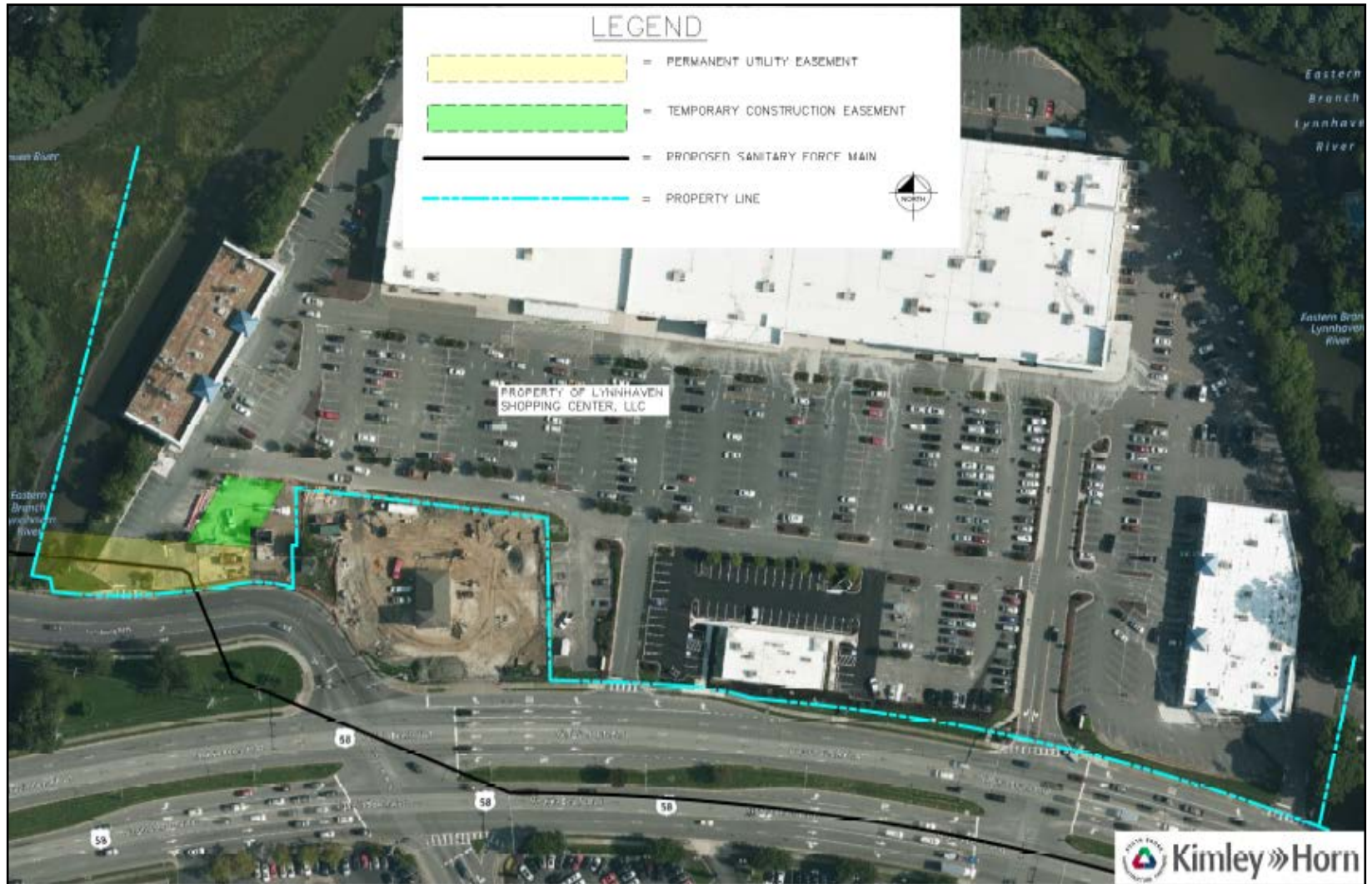
Parcel 1 Property Line Adjustment



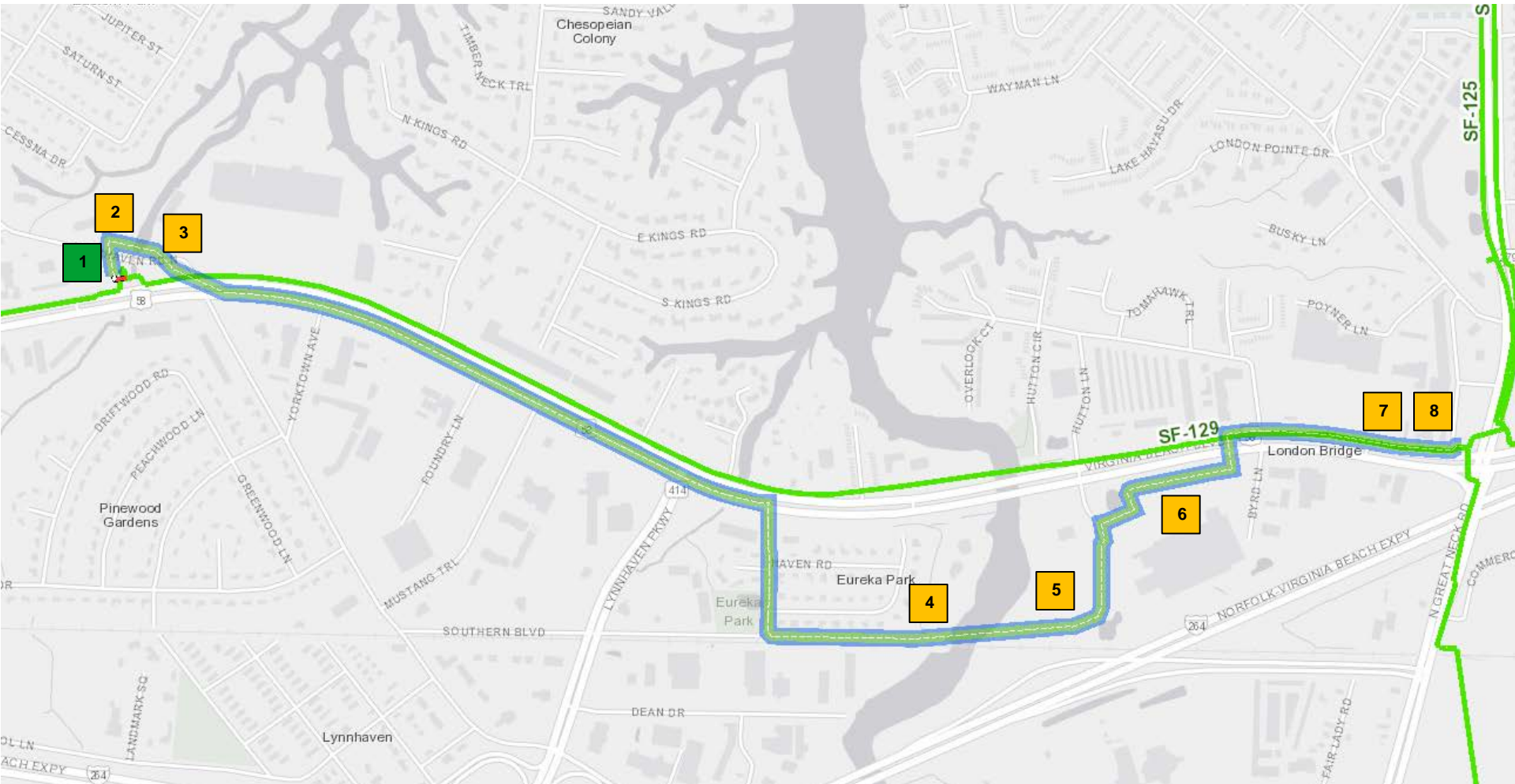
Parcel 2 Easement



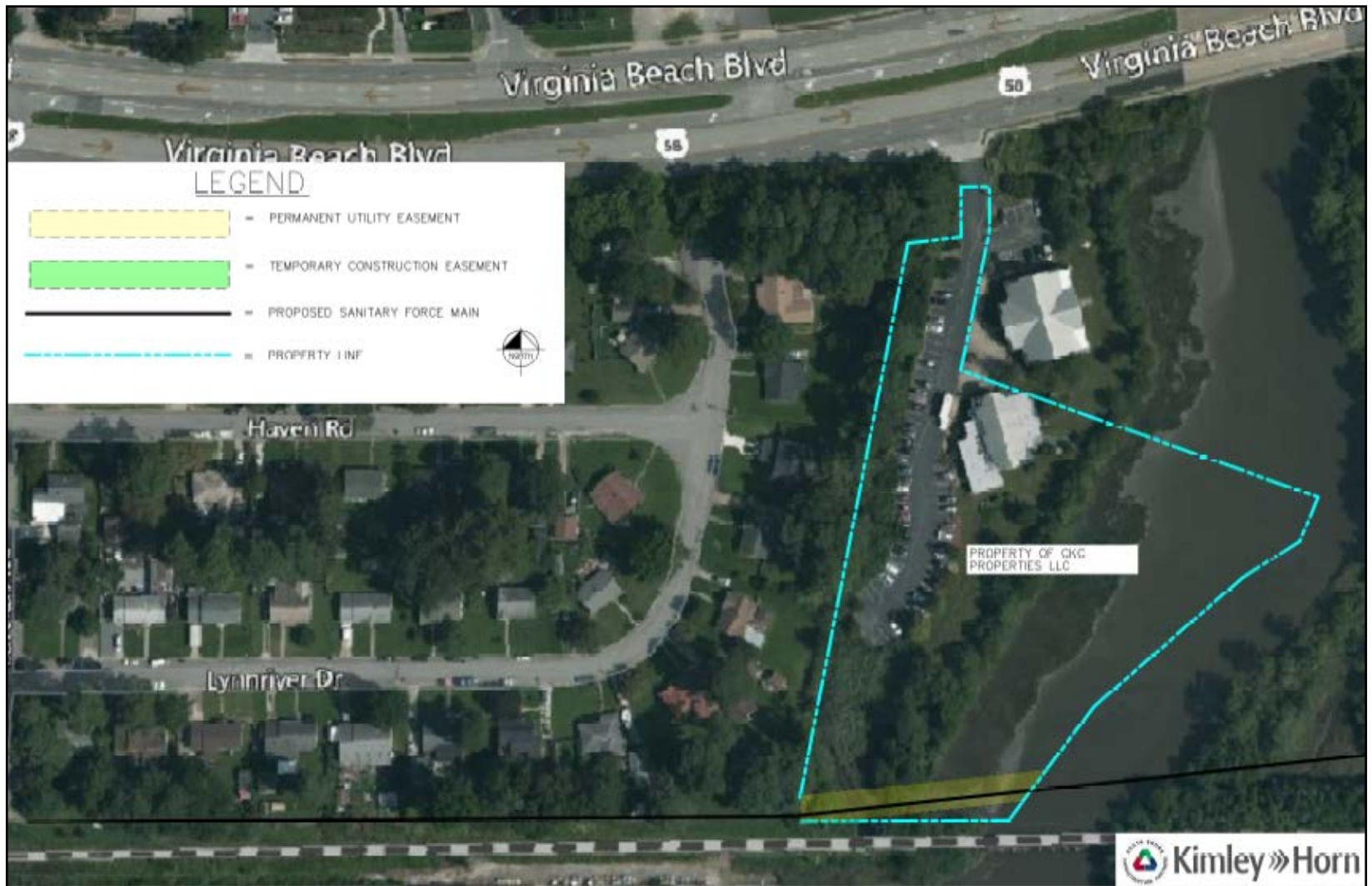
Parcel 3 Easement



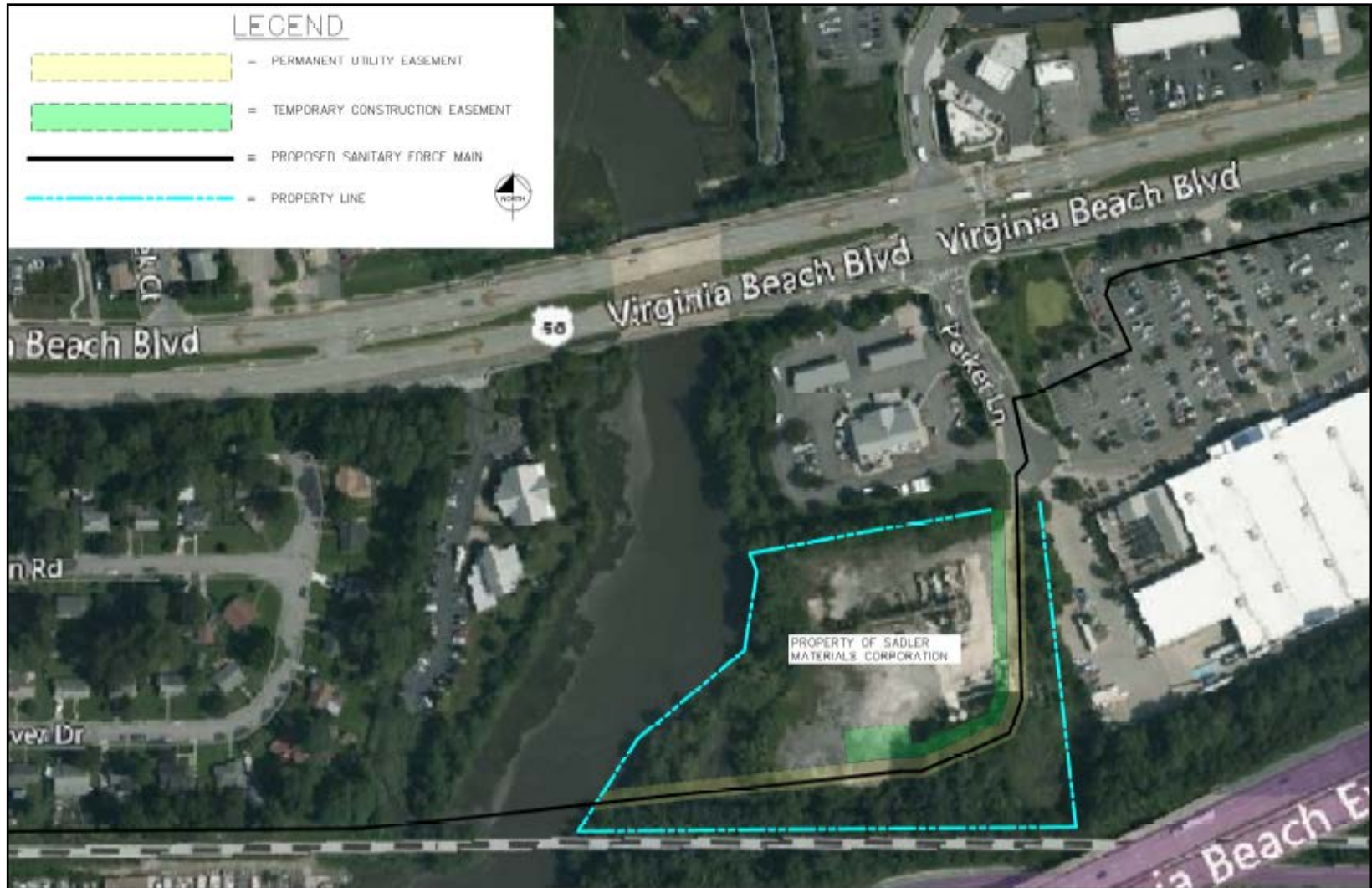
Project Alignment and Easement Sites



Parcel 4 Easement



Parcel 5 Easement



Utilities Surrounding Lowe's (Parcel 6 Easement)



Lowe's Easement: Current Alignment



Lowe's Easement: Alternative #1



Lowe's Easement: Alternative #2



Parcel 7



Parcel 8



Easement Status Summary

Easement No. / Name	Status	Considerations
1) Pine Tree Inn Associates, LLC (Wawa)	Acquired	Vibration Monitoring, Safety Fence, etc.
2) Susan Browney Dillon, Trustee (Golden Slippers Dance Studio)	Negotiations Ongoing	Construction duration limited to summer months
3) Lynnhaven Shopping Center, LLC (McLeskey Group)	Awaiting Property Owner Paperwork	Alignment shifted to keep entrance open
4) CKC Properties, LLC	Agreement Signed	None
5) Sadler Materials Corporation / Vulcan	Negotiations Ongoing	Alignment shifted to minimally impact property both during/after construction
6) Lowe's	Negotiations Ongoing	Three alternatives provided to property owner for consideration
7) 315 North Great Neck Road, LLC (Pollards Square)	Limited Response from Property Owner	-n/a-
8) 2300 Virginia Beach Boulevard, LLC (Starbucks)	Same as above	-n/a-

Questions?

HRSD COMMISSION MEETING MINUTES
JULY 23, 2019

ATTACHMENT #5

AGENDA ITEM 9. – Capital Improvement Program Quarterly Briefing Presentation



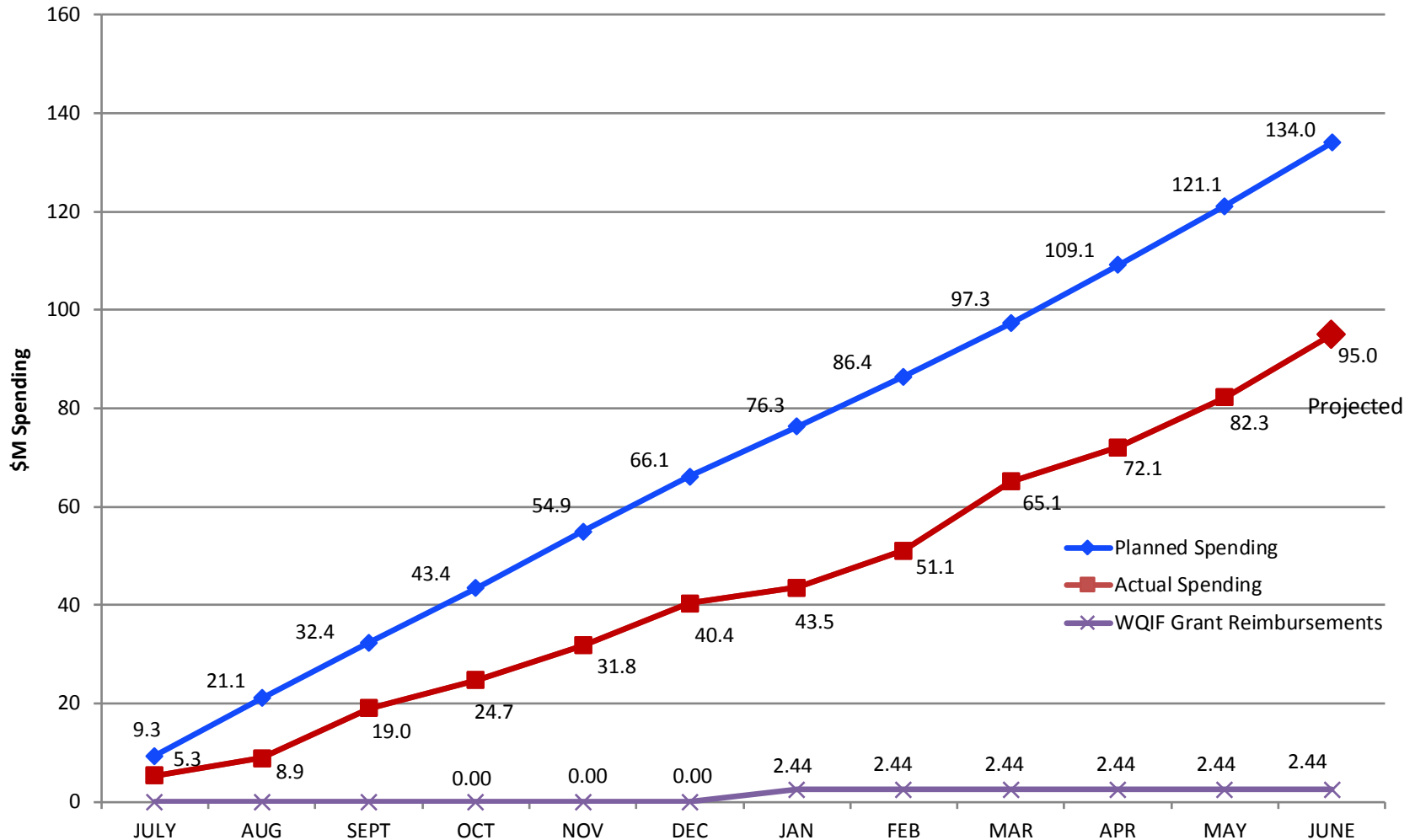
Capital Improvement Program Commission Briefing

July 23, 2019

- CIP Expenditures for FY-2019
- CIP Performance Metrics
- Consent Decree/Sewer Rehabilitation Plan – Project Status
- Firms Used for Engineering and Construction Efforts
- Significant Project Updates
- Project Focus:
 - Middlesex County Sewer 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	Differential
Atlantic Treatment Plant Thermal Hydrolysis Process (Cambi)	\$20,000,000	\$23,355,800	\$3,355,800
Virginia Initiative Plant Nutrient Reduction Improvements – Contact B	\$6,379,000	\$5,029,400	-\$1,349,600
Program Management of SWIFT Full Scale Implementation	\$6,154,000	\$2,523,000	-\$3,624,000

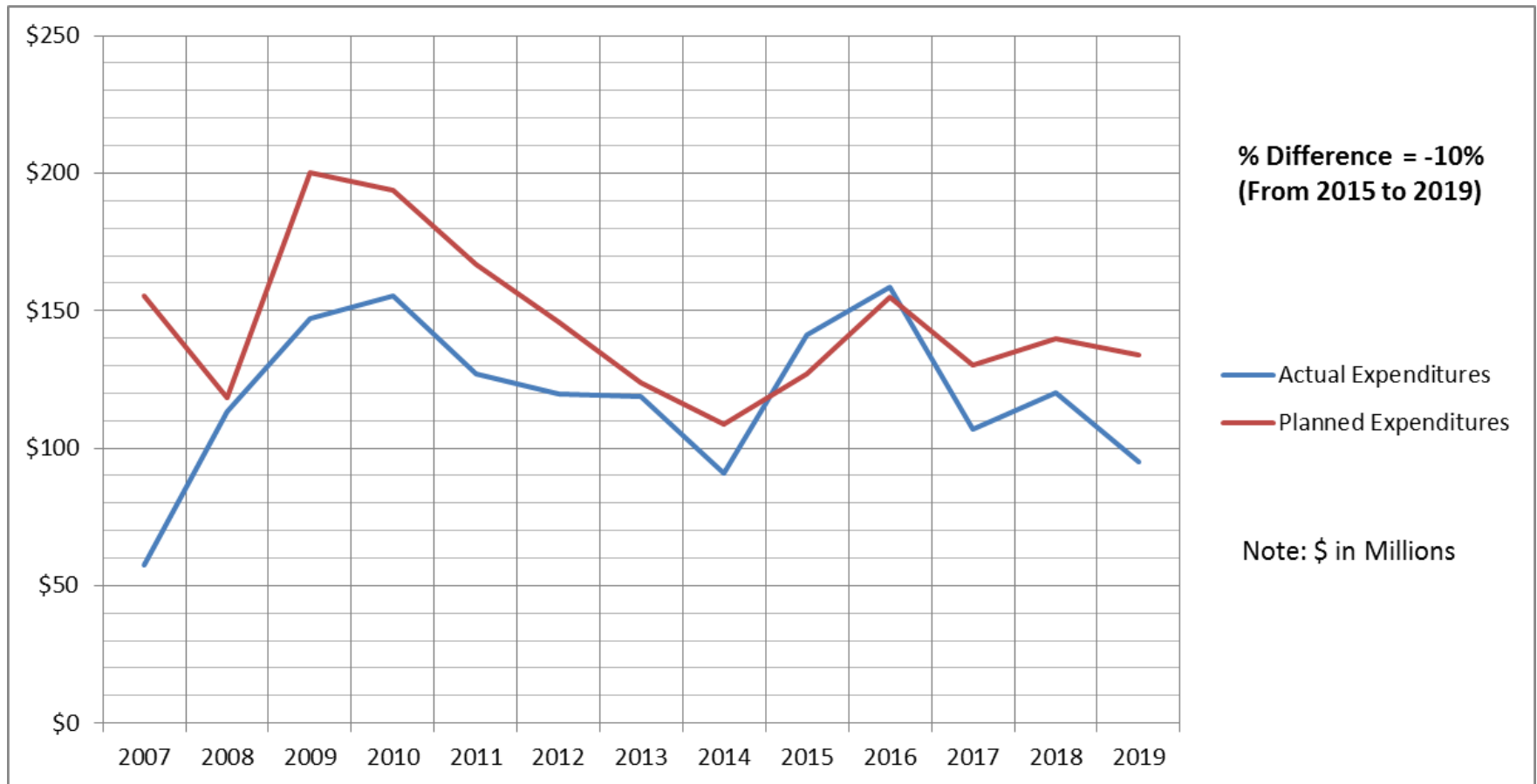
CIP Expenditures for FY-2019 (cont.)

CIP Projects with Largest Spending Projections in FY-2019

Project Name	Planned FY-2019 CIP Spending	Actual FY-2019 Spending	Differential
Interceptor Systems Pump Station Control and SCADA Upgrades	\$5,729,000	\$1,228,300	-\$4,500,700
Boat Harbor Treatment Plant Switchgear and Controls Replacements	\$4,707,000	\$368,000	-\$4,339,000
Williamsburg SWIFT Facility	\$4,560,000	\$684,000	-\$3,876,000
		Total:	-\$14,333,500

CIP Expenditures for FY-2019 (cont.)

Planned vs. Actual Spending



CIP Expenditures for FY-2019 (cont.)

Completed Projects for FY-2019

Project	Initial Appropriation	Additional	Final Appropriation	Actual Costs	Act/Orig	Act/Final
Environmental Data Management System	\$4,449,000.00		\$4,449,000.00	\$4,371,979.00	-1.7%	-1.7%
Shippo Corner Interim PRS	\$3,150,000.00	\$500,000.00	\$3,650,000.00	\$3,495,250.00	11.0%	-4.2%
ATP Admin Bldg Renovation/Expansion	\$2,740,000.00	\$50,162.00	\$2,790,162.00	\$2,789,095.00	1.8%	0.0%
ATP MCC Replacement	\$591,544.00		\$591,544.00	\$151,173.00	-74.4%	-74.4%
Hampton Trunk Div B - Claremont FM Repl	\$5,388,000.00		\$5,388,000.00	\$4,715,273.00	-12.5%	-12.5%
Lucas Creek-Woodhaven IFM Repl Ph I	\$3,770,000.00		\$3,770,000.00	\$3,693,704.00	-2.0%	-2.0%
Mathews Collection System Vacuum Valve Repl	\$1,452,000.00	\$212,597.00	\$1,664,597.00	\$1,473,856.00	1.5%	-11.5%
Kirby Street Sanitary Sewer Rehabilitation	\$656,200.00	\$331,923.00	\$988,123.00	\$891,549.00	35.9%	-9.8%
Middlesex County Sewer Exp Study	\$250,000.00		\$250,000.00	\$222,500.00	-11.0%	-11.0%
Larchmont Sanitary Sewer Master Plan Study	\$195,000.00		\$195,000.00	\$176,058.00	-9.7%	-9.7%
VIP NRI Contract B	\$129,999,000.00	\$5,285,000.00	\$135,284,000.00	\$123,696,053.00	-4.8%	-8.6%
Rodman Avenue PS WW Rehab	\$1,026,000.00	\$485,713.00	\$1,511,713.00	\$1,510,712.00	47.2%	-0.1%

CIP Expenditures for FY-2019 (cont.)

Completed Projects for FY-2019 (cont.)

Project	Initial Appropriation	Additional	Final Appropriation	Actual Costs	Act/Orig	Act/Final
Williamsburg TP Outfall & Diffuser Repair	\$165,000.00	\$101,189.00	\$266,189.00	\$235,217.00	42.6%	-11.6%
York River TP Digester Cover Replacement	\$1,400,500.00	\$471,363.00	\$1,871,863.00	\$1,799,105.00	28.5%	-3.9%
York River TP Environmental Studies	\$1,000,000.00	\$80,000.00	\$1,080,000.00	\$1,072,681.00	7.3%	-0.7%
Continued Condition Assessment	\$7,607,000.00		\$7,607,000.00	\$2,368,065.00	-68.9%	-68.9%
Arctic Ave PS & Newtown Rd PS Electrical Imp	\$750,000.00		\$750,000.00	\$381,538.00	-49.1%	-49.1%
Aquifer Replenishment	\$386,000.00	\$10,714,000.00	\$11,100,000.00	\$10,790,826.00	2695.6%	-2.8%
WQ Instrumentation & Monitoring Equipment	\$313,500.00		\$313,500.00	\$153,117.00	-51.2%	-51.2%
Poplar Hall Davis Corner Trunk	\$121,859.00		\$121,859.00	\$111,320.00	-8.6%	-8.6%
Small Communities Coll Sys Rehab-Ph I	\$1,986,250.00		\$1,986,250.00	\$480,047.00	-75.8%	-75.8%
Langley Magruder IFM Emerg (Semple Farm)	\$1,885,000.00		\$1,885,000.00	\$1,416,032.00	-24.9%	-24.9%
Total:	\$141,974,700.00	\$18,231,947.00	\$160,206,647.00	\$147,754,344.00	4.1%	-7.8%

CIP Projects Completed in FY-2019:

Projects Planned to be Completed = 30

Projects Actually Completed = 22

% of Projects Completed = 73%

Past Performance:

	<u>% Complete by End of FY</u>	<u>% Complete by End of FY-2019</u>
FY-2013	46%	100%
FY-2014	66%	100%
FY-2015	70%	100%
FY-2016	75%	100%
FY-2017	71%	100%
FY-2018	73%	100%

CIP Projects Not Completed in FY-2019:

<u>Reasons for Projects Completed Late</u>	<u># of Projects</u>
Added/Modified scope to project	5
Design related delays	3
Duration of work effort took longer than anticipated	1
Intentionally delayed project	1
Regulatory/Permitting delays	1

Atlantic Treatment Plant Thermal Hydrolysis Process and FOG Receiving Station

Engineers:

HDR Engineering, Inc. /
Brown & Caldwell

Construction Manager:

Crowder Construction
Company

Schedule Completion:

October 2020

Project Value: \$67.2M

Funding:

HRSD Revenue Bond
VRLF Loan



Providence Road Off-Line Storage Facility

Engineers:

Kimley Horn / RK&K

Design-Build Team:

- Crowder Construction
- Hazen & Sawyer

Schedule Completion:

February 2021

Project Value: \$32.0M

Funding:

HRSD Revenue Bond



Water Quality Services Building – Phase II

Engineer:

Guernsey Tingle

Design-Build Team:

- Henderson, Inc.
- DJG, Inc.

Schedule Completion:

August 2020

Project Value: \$20.2M

Funding:

HRSD Revenue Bond



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	\$6,589,331
BH014800	Jefferson Avenue Extension Gravity Improvements	Design	\$3,287,826
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	Construction	\$9,389,310
CE010400	Independence Boulevard Pressure Reducing Station Modifications	Construction	\$4,136,037
CE011700	Western Trunk Force Main Replacement	Design	\$2,168,712
GN011700	Pump Station Generators and Standby Pump Upgrades	Design	\$6,818,223
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	Construction	\$608,725
GN012130	Manhole Rehabilitation / Replacement Phase I	Construction	\$7,133,538
GN012140	Pump Station Wet Well Rehabilitation Phase I	Construction	\$3,437,651
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	Complete	\$615,812
JR012100	Huxley to Middle Ground Force Main Extension	Construction	\$4,555,845
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	Design	\$1,499,093
NP012600	Deep Creek Interceptor Force Main Replacement	Design	\$5,957,467
VP014010	Ferebee Avenue Pump Station Replacement	Design	\$8,166,000
WB012200	North Trunk Force Main Part B Replacement	Construction	\$1,987,991

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	Complete	\$2,972,422
AT011520	Shipp's Corner Pressure Reducing Station Modifications	Proposed	\$1,794,131
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	Proposed	\$5,472,744
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	Proposed	\$4,085,850
AT013100	South Norfolk Area Gravity Sewer Improvements	Proposed	\$6,666,942
AT013200	Dozier's Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	Proposed	\$314,358
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	Proposed	\$4,404,011
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	Design	\$2,243,889
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	Design	\$9,411,366
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	Design	\$4,644,415
BH015100	Bloxoms Corner Force Main Replacement	Proposed	\$3,495,808
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	\$2,178,815
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	\$1,189,650

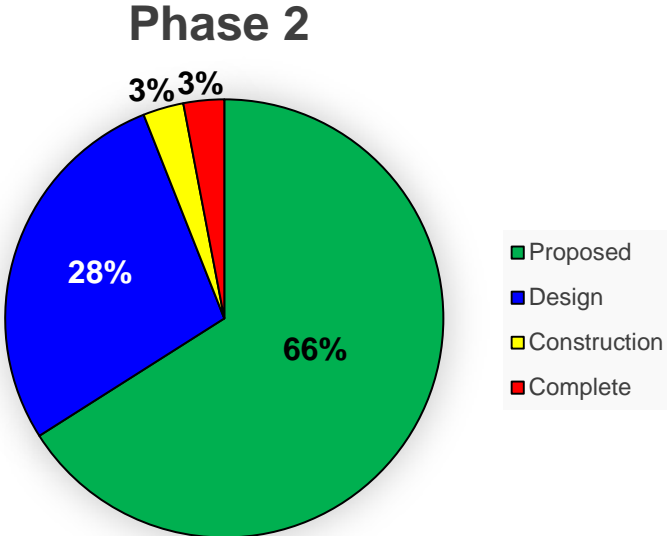
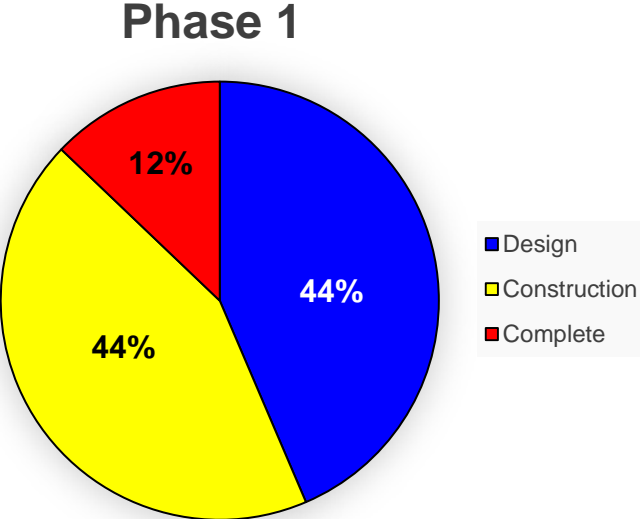
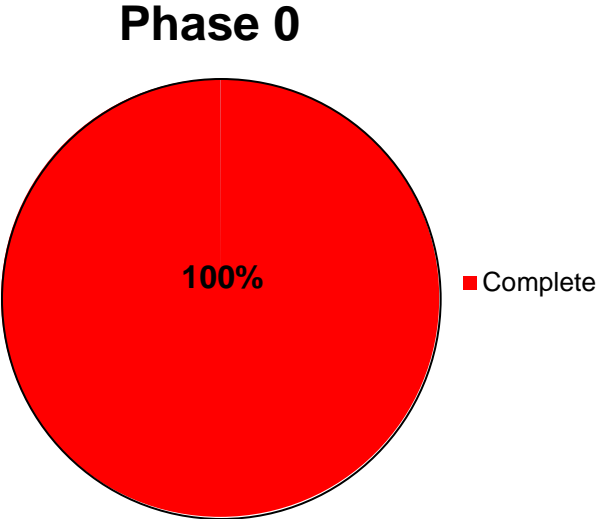
Consent Decree/Sewer Rehabilitation Plan – Project Updates

Phase 2 (cont.)

CIP	Project Name	Project Status	Total CIP Cost
GN014900	North Shore Gravity Sewer Improvements Phase I	Proposed	\$5,639,906
GN015000	South Shore Gravity Sewer Improvements Phase I	Proposed	\$913,381
GN015300	Interceptor System Valve Improvements Phase I	Proposed	\$3,256,743
GN015400	South Shore Aerial Crossing Improvements	Proposed	\$326,604
JR010600	Lucas Creek Pump Station Upgrade	Design	\$6,824,774
NP010620	Suffolk Pump Station Replacement	Design	\$20,250,618
NP012400	Western Branch Sewer System Gravity Improvements	Proposed	\$3,404,552
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	Design	\$2,375,953
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	\$10,878,500
VP014700	Ingleside Road Pump Station Replacement	Proposed	\$3,810,449
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	Design	\$1,109,112
VP015320	Larchmont Area Sanitary Sewer Improvements	Proposed	\$16,752,950
VP015400	Lafayette Norview-Estabrook Pump Station Replacements	Design	\$18,570,895
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	Proposed	\$2,490,879
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	Proposed	\$3,061,233
VP017100	Central Norfolk Area Gravity Sewer Improvements	Proposed	\$3,094,144
VP018000	Park Avenue Pump Station Replacement	Design	\$8,938,684
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	Proposed	\$3,816,116

\$269,498,659

Consent Decree / Sewer Rehabilitation Plan – Project Updates



Firms Used for Engineering and Construction Engineering Services Annual Contracts

Contract	Firm	# Task Orders	Active Contract Value	Term
A/M/E	Guernsey Tingle*	7	\$1,620,558	2/5
Condition Assessment	Hazen & Sawyer	5	\$909,115	1/5
Construction Inspection	MBP	1	\$16,923	1/5
Corrosion	Pond	1	\$170,395	3/5
Environmental	Kimley Horn	2	\$600,048	NA
	Tetra Tech	1	\$219,802	1/5
GES	CH2MH Hill	17	\$15,800,544	4/5
	HDR	30	\$7,964,457	4/5
	Hazen & Sawyer	11	\$4,310,915	4/5
Interceptor Systems	URS	2	\$321,500	NA
	Whitman Requardt	10	\$2,221,839	NA
	RK&K	10	\$1,302,791	1/5

Firms Used for Engineering and Construction Engineering Services Annual Contracts (cont.)

Contract	Firm	# Task Orders	Active Contract Value	Term Period
Land Surveying	Rice	4	\$72,134	1/5
Real Estate	JMT	14	\$245,194	2/5
Structural	Collins	17	\$353,115	4/5

Firms Used for Engineering and Construction Engineering Services Individual Contracts

Firm	# of Contracts	Active Contract Value	Remaining Contract Value
AECOM	6	\$13,324,054	\$7,502,279
Bowman	3	\$688,628	\$87,879
Brown & Caldwell	2	\$1,078,909	\$297,851
Dewberry	1	\$373,494	\$54,619
Gannett Fleming	3	\$677,390	\$25,372
Hazen & Sawyer	2	\$2,789,041	\$1,510,972
HDR Engineering	5	\$59,511,406	\$3,267,540
Johnson, Mirmiran & Thompson (JMT)	1	\$1,167,425	\$335,030
Kimley Horn	14	\$11,797,432	\$4,165,371
Michael Baker	3	\$5,426,385	\$434,519

Firms Used for Engineering and Construction Engineering Services Individual Contracts (cont.)

Firm	# of Contracts	Active Contract Value	Remaining Contract Value
O'Brien & Gere Engineers	1	\$1,240,300	\$963,617
Rummel Klepper and Kahl (RK&K)	5	\$2,527,982	\$1,487,364
URS	1	\$1,111,834	\$13,485
Westin	2	\$4,978,462	\$278,543
Whitman Requardt	2	\$1,505,238	\$580,915
Woolpert	1	\$236,338	\$19,959

Firms Used for Engineering and Construction Construction Services Annual Contracts

Contract	Firm	# Task Orders	Active Contract Value	Remaining Contract Value
Force Main Inspections & Repairs	T.A. Sheets* Tidewater Utility Construction	5 0	\$1,942,382 \$0	\$165,273 \$0

*SWAM Firms

Firms Used for Engineering and Construction Design-Build and Construction Services Individual Contracts

Firm	# of Contracts	Active Contract Value	Remaining Contract Value
Basic Construction*	7	\$28,569,632	\$11,005,157
Branscome Inc.	1	\$3,539,629	\$170,565
Clark Construction Group	1	\$1,064,091	\$1,033,934
Conrad Brothers*	1	\$2,461,275	\$0
Crowder Construction	2	\$31,921,799	\$7,133,388
Howard Brothers Contractor, Inc.*	1	\$984,608	\$984,608
MEB General Contractor, Inc.	4	\$136,555,261	\$626,435
REW Corporation*	3	\$25,183,714	\$7,406,070
Shaw Construction, Corp.*	5	\$7,895,594	\$3,174,972
T.A. Sheets General Contractors*	6	\$20,868,409	\$2,135,364
Tidewater Utilities Construction, Inc.*	1	\$276,491	\$32,346
Walter C. Via Enterprises, Inc.*	1	\$665,258	\$141,894

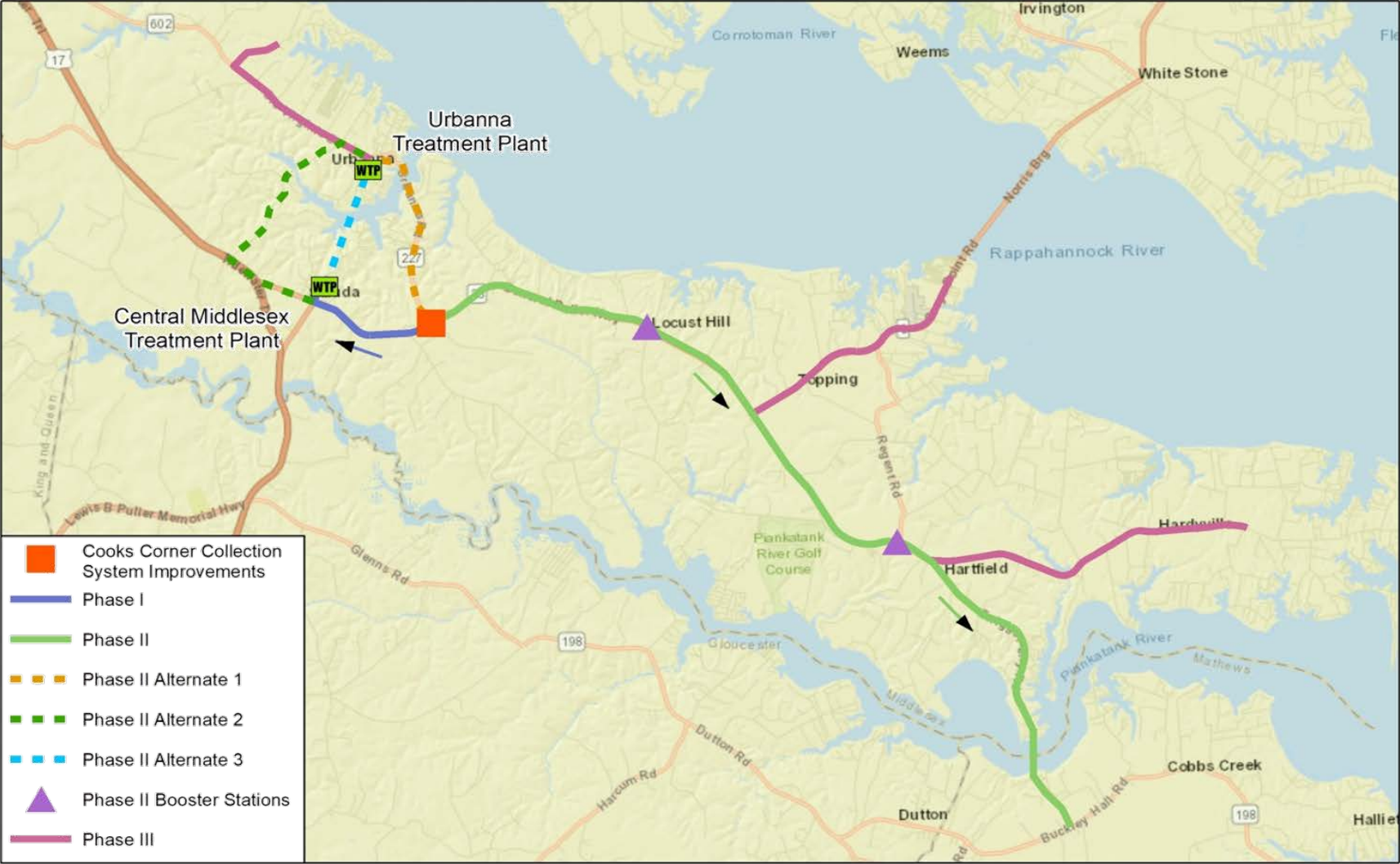
*SWAM Firms

Firms Used for Engineering and Construction Design-Build / CMAR – Individual Contracts

Firm	# of Contracts	Active Contract Value	Remaining Contract Value
Crowder Construction Company	2	\$80,824,486	\$46,844,073
Henderson*	1	\$16,445,004	\$15,780,156
MEB General Contractor, Inc.	1	\$8,978,000	\$867,242
Ulliman Schutte	1	\$37,077,500	\$33,369,097

*SWAM Firms

Middlesex County Sewer Improvements



Middlesex County Sewer Improvements (cont.)

Project Name	2019	2020	2021	2022	2023	2024
Middlesex Collection System – Cooks Corner	X	X	X			
Middlesex IFM – Phase I	X	X	X			
Middlesex IFM – Phase II		X	X	X	X	X
Middlesex IFM – Phase III			X	X	X	X

Middlesex Collection System – Cooks Corner

Engineer:

Bowman Consulting Group

Contractor: NA

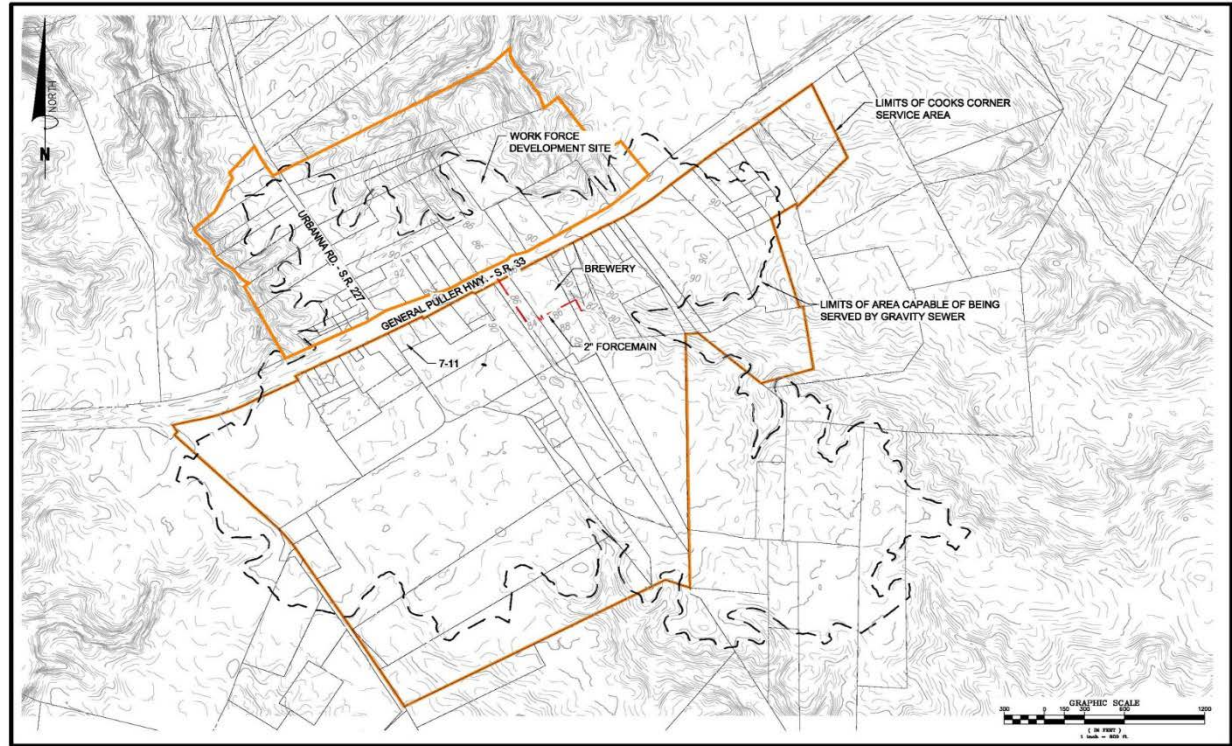
Schedule Completion:

July 2020

Project Value: \$1.7M

Funding:

Reimbursable by Middlesex County



Middlesex IFM – Phase I

Engineer:

Jacobs Engineering

Contractor: NA

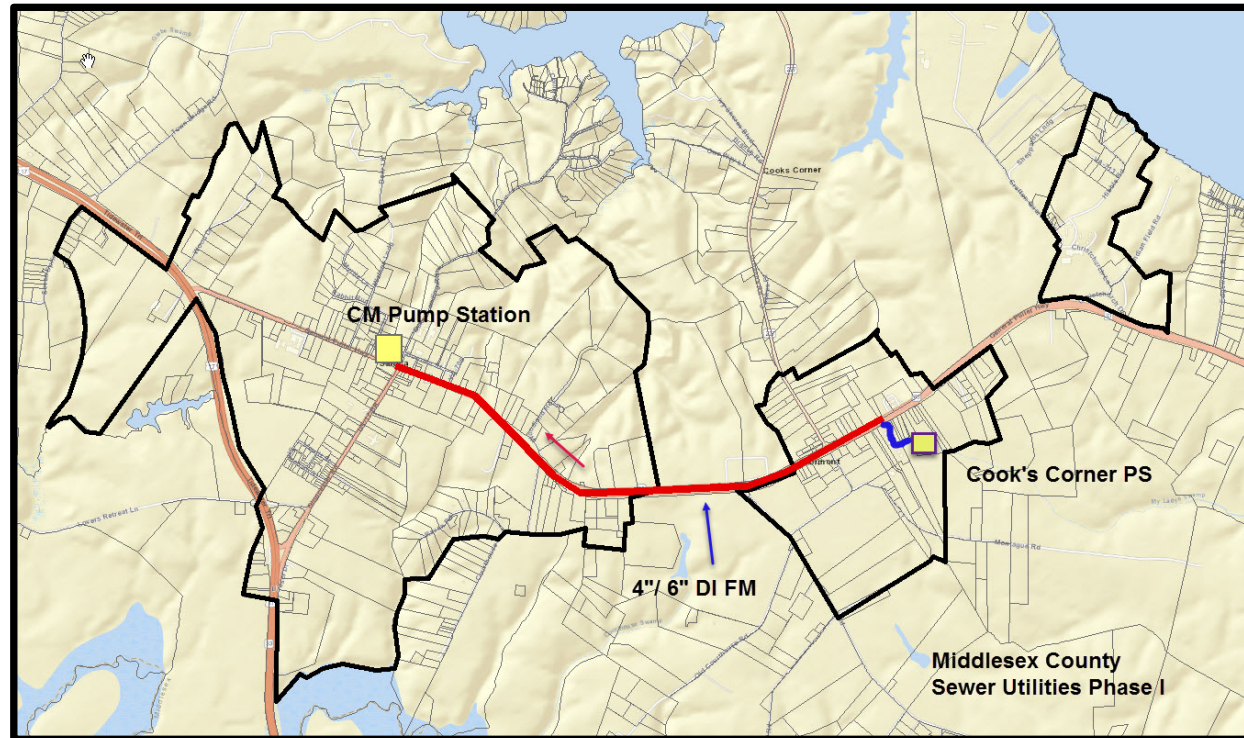
Schedule Completion:

July 2020

Project Value: \$2.3M

Funding:

HRSD Revenue Bond



Middlesex IFM – Phase II

Engineer:

Jacobs Engineering
(Route study only)

Contractor: NA

Schedule Completion:

July 2024

Project Value: \$31M

Funding:

HRSD Revenue Bond



Middlesex IFM – Phase III

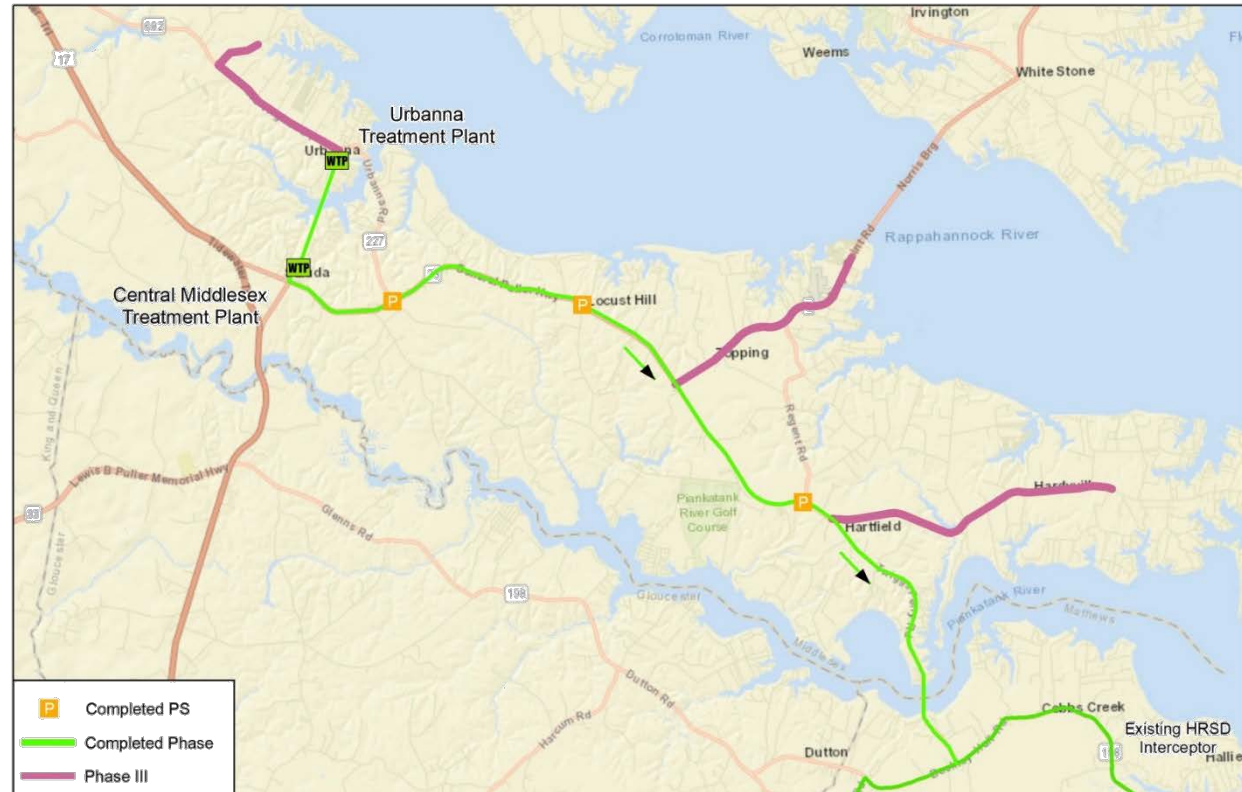
Engineer: NA

Contractor: NA

Schedule Completion:
Oct. 2024

Project Value: \$6.3M

Funding:
HRSD Revenue Bond



Questions?

HRSD COMMISSION MEETING MINUTES
JULY 23, 2019

ATTACHMENT #6

AGENDA ITEM 14. – 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](#)



July 16, 2019

Re: General Manager's Report

Dear Commissioners:

Despite the best efforts of the Small Communities Division staff, we experienced a permit exceedance for pH in June at the West Point Treatment Plant. The West Rock paper mill discharged industrial waste to the sanitary sewer system at an extremely high pH value. West Rock does not have an industrial waste discharge permit with HRSD as they handle all their industrial waste themselves. Discharge of "injurious or deleterious" matter into any of our systems is prohibited by our Enabling Act regardless of whether there is an industrial waste discharge permit. We are able to recover all costs associated with the illicit discharge as well as any civil penalties that may be appropriate. The Pretreatment and Pollution Prevention (P3) staff continues to investigate and appropriate enforcement action will be taken. West Rock has been cooperative throughout the preliminary investigation.

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

- A. **Treatment Compliance and System Operations:** With the exception of West Point, all treatment plants met permit with only one reportable issue in the conveyance system. The highlights for 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 session
 - 2. A meeting to discuss SCADA and the path forward
 - 3. 26th Annual Pretreatment Excellence & Pollution Prevention (P2) Awards Luncheon
 - 4. A length of service recognition breakfast

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

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

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

1. The quarterly board of directors meeting for the Virginia Association of Municipal Wastewater Agencies.
2. Hosted a SWIFT Research Center tour for Ann C. Phillips, Special Assistant to the Governor for Coastal Adaptation and Protection
3. A meeting with elected and appointed officials from communities on the Eastern Shore to discuss potential inclusion in the HRSD territory
4. The quarterly meeting of the Executive Board of Virginia Forever
5. A meeting with the Newport News City Manager and Director of Parks and Recreation regarding the James River Treatment Plant
6. A SWIFT briefing with HRSD staff for Tony S. Singh, PhD, Deputy Office Director / Public Health Engineering Division Director, Office of Drinking Water, Virginia Department of Health
7. An interview with the consulting team conducting a Joint Land Use Study for Department of Defense facilities in Portsmouth
8. A National Association of Clean Water Agencies (NACWA) Awards Committee conference call
9. Two conference calls with the US EPA Environmental Financial Advisory Board
10. Review of the US Water Prize nominations for 2019
11. A meeting with US Department of Justice and US EPA Region 3 staff regarding Consent Decree negotiations

D. Consent Decree Update:

1. A meeting was held with EPA/DOJ/DEQ to discuss status of the Integrated Plan on June 27th at EPA Region III offices in Philadelphia.
2. The Sanitary Sewer Overflow Response Plan annual update was submitted to US EPA.

We will be convening a group of stakeholders on July 29, 2019 to conduct a visioning session for an aquaculture repurposing of the Chesapeake-Elizabeth Treatment Plant. The stakeholders include a wide variety of interested organizations and individuals. The purpose is to explore possibilities and develop a ranked list of options to further pursue. A key pre-condition is that HRSD will not operate or finance an aquaculture facility. HRSD's participation will be limited to funding some portion of the feasibility study as well as some modifications of the existing facility to allow wastewater discharges from the Chesapeake-Elizabeth facilities to be pumped back into the regional sanitary sewer system. Additionally, HRSD will likely retain ownership control of the property and continue to operate any facilities required for ongoing operation of

the regional wastewater system. These facilities are yet to be defined but could include wet weather storage, additional pumping facilities or regional solids handling facilities. Staff will provide a briefing on the results of the visioning session at a future Commission meeting.

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, July 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 June 2019
DATE: July 9, 2019

A. Publicity and Promotion

1. **Business Notes for the week of June 17 (Environment section)| June 10, 2019 | Inside Business https://pilotonline.com/inside-business/news/data/article_cb892a82-8943-11e9-b801-4383b2bbb433.html**
2. **To 500 Sourcebook: Water Treatment Plant Swiftly Moving Full Scale | June 19, 2019 | ENR - Engineering News Record <https://www.enr.com/articles/47115-top-500-sourcebook-water-treatment-plant-swiftly-moving-full-scale>**
3. **Microplastics are everywhere, but how do they harm the Bay? | June 19, 2019 | MarylandReporter.com (HRSD mentioned in “Drinking Water” section) <https://marylandreporter.com/2019/06/19/microplastics-are-everywhere-but-how-do-they-harm-the-bay/>**

B. Social Media and Online Engagement

1. Facebook: 15,180 post impressions and Facebook Engagement of 568
2. Twitter: 9,672 impressions
3. SWIFT website visits: 593
4. LinkedIn Impressions: 1,039
5. Blog posts: 0
6. Construction Project Page Visits: 1068 total (this number does not include direct visits from home page), broken down as follows:
 - a. 421 visits to construction status page
 - b. 647 visits to individual project pages

7. Next Door unique impressions: 0 (no posts in June)

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

1. News Releases/Traffic Advisories/Construction Notices: 2 news releases
2. Advertisements: 0
3. Project Notices: 2 (via door hanging/door knocking, USPS mailings reaching approximately 181 residents)
4. Project/Community Meetings: 3
5. New Project Web Pages/Blogs/Videos: 1 – [Surry Hydraulic Improvements and Force Main Installation](#)

C. Special Projects and Highlights

1. Director attended the NACWA StratComm 2019 Conference in Cleveland, Ohio. This is NACWA's third year of holding the communications conference, and each year it continues to grow and develop into a significant communications networking and strategic planning opportunity. This year's conference theme was, "Mission-Oriented Communications for Today's Clean Water Utilities" and highlighted the 50th anniversary of the Cuyahoga River Fire. Speakers and presenters shared numerous ideas, strategies, principles and tactics to produce real impact in clean water outreach and education.
2. Director and staff attended the Pretreatment Excellence and Pollution Prevention Awards, providing assistance and social media coverage during the event.
3. Director and staff held a Teacher Open House at the SWIFT RC for public school STEM teachers within the HRSD service region. The event featured a tour of the facility followed by activity demonstrations for use in the teachers' classrooms, and a tour of the Nansemond Treatment Plant.
4. Director, together with Jamie Mitchell and Dr. Charles Bott provided a tour of the SWIFT RC to staff from the Virginia Port Authority.
5. Director and General Manager provided a SWIFT RC tour to Frank Spellman, who is writing a book about the program.

6. Director participated in a meeting with Dave Mayfield and Jon Loftis to discuss HRSD participation and sponsorship with “Catch the King.”
7. Director and staff participated in a phase 2 communications planning meeting for the Woodstock Park Improvement Project with Virginia Beach Parks and Recreation, Hazen and Crowder and their communications consultant.
8. Director and staff met with AECOMM for a SWIFT Community Benefit/Commitment planning workshop.
9. Staff participated in the monthly askHRGreen FOG meeting.
10. Staff participated in the monthly VWEA Communications teleconference.

D. Internal Communications

1. Director participated in the following internal meetings and events:
 - a. Several coordination and planning meetings for the SWIFT RC Teacher Open House event
 - b. Atlantic Treatment Plant beautification planning meeting
 - c. Meetings with staff and consultant to direct a drone video shoot of the Chesapeake-Elizabeth Treatment Plant
 - d. New Employee Orientation
 - e. SWIFT QST, QST and DMR meetings
2. Director conducted bi-weekly communications department status meetings.

E. Metrics

1. Educational and Outreach Activities: 4
 - a. 06/17/19 – Teacher Open House at SWIFT Research Center (SWIFT RC) (21 attendees)
 - b. 06/21/19 – SWIFT RC Tour to Virginia Port Authority staff (20 attendees)
 - c. 06/23/19 – RIVERFest, Virginia Beach (3,000 attendees)
 - d. 06/26/19 – SWIFT RC tour for Portsmouth Envirobase (17 attendees)

2. Number of Community Partners: 10
 - a. Elizabeth River Project
 - b. Virginia Port Authority
 - c. Portsmouth Public Schools
 - d. City of Norfolk Public Schools
 - e. City of Virginia Beach Public Schools
 - f. City of Portsmouth Public Schools
 - g. City of Chesapeake Public Schools
 - h. York County Public Schools
 - i. Williamsburg/James City County Public Schools
 - j. City of Suffolk Public Schools

3. Additional Activities Coordinated by Communications Department: 1
 - a. 06/17/19 – Nansemond Treatment Plant Tour

4. Monthly Metrics Summary

Item #	Strategic Planning Measure	Unit	May 2019
M-1.4a	Total Training Hours per Full Time Employee (3) - Current Month	Hours / #FTE	16.25
M-1.4b	Total Training Hours per Full Time Employee (3) - Cumulative Fiscal Year-to-Date	Hours / #FTE	116.36
M-5.2	Educational and Outreach Events	Number	4
M-5.3	Number of Community Partners	Number	10

Respectfully,

Leila Rice, APR
 Director of Communications

TO: General Manager

FROM: Director of Engineering

SUBJECT: Engineering Monthly Report for June 2019

DATE: July 10, 2019

A. General

1. Capital Improvement Program (CIP) spending for the eleventh month of Fiscal Year (FY) 2019 was slightly below the planned spending target.

CIP Spending (\$M):

	Current Period	FYTD
Actual	10.16	82.27
Plan	12.00	121.10

No Water Quality Improvement Fund Grant reimbursements were received in the month of June.

2. An audit prepared by SC&H recommends that HRSD consider events other than hurricanes, flooding and IT impacts that could affect the continuity of business at HRSD. These events are challenging to define and to prioritize. Another approach is to determine the critical organizational business processes (BPs) and determine a mitigation strategy for each process in the case an event occurs. Leadership and staff recently determined the critical business processes that prohibit HRSD from meeting its mission if the process is not functional for a period of more than 30 days. The following BPs were selected to be integrated into the plan:

- Conveying wastewater
- Treating wastewater
- Paying employees
- Paying consultants, contractors and vendors
- IT network
- Receipt of payments
- Administrative facility loss (NS, SS, CEL)
- Purchasing goods and services

The Engineering Department is working to create a master template to be used for each of the individual BP plans. Once the master template is created, the information will be shared with the BP Task Leader to create the specific plan.

B. Asset Management Division

1. Staff has researched various dashboard tools that could be used to share critical asset management data. These tools are typically software programs made to view data from a specific program or a tool that can take data from many sources to collate and share. Based on the potential to use a dashboard tool for other applications at HRSD, the IT Department has taken the lead on the selection of a dashboard tool. This tool will be critical to the proactive use of the large quantities of data that will be available once the Asset Management Program is fully functional.
2. Efforts continue to improve aspects of the Emergency Response Plan. Staff has begun compiling a list of treatment plant and pump station generator information for inclusion in the U.S. Army Corps of Engineers (USACE) Emergency Power Facility Assessment Tool (EPFAT). EPFAT is a web-based tool that can be used by critical public facilities to expedite USACE's abilities to provide temporary power in the event of a disaster. Staff has also begun assessing the radio communication protocol in the event of a disaster resulting in cellular signal and internet communications outages. This process will include an inventory of all long-range radios, repair/replacement needs, channel/frequency issues, and communication protocol within and between work centers.

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

1. The Surry Pump Station and Discharge Force Main project was awarded to the team of RK&K, Timmons and MEB General Contractors in February. This project is being delivered using a Design-Build method and will involve the ultimate abandonment of the Town of Surry Treatment Plant. The design effort continues as the Design-Build Team finalizes efforts before initial construction begins. Final decisions on materials of construction and the coordination of needed easements are nearly complete. The construction effort will be fast tracked to meet the VDEQ Consent Order deadline of November 2020.
2. The Providence Road Off-Line Storage Facility project is proceeding into the construction phase. The final site plan approval has been received from the City of Virginia Beach and the necessary construction-related permits are being finalized. This project includes the construction of a 5.2 million gallon storage tank located in the City of Virginia Beach's Woodstock Park. Woodstock Park was closed on June 3 to facilitate construction. Contractor mobilization, sediment & erosion control and other preliminary tasks are underway at the site. This project is being closely coordinated with the City

of Virginia Beach who is partially funding the efforts to improve the park as part of the overall program.

3. The individual projects that make up the overall SWIFT Program continue to be refined. Work at James River, York River and the crossing of Hampton Roads with a pipeline from Boat Harbor to Nansemond all are moving forward. Coordination with the Finance Department is underway to determine the most efficient funding mechanism for the SWIFT Program. Funding options include the federal WIFIA Program, State Revolving Loan funds and the State Water Quality Improvement Fund. Each individual project will be considered for funding and the decision on how to fund the projects will be based on a number of factors including: schedule, funding restrictions and requirements, scope of the individual project that could limit reimbursement and interest rate considerations.

D. Planning & Analysis Division

1. Staff continues considering flow diversions as part of the SWIFT Program. Optimization of flow to each plant is critical to the design of the proposed SWIFT facilities. This flow optimization includes both hydraulic capacity and industrial discharges that could negatively impact the SWIFT treatment process. Staff is also reviewing two strategic alternatives to optimize the closure of the Boat Harbor Treatment Plant. This closure is needed since construction of a new SWIFT facility at this location is not feasible due to the very limited site and adjacent constraints.
2. Staff has taken on the responsibility to oversee the data gathering, review and coordination for the Management, Operations and Maintenance (MOM) Program as part of the Federal Consent Decree to address sanitary sewer overflows in the region. June 30 is the deadline for the current reporting period and data will be gathered and analyzed in the coming month to allow for preparation of the annual MOM report that is provided to the U.S. EPA and the Virginia Department of Environmental Protection.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 3
 - a. 06/18/19 - Staff provided a tour of the SWIFT Research Center to the Prince William County Service Authority.
 - b. 06/21/19 - Staff assisted with providing a tour of the SWIFT Research Center to the Virginia Port Authority.

- c. 06/23/19 - Staff assisted with the Elizabeth River Project RIVERfest Event.
2. Number of Community Partners: 3
 - a. Prince William County Service Authority
 - b. Virginia Port Authority
 - c. Elizabeth River Project
 3. Number of Research Partners: 0
 4. Metrics Summary

Item #	Strategic Planning Measure	Unit	June 2019
M-1.4a	Total Training Hours per Full Time Employee (43) - Current Month	Hours / #FTE	5.33
M-1.4b	Total Training Hours per Full Time Employee (43) - Cumulative Fiscal Year-to-Date	Hours / #FTE	36.58
M-5.2	Educational and Outreach Events	Number	3
M-5.3	Number of Community Partners	Number	3
M-5.4	Number of Research Partners	Number	0

5. Annual Metrics

Item #	Strategic Planning Measure	Unit	FY-2019
M-2.1	CIP Delivery – Budget	%	170
M-2.2	CIP Delivery – Schedule	%	159
M-5.4	Number of Research Partners	Number	1

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, P.E.

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

A. General

1. Staff submitted HRSD's Letter of Interest to the EPA Water Infrastructure Finance and Innovation Act (WIFIA) for our SWIFT program. This is the first step in the process to get approved for these low interest loans. EPA estimates that invitations to apply to the program will be announced in early October. In addition, staff is working on applying for Virginia Clean Water Revolving Loan Funds (VCWRLF), which is managed by the Virginia Resources Authority (VRA) and Virginia's Department of Environmental Quality (DEQ). Staff met with VRA and DEQ on June 19 to discuss different approaches to applying for VCWRLF for large programs like SWIFT and our Integrated Plan which spans multiple years.
2. On June 27, HRSD Customer Care staff supported our jurisdictional partner, City of Virginia Beach, by answering all incoming customer calls at the City of Virginia Beach Public Utilities Call Center. Our assistance allowed their staff to attend a memorial service honoring the victims of the Virginia Beach tragedy.
3. The Center for Child and Family Services, an HRSD Financial Wellness partner, provided a Money Management workshop for Customer Care staff on June 14. The workshop was designed to provide a snapshot of the Financial Wellness Program that is offered to customers that have fallen behind on their HRSD accounts. The interactive workshop allowed staff to have a better understanding of the benefits and resources offered in the program. Staff provided positive feedback and plan to use the knowledge when interacting with customers, and even hope to improve their own money management and budgeting skills.
4. Wastewater revenues ended the year slightly higher than expected with water consumption at 0.5 percent higher than budget. Municipal Assistance ended the year lower than budget as some expected Locality projects did not materialize. Facility Charge revenue was higher than budget, which reflects the continued strong regional economy. Interest Income ended the year significantly higher than budget due to higher than expected interest rates and larger than expected cash balances due to slow capital spending. Personal Services is slightly higher than budget due to lower than expected turnover and Talent Management's excellent job filling vacancies quickly. Material and Supplies (M&S) ended the year slightly higher than budget due to unexpected SWIFT Research Center costs, new sensors and probes, and additional work related to CAMBI. Even with these additional M&S costs, the Operations Department was able to stay under budget overall. Major Repairs expense is significantly lower than budget at this time, and while we anticipate expenditures to increase as payments are processed during the 13th accounting period we still expect the total to remain below budget.

B. Interim Financial Report

1. Operating Budget for the Period Ended June 30, 2019

	Amended Budget	Current YTD	Current YTD as % of Budget (100% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 289,967,000	\$ 290,353,613	100%	101%
Surcharge	1,425,000	1,524,125	107%	75%
Indirect Discharge	2,750,000	3,050,784	111%	107%
Fees	2,855,000	2,874,128	101%	96%
Municipal Assistance	875,000	620,610	71%	106%
Miscellaneous	595,000	1,049,320	176%	114%
Total Operating Revenue	298,467,000	299,472,580	100%	101%
Non Operating Revenues				
Facility Charge	6,075,000	6,643,320	109%	113%
Interest Income	2,500,000	8,718,107	349%	194%
Build America Bond Subsidy	2,400,000	2,266,416	94%	96%
Other	820,000	1,493,783	182%	130%
Total Non Operating Revenue	11,795,000	19,121,626	162%	124%
Total Revenues	310,262,000	318,594,206	103%	101%
Transfers from Reserves	8,847,824	8,847,824	100%	100%
Total Revenues and Transfers	\$ 319,109,824	\$ 327,442,030	103%	101%
Operating Expenses				
Personal Services	\$ 55,355,886	\$ 56,434,669	102%	99%
Fringe Benefits	24,321,670	24,257,613	100%	99%
Materials & Supplies	7,762,154	8,135,501	105%	97%
Transportation	1,446,906	1,384,249	96%	86%
Utilities	12,506,952	12,436,585	99%	98%
Chemical Purchases	10,894,183	8,543,798	78%	94%
Contractual Services	42,104,030	30,237,750	72%	76%
Major Repairs	10,315,534	6,887,297	67%	51%
Capital Assets	1,232,144	577,436	47%	95%
Miscellaneous Expense	2,945,304	2,570,150	87%	97%
Total Operating Expenses	168,884,763	151,465,048	90%	90%
Debt Service and Transfers				
Debt Service	62,511,000	61,905,221	99%	100%
Transfer to CIP	87,475,061	87,475,056	100%	100%
Transfer to General Reserve	-	-	0%	100%
Transfer to Risk management	239,000	239,004	100%	100%
Total Debt Service and Transfers	150,225,061	149,619,281	100%	100%
Total Expenses and Transfers	\$ 319,109,824	\$ 301,084,329	94%	94%

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 June 30, 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	320,719,136			-
Capital Grants				2,444,140
VRA Draws				35,039,875
Bond Proceeds (includes interest)				940,873
Transfers In	-	239,004		87,475,056
Sources of Funds	<u>320,719,136</u>	<u>239,004</u>	<u>-</u>	<u>125,899,944</u>
Total Funds Available	<u>\$ 514,342,529</u>	<u>\$ 3,499,535</u>	<u>\$ 15,266,324</u>	<u>\$ 201,773,973</u>
Deduct: Current Year Uses of Funds				
Cash Disbursements	215,311,968			101,159,611
Transfers Out	87,714,060			-
Uses of Funds	<u>303,026,028</u>	<u>-</u>	<u>-</u>	<u>101,159,611</u>
End of Period - June 30, 2019	<u>\$ 211,316,501</u>	<u>\$ 3,499,535</u>	<u>\$ 15,266,324</u>	<u>\$ 100,614,362</u>

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended June 30, 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	\$ 2,492,455	\$ 42,865,560	\$ 2,942,243	\$ 28,778,220	
Army Base	158,584,000	124,056,440	1,044,417	125,100,857	1,568,429	31,914,714	
Atlantic	127,815,138	56,021,559	29,708,315	85,729,874	22,265,342	19,819,922	
Boat Harbor	136,653,850	55,186,498	4,532,358	59,718,856	17,316,260	59,618,734	
Ches-Eliz	175,032,583	10,416,092	9,909,585	20,325,677	68,022,500	86,684,406	
James River	91,837,687	55,333,203	3,091,596	58,424,799	5,519,772	27,893,116	
Middle Peninsula	87,389,819	7,951,942	2,478,573	10,430,515	7,065,151	69,894,153	
Nansemond	86,801,179	39,238,100	2,451,241	41,689,341	6,194,008	38,917,830	
Surry	13,980,950	101,724	1,425,170	1,526,894	8,523,946	3,930,110	
VIP	293,797,711	250,845,561	8,738,715	259,584,276	2,027,812	32,185,623	
Williamsburg	19,338,971	10,079,626	1,598,190	11,677,816	1,843,007	5,818,148	
York River	51,754,404	40,864,038	3,014,913	43,878,951	855,077	7,020,376	
General	484,385,283	216,595,238	12,408,361	229,003,599	23,023,266	232,358,418	
	<u>\$1,801,957,598</u>	<u>\$ 907,063,126</u>	<u>\$ 82,893,889</u>	<u>\$ 989,957,015</u>	<u>\$ 167,166,813</u>	<u>\$ 644,833,770</u>	

5. Debt Management Overview

Debt Outstanding (\$000's)					
	Principal May 2019	Principal Payments	Principal Draws	Principal Jun 2019	Interest Payments
Fixed Rate					
Senior	\$ 308,095	\$ -	\$ -	\$ 308,095	\$ -
Subordinate	460,046	(1,110)	8,477	467,413	(210)
Variable Rate					
Subordinate	50,000	-	-	50,000	(70)
Line of Credit					
Total	<u>\$ 818,141</u>	<u>\$ (1,110)</u>	<u>\$ 8,477</u>	<u>\$ 825,508</u>	<u>\$ (280)</u>

Series 2016 Variable Rate Interest Summary - Variable Rate Debt Benchmark (SIFMA) as of 6/28/19

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	2.30%	2.25%	-0.05%
Average	0.50%	0.49%	-0.01%
Minimum	0.01%	0.01%	0.00%
As of 6/28/19	1.90%	1.90%	0.00%

* Since October 20, 2011 HRSD has averaged 49 basis points on Variable Rate Debt

Financial Performance Metrics for the Period Ended June 30, 2019

HRSD - UNRESTRICTED CASH

June 30, 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	\$ 284,605,125		615
Risk Management Reserve	\$ (3,499,535)	(8)	607
Reserve	\$ (15,266,324)	(33)	574
Capital (PAYGO only)	\$ (86,279,809)	(186)	388
Net Unassigned Cash	\$ 179,559,457		388

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

June 30, 2019

Primary Source

	Beginning Market Value July 1, 2018	YTD Contributions	YTD Withdrawals	YTD Income Earned	Ending Market Value June 30, 2019	Allocation of Funds	Credit Quality	Current Mo Avg Yield
BAML Corp Disbursement Account	10,669,597	516,340,242	519,307,821	52,988	7,755,006	4.5%	N/A	0.70%
VIP Stable NAV Liquidity Pool	-	202,000,000	41,000,000	2,658,801	163,658,801	95.5%	AAAm	2.46%
Va Local Government Investment Pool	68,984,048	5,000,000	74,115,221	131,173	-	0.0%	AAAm	2.45%
Total Primary Source	\$ 79,653,645	\$ 723,340,242	\$ 634,423,042	\$ 2,842,962	\$ 171,413,807	100.0%		

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

Secondary Source

	Beginning Market Value July 1, 2018	YTD Contributions	YTD Withdrawals	YTD Income Earned & Realized G/L	Ending Market Value June 30, 2019	Ending Cost	YTD Mkt Adj	Yield to Maturity at Market
VIP 1-3 Year High Quality Bond Fund	-	124,728,039	1,022,175	2,789,827	128,529,607	126,495,691	2,033,916	1.87%
Total Secondary Source	\$ -	\$ 124,728,039	\$ 1,022,175	\$ 2,789,827	\$ 128,529,607	\$ 126,495,691	\$ 2,033,916	

VIP 1-3 Year High Quality Bond Fund out performed ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) by 0.03% in the month of June.

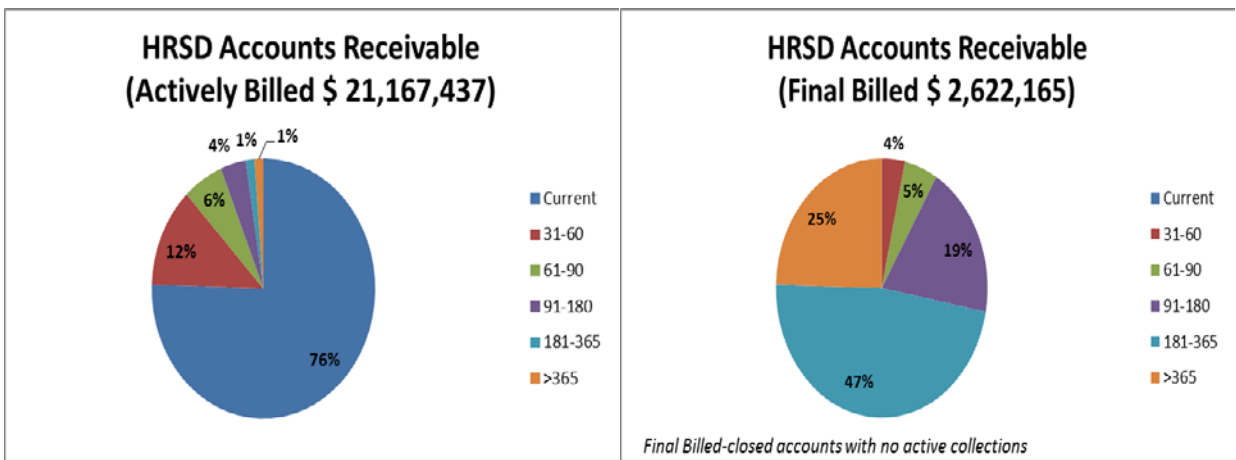
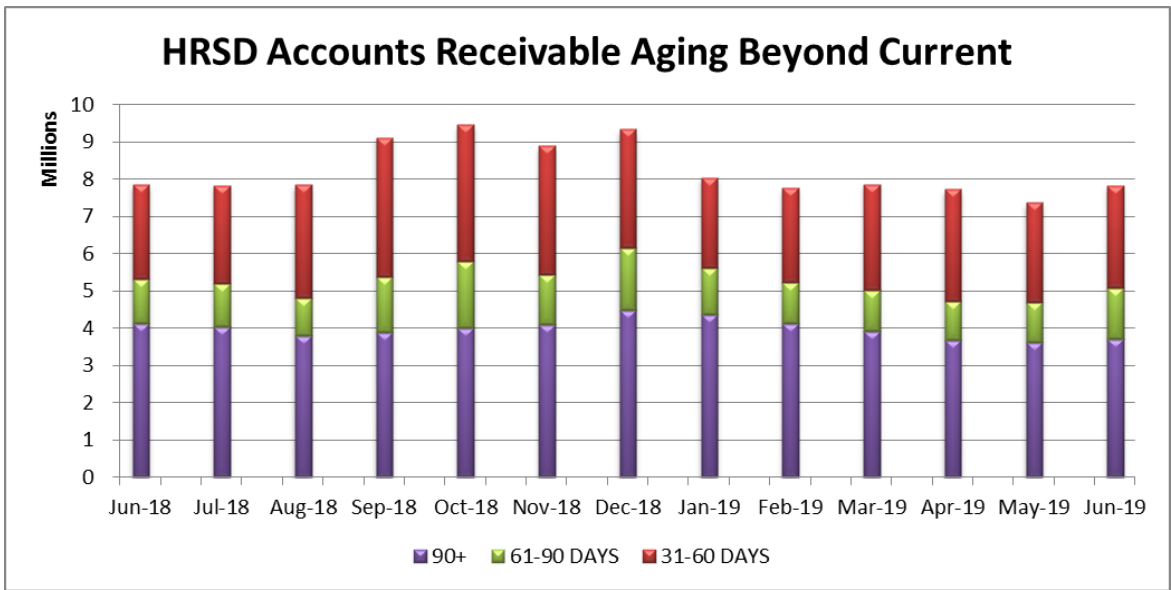
Total Primary Source	\$ 171,413,807	57.1%
Total Secondary Source	\$ 128,529,607	42.9%
TOTAL SOURCES	\$ 299,943,414	100.0%

6. Summary of Billed Consumption

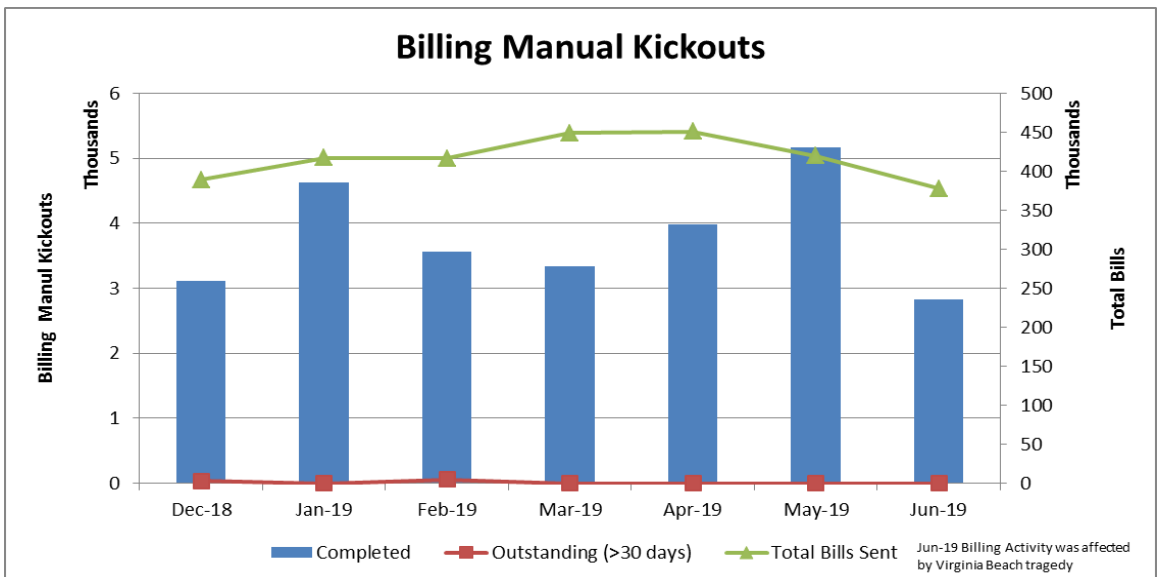
Summary of Billed Consumption (,000s ccf)							
Month	FY2019 Cumulative Budget Estimate	FY2019 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative FY2018 Actual	From FY2018	Cumulative 3 Year Average	From 3 Year Average
July	4,737	5,175	9.3%	4,869	6.3%	4,821	7.3%
Aug	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	44,551	2.2%	44,732	-0.4%	44,649	-0.2%
May	47,887	48,790	1.9%	49,018	-0.5%	48,864	-0.2%
June	52,927	53,172	0.5%	53,298	-0.2%	53,391	-0.4%

C. Customer Care Center

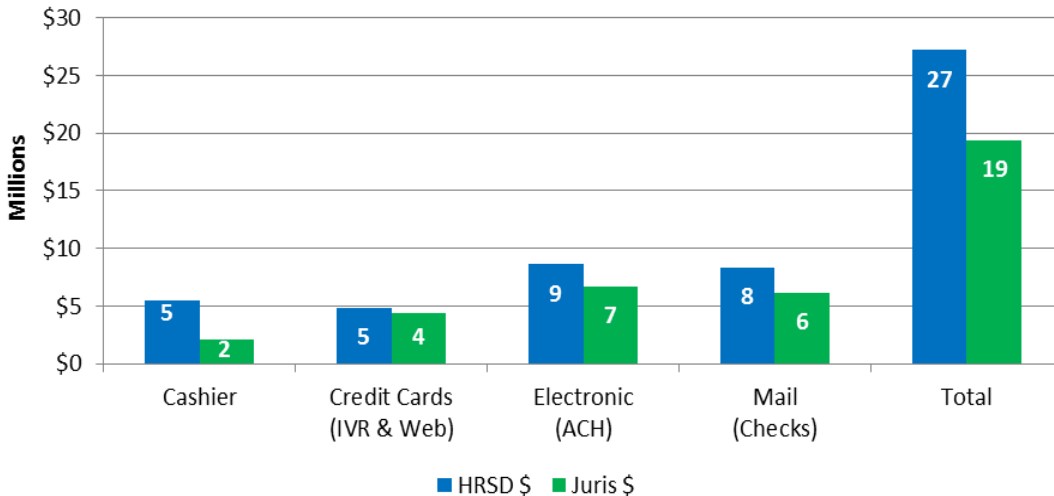
1. Accounts Receivable Overview



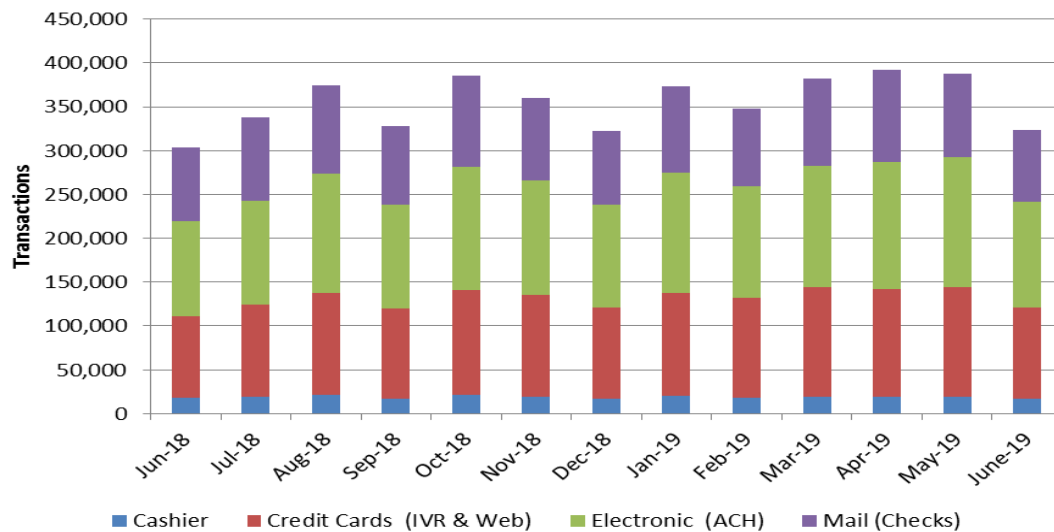
2. Customer Care Center Statistics



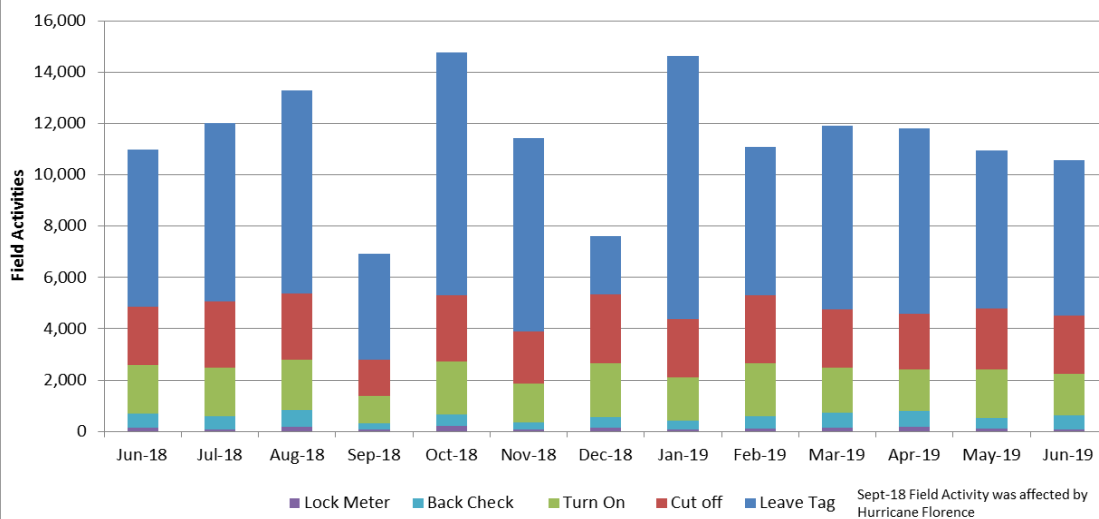
Payments Processed June 2019

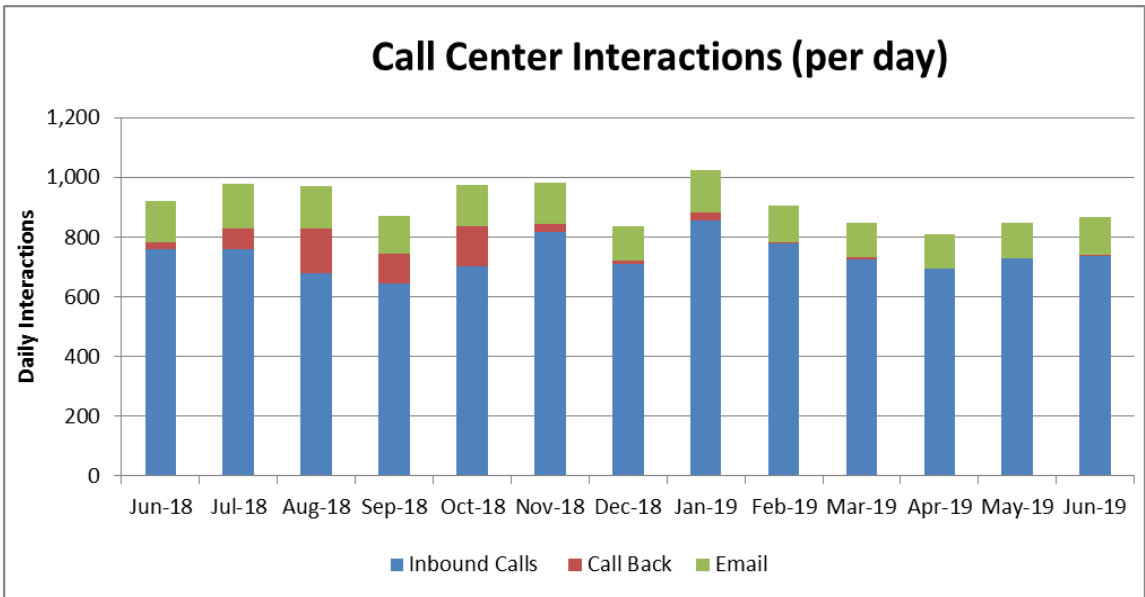
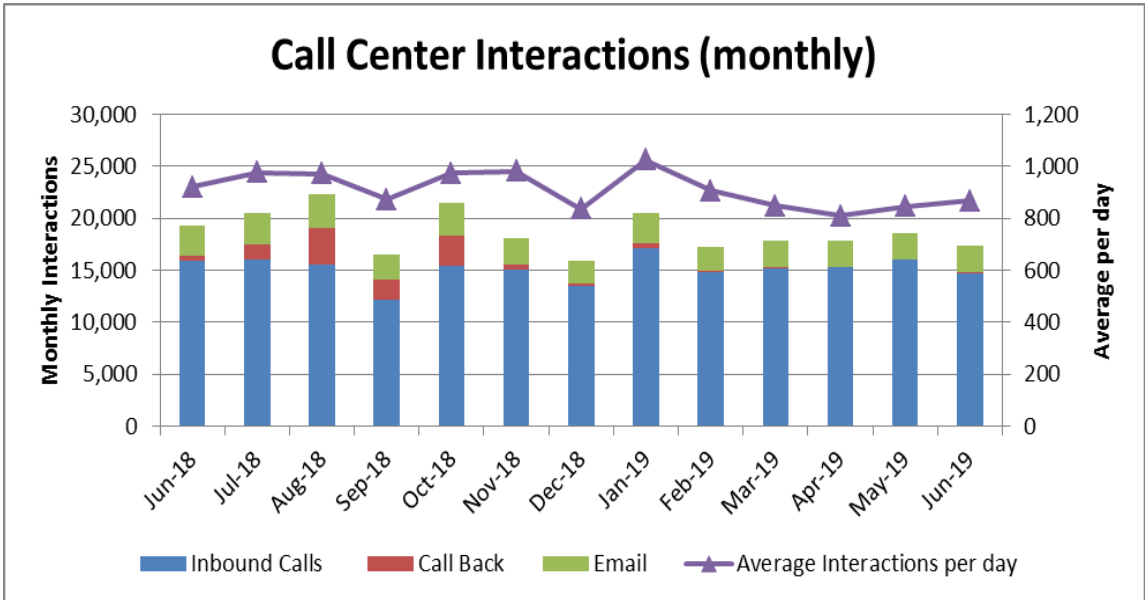
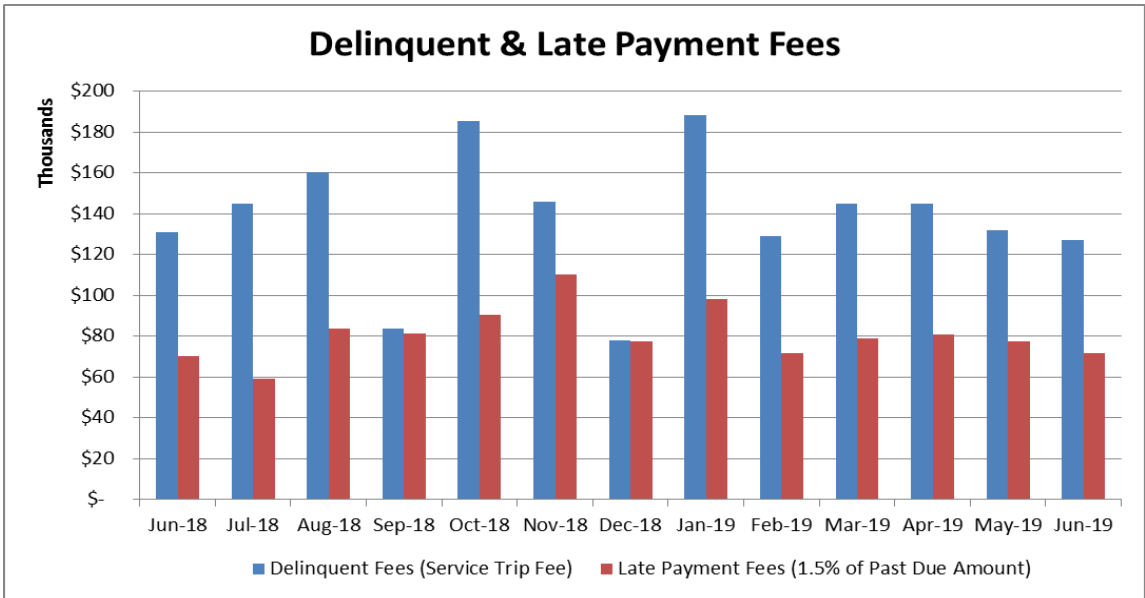


Payment Transactions



Field Activity



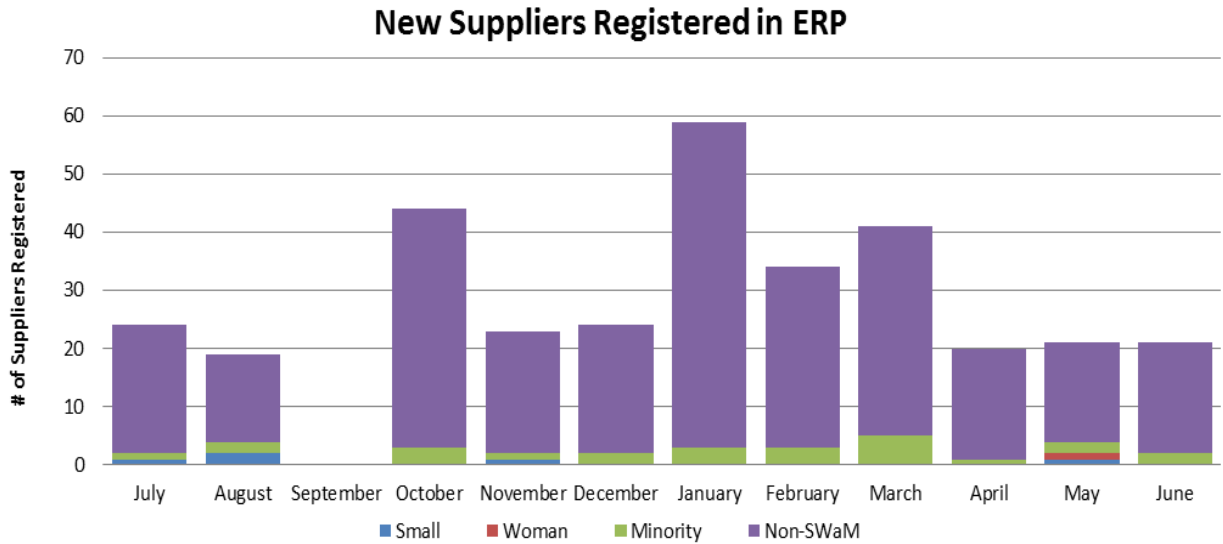


Customer Interaction Statistics	Jan	Feb	Mar	Apr	May	Jun
Calls Answered within 3 minutes	85%	94%	94%	96%	96%	94%
Average Wait Time (seconds)	1:20	0:37	0:39	0:26	0:29	0:40
Calls Abandoned	6%	4%	4%	3%	3%	4%

D. Procurement Statistics

Savings	Current Period	FYTD
Competitive Savings ¹	\$281,855	\$1,867,946
Negotiated Savings ²	\$259,111	\$836,276
Salvage Revenues	\$900	\$141,9446
Corporate VISA Card - Estimated Rebate	\$24,833	\$226,871

*Estimated Rebate FYTD amount corrected due to transactions posting prior to report run.

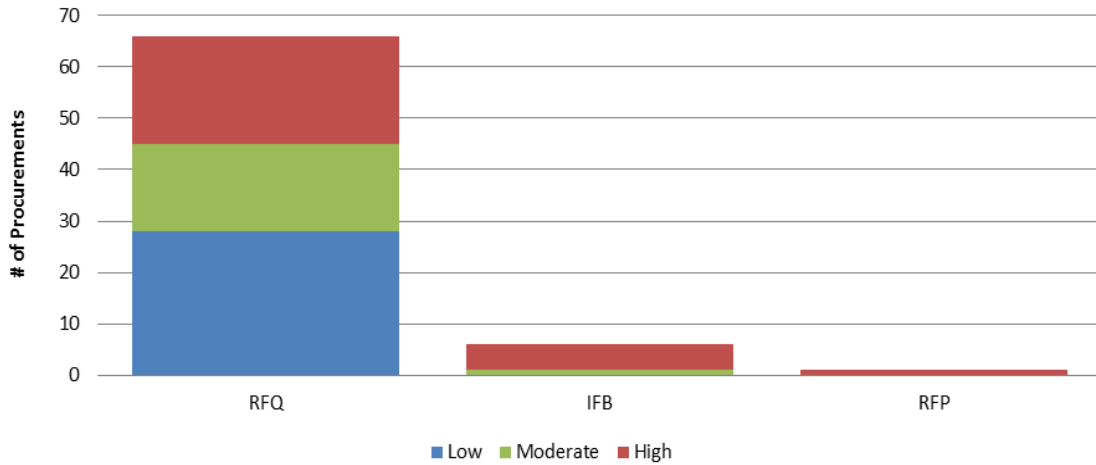


*Increased supplier registration due to supplier outreach at NIGP Forum 8/21/18, Water Jam 9/12/18, WEFTEC 10/2/18, VASCUPP@ SWaMFest 10/4/18, DGS Public Procurement Forum 10/23/18, CNU SWaM Fair 11/7/18, Virginia Beach Minority Business Council Conference and Expo 11/8/18

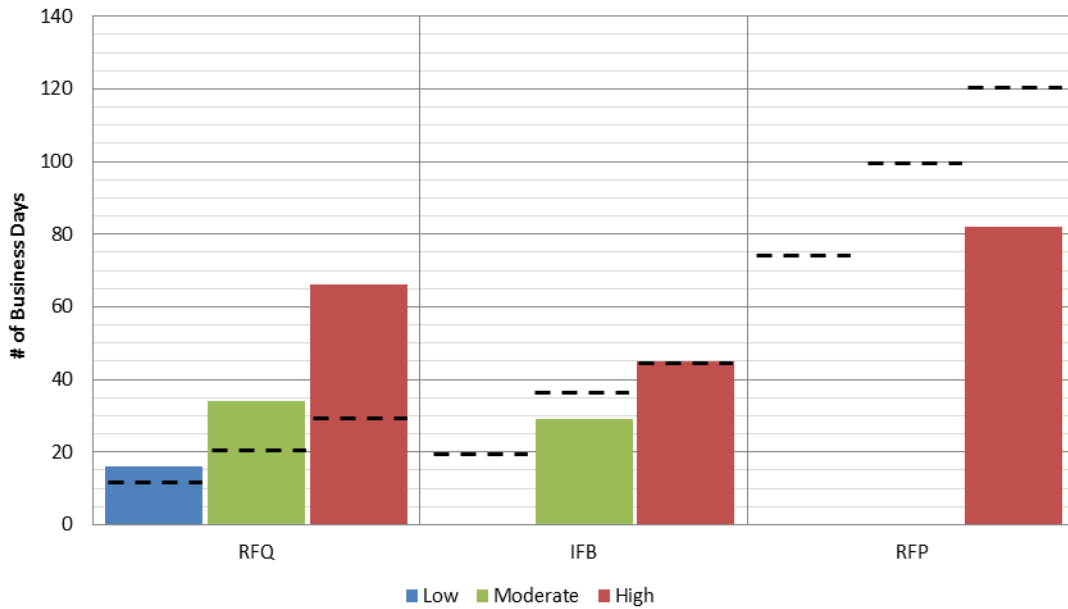
¹ Competitive savings are those savings obtained through the informal/formal bidding process. All bids received (except for the lowest responsive/responsible bid) added together and averaged. The average cost is subtracted from the apparent low responsive/responsible bidder.

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

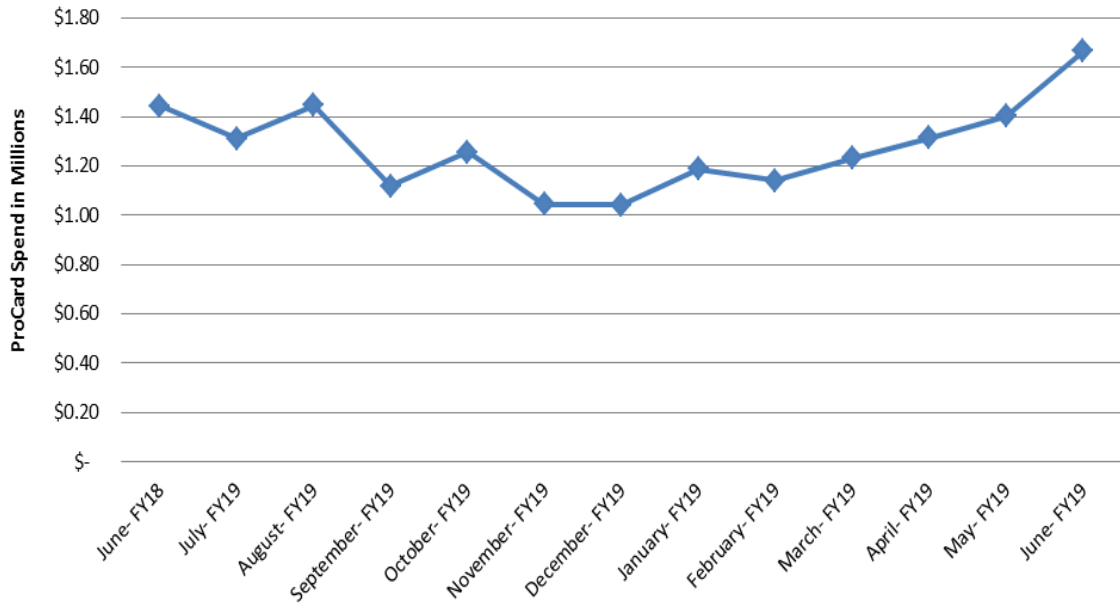


Dashed Line: Target Service Level Cycle Time

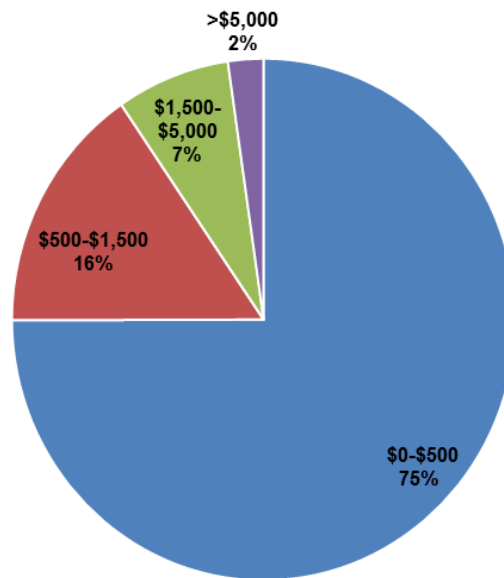
	Low	Moderate	High
RFQ	12	20	30
IFB	20	35	45
RFP	75	100	120

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
April	1	Caught by bank immediately
May	4	Caught by bank immediately
June	5	Caught by bank immediately
Total	25	

***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 1 transaction (0.04%) out of the 2,767 June ProCard transactions, with a total of \$107.04.

Procurement Client Training		
	Current Period	YTD
ProCard Policy and Process	0	38
Procurement Cycle	1	36
Procurement 101- Sole Source	0	32
Procurement 101- Request for Proposal	0	37
Total	1	143

E. Business Intelligence – Enterprise Resource Planning (ERP)

- ERP Helpdesk currently has 153 open work orders in the following statuses:

Escalated	3
In progress	58
On Hold	21
Open	70
Waiting on User	1

- ERP Helpdesk received 273 work orders in June. In June, 301 work orders were closed and 128 were closed within one hour.

3. Members of the BI group and HR staff attended the Oracle HCM User Group World conference to further the development of internal skillsets and maximize the utilization of the HRSD ERP system.

4. Projects

a. Unifier Administrative (Admin) Support

Unifier Admin received 21 work requests with 96 percent resolved.

b. Comprehensive Annual Financial Report (CAFR)/Reporting Software

Staff continued work on implementation of Gravity CAFR Software with Accounting staff. User and Administrator Training continued in June.

c. ERP Enhancements

Solution and estimate has been approved to improve how the system handles the use and processing of FMLA and Short Term Disability related time entry and leave balances.

d. ERP Patching

The team is testing the most recent Oracle RUP 13 patch that includes enhancements, various fixes, and other system updates.

e. Project EVO Initiative - Unifier improvement project

This project will improve HRSD's project management system, Unifier, to provide real-time visibility into budgets and schedules and empower data-driven decisions.

(1) Training for administrators and users of Oracle Primavera P6 has been completed. P6 go-live (Phase 1) will be July 1.

(2) EBS/Unifier high-level design has been completed and approved. Detailed design will begin in July.

(3) The Data warehouse (Panoptra) has been tested and approved. Go-live will be in July pending as bug fix.

(4) Change management and stakeholder communication continues.

F. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0

2. Community Partners: 0

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	June 2019
M-1.4a	Training During Work Hours Per Full Time Employee (101) – Current Month	Hours / #FTE	2.24
M-1.4b	Total Training During Work Hours Per Full Time Employee (101) – Cumulative Fiscal Year-to-Date	Hours / #FTE	32.75
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	100%
	General Reserves	Percentage of Operating Budget less Depreciation	125%
	Liquidity	Days Cash on Hand	615 Days
	Accounts Receivable (HRSD)	Dollars	\$23,789,602
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	16%

4. Annual Metrics

Item #	Strategic Planning Measure	Unit	FY-2019
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	*
M-4.3	Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow	*
M-4.4	Affordability	6.5 CCF Monthly Charge/Median Household Income ³	*
M-4.5	Operating Cost/MGD	Total Operating Expense /365/5-Year Average Daily Flow	*
	Billed Flow	Percentage of Total Treated	*
	Senior Debt Coverage	Cash Reserves/ Senior Annual Debt Service	*
	Total Debt Coverage		*

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

³ Median Household Income is based on the American Community Survey (US Census) for Hampton Roads

TO: General Manager
FROM: Director of Information Technology
SUBJECT: Information Technology Department Report for June 2019
DATE: July 10, 2019

A. General

1. Technical design and interface development work has begun on the improved integrations between Unifier and the ERP system. This is a combined effort between multiple vendors, ITD and Finance.
2. ITD is working with Engineering's Planning and Analysis (P&A) Division to complete the OSI PI Vision software security upgrade.
3. Work also continues with Industrial Automation and P&A on a project to bring additional sensor data from EDS into PI.
4. Staff is upgrading the SAP Business Objects reporting software to the latest version, 4.2. Migration of data is complete, and testing is being conducted prior to promoting the upgrade into production.
5. Several ITD staff developed and presented a cybersecurity awareness class as part of this year's Teaching & Learning Week.

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	June 2019
M-1.4a	Training During Work Hours Per Full-Time Employee (45) – Current Month	Total Training Hours / # FTE	1.97
M-1.4b	Total Training During Work Hours Per Full-Time Employee (45) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	34.65
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 June 2019
DATE: July 8, 2019

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

- a. The programming changes at Coliseum Pressure Reducing Station (PRS) and Off-Line Storage tank were finalized and tested this month. This effort is intended to utilize the 2.5 million gallon (MG) tank on a daily basis to balance or “flat-line” average daily flows going to the York River Treatment Plant (YRTP). Previously, the facility had only been used as storage in the interceptor system during heavy wet weather events. Preliminary results demonstrated treatment advantages at YRTP. Testing continues, but the anticipation is that by utilizing the tank during dry weather we can improve treatment at YRTP and potentially reduce operating and capital costs.
- b. The Washington Street Pump Station (PS) beautification project reached substantial completion this month.
- c. Staff supported the Small Communities Division with the review of numerous development projects, development of in-house design efforts, and inspections.

2. South Shore (SS) Interceptor Systems

- a. There were four interceptor complaints reported this month. One was a City of Suffolk system issue, one a City of Chesapeake issue, and one York County system issue. A motorist in Portsmouth reported a missing valve lid. Staff lowered the valve casting and replaced the lid.
- b. Staff responded and resolved 17 system alarms this month.
- c. Staff assisted the Chesapeake-Elizabeth Treatment Plant (CETP) and Nansemond Treatment Plant (NTP) by removing grease and other debris from their facilities.

- d. On June 22, staff operated a system valve on Rosemont Road to assist the City of Virginia Beach. After the project was completed, staff tried to re-open our valve but found the stem had broken. When staff attempted to isolate the broken system valve with a system valve near Little Neck Road they discovered a faulty gearbox making that valve inoperable. Staff repaired the valves. The work was performed over two nights when system flows were low and to minimize any traffic impacts.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Contractor conducted performance testing and optimization on seven aeration blowers to stabilize the aeration process and minimize power consumption. Staff optimized the blower operation due to blowers cycling on and off with the previous settings, thus resulting in a reduction in power consumption.
- b. Contractor installed new retractable hand rails for the aeration blowers and the gravity belt thickeners. The retractable hand rails will allow for the safe loading and removal of equipment.
- c. Staff successfully secured caustic feed utilized to control alkalinity in the aeration tanks. A pH probe was installed to measure and control the secondary clarifier pH. The strategy resulted in cutting off the caustic. Caustic addition will most likely be required in the winter months, when the raw influent alkalinity drops. Staff has been trained on monitoring the secondary pH, and how to respond to low pH events. A functional description has been written and submitted to the Industrial Automation Programmers to automate the system.
- d. Staff optimized the foam removal system on the secondary clarifiers by reducing the amount of spray water in the foam troughs. This change reduced the run time of the foam pumps at the secondary clarifiers and at the gravity belt thickeners. It also reduced the amount of recycle flow to the head of the plant.
- e. Staff replaced a torn filtration belt on a gravity belt thickener.
- f. Staff relocated several electrical panels and transformers in the Administration Building.
- g. Staff programmed the dewatering polymer system to operate through the Distributed Control System (DCS).

2. Atlantic Treatment Plant (ATP)

- a. Construction of the Thermal Hydrolysis Process (THP) continues. The monorail and host were installed in the pre-dewatering building for the centrifuges. The two rebuilt centrifuges from James River Treatment Plant (JRTP) and Nansemond treatment Plant (NTP) were delivered and installed. Work continues on the block and side panels to the pre-dewatering building. Contractors continued work on the steam boiler piping installation as well as the HVAC systems and electrical upgrades. Work also continues on the Fats, Oil, and Grease facility.
- b. Staff is in the process of making upgrades in the aeration tanks to be able to run the process in Dissolved Oxygen (DO) control. This would allow the blowers to run while using less power by setting the DO at an optimal set point. Currently, the blower runs at a constant speed, which results in supplying more air to the aeration process than what is needed. By running in DO control, the blower will increase and decrease speed to meet the set points, thus saving power. We are currently testing this in one of the Aeration tanks and are planning on expanding this to two more tanks once all of the parts are onsite.
- c. Staff installed new fiber lines for the scale house camera.
- d. The mixers for digesters 1 & 2 (eight in total) were pulled and sent out for sandblasting and recoating. Three have been returned.

3. Boat Harbor Treatment Plant (BHTP)

- a. Plant staff began the process of re-establishing Nitrification at the beginning of June.
- b. Staff performed incinerator rotation to unit 2 to facilitate required maintenance and repairs of unit 1.
- c. Staff completed installation of new polymer mixing system and tied into DCS.
- d. Contractors replaced mixer support frames on both solids holding tanks.
- e. Contractors completed installation of the waste activated biosolids piping to bypass deteriorated underground piping.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

- a. Staff staged a large parking area behind the preliminary treatment facility for future use for the SS vehicles once the parking at the main office complex becomes more constrained with the construction of the new Water Quality building.
- b. Contractors installed LED lighting in the preliminary treatment facility and the scum building.

5. James River Treatment Plant (JRTP)

- a. There were two odor control events this month. The first event occurred when the sewage treatment scrubber fan was taken off-line for more than one hour to perform electrical work. The second event occurred when a belt failed on the solids handling scrubber fan.
- b. Staff replaced the #2 gravity belt thickener belt and hydraulic pump, and the #1 digester transfer pump check valve. Staff also drained and cleaned the #1 and #3 contact tanks and cleaned the weirs on the #5 secondary clarifier.
- c. With improved biological phosphorus removal, struvite buildup at various locations throughout the plant has increased. Staff cleaned out struvite from both the ANITA-Mox feed pumps and jet rodded the discharge lines. Struvite build up was found in a centrifuge for the first time since centrifuge operations began in 1996. The struvite formation kept the centrifuge from properly operating and necessitated removing the cover and rotating the assembly to jack hammer out the struvite.
- d. Staff spent considerable time testing and troubleshooting the #3 centrifuge to determine failure of its control program.
- e. The centrifuge replacement contractor constructed concrete forms and doveled into the existing concrete floor to prepare for installation of reinforcing bar and pouring concrete. Their electrical subcontractor removed old conduit and installed new power supply conduit.

6. Nansemond Treatment Plant (NTP)

- a. On June 16, there was a significant treatment upset. We believe the upset was caused by an illicit discharge from an industry within the service area, which caused an inhibition of Phosphorus uptake throughout the secondary treatment process. The Water Quality Department was notified but was unable to track down the source. The upset resulted in a single day 28.6 milligram per liter (mg/l) effluent Total Phosphorus value and a monthly average of 2.12 mg/l.
- b. As a result of the treatment upset, the influent turbidity critical control point was changed at the SWIFT Research Center alarm with alert values from 15 and 20 NTU to 3.5 and 5 NTU, respectively.
- c. The total volume of SWIFT recharge into the Potomac aquifer for the month of June was 14.94 MG.
- d. Staff re-piped the Odor Control chemical feed system (Sodium Hypochlorite).
- e. On June 6, staff started “stressing” the primary clarifiers. “Stressing” the primary clarifiers is when the number of primary clarifiers in service is just enough to allow for minimal solids and Biochemical Oxygen Demand (BOD) removal. The reason for stressing the clarifiers is to allow for more BOD, (a food source for microorganisms), to stay in the wastewater stream to the aeration tanks. The microorganisms will consume the additional BOD, reducing the need to add high volumes of methanol to be added. This strategy has resulted in a 60 percent reduction in supplemental carbon usage.
- f. Plant staff discovered an inoperable sluice gate between the Anaerobic, Anoxic, or Aerobic (AAA) Tank #3 and the Aeration Influent channel. Since it is impossible to empty the aeration influent channel, divers unsuccessfully attempted to break the gate free. Next steps will likely be to cut out and replace the gate.
- g. A corrosion testing rig for the ozone contactor was installed at the research center with different coupons to evaluate the performance of five different alloys that can potentially be used as a replacement of the existing contactor.

- h. The biological activated filters are almost done acclimating. Nitrite (NO₂-N) was at non-detect levels after June 21 indicating complete nitrification, additionally, manganese (Mn) is down to 3.6 mg/L (during startup Mn was ~35 mg/L).
- i. Arsenic levels at MW-SAT are decreasing and all June data was below the maximum contaminant levels.

7. Virginia Initiative Plant (VIP)

- a. Staff continues rehabilitation work on one primary clarifier.
- b. Staff removed one aeration tank and one secondary clarifier from service and cleaned, inspected, and performed annual planned maintenance activities on both tanks.
- c. Staff assisted contractors with clearing floor drains in the incinerator building, rerouted the first floor sanitary drain system and installed a motor-actuated makeup water valve for the scrubber recirculation tank.
- d. Staff is lowering dissolved oxygen levels in anticipation of ammonia-based air control.
- e. The Nutrient Reduction Improvement Upgrade Project is nearly complete. Contractors are focusing their efforts on installing a new motor control center at the chemical storage area, installing access platforms at the band screens, demolishing the old influent junction boxes, site grading and cleanup and punch-list completion.

8. Williamsburg Treatment Plant (WBTP)

- a. Staff used the short outfall as part of diffuser maintenance activities this month.
- b. Staff continued replacement of corroded aluminum walls separating different zones of the nutrient removal process in aeration tank #2. Walls were replaced with materials made of fiberglass and polyvinyl chloride (PVC).

9. York River Treatment Plant (YRTP)

- a. There was one reportable wastewater event and no odor deviations. The wastewater event resulted in a loss of approximately 3,000 gallons of non-potable water down a storm drain after a contractor broke an unground pipeline. Staff performed routine maintenance and the repair.
- b. A contractor has started work on repairs to the #3 secondary clarifier spur gear.

10. Minor Incinerator Operations Events Summary

There were six deviations from the required Sewage Sludge Incineration Rule minimum operating parameters and eight minor (less than 60 minutes) non-reportable bypass events this month.

C. Small Communities (SC)

1. Middle Peninsula Small Communities Treatment and Collections

a. West Point Treatment Plant (WPTP)

On June 28, there was a significant treatment upset. The WestRock Paper Mill accidentally introduced some of their industrial waste from a seal pit into their domestic sanitary waste pump station which, in turn, was released into the HRSD collection system. After noticing blackish brown flow coming into WPTP, staff immediately diverted flow to the offline storage pond until the next day to allow the pH of the influent to come down. Due to this non-permitted industrial discharge having an abnormally high pH, this caused a permit exceedance of the FNE pH value. On June 30, process samples showed the effluent pH had returned to under the permit limit.

b. Urbanna Treatment Plant (UBTP)

The design effort for the UBTP Reliability Improvements CIP continues; this design effort will occur over the next six months to allow for the increased Bethpage Campground flow and additional nutrient loading.

c. Central Middlesex Treatment Plant (CMTP)

A new automated bar screen was ordered for the plant. The majority of this equipment cost will be reimbursed by the Regional Jail Facility.

d. King William Treatment Plant (KWTP)

During the last week of June, the required frequency of cBOD sample analysis for the KWTP Outfall 1 was not met. A cBOD sample was collected on June 27, but the cBOD analytical result was flagged by the Central Environmental Laboratory with the designation IA1 (quality control data outside of acceptance limits). This designation determines the analytical result invalid. Although the result was well under the permit limit, it was not included in the monthly average calculation. Reuse water was sent to Nestle-Purina for six calendar days during this week, allowing for only one outfall sample day; therefore, additional samples could not be collected. The permit requires two cBOD samples per week only when Outfall 1 is utilized for two or more days.

e. Matthews Systems

The Mathews Vacuum System Pump Station Replacement project continues. Piles for the foundation were installed and formwork began for the concrete walls and foundation. The construction on this project will last approximately one year.

2. Small Communities – Surry Systems

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

3. Small Communities - Lawnes Point

There were four pump and haul operations of the Lawnes Point Treatment Plant.

D. Support Systems

1. Automotive

a. Staff performed load bank tests at Suffolk (PS), Bayshore PS, and Bridge Street PS. 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.

- b. Standby generators at BHTP and NTP will be used to supply electric power during peak utility demand. This program requires the generators to be retrofitted with exhaust catalysts to meet emissions standards for use in excess of one hundred hours. The warranty requirements for the catalysts and treatment plant air quality permits require ultra-low sulfur diesel fuel (15 parts per million). As a result, all treatment plant standby generator fuel tanks were tested using American Society for Testing and Materials (ASTM) standards for sulfur content. The results found two storage tanks at ATP and YRTP exceeded the allowable sulfur limits. Staff believes the cause of the higher sulfur levels is from older fuel sources that allowed higher sulfur concentrations. Following recommendations by the Virginia Department of Environmental Quality (DEQ), staff has ceased using the fuel and is exploring options to remove it from the two tanks. These tanks will be cleaned and filled with ultra-low sulfur diesel fuel.

2. Condition Assessment

- a. A gravity inspection contractor completed Closed-Circuit Television (CCTV) inspection of 9,524 Linear Feet (LF) for South Shore Interceptors (SS INT) and 17,102 LF for Small Communities Division (SCD). The contractor inspected 81 manholes for SS INT and 106 manholes for SCD.
- b. Coatings work continued BHTP secondary clarifiers and NTP aeration tank #5 ductile iron pipe.

3. Facilities Maintenance

- a. Renovations of the NTP solids handling locker rooms are now complete.
- b. Staff rebuilt three pumps, Terminal PS #2, Cedar Lane PS #3 and Atlantic Treatment Plant Drain Pump Station pump.

A. Electrical and Instrumentation

1. Staff relocated three power panels at ABTP. Work involved coordinating a power outage of the administration building, rerouting of circuits to their new respective power panels and testing.
2. Staff worked with a contractor to test and inspect the emergency generator and control systems at ABTP and ATP. The generators operated as designed.
3. Staff worked with a contractor to test and inspect the medium voltage blower switchgear, breakers and starters at ATP.
4. Staff coordinated four ATP power shutdowns to accommodate the installation of six new 480 volt (V) buckets that could not be bypassed for installation.
5. Staff completed the installation of underground conduit from the Electrical and Instrumentation shop server to the Scale House at ATP. All network and power wiring to the Scale Operator panels were replaced. Staff also worked with the Information Technology Department to correct various Internet Protocol issues that arose with the upgrade of the network server and switch.
6. Staff worked with a contractor on exhaust modifications and monitoring equipment to generators for the new power curtailment program for BHTP and NTP.
7. Staff installed six new Hach probes and a Telog sensor to the influent section of the aeration tanks for the DO project at CETP.
8. Staff worked with a contractor to test and inspect the medium voltage emergency generator and control system at CETP. The generators are operating as designed.
9. Staff worked with a contractor to repair the local Human Machine Interface (HMI) at the standby generator paralleling switchgear at NTP. The HMI graphics were not properly displaying and refreshing. The contractor installed the correct software and the HMI's graphics and functionality were restored.
10. Staff completed the installation wiring and programming on the DCS of the three actuators on the three hypo-chlorite holding tanks at YRTP.
11. Staff continues to design and research a nitrate and nitrite (NO_x) wet chemical analyzer with promising results. This analyzer has a unique

method using vanadium in solution for nitrate analysis. The analyzer was moved from WBTP to JRTP for secondary clarifier testing. The analyzer accuracy is excellent.

12. Staff worked with a contractor to test and inspect the emergency generator and control systems at Rodman Pump Station (PS) and 1434 Air Rail Avenue. Reports have been received and indicate generators are operating as designed.
13. Staff responded to 24 Supervisory Control and Data Acquisition (SCADA) communication failures and six Telog communication failures. A communication failure is defined as a total loss of communication at a site that requires staff to respond to the site.

B. Water Technology and Research

Highlighted Project: Activities associated with the restart of the SWIFT Research Center (SWIFT RC) are coming to an end. Remaining work includes:

- Minor electrical issues to be sorted out with ozone generator #2
- Softened water booster pump installation for the monochloramine generation system
- Recoating of GAC contactor #2 and filling that contactor with virgin GAC
- Coating and repair of submersible pumps (GAC feed, backwash, and drain)
- Final repair of UV effluent flow control valves

As this work is wrapping up, staff will transition the SWIFT RC into a mode of attempting to achieve consistent recharge with minimal downtime and “off-spec” periods, as well as special testing in support of full-scale SWIFT facility design. For the former, this primarily involves a careful evaluation of instrument and equipment reliability associated with critical control points. For the latter, the following testing is planned:

- Full-scale testing of sedimentation tank Lamella plate loading rate to evaluate the impact on settled water turbidity and total organic carbon (TOC)
- Full-scale testing of dissolved oxygen stripping to evaluate the impact on filter bumping requirements
- Full-scale testing of bromate control approaches and evaluation of maximum seasonal leachate loading
- Full-scale testing of GAC contactor loading rate control and GAC effluent blending for effluent TOC management (impact on emerging contaminant removal)
- Pilot testing of direct filtration
- Pilot testing of enhanced 1,4-dioxane removal through biofiltration
- Soil column testing for emerging and conventional contaminants

C. 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	5	4	0
2.7	# of PS Annual PMs Performed (SS)	6	3	5	4	6	3	5	6	6	6	0	0
2.7	# of Backup Generator PMs Performed (Target is 4.6)	6	19	7	8	10	6*	11	11	12	8	11	6
2.8	# of FM Air Release Valve PMs Performed (NS)	128	33	124	268	213	191	181	42	176	130	228	194
2.8	# of FM Air Release Valve PMs Performed (SS)	193	221	222	275	161	230	225	326	265	304	284	116
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	2,334	1,361	1,587
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	8,525	6,432	8,808
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	0	0	9.524

*Adjusted monthly total

D. Strategic Measurement Data

1. Education and Outreach Events: 14

- a. 6/3/19: Tour of Swift for city of Roseville, CA – Tour conducted by Charles B
- b. 6/8/19: Demarius Howe attended Home Educators Association of Virginia (HEAV) job fair in Richmond, VA
- c. 6/11/19: Eric Horton attended career day at Hidenwood Elementary School in Newport News, Virginia
- d. 6/13/19: Tour of Swift for City of Chesapeake Stormwater Committee – Tour conducted by Tony R. and Bruce W.
- e. 6/14/19: Tour of Swift for VWEA (Virginia Water Environment Association) and AWWA (American Water Works Association) – Tour conducted by Christel D.
- f. 6/15/19: Podium Presentation on SWIFT Research Center, AWWA ACE Conference, Samantha Hogard and Stefania Hurtado
- g. 6/17/19: Tour of NTP for Teacher Open House and Workshop – Tour conducted by Tim S
- h. 6/18/19: Tour of Swift for Prince William County Service Authority – Tour conducted by Lauren Z
- i. 6/19/19: Podium Presentation on SWIFT Research Center, IWA Reuse Conference, Samantha Hogard
- j. 6/19/19: Tour of Swift for VCWFAP (Virginia Department of Environmental Quality Clean Water Finance Group) and Quarterly Loan Progress meeting – Tour conducted by Lauren Z
- k. 6/20/19: Tour of Swift for Virginia Beach Department of Parks and Recreation – Tour conducted by Tony R.
- l. 6/21/19: Tour of Swift for Virginia Port Authority – Tour conducted by Charles B.
- m. 6/28/19: Tour of Swift for Virginia Department of Health – Tour conducted by Charles B
- n. Gloucester Job Fair – Small Communities

2. Community Partners: 4

- a. VIMS
- b. ODU
- c. Chesapeake Bay Foundation
- d. Clean the Bay Day – Small Communities

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	June 2019
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (516) – Current Month	Hours / FTE	4.71
M-1.4b	Total Training During Work Hours per FTE (516) – Cumulative Year-to-Date	Hours / FTE	36.11
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	27,772
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	58%
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	17%
M-2.3d	Planned Maintenance - Projects	% of Total Maintenance Hours	25%
M- 4.1a	Energy Use: Treatment *reported for April 2019	kWh/MG	2,263
M-4.1b	Energy Use: Pump Stations *reported for April 2019	kWh/MG	144
M-4.1c	Energy Use: Office Building *reported for April 2019	kWh/MG	85
M-5.2	Educational and Outreach Events	Number	14
M-5.3	Number of Community Partners	Number	4

4. Annual Metrics

Item #	Strategic Planning Measure	Unit	FY-2019
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours(average)	31,542.80
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours (average)	58.70%
M-2.3c	Planned Maintenance-Corrective Maintenance	% of Total Maintenance Hours (average)	18.07%
M-2.3d	Planned Maintenance-Projects	% of Total Maintenance Hours (average)	27.19%
M-3.6	Alternate Energy	Total KWH	*
M- 4.1a	Energy Use: Treatment	kWh/MG	*
M-4.1b	Energy Use: Pump Stations	kWh/MG	*
M-4.1c	Energy Use: Office Building	kWh/MG	*

Respectfully submitted,
Steve de Mik
 Director of Operations

TO: General Manager
FROM: Director of Talent Management
SUBJECT: Monthly Report for June 2019
DATE: July 10, 2019

A. Human Resources (HR)

1. Recruitment Summary

New Recruitment Campaigns	17
Job Offers Accepted – Internal Selections	5
Job Offers Accepted – External Selections	18
Internal Applications	25
External Applications	115
Average Days to Fill Position	65

Ten Hampton Roads Public Works Academy cadets were recruited for summer internships at eight work centers.

2. Enterprise Resource Planning (ERP)

- a. HRSD worked with the Managed Services consultant on updates to system setup for three benefit interfaces.
- b. Fiscal Year 2020 (FY20) pay table and position changes were completed.
- c. The HR Business Analyst attended the Oracle Human Capital Management Users group meeting to obtain information and provide feedback on HR applications.
- d. Staff worked with Oracle Support on iRecruitment notifications and pay table updates.
- e. Support was provided to track Ethics Policy employee acknowledgement and disclosure forms.

3. Benefits and Compensation

- a. Director of Talent Management worked with Director of Communications to finalize a fact sheet summarizing the 2018 Compensation Study and FY2020 Compensation Plan.
- c. The Compensation and Classification team evaluated positions based on Department requests, Compensation Study results and budget proposals.
- d. Employee discount information was posted on SharePoint.

4. Wellness

- a. Participation Activities

Year Six Participation Activities	Unit	June 2019	Year to Date (March 2019–February 2020)
Biometric Screenings	Number	1	5
Preventive Health Exams	Number	3	17
Preventive Health Assessments	Number	11	45
Coaching Calls	Number	0	0
On-Line Health Improvement Programs	Number	14	73
Web-MD Online Health Tracking	Number	103	359
Challenges Completed	Number	0	0
Fit-Bit Promotion	Number	8	39

- b. The Wellness Specialist began contacting fitness centers to update and obtain membership discount information for HRSD employees.
- c. The Wellness Specialist presented two topics (four sessions) on *Mindfulness* and *Going Green* for Learning Week.

5. Workers Compensation

Two new cases were opened with eight cases remaining active.

6. Employee Relations

- a. Staff continued to partner with work center supervisors and employees to support employee relations and address HR issues. Staff participated on interview panels for Finance and assisted Operations and Water Quality with job requirements.
- b. Several on-site Employee Assistance Program (EAP) post-tragedy support sessions were held and resource information was distributed in response to the City of Virginia Beach tragedy.

7. General

- a. Social Media Policy training for supervisors was planned for July.
- b. Staff participated in the following HRSD activities:
 - (1) Pretreatment and Pollution Prevention (P3) Awards Luncheon
 - (2) SharePoint Governance team meeting
- c. Staff participated in the following training:
 - (1) Employment Equal Opportunity Commission Training
 - (2) Learning Week
 - (3) Society of Human Resources Management's Annual Conference
 - (4) *Your Role in Quality* training as an instructor

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).
- b. Staff completed the Workcenter Planning Day schedule. The Quality facilitator team will begin practice sessions in July.
- c. The Organizational Professional Services Request for Proposal (RFP) team continued the selection process.

- d. The following programs were held:
 - (1) *Your Role in Quality*- half day
 - (2) *Learning Week- Alert, Aware and Always Ready*
- e. Work continued with the Administrative Workcenter Planning Day team.
- f. Staff worked with the Customer Care Center supervisors on a team- building initiative and exercises for their Workcenter Planning Days.
- g. Learning Week 2019 was a success with a significant increase in attendance. 166 participants engaged in learning week activities.

2. Apprenticeship Program

- a. The Learning Management System team worked with Procurement on the final contract and implementation schedules.
- b. Staff continued planning the Apprenticeship Program graduation and 40th Anniversary celebration. A picnic for graduates and their families and supervisors was held at the Nansemond Treatment Plant (TP).
- c. The Apprenticeship Committee met to address issues related to Apprenticeship Math policies, curriculum and testing requirements.
- d. Pre-Apprenticeship Orientation for new apprentices was held to review the Apprenticeship Manual and Course catalog and to administer placement exams. Presentations were given by EAP staff on Financial Wellness and Stress Management and by OD&T staff on *Successful Strategies for the Adult Learner*.

3. General

- a. Two new Workplace Facilitators and a Team and Problem Solving Facilitator were selected.
- b. Staff participated in Mentor Coach's *Individual Intensive Coaching*

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	11
Lost Time Mishaps	6	3
<i>Numbers subject to change pending HR review of each case.</i>		

b. MOM Program Year Performance Measure Work Related Injuries

June 2019 Injuries For Operations	June 2019 Injuries for Other HRSD Departments	Total Lost Time Injuries Since July 2018	Total HRSD Injuries Since July 2018
2	0	5	39

c. Follow-up investigations were performed on two reported work-related injuries.

2. HRSD Safety Training

Strategic Planning Measure	Unit	June 2019
Total Safety Training Hours per Full Time Employee (836) All HRSD – June 2019	556 Hours / 836 FTE	0.67
Total Safety Training Hours Per Full Time Employee (836) – Cumulative July 2018	4828.11Hours / 836 FTE	5.78

3. In addition to regularly scheduled safety training and medical monitoring, the following sessions were conducted:

a. Six external briefings for contractors working at Treatment Plants (TP) and pump stations

- b. Forklift Safety training for South Shore Interceptors and Boat Harbor TP employees
 - c. Chainsaw Safety Training for York River TP employees
 - d. Hazardous Communication and Safety Data Sheet training for custodial staff
 - e. Former Nansemond Ordnance Depot property training for a Right of Way contractor
 - f. Overhead Crane Safety training for North Shore Electrical employees.
 - g. Industrial Hygienist developed a new Excavation/Trenching presentation.
4. Safety Inspections, Testing and Monitoring
- a. Weekly on-site inspections of the following construction sites:
 - (1) Army Base TP
 - (2) Atlantic TP
 - (3) Boat Harbor TP
 - (4) Laskin Road Pump Station (PS)
 - (5) Luxembourg Avenue PS
 - (6) Pine Tree PS
 - (7) Shipps Corner PS
 - (8) 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 PSs
 - (4) South Shore Carpentry, Machine, Automotive and Electrical Shops
 - (5) South Shore Interceptors
 - (6) Williamsburg TP

- c. Monitoring and testing for the following:
 - (1) Monthly velocity tests on Central Environmental Lab (CEL), Technical Services Division (TSD) and SWIFT Research Center (SWIFT RC) lab hoods
 - (2) Velocity test on a VIP lab hood
 - (3) Sound level survey of the Greensprings PS
 - (4) Chlorine level check within the CEL

- d. Safety walk-throughs and evaluations:
 - (1) Final safety walk-through of Washington PS repairs with North Shore Interceptor and Electrical staff
 - (2) Escorted the new Fire Protection vendor throughout the Air Rail complex for annual fire extinguisher inspections

- e. Safety Manager and Industrial Hygienist met with Virginia Occupational Safety and Health Administration (VOSH) Voluntary Compliance Inspector for inspection of contractors working at Providence Road, Laskin Road and Pine Tree pump stations.

- f. Industrial Hygienist met with South Shore Interceptor supervisors to discuss pump station dry well ventilation survey results.

5. Safety Programs

- a. As part of National Safety Month, Atlantic TP and South Shore P3 received the 2019 Safety Innovation awards. Atlantic TP modified primary clarifier covers and South Shore P3 modified sample collection drums to improve work safety.

- b. Safety Manager worked with Engineering and the Safety team to develop a Main Office Emergency Guide for visitors.

- c. The following was performed for the Respiratory Protection Program:
 - (1) Make-up pulmonary function and respirator fit testing for employees from all work centers at the Main Office
 - (2) Distributed testing results to employees
 - (3) Pulmonary function and respirator fit testing at Small Communities

- d. Confined space entry permits were reviewed for North and South Shore Interceptors.

- e. Audiometric testing was performed for Small Communities employees.
- f. Safety Shoe guidelines were updated and distributed.
- g. Multiple hot work permits were issued to contractors working at Laskin Road, Luxembourg Avenue, Norchester and Shipps Corner pump stations.
- h. The following was performed for the Electrical Safety Program:
 - (1) Work with the Electrical and Instrumentation staff on program updates based on National Fire Protection Act (NFPA) 70E requirements
 - (2) Developed a new Electrical Job Safety Assessment form
 - (3) Began developing an Electrical Arc Flash Risk Matrix.
- i. The Safety Coordinator continued maintaining the Operations Safety Accident Tracking report.
- j. Main Office Automated External Defibrillators were inspected.

6. General

- a. A response was developed and submitted to the insurance carrier for risk control assessments of North Shore Operations and York River and Lawnes Point TPs.
- b. Safety, Talent Management, Finance and Operations staff met with HRSD's insurance broker and carrier representatives to review fleet safety policies and practices.
- c. Safety Manager met with vendor to discuss new chemical delivery requirements for several TPs.
- d. The Safety Program internal audit continued. Meetings were held with SC&H staff to address questions, provide documentation and finalize the fieldwork phase.
- e. Safety Manager and a Human Resources Business Partner investigated a reported workplace violence incident.

- f. The Safety Team met to address the following:
 - (1) Safety Innovation Awards
 - (2) Recent Virginia OSHA Voluntary Compliance Inspections
 - (3) Safety Shoe Guide
 - (4) Main Office Emergency Guide for Visitors
- g. A tick safety information pamphlet was distributed to North and South Shore Interceptors and Small Communities work centers.
- h. Staff updated safety training ERP records.
- i. Staff continued updating the Medical Provider RFP for employee physicals and testing.
- j. Industrial Hygienist attended Greater Tidewater American Society of Safety Professionals meeting.
- k. Staff attended Outlook software training at Infotec
- l. Safety Manager attended the HRSD Quality Steering Team (QST) meeting to discuss security needs

D. Monthly Strategic Planning Metrics Summary

- 1. Education and Outreach Events: (8)
 - a. 6/6/19 - City of Norfolk Workforce Development Center Career Fair
 - b. 6/6/19 – Former Nansemond Ordnance Depot Meeting
 - c. 6/7/19 – Home Educators Association of Virginia (HEAV) Apprenticeship Job Fair
 - d. 6/12/19 – Career and College Academy at Pruden Advisory Meeting
 - e. 6/13/19 –Chesapeake *Jobs Work* Job Fair
 - f. 6/21/19 – Hosted Hampton Roads Public Works Academy meeting
 - g. 6/22/19 – Virginia Employment Commission (VEC) Middle Peninsula Job Fair and Expo

h. 6/25/19 - Hampton Roads Community Foundation, Talent Alignment Strategy Workshop

2. Community Partners: (8)

a. City of Norfolk Workforce Development Center

b. Former Nansemond Ordnance Depot Committee

c. HEAV

d. City of Suffolk Pruden Center

e. City of Chesapeake

f. Hampton Roads Public Works Academy

g. VEC

h. Hampton Roads Community Foundation

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	June 2019
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.86%
M-1.1b	Employee Turnover due to Service Retirements	Percentage	0.00%
M-1.4a	Total Training Hours Per Full Time Employee (17) – Current Month	Total Training Hours/ FTE	5.72
M-1.4b	Total Training During Work Hours Per Full Time Employee (17) – Cumulative Fiscal Year-to-Date	Hours / #FTE	50.65
M-5.2	Educational and Outreach Events	Number	8
M-5.3	Community Partners	Number	8

4. Annual Metrics

Item #	Strategic Planning Measure	Unit	FY-2019
M-1.1a	Employee Turnover Rate (Total)	Percentage	6.63%
M-1.1b	Employee Turnover due to Service Retirements	Percentage	2.10%
M-1.1c	Employee Turnover Rate within Probationary Period	Percentage	0.25%
M-1.2	Internal Employee Promotion Eligible	Percentage	*%
M-1.3	Average Time to Fill a Position	Calendar Days	66
M-1.5a	Safety OSHA 300 Incidence Rate Total Cases	# per 100 Employees	*
M-1.5b	Safety OSHA 300 Incidence Rate Cases with Days Away	# per 100 Employees	*
M-1.5c	Safety OSHA 300 Incidence Rate Cases with Restriction, etc.	# per 100 Employees	*

*These metrics will be provided at close out of fiscal year

Respectfully submitted,
Paula A. Hogg
 Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for June 2019
DATE: July 11, 2019

A. General

1. Pretreatment and Pollution Prevention (P3) division staff assessed no civil penalties this month.
2. The 26th Annual Pretreatment Excellence and Pollution Prevention Awards Celebration and Luncheon was held on June 6 at the Hampton Roads Convention Center in Hampton, VA. Three industries were honored for their outstanding multi-media pollution prevention efforts. Pretreatment Excellence Awards were presented to 97 permitted facilities who achieved perfect compliance for at least the full calendar year of 2017. Sixteen of those industries were recognized for 10 or more consecutive years of perfect compliance and 22 permittees were recognized for five to nine consecutive years of perfect compliance.

B. Quality Improvement and Strategic Activities

1. The Sustainability Environment Advocacy Group (SEA) reported the following activities for the month of June:
 - a. Oyster Restoration Program – An oyster restoration educational sign has been created and the idea and design were approved by Communications.
 - c. R³ (Reduce, reuse, recycle) Support – Recycle Right PowerPoint presentation was finalized and shared with the SEA team to present to work centers.
 - d. HRSD Interactive Challenge – Designs were presented to SEA and to the QST. The QST selected the Baleen Trash Collector Design as the winner. The winning team has been allotted \$10,000 to build this trash collector at the Boat Harbor Treatment Plant.
 - e. Community Clean-Ups – A clean-up was held at Virginia Beach's Mill Dam Creek on June 25.

f. Learning Week: SEA held an open house event to educate HRSD staff on Lazy Composting, pollinators, Recycling Right, and the use of rain barrels.

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 King George County to support monitoring required for their Virginia Pollution Discharge Elimination System (VPDES) permit.

2. [Municipal Assistance Billed Reimbursements](#) per service collected between April 1 and June 30, 2019 are attached.

3. The [Municipal Assistance Invoice Summary](#) for the second quarter of the 2019 calendar year is attached.

D. Strategic Planning Metrics Summary: 5

1. Educational and Outreach Events:

- a. 06/07/19 - P3 staff participated in Harborfest
- b. 06/14/19 - P3 staff participated in the Leeward Marina outreach event
- c. 06/19/19 – Central Environmental Laboratory staff provided a tour to students of the Commonwealth Challenge Youth Academy
- d. 06/23/19 - P3 and Technical Services Division staff participated in Riverfest

2. Community Partners: 9

- a. City of Chesapeake
- b. City of Hampton
- c. City of Newport News
- d. City of Norfolk
- e. City of Virginia Beach
- f. Virginia Department of Environmental Quality
- g. Virginia Department of Health Division of Shellfish Sanitation
- h. Southeastern Virginia Food Bank
- i. United Way

3. Pretreatment Related System Issues: 1

On June 28, West Rock paper mill discharged high pH wastewater as a result of a process wastestream entering an unused pit and then being pumped into a domestic waste pit. Investigation by the paper mill continues. The West Point Treatment Plant was impacted; the unauthorized discharge from West Rock resulted in an effluent pH that exceeded the permit limit. A portion of the raw influent affected by the West Rock discharge was diverted to the plant's holding pond and is being properly disposed of outside the HRSD system. Appropriate enforcement actions are being taken.

4. Monthly Metrics

Item #	Strategic Planning Measure	Unit	June 2019
M-1.4a	Training During Work Hours Per Full Time Employee (109) (Current Month)	Total Hours / # FTE	7.89
M-1.4b	Total Training During Work Hours Per Full Time Employee (109) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	69.39
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	2:60,879
M-3.2	Odor Complaints	#	0
M-3.4	Pollutant Removal	Total Pounds Removed	187,612,572
M-3.5	Pollutant Discharge	% Pounds Discharged/ Pounds Permitted	19%
M-5.2	Educational and Outreach Events	#	4
M-5.3	Community Partners	#	9

Item #	Strategic Planning Measure	Unit	June 2019
	Average Daily Flow	Total MGD for all Treatment Plants	144.82
	Pretreatment Related System Issues	#	1

5. Annual Metrics

Item #	Strategic Planning Measure	Unit	FY-2019
M-3.3	Carbon Footprint	Tons per MG	*
M-4.2	R & D Budget	Percentage of Total Revenue	*%
M-5.4	Value of Research	Number	*
M-5.5	Number of Research Partners	Number	*
	Rolling 5 Year Average Daily Flow	MGD	152.23
	Rainfall reported at Norfolk International Airport	Inches	53.1

*These metrics will be reported upon closeout of fiscal year financials.

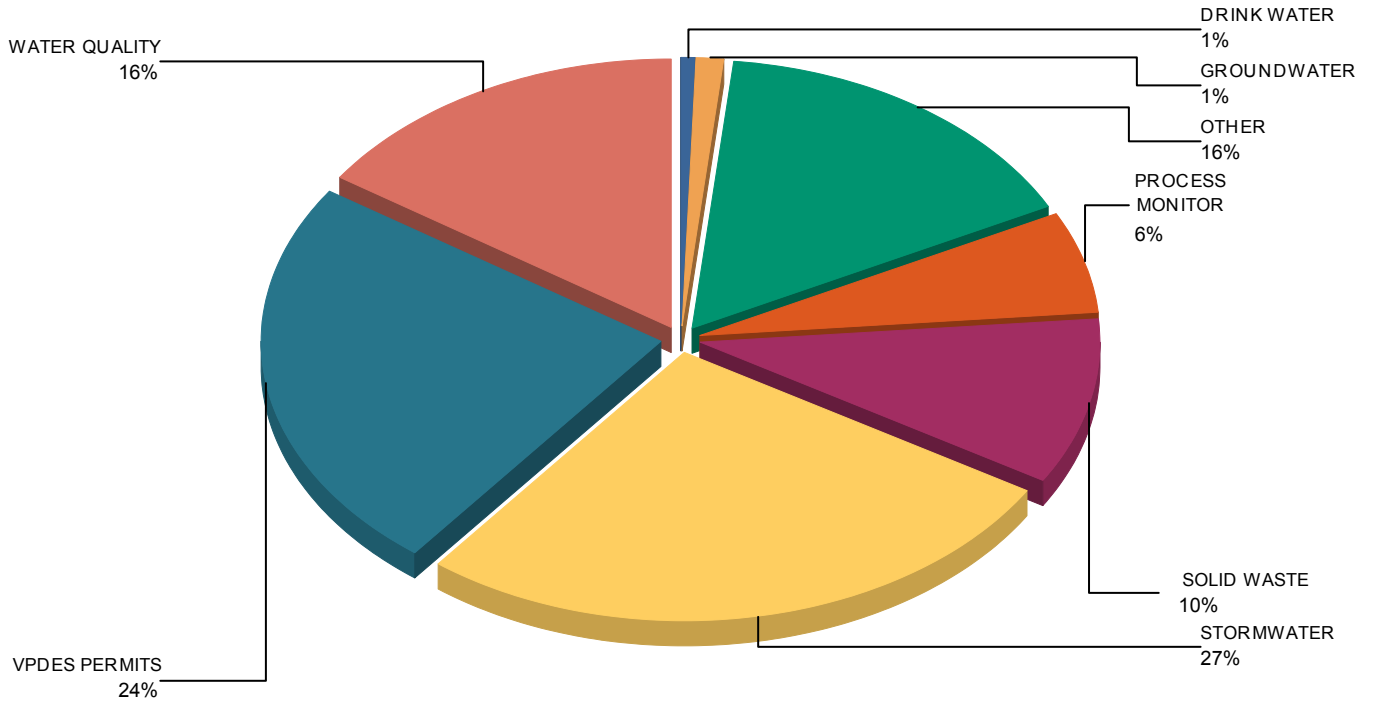
Respectfully submitted,

James Plett, PhD

Director of Water Quality

Municipal Assistance Billed Reimbursements per Service From 04/01/2019 to 06/30/2019

Attachment 1



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

Municipal Assistance Invoice Summary

From 04/01/2019 - 06/30/2019

Municipality	Reimbursements	Reimbursements Fiscal Year 2019
Accomack County	\$2,043.41	\$9,562.23
Bedford County PSA	\$0.00	\$3,429.70
Buckingham County	\$589.02	\$2,377.24
Chesterfield County	\$4,119.46	\$6,855.68
City of Chesapeake	\$9,452.69	\$20,431.14
City of Emporia	\$463.50	\$920.77
City of Fredericksburg	\$0.00	\$614.86
City of Hampton	\$8,325.35	\$20,564.33
City of Lynchburg	\$3,773.20	\$22,868.92
City of Norfolk	\$8,818.85	\$29,844.57
City of Portsmouth	\$10,055.50	\$32,013.26
City of Roanoke	\$2,384.60	\$6,995.99
City of Suffolk	\$5,699.88	\$24,811.82
City of Virginia Beach	\$17,752.57	\$35,269.79
Deerfield Corrections Center	\$0.00	\$1,623.30
HRPDC	\$51,236.92	\$205,565.32
Hanover County	\$7,146.16	\$9,345.36
Hopewell RWTF	\$4,325.03	\$13,559.72
James City County Service Authority	\$0.00	\$1,030.80
METRO Wastewater Reclamation Dist	\$0.00	\$1,670.38
New Kent County	\$8,802.61	\$34,241.42
Newport News Oil & Grease	\$6,286.83	\$6,286.83
Northampton County WWTP	\$1,223.64	\$6,065.48
Northumberland Co. - Callao WWTP	\$1,585.65	\$6,026.70
Prince William County	\$3,790.25	\$3,876.80
Rivanna Water and Sewer Authority	\$0.00	\$1,149.43
Spotsylvania County	\$1,073.00	\$5,393.53
Stafford County	\$93.24	\$392.12
Star Sewer and Water District	\$0.00	\$317.49
Town of Cape Charles	\$6,182.56	\$23,965.92
Town of Lawrenceville	\$507.46	\$1,970.30
Town of Round Hill	\$0.00	\$155.06
Town of South Hill	\$325.43	\$325.43
Upper Occoquan Service Authority	\$15,257.64	\$28,824.10
Virginia Department of Health	\$9,172.50	\$43,171.19
Western VA Water Authority	\$0.00	\$4,720.29
Westmoreland County	\$1,002.76	\$4,569.05
Totals:	<u>\$191,489.71</u>	<u>\$620,806.32</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

- **Upcoming Tasks (Q3 2019)**
 - HRSD management has communicated its continued progress to develop a plan to address the recommendations included in the BC/DR report. SC&H will continue to work with HRSD process owners and management to finalize the audit report, incorporating management action plans. A specific completion date has not been identified at this time.

Customer Care

- **Tasks Completed (June 2019)**
 - Customer Care communicated that the review and response to the final report was in process during the month of June. No additional tasks were performed by SC&H during this time.
- **Upcoming Tasks (July 2019)**
 - Obtain management action plan responses
 - Work with process owners to finalize report

Safety

- **Tasks Completed (June 2019)**
 - Completed fieldwork procedures
 - Conducted exit discussion with process owners
 - Drafted final audit report
- **Upcoming Tasks (July 2019)**
 - Communicate final audit report for review and response (sent 7/8/19)
 - Obtain management action plan responses
 - Work with process owners to finalize report

Permitting

- **Tasks Completed (June 2019)**
 - Conducted walkthroughs with Operations, Water Quality, and Lab process owners
 - Prepared process understanding documentation
 - Drafted fieldwork objectives and audit plan
- **Upcoming Tasks (July 2019)**
 - Finalize fieldwork objectives and audit plan
 - Begin fieldwork testing procedures

II. Upcoming Projects (FY2019)

SC&H's next audit will pertain to the Payroll and Timekeeping functions at HRSD and is scheduled to begin in Q3 (July) 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	July-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	June-19	1	4	5
Procurement/ ProCard	8/23/2017	October-19	8	3	11

Annual Metrics													
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%	6.66%	9.99%	6.63%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%	0.90%	1.01%	2.10%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	69.57%	71.43%	64.00%	69.00%	68.00%	85.00%	*
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67	67	66
M-1.4	Training Hours per Employee - cumulative fiscal year-to-date	Hours	> 40		30.0	43.8	37.5	35.9	42.8	49.0	48.4	41.1	40.9
M-1.5a	Safety OSHA 300 Incidence Rate Total Cases	# per 100 Employees	< 3.5	6.57	6.15	5.8	11.2	5.07	3.87	7	5.5	5.7	*
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%	170%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%	167%	159%
M-2.3a	Total Maintenance Hours	Total Available Mtc Labor Hours Monthly Avg			16,495	22,347	27,615	30,863	35,431	34,168	28,786	28,372	31,887
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%	44%	59%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%	24%	18%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%	32%	27%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%	5%	*
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	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%	N/A
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	152.23
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14	66.66	49.24	53.1
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%	76%	*
	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%	*

* To be reported upon completion of the annual financial statements.

Monthly Updated Metrics														FY-19	
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	May-19	Jun-19
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	145.8	152.7	140.2	144.8
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	4	7	0	1
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	103%	104%	100%	100%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	112%	117%	124%	125%
	Accounts Receivable (HRSD)	Dollars (Monthly Avg)			\$17,013,784	\$17,359,488	\$18,795,475	\$20,524,316	\$20,758,439	\$22,444,273	\$22,572,788	\$22,243,447	\$23,900,803	\$21,573,720	\$23,789,602
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	18%	17%	17%	16%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	10	5	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	9:53236	9:58338	2:60879	1:55,806	2:60879
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	6	9	1	0
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	189,765,922	190,536,910	187,612,572	172,507,713	187,612,572
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	22%	17%	17%	20%	19%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	432	367	24	29
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	381	293	23	29

EFFLUENT SUMMARY FOR JUNE 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	10.54	59%	2	3.1	9	2	0.51	0.40	3.6	3.4	NA	NA	17
ATLANTIC	26.63	49%	8	4.8	4	1	NA	NA	NA	NA	NA	NA	5
BOAT HARBOR	13.41	54%	6	3.9	2	<1	0.64	0.62	27	22	NA	NA	21
CENT. MIDDLESEX	0.010	38%	2	1.0	1	<1	NA	NA	NA	NA	NA	NA	NA
CHES-ELIZ	17.20	72%	12	11	17	6	1.4	1.2	34	31	NA	NA	10
JAMES RIVER	12.61	63%	0	1.9	7	1	0.15	0.34	5.6	7.2	NA	NA	1
KING WILLIAM	0.058	58%	<2	<1.0	NA	1	0.04	0.06	0.64	1.3	0.53	NA	NA
NANSEMOND	16.41	55%	5	4.0	2	2	2.4	1.2	3.4	4.6	NA	NA	5
SURRY, COUNTY	0.065	100%	2	2.0	NA	1	NA	NA	NA	NA	NA	<0.10	0
SURRY, TOWN	0.055	92%	5	10	NA	8	NA	NA	NA	NA	1.4	0.11	NA
URBANNA	0.054	54%	2	10	3	1	7.3	4.2	21	13	NA	0.08	NA
VIP	26.47	66%	0	1.4	1	1	2.0	0.81	3.8	3.6	NA	NA	0
WEST POINT	0.481	80%	20	20	9	2	2.7	2.1	17	14	NA	NA	0
WILLIAMSBURG	8.42	37%	1	2.2	4	2	0.95	0.49	2.9	2.8	NA	NA	6
YORK RIVER	12.40	83%	6	1.5	1	1	0.26	0.26	5.5	5.7	NA	NA	8
	<u>144.82</u>												

	% of Capacity
North Shore	57%
South Shore	59%
Small Communities	72%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY19	YTD	Projection	CY19
	%	Lbs	%	%	Lbs	%
James River	43%	3,761,485	83%	42%	291,117	91%
York River	45%	255,659	89%	37%	16,244	84%
Rappahannock	72%	NA	NA	337%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY19 to Date: 2:60,879
Pounds of Pollutants Removed in FY19 to Date: 187,612,572
Pollutant Lbs Discharged/Permitted Discharge FY19 to Date: 19%

	Rainfall (inch)		
	<u>North Shore (PHF)</u>	<u>South Shore (ORF)</u>	<u>Small Communities (FYJ)</u>
Month	6.18"	3.85"	8.30"
Normal for Month	4.57"	4.90"	5.15"
Year to Date Total	25.63"	21.59"	25.70"
Normal for YTD	22.82"	21.43"	23.19"

AIR EMISSIONS SUMMARY FOR JUNE 2019

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave (F)	12 hr ave (in. WC)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	pH 3 hr ave	Bypass Stack Use	Mo. Ave (PPM)	DC (%)	Daily Ave Days >Max
ARMY BASE	0	0	0	0	0	0	0	2	28	98	0
BOAT HARBOR	2	0	0	n/a	0	0	0	1	9	100	0
CHES-ELIZ	0	0	1	1	1	1	0	3	37	100	0
VIP	0	0	0	n/a	0	0	0	1	62	99	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	1	15	95	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	1
DEQ Request for Corrective Action (RCA):	0
DEQ Warning Letter:	0
DEQ Notice of Violation (NOV):	0
Other Air Permit Deviations:	0
Odor Complaints Received:	0
HRSD Odor Scrubber H2S Exceptions:	3