



COMMISSION MEETING MINUTES
June 27, 2017

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Name	Title	Present for Item Nos.
Elofson, Frederick N.	Commission Chair	1-27
Lynch, Maurice P.	Commission Vice-Chair	1-27
Glenn, Michael E.	Commissioner	1-27*
Lakdawala, Vishnu K.	Commissioner	1-27
Levenston, Jr., Willie	Commissioner	1-27
Rodriguez, Stephen C.	Commissioner	1, 3-27*
Taraski, Elizabeth	Commissioner	1-27
Templeman, Ann	Commissioner	1-27

*Commissioner Michael Glenn requested approval to participate in today's meeting from Virginia Beach, Virginia due to family business and Stephen Rodriguez requested approval to participate in today's meeting from Greenville, North Carolina due to business travel.

Roll call vote to allow remote participation: **Ayes: 8** **Nays: 0**

1. **AWARDS AND RECOGNITION**

Brief:

a. New Commissioner Introduction

Chair Elofson introduced our new Commissioner Elizabeth Taraski, PhD of Suffolk. As current President and CEO of the Nansemond River Preservation Alliance (NRPA), Dr. Taraski works to raise awareness and manage the environmental stewardship of the Nansemond River watershed in fulfillment of NRPA's mission. During her tenure, the non-profit organization has grown from the original seventeen founding members who established it 2009 to a current, robust membership of 350.

Dr. Taraski previously served in senior fundraising management positions at Christopher Newport University, Old Dominion University and the University of Richmond. Before moving to Virginia in 1998, she was Director of Administration and Industrial Relations for the Multi-lifecycle Engineering Research Center at New Jersey Institute of Technology.

Dr. Taraski is also active within the community and has been a member of the Suffolk Branch of the American Association of University Women since 2010 and served as president from 2012 to 2015. She is also a member of the Suffolk Business Women's Club and the Suffolk Rotary Club.



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She has earned several degrees including a Ph.D. in Higher Education Administration at Seton Hall University, an M.S. from New York University and a Master of Education from Rutgers University.

Dr. Taraski's rich and varied career, civic and educational experiences are certain to be of great value to the Commission. Dr. Taraski succeeds Mr. Art Bredemeyer who completed his appointment on June 7. Thank you, Art, for your service to HRSD.

b. Commissioner Reappointment

We are pleased to announce Governor Terry McAuliffe has appointed Dr. Maurice Lynch, of Williamsburg, to a third term, representing the Middle Peninsula. Dr. Lynch was first appointed in 2009 and reappointed in 2013. Dr. Lynch is a professor emeritus of the College of William and Mary's Virginia Institute of Marine Science and former chair of the Middle Peninsula Planning District Commission. Dr. Lynch has served on the HRSD Operations & Nominations Committee and is currently serving on the HRSD Finance Committee.

c. New Employee Introduction

Mr. Henifin introduced Ms. Christine Mitchell who joined HRSD this month as a Condition Assessment Manager in the Engineering Department. Ms. Mitchell is an experienced project and program manager in the water/wastewater industry with a strong understanding of asset and utility management. Prior to joining HRSD, she worked for HDR as a Project Manager and Client Development Leader, serving water and wastewater utilities in Virginia and Maryland. Prior to HDR, she worked in the public sector as Project Manager and then Engineering Manager of the Development Services and Project Management Divisions for the Cape Fear Public Utility Authority (CFPUA), a water and wastewater utility in Wilmington, North Carolina.

Ms. Mitchell has a bachelors degree in Civil and Environmental Engineering from Old Dominion University and a Master of Engineering Management degree from Duke University. She is very passionate about our industry and protecting our local waterways and our community. As such, she is active in VWEA and spends her free time volunteering in community clean-up events and educating children about the importance of protecting our waterways.



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d. Awards

HRSD is proud to have been recognized for the seventh consecutive year by the United Way of South Hampton Roads for our employees' efforts to support non-profit agencies that improve the quality of life in Hampton Roads. This year HRSD received the Bronze Trailblazer Award during a June 7 luncheon attended by Commission members and key campaign volunteers. The co-chairs, whose efforts helped earn this award, were Mary Strong, North Shore Electrical Materials Coordinator and Ann Copeland, North Shore Engineering Project Manager.

Three awards are presented at this annual event: the Bronze Trailblazer (meets one criterion), the Silver Trailblazer (meets two criteria) and the Gold Trailblazer (meets three criteria). The criteria to receive an award are:

- \$5,000 contribution and 5 pledges
- 60 percent of company pledges
- Minimum of \$75 per person
- Average contribution of \$150 or more per person

HRSD had an average of \$232.02 per contribution and received 174 pledges with 21.8 percent of employees contributing.

e. Videos

- (1) HRSD collaborated with our partners HDR and MEB General Contractors to produce this video update on the VIP and Bridge Street projects for Infrastructure Week which took place May 15–19 this year. Our goals for the video were to increase awareness and understanding of how HRSD's infrastructure projects not only further our mission and vision for the environment, but also develop jobs, building communities and growing local economies. <https://www.youtube.com/watch?v=8MVw1733WGc>.
- (2) For those who could not attend our SWIFT Groundbreaking and Multiple Benefits Ceremony, here are some highlights from the March 31 Celebration: <https://www.youtube.com/watch?v=0NYJJMrexv4>.

Attachment: None

Public Comment: None



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2. **CONSENT AGENDA**

Action: Approve the items listed in the Consent Agenda.

Moved: Maurice Lynch **Ayes:** 7
(Commissioner Rodriguez lost phone connection)

Seconded: Willie Levenston **Nays:** 0

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Awards
 - 1. [Architectural, Mechanical and Electrical Services Contract Award](#) \$0
 - 2. [Army Base Treatment Plant Miscellaneous Improvements Contract Award](#) \$2,644,800
 - 3. [Atlantic Treatment Plant Secondary Clarifiers Coating and Repair](#) \$259,522
 - 4. [Boat Harbor Treatment Plant Odor Control Piping Coating](#) \$244,000
 - 5. [Hampton Trunk Sewer Extension Division B – Claremont Force Main Replacement](#) \$4,091,739
 - 6. [Nansemond Treatment Plant Digester Cleaning](#) \$484,006
 - 7. [Real Estate Services](#) \$0
- c. Task Orders
 - 1. [Hampton Trunk Sewer Extension Division B – Claremont Force Main Replacement](#) \$351,054
 - 2. [Pughsville Pressure Reducing Station Upgrades](#) \$2,000,995



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d. Change Orders

1. [Thermo Scientific™ SampleManager Laboratory Information Management System Upgrade](#) \$75,400

e. Sole Source

1. [BioWin Software Licensing and Support](#)
2. [Jerome® Analyzers Maintenance Contract](#)
3. [SAP® Software Solutions Maintenance and Support](#)
4. [Sulzer Effluent Pump Parts, Rebuild and Repair Services](#)
5. [Technical Grade Magnesium Hydroxide Slurry](#)

Item(s) Removed for Discussion: None

Attachment #1: [Consent Agenda](#)

Public Comment: None



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3. **WILLIAMSBURG TREATMENT PLANT LAND ACQUISITION
PUBLIC HEARING FOR DETERMINATION OF PUBLIC NEED**

Action: Conduct public hearing.

Brief: Preliminary facility planning for new treatment facilities required to achieve water quality targets for safe underground injection has identified the need for additional land at the Williamsburg Treatment Plant. The treatment facilities will not fit on the existing HRSD owned property and as a result, staff believes HRSD will need to acquire some of the adjacent property to construct the necessary purification and disposal facilities.

Currently, HRSD is conducting preliminary negotiations with the property owner and a bona fide offer based on an appraisal, (in accordance with Section 25.1-204 of the Code of Virginia), is forthcoming. Early discussions have not been promising and as such staff is recommending the Commission formally make the determination that there is a public need for additional land to support the proposed treatment facilities. This public need determination must include a public hearing in accordance with Section 15.2-1903.B of the Code of Virginia in the event we cannot come to terms with the owner and must acquire through condemnation.

Staff provided a short overview of the project for the Commission and the public immediately prior to the Public Hearing.

Discussion Summary: Chair Elofson opened the public hearing by asking if there was any member of the public who wished to address the Commission. No member of the public desired to address the Commission.

Mr. Henifin stated he received a call from Mr. Stanley Barr of Kaufman and Canoles, who is representing the property owner in this matter. Mr. Barr asked that the record reflect their opposition to the acquisition of this property. Mr. Henifin made the commitment to Mr. Barr to continue to work on a mutually agreeable resolution. The owner, who lives in Chicago, was unable to attend the hearing and asked that his formal opposition be included in the record of this meeting.

The public hearing was closed.

Attachment #2: [PowerPoint Presentation](#)

Public Comment: None



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4. **BENEFICIAL USE OF INCINERATOR ASH**

Action: No action required.

Brief: HRSD, through our ash hauling contractor, identified a beneficial use for our incinerator ash in which it was used for restoring non-productive farm land to productive use. HRSD successfully restored acres of fields in Virginia Beach by removing approximately 18 inches of topsoil, adding approximately 2-feet of ash and replacing the topsoil with the appropriate drainage features. We did this for several years until DEQ received a dust complaint and through a series of unfortunate decisions, directed us not to use the ash in this manner.

After pursuing DEQ's dispute resolution process, HRSD sued DEQ over this issue. Our suit was really focused on four issues:

- DEQ erred when they denied our use of a Solid Waste Management Regulation that exempted our use of ash as a substitute for fill dirt from additional regulation.
- DEQ erred when they requested we submit a Beneficial Use Determination for our ash.
- No evidence supports DEQ's claim that use of the ash poses any threat to the environment.
- DEQ's use of a guidance document to impose binding regulations violates agency rulemaking requirements of the Administrative Process Act.

We lost in the Circuit Court where we believe the judge really failed to grasp the issues and showed significant deference to the agency as is often the case in regulatory law suits. We appealed that decision to the Virginia Court of Appeals. We recently received the decision from the Court of Appeals that affirmed the decision made by the Virginia Beach Circuit Court. With practically no chance of success should we pursue this issue further, staff has directed counsel not to appeal this to the Virginia Supreme Court.

We remain confident that the field restoration use of the ash was fully protective of the environment and provided significant benefits to the region despite the courts' decision, which was largely procedural. Currently our ash is being landfilled, primarily beneficially as alternate daily cover. Staff intends to seek alternative beneficial uses in the year ahead with the required DEQ approvals. Dick Sedgely, counsel from AquaLaw, provided a short briefing to the Commission at the June meeting.

Attachment: None

Public Comment: None



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5. **FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)/VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT (VDEM) DISASTER ASSISTANCE AGREEMENT (HURRICANE MATTHEW)**

Action: Approve the terms and conditions of this agreement (and similar agreements related to Hurricane Matthew Public Assistance should the project worksheets be separated into individual agreements for funding expediency) with the Virginia Department of Emergency Management and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications, amendments and deletions as the General Manager may deem necessary.

Moved: Willie Levenston **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

Agreement Description: In December 2016, VDEM reached out to staff to inform us that we had projects that may qualify for federal and state grant funding from Hurricane Matthew, which came through Hampton Roads between October 8 – 9, 2016. The general rule of thumb for eligible projects damaged by an event is if the infrastructure was working properly before the event. In addition, projects are only eligible if they are in a Locality that was designated as a being eligible for public assistance funds.

After reviewing the damages sustained in Hurricane Matthew that meet the criteria, staff sent the request for public assistance to VDEM on January 12, 2017. Three Project Worksheets were submitted for a total cost of approximately \$874,000. Of this amount, up to 75 percent could be from federal grants and up to 18 percent from state grants with the remainder funded by HRSD. A summary of the costs and potential grant funding is shown below.

Project Worksheets	Total	FEMA 75%	VDEM 18%	HRSD 7%
Emergency Protective Measures	\$60,636.84	\$45,477.63	\$10,914.63	\$4,244.58
Chesapeake-Elizabeth Treatment Plant effluent pump damage	\$247,954.68	\$185,966.01	\$44,631.84	\$17,356.83
Pipeline breaks at Laskin Road and Independence Boulevard	\$565,444.68	\$424,083.51	\$101,780.04	\$39,581.13
	\$874,036.20	\$655,527.15	\$157,326.52	\$61,182.53



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The attached [agreement](#) is for one project worksheet with a total grant award of \$60,636.84 for "Emergency Protective Measures." For this project worksheet, one of the items is for equipment, labor and overtime at the Chesapeake-Elizabeth Treatment Plant to monitor pumps, keep the grit system operational, flushing pumps and managing lines as needed. Another item is the hauling of excess grit from the two major pipe breaks that occurred during the event.

Since this is the first project approved by VDEM, future approvals will be an amendment to the attached agreement, except that a second agreement may be required so that reimbursement to HRSD is not impeded due to a lagging project. We are currently waiting for an insurance decision on two project worksheets not included in this agreement, since FEMA/VDEM will only reimburse remaining expenses beyond what our insurance will cover.

The new Enterprise Resource Planning (ERP) system provided improved access to personnel and purchasing records, facilitating gathering the documents required for filing the requests. In addition, there were a number of lessons learned with the new ERP system and for staff that had not been through the FEMA public assistance process before.

The agreement has been reviewed by HRSD's auditors and legal counsel.

Attachment #3: [Agreement](#)

Public Comment: None



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6. **ASSET MANAGEMENT IMPLEMENTATION
INITIAL APPROPRIATION AND TASK ORDER**

Actions:

- a. **Appropriate total project funding in the amount of \$1,700,000.**
- b. **Approve a task order with Hazen and Sawyer under the General Engineering Services contract in the amount of \$623,318.**

<u>Moved:</u>	Vishnu Lakdawala	<u>Ayes:</u>	8
<u>Seconded:</u>	Willie Levenston	<u>Nays:</u>	0

CIP Project: AD012100

Project Description: This project will provide a formal Asset Management Program in order to coalesce the various ongoing asset management-related activities already underway into a coherent program with a defined vision for the future. The project will establish a risk-based, data-driven, and sustainable system for planning the replacement, rehabilitation, upgrade and major maintenance of HRSD's infrastructure by applying the triple bottom line framework and systems thinking approach.

Funding Description: The total cost for this project is estimated to be \$1,700,000 based on initiatives identified in an ISO 55001 Gap Assessment performed in FY-2016.

Analysis of Cost: This cost is in agreement with other similar efforts from other firms and the rates used are in accordance with the General Engineering Services annual contract with Hazen and Sawyer.

Task Order Description: This task order will provide services for the implementation of improvements to the Asset Management Plan. A meeting was held to discuss the project and scope of services. A fee of \$623,318 was negotiated, which will provide the services for Year 1 including development of a Management of Change Plan, Communications Plan, Asset Management Policy, Strategic Asset Management Plan, levels of service, risk assessment, data needs assessment, pilot implementation for SWIFT and plant failure codes.

<u>Schedule:</u>	Year 1 Services	June 2018
	Year 2 Services	June 2019
	Project Completion	June 2020

Attachment: None

Public Comment: None



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7. ATLANTIC TREATMENT PLANT THERMAL HYDROLYSIS PROCESS (THP) AND ATLANTIC TREATMENT PLANT FATS, OILS AND GREASE (FOG) RECEIVING STATION ADDITIONAL APPROPRIATION, TASK ORDER AND GUARANTEED MAXIMUM PRICE (GMP)

Actions:

- a. Appropriate additional funding in the amount of \$24,591,332.
- b. Approve a task order for HDR Engineering, Inc. for the Atlantic Treatment Plant Thermal Hydrolysis Process and Atlantic Treatment Plant FOG Receiving Station in the amount of \$5,973,384.
- c. Approve a Guaranteed Maximum Price of \$48,190,779 to the Comprehensive Agreement with Crowder Construction Company.

Moved: Vishnu Lakdawala **Ayes:** 8
Seconded: Ann Templeman **Nays:** 0

CIP Project: AT013500

Budget	\$39,281,000
Previous Expenditures and Encumbrances	(\$9,050,483)
Available Balance	\$30,230,517
Proposed Task Order to HDR	(\$5,376,046)
Guaranteed Maximum Price	(\$43,371,701)
KAI Panel Purchase	(\$200,000)
Emerson Purchase	(\$500,000)
Proposed Contingency	(\$2,168,585)
Project Shortage/Requested Additional Funding	(\$21,385,815)
Revised Total Project Authorized Funding	\$60,666,815

CIP Project: AT012910

Budget	\$3,392,000
Previous Expenditures and Encumbrances	(\$940,148)
Available Balance	\$2,451,852
Proposed Task Order to HDR	(\$597,338)
Guaranteed Maximum Price	(\$4,819,078)
Proposed Contingency	(\$240,953)
Project Shortage/Requested Additional Funding	(\$3,205,517)
Revised Total Project Authorized Funding	\$6,597,517



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Contract Status:	Amount
Original Contract with HDR Engineering, Inc.	\$1,525,308
Total Value of Previous Task Orders	\$7,574,314
Requested Task Order	\$5,973,384
Total Value of All Task Orders	\$13,547,698
Revised Contract Value	\$15,073,006
Engineering Services as % of Construction	31%

Project Description: The purpose of implementing the Thermal Hydrolysis Process (THP) and Fats, Oils and Grease (FOG) Receiving Station at the Atlantic Treatment Plant (ATP) is to improve cake dewaterability and produce a Class A biosolids product by processing through the Cambi THP System, which will provide the following:

- Flexibility – prepare for FOG and biosolids receiving
- Expandability – increased load
- Economy – resource efficiency, use existing infrastructure
- Integrate seamlessly into plant
- Odor neutrality

Funding Description: This action requests additional appropriation to cover construction, construction phase engineering services and project contingency.

Guaranteed Maximum Price: This project is being procured through the Construction Management at Risk (CMAR) delivery process. On June 23, 2015 the Commission approved an Agreement with Crowder Construction Company for basic services negotiated at \$288,000. Crowder has competitively bid the work and negotiated a Guaranteed Maximum Price (GMP). The GMP contains two components. The price for the THP and FOG construction is \$48,190,779. The price for the purchase of new centrifuges for installation by others at Nansemond and James River Treatment Plants (to replace the units being relocated to Atlantic as part of this work) is \$1,098,435. The centrifuge GMP is handled under a separate Agenda item. The following items have been revised or added to the project since the award of the CMAR contract in 2015:

<u>Item</u>	<u>Estimated Cost</u>
New predewatering building	\$5,100,000
Additional features added to the Cambi system	\$1,300,000
Solids Handling building life safety improvements	\$540,000
Incidental equipment and other improvements	\$1,000,000
Virginia Revolving Loan Fund Requirements	\$2,900,000
Improving economy increasing labor and material costs	\$6,300,000
Additional engineering design/inspection	\$5,000,000
	<u>\$22,140,000</u>



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Task Order Description: This task order will provide contract administration and field engineering and inspection services during construction. A total fee of \$5,973,384 was negotiated, which includes \$5,281,042 for lump sum services and \$692,342 in additional services. The fee estimate provided by HDR Engineering, Inc. for this work is reasonable, based on comparison with past projects, such as the James River Plant Improvements Phase I, Nansemond Plant Nutrient Reduction Project and York River Plant Expansion Phase I. The total engineering fees compare well to the total construction cost as estimated by the GMP. Based on comparison of average hourly rates, the construction administration staff assigned to the THP project are at the expected skill level. The construction inspection as measured by dollars per month shows a typical level of oversight.

Schedule: Project Completion August 2020

Discussion Summary: A question was asked about the expected needed capacity at the Atlantic Treatment Plant. At the time the Chesapeake-Elizabeth Treatment Plant is shut down, the combined flow at the Atlantic Plant will be very near the design capacity of 54 MGD. The Thermal Hydrolysis Process (THP) upgrade at Atlantic Plant makes rerating this facility to something in the range of 65 to 72 MGD very affordable with minor additional improvements, allowing for additional growth in the service area. Although biosolids master planning efforts are continuing, a small upgrade of the THP system would allow for dewatered solids receiving at Atlantic plant with a capacity sufficient to manage that from Army Base, Boat Harbor, Nansemond, and VIP treatment plants. This is a very important consideration for the THP upgrade, because it could eliminate the need for a new and very costly regional solids handling system at the time when the multiple hearth incinerators are nearing the end of their useful operating life. The future disposition of solids produced at York River, James River, and Williamsburg treatment plants is also being considered in master planning efforts.

Attachment #4: [PowerPoint Presentation](#)

Public Comment: None



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\$288,000. Crowder has competitively bid the work and negotiated a Guaranteed Maximum Price (GMP). The GMP for the purchase of new centrifuges for installation by others at Nansemond and James River Treatment Plants (to replace the units being relocated to Atlantic) is \$1,098,435.

<u>Schedule:</u>	PER	July 2017
	Design	August 2017
	Construction	July 2018
	Project Completion	March 2019

Attachment: None

Public Comment: None



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9. **FERGUSON PARK INTERCEPTOR FORCE MAIN BRIDGE SPAN RELOCATION
ADDITIONAL APPROPRIATION AND CONTRACT AWARD**

Actions:

- a. **Appropriate additional funding in the amount of \$150,602.**
- b. **Award a contract to Basic Construction Company LLC in the amount of \$777,040.**

Moved: Willie Levenston **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

CIP Project: BH013700

Budget	\$1,024,000
Previous Expenditures and Encumbrances	(\$170,042)
Available Balance	<u>\$853,958</u>
Proposed Contract Award to Contractor	<u>(\$777,040)</u>
Proposed Contingency	<u>(\$227,520)</u>
Project Shortage/Requested Additional Funding	<u>(\$150,602)</u>
Revised Total Project Authorized Funding	<u>\$1,174,602</u>

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Basic Construction Company LLC	\$777,040.20
TA Sheets General Contractors Inc.	\$871,840.00
Tidewater Utility Construction Inc.	\$1,032,315.00

Engineer Estimate: \$562,573.80

Project Description: This project involves the replacement of approximately 1,250 linear feet of 10-inch cast iron and ductile iron force main from just west of the CSX railroad to the discharge manhole located south of the ramp to Route 143.

Contract Description: This contract is for construction of the Ferguson Park Interceptor Force Main Bridge Span Relocation Project.

Funding Description: The additional funding requested will facilitate construction-related engineering services as well as provide contingency funding for the construction effort. The original CIP project estimate did not anticipate the level of effort required to



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construct this project. Many alternates were reviewed and the final design is to slip line portions of the project and replace other portions. The amount being requested to cover additional work related to construction is \$227,520. This is comprised of \$110,520 for engineering and \$117,000 for construction contingency and exceeds the balance available for this CIP project.

Analysis of Cost: The construction bids were obtained through competitive bidding. The engineer's cost estimate for construction was significantly below the low bid submitted by Basic Construction. The bids received reflect local contractors current work load and availability of equipment and labor, as well as a limited level of interest in a relatively small, difficult project on a major thoroughfare in Newport News. The project also includes work within the CSX railroad Right of Way which further complicates the effort. The engineering costs are based on the negotiated rates and construction contingency costs are based on 15 percent of the bid amount.

Schedule:

Construction	July 2017
Project Completion	April 2018

Attachment: None

Public Comment: None



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11. **FREEMAN DRIVE REALIGNMENT/NEWMARKET CREEK TRAIL PROJECT
CONVEYANCE OF 19 FREEMAN DRIVE TO CITY OF HAMPTON**

Actions:

- a. **Accept the terms and conditions of the Deed with the City of Hampton for the conveyance of 19 Freeman Drive.**
- b. **Authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.**

<u>Moved:</u>	Maurice Lynch	<u>Ayes:</u>	8
<u>Seconded:</u>	Willie Levenston	<u>Nays:</u>	0

Project Description: The City of Hampton is acquiring easements and right of way for construction of the Freeman Drive Realignment/Newmarket Creek Trail Project. The purpose of this project is to realign Freeman Drive between Green Hill Lane and Armistead Avenue in order to facilitate development of the adjacent properties to the north and to replace the poor pavement along the project’s length. Improvements include new full-depth pavement, curb and gutter, drainage structures and a new 10-foot-wide multi-use path along the southern side of Freeman Drive.

In connection with the project, which is a city-administered VDOT project, the City of Hampton is requesting 1,372 square feet for right of way purposes and 1,963 square feet for a Pedestrian Access Easement from 19 Freeman Drive, which is a vacant parcel adjacent to HRSD’s pump station site at 17 Freeman Drive. This parcel is considered surplus property and conveyance of the easement and right of way will render the remainder of the parcel an uneconomic remnant. HRSD staff reviewed the request and believes it to be in HRSD’s best interest to convey the parcel in its entirety (7,918 square feet). HRSD took ownership of the adjacent pump station site located at 17 Freeman Drive in 2015.

Funding Description: No funding required.

Agreement Description: The attached [Deed](#) has been reviewed by HRSD legal counsel. [Facilities orientation maps](#) and a [preliminary plat](#) are also provided for clarification purposes.

Attachment #6: [Deed, Plat and Maps](#)

Public Comment: None



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13. **MICROBIAL SOURCE TRACKING ANALYSIS AGREEMENT**

Action: Approve the terms and conditions of the Agreement with Virginia Department of Health (VDH) for Microbial Source Tracking (MST) analysis to be provided by HRSD for one year with the option to renew for four additional years and authorize the General Manager to execute same, substantially as presented, together with such changes, modifications, amendments and deletions as the General Manager may deem necessary.

Moved:	Maurice Lynch	Ayes:	8
Seconded:	Willie Levenston	Nays:	0

Agreement Description: The [agreement](#) will provide for analysis of water samples which exceed beach advisory thresholds for a human associated marker (e.g. HF183). This marker can provide health risk and source identification information that is helpful to resource managers who may further investigate the potential human sources in the beach watershed. This contract will be managed by the HRSD Municipal Assistance Program.

Analysis of the Revenue: VDH will pay HRSD an estimated amount of \$13,100 for analysis through November 30, 2017 with estimated cumulative revenue of \$65,500 over the remaining optional years.

Funding Description: No funding required.

Attachment #8: [Agreement](#)

Public Comment: None



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14. NANSEMOND TREATMENT PLANT LAND ACQUISITION – LAND STABILIZATION INITIAL APPROPRIATION

Action: Appropriate total project funding in the amount of \$1,840,000.

Moved: Vishnu Lakdawala **Ayes:** 8
Seconded: Willie Levenston **Nays:** 0

CIP Project: NP013500

Project Description: This project includes work for stabilization of approximately 750 linear feet of eroding shoreline along the James River, located about 2,000 feet north of the existing Nansemond Wastewater Treatment Plant, between I-664 and Skeeters Creek. Stabilization will incorporate living shoreline design elements and armoring to stabilize the 12- to 15-foot tall eroding banks. Additionally, work will be completed to stabilize eroding channel banks and provide support for a force main that crosses a tidal creek, a tributary to Skeeters Creek, just south of the existing treatment plant.

Funding Description: The total cost for this project is estimated to be \$1,840,000.

Schedule:	PER	July 2017
	Design	November 2017
	Bid	June 2018
	Construction	September 2018
	Project Completion	May 2019

Attachment: None

Public Comment: None



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15. **POPLAR HALL DAVIS CORNER 24-INCH GRAVITY SEWER IMPROVEMENTS – I-264 VDOT INITIAL APPROPRIATION**

Action: Appropriate total project funding in the amount of \$121,859.

Moved: Vishnu Lakdawala **Ayes:** 8
Seconded: Ann Templeman **Nays:** 0

CIP Project: CE012000

Project Description: This project is to replace approximately 250 linear feet of 24-inch gravity pipeline and associated manholes. Project extends along Witchduck Road to the I-264 Interchange.

Funding Description: Condition assessment activities indicate that these assets present a material risk of failure due to physical condition defects. The Virginia Department of Transport (VDOT) Project 0264-134-102, C501 (UPC# 17630) for the I-64 and I-264 Interchange Improvements presents an opportunity for HRSD to complete this work in a collaborative effort. VDOT’s contractor will perform the construction of this betterment and HRSD will reimburse VDOT in accordance with an executed Utility Agreement.

Schedule:

PER	July 2017
Design	July 2017
Bid	December 2017
Construction	December 2017
Project Completion	December 2018

Attachment: None

Public Comment: None



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Project Description: Rehabilitation of wet wells, and installation of miscellaneous piping, valves, safety rails and decking along with other appurtenances at North Shore Road Pump Station, Norview Avenue Pump Station, Newtown Road Pump Station, Virginia Beach Boulevard Pump Station, Washington District Pump Station, Dovercourt Road Pump Station, Luxembourg Avenue Pump Station, Willoughby Avenue Pump Station and Bainbridge Boulevard Pump Station are referred for action. Each station has unique characteristics for bypassing the pump station so that the rehabilitation work can be completed.

Funding Description: The original CIP project estimate did not anticipate additional piping, structural repairs, sluice gate replacement and additional work necessary to rehabilitate the wet wells. This request includes a \$200,000 contingency to accommodate any additional unforeseen conditions. This project requires additional funding due to a budgetary shortfall. The budgetary shortfall, in the amount of \$353,231, includes \$153,231 due to changes in the scope of work and addition of a \$200,000 contingency.

Contract Description: This construction contract consists of rehabilitation of the wet wells located at nine pump stations located in Chesapeake and Norfolk. The project was advertised on April 23, 2017 and four bids were received on May 23, 2017. The design engineer, Brown and Caldwell, evaluated the bids and recommends award to the lowest responsive and responsible bidder, Shaw Construction Corporation, in the amount of \$2,408,844.

Task Order Description: This task order will provide contract administration and field engineering and inspection services. A meeting was held to discuss the project and scope of services. A fee of \$465,160 was negotiated, which will provide the required services during construction.

Analysis of Cost: The engineering services to construction cost ratio is 38 percent. This cost is in agreement with other similar efforts from other firms.

<u>Schedule:</u>	PER	March 2013
	Design	January 2014
	Bid	June 2017
	Construction	July 2017
	Project Completion	March 2019

Attachment: None

Public Comment: None



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17. REGIONAL HYDRAULIC MODEL AND OTHER CONSENT ORDER REQUIREMENTS
ADDITIONAL APPROPRIATION AND TASK ORDER

Actions:

- a. Appropriate additional funding in the amount of \$1,793,275.
- b. Approve a task order with Brown and Caldwell in the amount of \$1,993,275.

Moved: Vishnu Lakdawala **Ayes:** 8
Seconded: Willie Levenston **Nays:** 0

CIP Project: GN012110

Budget	\$131,191,858*
Previous Expenditures and Encumbrances	(\$130,937,304)*
Available Balance	\$254,554
Proposed Task Order to Brown and Caldwell	(\$1,993,275)
Proposed Contingency	(\$54,554)
Proposed Shortage/Requested Additional Funding	(\$1,793,275)
Revised Total Project Authorized Funding	\$132,985,133

*Includes all Consent Order CIPs: GN012110, GN012112, GN012113, GN012114, GN012115, GN012120, GN012130, GN012140, GN012150, CE011900, AT013800, JR013300, MP012800

Contract Status:	Amount
Original Contract with Brown & Caldwell	\$1,672,040
Total Value of Previous Task Orders	\$51,160,670
Requested Task Order	\$1,993,275
Total Value of All Task Orders	\$53,153,945
Revised Contract Value	\$53,153,945

Project Description: Engineering services, system inspections and software expenses are required to create a fully functional extended-state hydraulic model for the specified portions of the regional sanitary sewer system. Model features and engineering services to include: extended state simulation, GIS data integration, interoperability with the localities' hydraulic models, training and database administration. Additional modeling efforts and software purchases for each of the localities and the Middle Peninsula are included as part of this project. Additional task items to be completed as mandated by the Federal Consent Decree include: overall program management and guidance,



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consent decree negotiation, locality coordination, capacity and condition assessment (an estimated 2-5 percent of the interceptor force mains and 100 percent of the gravity interceptors will need to be inspected for possible defects), public participation, overall Supervisory Control and Data Acquisition (SCADA) coordination, Sewer System Evaluation Survey (SSES) planning, rehabilitation planning and implementation and preparation and implementation of the Regional Wet Weather Management Plan (RWWMP). Other related work includes: surveying of manholes and pumping stations, several consent order-related studies and hydraulic model support to make sure other CIP projects fully comply with the Federal Consent Decree.

Funding Description: This request extends Brown and Caldwell's contract through June 30, 2017.

Analysis of Cost: The fee for this task order is in line with Brown and Caldwell's agreed-upon rates and is in line with the task order.

Task Order Description: This task order will provide overall contract management for the Sewer System Repair and Force Main Condition Assessment contracts with T.A. Sheets Mechanical Contractors, Inc. Brown and Caldwell will prepare work orders, perform inspections of work tasks and prepare record drawings. They will also provide program management for the gravity flow monitoring program with CSL. This funding is through June 30, 2018. They will also perform an annual condition assessment report, which will be completed by December 2017.

Brown and Caldwell will also provide overall coordination and technical support for the RWWMP. They will provide Compliance Assistance, which will include: Quarterly Briefings, Semi-Annual Reports and Annual Reports submitted to the U.S. Environmental Protection Agency (EPA) and Virginia Department of Environmental Quality (DEQ). There will be bi-weekly meetings with all members of the team from Brown and Caldwell, CDM Smith and HRSD. This funding will be through submittal of the plan on October 1, 2017 to EPA.

Brown and Caldwell will continue to support HRSD with many phases of the Management, Operations and Maintenance (MOM) Program update and implementation of the overall program. This task will provide funding through June 30, 2018.

Schedule: Project Completion October 2019

Attachment: None

Public Comment: None



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18. **COMMISSION GOVERNANCE GUIDELINES**

Action: Review changes to the HRSD Commission Governance Guidelines proposed by the Operations and Nominations (O&N) Committee.

Brief: The O&N Committee regularly reviews the [Commission Governance Guidelines](#). Staff suggested several “housekeeping measures,” which are shown in Track Changes in the provided draft. The O&N Committee presented their recommended revisions to the full Commission.

Discussion Summary: The Commission discussed the proposed changes. Additional recommended edits will be presented at the next Commission meeting for approval.

Attachment #9: [Commission Governance Guidelines](#)

Public Comment: None



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19. **ETHICS POLICY**
COMMISSION ADOPTED POLICY

Action: Approve revised Ethics Policy.

<u>Moved:</u>	Vishnu Lakdawala	<u>Ayes:</u>	8
<u>Seconded:</u>	Maurice Lynch	<u>Nays:</u>	0

Brief: During the 2017 session, the Virginia General Assembly passed additional changes to the Conflicts of Interest Acts, which have been incorporated into the attached revised [Ethics Policy](#).

The Operations & Nominations (O&N) Committee met on June 6 to review the proposed changes.

Attachment #10: [Ethics Policy](#)

Public Comment: None



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20. **FINANCE COMMITTEE APPOINTMENT
FISCAL YEAR 2018**

Action: Chair appointed Stephen Rodriguez and Maurice Lynch to the Finance Committee for Fiscal Year 2018. Commissioner Rodriguez will serve as the Committee Chair.

Brief: In accordance with the HRSD Commission Governance Guidelines (adopted October 2013), the Commission maintains two standing committees, (1) Finance and (2) Operations and Nominations. These committees report to the full Commission as needed.

Two members of the Commission were appointed by the Chair in July 2016 to serve on the Finance Committee for a one-year term beginning July 1. Staff recommends appointing the Finance Committee on a fiscal year basis to more closely align with the business practice.

The Finance Committee meets periodically to review HRSD’s financing activities, budgets and annual audits and reports to the full Commission regarding these activities. The Finance Committee will meet as follows for FY-2018:

- Comprehensive Annual Financial Report (CAFR) review Sep/Oct 2017
- Commissioner budget work session (after regular meeting) January 23, 2018
- First CIP review and prioritization meeting TBD March 2018
- Commissioner budget work session (after regular meeting) March 27, 2018
- Final CIP review meeting TBD March 2018
- Preliminary annual operating budget review March/April 2018
- Other financial issues As needed

All meetings of the Finance Committee are public meetings subject to the Virginia Freedom of Information Act (FOIA) requirements. Committee members serve at the pleasure of the Chair without limitation as to the number of one-year terms. Committee members continue serving until a replacement is appointed by the Chair.

Attachment: None

Public Comment: None



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21. **ELECTION OF OFFICERS**

Action: Elect a Chair and Vice-Chair of the Commission for Fiscal Year 2018.

The Operations & Nominations Committee nominated Frederick Elofson as Chair and Maurice Lynch as Vice-Chair of the Commission for Fiscal Year 2018.

Moved: Vishnu Lakdawala made a motion to close the nominations. **Ayes:** 8

Seconded: Willie Levenston **Nays:** 0

Moved: Vishnu Lakdawala made a motion to elect Frederick Elofson as Chair and Maurice Lynch as Vice-Chair. **Ayes:** 8

Seconded: Ann Templeman **Nays:** 0

Brief: The Commission is required by the Enabling Act to elect a Chair and Vice-Chair each year. Chair Elofson appointed Commissioners Levenston and Templeman to the Operations and Nominations Committee in May. The Committee made its nominating report at the June meeting.

Attachment: None

Public Comment: None



COMMISSION MEETING MINUTES
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22. **WEFTEC 2017**

Action: No action required.

Brief: WEFTEC will be held in Chicago beginning on Monday, October 2 and concluding on Wednesday, October 4. As is typical, HRSD staff will be presenting several papers throughout the three days and our Operations Challenge team will be competing on Monday and Tuesday. Once we receive the detailed program, staff will develop a full listing of recommended sessions to attend and vendors to visit on the exhibition floor.

HRSD has a block of rooms at the headquarters hotel, the Chicago Hilton on Michigan Avenue, just south of the Loop. We will need your travel plans by July 15th in order to lock in the rooms. WEFTEC continues to be the most comprehensive education and trade show in our industry and will be attended by nearly 20,000 water professionals from around the world. This is a great opportunity for you to learn more about our industry and gain a wider perspective of issues that HRSD is facing along with the entire industry. This year WEFTEC is planning a public officials' forum with some exclusive offerings for elected and appointed water agency officials. We will provide details as they become available.

There are workshops scheduled for Saturday, September 30 and Sunday, October 1. Workshops run from 8:30 a.m. until 5:00 p.m. Of interest this year is a workshop on Water Reuse that will be held on Saturday and a workshop on Innovation on Sunday. Please inform Jennifer if you would like to attend either or both as those require advanced registration.

Attachment: None

Public Comment: None



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- 23. UNFINISHED BUSINESS – None
- 24. NEW BUSINESS – None
- 25. COMMISSIONER COMMENTS – None
- 26. PUBLIC COMMENTS NOT RELATED TO AGENDA – None
- 27. 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](#)
- e. [Commission Adopted Policy – Financial Policy Staff Revision](#)

Attachment #11: [Informational Items](#)

Public Comment: None

Next Commission Meeting Date: Wednesday, July 19, 2017 at the HRSD North Shore Operations Center, 2389 G. Avenue, Newport News, VA 23602

Meeting Adjourned: 11:08 a.m.

SUBMITTED:



Jennifer L. Cascio, Secretary

APPROVED:



Frederick N. Eloffson, Chair

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #1

AGENDA ITEM 1. – Consent Agenda

CONSENT AGENDA ITEM 2.b.1. – June 27, 2017

Subject: Architectural, Mechanical and Electrical Services
Contract Award (>\$200,000)

Recommended Action: Award a professional services annual contract for Architectural/Mechanical/Electrical Services to Guernsey Tingle Architects, P.C. to become effective July 1, 2017 with a maximum allowable limit of \$1,000,000 per single task and accumulated \$5,000,000 per year with four years annual renewal options.

Type of Procurement: Competitive Negotiation

A Public Notice was issued on April 2, 2017. Two firms submitted proposals on April 26, 2017 and both firms were determined to be responsive and deemed fully qualified, responsible and suitable to the Selection Committee. The two firms were interviewed on May 25, 2017 and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
Guernsey Tingle Architects, P.C.	83	1
Clark Nexsen, Inc.	82	2

The Selection Committee recommends award of the Architectural, Mechanical and Electrical Services contract to Guernsey Tingle Architects, P.C. whose professional qualifications and proposed services serve the interest of HRSD. The workforce categories, rates, handling costs for sub-consultants, and direct reimbursable costs were negotiated for the first contract year of the renewable contract. This contract will become effective on July 1, 2017.

Contract Description: This contract is an agreement for architectural, mechanical, and electrical professional services to be provided by Guernsey Tingle Architects, P.C. on a task by task basis to serve the entire organization. Funding for the requested services will be from the Engineering Department Contractual Services Budget or from the Capital Improvement Budget associated with identified capital projects.

CONSENT AGENDA ITEM 2.b.2. – June 27, 2017

Subject: Army Base Treatment Plant Miscellaneous Improvements
Contract Award (>\$200,000)

Recommended Action: Award a contract to T.A. Sheets General Contractors, Inc. in the amount of \$2,644,800.

CIP Project: AB010100

Budget	\$124,521,000
Previous Expenditures and Encumbrances	(\$119,161,049)
Available Balance	<u>\$5,359,951</u>

Type of Procurement: Competitive Bid

The project was advertised on April 23, 2017 and three bids were received on June 1, 2017. The design engineer, HDR Engineering, Inc., evaluated the bids and recommends award to the lowest responsive and responsible bidder, T.A. Sheets General Contractors, Inc., in the amount of \$2,644,800.

Bidder	Bid Amount
T.A. Sheets General Contractors, Inc.	\$2,644,800
MEB General Contractors, Inc.	\$2,665,700
Allfirst, LLC	\$13,729,924

Engineer Estimate: \$2,282,702

Project Description: This project will provide for the Biological Nutrient Removal (BNR) to meet regulatory requirements. Improvements to existing facilities are needed to address the BNR process upgrades including the installation of a distributed control system, grit removal improvements and generator/switchgear upgrades. A number of other site improvements are needed on this relatively small and fully utilized site.

Contract Description: This construction contract consists of site work including demolition of existing curbs, inlets, roadway and vaults, grading, erosion and sediment control provisions, installation of stormwater collection systems, and other similar site work and site improvements; modifications and rehabilitation of existing wastewater treatment plant facilities including architectural, electrical and structural upgrades; and modifications of chemical feed facilities, process piping and pumping systems, and yard piping.

Schedule: Project Completion Fall 2018

CONSENT AGENDA ITEM 2.b.3. – June 27, 2017

Subject: Atlantic Treatment Plant Secondary Clarifiers Coating and Repair
Contract Award (>\$200,000)

Recommended Action: Award a contract to New Kent Coatings Inc. in the amount of \$259,522.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
New Kent Coatings Inc.	\$259,522
Vast Solutions Of Virginia LLC	\$556,708
Town Hall Painting Corporation	\$726,025
UHP Projects, Inc.	Non-responsive
Progressive Environmental Services LLC	Non-responsive

HRSD Estimate: \$310,000

Contract Description: This contract is an agreement to prepare, coat and perform spot repairs on all immersion/atmospheric ferrous steel on the Secondary Clarifiers #1-6 at the Atlantic Treatment Plant.

UHP Projects, Inc. was found non-responsive due to the inability to obtain bonding. Progressive Environmental Services, LLC was found non-responsive for not having a valid Contractor's License with the Virginia Department of Professional and Occupational Regulation.

CONSENT AGENDA ITEM 2.b.4. – June 27, 2017

Subject: Boat Harbor Treatment Plant Odor Control Piping Coating
Contract Award (>\$200,000)

Recommended Action: Award a contract to Town Hall Painting Corporation in the amount of \$244,000.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Town Hall Painting Corporation	\$244,000
New Kent Coatings Inc.	\$272,430
Marine Hydraulics International Inc.	\$379,889
Vast Solutions Of Virginia LLC	\$541,445

HRSD Estimate: \$560,000

Contract Description: This contract is an agreement to prepare and coat all odor piping and steel pipe bands. Services will also include spot repair of steel structures around scrubber tanks, towers and fans at the Boat Harbor Treatment Plant.

CONSENT AGENDA ITEM 2.b.5 – June 27, 2017

Subject: Hampton Trunk Sewer Extension Division B – Claremont Force Main Replacement
Contract Award (>\$200,000) and Task Order (>200,000)

Recommended Actions:

- a. Award a contract to BASIC Construction Company LLC in the amount of \$4,091,739.
- b. Approve a task order with Whitman, Requardt & Associates, LLP in the amount of \$351,054.

CIP Project: BH012700

Budget	\$5,388,000
Previous Expenditures and Encumbrances	(\$339,356)
Available Balance	\$5,048,644

Type of Procurement: Competitive Bid

Bidder	Bid Amount
BASIC Construction Company LLC	\$4,091,739
TA Sheets General Contractors Inc.	\$4,155,925
S J Louis Construction Inc.	\$4,183,000
MEB General Contractors Inc.	\$4,976,145
Gaston Brothers Utilities, LLC	\$4,978,393
Tidewater Utility Construction Inc.	\$6,373,768

HRSD/Engineer Estimate: \$5,419,147

Contract Status:	Amount
Original Contract with Whitman, Requardt & Associates, LLP	\$54,501
Total Value of Previous Task Orders	\$283,661
Requested Task Order	\$351,054
Total Value of All Task Orders	\$634,715
Revised Contract Value	\$689,216
Engineering Services as % of Construction	16.84%

Project Description: The project includes a new 36-inch ductile iron pipeline and appurtenant facilities to replace an aging HRSD 34-inch force main along Chesapeake

Avenue. The project includes approximately 5,340 linear feet of 36-inch force main from HRSD's Claremont Pump Station in Hampton along Chesapeake Avenue to the Monitor Merrimac Overlook Park in Newport News.

Contract Description: This contract is for the construction of Hampton Trunk Sewer Extension Division B – Claremont Force Main Replacement.

This task order will provide contract administration and contract inspection services. The project route is along Chesapeake Avenue. This project will require coordination with the City of Newport News, the City of Hampton and the City of Newport News' Chesapeake Avenue Bike Trail and Sidewalk project.

Analysis of Cost: The total engineering services cost to construction ratio is 16.84 percent. A meeting was held on June 9, 2017 to discuss the project scope of services. A fee of \$351,054 was negotiated for the required professional services for construction oversight. The Construction Services fee is 8.6 percent of the Construction bid amount which is comprised of a Construction Administration fee that is 3.1 percent of the Construction bid amount, a Construction Inspection fee that is 5.1 percent of the Construction bid amount and an Additional Services fee that is 0.4 percent of the Construction bid amount. The engineering costs are in agreement with similar efforts for other projects.

<u>Schedule:</u>	PER	January 2015
	Design	January 2016
	Bid	May 2017
	Construction	July 2017
	Project Completion	June 2018

CONSENT AGENDA ITEM 2.b.6. – June 27, 2017

Subject: Nansemond Treatment Plant Digester Cleaning
Contract Award (>\$200,000)

Recommended Action: Award a contract to Synagro Technologies Inc. in the amount of \$484,006.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Synagro Technologies Inc.	\$484,006
HEPACO LLC	Non-Responsive

HRSD Estimate: \$327,000

Contract Description: This contract is an agreement for the cleaning of digester tank No. 2 and hauling of residuals to approved landfill. Cleaning of the digester tanks is preparation for the ongoing tank coating projects at the Nansemond Treatment Plant.

HEPACO LLC was found non-responsive due to missing the bid deposit submittal requirement.

CONSENT AGENDA ITEM 2.b.7. – June 27, 2017

Subject: Real Estate Services
Contract Award (>\$200,000)

Recommended Action: Award a professional services annual contract agreement for Real Estate Services with Johnson, Mirmiran & Thompson (JMT), to become effective July 1, 2017 with a maximum allowable limit of \$1,000,000 per single task and accumulated \$5,000,000 per year with four annual renewal options.

Type of Procurement: Competitive Negotiation

A Public Notice was issued on April 2, 2017. Four firms submitted proposals on April 25, 2017, and four firms were determined to be responsive and deemed fully qualified, responsible and suitable to the requirement in the Request for Proposals. Three firms were short-listed, interviewed and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
Johnson, Mirmiran & Thompson (JMT)	91	1
O.R. Colan Associates, LLC	78	2
Cushman & Wakefield Thalhimer	72	3

The Selection Committee recommends award of the Real Estate Services contract to JMT whose professional qualifications and proposed services serve the interest of HRSD. The workforce categories, rates, handling costs for sub-consultants and direct reimbursable costs were negotiated for the first contract year of the renewable contract. This contract will become effective on July 1, 2017.

Contract Description: This firm will provide assistance in areas such as land and easement acquisition, complex real estate transactions and consultation, appraisals and leasing. The Professional Services Agreement with JMT establishes billing rates and reimbursement methods. Actual authorization will be addressed through Task Orders and Amendments. Funding for this work will be from the Operating Budget and/or the Capital Improvement Budget.

CONSENT AGENDA ITEM 2.c.2. – June 27, 2017

Subject: Pughsville Pressure Reducing Station Upgrades
Task Order (>\$200,000)

Recommended Action: Approve a task order with TA Sheets General Contractors, Inc. in the amount of \$2,000,995.

CIP Project: NP012200

Budget	\$2,720,000
Previous Expenditures and Encumbrances	(\$223,099)
Available Balance	\$2,496,901

Contract Status:	Amount
Original Contract with TA Sheets General Contractors, Inc.	\$6,182,375
Total Value of Previous Task Orders	\$17,599,411
Requested Task Order	\$2,000,995
Total Value of All Task Orders	\$19,600,406
Revised Contract Value	\$25,782,781
Engineering Services as % of Construction	%

Project Description: The original project was to design and construct upgrades to the Pughsville Pressure Reducing Station (PRS) in order to adequately reduce pressures downstream of the Wilroy Road PRS. The contemplated upgrades were to include the addition of temporary bypass pumps to reduce peak pressures in the force main system during wet weather flow conditions. This portion of the work is on hold pending decisions related to wet weather management. In the short term, this project will replace yard valves and a limited amount of yard piping to improve system reliability. This project is part of the Interim System Improvements required as part of the Federal Consent Decree.

Task Order Description: This task order will prepare the site for bypass pumping required to complete the yard valves replacement work as mandated by the Federal Consent Decree. TA Sheets (TAS) will excavate at the proposed line stop and bypass location north of the station, cut off the casing at the old railroad tracks crossing and evaluate the condition of the force main for a line stop at that location. The yard valve replacements must be complete by February 2018. To meet this schedule, the work will be done by TAS under the Prompt Repairs and On Call Services Contract, following completion of the exploratory work.

Analysis of Cost: The cost for this task order is based on the unit costs defined in the Prompt Repairs and On Call services contract awarded to TAS in 2013.

Schedule:	PER	October 2011
	Design	May 2012
	Bid	August 2012
	Construction	April 2017
	Project Completion	November 2017

CONSENT AGENDA ITEM 2.d.1. – June 27, 2017

Subject: Thermo Scientific™ SampleManager Laboratory Information Management System Upgrade
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with Thermo Labsystems Inc. DBA Thermo Fisher Scientific Inc. in the estimated amount of \$75,400.

Contract Status:	Amount	Cumulative % of Contract
Original Contract with Thermo Labsystems Inc. DBA Thermo Fisher Scientific Inc.	\$210,738	
Total Value of Previous Change Orders	\$0	0%
Requested Change Order No. 1	\$75,400	
Total Value of All Change Orders	\$75,400	36%
Revised Contract Value	\$286,138	

Time (Additional Calendar Days)		0
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Change Order Description: This change order includes initial upgrade to version 12 with required modifications to the system; enabling of workflows; initial testing of upgraded system; upgrade and configuration of Integration Manager; migration of instrument interfaces and interface with electronic data deliverables (EDD) from the Sustainable Water Initiative for Tomorrow (SWIFT); issue resolution; development of upgrade plan for Go Live; and Go-Live assistance.

Analysis of Cost: Upgrade and implementation costs are based on a fixed per day cost of \$1,400 (\$175/hour) for approximately 51 days. Travel and expense costs will be billed based on the HRSD travel guidelines and will not exceed \$4,000.

CONSENT AGENDA ITEM 2.e.1. – June 27, 2017

Subject: BioWin Software Licensing and Support
Sole Source (>\$10,000)

Recommended Action: Approve EnviroSim Associates LTD as the provider of BioWin software licensing and support for Water Technology and Research.

Sole Source Justification:

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

Details: Services include licensing and support for the BioWin software. BioWin is a wastewater treatment process simulator used at HRSD to tie together biological, chemical and physical process models. It is used to design, upgrade and optimize wastewater treatment plants of all types. Licensing and support includes the use of the BioWin model, free updates, online help system and tutorials, access to pre-configured process flowsheet layouts and on-going technical customer support. The BioWin model is owned, developed and supported exclusively by EnviroSim Associates LTD.

CONSENT AGENDA ITEM 2.e.2. – June 27, 2017

Subject: Jerome[®] Analyzers Maintenance Contract
Sole Source (>\$10,000)

Recommended Action: Approve Arizona Instrument LLC as the provider of annual warranty maintenance on Jerome[®] Analyzers for the Technical Services Division.

Sole Source Justification:

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

Details: Services include parts and labor for repairs, one annual calibration and replacement of one gold film sensor at the manufacturing facility (excluding return freight). The Jerome[®] analyzers use patented sensors for accurate detection and measurement of low parts per billion detection level threshold hydrogen sulfide concentrations. Loaner instruments are available while analyzer is being serviced at a reduced cost including freight.

CONSENT AGENDA ITEM 2.e.3. – June 27, 2017

Subject: SAP® Software Solutions Maintenance and Support
Sole Source (>\$10,000)

Recommended Action: Approve SAP America Inc. as the provider of SAP® software solutions maintenance and support for the Information Technology Division.

Sole Source Justification:

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

Details: Services include maintenance and support for Crystal Reports and Business Objects software utilized by HRSD. Maintenance includes new software releases, tools and procedures for upgrades, correction packages to adapt existing functionality, technology updates and software change management. Support includes five days remote support from SAP® solution architects, access to guided self-services and access to configuration guidelines and content for SAP® software.

CONSENT AGENDA ITEM 2.e.4. – June 27, 2017

Subject: Sulzer Effluent Pump Parts, Rebuild and Repair Services
Sole Source (>\$10,000)

Recommended Action: Approve Sulzer Pump Services (US) Inc. as the provider of parts, rebuild and repair services to Sulzer Effluent Pumps in use at HRSD.

Sole Source Justification:

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

Details: Services include disassembly, inspection and complete rebuild of the vertical effluent pump. The pumps are critical for maintaining operations during the wet weather seasons and storm events helping prevent spill or overflow.

This is the second of four pumps being rebuilt for Chesapeake-Elizabeth Treatment Plant. The first was completed under an Emergency Declaration in December 2016. HRSD has submitted documentation to the Federal Emergency Management Agency for reimbursement.

CONSENT AGENDA ITEM 2.e.5. – June 27, 2017

Subject: Technical Grade Magnesium Hydroxide Slurry
Sole Source (>\$10,000)

Recommended Action: Approve the use of Thioguard® technical grade magnesium hydroxide slurry and Premeir Magnesia LLC as the provider for the James River Treatment Plant.

Sole Source Justification:

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

Details: Services include supply and delivery of 60 percent magnesium hydroxide $Mg(OH)_2$ slurry for use at the James River Treatment Plant as part of a pilot study. The pilot study is to precipitate soluble phosphorus in anaerobically digested sludge as struvite. Inline struvite precipitation is being investigated as a net cost control measure by reducing costs associated with dewatering operations, biosolids hauling and nuisance struvite removal from sludge piping.

The most critical component for the pilot study from a quality standpoint is the grain size distribution of the $Mg(OH)_2$ slurry. This is the root of some bulk feed system problems and lack of apparent activity for some $Mg(OH)_2$ products. Preliminary testing on a small sample of Thioguard® has shown that the product provides the most favorable quality.

The use of this product will be on a temporary basis with the sole source request expiring in a six-month period from award. Parallel to the study, requirements will be developed for a competitive solicitation which will include jar testing of other products to confirm suitability as compared to $Mg(OH)_2$ on a permanent basis. Use of the Thioguard® product will reduce the time and associated labor expenses of multiple product testings and provide a consistent version of the product while keeping to the pilot study schedule.

HRSD COMMISSION MEETING MINUTES
June 27, 2017

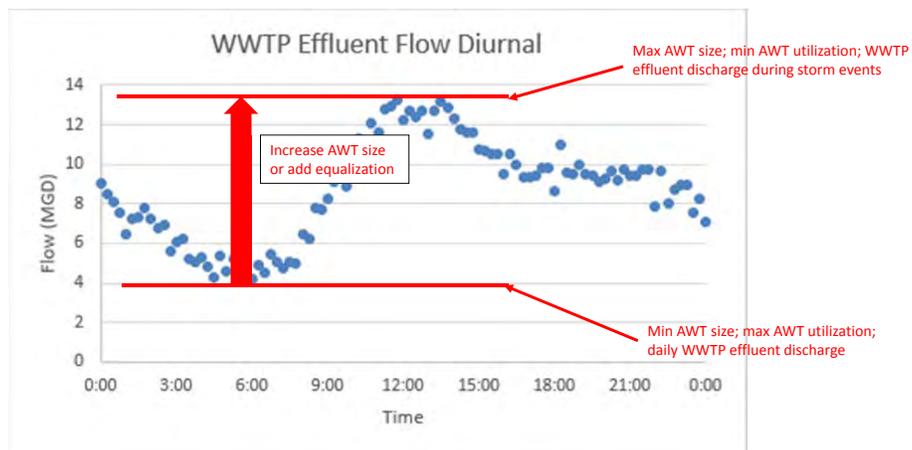
ATTACHMENT #2

AGENDA ITEM 3. – Williamsburg Treatment Plant Land Acquisition
PowerPoint Presentation

WB SWIFT Facility Layout Options

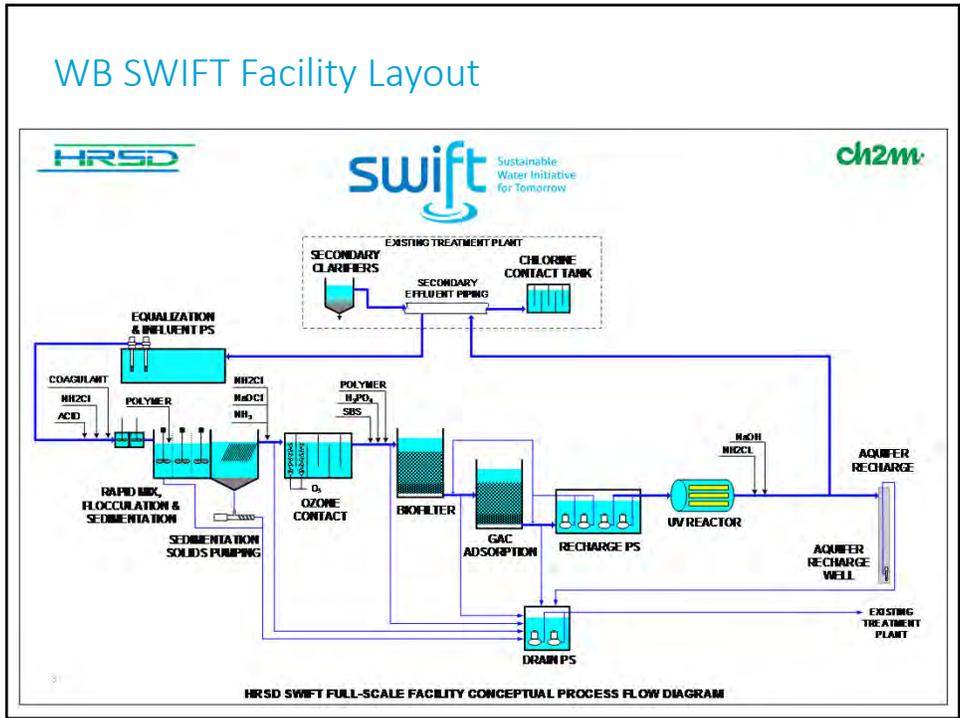


Facility Sizing

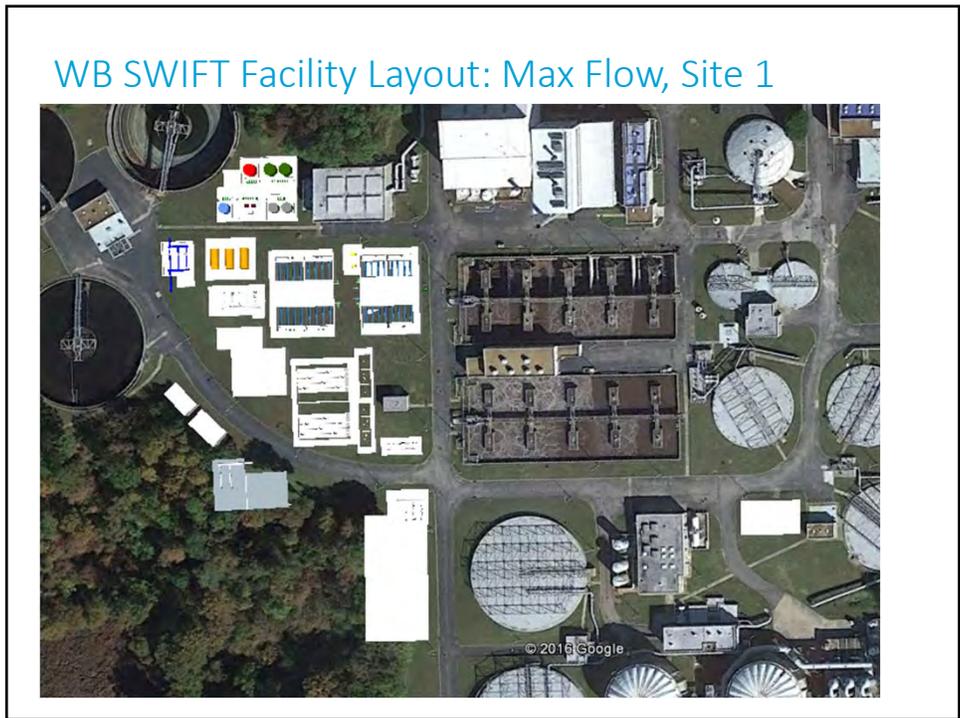


- Two sizes selected for analysis:
 - 8 MGD AWT, 1 MG EQ tank
 - 13 MGD AWT, 2 MG EQ tank

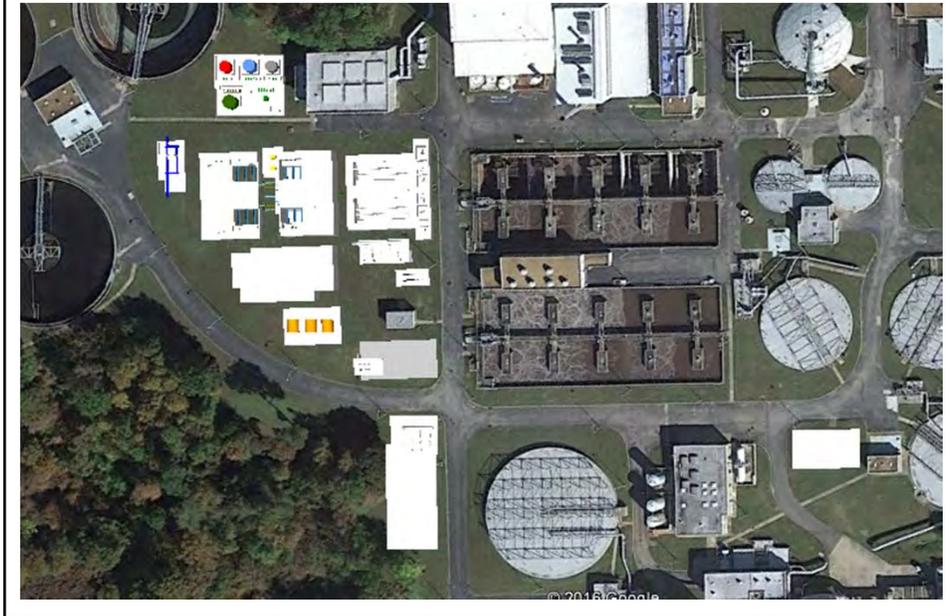
WB SWIFT Facility Layout



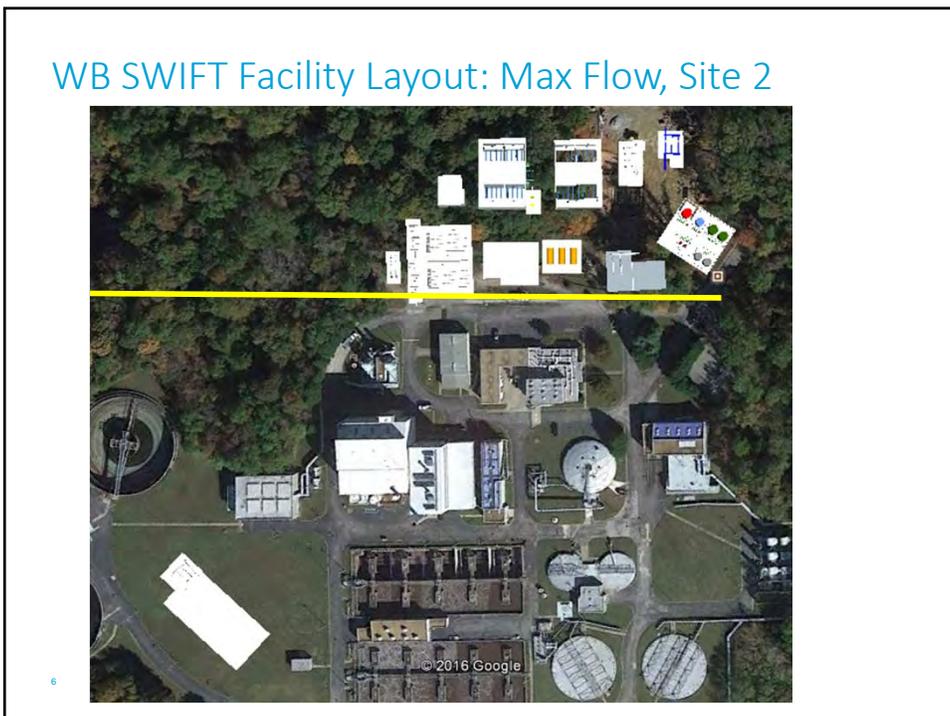
WB SWIFT Facility Layout: Max Flow, Site 1



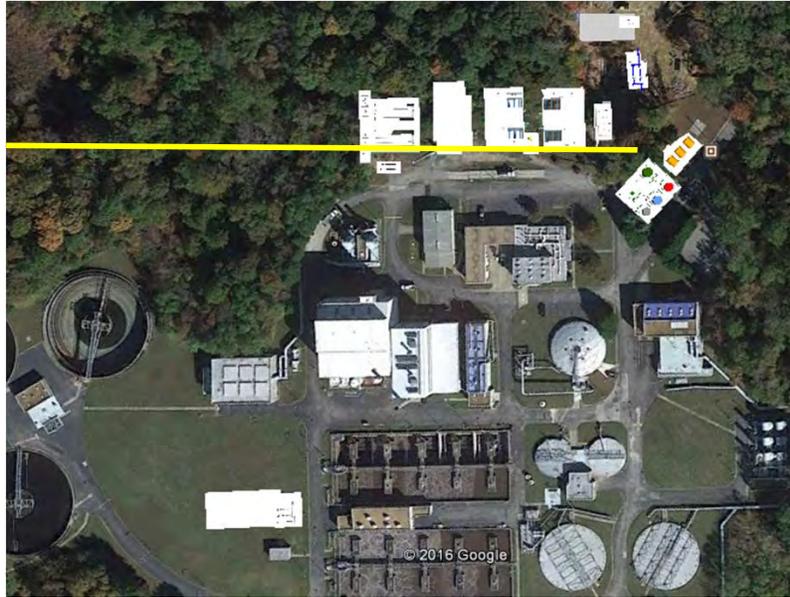
WB SWIFT Facility Layout: Min Flow, Site 1



WB SWIFT Facility Layout: Max Flow, Site 2



WB SWIFT Facility Layout: Min Flow, Site 2



Facility Layout Conclusions

- In all scenarios analyzed, addition of SWIFT facilities within current site boundaries:
 - Results in a tight site layout that would be challenging to integrate with existing facilities
 - Requires consideration of stacking facilities and/or building on steep slope
 - Inadequate space for well field
- Acquiring the parcel adjacent to the site allows:
 - SWIFT facilities to be co-located outside of the boundary of the existing facilities
 - Adequate spacing and access for the SWIFT facility
 - Existing treatment plant facilities to remain “unharmd”
 - Construction to be performed at a reasonable grade/slope and provides space for construction access and lay-down areas

8

WB Proposed Parcel Acquisition



9

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #3

AGENDA ITEM 5. – Federal Emergency Management Agency (FEMA)/Virginia
Department of Emergency Management (VDEM)
Disaster Assistance Agreement (Hurricane Matthew)

JEFFREY D. STERN, Ph.D.
State Coordinator

BRETT A. BURDICK
Chief Deputy Coordinator



SUSAN L. MONGOLD
Deputy Coordinator
Mission Support

COMMONWEALTH of VIRGINIA
Department of Emergency Management

10501 Trade Court
North Chesterfield, Virginia 23236-3713
Tel (804) 897-6500 TDD (804) 674-2417 FAX (804) 897-6506

May 31, 2017

Mr. Jay Bernas
Director of Finance
Hampton Roads Sanitation District
PO Box 5911
Virginia Beach, VA, 23471-0911

RE: Hampton Roads Sanitation District– DR 4291 Public Assistance Award Letter
CFDA #97.036
FIPS #: 810-07541-00
PA-03-VA-4291-PW-000100 – Emergency Protective Measures

Dear Mr. Bernas:

I am pleased to notify you that the Federal Emergency Management Agency has approved the following project worksheets for Disaster 4291. The funds have been obligated through the Public Assistance Grant Program. Attached you will find the grant award package. Please read all documents carefully prior to initiating your project.

As funded, the federal share is 75% of the total project costs and the non-federal share is 25%. If any state match will be provided, it will be listed on the attached grant agreement. State funds will be dispersed upon receipt of funds from the Virginia Department of Planning and Budget. If you have additional projects not yet awarded, this agreement will be amended once awarded and/or the state share is approved.

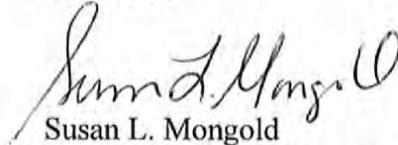
No reimbursements will be made until the award package is signed and received by the Virginia Department of Emergency Management. Please sign the grant award package and attachments and return to the attention of Robbie Coates at robert.coates@vdem.virginia.gov. Small projects will be reimbursed as soon as possible after receipt of this letter, while large projects (over \$121,800) may receive partial payment with final payment upon completion of the final inspection report (FIR) by FEMA.

*Saving lives through effective emergency management and homeland security.
"A Ready Virginia is a Resilient Virginia."*

Mr. Jay Bernas
Page 2
May 31, 2017

Again, congratulations on approval of these projects. If you have questions regarding this award or the implementation of your project, please contact Lewis Campbell by email at lewis.campbell@vdem.virginia.gov or by telephone at 804-897-9978.

Sincerely,



Susan L. Mongold
Alternate Governor's Authorized Representative

SLM/RSC/sns

cc: Robert Coates, Grants Manager, Disaster Programs

**Commonwealth of Virginia
Public Assistance Program
State Recipient/Sub-recipient Disaster Assistance Agreement
CFDA# 97.036**

Section 1 – Purpose

This Agreement is made as of this 31st day of May, 2017 by and between the State/Recipient, the Virginia Department of Emergency Management, hereinafter “VDEM,” and Hampton Roads Sanitation District, hereinafter “Sub-recipient.” This Agreement shall apply to all assistance funds provided by or through VDEM to the Sub-recipient as a result of the disaster called Hurricane Matthew from October 7 through October 15, 2016, and pursuant to the disaster declaration made by the President of the United States numbered FEMA-4291-DR-VA.

Section 2 – General Statement of Terms and Conditions

This Agreement is subject to the general conditions that follow and any special conditions attached hereto. This award is also subject to all applicable rules, regulations, and conditions prescribed by the Federal Emergency Management Agency (FEMA) and the Commonwealth of Virginia.

Section 3 – Term of the Agreement and Effective Date

This Agreement between VDEM and the Sub-recipient shall be effective upon execution of the Agreement by both VDEM and Sub-recipient and is effective upon the date the fully executed Award Acceptance Agreement is received by VDEM.

Section 4 – Scope of the Agreement

This Agreement shall apply to all Public Assistance disaster funds provided through VDEM to the Sub-recipient as a result of the above referenced disaster.

Section 5 – Conflicts of Interest

1. The Sub-recipient must disclose, in a timely manner and in writing to FEMA and VDEM, any potential conflict of interest in the federal award cycle.
2. The Sub-recipient must disclose, in a timely manner and in writing to the FEMA and VDEM, all violations of federal criminal law involving fraud, bribery, or gratuity potentially affecting the federal award.

Section 6 – Failure to Comply

Failure to comply with the conditions and requirements set forth in this Agreement will result in the suspension of and/or recovery by VDEM of funding for projects under this sub-award under the above referenced disaster and may affect the Sub-recipient’s eligibility for future funding under the Public Assistance Program.

Section 7 – Accounting and Record Keeping

The Sub-recipient shall establish and maintain a proper accounting system to record expenditures of disaster assistance funds in accordance with generally accepted accounting standards and shall maintain all records and supporting documentation associated with the disaster in accordance with 2 CFR § 200.333. The Sub-recipient shall retain documentation supporting each claim for a period of not less than three years from the date of the final payment and; the Sub-recipient shall give state and federal agencies designated by the Governor’s Authorized Representative (GAR) or Alternate GAR access to and the right to examine all records and documents related to the use of disaster assistance funds.

Section 8 – Procurement

The Sub-recipient agrees to abide by its respective procurement rules, policies, and/or procedures as outlined in 2 CFR §§ 200.318–200.326. If there are no written rules, the Sub-recipient agrees to abide by the Commonwealth of Virginia’s procurement rules, policies, and/or procedures. A copy of the Sub-recipient procurement policy will be provided to VDEM upon request.

Section 9 – Audit

The Sub-recipient is aware that under the conditions of 2 CFR §§ 200.500–200.521, a non-federal entity that expends \$750,000 or more during the non-federal entity’s fiscal year in federal awards must have a single or program-specific audit conducted for that year.

Section 10 – Governing Laws, Regulations, and Statutes

The Sub-recipient hereby assures and certifies compliance with all applicable statutes, regulations, policies, guidelines, and requirements, including, but not limited to those listed in Appendix C.

Section 11 – General Conditions and Standard Assurances

The designated agent of the Sub-recipient certifies that:

1. The Sub-recipient’s designated agent has legal authority to apply for assistance on behalf of the Sub-recipient and is authorized to execute all required forms on behalf of the Sub-recipient.
2. The Sub-recipient shall provide all necessary financial and managerial resources to meet the terms and conditions of receiving federal and state disaster assistance.
3. The Sub-recipient certifies that all costs claimed under this application are for actual costs incurred by the Sub-recipient in the performance of authorized work as defined in the eligibility criteria established by the FEMA.
4. The total grant award from VDEM is \$60,636.84, provided through the FEMA Public Assistance Grant Program, FEMA_DR_4291_VA. FEMA shall provide funds for the project identified in the Scope of Work (Attachment A) totaling \$45,477.63; VDEM shall provide funds for the project identified in the Scope of Work (Attachment A) totaling \$ 10,914.63. The Sub-recipient agrees to provide a match in the amount of \$4,244.58. The Sub-recipient is aware of and shall comply with cost-sharing requirements of federal and state mitigation grant assistance; specifically that federal assistance is limited to 75% of eligible expenditures, state assistance (as reimbursed through the Virginia Department of Emergency Management) is limited to 18% of eligible costs, and the Sub-recipient shall provide from the Sub-recipient’s funds 7% of eligible costs. The state share is derived from the Commission on Local Government’s fiscal stress index (Code of Virginia §44-146.28) and will be disbursed upon receipt of fund from the Virginia Department of Planning and Budget. Private non-profits will not receive a state share.
5. The Sub-recipient is aware that limited funding may be made available for mitigation of future disaster damages, which requires cost-sharing on the basis of 75% federal and 25% non-federal contribution, and that the Sub-recipient may be required to provide the full non-federal share for such mitigation activities.
6. The Sub-recipient shall establish and maintain a proper accounting system to record expenditures of disaster assistance funds in accordance with federally accepted accounting standards or as directed by the GAR or Alternate GAR.
7. Sub-recipient shall not deviate from the Scope of Work as provided in the Project Worksheet(s) and described in Attachment A, without first receiving written approval from the FEMA through VDEM.
8. The Sub-recipient shall begin and complete all items of work within the time limits established by the GAR or Alternate GAR.
 - a. Emergency Work (Categories A and B) shall be completed within six months from December 15, 2016, the date of the Federal Disaster Declaration: Completion date is May 7, 2017.

- b. Permanent Work (Categories C – G) shall be completed within 18 months from December 15, 2016, the date of the Federal Disaster Declaration: Completion date is May 7, 2018.
 - c. Extensions may be granted, upon request, for those factors that are out of the span of control of the Sub-recipient. The Sub-recipient must write a letter to the GAR or Alternate GAR at VDEM, requesting an official extension and supplying valid documentation/reasoning as to why the project cannot be completed on time. Authorization for an extension remains at the discretion of VDEM and/or FEMA and will be made in writing by VDEM or FEMA depending on the agency's respective extension authority.
9. Sub-recipient will submit to VDEM quarterly updates on all open projects. These updates will be due on April 15, July 15, October 15, and January 15.
10. The Sub-recipient shall, upon the request of VDEM, participate in initial, interim, and final site inspections with the State Public Assistance Officer or designee.
11. The Sub-recipient shall comply with all applicable codes and standards in completion of eligible repair or replacement of damaged public facilities.
12. The Sub-recipient shall comply with any requirement by FEMA to obtain and maintain any insurance coverage prior to receipt of funding. The Sub-recipient shall produce evidence and documentation of said insurance coverage. The Sub-recipient shall ensure that all applicable local, state, and federal permits have been obtained prior to starting any construction and that all projects are consistent with current codes and standards.
13. The Sub-recipient will engage VDEM and FEMA as soon as it identifies a change to the Statement of Work, in order to allow FEMA time to review changes for eligibility and environmental and historic preservation (EHP) compliance requirements prior to commencement of work. If the Sub-recipient begins work associated with a change before FEMA's review and approval, it will jeopardize public assistance funding.
14. The Sub-recipient shall comply with all federal and state statutes and regulations relating to non-discrimination.
15. The Sub-recipient shall comply, as applicable, with the provisions of the Davis-Bacon Act relating to labor standards.
16. The Sub-recipient agrees to establish internal personnel safeguards, which will prohibit employees from using their positions for a purpose that creates, or gives the appearance of creating, a desire for private gain for themselves or for others, particularly those persons who have a family, business, or other tie to the employee.
17. The Sub-recipient agrees to comply with provisions of the Drug-Free Workplace Act as set forth in Attachment A and incorporated herein.
18. The Sub-recipient agrees that it will not use any federal funds for lobbying and will disclose the use of non-federal funds for lobbying by filing any documentation and/or forms that are required by either the federal government or the Commonwealth as set forth in Attachment B and incorporated herein.
19. The Sub-recipient agrees to comply with the Assurances Non-Construction Programs requirements, which are attached hereto as Attachment C and incorporated herein.
20. The Sub-recipient certifies that the federal and state disaster assistance requested through the submission of this application does not and will not duplicate any financial assistance or cost reimbursement

received for the same disaster cost or loss under any other program or from insurance or any other source.

21. The Sub-recipient shall not enter into cost plus percentage of cost contracts for completion of disaster restoration or repair work projects.
22. The Sub-recipient shall not enter into any contracts for which payment is contingent upon receipt of state or federal funds.
23. The Sub-recipient shall not enter into any contract with any party that is debarred or suspended from participating in federal assistance programs.
24. The Sub-recipient shall return to the state, within 60 days of such request by the GAR or Alternate GAR, any advance funds that are not supported by audit or other federal or state review of documentation maintained by the Sub-recipient. If the Sub-recipient fails to refund the monies, the Commonwealth reserves the right to offset the amount due against any existing or future sums of money owed to the Sub-recipient by any Commonwealth agency or department.

Section 12 - Amendment

This Agreement may be modified, amended, altered, or changed at any time by VDEM. All amendments will be made in writing to the Sub-recipient. Amendments may also be made by mutual consent between VDEM and Sub-recipient, if agreed to in writing and executed by both parties.

Section 13 – Termination of Agreement

Termination of this Agreement can occur as an effect of the following results:

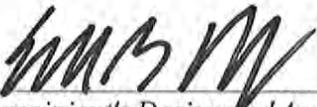
1. Proper completion and closeout of this project;
2. Termination for Breach
 - a. In the event of breach by the Sub-recipient of this Agreement, VDEM shall provide written notice to the Sub-recipient specifying the manner in which the Agreement has been breached. If a notice of breach is given and the Sub-recipient has not substantially corrected the breach within 60 days of receipt of the written notice, VDEM shall have the right to terminate the Agreement. The Sub-recipient shall be paid for no service rendered or expense incurred after receipt of the notice of termination, except such fees and expenses incurred prior to the effective date of termination that are necessary for curtailment of its work under the Agreement.
3. Termination for Convenience or other termination as allowed or required by 44 CFR for projects which cannot be completed as described in the FEMA-approved grant project application and the Scope of Services – Attachment D, herein.
 - a. Communication of this decision and information related to the project termination will be provided to the Sub-recipient in coordination with FEMA through registered mail.

Article XIV – Entire Agreement

This Agreement represents the complete and final understanding of VDEM and the Sub-recipient. No other understanding, oral, or written, regarding the subject matter of this Agreement, may be deemed to exist or to bind the parties at the time of execution.

Signed for the Sub-recipient:

Edward G. Henifin, General Manager
Typed Name and Title

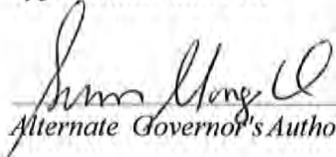

Sub-recipient's Designated Agent (Signature)

6/27/2017
Date

Signed for the State/Recipient:

Virginia Department of Emergency Management

Susan Mongold, Deputy State Coordinator for Mission Support
Typed Name and Title


Alternate Governor's Authorized Representative (Signature)

5.31.17
Date

ATTACHMENT A
Project Worksheet(s)

Project worksheet #100

- Project title: Emergency Protective Measures
- Total amount: \$60,636.84

ATTACHMENT B
Insert Project Budget

Project Awarded Budget – Funding Source FEMA Public Assistance:

Federal Project Funds (75%)	\$45,477.63
State Project Funds (18%)	\$10,914.63
Local Match (7%)	\$4,244.58
Total Project Funds	\$60,636.84

ATTACHMENT C
Administrative Requirements and Guidance

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, and as implemented by 44 CFR §§ 13, 206.
- Flood insurance purchase requirements of the Flood Disaster Protection Act, 42 U.S.C. §§ 4001 *et seq.*, as amended.
- National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*, as amended, and its applicable Federal Regulations found at 44 CFR Part 10.
- Clean Air Act, 42 U.S.C. §§ 7401 *et seq.*, as amended.
- Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 *et seq.*, as amended.
- Endangered Species Act of 1973, 7 U.S.C. § 136, 16 U.S.C. §§ 1531 *et seq.*, as amended.
- National Historic Preservation Act, 16 U.S.C. § 469, 470 *et seq.*, as amended, and its applicable Federal Regulations found at 36 CFR § 800 and 44 CFR § 208.
- Executive Order 11593, Protection and Enhancement of the Cultural Environment
- Hatch Act, 5 U.S.C. § 7324 *et seq.*, as amended, which limits the political activities of public employees.
- 2 CFR § 200 (Uniform Guidance)

PA-03-VA-4291-PW-00100(0) <u>P</u>	
Applicant Name: HAMPTON ROADS SANITATION DISTR	Application Title: WWKB019 Emergency Protective Measures
Period of Performance Start: 11-02-2016	Period of Performance End: 05-02-2017

Bundle Reference # (Amendment #)	Date Awarded

Subgrant Application - FEMA Form 90-91

Note: The Effective Cost Share for this application is 75%

FEDERAL EMERGENCY MANAGEMENT AGENCY PROJECT WORKSHEET						
DISASTER		PROJECT NO.	PA ID NO.	DATE	CATEGORY	
FEMA	4291 - DR -VA	WWKB019	810-07541-00	03-09-2017	B	
APPLICANT: HAMPTON ROADS SANITATION DISTR				WORK COMPLETE AS OF: 03-08-2017 : 100 %		
Site 1 of 1						
DAMAGED FACILITY: WWKB019 Emergency Protective Measures				COUNTY: Statewide		
LOCATION: Current Version: Hampton Road Sanitation District - System-Wide, Virginia				LATITUDE: 36.90915	LONGITUDE: -76.16286	
DAMAGE DESCRIPTION AND DIMENSIONS: Current Version: During the Incident Period of October 7 thru October 15, 2016, Hurricane Matthew caused high winds and heavy rainfall that resulted in flooding throughout the Hampton Road Sanitation District (HRSD) system wide. When a storm such as Matthew occurs and results in a flow of 100+ mgd (million gallons per day) it has the effect of scouring the sanitary pipe lines and pushing all the material that has been sitting in the lines to the treatment plant. The grit system at Hampton Roads Sanitation District is rated for about 60 mgd, so the amount of flow that was generated with the storm, overwhelmed the system and carried grit and sand downstream into other processes while plugging lines and filling sump stations. The Hampton Roads Sanitation District Chesapeake Elizabeth Plant located at 5332 Shore Drive, Virginia Beach, VA 23455, also lost electrical power starting on 10/09/16. GPS Location shown on PW was taken at Hampton Roads Sanitation District Chesapeake Elizabeth Plant.						
SCOPE OF WORK: Current Version: WORK COMPLETED: To protect public health, safety and public property of the Hampton Roads Sanitation District, the Applicant utilized 286.95 total Force Account hours, 249.65 regular (ineligible) hours and 37.30 over time (eligible) hours for a total of \$2,675.18 to respond to and monitor the pumps at the HRSD Chesapeake Plant. During the storm, FA Labor (eligible) over time hours were also utilized to keep the grit system from shutting down completely; flushing pumps and pulling lines apart as needed. FA Equipment used included generator, pumps and various trucks totaling \$39,447.25. Hampton Roads Sanitation District interceptors (pipe & pumping station workers) hauled grit and sand to the Hampton Roads Sanitation District Chesapeake Elizabeth Plant from pumping station clean outs and from (2) major pipe breaks that occurred at Laskin Road and the Intersection of Independence Boulevard and Columbus Street.						

The Applicant contracted Waste Management to haul away excess grit/sand = \$18,514.41. This grit and sand was taken to Bethel Landfill located at 100 North Park Lane, Hampton, VA 23666 for disposal.
 A permanently mounted backup generator that was run continuously for 59.5 hours starting on 10/9/16 was monitored intermittently.

GENERAL CONDITION:

By accepting this grant the Applicant to the best of their ability acknowledges that all damages described within this Sub-grant Application an all associated costs being claimed were a direct result of the declared event, and in connection with the incident period; with the exception of request for alternate or improved projects.

75% FEDERAL FUNDING: In accordance with FEMA policy 9523.9 and current disaster declaration determinations, this project worksheet will be funded with the Federal Cost share at 75% of all eligible costs.

DIRECT ADMINISTRATIVE COSTS:

The Sub grantee chooses not to claim costs to manage and administer this project as part of the Public Assistance program's grant award. Declining such costs does not exempt the Sub grantee from maintaining records adequately and documenting the source and application of funds as required in 2 CFR 200.413.

PROCUREMENT: Applicant/Sub-Recipient; please be advised that in the seeking of proposals and letting of contracts for eligible work, the Applicant/Applicant/Sub-Recipient must comply with its Local, State (provided that the procurements conform to applicable Federal law) and Federal procurement laws, regulations, and procedures as required by FEMA Policy 2 CFR Part 200, Procurement Standards, §317-326.

RECORD RETENTION/DOCUMENTATION: As described in 2 CFR, Part 200 § 200.333, Financial records, supporting documents, statistical records, and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three (3) years from the date of submission of the final expenditure report or, for Federal awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, respectively, as reported to the Federal awarding agency or pass-through entity in the case of a sub-recipient. Federal awarding agencies and pass-through entities must not impose any other record retention requirements upon non-Federal entities. Exceptions, Part 200.333, (a) – (f), (1), (2). All records relative this project worksheet are subject to examination and audit by the State, FEMA and the Comptroller General of the United States and must reflect work related to disaster specific costs.

INSURANCE: All Public Assistance projects are subject to an insurance review as stated in 44 CFR Sections §206.252 and 206.253. If applicable, an insurance determination will be made either as anticipated proceeds or actual proceeds in accordance with the applicant's insurance policy that may affect the total amount of project.

ENVIRONMENTAL and HISTORIC PRESERVATION:

Any change to the approved scope of work will require re-evaluation in accordance with the National Environmental Policy Act (NEPA) and other Federal environmental protection and historic preservation laws and Executive Orders. Noncompliance with this requirement may jeopardize the receipt of federal funding.

This review does not address all Federal, state and local requirements. Acceptance of Federal funding requires recipients to comply with all Federal, state and local laws, and all conditions imposed. The applicant is responsible for providing documentation of compliance for closeout. Failure to obtain all appropriate Federal, state and local environmental permits and clearances may jeopardize the receipt of Federal funding.

If ground disturbing activities occur during construction, the Applicant/Sub-Recipient will monitor ground disturbance and if any potential archaeological resources are encountered, will immediately cease construction in that area and notify the State and FEMA.

Does the Scope of Work change the pre-disaster conditions at the site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Special Considerations included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Hazard Mitigation proposal included? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is there insurance coverage on this facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PROJECT COST

ITEM	CODE	NARRATIVE	QUANTITY/UNIT	UNIT PRICE	COST
		*** Version 0 ***			
		Work Completed			
1	9007	Labor	1/LS	\$ 2,675.18	\$ 2,675.18
2	9008	Equipment	1/LS	\$ 39,447.25	\$ 39,447.25
3	9001	Contract	1/LS	\$ 18,514.41	\$ 18,514.41
		Direct Subgrantee Admin Cost			
4	9903	No Direct Administrative Costs	1/LS	\$ 0.00	\$ 0.00
				TOTAL COST	\$ 60,636.84

PREPARED BY Beverlyn Tucker	TITLE Project Specialist (FEMA)	SIGNATURE
APPLICANT REP. Robert Coates	TITLE Public Assistance Program Manager	SIGNATURE

Public Assistance Grant Program

Non-Supplanting Certification

I certify that any funds awarded under the Public Assistance Program will be used to supplement existing funds for programs activities, and will not replace (supplant) non-federal funds.

Designated Agent

Edward G. Henifin
Name


Signature

General manager
Title

HRSD
Agency

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence and officer of employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the modification of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of the certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose according. The certification is a material representation of the fact on which reliance was placed when this transaction was made or entered into. Submission of the certification is a prerequisite for making or entering into the transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned state, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence and officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instruction. Submission of this statement is a prerequisite for making or entering into this accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Applicant's Organization

HRSD

Printed name and title of authorized representation

Edward G Henifin, General Manager

Signature



Date

6/27/17

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

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1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
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7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
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19. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE 
APPLICANT ORGANIZATION 	DATE SUBMITTED 

ASSURANCES - CONSTRUCTION PROGRAMS

OMB Number: 4040-0009
Expiration Date: 01/31/2019

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

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3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
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SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE General Manager
APPLICANT ORGANIZATION HRSD	DATE SUBMITTED 6/27/17

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #4

AGENDA ITEM 7. – Atlantic Treatment Plant Thermal Hydrolysis Process (THP) and Atlantic Treatment Plant Fats, Oils and Grease (FOG) Receiving Station Additional Appropriation, Task Order and Guaranteed Maximum Price (GMP)
PowerPoint Presentation

Agenda Item 7 – Atlantic THP and FOG Receiving

- Big ask – additional funding of \$24.6 M
 - \$21.4 M for CAMBI
 - \$3.2 M for FOG receiving
- Still lowest cost option for long-term solids management at HRSD
- Allows re-rating of Atlantic to +65 mgd with no additional investment – to 72 mgd with minimal additional investment
- Maximizes use of existing investments in Atlantic digesters

1

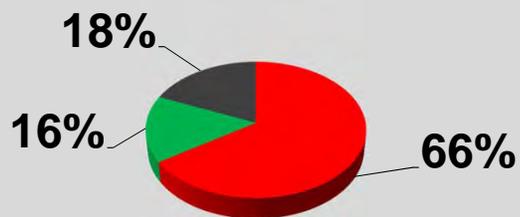


Update: Biosolids Resource
Recovery Master Plan (BRRMP)

Atlantic Treatment Plant:
Thermal Hydrolysis Process & FOG
Receiving Station

November 10, 2014

Current Biosolids Handling (*raw solids basis*)



- Incineration
- Composting
- Land Application

- Incinerators
 - Army Base
 - Ches-Elizabeth
 - VIP
 - Boat Harbor
 - Nansemond (D)
 - Williamsburg
 - Composting
 - York River (D)
 - James River (D)
 - Class B Land App
 - Atlantic (D)
- (D) = Plant has digesters

11/10/14 Presentation

3



Background: Longevity of MHIs



11/10/14 Presentation



Future of Multiple Hearth Incinerators (MHI) at HRSD

- The MHIs can comply with current and future regulations for the next 5 to 10yrs;
- The MHIs are well maintained/operated and have been used for over 35+ years by HRSD
- How long should HRSD keep relying on the MHIs? This is a question that HRSD needs to consider;
 - Future air regulations from EPA may influence this decision
- The decisions about the future of MHIs and CAMBI are inter-related

Class B Land Application

- Limited crops and application period
 - Weather can leave small window to spread
- Extra storage time to meet Class B
- Extra cost to manage storage pad (restacking)
- More land needed
- Increased odor potential
- Subject to political whims - NIMBY
- Bad actors have created negative public perception
- Growing movement to “organic” sourced foods with restrictions on use of biosolids

Atlantic Treatment Plant (54 MGD) – Rating Study (~72 MGD)



11/10/14 Presentation



ATP Pad No. 1 East Side – 28 Feb 2013



11/10/14 Presentation



ATP Pad No. 2 South Side – 28 Feb 2013



11/10/14 Presentation



ATP Pad No. 2 South East Corner – 28 Feb 2013



11/10/14 Presentation



Atlantic THP Project Drivers

- THP provides Class A quality with certainty
 - Minimal concern for regrowth, reactivation, product odors, public health, etc.
- Class A product opens up more and closer land application sites– as well as other use options.
- Requires much less storage capacity at plant
 - Cake solids from 15-19% to 28-32%
 - ~7% less dry solids to manage (~10% increase in VSR)
 - Better stacking, without higher sidewalls
 - Field storage is possible
 - More frequent application possible
- Approximately energy neutral (FOG makes this energy positive)
- Easily incorporates P-Release
- Provides a good opportunity for dewatered biosolids receiving (from other plants)
- Higher digester loading increases digester capacity, allowing receipt of raw cake from other plants (significant capacity)

11/10/14 Presentation



Atlantic Plant - Preliminary Engineering Report:

- Thermal Hydrolysis (CAMBI)
- FOG Receiving & Co-digestion



11/10/14 Presentation

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Project Vision

Produce a high-quality Class A biosolids product by processing solids through the CAMBI Thermal Hydrolysis Process, provide for future increases in solids handling capability, and provide for a new fats, oils and grease (FOG) receiving station to feed the CAMBI system. The system should be reliable, operator friendly, cost effective, and energy efficient, and should result in no offsite odors.

11/10/14 Presentation



Project Objectives

- Achieve Class A quality biosolids
- Provides the ability to accommodate the anticipated increase in loads from CETP
- Decrease the quantity of cake solids by improving dewaterability
- Minimize cake storage requirements
- Improve product odor and stackability
- Limit offsite odor excursions.
- Efficiently integrate into the existing plant processes
- Economical design: maximize the use of existing infrastructure
- Flexibility: FOG receiving and delivered biosolids from other HRSD facilities (future)

11/10/14 Presentation



Project Elements

- **New facilities**
 - Primary solids screening
 - Pre-dewatering centrifuges, cake storage, and conveyance
 - Cambi THP
 - Process steam system
 - Post-THP cooling system
 - Emergency solids storage
 - FOG Receiving Station
- **Modified facilities**
 - Solids holding tanks
 - Digesters (feed)
 - Digester gas management system
 - CHP (gas blending)
 - Odor Stations A, B and D
 - Plant NPW, DCS, Electrical

11/10/14 Presentation

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Ultimate Solids Contributions to THP and Digestion

Description	Peaking Condition	ATP Solids Production (including FOG), dtpd	Delivered Biosolids, dtpd	Total Solids to Cambi, dtpd	Cambi B6-4 Trains Required No.	Unused Cambi Capacity dtpd	Digesters In Service, No.
28.5 MGD	Peak 2-week	37.95	0	38	1	54	2
54 MGD	Peak 2-week	70.75	0	71	1	21	3
Maximum Digestion Capacity with 6 digesters (ATP = 54 MGD)	Peak 2-week	70.75	113	184	2	0	5
	Annual Average	60.35	78.5	139	2	45	5
72 MGD	Peak 2-week	101.25	0	101.5	2	82.5	3
Maximum Digestion Capacity with 6 digesters (ATP = 72 MGD)	Peak 2-week	101.25	82.5	184	2	0	5
	Annual Average	86.55	52.5	139	2	45	5

Notes:

1. Capacity of one Cambi B6-4 Train is 92 dtpd

11/10/14 Presentation

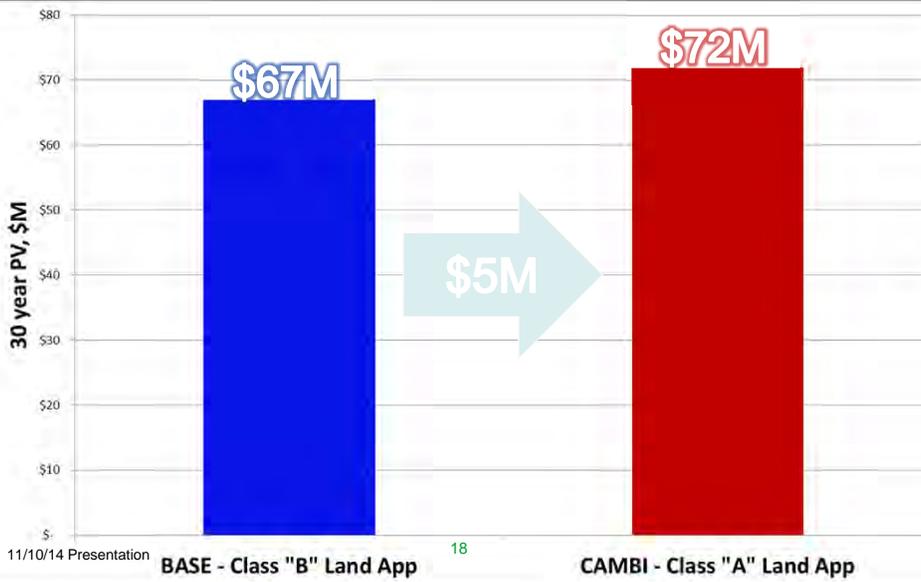


Assumptions

- **BASE (Do Nothing)**
 - New storage pads
 - New access road
 - Redundant acid phase digester
 - Solids in excess of pad capacity go to McGill
- **CAMBI**
 - 54 MGD capacity
 - \$35M capex (post value engr)
 - One new maintenance operator
 - Reduced land app requirements for Class A
 - Reduced solids (31% less solids to land apply)
 - Increased O&M, fixed and variable costs
 - Reduced power cost

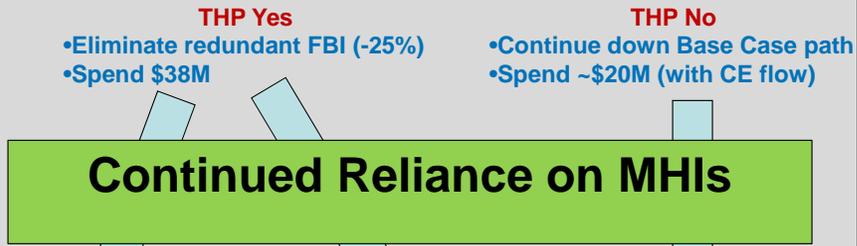


BCE Summary – 30 year Present Value Capex + O&M



Importance of this Decision

Now:

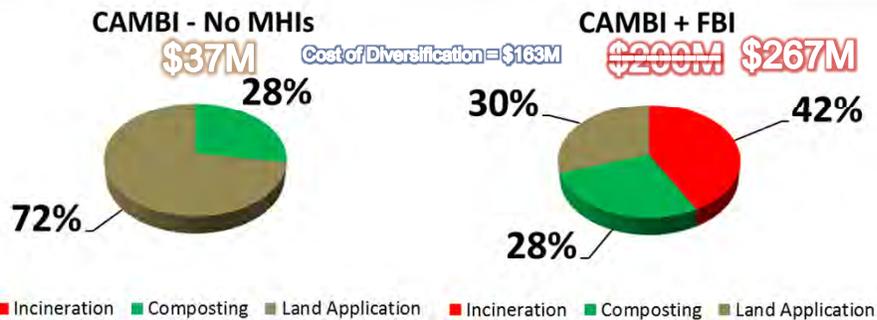


Later:

- | | |
|--|--|
| <p>Expand CAMBI – Eliminate FBI</p> <ul style="list-style-type: none"> •Regional solids handling at ATP •~\$37M capital + Road •Access road •Biosolids Receiving at ATP •Expand Class A Land App •Class A Products? •NS Plants? JR, YR, WB | <p>Single Regional FBI</p> <ul style="list-style-type: none"> •Eliminate redundant FBI (\$200M) •Biosolids Receiving at ATP |
| | <p>Fully Redundant Regional FBI</p> <ul style="list-style-type: none"> •\$270M capital cost •ATP remains Class B |

11/10/14 Presentation

Fork in the Road



- **No siting issues**
- CAMBI = AT + CE + AB + BH + VIP + WB
- Composting = JR + YR + NP
- New access road req'd
- 72 MGD rerating

- **Siting and permitting issues**
- FBI = AB + BH + VIP + WB
- CAMBI = AT + CE
- Composting = JR + YR + NP

11/10/14 Presentation

20



CAMBI Benefits

- Class A (with certainty)
- Digester capacity increases 2-3X
 - Accommodates Locality growth
 - Future flow diversions
- Improved VSR and gas production
 - CNG and Power Hedge
- Energy neutral
- Improved dewaterability and stackability
- Less pad storage required – year round hauling, more frequent application, and field storage
- Low odor, high quality product
- Opportunity for future marketable product
- Opportunity to regionalize based on digestion, hauling dewatered cake

11/10/14 Presentation

21



How did we miss the cost by so much?

- Listed several items in agenda package
- Big issue with design around cooling – other CAMBI installations in cooler, less humid climates – missed entirely in initial estimates
- Steep learning curve – HRSD very different from DC Water installation
- CMAR was a much more expensive delivery method – but highly valuable

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Options considered by staff

- Package for traditional bidding
 - Unknown savings
 - Potential loss of significant benefit of CMAR – contractor's commitment and knowledge of full design – well beyond what is in plans and specs
 - Loss of time
 - Challenges to integrate HRSD ICM capabilities in traditional bid package – likely to have 3rd party for controls

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HRSD

Options considered by staff

- Revisit solids handling strategies
 - Invest in more storage at Atlantic
 - Keep MHIs running
 - High risk option –
 - Dependent on aging MHIs to meet tighter air regulations
 - Class B solids issues continue to be tenuous
 - Requires significant investment in FBI in future – well in excess of CAMBI investment

24

HRSD

Recommendation

- Fully fund CAMBI at Atlantic – delaying Lynnhaven Parkway force main project until RWWMP (\$17 M)
 - Allows future consolidation of solids handling at Atlantic for all South Shore
 - Allows re-rating of Atlantic to +65 MGD – cheap capacity with minimal incremental operating cost increase
 - Maximizes use of existing digester investment
- Revisit use of CMAR in the future
 - Is cost worth benefits?

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HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #5

AGENDA ITEM 10. – Freeman Drive Realignment/Newmarket Creek Trail Project
Deed of Easement and Right of Way for 17 Freeman Drive
Conveyance to City of Hampton

601435

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

Tax ID: LRSN# 7000111

DEED OF EASEMENT AND RIGHT OF WAY

THIS DEED OF EASEMENT AND RIGHT OF WAY, made this _____ day of _____, 2017, by and between **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia, **GRANTOR**, (whether one or more) and the **CITY OF HAMPTON, GRANTEE**, whose mailing address is: _____

WITNESSETH:

That for and in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, receipt of which is hereby acknowledged, **GRANTOR** does hereby grant and convey with GENERAL WARRANTY OF TITLE, unto **GRANTEE**, its successors and assigns, forever, the perpetual right, privilege, easement and right-of-way, hereinafter described, as follows:

All those certain lots, tracts or parcels of land lying situate and being in the City of Hampton, Virginia, designated and described as, "PROPOSED PUBLIC RIGHT-OF-WAY 1,232 SQUARE FEET, OR 0.028 ACRE" and "PROPOSED 24' PERMANENT PEDESTRIAN ACCESS EASEMENT 3,573 SQUARE FEET, OR 0.082 ACRE", all as shown on that certain plat entitled "PLAT SHOWING PUBLIC RIGHT-OF-WAY FOR LINEAR PARK TRAIL AND SIDEWALK AND RIGHT-OF-WAY TO BE ACQUIRED BY CITY OF HAMPTON FROM HAMPTON ROADS SANITATION DISTRICT FREEMAN DRIVE RECONSTRUCTION PROJECT HAMPTON, VIRGINIA" dated June 12, 2017 and made by Precision Measurements, Inc., SURVEYORS.GPS.3-D SCANNING.GIS,MAPPERS, attached hereto and made a part hereof;

It being part of the same properties conveyed to the Grantor by the City of Hampton, Virginia, dated deed recorded in the Clerk's Office of the Circuit Court for the City of Hampton, Virginia, as Instrument number: 150010176.

WITNESS the following signature and seal all as of the day and year first above written.

HAMPTON ROADS SANITATION DISTRICT
a political subdivision of the Commonwealth
of Virginia

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

STATE OF VIRGINIA

CITY OF VIRGINIA BEACH, to-wit:

I hereby certify on this ____ day of _____, 2017, that Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District, acknowledged the foregoing Deed of Easement and Right of Way before me. He is personally known to me.

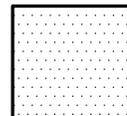
Notary Public

My commission expires:

Registration No.:

LEGEND

- PROP. R/W MONUMENTATION (TO BE SET)
- ⊙ PROP. PROPERTY MONUMENT (TO BE SET)
- PIPE(F) PIPE FOUND
- ROD(F) IRON ROD FOUND

 PROPOSED PUBLIC RIGHT-OF-WAY
56 SQUARE FEET, OR 0.001 ACRE

$\frac{47.00'LT}{+76.54}$ STATION & OFFSET FOR
RIGHT-OF-WAY

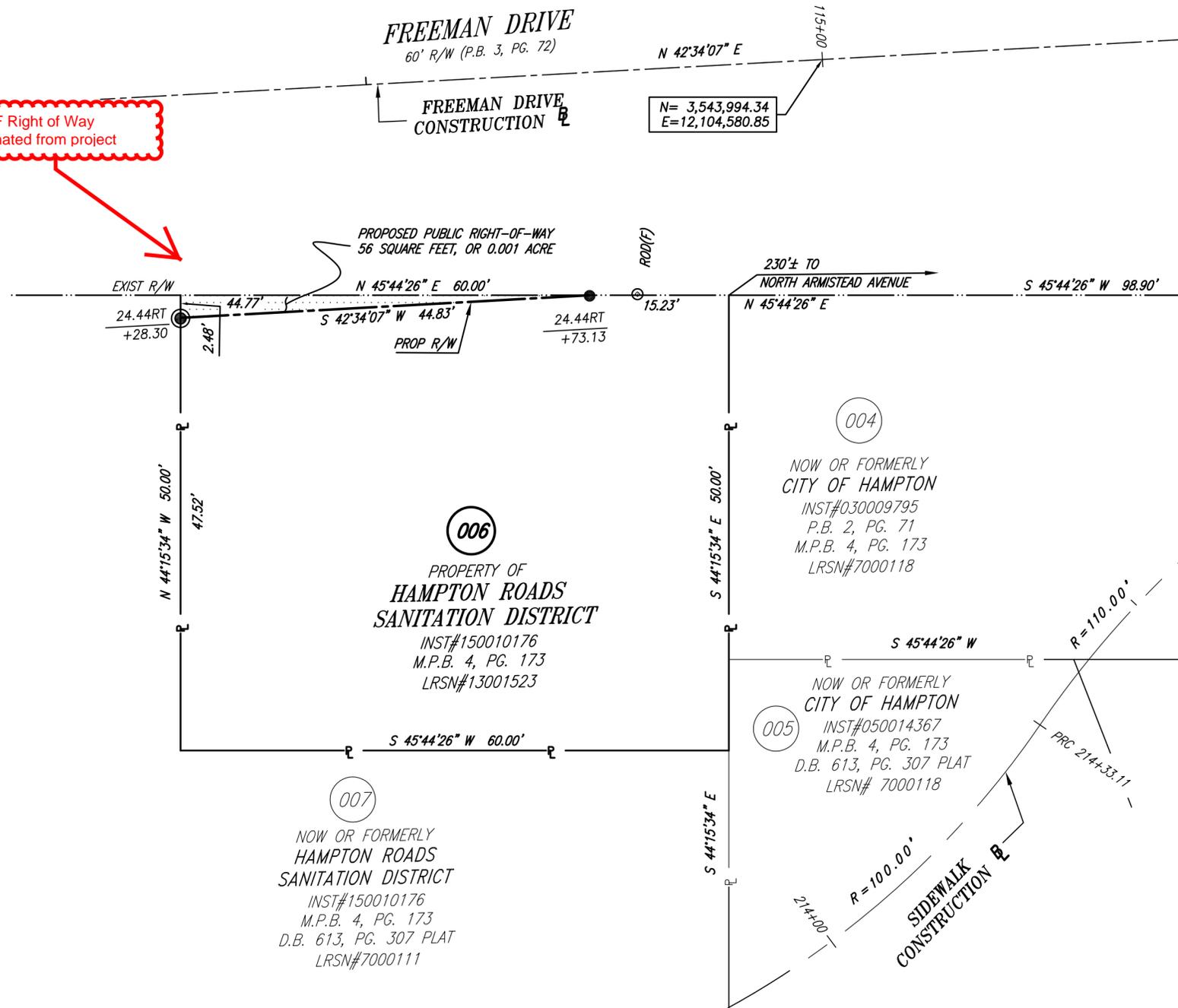
AREA TABLE		
	SQUARE FEET	ACRE
ORIGINAL PARCEL	3,000	0.069
RIGHT-OF-WAY ACQUISITION	56	0.001
RESIDUAL PARCEL	2,944	0.068



VICINITY MAP
SCALE 1"=2,000

REFERENCES:
INST#150010176
D.B. 613, PG. 307 PLAT

56 SF Right of Way
eliminated from project



006
PLAT SHOWING
RIGHT-OF-WAY
TO BE ACQUIRED BY
CITY OF HAMPTON
FROM
HAMPTON ROADS SANITATION DISTRICT
FREEMAN DRIVE RECONSTRUCTION PROJECT
HAMPTON, VIRGINIA

SCALE: 1" = 10' DATE: JUNE 12, 2017



SURVEY NOTES:

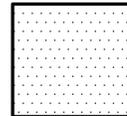
1. THE MERIDIAN SOURCE OF THIS PLAT IS BASED ON THE CITY OF HAMPTON, 1995 GEODETIC CONTROL NETWORK, VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983(NAD83)(1995), U.S. SURVEY FEET.
2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, AND DOES NOT SHOW ANY PHYSICAL IMPROVEMENTS, NOR ALL EASEMENTS, RESTRICTIONS OR ENCUMBRANCES THAT MAY AFFECT THE PROPERTY.
3. PROPERTY LINE AND RIGHT-OF-WAY INFORMATION IS BASED ON PLATS, DEEDS OF RECORD AND ACTUAL FIELD MEASUREMENTS.
4. THIS PLAT IS FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY AND IS NOT INTENDED TO REPRESENT A BOUNDARY SURVEY NOR A SUBDIVISION OF LAND.
5. SOURCE OF TITLE AND LAST PLACE OF RECORD: INST#150010176, RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF HAMPTON, VIRGINIA.
6. PROPERTY MONUMENTATION TO BE INSTALLED AFTER CONSTRUCTION BY A LAND SURVEYOR, LICENSED IN THE STATE OF VIRGINIA, AS REQUIRED BY THE VIRGINIA DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION - RULES AND REGULATIONS - PART 5, SECTION 10, SUB-SECTION B, PARAGRAPH 4.
7. RIGHT-OF-WAY MONUMENTATION TO BE INSTALLED AFTER CONSTRUCTION BY A LAND SURVEYOR, LICENSED IN THE STATE OF VIRGINIA, AS REQUIRED BY THE VIRGINIA DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION - RULES AND REGULATIONS - PART 5, SECTION 10, SUB-SECTION B, PARAGRAPH 4.

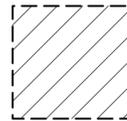


PRECISION MEASUREMENTS, INC.
SURVEYORS • GPS • 3-D SCANNING • GIS • MAPPERS
VIRGINIA BEACH-RICHMOND-NEWPORT NEWS-CHANTILLY, VIRGINIA
11835 CANON BLVD, SUITE B103
NEWPORT NEWS, VIRGINIA 23606
TEL: (757) 595-7570

LEGEND

- PROP. R/W MONUMENTATION (TO BE SET)
- ⊙ PROP. PROPERTY MONUMENT (TO BE SET)
- PIPE(F) PIPE FOUND
- ROD(F) IRON ROD FOUND

 PROPOSED PUBLIC RIGHT-OF-WAY
1,232 SQUARE FEET, OR 0.028 ACRE

 PROPOSED 24' PERMANENT
PEDESTRIAN ACCESS EASEMENT
3,573 SQUARE FEET, OR 0.082 ACRE

47.00'LT
+76.54

STATION & OFFSET FOR
RIGHT-OF-WAY

67.00'LT
+72.55

STATION & OFFSET FOR
PROPOSED 24' PERMANENT
PEDESTRIAN ACCESS EASEMENT

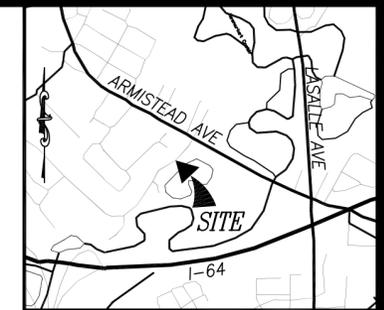
EASEMENT AREA

	SQUARE FEET	ACRE
PROPOSED 24' PERMANENT PEDESTRIAN ACCESS EASEMENT	3,573	0.082

NOTE: ALL EASEMENTS ARE PART OF THE RESIDUAL PARCEL.

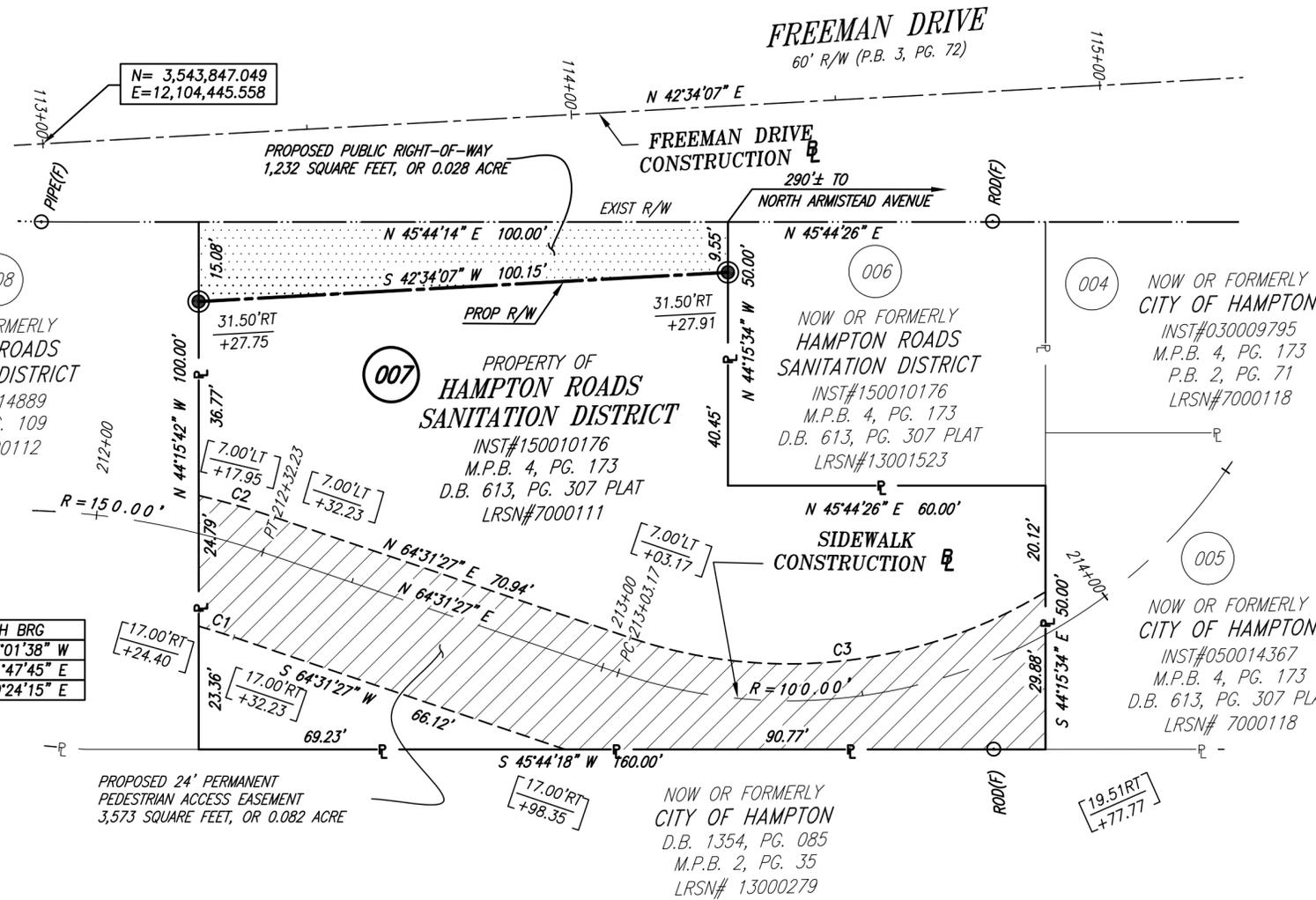
AREA TABLE

	SQUARE FEET	ACRE
ORIGINAL PARCEL	13,000	0.298
RIGHT-OF-WAY ACQUISITION	1,232	0.028
RESIDUAL PARCEL	11,768	0.270



VICINITY MAP
SCALE 1"=2,000

REFERENCES:
INST#150010176
M.P.B. 4, PG. 173
D.B. 613, PG. 307 PLAT



CURVE TABLE

CURVE	RADIUS	DELTA	ARC	CHORD	CH BRG
C1	133.00'	2°59'37"	6.95'	6.95'	S 63°01'38" W
C2	157.00'	5°27'24"	14.95'	14.95'	N 61°47'45" E
C3	93.00'	50°14'24"	81.55'	78.96'	N 39°24'15" E

007
PLAT SHOWING
PUBLIC RIGHT-OF-WAY FOR LINEAR PARK TRAIL AND SIDEWALK
AND RIGHT-OF-WAY
TO BE ACQUIRED BY
CITY OF HAMPTON
FROM
HAMPTON ROADS SANITATION DISTRICT
FREEMAN DRIVE RECONSTRUCTION PROJECT
HAMPTON, VIRGINIA

SCALE: 1" = 20' DATE: JUNE 12, 2017



SURVEY NOTES:

1. THE MERIDIAN SOURCE OF THIS PLAT IS BASED ON THE CITY OF HAMPTON, 1995 GEODETIC CONTROL NETWORK, VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983(NAD83)(1995), U.S. SURVEY FEET.
2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT, AND DOES NOT SHOW ANY PHYSICAL IMPROVEMENTS, NOR ALL EASEMENTS, RESTRICTIONS OR ENCUMBRANCES THAT MAY AFFECT THE PROPERTY.
3. PROPERTY LINE AND RIGHT-OF-WAY INFORMATION IS BASED ON PLATS, DEEDS OF RECORD AND ACTUAL FIELD MEASUREMENTS.
4. THIS PLAT IS FOR ESTABLISHMENT OF PUBLIC RIGHT-OF-WAY FOR LINEAR PARK TRAIL AND SIDEWALK, AND RIGHT-OF-WAY ACQUISITION PURPOSES ONLY AND IS NOT INTENDED TO REPRESENT A BOUNDARY SURVEY NOR A SUBDIVISION OF LAND.
5. SOURCE OF TITLE AND LAST PLACE OF RECORD: INST#150010176, RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF HAMPTON, VIRGINIA.
6. PROPERTY MONUMENTATION TO BE INSTALLED AFTER CONSTRUCTION BY A LAND SURVEYOR, LICENSED IN THE STATE OF VIRGINIA, AS REQUIRED BY THE VIRGINIA DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION - RULES AND REGULATIONS - PART 5, SECTION 10, SUB-SECTION B, PARAGRAPH 4.
7. RIGHT-OF-WAY MONUMENTATION TO BE INSTALLED AFTER CONSTRUCTION BY A LAND SURVEYOR, LICENSED IN THE STATE OF VIRGINIA, AS REQUIRED BY THE VIRGINIA DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION - RULES AND REGULATIONS - PART 5, SECTION 10, SUB-SECTION B, PARAGRAPH 4.



PRECISION MEASUREMENTS, INC.
SURVEYORS • GPS • 3-D SCANNING • GIS • MAPPERS
VIRGINIA BEACH-RICHMOND-NEWPORT NEWS-CHANTILLY, VIRGINIA
11835 CANON BLVD, SUITE B103
NEWPORT NEWS, VIRGINIA 23606
TEL: (757) 595-7570

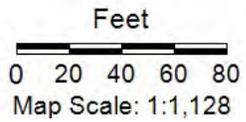
Legend

- ▭ Parcels
- Lot Lines



Title: 17 Freeman Drive

Date: 6/21/2017



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

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #6

AGENDA ITEM 11. – Freeman Drive Realignment/Newmarket Creek Trail Project
Conveyance of 19 Freeman Drive to City of Hampton

601403

PREPARED BY AND RETURN TO:

Conway H. Sheild, III, Esquire VSB# 06893
Jones, Blechman, Woltz & Kelly, P.C.
701 Town Center Drive, Suite 800
Newport News, Virginia 23606

Title policy: Unknown

Tax Map ID: RPC 7000112

TAX EXEMPT PURSUANT TO VA CODE SECTION 58.1-811-D AS AMENDED

\$00

THIS DEED OF GIFT, made this _____ day of _____, 2017,
by and between HAMPTON ROADS SANITATION DISTRICT, a political subdivision of
the Commonwealth of Virginia, GRANTOR, and the CITY OF HAMPTON, a Municipal
corporation of the Commonwealth of Virginia, whose mailing address is 22 Lincoln
Street, Hampton, Virginia, 23664.

WITNESSETH: That for and in consideration of the sum of ONE
DOLLAR (\$1.00), cash in hand paid, the receipt of which is hereby acknowledged, the
said Grantor does grant and convey with GENERAL WARRANTY AND ENGLISH
COVENANTS OF TITLE, unto the said Grantee, its successors and assigns, the
following described property, to wit:

All that certain lot, piece or parcel of land situate, lying and being in City of
Hampton, Virginia, known and designated as Lot THREE (3), as shown on
that certain plat entitled, "LAKE HAMPTON, SECTION ONE", made by W.
B. Sours, Civil Engineer, dated October 6, 1952, and recorded in the
Clerk's Office of the Circuit Court for the City of Hampton, Virginia, in Plat
Book 3, at page 109, to which reference is here made.

It being the same property conveyed to the Grantor by deed dated April
11, 2013 from Anthony D. Hester, duly recorded in the aforesaid Clerk's
Office as Instrument number: 130014889.

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

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

WITNESS the following signatures and seals.

HAMPTON ROADS SANITATION DISTRICT
a political subdivision of the Commonwealth
of Virginia

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

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

I hereby certify on this ____ day of _____, 2017, that Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District, acknowledged the foregoing Deed of Gift before me. He is personally known to me.

Notary Public

My commission expires:

Registration No.:

LEGEND

- PROP. R/W MONUMENTATION (TO BE SET)
- ⊙ PROP. PROPERTY MONUMENT (TO BE SET)
- PIPE(F) PIPE FOUND
- ROD(F) IRON ROD FOUND



PROPOSED PUBLIC RIGHT-OF-WAY
1,372 SQUARE FEET, OR 0.032 ACRE



PROPOSED 24' PERMANENT PEDESTRIAN
ACCESS EASEMENT
1,963 SQUARE FEET, OR 0.045 ACRE

47.00'LT
+76.54

STATION & OFFSET FOR
RIGHT-OF-WAY

67.00'LT
+72.55

STATION & OFFSET FOR
PERMANENT EASEMENTS

EASEMENT TABLE

	SQUARE FEET	ACRE
24' PERMANENT PEDESTRIAN ACCESS EASEMENT	1,963	0.045

NOTE: ALL PROPOSED EASEMENTS ARE PART OF THE RESIDUAL PARCEL

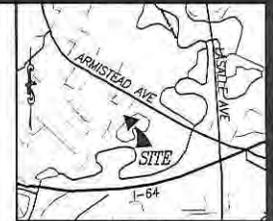
AREA TABLE

	SQUARE FEET	ACRE
ORIGINAL PARCEL	7,918	0.182
RIGHT-OF-WAY ACQUISITION	1,372	0.032
RESIDUAL PARCEL	6,546	0.150

CURVE TABLE

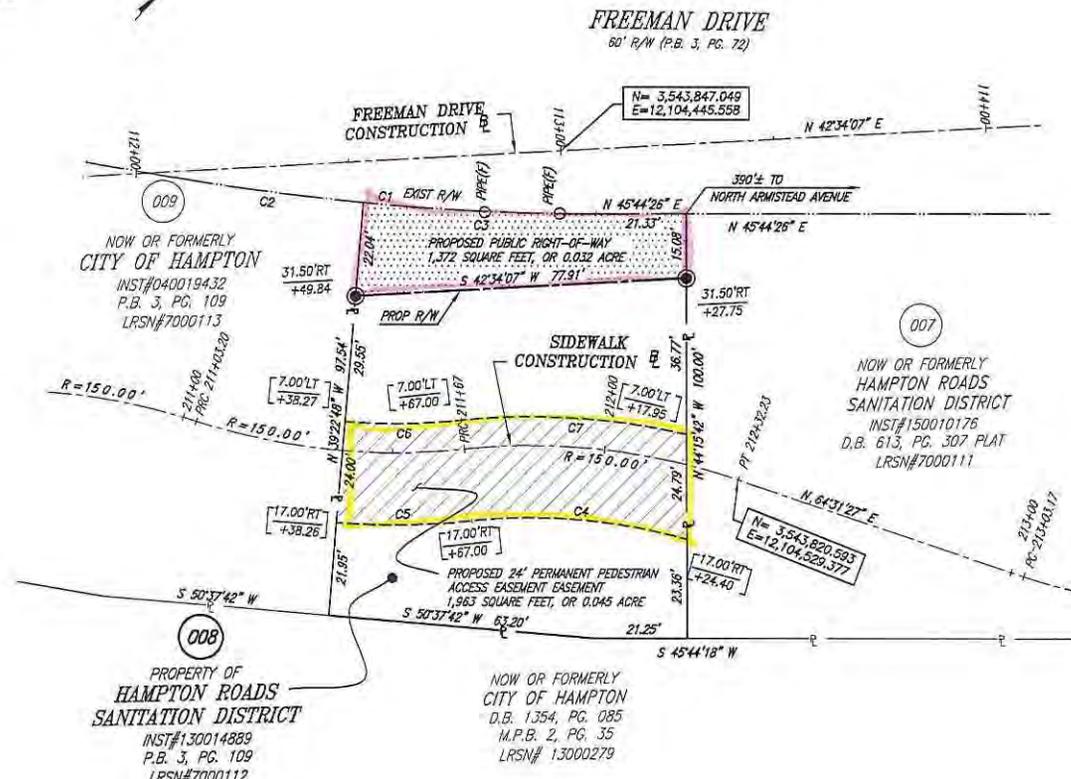
CURVE	RADIUS	DELTA	ARC	CHORD	CH BRG
C1	582.96'	9°48'16"	99.76'	99.63'	N 50°38'34" E
C2	582.96'	4°25'52"	45.09'	45.07'	N 53°19'46" E
C3	582.96'	5°22'24"	54.67'	54.65'	N 48°25'38" E
C4	133.00'	21°55'29"	50.89'	50.58'	S 50°34'05" W
C5	167.00'	10°58'43"	32.00'	31.95'	S 45°05'42" W
C6	143.00'	10°58'21"	27.39'	27.34'	N 45°05'31" E
C7	157.00'	19°27'43"	53.33'	53.07'	N 49°20'12" E

Exhibit "A"



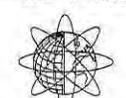
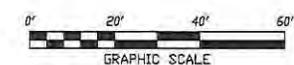
VICINITY MAP
SCALE 1"=2,000'

REFERENCES:
INST#130014889
P.B. 3, PG. 109
P.B. 3, PG. 72



008
PLAT SHOWING
EASEMENT & RIGHT-OF-WAY
TO BE ACQUIRED BY
CITY OF HAMPTON
FROM
HAMPTON ROADS SANITATION DISTRICT
FREEMAN DRIVE RECONSTRUCTION PROJECT
HAMPTON, VIRGINIA

SCALE: 1" = 20' DATE: OCTOBER 10, 2016



PRECISION MEASUREMENTS, INC.
SURVEYORS • GPS • 3-D SCANNING • GIS • MAPPERS
VIRGINIA BEACH-RICHMOND-NEWPORT NEWS-CHANTILLY, VIRGINIA
11835 CANNON BLVD., SUITE B103
NEWPORT NEWS, VIRGINIA 23606
TEL: (757) 585-7570

SHEET 1 OF 1

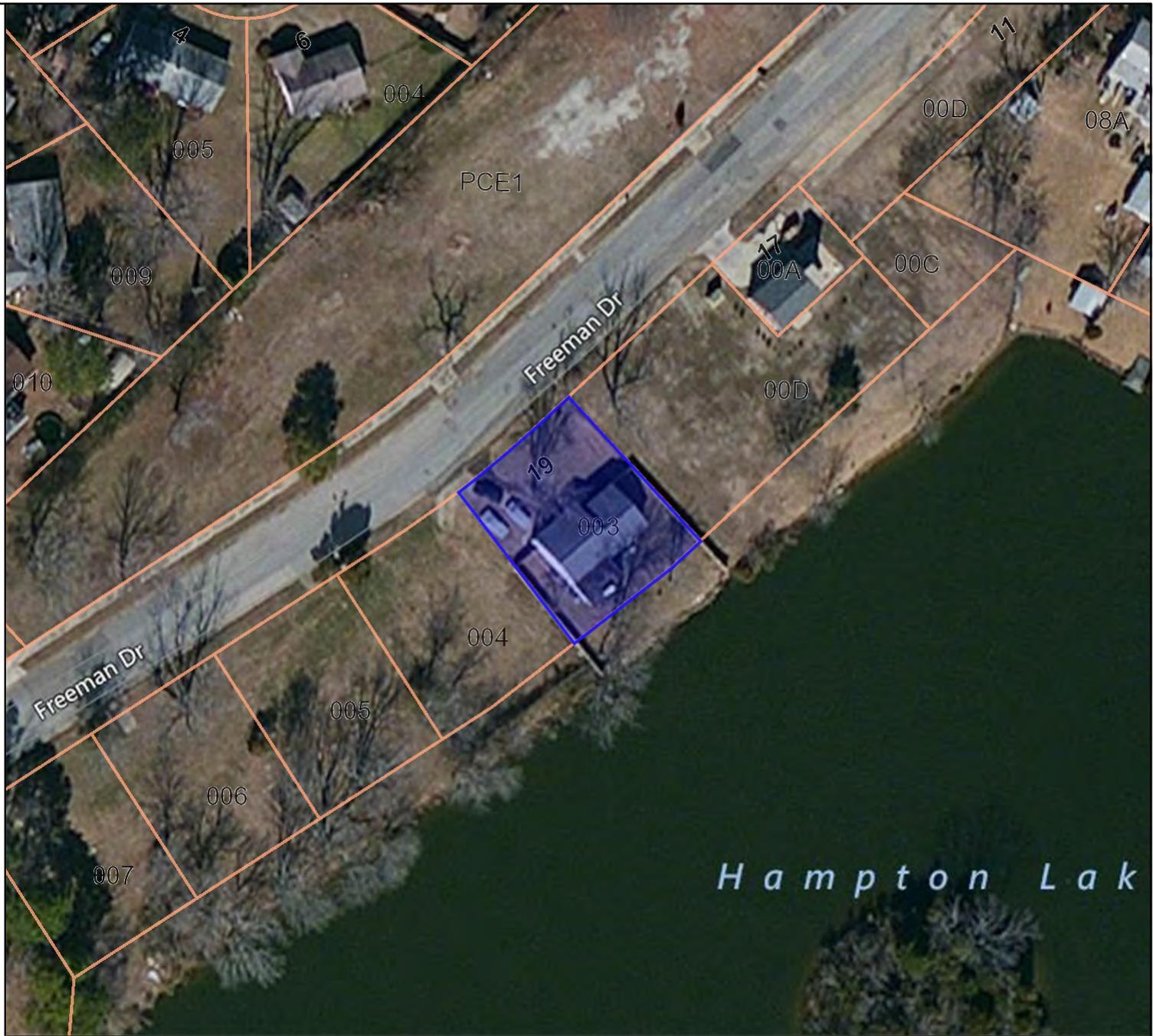


SURVEY NOTES:

1. THE MERIDIAN SOURCE OF THIS PLAT IS BASED ON THE CITY OF HAMPTON, 1995 GEODETIC CONTROL NETWORK, VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983(NAD83)(1995), U.S. SURVEY FEET.
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3. PROPERTY LINE AND RIGHT-OF-WAY INFORMATION IS BASED ON PLATS, DEEDS OF RECORD AND ACTUAL FIELD MEASUREMENTS.
4. THIS PLAT IS FOR RIGHT-OF-WAY ACQUISITION AND EASEMENT ACQUISITION PURPOSES ONLY AND IS NOT INTENDED TO REPRESENT A BOUNDARY SURVEY NOR A SUBDIVISION OF LAND.
5. SOURCE OF TITLE AND LAST PLACE OF RECORD: INST#130014889, RECORDED IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF HAMPTON, VIRGINIA.
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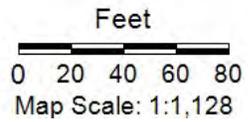
Legend

- Parcels
- Lot Lines



Title: 19 Freeman Drive

Date: 6/14/2017



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

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #7

AGENDA ITEM 12. – Mathews Main Vacuum Pump Station Replacement
Acquisition of Real Property
Agreement

CONTRACT FOR PURCHASE AND SALE

THIS CONTRACT FOR PURCHASE AND SALE, made this 15th day of June 2016, by and among **HAMPTON ROADS SANITATION DISTRICT** ("HRSD"), a political subdivision of the Commonwealth of Virginia, located at 1434 Air Rail Avenue, Virginia Beach, Virginia 23455 (the "Buyer"), and **MARIA R. SAUNDERS, CLARKE T. RICHARDSON, JR., and ROSANNA R. COOKE**, whose mailing address is P.O. Box 133, Mathews, Virginia 23109 ("Seller"). Collectively, Buyer and Seller shall be referred to as the "Parties."

AGREEMENT

WITNESSETH: That for and in consideration of the sum of **THREE HUNDRED, THIRTY-FIVE THOUSAND 00/100 DOLLARS (\$335,000.00)** (the "Purchase Price"), cash in hand to be paid to the Seller by the Buyer, the Seller agrees to sell and the Buyer agrees to buy the following property:

Parcel #26A324-3 and 26A3-A-187 "the Property":

All that certain lot, piece, or parcel of land containing 1.917 acres (+/-) more or less, situate, lying, and being in the county of Mathews, Virginia, and being designated as a "1.4830 ACRES" and REMAINDER LOT OF 3 0.4348 AC.", as shown on that certain plat entitled: "PLAT OF THE PROPERTY OF MARIA R. SAUNDERS, CLARKE T. RICHARDSON, JR. & ROSANNA R. COOKE PARCEL OF LAND CONTAINING 1.4830 ACRES AND REMAINDER OF LOT 3 CONTAINING 0.4348 ACRE", bearing a date of March 27, 2014 and signed March 27, 2014, by Wayne E. Lewis, Lewis Land Surveying, PC, P.O. Box 689, Mathews, Virginia 23109. Said plat is attached hereto as Exhibit "A" for reference and made a part of this legal description and Agreement.

Together with all and singular the buildings and improvements, tenements, hereditaments, rights, privileges and appurtenances thereunto belonging or in anywise appertaining (the "Property").

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

2. **INTENDED PURPOSE:** HRSD agrees to buy the real property comprised of two (2) parcels known as 26A324-3 and 26A3-A-187 which fronts along Main Street in Mathews, Virginia (the "Property"). After Settlement and closing, HRSD intends to construct a new pump station on the Property.

3. **PURCHASE PRICE FOR PROPERTY:** The purchase price ("Purchase Price") for the Property is THREE HUNDRED, THIRTY-FIVE THOUSAND 00/100 DOLLARS (\$335,000.00); and shall be paid by HRSD to the Seller as follows:

\$	3,000.00	Deposit with the Contract (the "Deposit")
\$	<u>332,000.00</u>	Remainder to be paid at Settlement by cash or certified funds
\$	335,000.00	Total Purchase Price

4. **DUE DILIGENCE AND INSPECTION PERIOD:** HRSD shall have a due diligence period of ninety (90) days after the Effective Date of the contract between Buyer and Seller to conduct such tests, studies, inspections, and other examinations (collectively "Examinations") of the Property to as HRSD may elect in its sole judgment, to determine the suitability of the Property for its purposes. Such Examinations may include, but shall not be limited to, appraisal, title examination, soil tests, borings, engineering studies, environmental studies, feasibility studies, surveys, drainage plans, utility services, and ability to obtain all required permits or licenses for the Intended Purpose of the property.
- A. During the Due Diligence Inspection Period, HRSD, its employees, agents, and representatives shall have the right to enter upon the Property at all times to conduct Examinations, subject, however, to providing Seller with prior notice and an opportunity to be present.
 - B. In connection with the right to enter upon the Property, HRSD agrees (i) to restore the Property to its prior condition after the performance of any such inspections or tests and (ii) to indemnify, defend and hold the Seller harmless from and against all costs, losses, damages, and expenses, including reasonable attorneys' fees, arising out of the activities of HRSD and/or its employees, agents and representatives on the Property.
 - C. HRSD shall obtain a Phase I Environmental Assessment of the Property, a real estate appraisal, and title examination during the Due Diligence Inspection Period, the cost of which shall be paid by HRSD.
 - D. If HRSD cannot obtain permits/approval, for the Intended Purpose, HRSD may terminate this Contract by giving written notice to the Seller prior to 5:00 p.m. on the last day of the Due Diligence Inspection Period, in which event the Nonrefundable Deposit shall be retained by Seller and neither party will have any further liability to the other.
 - E. Seller agrees to fully cooperate with HRSD to join in any and all application for licenses, permits, approvals, and consents which may be necessary or desirable.
5. **CONTINGENCIES:** The purchase contemplated in this Agreement is contingent upon the occurrence of the following items. In the event that either one of these events does not occur, then this Contract shall become null and void, the Nonrefundable Deposit (\$3,000) shall be retained by the Seller, and neither party shall have any further liability to the other.
- A. Appraisal of property within twenty percent (20%) of the sales price (no less than \$268,000).
 - B. Acceptable Environmental Phase I report.
 - C. Conveyance of clear title.
 - D. Permits/approvals for Intended Purpose.
 - E. The ability to obtain an Owner's Title Insurance Commitment satisfactory to the Buyer.

- F. Each transaction is subject to compliance with state and city statutes, code provisions, and other governing regulations as well as final approval by the HRSD Commission Board.
6. **SETTLEMENT/POSSESSION OF THE PROPERTY:** Settlement on the purchase of the Property by HRSD shall be made at a location selected by HRSD within thirty (30) days after the contingencies set forth in Section 4 of this Contract have been met. Time is of the essence. Possession of the Property shall be given to HRSD as such Settlement and Seller shall execute and deliver to HRSD the following:
- A. A duly executed General Warranty Deed conveying the Property to HRSD.
 - B. An owner's affidavit as customarily required by title companies pertaining to mechanic's liens and the absence of tenants in occupancy.
 - C. An owner's affidavit that is acceptable to the title company in order to provide standard "gap" coverage.
 - D. Seller's affidavit that Seller is not a foreign person for the purposes of Section 1445 of the Internal Revenue Code.
 - E. Such additional documents as HRSD or HRSD's title company may reasonably require in order to consummate this transaction and fully comply with this Contract.
7. **EXPENSES:** The Seller shall pay only the expense of preparing the deed, the recordation tax applicable to grantors and Seller's attorney's fees (if applicable). Except as otherwise agreed herein, all other expenses incurred by the Buyer in connection with the Buyer's purchase, including (without limitation), title examination, surveys, appraisal fees, preparation of deeds of trust and notes, title insurance premiums, recording costs and fees of the Buyer's attorney, shall be borne by the Buyer.
8. **ESCROW/PRORATION:** All taxes, storm water fees, utilities, insurance, and other periodic charges, if any, shall be prorated as of the date of settlement.
9. **TITLE:** At settlement, Seller shall convey marketable and insurable (at normal rates) fee simple title to the Property and a General Warranty Deed to the Buyer, free of all encumbrances, tenancies, and liens (except the lien for current taxes), but subject to all covenants, restrictions, easements, and rights-of-way currently of record or apparent on the ground which do not render the title unmarketable. If the examination reveals a title defect of a character that can be remedied by legal action or otherwise within a reasonable time, the Buyer shall give written notice of the same to the Seller. The Seller shall have the option to either (i) terminate this Contract, or (ii) take such action as is necessary to cure such defect. If the defect is not cured within ninety (90) days after the Seller receives notice of the defect, then either party may terminate this Contract at the expiration of such ninety (90) day period. In the event that the Contract is terminated under this paragraph, the Deposit shall be refunded to HRSD and neither party shall have any further liability to any other. The parties agree that the date of Settlement shall be extended if necessary to enable the Seller to cure any title defect, but not for more than ninety (90) days, unless extended by written consents of both the Seller and the Buyer.

Notwithstanding any other provision of the Contract, HRSD shall examine the title to the Property within thirty (30) days after the Effective Date and unless HRSD notifies the Seller within such thirty (30) day period, HRSD shall be deemed to accept the title to the Property, in its condition as of the Effective Date.

10. **MECHANICS LIENS:** The Seller shall deliver to the Buyer at Settlement an affidavit signed by the Seller that no labor or materials have been furnished to the Property within the statutory period for the filing of mechanics' or materialmen's liens against the property. If labor or materials have been furnished during the statutory period, the Seller shall deliver to the Buyer an affidavit signed by the Seller furnishing the labor or materials that the costs thereof have been paid.
11. **RISK OF LOSS:** All risk of loss or damage to the Property by fire, windstorm, casualty, or other causes are assumed by the Seller until Settlement.
12. **CONDEMNATION:** If any authority having the right of eminent domain commences negotiations with the Seller or commences legal action against the Seller for the damaging, taking or acquiring of all or a material part of the property, either temporarily or permanently, by condemnation or by exercise of the right of eminent domain, the Seller shall immediately give notice of the same to the Buyer, together with all information and documentation received by the Seller regarding the same. Upon the occurrence of any of the foregoing events, the Buyer shall have the right, at its option, to terminate this Contract by giving notice thereof to the Seller on or before the date of Settlement, in which event the Deposit shall be returned to HRSD and neither party shall have any liability to any other. If the Buyer does not elect to terminate this Contract, the purchase price for the property shall be reduced by the total of any awards, settlement proceeds or other compensation received by the Seller at or prior to Settlement with respect to any damage, taking or acquisition. The risk of condemnation or eminent domain shall be borne by the Seller until Settlement. In the event of any negotiations with any authority regarding the payment of any awards or other sums or regarding any settlement on account of any damage, taking, or acquisition through condemnation or eminent domain, the Seller will inform the Buyer of all such negotiations of which the Seller has notice and will permit the Buyer to take part therein.
13. **FLOOD ZONE:** Buyer is aware that the property it will purchase either partially or wholly may lie in a Flood Zone which may require the Buyer to purchase flood insurance.
14. **ENVIRONMENTAL DISCLOSURE:** Buyer is aware that the uses and development opportunities of the property it will purchase may be limited if such property is covered by the Chesapeake Bay Preservation Act, the Clean Water Act, the Virginia Water Control Act or any other federal, state, or local regulations concerning the environment.
15. **DEFAULT:** If either party defaults under this Contract, the non-defaulting party shall have the right to compel specific performance and shall have all additional rights and remedies

available to the non-defaulting party and the non-defaulting party shall be entitled to recover its reasonable attorney's fees, expert fees, and costs.

16. **SURVIVAL:** Unless otherwise indicated, the representations, warranties, covenants, and agreements contained in this Contract shall survive Settlement and delivery and recordation of the deeds provided for herein.
17. **AGENTS AND BROKERS:** Buyer and Seller authorize and direct the settlement agent to disburse to listing company from the settlement proceeds their respective portions of the brokerage fee payable as a result of this sale and closing under this Contract. Buyer and Seller authorize and direct the settlement agent to provide to each of Seller, Buyer, and Listing Company a copy of the unified settlement statement for the transaction.
18. **NOTICES:** Any notice to be given to any party as herein provided shall be deemed to be given when hand delivered, one (1) day after being sent by national courier deliver service (e.g. Federal Express or United Parcel Service), or three (3) days after being duly posted by U.S. registered or certified mail, return receipt request, if sent to the addresses listed on the signature page of this Contract. Any party may change the place designated for the giving of such notices by written notice duly and timely given to all other parties.
19. **ASSIGNMENT:** This Contract may only be assigned by a party upon the written consent of the other party, which consent shall not be unreasonably withheld, conditioned, or delayed. Within a reasonable time after such assignment, the name, address, and telephone number of the assignee shall be provided to the other party in writing. Furthermore, all provisions of this Contract shall be binding on a party's assignee as well as on the original assignor party.
20. **BINDING EFFECT:** All the provisions, conditions, and agreements of this Contract shall be binging upon and inure to the benefit of the legal representatives, heirs, successors, and assigns of the parties.
21. **EXCLUSIVITY:** The parties to the Contract agree that during the time this contract is outstanding and in full force and effect, the Seller will not accept offers or bids for the purchase of the subject property other than with the current listed Buyer, nor negotiate for the offer or acceptance of offers to buy the subject property, and should any unsolicited offer or bid for the purchase of the subject property be received by Seller, Seller shall so inform the sender that the property is under contract and Buyer is not able to accept bid or offers of purchase for the subject property.
22. **CAPTIONS:** The headings appearing in each paragraph of this Contract are intended only for convenience or reference, and are not to be considered in construing this instrument or any paragraph hereof.
23. **GOVERNING LAW:** This Contract shall be governed, interpreted, and construed in accordance with the laws of the Commonwealth of Virginia.

24. **WAIVER:** If on any occasion either party waives any term or condition of this Contract such waiver must be in writing and shall not be construed as a continuing waiver.
25. **SEVERABILITY:** If any provision of this Contract or the application thereof to any person or circumstance is determined to be invalid or unenforceable to any extent, then the remainder of this Contract or the application of such provision to other persons or circumstances shall be and remain valid and enforceable to the fullest extent permitted by law.
26. **ATTORNEYS FEES AND COSTS:** In the event a dispute arises between the parties under this Contract, the non-prevailing party in such dispute shall pay the prevailing party's costs and expenses, including, but not limited to, its reasonable attorney's fees and expert fees.
27. **COUNTERPARTS AND FACSIMILES:** This Contract may be entered into in multiple counterparts, all of which taken together shall constitute one complete agreement. To facilitate execution and delivery of this Contract, the parties may execute and exchange counterparts of the Contract by facsimile, email or other electronic transmission (collectively "Electronic Signature"). All parties agree that Electronic Signatures shall have the same effect as original signatures and shall be considered legally binding upon the parties. The signature or Electronic Signature of any party to any counterpart may be appended to any other counterpart. All counterparts so executed shall collectively constitute one agreement, binding on all of the parties, notwithstanding the fact that all the parties have not signed the same original or the same counterpart.
28. **COMPLETE AGREEMENT:** This Contract constitutes the entire agreement and understanding between the parties; all prior negotiations between them have been merged with this Contract; there are no understandings, representations, warranties, or covenants, either oral or written, other than those set forth in this Contract; and no provision of this Contract shall be amended, altered, or waived in any manner unless such amendment, alteration, or waiver is in writing and signed by all parties.
29. **LIMITATION OF OFFER:** This Contract shall terminate at 5:00 p.m. on the tenth (10th) day after the date of this Contract, if not executed by both parties and delivered to both parties prior to such date and time.

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

THIRD AMENDMENT TO CONTRACT FOR PURCHASE AND SALE

THIS THIRD AMENDMENT TO CONTRACT FOR PURCHASE AND SALE, made this 8th day of June, 2017, by and among HAMPTON ROADS SANITATION DISTRICT ("HRSD") a political subdivision of the Commonwealth of Virginia, located at 1434 Air Rail Avenue, Virginia Beach, Virginia 23455 (the "Buyer"); and MARIA R. SAUNDERS, CLARKE T. RICHARDSON, JR., and ROSANNA R. COOKE, whose mailing address is P. O. Bo 133, Mathews, Virginia 23109 ("Seller"), collectively, Buyer and Seller shall be referred to as the "Parties", hereby amends and modifies a certain Contract for Purchase and Sale dated June 15, 2016, among the Parties, and also hereby amends and modifies that certain Amendment to Contract for Purchase and Sale dated September 21, 2016, among the Parties, and also hereby amends and modifies that certain Second Amendment to Contract for Purchase and Sale dated December 14, 2016, among the Parties, all of which govern a certain tract of land located in Mathews County, Virginia, as more particularly described therein.

ACCORDINGLY, that for and in consideration of the sum of Ten Dollars (\$10.00) and other good and valuable consideration to be paid by the Buyer to the Seller, the Parties agree to amend and modify the said Contract for Purchase and Sale and the Amendments thereto in the following particulars:

1. That the Parties agree that the Contract for Purchase and Sale, upon the execution of this Third Amendment to Contract for Purchase and Sale, shall be, along with any Amendments thereto previously executed, in full force and effect until the Settlement Date as hereinafter defined.

2. That the Purchase Price as defined in the Contract for Purchase and Sale shall be the sum of TWO HUNDRED FIFTEEN THOUSAND & 00/100 DOLLARS (\$215,000.00).

3. That the description of the Property to be sold by Seller to Buyer as defined in the Contract for Purchase and Sale shall be amended in the following manner to be the Property which is the subject of the Contract for Purchase and Sale

and the Amendments thereto: That the Property shall be defined as the property encompassed by the point or place of beginning, which is 10 feet in a southerly direction along the easterly boundary line of the current property from the current intersection of the line dividing the "Remainder of Lot 3 0.4348 Ac.", from the piece denoted as "1.4830 Acres", and from the point or place of beginning which is 10 feet in a southerly direction from that intersecting line, which point is in the southerly boundary of such property, thence running N 79° 25' W a distance that would connect with the westerly boundary line of the said property. Said plat is attached hereto as Exhibit A for reference and made a part of this legal description and agreement, but the parties agree that (prior to closing and the execution of a deed of conveyance, an engineering plat shall be drawn indicating the exact acreage and configuration of the Property.) *At Purchasers Expense.*

*CTAG MRS
GRC, EM*

4. That all dates for performance of duties and obligations of the Buyer as expressed under Paragraphs 4 and 5 of the Contract for Purchase and Sale, as may have been previously amended by the Amendment and Second Amendment, are hereby extended to the Settlement Date, which shall be defined as June 30, 2017, or as soon thereafter as the plat can be prepared so that approval can be received from the County of Mathews allowing the Property, as herein defined, to be a valid and legal conveyance under Mathews County Ordinances.

5. That where not amended by this Third Amendment to Contract for Purchase and Sale, or the Second Amendment to Contract for Purchase and Sale, all of the terms and provisions of the Contract for Purchase and Sale, as well as the Amendment to Contract for Purchase and Sale and Second Amendment to Contract for Purchase and Sale shall remain in full force and effect.

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

BUYER:

HAMPTON ROADS SANITATION DISTRICT (HRSD)

BY: *EGH* Date: *1/5/2017*
Name: Edward G. Henifin, P.E.
Title: General Manager
Contact Address: 1434 Air Rail Avenue, Virginia Beach, Virginia 23455

SELLER(S):

Marisa R. Saunders Date: *6-16-17*
Marisa R. Saunders (signature)

(Remaining signatures on following page)

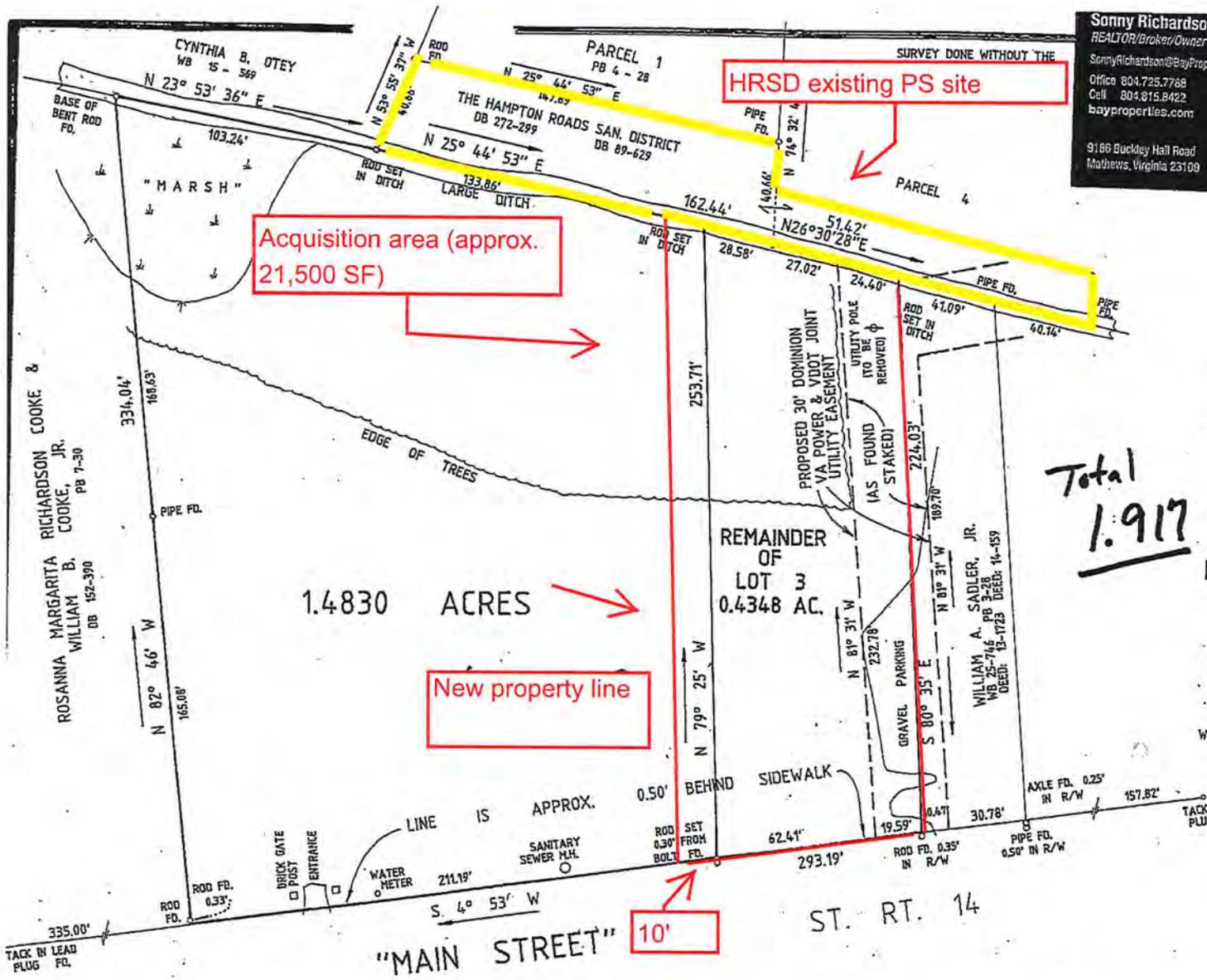

Clarke T. Richardson, Jr. (signature)

Date: 6-14-17


Rosanna R. Cooke (signature)

Date: 6-16-17

Contact Address: P. O. Box 133, Mathews, Virginia 23109



Sonny Richardson
 REALTOR/Broker/Owner
 SonnyRichardson@BayProperties.com
 Office 804.725.7788
 Cell 804.815.8422
 bayproperties.com
 9166 Buckley Hall Road
 Matthews, Virginia 23109

bayproperties
 A CURE SOUTH COMPANY



PLAT OF THE PROPERTY OF
MARIA R. SAUNDERS,
CLARKE T. RICHARDSON, JR.
& ROSANNA R. COOKE
 PARCEL OF LAND
 CONTAINING
1.4830 ACRES
 AND
 REMAINDER OF LOT 3
 CONTAINING
0.4348 ACRE
 MATHews COURTHOUSE
 WESTVILLE DISTRICT
 MATHews COUNTY, VA

Total
1.917

WB 26-238 DB 68-420 PB 3-28 DEED: 13-1632
 DEED: 14-160 HPB 4-144
 SCALE: 1" = 40' DATE: 3/27/14
 T.M. 26A3 (A) 187
 26A3 (24) 3

LEWIS LAND SURVEYING, PC
 PO BOX 689
 MATHews, VA 23109
 (804) 725 - 9777

JOB NO: 14-058

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #8

AGENDA ITEM 13. – Microbial Source Tracking Analysis Agreement

VIRGINIA DEPARTMENT OF HEALTH
OFFICE OF EPIDEMIOLOGY (OEPI)
DIVISION OF ENVIRONMENTAL EPIDEMIOLOGY
109 GOVERNOR STREET
RICHMOND, VIRGINIA 23219

MEMORANDUM OF UNDERSTANDING (MOU)

MOU Number: HRSDMST617FY17

- I. **PARTIES TO THE AGREEMENT:** This Memorandum of Understanding is entered into by Hampton Roads Sanitation District (HRSD), 1434 Air Rail Ave, Virginia Beach, VA 23455 hereinafter called the "Contractor" and Commonwealth of Virginia through the Department of Health, 109 Governor Street, Richmond, VA 23219, hereinafter called the "Department."

WHEREAS, The Department desires to enter into an Agreement with the Contractor to provide Microbial Source Tracking Analysis and Results;

WHEREAS, The Contractor desires to perform such services;

THEREFORE, in consideration of their respective undertakings, the Department and the Contractor hereby covenant and agree to the following terms.

- II. **PERIOD OF PERFORMANCE:** From execution date of VDH signature on last page through November 30, 2017 and renewable for four, on-year periods in accordance with Section XV, Special Terms and Conditions, Item K.
- III. **PURPOSE:** The Contractor will analyze water samples which exceed Beach advisory thresholds for a human associated marker (e.g. HF183). This marker can provide health risk and source identification information that is helpful to resource managers who may further investigate the potential human sources in the beach watershed. MST has been utilized by the Virginia Beach Monitoring Program for ~15 years and is a useful diagnostic tool where human sources may be present, or when attempting to rule out non-human sources of bacteria.
- IV. **SCOPE OF SERVICES:** *A detailed list of services to estimate the costs associated with this agreement is provided in Appendix A.*

Contractor will enumerate the HF183 marker to confirm or rule out the presence of human contamination in Department samples that exceed the single standard recreational water quality threshold. All results of analysis will be provided within or less than 14 days to the Department and the submitting health district.

If non-human source tracking markers are required, Contractor currently uses several locally-relevant animal fecal markers (e.g. dog, Canada geese, gull) and can develop and optimize multiple other markers at request.

500ml bottles will be purchased by Contractor for exclusive use by health districts for collecting MST samples (~16 bottles per health district). Submitted sample bottles will be sanitized with acceptable quality assurance to prevent inhibition and bacterial growth within bottles, and shipped back to the health districts to maintain an adequate supply of bottles in rotation. Bottles will be appropriately marked to ensure they are only used for Beach Monitoring samples and to ensure sterility.

Courier services will be provided by Contractor staff to collect exceedance samples from the notifying health district laboratory and delivered to the Contractor facility for analysis. Courier services will not apply to the Eastern Shore Health District.

In addition to consultation with the Department and health district regarding results during the season, an Annual Report will be submitted to the Department to summarize the beach season MST results and conclusions. A representative from Contractor will provide a presentation of these results at the Annual Beach Meeting in the following year.

- V. **COMPENSATION:** The Department will reimburse Contractor for actual expenditures as a result of services provided under the terms of the basic agreement. Any travel expenses will be reimbursed as per the current, state approved travel regulations available at http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Main.cfm (Topic#20335).

Contract Value: \$13,100.06 with optional 4 one-year renewals. Total Aggregate estimated to be \$65,500.30

All contractors/subcontractors shall report the actual program income received and expended during the month or billing period on the invoice billing statement. The revenue and expenses shall be traceable through their financial system of record.

Contractor will bill The Department on a monthly basis via invoice with supporting documentation citing the Agreement number assigned to this document. Billing will be due no later than 30 days following the end of each calendar month in which expenses are incurred. Failure by Contractor to submit invoices within the prescribed time frame may forfeit its right to payment from the Department.

The Contractor agrees to ensure that all expenditures made under this Agreement are recorded correctly, are allowable, and are in support of the objectives of this Agreement. The Contractor shall ensure that payroll expenditures in support of this Agreement and as specified in this Agreement are charged accurately and that the employees paid under this Agreement submit Time and Effort (T&E) reports. These T & E Reports shall be maintained on site for VDH review during monitoring visits.

The Contractor shall maintain supporting documentation for all expenditures made under this Agreement and maintain such documentation for five years as per GAO/OMB regulations. Any expenditure recorded after this date will be attributed to the next budget period.

Beach Monitoring funds may not be used to pay the salary of an individual at a rate in excess of the Executive Level II salary of the Federal Executive Pay Scale, as per Notice of Award #98389614.

Final reconciliation billing for November 30, 2017 along with any overpayments due to the Department shall be submitted no later than December 29, 2017 to:

Virginia Department of Health
Division of Environmental Epidemiology
Attention Margaret Smigo
109 Governor Street, 6th Floor
P.O. Box 2448-2448
Richmond, Virginia 23219

Inclusion of Indirect Costs: Capped at 10% and allowable only when the contractor/subcontractor has a certified indirect cost rate approved by their Federal cognizant agency.

VI. FEDERAL AWARD INFORMATION:

Contractor is a Vendor
 Contractor is a Sub recipient **Information Below Does Apply**

Federal Award Identification Number: CU98389614
Federal Award Date: 12/1/16-11/30/17
Total Amount of Federal Award: \$262,000
Name of Federal Grantor: U.S. Environmental Protection Agency
CFDA Number & Name: 66.472 Beach Monitoring and Notification
Research and Development: Yes No

Do you receive more than \$750,000 in federal funds? Yes No

VII. FEDERAL AWARD RESTRICTIONS: There are general Federal cost principles that are applicable to all Federal Awards. These general principles are outlined in Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards (2 CFR Section 200.0 – 200.521). The local health districts are required to adhere to these principles while managing federal grant awards (specifically Subpart E – Cost Principles). The Electronic Code of Federal Regulations can be found at www.eCRF.gov.

General Provisions
Sections: 200.400-200.401

Basic Considerations
Sections: 200.402-200.411

Direct and Indirect (F&A) Costs
Sections: 200.412 – 200.415

Special Considerations for States,
Local Governments and Indian Tribes
Sections:

200.416-200.417

General Provisions for Selected
Items of Cost
Sections:

200.420-200.475 (with exception of 200.424
and 200.475 as these are more applicable to
Higher Education Institution and other
nonprofit organizations.

The Virginia Department of Health, Office of Epidemiology, as a pass-through entity for numerous federal grants, is responsible for ensuring certain activities occur with respect to monitoring of sub-recipients. The above requirements include, but are not limited to the following:

Sub-recipients receiving more than \$750,000 in federal funds, during the sub-recipient's fiscal year, from any and all sources are required to have a single audit performed in accordance with code (§200.501(a)). When required, the most recent copy of the audit must be provided to the assigned contract monitor within 30 days of the effective date on this Agreement. If any findings were noted in the audit report, corrective actions taken to fully resolved the finding must be provided. If an audit occurs during the term of this Agreement, a copy of that audit and response to any findings must be provided as well. The sub-recipient must provide a written statement if the organization did not receive more than \$750,000 in federal funds.

Federal Funding Accountability and Transparency Act (FFATA)

Effective October, 2010, all entities that plan to apply for and ultimately receive a Federal grant/cooperative agreement or receive sub awards directly from recipients of those funds shall:

- Be registered in System for Award Management (SAM) prior to submitting an application or plan. The SAM is a Web-enabled government wide application that collects, validates, stores and disseminates business information about the federal government's trading partners in support of the contract award, grants and the electronic payment processes. SAM information must be updated at least every 12 months to remain active (for both grantees and sub-recipients),
- Have a DUNS number,
- Provide address for primary Virginia service location including nine digit zipcode,
- Provide Executive compensation information for five most highly compensated officers if all of the following apply:
 - Organization receives 80% or more of its annual gross revenues in Federal awards,
 - Organization receives \$25,000,000 or more in annual gross revenues from Federal awards,

- Executive compensation has not previously been reported to any Federal Agency through any other reporting system.
- VIII. APPROPRIATIONS:** The Contractor acknowledges the understanding that this Agreement is subject to appropriations and constraints by the State or the Federal government budget.
- IX. SMOKE FREE ENVIRONMENT:** Public Law 103-277, also known as the Pro-Children Act of 1994, requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted for by an entity and used routinely or regularly for the provision of health, day care, early childhood development services, education or library services to children under the age of 18, if the services are funded by Federal programs either directly or through State or local governments, by Federal grant, contract, loan, or loan guarantee. Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty of up to \$1000 for each violation and/or the imposition of an administrative compliance order on the responsible entity.
- X. SUBCONTRACTS:** No portion of the work shall be subcontracted without prior written consent of the Department. In the event that the Contractor desires to subcontract some part of the work specified herein, the Contractor shall furnish The Department the names, qualifications and experience of their proposed subcontractor(s) and shall assure compliance with all requirements of the contract. Subcontracting with local health districts is not allowed.
- XI. INTEGRATION AND MODIFICATION:** This Agreement constitutes the entire understanding of the parties as to the matters contained herein. No alteration, amendment or modification of this Agreement shall be effective unless in writing and signed by the duly authorized officials of both The Department and Contractor.
- XII. PRICE ADJUSTMENT:** This Agreement is a cost reimbursement contract that is negotiated prior to annual renewal each year depending on the approved budget. The Department approved, price adjustment may be allowed at any time during the term of this Agreement.
- XIII. CONFIDENTIALITY OF PROPRIETARY INFORMATION, DUPLICATION AND DISCLOSURE:** The Contractor agrees that proprietary information disclosed by The Department to the Contractor for the purpose of a Memorandum of Understanding shall be held in confidence and used only in the performance of the contract. No item designed for or by The Department shall be duplicated or furnished to others without prior written consent. All products and materials including but not limited to papers, data, reports, forms, records, materials, creations, or inventions relating to this contract are sole and exclusive property of The Department. All such materials shall be delivered to The Department in usable condition at any time requested by The Department.
- XIV. METHOD OF PAYMENT:** The Contractor will be paid monthly in arrears for services rendered upon receipt of a valid invoice by the Department. A valid invoice shall be submitted to the Department by the thirtieth of the month following the month of service. Payment will be made in accordance with the Prompt Payment Act of Virginia.
- XV. SPECIAL TERMS AND CONDITIONS:**

- A. **AUDIT:** The Contractor shall retain all books, records, and other documents relative to this Agreement for five (5) years after final payment, or until audited by the Commonwealth of Virginia, whichever is sooner. The Department, its authorized agents, and/or state auditors shall have full access to and the right to examine any of said materials during said period.
- B. **APPLICABLE LAWS AND COURTS:** This Agreement 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 Commonwealth. The Department and the Contractor are encouraged to resolve any issues in controversy arising from the award of the agreement or any contractual dispute using Alternative Dispute Resolution (ADR) procedures (*Code of Virginia, §2.2-4366*). ADR procedures are described in Chapter 9 of the *Vendors Manual*. The Contractor shall comply with all applicable federal, state and local laws, rules and regulations.
- C. **AVAILABILITY OF FUNDS:** It is understood and agreed between the parties herein that the Department shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this Agreement.
- D. **BACKGROUND CHECKS:**
1. The VDH may require a background check for Contractor staff assigned to any resulting agreement. The Contractor shall be required to pay for all background checks processed for staff assigned to any agreement resulting from this Agreement at a rate of \$50.00. Fees are on a per background check basis and will be invoiced by VDH Accounting. The Contractor employees will be required to complete a form granting authority to release information. The Contractor shall allow the VDH access to review Contractor staff personnel and employment records.
 2. Background investigation results will be reviewed by the VDH, and are not releasable to the Contractor, however, can be provided to the individual of the investigation upon a written request.
 3. In the event agreement award is made prior to completion of background checks, any unfavorable results shall be subject to the terms and conditions of this Agreement.
 4. In the event of any staff turnover or staff reassignments, the Contractor shall notify the VDH and shall submit the appropriate background history questionnaire, authority for release of information and have fingerprints obtained for any proposed new staff member. This shall be in addition to the requirement to provide the required credentials information. The VDH may remove any Contractor employee that the Contract Administrator feels threatens the health or safety of staff, security of the facility, or quality of the service provided by the Contractor.

- E. **CANCELLATION OF AGREEMENT:** The Department reserves the right to cancel and terminate any resulting agreement, in part or in whole, without penalty, upon 60 days written notice to the Contractor. In the event the initial agreement period is for more than 12 months, the resulting agreement may be terminated by either party, without penalty, after the initial 12 months of the agreement period upon 60 days written notice to the other party. Any agreement cancellation notice shall not relieve the Contractor of the obligation to deliver and/or perform on all outstanding orders issued prior to the effective date of cancellation.
- F. **CONTINUITY OF SERVICES:**
- a. The Contractor recognizes that the services under this contract are vital to the Agency and must be continued without interruption and that, upon contract expiration, a successor, either the Agency or another contractor, may continue them. The Contractor agrees:
 - i. To exercise its best efforts and cooperation to effect an orderly and efficient transition to a successor;
 - ii. To make all Agency owned facilities, equipment, and data available to any successor at an appropriate time prior to the expiration of the contract to facilitate transition to successor; and
 - iii. That the Agency Contracting Officer shall have final authority to resolve disputes related to the transition of the contract from the Contractor to its successor.
 - b. The Contractor shall, upon written notice from the Contract Officer, furnish phase-in/phase-out services for up to ninety (90) days after this contract expires and shall negotiate in good faith a plan with the successor to execute the phase-in/phase-out services. This plan shall be subject to the Contract Officer's approval.
 - c. The Contractor shall be reimbursed for all reasonable, pre-approved phase-in/phase-out costs (i.e., costs incurred within the agreed period after contract expiration that result from phase-in, phase-out operations) and a fee (profit) not to exceed a pro rata portion of the fee (profit) under this contract. All phase-in/phase-out work fees must be approved by the Contract Officer in writing prior to commencement of said work.
- G. **CHANGES TO THE AGREEMENT:** The parties may agree in writing to modify the scope of the Memorandum of Understanding. An increase or decrease in the price to the Memorandum of Understanding resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the scope of the Memorandum of Understanding.
- H. **CONFIDENTIALITY OF PERSONALLY IDENTIFIABLE INFORMATION:** The Contractor assures that information and data obtained as to personal facts and circumstances related to patients or clients will be collected and held confidential, during and following the term of this Agreement, and will not be divulged without the individual's and the Department's written consent and only in accordance with federal law or the Code of Virginia. Contractors who utilize, access, or store personally identifiable information as

part of the performance of a agreement are required to safeguard this information and immediately notify the Department of any breach or suspected breach in the security of such information. Contractors shall allow the Department to both participate in the investigation of incidents and exercise control over decisions regarding external reporting. Contractors and their employees working on this project may be required to sign a confidentiality statement.

- I. **DRUG FREE WORKPLACE:** During the performance of this Agreement, the Contractor agrees to (i) provide a drug-free workplace for the Contractor's employees, (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance, marijuana or alcohol is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- J. **IMMIGRATION REFORM AND CONTROL ACT OF 1986:** By entering into a written agreement with the Commonwealth of Virginia, the Contractor certifies that the Contractor does not, and shall not during the performance of the agreement for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- K. **RENEWAL OF AGREEMENT:** This Agreement may be renewed by the Commonwealth upon written agreement of both parties for four successive one year periods, under the terms of the current agreement, and at a reasonable time (approximately 90 days) prior to the expiration.
- L. **CONFIDENTIALITY OF HEALTH RECORDS:** By signature on this Agreement, the Contractor agrees to comply with all applicable statutory provisions and regulations of the Commonwealth of Virginia and in the performance of this Agreement shall:
 1. Not use or further disclose health records other than as permitted or required by the terms of this Agreement or as required by law;
 2. Use appropriate safeguards to prevent use or disclosure of health records other than as permitted by this Agreement;
 3. Report to the Department of Health any use or disclosure of health records not provided for by this Agreement;
 4. Mitigate, to the extent practicable, any harmful effect that is known to the Contractor of a use or disclosure of health records by the Contractor in violation of the requirements of this Agreement;
 5. Impose the same requirements and restrictions contained in this Agreement on its subcontractors and agents;

6. Provide access to health records contained in its records to the Department of Health, in the time and manner designated by the Department of Health, or at the request of the Department of Health, to an individual in order to afford access as required by law;
7. Make available health records in its records to the Department of Health for amendment and incorporate any amendments to health records in its records at the Department of Health request; and
8. Document and provide to the Department of Health information relating to disclosures of health records as required for the Department of Health to respond to a request by an individual for an accounting of disclosures of health records.

M. ANTI-DISCRIMINATION: By signing this Agreement contractors certify to the Commonwealth that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians With Disabilities Act, the Americans With Disabilities Act and § 2.2-4311 of the *Virginia Public Procurement Act (VPPA)*. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the agreement on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that agreement with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body. (*Code of Virginia, § 2.2-4343.1E*).

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

1. During the performance of this Agreement, the Contractor agrees as follows:

- a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such contractor 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 these requirements.
2. The Contractor 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 subcontractor or vendor.
- N. **ANTITRUST:** By entering into an agreement, the Contractor conveys, sells, assigns, and transfers to the Commonwealth of Virginia all rights, title and interest in and to all causes of 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 the Commonwealth of Virginia under said agreement.
- O. **PAYMENT:**
1. **To Prime Contractor:**
 - a. Invoices for items ordered, delivered and accepted shall be submitted by the Contractor directly to the payment address shown on the purchase order/agreement. All invoices shall show the state agreement number and/or purchase order number; social security number (for individual contractors) or the federal employer identification number (for proprietorships, partnerships, and corporations).
 - b. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
 - c. All goods or services provided under this Agreement or purchase order, that are to be paid for with public funds, shall be billed by the Contractor at the agreement price, regardless of which public agency is being billed.
 - d. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.
 - e. **Unreasonable Charges.** Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are placed. In such cases, contractors should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the Commonwealth shall promptly notify the Contractor, in writing, as to those charges which it considers unreasonable and the basis for the determination. A contractor may not institute legal action unless a settlement cannot be reached within thirty (30) days of notification.

The provisions of this section do not relieve an agency of its prompt payment obligations with respect to those charges which are not in dispute (*Code of Virginia*, § 2.2-4363).

2. To Subcontractors:

a. A contractor awarded an agreement is hereby obligated:

(1) To pay the subcontractor(s) within seven (7) days of the contractor's receipt of payment from the Commonwealth for the proportionate share of the payment received for work performed by the subcontractor(s) under the agreement; or

(2) To notify the agency and the subcontractor(s), in writing, of the contractor's intention to withhold payment and the reason.

b. The Contractor is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the agreement) on all amounts owed by the Contractor that remain unpaid seven (7) days following receipt of payment from the Commonwealth, except for amounts withheld as stated in (2) above. The date of mailing of any payment by U. S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier contractor performing under the primary agreement. A contractor's obligation to pay an interest charge to a subcontractor may not be construed to be an obligation of the Commonwealth.

3. Each prime contractor who wins an award in which provision of a SWAM procurement plan is a condition to the award, shall deliver to the contracting agency or institution, on or before request for final payment, evidence and certification of compliance (subject only to insubstantial shortfalls and to shortfalls arising from subcontractor default) with the SWAM procurement plan. Final payment under the agreement in question may be withheld until such certification is delivered and, if necessary, confirmed by the agency or institution, or other appropriate penalties may be assessed in lieu of withholding such payment.

4. The Commonwealth of Virginia encourages contractors and subcontractors to accept electronic and credit card payments.

P. **ASSIGNMENT OF AGREEMENT:** An agreement shall not be assignable by the Contractor in whole or in part without the written consent of the Commonwealth.

Q. **DEFAULT:** In case of failure to deliver goods or services in accordance with the agreement terms and conditions, the Commonwealth, after due oral or written notice, may procure them from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the Commonwealth may have.

R. **NONDISCRIMINATION OF CONTRACTORS:** A contractor shall not be discriminated against in the award of this Agreement because of race, religion, color, sex, national origin, age, disability, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the vendor employs ex-offenders unless the state agency, department or institution has made a written determination that employing ex-offenders on the specific agreement is not in its best interest. If the award of this Agreement is made to a faith-based organization and an individual, who applies for or receives goods, services, or disbursements provided pursuant to this Agreement objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative Contractor.

S. **WHISTLEBLOWER PROTECTIONS:** Congress has enacted the whistleblower protection statute 41 U.S.C. Section 4712 to encourage employees to report fraud, waste, and abuse without repercussions. This statute applies to all employees working for contractors, grantees, subcontractors, and sub grantees in accordance with this Agreement. All contractors, grantees, sub grantees, and subcontractors for federal grants and contracts are required to:

1. Inform their employees in writing of the whistleblower protections under 41 U.S.C. Section 4712 in the predominant native language of the workforce, to include the specific requirements of the statute, and
2. Include this term and condition in any agreement made with a subcontractor or sub grantee.

The employees' rights under 41 U.S.C. Section 4712 shall survive termination of this Agreement.

T. **AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH:** A contractor organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia or as otherwise required by law. Any business entity described above that enters into a contact with a public body pursuant to the Virginia Public Procurement Act shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.

U. **NONDISCRIMINATION OF CONTRACTORS (EO61):** A contractor shall not be discriminated against in the award of this Agreement because of race, religion, sexual orientation, gender identity color, sex, national origin, age, political affiliation, disability, veteran status, faith-based organizational status, any other basis prohibited by state law relating to discrimination in employment or because the vendor employs ex-offenders unless the state agency, department or institution has made a written determination that employing ex-offenders on the specific agreement is not in its best interest. If the award of this Agreement is made to a faith-based organization and an

individual, who applies for or receives goods, services, or disbursements provided pursuant to this Agreement objects to the religious character of the faith-based organization from which the individual receives or would receive the goods, services, or disbursements, the public body shall offer the individual, within a reasonable period of time after the date of his objection, access to equivalent goods, services, or disbursements from an alternative Contractor.

V. SERVICE ORGANIZATION CONTROLS:

Service Organization Controls (SOC2) may be required for this contract. Please see link for requirements

http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/10305.pdf

CERTIFICATION OF INTERNAL CONTROLS: The contractor shall have clearly delineated processes and procedures for the internal control of sensitive data and processes, which are any data and processes of which the compromising of confidentiality, integrity, and/or availability could have a material adverse effect on Commonwealth of Virginia interests, the conduct of agency programs, or to the privacy of which individuals are entitled, when such sensitive data or processes are related to the goods and/or services provided pursuant to this agreement.

The contractor shall provide evidence of compliant and ongoing internal control of sensitive data and processes through a standard methodology, such as but without limitation the American Institute of Certified Public Accountant (AICPA) Service Organization Control (SOC) Reports. The evidence of compliance shall be contained in a report describing the effectiveness of the contractor's internal controls. The most recent version of the report shall be provided to the purchasing office upon request. Trade secrets or proprietary information contained within the report shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the contractor must invoke the protection of Code of Virginia, § 2.2-4342F, in writing, prior to or upon submission of the report, and must identify the data or other materials to be protected and state the reasons why protection is necessary.

If deficiencies in the contractor's internal control processes and procedures are described in the most recent version of the report, the contractor shall automatically submit the report to the purchasing office within a timely manner and shall describe the corrective actions to be put into place by the contractor to remedy the deficiencies. Failure to report and/or repair deficiencies in a timely manner shall be cause for the Commonwealth to make a determination of breach of contract.

The contractor's obligations for certification of internal controls shall survive and continue after completion of this agreement unless the contractor certifies the destruction of the sensitive data at the end of the contract term.

XVI. STATUS OF PERSONNEL: Margaret Smigo, Waterborne Pathogens Control Coordinator for the Beach Monitoring and Notification Program, has been designated as the Department administrator for this Agreement.

IN WITNESS WHEREOF, the parties have caused this Memorandum of Understanding to be duly executed intending to be bound thereby.

Hampton Roads Sanitation District (HRSD)

EH 7/5/2017
Signature and Date

Edward Henifin, General
Manager

Name and Title (Printed)

VDH/Office of Purchasing
and General Services

Nancy Scanzo 7-14-17
Signature and Date

Nancy Scanzo Procurement
Name and Title (Printed)

Office II

Note: This public body does not discriminate against faith-based organizations in accordance with the Code of Virginia, §§ 2.2-4343.1 or against a Contractor because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

Appendix A

Name of Contractor: Hampton Roads Sanitation District

Method of Selection: HRSD utilizes the latest droplet digital PCR technology to provide absolute quantification in conjunction with the latest human source tracking marker molecular assay (a HF183 and *Enterococcus* spp. multiplex). Advantages of HRSD's workflow include lower detection capabilities, inhibition alleviation, and paired molecular *Enterococcus* spp. concentrations. Detailed HRSD extraction and analyses protocols will be provided. Contractor can provide services at cost with a nominal 15% overhead charge through their Municipal Assistance Program.

Period of Performance: Date agreement is executed – November 30, 2017

Scope of Work: HRSD will enumerate the HF183 marker to confirm or rule out the presence of human contamination in samples that exceed the recreational water quality threshold. HRSD will provide 500ml bottles and sampler poles and will clean bottles and return bottles to rotation according to QA protocols to ensure sterility. Bottles will be clearly marked such that they are used by no other HRSD patrons – when in doubt, HRSD will provide new bottles for VDH use. Sterilized bottles will be marked to verify sterility and either shipped or couriered to the health district lab to place bottles back into rotation. If non-human source tracking markers are required, HRSD currently uses several locally-relevant animal fecal markers and can develop and optimize multiple other markers at request. Courier services are available to all beach district labs – Newport News Waterworks, Virginia Beach Public Utilities, and Norfolk Public Utilities - with the exception of Eastern Shore DSS Accomac Laboratory. Results will be provided to the submitting health district and Contract Administrator within 14 days. An annual report will summarize the results of samples submitted during the contract period and recommendations on further sampling when applicable. Annual results will be presented at the Beach Meeting in the following year.

Budget:

Supplies

500ml bottles (\$5.19/bottle @ 96)	\$ 499
Sampler poles (6 x \$141.52)	\$ 850

Laboratory Services

HF 183 assay (50) \$81 per sample	\$ 4,050
<i>Optional assays:</i>	
Dog assay (10) \$26 per sample	\$ 260
Gull assay (10) \$26 per sample	\$ 260
Geese assay (10) \$26 per sample	\$ 260
Courier service (30 hours @\$41)	\$ 1,230
Bottle service (1xWeek@\$10/10weeks)	\$ 1,000

Technical Services

Data interpretation/Report/meeting (35 hours @\$75)	\$ 2,625
Project management (10 hours @\$100)	\$ 1,000

Other

Shipping (cleaned bottles to districts)	\$ 250
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Travel

Courier Mileage (1000 @.535 +25% MOS)	\$ 785
Annual Meeting (60miles @ .535)	\$ 32

Total \$ 13,100.06

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #9

AGENDA ITEM 18. – Commission Governance Guidelines

HRSD Commission Governance Guidelines

The Commission is charged with managing and controlling the functions, affairs and property of the Hampton Roads Sanitation District (HRSD). HRSD's operation is accomplished by its employees under the direct supervision of the General Manager. These governance guidelines are intended to support the Commission in its oversight role, which is set forth in the Acts of Assembly. Some additional Commission responsibilities are specified in HRSD's Trust Agreements, required by federal law or mandated by the Virginia Public Procurement Act.

The Commission and HRSD's management recognize that the interests of HRSD are advanced by responsibly addressing the concerns of other constituencies, including employees, customers and the communities in which HRSD provides services. The Commission will review these guidelines regularly in its continuing effort to achieve this goal.

Section 1. Role and Function of the Commission

A. Composition

1. The Commission consists of eight members appointed by the Governor of Virginia to four-year terms.
2. At the time of their appointment, Commissioners shall reside in the locality from which they were appointed. Moving from this locality terminates the appointment.
3. With the exception of the aforementioned residency restriction, a Commissioner's term continues until the successor is appointed. Any person appointed to fill a vacancy shall serve for the unexpired term.
4. Commissioners are eligible for reappointment without limitation to the number of terms. Members may be suspended or removed at the Governor's pleasure.

B. Structure

1. The Commission shall annually elect one of its members as chair and another as vice-chair. These officers shall not serve more than ~~two~~ **four** consecutive **one-year** terms in each office. These officers may be re-elected after being out of office for one full term.
2. The Commission's committees are (1) Finance and (2) Operations and Nominations (O&N). These committees report as needed to the full Commission. The Commission may elect to form a new standing or special committee or to disband an existing committee.

HRSD Commission Governance Guidelines

- A. The Finance Committee shall review the Comprehensive Annual Financial Report; ensure the annual audit is completed and receive the audit report from the external auditor; review the work plan and receive reports from the audit firm performing internal audits; review the financial forecast and the annual operating and capital budgets and report out to the full Commission prior to Commission action on the annual budgets; participate in selection of internal and external auditors; and other *related* financial ~~related~~ matters as may be referred to the committee by the chair.
- B. The O&N Committee shall prepare a slate of officers for Commission consideration annually; review the Governance Guidelines on a regular basis; review the Remote Participation Policy annually; and review other Commission policies as required or directed by the chair.
3. The Commission chair annually appoints the committee members and chairs. *Committees are composed of two Commissioners and both are required for a quorum. All Commissioners are invited to participate in all Committee meetings.*

C. Operation

1. The Commission has the authority to adopt bylaws and to make rules and regulations for the management of its affairs and the conduct of its business.
2. Unless otherwise announced, the Commission meets on the fourth Tuesday of each month January through November and on the third Tuesday of December. Special meetings are held when necessary. The General Manager sets the meeting agendas with advice from the Department Directors and the chair. Agendas, with any relevant accompanying information or reports, are distributed to the Commissioners prior to meetings for review. When circumstances require, items may be added to the agenda after it has been distributed.
3. Four members shall constitute a quorum.
4. The rules contained in the current edition of ***Rosenberg's Rules of Order*** shall govern the Commission in all cases to which they are applicable and in which they are not inconsistent with state law or any special rules of order the Commission may adopt.

HRSD Commission Governance Guidelines

D. Commissioner Policies

1. Newly appointed Commissioners will receive a briefing from the General Manager and Department Directors regarding matters related to HRSD's mission and core services. At a minimum, Commissioners are briefed on operations, financial matters and strategic directions. The Commission Secretary will provide information related to [Virginia's Freedom of Information Act](#) and Commission membership. In addition, new Commissioners shall tour HRSD facilities *as their schedules permit and when practical and* be introduced to the chief elected officials of their localities *as appropriate and practical* to facilitate effective working relationships.
2. Commissioners are expected to devote as much time and attention as necessary to discharge their duties. This includes attending all monthly Commission meetings and the meetings of any committees on which they may serve. Commissioners should notify the Commission Secretary whenever they are unable to attend a scheduled meeting. Commissioners may participate remotely in accordance with the Remote Participation Policy. Commissioners must notify the chair of their desire to participate remotely prior to the meeting. Commissioners also may be asked to participate in special events and to represent HRSD at public meetings.
3. Commissioners shall be mindful of the best interest of the HRSD service area at large *over as opposed to instead of* those of the localities in which they reside.
4. At the request of the Commission, individual Commissioners may serve as liaisons to officials in the communities in which they reside or other localities within HRSD's service area.
5. Commissioners receive no salary but are compensated for travel and expenses associated with meeting attendance at the rate paid to members of the Commonwealth Transportation Board.
6. Each Commissioner shall be covered by a public official's liability policy paid for by HRSD.
7. Commissioners are expected to *recuse themselves from discussion and abstain from voting on matters in which they may have a personal or professional conflict, and to announce the recusal or abstention in advance.*

HRSD Commission Governance Guidelines

E. Responsibilities

The Acts of Assembly authorize and empower the Commission to perform a variety of specified acts by means of its own officers, agents and employees or by contracts with any persons. Some of the most significant functions are:

1. To construct, improve, extend, enlarge, reconstruct, maintain, equip, repair and operate a sewage disposal system or systems.
2. To issue revenue bonds, notes or other obligations.
3. To fix and collect rates, fees and other charges for the services.
4. To acquire land, structures, property, rights, rights-of-way and easements by purchase, lease, grant or the exercise of the right of eminent domain.
5. To employ, in its discretion, consulting engineers, attorneys, accountants, construction and financial experts, managers and other such officers, employees and agents as may be necessary, and to fix their compensation.
6. To sue and to be sued.
7. To prevent any person, jurisdiction or corporation from discharging into District waters any sewage, industrial wastes or other refuse that would pollute these waters.
8. To seek civil penalties or civil charges against owners in violation of pretreatment standards in permits.
9. To make and enter into all contracts and agreements necessary or incidental to the performance of its duties and execution of its powers.
10. The Commission does not have the power to mortgage, pledge, encumber or otherwise dispose of any part of the sewerage system except that which may no longer be necessary or useful.

HRSD Commission Governance Guidelines

Section 2. HRSD Management and the Commission

Commissioners have complete access to the General Manager, who may refer them to Department Directors or other appropriate resources for assistance. The Commission Secretary shall assist Commissioners with matters related to scheduling, expense reimbursement, access to information and meeting attendance.

A. Staff Relations

1. The Commission appoints a General Manager, who serves at the pleasure of the Commission. As the chief administrative officer, the Commission delegates day-to-day operations to the General Manager within the broad framework of Commission established policies and strategies. The Commission shall review the General Manager's performance and set compensation at least annually.
2. The Commission appoints a Secretary and a Treasurer who serve in these roles at the pleasure of the Commission. These appointments are made from existing staff positions. The Commission fixes their compensation through the annual budget process as these positions are in the HRSD position classification and compensation system.
3. The Commission periodically reviews and assesses the compensation paid to all HRSD employees as part of the annual budget process.
4. Establishment and maintenance of appropriate human resource policies have been delegated to the General Manager.

B. Financial Oversight

1. The Commission approves HRSD's Financial Policy.
2. The Commission approves the Annual Budget, Capital Improvement Program (CIP), Financial Plan and Schedule of Rates.
3. The Finance Committee meets as required to perform their financial oversight duties and reports to the Commission regarding these activities.

Section 3. Commission Actions

A. Commission Approval Items

1. Policies – All policies that govern HRSD business processes, financial practices, service to localities, etc.

HRSD Commission Governance Guidelines

2. Annual Operating Budget – Budget policy allows General Manager to transfer between budget object codes within total approved budget without further Commission action. Additional action is only required if total annual operating budget is amended.
3. Capital Improvement Program
 - a. 10-year program without authorization of specific projects
 - b. Authorization of projects in first year without appropriation
 - c. Changes in program that impact first-year projects previously authorized
4. Capital Improvement Projects
 - a. Appropriation of full project funding specific to each project at time first dollar is to be spent
 - b. Changes requiring additional funding
 - c. Changes resulting in significant reduction in scope (greater than 25 percent of appropriation)
5. Schedule of rates including facility charges
6. Resolutions authorizing issuance of definitive bonds, interim receipts or temporary bonds, notes or other obligations
7. Acceptance or award of grants
8. Procurement
 - a. The HRSD Procurement Policy
 - b. Use of alternative project delivery methods prior to solicitation (Design-Build, Construction Management, etc.)
 - c. Agreements – Contracts, task orders or purchase orders where the total value is projected to exceed \$200,000
 - d. Rejection of bids for all contracts where total value is projected to exceed \$200,000

HRSD Commission Governance Guidelines

- e. Change orders to contracts that will result in changing the total value of the contract inclusive of all change orders to either 125 percent or more of the original contract award amount or \$50,000, whichever is greater
 - f. HRSD use of an existing competitively awarded contract vehicle (State contract, cooperative procurement, General Services Administration, etc.) where the total value of HRSD participation is projected to exceed \$200,000
 - g. Sole Source Procurement – Initial sole source determination for specific vendor, item(s) and location(s) where total value is projected to exceed \$10,000
 - h. Debarment – Review staff recommendation and make the final determination of all firm/contractor debarment, the conditions and length of term for the debarment.
 - i. Real Property
 - 1. Acquisition by condemnation in accordance with the Code of Virginia §15.2
 - 2. Acquisitions by purchase, lease, grant or conveyance
 - 3. Sale, lease or permanent encumbrance of HRSD property
 - 4. Easements or Right of Entry Agreements (temporary or permanent) with value in excess of \$25,000
9. Intellectual Property (IP)
- a. IP rights agreements
 - b. Royalty distribution agreements

HRSD Commission Governance Guidelines

10. Personnel
 - a. Compensation of General Manager
 - b. Compensation of Treasurer, Secretary and other employees through annual budget process
11. Regulations
 - a. HRSD Industrial Wastewater Discharge Regulations
 - b. Enforcement Response Plan
12. Selection of Commission consultants
 - a. Legal
 - b. Auditors
13. Agreements with other entities meeting one of the following criteria:
 - a. Design or construction of infrastructure with a constructed value in excess of \$50,000
 - b. Provides use of real property for temporary (greater than one year) or permanent use
 - c. Provides use of personal property valued at more than \$50,000 for temporary (greater than one year) or permanent use
 - d. *Transfer of existing infrastructure to/from HRSD with an estimated value in excess of \$50,000.*
 - ~~d~~.e. Provides a service or other benefit that spans multiple years
 - ~~e~~.f. Obligates significant financial resources (\$200,000 or more)
 - ~~f~~.g. Obligates significant personnel resources (one full time employee or more)
 - ~~g~~.h. Is or has the potential to be politically significant

HRSD Commission Governance Guidelines

B. Commission Recognition Items

1. Employees celebrating length of service 20 years and above
2. New employees Grade 9 and above
3. Awards and recognition earned by HRSD
4. Awards and recognition granted by HRSD

C. Commission Information Items

1. Monthly reports from General Manager and each Department Director
2. Monthly Interim Financial Report (included in Director of Finance report)
3. Notice of declaration of emergency
- ~~3.4.~~ *Internal Audit Reports and updates*
- ~~4.5.~~ Quarterly Investment Report
- ~~5.6.~~ Quarterly CIP Update

Section 4. Commission Meetings

All meetings of the Commission shall be held in accordance with the Virginia Freedom of Information Act. Remote participation in meetings shall be in accordance with the Remote Participation policy.

A. Commission Meeting Agenda

The Commission meeting agenda shall be prepared by the General Manager and distributed to the Commission typically five calendar days prior to the meeting date. Public notice of the meeting and posting of the agenda shall be in accordance with the Virginia Freedom of Information Act (§ 2.2-3700 et. Seq. of the Code of Virginia). The General Manager shall review the agenda prior to the meeting with the chair.

HRSD Commission Governance Guidelines

The agenda shall be structured to ensure efficient and effective use of ~~Commissioner's~~ *Commissioners'* time and expertise.

1. Full agenda items with briefings may be provided for the following items and other items as deemed appropriate:
 - a. Annual Budget
 - b. Capital Improvement Program
 - c. Individual Capital Improvement Projects when requesting appropriation or additional appropriations to individual Capital Improvement Projects
 - d. Changes in CIP that impact first-year projects
 - e. Schedule of Rates
 - f. Resolutions related to bonds, notes or other obligations
 - g. Resolutions related to certain employee benefit plans
 - h. Acceptance or award of grants
 - i. New, modified, amended or reissued Commission approved policies
 - j. Use of alternative project delivery methods for contracts
 - k. Agreements*
 - l. Rejection of bids for contracts*
 - ~~k.m.~~ Real estate acquisitions by condemnation including requisite public hearings
 - ~~l.n.~~ Real estate acquisitions
 - ~~m.o.~~ Sale, ~~or~~ lease, *conveyance* of HRSD property *or transfer of property to HRSD*

HRSD Commission Governance Guidelines

~~n.p.~~ Intellectual property agreements

~~e.q.~~ Patent applications

~~p.r.~~ Changes, amendments or reissuance of the Industrial Wastewater Discharge Regulations or Enforcement Response Plan

~~e.s.~~ Selection of Commission consultants

~~r. — Agreements requiring Commission approval~~

2. Consent agenda items shall be limited to items meeting the requirements for Commission approval as detailed herein but not typically warranting of a full briefing due to the nature of the action or previous communication with the Commission.

a. Contract awards ~~or rejection of bidders~~

b. *Contract* Change orders

c. Task orders

d. HRSD use of existing competitively awarded contract vehicle

e. Sole source procurement

3. Informational agenda items (with or without briefings) may be presented with the agenda as appropriate.

a. Monthly reports

b. Quarterly investment reports

c. Emergency declarations

d. CIP update

e. Other items as needed

B. Commission Workshops

HRSD Commission Governance Guidelines

Workshops shall be scheduled as needed to allow informal dialogue on a topic or narrow range of topics. Appropriate staff shall be available to brief and facilitate as well as provide subject matter expertise. No official actions shall be taken during workshops. Workshops are public meetings and shall be held in conformance with Virginia's Freedom of Information Act.

C. Committee Meetings

Committee meetings shall be scheduled as needed. Committee meetings are public meetings and shall be held in conformance with Virginia's Freedom of Information Act. Remote participation in committee meetings is not allowed. *The Commission Chair shall be an ex-officio member of all committees. The ex-officio shall retain all the rights and privileges of the Commission, including the right to vote. However, the Commission Chair shall not be counted in determining the number required for a Committee quorum or in determining whether or not a quorum is present.*

Section 5. Annual Calendar of Commission Actions

Action	Schedule
Quarterly CIP Update	January
Finance Committee Meeting to Review Operating Budget	March
Quarterly CIP Update	April
Receive Finance Committee report	April
Appoint Operations & Nominations (O&N) Committee	May
Approve Annual Budget, CIP, Financial Plan, and Schedule of Rates	May
O&N Committee Meeting after Regular Meeting	May
O&N Committee Meeting before Regular Meeting	June
Elect Officers	June
Quarterly CIP Update	July
<i>Appoint Finance Committee</i>	<i>July</i>
Finance Committee Meeting to Review Comprehensive Annual Financial Report (CAFR)	September - October
Accept CAFR	September-October
Quarterly CIP Update	October
Diversity Procurement Report	October
Evaluate General Manager's Performance	October
Appoint Finance Committee	December

HRSD Commission Governance Guidelines

Section 6. Advisory Role of Former Commissioners

So as not to lose the benefit of the insights gained during their years of service, former Commissioners may be asked to serve in an advisory role ~~for a period of two years~~ following the end of their term. Equipment required to facilitate communications with the General Manager and Commission officers may be provided to those serving in an advisory role.

Section 67. Modifications

The operation of HRSD is a dynamic and evolving process. As such, the O&N Committee annually reviews these Guidelines and recommends proposed modifications to the Commission when appropriate and when statutes or regulations dictate changes.

The O&N Committee also annually reviews the schedule of items to be considered by the Commission to ensure effective oversight and efficient meetings.

Section 78. Appendix

The most current versions of the following documents are available on HRSD.com or, upon request, in hard copy.

- Budget
- Capital Improvement Program
- Comprehensive Annual Financial Report
- Enabling Act
- Schedule of Rates
- Trust Agreements

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #10

AGENDA ITEM 19. – Ethics Policy

1.0 Purpose and Need

As a public body, gaining and keeping the trust of the public is paramount. HRSD Commissioners and employees are committed to maintaining high ethical standards in every aspect of their business as members of a public body. As a political subdivision of the Commonwealth, HRSD Commissioners and employees are committed to complying in that regard to all applicable laws and regulations governing ethics and conflicts of interest. **This policy is applicable to all HRSD employees.** Additionally, specific disclosure requirements are hereby established for HRSD Commissioners and employees in HRSD Positions of Trust.

2.0 Definitions

HRSD Commissioner – A non-salaried citizen member of the HRSD Commission

HRSD Positions of Trust – Positions requiring annual disclosure filing

- General Manager
- Director of Communications
- Director of Engineering
- Director of Finance
- Director of Information Technology
- Director of Operations
- Director of Talent Management
- Director of Water Quality
- Director of Water Technologies and Research
- Special Assistant for Compliance Assurance
- Chief of Procurement
- Real Estate Manager

Gift – Any goods, meals, services, loans, tickets to events, greens fees, travel, lodging or similar items with monetary value or discounts, favors, gratuities, hospitality, forbearance, etc. This includes prizes awarded from drawings or similar games of chance at events attended in an official capacity. This also includes wreaths, candy, cookies, fruit baskets, etc., whether addressed to an individual or to HRSD.

Not a Gift – For the purposes of this policy the following are not considered gifts:

- Offer of a ticket, coupon, admission or pass if such item is **not** used
- Honorary degrees
- Food or beverage consumed and mementos received at an event at which an individual is performing official duties or is a speaker
- Registration or attendance fees (not travel costs) at an event at which individual is a speaker
- Unsolicited awards of appreciation or recognition (plaque, trophy, wall or desk memento)
- Gifts from relatives or Personal Friends
- Travel paid for by the government
- Travel, meals and activities directly associated with and paid for by a professional association that HRSD pays dues to on behalf of the agency or individual as part of their official duties
- Scholarships awarded competitively
- Travel related to an official meeting of HRSD

Widely Attended Event – An event to which at least 25 persons have been invited or there is a reasonable expectation that at least 25 persons will attend the event and the event is open to individuals (i) who are members of a public, civic, charitable or professional organization, (iii) who are from a particular industry or profession, or (iv) who represent persons interested in a particular issue.

Immediate Family – Includes spouse and any other person who resides in the same household and who is a dependent of the Commissioner or employee.

Personal Friend – An individual whose relationship with an HRSD employee or Commissioner pre-dates employment/appointment with HRSD and the relationship has a history of gift exchange or with whom a personal relationship developed totally unrelated to the employee's or Commissioner's position with HRSD.

3.0 Guiding Principles

HRSD Commissioners and employees shall conduct themselves beyond reproach. Improprieties or the appearance of improprieties will not be tolerated. All prohibitions herein apply to Commissioners, employees and their immediate families.

Soliciting, accepting or receiving any Gift from a lobbyist, lobbyist's principal or any entity or person seeking to contract with HRSD is prohibited subject to exemptions for Gifts from relatives or Personal Friends.

Personal interest in any contract with HRSD other than the employee's own employment contract is prohibited. Where such interest pre-exists, it shall be disclosed and the Commissioner or employee shall refrain from voting on or acting on behalf of HRSD in any manner in relation to the contract.

Participation in a transaction with HRSD if the employee has a personal interest in the transaction is prohibited. Such interest shall be disclosed and the Commissioner or employee shall refrain from voting on or acting on behalf of HRSD in any manner in relation to the transaction.

Engaging in transactions (beyond those associated with connection, payment or maintenance of a sewer service account or related activities available to all HRSD customers) with HRSD for a period of six months post employment or appointment is prohibited.

Food, beverages, mementos, entertainment or the cost of admission may be accepted when such a Gift is accepted or received while in attendance at a Widely Attended Event and is associated with the event. Commissioners and employees in HRSD Positions of Trust must disclose Gifts received at Widely Attended Events in excess of \$100 pursuant to Section 4.0.

Gifts received without specific recipients identified shall be returned whenever practicable. If not practicable to return, perishable gifts may be shared with the entire work center. Non-perishable gifts shall be collected and distributed to local charities as appropriate.

4.0 Procedures

HRSD Commissioners and employees in HRSD Positions of Trust as defined herein shall file disclosure forms as specified in the *Code of Virginia* prior to assuming his or her position and then annually as required. The report on the previous 12 months from January 1 to December 31 may not be dated or filed prior to January 1.

- Commissioners shall file the form found in Virginia Code § 2.2-3118
- Employees in HRSD Positions of Trust shall file the form found in Virginia Code § 2.2-3117

COMMISSION ADOPTED POLICY
Ethics



Adopted: October 27, 2015

Revised: June 27, 2017
Effective: July 1, 2017

Page 4 of 4

- Employees who are designated as "Acting" in a Position of Trust in excess of 60 days shall file the form found in Virginia Code § 2.2-311 prior to assuming his or her position. Employees in an "Acting" position at the time of the filing deadline shall also file the required forms.
- Any disclosure forms to be filed with HRSD shall be maintained by the Commission Secretary as public records for a period of five years.
- This policy is effective beginning January 1, 2016.

5.0 Responsibility and Authority

This policy shall be reviewed annually by the Operations and Nominations Committee and revised as required to conform to current law and regulations and changes in positions designated as HRSD Positions of Trust.

Approved:

Handwritten signature of Frederick N. Elofson in black ink.

Frederick N. Elofson, CPA
Commission Chair

6/27/17

Date

Attest:

Handwritten signature of Jennifer L. Cascio in black ink.

Jennifer L. Cascio
Commission Secretary

6/27/17

Date

HRSD COMMISSION MEETING MINUTES
June 27, 2017

ATTACHMENT #11

AGENDA ITEM 27. – Informational Items

- a. Management Reports
 - (1) [General Manager](#)
 - (2) [Communications](#)
 - (3) [Engineering](#)
 - (4) [Finance](#)
 - (5) [Information Technology](#)
 - (6) [Operations](#)
 - (7) [Special Assistant for Compliance Assurance](#)
 - (8) [Talent Management](#)
 - (9) [Water Quality](#)
 - (10) [Report of Internal Audit Activities](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)
- e. [Commission Adopted Policy – Staff Revision to the Financial Policy](#)



June 19, 2017

Re: General Manager's Report

Dear Commissioners:

HRSD participated in the fifth annual National Infrastructure Week in May. National Infrastructure Week is one of education and advocacy bringing together American businesses, workers, elected leaders and everyday citizens around one message: it is time to invest in our nation's infrastructure. From May 15-19, leaders and citizens around America highlighted the state of our nation's infrastructure – roads, bridges, rail, ports, airports, water and sewer systems, the energy grid and more – and encouraged policymakers to invest in the projects, technologies, and policies necessary to make America competitive, prosperous, and safe.

Our participation was through the production of two videos to tell the story of how HRSD's investment in infrastructure creates jobs and supports the economy in Hampton Roads. One video focused on the upgrade to the Virginia Initiative Plant, our largest capital improvement project ever and the other on the Bridge Street Pump Station project, our largest pump station project ever. These short videos, (available on YouTube through links on our website) feature HRSD, HDR and MEB employees speaking to the importance of these projects and the work HRSD does to ensure future generations inherit clean waterways.

As Commissioners, you have stepped up to support investment in the region's wastewater infrastructure over the past 10 years. Our aggressive capital improvement program includes investments in infrastructure renewal, treatment process improvements, wet weather capacity enhancements and the multiple benefits from the Sustainable Water Initiative for Tomorrow (SWIFT). These investments create and support local jobs - directly with construction, maintenance and operations and indirectly, by ensuring the availability of reliable sewer infrastructure to support current and future development needs while protecting public health and the waterways that are integral to our region's economy and quality of life. I am proud of the leadership role HRSD plays in our region as I am sure you are as well.

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

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

May was relatively uneventful from an operating perspective as detailed in the attached monthly reports.

1. **Treatment Compliance and System Operations:** All plants met all VPDES and air permit requirements during the month with no reportable events in the interceptor system during the month.

2. **Internal Communications:** I participated in the following meetings/ activities with HRSD personnel:
 - a. A new employee orientation session
 - b. A kick-off meeting for updating the HRSD Strategic Plan
 - c. A meeting to discuss coordination of HRSD work with the City of Virginia Beach's Lesner Bridge project
 - d. The monthly update on the Wet Weather Management Plan
 - e. Resolution of several customer billing inquiries
 - f. Coordination of our response to Chesapeake's request for a service area expansion
 - g. A meeting to discuss potential property needs at Williamsburg Treatment Plant
 - h. A question and answer session with the Supervisory Training class
 - i. A meeting to review small community policies
 - j. A luncheon with our United Way Campaign prize winners

3. **External Communications:** I participated in the following meetings/ activities:
 - a. Moderated a session at the Wet Weather Partnership on opportunities for regulatory changes in the next three years
 - b. Met with senior officials at the Department of Justice as part of a delegation of the National Association of Clean Water Agencies (NACWA) utility members
 - c. Attended the Mission H2O Annual meeting
 - d. Met with the County Administrator from James City County to discuss SWIFT
 - e. Participated in a Value of Water Coordinating Committee teleconference
 - f. Several calls with City of Virginia Beach staff to address details of their proposed nutrient credit trading agreement with HRSD

- g. A meeting of an ad hoc governance committee of Virginia*forever* via teleconference
- h. A meeting to review the priority projects and process identified in the Regional Wet Weather Management Plan (RWWMP)
- i. Two preparation calls with the facilitator for the SWIFT oversight workshop to be held on July 20th
- j. A meeting with representatives from the Hampton Yacht Club regarding the Bridge Street Pump Station project
- k. Delivered a SWIFT update to employees at the Central Environmental Laboratory (CEL)
- l. A budget review call with the NACWA board
- m. A meeting with the Virginia Extension Service staff in preparation for the poverty simulation in August
- n. A call with the Water Agency Leader's Alliance regarding a workforce development proposal with the Brookings Institution

This month we welcome Dr. Elizabeth Taraski, our newly appointed Commissioner who lives in Suffolk. The agenda package includes a summary of Elizabeth's impressive credentials. I look forward to her contributions to the governance of HRSD. Elizabeth was appointed to fill the seat previously held by Art Bredemeyer. Art had served the Commission since 2009. We wish Art the best and will have a chance to recognize his service at the annual Commission Dinner and Apprentice Graduation to be held this August.

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, June 27, 2017 in Virginia Beach.**

Respectfully submitted,

Ted Henifin

Ted Henifin, P.E.
General Manager

TO: General Manager
FROM: Director of Communications
SUBJECT: Monthly Report for May 2017
DATE: June 14, 2017

A. Publicity and Promotion

None this month outside of construction communication news.

B. Social Media and Online Engagement

1. Facebook Reach: 3,504
2. Twitter: 5,132 twitter impressions
3. SWIFT website visits: 609
4. Blog posts: 2 (featured on AskHRGreen.org and U.S. Water Alliance sites)
 - a. It's Time To Build: This Is Not Your Mother's Wastewater Treatment Plant - <http://askhrgreen.org/time-build-mothers-wastewater-treatment-plant> and <http://uswateralliance.org/resources/blog/not-your-mothers-wastewater-treatment-plant>
 - b. It's Time To Build: This Is Not Your Mother's Wastewater Treatment Plant - <http://askhrgreen.org/time-build-mothers-wastewater-treatment-plant> and <http://uswateralliance.org/resources/blog/pump-station-runs-innovation-and-coffee-lots-coffee>
5. Construction Project Page Hits: 5681

C. News Releases, Advisories and Project Notices

1. [Temporary Lane Shift Scheduled on Warwick Boulevard for Sanitary Sewer Pipeline Installation](#)
2. [Update: Sanitary Sewer Pipeline Installation on Warwick Boulevard Rescheduled from May 13 to May 20](#)
3. Five Project Notices

D. Special Projects

1. The Communications Department, in coordination with Engineering and in partnership with HDR Engineering, Inc. and MEB General Contractors, highlighted two projects for National Infrastructure Week. The department developed and implemented a communications plan to showcase the VIP Nutrient Reduction Program and the Bridge Street Pump Station Replacement Project. The Director of Communications worked with HDR in directing and producing videos at each of the sites and communications department staffs wrote two blog posts for the U.S. Water Alliance. These posts were also leveraged within HRSD content marketing platforms and askHRgreen.org. Social media content was also prepared for Facebook, LinkedIn and Twitter engagement and audience sharing with our partners at MEB, HDR.
2. The Communications staff conducted an Education Program Development half-day workshop to begin developing an educational outreach plan for the coming school year that will incorporate SWIFT education, target age groups, SOL learning and education module update planning.
3. The Director of Communications participated in logistics and planning meetings in preparation for upcoming SPSA Pump and Haul operations to assist that agency with the safe disposal of its excess build-up of leachate at its Suffolk landfill location.
4. The Director of Communications attended the Norfolk State of the City with Commissioner Mike Glenn and the Commission Secretary.
5. The Director of Communications coordinated a hard-hat tour and interviews with several subject matter experts from HRSD, contractors and consultants for an upcoming June story in *Engineering News Record*.
6. Communications staff, working with the SWIFT Research Center project manager, participated in several coordination and conceptualization meetings to plan the educational features and tools for the SWIFT Research Center.

E. Internal Communications

1. The Director of Communications along with members of IT and procurement, participated in website redesign vendor interviews.
2. Communications staff participated in the Chesapeake-Elizabeth Treatment Plant Garden Dedication Ceremony.

3. The Director of Communications attended the SWIFT update and lab tour
4. Communications staff participated in askHRgreen website redesign work for FOG subcommittee

F. Metrics

1. Educational and Outreach Activities: 4
 - a. Fairlawn Elementary School Career and College Day (all students, grades 3-5) – 5/5
 - b. VA Hospital Country Fair (estimated 100 attendees) – 5/17
 - c. Wards Corner Civic League – SWIFT presentation (25 attendees) – 5/15
 - d. Girl Scout Troop (10 girls), Washing Water Activity – 5/21

2. Number of Community Partners: 5
 - a. Department of Veterans Affairs
 - b. Fairlawn Elementary School
 - c. Girl Scouts
 - d. Wards Corner Civic League
 - e. askHRgreen.org

3. Additional Activities Coordinated by Department: 2
 - a. Coordinated outreach materials for Boater Education event
 - b. VEPGA Annual Meeting and SWIFT Pilot Tour – 5/3 – 5/4

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Total Training Hours per Full Time Employee (1) - Current Month	Hours / #FTE	0
M-1.4b	Total Training Hours per Full Time Employee (1) - Cumulative Fiscal Year-to-Date	Hours / #FTE	11
M-5.2	Educational and Outreach Events	Number	4
M-5.3	Number of Community Partners	Number	5

Leila Rice
 Director of Communications

TO: General Manager

FROM: Director of Engineering

SUBJECT: Engineering Monthly Report for May 2017

DATE: June 13, 2017

A. General

1. Capital Improvement Program (CIP) spending for the tenth month of Fiscal Year-2017 was \$8.1 million, while the planned expenditure for the month was estimated at \$9.8 million. CIP spending continues to track below planned estimates. The largest three CIP projects are a total of \$10 million behind planned spending estimates for the fiscal year. A Water Quality Improvement Fund (WQIF) grant reimbursement of \$1.6 million was received for the Virginia Initiative Plant (VIP) Nutrient Reduction Improvements project.
2. The Engineering Department, in conjunction with HDR Engineering, Inc. and MEB General Contractors, highlighted two projects for National Infrastructure Week. This is the fifth annual National Infrastructure Week, held May 15-19. This effort included a week of events, media coverage, education and advocacy efforts designed to elevate infrastructure as a critical issue impacting all Americans. The VIP Nutrient Reduction Improvements project and the Bridge Street Pump Station Replacement project were highlighted. The effort was managed by the Communications Division and a short video was created to highlight HRSD's efforts to address infrastructure issues in the region.
3. On May 31, the Engineering Department held a Consultant Coordination Meeting. The Engineering Department uses numerous consultants to assist with CIP projects so it is important that an open dialogue exists to provide for continuous improvement. Forty individuals attended, all representing firms actively engaged in work with HRSD. The meeting included discussions related to new procedures, processes and lessons learned from a variety of projects underway at HRSD. A question and answer period was also held for the consultants to ask HRSD staff about issues of concern.

B. Asset Management Division

1. Staff efforts continue for the pilot study at the Atlantic Treatment Plant to evaluate data gaps in the Computerized Maintenance Management System (CMMS) and to assess critical assets. The study is now 50 percent

complete. The consultant assisting with the effort has provided typical life expectancy curves for the ten asset classes selected for the pilot. These curves will be used to perform remaining useful life evaluations and replacement planning. This study should be completed later this year.

2. Staff continues to plan for the upcoming implementation of the Asset Management Program (AMP). Recent discussions have focused on change management and how best to integrate the AMP with SWIFT. The upcoming SWIFT Research Center at Nansmond will be a good opportunity to consider ways to better implement asset management concepts for new infrastructure.

C. North Shore and South Shore Design & Construction Divisions

1. Progress continues on construction of the VIP Nutrient Reduction Improvements project. Construction efforts are ongoing and the project is on schedule. The first part of the project (Group 1) involves the nutrient reduction portion of the project. This segment of the project reached substantial completion in March 2017. The second part of the project (Group 2) involves construction of the plant peak flow capacity improvements. Ongoing work includes construction of the Preliminary Treatment Facility, Equalization Basin and Raw Water Influent Pump Station. Electrical improvements and large diameter yard piping installation are also underway as part of this phase. The substantial completion date for this part of the project is July 2018. This is HRSD's largest single CIP project, and work will continue through the end of 2018. The project team is working well together and this effort is an example of good planning and communication. The contractor sponsored a celebration lunch in May to thank the Project Team and acknowledge the individuals who have made significant contributions to the effort. This project is partially funded through a WQIF grant and HRSD should receive \$46 million as part of the cost sharing agreement with the VDEQ.
2. Construction efforts are nearing completion for the 33rd Street Pump Station Replacement project. The replacement pump station was put into service in May and is operating as intended. The salvage and demolition of the existing pump station is proceeding. Restoration of the site and repaving of the adjacent roadway will be completed once the old pump station is demolished. This project has been a challenging effort due to the needed coordination with Newport News Shipbuilding. The project began in 2008 and it took 6 years to complete the design and get the needed property to build the new pump station.

D. Planning & Analysis Division

1. Staff continued their efforts to share information related to the SWIFT Program. Four presentations were made in May highlighting the program goals and status of the work. We continue to receive positive feedback about the program and how it will result in multiple positive outcomes for the region.
2. Staff has recently updated the HRSD Emergency Preparedness and Response Plan. This plan provides staff with information in the case of an emergency and highlights critical “need to know” information in one source. The annual update, found on the Emergency Preparedness tab on the HRSD SharePoint site, includes new point of contact and weather/tidal related information. The update this year also included improvements to the mobile application which will be used as part of any post-storm recovery effort.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 6
 - a. Staff made a SWIFT presentation to Arcadis as part of their “What’s on Your Mind” series on May 9.
 - b. Staff represented HRSD in the filming of a video segment for National Infrastructure Week on the VIP Nutrient Reduction and Bridge Street Pump Station projects on May 11.
 - c. Staff was part of a panel discussion for the “Planning for Sustainable Resource Recovery Programs,” made as part of the VWEA Education Seminar on May 11.
 - d. Staff volunteered at the United Way of the Peninsula Special Project in Hampton, VA on May 17.
 - e. Staff made two presentations at the Old Dominion University Civil and Environmental Engineering Visiting Council seminar entitled, “What Does the Future Hold?” on May 18.
 - f. Staff made a SWIFT presentation as part of a webinar for the Chesapeake Section AWWA/WEF Reuse Committee on May 25.

2. Number of Community Partners: 5
 - a. Arcadis
 - b. VWEA
 - c. United Way of the Peninsula
 - d. Old Dominion University Civil and Environmental Engineering Visiting Council
 - e. Chesapeake Section AWWA/WEF Reuse Committee

3. Number of Research Partners: 0

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Total Training Hours per Full Time Employee (39) - Current Month	Hours / #FTE	3.07
M-1.4b	Total Training Hours per Full Time Employee (39) - Cumulative Fiscal Year-to-Date	Hours / #FTE	39.33
M-5.2	Educational and Outreach Events	Number	6
M-5.3	Number of Community Partners	Number	5
M-5.4	Number of Research Partners	Number	0

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, P.E.

TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for May 2017
DATE: June 14, 2017

A. General

1. The Total Return Strategy, which consists of operating funds that are not expected to be a major source of HRSD's day-to-day disbursement requirements and operational needs and are invested in longer-term securities, have two securities that were downgraded. Moody's and Standard and Poor's (S&P) lowered the credit rating of IBM from AA3 to A1 and AA- to A+, respectively. S&P, Moody's and Fitch lowered the credit rating of the State of Connecticut from AA-/Aa3/AA- to A+/A1/A+, respectively. As required in our Financial Policy, any security that is downgraded below any level of single "A" rating will be sold within 180 days of the downgrading action.
2. At a regional Oracle user's group in May, staff presented two different topics related to how we use our financial management software (ERP). One presentation was on implementing Oracle Hyperion for budget and the other was on payroll.
3. Accrual-based accounting for revenues is tracking on target as water consumption estimates are coming within one percent of budgeted consumption. The regional housing economy continues to improve as Facility Charges exceed budget and are higher compared to this same period last year. Cash-based accounting for expenses is tracking less than budget, but we expect many of these items to be closer to budget on an accrual basis by fiscal year end.
4. The unrestricted Debt Service Reserve Fund was reduced by \$993,920 to \$30,760,330 as the required funding amount declines as senior lien debt is paid off. These funds were transferred to the Capital Fund.

B. Interim Financial Report

1. Operating Budget for the Period Ended May 31, 2017

	Amended Budget	Current YTD	Current YTD as % of Budget (92% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 242,810,000	\$ 223,476,338	92%	93%
Surcharge	1,500,000	1,632,229	109%	98%
Indirect Discharge	2,500,000	2,443,689	98%	95%
Norfolk Sludge	90,000	65,370	73%	61%
Fees	2,843,000	2,631,440	93%	89%
Municipal Assistance	1,250,000	942,281	75%	94%
Miscellaneous	750,000	853,946	114%	77%
Total Operating Revenue	251,743,000	232,045,293	92%	93%
Non Operating Revenues				
Facility Charge	5,850,000	5,982,395	102%	89%
Interest Income	1,400,000	1,108,810	79%	113%
Build America Bond Subsidy	2,400,000	2,361,607	98%	100%
Other	840,000	705,356	84%	94%
Total Non Operating Revenue	10,490,000	10,158,168	97%	95%
Total Revenues	262,233,000	242,203,461	92%	93%
Transfers from Reserves	7,901,331	7,242,887	92%	92%
Total Revenues and Transfers	\$ 270,134,331	\$ 249,446,348	92%	93%
Operating Expenses				
Personal Services	\$ 52,611,153	\$ 48,682,328	93%	90%
Fringe Benefits	24,287,503	22,402,446	92%	86%
Materials & Supplies	7,374,956	6,950,201	94%	115%
Transportation	1,448,541	1,185,491	82%	99%
Utilities	12,286,132	10,354,065	84%	79%
Chemical Purchases	9,360,735	7,031,346	75%	72%
Contractual Services	32,185,100	22,890,695	71%	70%
Major Repairs	9,846,266	6,215,281	63%	50%
Capital Assets	3,252,171	2,303,416	71%	55%
Miscellaneous Expense	2,388,476	2,015,265	84%	66%
Total Operating Expenses	155,041,033	130,030,534	84%	81%
Debt Service and Transfers				
Debt Service	61,832,000	56,662,945	92%	91%
Cost of Issuance Bonds	900,000	3,553	0%	132%
Transfer to CIP	52,101,298	47,759,523	92%	92%
Transfer to Risk management	260,000	238,344	92%	92%
Total Debt Service and Transfers	115,093,298	104,664,365	91%	92%
Total Expenses and Transfers	\$ 270,134,331	\$ 234,694,899	87%	85%

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 May 31, 2017

	General	Risk Management	Reserve	Capital
Beginning of Period - July 1, 2016	\$ 155,644,784	\$ 2,740,508	\$ -	\$ 124,405,496
Add: Current Year Sources of Funds				
Cash Receipts	251,545,186			
Capital Grants				10,041,164
Line of Credit				-
Bond Proceeds (includes interest)				97,253
Transfers In		238,344	31,754,250	48,753,444
Sources of Funds	251,545,186	238,344	31,754,250	58,891,861
Total Funds Available	\$ 407,189,970	\$ 2,978,852	\$ 31,754,250	\$ 183,297,357
Deduct: Current Year Uses of Funds				
Cash Disbursements	190,867,641			110,975,279
Transfers Out	47,997,867		993,920	31,754,250
Uses of Funds	238,865,508	-	993,920	142,729,529
End of Period - May 31, 2017	\$ 168,324,462	\$ 2,978,852	\$ 30,760,330	\$ 40,567,828

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended May 31, 2017

Classification/ Treatment Service Area	Expenditures		Year to Date		Total Expenditures	Outstanding Encumbrances	Available Balance
	Budget	prior to June 30, 2016	FY 2017 Expenditures	Total			
Administration	\$ 40,961,073	\$ 35,489,810	\$ 3,189,767	\$ 38,679,577	\$ 1,127,466	\$ 1,154,030	
Army Base	156,834,000	117,268,663	1,778,443	119,047,106	4,001,079	33,785,815	
Atlantic	91,488,147	37,540,037	3,980,702	41,520,739	8,381,281	41,586,127	
Boat Harbor	86,663,081	33,305,878	6,925,905	40,231,783	9,163,437	37,267,861	
Ches-Eliz	128,367,458	4,781,814	1,203,607	5,985,421	3,038,600	119,343,437	
James River	75,114,256	36,167,539	11,708,566	47,876,105	6,029,449	21,208,702	
Middle Peninsula	38,036,619	5,170,712	609,702	5,780,414	4,523,308	27,732,897	
Nansemond	74,720,570	24,996,903	7,744,574	32,741,477	6,116,830	35,862,263	
VIP	271,381,603	195,724,686	26,972,125	222,696,811	22,383,801	26,300,991	
Williamsburg	11,396,383	7,646,446	692,044	8,338,490	911,842	2,146,051	
York River	45,160,886	30,560,270	7,529,866	38,090,136	2,202,718	4,868,032	
General	235,837,960	141,618,472	15,799,046	157,417,518	49,196,834	29,223,608	
	<u>\$ 1,255,962,036</u>	<u>\$ 670,271,230</u>	<u>\$ 88,134,347</u>	<u>\$ 758,405,577</u>	<u>\$ 117,076,645</u>	<u>\$ 380,479,814</u>	

5. Debt Management Overview

	Debt Outstanding (\$000's)				
	Principal April 2017	Principal Payments	Net Refunding	Principal May 2017	Interest Payments
Fixed Rate					
Senior	\$ 429,165	\$ -	\$ -	\$ 429,165	\$ 3,674
Subordinate	301,384	-	-	301,383	-
Variable Rate					
Subordinate	50,000	-	-	50,000	34
Line of Credit	-	-	-	-	-
Total	<u>\$ 780,549</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 780,548</u>	<u>\$ 3,708</u>

Series 2016 Variable Rate Interest Summary - Variable Rate Debt Benchmark (SIFMA) as of 06/02/17

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	0.92%	0.93%	0.01%
Average	0.20%	0.19%	-0.01%
Minimum	0.01%	0.01%	0.00%
As of 06/02/17	0.76%	0.72%	-0.04%

* Since October 20, 2011 HRSD has averaged 19 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended May 31, 2017

	Current YTD	Policy Minimum
Capital % Cash Funded	40%	15%
General Reserve as % of Operations	109%	75-100%
Risk Management Reserve as % of Projected Claims Costs	25%	25%

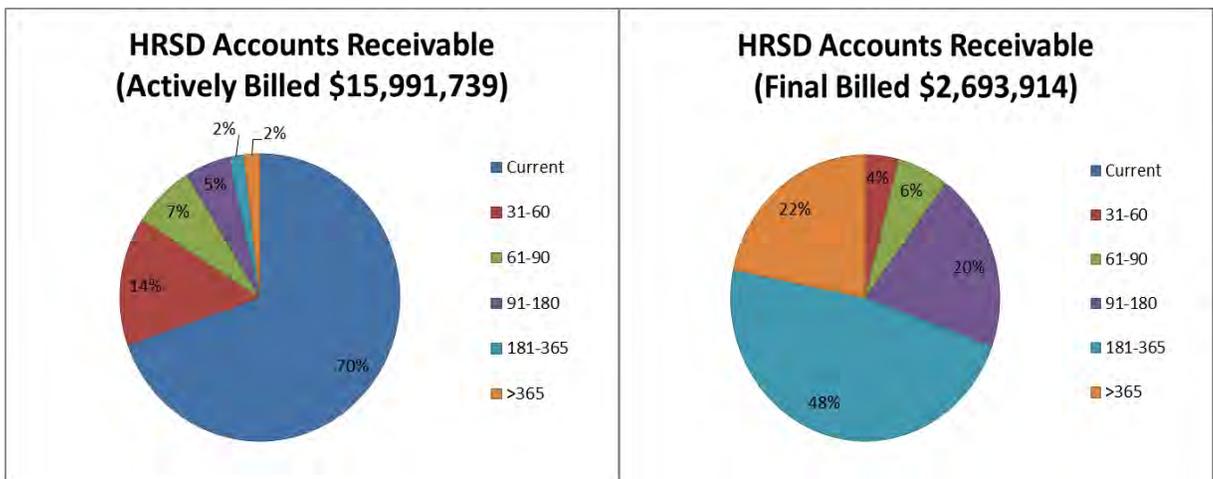
7. Summary of Billed Consumption

Summary of Billed Consumption (ccf)							
Month	Cumulative 3 Year Average	Cumulative 2016 Actual	2017 Cumulative Budget Estimate	2017 Cumulative Actual	% Difference		
					From Budget	From 2016	From 3 Year Average
July	4,902	4,819	4,784	4,776	-0.2%	-0.9%	-2.6%
Aug	9,774	9,783	9,382	9,275	-1.1%	-5.2%	-5.1%
Sept	14,337	14,290	13,595	14,227	4.6%	-0.4%	-0.8%
Oct	19,210	18,976	18,284	19,017	4.0%	0.2%	-1.0%
Nov	23,362	23,486	22,761	23,282	2.3%	-0.9%	-0.3%
Dec	27,733	27,627	26,918	27,761	3.1%	0.5%	0.1%
Jan	31,997	31,844	31,009	32,036	3.3%	0.6%	0.1%
Feb	36,132	35,960	34,750	36,263	4.4%	0.8%	0.4%
March	40,991	40,706	40,257	40,516	0.6%	-0.5%	-1.2%
Apr	45,205	44,834	44,861	44,383	-1.1%	-1.0%	-1.8%
May	49,487	49,022	48,879	48,553	-0.7%	-1.0%	-1.9%
June	54,069	53,503	52,788	-	N/A	N/A	N/A

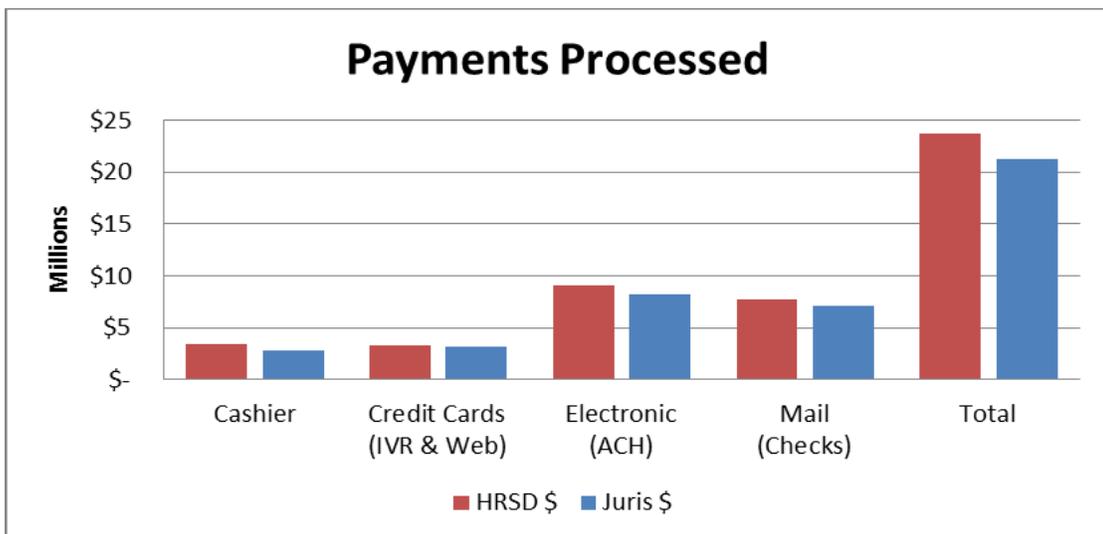
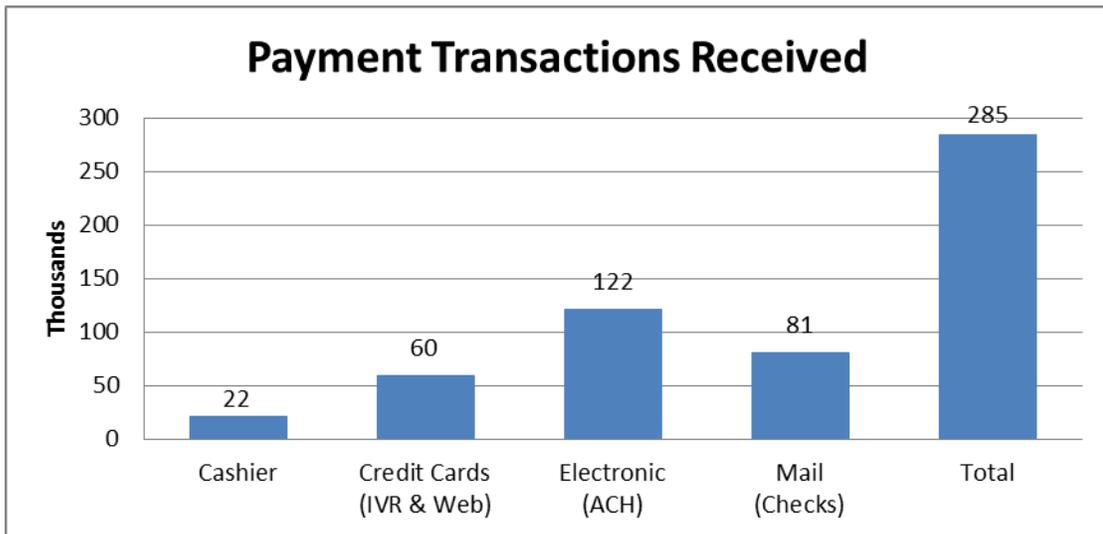
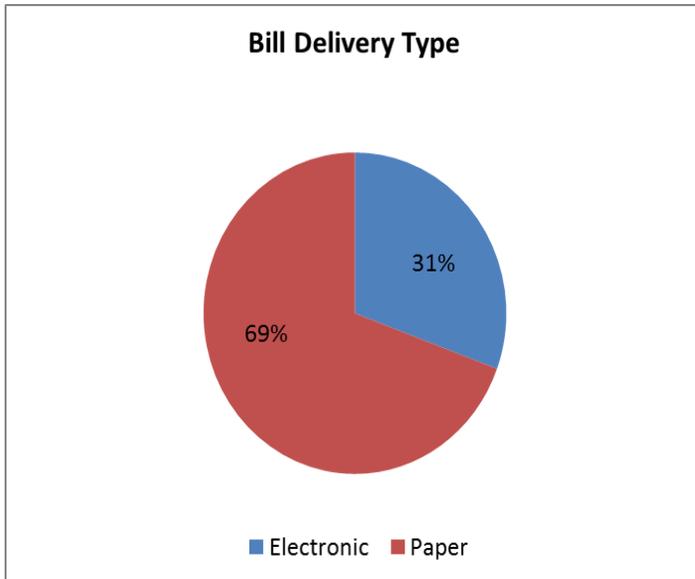
C. Customer Care Center

1. Accounts Receivable Overview

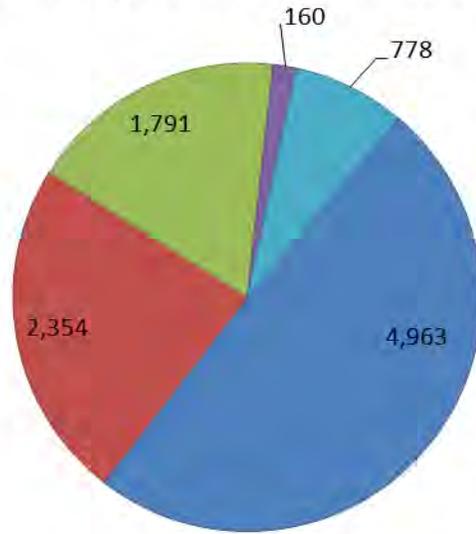
	HRSD	Juris	Total
Roll Forward			
April A/R Balance	\$ 19,864,326	\$ 23,086,008	\$ 42,950,334
Billings	20,631,629	23,463,690	44,095,319
Payments	(24,314,966)	(21,538,382)	(45,853,348)
Delinquency Activity Fees	113,370	-	113,370
Late Payment Charges	66,252	21,997	88,249
Adjustments	2,504,787	(2,595,058)	(90,271)
Balances Written Off	(179,745)	(189,361)	(369,106)
May A/R Balance	\$ 18,685,653	\$ 22,248,894	\$ 40,934,547



2. Customer Care Center Statistics for the Period Ended May 31, 2017

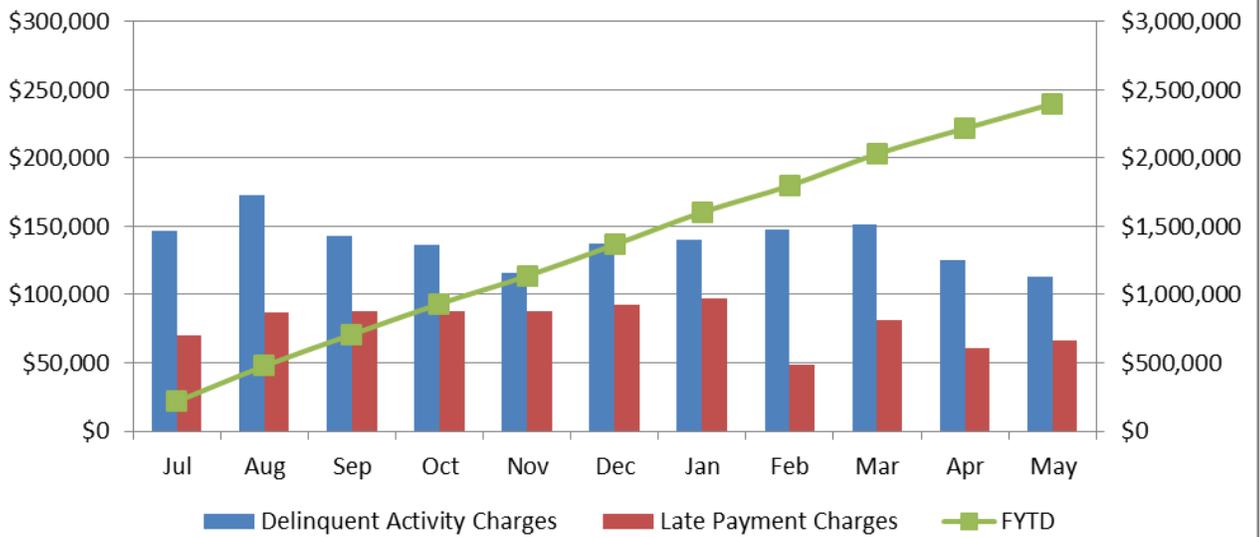


Delinquent Field Activity

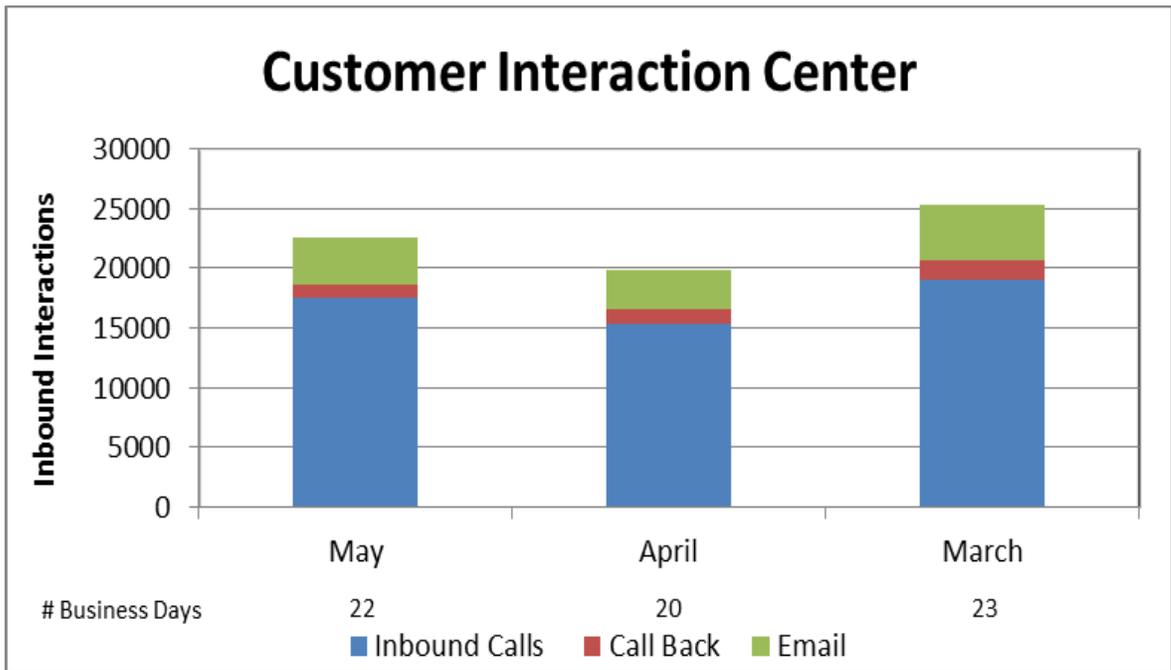


■ Leave Tag
 ■ Cut off
 ■ Turn On
 ■ Lock Meter
 ■ Back Check

Delinquent Fees



■ Delinquent Activity Charges
 ■ Late Payment Charges
 ■ FYTD



Customer Interaction Statistics	May	April	March
Calls Answered within 3 minutes	80%	79%	74%
Average Wait Time	1:37	1:44	2:08
Calls Abandoned	1,441	1,230	1,916

D. Procurement

1. Procurement Statistics

	Current Period	FYTD
Bid Cost Savings	\$ 265,033	\$ 525,379
Negotiated Cost Savings	\$ 11,493	\$ 335,793
Salvage Revenues	\$ 16,868	\$ 41,617
Corporate VISA Card - Estimated Rebate	\$ 19,119	\$ 203,359

Average Cycle Time (Receipt of Requisition to Award)					
Solicitation Types	Award Amounts	Apr-17		May-17	
		No. Days	Count	No. Days	Count
RFQs	< \$10,000	11	13	43	10
	\$10,000 - \$50,000	23	23	43	17
IFBs	\$50,000 - \$100,000	37	6	38	14
IFBs/RFPs	>\$100,000	46	9	50	6

Requisition Volume Comparison			
Requisition Amounts	7/1/2015 - 6/30/2016 Requisitions	7/1/2016 - 5/31/2017 Requisitions	Percent Comparison of Past Year
< \$10,000	260	202	78%
\$10,000 – \$50,000	274	230	84%
\$50,000 – \$100,000	47	63	134%
>\$100,000	78	80	103%
Total	659	575	87%

2. Some of the more formal technical competitive bid solicitations for the month include:
 - a. Mezzanine Removal and Reinstallation for Small Communities Division
 - b. Digester Peripheral Draft Tube Mixer for Atlantic Treatment Plant
 - c. Cross Street Pump Station Rehabilitation for Small Communities Division
 - d. Washington Plant Demolition for the South Shore Interceptors Division
 - e. Coating of Odor Control Piping & Steel Structures at Boat Harbor Treatment Plant
 - f. Protective Coatings for two (2) Contact Tanks and Parshall Flumes at Atlantic Treatment Plant
 - g. Spot Repairs and Coatings on Secondary Clarifiers No. One (1) through Six (6) at Atlantic Treatment Plant
 - h. Matthews Pit Packages Installation for the Small Communities Division

E. Business Intelligence – Enterprise Resource Planning (ERP)

1. ERP Helpdesk currently has 239 open work orders in the following status: 5 escalated, 72 in progress, 15 on hold, 135 open, 12 waiting on user. ERP Helpdesk received 252 work orders in May. In May, 219 work orders were closed and 88 were closed within one hour.
2. ERP staff organized project team and created kickoff meetings for CMMS Purchasing Module’s integration into ERP.
3. ERP staff continues to work with consultants on functionality and improvements to the system.

F. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1
 - a. 2017 Carolinas-Virginia Minority Supplier Development Council (CVMSDC) Supplier Diversity Pro Forum
2. Community Partners: 0

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Training During Work Hours Per Full Time Employee (100) – Current Month	Hours / #FTE	5.54
M-1.4b	Total Training During Work Hours Per Full Time Employee (100) – Cumulative Fiscal Year-to-Date	Hours / #FTE	33.93
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	100%
	General Reserves	Percentage of Operating Budget less Depreciation	109%
	Accounts Receivable (HRSD)	Dollars	\$18,685,380
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	20%

Respectfully,

Jay A. Bernas

Jay A. Bernas, P.E.

Director of Finance

TO: General Manager

FROM: Director of Information Technology (IT)

SUBJECT: Information Technology Department Report for May 2017

DATE: June 14, 2017

A. General

1. Staff continues to work with Customer Care Division to transition the bill print, e-bill, and e-pay operations from our current vendor, to our new service provider, UTILITEC.
2. After the successful test of the new NRCY (Nitrified Recycle) control scheme at the James River Treatment Plant, all tanks have been programmed and are currently being operated in the same manner.
3. IT staff is developing a cyber security readiness and response training program for all employees. Employee awareness is the first line of defense in combatting cyber threats.
4. Several high profile cyber security incidents, impacting millions of computer users around the world, prompted immediate and effective response by staff to protect the integrity of HRSD's network and data.
5. Construction of the Small Communities Division Server and Communications Room (SCR) is nearing completion. The SCR will be professionally cleaned prior to installation of the servers, storage, and networking gear.

B. Strategic Planning Metrics Summary

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

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Training During Work Hours Per Full Time Employee (48) – Current Month	Total Training Hours / # FTE	2.45
M-1.4b	Total Training During Work Hours Per Full Time Employee (48) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	12.73
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 May 2017
DATE: June 15, 2017

A. Highlights

1. Staff from the Chesapeake-Elizabeth Treatment Plant (CETP) celebrated its 50th anniversary. As part of the ceremony, staff dedicated a commemorative garden to those working at the facility until it is shutdown in 2021. Staff was particularly grateful that five HRSD Commissioners attended the event and lunch that followed.
2. Staff assisted the Southeastern Public Service Authority (SPSA) with the disposal of the accumulated leachate at their landfill sight in Suffolk by making available pump stations (PS) across HRSD's south and north shores' service areas. Discharge points on the north shore include a manhole on Terminal Ave outside of Boat Harbor Treatment Plant, the Freeman PS and the Patrick Henry PS. Washington Street PS was made available on South Shore.

B. Interceptor Systems

1. North Shore (NS) Interceptor Systems
 - a. NS Interceptor Systems responded to one sanitary sewer overflow (SSO), two interceptor complaints and 8 system alarms. The vent/stand pipe on the York River Treatment Plant (YRTP) outfall discharged an estimated 50 gallons of non-potable water. The design engineer for this project is currently working on a solution to eliminate this issue. Staff followed up with each of the complaints and alarms and all were fully resolved.
 - b. The department continues assessing the implications of assuming ownership of the Surry County and Town of Surrey sewer systems. Property acquisition and easement transfer activities continued.
 - c. With the warmer temperatures, the off-gassing issues within the Gloucester System returned, necessitating a caustic injection to shock the system and relieve pressures.

- d. The updates and improvements to the Interceptor System Preventative Maintenance Manual were completed.
- e. Staff continues pump and haul operations of the Lawnes Point Treatment Plant.
- f. Staff assisted with the construction activities and startup procedures for the replacement of the 33rd Street PS, including activating and placing the newly constructed PS into service this month.

2. South Shore (SS) Interceptor Systems

- a. On May 15, a vehicle ran over and destroyed the Ingleside Road PS control panel. Staff installed temporary bypass pumping and temporary solar powered alarms to monitor the pumps. Staff is working with an electrical contractor to build, install and test a new control cabinet. The new cabinet should be in place by mid-July.
- b. There was one odor complaint received this month. On May 26, 2017, staff was operating an air vent at the intersection of W. Washington Street and Pitchkettle Road in Suffolk. Subsequent to the operations, a nearby business owner stated that the odor from the venting made him ill. Staff will utilize a mobile carbon unit at this location to prevent off-site odors for future venting operations.
- c. Staff assisted Virginia Initiative Plant (VIP) by removing 6,000 gallons of sludge after a spill.
- d. Staff performed several hot water taps for the heat recovery process at the Atlantic Treatment Plant (ATP).

C. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. Sewage Treatment had four reportable events. Three were non-potable water events resulting from underground leaks. Repairs for these will be complete in June. There was one odor control event, resulting from low chemical feed. Solids handling reported one scrubber pH event.
- b. Since the methanol tank remains out of service and the chemical is not available to assist in the denitrification process, the effluent averaged a phosphorous of 0.72 mg/L and a T-N of 9.19 mg/L. A

consulting firm has been engaged to pursue a permanent above-ground storage tank.

- c. Contractors completed construction of the raw influent pump platforms. Replacement of Aeration Tank #2 concrete column will begin in July.
- d. Staff completed installation and re-connection of Emergency Generator #2 this month and Black Start Training for the emergency generator system was also completed. ABTP has been without an operational second generator since June 23, 2016.
- e. Staff removed a 3X4 plywood board from the Odor B plenum. The board was residual construction debris and was a contributing factor in the failure of the odor control fan noted last month. Staff also found the first tower full of calcium and magnesium salts. Despite aggressive cleaning with muriatic acid, the tower remains plugged. New media is on order.
- f. Two NPW leaks were discovered underground resulting in substantial removal of roadway to effect repairs.

2. ATP

- a. The contractor received Notice to Proceed for the construction of the new administration building. Construction of the new building will take approximately 12 months.
- b. Staff attended Black Start Training for the emergency generators.
- c. Staff met with the Technical Services Division to prepare for upcoming changes to the plant's air permit as a result of the upcoming Thermal Hydrolysis Project (THP). The THP project will add a new steam boiler and remove two old gas fire boilers.

3. Boat Harbor Treatment Plant (BHTP)

- a. An air permit deviation occurred on May 4 when furnace pressures dropped because of a low level of biosolids feeding the incinerator. Staff increased loadings to the furnace to raise the differential pressure.

- b. A deviation occurred on May 10 when a buildup of calcium in the spray nozzles restricted scrubber water flow. An unscheduled burnout was performed, resulting in a second deviation for the average burn zone temperature. Staff replaced the spray nozzles to restore normal water flow rates.
- c. Staff continues to optimize nitrification efforts in order to support the lower James River bubble permit.
- d. Staff brought Furnace #2 back on line until receipt of the official results of Furnace #1 testing.
- e. Contractors are nearing completion of the Aeration and Secondary tank repairs and coatings project. This work has not only extended the life of the assets, but has also greatly improved the on-and-offsite aesthetics of the plant.

4. CETP

- a. On May 13, a power interruption caused a burnout resulting in an air permit deviation when the less-than-minimum average pressure dropped.
- b. From May 13 to May 30, six separate events caused the ID fan to shut down, resulting in the opening of the Bypass Stack.
- c. Staff completed installation and preparation of the Hurricane Trailer for this year's hurricane season.
- d. Staff installed an alternative ferric feed point into the grit tank effluent channel for phosphorus removal.

5. James River Treatment Plant (JRTP)

- a. Staff completed installation of a cylinder screen on the #2 Nitrified Recycle (NRCY) pipeline on Integrated Fixed Film Activated Solids (IFAS) tank #5. The screen will prevent media from flowing through the pipe to the IFAS effluent during conditions where NRCY pumps might be off while the tank is in operation. IFAS tank #5 was returned to service and staff began work on modifying the #2 NRCY pipeline in IFAS tank #6 to create an anaerobic zone at the influent of the tank. Staff will also install a cylinder screen.

- b. Staff continued construction on the digested solids, magnesium hydroxide feed system that will aid with phosphorus removal. Staff completed fabrication of mix tank components and assembled the tank in the dewatering building.
- c. Testing of Ammonia-Based Aeration Control on the IFAS tanks continued in our efforts to optimize the IFAS system. The Distributive Control System (DCS) was also programmed for Ammonia Versus Nitrate (AVN) control of the IFAS tanks. AVN testing began on the IFAS tanks.
- d. On the JRTP Hydraulic Improvement Project, the contractor continued work on converting preaeration tanks #2 and #3 to centrate equalization tanks and installation of centrate feed and discharge piping.

6. Nansemond Treatment Plant (NTP)

- a. On May 5 and 9, there were two separate underground ferric sulfate line breaks, releasing approximately 10 gallons on May 5, and approximately 100 gallons on May 9. Staff excavated the area, and soil containing the ferric mixture was stored in an empty bay at the plant's Regional Residuals Facility until testing and proper disposal can occur. The high rates of ferric added to the secondary clarifiers likely caused the line breaks. As noted below, these high feed rates are not common practice at the NTP. Staff developed a plan to replace all ferric feed lines to prevent future breaks.
- b. Staff continues to focus on the recovery of digester #1. Digester #2 is serving as a holding tank to avoid partial digestion of the solids while attempting to recover digester #1, which creates dewatering challenges. The coatings work on digester #2 remains on hold until digester #1 is returned to service. Because of the status of the digestion process at the plant, the Struvite Recovery Facility (SRF) remains offline, which means the plant is feeding a significant amount of ferric to the plant in order to control phosphorus levels. Digester #1 should return to service by the end of June.
- c. Staff continues to address the high solids concentrations at the Lawnes Point Treatment Plant.

7. VIP

- a. The plant lost power at midnight on May 23, and the emergency generator system failed to start automatically. The operator on duty manually started one of the generators to provide power to the influent and chemical pumps. The pumps were offline for more than 10 minutes resulting in a reportable event for the loss of chlorination and de-chlorination. With the power failure, utilization of the bypass damper resulted in an air permit deviation. Staff discovered a wiring anomaly and immediately made repairs. Plans are underway to implement and test changes to minimize voltage drop in the control circuit.
- b. Two other air permit deviations occurred when the less than 12-hour average limits for the venturi pressure and scrubber flow were not met.
- c. One of three bar screens malfunctioned. Staff discovered that the carriage was broken and rebuilt the carriage. In addition, staff purchased an electric hoist to maneuver the bar screen during high flows or in the event future bar screen malfunctions. During high flows, three bar screens are required to be in service to prevent an overflow. These screens will be replaced as part of the VIP upgrade project in early 2018.
- d. The secondary clarifier # 1 drive malfunctioned and was quickly repaired by a contractor with an existing drive in inventory.

8. Williamsburg Treatment Plant (WBTP)

Staff continued working on the fourth aeration tank to include an anaerobic selector zone. We are expecting to have this modified tank in service by late June.

9. YRTP

- a. A reportable event occurred on May 5 when a power interruption tripped the bisulfite pump, creating a loss of de-chlorination. The operator restored chemical feed by resetting the pump. A review of the Enterprise Data Server record showed that the pump was offline for 1 hour and 9 minutes. To minimize future occurrences, staff modified the pump's programming to alarm if the pump flow rate drops below a pre-determined flow rate for one minute or if the pump motor trips.

- b. Plant and NS staff cleaned significant buildup in the centrate drain system.

D. Small Communities Division (SCD)

1. SC Treatment:

a. West Point Treatment Plant (WPTP)

Design continues on the Tertiary Filter and is progressing with an anticipated construction commission approval of September. The filter will be another substantial improvement to treatment reliability and performance.

b. Urbanna Treatment Plant (UBTP)

The fine bubble diffuser and additional mixer equipment are on order for the plant aeration and anoxic selector upgrade. These are necessary to enhance biological nutrient removal at the plant due to the increased loading from the Bethpage Campground facilities. The equipment installation will occur in November/December of this year after the campground closes down for the season and after completion of the annual Oyster Festival. Materials have begun to arrive for new stairways, handrail, grating, etc. for installation at the plant; new sidewalks have also been installed.

c. Central Middlesex Treatment Plant (CMTP)

The plant continues to perform very well with the UV system upgrades.

2. Operations Center:

a. The new Supervisory Control and Data Acquisition (SCADA) room is progressing with the finalization of HVAC and electrical systems. Generator installation is anticipated in August or September.

b. A mezzanine from the old NS complex will be installed at the SCD in early July.

E. Support Systems

1. Automotive

a. Staff performed generator load bank tests at Center Avenue, Hilton School, Pine Tree, Terminal Avenue and Washington Street Pump

Stations (PSs). All generators operated as designed and were returned to service.

- b. Staff performed generator load bank tests at the NS Operations Center and the SS Main Office Complex. The NS Automotive/Electrical building's generator operated as designed. The generator for the Operations Center at 2389 G Avenue failed due to a faulty electronic control module. Staff programmed and replaced a new control module bringing the generator to full operation. All SS Main Office Complex generators operated as designed.

2. Carpentry Shop

The SS Carpenters began remodeling existing laboratory rooms in the Technical Services Division (TSD) building. The lab rooms will become new testing and process areas for TSD staff.

3. Condition Assessment (Coatings and Concrete)

- a. The SCADA project continues. Staff updated 41 SS PS Visio screen layouts.
- b. Coatings Inspectors (CI) inspected the #1 compost storage pad at the ATP. Four sections were determined to need blasting and recoating. All other sections remain in good condition after 16 years.
- c. Phase III of BHTP's concrete and coating rehabilitation of the aeration and secondary clarifier tank's exterior walls and roof decks has started.
- d. CI performed inspection assessments on gravity thickener #1 and primary tanks #3 and #4 at JRTP.
- e. Rehabilitation of the return effluent grit channel at VIP has concluded. CI performed final inspection. Project is 100 percent complete.
- f. A contractor completed the coating rehabilitation work on the scum concentrator steel tank, waste burner stack, and #1 gravity thickener tank at YRTP. CI performed final walk-throughs and inspections.

4. Facilities Maintenance

- a. Work continues on the Central Environmental Laboratory's (CEL) roof and heating, ventilation and air conditioning (HVAC) upgrade project.

The HVAC portion of the project is at substantial completion stage. Work on the roof replacement is 90 percent complete.

- b. A 5-ton HVAC split system unit was replaced in the Centrifuge Motor Control Center (MCC) Room at JRTP. The unit has been tested and is operating as designed.

5. Machine Shop

The Machine Shop rebuilt the #2 pump at Taussig Boulevard PS and the #1 pump at Norview Avenue PS. The Machine Shop fabricated screw conveyor shafts for ATP, modified drain valve shafts for JRTP, improved the emergency fuel trailer to secure the fuel cube for SS Automotive, began working on a platform for the Operations Challenge team and began work on the overhaul project for the returned activated solids (RAS) pump at Williamsburg Treatment Plant (WBTP).

F. Electrical and Energy Management (EEM)

1. HRSD sponsored the Virginia Energy Purchasing Governmental Association (VEPGA) annual meeting at the NS Operations Building this month with 56 members in attendance. Staff provided a field trip to the Sustainable Water Initiative for Tomorrow (SWIFT) pilot site and provided presentations regarding the SWIFT overview, pilot and research center.
2. Contractors cut a communications fiber to JRTP. This caused a loss of communications to Lee Hall Pressure Reducing Station (PRS), Lucas Creek PS, Normandy Lane PS and Triton Court PS. The SCADA Staff rerouted communication to the NS Operations Building. The normal radio path was restored after the fiber was repaired.
3. Staff provided an electrical contractor plans and specifications for the installation of a significant amount of conduit needed for the installation of new dissolved oxygen (DO) probes for CETP's aeration system. A contractor will install the bulk of conduit and EEM will install equipment and perform control work.
4. Staff programmed and installed Telog boxes for the Surry County Treatment Plant (TP) and PS's. The Telog boxes provide a means to collect remote motor run statuses and alarms and transmit that information over radio frequencies to the appropriate personnel.
5. Staff continues to work on sequential batch reactors (SBR's) for Technical Services Division (TSD). It is an ongoing project which analyzes ammonia,

pH, phosphorous, etc. in the wastewater. The current changes are nearing completion. Carpenters are completing the woodwork to support the equipment. The wiring will be completed shortly thereafter.

6. Electrical and Instrumentation Specialists (EIS's) worked with a contractor to complete thermographic inspections at Army Base Treatment Plant (ABTP) and VIP. The inspections identify anomalous heat signatures in the electrical equipment prior to them becoming a serious electrical problem.

G. Water Technology and Research

Water Technology and Research staff continues to support the design of the SWIFT Research Center (SWIFTRC), culminating in the final design workshop on May 22. This includes input on the design of the main process train, chemical and ozone systems, the aquifer injection system, process controls and automation, monitoring well integration, the laboratory and control room and facilities dedicated to pilot and soil column testing. Several small design modifications remain under scrutiny, but this is the benefit of the design-build process, whereby construction can begin before the final design is complete. Results from the SWIFT pilot facility have been instrumental in guiding the SWIFTRC design, including a solids recirculation system for the flocculation/sedimentation process, ozone dosing and control, final chlorination system design, biofiltration and GAC sizing and design and chemical system sizing. In fact, results from the SWIFT pilot were responsible for many of the recent changes in the design. The SWIFT pilot continues to provide fascinating results with respect to removal of organics and chemicals of emerging concern. This relates directly to GAC reactivation interval, which will be by far the most significant operating cost element for the full-scale SWIFT facilities. In addition to demonstrating aquifer injection and monitoring groundwater quality and head, another very important objective of the SWIFTRC will be optimizing advanced treatment processes, including ozonation, biofiltration, and GAC adsorption, because these unit processes are central to capital and operating costs for the full-scale facilities.

H. Strategic Measurement Data

1. Education and Outreach Events: 14
 - a. EEM staff participated in Career Day, Richneck Elementary School, Newport News
 - b. Charles Bott presented a SWIFT Seminar at Johns Hopkins University

- c. Charles Bott and Chris Wilson provided a SWIFT Tour and Presentation for members of the Virginia Energy Purchasing Governmental Association (VEPGA) – 2
- d. Charles Bott and Stephanie Klaus gave a presentation and workshop on Sidestream deammonification for the New York City Department of Environmental Protection – 2
- e. Charles Bott hosted a tour by Greeley, CO WWTP staff
- f. Charles Bott provided a SWIFT briefing for the WEF/WE&RF LIFT program
- g. Charles Bott and Chris Wilson attended the WEFTEC Program Committee meeting – 2
- h. Charles Bott and Jaime Mitchell provided a SWIFT briefing for Chesapeake Bay Program Trading Workgroup
- i. Staff participated in a United Way Special Project at the VA hospital in Hampton on May 17
- j. CETP Staff provide an HRSD Boater Pump-Out Tour for 9 persons
- k. YRTP tour for two members of the Greeley Colorado operations staff

2. Community Partners: 6

- a. Virginia Institute of Marine Science
- b. Old Dominion University
- c. Chesapeake Bay Foundation – oyster restoration
- d. United Way
- e. Richneck Elementary School, Newport News
- f. Virginia Energy Purchasing Governmental Association

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (507) – Current Month-	Hours / FTE	4.14
M-1.4b	Total Training During Work Hours per FTE (507) – Cumulative Year-to-Date	Hours / FTE	44.33
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	33,452.25
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	42.2

Item #	Strategic Planning Measure	Unit	May 2017
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	24
M-2.3d	Planned Maintenance-Projects	% of Total Maintenance Hours	33.8
M- 4.1a	Energy Use: Treatment *reported for April 2017	kWh/MG	2,360
M-4.1b	Energy Use: Pump Stations *reported for April 2017	kWh/MG	181
M-4.1c	Energy Use: Office Building *reported for April 2017	kWh/MG	103
M-5.2	Educational and Outreach Events	Number	14
M-5.3	Number of Community Partners	Number	6

Respectfully submitted,

Steve de Mik
Director of Operations

TO: General Manager
FROM: Special Assistant for Compliance Assurance
SUBJECT: Monthly Report for May 2017
DATE: June 8, 2017

A. General

HRSD continues implementing the hybrid regionalized approach to the Regional Wet Weather Management Plan (RWWMP) with the next major Consent Decree milestone, the submittal of the RWWMP, scheduled for October 1, 2017.

B. Submittals Completed in May 2017 – No submittals required during this period.

C. Activities

1. **Phase 6 – Rehabilitation Plan.** Work continues on the Rehab Action Plan projects with the next major milestone on May 5, 2018, for Phase 0. Several projects are underway with completions reported in the Semi-Annual Report.
2. **Phase 7 – RWWMP.** Development of the approach to High Priority Project selection was underway along with sequencing and scheduling the RWWMP projects. Meetings on **May 3** and **18** were held to review the criteria and approach to scoring projects to select high-priority RWWMP projects and the preliminary list of selected high-priority RWWMP projects, respectively. This was presented at the May Commission Meeting.

The Technical Coordination Team met on **May 11 and 25** to review overall progress. The HRSD project manager for the Chesapeake-Elizabeth Treatment Plant Closure continues attending monthly coordination meetings as part of an ongoing effort to ensure that closure of this treatment plant is properly modeled and accounted for in the final RWWMP.

3. **Phase 8 – EPA Consent Decree Services.** HRSD continues sharing information with the localities through the regional SharePoint site and flow, pressure and rainfall data portal. The Semi Annual Report was shared with the localities in May.

4. **Phase 9 – Supplemental Services.** At the April 5 monthly compliance program meeting, attendees agreed to move the meeting to a quarterly basis. The next compliance program meeting will be held on July 5 to review overall progress.

Management, Operations and Maintenance (MOM) Program elements are ongoing, including the Hydrogen Sulfide (H₂S) Monitoring Program and implementation of a Business Intelligence (BI) system for the Small Communities Division (SCD). This includes a MOM update manual guidance document for use on the next major update expected in 2018.

The Flow, Pressure and Rainfall (FPR) monitoring program continued in May, with data collection and analysis being performed as part of the MOM Program.

Condition assessment work under Phase II of the Force Main Condition Assessment (FMCA) program progressed in May. Force main inspection work order status is as follows:

- FMP2 035 Hampton Trunk: Draft Work Order under development.
- FMP2 039 Bowers Hill: Final Work Order signed and issued to contractor.
- FMP2 043 Kempsville Road: Final Work Order signed and issued to contractor.
- FMP2 044 Battlefield: Original scope completed, minor follow-up work occurred in early May.

Gravity inspection work order status is as follows:

- GMP2 044 Berkley Trunk Sect SS: Completed in May with the exception of follow up work to inspect 3 pipe segments (SG 202-13703, SG 202-13704, and SG 202-19923) upstream the State Street PS due to surcharged conditions.
- Several work orders have been signed and are scheduled to be completed in June:
 - GMP2 042 NS Siphons 2017
 - GMP2 043 FY17 SS MH Inspection
 - GMP2 053 SS Siphons 2017

Work on the Fiscal Year-2016 Condition Assessment Annual Report continued in May.

D. Next Submittals

RWWMP – Due October 1, 2017

E. Program Budget Status

The overall program budget is **\$131,191,858**, excluding the Master Metering Program. A summary of appropriations and expenses is attached.

F. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1

Attended the WEF Collections Specialty Conference in Omaha, NE May 21 – May 24, 2017. Made a presentation at a workshop and lead discussion on Program Management, moderated a session on Private Property Infiltration and Inflow (I/I) and coordinated a mobile session in the exhibit hall. This conference will be hosted in Virginia Beach April 8-11, 2018 at the Virginia Beach Convention Center. I will be one of three that will be coordinating this conference.

2. Number of Community Partners: 0

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Total Training Hours Per Full Time Employee (1) – Current Month	Total Training Hours / # FTE	28
M-1.4b	Total Training Hours Per Full Time Employee (1) – Cumulative Fiscal Year to Date	Total Training Hours / # FTE	72
M-5.2	Educational and Outreach Events	Number	1
M-5.3	Number of Community Partners	Number	0

Respectfully submitted,

Phil Hubbard, P.E.

Attachments: [Consent Order State & EPA Expenditures](#)

Consent Order State & EPA Expenditures

	Total Appropriation	May 2017 Obligations	Available Balance
Regional Consent Order and Other Consent Order Requirements			
Regional Hydraulic Model	\$104,248,712	\$109,105,156	-\$4,856,444
Manhole Rehab/Replacement Phase I & North Shore Siphon Chamber	\$2,834,000	\$441,822	\$2,392,178
Pump Station Wet Well Rehabilitation Phase I	\$2,890,000	\$413,024	\$2,476,976
Locality System Monitoring and Condition Assessment	\$21,219,146	\$20,462,577	\$756,569
Subtotal - In progress	\$131,191,858	\$130,422,579	\$769,279

Completed Work

Regional Consent Order and Other Consent Order Requirements	(Included in subtotal above)
Master Metering Program III	\$2,005,140
Master Metering Program IV	\$13,628,635
Total	\$146,056,354

TO: General Manager
FROM: Director of Talent Management
SUBJECT: Monthly Report for May 2017
DATE: June 10, 2017

A. Human Resources (HR)

1. Recruitment Summary

New Recruitment Campaigns	4
Job Offers Accepted	
Internal Selections	2
External Selections	12
Internal Applications	10
External Applications	64
Average Days to Fill Position	45

2. Enterprise Resource Planning (ERP)

- a. A new Learning Management catalog was set up for Support Systems. Administrator training was provided to staff for managing training activities.
- b. Benefit setup was completed in preparation for Open Enrollment.

3. Benefits and Compensation

- a. Open enrollment meetings were completed for all work centers. Meetings were streamlined to focus on benefit changes and to address employee questions. Employees had the opportunity to make benefit changes in ERP through the end of May for changes to be processed for the new plan year, beginning July 1st.
- b. Staff worked with HRSD's Benefits Consultant and Finance staff to evaluate options for medical stop loss renewal.
- c. Workers Compensation administrative procedures were streamlined.
- d. The Internal Audit action plan was updated to reflect current status of several items.

4. Wellness

a. Participation Activities

Year 5 Participation Activities	Unit	May 2017 2017	Year to Date (March 2017– February 2018)
Biometric Screenings	Number	0	3
Preventive Health Exams	Number	2	11
Preventive Health Assessments	Number	12	41
Coaching Calls	Number	0	0
On-Line Health Improvement Programs	Number	5	89
Web-MD Online Health Tracking	Number	124	400
Challenges Completed	Number	0	0
Fit-Bit Promotion	Number	14	45

- b. The Hurricane Plan healthy options menu was finalized and sent to the Director of Operations.
- c. An eight-week Boot Camp class continued at the Air Rail complex.
- d. The Wellness Specialist met with a PNC Bank Financial Wellness Manager to review materials for a Financial Wellness presentation.
- e. A health improvement program promoting the American Dietary Association's *National Get Fit Don't Sit* campaign was held.
- f. The Year 4 Wellness Incentive Payout process was completed.

5. Workers Compensation

Four new cases were opened with ten cases remaining active.

6. Employee Relations

- a. Staff continued partnering and meeting with workcenter supervisors and employees to support employee relations and address HR issues. Questions regarding compensation and timekeeping policies were addressed. Input was provided for revision of several job descriptions.

- b. A HR Specialist provided support and participated in Engineering Department's first annual diversity day celebration, an outcome of work center planning day. Activities were inspired by the United Nations' World Day for Cultural Diversity for Dialogue and Development, described as "a day set aside as an opportunity to deepen our understanding of the values of cultural diversity and to learn to live together better."

7. General

- a. Staff began working with IT to develop a plan to address data migration, storage and future access of records for e-Personality software.
- b. The HR Manager met with the Safety Manager, HRSD's insurance broker and a workers compensation carrier to address questions and provide information as part of the renewal process.
- c. Staff attended the following training:
 - (1) Employee Assistant Program (EAP) webinar, *Healthy versus Unhealthy Relationships*
 - (2) HRSD Main Office Emergency Response training
- d. Staff participated in the following:
 - (1) EAP Quarterly Review meeting
 - (2) HRSD Leadership Forum
 - (3) HRSD Security Camera Policy team

B. Organization Development and Training (OD&T)

- 1. The HRSD University team continued developing two e-learning pilot projects: *HR Open Enrollment (Benefits)* and *Introduction to Biological Nutrient Removal (BNR)*. Both modules are in the final review phase.
- 2. The following training programs were held:
 - a. Learning Styles
 - b. Supervisory Training, Week 2
 - c. Introductory and Advanced Coaching
 - d. Emotional Intelligence

3. Preparations were finalized for Learning Week 2017, *Be a Learning Hero*. Several anchor classes will continue to be offered along with new activities such as improvisation, composting, assertive communication and wellness.
4. The OD&T Manager assisted with the following:
 - a. Planning a *Strengths Finder* workshop for South Shore Operations Leadership
 - b. Developing a HRSD project management class in collaboration with employees holding Project Management certifications
 - c. Work with Army Base TP to pilot EAP's *Emotional Intelligence* training
5. Apprenticeship Program
 - a. The Training Superintendent continued work on the following curriculums: *Wastewater Analysis, Wastewater Laboratory, Incineration, Disinfection and Collection System Maintenance*.
 - b. Staff distributed finalized Virginia Department of Professional and Occupational Regulation revisions related to Wastewater Operator requirements.
 - c. The Apprenticeship policy for delaying program entry was updated.
 - d. Year-end activities were completed including 4th Quarter Honor Roll.
6. Staff attended the following training:
 - a. Association of Training and Development's (ATD) *Innovating Leadership Development Strategy*
 - b. ATD International Conference and Exposition
 - c. *Positive Psychology and Intensive Group Coaching* by Mentor Coach

C. Safety

1. Mishaps and Work Related Injuries

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

	<u>2016</u>	<u>2017</u>
Mishaps	42	15
Lost Time Mishaps	8	3
<i>Numbers subject to change pending HR review of each case.</i>		

b. MOM Program Year Performance Measure Work Related Injuries

May 2017 Injuries For Operations	May 2017 Injuries for Other HRSD Departments	Total Lost Time Injuries Since July 2016	Total HRSD Injuries Since July 2016
4	0	6	36

c. A follow-up investigation was performed on four work-related injuries and two auto accidents.

2. HRSD Safety Training

Strategic Planning Measure	Unit	May 2017
Total Safety Training Hours per Full Time Employee (814) All HRSD – May 2017	745.75 Hours / 814 FTE	0.91
Total Safety Training Hours Per Full Time Employee (814) – Cumulative July 2016	4528.18 Hours / 814 FTE	5.56

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

- a. Six external briefings for contractors working at HRSD treatment plants and pump stations
- b. Updated Respiratory Protection Program training at work centers:
 - (1) Main Office

- (2) North Shore Operations
 - c. Confined Space, Fire Safety, CPR, First Aid, and Virginia Department of Transportation Flagging training for P3 employees
 - d. A Decision Driver training class for Laboratory Couriers and Customer Care Account Investigators
 - e. Initiated Electrical Safety Program training for Operations work centers
 - f. Two Methanol Safety training sessions for VIP employees
 - g. Main Office Emergency Response training
 - h. Safety Orientation for Marina Interns
 - i. Confined Space training for Water Quality employees
 - j. Chainsaw Safety training for North Shore Electrical and Energy Management employees
4. Safety Inspections, Testing and Monitoring
- a. Weekly on-site inspections of the following construction sites:
 - (1) Virginia Initiative Plant (VIP)
 - (2) 33rd Street Pump Station
 - (3) James River TP
 - (4) Nansemond TP SWIFT Demonstration Project
 - b. Quarterly safety inspections of the following work centers:
 - (1) Air Rail Avenue Complex
 - (2) Central Environmental Lab
 - (3) James River TP
 - (4) North Shore Pump Stations
 - (5) South Shore Pump Stations
 - (6) South Shore P3
 - (7) Technical Services
 - (8) VIP
 - (9) York River TP

- c. Monitoring and testing for the following:
 - (1) Monthly Central Environmental Lab and Technical Services Lab hood velocity tests
 - (2) Evaluated a hypochlorite sensor and chlorine generator at Williamsburg TP
 - (3) Air sampling during leachate deliveries at Freeman Drive, Washington and Terminal Avenue pump stations
- d. Conducted the following safety walk-throughs or evaluations:
 - (1) Escorted City of Norfolk's Fire Department staff and VIP Contractor on a plant tour in preparation for methanol use
 - (2) Escorted City of Newport News' Fire Marshall on a Boat Harbor TP inspection
 - (3) Conducted an asbestos survey of a property in Gloucester

5. Safety Programs

- a. Staff coordinated respirator physicals for Operations employees.
- b. Industrial Hygienist completed a presentation summarizing employee survey results to evaluate a Prescription Safety Glasses program.
- c. Staff updated procedures and developed a presentation outlining issues related to Treatment Plant Chemical Deliveries for the Operations QST.
- d. The Safety Coordinator continued maintaining Operation's Safety Accident Tracking report.

6. General

- a. Staff reviewed and provided comments on HRSDs Hurricane Plan and updated Hurricane Locker checklists.
- b. The Safety Manager met with a property insurance carrier representatives to provide information as part of the renewal process.
- c. Safety staff participated in the following HRSD activities:
 - (1) 100% Design Review for the SWIFT Demonstration project
 - (2) HRSD Security Camera Policy team

- d. Staff attended Virginia Department of Transportation’s Work Zone training.
- e. The HRSD Safety Team met to address the following:
 - (1) National Safety Awareness Month safety innovation recognition
 - (2) Safety Shoe Guidelines

D. Monthly Strategic Planning Metrics Summary

- 1. Education and Outreach Events: (2)
 - a. Hampton Roads Public Works Academy (HRPWA) summer internship interviews
 - b. Virginia Employment Commission (VEC) Roundtable, *Managing Employment Relationships*
- 2. Community Partners: (2)
 - a. HRPWA
 - b. VEC

Item #	Strategic Planning Measure	Unit	May 2017
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.26
M-1.1b	Employee Turnover due to Service Retirements	Percentage	0.26
M-1.4a	Total Training Hours Per Full Time Employee (15) – Current Month	Total Training Hours/ FTE	3.67
M-1.4b	Total Training Hours Per FTE (15) Cumulative Fiscal Year-to-Date	Total Training Hours/ FTE	42.94
M-5.2	Educational and Outreach Events	Number	2
M-5.3	Community Partners	Number	2

Respectfully submitted,
Paula A. Hogg
 Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for May 2017
DATE: June 15, 2017

A. General

1. Pretreatment and Pollution Prevention (P3) division staff assessed two civil penalties this month.

Catalina Cylinders, Incorporated – Hampton

An Enforcement Order was issued to Catalina Cylinders, Incorporated in April 2017 for exceedances of their permit limit for Zinc that occurred in October and December 2016, and January 2017. The Order contained an invoice totaling \$5,000 in Civil Penalties. The facility is currently under an Administrative Order for Zinc while they investigate the issue and come back into compliance. The Enforcement Order was accepted and the Civil Penalty was paid in May 2017.

Continental Automotive Systems, Incorporated – Newport News

An Enforcement Order was issued to Continental Automotive Systems, Incorporated in March 2017 for COD:BOD ratio permit exceedance that occurred in October 2016. The Order contained an invoice totaling \$500 in Civil Penalties. The violation has been addressed and corrective actions have been put into place. The Enforcement Order was accepted and the Civil Penalty was paid in May 2017.

2. The Director participated in a one-day symposium sponsored by Mathematica Policy Research and titled “The Potential of Wastewater Testing for Public Health and Safety” in Washington, DC on behalf of HRSD and the National Association of Clean Water Agencies. The symposium’s goals were to raise awareness of wastewater testing’s capacity to inform public health and safety investigations specific to the knowledge, data sources, coordination, and decision making regarding the opioid crisis and the use of other drugs. The long-term goal will be to explore how the use of wastewater testing to monitor public health could empower local, state and federal officials to begin identifying drug threats before they proliferate and effectively deploy resources. Representatives from Europe and Australia shared their experiences with wastewater

measurements; however it was not demonstrated that this approach quantitatively either reduced risk or improved the overall health of a population. To be effective, this approach will require that wastewater treatment facilities partner with local health officials to reliably identify populations with unacceptable risk. A pilot study consisting of monitoring, followed by application of targeted resources to directly address risk and health is needed here in the United States. State and federal health officials will consider such an approach as they develop a strategy to address this challenge.

3. The Central Environmental Laboratory (CEL) and Technical Services Division (TSD) are participating in the latest round of Sustainable Water Initiative For Tomorrow (SWIFT) updates available for all HRSD employees. The General Manager is providing a project update and CEL and TSD staff is providing tours of Water Quality Department facilities actively supporting SWIFT.

B. Quality Improvement and Strategic Activities

1. The Sustainability Advocacy Group (SAG) sent out a survey to all of HRSD for the Material Reuse Challenge in April and May. The first place winner was Bob Jones from the James River Treatment Plant who created “Gear Bookends” made from structural steel beam and worn out ring gears. The second place winner was the Information Technology Team consisting of Rosemary Benesh, Coleen Cataulin, Jacquie Harrison, Roger Nichols and Amy Seron who created “Lucidity”; a creative lamp made from used CDs, highlighters and an LED light. It was a great challenge and the SAG is working on creating new challenges to recognize work centers relative to sustainable practices.

The SAG is also working on developing recommendations to update the Environmental Impact focus of HRSD’s strategic and business plans.

2. The TSD Technology Team is evaluating the ESRI ArcGIS Data Collector application to see if this will aid in field data capture needs. Availability and support of this software is internal to HRSD. A pilot project has been identified and an effort to develop project needs is underway. Discovery kickoff meetings are planned for late June and July.
3. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department.

C. Municipal Assistance

HRSD provided sampling and analytical services to Bedford County and the City of Fredericksburg to support their respective Virginia Pollution Discharge Elimination System (VPDES) permit application processes.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 1

- a. TSD staff, in collaboration with Operations, provided a SWIFT briefing and tour of the pilot facility to a local chapter of Virginia Master Naturalists.

2. Community Partners: 9

- a. City of Norfolk
- b. City of Newport News
- c. Virginia Department of Health Division of Shellfish Sanitation
- d. City of Suffolk
- e. Virginia Department of Environmental Quality
- f. City of Chesapeake
- g. Elizabeth River Project
- h. Hampton Roads Planning District Commission (HRPDC)
- i. Virginia Department of Health Office of Epidemiology

3. IWD Related System Issues: 1

North Shore Interceptors notified P3 staff of a paint thinner odor at the North Avenue pump station. P3 responded, but the odor was no longer present when staff arrived. Surrounding manholes were checked as a precaution, but no source was located. This area is a mixture of residential and commercial.

Item #	Strategic Planning Measure	Unit	May 2017
M-1.4a	Training During Work Hours Per Full Time Employee (105) (Current Month)	Total Hours / # FTE	8.42
M-1.4b	Total Training During Work Hours Per Full Time Employee (105) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	60.02
M-2.5	North Shore/South Shore Capacity Related Overflows	# within Level of Service	0

Item #	Strategic Planning Measure	Unit	May 2017
M-3.1	Permit Compliance	# of Exceedances: # of Permitted Parameters	7:48,800
M-3.2	Odor Complaints	#	0
M-3.4	Pollutant Removal	Total Pounds Removed	175,394,642
M-3.5	Pollutant Discharge	% Pounds Discharged/Pounds Permitted	22%
M-5.2	Educational and Outreach Events	#	1
M-5.3	Community Partners	#	9
	Average Daily Flow	Total MGD for all Treatment Plants	159.03
	Industrial Waste Related System Issues	#	1

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



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

I. Projects in Process

Procurement/ ProCard Process Review

- **Tasks Completed (May 2017)**
 - Finalized flowchart/ risk and control documentation
 - Completed fieldwork testing steps
 - Documented observations noted
 - Drafted final project report
 - Discussed and confirmed preliminary observations with process stakeholders

- **Upcoming Tasks (June 2017)**
 - Deliver final draft report to management
 - Obtain and review management action plan responses to recommendations
 - Finalize report for distribution to HRSD Commission

Engineering Procurement Process Review

- **Tasks Completed (May 2017)**
 - Communicated audit notification and initial document requests to process owners
 - Conducted kick-off meeting to discuss audit, preliminary objectives, and next steps
 - Began to review documentation as received

- **Upcoming Tasks (June 2017)**
 - Review process documentation as received
 - Schedule meetings on-site to begin project walkthrough discussions
 - Document process flowcharts and prepare risk and control matrix
 - Finalize project objectives
 - Draft audit work program and request testing documentation

****Engagement Notes/ Delays***

SC&H has noted delays in the receipt of documentation review responses and audit information requests in the performance of the Procurement/ P-Card Process review that were the result of timing and availability constraints for process owners. These delays have not been significant and SC&H is continuing to work with the team to move this project forward.



II. Upcoming Projects (FY2018)

The following projects are scheduled to be performed during FY2018 based upon the risk assessment previously performed by SC&H.

- Q1- IT: Network Security/ Cybersecurity
- Q2- Corporate Governance: Ethics Function
- Q2- Risk Assessment: Year 3 Refresh
- Q3- Operations: Treatment Plants
- Q4- Finance and Accounting: Customer Care (Billing, Mail Center & Payments, A/R & Delinquent Accounts)

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 and upcoming monitoring timeframes.

Design and Construction: CIP Project Management Review MAP Status

- Audit Report Date: May 11, 2016
- Total Recommendations: 13
- Recommendations Closed: 9 (Pending review and validation)
- Recommendations Open: 4 (Anticipated to be closed by December 2017)

Upcoming MAP Monitoring

- Biosolids
 - Report Date: October 8, 2016
 - Anticipated MAP Follow-up: October 2017
- HR Administration of Employee Health Insurance
 - Report Date: November 22, 2016
 - Anticipated MAP Follow-up: December 2017
- Inventory Management
 - Report Date: April 20, 2017
 - Anticipated MAP Follow-up: April 2018

Annual Metrics

Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	69.57%	71.43%	64.00%	69.00%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56
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
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
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
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
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%
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
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45
M-3.6	Alternate Energy	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096
M-4.1a	Energy Use: Treatment	kWh/MG Monthly Avg			2,473	2,571	2,229	2,189	2,176	2,205
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97
M-4.2	R&D Budget	Percentage of Total Revenue	> 0.5%		1.0%	1.4%	1.0%	1.3%	1.0%	0.8%
M-4.3	Total Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow		\$1,028	\$1,095	\$1,174	\$1,232	\$1,249	\$1,279	\$1,246
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%
M-4.5	Total Operating Cost/MGD	Total Operating Expense/ 365/5-Year Average Daily Flow		\$2,741	\$2,970	\$3,262	\$3,316	\$3,305	\$3,526	\$3,434
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%
	Senior Debt Coverage	Net Revenue/Senior Annual Debt Service	> 1.5	2.51%	2.30%	2.07%	1.88%	1.72%	1.90%	2.56%
	Total Debt Coverage	Net Revenue/Total Annual Debt	>1.4	1.67%	1.67%	1.46%	1.45%	1.32%	1.46%	1.77%

Monthly Updated Metrics

Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	Apr-17	May-17
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	149.8	159.0
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	0	1
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	101%	100%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	106%	109%
	Accounts Receivable (HRSD)	Dollars (Monthly Avg)			\$ 17,013,784	\$ 17,359,488	\$ 18,795,475	\$ 20,524,316	\$ 20,758,439	\$ 22,444,273	\$19,864,326	\$18,685,380
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	20%	20%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	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	7:44363	7:48800
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	2	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	160,710,481	175,394,642
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	23%	22%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	45	39
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	39	28

EFFLUENT SUMMARY FOR MAY 2017

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	9.52	53%	1	2.2	2	<1	0.72	0.66	9.2	6.1	NA	NA	15
ATLANTIC	29.89	55%	11	5.3	7	2	NA	NA	NA	NA	NA	NA	4
BOAT HARBOR	13.00	52%	5	6.0	1	1	0.61	0.38	13	13	NA	NA	2
CENT. MIDDLESEX	0.012	47%	<2	<1.0	<1	1	NA	NA	NA	NA	NA	NA	NA
CHES-ELIZ	19.41	81%	19	19	42	5	1.6	1.1	32	31	NA	NA	6
JAMES RIVER	12.72	64%	3	2.9	1	1	0.29	0.55	9.4	10	NA	NA	3
KING WILLIAM	0.044	44%	<2	<1.0	NA	<1	0.03	0.03	0.48	1.1	0.40	NA	NA
NANSEMOND	19.25	64%	9	5.8	2	2	1.3	0.88	6.3	7.5	NA	NA	13
URBANNA	0.061	61%	2	6.2	2	2	4.8	4.7	14	23	NA	0.20	NA
VIP	33.26	83%	2	3.5	5	2	0.62	0.68	5.6	8.1	NA	NA	6
WEST POINT	0.564	94%	15	15	6	8	2.4	2.7	14	16	NA	6.3	0
WILLIAMSBURG	7.90	35%	2	2.4	5	1	0.50	0.41	4.1	4.8	NA	NA	5
YORK RIVER	13.40	89%	1	1.6	1	<1	0.25	0.26	1.8	2.2	NA	NA	7
	<u>159.03</u>		<u>6</u>	<u>6</u>									

	% of Capacity
North Shore	57%
South Shore	67%
Mid Peninsula	80%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY17	YTD	Projection	CY17
	%	Lbs	%	%	Lbs	%
James River	38%	4,068,346	89%	32%	267,315	84%
York River	17%	199,704	69%	31%	15,358	80%
Rappahannock	94%	NA	NA	291%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY17 to Date: 7:48,800
Pounds of Pollutants Removed in FY17 to Date: 175,394,642
Pollutant Lbs Discharged/Permitted Discharge FY17 to Date: 22%

	Rainfall (inch)		
	North Shore (PHF)	South Shore (ORF)	Small Communities (FYJ)
	Month	5.32"	8.56"
Normal for Month	4.02"	4.08"	4.26"
Year to Date Total	19.75"	21.82"	20.03"
Normal for YTD	18.15"	16.26"	17.94"

AIR EMISSIONS SUMMARY FOR MAY 2017

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	BZ Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave (F)	12 hr ave (in. WC)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	pH 3 hr ave	Bypass Stack Use	Mo. Ave (PPM)	DC (%)	Daily Ave Days >Max
ARMY BASE	0	0	0	0	0	0	1	0	30	100	0
BOAT HARBOR	1	1	0	n/a	0	1	0	0	50	96	0
CHES-ELIZ	1	1	0	0	0	0	0	6	39	97	0
VIP	0	1	0	n/a	1	0	0	1	54	98	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	0	9	100	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	1	No. of Permit Deviations/Possible No. of Permit Deviations (5/17) = 15/3069
DEQ Request for Corrective Action (RCA):	0	No. Permit Deviations/No. Possible Permit Deviations (CY17 to date) = 52/14,867
DEQ Notice of Violation (NOV):	0	Total Time on Bypass/Total Time Operating (5/17) = 3.9 hrs/3393 hrs Total Time on Bypass/Total Time Operating (CY17 to date) = 11.25 hrs/16,500 hrs
Other Air Permit Deviations:	0	Dry Tons Solids Processed (5/17) = 2825
Odor Complaints Received:	0	Total Dry Tons Solids Processed (CY17 to date) = 12,283 Monthly average Dry Ton per Day (DTD) per MHI unit = 18.4
Odor Scrubber HRSD Exceptions:	1	

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1.0 PURPOSE AND NEED

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

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

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

HRSD recognizes that one of the keys to sound financial management is the development of formal financial policy. This sentiment is echoed by bond rating agencies, investors and the Government Finance Officers Association.

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

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

2.0 DEFINITIONS

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

2.2 Arbitrage. The simultaneous purchase and sale of an asset in order to profit from a difference in the price. It is a trade that profits by exploiting price differences of identical or similar financial instruments in different markets or in different forms. For the purposes of this Policy, Arbitrage refers to the difference between the interest paid on the tax-exempt securities and the interest earned by investing the security proceeds in higher-yielding taxable securities. The IRS Code governs arbitrage on the proceeds from issuance of tax-exempt municipal securities.

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- 2.3 Asset Allocation.** An investment strategy that attempts to balance risk versus reward by adjusting the percentage of each asset in an investment portfolio according to the investor's risk tolerance, goals and investment time frame.
- 2.4 Balloon Maturity.** A maturity within an issue of bonds, which contains twenty-five percent (25%) or more of the principal amount of the original issue.
- 2.5 Bankers' Acceptance.** A draft or bill or exchange accepted by a bank or trust company. The accepting institution guarantees payment of the bill, as well as the issuer.
- 2.6 Basis Swap.** An agreement between two parties to exchange interest payments based on different variable-rate indices, e.g. SIFMA vs. LIBOR; a floating-to-floating swap.
- 2.7 Benchmark.** A comparative base for measuring the performance or risk tolerance of an investment portfolio. A benchmark should represent a close correlation to the level of risk and the average duration of the portfolio's investments.
- 2.8 Bond Anticipation Notes.** Notes which are generally repaid from the proceeds of the issuance of long-term indebtedness.
- 2.9 Broker.** Brings buyers and sellers together for a commission.
- 2.10 Bullet Maturity.** A maturity within an issue of bonds for which there are no principal and/or sinking fund payments prior to the stated maturity date.
- 2.11 Call Provisions.** The term of a bond giving the issuer the right to redeem all or a portion of such bond prior to its stated date of maturity at a specific price, usually at or above par.
- 2.12 Capital Appreciation Bonds.** A municipal security on which the investment return on an initial principal amount is reinvested at a stated compounded rate until maturity. At maturity the investor receives a single payment (the "maturity value") representing both the initial principal amount and the total investment return.
- 2.13 Capital Asset.** A unit of property purchased by, constructed by or donated to HRSD that: (1) was acquired or produced and has a value of \$5,000 or more; and (2) has an economic useful life of a minimum of 60 months. Capital Assets must be capitalized and depreciated for financial statement purposes. Assets constructed and paid by HRSD that improve the performance of the Wastewater System and subsequently transferred to a Locality constitute Locality Assets and will not be capitalized by HRSD for any purpose.

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- 2.14 Capital Improvement Program (CIP).** The CIP is HRSD's planned program of capital projects (greater than \$100,000), such as property, plant and equipment and related engineering, legal and construction services, and may consist of Capital Assets and Locality Assets.
- 2.15 Capitalized Interest.** A portion of the proceeds of a bond issue which is set aside to pay interest on one or more bond issues for a specific period of time. Interest is commonly capitalized for the construction period of the project.
- 2.16 Certificate of Deposit (CD).** A time deposit with a specific maturity evidenced by a Certificate. Large-denomination CDs are typically negotiable.
- 2.17 IRS Code.** The Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.
- 2.18 Collateral.** Securities, evidence of deposit or other property, which a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.
- 2.19 Commercial Paper (CP).** Short-term, unsecured promissory notes issued by corporations or governments to finance receivables for a maturity specified by the purchaser that ranges from three days to 270 days. Notes are generally sold at a discount, and carry credit ratings issued by an NRSRO.
- 2.20 Competitive Sale.** A sale/auction of securities by an issuer in which underwriters or syndicates of underwriters submit sealed bids to purchase the securities.
- 2.21 Constant Maturity Swap.** An interest rate swap that is predicated upon the shape of the forward implied yield curve whereby counterparties exchange interest rate payments based on an anticipated future interest rate and a variable swap index rate. The interest rate on one leg of the swap is reset periodically but with reference to a market swap rate rather than an index such as LIBOR. The other leg of the swap is generally a market index, such as LIBOR.
- 2.22 Continuing Disclosure.** The principle that accurate and complete information material to a transaction or HRSD, which potential investors would likely consider material in making investment decisions with respect to the securities be made available on an ongoing basis. Pursuant to Rule 15c2-12 promulgated by the SEC, underwriters of HRSD's bonds are obligated to obtain a Continuing Disclosure Agreement (CDA) from HRSD prior to underwriting such bonds.
- 2.23 Corporate Notes.** Unsecured promissory notes issued by corporations to raise capital for a maturity that is longer than 270 days. Notes are generally sold at a discount, and carry credit ratings issued by an NRSRO.

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- 2.24 Credit Enhancement.** Credit support purchased by the issuer to raise the credit rating of a debt issue. The most common credit enhancements consist of bond insurance, direct or standby letters of credit, and lines of credit.
- 2.25 Credit Support Annex.** A legal document which regulates credit support (collateral) for derivative transactions.
- 2.26 Days Cash on Hand.** Measured by current and non-current cash and investments, plus any restricted cash and investments, if available for general system purposes, divided by operating and maintenance expenses less depreciation, divided by 365. This calculation will exclude accrued debt service for the next fiscal year and all funds in the Risk Reserve and Renewal and Replacement Reserve.
- 2.27 Dealer.** Acts as a principal in all transactions, buying and selling for his own account.
- 2.28 Debenture.** A bond secured only by the general credit of the issuer.
- 2.29 Debt Service Coverage Ratio – GAAP.** Calculated in accordance with HRSD's Senior Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets are considered an expense. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).
- 2.30 Debt Service Coverage Ratio - Adjusted.** Calculated in accordance with HRSD's Subordinate Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets may be excluded from the calculation of Net Revenues under the circumstances described within the definitions of Net Revenues and Operating Expenses. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).
- 2.31 Debt Service Reserve Fund.** The fund in which moneys are placed that may be used to pay debt service if revenues available for debt service and Credit Enhancements, if applicable, are insufficient to pay debt service on HRSD's bonds secured by a Debt Service Reserve Fund as it becomes due and payable.
- 2.32 Deep Discount Bonds.** Bonds which are priced for sale at a substantial discount from their face or par value.
- 2.33 Delivery versus Payment.** Delivery of securities with an exchange of money for the securities. (See also Delivery versus Receipt)

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

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

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- 2.53 Letters of Credit.** A bank credit facility wherein the bank agrees to lend a specified amount of funds for a limited term. Letters of Credit may be used as Credit Enhancement for HRSD's indebtedness.
- 2.54 Line of Credit.** A bank facility wherein the bank permits the borrower to access funds at any time, subject to a maximum loan balance.
- 2.55 Liquidity.** The ability of ease with which an asset can be converted into cash without a substantial loss of value.
- 2.56 Liquidity Facility.** A type of bank credit facility wherein the bank agrees to purchase securities, typically variable rate debt, that cannot be immediately remarketed to investors. The Liquidity Facility provider purchases the securities until such time as they can be remarketed.
- 2.57 Locality Assets.** Assets constructed and paid for by HRSD and subsequently transferred to a locality. A Commission Resolution is required to exclude these costs from the calculation of the Operating Expenses for purposes of the calculation of the Debt Service Coverage Ratio – Adjusted.
- 2.58 London InterBank Offered Rate (LIBOR).** LIBOR is the rate on U.S. dollar denominated deposits with maturities from one day to 12 months transacted between banks in London. LIBOR is generally the benchmark floating index in the taxable or corporate swap market.
- 2.59 Management Fee.** The fixed percentage of the gross spread which is paid to the senior managing underwriter for the structuring phase of a bond issue.
- 2.60 Market Value.** The price at which a security is trading and could presumably be purchased or sold.
- 2.61 Master Repurchase Agreement.** A written contract covering all future transactions between the parties to repurchase—reverse repurchase agreements that establishes each party's rights in the transactions. A master agreement will often specify, among other things, the right of the buyer-lender to liquidate the underlying securities in the event of default by the seller borrower.
- 2.62 Maturity.** The date upon which the principal or stated value of an investment becomes due and payable.
- 2.63 Members.** Underwriters in a syndicate other than the senior underwriter.
- 2.64 Moody's.** Moody's Investors Service, Inc. is a NRSRO.

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- 2.65 Nationally Recognized Statistical Rating Organization (NRSRO).** A credit rating agency which issues credit ratings that the SEC permits other financial firms to use for certain regulatory purposes. Examples include Moody's and S&P.
- 2.66 Negotiated Sale.** A method of sale in which the issuer chooses an underwriter to negotiate terms pursuant to which such underwriter will purchase and market the bonds.
- 2.67 Net Revenues.** All revenues received by HRSD less Operating Expenses.
- 2.68 Nominal Interest Rate.** The interest rate before taking inflation into account. Generally, it is the stated or quoted rate in a loan or deposit agreement.
- 2.69 Normal Cost.** The annual current cost of a member's future retirement benefit.
- 2.70 Operating Expenses.** As defined by the Enabling Act and as used in the Senior Trust Agreement, operating expenses includes the cost of maintaining, repairing and operating such system or systems or sewer improvements and to provide such reserves therefor as may be provided in the resolution providing for the issuance or such revenue bonds or in the trust agreement securing the same. As defined in the Subordinate Trust Agreement, Operating Expenses includes those expenses required to pay the cost of maintaining, repairing and operating the Wastewater System, including, but not limited to, reasonable and necessary usual expenses of administration, operation, maintenance and repair, costs for billing and collecting the rates, fees and other charges for the use of or the services furnished by the Wastewater System, insurance premiums, credit enhancement and liquidity support fees, legal, engineering, auditing and financial advisory expenses, expenses and compensation of the Trustee, and deposits into a self-insurance program. Operating Expenses shall exclude allowance for depreciation and amortization and expenditures for extraordinary maintenance or repair or improvements. Operating Expenses shall also exclude expenses for improvements that will not be owned by HRSD but which will, in the reasonable determination of the Commission, as evidenced by a resolution thereof, maintain or improve the integrity of the Wastewater System.
- 2.71 Original Issue Discount.** The amount by which the original par amount of an issue exceeds its public offering price at the time it is originally offered to an investor.
- 2.72 Percentage of (% of) LIBOR Swap.** A swap whose floating rate is reset based on a percentage of a taxable rate (e.g. 67% of LIBOR) rather than a true tax-exempt rate, e.g. the SIFMA Index. A Percentage of LIBOR swap generally carries a lower expected or nominal fixed rate than a comparable SIFMA swap to compensate the fixed payer (issuer) for the assumption of basis and tax risk.

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- 2.73 Portfolio.** Collection of securities held by an investor.
- 2.74 Premium.** The difference between the higher price paid for a fixed-income security and the security's face amount at issue.
- 2.75 Present Value.** The current value of a future cash flow.
- 2.76 Primary Dealer.** A group of government securities dealers who submit daily reports of market activity and positions and monthly financial statements to the Federal Reserve Bank of New York and are subject to its informal oversight. Primary dealers include SEC, registered securities broker-dealers, banks, and a few unregulated firms.
- 2.77 Private Placement.** The placement of an issue of indebtedness directly with one or more qualified or institutional investors.
- 2.78 Prudent Person Rule.** An investment standard outlining the fiduciary responsibilities of public funds invested relating to investment practices.
- 2.79 Rate Lock.** An interest rate hedge that is cash-settled at maturity based on the prevailing level of an agreed upon underlying index. (e.g. the SIFMA 'AAA' scales)
- 2.80 Rate of Return.** The yield obtainable on a security based on its purchase price or its current market price. This may be the amortized yield to maturity on a bond or the current income return.
- 2.81 Rebate.** A requirement imposed by the Tax Reform Act of 1986 whereby the issuer of tax exempt bonds must pay the IRS an amount equal to its profit earned from investment of tax-exempt bond proceeds at rates exceeding the tax exempt borrowing rate. The tax-exempt borrowing rate (or bond yield) is calculated pursuant to the IRS code together with all income earned on the accumulated profit pending payment.
- 2.82 Repurchase Agreement (RP or REPO).** An agreement under which the holder of securities sells these securities to an investor with a contract to repurchase the securities at a fixed price on a fixed date. The security "buyer" in effect lends the "seller" money for the period of the agreement, and the terms of the agreement are structured to compensate him for this.
- 2.83 Revenue (Limited Liability) Bonds.** Bonds issued by HRSD secured by a specific revenue pledge of rates, rents or fees.
- 2.84 Revenue Anticipation Notes.** Notes issued in anticipation of receiving revenues at a future date.

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- 2.85 Safekeeping.** A service to customers rendered by banks for a fee whereby securities and valuables of all types and descriptions are held in the bank's vaults for protection.
- 2.86 Securities and Exchange Commission (SEC).** Agency created by Congress to protect investors in securities transactions by administering securities legislation.
- 2.87 SEC Rule 15C3-1.** See Uniform Net Capital Rule.
- 2.88 Securities Industry and Financial Markets Association (SIFMA).** SIFMA is a high grade market index of 7-day variable rate demand notes that is produced by Municipal Market Data. SIFMA is the benchmark swap floating index in the tax-exempt swap market.
- 2.89 Self-Liquidity.** A term used in connection with variable rate bond financings whereby the issuer agrees to repurchase with its own capital bonds that have been tendered but not yet remarketed without procuring a third-party Liquidity Facility. In this instance, the issuer uses its own funds to purchase securities.
- 2.90 Selling Groups.** The group of securities dealers who participate in an offering not as underwriters but rather who receive securities less the selling concession from the managing underwriter for distribution at the public offering price.
- 2.91 Senior Bonds.** Bonds and other indebtedness issued by HRSD secured by the Senior Trust Agreement.
- 2.92 Senior Trust Agreement.** The Trust Agreement, dated March 1, 2008, as the same may be amended and supplemented from time to time, between HRSD and a trustee. The Senior Trust Agreement secures HRSD's Senior Bonds.
- 2.93 Serial Bond.** A bond issue in which a portion of the outstanding bonds matures at regular intervals until eventually all of the bonds have matured.
- 2.94 Standard & Poor's (S&P).** Standard & Poor's Global Ratings is a NRSRO.
- 2.95 Stripped Security.** Security that has been transformed from a principal amount with periodic interest coupons into a series of zero-coupon bonds, with the range of maturities matching the coupon payment dates and the redemption date of the principal amount.
- 2.96 Subordinate Bonds.** Bonds and other indebtedness issued by HRSD and secured by the Subordinate Trust Agreement.

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- 2.97 Subordinate Trust Agreement.** The Trust Agreement, dated October 1, 2011, as amended and restated as of March 1, 2016, as the same may be amended and supplemented from time to time, between HRSD and a trustee. The Subordinate Trust Agreement secures HRSD's Subordinate Bonds.
- 2.98 Swaption.** An option on a forward swap. The purchaser of a swaption (counterparty) has the right, but not the obligation, to compel the swaption seller (usually an issuer) to enter into a pre-negotiated swap agreement at some future date (exercise date). In exchange for this right, the swaption purchaser pays the swaption seller a premium amount. This amount can be paid up front, at some future date, or as an annuity over time.
- 2.99 Syndicate Policies.** The contractual obligations placed on the underwriting group relating to distribution, price limitations and market transactions.
- 2.100 Term Bonds.** Bonds from the same issue that share the same maturity dates and interest rate. A term bond is the opposite of a serial bond, which has various maturity schedules at regular intervals until the issue is retired.
- 2.101 Termination Payment Risk.** The risk that an issuer is forced to liquidate a swap when it owes a termination payment to its counterparty.
- 2.102 Treasury Bills.** A non-interest bearing discount security issued by the U.S. Treasury to finance the national debt. Most bills are issued to mature in three months, six months, or one year.
- 2.103 Treasury Bonds.** Long-term coupon-bearing U.S. Treasury securities issued as direct obligations of the U.S. Government and having initial maturities of more than 10 years.
- 2.104 Treasury Inflation Protected Securities (TIPS).** The principal of a TIPS increases with inflation and decreases with deflation, as measured by the Consumer Price Index. When a TIPS matures, the adjusted principal or original principal, whichever is greater is paid.
- 2.105 Treasury Notes.** Medium-term coupon-bearing U.S. Treasury securities issued as direct obligations of the U.S. Government and having initial maturities from two to 10 years.
- 2.106 Trust Agreements.** Collectively, the Senior Trust Agreement and the Subordinate Trust Agreement.
- 2.107 Underwriter.** A dealer that purchases new issues of municipal securities from the Issuer and resells them to investors.

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2.108 Underwriter's Discount. The difference between the price at which bonds are bought by the Underwriter from the Issuer and the price at which they are offered to investors.

2.109 Underwriter's Expenses. Compensates senior managers for out-of-pocket expenses including: underwriter's counsel; DTC charges, travel, syndicate expenses, dealer fees, overtime expenses, communication expenses, computer time and postage.

2.110 Uniform Net Capital Rule. SEC requirement that member firms as well as nonmember broker-dealers in securities maintain a maximum ratio of indebtedness to liquid capital also called net capital rule and net capital ratio. Indebtedness covers all money owed to a firm, including margin loans and commitments to purchase securities, one reason new public issues are spread among members of underwriting syndicates. Liquid capital includes cash and assets easily converted into cash.

2.111 Variable Rate Debt (VRD). An interest rate on a security which changes at intervals according to an index or a formula or other standard of measurement as stated in the bond contract.

2.112 Yield. The rate of annual income return on an investment, expressed as a percentage. Income/current yield is obtained by dividing the current dollar income by the current market price for the security. Net yield or yield to maturity is the current income yield minus any premium above par or plus any discount from par in purchase price, with the adjustment spread over the period from the date of purchase to the date of maturity of the bond.

3.0 GUIDING PRINCIPLES

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

3.1.1 General Reserve. HRSD will maintain sufficient liquidity to ensure adequate working capital for HRSD's operations. These funds are intended to help HRSD cover unanticipated expenses that cannot be paid from the current fiscal year's budgetary resources. Liquidity will be determined in terms of Days Cash on Hand which will be measured by current and non-current cash and investments, plus any

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restricted cash and investments, if available for general system purposes, divided by operating and maintenance expenses less depreciation, divided by 365. This calculation will exclude accrued debt service for the next fiscal year and all funds in the Risk Reserve and Renewal and Replacement Reserve, described below. Days Cash on Hand at the end of a fiscal year may not be less than 270 or more than 365 days.

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

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

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

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

3.2 BUDGETARY PRINCIPLES.

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

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

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

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The Commission will adopt an operating budget that:

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

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

A capital project by definition involves expenditures to acquire or add assets of a relatively permanent nature such as property, plant and equipment. The CIP is typically for capital projects (not less than \$100,000), new facilities, expansions and improvements requiring engineering and/or construction services.

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

- A. The operating budget is adopted by department, with budgetary controls exercised administratively by management at the department level. The General Manager is authorized to transfer funds among departments without further approval by the Commission. Appropriations lapse at the end of the fiscal year. Valid, outstanding encumbrances (those for which performance under a contract is expected in the next year) are re-appropriated without further approval by the Commission and become part of the subsequent year's budget.

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B. The capital budget is a ten-year plan of CIP spending based on estimated project costs and prioritized schedules. Prior to the commencement of construction for any project, the Commission must appropriate funding for the total project cost. If a project is expected to exceed its initial appropriation, the Commission must approve any additional funding through a revised appropriation.

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

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

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

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

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

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

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

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4.0 PROCEDURES

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

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

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

4.1.1 Permitted Debt by Type.

- A. **Lease Financing.** HRSD may use leasing for facilities or equipment if (1) it can be demonstrated that this is the most cost effective or appropriate way to secure financing, or (2) on small projects that do not warrant entry into the bond market.
- B. **Installment Purchases or Conditional Sale Contracts.** HRSD may utilize installment purchase or conditional sale contracts having an original term of one year or less.
- C. **Bond Anticipation Notes, Commercial Paper (CP) and Lines of Credit.** Each are typically short duration debt instruments issued to provide interim financing and due to their short duration, expose HRSD to interest rate risk and market access risk upon renewal. Bond Anticipation Notes, Commercial Paper and Lines of Credit may be used to
 - (1) To finance small projects until such time as the project or projects can be incorporated into a larger bond sale
 - (2) During times of high interest rates and when the expectation is that interest rates will stabilize in the future or trend downward
 - (3) When market conditions are such that a Bond Anticipation Notes, Commercial Paper or Lines of Credit may be more readily received in the market than long-term debt, or (4) as an interim financing tool during the construction period for a project(s) until such time as the project(s) is placed into service and / or HRSD sells long-term debt.

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

4.1.2 Guidelines on Debt Issuance.

- A. **Trust Agreements.** HRSD will abide by the covenants contained in its Trust Agreements. HRSD considers these covenants to be minimum requirements and generally expects to exceed the requirements of each covenant.
- B. **Authorization.** Prior to the issuance of debt, the Commission will pass a resolution authorizing the financing arrangements and setting appropriate limits and parameters for the anticipated financing.
- C. **Lowest Cost Financing.** Generally, HRSD intends to pursue the lowest cost of financing within the parameters of this Policy, the Trust Agreements and the Enabling Act.
- D. **Cash Financing from Available Sources.** HRSD will contribute at least 15 percent of each year's CIP in cash.
- E. **Project Costs Prior to Debt Issue.** If project costs are incurred prior to the issuance of debt, the Commission will pass a resolution documenting its intent to be reimbursed from bond proceeds.
- F. **Variable Rate Debt (VRD) and Bond Anticipation Notes.** VRD and Bond Anticipation Notes carry inherent interest rate risk. Such securities historically have interest rates lower than fixed rate securities and offer the potential for lower debt service costs over the term of the bond issue. HRSD will consider using VRD when it improves matching of assets and liabilities, potentially lowers debt service costs, adds flexibility to HRSD's capital structure, or diversifies HRSD's investor base.
 - (1) Debt service on VRD will be budgeted at a conservative rate based on historical fluctuations in interest activity and current market assumptions. Before issuing VRD, HRSD will determine how potential spikes in the debt service will be funded and consider the impact of various interest rate scenarios on its financial position and on various debt ratios.
 - (2) HRSD will not issue VRD in excess of 15 percent of its total debt portfolio. This limitation, however does not apply to Bond Anticipation Notes with a maturity greater than nine months from the date of issue

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or Bond Anticipation Notes issued as part of an interim financing program. In addition, if HRSD can demonstrate historical and projected sufficiency of offsetting principal and interest coverage from short-term and variable rate investment assets held in unrestricted, non-operating accounts, these assets may be netted from variable rate liabilities.

- G. **Derivative Products.** HRSD recognizes that the use of derivatives may aid HRSD in reducing the cost of capital and gaining flexibility in structuring its debt portfolio. The use of such products are governed by the Derivatives section of this policy.
- H. **Method of Sale.** HRSD will select a method of sale it believes is the most appropriate and economically advantageous in light of financial, market, transaction-specific and HRSD-related conditions. Acceptable methods of sale may include a competitive sale, a negotiated sale, or a private placement.
- I. **Duration of Debt.** HRSD will not issue debt for a period longer than aggregate useful lives of the projects being financed. Pursuant to the Enabling Act, HRSD cannot issue debt with a final maturity more than 40 years from the date of issuance. Factors to be considered when determining the final maturity of debt include: the average life of the assets being financed, relative level of interest rates, and the year-to-year differential in interest rates.

4.1.3 Debt Structure

- A. **Interest Rate Structure.** HRSD may make use of both variable and fixed rate debt in accordance with limitations set forth in this policy.
- B. **Tax Status.** Tax-exempt debt will be used whenever possible and appropriate.
- C. **Maturity Structure.** HRSD's long-term debt may include serial and term bonds. Other maturity structures may also be considered when demonstrated to be advantageous to HRSD.
- D. **Coupon Structure.** Fixed rate debt may include par, discount, premium and capital appreciation bonds.
- E. **Redemption Features.** In order to preserve flexibility and refinancing opportunities, HRSD debt shall generally be issued with call provisions. HRSD may consider call provisions that are shorter than traditional and/or

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non-call debt when warranted by market conditions. For each transaction, various call option scenarios will be evaluated so that the most beneficial can be utilized.

- F. **Credit Enhancement.** HRSD may use bond insurance and/or line and letters of credit for credit enhancement when it is economically advantageous to do so.
- (1) When considering the use of bond insurance, HRSD will perform a maturity-by-maturity analysis. The economic feasibility of insurance will be analyzed based on the value of insurance as priced to the earlier of each maturity's first applicable call date and the maturity date of such maturity. Enhancement will be used when present value savings result or when such use permits HRSD to incorporate less restrictive covenants into a transaction which results in greater flexibility or lower user charges. HRSD may insure bonds in maturities that are borderline from an economic feasibility standpoint if warranted by other factors (e.g., use of insurance to attract investor interest where certain bond maturities might otherwise be difficult to sell).
- (2) When considering the use of a letter of credit or Liquidity Facility, HRSD will examine the economic feasibility of a credit facility by taking into account the trading spread, the cost of the credit facility and the interest costs of HRSD's debt if enhanced.
- G. **Debt Service Reserve Fund.** The Senior Trust Agreement requires HRSD to fund a Debt Service Reserve Fund when certain debt service coverage and liquidity ratios are not met. HRSD will fund such reserve when and if it is required. The Subordinate Trust Agreement permits, but does not require, the funding of a Debt Service Reserve Fund.
- H. **Capitalized Interest.** By definition, capitalization of interest increases the amount of debt that is issued. If HRSD capitalizes interest on one or more series of indebtedness, it will do so only until such time as the project being financed is expected to be placed in service.
- I. **Refinancing of Debt.** HRSD will refinance debt from time to time to achieve debt service savings as market opportunities arise.

Since federal regulations limit a tax-exempt issue to one advance refunding (a refinancing prior to a bond's call provision), HRSD will ensure that the advance refunding results in a significant present value savings. A proposed refinancing should achieve a minimum cumulative, net present value savings of three percent of the amount refinanced, provided HRSD may refinance

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debt that does not meet this threshold if it obtains other benefits, financial or otherwise, from the refinancing and only if the Commission determines that the issuance of such bonds will be in the District's best interests. In addition, HRSD may consider the efficiency of a proposed refinancing transaction. The efficiency evaluation considers the value realized by HRSD when exercising its option to redeem its bonds early calculated under a variety of different interest rate environments versus the savings garnered. In general, HRSD believes a weighted average aggregate efficiency of 70 percent or greater is a reasonable benchmark.

In any refinancing transaction, HRSD maintains a bias to not extend maturities.

- J. **Escrow Structuring.** HRSD will utilize the least costly securities available in structuring refinancing escrows. Unless State and Local Government Securities (SLGS) are used, a certificate will be provided by a third party agent stating that the securities were procured through an arms-length, competitive bid process (in the case of open market securities), and that the price paid for the securities was reasonable within federal guidelines. Under no circumstances will an underwriter, agent or financial advisor sell escrow securities to HRSD from its own account.
- K. **Hiring of Professionals.** All members of the financial advisory team including underwriter, financial advisor, bond counsel, and other professionals will be selected in a manner consistent with HRSD's procurement policy for professional services.

4.1.4 Underwriter Selection.

- A. **Senior Manager Selection.** HRSD will select a senior manager for any proposed negotiated sale. The selection criteria will include but not be limited to the following:
 - (1) The firm's ability and experience in managing transactions similar to that contemplated by HRSD
 - (2) Prior knowledge and experience with HRSD
 - (3) The firm's ability and willingness to risk capital and demonstration of the firm's capital availability and underwriting of unsold balances
 - (4) Quality and experience of personnel assigned to HRSD's engagement
 - (5) Financing plan presented

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(6) Cost including underwriting fees and anticipated pricing

- B. **Co-Manager Selection.** Co-managers may be selected on the same bases as the senior manager with the exception of underwriting fees, which are determined by the senior manager. In addition to their qualifications, co-managers appointed to specific transactions will be a function of transaction size and the necessity to ensure maximum distribution of HRSD's bonds.
- C. **Selling Groups.** HRSD may establish selling groups in certain transactions. To the extent that selling groups are used, HRSD may make appointments to selling groups, as the transaction dictates.
- D. **Underwriter's Counsel.** In any negotiated sale of HRSD debt in which legal counsel is required to represent the underwriter, the appointment will be made by the Senior Manager.
- E. **Underwriter's Discount.** HRSD will evaluate the proposed underwriter's discount against other proposals and/or comparable issues in the market. If there are multiple underwriters in the transaction, HRSD will determine the allocation of underwriting liability and management fees. The allocation of fees will be determined prior to the sale date; a cap on management fees, expenses and underwriter's counsel fee will be established and communicated to all parties by HRSD. Any additional expenses must be substantiated.
- F. **Evaluation of Underwriter Performance.** HRSD will evaluate each bond sale after completion to assess the following: costs of issuance including underwriters' compensation, pricing of the bonds in terms of the overall interest cost and on a maturity-by-maturity basis, and the distribution of bonds and sales credits.
- G. **Syndicate Policies.** For each negotiated transaction, HRSD will establish syndicate policies that will describe the priority of orders and designation policies governing the upcoming sale.
- H. **Designation Policies.** To encourage the pre-marketing efforts of each member of the underwriting team, orders for HRSD's bonds will be net designated, unless otherwise expressly stated. HRSD shall require the senior manager to:
 - (1) Fairly allocate bonds to other managers and the selling group.
 - (2) Comply with the Municipal Securities Rulemaking Board's (MSRB) regulations governing the priority of orders and allocations.

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- (3) Within 10 working days after the sale date, submit to HRSD a detail of orders, allocations and other relevant information pertaining to HRSD's sale.

4.1.5 Consultants.

- A. **Financial Advisor.** HRSD will select a financial advisor (or advisors) to assist in its debt issuance and debt administration processes. Such financial advisor(s) will be an Independent Registered Municipal Advisor within the meaning of the Securities Exchange Act of 1934, as amended. Selection of HRSD's financial advisor(s) will be based on, but not limited to, the following criteria:
 - (1) Experience in providing consulting services to entities similar to HRSD
 - (2) Knowledge and experience in structuring and analyzing bond issues
 - (3) Experience and reputation of assigned personnel
 - (4) Fees and expenses
- B. **Bond Counsel.** HRSD debt will include a written opinion by legal counsel affirming that HRSD is authorized to issue the proposed debt, that HRSD has met all legal requirements necessary for issuance, and, if the interest on the debt to be issued is to be exempt under the IRS Code, a determination consistent therewith. The approving opinion and other documents relating to the issuance of debt will be prepared by counsel with extensive experience in public finance and tax issues. The Bond Counsel will be selected by HRSD.
- C. **Conflicts of Interest.** HRSD requires that its consultants and advisors provide objective advice and analysis, maintain the confidentiality of HRSD financial plans, and be free from any conflict of interest. In no case will HRSD's financial advisor be permitted to underwrite any portion of HRSD's bond issues, whether sold competitively or negotiated.
- D. **Disclosure by Financing Team Members.** All financing team members will be required to provide full and complete disclosure, relative to agreements with other financing team members and outside parties. The extent of disclosure may vary depending on the nature of the transaction. However, in general terms, no agreements will be permitted which could compromise the firm's ability to provide independent advice which is solely in HRSD's best interests or which could reasonably be perceived as a conflict of interest.

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4.1.6 Communication and Disclosure.

- A. **Rating Agencies.** HRSD seeks to maintain the highest possible credit ratings it believes appropriate for its debt without compromising the delivery of its basic core services. The Director of Finance will manage relationships with the rating analysts assigned to HRSD.
- B. **Investors, Bond Insurers, Liquidity Providers.** The Director of Finance will manage relationships using both informal and formal methods to disseminate information.
- C. **Continuing Disclosure.** HRSD recognizes that accurate and complete disclosure is imperative to maintaining the high credit quality of its debt. HRSD will comply with all of its contractual obligations and applicable law and will meet such disclosure requirements in a timely and thorough manner.
- D. **Arbitrage Compliance.** HRSD will maintain a system of record keeping and reporting in order to comply with the Arbitrage Rebate Compliance Requirements of the Internal Revenue Code of 1986, as amended.
- E. **Post-Issuance Compliance Procedures.** Separate from this policy, HRSD will maintain and follow post-issuance compliance procedures. Such procedures will include provisions regarding continuing disclosure and arbitrage compliance, among others.

4.2 DERIVATIVES.

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

- A. **Specific Objectives for Utilizing Swaps.** HRSD may consider the use of specific swaps if they meet one or more of the benefits previously described in this Policy or if they:
 - (1) Result in an expected lower net borrowing cost than traditional debt alternatives;
 - (2) Result in an improved capital structure (e.g., altered pattern of debt service payments or to create variable rate exposure) or better asset/liability matching;

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- (3) Cap, limit, or hedge HRSD's exposure to changes in interest rates on a particular financial transaction; or
- (4) Provide a specific benefit not otherwise available.
- (5) Swaps must not be speculative or create unreasonable risk. Each swap will be reviewed on a case-by-case basis to determine whether or not the level of risk is appropriate for HRSD. Examples of swaps that HRSD considers speculative and which create unreasonable risk include, without limitation:
 - Basis swaps;
 - Constant maturity swaps;
 - Knock-in options on swaps;
 - Swaps that including a floating index multiplier (e.g., three times SIFMA); and
 - Swaps that are not associated with a specific bond issue.
- (6) HRSD prefers Swaps that meet the "consistent critical terms method" for evaluating the effectiveness of Swaps as defined by the Governmental Accounting Standards Board in Statement #53: Accounting and Financial Reporting for Derivative Instruments.

B. Prohibited Swap Features. HRSD will not use Swaps that:

- (1) Are speculative or create extraordinary leverage or risk;
- (2) Lack adequate liquidity to terminate without incurring a significant bid/ask spread;
- (3) Provide insufficient price transparency to allow reasonable valuation; or
- (4) Are not reasonably uniform to the risk evaluation criteria by this Policy.

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

"With respect to contracts concerning interest rates, currency, cash flow and other basis, the District may enter into any contract that the Commission determines to be necessary or appropriate to place any obligation or investment of the District, as represented by bonds or the investment of their proceeds, in whole or in part, on the interest rate, cash flow or other basis desired by the Commission. Such contracts may include, without limitation, contracts commonly known as interest

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rate swap agreements, rate locks, forward purchase agreements, and futures or contracts providing for payments based on levels of, or changes in, interest rates. Such contracts or arrangements may be entered into by the District in connection with, or incidental to, entering into or maintaining any (i) agreement that secures bonds or (ii) investment, or contract providing for investment, otherwise authorized by law. These contracts and arrangements may contain such payment, security, default, remedy, and other terms and conditions as determined by the Commission, after giving due consideration to the creditworthiness of the counterparty or other obligated party, including any rating by any nationally recognized rating agency.”

All derivatives contracts require Commission approval.

- D. **Permitted Instruments.** HRSD may utilize the following financial products on a current or forward basis, after identifying the objective(s) to be realized and assessing the attendant risks.
- (1) Interest rate swaps, including fixed and floating rate swaps.
 - (2) Options, including swaptions, Interest Rate Caps, Interest Rate Floors, and Interest Rate Collars.

HRSD prefers swaps that have strong price transparency and which are of a type referred to as “plain vanilla,” e.g., a fixed to floating rate SIFMA based interest rate swap.

Swaps will be subject to the legal provisions set forth in HRSD’s Trust Agreement, applicable debt documents, and statutory requirements.

- E. **Procedure for Submission and Execution.** HRSD may consider swaps that are either presented as proposals or that are developed by HRSD in consultation with its financial advisor and legal counsel. HRSD will give detailed consideration only to proposals that HRSD, in its sole discretion, believes will offer the projected savings or other benefits and will have the ability to meet one or more of the objectives outlined herein.
- (1) When feasible, swaps should be competitively procured either under a competitive sealed bid or competitive negotiation (e.g. RFP). On a product-by-product basis, HRSD will have authority to negotiate the procurement of financial instruments that have customized or specific attributes designed for HRSD.

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- (2) For both competitive and negotiated procurements, the execution of any swap transaction will be subject to receipt of a fairness opinion from HRSD's financial advisor, finding that the terms and conditions of the swap reflect a fair market value of such transaction as of the date and time of its execution.
- (3) The execution of all Swaps will be subject to receipt of an opinion from a law firm with extensive experience in public finance and tax issues that the contract is a legal, valid and binding obligation of HRSD and complies with applicable law.

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

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

G. **Swap Risks.** In reviewing proposed or possible swaps, HRSD will consider at a minimum each of the following types of risks, as applicable:

- (1) **Counterparty Risk.** The risk of a payment default on a swap by a swap counterparty.
- (2) **Termination Risk.** The risk that a swap has a negative value and HRSD owes a "breakage" fee if the contract has to be terminated.
- (3) **Tax Risk.** A mismatch between changes in the rate or price on HRSD's underlying debt and the swap caused by a reduction or elimination in the benefits of the tax exemption for municipal bonds, e.g. a tax cut that results in an increase in the ratio of tax-exempt to taxable yields.

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- (4) **Basis Risk.** A mismatch between the rate on HRSD's underlying debt and the rate paid under the swap, e.g. a tax-exempt variable rate issue which trades at 67% of LIBOR while HRSD receives 80% of LIBOR under the swap.
- (5) **Liquidity/Remarketing Risk.** The risk that HRSD cannot secure a cost-effective renewal of a Letter or Line of Credit or suffers a failed remarketing with respect to its variable rate debt.
- (6) **Rollover Risk.** The risk that a swap maturity does not match maturity of the related debt or asset.

H. **Counterparty Risk Assessment.** HRSD will only enter into a swap with highly rated financial institutions. Credit criteria for financial institutions are as follows:

- (1) The institutions' long-term, unsecured and unsubordinated obligations are rated at the time of execution of the swap by at least one rating agency at least "Aa3" by Moody's Investors Services, Inc. ("Moody's") or "AA" by Standard & Poor's Rating Services ("S&P"), or "AA" by Fitch Ratings ("Fitch") and by at least one other rating agency at no lower than "A2" by Moody's, "A" by S&P, or "A" by Fitch; or
- (2) The institutions' obligations under the swap and the Credit Support Annex are unconditionally guaranteed by a bank or non-bank financial institution the long-term, unsecured and unsubordinated obligations of which are rated at the time of execution of the swap by at least one credit agency at least "Aa3" by Moody's or "AA" by S&P or "AA" by Fitch and by at least one other rating agency at no lower than "A2" by Moody's, "A" by S&P, or "A" by Fitch.

In the event of downgrade of a swap counterparty below the minimal rating standard set forth above, the counterparty will be required to:

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

I. **Benefit Expectation.** Financial transactions using swaps or other derivative products related to a debt issue should generate at least two percent or greater projected debt service savings than a traditional debt alternative. Such savings analysis will include, where applicable, the consideration of the

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probability (based on historical interest rate indices, where applicable, or other accepted analytic techniques) of the realization of savings for the derivative structure. The savings target requirement is intended to reflect the complexity and risk of derivative financial instruments, and should include a risk adjustment for other factors. For example, if the underlying debt is callable and the swap is not, then the analysis should include a risk adjustment for this factor.

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

- J. **Hedging Derivatives.** When utilizing a derivative to cap, limit or hedge HRSD's exposure to changes in interest rates, HRSD will evaluate various interest rate scenarios and the estimated impact on projected wastewater rates.
- K. **Legal and Contractual Requirements.** HRSD will use standard International Swap and Derivatives Association, Inc. swap documentation, including the Schedule to the Master Agreement and a Credit Support Annex, and related protocols. HRSD may use additional documentation if the product is proprietary or HRSD deems in its sole discretion that such documentation is otherwise in its interest. The swap agreement between HRSD and each counterparty will include payment, term, security, collateral, default, remedy, termination, and other terms, conditions, provisions and safeguards as HRSD, in consultation with its legal counsel, deems necessary and desirable.
- L. **Legal Terms of Swaps.** Terms and conditions of any swap will be negotiated by HRSD in the best interests of HRSD. Swap documentation and terms should include the following:
 - (1) Downgrade provisions triggering termination based on HRSD's credit rating will in no event be less advantageous than those permitting termination based on a downgrade of the counterparty.
 - (2) Governing law for swaps will be New York law to the extent permitted by law, but should reflect that HRSD's authorization of the related agreement is governed by Virginia law.

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- (3) The specified debt related to credit events in any swap agreement should be narrowly drafted and refers only to specific debt.
- (4) Collateral thresholds will be set on a sliding scale reflective of credit ratings (see Collateral Section).
- (5) Eligible collateral will be as set forth in the Collateral Section.
- (6) Termination value will be established by “market quotation” methodology, which involves the solicitation of quotations from unrelated brokers regarding the valuation of the swaps.

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

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

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

O. **Termination Provisions.** Swaps will contain provisions granting HRSD the right to optionally terminate a swap agreement at any time over the term of the agreement. Such a provision will be required even if the termination is at market. In general, exercising the right to terminate an agreement should produce a benefit to HRSD, either through the receipt of a payment from a termination or, if the termination payment is made by HRSD, in conjunction with the conversion of the related indebtedness to a more beneficial interest rate mode or mitigates a risk to HRSD, as will be determined by HRSD in its sole discretion.

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

P. **Collateral.** As part of any swap, HRSD will require collateralization or other forms of credit enhancement to secure any or all swap payment obligations.

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As appropriate, HRSD, in consultation with its financial advisor, will require collateral or other credit enhancement to be posted by each swap counterparty as follows:

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

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

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

Legal modification to an existing swap will require approval from the Commission. In modifying any swap, HRSD will fulfill all terms of this Policy

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and refer back to the original procurement and execution procedures outlined in this Policy.

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

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

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

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S. Acceptable Collateral.

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

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

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

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

4.3 INVESTMENT

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

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

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4.3.2 Operating Funds

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

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under the circumstances then prevailing that a person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

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

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

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- E. **Authorized Investments.** Under the Trust Agreement, the Director of Finance may invest in the following securities that are in compliance with applicable law. The Director of Finance, however, may impose additional requirements and restrictions in order to ensure that HRSD's goals are met. Permitted investments for the Investment Portfolio include:
- (1) **U.S. Treasury Obligations.** Bills, notes and any other obligation or security issued by or backed by the full faith and credit of the United States of America. The final maturity will not exceed a period of five years from the time of purchase.
 - (2) **Federal Agency Obligations.** Bonds, notes and other obligations of the United States, and securities issued by any federal government agency or instrumentality or government sponsored enterprise, provided that such investments must be rated in one of the two highest rating categories by at least one NRSRO and or the have the same rating as those of U.S. Treasury obligations. The final maturity will not exceed a period of five years from the time of purchase.
 - (3) **Municipal Obligations.** Bonds, notes and other general obligation indebtedness, upon which there is no default, with a rating of at least AA from S&P and Aa from Moody's Investor Services, maturing within five years of the date of purchase, and otherwise meeting the requirements of Code of Virginia §2.2-4501. However, HRSD is prohibited from purchasing its own debt for the purpose of investing its Operating Funds. Please see the *Self-Liquidity* section of this policy for important language related to Self-Liquidity and HRSD's purchase of its own debt.
 - (4) **Commercial Paper.** Prime quality commercial paper, with a maturity of 270 days or less, issued by domestic corporations (corporations organized and operating under the laws of the United States or any state thereof) provided that the issuing corporation, or its guarantor, has a short-term debt rating of no less than "A-1" (or its equivalent) from at least two of the NRSROs.
 - (5) **Bankers Acceptance.** Issued by domestic banks or a federally chartered office of a foreign bank, which are eligible for purchase by the Federal Reserve System with a maturity of 180 days or less. The issuing corporation, or its guarantor, must have a short-term debt rating of no less than "A-1" (or its equivalent) from at least two of the NRSROs.

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- (6) **Corporate Notes.** High quality corporate notes with a rating of at least “Aa” by Moody’s and at least “AA” by S&P. The final maturity will not exceed a period of five years from the time of purchase.
- (7) **Negotiable Certificates of Deposit and Bank Deposit Notes.** Negotiable certificates of deposit and negotiable bank deposit notes of domestic banks and domestic offices of foreign banks with ratings of at least A-1 from P-1 from Moody’s, for maturities of one year or less, and a rating of at least AA from S&P and Aa Moody’s, for maturities over one year. The final maturity may not exceed a period of five years from the time of purchase.
- (8) **Money Market Mutual Funds (Open-Ended Investment Funds).** Shares in open-end, no-load investment funds provided such funds are registered under the Federal Investment Company Act of 1940, provided that the fund is rated at least “AAAm” or the equivalent by an NRSRO. The mutual fund must comply with the diversification, quality and maturity requirements of Rule 2(a)-7, or any successor rule, of the SEC, provided the investments by such funds are restricted to investments otherwise permitted by the Code of Virginia for political sub-divisions.
- (9) **Local Government Investment Pool.** A specialized fund created in the 1980 session of the General Assembly designed to offer a convenient, liquid, and cost-effective investment vehicle for public entities. The Fund is administered by the Treasury Board of the Commonwealth of Virginia and is rated AAAM by Standard & Poor’s, Inc.
- (10) **SNAP Fund.** Any pooled investment vehicle established for the investment of bond proceeds under the Government Non-Arbitrage Investment Act (Chapter 47 of Title 2.2 of the Code of Virginia).
- (11) **Repurchase Agreements.** In overnight, term and open repurchase agreements provided that the following conditions are met:
 - a. The contract is fully secured by deliverable U.S. Treasury and Federal Agency obligations as described in paragraph 1 and 2 above (with a maximum maturity of five years), having a market value at all times of at least 102 percent of the amount of the contract;
 - b. A Master Repurchase Agreement or specific written Repurchase Agreement governs the transaction;

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

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

<u>Permitted Investment</u>	<u>Sector Limit</u>	<u>Issuer Limit</u>
U.S. Treasury Obligations	100%	100%
Federal Agency Obligations	100%	35%
Municipal Obligations	15%	5%
Commercial Paper	25%	5%
Bankers' Acceptances	25%	5%
Corporate Notes	25%	3%
Negotiable Certificates of Deposit and Bank Deposit Notes	25%	3%
Money Market Mutual Funds	100%	100%
LGIP	100%	100%
SNAP Fund (bond proceeds only)	100%	100%
Repurchase Agreements	35%	35%
Collateralized Bank Deposits	100%	100%
Supra Sovereign Agency Bonds	15%	10%

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

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

- (1) The **Operating Liquidity Strategy** will be invested in short-term investments maturing in 12 months or less. Because of the difficulties inherent in accurately forecasting all cash flow requirements, at least 25 percent of this strategy will be continuously invested in readily available funds such as bank deposit accounts, money market funds and overnight repurchase agreements and at least 75 percent of this strategy will be invested in securities with maturities less than 180 days.
- (2) The **Total Return Strategy** will be invested in permitted investments with a stated maturity of not more than five years from the date of purchase. To manage volatility, the Director of Finance will from time-

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to-time determine an investment duration target which will not exceed three years and which will be comparable to the selected performance standards as identified under the Performance Standards section of this Policy.

- (3) The Capital Investment Strategy will be invested in compliance with the specific requirements of the Trust Agreements. However, in no case will bond proceeds, or funds set aside for capital projects, be invested in securities with a term to maturity that exceeds the expected disbursement date of those monies.
 - (4) Debt service reserve funds with longer term investment horizons may be invested in securities exceeding five years, provided that such investments will mature no later than the first call date for the related bonds.
- G. **Security Downgrades.** In the event that any security held in the Investment Portfolio is downgraded below AA or equivalent rating by any NRSRO, the security will be sold within 180 days of such downgrade.
- H. **Self-Liquidity.** In the event that HRSD determines to provide Self-Liquidity for any issuance of CP, VRDs, or related indebtedness investments of the Total Return Strategy will be used to support such obligations, if necessary, provided that HRSD will not be legally obligated to pledge such funds for such purpose. The Strategy's investments identified to provide self-liquidity coverage will be sufficient to meet the quality, volatility, liquidity, and maturity guidelines of the NRSRO's then providing ratings on HRSD's debt obligations. If needed, HRSD is permitted to purchase its own debt on a temporary basis or for the retirement of the debt. Such purchase will not be limited to the sector and issuer diversification limits as set forth in the Portfolio Diversification section of this policy or the maximum maturity requirement as set forth in the Capital Investment Strategy section of this Policy.
- I. **Investment of Bond Proceeds.** HRSD intends to comply with all applicable sections of the Internal Revenue Code as it relates to Arbitrage Rebate and the investment of bond proceeds. All investment records will be maintained to ensure compliance with all regulations.
- J. **Collateralization of Bank Deposits.** All bank deposits of HRSD should be considered Public Deposits as defined by Code of Virginia Security for Public Deposits Act (Section 2.2-4400 et seq.) and all deposits must be made with Qualified Public Depositories within the meaning of such law.

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- K. **Selection of Broker/Dealers.** All broker/dealers who desire to provide investment services to HRSD will be provided with current copies of HRSD's Financial Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Financial Policy.
- (1) At the request of the Director of Finance, broker/dealers will supply HRSD with information sufficient to adequately evaluate their financial capacity and creditworthiness. The following information will be provided:
 - (a) Audited financial statements;
 - (b) Regulatory reports on financial condition;
 - (c) Proof of Financial Institution Regulatory Authority (FINRA) certification and of state registration;
 - (d) A sworn statement by an authorized representative of the broker/dealer pledging to adhere to Capital Adequacy Standards established by the Federal Reserve Bank and acknowledging the broker/dealer understands that HRSD has relied upon this pledge; and
 - (e) Any additional information requested by the Director of Finance in evaluating the creditworthiness of the institution.
 - (2) Only firms meeting the following requirements will be eligible to serve as broker/dealers for HRSD:
 - (a) "Primary" dealers and regional dealers that qualify under Securities and Exchange Commission Rule 15C3-1 (uniform net capital rule);
 - (b) Capital of at least \$10,000,000;
 - (c) Registered as a dealer under the Securities Exchange Act of 1934;
 - (d) Member of the FINRA;
 - (e) Registered to sell securities in the Commonwealth of Virginia; and

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- (f) Engaged in the business of effecting transactions in U.S. government and agency obligations for at least five consecutive years.
 - (3) HRSD will designate broker/dealers on an annual basis.
- L. **Competitive Selection of Investment Instruments.** All securities purchases and sales will be transacted only with designated broker/dealers through a formal and competitive process requiring the solicitation and evaluation of at least three bids/offers, taking into consideration current market conditions. Electronic bids will be accepted. HRSD will accept the bid which, in the sole judgment of the Director of Finance or his/her designee: (1) offers the highest rate of return within the maturity required; and (2) optimizes the investment objective of the overall investment portfolio, including diversification requirements. When selling a security, HRSD will select the bid that generates the highest sale price, consistent with the diversification requirements.
- M. **Safekeeping and Custody.** All investment securities purchased by HRSD or held as collateral on deposits or investments will be held by HRSD or by a third-party custodial agent that may not otherwise be counterparty to the investment transaction.
 - (1) All securities in HRSD's investment portfolio will be held in the name of HRSD and will be free and clear of any lien. Further, all investment transactions will be conducted on a delivery versus payment basis. On a monthly basis, the custodial agent will provide reports that list all securities held for HRSD, the book value of holdings, and the market value as of month-end.
 - (2) HRSD officials and representatives of the custodial agent responsible for, or in any manner involved with, the safekeeping and custody process of HRSD will be bonded in such a manner as to protect HRSD from losses from malfeasance and misfeasance.
 - (3) Original copies of non-negotiable certificates of deposit and confirming copies of all other investment transactions must be delivered to HRSD or its custodial agent.
- N. **Internal Controls.** The Director of Finance will establish a framework of internal controls governing the administration and management of HRSD's investment portfolio, and these controls will be documented in writing. Such controls will be designed to prevent and control losses of HRSD monies arising from fraud, employee error, and misrepresentation by third parties,

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unanticipated changes in financial markets, or imprudent actions by any personnel. The internal control structure will be designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived, and (2) the valuation of costs and benefits require estimates and judgments by management.

- O. **Records and Reports.** The Director of Finance will prepare an investment report on at least a quarterly basis for the Commission.

- P. **Performance Standards.** The investment portfolio will be designed to obtain at least a market level rate of return, given budgetary and economic cycles, commensurate with HRSD's investment risk and cash flow needs. HRSD's portfolio management approach will be active, allowing periodic restructuring of the investment portfolio to take advantage of current and anticipated interest rate movements.
 - (1) The returns on HRSD's investments will be compared on a quarterly basis to indices of U.S. Treasury securities having similar maturities or to other appropriate benchmarks.
 - (2) The applicable benchmarks for each of HRSD's three major Investment strategies are listed below:

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

- Q. **Engagement of Investment Managers.** The Director of Finance may engage one or more qualified firms to provide discretionary investment management services in compliance with this Policy for HRSD. All investment management firms who desire to provide investment services to HRSD will be provided with current copies of HRSD's Investment Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Investment Policy. The Director of Finance will conduct appropriate due diligence in the selection of qualified investment management firms and will periodically

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confirm a manager's qualifications by visiting that manager's operational facilities that provide services to HRSD.

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

4.3.3 Retiree Health Plan Trust

- A. **Background.** HRSD established the Hampton Roads Sanitation District Retiree Health Plan Trust (the Trust) originally effective July 1, 2002, and amended and restated effective January 22, 2008 and November 25, 2008. The Trust provides for funding of non-pension/Other Post-Employment Benefits for employees who meet the age and service requirements outlined in the Hampton Roads Sanitation District Health Benefits Plan (the Plan) originally effective July 1, 2002, as it may be amended from time to time.

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

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- (a) An investment advisor (the Investment Advisor) to assist the Administrator in the investment process and to maintain compliance with this Policy. The Investment Advisor may assist the Administrator in establishing investment policy objectives and guidelines. The Investment Advisor will adjust asset allocation for the Trust subject to the guidelines and limitations set forth in this Policy. The Investment Advisor will also select investment managers (Managers) and strategies consistent with its role as a fiduciary for the Trust. The investment vehicles allowed may include mutual funds, commingled trusts, separate accounts, limited partnerships and other investment vehicles deemed to be appropriate by the Investment Advisor. The Investment Advisor is also responsible for monitoring and reviewing investment managers; measuring and evaluating performance; and other tasks as deemed appropriate in its role as Advisor for Trust assets. The Investment Advisor may also select investment managers with discretion to purchase, sell, or hold specific securities, such as Exchange Traded Funds, that will be used to meet the Trust's investment objectives. The Investment Advisor shall never take possession of securities, cash or other assets of the Trust, all of which shall be held by the custodian. The Investment Advisor must be registered with the SEC. The Director of Finance will conduct appropriate due diligence in the selection of the Investment Advisor and will periodically confirm the Investment Advisor's qualifications by visiting its operational facilities that provide services to the Trust and HRSD.
- (b) A custodian to physically maintain possession of securities owned by the Trust, collect dividend and interest payments, redeem maturing securities, and effect receipt and delivery following purchases and sales, among other things. The custodian may also perform regular accounting of all assets owned, purchased, or sold, as well as movement of assets into and out of the Trust.
- (c) A trustee appointed by the Trust, such as a bank trust department, if the Trust does not have its own Trustees, to assume fiduciary responsibility for the administration of Trust assets; provided, however, that if the Administrator shall have appointed an investment advisor, then any trustee appointed under this paragraph shall have no authority with respect to selection of investments.

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(d) Specialists such as attorneys, auditors, actuaries and, retirement plan consultants to assist the Administrator in meeting its responsibilities and obligations to administer Trust assets prudently.

(3) HRSD members, staff, investment advisors, consultants and managers will refrain from engaging in any activity that impairs (or has the potential to impair) their ability to make impartial investment decisions for the Trust. Persons who nevertheless engage in such conduct will immediately disclose the conduct to the Administrator. HRSD members, staff, investment managers and advisers will also immediately disclose to the Administrator any activity engaged in by their respective firms, employers, employees and agents which conflicts (or has the potential to conflict) with the execution of HRSD's investment program for the Trust.

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

(1) **Funding.** The primary objective of the Administrator is to maintain the assets of the Trust at the funding level necessary to provide a pool of funds to be used to provide post-retirement welfare benefits to Plan participants. To obtain this objective the Administrator will diversify Trust assets and adopt an investment strategy consistent with the Trust's investment objectives.

(2) **Safety.** In order to maintain the safety of Trust assets the Administrator will:

(a) Invest assets of the Trust in a manner consistent with the following fiduciary standards: all transactions undertaken must be for the sole interest of Trust beneficiaries and defray reasonable expenses in a prudent manner, and assets are to be diversified in order to minimize the impact of large losses in individual investments.

(b) Conserve and enhance the value of Trust assets in real terms through asset appreciation and income generation, while maintaining a moderate investment risk profile.

(c) Minimize principal fluctuations over the Time Horizon (as defined below).

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- (d) Achieve a long-term level of return commensurate with contemporary economic conditions and equal to or exceeding the investment objective set forth in this policy under the Performance Expectations section of the Policy.
 - (3) **Liquidity.** The Trust's Investment Portfolio in combination with the projected net cash flows will provide sufficient liquidity to enable the Plan to meet all operating requirements which may be reasonably anticipated.
- E. **Investment Guidelines.** Within this section of the Policy, several terms will be used to articulate various investment concepts. The descriptions are meant to be general and may share investments otherwise considered to be in the same asset class. They are:
- (1) **Growth Assets** - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on capital appreciation. Investments within the Growth Assets category can include income and risk mitigating characteristics, so long as the predominant investment risk and return characteristic is capital appreciation. Examples of such investments or asset classes are: domestic and international equities or equity funds, private or leveraged equity, certain real estate investments, and hedge funds focused on equity risk mitigation or equity-like returns.
 - (2) **Income Assets** - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on income generation. Investments within the Income Assets category can include capital appreciation and risk mitigating characteristics, so long as the primary investment risk and return characteristic is income generation. Examples of such investments or asset classes are: fixed income securities, guaranteed investment contracts, certain real estate investments, and hedge funds focused on interest rate risk mitigation or income investment-like returns.
 - (3) **Real Return Assets** - a collection of investments and/or asset classes whose primary risk and return characteristics are focused on real returns after inflation. Investments within the Real Return category can include inflation protected securities, commodities, certain real estate investments and hedge funds.
- F. **Time Horizon.** The Trust's investment objectives are based on a market-cycle investment horizon so that interim fluctuations should be viewed with appropriate perspective. HRSD has adopted a long-term investment horizon

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such that the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets.

- G. **Liquidity and Diversification.** Trust will hold an adequate amount of protected liquidity needs for benefit payments and expenses in cash or cash equivalents, as determined necessary. The liquidity assets will be invested in accordance with statutory requirements applicable to liquid assets, as determined by the Administrator. The remaining assets will be invested in longer-term securities.

Investments will be diversified with the intent to minimize the risk of long-term investment losses. The total portfolio will be constructed and maintained to provide prudent diversification with regard to the concentration of holdings in individual issues, issuers, countries, governments or industries.

- H. **Asset Allocation.** The Administrator recognizes that asset allocation is one of the most important investment decisions that an investor makes. The Administrator or Investment Advisor, as appropriate, will allocate Trust assets in keeping with the Prudent Person Rule. The Administrator or Investment Advisor has determined that to achieve the greatest likelihood of meeting the applicable investment objectives and achieving the best balance between risk and return for optimal diversification, the Trust should allocate assets into two broad classes called Investment Assets and Liquidity Assets.

- (1) The Investment Assets will be invested in accordance with the targets for each asset class as follows to achieve an average total annual rate of return that is equal to or greater than the Trust's actuarial discount rate as described in the Section titled "Performance Expectations." The Liquidity Assets will be held in cash equivalent investments and used to pay for benefits and expenses of the Trust.
- (2) The Administrator, Investment Advisor, or Managers will have discretion to temporarily invest a portion of the assets in cash reserves when they deem it appropriate. However, the Investment Advisor and each Manager will be evaluated against their peers on the performance of the total funds under their direct management.



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INVESTMENT ASSETS

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

LIQUIDITY ASSETS

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

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

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

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

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

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- (7) The investment manager for portfolios other than Pooled Vehicles (see the following Guidelines for Portfolio Holdings) must confirm that it has received, understands and will adhere to this policy and any manager specific policies by signing a consent form.

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

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

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

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

- (a) **Growth Assets.**

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

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(1) **Domestic Equities.** Other than these constraints, there are no quantitative guidelines suggested as to issues, industry or individual security diversification. However, prudent diversification standards should be developed and maintained by the investment manager(s).

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

(b) **Income Assets.**

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

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

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

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

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

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opportunistic real estate fund where capital gains are expected to make up a significant portion of the total return.

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

(d) **Real Return Assets.**

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

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

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

(f) **Additional Limitations.**

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

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

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- Venture capital funds,
- Private equity,
- Hedge funds;

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

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

(g) **Control Procedures.**

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

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

- Change in investment advisors
- Initial use of investment vehicles other than mutual funds

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- Significant change in Trust assets
- Significant change in funded status
- Significant change in market conditions

(3) **Review of Investment Objectives.** The Administrator will review annually the appropriateness of the Policy for achieving the Trust's stated objectives. It is not expected that the Policy will change frequently. In particular, short-term changes in the financial markets should not require an adjustment in the investment policy.

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

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

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

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- Barclays U.S. Aggregate Bond Index will be used to benchmark the fixed income portfolio.

The categories "Other" will be benchmarked against appropriate indices depending on the specific characteristics of the strategies and funds used. The Administrator will also compare investment results with the Virginia Retirement System at the end of each fiscal year.

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

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

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

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

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4.4 ASSET CAPITALIZATION

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

A. Cost.

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

B. Useful Life.

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

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(2) The service lives for Capital Assets are as follows:

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

5.0 RESPONSIBILITY AND AUTHORITY

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

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

HRSD understands that changes in the capital markets or other unforeseen circumstances may from time to time produce situations that are not covered by the Policy and will require modifications or exceptions to achieve the Policy goals. In these cases, HRSD's management flexibility is appropriate provided specific authorization from the HRSD Commission is obtained. Failure to comply in any manner with the Policy will not result in any liability on the part of HRSD to any party.

HRSD, together with HRSD's financial advisor and legal counsel, will no less than bi-annually review the Policy and recommend appropriate changes.

Approved:  _____ Date 6/27/17

Attest:  _____ Date 6/27/17

Frederick N. Elofson
Commission Chair

Jennifer L. Cascio
Commission Secretary