



FINAL COMMISSION MEETING MINUTES
June 26, 2018

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

Commissioner Stephen Rodriguez requested approval to participate in today’s meeting starting at 10 a.m. due to a scheduling conflict.

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

The Commission watched a video of the [SWIFT Ribbon Cutting](#) ceremony prior to the start of the agenda.

1. **CONSENT AGENDA**

Action: Approve the items listed in the Consent Agenda.

Moved: Vishnu Lakdawala **Ayes:** 8

Seconded: Willie Levenston **Nays:** 0

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Awards
 - 1. [Condition Assessment Services](#) \$5,000,000
 - 2. [Construction Inspection Services](#) \$5,000,000
 - 3. [Employee Uniform and Personal Apparel Purchase Contract](#) \$1,099,040



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4.	Environmental Services	\$5,000,000
5.	Interceptor System Projects	\$5,000,000
6.	Nansemond Treatment Plant Solids Handling Locker Room Renovation	\$226,293
c.	Task Orders	
1.	Atlantic Treatment Plant Influent Screen Expansion	\$444,845
d.	Change Orders	
1.	Manhole Rehabilitation Project	\$95,470
2.	Sewerage System Improvements Division C, Phase II Replacement	\$312,608
e.	Sole Source	
1.	ASCO Power Services, Inc. / ASCO Power Technologies® Generator Control System Parts and Service	
2.	Landia, Inc. Landia Mixer, Replacement Parts and Service	
3.	Sherwood-Logan & Associates, Inc. Xylem YSI Ammonia Probes	

Item(s) Removed for Discussion: None

Attachment #1: [Consent Agenda](#)

Public Comment: None



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In anticipation of Commissioner Rodriguez's departure prior to the end of the meeting, Chair Elofson recommended items [12](#) - [13](#) be heard at this time.

2. **FINANCIAL POLICY**

Action: Approve the revised Financial Policy.

Moved:	Ann Templeman	Ayes:	8
Seconded:	Willie Levenston	Nays:	0

Brief: HRSD's financial operations are guided by its [Financial Policy](#) (Policy). The Policy was originally adopted in 2009 and most recently revised in 2017. It is the primary document that places parameters and defines management discretion and philosophies relative to the financial aspects of HRSD. The Policy covers areas such as reserves; budgetary principles and control; key financial metrics, internal controls and audits; debt affordability; and risk, debt, derivative and investment management.

The driver for this revision is to allow investments in the VML/VACo Virginia Investment Pool Trust Fund (VIP) ([see agenda item 3](#)) and to modify the 1-3 year benchmark to be consistent with the VIP benchmark.

Summary of Changes:

- Added VIP funds as allowable investments and modified the 1-3 year benchmark to the Merrill Lynch 1-3 Year U.S. Corporate & Government Index
- Allow the Operating Liquidity Strategy to be used for Self-Liquidity on debt financings
- Eliminate the current ratings on the Local Government Investment Pool (LGIP) to avoid having to modify the policy if it is downgraded

Discussion Summary: VML is a non-profit organization created by cities and counties, which allows a lower fee structure.

Attachment #2: [Financial Policy](#)

Public Comment: None



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3. VIRGINIA INVESTMENT POOL (VIP) TRUST FUND PARTICIPATION
RESOLUTION

Action: Approve the terms and conditions of the resolution authorizing participation in the Virginia Investment Pool Trust Fund for the purpose of investing funds belonging to HRSD in certain authorized investments in accordance with sections 2.2-4501 et seq. and 15.2-1300 of the Virginia code and authorize the Treasurer to execute the Trust Joinder Agreement, substantially as presented, together with such changes, modifications and deletions as the Treasurer may deem necessary.

Moved: Maurice Lynch **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

Description: VML/VACo Finance was established in 2003 by the Virginia Municipal League (VML) and Virginia Association of Counties (VACo) as a non-profit entity to address many of the financial needs of Cities, Counties, Towns, School Divisions, and Authorities in the Commonwealth of Virginia. VML/VACo pools the resources of local governments in order to provide superior financial services at lower cost. They offer two fixed income investments managed by Public Trust Advisors (PTA): VIP Stable NAV Liquidity Pool (“VIP Liquidity Pool”) and VIP 1-3 Year High-Quality Bond Fund (“VIP 1-3 Year Fund”). The VIP Liquidity Pool is a highly liquid fund that is similar to the Commonwealth’s Local Government Investment Pool (LGIP), which is where HRSD currently invests a portion of its operating funds. The VIP Liquidity Pool has outperformed the LGIP 91% of the time since its inception in November 2016, which would have increased our investment income by over \$25,000 in the last year. In addition, both funds are governed by a Board of Trustees that is elected by local government and authority participants, unlike the LGIP which is managed by Commonwealth’s Treasury office. The VIP 1-3 Year Fund has a similar performance to HRSD’s 1-3 Year portfolio, which is currently managed by PFM, but the management and custodial fees would be slightly lower. The three largest participants in the VIP are Arlington County, City of Virginia Beach and the Northern Virginia Transportation Authority.

Staff performed a due diligence site visit with PTA and were impressed by their operation and compliance procedures. PTA manages over \$30 billion in assets including state and local governments in Colorado, Michigan, New York, Texas, Florida, Indiana, Louisiana and Virginia. Also, attending the site visit and providing strong references were two VIP board members: the Washington County Treasurer and Arlington County Treasurer.



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Approval of the Financial Policy edits, which lists these funds as approved investments, is required to transfer HRSD's funds. The [Resolution](#) and [Trust Joinder Agreement](#) were both reviewed by legal counsel.

Attachment #3: [Resolution](#)

Public Comment: None



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4. **PROCUREMENT POLICY**

Action: Approve the revised policy.

Moved: Vishnu Lakdawala

Ayes: 8

Seconded: Elizabeth Taraski

Nays: 0

Brief: The attached [Procurement Policy](#) has been revised to reflect the changes in the Virginia Public Procurement Act (VPPA) related to competitive negotiations for professional services. [Appendix B](#) was updated to reflect the current name for the state SWaM site.

The VPPA requires local governing bodies to adopt specific policies defining local procedures for specific portions of the VPPA. Those requirements are met with this revision with the various appendices.

Attachment #4: [Procurement Policy](#)

Public Comment: None



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5. **HAMPTON TRUNK SEWER EXTENSION DIVISIONS I & J
RELOCATION PHASE II
MEMORANDUM OF UNDERSTANDING AMENDMENT AND TASK ORDER**

Actions:

- a. **Approve the terms and conditions of FIRST AMENDMENT to the Memorandum of Understanding (MOU) between HRSD and Hampton University for relocation of the HRSD force main on the Hampton University campus and authorize the General Manager to execute same, substantially as presented together with such changes, modifications and deletions as the General Manager may deem necessary.**
- b. **Approve a task order with Kimley-Horn and Associates, Inc. (KHA) in the amount of \$956,800.**

Moved: Ann Templeman **Ayes:** 8
Seconded: Willie Levenston **Nays:** 0

CIP Project: BH014220

Budget	\$13,644,089
Previous Expenditures and Encumbrances	(\$86,482)
Available Balance	\$13,557,607

Contract Status:	Amount
Original Contract with KHA	\$85,020
Total Value of Previous Task Orders	\$0
Requested Task Order	\$956,800
Total Value of All Task Orders	\$956,800
Revised Contract Value	\$1,041,820
Engineering Services as % of Construction	9.5%

Project Description: This project includes replacing the existing force main (approximately 7,500 linear feet of 30-inch) originating from the Willard Avenue Pump Station connecting to a point east of the Bridge Street Pump Station in Hampton. In addition, the project will require reconnection of three existing pump stations to the new force main and abandonment of the existing force main.



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Agreement Description: In September of 2012, the Commission approved an [MOU](#) with Hampton University to address concerns expressed by Hampton University about a large interceptor running through a highly developed portion of their campus along with HRSD’s concerns about access for maintenance or emergency repairs. While HRSD had a need to replace this pipeline both due to the age of the existing pipe and potentially to meet wet weather capacity requirements, placing the pipe in a new alignment, off of Hampton University property would increase the cost of this project. As a result, Hampton University agreed to pay \$1 million, the estimated additional cost to relocate the new line, upon completion of this project. Total project estimate at the time was \$11.68 million with preliminary design slated to begin in FY-2014 and construction completed in 2018.

Other pressing capital investment needs delayed this project well beyond the originally projected completion date and schedule as included the MOU with Hampton University. We still need their cooperation and access to their property but no longer believe it is appropriate to require a cost share for this project with them. Their willingness to share the cost was based on their expressed urgency to have the force main relocated off the campus. Our delays have negated that urgency. As a result the agreement is proposed to be [amended](#) to reflect the elimination of the cost share and the new project schedule.

Task Order Description and Analysis of Cost: This task order will provide for the design and pre-construction phase services for the new force main. The new force main will be located outside the limits of the Hampton University property. The cost for this task order was negotiated between KHA and HRSD. A current construction cost estimate for this project is approximately \$11,000,000. The design fee includes \$848,300 for design, \$27,500 for bid phase services, and \$81,000 for additional services. The costs compare favorably to other similar force main projects.

<u>Schedule:</u>	Design	July	2018
	Bid	August	2019
	Construction	December	2019
	Project Completion	May	2022

Discussion Summary: Staff described the location of the project in relation to the bridge over the Hampton River near Settler’s Landing.

Attachment #5: [Agreement](#)

Public Comment: None



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6. **OLD DOMINION UNIVERSITY RESEARCH FOUNDATION
SURFACE CHLOROPHYLL A DISTRIBUTIONS IN THE LOWER JAMES RIVER
ESTUARY AGREEMENT**

Action: Approve Old Dominion University (ODU) Research Foundation as a provider of continued services to conduct research studies of Surface Chlorophyll A Distributions in the Lower James River Estuary for HRSD.

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

Project Description: The ODU Research Foundation is conducting research studies on the relationship between Surface Chlorophyll A Distributions, Dinoflagellate Abundance and Specification, and Depth-Integrated Chlorophyll Concentrations in the Lower James River Estuary for the Technical Services Division (TSD).

This is a continuation of the [study](#) which is designed to improve the scientific understanding of the dynamics of harmful algal blooms (HABs) that periodically occur in the Hampton Roads area. The severity and duration of HABs directly affect compliance with existing and pending revisions to Chlorophyll water quality standards in the lower James River. The subject matter is highly complex and requires multiple years of dedicated research to address the study objectives because of the unpredictable nature of HAB occurrence.

Attachment #6: [Study](#)

Public Comment: None



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7. **NANSEMOND TREATMENT PLANT LAND ACQUISITION – LAND STABILIZATION
ADDITIONAL APPROPRIATION AND TASK ORDER (>\$200,000)**

Actions:

- a. **Appropriate additional funding in the amount of \$3,894,789**
- b. **Approve a task order with Kimley-Horn and Associates, Inc. in the amount of \$447,690.**

Moved: Michael Glenn **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

CIP Project: NP013500

Budget	\$1,840,000
Previous Expenditures and Encumbrances	(\$99,480)
Available Balance	\$1,740,520
Proposed Task Order to Kimley-Horn and Associates	(\$447,690)
Project Shortage/Requested Additional Funding	(\$3,894,789)
Revised Total Project Authorized Funding	\$5,734,789

Engineering Services as % of Construction 15.9%

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 Treatment Plant (NTP), between I-664 and Skeeters Creek. Stabilization will incorporate living shoreline design elements and stone armoring to stabilize the 12 to 15 foot tall eroding banks. An access road from Armstead Road to the shoreline will be included in this project. Additionally, work will be completed to stabilize eroding channel banks and provide support for a force main that crosses a tidal creek which is a tributary to Skeeters Creek just south of the existing treatment plant.

Funding Description: The initial appropriation for this project was approved in June 2017. Since that time, the project scope has increased to include a living shoreline design, new access road and design elements to allow for a future pier, parking lot and public access pathway. The additional appropriation requested is in agreement with the budget included in the FY-2019 to FY-2028 CIP.



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Task Order Description and Analysis of Cost: This task order will provide for design phase engineering services for Nansemond Treatment Plant Land Acquisition – Land Stabilization. The cost for this task order is based on a negotiated scope and fee with Kimley-Horn. The Engineering Services is 15.9% of the estimated cost of construction. The Design fee is 13.0% of the estimated cost of construction. Although the design percentage is higher than typical projects, this property is a Superfund site and will require a robust sampling program which will result in higher than normal costs.

<u>Schedule:</u>	Feasibility Studies	May 2018
	Design	July 2018
	Bid	July 2019
	Construction	October 2019
	Project Completion	October 2020

Discussion Summary: A fence will be installed to separate public access from the treatment plant. The appropriation for the land purchase was approved by the Commission in 2017.

Attachment: None

Public Comment: None



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8. **KECOUGHTAN ROAD, HAMPTON
DISPOSITION OF EASEMENT TO THE CITY OF HAMPTON**

Actions:

- a. **Accept the terms and conditions of the Quitclaim Deed of Assignment for the transfer of an existing 2,925 square foot sewer line easement along the 4300 block of Kecoughtan Road to the City of Hampton.**
- 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.**
- c. **Authorize assignment of easement to the City of Hampton.**

Moved: Michael Glenn **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

Project Description: The City of Hampton is replacing its pump station on Kecoughtan Road, and as part of the replacement project, they will be upsizing their existing force main from 2-inch to 4-inch that is currently located in an HRSD-owned easement along the 4300 block of Kecoughtan Road. The easement was originally acquired through a quitclaim process in the 1940s. The City of Hampton has been utilizing this easement for their 2-inch line, but would like to formalize the ownership of the easement for the force main replacement. Placement of the new 4-inch force main within the adjacent right-of-way is not an option due to lack of available space. This request was routed to HRSD Operations staff who determined that easement was no longer needed as current infrastructure is located in City right-of-way.

Funding Description: No funding required.

Agreement Description: The [Quitclaim Deed of Assignment](#) was reviewed by HRSD legal counsel. A facilities orientation [map](#) is also provided for clarification purposes.

Attachment#7: [Quitclaim Deed and Map](#)

Public Comment: None



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Discussion Summary: While the Commission approved the acquisition of the easement by condemnation, if necessary, at the April 24, 2018 meeting, staff was able to negotiate a reasonable agreement with the owner.

Attachment #8: [Purchase Agreement, Deed and Map](#)

Public Comment: None



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10. VIRGINIA INITIATIVE PLANT SWIFT LAND ACQUISITION
INITIAL APPROPRIATION

Action: Appropriate funding in the amount of \$15,000,000.

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

CIP Project: GN016341

Project Description: This project purchases land adjacent to the Virginia Initiative Plant (VIP) from the City of Norfolk to construct SWIFT advanced treatment facilities.

Brief: At the March 27, 2018 meeting, the HRSD Commission approved an [agreement](#) with the City of Norfolk to purchase a portion of the Lamberts Point Golf Course for expansion of the VIP treatment plant to include SWIFT advanced treatment facilities. That agreement required development of a [subdivision plat](#) acceptable to the City of Norfolk and HRSD as well as a rezoning to accommodate HRSD's intended use. The preliminary subdivision plat has been [approved](#) through June 1, 2024. The rezoning is scheduled to be considered by Norfolk City Council on June 26, 2018.

HRSD will pay \$15,000,000 to the City of Norfolk for the non-revocable option to purchase the parcel created with the approved subdivision plat in accordance with the agreement subject to the approval of the rezoning. Staff anticipates approval and wiring the funds to Norfolk on June 27, 2018.

In accordance with the agreement, the option must be exercised no earlier than January 1, 2023 and no later than December 31, 2023. An additional payment of \$15,000,000 will be due at that time. Failure to exercise the option will result in a forfeiture of the option fee.

Attachment #9: [Agreement, Plat and City Approval](#)

Public Comment: None



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11. **ETHICS POLICY**

Action: Approve revised Ethics Policy.

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

Brief: SC&H recently conducted an internal audit of the administrative procedures related to the Ethics Policy. During the review, several changes to help reduce risk and increase process efficiency and effectiveness were suggested to the [Ethics Policy](#), which have been incorporated into the attached document. Staff also recommended changes to the policy related to intern positions.

The Operations & Nominations (O&N) Committee met on May 22, 2018 to review the proposed changes. Legal counsel has reviewed the policy.

Discussion Summary: The Commission asked about consequences of violating the Ethics Policy. Staff stated formal progressive discipline actions will be taken up to and including termination of employment.

Attachment #10: [Policy](#)

Public Comment: None



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12. **COMMISSION GOVERNANCE GUIDELINES**

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

Moved: Willie Levenston (Committee recommendation) **Ayes:** 7

Seconded: Michael Glenn **Nays:** 1 (Maurice Lynch)

Brief: The O&N Committee regularly reviews the Commission Governance Guidelines. The O&N Committee present their recommended changes to the full Commission along with several “housekeeping measures” proposed by staff in the attached [document](#).

Discussion Summary: Committee Chair Levenston stated the Committee reviewed the Commission Governance Guidelines, Remote Participation and Ethics policies. The Committee’s review of the Governance Guidelines focused on the term limits. After much discussion, the Committee concluded term limits created unnecessary complications to the nomination process. As a result, the Committee recommends the removal of term limits for the chair and vice-chair positions from the Commission Governance Guidelines. The Commissioners should be able to elect leadership from within their membership without additional constraints in accordance with the Enabling Act. This practice also aligns with other Governor-appointed boards. The Committee agreed with the few housekeeping changes proposed by staff in addition to the deletion of term limits and recommended approval of these changes to the Commission.

Commissioner Lynch shared his opposition to the proposed changes. He suggested a rotation through Chair and Vice-Chair at shorter intervals. Commissioner Rodriguez said he reviewed bylaws of other Governor-appointed boards and found no term limits on the Chair and Vice-Chair positions on the boards on which he could get details. Commissioner Rodriguez stated that term limits should be established through the nomination process with guidance to ensure the tenure of the Commissioners do not end on the same date.

Attachment #11: [Governance Guidelines](#)

Public Comment: None



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13. **ELECTION OF OFFICERS**

Action: Elect a Chair and Vice-Chair of the Commission for Fiscal Year 2019.

The Operations & Nominations Committee nominated Frederick Elofson as Chair and Maurice Lynch as Vice-Chair of the Commission for Fiscal Year 2019.

<u>Moved:</u>	Willie Levenston (Committee Recommendation)	<u>Ayes:</u>	8
<u>Seconded:</u>	Recommendations from a committee do not require a second.	<u>Nays:</u>	0

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

Discussion Summary: Chair Elofson reminded the Commission that officers are elected annually. The O&N Committee can make changes as they discuss the process with each Commissioner during the nomination period. He believes a turnover is appropriate at an interval to be determined by the Commission.



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14. **UNFINISHED BUSINESS – None**

15. **NEW BUSINESS – None**

16. **COMMISSIONER COMMENTS**

Commissioner Glenn commended staff on the quick negotiation of the agreement with the City of Norfolk to purchase a portion of the Lamberts Point Golf Course for expansion of the VIP treatment plant.

Chair Elofson thanked the Commission for their vote of confidence in his re-election as Chair.

Chair Elofson read the following excerpt from the General Manager's monthly report:

"The opening of the SWIFT Research Center is just one more example of what HRSD can accomplish with our talented and dedicated staff. As I mentioned in my remarks at the ribbon cutting, I am proud of what our team accomplished, but even more proud of how they accomplished it – with joy, energy, passion and a firm belief that what they do matters. I know you share my pride."

Speaking on behalf of the Commission, Chair Elofson echoed those sentiments and thanked the staff for their hard work. He stated that HRSD's national recognition as a leader can be attributed to its culture of open thought, innovative solutions and Commission support of well-defined experimenting.

Commissioner Lynch said the contractors he spoke to at the ribbon cutting ceremony were encouraged by the employees' passion.

Commissioner Lynch thanked staff for the weekly communication of HRSD-related news stories.

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



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18. **INFORMATIONAL ITEMS**

Action: No action required.

Brief: The items listed below were presented for information.

- a. [Management Reports](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)
- e. [Emergency Declaration - Williamsburg Treatment Plant Emergency Generator Rental, Repairs and Associated Electrical Services](#)

Attachment #12: [Informational Items](#)

Public Comment: None

Next Commission Meeting Date: July 31, 2018 at the HRSD North Shore Operations Center, 2389 G. Avenue, Newport News, VA 23602

Meeting Adjourned: 9:43 a.m.

SUBMITTED:

Jennifer L. Cascio

Jennifer L. Cascio
Secretary

APPROVED:

Frederick N. Elofson

Frederick N. Elofson, CPA
Chair

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ATTACHMENT #1

AGENDA ITEM 1. – Consent Agenda

CONSENT AGENDA ITEM 1.b.1.– June 26, 2018

Subject: Condition Assessment Services
Contract Award (>\$200,000)

Recommended Action: Award an annual services contract for Condition Assessment Services to Hazen and Sawyer, P.C. to become effective July 1, 2018 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 March 11, 2018. Nine firms submitted proposals on April 10, 2018 and all nine firms were determined to be responsive and deemed fully qualified, responsible and suitable to the requirements in the Request for Proposals. Two firms were shortlisted, interviewed and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
Hazen and Sawyer, P.C.	86	1
HDR Engineering, Inc.	83	2

The Selection Committee recommends award of the Condition Assessment Services annual services contract to Hazen and Sawyer, P.C. whose professional qualifications and proposed services best serve the interest of HRSD. This contract will become effective on July 1, 2018.

Contract Description and Analysis of Cost: This contract is an agreement for infrastructure condition assessment of treatment plants, pump stations and collection systems to be provided by Hazen and Sawyer on a task by task basis to serve the entire organization. This work will be conducted in accordance with the Consent Decree with the EPA and our Management, Operations, and Maintenance (MOM) Program. 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. The workforce categories, rates, handling costs for sub-consultants, and direct reimbursable costs were negotiated for the first contract year of this renewable contract.

CONSENT AGENDA ITEM 1.b.2. – June 26, 2018

Subject: Construction Inspection Services
Contract Award (>\$200,000)

Recommended Action: Award an annual services contract for Construction Inspection Services to McDonough Bolyard Peck to become effective July 1, 2018 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 March 4, 2018. Three firms submitted proposals on April 10, 2018 and all three firms were determined to be responsive and deemed fully qualified, responsible and suitable to the requirements in the Request for Proposals. Three firms were shortlisted, interviewed and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
McDonough Bolyard Peck	93	1
Gannett Fleming, Inc.	88	2
Certified Construction Management of Virginia	69	

The Selection Committee recommends award of the Construction Inspection Services annual services contract to McDonough Bolyard Peck whose professional qualifications and proposed services best serve the interest of HRSD. This contract will become effective on July 1, 2018.

Contract Description and Analysis of Cost: This contract is an agreement for construction inspection services to be provided by McDonough Bolyard Peck 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. The workforce categories, rates, handling costs for sub-consultants, and direct reimbursable costs were negotiated for the first contract year of this renewable contract.

CONSENT AGENDA ITEM 1.b.3. – June 26, 2018

Subject: Employee Uniform and Personal Apparel Purchase Contract
Contract Award (>\$200,000)

Recommended Action: Award a contract for employee standard and arc rated uniforms and personal apparel to Unifirst Corporation in the estimated amount of \$219,808 for year one with four annual renewal options and an estimated cumulative value in the amount of \$1,099,040 (amounts exclude personal apparel purchases).

Type of Procurement: Competitive Negotiation

Proposers	Technical Points	Recommended Selection Ranking
Unifirst Corporation	87	1
Tyndale Enterprises Inc. DBA Tyndale Company Inc.	85	2
Cintas Corp 2	45	3

HRSD Estimate:

\$ 219,808/year

Contract Description: This contract is an agreement for the supply and delivery of standard and arc rated uniforms and personal apparel purchases by all of HRSD. A Public Notice was issued on February 5, 2018. Three Offerors submitted proposals on March 23, 2018 and all were determined to be responsive and deemed qualified, responsible and suitable to the requirements in the Request for Proposal. All three were technically ranked, interviewed and provided garment samples as part of evaluation. The proposal and garment samples submitted by Unifirst were ranked by technical points to be the most advantageous.

Analysis of Cost: All three Offerors provided pricing schedules based on a range of garments typically ordered by HRSD employees. Unifirst provided the best quality product for the least overall cost.

CONSENT AGENDA ITEM 1.b.4. – June 26, 2018

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

Recommended Action: Award an annual services contract for Environmental Services to Tetra Tech, Inc. to become effective July 1, 2018 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 February 25, 2018. Four firms submitted proposals on March 29, 2018 and all four firms were determined to be responsive and deemed fully qualified, responsible and suitable to the requirements in the Request for Proposals. Three firms were shortlisted, interviewed and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
Tetra Tech, Inc.	97	1
Kimley-Horn and Associates, Inc.	93	2
Froehling and Robertson, Inc.	76	

The Selection Committee recommends award of the Environmental Services annual services contract to Tetra Tech, Inc. whose professional qualifications and proposed services best serve the interest of HRSD. This contract will become effective on July 1, 2018.

Contract Description and Analysis of Cost: This contract is an agreement for environmental services including wetlands and stream permitting, environmental compliance, environmental impact, regulatory permitting, water quality and HAZMAT investigations, above ground and underground tank management, stormwater services and environmental health and safety services to be provided by Tetra Tech, Inc. 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. The workforce categories, rates, handling costs for sub-consultants, and direct reimbursable costs were negotiated for the first contract year of the renewable contract.

A review of the proposed rates for the period July 1, 2018 - June 30, 2019 as compared to the same period for 2017-2018 as negotiated with Kimley-Horn and Associates, Inc. showed that Tetra Tech's rates are comparable and reasonable for the unique aspects of the anticipated work.

CONSENT AGENDA ITEM 1.b.5. – June 26, 2018

Subject: Interceptor System Projects
Contract Award (>\$200,000)

Recommended Action: Award a professional services annual contract agreement to Rummel, Klepper & Kahl, LLP for the Interceptor System Projects, to become effective July 1, 2018, 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 February 18, 2018. Seven firms submitted proposals on April 4, 2018 and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the requirements in the Request for Proposals. Three firms were short-listed, interviewed, and technically ranked as listed below:

Proposers	Technical Points	Recommended Selection Ranking
Rummel, Klepper and Kahl, LLP	86	1
Michael Baker International, Inc.	85	2
Whitman, Requardt and Associates, LLP	83	

The Selection Committee recommends award of the Interceptor System Projects annual services contract to Rummel, Klepper and Kahl, LLP, whose professional qualifications and proposed services best serve the interest of HRSD. The contract will become effective on July 1, 2018.

Contract Description and Analysis of Cost: This annual service contract will provide professional services including preliminary engineering report services, design services, pre-construction services, contract administration services, field engineering and inspection services, startup and testing services, operations and training services, and post-startup and certification services for Interceptor System Projects and for other projects related to the interceptor system. The workforce categories, rates, and direct reimbursable costs were negotiated for the first contract year of the renewable contract. These costs compare favorably to other similar work efforts and the rates used in 2017-2018 by the previous firm who held this contract.

CONSENT AGENDA ITEM 1.b.6. – June 26, 2018

Subject: Nansemond Treatment Plant Solids Handling Locker Room Renovation
Contract Award (>\$200,000)

Recommended Action: Award a contract to Vast Solutions of Virginia, LLC in the amount of \$226,293.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Vast Solutions of Virginia, LLC	\$226,293

HRSD Estimate: \$195,000

Contract Description: This contract is an agreement for all labor, material and equipment required to complete the renovation of the solids handling locker room at the Nansemond Treatment Plant. Scope of work includes demolition, reconfiguration of layout and installation of new HVAC, plumbing and electrical fixtures and components.

An initial apparent low, responsive, responsible bid was received from Allfirst, LLC. During evaluation, Allfirst discovered a calculation error which would have brought their total bid cost to \$223,033. Pricing could not be adjusted after the bid closing and the request to have their bid withdrawn was reviewed and approved by the Procurement Office.

Analysis of Cost: Hourly labor costs were compared to past and current contracts for similar type of renovations and found to be fair and reasonable.

CONSENT AGENDA ITEM 1.c.1 – June 26, 2018

Subject: Atlantic Treatment Plant Influent Screen Expansion
Task Order (>\$200,000)

Recommended Action: Approve a task order with HDR Engineering, Inc. in the amount of \$444,845

CIP Project: AT0139000

Budget	\$2,152,435
Previous Expenditures and Encumbrances	(\$61,245)
Available Balance	\$2,091,190

Contract Status:	Amount
Original Contract with HDR	\$61,245
Total Value of Previous Task Orders	\$0
Requested Task Order	\$444,845
Total Value of All Task Orders	\$444,845
Revised Contract Value	\$506,090
Engineering Services as % of Construction	29%

Project Description: This project will install a fourth influent screen in the Preliminary Treatment Facility (PTF) Building of the Atlantic Treatment Plant. The PTF Building was designed for four screens and three screens were installed in the last upgrade of the plant. The project will include the screen, washer/compactor, diverter chute, platform and non-potable water booster pump and strainer.

Task Order Description and Analysis of Cost: This task order will provide design phase services, bid support assistance, and services during construction including contract administration and field engineering and inspection. The Preliminary Engineering Report estimates the project construction cost to be \$1,764,000 for a perforated flow-through type influent screen. The design phase services fee is 11.8 percent of construction and the construction phase services fee is 11.2 percent, which are reasonable compared to other projects of similar complexity.

<u>Schedule:</u>	PER	April 2018
	Design	July 2018
	Bid	December 2018
	Construction	March 2019
	Project Completion	February 2020

CONSENT AGENDA ITEM 1.d.1 – June 26, 2018

Subject: Manhole Rehabilitation Project
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with Progressive Environmental Services LLC in the amount of \$95,470.

CIP Project: GN012130

Budget	\$2,834,000
Previous Expenditures and Encumbrances	(\$608,590)
Available Balance	\$2,225,410

Contract Status:	Amount	Cumulative % of Contract
Original Contract with Progressive Environmental Services LLC	\$125,503	
Total Value of Previous Change Orders	\$0.00	0%
Requested Change Order No. 1	\$95,470	
Total Value of All Change Orders	\$95,470	76.07%
Revised Contract Value	\$220,973	

Time (Additional Calendar Days)	0
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Project Description: This project will currently rehabilitate 91 manholes identified as having material risk of failure or significant Inflow/Infiltration (I/I) during condition assessment activities. These manholes have isolated issues with respect to the surrounding system and are not currently known to be included in any existing CIP projects for rehabilitation or replacement. This project will also address and rehabilitate six siphon chambers that are not already included with other Interceptor projects. The siphon chambers are: FLWCTRL-NG-129-5762, FLWCTRL-NG-149-977, FLWCTRL-NG-149-980, FLWCTRL-NG-169-4486, FLWCTRL-NG-169-4487, FLWCTRL-SG-191-1924. FLWCTRL-SG-191-1924 will only be a partial rehabilitation in order to stop infiltration and replace the deteriorated frame and cover as this structure is slated to be abandoned with the Suffolk PS CIP project.

Change Order Description: This change order includes a change in conditions. Conditions of manholes were found to be worse than expected. Additional rehabilitation efforts will be required, including but not limited to, additional grout and mastic repairs, frame and cover replacements due to excessive deterioration and additional efforts for surface preparation before coating.

Analysis of Cost: The cost of this change order is based on the rates provided in the cooperative contract with James City County Authority as well as the project manager's knowledge of past work on similar manhole rehabilitations.

<u>Schedule:</u>	PER	June 2013
	Design	April 2017
	Bid	March 217
	Construction	June 2017
	Project Completion	April 2021

CONSENT AGENDA ITEM 1.d.2. – June 26, 2018

Subject: Sewerage System Improvements Division C, Phase II Replacement
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order with T.A. Sheets General Contractors, Inc. in the amount of \$312,608.

CIP Project: VP011600

Budget	\$ 2,031,000
Previous Expenditures and Encumbrances	(\$ 1,512,977)
Available Balance	\$ 518,023

Contract Status:	Amount	Cumulative % of Contract
Original Contract with T.A. Sheets	\$ 978,330	
Total Value of Previous Change Orders	\$ 0	0 %
Requested Change Order No. 1	\$ 312,608	
Total Value of All Change Orders	\$ 312,608	32 %
Revised Contract Value	\$ 1,290,938	

Time (Additional Calendar Days)	54
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Project Description: This project is to study, design and construct a replacement 24-inch ductile iron force main for approximately 1,680 linear feet of 30-inch reinforced concrete force main. The replacement alignment is in the Elm Avenue right of way and roughly the same length as the original pipe. Additionally, HRSD will enter into a cost-sharing agreement with the City of Portsmouth to abandon a 6-inch water line that was constructed in the early 1900s.

Change Order Description and Analysis of Cost: This project is now complete and this closeout change order includes the following changed conditions:

- Additional roadway restoration: the removal of an unmarked, abandoned utility created a void in the subgrade and the need for additional pavement replacement
- Deteriorated storm drainage pipe replacement
- Lost time, relating to water line abandonment and multiple unknown/unmarked utilities

The Engineer prepared an independent estimate of costs and recommends approval of these changes.

Schedule:	PER	November 2014
	Design	March 2015
	Bid	March 2017
	Construction	July 2017
	Project Completion	April 2018

CONSENT AGENDA ITEM 1.e.1. – June 26, 2018

Subject: ASCO Power Services, Inc.
ASCO Power Technologies® Generator Control System Parts and Service
Sole Source (>\$10,000)

Recommended Action: Approve ASCO Power Services, Inc. as the provider of repair services for the ASCO Power Technologies® generator control system in use at the Nansemond 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 repairs, hardware replacement, software programming, licensing and all technical operational adjustments to the ASCO Power Technology® generator control system. The generator control system allows for automatic start of all generators, synchronizes them and transfers plant loads to the generators.

ASCO Power Services, Inc. is the only factory authorized service maintenance provider in Virginia.

CONSENT AGENDA ITEM 1.e.2. – June 26, 2018

Subject: Landia, Inc.
Landia Mixer, Replacement Parts and Service
Sole Source (>\$10,000)

Recommended Action: Approve Landia, Inc. as the provider of Landia Mixer, Replacement Parts and Service for use at the York 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: Product includes one submersible Landia mixer and various replacement parts for mixing in the DEMON[®] process. This mixer ensures that the Anammox microorganisms stay in suspension and are mixed well with the centrate to reduce the ammonia throughout the treatment process and decrease usage of methanol. Replacement parts include, but not limited to, propeller and hardened wear bush. The mixer and replacement parts act as a drop in place replacement without modifications to the existing DEMON[®] treatment tank rail system.

Landia, Inc. is the only authorized manufacturer and authorized service provider for Landia equipment in Virginia.

CONSENT AGENDA ITEM 1.e.3. – June 26, 2018

Subject: Sherwood-Logan & Associates, Inc.
Xylem YSI Ammonia Probes
Sole Source (>\$10,000)

Recommended Action: Approve Sherwood-Logan & Associates, Inc. as the provider of YSI Ammonia Ion Selective Electrodes (ISEs) and associated parts for use at HRSD.

Sole Source Justification:

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

Details: Product includes YSI ammonia ISEs. These probes are operationally necessary for the proper function of ammonia-based aeration controls systems to maintain stable and high quality effluent in terms of total nitrogen. Based on significant comparative test data, these probes have been found to perform much better than the existing Hach brand ammonia probes, in particular at the lower ammonia concentrations needed in SWIFT secondary effluent applications.

The Operations Department has begun the replacement of Hach ammonia probes with the YSI ammonia ISEs across HRSD in an effort to standardize equipment, to achieve more reliable and consistent performance and to generate more cost effective solutions for process control.

Sherwood-Logan & Associates, Inc. is the only current authorized distributor for Virginia.

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #2

AGENDA ITEM 2. – Financial Policy

COMMISSION ADOPTED POLICY
Financial Policy



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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. This strategy may be utilized to provide Self-Liquidity on debt financings.
 - (2) The **Total Return Strategy** consists of operating funds that are not expected to be a major source of HRSD's day-to-day disbursement requirements and operational needs. The Total Return Strategy may therefore be invested in longer-term securities in order to generate an investment return, which, over time, is higher than the total return of the Operating Liquidity Strategy. 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.
- (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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(14) **Virginia Investment Pool Trust Fund (VIP) Stable NAV Liquidity Pool.** This pool supports the cash management needs of municipalities, other governmental agencies and political subdivisions in Virginia that must manage investments conservatively. The objective of the fund is to obtain a competitive market yield on available financial assets consistent with the constraints imposed by the safety objectives, cash flow considerations and the laws of the Commonwealth of Virginia that govern the placement of public funds while facilitating daily liquidity and the maintenance of a stable Net Asset Value, with the price of shares in the portfolio targeted to maintain a value of \$1.00. The fund is governed by the Board of Trustees of the VIP.

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

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

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

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%

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

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

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

- (1) The **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-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

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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 Operating Liquidity Strategy and the Total Return Strategy may be used to support such obligations, if necessary, provided that HRSD will not be legally obligated to pledge such funds for such purpose. The investments identified to provide self-liquidity coverage will be sufficient to meet the quality, volatility, liquidity, and maturity guidelines of the NRSRO's then providing ratings on HRSD's debt obligations. If needed, HRSD is permitted to purchase its own debt on a temporary basis or for the retirement of the debt. Such purchase will not be limited to the sector and issuer diversification limits as set forth in the Portfolio Diversification section of this policy or the maximum maturity requirement as set forth in the Capital Investment Strategy section of this Policy.
- I. **Investment of Bond Proceeds.** HRSD intends to comply with all applicable sections of the Internal Revenue Code as it relates to Arbitrage Rebate and the investment of bond proceeds. All investment records will be maintained to ensure compliance with all regulations.
- J. **Collateralization of Bank Deposits.** All bank deposits of HRSD should be considered Public Deposits as defined by Code of Virginia Security for Public Deposits Act (Section 2.2-4400 et seq.) and all deposits must be made with Qualified Public Depositories within the meaning of such law.
- K. **Selection of Broker/Dealers.** All broker/dealers who desire to provide investment services to HRSD will be provided with current copies of HRSD's Financial Policy. Before an organization can provide investment services to HRSD, it must confirm in writing that it has received and reviewed HRSD's Financial Policy.
 - (1) At the request of the Director of Finance, broker/dealers will supply HRSD with information sufficient to adequately evaluate their financial

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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
 - (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

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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, 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.

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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. Corporate & Government Index over three-year periods
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 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;

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- (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.
- 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.

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- (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:
 - (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

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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.
 - (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

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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).
 - (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.

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- 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 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.

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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.

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%



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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.

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.

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- 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.
 - (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

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

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

COMMISSION ADOPTED POLICY
Financial Policy



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(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
- 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.

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- (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;
- 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

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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.

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.

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Financial Policy



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

B. Useful Life.

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

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

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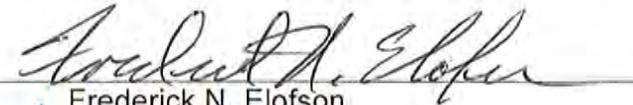
5.0 RESPONSIBILITY AND AUTHORITY

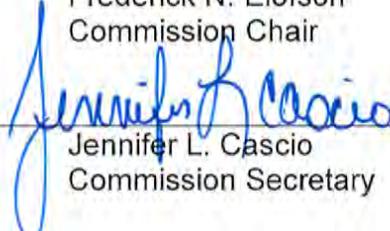
These financial policies were created after much study and evaluation and were specifically adopted by the Commission. They were developed subject to the confines of HRSD's Trust Agreement, its Enabling Act and the Code of Virginia. Any changes and exceptions to these policies will be made in writing 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:  _____ 6/26/18
Frederick N. Elofson
Commission Chair
Date

Attest:  _____ 6/26/18
Jennifer L. Cascio
Commission Secretary
Date

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #3

AGENDA ITEM 3. – Virginia Investment Pool Trust Fund Participation Resolution

A RESOLUTION AUTHORIZING PARTICIPATION IN THE VACO/VML VIRGINIA INVESTMENT POOL FOR THE PURPOSE OF INVESTING FUNDS BELONGING TO THE HAMPTON ROADS SANITATION DISTRICT IN CERTAIN AUTHORIZED INVESTMENTS IN ACCORDANCE WITH SECTIONS 2.2-4501 *et seq.* AND 15.2-1300 OF THE VIRGINIA CODE.

WHEREAS, pursuant to the Hampton Roads Sanitation District Commission Enabling Act, the Virginia General Assembly established Hampton Roads Sanitation District (“HRSD”) as a regional political subdivision of the Commonwealth of Virginia and the Hampton Roads Sanitation District Commission (“Commission”) as its governing body, and further authorized the Commission, among other things, to make rules and regulations for the conduct of HRSD’s affairs, to enter into contracts and agreements, to do all acts necessary and incidental to the performance of its duties including making choices concerning the investment of its funds and investing its funds; and

WHEREAS, the Investment of Public Funds Act (Va. Code §§ 2.2-4500 through 2.2-4519) lists the eligible categories of securities and investments in which municipal corporations, other political subdivisions and other public bodies are authorized to invest funds belonging to them or within their control; and

WHEREAS, Section 15.2-1300 of the Virginia Code provides that any power, privilege or authority exercised or capable of exercise by any political subdivision of the Commonwealth of Virginia may be exercised and enjoyed jointly with any other political subdivision having a similar power, privilege or authority pursuant to agreements with one another for joint action in accordance with the provisions of that Code section; and

WHEREAS, the City of Chesapeake, Virginia and the City of Roanoke, Virginia have jointly established and are participating in the Virginia Investment Pool Trust Fund (the “Trust Fund”), also known as the “VACo/VML Virginia Investment Pool,” and have

provided in their trust agreement for participation by other eligible governmental entities that execute a trust joinder agreement; and

WHEREAS, it appearing to the Commission, that it is in the best interests of HRSD to become a Participating Political Subdivision in the Trust Fund; and

WHEREAS, the Commission authorizes the individual holding the title of Director of Finance/Treasurer, to be the Chief Investment Officer of the Hampton Roads Sanitation District, and thereby confirms that the Director of Finance/Treasurer has the authority and responsibility under Virginia law to determine the manner in which funds under his control will be invested;

**NOW, THEREFORE THE COMMISSION OF THE HAMPTON ROADS
SANITATION DISTRICT HEREBY RESOLVES:**

§ 1 That, pursuant to Sections 2.2-4501 *et seq.* and 15.2-1300 of the Virginia Code, the Hampton Roads Sanitation District Commission hereby establishes a trust for the purpose of investing funds, other than sinking funds, determined to derive the most benefit from this investment strategy, in investments authorized under the Investment of Public Funds Act, jointly with other participating political subdivisions and public bodies in the Trust Fund. A copy of the Virginia Investment Pool Trust Fund Agreement (“Trust Fund Agreement”) is attached and incorporated in this resolution as Exhibit A.

§ 2 That the Hampton Roads Sanitation District Commission hereby agrees for HRSD to become a “Participating Political Subdivision” in the Trust Fund as further defined in the Agreement.

§ 3 That the Hampton Roads Sanitation District Commission hereby designates the Director of Finance/Treasure of HRSD to serve as its trustee with respect to the Trust Fund and determine what funds shall be invested in the Trust Fund.

§ 4 That the Hampton Roads Sanitation District Commission hereby authorizes its above-designated trustee to execute and deliver the Trust Joinder Agreement for Participating Political Subdivisions under the Virginia Investment Pool Trust Fund ("Trust Joinder Agreement"), a copy of which is attached and incorporated in this resolution as Exhibit B.

§ 5 This resolution shall be in force and effect upon its adoption.

Adopted by the HRSD Commission on the twenty-sixth day of June, 2018.



Frederick N. Elofson, CPA
HRSD Commission Chair

Attest: 

Jennifer L. Cascio
HRSD Commission Secretary

Exhibits: [Trust Fund Agreement \("Exhibit A"\)](#)
 [Trust Joinder Agreement \("Exhibit B"\)](#)

EXHIBIT A
VIRGINIA INVESTMENT POOL
TRUST FUND AGREEMENT

THIS AGREEMENT (the “Agreement”), is made by and among the Participating Political Subdivisions that execute Trust Joinder Agreements to participate in the Virginia Investment Pool Trust Fund, their duly elected Treasurers or other Chief Investment Officers empowered by law to invest the public funds of such Participating Political Subdivisions, and the individuals named as Trustees pursuant to Section 107 hereof and their successors (the “Board of Trustees”). The Participating Political Subdivisions and their Treasurers or Chief Investment Officers hereby establish with the Board of Trustees, and the Board of Trustees hereby accepts, under the terms of this Agreement, a trust for the purpose of investing moneys belonging to or within the control of the respective Participating Political Subdivisions as allowed by law.

WITNESSETH:

WHEREAS, Section 15.2-1500 of the Virginia Code provides, in part, that every locality shall provide for all the governmental functions of the locality, including, without limitation, the organization of all departments, offices, boards, commissions and agencies of government, and the organizational structure thereof, which are necessary to carry out the functions of government; and

WHEREAS, Chapter 45 of Title 2.2 of the Virginia Code (§§ 2.2-4500 *et seq.*) of the Virginia Code provides that all municipal corporations and other political subdivisions may invest any and all moneys belonging to them or within their control, other than sinking funds, in certain authorized investments; and

WHEREAS, Section 15.2-1300 of the Virginia Code provides that any power, privilege or authority exercised or capable of exercise by any political subdivision of the Commonwealth of Virginia may be exercised and enjoyed jointly with any other political subdivision of the Commonwealth having a similar power, privilege or authority pursuant to agreements with one another for joint action pursuant to the provisions of that section; and

WHEREAS, the City of Chesapeake and the City of Roanoke have adopted ordinances approving participation in the Virginia Investment Pool for each such locality; and

WHEREAS, the Participating Political Subdivisions and their Treasurers or Chief Investment Officers and the Board of Trustees of the Virginia Investment Pool Trust Fund (herein referred to as the “Trust Fund”) hereby establish a trust for the purpose of investing monies belonging to or within the control of the Participating Political Subdivisions, respectively, other than sinking funds, in investments authorized under Chapter 45 of Title 2.2 of the Virginia Code (§§ 2.2-4500 *et. seq.*); and

WHEREAS, the parties intend that the Trust Fund hereby established shall constitute a tax-exempt governmental trust under Section 115 of the Internal Revenue Code of 1986, as

amended;

NOW, THEREFORE, the parties hereto mutually agree as follows:

PART 1- GENERAL PROVISIONS

Section 100. APPLICATION.

The provisions of Part 1 are general administrative provisions applicable to each Part of this Agreement and provisions applicable to the Board of Trustees.

Section 101. NAME

The name of the trust created by this Agreement shall be the “Virginia Investment Pool Trust Fund” and the Board shall conduct the Trust’s activities, execute all documents and sue or be sued under that name. The Board may use such other designations, including “VIP”, and may adopt such other names for the Trust as the Board deems proper, and the Trust may hold property and conduct its activities under such designations or names. The Board shall take such action as they, acting with the advice of counsel, shall deem necessary or appropriate to file or register such names in accordance with the laws of the Commonwealth of Virginia or the United States of America so as to protect and reserve the right of the Trust in and to such names.

Section 102. DEFINITIONS.

The following definitions shall apply to this Agreement, unless the context of the term indicates otherwise, and shall govern the interpretation of this Agreement:

A. Administrator. The term “Administrator” means the Virginia Local Government Finance Corporation (d/b/a “VML/VACo Finance”) or any successor designated by the Board of Trustees to administer the Trust Fund.

B. Beneficial Interest. The right of a party to some distribution or benefit from the Trust Fund; a vested interest in the Trust Fund’s assets.

C. Business Day. Means a day on which banks are not required or authorized by law to close in the State and on which the Investment Advisor or Custodian is not closed.

D. Code. The term “Code” means the Internal Revenue Code of 1986, as amended, and, as relevant in context, the Internal Revenue Code of 1954, as amended.

E. Custodian. The term “Custodian” means the banks, mutual funds, insurance companies or other qualified entities selected by the Board of Trustees, under a separate written document with each, to accept contributions from Participating Political Subdivisions and to hold the assets of the Trust Fund.

F. Effective Date. The term “Effective Date” means the date coinciding with the last to occur of each of the following events: (i) passage of an ordinance by each of the City of Chesapeake and the City of Roanoke approving such governmental entities as Participating Political Subdivisions in the Trust Fund; (ii) execution by the authorized officer of each such governmental entity of the Trust Joinder Agreement; (iii) execution of this Agreement by all members of the initial Board of Trustees and the Administrator; and (iv) any contribution of cash to the Trust by a Participating Political Subdivision.

G. Participating Political Subdivision. The term “Participating Political Subdivision” means any county, city, town, or other political subdivision within the State whose governing body has passed an ordinance or resolution to participate in the Trust Fund, or is otherwise entitled to participate in accordance with State law, and whose Treasurer or Chief Investment Officer, serving as trustee for such Participating Political Subdivision, executes a Trust Joinder Agreement, as provided in Section 301 hereof.

H. Treasurer. The term “Treasurer” means an officer described in Article VII, Section 4, of the Constitution of Virginia who shall serve as the trustee and representative of its Participating Political Subdivision for purposes of this Agreement. Treasurers shall vote the beneficial interest of such Participating Political Subdivision in the Trust Fund, as prescribed in Part 3 of this Agreement. Nothing in this agreement shall be construed to limit the discretion of a duly elected Treasurer to invest the public funds of his or her political subdivision in any manner otherwise permitted by law, nor shall the decision of any local governing body to become a Participating Political Subdivision under this agreement compel any duly elected Treasurer having responsibility for such investments of public funds to invest any the locality’s funds in the Trust Fund created under this Agreement.

I. Chief Investment Officer. The term “Chief Investment Officer” means an officer designated by the governing body of a Participating Political Subdivision to invest public funds on behalf of the political subdivision and to serve as the trustee of such Participating Political Subdivision with respect to the Trust Fund, but only in a political subdivision that does not have an elected treasurer empowered by law to perform those functions. The term “Chief Investment Officer” may include certain individuals holding the title of “treasurer” for the political subdivision but who are not included in the definition in Subsection F. Each Treasurer or Chief Investment Officer, as the case may be, shall be the trustee and representative of his or her Participating Political Subdivision for purposes of this Agreement and shall vote the beneficial interest of such Participating Political Subdivision in the Trust Fund, as prescribed in Part 3 of this Agreement.

J. Fiscal Year. The first fiscal year of the Trust Fund shall be a short fiscal year beginning on the Effective Date of this Agreement and ending on June 30, 2014. Each subsequent fiscal year of the Trust Fund shall begin on the first day of July and end on the thirtieth day of June.

K. Investment Advisor. Shall mean any person or persons appointed, employed or contracted with by the Administrator on behalf of the Trust pursuant to Section 202 C. hereof.

L. Investment Policy. The term “Investment Policy” means the Virginia Investment Pool Trust Fund Investment Policy, as established by the Board of Trustees, as amended from time to time.

M. Prudent Person. A person who conducts himself faithfully, with intelligence, and exercising sound discretion in the management of his affairs, not in regard to speculation, but in regard to the permanent disposition of his funds, considering the probable income, as well as the probable safety of capital to be invested.

N. State. The term “State” means the Commonwealth of Virginia.

O. Trust Fund. The term “Trust Fund” means the Virginia Investment Pool Trust Fund, comprised of all of the assets set aside hereunder.

P. Trust Joinder Agreement. The term “Trust Joinder Agreement” means the agreement, in the form attached hereto as Exhibit A, pursuant to which the Participating Political Subdivision joins in the Trust Fund, with the Treasurer or Chief Investment Officer, as the case may be, serving as the trustee of such Participating Political Subdivision, and agrees to be bound by the terms and conditions of the Virginia Investment Pool Trust Fund Agreement, as provided in Section 301 hereof.

Q. Trustees. The term “Trustees” means the individuals who serve on the Board of Trustees of the Trust Fund pursuant to Section 107 hereof and their successors.

R. Virginia Code. The term “Virginia Code” means the laws embraced in the titles, chapters, articles and sections designated and cited as the “Code of Virginia,” under the laws of the State.

S. VIP Stable NAV Liquidity Pool. The name of one of the portfolios of the Virginia Investment Pool Trust Fund in which assets are invested to facilitate overnight liquidity and the maintenance of a stable Net Asset Value, with the price of shares in the portfolio targeted to maintain a value of \$1.00.

T. VIP 1-3 Year High Quality Bond Fund. The name of one of the portfolios of the Virginia Investment Pool Trust Fund in which assets are invested in fixed income securities benchmarked with the Bank of America Merrill Lynch 1-3 Year Corporate/Government Index. The Pool is intended for the management of assets that Participating Political Subdivisions intend to invest for one year or longer.

Section 103. GENERAL DUTIES AND MEETINGS OF THE BOARD OF TRUSTEES.

A. General Duties. The Board of Trustees and each Investment Manager appointed pursuant to this Agreement shall discharge their respective duties under this Agreement solely as follows: (i) except as otherwise provided by any applicable provision of any statute, regulation, ordinance, or resolution, for the exclusive purpose of fulfilling the investment objectives of the Participating Political Subdivisions and defraying the reasonable expenses of administering the

Trust Fund; (ii) with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims; and (iii) by diversifying the investments of the Trust Fund so as to minimize the risk of large losses unless under the circumstances, it is clearly prudent not to do so. However, the duties and obligations of the Board of Trustees and each Investment Manager, respectively, as such, shall be limited to those expressly imposed upon them, respectively, by this Agreement. The Board of Trustees shall administer the Trust Fund in compliance with Chapter 45 of Title 2.2 of the Virginia Code (§§ 2.2-4500 et. seq.)

1. Authority of the Trustees. The Trustees shall have the power and authority and shall be charged with the duty of general supervision and operation of the Trust Fund, and shall conduct the business and activities of the Trust Fund in accordance with this Agreement, the Trust Joinder Agreements, rules and regulations adopted by the Board of Trustees and applicable law.

2. Trustees' Liabilities. No Trustee shall be liable for any action taken pursuant to this Agreement in good faith or for an omission except bad faith or gross negligence, or for any act of omission or commission by any other Trustee. The Trustees are hereby authorized and empowered to obtain, at the expense of the Trust Fund, liability insurance fully protecting the respective Trustees, the Administrator, and the Trust Fund from any loss or expense incurred, including reasonable attorney's fees, for all acts of the Trustees except bad faith or gross negligence. The Trust Fund shall save, hold harmless and indemnify the Trustees and Administrator from any loss, damage or expense incurred by said persons or entities while acting in their official capacity excepting bad faith or gross negligence.

3. Standard of Review. In evaluating the performance of the Trustees, compliance by the Trustees with this Agreement must be determined in light of the facts and circumstances existing at the time of the Trustees' decision or action and not by hindsight.

4. Limitations on Liabilities. The Trustees' responsibilities and liabilities shall be subject to the following limitations:

- a. The Trustees shall have no duties other than those expressly set forth in this Agreement and those imposed on the Trustees by applicable laws.
- b. The Trustees shall be responsible only for money actually received by the Trustees, and then to the extent described in this Agreement.
- c. The Trustees shall not be responsible for the correctness of any determination of payments or disbursements from the Trust Fund.
- d. The Trustees shall have no liability for the acts or omissions of any predecessor or successor in office.

- e. The Trustees shall have no liability for (i) the acts or omissions of any Investment Advisor or Advisors, or Investment Manager or Managers; (ii) the acts or omissions of any insurance company; (iii) the acts or omissions of any mutual fund; or (iv) following directions that are given to the Trustees by the Treasurer or Chief Investment Officer in accordance with this Agreement.

B. Reliance on Counsel. The Board of Trustees may employ, retain or consult with legal counsel, who may be counsel for the Administrator, concerning any questions which may arise with reference to the duties and powers or with reference to any other matter pertaining to this Agreement; and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by the Trustees in good faith in accordance with the opinion of such counsel, and the Trustees shall not be individually or collectively liable therefor.

C. Meetings. The Board of Trustees shall meet at least three times per year, and more frequently if called, at the principal office of the Trust Fund or at such other location as may be acceptable to a majority of the Trustees. One such meeting of the Board of Trustees shall be held as soon as practicable after the adjournment of the annual meeting of Treasurers or Chief Investment Officers of Participating Political Subdivisions at such time and place as the Board of Trustees may designate. Other meetings of the Board of Trustees shall be held at places within the Commonwealth of Virginia and at times fixed by resolution of the Board of Trustees, or upon call of the Chairperson of the Board or a majority of the Trustees, on not less than ten (10) days' advance notice. Such notice shall be directed to the Trustees by U. S. mail to the respective addresses of the Trustees as recorded in the office of the Trust Fund or by electronic mail. The notice of any special meetings of the Board of Trustees shall state the purpose of the meeting.

A majority of the number of Trustees elected and serving at the time of any meeting shall constitute a quorum for the transaction of business. Each Trustee shall be entitled to cast a single vote of equal weight on each question coming before the Board. Proxy voting is not allowed. The act of a majority of Trustees present at a meeting at which a quorum is present, shall be the act of the Board of Trustees unless otherwise specified in this agreement. Less than a quorum may adjourn any meeting.

Robert's Rules of Order Newly Revised (11th edition) shall be the parliamentary authority for the Board of Trustees.

D. Office of the Trust Fund. The Administrator shall establish, maintain and provide adequate funding for an office for the administration of the Trust Fund. The address of such office is to be made known to the parties interested in or participating in the Trust Fund and to the appropriate governmental agencies. The official books and records pertaining to the Trust Fund and its administration shall be kept and maintained at the office of the Trust Fund.

E. Execution of Documents. A certificate signed by a person designated by the

Board of Trustees to serve as Secretary shall be evidence of the action of the Trustees, and any such certificate or other instrument so signed shall be kept and maintained at the office of the Trust Fund and may be relied upon as an action of the Trustees.

F. Appointment and Removal of Administrator. The Virginia Local Government Finance Corporation is hereby initially designated the Administrator pursuant to an administrative services agreement between the parties. The Board of Trustees shall provide compensation for the Administrator to administer the affairs of the Trust Fund. Any three (3) Trustees may call for a vote of the Board of Trustees to remove the Administrator by providing no less than 30 days' notice to the other Trustees and to the Administrator. A vote will be scheduled at the next meeting of the Board of Trustees, for which sufficient notice can be given, at which meeting the Administrator may be removed on a majority vote of the Trustees then serving. Upon removal of the Administrator, the Board of Trustees shall designate a successor Administrator.

G. Duty to Furnish Information. The Treasurers or Chief Investment Officers and the Board of Trustees shall furnish to each other any document, report, return, statement or other information that the other reasonably deems necessary to perform duties imposed under this Agreement or otherwise imposed by law.

H. Reliance on Communications. The Board of Trustees may rely upon a certification of a Treasurer or Chief Investment Officer with respect to any instruction, direction, or approval of its Participating Political Subdivision and may continue to rely upon such certification until a subsequent certification is filed with the Trustees. The Trustees shall have no duty to make any investigation or inquiry as to any statement contained in any such writing but may accept the same as fully authorized by the Treasurer or Chief Investment Officer and its Participating Political Subdivision.

Section 104. ADMINISTRATIVE POWERS AND DUTIES.

A. Trustees. The Board of Trustees, in addition to all powers and authorities under common law or statutory authority, including Chapter 45 of Title 2.2 of the Virginia Code (§§ 2.2-4500 *et seq.*), and subject to the requirements and limitations imposed by the common law or statutory authority, including Chapter 45 of Title 2.2 of the Virginia Code (§§ 2.2-4500 *et seq.*), shall have and in its sole and absolute discretion may exercise from time to time and at any time, either through its own actions, delegation to the Administrator, or through a Custodian selected by the Board of Trustees, the following administrative powers and authority with respect to the Trust Fund:

1. To receive for the purposes hereof all cash contributions paid to it by or at the direction of the Participating Political Subdivisions or their Treasurers or Chief Investment Officers.
2. To hold, invest, reinvest, manage, administer and distribute cash balances as shall be transferred to the Trustees from time to time by the Participating Political Subdivisions or their Treasurers or Chief Investment Officers and the increments,

proceeds, earnings and income thereof for the exclusive benefit of Participating Political Subdivisions.

3. To continue to hold any property of the Trust Fund that becomes otherwise unsuitable for investment for as long as the Board of Trustees in its discretion deems desirable; to reserve from investment and keep unproductive of income, without liability for interest, cash temporarily awaiting investment and such cash as it deems advisable, or as the Administrator from time to time may specify, in order to meet the administrative expenses of the Trust Fund or anticipated distributions therefrom.

4. To hold property of the Trust Fund in the name of the Trust Fund, or in the name of a nominee or nominees (e.g., registered agents), without disclosure of the trust, or in bearer form so that it will pass by delivery, but no such holding shall relieve the Board of Trustees of its responsibility for the safe custody and disposition of the Trust Fund in accordance with the provisions of this Agreement; the books and records of the Board of Trustees shall show at all times that such property is part of the Trust Fund and the Board of Trustees shall be absolutely liable for any loss occasioned by the acts of its nominee or nominees with respect to securities registered in the name of the nominee or nominees.

5. To employ in the management of the Trust Fund suitable agents, without liability for any loss occasioned by any such agents, so long as they are selected with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent 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.

6. To make, execute and deliver, as trustee, any deeds, conveyances, leases, mortgages, contracts, waivers or other instruments in writing that it may deem necessary or desirable in the exercise of its powers under this Agreement.

7. To do all other acts that it may deem necessary or proper to carry out any of the powers set forth in this Section 104 or Section 202, to administer or carry out the purposes of the Trust Fund, or as otherwise is in the best interests of the Trust Fund; provided, however, the Board of Trustees need not take action unless in its opinion there are sufficient Trust Fund assets available for the expense thereof.

8. To adopt rules and regulations governing the Trustees' operations and procedures.

9. To contract with municipal corporations, political subdivisions and other public entities of State or of local government and private entities for the provision of Trust Fund services and for the use or furnishing of services and facilities necessary, useful, or incident to providing Trust Fund services.

10. To advise the Administrator on the establishment of expectations with regard to the provision of administrative services and the establishment of appropriate fee

levels.

11. To establish and charge fees for participation in the Trust Fund and for additional administrative services provided to a Participating Political Subdivision in addition to any fees charged by other administrative service providers.

12. To collect and disburse all funds due or payable from the Trust Fund, under the terms of this Agreement.

13. To provide for and promulgate all rules, regulations, and forms deemed necessary or desirable in contracting with Treasurers and Chief Investment Officers and their Participating Political Subdivisions, in fulfilling the Trustees' purposes and in maintaining proper records and accounts.

14. To employ insurance companies, banks, trust companies, investment brokers, investment advisors, or others as agents for the receipt and disbursement of funds held in trust for Participating Political Subdivisions.

15. To determine, consistent with the applicable law and the procedures under the Trust Fund, all questions of law or fact that may arise as to investments and the rights of any Participating Political Subdivision to assets of the Trust Fund.

16. Subject to and consistent with the Code and the Virginia Code, to construe and interpret the Trust Agreement and to correct any defect, supply any omissions, or reconcile any inconsistency in the Agreement.

17. To contract for, purchase or otherwise procure insurance and investment products.

B. Administrator. Pursuant to an administrative services agreement between the Board of Trustees and the Administrator, the Administrator shall have the power and authority to implement policy and procedural matters as directed by the Board of Trustees as they relate to the ongoing operation and supervision of the Trust Fund and the provisions of this Agreement and applicable law. The Administrator shall immediately make application for a fidelity bond, to any company designated by the Board of Trustees, in such amount as may be specified by the Board of Trustees. The premium on such bond shall be paid from the Trust Fund, which bond shall be continued in force in such amount as the Board of Trustees may from time to time require. If the Administrator's bond is refused, or is ever cancelled, the Administrator may be removed on a majority vote of the Trustees then serving.

Section 105. TAXES, EXPENSES AND COMPENSATION OF TRUSTEES.

A. Taxes. The Administrator, without direction from the Board of Trustees, shall pay out of the Trust Fund all taxes, if any, properly imposed or levied with respect to the Trust Fund, or any part thereof, under applicable law, and, in its discretion, may contest the validity or amount of any tax, assessment, claim or demand respecting the Trust Fund or any part thereof.

B. Expenses and Compensation. The Board of Trustees is authorized to set aside from Participating Political Subdivision contributions received and the investment income earned thereon a reasonable sum for the operating expenses and administrative expenses of the Trust Fund including but not limited to, the employment of such administrative, legal, accounting, and other expert and clerical assistance, and the purchase or lease of such materials, supplies and equipment as the Board of Trustees, in its discretion, may deem necessary or appropriate in the performance of its duties, or the duties of the agents or employees of the Trust Fund or the Trustees.

All remaining funds coming into the Trust shall be set aside, managed and used only for the benefit of Participating Political Subdivisions.

Section 106. COMMUNICATIONS.

Until notice is given to the contrary, communication to the Trustees or to the Administrator shall be sent to them at the Trust Fund's office in care of the Administrator. The Administrator's address is VML/VACo Finance at 919 E. Main Street, Suite 1100 Richmond, VA 23219.

Section 107. APPOINTMENT, RESIGNATION OR REMOVAL OF TRUSTEES.

A. Appointment of Trustees and Length of Appointment. The number of Trustees serving on the Board of Trustees shall be fourteen (14).

1. The initial group of Trustees to establish the Trust Fund will be comprised as follows: (a) the Treasurer of the City of Chesapeake, (b) the Treasurer of the City of Roanoke, (c) five (5) individuals designated by the Board of Directors of the Virginia Association of Counties ("VACo"), (d) five (5) individuals designated by the Board of Directors of the Virginia Municipal League ("VML"), (e) the Executive Director of VACo, who shall serve as a non-voting *ex officio* trustee, and (f) the Executive Director of VML, who shall serve as a non-voting *ex officio* trustee. VACo and VML shall give priority for appointment to Treasurers and Chief Investment Officers. The appointees of VACo and VML serve until successor trustees are elected at the first annual meeting of the Treasurers and Chief Investment Officers.

2. With the first annual meeting of the Treasurers and Chief Investment Officers, the Board of Trustees shall be divided into three classes, A, B, and C. Class A will include the Treasurers of the two founding Participating Political Subdivisions, who shall continue to serve for two 3-year terms until successor trustees are elected at the annual meeting of the Treasurers and Chief Investment Officers to be held in Fiscal Year 2021 (the "Fiscal Year 2021 annual meeting"), and two trustees to be elected to serve until successor trustees are elected at the annual meeting to be held in Fiscal Year 2018. Class B, will serve for a transitional period until successor trustees are elected at the annual meeting to be held in Fiscal Year 2017. Class C will serve for a transitional period until successor trustees are elected at the annual meeting to be held in Fiscal Year

2016.

One of the Class B seats and one of the Class C seats will be designated to be filled by a Treasurer or Chief Investment Officer of a locality with a population of 75,000 or less, according to the latest decennial census. Individuals who do not meet this requirement may not be nominated for a seat so designated.

3. On or after July 1, 2014, the Trustees shall solicit nominations from the Treasurers and Chief Investment Officers of Participating Political Subdivisions for two Class A, four Class B, and four Class C Trusteeships, and such nominees, along with any nominations from the floor, shall constitute the candidates for the election of Trustees by vote at the Fiscal Year 2015 annual meeting of the Treasurers and Chief Investment Officers as provided in Section 307. In the event that there are not a sufficient number of eligible nominees from among Participating Political Subdivisions, nominations will be provided by the Executive Directors of the Virginia Association of Counties and the Virginia Municipal League. VACo and VML shall give priority for nomination, firstly, to Treasurers and Chief Investment Officers of Participating Political Subdivisions and, secondly, to treasurers and chief investment officers of non-participating political subdivisions.

4. On or after July 1, 2015, the Trustees shall solicit nominations from Treasurers and Chief Investment Officers of Participating Political Subdivisions for Class C Trusteeships, and such nominees, along with any nominations from the floor, shall constitute the candidates for the election of Trustee by vote at the Fiscal Year 2016 annual meeting of the Treasurers and Chief Operating Officers as provided in Section 307. In the event that there are not a sufficient number of eligible nominees from among Participating Political Subdivisions, nominations will be provided by the Executive Directors of the Virginia Association of Counties and the Virginia Municipal League. VACo and VML shall give priority for nomination, firstly, to Treasurers and Chief Investment Officers of Participating Political Subdivisions and, secondly, to treasurers and chief investment officers of non-participating political subdivisions.

5. At each annual meeting of Treasurers and Chief Investment Officers following the transitional period, the successors to the class of Trustees whose terms shall then expire shall be identified as being of the same class as the trustees they succeed and elected to hold office for a term expiring at the third succeeding annual meeting of Treasurers and Chief Investment Officers. Trustees shall hold their offices until the next annual meeting of Treasurers and Chief Investment Officers for such Trustee's respective Class and until their successors are elected and qualify.

6. At each annual meeting of the Treasurers and Chief Investment Officers, the incumbent Trustees will present all nominations received for each class of Trustees (A, B, and/or C) for which an election is to be held and entertain nominations from the floor. If a Treasurer or Chief Investment Officer does not designate a particular class for its nominee(s), such names will be included on the lists of eligible nominees for each class for which an election is to be held unless the individual named is elected to

another seat.

7. No individual Trustee may be elected or continue to serve as a Trustee after becoming an owner, officer or employee of the Administrator, an Investment Advisor, an Investment Manager or a Custodian. Beginning with the FY 2017 annual meeting, no Trustee may be elected or continue to serve as a Trustee unless he or she is a Treasurer or Chief Investment Officer of a Participating Political Subdivision or has received a delegation of authority according to the requirements of Section 107(A)(8). In the event that there are not a sufficient number of eligible nominees as of the date of the annual meeting, the position will be declared vacant.

8. A Treasurer or Chief Investment Officer may delegate to a subordinate officer who holds investment responsibilities the authority to seek election to and serve as a member of the Board of Trustees as a representative of the Participating Political Subdivision. Such officers will be entitled to the same rights and responsibilities as Treasurers and Chief Investment Officers with respect to seeking election to and serving on the Board of Trustees. The delegation of authority and any subsequent rescission of a delegation of authority must be delivered in writing to the Secretary of the Board of Trustees. If a delegation of authority is rescinded, the affected position on the Board of Trustees will be considered vacated. All references to "Treasurers" and "Chief Investment Officers" in Section 107 will pertain equally to such individuals delegated authority under this provision.

9. Each Trustee and each successor Trustee shall acknowledge and consent to his or her election as a Trustee at the annual meeting at which he/she is elected or, if subsequent to the annual meeting, by giving written notice of acceptance of such election to the Chairperson of the Trustees.

B. Resignation of a Trustee.

1. A Trustee may resign from all duties and responsibilities under this Agreement by giving written notice to the Chairperson of the Trustees. The Chairperson may resign from all duties and responsibilities under this Agreement by giving written notice to all of the other Trustees. Such notice shall state the date such resignation shall take effect and such resignation shall take effect on such date but not later than sixty (60) days after the date such written notice is given.

2. Any Trustee, upon leaving office, shall forthwith turn over and deliver to the Administrator at the principal office of the Trust Fund any and all records, books, documents or other property in his or her possession or under his or her control which belong to the Trust Fund.

C. Removal of a Trustee. Each Trustee, unless due to resignation, death, incapacity, removal, or conviction of a felony or any offense for which registration is required as defined in Virginia Code § 9.1-902, shall serve and shall continue to serve as Trustee hereunder, subject to the provisions of this Agreement.

A Trustee shall relinquish his or her office or may be removed by a majority vote of the Trustees then serving or *ipso facto* when the Employer which he/she represents is no longer a Participating Political Subdivision in the Trust Fund. Notice of removal of a Trustee shall be furnished to the other Trustees by the Chairperson of the Trustees and shall set forth the effective date of such removal. Notice of removal of the Chairperson shall be furnished to the other Trustees by the Administrator and shall set forth the effective date of such removal.

D. Appointment of a Successor Trustee. Except as otherwise provided in part A.1 of this Section with respect to the initial term of Class A Trustees, in the event a Trustee shall die, resign, become incapacitated, be removed from office, or convicted of a felony or any offense for which registration is required as defined in Virginia Code § 9.1-902, a successor Trustee shall be elected forthwith by the affirmative vote of the majority of the remaining Trustees though less than a quorum of the Board of Trustees. The notice of the election of a successor Trustee shall be furnished to the other Trustees by the Chairperson. In case of the removal, death, resignation, etc. of the Chairperson, notice of the election of a successor Trustee, and the new Chairperson, shall be furnished to the other Trustees by the Administrator. Nominations for interim replacement of vacant positions may be made by any member of the Board of Trustees. The term of office of any Trustee so elected shall expire at the next Annual Meeting of Treasurers and Chief Investment Officers at which Trustees are elected. The successor Trustee shall be elected to complete the term for the Class to which such Trustee has been assigned. In the event that a vacancy occurs in the office of either the Treasurer of Chesapeake or the Treasurer of Roanoke prior to the FY 2021 annual meeting, the newly assigned Treasurer of the founding Participating Political Subdivision will automatically assume the vacant position.

E. Trustees' Rights. In case of the death, resignation or removal of any one or more of the Trustees, the remaining Trustees shall have the powers, rights, estates and interests of this Agreement as Trustees and shall be charged with the duties of this Agreement; provided in such cases, no action may be taken unless it is concurred in by a majority of the remaining Trustees. However, if such vacancies leave less than a quorum of Trustees, the remaining trustees may only act to appoint successors. Only after a quorum has been established may the trustees take the other actions established in this subsection.

Section 108. BONDING.

All Trustees shall immediately make application for a fidelity bond, to any company designated by the Board of Trustees, in such amount as may be specified by the Board of Trustees. Premiums on such bonds shall be paid from the Trust Fund, which bonds shall be continued in force in such amount as the Board of Trustees may from time to time require. If a Trustee's bond is refused, or is ever cancelled, except with the Board of Trustees' approval, such Trustee may be removed from office by majority vote of the Trustees then serving.

PART 2 – PROVISIONS APPLICABLE TO INVESTMENTS

Section 200. APPLICATION.

The provisions of Part 2 apply to the investments of the Trust Fund.

Section 201. ADMINISTRATION OF TRUST.

A. General. All such assets shall be held by the Trustees in the Trust Fund.

B. Contributions. The Board of Trustees hereby delegates to the Custodian the responsibility for accepting cash contributions to the Trust Fund, and the Custodian shall have the responsibility for accepting cash contributions by Participating Political Subdivisions. Assets held in the Trust Fund shall be dedicated to the benefit of each Participating Political Subdivision, respectively, or to defraying reasonable expenses of the Trust Fund. All contributions by a Participating Political Subdivision shall be transferred to the Trust Fund to be held, managed, invested and distributed as part of the Trust Fund by the Trustees in accordance with the provisions of this Agreement and applicable law.

C. Applicable Laws and Regulations. The Board of Trustees shall be authorized to take the steps it deems necessary or appropriate to comply with any laws or regulations applicable to the Trust Fund.

D. Accumulated Share. No Participating Political Subdivision shall have any right, title or interest in or to any specific assets of the Trust Fund, but shall have an undivided beneficial interest in the Trust Fund; however, there shall be a specific accounting of assets allocable to each Participating Political Subdivision.

Section 202. MANAGEMENT OF INVESTMENTS OF THE TRUST FUND.

A. Authority of Trustees. Except as set forth in subsections C, D, F, or G of this Section, and except as otherwise provided by law, the Board of Trustees shall have exclusive authority and discretion to manage and control the assets of the Trust Fund held by them pursuant to the guidelines established by the Board of Trustees in the Investment Policy.

B. Investment Policy. The Board of Trustees, as its primary responsibility under this Agreement, shall develop written Investment Policies establishing guidelines applicable to the investment of the assets of the Trust Fund, and from time to time shall modify such Investment Policies, in light of the short and long-term financial interests of the Participating Political Subdivisions and the Trust Fund. The Investment Policies shall serve as the description of the funding policies and method for the Trust Fund.

C. Investment Advisor. From time to time, the Administrator may, pursuant to approval of the Board of Trustees, appoint one (1) or more independent Investment Advisors ("Investment Advisor"), pursuant to a written investment advisory agreement with each, describing the powers and duties of the Investment Advisor with regard to the management of all or any portion of any investment or trading account of the Trust Fund. The Investment Advisor shall review, a minimum of every calendar quarter, the suitability of the Trust Fund's investments, the performance of the Investment Managers and their consistency with the

objectives of the Investment Policy with assets in the portion of the Trust Fund for which the Investment Manager has responsibility for management, acquisition or disposition.

If the Administrator contracted with a lead Investment Advisor prior to the establishment of this Agreement, the Board of Trustees may ratify such contract. The lead Investment Advisor will serve at the pleasure of the Board of Trustees and will be compensated for its recurring, usual and customary services.

Subject to the approval of the Board of Trustees, the Investment Advisor shall recommend an asset allocation for the Trust Fund that is consistent with the objectives of the Investment Policy. If the Board of Trustees shall approve a separate Investment Policy with respect to assets in a segregated portion of the Trust Fund, the Investment Advisor shall recommend an asset allocation for such segregated portion of the Trust Fund that is consistent with the objectives of such Investment Policy. At least annually, the Investment Advisor shall review the Investment Policy and asset allocation with the Board of Trustees. The Investment Advisor shall also advise the Board of Trustees with regard to investing in a manner that is consistent with applicable law, based on majority vote of the Board of Trustees, and in consideration of the expected distribution requirements of the Plans.

D. Investment Managers. The Board of Trustees, from time to time, may appoint one (1) or more independent Investment Managers (“Investment Manager”), pursuant to a written investment management agreement with each, describing the powers and duties of the Investment Manager to invest and manage all or a portion of the Trust Fund. The Investment Manager shall have the power to direct the management, acquisition or disposition of that portion of the Trust Fund for which the Investment Manager is responsible.

The Board of Trustees shall be responsible for ascertaining that each Investment Manager, while acting in that capacity, satisfies the following requirements:

1. The Investment Manager is either (i) registered as an investment advisor under the Investment Advisors Act of 1940, as amended; (ii) a bank as defined in that Act; or (iii) an insurance company qualified to perform the services described herein under the laws of more than one state; and
2. The Investment Manager has acknowledged in writing to the Board of Trustees that it is a fiduciary with respect to the assets in the portion of the Trust Fund for which the Investment Manager has responsibility for management, acquisition or disposition.

If the Administrator contracted with a lead Investment Manager prior to the establishment of this Agreement, the Board of Trustees may ratify such contract. The lead Investment Manager will serve at the pleasure of the Board of Trustees and will be compensated for its recurring, usual and customary services.

E. Custodian. The Custodian is responsible for holding all funds and securities in a separate account in the name of the Trust, collecting all income and principal due the Trust

from securities held, accepting contributions and distributing redemptions, and properly accepting for delivery and/or delivering securities in accordance with the contract between the Trust and the Custodian.

The Board on behalf of the Trust shall employ a bank or trust company organized under the laws of the United States of America or the Commonwealth of Virginia. The Custodian shall be subject to such restrictions, limitations, and other requirements set forth in a Custodian Agreement to be entered into between the Board and the Custodian.

The Custodian shall have such duties as are set forth in the Custodian Agreement. Such Agreement shall also provide that it may be terminated at any time without cause and without the payment of any penalty on 45 days' written notice.

In the event that, at any time, the Custodian shall resign or shall be terminated the Board shall appoint a successor.

F. Absence of Trustees' Responsibility for Investment Advisor and Manager. Except to the extent provided in paragraph A of Section 103 above, the Board of Trustees, collectively and individually, shall not be liable for any act or omission of any Investment Manager and shall not be under any obligation to invest or otherwise manage the assets of the Trust Fund that are subject to the management of any Investment Manager. Without limiting the generality of the foregoing, the Board of Trustees shall be under no duty at any time to make any recommendation with respect to disposing of or continuing to retain any such asset. Furthermore, the Board of Trustees, collectively and individually, shall not be liable by reason of its taking or refraining from taking the advice of the Investment Advisor any action pursuant to this Section, nor shall the Board of Trustees be liable by reason of its refraining from taking any action to remove or replace any Investment Manager on advice of the Investment Advisor; and the Trustees shall be under no duty to make any review of an asset acquired at the direction or order of an Investment Manager.

G. Reporting. The Board of Trustees shall be responsible for and shall cause to be filed periodic audits, valuations, reports and disclosures of the Trust Fund as are required by law or agreements. Notwithstanding anything herein to the contrary, the Board of Trustees shall cause the Trust Fund to be audited by a certified public accounting firm retained for this purpose at least once each year. The Board of Trustees may employ professional advisors to prepare such audits, valuations, reports and disclosures and the cost of such professional advisors shall be borne by the Trust Fund.

H. Commingling Assets. Except to the extent prohibited by applicable law, the Board of Trustees may commingle the assets of all Participating Political Subdivisions held by the Board of Trustees under this Agreement for investment purposes in the Trust Fund and shall hold the Trust Fund in trust and manage and administer the same in accordance with the terms and provisions of this Agreement. However, the assets of each Participating Political Subdivision shall be accounted for separately.

I. Record of Shares. The Trust shall maintain records which shall contain:

- i. The names and addresses of Participating Political Subdivisions;
- ii. The number of shares representing their respective interests hereunder; and
- iii. A record of all allocations and redemptions.

Such records shall be conclusive as to the identity of the Participating Political Subdivisions to which shares are allocated. Only those Participating Political Subdivisions whose allocation of shares is recorded in the Trust records shall be entitled to receive distributions with respect to shares or otherwise to exercise or enjoy the rights and benefits related to the beneficial interests represented by the shares. No Participant shall be entitled to receive any distribution, nor to have notices given to it, until it has given its appropriate address to the Trust.

J. Maintenance of Records. The Administrator, or such other entity appointed by the Board, shall record the allocations of shares in the records of the Trust,

K. No Transfer of Shares. The beneficial interests measured by the shares shall not be transferable, in whole or in part, other than to the Trust itself for purposes of redemption. However, shares may be redeemed from one Participating Political Subdivision's account and the proceeds deposited directly into another Participating Political Subdivision's account upon instructions received from both respective Participants.

L. Limitation of Responsibility. The Board shall not, nor shall the Participating Political Subdivisions or any officer or other agent of the Trust, be bound to determine the existence of any trust, express, implied or constructive, or of any charge, pledge or equity to which any of the shares or any interest therein are subject, or to ascertain or inquire whether any redemption of any such shares by any Participating Political Subdivision or its representatives is authorized by such trust, charge, pledge or equity, or to recognize any person as having any interest therein except the Participating Political Subdivision recorded as the Participating Political Subdivision to which such shares are allocated. The receipt of moneys by the Participating Political Subdivision in whose name any share is recorded or by the duly authorized agent of such Participating Political Subdivision shall be a sufficient discharge for all moneys payable or deliverable in respect of such shares and from all responsibility to see the proper application thereof.

Section 203. ACCOUNTS.

The Trustees shall keep or cause to be kept at the expense of the Trust Fund accurate and detailed accounts of all its receipts, investments and disbursements under this Agreement, with the Trustees causing the Investment Advisor to account separately for each Investment Manager's portion of the Trust Fund.

Section 204. DISBURSEMENTS FROM THE TRUST.

A. Trust Payments. The Board of Trustees hereby delegates to the Administrator the

responsibility for making payments from the Trust Fund, in accordance with rules and regulations established by the Board of Trustees. Payments from the Trust Fund shall be made by electronic transfer or check (or the check of an agent) for deposit to the order of the payee. Payments or other distributions hereunder may be mailed to the payee at the address last furnished to the Administrator. The Trustees shall not incur any liability on account of any payment or other distribution made by the Trust Fund in accordance with this Section. Such payment shall be in full satisfaction of claims hereunder against the Trustee, Administrator or Participating Political Subdivision.

B. Payments from the Trust to Participating Political Subdivisions. Any and all allocated shares may be redeemed at the option and as directed by the Treasurer or Chief Investment Officer of each Participating Political Subdivision upon and subject to the terms and conditions provided in this Agreement and the Informational Statement(s). The Trust shall, upon application of any Participating Political Subdivision, redeem from such Participating Political Subdivision allocated shares for an amount per share equivalent to the proportional interest in the net assets of the Trust at the time of the redemption. The procedures for effecting redemption shall be prescribed by the Board; provided, however, that such procedures shall not be structured so as to substantially and materially restrict the ability of the Participating Political Subdivisions to withdraw funds from the Trust.

C. Allocation of Expenses. The Trustees shall pay all expenses of the Trust Fund from the assets in the Trust Fund. All expenses of the Trust Fund, which are allocable to a particular investment option or account, may be allocated and charged to such investment option or account as determined by the Trustees. All expenses of the Trust Fund which are not allocable to a particular investment option or account shall be charged to each such investment option or account in the manner established by the Trustees.

Section 205. INVESTMENT PORTFOLIOS.

The Trustees shall establish two (2) investment portfolios within the Trust Fund pursuant to the Investment Policies, for communication to, and acceptance by, Treasurers and Chief Investment Officers:

- i. VIP Stable NAV Liquidity Pool. Assets in this portfolio will be invested in such a manner to facilitate overnight liquidity as well as the maintenance of a stable Net Asset Value, with the price of shares in the portfolio targeted to maintain a value of \$1.00.
- ii. VIP 1-3 Year High Quality Bond Fund. Assets in this portfolio will be invested in fixed income securities benchmarked with the Bank of America Merrill Lynch 1-3 Year Corporate/Government Index. The Pool is intended for the management of assets that Participating Political Subdivisions intend to invest for one year or longer.

The Board of Trustees may develop additional investment options, reflecting different risk/return objectives and corresponding asset mixes, for selection by Treasurers and Chief

Investment Officers, as alternatives to the current investment options. The determination to add alternative investment options to the Investment Policies, and the development of each such investment option, are within the sole and absolute discretion of the Board of Trustees. The Trustees shall transfer to any deemed investment option developed hereunder such portion of the assets of the Trust Fund as appropriate. The Trustees shall manage, acquire or dispose of the assets in an investment option in accordance with the directions given by each Treasurer or Chief Investment Officer. All income received with respect to, and all proceeds received from, the disposition of property held in an investment option shall be credited to, and reinvested in, such investment option.

If multiple investment options are developed, from time to time, the Board of Trustees may eliminate an investment option, and the proceeds thereof shall be reinvested in the remaining investment option having the shortest duration of investments unless another investment option is selected in accordance with directions given by the Treasurer or Chief Investment Officer.

Separate investment funds within the Trust Fund and varying percentages of investment in any such separate investment fund by the Participating Political Subdivisions, to the extent so determined by the Board of Trustees, are expressly permitted.

PART 3 – PROVISIONS APPLICABLE TO PARTICIPATING POLITICAL SUBDIVISIONS

Section 300. APPLICATION.

The provisions of Part 3 set forth the rights of Participating Political Subdivisions.

Section 301. PARTICIPATING POLITICAL SUBDIVISIONS.

A. Approval. The Board of Trustees or its designee shall receive applications from Treasurers and Chief Investment Officers of Participating Political Subdivisions for membership in the Trust Fund and shall approve or disapprove such applications for membership in accordance with the terms of this Agreement, the Trust Joinder Agreement, and the rules and regulations established by the Board of Trustees for admission of new Participating Political Subdivisions. The Board of Trustees shall have total discretion in determining whether to accept a new member. The Board of Trustees may delegate the authority for membership approval to the Administrator.

B. Execution of Trust Joinder Agreement. Once the governing body of a political subdivision has approved an ordinance or resolution to participate in the Trust Fund, its Treasurer or Chief Investment Officer, serving as trustee for such political subdivision, may execute a Trust Joinder Agreement in such form and content as prescribed by the Board of Trustees. By the execution of the Trust Joinder Agreement, the Participating Political Subdivision agrees to be bound by all the terms and provisions of this Agreement, the Trust Joinder Agreement, and any rules and regulations adopted by the Trustees under this Agreement. The Treasurer or Chief Investment Officer of each Participating Political

Subdivision, serving as such Participating Political Subdivision's trustee shall represent such Participating Political Subdivision's interest in all meetings, votes, and any other actions to be taken by a Participating Political Subdivision hereunder, provided that a Treasurer who elects not to invest public funds pursuant to the Joinder Agreement shall have no obligation to serve as a trustee for his or her locality.

C. Continuing as a Participating Political Subdivision. Application for participation in this Agreement, when approved in writing by the Board of Trustees or its designee, shall constitute a continuing contract for each succeeding fiscal year unless terminated by the Trustees or unless the Participating Political Subdivision resigns or withdraws from this Agreement by written notice sent by its duly authorized official. The Board of Trustees may terminate a Participating Political Subdivision's participation in this Agreement for any reason by vote of a three-fourths (3/4) majority of the voting members of the Board of Trustees present at a duly called meeting. If the participation of a Participating Political Subdivision is terminated, the Board of Trustees and the Administrator shall effect the withdrawal of such Participating Political Subdivision's beneficial interest in the Trust in accordance with its usual withdrawal policies.

Section 302. MEETINGS OF PARTICIPATING POLITICAL SUBDIVISIONS.

A. Places of Meetings. All meetings of the Treasurers and Chief Investment Officers shall be held at such place, within the Commonwealth of Virginia, as from time to time may be fixed by the Trustees.

B. Annual Meetings. The annual meeting of the Treasurers and Chief Investment Officers of Participating Political Subdivisions, for the election of Trustees and for the transaction of such other business as may come before the annual meeting, shall be held at such time on such business day between September 1st and October 31st as shall be designated by resolution of the Board of Trustees.

C. Special Meetings. Special meetings of the Treasurers or Chief Investment Officers for any purpose or purposes may be called at any time by the Chairperson of the Board of Trustees, by the Board of Trustees, or if Treasurers and Chief Investment Officers together holding at least twenty percent (20%) of all votes entitled to be cast on any issue proposed to be considered at the special meeting sign, date and deliver to the Trust Fund's Secretary one or more written demands for the meeting describing the purpose or purposes for which it is to be held. At a special meeting no business shall be transacted and no action shall be taken other than that stated in the notice of the meeting.

D. Notice of Meetings. Written notice stating the place, day and hour of every meeting of the Treasurers and Chief Investment Officers and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each Participating Political Subdivision's Treasurer or Chief Investment Officer of record entitled to vote at such meeting, at the address which appears on the books of the Trust Fund. Such notice may include any rules established by the Board of Trustees governing the nomination and election of candidates,

determination of vote allocations, and other such matters.

E. Quorum. Any number of Treasurers and Chief Investment Officers together holding at least a majority of the outstanding beneficial interests entitled to vote with respect to the business to be transacted, who shall be physically present in person at any meeting duly called, shall constitute a quorum of such group for the transaction of business. If less than a quorum shall be in attendance at the time for which a meeting shall have been called, the meeting may be adjourned from time to time by a majority of the Treasurers and Chief Investment Officers present. Once a beneficial interest is represented for any purpose at a meeting of Treasurers and Chief Investment Officers, it shall be deemed present for quorum purposes for the remainder of the meeting and for any adjournment of that meeting unless a new record date is, or shall be, set for that adjourned meeting.

F. Voting. At any meeting of the Treasurers and Chief Investment Officers, each Treasurer or Chief Investment Officer entitled to vote on any matter coming before the meeting shall, as to such matter, have one vote, in person, for each two hundred fifty thousand (\$250,000) dollars, or fraction thereof, invested in its name in the Trust Fund, based upon an annual weighted average during the previous fiscal year ending June 30. Notwithstanding the preceding sentence, at any meeting held after the date the *tenth (10th)* Participating Political Subdivision joins the Trust, no one Treasurer or Chief Investment Officer may vote more than *twenty percent (20%)* of the total votes cast. A Treasurer or Chief Investment Officer may, by written and signed proxy, designate another employee or elected official of his/her Participating Political Subdivision to cast his/her votes in person at the meeting. A delegation of authority issued under Section 106(A) (8) does not replace the requirement for a written and signed proxy at meetings of the Treasurers and Chief Investment Officers of Participating Political Subdivisions.

If a quorum is present at a meeting of the Treasurers and Chief Investment Officers, action on a matter other than election of Trustees shall be approved if the votes cast favoring the action exceed the votes cast opposing the action, unless a vote of a greater number is required by this Agreement. If a quorum is present at a meeting of the Treasurers and Chief Investment Officers, nominees for Trustees for all open seats for each class of Trustees on the Board of Trustees shall be elected by a plurality of the votes cast by the beneficial interests entitled to vote in such election.

Treasurers and Chief Investment Officers at the annual meeting will vote at one time to fill all open positions within a single class of Trustees. Elections will be held by class, in the order of the length of the terms to be filled, beginning with the longest term. Each Treasurer or Chief Investment Officer will cast up to the full number of its votes for each open position within a class of Trustees but may not cast votes for more than the number of open positions in such class. Those nominees receiving the largest plurality of votes, up to the number of positions to be filled, will be declared elected. Subsequent votes may be held to break any ties, if necessary, in order to elect the correct number of Trustees.

PART 4 – PROVISIONS APPLICABLE TO OFFICERS

Section 401. ELECTION AND REMOVAL OF OFFICERS.

A. Election of Officers; Terms. The Board of Trustees shall appoint the officers of the Trust Fund. The officers of the Trust Fund shall consist of a Chairperson of the Board, a Vice-Chairperson, and a Secretary. The Secretary need not be a member of the Board of Trustees and may be the Administrator. Other officers, including assistant and subordinate officers, may from time to time be elected by the Board of Trustees, and they shall hold office for such terms as the Board of Trustees may prescribe. All officers shall hold office until the next annual meeting of the Board of Trustees and until their successors are elected.

B. Removal of Officers; Vacancies. Any officer of the Trust Fund may be removed summarily with or without cause, at any time, on a three-fourths ($\frac{3}{4}$) vote of the Board of Trustees present at a duly called meeting. Vacancies may be filled by the Board of Trustees.

Section 402. DUTIES.

A. Duties, generally. The officers of the Trust Fund shall have such duties as generally pertain to their offices, respectively, as well as such powers and duties as are prescribed by law or are hereinafter provided or as from time to time shall be conferred by the Board of Trustees. The Board of Trustees may require any officer to give such bond for the faithful performance of such officer's duties as the Board of Trustees may see fit.

B. Duties of the Chairperson. The Chairperson shall be selected from among the Trustees. Except as otherwise provided in this Agreement or in the resolutions establishing such committees, the Chairperson shall be *ex officio* a member of all Committees of the Board of Trustees. The Chairperson shall preside at all Board meetings. The Chairperson may sign and execute in the name of the Trust Fund stock certificates, deeds, mortgages, bonds, contracts or other instruments except in cases where the signing and the execution thereof shall be expressly delegated by the Board of Trustees or by this Agreement to some other officer or agent of the Trust Fund or as otherwise required by law. In addition, he/she shall perform all duties incident to the office of the Chairperson and such other duties as from time to time may be assigned to the Chairperson by the Board of Trustees. In the event of any vacancy in the office of the Chairperson, the Vice-Chairperson shall serve as Chairperson on an interim basis until such vacancy is filled by subsequent action of the Board of Trustees.

C. Duties of the Vice-Chairperson. The Vice-Chairperson, if any, shall be selected from among the Trustees and shall have such powers and duties as may from time to time be assigned to the Vice-Chairperson. The Vice-Chairperson will preside at meetings in the absence of the Chairperson.

D. Duties of the Secretary. The Secretary shall act as secretary of all meetings of the Board of Trustees and of the Treasurers and Chief Investment Officers. When requested, the Secretary shall also act as secretary of the meetings of the Committees of the Board of Trustees. The Secretary shall keep and preserve the minutes of all such meetings in permanent books. The

Secretary shall see that all notices required to be given by the Trust Fund are duly given and served. The Secretary may, at the direction of the Board of Trustees, sign and execute in the name of the Trust Fund stock certificates, deeds, mortgages, bonds, contracts or other instruments, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Trustees or by this Agreement. The Secretary shall have custody of all deeds, leases, contracts and other important Trust Fund documents; shall have charge of the books, records and papers of the Trust Fund relating to its organization and management as a trust; and shall see that all reports, statements and other documents required by law are properly filed.

PART 5 – MISCELLANEOUS PROVISIONS

Section 501. TITLES.

The titles to Parts and Sections of this Agreement are placed herein for convenience of reference only, and the Agreement is not to be construed by reference thereto.

Section 502. SUCCESSORS.

This Agreement shall bind and inure to the benefit of the successors and assigns of the Trustees, the Treasurers and Chief Investment Officers, and the Participating Political Subdivisions.

Section 503. COUNTERPARTS.

This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original but all of which together shall constitute but one instrument, which may be sufficiently evidenced by any counterpart. Any Participating Political Subdivision that formally applies for participation in this Agreement by its execution of a Trust Joinder Agreement which is accepted by the Trustees shall thereupon become a party to this Agreement and be bound by all of the terms and conditions thereof, and said Trust Joinder Agreement shall constitute a counterpart of this Agreement.

Section 504. AMENDMENT OR TERMINATION OF THIS AGREEMENT; TERMINATION OF PLANS.

A. Duration. The Trust shall be perpetual, subject to the termination provisions contained in Section 504, Subsection C below.

B. Amendment. This Agreement may be amended in writing at any time by the vote of a two-thirds (2/3) majority of the Trustees. Notwithstanding the preceding sentence, this Agreement may not be amended so as to change its purpose as set forth herein or to permit the diversion or application of any funds of the Trust Fund for any purpose other than those specified herein.

The Board of Trustees, upon adoption of an amendment to this Agreement, shall provide notice by sending a copy of any such amendment to each Treasurer and Chief

Investment Officer within 15 days of adoption of such amendment. If a Treasurer or Chief Investment Officer objects to such amendment, the Treasurer or Chief Investment Officer must provide written notice of its objection and intent to terminate its participation in the Trust Fund by registered mail delivered to the Administrator within ninety (90) days of such notice, and if such notice is given, the amendments shall not apply to such Participating Political Subdivision for a period of 180 days from the date of adoption of such amendments. The Participating Political Subdivision's interest shall be terminated in accordance with the provisions of paragraph B of this section.

C. Withdrawal and Termination. Any Participating Political Subdivision may at any time in its sole discretion withdraw and terminate its interest in this Agreement and any trust created hereby by giving written notice from the Participating Political Subdivision's Treasurer or Chief Investment Officer to the Trustees in the manner prescribed by this Section. The Trust Fund may be terminated in its entirety when all participation interests of all Participating Political Subdivisions have been terminated in their entirety. This Agreement and the Trust Fund will then be terminated in its entirety pursuant to Virginia law.

In case of a termination of this Agreement, either in whole or in part by a Participating Political Subdivision, the Trustees shall hold, apply, transfer or distribute the affected assets of the Trust Fund in accordance with the applicable provisions of this Agreement and as directed by the Treasurer or Chief Investment Officer of each Participating Political Subdivision. Upon any termination, in whole or in part, of this Agreement, the Trustees shall have a right to have their respective accounts settled as provided in this Section 504.

In the case of the complete or partial termination of this Agreement as to one or more Participating Political Subdivisions, the affected assets of the Trust Fund shall continue to be held pursuant to the direction of the Trustees, for the benefit of the Participating Political Subdivision, until the Trustees, upon recommendation of the Administrator, distribute such assets to a Participating Political Subdivision, or other suitable arrangements for the transfer of such assets have been made. This Agreement shall remain in full effect with respect to each Participating Political Subdivision that does not terminate or withdraw its participation in the Trust Fund, or whose participation is not terminated by the Trustees. However, if distributions must be made, the Treasurer or Chief Investment Officer of each Participating Political Subdivision shall be responsible for directing the Administrator on how to distribute the beneficial interest of such Participating Political Subdivision. In the absence of such direction, the Administrator may take such steps as it determines are reasonable to distribute such Participating Political Subdivision's interest.

A Participating Political Subdivision must provide written notice of its intent to terminate its participation in the Trust Fund by registered mail signed by the appropriate official of the subdivision and delivered to the Administrator.

Notwithstanding the foregoing, the Trustees shall be required to pay out any assets of the Trust Fund to Participating Political Subdivisions upon termination of this Agreement or the Trust Fund, in whole or in part, upon receipt by the Trustees of written certification from the Administrator that all provisions of law with respect to such termination have been

complied with. The Administrator shall provide the required written certification to the Trustees within three (3) working days of receiving a written notice of intent to terminate as described above. The Trustees shall rely conclusively on such written certification and shall be under no obligation to investigate or otherwise determine its propriety.

When all of the assets of the Trust Fund affected by a termination have been applied, transferred or distributed and the accounts of the Trustees have been settled, then the Trustees and Administrator shall be released and discharged from all further accountability or liability respecting the Trust Fund, or portions thereof, affected by the termination and shall not be responsible in any way for the further disposition of the assets of the Trust Fund, or portions thereof, affected by the termination or any part thereof so applied, transferred or distributed; provided, however, that the Trustees shall provide full and complete accounting for all assets up through the date of final disposition of all assets held in the Trust.

Section 505. SPENDTHRIFT PROVISIONS; PROHIBITION OF ASSIGNMENT OF INTEREST.

The Trust Fund shall be exempt from taxation and execution, attachment, garnishment, or any other process. No Participating Political Subdivision or other person with a beneficial interest in any part of the Trust Fund may commute, anticipate, encumber, alienate or assign the beneficial interests or any interest of a Participating Political Subdivision in the Trust Fund, and no payments of interest or principal shall be in any way subject to any person's debts, contracts or engagements, nor to any judicial process to levy upon or attach the interest or principal for payment of those debts, contracts, or engagements.

Section 506. VIRGINIA FREEDOM OF INFORMATION ACT.

The Administrator shall give the public notice of the date, time, and location of any meeting of the Board of Trustees' or of the Treasurers and Chief Investment Officers in the manner and as necessary to comply with the Virginia Freedom of Information Act (Va. Code §§ 2.2-3700 *et seq.*). The Secretary or its designee shall keep all minutes of all meetings, proceedings and acts of the Trustees and of Treasurers and Chief Investment Officers, but such minutes need not be verbatim. Copies of all minutes of the Trustees and of Treasurers and Chief Investment Officers shall be sent by the Secretary or its designee to the Trustees.

All meetings of the Board of Trustees and of Treasurers or Chief Investment Officers shall be open to the public, except as provided in § 2.2-3711 of the Virginia Code. No meeting shall be conducted through telephonic, video, electronic or other communication means where the members are not physically assembled to discuss or transact public business, except as provided in §§ 2.2-3708 or 2.2-3708.1 of the Virginia Code.

Section 507. JURISDICTION.

This Agreement shall be interpreted, construed and enforced, and the trust or trusts created hereby shall be administered, in accordance with the laws of the United States and of the Commonwealth of Virginia, excluding Virginia's law governing the conflict of laws.

Section 508. SITUS OF THE TRUST.

The situs of the trust or trusts created hereby is the Commonwealth of Virginia. All questions pertaining to its validity, construction, and administration shall be determined in accordance with the laws of the Commonwealth of Virginia. Venue for any action regarding this Agreement is the City of Richmond, Virginia.

Section 509. CONSTRUCTION.

Whenever any words are used in this Agreement in the masculine gender, they shall be construed as though they were also used in the feminine or neuter gender in all situations where they would so apply and whenever any words are used in this Agreement in the singular form, they shall be construed as though they were also used in the plural form in all situations where they would so apply, and whenever any words are used in this Agreement in the plural form, they shall be construed as though they were also in the singular form in all situations where they would so apply.

Section 510. CONFLICT.

In resolving any conflict among provisions of this Agreement and in resolving any other uncertainty as to the meaning or intention of any provision of the Agreement, the interpretation that (i) causes the Trust Fund to be exempt from tax under Code Sections 115 and 501(a), and (ii) causes the participating Plan and the Trust Fund to comply with all applicable requirements of law shall prevail over any different interpretation.

Section 511. NO GUARANTEES.

Neither the Administrator nor the Trustees guarantee the Trust Fund from loss or depreciation or for the payment of any amount which may become due to any person under any participating Plan or this Agreement.

Section 512. PARTIES BOUND; NO THIRD PARTY RIGHTS.

This Agreement and the Trust Joinder Agreements, when properly executed and accepted as provided hereunder, shall be binding only upon the parties hereto, *i.e.*, the Board of Trustees, the Administrator and the Participating Political Subdivisions. Neither the establishment of the Trust nor any modification thereof, nor the creation of any fund or account shall be construed as giving to any person any legal or equitable right against the Trustees, or any officer or employee thereof, except as may otherwise be provided in this Agreement. Under no circumstances shall the term of employment of any Employee be modified or in any way affected by this Agreement.

Section 513. NECESSARY PARTIES TO DISPUTES.

Necessary parties to any accounting, litigation or other proceedings relating to this Agreement shall include only the Trustees and the Administrator. The settlement or judgment in

any such case in which the Trustees are duly served or cited shall be binding upon all Participating Political Subdivisions and upon all persons claiming by, through or under them.

Section 514. SEVERABILITY.

If any provision of this Agreement shall be held by a court of competent jurisdiction to be invalid or unenforceable, the remaining provisions of the Agreement shall continue to be fully effective. If any provision of the Agreement is held to violate the Code or to be illegal or invalid for any other reason, that provision shall be deemed to be null and void, but the invalidation of that provision shall not otherwise affect the trust created by this Agreement.

Approved by Board of Trustees, September 13, 2013

Amended by Board of Trustees, January 24, 2014

Amended by Board of Trustees, June 19, 2015

Amended by Board of Trustees, September 23, 2016

[SIGNATURE PAGE FOLLOWS]

EXHIBIT B
TRUST JOINDER AGREEMENT
FOR PARTICIPATING POLITICAL SUBDIVISIONS IN THE
VACo/VML VIRGINIA INVESTMENT POOL

THIS TRUST JOINDER AGREEMENT is made by and between the Director of Finance/Treasurer as the Chief Investment Officer of the Hampton Roads Sanitation District (herein referred to as the “Treasurer/Chief Investment Officer”), the Hampton Roads Sanitation District, a regional political subdivision of the Commonwealth of Virginia with its main office located in Virginia Beach, Virginia (herein referred to as the “Participating Political Subdivision”), and the Board of Trustees (herein collectively referred to as the “Trustees”) of the VACo/VML Virginia Investment Pool (herein referred to as the “Trust Fund”).

WITNESSETH:

WHEREAS, the governing body of the Participating Political Subdivision desires to participate in a trust for the purpose of investing monies belonging to or within its control, other than sinking funds, in investments authorized under Section 2.2-4501 of the Virginia Code; and

WHEREAS, the governing body of the Participating Political Subdivision has adopted an ordinance and/or resolution (a certified copy of which is attached hereto as Exhibit A) to authorize participation in the Trust Fund and has designated the Treasurer/Chief Investment Officer to serve as the trustee of the Participating Political Subdivision with respect to the Trust Fund and to determine what funds under the Treasurer’s/Chief Investment Officer’s control shall be invested in the Trust Fund, and has authorized the Treasurer/Chief Investment Officer to enter into this Trust Joinder Agreement; and

WHEREAS, the Trust Fund, in accordance with the terms of the VACo/VML Virginia Investment Pool Trust Fund Agreement (the “Agreement”), provides administrative, custodial and investment services to the Participating Political Subdivisions in the Trust Fund; and

WHEREAS, the Treasurer/Chief Investment Officer, upon the authorization of the Hampton Roads Sanitation District Commission whose main office is in Virginia Beach, Virginia, desires to submit this Trust Joinder Agreement to the Trustees to enable Hampton Roads Sanitation District , to become a Participating Political Subdivision in the Trust Fund and a party to the Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements flowing to each of the parties hereto, it is agreed as follows:

1. Pursuant to the Board of Trustees’ acceptance of this Trust Joinder Agreement, Hampton Roads Sanitation District, a regional political subdivision of the Commonwealth of Virginia with its main office located in Virginia Beach, Virginia, is a Participating Political Subdivision in the Trust Fund, as provided in the Agreement, and the Treasurer/Chief Investment

Officer is authorized to enter into this Trust Joinder Agreement, and to represent and vote the beneficial interest of Hampton Roads Sanitation District , in the Trust Fund in accordance with the Agreement.

2. Capitalized terms not otherwise defined in this Trust Joinder Agreement have the meaning given to them under the Agreement.

3. The Treasurer/Chief Investment Officer shall cause appropriations designated by the Participating Political Subdivision for deposit in the Trust Fund to be deposited into a depository designated by the Trustees.

4. The Treasurer/Chief Investment Officer shall timely remit, or timely approve the remittance of, administrative fees as may be due and payable by the Participating Political Subdivision under the Agreement into a depository designated by the Trustees.

5. The Participating Political Subdivision shall have no right, title or interest in or to any specific assets of the Trust Fund, but shall have an undivided beneficial interest in the Trust Fund; however, there shall be a specific accounting of assets allocable to the Participating Political Subdivision.

6. The Treasurer/Chief Investment Officer shall provide to the Administrator designated by the Trustees all relevant information reasonably requested by the Administrator for the administration of the Participating Political Subdivision's investment, and shall promptly update all such information. The Treasurer/Chief Investment Officer shall certify said information to be correct to the best of his/her knowledge, and the Trustees and the Administrator shall have the right to rely on the accuracy of said information in performing their contractual responsibilities.

7. The Trust Fund shall provide administrative, custodial and investment services to the Participating Political Subdivision in accordance with the Agreement.

8. The Trustees and the Administrator, in accordance with the Agreement and the policies and procedures established by the Trustees, shall periodically report Trust activities to the Participating Political Subdivision on a timely basis.

9. The Treasurer/Chief Investment Officer and the Participating Political Subdivision agree to abide by and be bound by the terms, duties, rights and obligations as set forth in the Agreement, as may be amended by the Trustees, which is attached hereto and is made a part of this Trust Joinder Agreement.

10. The Treasurer/Chief Investment Officer, in fulfillment of his/her duties as the trustee of the Participating Political Subdivision, retains the services of the Investment Manager or Managers selected by the Trustees pursuant to the Agreement.

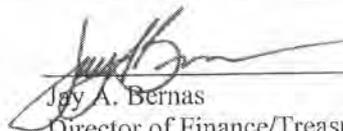
11. The term of this Trust Joinder Agreement shall be indefinite. The Treasurer/Chief Investment Officer may terminate this Trust Joinder Agreement on behalf of the Participating

Political Subdivision by giving notice in writing to the Trustees. Termination shall be governed by the provisions of the Agreement.

IN WITNESS WHEREOF, the Treasurer/Chief Investment Officer has caused this Trust Joinder Agreement to be executed this 26th day of June, 2018.

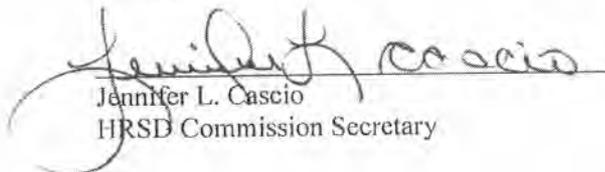
**TREASURER/CHIEF INVESTMENT
OFFICER OF**

HAMPTON ROADS SANITATION DISTRICT



Jay A. Bernas
Director of Finance/Treasurer

ATTEST:

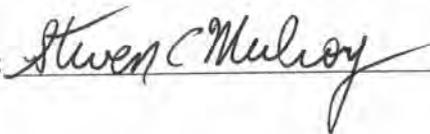


Jennifer L. Cascio
HRSD Commission Secretary

* * * *

ACCEPTANCE:

VACo/VML VIRGINIA INVESTMENT POOL

By: 

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #4

AGENDA ITEM 4. Procurement Policy

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

Revised: June 26, 2018
Effective: July 1, 2018

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1.0 Purpose and Need

All procurement shall be in accordance with the Code of Virginia §2.2-4300, the Virginia Public Procurement Act, as supplemented herein.

2.0 Guiding Principles

1. HRSD is committed to competitive procurement practices that are accountable to our ratepayers and the public, ethical, impartial, professional, transparent and fully in accordance with applicable law.
2. The Chief of Procurement is responsible for the purchase, rent, lease, or otherwise acquiring goods, professional and non-professional services, and certain construction services. In addition, the Chief of Procurement is responsible for control and disposal of excess, obsolete, and salvageable materials and equipment.

The Chief of Procurement shall establish procedures consistent with this policy and may designate other HRSD staff to act on his/her behalf.

3. The Director of Engineering is responsible for procurement of professional and non-professional services related to the study, design, construction, real estate and property acquisition associated with capital improvement projects or facility projects.

The Director of Engineering shall establish procedures consistent with this policy and may designate other HRSD staff to act on his/her behalf.

4. Except for small purchases (less than \$10,000) and certain easement acquisitions, no employee has the authority to enter into any purchase agreement or contract except the Chief of Procurement or the Director of Engineering or such other employee as may be designated by the General Manager.
5. Fair market value shall be the basis of all real estate acquisitions with appropriate compensation for related restoration and/or inconvenience. Additional costs, in accordance with applicable state law, shall be included as required in procurement through eminent domain procedures.

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

Revised: June 26, 2018
Effective: July 1, 2018

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3.0 **Definitions**

Agreement/Contract. An understanding, in writing, between two or more competent parties, under which one party agrees to certain performance as defined in the agreement and the second party agrees to compensation for the performance rendered in accordance with the conditions of the agreement.

Fair Market Value. The price for an item upon which purchaser and supplier agree in an open market when both are fully acquainted with market conditions.

Total Value. Cost of all related procurement actions, even across fiscal years, that are known at the time of the procurement action including delivery, assembly, start-up, warranty, etc. Each procurement action must be able to meet the business objective individually, without the need for additional procurement actions.

4.0 **Procedures**

1. Generally competition shall be sought for all procurement with the following exceptions:
 - a. Purchase of goods or services other than professional services where the Total Value will not exceed \$10,000. Related purchases shall not be divided into separate actions to meet this threshold.
 - b. Sole Source – Purchase of goods or services where there is only one source practicably available. The requesting department shall provide a written determination supporting the sole source to the Chief of Procurement. The HRSD Commission must approve all sole sources above \$10,000 for specific vendor and specific application.
 - c. Emergency – Where emergency actions are required to protect public safety, public health, HRSD employees or property or the environment, a contract can be awarded without competition upon a written emergency declaration, approved by General Manager. Competition should be sought if possible with emergency contracts even if typical procurement procedures cannot be fully followed.

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

Revised: June 26, 2018
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- d. Real Property – Where acquisition or lease is required in support of HRSD facilities.
2. In accordance with § 2.2-4303 G. competitive sealed bids or competitive negotiation is not required for purchase of goods and services other than professional services where the **total value of the procurement will not exceed \$10,000**. The following procedure shall be followed:
 - a. A minimum of one quote is required. When possible, multiple quotes should be obtained. Use of small businesses and businesses owned by women, minorities, and service disabled veterans is encouraged for all procurement actions whenever possible.
 - b. Purchase is normally made using an HRSD ProCard.
 - c. Purchase may be made by any HRSD employee granted purchasing authority by their department director.
 - d. Basis of award shall be a determination that the stated need will be met and the price is fair and reasonable.
 3. In accordance with § 2.2-4303 G. competitive sealed bids or competitive negotiation is not required for purchase of goods and services other than professional services where **the total value of the procurement will be greater than \$10,000 and not to exceed \$100,000**. The following procedure shall be followed:
 - a. Purchases shall be initiated by the submission of a requisition to Procurement or Engineering.
 - b. An unsealed (informal) quote shall be solicited by Procurement or Engineering from three sources in response to an Invitation for Bid (IFB) or Request for Proposal (RFP).
 - c. Basis of award shall be lowest responsive and responsible bidder, offeror or best value as determined by criteria included in the IFB or RFP.

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

Revised: June 26, 2018
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4. In accordance with § 2.2-4303 G, competitive negotiation is not required for purchase of **professional services where the total value of the procurement will not exceed \$80,000**. The following procedure shall be followed:
 - a. Purchases shall be initiated by the submission of a requisition to Procurement or Engineering.
 - b. An unsealed (informal) quote shall be solicited by Procurement or Engineering from three sources in response to an IFB or RFP.
 - c. Basis of award shall be lowest responsive and responsible offeror or best value as determined by criteria included in the IFB or RFP.
5. In accordance with §2.2-4308, design-build or construction management contracts shall be in accordance with [Appendix A](#) of this policy.
6. In accordance with §2.2-4310 B, HRSD promotes the use of small businesses and businesses owned by women, minorities, and service disabled veterans in procurement transactions in accordance with [Appendix B](#) of this policy.
7. In accordance with §2.2-4316, comments concerning specifications or other provisions in IFB or RFP must be submitted and received in accordance with the procedures specified in the IFB or RFP for comment submittal.
8. In accordance with §2.2-4318, if the bid from the lowest responsive, responsible bidder exceeds available funds, negotiations may be entered with the apparent low bidder to obtain a contract price within available funds in accordance with [Appendix C](#) of this policy.
9. In accordance with §2.2-4321, contractors may be debarred from contracting for particular types of supplies, services, insurance or construction, for specified periods of time in accordance with [Appendix D](#) of this policy.
10. In accordance with §2.2-4330 C, bids may be withdrawn due to error for other than construction contracts in accordance with [Appendix E](#) of this policy.

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

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11. In accordance with §56-575.3:1, a project under the Public-Private Education Facilities and Infrastructure Act shall be in accordance with [Appendix F](#) of this policy.
12. Acquisition of easements (temporary or permanent) may be made by the Director of Engineering (or his/her designee) up to \$25,000.

5.0 Approvals

The following actions specifically require the approval of the HRSD Commission before executing unless executed under an approved emergency declaration:

1. **Agreements.** Contracts or purchase orders where the total value is projected to exceed \$200,000.
2. **Sole Source Procurement.** Initial sole source determination for specific vendor, items(s) and location(s) where the Total Value is projected to exceed \$10,000 (§2.2-4303E).
3. **Modifications to Agreements (Task Orders).** Where the Total Value is projected to exceed **\$200,000**.
4. **Cooperative Procurement.** Where the Total Value of HRSD's participation is projected to exceed **\$200,000** (§2.2-4304).
5. **Change Orders (§2.2-4309).** Where the Total Value exceeds **25 percent** of the original contract award or **\$50,000** whichever is greater.
6. **Rejection of all Bids.** Where the Total Value is projected to exceed **\$200,000** (§2.2-4319).
7. **Design-Build or Construction Management Agreements.** (§2.2-4306).
8. **Debarment.** (§2.2-4321).
9. **Determination of Non-responsibility.** (§2.2-4359).

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

Revised: June 26, 2018
Effective: July 1, 2018

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10. **Real Property**

- a. Acquisition by condemnation in accordance with the Code of Virginia §15.2
- b. Acquisitions by purchase, lease, grant or conveyance
- c. Sale, lease or permanent encumbrance of HRSD property
- d. Easements or Right of Entry Agreements (temporary or permanent) with value in excess of \$25,000

11. **Intellectual Property.** All Intellectual Property Rights Agreements and Royalty Distribution Agreements.

12. **Agreements with other Entities.** Agreements which include any 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. Provide use of personal property valued at more than \$50,000 for temporary (greater than one year) or permanent use
- d. Provides a service or other benefit that spans multiple years
- e. Obligates significant financial resources (\$200,000 or more)
- f. Obligates significant personnel resources (one full time employee or more)
- g. Is or has the potential to be politically significant

COMMISSION ADOPTED POLICY
Procurement Policy



Adopted: December 16, 2014

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6.0 **Ethics**

HRSD employees involved in the procurement process are expected to maintain high ethical standards. In addition to HRSD's Standards of Conduct and HRSD's Ethics Policy, the following State laws apply:

1. Virginia Public Procurement Act (VPPA); (§2.2-4300)
2. Ethics in Public Contracting (§2.2-4367)
3. Virginia Governmental Frauds Act (§18.2-498.1) and Articles 2 (§18.2-438) and 3 (§18.2-446) of Chapter 10 of Title 18.2.
4. State and Local Government Conflict of Interests Act (§ 2.2-3100)

7.0 **Responsibility and Authority**

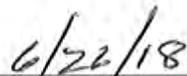
This policy was developed in accordance with HRSD's Enabling Act and the Code of Virginia. Any changes this policy shall be made in writing and approved by the HRSD Commission.

HRSD's General Manager and the Chief of Procurement are the designated administrators of this policy. The Chief of Procurement shall have the day-to-day responsibility and authority for implementing the provisions of this policy.

Approved:

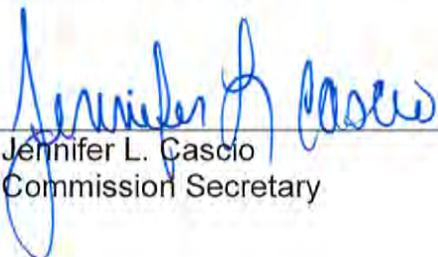


Frederick N. Eloffson
Commission Chair

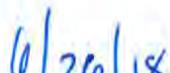


Date

Attest:



Jennifer L. Cascio
Commission Secretary



Date

COMMISSION ADOPTED POLICY
Procurement Policy – Appendix A
Design-Build and Construction Management Contracting



Adopted: December 16, 2014

Revised: September 26, 2017

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1.0 **Purpose and Need**

Design-build and construction management contracting methods provide opportunity for HRSD to contract for specific projects where traditional design-bid-build may not be in the best interest of HRSD. These non-traditional procurement methods shall only be used in accordance with this policy.

2.0 **Procedures**

While the competitive sealed bid process remains the preferred method of construction procurement for HRSD, a contract for construction on a design-build fixed price or on a construction management basis may be used, provided a written determination made in advance is approved by the Commission which sets forth that competitive sealed bidding is either not practicable or not fiscally advantageous.

Criteria for Use of Design-Build Contracts – Design-Build contracts are intended to minimize the project risk and to reduce the delivery schedule by overlapping the design phase and construction phase of a project.

Criteria for Use of Construction Management Contracts – Construction Management contracts may be approved for use on projects where fast tracking of construction is needed to meet program requirements or value engineering and/or constructability analyses concurrent with design are required. The use of Construction Management shall be limited to projects with a construction value that is in excess of \$10,000,000. With proper justification for small complex projects, the Commission may grant a waiver of this requirement and the written approval maintained in the procurement file.

2.1. **Procedure for Design-Build or Construction Management Contracts**

2.1.1. **General.** The Director of Engineering shall prepare a report documenting in writing that for a specific construction project; (i) a Design-Build or Construction Management contract is more advantageous than a competitive sealed bid construction contract; (ii) why there is a benefit to HRSD by using a Design-Build or Construction Management contract; and (iii) why competitive sealed bidding is not practical or fiscally advantageous; and (iv) these justifications shall be stated in the Request for Qualifications. This report shall be submitted to the General Manager for approval.

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Contracting



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- 2.1.2. Design-Build construction projects involve retaining a party that provides both professional design and construction services. Construction Management projects involve retaining a firm to coordinate and administer contracts for construction services and may also include, if provided in the contract, the direct furnishing of construction services. Design-Build services shall be procured using a two-step competitive negotiation process which shall consider both technical capabilities and price for the services required for the project. Construction Management services shall be awarded and initiated no later than the completion of the Schematic Phase of design.
- 2.1.3. **Design-Build and Construction Management Firms.** The Director of Engineering shall obtain qualified Design-Build and Construction Management firms to provide needed services. A list of firms shall be accumulated through solicitation and other methods. The list of firms shall include small, women-owned, minority-owned or service disabled veteran-owned businesses
- 2.1.4. **Request for Qualification (RFQ).** A RFQ shall be prepared for each project and approved by the Director of Engineering. The RFQ shall state the criteria and goals of the project, the time and place for receipt of qualifications, the factors to be used in evaluating qualifications, the contractual terms and conditions, any unique capabilities or qualifications required of the proposer and any project specific requirements for the particular project. The RFQ shall normally consist of the following sections unless modified by the Director of Engineering:
- Cover Sheet
 - I. Introduction and/or Background
 - II. Instructions to Proposers
 - III. Scope of Work
 - IV. Tentative Procurement Schedule
 - V. Attachments
- 2.1.5. **Public Notice.** A Public Notice of the RFQ shall be posted, at least ten (10) business days prior to receipt of proposals for design-build or construction management services, , in a newspaper or newspapers of general circulation in the area in which the contract is to be performed and on the HRSD Internet website. For Construction management services, the Public Notice shall also be published on the Commonwealth of Virginia’s central electronic procurement website, known as eVA, at least thirty (30) days prior to the date set for receipt of qualification proposals. The Public Notice shall be sent directly to firms that have requested to be notified of work and may be sent to

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those firms believed to be qualified to perform the work. The Public Notice shall also be sent directly to organizations promoting small, women-owned, minority-owned and service disabled veteran-owned businesses and to similar businesses that have requested to be notified and/or are believed to be qualified to perform the work. An affidavit shall be placed in the project file certifying the advertising date and method.

- 2.1.6. **Contacts by Proposers.** Proposers may contact only the HRSD representative designated in the RFQ related to questions pertaining to the project. Responses to these questions which are relevant to the work will be documented and addenda will be issued to all proposers who have requested a copy of the RFQ.
- 2.1.7. **Selection Committee.** A Selection Committee shall evaluate the Statements of Qualifications (SOQ) and short-list proposers for further consideration. The Selection Committee shall consist of at least three (3) qualified HRSD staff members appointed by the Director of Engineering. The members of the Selection Committee shall have experience relevant to the project, with backgrounds in such areas as design, construction, contracts, project management and operations/maintenance.
- 2.1.8. **Statements of Qualifications.** The Selection Committee shall request a SOQ from any firm desiring consideration. The SOQ shall provide the information requested in the RFQ. Firms submitting a SOQ shall provide the electronic document by the date and time listed in the RFQ.
- 2.1.9. **Pre-Proposal Conference.** A pre-proposal conference may be held for complex or large projects to ensure clarity, review potential problems with the Scope of Work and answer questions related to the project. Attendance at the pre-proposal conference may be optional or mandatory as specified in the RFQ. If attendance is mandatory, SOQ's shall be considered only from those firms who attended the conference and met the requirements listed in the RFQ related to the pre-proposal conference.
- 2.1.10. **Opening of Statement of Qualifications.** The Director of Engineering or his/her designee shall document receipt of the SOQ's at the specified time and place. SOQ's not received at the specified time will not be considered.
- 2.1.11. **Changes to the RFQ.** The Selection Committee shall determine whether any changes to the RFQ should be made to clarify errors, omissions or ambiguities or to incorporate project improvements or additional details. If such changes are required, an addendum shall be issued.

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- 2.1.12. **Evaluation of Statement of Qualifications (Short-List Step).** The Selection Committee shall evaluate each SOQ. The Selection Committee may waive minor informalities in a SOQ but shall eliminate from further consideration any proposer determined to be non-responsive or deemed not fully qualified, responsible or suitable. Prior construction management or design-build experience shall not be required as a prerequisite for consideration or award of a contract. However, in the selection of a contractor, the selection committee may consider the experience of each contractor on comparable projects. The Selection Committee shall then select (short-list) two (2) or more responsive proposers based on the SOQ submitted in response to the RFQ. The Selection Committee either individually or as a group at any point in the evaluation may contact some or all references recommended by the proposer. The Selection Committee may use the information gained during the reference checks in the evaluation. The Selection Committee may ask questions or request additional information from any proposer.
- 2.1.13. **Request for Proposals (RFP).** A RFP shall be prepared for each project and approved by the Director of Engineering. The RFP shall provide further details not described in the RFQ and shall include the factors to be used in evaluating each proposal. For Design-Build contracts, the RFP shall include details regarding the project quality and performance requirements, conceptual design documents and information regarding the proposer's Construction Cost Limit (CCL) to determine the best value in response to the RFP. For Construction Management contracts, the RFP shall define the allowable level of direct construction involvement by the proposer, describe details regarding the proposer's CCL and define the pre-design, design, bid and construction phase services required. No more than ten (10) percent of the construction work, as measured by the cost of the work, shall be performed by the construction manager with its own forces. The Construction Management firm will procure the subcontractors services by publicly advertising and competitive sealed bidding to the maximum extent practicable. Documentation shall be placed in the file detailing the reasons any work is not procured by publicly advertised competitive sealed bidding. The RFP process shall include a separate technical proposal evaluation stage and a price proposal evaluation stage.
- 2.1.14. **Technical Proposals.** The Selection Committee shall initially request a technical proposal from those firms that were short-listed. The technical proposals shall provide the information requested in the RFP. Firms

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submitting a technical proposal shall provide the electronic document by the date and time listed in the RFP.

- 2.1.15. **Opening of Technical Proposals.** The Director of Engineering or his/her designee shall document receipt of the technical proposals at the specified time and place. Technical proposals not received at the specified time will not be considered.
- 2.1.16. **Preliminary Evaluation of Technical Proposals.** The Selection Committee shall review each technical proposal to first determine whether the proposals are responsive to the requirements of the RFP. The Selection Committee shall then evaluate and document (score) the technical proposal from the short-listed proposers based on an evaluation plan specified in the RFP. The Selection Committee shall keep confidential a preliminary ranking of the technical proposals. The Selection Committee may cancel or reject any and all technical proposals. The Director of Engineering shall prepare a report documenting the reasons for the cancellation or rejection. The Selection Committee may waive informalities in the technical proposals.
- 2.1.17. **Conferences During Preliminary Evaluation.** The Selection Committee may hold a question and answer conference with any or all proposers to clarify or verify the contents of a technical proposal. The conference may be in person or by telephone. Each proposer shall be allotted the same fixed amount of time for any conference held as part of the selection. Proposers shall be encouraged to elaborate on their qualifications, proposed services, relevant experience and details of the technical proposal for the project. Proprietary information from competing proposers shall not be disclosed to the public or to competitors.
- 2.1.18. **Changes to the RFP.** Based upon a review of the technical proposal and discussions with each short-listed proposer, the Selection Committee shall determine whether any changes to the RFP should be made to clarify errors, omissions or ambiguities or to incorporate project improvements or additional details. If such changes are required, an addendum shall be provided to each proposer. If addenda are issued by the Selection Committee, proposers will be given an opportunity to revise their technical proposals.
- 2.1.19. **Final Evaluation of Technical Proposals.** At the conclusion of the technical proposal evaluation stage, the Selection Committee will meet to discuss each proposer. After the discussion is completed, each team member will be given an opportunity to adjust their score. The Selection Committee shall document and keep confidential a final ranking of the

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technical proposals. This documentation shall occur before any price proposals are received by HRSD.

- 2.1.20. **Price Proposals.** The Selection Committee shall request a price proposal from those firms short-listed during the price proposal evaluation stage. The price proposal shall provide the information requested in the RFP including any and all addendum. The price proposal will include a CCL based on the project scope of work and other information provided in the RFP and any subsequent changes to the RFP. Firms submitting a price proposal shall provide the requested information by the date and time listed in the RFP. For Construction Management contracts, price shall be a critical basis for award of the contract. Unless approved by the commission in advance of issuance of the Public Notice, the price component for selection of a Construction Management firm shall be at least fifty (50) percent of the weighted score.
- 2.1.21. **Opening of Price Proposals.** The Director of Engineering or his/her designee shall open and document receipt of the price proposals at the specified time and place. Price proposals not received at the specified time will not be considered.
- 2.1.22. **Evaluation of Price Proposals.** The Selection Committee shall review each price proposal to determine whether the proposals are responsive to the requirements of the RFP and any and all addenda. The Selection Committee shall document and keep confidential the results of each price proposal.
- 2.1.23. **Final Evaluation and Recommendation to Award a Contract.** The Selection Committee shall tabulate the technical and price proposal scores as listed in the RFP to determine the recommended firm. The Selection Committee shall prepare a report documenting the process, summarizing the results and recommending the design-build or construction management firm for award to the Director of Engineering. Upon concurrence with the recommendation of the Selection Committee, the Director of Engineering or his/her designee shall negotiate a contract with the recommended firm. Otherwise, the Director of Engineering or his/her designee shall formally terminate negotiations with the proposer ranked first and shall negotiate with the proposer ranked second, and so on, until a satisfactory agreement can be negotiated. The Director of Engineering shall inform the General Manager of the results of the negotiation. The General Manager shall receive Commission approval of award to the recommended firm. The Commission may cancel or reject any and all proposals.

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2.1.24. **Award of Design-Build or Construction Management Contract.** Upon approval by the Commission, the Director of Engineering shall forward all contract, bond and insurance forms to the selected firm for signature. The contract shall be prepared using the standard HRSD format approved by the Director of Engineering and reviewed by the HRSD attorney.

2.1.25. **Inspection of Proposals.** Any proposer may inspect the proposal documents after opening of the price proposals but prior to award of the contract. All records, subject to public disclosure under the Virginia Freedom of Information Act, shall be open to public inspection only after award of the contract.

2.1.26. **Emergency Procurement.** A contract for design-build or construction management services may be negotiated and awarded without competitive negotiation if the General Manager determines there is an emergency. The procurement of these services will be made using as much competition as practical under the circumstances. The Director of Engineering shall submit a report documenting the basis of the emergency and the selection of the particular firm. The Director of Engineering shall prepare a notice stating the contract is being awarded on an emergency basis and identifying what is being procured, the firm selected and the date the contract was or will be awarded. The notice shall be placed on the HRSD Internet website on the day HRSD awards or announces its decision to award, whichever comes first or as soon thereafter as practical.

2.2. **Procedure for Changes to Design-Build or Construction Management Contracts**

All changes to the Contract shall be by a formal Change Order as mutually agreed to by the firm and HRSD. The method of making such changes and any limits shall be in accordance with the Contract Documents. Change Orders shall be negotiated by HRSD staff and such actions reported to the Director of Engineering with recommendations for approval. Change Orders exceeding \$50,000 or 25% of the original contract amount, whichever is greater, shall be submitted to the Commission for approval prior to authorization. All Change Orders shall be executed by the firm and the Director of Engineering or his/her designee.

Extra work by the firm may be authorized by a written Work Change Directive within limits of authorization provided above with later inclusion in the Contract by formal Change Order.

In case of disputes as to the value of extra work, HRSD, within the limits of authorization provided above, may issue a directive in accordance with the Contract Documents to proceed with the work so as to not impede the progress and cause unnecessary delay and expense to the parties involved. The directive shall acknowledge the dispute by the firm, and the dispute shall be resolved at a later date.

2.3. Procedure for Progress Payments

Progress payments shall be paid in accordance with the Contract Documents. Requests for progress payments shall be prepared by the firm and approved by HRSD staff and the Director of Engineering. Requests for progress payments shall generally be submitted to HRSD on a monthly basis with payments by HRSD to the firm within the period of time specified in the Contract Documents.

Progress payments shall be based on unit prices, schedules of values, and other agreed-upon specified basis. Each progress payment shall represent the amount of completed work and materials on site to be incorporated into the work as accepted and approved, less the specified retainage and less previous payments. Payment for materials on site shall be in accordance with the Contract Documents.

Progress payments may be reduced or withheld in accordance with the Contract Documents. Retainage may be reduced or increased in accordance with the Contract Documents.

2.4. Procedure for Final Payments

Final acceptance, payment, and release of claims shall be in accordance with the Contract Documents. Requests for final payments shall be prepared by the firm, certified and approved by HRSD staff and approved by the Director of Engineering.

3.0 Responsibility and Authority

Under the direction of the Director of Engineering, shall be responsible for overall development, management and implementation of this policy.

COMMISSION ADOPTED POLICY
Procurement Policy – Appendix B
Participation of SWaM



Adopted: December 16, 2014

Revised: June 26, 2018

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1.0 **Purpose and Need**

This policy is in accordance with §2.2-4310 B to facilitate the participation of small businesses and businesses owned by women, minorities and service disabled veterans in HRSD procurement transactions.

HRSD is committed to ensuring fair consideration of all contractors and suppliers in its day-to-day purchase or lease of goods and services. HRSD recognizes that working with a wide range of contractors and suppliers provides an open, competitive and diverse business environment.

HRSD recognizes its responsibilities to the communities that it serves and the society in which it conducts business. The inclusion of small, women-owned, minority-owned and service disabled veteran-owned (SWaM) businesses must be a function of our normal, day-to-day purchasing activities. No potential contractor or supplier will be precluded from consideration on the basis of race, religion, color, sex, national origin, age, or disability (Code of Virginia, § 2.2-4310A).

Therefore, HRSD's policy is to actively solicit and encourage SWaM businesses to participate in procurement opportunities through equally fair and open competition for all contracts. Every employee who is involved in procurement decisions for the purchase of goods or services is charged with making giving every consideration to using qualified SWaM businesses in a manner that is consistent with state and federal laws and regulations. Further, each of HRSD's contractors and suppliers are encouraged to provide for the participation of SWaM businesses through partnerships, joint ventures, subcontracts and other contractual opportunities.

HRSD shall not accept a bad business deal or a lower quality contractor, supplier, product or service in order to achieve greater participation of SWaM businesses in HRSD procurement.

As an integral part of the company-wide culture, HRSD does not discriminate because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by law. Additionally, in procuring goods or services or in making disbursements, HRSD shall not (i) discriminate against a faith-based organization on the basis of the organization's religious character or (ii) impose conditions that (a) restrict the religious character of the faith-based organization, except, in accord with Virginia Code §2.2-4343.1(F), that no funds shall be expended on contracts for sectarian worship, instruction, or proselytizing, or (b) impair, diminish, or discourage the exercise of religious freedom by the recipients of such goods, services, or disbursements.

COMMISSION ADOPTED POLICY
Procurement Policy – Appendix B
Participation of SWaM



Adopted: December 16, 2014

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2.0 Procedures

The Procurement Division shall:

1. Ensure SWaM businesses have the maximum practicable opportunity in procurement and contractual activities
2. Apprise potential SWaM businesses of HRSD's procurement activities
3. Identify SWaM businesses for HRSD solicitations
4. Promote the use of SWaM contractors through formal and informal training classes
5. Maintain diversity procurement data of contracts and subcontracts awarded to SWaM businesses
6. Monitor, evaluate, and report on the utilization of SWaM contractors at least annually to the HRSD Commission
7. Include qualified businesses selected from the HRSD centralized contractor/supplier database, the Virginia Department of Small Business and Supplier Diversity (Code of Virginia, § 2.2-4310), and/or the Carolinas-Virginia Minority Supplier Development Council consistent with this policy whenever soliciting quotes or qualifications

All employees with purchasing responsibility or who are involved in procurement decisions for goods and services shall give every consideration to using qualified SWaM contractors/suppliers and consult with the Procurement Division as required to identify SWaM contractors/suppliers.

Certified Minority Business Enterprise (MBE). No contractor/supplier shall be considered a Small Business Enterprise, a Minority-Owned Business Enterprise, a Women-Owned Business Enterprise or a Service Disabled Veteran-Owned Business Enterprise unless certified as such by the Virginia Department of Small Business and Supplier Diversity or Carolinas-Virginia Minority Supplier Development Council.

3.0 Responsibility and Authority

Under the direction of the Director of Finance, the Chief of Procurement, as well as the Director of Engineering, shall be responsible for overall development, management and implementation of this policy.

COMMISSION ADOPTED POLICY
Procurement Policy – Appendix C
Negotiation with Lowest Responsible Bidder



Adopted: December 16, 2014

Revised: September 26, 2017

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1.0 **Purpose and Need**

If the bid from the lowest responsive, responsible bidder exceeds available funds, HRSD may negotiate with the apparent low bidder to obtain a contract price within available funds in accordance with this policy.

2.0 **Procedures**

Unless all bids are cancelled or rejected, HRSD reserves the right to negotiate with the lowest responsive, responsible bidder to obtain a contract price within the funds available. The term “available funds” shall mean those funds which were budgeted by the requested HRSD department for the contract prior to the issuance of the written Invitation for Bids. The procurement record in the Procurement Division shall include documentation of the “available funds” prior to the issuance of the IFB.

Negotiations with the lowest responsive, responsible bidder may include both modifications of the bid price and the Scope of Work/Specifications to be performed.

HRSD shall initiate such negotiations by written notice to the lowest responsive, responsible bidder that its bid exceeds the available funds and that HRSD wishes to negotiate a lower contract price. The times, places, and manner of negotiating shall be agreed to by HRSD and the lowest responsive, responsible bidder.

If a mutually acceptable price cannot be negotiated, all bids shall be rejected. A new IFB cannot be issued without HRSD modifying the scope or specification to match the available funds. Shopping for bids shall not be permitted.

3.0 **Responsibility and Authority**

Under the direction of the Director of Finance, the Chief of Procurement, as well as the Director of Engineering, shall be responsible for overall development, management and implementation of this policy.

COMMISSION ADOPTED POLICY
Procurement Policy – Appendix D
Debarment



Adopted: December 16, 2014

Revised: N/A

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1.0 **Purpose and Need**

To ensure HRSD receives the best value with all procurement actions, contractors that fail to meet HRSD standards may be debarred and prevented from being awarded work from HRSD for a specified period of time. Debarment is a serious action and shall only be pursued when continued use of a particular contractor threatens HRSD's ability to meet regulatory requirements, requires inordinate levels of inspection, administration or supervision, poses a legal, financial or reputational risk to HRSD or a locality partner or the contractor has previously demonstrated the inability to meet HRSD schedules or quality requirements, provides poor references or is in active litigation related to HRSD work or similar projects.

2.0 **Procedures**

The Chief of Procurement or Director of Engineering shall regularly evaluate prospective contractors to determine eligibility for contracting for particular types of supplies, services, insurance or construction.

If a determination is made that a prospective contractor should not be eligible, the Chief of Procurement or Director of Engineering shall submit a written report notifying the contractor of the proposed debarment and specified period of time, disclosing factual support for the contractor's unsatisfactory performance and/or other reasons for the proposed debarment, and allowing the contractor an opportunity to inspect any documents relating to the proposed debarment within five (5) business days after receipt of notification and to submit rebuttal information within ten (10) business days after receipt of notification.

The Chief of Procurement or Director of Engineering shall revise the report as appropriate within five (5) business days after receipt of rebuttal information and submit the revised report to the contractor and the General Manager.

The General Manager shall submit the revised report and recommended action to the HRSD attorney for review and to the Commission for action. The Chief of Procurement or Director of Engineering shall notify the contractor of the Commission's final determination including, if debarred, the basis of the debarment and the term of the debarment.

3.0 **Responsibility and Authority**

Under the direction of the Director of Finance, the Chief of Procurement, as well as the Director of Engineering, shall be responsible for overall development, management and implementation of this policy.

COMMISSION ADOPTED POLICY
Procurement Policy – Appendix E
Withdrawal of Bids



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Revised: N/A

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1.0 **Purpose and Need**

Occasionally a bidder requests to withdraw a bid due to a mistake. It is not in HRSD's best interest to force a bidder to perform if the bidder actually made an error in their bid preparation. However, in a competitive bid environment, bidders cannot be allowed to withdraw bids without just cause as this practice can undermine the integrity of the bidding process. HRSD shall follow these procedures to protect the integrity of the bidding process when considering a request to withdraw a bid.

2.0 **Procedures**

For bids on construction projects, withdrawal procedures shall be in accordance with §2.2-4330 where the bidder shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure and shall submit original work papers with such notice.

For bids other than construction bids, the same withdrawal procedures shall be followed.

The Chief of Procurement or the Director of Engineering will review the request to withdraw and make a determination based on the evidence provided in accordance with §2.2-4330.

3.0 **Responsibility and Authority**

Under the direction of the Director of Finance, the Chief of Procurement, as well as the Director of Engineering, shall be responsible for overall development, management and implementation of this policy.

1.0 Purpose and Need

This policy is intended to encourage competition and guide the procurement of projects under Public-Private Education Facilities and Infrastructure Act.

2.0 Procedures

General. Prior to developing or operating the qualifying project, the selected private entity shall enter into a comprehensive agreement with HRSD. Prior to entering a comprehensive agreement, an interim agreement may be entered into that permits a private entity to perform compensable activities related to the project. Any interim or comprehensive agreement shall define the rights and obligations of HRSD and the private entity with regard to the project. The interim and comprehensive agreements and any amendments thereto must be approved by the HRSD Commission.

Interim Agreement Terms. Prior to or in connection with the negotiation of the comprehensive agreement, HRSD may enter into an interim agreement with the private entity proposing the development or operation of the qualifying project. The scope of an interim agreement may include, but is not limited to:

1. Project planning and development;
2. Design and engineering;
3. Environmental analysis and mitigation;
4. Survey;
5. Ascertaining the availability of financing for the proposed facility through financial and revenue analysis;
6. Establishing a process and timing of the negotiation of the comprehensive agreement; and
7. Any other provisions related to any aspect of the development or operation of a qualifying project that the parties may deem appropriate prior to the execution of a comprehensive agreement.

Comprehensive Agreement Terms. Prior to developing or operating the qualifying project, the selected private entity shall enter into a comprehensive agreement with HRSD. The comprehensive agreement shall define the rights and obligations of HRSD and the private entity with regard to the project.

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Procurement Policy – Appendix F
PPEA



Adopted: December 15, 2014

Revised: N/A

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As provided by the PPEA, the terms of the comprehensive agreement shall include, but not be limited to:

1. The delivery of maintenance, performance, and payment bonds or letters of credit in connection with any acquisition, design, construction, improvement, renovation, expansion, equipping, maintenance, or operation of the qualifying project, in the forms and amounts satisfactory to HRSD and in compliance with § 2.2-4337 for those components of the qualifying project that involve construction;
2. The review and approval of plans and specifications for the qualifying project by HRSD;
3. The rights of HRSD to inspect the qualifying project to ensure compliance with the comprehensive agreement;
4. The maintenance of a policy or policies of liability insurance or self-insurance reasonably sufficient to insure coverage of the project and the tort liability to the public and employees and to enable the continued operation of the qualifying project;
5. The monitoring of the practices of the private entity by HRSD to ensure proper maintenance, safety, use, and management of the qualifying project;
6. The terms under which the private entity will reimburse HRSD for services provided;
7. The policy and procedures that will govern the rights and responsibilities of HRSD and the private entity in the event that the comprehensive agreement is terminated or there is a material default by the private entity including the conditions governing assumption of the duties and responsibilities of the private entity by HRSD and the transfer or purchase of property or other interests of the private entity by HRSD;
8. The terms under which the private entity will file appropriate financial statements on a periodic basis;
9. The mechanism by which user fees, lease payments, or service payments, if any, may be established from time to time upon agreement of the parties. Any payments or fees shall be the same for persons using the

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Procurement Policy – Appendix F
PPEA



Adopted: December 15, 2014

Revised: N/A

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facility under like conditions and that will not materially discourage use of the qualifying project;

- a. A copy of any service contract shall be filed with HRSD;
 - b. A schedule of the current user fees or lease payments shall be made available by the private entity to any member of the public upon request;
 - c. Classifications according to reasonable categories for assessment of user fees may be made.
10. The terms and conditions under which HRSD will contribute financial resources, if any, for the qualifying project;
 11. The terms and conditions under which existing site conditions will be assessed and addressed, including identification of the responsible party for conducting the assessment and taking necessary remedial action;
 12. The terms and conditions under which HRSD will be required to pay money to the private entity and the amount of any such payments for the project;
 13. Other requirements of the PPEA or other applicable law; and
 14. Such other terms and conditions as HRSD determines serve the public purpose of the PPEA.

Notice and Posting requirements. In addition to the posting requirements of Section IV, HRSD shall advertise for a public hearing to discuss proposals it has received or the negotiated interim or comprehensive agreements. Such hearing may occur at a regularly scheduled meeting of the Board. Such notice shall be at least 30 days prior to the public hearing. Public comments may be submitted to HRSD at any time during the notice period and prior to the public hearing. After the public hearing and the end of the public comment period, no additional posting shall be required based on any public comment received.

Once the negotiation phase for the development of an interim or a comprehensive agreement is complete and a decision to award has been made, the proposed agreement shall be posted in the following manner:

1. On the HRSD website for 30 days prior to the execution of the agreement.

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Procurement Policy – Appendix F
PPEA



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Revised: N/A

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2. In addition to the posting requirements, a copy of the proposals shall be made available for public inspection. Trade secrets, financial records, or other records of the private entity excluded from disclosure under the provisions of subdivision 11 of §2.2-3705.6 shall not be required to be posted, except as otherwise agreed to by the HRSD and the private entity.
3. Any studies and analyses considered by HRSD in its review of a proposal shall be disclosed at some point prior to the execution of an interim or comprehensive agreement.

Once an interim agreement or a comprehensive agreement has been entered into, the HRSD shall make procurement records available for public inspection, upon request.

1. Such procurement records shall include documents protected from disclosure during the negotiation phase on the basis that the release of such documents would have an adverse effect on the financial interest or bargaining position of HRSD or the private entity in accordance.
2. Such procurement records shall not include:
 - a. trade secrets of the private entity as defined in the Uniform Trade Secrets Act (§ 59.1-336 et seq.) or
 - b. financial records, including balance sheets or financial statements of the private entity that are not generally available to the public through regulatory disclosure or otherwise.

Actual timelines will depend on many factors, including complexity of the project, number of proposals received, staff workload, and Commission meeting schedules.

3.0 Responsibility and Authority

Under the direction of the Director of Finance, the Chief of Procurement, as well as the Director of Engineering, shall be responsible for overall development, management and implementation of this policy.

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #5

AGENDA ITEM 5. Hampton Trunk Sewer Extension Divisions I & J
Relocation Phase II
Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is made this 9th day of September, 2012 by and between Hampton Roads Sanitation District ("HRSD"), a political subdivision of the Commonwealth of Virginia, and Hampton University ("HU"), a Virginia nonstock corporation.

WHEREAS, HRSD has maintained for many years an interceptor force main and corresponding easements running through property belonging to HU, which property is a part of HU's campus (the "Force Main"); and

WHEREAS, HU has and continues to desire that HRSD replace and/or reroute portions of the Force Main to minimize interference with HU's campus; and

WHEREAS, HRSD in evaluating the regional sanitary sewer system to improve system performance and reliability has identified the Force Main as a candidate for replacement as a part of a larger project to increase its system capacity; and

WHEREAS, HRSD and HU desire and agree to explore rerouting the Force Main in accordance with this Memorandum of Understanding; and

WHEREAS, the proposed replacement and/or rerouting of the Force Main will increase HRSD's replacement cost by an estimated \$4,000,000.00;

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

1. Intent. The parties acknowledge that this Memorandum of Understanding is intended to set out the responsibilities and obligations of HRSD and HU in furtherance of HRSD's pursuit of replacing and/or rerouting the Force Main, and it is a legally enforceable agreement to the extent provided by its terms.

2. HRSD Obligations.

(a) *Pursuing Replacement of Force Main.* HRSD agrees to pursue the potential for designing and constructing a Capital Improvement Project to replace and/or reroute the Force Main currently running across HU's property. HRSD will pursue the potential replacement and/or rerouting of the Force Main to be replaced and constructed in a new alignment that minimizes to the extent practicable the impact on property owned by HU. The proposed replacement and construction of the Force Main will be subject to further negotiation and adjustment, but, as of the execution of this Memorandum of Understanding, it is presently intended to be constructed as shown on the map attached to this Memorandum of Understanding in Exhibit A.

(b) *Schedule*. HRSD anticipates beginning the design phase of a new Force Main replacement in late 2013. HRSD anticipates beginning the replacement and construction in 2016. HRSD anticipates completing construction in 2018.

3. HU Obligations

(a) *Easements over Property*. HU shall grant the necessary easements to HRSD to accommodate reasonable routing and alignment of small diameter Force Main lines required to serve existing HU pump stations, including the HRSD Hampton University Pump Station and the City of Hampton Pump Station located near College Court. HU shall further provide HRSD with the necessary easements (or, at HU's election, fee simple conveyance of the property) required to directionally drill a new crossing under the Hampton River to accommodate the replacement of the Force Main.

(b) *Cost-Sharing*. In the event HRSD replaces and/or reroutes the Force Main contemplated by this Memorandum of Understanding in a manner agreed to by both HRSD and HU prior to the start of Force Main construction, HU shall pay HRSD \$1,000,000.00 upon completion of the construction of the replaced and/or rerouted Force Main.

4. Cooperation and Further Negotiation. The parties recognize that the obligations and rights in paragraphs 2(a), 2(b), and 3(a) of this Agreement are open to further negotiation, revision, amendment, or agreement. The parties therefore agree to undertake all future collaborative efforts in good faith and in an expeditious manner. The parties agree to make themselves and their agents, contractors, and representatives available for reasonable amounts of time to coordinate the undertakings contemplated by this Memorandum of Understanding. If, after good faith negotiation, the parties cannot agree on a proposed course of action, both parties' obligations under this Memorandum of Understanding shall terminate upon a signed termination agreement acknowledging that, after good faith negotiations, the parties were unable to reach an agreement.

5. Access. Prior to construction on the Force Main beginning, HU agrees to allow HRSD and its agents, contractors, and representatives to enter its property during reasonable times to carry out the terms and intentions of this Memorandum of Understanding. HRSD shall use its best efforts to minimize any disruptions while present on HU's property. HRSD shall be responsible for any damage caused by its (or its agents, contractors', and representatives') entry on to HU property prior to construction on the Force Main beginning pursuant to this paragraph 5.

6. Limit on HRSD Obligation. The parties acknowledge and agree that, in the event it becomes impractical or impossible for HRSD to replace or reroute the Force Main or construct a new Force Main as proposed in this Memorandum of Understanding because of insufficient funds, failure of the parties to agree on material terms of the contemplated Force Main reconstruction or replacement, failure to receive required approvals or permits, illegality, or any other material change in circumstances before starting construction, both parties' obligations under this Memorandum of Understanding shall be discharged and this Memorandum of Understanding shall be terminated. Except as provided in paragraph 5, neither party shall be

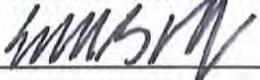
entitled to recover any damages from the other party in the event this Memorandum of Understanding is terminated pursuant to this paragraph 6.

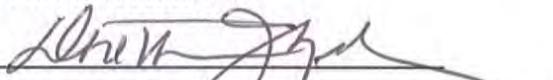
7. Indemnification. HRSD agrees to indemnify and hold HU harmless from any loss, cost, liability, attorneys' fees, or other damages in any form whatsoever arising out of the acts or omissions of HRSD and its agents, contractors, and representatives. HU agrees to indemnify and hold HRSD harmless from any loss, cost, liability, attorneys' fees, or other damages in any form whatsoever arising out of the acts or omissions of HU and its agents, contractors, and representatives.

8. Miscellaneous. This Memorandum of Understanding shall not be interpreted in favor of or against either party. This Memorandum of Understanding constitutes the entire agreement between the parties and supersedes any prior written or oral agreements or understandings between the parties regarding the subject matter of this Memorandum of Understanding. Any modification to this Memorandum of Understanding shall only be valid if it is in writing and signed by both parties.

HAMPTON ROADS SANITATION DISTRICT

HAMPTON UNIVERSITY

By: 

By: 

Name: Edward G. Henifin, P.E.

Name: Doretha J. Spells

Its: General Manager

Its: VP for Business Affairs/Treasurer

519390

**FIRST AMENDMENT TO THE MEMORANDUM OF UNDERSTANDING
BETWEEN HRSD AND HAMPTON UNIVERSITY**

THIS FIRST AMENDMENT TO THE MEMORANDUM OF UNDERSTANDING (this First Amendment) made and entered into this 1st day of August, 2018, by and between HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia (HRSD) and HAMPTON UNIVERSITY (HU) a Virginia nonstock corporation recites and provides as follows:

RECITALS

- A. HRSD and HU entered into that certain MEMORANDUM OF UNDERSTANDING dated September 9, 2012, to set out responsibilities and obligations of HRSD and HU in furtherance of HU's expressed desire to reroute an interceptor force main from an easement running through property belonging to HU and HRSD's pursuit of such rerouting to minimize interference with the HU campus.
- B. HRSD and HU desire to amend the MEMORANDUM OF UNDERSTANDING upon the terms set forth herein.

NOW, THEREFORE, for and in consideration of the mutual agreements set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree to the following amendments to the MEMORANDUM OF UNDERSTANDING as follow:

- 1. **Section 2. HRSD Obligations**, subparagraph (b) *Schedule*
Delete this subparagraph in its entirety and substitute the following:
(b) *Schedule*. HRSD anticipates beginning the design phase in 2018. HRSD anticipates beginning construction in 2020 with completion in 2022.
- 2. **Section 3. HU Obligations**, subparagraph (b) *Cost-sharing*
Delete this subparagraph in its entirety.
- 3. All other obligations, terms and conditions remain unchanged.

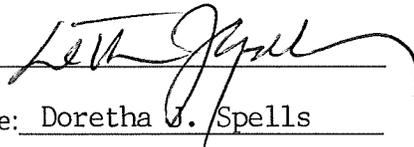
HAMPTON ROADS SANITATION DISTRICT

By: 

Name: Edward G. Henifin

Its: General Manager

HAMPTON UNIVERSITY

By: 

Name: Doretha J. Spells

Its: V.P. for Business Affairs
and Treasurer

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #6

AGENDA ITEM 6. – Old Dominion University Research Foundation
Surface Chlorophyll A Distributions in the Lower James River
Estuary Agreement



Old Dominion University Research Foundation

May 24, 2018

Mr. Will Hunley
HRSD
whunley@hrsd.com

RE: The relationship between surface chlorophyll *a* distributions, dinoflagellate abundance and speciation, and depth-integrated / averaged chlorophyll concentrations in the Lower James River estuary

Dear Mr. Hunley:

Old Dominion University Research Foundation is pleased to submit its proposal titled “The relationship between surface chlorophyll *a* distributions, dinoflagellate abundance and speciation, and depth-integrated / averaged chlorophyll concentrations in the Lower James River estuary” for your review and consideration. The proposal is submitted on behalf of the Principal Investigator Dr. Margaret Mulholland, Department of Ocean, Earth, and Atmospheric Sciences, Old Dominion University.

Please note that if an award is made as a result of this proposal, it should be made payable to the Old Dominion University Research Foundation. The Research Foundation is the fiscal and administrative agent for Old Dominion University for sponsored agreements. The Foundation is a not-for-profit corporation, and it is tax exempt under Section 501(c)(3) of the Internal Revenue Code.

Please address any questions of a technical nature to Dr. Mulholland at (757) 683-3972. Contractual questions should be addressed to Shelly Shaff-Frost, Sr. Grant & Contract Administrator, at (757) 683-4293, or rfawards@odu.edu.

Sincerely,

**Julian F
Facenda**

Julian F. Facenda
Executive Director

Digitally signed by Julian F
Facenda
Date: 2018.05.24 10:18:09
-04'00'

Enclosure: Original ODU Research Foundation Proposal No. 18-720

CC: Dr. Margaret Mulholland
Dr. Eileen Hofmann
Dr. John Klinck
Dr. Fred Dobbs
Dr. Debra Major

P. O. Box 6369 • Norfolk, Virginia 23508-6369
Telephone 757-683-4293 • Facsimile 757-683-5290
An Affirmative Action/Equal Opportunity Employer

The relationship between surface chlorophyll *a* distributions, dinoflagellate abundance and speciation, and depth-integrated / averaged chlorophyll concentrations in the Lower James River estuary.

For HRSD FY19 (July 1, 2018 – June 30, 2019)

PI: Margaret R. Mulholland, Professor, Department of Ocean, Earth, and Atmospheric Sciences, Old Dominion University, Norfolk, VA 23529-0276, 757-683-3972, mmulholl@odu.edu

Co-PI: Eileen Hofmann, Professor, Department of Ocean, Earth, and Atmospheric Sciences, Old Dominion University, Norfolk, VA 23529-0276, 757-683-5334, hofmann@ccpo.odu.edu

Co-PI: John Klinck, Professor, Department of Ocean, Earth, and Atmospheric Sciences, Old Dominion University, Norfolk, VA 23529-0276, 757-683-6005, klinck@ccpo.odu.edu

Based on our previous studies, we believe that *Cochlodinium* bloom initiation is linked to the wind-induced resuspension of cysts along with nutrient-laden sediments. If conditions in the water column are conducive (e.g., temperature is sufficiently high and light and nutrients are available), cysts “germinate” and cells grow and reproduce. Excystment and growth are uncoupled so the former doesn’t necessarily ensure the latter. If excystment is successful and growth is promoted by environmental conditions, a population is established. Evidence suggests that emerging populations require an incubation period during which the dinoflagellates can grow and increase in density, this requires a period of quiescence. Hot spots for bloom development appear to be sites where the residence time is sufficient to allow population growth. Once growth is established and biomass reaches some critical cell density or cells have outcompeted co-occurring plankton, the bloom can be successfully transported to connected waterways where it can flourish because bloom organisms are nutritionally flexible and can vertically migrate to facilitate nutrient acquisition and predator evasion.

During calendar year (CY) 2017, we did not experience bloom concentrations of *C. polykrikoides* or any dinoflagellate species in the Lafayette River, however we did collect data that can serve as “control” conditions in this system and continued fortifying the databases we have been building. While we garnered no new data during blooms, we did gather data that can serve as “control” data”. Consequently, data we propose to gather in CY 2018 is similar to what was proposed in 2017. In 2018, we propose to continue to collect high frequency data at our continuous monitoring stations and in conjunction with the Lower James River dataflow monitoring and undertake the new efforts proposed in 2018 based on our evolving understanding of harmful algal blooms (HABs). While poised to do this in 2017, there was no bloom. Data collected in 2017 will serve as a control year for the purposes of our modeling endeavors.

Rationale and Background:

Surface chlorophyll *a* (Chl *a*) concentrations are increasingly monitored in waterbodies and managed as a proxy for phytoplankton biomass to protect against ecological impacts associated with excess or deleterious algal growth. Chl *a* criteria have been established for the James River and have been recommended Chesapeake Bay-wide (Harding et al. 2014). Despite efforts to control Chl *a* impairments, in the tidal meso- and polyhaline segments of the James River, algal blooms commonly occur during all seasons. During these events Chl *a* concentrations are significantly elevated and depending on their severity, may exceed the

established water quality criteria. Blooms of the harmful algae *Cochlodinium polykrikoides* are one of the primary impairments during the summer season. This dinoflagellate is well established in the region, and forms annual seasonal blooms throughout lower Chesapeake Bay, where it can cause mortality to fish and invertebrate populations (Marshall and Egerton 2009, Mulholland et al. 2009).

Due to the new regulatory landscape for the Chesapeake Bay system, existing numeric Chl *a* criteria for the James River estuary and its tributaries were assessed as part of the James River Study in order to determine whether current water quality standards are protective of aquatic life and designated and beneficial uses in the James River. Seasonal numeric Chl *a* criteria ranges for the lower James River recommended by the Scientific Advisory Panel were designed to be protective against blooms of *C. polykrikoides* (defined as > 1000 cells mL⁻¹) because they occur nearly annually in this region (Fig. 1). This recommendation was based on bioassay studies, literature reviews, comparisons of Chl *a* concentrations and cell densities, and seasonal Chl *a* distributions (Bukaveckas et al. 2015). In the mesohaline James River, Chl *a* standard recommendations were based on summer *C. polykrikoides* cell densities and dissolved

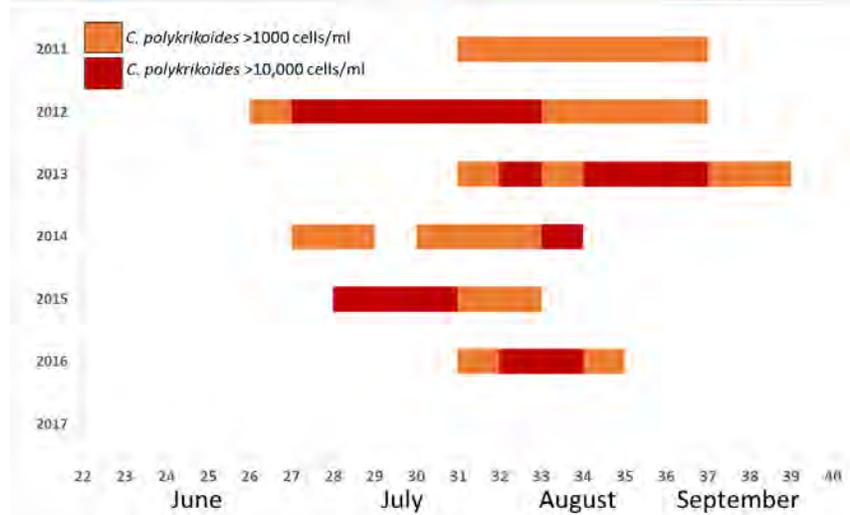


Figure 1. Relative *C. polykrikoides* abundance in the lower James River Estuary in sample collections made during HRSO Dataflow surface mapping cruises between 2011-2017. *C. polykrikoides* never reached concentrations greater than 1000 cells ml⁻¹ in 2017.

oxygen concentrations, while in the polyhaline segment, *C. polykrikoides* abundance was the single metric used to develop the summer Chl *a* criteria (Bukaveckas et al. 2015). Consequently, criteria adopted are specific to *Cochlodinium* blooms in the meso- and polyhaline segments and may not be protective for other HAB species that bloom in the lower Chesapeake Bay system and have yet to be assessed. Other potentially harmful taxa also bloom regularly in the lower Chesapeake Bay system

during summer and other seasons (Mulholland et al. 2018). Of emerging concern is the expansion of the toxic dinoflagellate *Alexandrium monilatum* into the James River. Further, relationships between Chl *a*, cell abundance, and toxicity or adverse ecosystem effects are taxa specific. For example, *C. polykrikoides* has more Chl *a* per cell than another HAB dinoflagellate, *Prorocentrum minimum* but less Chl *a* per cell than *Heterocapsa triquetra*, which blooms in the winter and spring, and the emerging and toxic HAB species, *Alexandrium monilatum*. **We propose to evaluate whether the Chl *a* criteria recommendations made based on *Cochlodinium* are potentially protective for other dinoflagellate blooms that regularly occur in the lower James River Estuary.**

Although we have found that surface populations of *C. polykrikoides* and Chl *a* have a significant linear relationship, there was substantial interannual variability in this relationship

over the last 6 years (2011-2016). We are still examining this relationship for other bloom-forming taxa (e.g., *A. monilatum*) but results to date suggest that this relationship varies greatly between species. We propose to continue to examine this relationship so we can amass a database of sufficient size to garner consistent relationships and generate ancillary databases to relate those to environmental conditions, before, during and after blooms. Sub-surface Chl *a* maxima (e.g., when the greatest Chl *a* concentrations are found in water deeper than 1m) were observed in 39% -62% of all vertical profiles conducted in the Elizabeth, Lafayette, and James Rivers during the summer months between 2013 and 2016, demonstrating that Chl *a* was not always concentrated at the surface during routine monitoring. Based on vertical profile data, it was found that measurements of surface Chl *a* most often over-estimated depth averaged Chl *a*, likely because Chl *a* was concentrated in surface waters where there was ample light for photosynthesis during daylight hours and most of the vertical profiles were measured during mid-day. Observations of subsurface Chl *a* maxima made at other times of day during diel sampling suggest that Dataflow may underestimate Chl *a* at other times. As for the cell abundance-Chl *a* relationship, sufficient data needs to be amassed during blooms to better evaluate variability in vertical distributions of Chl *a* with respect to light and time of day.

During 2015 and 2016, we observed vertical migration during diurnal sampling and this was corroborated by our surface and bottom moorings (Fig. 2). Phytoplankton cells, including harmful algal species, adjust their Chl *a* content based on their physiological status, nutritional mode, and light availability (Smayda 1997). Chlorophyll *a* is a physiological variable in cells and varies in response to light. Therefore, we expect that Chl *a* per cell will vary with depth as dinoflagellate populations vertically migrate or alter their nutritional mode (e.g., switch from photoautotrophy to heterotrophy). It is unclear how the Chl *a*:cell varies in populations over diurnal cycles or with respect to light intensity and its attenuation with depth. While we

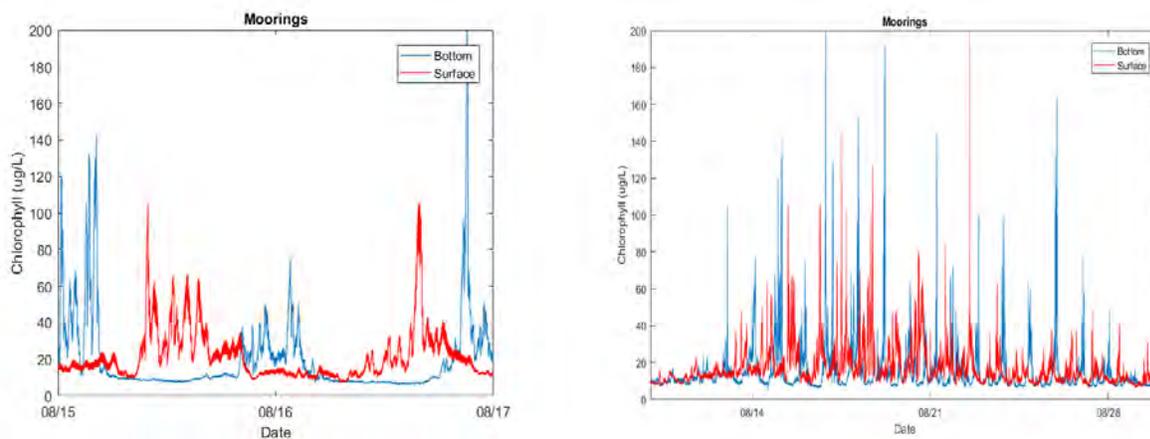


Figure 2. Chlorophyll *a* fluorescence from moorings 0.5 m from the surface and 0.5 m from the bottom at a fixed station at the Norfolk & Country Club (NYCC). In the left panel are observations made over 2 days during a bloom of *C. polykrikoides* when a diurnal study was undertaken. In the right panel are observations made over the duration of the bloom.

observed variability in Chl *a*:cell between years in the lower James River estuary (Table 1) and over diurnal cycles in the Lafayette River in 2016 (Figs. 3 & 4), data are still insufficient to evaluate this relationship with respect to light and diurnal migration. Constraining this

variability is crucial for evaluating the protectiveness of Chl *a* criteria for *C. polykrikoides* blooms. **To better understand the natural variability in Chl *a*:cell abundance ratios, we propose to compare Chl *a* concentrations with dinoflagellate cell counts: 1) at multiple depths during daily sampling and as populations of *C. polykrikoides* migrate between the surface and bottom waters, 2) in laboratory studies wherein *C. polykrikoides* is acclimated to different light levels, and 3) with respect to rates of photosynthesis, a measure of physiological status.**

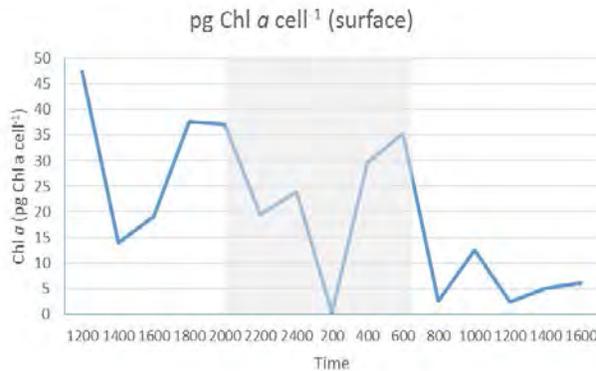


Figure 3. Chl *a* per *Cochlo dinium* cell in surface waters collected over a diurnal cycle from NYCC. The

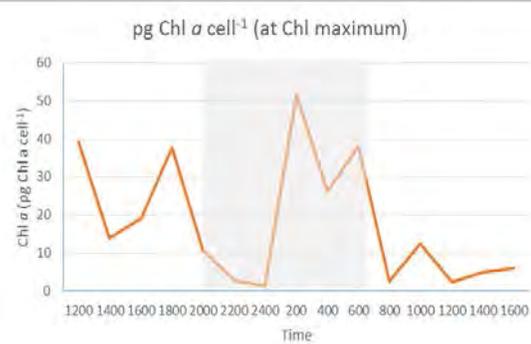


Figure 4. Chl *a* per *Cochlo dinium* cell at the depth of the Chl *a* maxima in samples collected over a diurnal cycle from NYCC. The shaded

Table 1. Chl *a* per cell during monospecific ($\geq 95\%$ of phytoplankton biomass) blooms of *C. polykrikoides*, *A. monilatum*, and *Gymnodinium* spp. in samples collected from the Lower James River from 2012-2016.

Chlorophyll a per cell counts (pg Chl a/Cell)						
Biomass $\geq 95\%$						
Species	2012	2013	2014	2015	2016	AVERAGE
<i>Cochlo dinium polykrikoides</i>	7.069445	14.53954	6.675064	7.91517	2.069143	7.653672
<i>Alexandrium monilatum</i>				19.12551	2.506443	10.81598
<i>Gymnodinium</i> spp.					5.307556	5.307556

While vertical migration is a vexing problem for monitoring dinoflagellates, tidal and wind mixing, and inputs of freshwater also influence vertical distributions of Chl *a* in the water column. Vertical heterogeneity in *C. polykrikoides* make it impossible to directly relate surface water Chl *a* measurements with depth-integrated Chl *a* concentrations in the lower James River system even at mid-day when populations are usually near the surface (Fig. 5).

This daily heterogeneity in cell abundance over the water column introduces errors to model-based calculations of Chl *a* concentrations based on measurements of surface Chl *a* concentrations. We know from our diel studies, vertical profiling, and our surface and bottom YSI moorings (2016) that the Chl *a* maxima during blooms of *Cochlo dinium* varies over the course of the day because their migration. To develop an algorithm for interpolating surface Chl *a* concentrations over the entire water column, we have taken the first steps to establishing the timing of vertical migrations. Through our mooring data, we observed that the timing of migrations can vary. We hypothesize, based on preliminary light measurements collected during

2016, that the timing of migrations depends not only on a diurnal rhythm but also on light availability. We propose to test this hypothesis in 2018 with additional profiling of light over daily cycles and comparisons of this data with vertical distributions of Chl *a* fluorescence and cells. In addition, we will continue to deploy and service our surface and bottom moorings and install a light sensor at Norfolk Yacht & Country Club (NYCC). We propose to continue to examine the relationship between cell abundance and Chl *a* fluorescence over the entire water column throughout the day and with respect to light so we can build a database of sufficient size to garner consistent relationships that are taxa specific.

Finally, we know that sediments are a repository for organic matter and resting cysts and suggest that sediment-water column interactions play a critical role in providing seed populations and associated nutrients that promote dinoflagellate blooms in the lower Chesapeake Bay estuary. We have observed in preliminary studies that cysts are resuspended and nutrients advected into the water column when winds are sufficient to cause sediment resuspension. In addition, in 2016, we observed development of a bloom of *C. polykrikoides* subsequent to a period of elevated turbidity (Fig. 6). Here, we propose to determine the wind forcing necessary to suspend sediments and examine the environmental factors promoting excystment and growth. In addition, we will examine the timing of excystment with respect to the tidal cycle and other factors that potentially lengthen population residence time in the tidal Lafayette River estuary thereby allowing the attainment of bloom-level cell densities.

Proposed Research:

Phytoplankton count data collected during Dataflow monitoring cruises from 2011-2017 have been regularly reported to the Virginia Harmful Algal Bloom Taskforce, which includes the Department of Environmental Quality (DEQ), Virginia Department of Health, ODU, VIMS and other regional partners. These data have been instrumental to the local management of HABs. From 2014 to 2017, HRSD supported the Virginia HAB Taskforce directly by funding phytoplankton analysis of the James River samples by the ODU phytoplankton laboratory. We will continue these collections and analyses in 2018 and the HAB data (location, species, density) generated by the proposed research will be similarly distributed to the taskforce and serve as a necessary sampling and monitoring component of the overall HAB monitoring in Virginia. **We propose to conduct analysis of phytoplankton samples supporting the HRSD Dataflow surface mapping to assess HAB presence/abundance as it relates to surface Chl *a* and support the Virginia HAB Taskforce objectives. This will require 1 designated personnel (Echevarria) supervised by Mulholland.**

Chlorophyll criteria in the lower James River Estuary are based, in part, on the occurrence of *C. polykrikoides* blooms and the Chl *a*:*C. polykrikoides* cell relationship observed in surface waters of the Lower James River during summer when blooms of this organism occurs. The relationship between Chl *a* and the abundance of several other harmful dinoflagellates that bloom in the Lower James River Estuary have not been established. **We will continue to add to our database and assess Chl *a* content and its variability for *C. polykrikoides* as well as other individual HAB species that may dominate the phytoplankton population in the region.**

In previous years, we determined that the vertical water column structure is not uniform with respect to salinity, temperature, and depth creating stratification and potential sub-surface Chl *a* maxima. In addition, even when the water column was mixed with respect to salinity and temperature, dinoflagellate populations vertically migrate on what appears to be a daily basis. Consequently, Chl *a* concentrations do not exhibit conservative behavior in the water column that can be easily or accurately monitored by surface water sampling or modeled using conventional methods. Neither are Chl *a*:cell abundance ratios conservative; they vary in response to light intensity and physiological status of cells. To be protective against HABs, Chl *a* criteria must account for variable Chl *a* concentrations within populations. **We propose to assess Chl *a*:cell abundance ratios and C fixation rates with respect to light availability in vertical profiles collected during blooms. This will allow us to examine the effect of light intensity on cellular chlorophyll quotas and physiological status, as estimated from photosynthetic rates.**

In 2018 we will conduct vertical profiles over many 12-hour periods from a fixed site at NYCC during summertime dinoflagellate blooms, including *C. polykrikoides*. We will also collect samples over the course of blooms of other species and expand the deployments of moored YSIs at the surface and bottom on the dock at NYCC beginning on April 1 and

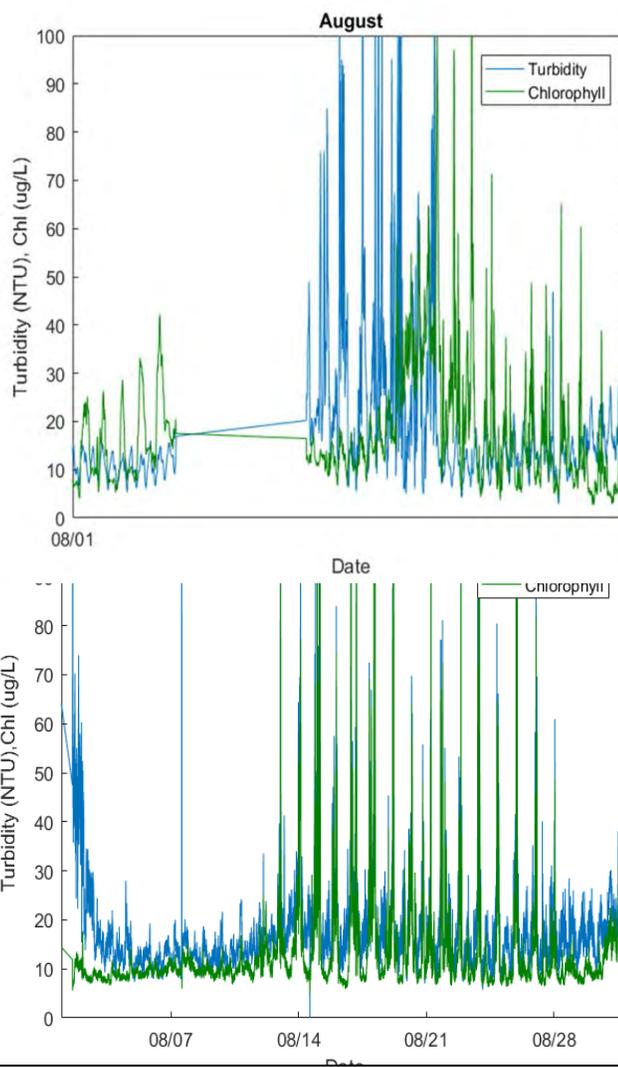


Figure 6. Surface (lower panel) and bottom (upper panel) concentrations of turbidity and Chl *a* c during August 2016.

extending to October 30 or until bloom activity subsides. Data from the moored YSIs will be available live on an ODU-hosted website, allowing for real-time data evaluation to ensure we are capturing blooms as they initiate and the final quality assured results will be posted on the VECOS web site. The ultimate goal is to capture the vertical water column structure hourly over many daily cycles during the initiation, peak, and demise of blooms of different species.

The data obtained will be used to continue the development of an assessment tool estimating depth-integrated Chl *a* concentrations from surface fluorescence estimates collected at different times of day. This tool needs to account for diurnal migration of dinoflagellate populations and physiological variability in the Chl *a*:cell abundance ratio with depth. To better constrain the range of Chl *a*:cell abundance ratios relative to environmental and physiological variability, we will measure photosynthetically active radiation (PAR) with depth in vertical profiles and will **conduct laboratory culture studies examining the Chl *a*:cell ratios with respect to light and other physiological variables (e.g., nutrient availability)**. During 2016, we established culture isolates of both *C. polykrikoides* and *A. monilatum* but they were too unstable to conduct kinetic experiments relating their growth to temperature, light, and other water column properties. In 2017, a new incubator was purchased and contaminating cyanobacteria were removed using antibiotic treatments. Cultures are now growing well in the new incubator. In both the field and laboratory components of this proposal, paired measurements of Chl *a*, particulate carbon (PC), and dinoflagellate cell abundance will be made to establish a range of Chl *a*:PC values that can be used for model parameterization.

New in 2018 will be an analysis of bloom initiation from sediment resuspension. To do this we will examine results from preliminary studies in previous years and turbidity data collected from our moored YSIs. Sediment resuspension not only delivers regenerated nutrients to shallow, organic enriched estuaries but also re-suspends dinoflagellate cysts. Dinoflagellates are unique in their production of resting cysts that can “seed” future blooms. Wind-driven sediment resuspension can reintroduce cysts to the water column where they can “germinate” if conditions are optimum. While we have surface data and vertical profiles that describe the distribution of cells once they are in the water column, we lack an understanding of the triggers for bloom initiation which is linked to benthic-pelagic coupling, in particular, the resuspension of cysts (and sediment associated nutrients) into receiving waters when conditions are conducive to their excystment. Factors we believe critical to excystment are temperature, light availability, and tidal state (as it relates to residence time). Under the supervision of Klinck and Mulholland, a student (Perez Vega) will examine sediment resuspension as it relates to bloom initiation and relate this to meteorological forcing.

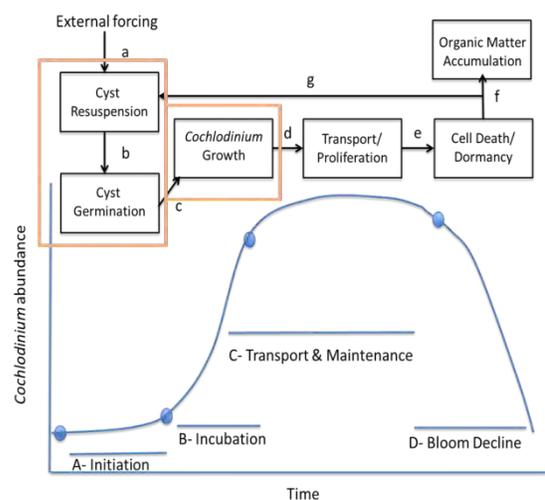


Figure 1. The conceptual bloom cycle model that underlies this research consists of: A) an initiation phase, B) a period of rapid growth and incubation, C) a period of expansion and maintenance, and D) bloom demise. The bloom cycle is described by physical, biological and meteorological processes that control cyst inputs, and cell growth, mortality and accumulation dynamics (top panel). The part of the conceptual bloom cycle that is the focus for this funding period is indicated (orange outline).

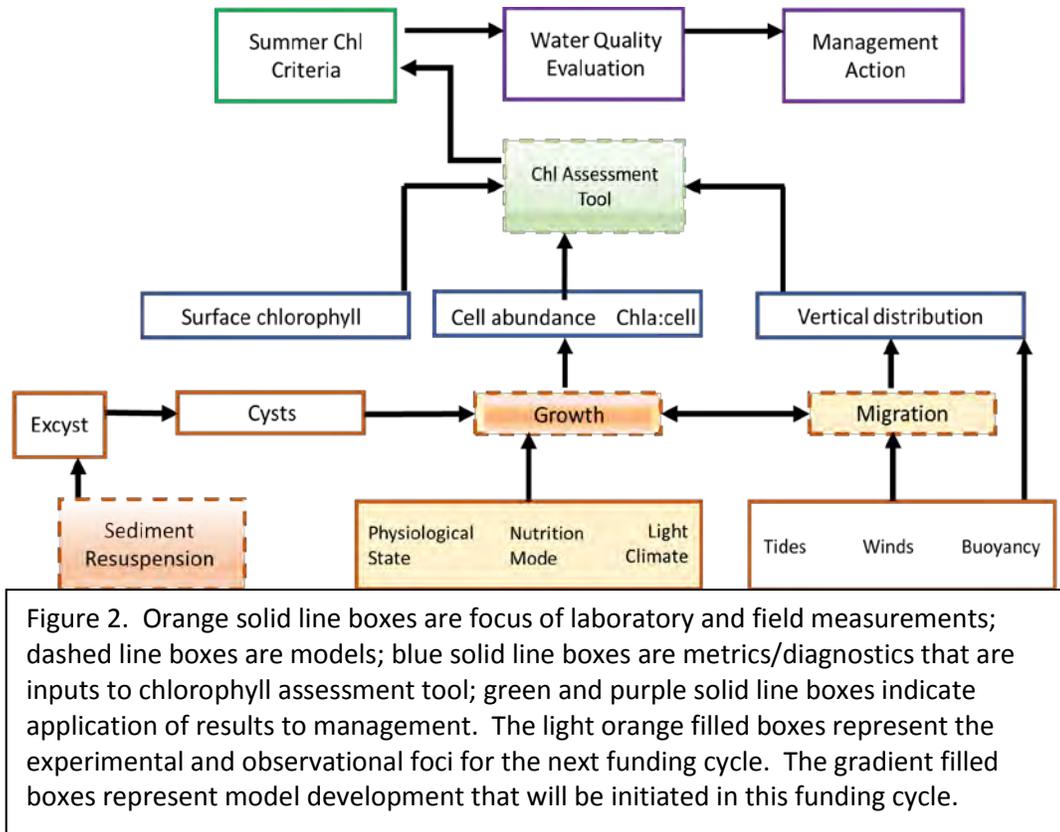
Once this rudimentary information is obtained, it will be the basis for a model of bloom initiation and resuspension (see methods). To enhance and expand on our existing one dimensional model of bloom initiation (Fig. 1; Hofmann), culture (when possible) and kinetic studies will be conducted (Echevarria) to parameterize this model so that it is specific to dinoflagellate (e.g., *Cochlodinium*) blooms in the Lafayette River. A third individual will be engaged to examine the high frequency data collected at the Lafayette and James River ConMon sites (Klinck) to date and assimilate this information into model parameterizations. Both the Ashland Circle and James River ConMon sites are shallow so should be ideal for assessing the relationship between wind speed and direction and sediment resuspension.

Objectives for 2018 (Fig. 2):

1. Continued phytoplankton analysis in support of HRSD Dataflow surface mapping to assess HAB presence and abundance as related to Chl *a* concentrations and in support of the VA HAB Taskforce.
2. Continued assessment of variability in the Chl *a*:dinoflagellate cell ratio between HAB species, including *Cochlodinium*.
3. Continued assessment of variability in the Chl *a*:dinoflagellate cell ratio within HAB species, including *Cochlodinium* in response to depth/light and physiological status.
4. Continued examination of the physiological ranges of Chl *a*:cell ratios in cultured populations of dinoflagellates that bloom in the lower James River Estuary.
5. Continued development of an assessment tool for estimating depth-integrated Chl *a* from surface measurements of Chl *a* during dinoflagellate blooms.
6. Development of a sediment resuspension model to better understand bloom initiation.
7. Development and parameterization of a bloom initiation and growth model for *Cochlodinium* in the lower James River estuary.

Methods:

To address the proposed tasks, we will use equipment and resources at ODU as well as those borrowed from HRSD. While no new bloom data were available for 2017, we will continue paired analysis of Chl *a* and cell abundance during HRSD's Dataflow cruises in the meso- and polyhaline James River in 2018 to augment our databases. To do this, water samples will be taken from the upper meter of water by HRSD during Dataflow cruises. Samples will be collected in accordance with HRSD's 2015-2017 Dataflow monitoring cruises, with weekly cruises July to September. Routine collections will be made at 5 fixed station locations in the James River (CBMP LE5.1, LE5.2, LE5.3, LE5.4, and LE5.5W). When a bloom is present, additional samples judged representative of the study area will be collected such that approximately 5-9 samples will be collected in a weekly time-frame. The current Chl *a* criteria for the segments (Spring 12 $\mu\text{g L}^{-1}$, Summer 10 $\mu\text{g L}^{-1}$) will be used as a guide for determining bloom conditions. Species composition, abundance and biomass of all samples will be analyzed in Mulholland's laboratory at ODU. Paired Chl *a* measurements will be made by HRSD using corrected Dataflow fluorescence measurements.



In addition to field studies, monospecific cultures of *C. polykrikoides* and *Alexandrium monilatum*, will be used, if stable, for intraspecific Chl *a* measurements and comparisons when possible. These cultures will also be used to assess the variability in the Chl *a*:cell relationship under varying environmental conditions (e.g., temperature and light) and at different phases of growth (e.g., lag, exponential, and stationary phase growth). We currently maintain cultures of recent (2016 and 2017) *C. polykrikoides* and *A. monilatum* isolates and will continue to isolate new clones of these groups. Because cultures have been unreliable to date, we will conduct culture-independent kinetic studies during blooms when a single species is >90% of the phytoplankton population.

For Chl *a* assessment to accurately reflect natural conditions it must take into account the relevant temporal and spatial variability. HABs occur on timescales that are not necessarily captured with routine monthly surface monitoring. Dinoflagellate blooms are dynamic, with changing population densities and species composition influenced by biological (excystment, growth rates, grazing, vertical migration) and environmental (storm activity, tidal/diurnal cycles) factors (Egerton et al. 2014, Morse et al. 2014). During 2011-2012, weekly Dataflow cruises, and daily sampling studies identified changes in the phytoplankton community associated with bloom initiation and transport occurring on the scale of days. Work by Filippino and Egerton in 2013 and 2014 identified *C. polykrikoides* biomass varied by almost 2 orders of magnitude over a 24-hour period. This work was expanded in 2015 and 2016, to capture diurnal variability of the dinoflagellates in the vertical water column. While surface waters generally contained the greatest concentration of Chl *a* and dinoflagellate cells, considerable vertical migration was detected during 24-hour diurnal studies and in surface and bottom moorings. Changes of this level (~2 orders of magnitude) in algal cell densities have consequences for the accurate assessment of bloom conditions and the potential impact to natural resources (i.e. dissolved

oxygen, duration of potential toxins, etc.). As such, we will continue to examine diurnal variability of bloom organisms in the Lafayette River during 2018 using our surface and bottom moorings and be conducting daylong observational studies measuring cell abundance, Chl *a* with respect to light concentrations, time of day, and the tidal cycle. Because diurnal studies are so demanding, it is impossible to do enough of them to obtain sufficient data to make a quantitative relationship. Therefore, we propose to conduct multiple (10) daylong studies measuring vertical profiles of hydrographic parameters and light concentrations with respect to cell abundance and Chl *a* that target and capture periods of upward and downward migration over the course of many days. These data will help to refine the Chl *a*:cell relationship, and better define how surface Chl *a* measurements can be used to predict total water column concentrations of *C. polykrikoides* and other HAB species abundance with respect to the diurnal light cycle as well as the tidal cycle.

To support our sample collections, we have deployed two YSI sondes at NYCC; one at the surface and the other near the bottom. We will stagger the deployments so that each instrument is only in the water one week at a time and one YSI will be replaced weekly with another calibrated and cleaned YSI. We will maintain a log book with calibration information specific to each YSI used. In addition, to augment our understanding of sediment resuspension and its relationship with bloom initiation, we will again deploy a YSI at our shallow-water site at an Ashland Circle residence. Parameters that will be measured are: temperature, salinity, depth, pH, turbidity, dissolved oxygen (DO), and chlorophyll fluorescence. We will telemetry the data to an ODU-hosted web site and monitor Chl *a* conditions from our desk top computers. Weekly grab samples will also be made to quantify cell counts and once an increase in *C. polykrikoides* abundance is observed, daily vertical profiling will begin. At least once a week (during blooms every other day), vertical profiling will be conducted hourly or every two hours for at least 14h to observe the timing of vertical migrations with respect to light. These profiles will allow us to assess the vertical water column structure with respect to conservative physical parameters and non-conservative biological parameters. Whole water samples will be collected to conduct counts of individual cells as well as chains of cells. Specific chain-lengths and the location in which they are found in the water column will be relevant to evaluate whether or not cells are actively dividing during vertical migration (Park et al., 2001). We will repeat these hourly vertical profiles as blooms initiate, intensify and decline. If the potentially toxic *A. monilatum* emerges, as it did in 2015 and 2016, we will also conduct vertical profiles during its initiation through its decline. In addition to vertical profiles with the YSI, whole water, Chl *a*, and nutrient samples will be collected at 3-5 depth intervals using a pump profiling system that consists of a peristaltic pump and metered tubing. Water samples for nutrients will be filtered (0.2 μm) on-site and frozen until analysis. We will measure nutrient concentrations: nitrate + nitrite ($\text{NO}_3^- + \text{NO}_2^-$), ammonium (NH_4^+), urea, total dissolved N (TDN), and ortho-phosphate (PO_4^{3-}). Primary productivity experiments will be conducted at 3 to 5 light levels daily and every 4 hours when vertical profiles are being collected hourly during day-long studies.

Through this research plan, we will be able to determine the vertical distribution of phytoplankton groups over the course of the day and associated light and nutrient availability throughout the water column. These measurements will be crucial for further developing an algorithm for estimating depth-integrated, areal Chl *a* concentrations from surface Chl *a* measurements. In addition, vertical measurements of the Chl *a* (PC):cell relationship will help us assess the physiological plasticity of Chl *a* concentrations per cell relative to light. While this sampling program is aggressive, we will also have help from at least two undergraduate students

participating in ODU's National Science Foundation-funded Research Experience for Undergraduates program and several others who have volunteered to assist in this project.

Samples for cell counts will be analyzed in a timely fashion and data disseminated to provide information to HRSD and other members of the HAB taskforce. During active HABs, when potentially toxic species are present in the James River, this will at a minimum include weekly email reports of relevant HAB taxa (*Cochlodinium*, *Alexandrium*, *Karlodinium*, *Dinophysis*, etc.) including cell densities, locations, dates and other potential bloom characteristics (fish kill, anoxia, noticeably discolored water, etc.). These data will be used to inform further sampling, potential advisories, or other management decisions.

The physical and biological data collected as part of this project will be combined with the extensive existing data sets (since 2008) to develop relationships between meteorological and physical forcing and bloom initiation to address aspects of developing projections of depth integrated Chl *a* and a sediment resuspension model (objectives 5 and 6). We will start by examining wind and precipitation data to develop relationships between wind, turbidity and the emergence of high Chl *a* concentrations. Additional analyses will examine relationships between flow conditions (e.g., tides), sediment resuspension, excystment, and light and nutrient availability. As a start, the data sets will be subjected to statistical analyses that include correlation analyses, lag-correlation analyses, and principal component analyses. These analyses will be done on data subsets so that emerging relationships can be tested and verified. Particular attention will be given to developing parameterizations that can be used to formulate a model of sediment resuspension and HAB bloom processes. We will also begin development of a one-dimensional (vertical and time dependent) sediment transport model. The focus for this effort will be on identifying approaches for specifying surface fluxes of heat and buoyancy (freshwater), surface wind stress, and vertical shear of the flow structure. These circulation processes affect the simulation of turbulence and hence the vertical distribution of Chl *a* and cysts.

Deliverables:

Final project datasets will be provided to HRSD within 4 months of the last sample collection for that year. Data shall be delivered to HRSD and other end-users in a format specified by HRSD. Two reports with interpretive graphics will be provided annually, summarizing all findings. The final report will include the assessment tool to account for the vertical distribution of Chl *a* based on dinoflagellate population behavior. We also intend to publish the findings of this research in peer-reviewed scientific journals.

We will communicate this data and its interpretations to HRSD, the VA DEQ, the VA HAB Task Force, and any other interested parties. We will also aid HRSD in communicating the results of this research to the public, stakeholders, and other interested parties with presentations at meetings or literature. To engage in educational and outreach efforts, the findings from this study will also be translated to college students through coursework and research programs, and to the community through outreach events such as RiverFest and communication venues such as the Virginian Pilot and Bay Journal. All data and analyses associated with research funded from this proposal will be made available to HRSD and its stakeholders.

Table 1. Timeline for field work, laboratory work, and deliverables in fiscal year 2019.
July 1, 2018-June 30, 2019

<i>Activity</i>	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June
2018-2019												
Deploy YSIs at NYCC	X	X	X	X	X					X	X	X
Deploy YSIs at AC	X	X	X	X	X					X	X	X
Routine weekly vertical profiling	X	X	X									X
Diurnal studies	X	X	X									X
Sediment resuspension studies	X	X	X	X	X	X				X	X	X
Productivity experiments	X	X	X	X								X
Laboratory experiments				X	X	X	X	X	X			X
Sample analysis				X	X	X	X	X	X			
Data analysis				X	X	X	X	X	X	X	X	
Reports and data to HRSD and VECOS							X	X				X

Old Dominion University Research Foundation (ODURF)
submitted on behalf of Dr. Margaret Mulholland

ODURF Proposal No.: 18-720

Date: May 24, 2018

Period of Performance: 7/1/18 - 6/30/19

Proposal Title: The relationship between surface chlorophyll a distributions, dinoflagellate abundance and speciation, and depth-integrated / averaged chlorophyll concentrations in the Lower James River estuary

	<u>Total</u>
Salaries and Wages	
PI: Mulholland	\$ 12,175
Co-PI: Hofmann	\$ 6,448
Co-PI: Klinck	\$ 5,509
Lab Manager: Bernhardt	\$ 17,500
Part-time Technician: TBD	\$ 35,000
Graduate Research Assistants (2 F/Sp, 3 Sum)	\$ 56,500
Subtotal: Salaries and Wages	\$ 133,132
Fringe Benefits	\$ 22,096
Supplies	\$ 12,900
Tuition	\$ 15,048
Total Direct Costs	\$ 183,176
Total Indirect Costs @ 10% of MTDC	\$ 16,813
PROJECT TOTAL	<u>\$ 199,989</u>

Old Dominion University Research Foundation
BUDGET JUSTIFICATION OF COST DETAIL

SALARIES & WAGES

Principal Investigator

Faculty salary for the Principal Investigator, Dr. Margaret Mulholland, is based on a 9-month performance period. Amounts charged are calculated as follows: salary/9 = rate per month. Rate per month x number of months in semester x percent effort in semester = charge per period. Dr. Mulholland's salary at the start of this project will be \$106,396, and she will devote approximately 1 month of summer effort to this project in Summer 2019. A 3% salary increase has been budgeted beginning Summer 2019.

Co-Principal Investigator

Faculty salary for the Co-Principal Investigator, Dr. Eileen Hofmann, is based on a 9-month performance period. Amounts charged are calculated as follows: salary/9 = rate per month. Rate per month x number of months in semester x percent effort in semester = charge per period. Dr. Hofmann's salary at the start of this project will be \$112,687, and she will devote approximately 0.5 month of summer effort to this project in Summer 2019. A 3% salary increase has been budgeted beginning Summer 2019.

Faculty salary for the Co-Principal Investigator, Dr. John Klinck, is based on a 12-month performance period. Amounts charged are calculated as follows: salary/12 = rate per month. Rate per month x number of months in semester x percent effort in semester = charge per period. Dr. Klinck's salary at the start of this project will be \$128,372, and he will devote approximately 0.5 month of summer effort to this project in Summer 2019. A 3% salary increase has been budgeted beginning Summer 2019.

Lab Manager

We are requesting funding for 3.5 months of effort for the Lab Manager based on a 12-month performance period. Amounts charged per project period were calculated as follows: salary/12 = rate per month. Rate per month x number of months in period x percent effort in period = charge per period. The Lab Manager's annual salary is budgeted at \$60,000.

Graduate Research Assistant

Graduate Research Assistant (GRA) wages are based on a 7.5 month performance period. A GRA may devote up to 50% academic year effort and 100% summer effort to the project each year. However, for this project, GRAs will devote an estimated 50% academic year effort and 66% summer effort. Specific wage rates are determined by the academic departments. They are based on the level of the student (masters or doctoral student) and on the number of years of experience the individual has had on research and sponsored projects. The wage rate for the GRA on this project is \$28,333.

Technician

The Part-time Technician will devote 8.08 months effort to the project. The requested salary is \$35,000.

FRINGE BENEFITS

(ONR negotiated rate submitted May 21, 2018)

Principal Investigator and Co-Principal Investigator (Hofmann & Klinck)

The fringe benefits applicable to the Principal Investigator's summer salary include FICA, worker's compensation and unemployment insurance premiums.

Lab Manager

FICA, worker's compensation, unemployment insurance, health, dental, life and disability insurance premiums, annual and sick leave earnings, tuition reimbursement, and a fringe benefit contribution in lieu of retirement have been budgeted for this position in accordance with current Old Dominion University Research Foundation policies.

Graduate Research Assistant

FICA, worker's compensation, and unemployment insurance premiums have been budgeted for the summer salary of the Graduate Research Assistant. Only worker's compensation has been budgeted on academic year salary. Health insurance premiums in the amount of \$500 for the fall academic semester and \$600 for the spring semester are requested.

Technician

FICA, unemployment insurance, and worker's compensation have been budgeted for this position.

OTHER DIRECT COSTS

Material and Supply Costs

Funds (\$12,900) are requested for research related materials and supplies.

Tuition Remission

It is the policy of Old Dominion University to include graduate research tuition in sponsored programs. Tuition remission of \$15,048 is included in the project budget. This amount covers 13 credit hours (for 2 GRAs working Fall, Summer, and Spring) and 1 credit hour (for GRA only working Summer) and all semester fees for each GRA (based on in-State credit hour rates).

INDIRECT COSTS

Per sponsor regulations, an Indirect Cost rate of 10% has been applied to the Modified Total Direct Costs (excluding tuition).

DIRECT COSTS = \$183,176
MTDC = \$168,128
INDIRECT COSTS = \$16,813
TOTAL COSTS = \$199,989



DEPARTMENT OF THE NAVY
 OFFICE OF NAVAL RESEARCH
 875 NORTH RANDOLPH STREET
 SUITE 1425
 ARLINGTON, VA 22203-1995

Agreement Date: May 8, 2018

NEGOTIATION AGREEMENT

INSTITUTION: OLD DOMINION UNIVERSITY /
 OLD DOMINION UNIVERSITY RESEARCH FOUNDATION
 NORFOLK, VA 23508

The Facilities and Administrative (F&A) rates contained herein are for use on grants, contracts and/or other agreements issued or awarded to Old Dominion University/Old Dominion University Research Foundation by all Federal Agencies of the United States of America, in accordance with the provisions and cost principles mandated by 2 CFR Part 200. These rates shall be used for forward pricing and billing purposes beginning with Old Dominion University/Old Dominion University Research Foundation's Fiscal Years 2019 through 2021. This agreement supersedes all previous agreements for FYs 2019 through 2021.

SECTION I: RATES - TYPE: PREDETERMINED (PRED)

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE</u>	<u>BASE</u>	<u>APPLICABLE TO</u>	<u>LOCATION</u>
PRED	7/1/18	6/30/21	55.00%	(a)	Organized Research (1)	On Campus
PRED	7/1/18	6/30/21	26.00%	(a)	Organized Research (1)	Off Campus
PRED	7/1/18	6/30/21	65.00%	(a)	Organized Research (2)	On Campus
PRED	7/1/18	6/30/21	36.00%	(a)	Organized Research (2)	Off Campus
PRED	7/1/18	6/30/21	53.00%	(a)	Instruction	On Campus
PRED	7/1/18	6/30/21	26.00%	(a)	Instruction	Off Campus
PRED	7/1/18	6/30/21	32.00%	(a)	Other Sponsored Agreements	On Campus
PRED	7/1/18	6/30/21	26.00%	(a)	Other Sponsored Agreements	Off Campus
PRED	7/1/18	6/30/21	10.00%	(a)	IPA* Agreements	All

*Intergovernmental Personnel Act

DISTRIBUTION BASE

(a) Modified Total Direct Costs (MTDC) consists of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment (see Special Remarks, Section II H-2), capital expenditures, charges for

patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000.

APPLICABLE TO

- (1) Applies to DOD contracts and subcontracts awarded before November 30, 1993, all Non-DOD instruments, and all DOD grants (See Section II, Part E). (Capped)
- (2) Applies to all DOD contracts awarded on or after November 30, 1993 in accordance with and under the authority of DFARS 231.303(1) (See Section II, Part E). (Uncapped)

SECTION II – GENERAL TERMS AND CONDITIONS

A. LIMITATIONS: Use of the rates set forth under Section I is subject to any statutory or administrative limitations and is applicable to a given grant, contract or other agreement only to the extent that funds are available and consistent with any and all limitations of cost clauses or provisions, if any, contained therein. Acceptance of any or all of the rates agreed to herein is predicated upon all the following conditions: (1) that no costs other than those incurred by the recipient/contractor were included in its indirect cost pool as finally accepted and that all such costs are legal obligations of the recipient/contractor and allowable under governing cost principles; (2) that the same costs that have been treated as indirect costs are not claimed as direct costs; (3) that similar types of costs, in like circumstances, have been accorded consistent accounting treatment; (4) that the information provided by the recipient/contractor, which was used as the basis for the acceptance of the rates agreed to herein and expressly relied upon by the Government in negotiating the said rates, is not subsequently found to be materially incomplete or inaccurate.

B. ACCOUNTING CHANGES: The rates contained in Section I of this agreement are based on the accounting system in effect at the time this agreement was negotiated. Changes to the method(s) of accounting for costs, which affects the amount of reimbursement resulting from the use of these rates, require the written approval of the authorized representative of the cognizant negotiating agency for the Government prior to implementation of any such changes. Such changes include but are not limited to changes in the charging of a particular type of cost from indirect to direct. Failure to obtain such approval may result in subsequent cost disallowances.

C. PREDETERMINED RATES: The predetermined rates contained in this agreement are not subject to adjustment in accordance with the provisions of 2 CFR Part 200, subject to the limitations contained in Part A of this section.

D. USE BY OTHER FEDERAL AGENCIES: The rates set forth in Section I hereof were negotiated in accordance with and under the authority set forth in 2 CFR Part 200. Accordingly, such rates shall be applied to the extent provided in such regulations to grants, contracts and other

agreements to which 2 CFR Part 200 is applicable, subject to any limitations in part A of this section. Copies of this document may be provided by either party to other Federal agencies to provide such agencies with documentary notice of this agreement and its terms and conditions.

E. APPLICATION OF INDIRECT COST RATES TO DOD CONTRACTS AND/OR

SUBCONTRACTS: In accordance with DFARS 231.303, no limitation (unless waived by the institution) may be placed on the reimbursement of otherwise allowable indirect costs incurred by an institution of higher education under a DOD contract awarded on or after November 30, 1993, unless the same limitation is applied uniformly to all other organizations performing similar work. It has been determined by the Department of Defense that such limitation is not being uniformly applied. Accordingly, the rates cited (2) of Section I, as explained under the title, "APPLICABLE TO" do not reflect the application of the 26% limitation on administrative indirect costs imposed by 2 CFR Part 200, whereas (1) do so.

F. DFARS WAIVER: Signature of this agreement by the authorized representative of the Old Dominion University/Old Dominion University Research Foundation and the Government acknowledges and affirms the University's request to waive the prohibition contained in DFARS 231.303(1) and the Government's exercise of its discretion contained in DFARS 231.303(2) to waive the prohibition in DFARS 231.303(1) for the Instruction and Other Sponsored Agreements Rates. The waiver request by the Old Dominion University/Old Dominion University Research Foundation is made to simplify the University's overall management of DOD cost reimbursements under DOD contracts.

G. OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Grants or contracts will not be subject to more than one F&A cost rate. If more than 50% of a project is performed off-campus, the off-campus rate will apply to the entire project.

H. SPECIAL REMARKS:

1. In accordance with 2 CFR 200.414(g) the Old Dominion University/Old Dominion University Research Foundation has requested an extension of its Fiscal Year 2018 rates. Therefore, the rates identified in Section I are in extension of the FY 2018 rates.

2. The Government's agreement with the rates set forth in Section I is not an acceptance of the Old Dominion University/Old Dominion University Research Foundation's accounting practices or methodologies. Any reliance by the Government on cost data or methodologies submitted by Old Dominion University/Old Dominion University Research Foundation is on a non-precedence-setting basis and does not imply Government acceptance.

3. Prior to July 1, 2011, equipment is defined as nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost equal or greater than \$5,000 for Old Dominion University and \$2,000 for Old Dominion University Research Foundation. Effective July 1, 2011, equipment is defined as nonexpendable, tangible personal

property having a useful life of more than one year and an acquisition cost equal or greater than \$5,000 for both entities.

Accepted:

FOR OLD DOMINION UNIVERSITY/
OLD DOMINION UNIVERSITY
RESEARCH FOUNDATION:

FOR THE U.S. GOVERNMENT:

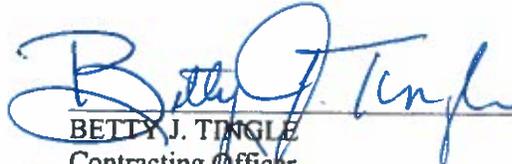


JULIAN FACENDA
Executive Director,
ODU Research Foundation

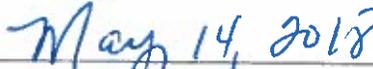


Date

For information concerning this agreement contact:
Betty J. Tingle
Office of Naval Research



BETTY J. TINGLE
Contracting Officer



Date

Phone: (703) 696-7742
E-mail: betty.tingle@navy.mil



DEPARTMENT OF THE NAVY
 OFFICE OF NAVAL RESEARCH
 875 NORTH RANDOLPH STREET
 SUITE 1425
 ARLINGTON, VA 22203-1995

IN REPLY REFER TO:

Agreement Date: June 6, 2016
 Supersedes Agreement Dated: October 23, 2014

NEGOTIATION AGREEMENT

INSTITUTION: OLD DOMINION UNIVERSITY
 NORFOLK, VA 23508

The Fringe Benefits rates contained herein are for use on grants, contracts and/or other agreements issued or awarded to Old Dominion University by all Federal Agencies of the United States of America, in accordance with the provisions and cost principles mandated by 2 CFR 200. These rates shall be used for forward pricing and billing purposes for Old Dominion University's Fiscal Years 2016-2017. This agreement supersedes all previous agreements for FY 2016-2017.

SECTION I: RATES - TYPES: FIXED (FIXED)

FRINGE BENEFITS*

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE</u>	<u>BASE</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
Fixed	7/1/15	6/30/16	34.50%	(a)	All	Full-time Employees
Fixed	7/1/15	6/30/16	5.50%	(b)	All	Part-time Employees
Fixed	7/1/16	6/30/17	37.50%	(a)	All	Full-time Employees
Fixed	7/1/16	6/30/17	5.50%	(b)	All	Part-time Employees

* The fringe benefit rates in this section do not apply to employees of Old Dominion University Research Foundation (ODURF). For information on the treatment of fringe benefit costs for employees of ODURF, see section II, paragraph G.2.

DISTRIBUTION BASES

- (a) Full-time employees Salaries and Wages.
- (b) Part-time employees Salaries and Wages.

SECTION II - GENERAL TERMS AND CONDITIONS

A. LIMITATIONS: Use of the rates set forth under Section I is subject to any statutory or administrative limitations and is applicable to a given grant or contract only to the extent that funds are available. Acceptance of the rates agreed to herein is predicated upon all of the following conditions: (1) that no costs other than those incurred by the grantee/contractor were included in this indirect cost pool as finally accepted and that such costs are legal obligations of the grantee/contractor and allowable under governing cost principles, (2) that the same costs that

have been treated as indirect costs are not claimed as direct costs, (3) that similar types of costs have been accorded consistent accounting treatment, and (4) that the information provided by the grantee/contractor which was used as a basis for acceptance of the rates agreed to herein, and expressly relied upon by the Government in establishing and accepting the said rates is not subsequently found to be materially incomplete or inaccurate.

B. ACCOUNTING CHANGES: The rates contained in Section I of this agreement are based on the accounting system in effect at the time this agreement was negotiated. Changes to the method(s) of accounting for costs, which affects the amount of reimbursement resulting from the use of these rates, require the written approval of the authorized representative of the cognizant negotiating agency for the Government prior to implementation of any such changes. Such changes include but are not limited to changes in the charging of a particular type of cost from indirect to direct. Failure to obtain such approval may result in subsequent cost disallowances.

C. FIXED RATES WITH CARRY-FORWARD PROVISIONS: The fixed rates contained in this agreement are based on estimates of the costs for FY 2016 and FY 2017. When actual costs for these fiscal years are determined, adjustments will be applied to the next subsequent rate negotiation to recognize the difference between the FY 2016 and FY 2017 estimated costs used to establish the fixed rates and the negotiated actual FY 2016 and FY 2017 costs.

D. CARRY FORWARD AMOUNTS: The following estimated carry-forward amounts were considered in the establishment by the FY2016 and FY2017 rates set forth in SECTION I.

	<u>FY2016</u>	<u>FY2017</u>
FY2014:		
Full-Time Employees	\$2,610,000	
Part-Time Employees	\$0	
FY2015:		
Full-Time Employees		\$3,600,000
Part-Time Employees		(\$35,122)

() Denotes over-recovery.

E. USE BY OTHER FEDERAL AGENCIES: The rates set forth in Section I hereof were negotiated in accordance with and under the authority set forth in 2 CFR 200. Accordingly, such rates shall be applied to the extent provided in such regulations to grants, contracts and other transactions to which 2 CFR 200 is applicable, subject to any limitations in part A of this section. Copies of this document may be provided by either party to other Federal agencies to provide such agencies with documentary notice of this agreement and its terms and conditions

F. SPECIAL REMARKS – FRINGE BENEFITS RATES:

1. OLD DOMINION UNIVERSITY:

a. The fringe benefits rates in this agreement apply to faculty and students at Old Dominion University. The Old Dominion University fringe benefits include: FICA, Retirement, Disability Insurance, Life Insurance, Workers' Compensation, Unemployment Insurance and Health Insurance.

b. TREATMENT OF PAID ABSENCES: Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims for the cost of these paid absences are not made.

2. OLD DOMINION UNIVERSITY RESEARCH FOUNDATION:

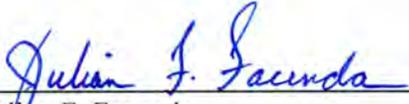
a. Fringe benefits are specifically identified to each employee and are charged individually as direct costs. The Old Dominion University Research Foundation fringe benefits include: FICA, Retirement, Disability Insurance, Life Insurance, Workers' Compensation, Unemployment Insurance and Health Insurance, Annual Leave and Sick Leave.

b. TREATMENT OF PAID ABSENCES: Holidays are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims for the cost of these paid absences are not made.

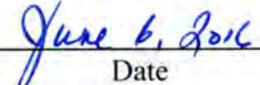
Accepted:

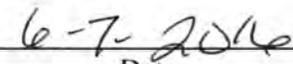
FOR OLD DOMINION UNIVERSITY/
OLD DOMINION UNIVERSITY
RESEARCH FOUNDATION

FOR THE U.S. GOVERNMENT:


Julian F. Facenda
Executive Director
ODU Research Foundation


Linda Shipp
Contracting Officer


Date


Date

For information concerning this document contact:

Betty Tingle, Office of Naval Research, e-mail: betty.tingle@navy.mil, Phone: 703.696.7742

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #7

AGENDA ITEM 8. – Kecoughtan Road, Hampton
Disposition of Easement to the City of Hampton

- [Quitclaim Deed of Assignment](#)
- [Map](#)

PREPARED BY AND RETURN TO:

Conway H. Sheild, III, Esquire
VSB # 6893
Jones, Blechman, Woltz & Kelly, P.C.
701 Town Center Drive, Suite 800
Newport News, Virginia 23606
Title Underwriter: Unknown to Preparer
LRSN: 2002378, 2002379

THIS QUITCLAIM DEED OF ASSIGNMENT, made this 26th day of June, 2018, by and between **HAMPTON ROADS SANITATION DISTRICT** (“**HRSD**”), a political subdivision of the Commonwealth of Virginia, Grantor, and the **CITY OF HAMPTON**, a municipal corporation of the Commonwealth of Virginia, Grantee, whose mailing address is 22 Lincoln Street, Hampton, Virginia 23669.

WITNESSETH: for mutual benefit and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor does by these presents assign, release and forever quitclaim to Grantee, and to its successors and assigns, **WITHOUT WARRANTY**, all its right, title, interest and claim in and to those certain easements situated in the City of Hampton, Virginia, described as “EX. 10’ HRSD SEWER LINE EASEMENT DEED BOOK 154, PAGE 427 (PAR. 8A) DEED BOOK 175, PAGE 177 (PAR. 12/8A) DEED BOOK 258, PAGE 268”, and “EX. 15’ HRSD SEWER LINE EASEMENT DEED BOOK 154, PAGE 427 (PAR. 8E) DEED BOOK 175, PAGE 177 (PAR.12/8E)” as shown on that certain plat entitled “Plat Showing HRSD Sanitary Sewer Easements To Be Assigned to the City of Hampton, VA on the Property of John Thomas Hutton and Brenda S. Hutton, Located at 4307 and 4313 Kecoughtan Road, Hampton, VA” dated 1 June 2018, made by Survey Technician-Randal J. Edwards, L.S., City of Hampton Public Works Engineering 22 Lincoln St., Hampton, VA 23669, which plat is attached hereto, made a part hereto, and to be recorded herewith.

Grantee agrees to hold harmless HRSD, and its agents, volunteers, servants, employees, and officials from and against any and all claims, losses, or expenses, including reasonable attorney's fees and litigation expenses suffered by any indemnified party or entity as a result of claims or suits, due to, arising out of or in connection with existing infrastructure or improvements within aforesaid property.

To have and to hold all and singular the above-described property, together with the appurtenances belonging to such property, to Grantee, its successors and assigns forever.

IN WITNESS WHEREOF the Hampton Roads Sanitation District has caused this Quitclaim Deed of Assignment to be signed on its behalf by its General Manager in accordance with authorization granted.

HAMPTON ROADS SANITATION DISTRICT

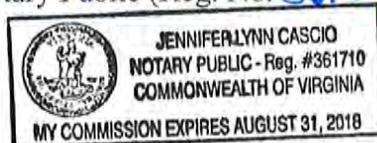
By: *EMH* (SEAL)
EDWARD G. HENIFIN, P.E., General Manager

COMMONWEALTH OF VIRGINIA
CITY OF VIRGINIA BEACH, TO-WIT:

The foregoing Quitclaim Deed of Assignment was acknowledged before me this 26th day of June, 2018, by Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District. He is known to me personally.

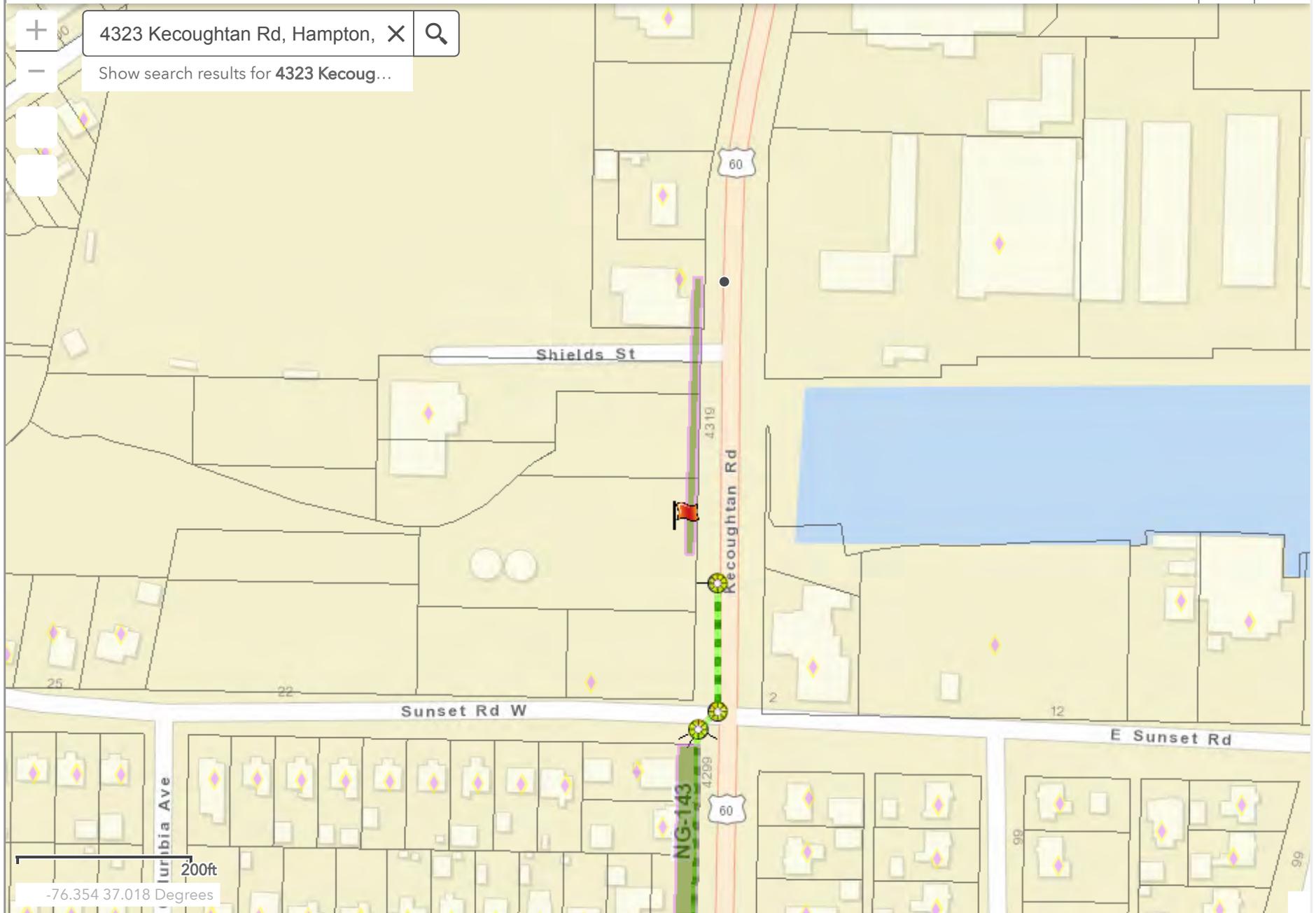
My commission expires: 8/31/18.

Jennifer Lynn Cascio
Notary Public (Reg. No. 361710)



Real Estate Lookup

+ 4323 Kecoughtan Rd, Hampton, X Q
- Show search results for 4323 Kecoug...



HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #8

AGENDA ITEM 9. – Newport News Transportation Center
600 Severn Road, Newport News, VA
Easement Acquisition Agreement

- [Purchase Agreement](#)
- [Deed](#)
- [Map](#)

600 Severn Road, Newport News, VA
Parcel ID#: 130000601

PARCEL NO.: 025412000351
JBWK FILE:
PROJECT: IFM RELOCATION
ROUTE/STREET: 600 Severn Road
CITY/COUNTY: Newport News, VA 23605

PURCHASE AGREEMENT

THIS CONTRACT FOR PURCHASE AND SALE, made this 19 day of June 2018, 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 **TWO-O-SEVEN COMPANY, L.C.**, whose mailing address is 458 Severn Road, #100, Newport News, Virginia 23602 ("Seller"). Collectively, Buyer and Seller shall be referred to as the "Parties."

WITNESSETH: That for and in consideration of one dollar and other valuable consideration, receipt of which is hereby acknowledged, Landowner agrees to convey to HRSD permanent and temporary easements over, across and through the following described property of the Landowner, by deed of easement, properly executed, acknowledged, and delivered.

The land and improvements subject to this Purchase Agreement of a Permanent Utility Easement and a Temporary Construction Easement (hereinafter referred to as "the Property") are described as follows:

Being as shown on attached plat prepared by Johnson, Mirmiran & Thompson. entitled "EXHIBIT PLAT SHOWING PROPOSED EASEMENTS FOR HAMPTON ROADS SANITATION DISTRICT ON PROPERTY KNOWN AS 600 SEVERN ROAD NEWPORT NEWS, VIRGINIA" and dated March 15, 2018 and containing 0.113 acre (4,934 square feet), more or less land for the proposed HRSD permanent easement; together with a proposed temporary construction easement containing 0.649 acre (28,279 square feet), more or less; and conveyed to William H. Ferguson, Jr. et als by Exchange Deed dated May 9, 1977, between Hornsby Oil Co. and William H. Ferguson, Jr., et als, recorded at Deed Book 955, page 584 in the Clerk's office for the Circuit Court for the City of Newport News, Virginia. (Temporary easement will terminate at such time as the construction of the aforesaid project is complete).

Together with all and singular the buildings and improvements, tenements, hereditaments, rights, privileges and appurtenances thereunto belonging or in anywise appertaining (the "Property"), a copy of which plat is attached hereto and made a part hereof.

600 Severn Road, Newport News, VA
Parcel ID#: 130000601

The total consideration for the conveyance provided for herein is as follows:

CONSIDERATION: TWENTY-SEVEN THOUSAND AND 00/100 DOLLARS (\$27,000.00) in full for the easements described hereinbefore and for all damages, if any.

The consideration hereinabove mentioned represents the value of all estates or interests in such land, and the damages to remaining lands of the Landowner which may result by reason of the use to which HRSD will put the land to be conveyed. The Landowner agrees to accept his legal proportionate share of such total consideration for his interest and right in the said land.

The Landowner hereby covenants and agrees for himself, his heirs and assigns and successors, that the consideration herein mentioned shall be in lieu of any and all claims to compensation and damages by reason of the location, construction and maintenance of the project by HRSD, including such drainage facilities as may be necessary.

In the event the Landowner is unable to convey clear title to the above easement to HRSD as herein provided, and HRSD should elect to institute condemnation proceedings for the purpose of acquiring such easements, it is agreed by the Landowner that this instrument may be introduced in such proceedings as evidence of the value of land and damages, if any, to the remaining property of the Landowner.

The Landowner by execution of this instrument acknowledges that the plans for the aforesaid project as they affect the subject property have been fully explained to the undersigned.

HRSD or its contractor will restore Landowner's land and Parcel affected as a result of construction of the project as closely as is reasonably possible to its pre-construction condition (or better) upon completion of the Project including replacing with acceptable landscaping.

HRSD or its contractor hereby agrees that it will perform all such measures in a manner causing as little inconvenience and disruption to the Landowner, and Landowner's invitees, licensees and occupants as is reasonably possible.

RIGHT TO ENTER: The HRSD, or its agents, may exercise the right to enter upon so much of the parcel or Land needed for such purposes as may be necessary for the construction of this project without further notice to the Landowner.

ETHICS IN PUBLIC CONTRACTING: By executing this Agreement, the undersigned Landowner or its representative, and the representative of HRSD, certify that the prices agreed to in this Agreement were arrived at without collusion or fraud and that they have not offered or received any payment, kickbacks or other inducement from any other party to this Agreement or its agent or employee in connection with this Agreement, and that they have not conferred on any public employee having responsibility for this procurement transaction any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised unless disclosed in this Agreement.

600 Severn Road, Newport News, VA
Parcel ID#: 130000601

Landowner acknowledges that HRSD has relied upon these covenants, representations and warranties in purchasing the above easement.

Settlement shall be within ninety (90) days, or as soon thereafter, allowing a reasonable time to correct any title defects reported by the title examiner and preparation and signing of the necessary documents to enable the HRSD to take proper title.

THE COVENANTS, AGREEMENTS, REPRESENTATIONS, WARRANTIES OF THE LANDOWNER CONTAINED IN THESE PARAGRAPHS SHALL SURVIVE THE CLOSING AND DELIVERY OF THE DEED OF EASEMENT ACROSS THE SUBJECT LAND.

WITNESS the following signatures and seals:

BUYER:

HAMPTON ROADS SANITATION DISTRICT (HRSD)

By: *EMH*

Date: 6/26/2018

Name: Edward G. Henifin, P.E.

Title: General Manager

Contact Address: 1434 Air Rail Avenue, Virginia Beach, Virginia 23455

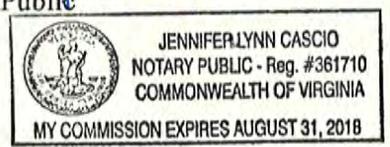
COMMONWEALTH OF VIRGINIA

City/County of Virginia Beach, to-wit:

The foregoing instrument was acknowledged before me this 26th day of June, 2018, by Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District.

Jennifer Lynn Cascio
Notary Public

Notary Public Registration No. 361710
My commission expires: 8/31/18



600 Severn Road, Newport News, VA
Parcel ID#: 130000601

SELLER(S):
TWO-O-SEVEN COMPANY, L.C.

BY: William H. Ferguson
William H. Ferguson, Assistant Manager

BY: J.W.W. Chisman
J.W.W. Chisman, Manager



COMMONWEALTH OF VIRGINIA
City/County of Jones City County. to-wit:

The foregoing instrument was acknowledged before me this 15 day of June,
2018, by William H. Ferguson, Assistant Manager, TWO-O-SEVEN COMPANY, L.C.

Donna Ritter Robinson
Notary Public

Notary Public Registration No. 771196
My commission expires: August 31, 2020

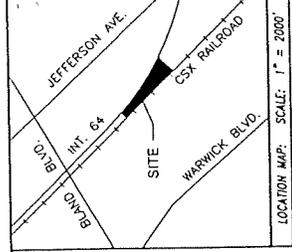
COMMONWEALTH OF VIRGINIA
City/County of Jones City County. to-wit:

The foregoing instrument was acknowledged before me this 15 day of June,
2018, by J.W.W. Chisman, Manager, TWO-O-SEVEN COMPANY, L.C.

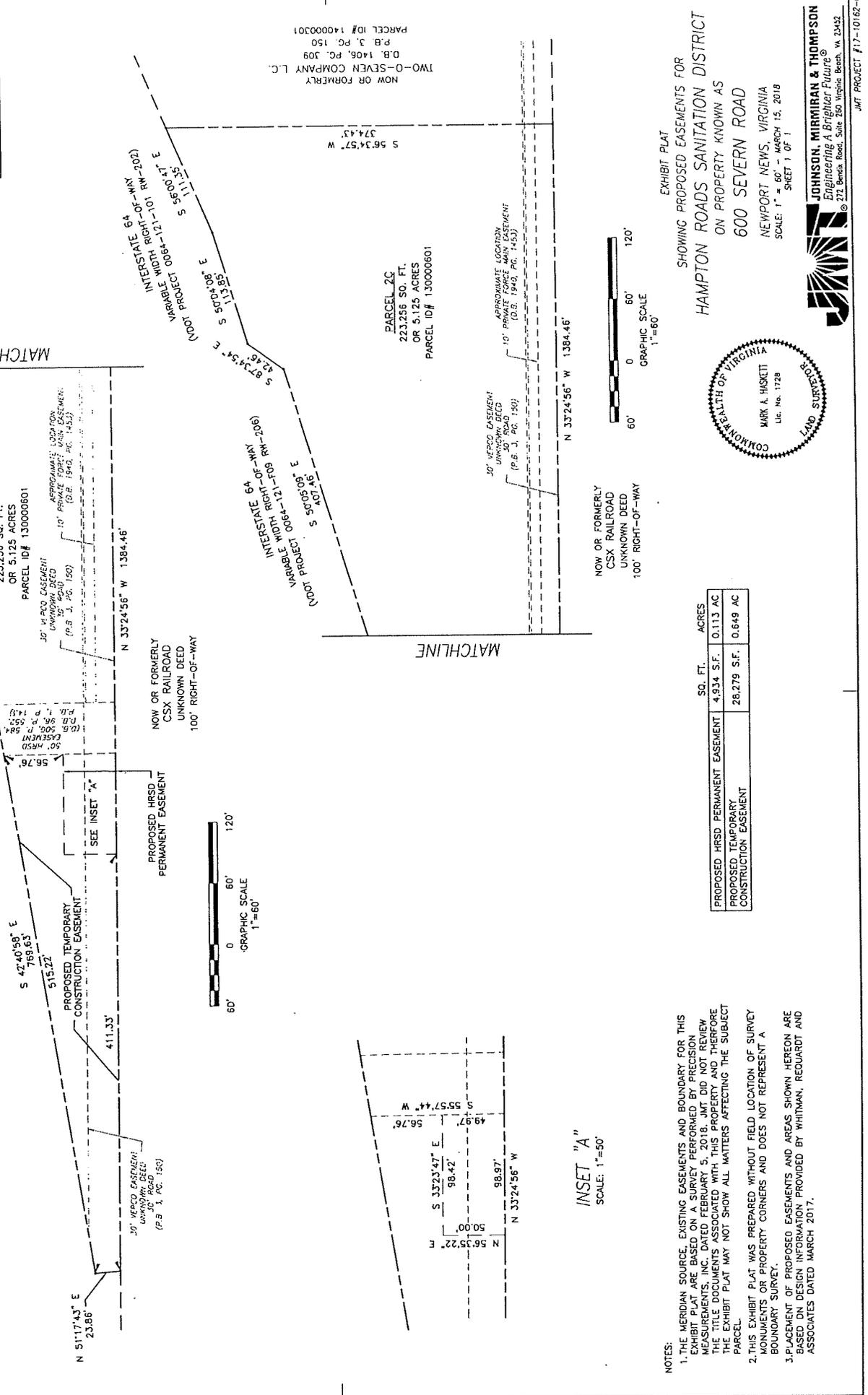
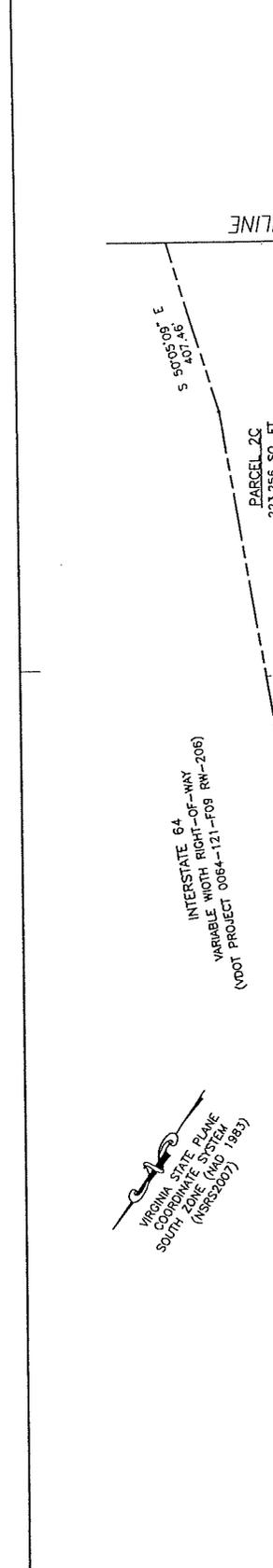
Donna Ritter Robinson
Notary Public

Notary Public Registration No. 771196
My commission expires: August 31, 2020





LOCATION MAP: SCALE: 1" = 2000'



NOW OR FORMERLY
TWO-O-EVEN COMPANY L.C.
D.B. 1406, P.C. 309
P.B. 3, P.C. 150
PARCEL ID# 14000301

PARCEL 2C
223,256 SQ. FT.
OR 5.125 ACRES
PARCEL ID# 130000601

NOW OR FORMERLY
CSX RAILROAD
UNKNOWN DEED
100' RIGHT-OF-WAY

NOW OR FORMERLY
CSX RAILROAD
UNKNOWN DEED
100' RIGHT-OF-WAY

EXHIBIT PLAT
SHOWING PROPOSED EASEMENTS FOR
HAMPTON ROADS SANITATION DISTRICT
ON PROPERTY KNOWN AS
600 SEVERN ROAD
NEWPORT NEWS, VIRGINIA
SCALE: 1" = 60' - MARCH 15, 2018
SHEET 1 OF 1

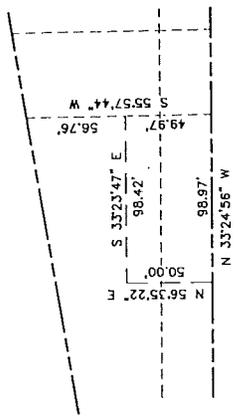


JOHNSON, MIRMIRAN & THOMPSON
Engineering & Architecture
272-Bentley, Towne, Suite 250, Virginia Beach, VA 23462
© 2018

	SO. FT.	ACRES
PROPOSED HRSD PERMANENT EASEMENT	4,934 S.F.	0.113 AC
PROPOSED TEMPORARY CONSTRUCTION EASEMENT	28,279 S.F.	0.649 AC

- NOTES:
1. THE MERIDIAN SOURCE, EXISTING EASEMENTS AND BOUNDARY FOR THIS EXHIBIT PLAT ARE BASED ON A SURVEY PERFORMED BY PRECISION MEASUREMENTS, INC. DATED FEBRUARY 5, 2018. JMT DID NOT REVIEW THE TITLE DOCUMENTS ASSOCIATED WITH THIS PROPERTY. THEREFORE THE EXHIBIT PLAT MAY NOT SHOW ALL MATTERS AFFECTING THE SUBJECT PARCEL.
 2. THIS EXHIBIT PLAT WAS PREPARED WITHOUT FIELD LOCATION OF SURVEY MONUMENTS OR PROPERTY CORNERS AND DOES NOT REPRESENT A BOUNDARY SURVEY.
 3. PLACEMENT OF PROPOSED EASEMENTS AND AREAS SHOWN HEREON ARE BASED ON DESIGN INFORMATION PROVIDED BY WHITMAN, REOQUARDT AND ASSOCIATES DATED MARCH 2017.

INSET "A"
SCALE: 1" = 50'



xxxxxx

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: 130000601

DEED OF EASEMENT

THIS DEED OF EASEMENT, made this 19 day of June, 2018 by and between **TWO-O-SEVEN COMPANY, L.C.**, whose mailing address is 488 Severn Road, #100, Newport News, Virginia 23602 (**GRANTOR**), and **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia, **GRANTEE**, whose mailing address is: P.O. Box 5911, Virginia Beach, Virginia, 23471-0911.

WITNESSETH:

That for and in consideration of the sum of TEN AND 00/100 (\$10.00) DOLLARS 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, for the purpose of laying, erecting, constructing, operating, and maintaining underground wastewater and/or water reuse force mains and/or gravity mains together with above and/or below ground equipment, accessories, and appurtenances thereto, hereinafter called "facilities," on the lands of the **GRANTOR**, said Permanent and Temporary Easements (the "Property") being further described as follows:

Being as shown on attached plat prepared by Johnson, Mirmiran & Thompson, entitled "EXHIBIT PLAT SHOWING PROPOSED EASEMENTS FOR HAMPTON ROADS SANITATION DISTRICT ON PROPERTY KNOWN AS 600 SEVERN ROAD NEWPORT NEWS, VIRGINIA" and dated March 15, 2018 and containing 0.113 acre (4,934 square feet), more or less land for the proposed HRSD permanent easement; together with a proposed temporary construction easement containing 0.649 acre (28,279 square feet), more or less; and conveyed to William H. Ferguson, Jr. et als by Exchange Deed dated May 9, 1977, between Hornsby Oil Co. and William H. Ferguson, Jr., et als, recorded at Deed Book 955, page 584 in the Clerk's office for the Circuit Court for the City of Newport News, Virginia. (Temporary easement will terminate at such time as the construction of the aforesaid project is complete).

Together with all and singular the buildings and improvements, tenements, hereditaments, rights, privileges and appurtenances thereunto belonging or in anywise appertaining (the "Property"), a copy of which plat is attached hereto and made a part hereof.

The Permanent and Temporary Easements are subject to the following conditions and provisions:

A. The facilities existing or constructed on or under the Easements shall remain the property of **GRANTEE**. **GRANTEE** shall have the right to inspect, rebuild, remove, repair, improve, and make such changes, alterations, additions to or extensions of its facilities within the boundaries of said right of way as are consistent with the purpose expressed herein. All construction, maintenance, equipment and facilities shall comply with all applicable laws, ordinances, codes and regulations.

B. Any disturbance of the premises by the **GRANTEE** or its contractor will be restored by the **GRANTEE** as nearly as practicable. This includes paving, fences, backfilling of trenches, grass, reseeding, replacing or replanting landscaping, and removal of trash or debris.

C. **GRANTEE** shall have the right to trim, cut and remove trees, shrubbery or other obstructions which interfere with or threaten the efficient and safe operation, construction and maintenance of said facilities. All trees and limbs cut by **GRANTEE** shall remain the property of **GRANTOR**. All brush, branches, and other debris resulting from any cutting, trimming, or clearing of said right of way shall be removed from lands of **GRANTOR** for disposal.

D. **GRANTEE** shall have the right of ingress to and egress from said right of way over the lands of **GRANTOR**. **GRANTEE** shall exercise such right in such manner as shall not occasion injury and inconvenience to **GRANTORS**. **GRANTEE** shall at **GRANTEE'S** election pay for or repair any injury to any of **GRANTOR'S** land, structures, roads, fences and other improvements caused by **GRANTEE**, its employees, agents or contractors.

E. **GRANTOR**, its successors and assigns, may use said right of way for any purpose not inconsistent with the rights hereby granted, provided such use does not interfere with the safe and efficient construction, operation or maintenance of said facilities, and further provided that such use is not inconsistent with any laws, ordinances or codes pertaining to the construction, operation or maintenance of said facilities. **GRANTOR** shall not place any permanent improvements within the easement without permission of **GRANTEE**, or its successors, including but not limited to houses, buildings, pools, sheds, signs, or similar permanent structures. **GRANTOR** may install fences, driveways, pavement and landscaping (trees and shrubs shall be varieties that will not exceed 20 feet tall at maturity).

F. It is understood and agreed that the consideration paid to the **GRANTOR** in connection herewith constitutes payment in full for the property hereby conveyed and for damages, if any, to the residue or other property of the **GRANTOR** resulting from the project and use made of the property conveyed.

G. Notwithstanding the above, should the property on which the aforesaid perpetual and temporary easements lay be subdivided, then the access rights to the easement as above enumerated shall be along the publicly dedicated streets within the said subdivision as far as practical, and then the access shall be on subdivided lots within the subdivision which shall efficiently provide access for the purposes of the **GRANTEE** as herein enumerated.

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

GRANTEE:

HAMPTON ROADS SANITATION DISTRICT (HRSD)

By: *EMH* Date: 6/20/2018

Name: Edward G. Henifin, P.E.

Title: General Manager

Contact Address: 1434 Air Rail Avenue, Virginia Beach, Virginia 23455

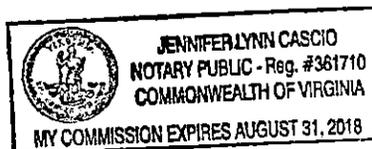
COMMONWEALTH OF VIRGINIA

City/County of Virginia Beach, to-wit:

The foregoing instrument was acknowledged before me this 20th day of June, 2018, by Edward G. Henifin, P.E., General Manager, Hampton Roads Sanitation District.

Jennifer Lynn Cascio
Notary Public

Notary Public Registration No. 361710
My commission expires: 8/31/18



GRANTOR(S):
TWO-O-SEVEN COMPANY, L.C.

BY: William H. Ferguson
William H. Ferguson, Assistant Manager

BY: J.W.W. Chisman
J.W.W. Chisman, Manager



COMMONWEALTH OF VIRGINIA
City/County of Jones City County to-wit:

The foregoing instrument was acknowledged before me this 19 day of June, 2018, by William H. Ferguson, Assistant Manager, TWO-O-SEVEN COMPANY, L.C.

Donna Ritter Robinson
Notary Public

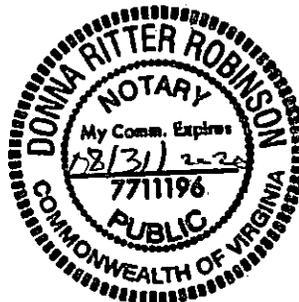
Notary Public Registration No. 7711196
My commission expires: August 31, 2020

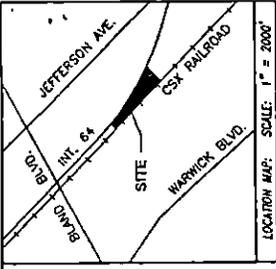
COMMONWEALTH OF VIRGINIA
City/County of Jones City County to-wit:

The foregoing instrument was acknowledged before me this 19 day of June, 2018, by J.W.W. Chisman, Manager, TWO-O-SEVEN COMPANY, L.C.

Donna Ritter Robinson
Notary Public

Notary Public Registration No. 7711196
My commission expires: August 31, 2020





LOCATION MAP: SCALE: 1" = 2000'

NOW OR FORMERLY
TWO-0-SEVEN COMPANY L.C.
D.B. 1406, P.C. 309
P.B. 3, P.C. 150
PARCEL ID# 14000301

PARCEL 2C
223,256 SQ. FT.
OR 5.125 ACRES
PARCEL ID# 130000601

APPROXIMATE LOCATION
UNIMPROVED 30' ROAD
10' PRIVATE TOWER MAIN EASEMENT
(P.B. 3, P.C. 150)

30' IMPROVEMENT
UNIMPROVED 30' ROAD
(P.B. 3, P.C. 150)

NOW OR FORMERLY
CSX RAILROAD
UNKNOWN DEED
100' RIGHT-OF-WAY



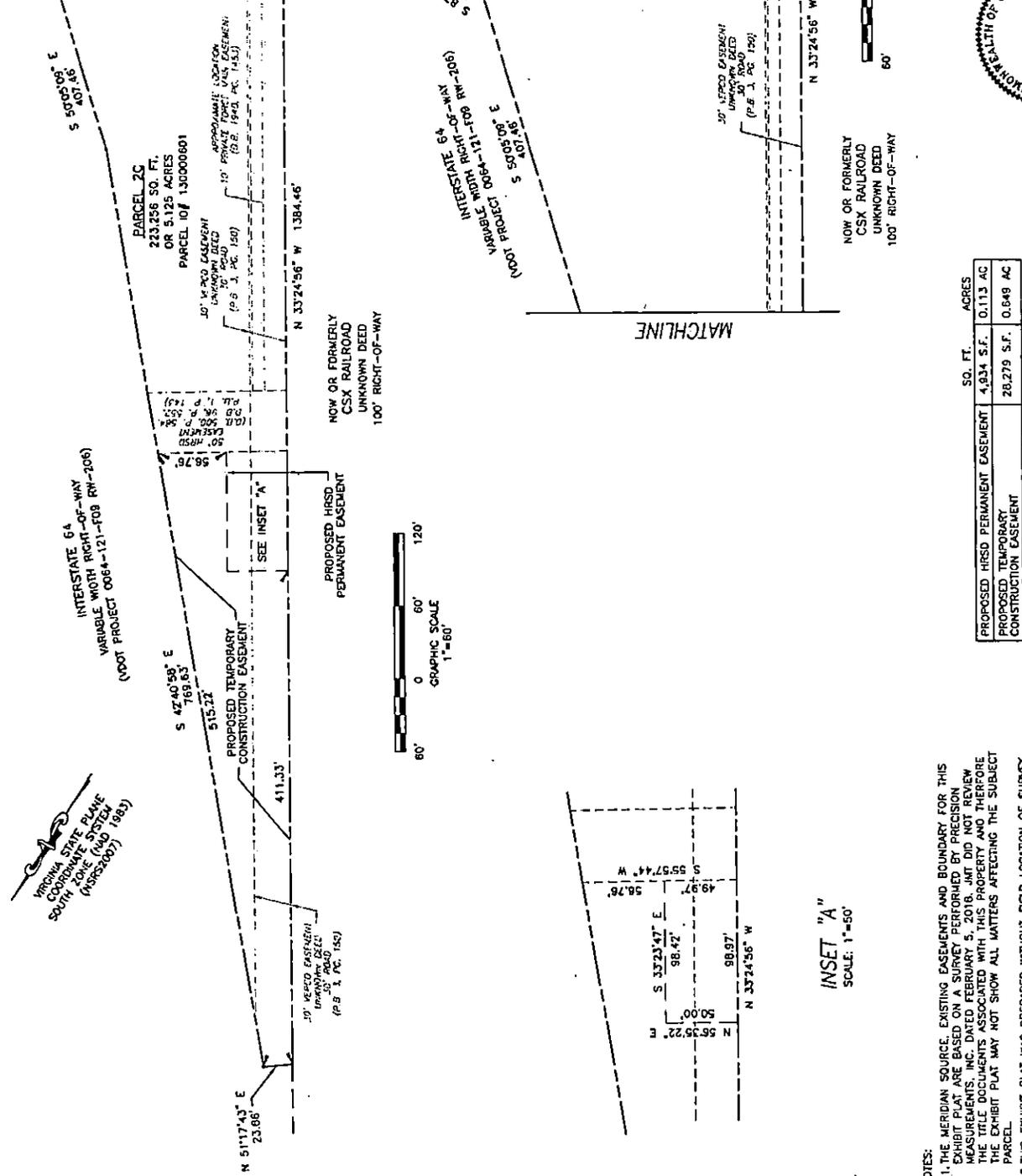
EXHIBIT PLAT
SHOWING PROPOSED EASEMENTS FOR
HAMPTON ROADS SANITATION DISTRICT
ON PROPERTY KNOWN AS
600 SEVERN ROAD
NEWPORT NEWS, VIRGINIA
SCALE: 1" = 60' - MARCH 15, 2018
SHEET 1 OF 1



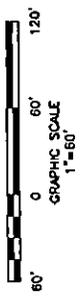
JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future
273 Brando Road, Suite 200 Virginia Beach, VA 23452

MATCHLINE

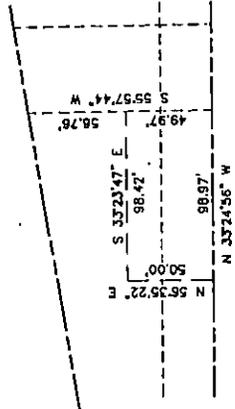
MATCHLINE



	SO. FT.	ACRES
PROPOSED HRSD PERMANENT EASEMENT	4,934 S.F.	0.113 AC
PROPOSED TEMPORARY CONSTRUCTION EASEMENT	28,279 S.F.	0.649 AC



INSET "A"
SCALE: 1" = 50'



- NOTES:
1. THE MERIDIAN SOURCE, EXISTING EASEMENTS AND BOUNDARY FOR THIS EXHIBIT PLAT ARE BASED ON A SURVEY PERFORMED BY PRECISION MEASUREMENTS, INC. DATED FEBRUARY 5, 2018. JMT DID NOT REVIEW THE TITLE DOCUMENTS ASSOCIATED WITH THIS PROPERTY AND THEREFORE THE EXHIBIT PLAT MAY NOT SHOW ALL MATTERS AFFECTING THE SUBJECT PARCEL.
 2. THIS EXHIBIT PLAT WAS PREPARED WITHOUT FIELD LOCATION OF SURVEY MONUMENTS OR PROPERTY CORNERS AND DOES NOT REPRESENT A BOUNDARY SURVEY.
 3. PLACEMENT OF PROPOSED EASEMENTS AND AREAS SHOWN HEREON ARE BASED ON DESIGN INFORMATION PROVIDED BY WHITMAN, REQUARDT AND ASSOCIATES DATED MARCH 2017.

INSTRUMENT 180008815
RECORDED IN THE CLERK'S OFFICE OF
NEWPORT NEWS CIRCUIT COURT ON
July 9, 2018 AT 12:36 PM
GARY S. ANDERSON, CLERK
RECORDED BY: ZCT

180008815

DOC. NO

RECORDED

2018 JUL -9 PM 12:36

ES. 602 TAX PAID F.
NEWPORT NEWS CIRCUIT COURT
GARY S. ANDERSON, CLERK: BY

5pgs
JBWK
\$41.33

\$1.67(442)

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #9

AGENDA ITEM 10. – Virginia Initiative Plant SWIFT Land Acquisition

- [Agreement](#)
- [Subdivision Plat](#)
- [City Approval](#)

OPTION TO PURCHASE REAL ESTATE

THIS OPTION TO PURCHASE REAL ESTATE (this "Agreement"), dated as of the 22nd day of April, 2018, is given by the **CITY OF NORFOLK**, a municipal corporation of the Commonwealth of Virginia (hereinafter called "City") to **HAMPTON ROADS SANITATION DISTRICT**, a political subdivision of the Commonwealth of Virginia (hereinafter called "HRSD").

RECITALS

A. HRSD's Sustainable Water Initiative for Tomorrow ("SWIFT") Project was conceived with multiple benefits in mind for the Hampton Roads region. This innovative water purification project is designed to enhance the sustainability of the long-term groundwater supply and help address other environmental pressures such as sea level rise and saltwater intrusion. The SWIFT Project is intended to achieve these benefits by taking already-treated wastewater that would otherwise be discharged into the Chesapeake Bay watershed, purifying it through additional rounds of advanced water treatment to meet drinking water standards, and injecting the resulting drinking quality water into the Potomac aquifer deep underground. Most importantly, with respect to TMDL benefits, SWIFT will result in a significant reduction in the total volume of HRSD discharge to the Chesapeake Bay watershed, to achieve greater environmental benefits with corresponding significant reductions of TN, TP and TSS discharges to the Chesapeake Bay watershed.

B. HRSD and the City entered into the Hampton Roads Water Quality Credit Agreement for Chesapeake Bay Restoration ("Trading Agreement") on June 28, 2017. Pursuant to Virginia Code § 62.1-44.19:21 and § 62.1-44.19:21.1, the City may acquire and use TN, TP and TSS credits for purposes of compliance with the Chesapeake Bay TMDL loading reductions of its MS4 VSMP Permit, including credits generated by SWIFT. The Trading Agreement provides such credits for the City to meet its obligations to reduce TN, TP and TSS as required by its municipal separate stormwater sewer system ("MS4"). The MS4 is subject to the Chesapeake Bay TMDL as derived from the Virginia WIP and to a Virginia Stormwater Management Program (VSMP) Permit issued to the City by DEQ. As a result of the VSMP Permit, the City is required to develop and implement Chesapeake Bay and Local TMDL Action Plans. The credits provided by HRSD under the Trading Agreement will be used to assist the City with meeting the Chesapeake Bay TMDL pollutant reduction requirements for the Second and Third Bay TMDL Permit Cycle saving the City millions of dollars. The ability to generate TN, TP, and TSS credits through the SWIFT Project and apply those credits as progress under the Hampton Roads localities' MS4 Permits and associated TMDL Action Plans is a fundamental premise for the SWIFT Project. HRSD is proceeding with the SWIFT Project, and the City is supporting it, in large part in reliance on these critical water quality trading-based benefits.

C. SWIFT requires HRSD to construct advanced water treatment facilities to treat HRSD's highly treated wastewater effluent to meet drinking water standards prior to pumping that SWIFT Water into the ground. Ideally those facilities need to be in close proximity to existing HRSD facilities or centrally located to allow consolidation of advanced treatment of effluent from multiple HRSD facilities. HRSD does not have adequate land available at the following treatment plants: Williamsburg, Boat Harbor, Army Base, and the Virginia Initiative

Plant. Accordingly, HRSD is actively seeking appropriate sites for SWIFT facilities for these existing treatment plants.

D. HRSD has identified approximately thirty-five (35) acres of land adjacent to the Virginia Initiative Plant as a potential location for a consolidated SWIFT facility to provide advanced water treatment for the effluent from the two Norfolk HRSD facilities (Army Base and Virginia Initiative Plant). The consolidated facility may provide a more cost-effective long-term solution for SWIFT. The land is owned by the City and is currently used as a municipal golf course known as Lambert's Point Golf Course.

E. The City desires to sell and HRSD desires to purchase the land for the construction and operation of wastewater treatment and/or SWIFT related facilities and the associated easements through adjacent City owned property required for construction and utilities to serve the parcel (the "Property"). The Property is approximately as shown on Attachment A with the exact parcel and easements to be defined by a subdivision plat to be prepared by HRSD, at HRSD's expense, in coordination with the City. The expectation is that the subdivision plat can be obtained without requiring HRSD to commit substantial funds for capital improvements or additional acquisition of real estate other than the Property.

F. The City desires to maintain open space along the water for public recreation, and HRSD has agreed to provide an easement approximately 125 feet wide with exact dimensions to be defined by the subdivision plat described in E to the City for the portions of the Property along the waterfront for public recreation activities, including, without limitation, possible connections to the Elizabeth River Trail (the "Open Space Easement"). The City shall be responsible for all costs and risks associated with the Open Space Easement. HRSD shall have no obligation to modify the Open Space Easement in the event the shoreline changes due to erosion.

G. The City, at the City's option, may maintain the driving range as an amenity for its citizens. The existing golf course parcel shall be subdivided to keep as much space as possible for a reconfigured driving range on the portion to the property to be retained by the City of Norfolk. The driving range shall be configured so as not to unreasonably interfere with HRSD's Intended Use of the Property (defined below).

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing (hereby incorporated as if fully set forth herein), the mutual covenants and conditions herein, and other good and valuable consideration, the receipt and sufficiency of which HRSD and the City acknowledge, the Parties hereby agree as follows.

1. Option. The City hereby grants to HRSD an option to purchase the Property upon the terms and conditions set forth herein.

2. Due Diligence. The "Due Diligence Period" shall be a period of ninety (90) days running from the date this Agreement has been fully executed by the parties hereto. HRSD shall have the right to extend the Due Diligence Period for one (1) additional period of ninety (90)

days by giving the City written notice thereof prior to the expiration of the Due Diligence Period. During the Due Diligence Period, HRSD shall determine if the results of its inspections, investigations and the like are satisfactory to HRSD. The City and HRSD shall do the following during the Due Diligence Period:

(a) Subdivision. Within a reasonable time after the full execution of this Agreement by the parties hereto, the City and HRSD shall determine the boundary lines of the Property. HRSD, at its sole cost and expense, shall then cause the Property to be surveyed and a subdivision plat to be prepared that creates two parcels, one to be sold to HRSD for the Intended Use, as hereinafter defined, and the other to remain owned by the City. The subdivision plat shall vacate all existing property lines internal to the parcels created thereby. The subdivision plat shall also include any easements necessary for HRSD's Intended Use of the Property and the Open Space Easement. The City will process the subdivision plat in a timely manner and in accordance with established processes.

Failure of the parties to agree upon a subdivision plat or of the City to approve the Subdivision Plat, with terms and conditions to which HRSD approves, with the Property designated, contiguous to the existing HRSD Virginia Initiative Plant, approximately shaped as shown on Attachment A, and including the Open Space Easement, on or prior to June 30, 2018, or a mutually agreed upon alternate date, releases HRSD and the City from any and all obligations contained herein, including HRSD's obligation to pay the Option Fee but excluding any obligations of HRSD pursuant to the right of entry set forth in Section 3 below.

(b) Zoning. No later than thirty (30) days after the parties have agreed upon the boundary lines of the Property, HRSD shall submit a completed application to the City's Department of Planning and Community Development for rezoning of the Property to a zoning classification that permits the Intended Use, as hereinafter defined. The City shall sign the application as the property owner. HRSD has no obligation to accept any terms and conditions required by the City to obtain the required zoning. The parties shall work diligently to complete the rezoning process prior to the expiration of the Due Diligence Period. If the Property is not rezoned to a zoning classification that permits the Intended Use prior to the expiration of the Due Diligence Period as extended in accordance with the terms hereof, HRSD shall have the right to terminate this Agreement by written notice to the City.

(c) Environmental. HRSD acknowledges that the Property is a former incinerator site. HRSD shall cause any environmental studies that it deems necessary to be performed, at its sole cost and expense, during the Due Diligence Period. Except as expressly set forth in this Agreement, HRSD will accept the use and conveyance of the Property "as is", including, without limitation, the environmental condition of the Property. HRSD shall have no obligation to pay any consideration hereunder until it has completed its due diligence hereunder.

(d) Title.

(i) No later than ten (10) days after the latest of HRSD receiving a fully executed copy of this Agreement, a definitive plat of the Property and the ALTA survey, HRSD shall request a buyer's title commitment (the "Title Commitment") for the proposed Property issued by a reputable title insurance company in the amount of the estimated Purchase

Price, and within fifteen (15) days after HRSD's receipt of such commitment shall notify City of any matters reported in the Title Commitment that would make title to the Property unmarketable or uninsurable under an ALTA owner's title insurance policy or that would adversely affect the use of the Property for the Intended Use in the reasonable opinion of HRSD (such matters are referred to herein as the "Title Objections").

(ii) The City shall have a reasonable time to cure any Title Objections (but in no event greater than ninety (90) days), but City shall have the option of declining to cure any Title Objection by providing written notice thereof to HRSD within thirty (30) days after receipt of HRSD's written notice of such Title Objections, and if the City declines to cure any Title Objection or does not cure any Title Objections that it has agreed to cure prior to the expiration of the Due Diligence Period, the HRSD shall have the right either to waive its Title Objections in writing and to proceed with the Option subject to such Title Objections which shall be considered "Permitted Exceptions" or to terminate this Agreement prior to the Option Payment Deadline, provided, however, if any Title Objection is not capable of being cured within the ninety (90) day period, the City shall work diligently to cure such Title Objection prior to Closing.

3. Right of Entry. At all times prior to the expiration or sooner termination of this Agreement, but upon prior reasonable advance notice to the City and the tenant operating the driving range, HRSD shall have the right to enter onto the Property for the purpose of making surveys, environmental tests, and soil tests provided such testing does not materially interfere with City's use of the Property and further provided that said tests shall not be so exercised as to cause material damage to said Property. All such testing is to be at the risk and expense of HRSD. In connection with this right to enter upon the Property, HRSD agrees (i) to restore the Property to its prior condition after the performance of any such survey or other investigation and (ii) to indemnify, defend and hold the City 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. The City shall have the right to be present during any entry upon the Property by HRSD.

4. Option Notice. On or prior to that date which is five (5) days after the expiration of the Due Diligence Period (the "Option Payment Deadline"), provided that HRSD does not terminate this Agreement in accordance with the terms hereof, HRSD shall pay, as additional consideration for the Option granted herein, Fifteen Million and 00/100 Dollars (\$15,000,000) (the "Option Fee"), which sum shall be non-refundable and shall be paid by HRSD to the City by wire transfer. If the Option Fee is not paid to the City in accordance with the terms hereof by the Option Payment Deadline, the City shall provide HRSD with written notice of its failure to pay and, absent such payment, this Agreement shall terminate automatically on that date which is thirty (30) days after the Option Payment Deadline. If the Option Fee is paid in accordance with the terms set forth herein, the Option shall then be non-revocable by the City and the Option Fee shall not be credited against the purchase price at settlement. In the event HRSD fails to exercise the Option granted hereunder and to close on the purchase of the Property prior to the expiration of the Option Term, the Option Fee shall continue to be the property of City and shall not be returned to HRSD.

5. Term. Provided that the Option Fee is paid by HRSD in accordance with the terms of this Agreement, the Option granted hereunder shall continue in effect until 5:00 p.m. on December 1, 2023 (the "Option Term").

6. Exercise of the Option. The Option granted hereunder shall be exercisable by HRSD by giving written notice to the City prior to the expiration of the Option Term in accordance with Section 14 below. HRSD may not exercise the option before January 1, 2023 without written consent of the City.

7. Purchase and Sale Agreement. If the Option is exercised by HRSD, this Agreement shall become a contract for the purchase and sale of the Property upon the following terms and conditions:

(a) The purchase price shall be Fifteen Million and 00/100 Dollars (\$15,000,000) escalated from the date of this Agreement to the date of settlement by the Consumer Price Index for All Urban Consumers (CPI-U) as published by the Bureau of Labor Statistics. The Purchase Price shall be paid to the City by wire transfer at the time of settlement.

(b) Closing shall occur as soon as reasonably possible after HRSD exercises the option in accordance with the terms herein but in no event later than March 31, 2024 (the "Outside Closing Date"). Closing shall be held in the office of HRSD's closing agent/attorney, on or before the Outside Closing Date; provided, however, all documents requiring execution on behalf of the City may be executed prior to settlement and delivered by the City to the closing agent/attorney in escrow. HRSD shall provide the City with at least thirty (30) days' prior written notice of its desired approximate Closing date.

(c) At closing, upon payment as above provided, City shall deliver to HRSD a special warranty deed conveying the Property to HRSD by reference to the Subdivision Plat and reserving the Open Space Easement. Title shall be good and marketable, free of liens and encumbrances except the Permitted Exceptions and the Open Space Easement. City shall also provide a standard owner's affidavit as customarily required by title companies pertaining to mechanic's liens and absence of tenants in occupancy of the Property and shall execute a settlement statement in a form that is mutually acceptable to both City and HRSD. Except as expressly set forth in this Agreement, HRSD will accept the use and conveyance of the Property "as is.", including, without limitation, the environmental condition of the Property.

(d) Real estate taxes and other public charges applicable to the Property, including charges for sewer and water, if any, shall be apportioned.

(e) The City is exempt from grantor's tax upon recordation of the deed. HRSD shall pay any other recording costs and state and local recordation taxes applicable to the recordation of the deed.

(f) City agrees that it will join, as the owner of the Property, with HRSD, at no cost or liability to City, in the signing of any applications for permits or licenses or in recording plats or in such other actions as may be necessary or required for HRSD's Intended Use of the Property.

(g) If HRSD exercises the Option hereunder but fails to deliver the Purchase Price to City at Closing as provided above, the City shall have the right to terminate this Agreement immediately upon written notice to HRSD and both parties' rights and obligations hereunder shall terminate, except for HRSD's obligations under Section 1 above and the City shall retain the Option Fee as its sole remedy for such breach.

(h) If HRSD exercises the Option hereunder but the City fails to deliver title to HRSD at Closing free and clear of all leases, tenancies, rights of occupancies or fails to meet its obligations as provided herein, HRSD shall have the right to terminate this Agreement immediately upon written notice to the City and both parties' rights and obligations hereunder shall terminate, and the City shall refund the Option Fee as HRSD's sole remedy for such breach.

(i) At closing, HRSD, in addition to any other documents required to be delivered under the terms of this Agreement, shall deliver the following to the City: a counterpart signed copy of the Settlement Statement; the Purchase Price by wire transfer; a written opinion of counsel of HRSD, in form commercially reasonable satisfactory to the City (assuming that all signatures are genuine, and further assuming that all documents presented to such counsel as copies conform with the originals), stating (1) that HRSD has the power to enter into the transactions contemplated by this Agreement (including, without limitation, entry into this Agreement); (2) that all actions by HRSD required to be authorized in the transaction contemplated by this Agreement have been duly authorized; and (3) that this Agreement and all documents required to effectuate the transactions contemplated hereby which are to be executed by HRSD (including, without limitation, all agreements and instruments to be executed by HRSD at Closing) have been duly executed and delivered by HRSD, and constitute binding obligations of HRSD, enforceable in accordance with their terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganizations, moratoriums or similar laws affecting the enforcement of creditors' rights generally and by legal and equitable limitation on the enforceability of specific remedies; resolutions of the HRSD's Commissioners ("Commission"), authorizing HRSD to consummate the transactions contemplated herein, such resolutions to be in form and substance reasonably satisfactory to the City; and any other document or instrument required hereunder or reasonably requested by the City in order to consummate the transactions contemplated herein, which document or instrument will be in form and substance reasonably acceptable to the HRSD and the City.

(j) Possession of the Property shall be delivered to HRSD as of the date of Closing, free and clear of all leases, tenancies and rights of occupancy.

8. Leases. City warrants that there are no unrecorded leases or rights of tenants in possession to which the Property is subject and agrees in the event of a breach of this warranty, City shall refund the Option Fee to HRSD, except for the Golf Course Lease which shall be terminated prior to the Closing. Possession of the Property shall be delivered to HRSD as of the settlement date, free and clear of all leases, tenancies and rights of occupancy.

9. Intended Use/Permitted Use; Right of First Refusal. HRSD shall use the Property, solely for the construction and operation of an expanded wastewater treatment facility and/or SWIFT related facilities and uses incidental thereto (the "Intended Use"). In the event (a) the HRSD purchases the Property but fails to develop all of the Property for the Intended Use

and if HRSD desires to sell any portion of the Property, the City shall have the right of first refusal to purchase such undeveloped portion of the Property at the lower of (a) the sum of the prorated Purchase Price and the prorated Option Fee less the cost to demolish any structures placed on the Property to be repurchased by HRSD or (b) a bona fide third-party written offer to purchase. In the event the City elects to repurchase the undeveloped portion of the Property pursuant to this Section 9, City shall provide written notice of its intent to repurchase and shall have 180 days to close upon such repurchase. At or prior to closing on the repurchase, HRSD shall execute and deliver a special warranty deed to the City re-conveying such portion of the Property as well as all improvements thereon to the City free and clear and any encumbrances, except for the Permitted Exceptions, the City's Open Space Easement, and any new encumbrances which would be typical for development of the Property for the Intended Use. Notwithstanding any provision to the contrary, once the HRSD commences operations on any portion of the Property for the Intended Use, then City's right to repurchase such portion of the Property shall become void.

10. Approvals. HRSD is solely responsible for securing all governmental permits, licenses and other approvals including, but not limited to, site plan, subdivision plat, zoning, building permits, and environmental permits necessary for development of the Property for its Intended Use. HRSD acknowledges that the City approvals required for development of the Property, including, without limitation, the Subdivision Plat and zoning, are administrative functions of the City that are separate from and independent of this Agreement.

11. Utilities. HRSD shall be responsible for confirming the existing public utilities adjacent to or downstream of the Property are adequate to support the Intended Use. Any public utility upgrades necessary to support the Intended Use shall be designed and constructed by HRSD at HRSD's expense. HRSD shall be responsible for the relocation of any utilities which is necessitated by the construction on the Property and for connecting to public utility lines located in public rights of way, and all costs thereof shall be paid and borne by HRSD. Connection fees and tap fees for such public utilities serving the Property will be HRSD's responsibility. The cost of franchise utility services for the Property shall be the responsibility of HRSD.

12. Design Review Exemption. Pursuant to Norfolk City Code Section 32-70(b)(6), the Project shall be exempt from design review by the City's Architectural Review Board ("ARB"). Notwithstanding this exemption, if not previously delivered to the City, as part of HRSD's site plan approval process after exercising the Option, HRSD shall cause to be delivered to the City the information that would be included in an application for design review by the ARB if the project were not exempt.

13. Open Space Easement. HRSD shall be responsible for maintaining the shoreline of the Property in accordance with all applicable laws, including those portions of the Property that are within the Open Space Easement area. The City shall have the right, at its sole cost and expense, to cause improvements, including without limitation, a pathway, lighting (including the necessary electrical connections), benches, fitness equipment, playground equipment, and picnic shelters, to be constructed in the Open Space Easement area. HRSD shall grant any utility easements in the Open Space Easement area which are necessary to allow for such improvements provided such easements do not interfere with HRSD's Intended Use of the Property. The City

shall be responsible for maintenance of any such public improvements constructed by the City in the Open Space Easement area, including mowing in the areas around such improvements. The boundary line of the Open Space Easement shall be fixed by the recorded subdivision plat and will not change based on erosion or other changes in the shoreline. To the extent allowed by applicable law, the City shall indemnify and hold HRSD harmless from and against all claims or causes of action arising from the City's and the public's use of the Open Space Easement area.

14. Default; Remedies. The occurrence of any of the following shall be an event of default by HRSD under this Agreement:

(a) The filing by HRSD of a voluntary proceeding under present or future bankruptcy, insolvency, or other laws respecting debtors' rights.

(b) The consent by HRSD to an involuntary proceeding under present or future bankruptcy, insolvency, or other laws respecting debtor's rights.

(c) The entering of an order for relief against HRSD or the appointment of receiver, trustee, or custodian for all or a substantial part of the property or assets of HRSD in any involuntary proceeding, and the continuation of such order, judgment or decree unstayed for any period of thirty (30) consecutive days.

(d) The failure of HRSD to perform or to observe any covenant, obligation, condition or requirement of this Agreement not specifically named as a default in this Section 16, and the continuation of such failure for thirty (30) days after written notice from the City specifying the nature and extent of any such default, or, if such default cannot reasonably be cured within such thirty (30)-day period, the failure either (i) to commence to cure such default within such thirty (30)-day period and to diligently continue to pursue such effort to cure to completion, or (ii) to cure such default within a reasonable time after the expiration of the first thirty (30)-day period, in no event to exceed ninety (90) days after the written notice of default.

(e) Upon the occurrence and continuance of any event of default described in this Section 14 or any other breach of this Agreement, the City may elect to terminate this Agreement by giving written notice of such termination to HRSD, and this Agreement shall terminate as of the date specified in such notice (which date shall be on or after the date of the notice of termination). In addition to the remedies of termination described above and except as set forth in Section 7(g) and Section 7(h) above, a non-defaulting party shall have available to it all other rights and remedies provided in this Agreement or at law or in equity.

(f) In the event that termination by the City under this Section 14 occurs after Closing, the City shall have the right to repurchase the Property at for the sum of the Purchase Price and the Option Fee less the cost to demolish any structures placed on the Property by HRSD. At or prior to closing on the repurchase, HRSD shall execute and deliver a special warranty deed to the City re-conveying the Property as well as all improvements thereon to the City free and clear and any encumbrances, except for the Permitted Exceptions any new encumbrances which would be typical for development of the Property for the Intended Use.

(g) Except as set forth in Section 7(g) and Section 7(h), remedies under this Agreement shall be cumulative and not restrictive of other remedies.

15. Notices. All notices, requests or other communications under this Agreement shall be in writing and shall be delivered either in person (when delivered) or sent by registered or certified mail, return receipt requested, postage prepaid (three business days thereafter), or by overnight mail by a nationally recognized overnight carrier (one business day thereafter) addressed to the respective parties hereto as follows:

City: City Manager
City of Norfolk
810 Union Street
1101 City Hall Building
Norfolk, VA 23510

With a
copy to: City Attorney
City of Norfolk
810 Union Street
900 City Hall Building
Norfolk, VA 23510

HRSD: General Manager
Hampton Roads Sanitation District
1434 Air Rail Avenue
Virginia Beach, VA 23455

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

17. No Assignment. This Agreement, and the rights and obligations established hereunder, shall be binding upon and inure to the benefit of any successors of the Parties. However, no Party may transfer or assign this Agreement, or its rights or obligations hereunder, without the prior written consent of the other Party, which consent may be withheld in the parties' sole and absolute discretion.

18. Expenses; Commissions. Except as provided herein, each Party shall pay its own fees and expenses, including its own counsel fees, incurred in connection with this Agreement or any transaction contemplated hereby. The Parties represent and warrant to each other that they have not dealt with any business broker or agent who would be entitled to a brokerage commission or finder's fee as a result of this Agreement or any related transactions.

19. Governing Law; Venue; Severability. This Agreement shall be construed in accordance with and governed for all purposes by the laws of the Commonwealth of Virginia. This Agreement is a Virginia contract deemed executed and accepted in the City of Norfolk; and all questions with respect to any of its provisions shall be instituted, maintained, and contested in a state court of competent jurisdiction in the City of Norfolk, Virginia. If any word or provision of this Agreement as applied to any Party or to any circumstance is adjudged by a court to be

invalid or unenforceable, the same shall in no way affect any other circumstance or the validity or enforceability of any other word or provision.

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

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

22. Counterparts; Signatures; Copies. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. A facsimile or scanned signature may substitute for and have the same legal effect as an original signature. Any copy of this executed Agreement made by photocopy, facsimile or scanner shall be considered the original for all purposes.

23. Recording. This Agreement or a mutually agreeable memorandum of this Agreement may be recorded by either party hereto at its cost and expense.

24. Authorization. Each Party represents that its execution, delivery and performance under this Agreement have been duly authorized by all necessary action on its behalf, and do not and will not violate any provision of its charter or enabling legislation or result in a material breach of or constitute a material default under any agreement, indenture, or instrument of which it is a party or by which it or its properties may be bound or affected.

[SIGNATURES BEGIN ON NEXT PAGE]

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

Witness the following signatures and seals:

[SIGNATURE PAGE OF OPTION TO PURCHASE REAL ESTATE (Hampton Roads Sanitation District – City of Norfolk)]

HAMPTON ROADS SANITATION DISTRICT

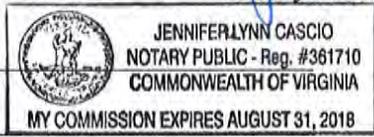
By: 
Name: Edward G Henifin, P.E.
Title: General Manager

COMMONWEALTH OF VIRGINIA
CITY OF Virginia Beach, to-wit:

I, Jennifer L. Cascio, a Notary Public in and for the City of Virginia Beach, in the Commonwealth of Virginia, do hereby certify that Edward G. Henifin, General Manager of Hampton Roads Sanitation District, whose name as such is signed to the foregoing Option to Purchase Real Estate, has acknowledged the same before me in the City and Commonwealth aforesaid.

Given under my hand this 29th day of March, 20 18.

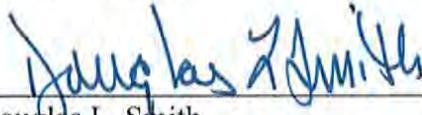

Notary Public

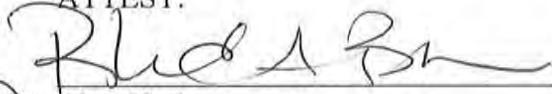
Registration Number: _____
My Commission Expires: _____


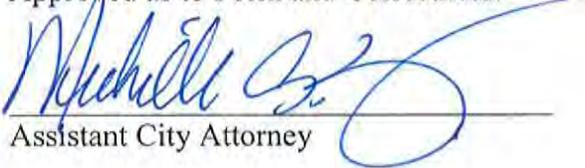
[Signatures continue on next page]

[CONTINUATION OF SIGNATURE PAGES TO OPTION TO PURCHASE REAL ESTATE (Hampton Roads Sanitation District – City of Norfolk)]

CITY OF NORFOLK

By: 
Name: Douglas L. Smith
Title: City Manager

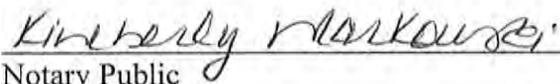
ATTEST:

City Clerk

Approved as to Form and Correctness:

Assistant City Attorney

COMMONWEALTH OF VIRGINIA
CITY OF NORFOLK, to-wit:

I, Kimberly K. Markowski, a Notary Public in and for the City of Norfolk, in the Commonwealth of Virginia, do hereby certify that Douglas L. Smith, City Manager, and R. Breckenridge Daughtrey, City Clerk, of the City of Norfolk, whose names as such are signed to the foregoing Option to Purchase Real Estate, have acknowledged the same before me in the City and Commonwealth aforesaid.

Given under my hand this 20th day of April, 2018


Notary Public

Registration Number: 213345

My Commission Expires: 4/30/2020



ATTACHMENT A



OWNERS NOTE:
 THE PLATTING OR DEDICATION OF THE FOLLOWING DESCRIBED LAND,
 "RE-SUBDIVISION PLAT OF PROPERTY OF HAMPTON ROADS SANITATION DISTRICT AND
 THE CITY OF NORFOLK AT THE WESTERN TERMINUS OF 43RD STREET, NORFOLK,
 VIRGINIA"
 LOCATED IN NORFOLK, VIRGINIA IS WITH FREE CONSENT AND IN ACCORDANCE
 WITH THE DESIRE OF THE UNDERSIGNED OWNERS.

OWNER: CITY OF NORFOLK

APPROVED: _____, DATE: _____
 RONALD H. WILLIAMS, JR. ASSISTANT CITY MANAGER

APPROVED: _____, DATE: _____
 R. BRECKENRIDGE DAUGHTREY, CITY CLERK

STATE OF VIRGINIA
 CITY OF NORFOLK, TO WIT:

I, _____, A NOTARY PUBLIC, IN AND FOR THE CITY
 AND STATE AFORESAID, DO HEREBY CERTIFY THAT RONALD H. WILLIAMS, JR.
 ASSISTANT CITY MANAGER AND R. BRECKENRIDGE DAUGHTREY, CITY CLERK
 WHOSE NAMES ARE SIGNED TO THE FOREGOING WRITING BEARING DATE
 ON THE ____ DAY OF _____, 20____ HAVE ACKNOWLEDGED THE SAME
 BEFORE ME IN MY CITY AND STATE AFORESAID.

GIVEN UNDER MY HAND THIS ____ DAY OF _____, 20____.
 MY COMMISSION EXPIRES _____

NOTARY PUBLIC _____ REGISTRATION NUMBER _____

OWNERS NOTE:
 THE PLATTING OR DEDICATION OF THE FOLLOWING DESCRIBED LAND,
 "RE-SUBDIVISION PLAT OF PROPERTY OF HAMPTON ROADS SANITATION DISTRICT AND
 THE CITY OF NORFOLK AT THE WESTERN TERMINUS OF 43RD STREET, NORFOLK,
 VIRGINIA"
 LOCATED IN NORFOLK, VIRGINIA IS WITH FREE CONSENT AND IN ACCORDANCE
 WITH THE DESIRE OF THE UNDERSIGNED OWNERS.

OWNER: HAMPTON ROADS SANITATION DISTRICT

APPROVED: _____, DATE: _____
 EDWARD G. HENIFIN, P.E., GENERAL MANAGER

STATE OF VIRGINIA
 CITY OF NORFOLK, TO WIT:

I, _____, A NOTARY PUBLIC, IN AND FOR THE CITY
 AND STATE AFORESAID, DO HEREBY CERTIFY THAT EDWARD G. HENIFIN, P.E.,
 GENERAL MANAGER WHOSE NAME IS SIGNED TO THE FOREGOING WRITING
 BEARING DATE
 ON THE ____ DAY OF _____, 20____ HAVE ACKNOWLEDGED THE SAME
 BEFORE ME IN MY CITY AND STATE AFORESAID.

GIVEN UNDER MY HAND THIS ____ DAY OF _____, 20____.
 MY COMMISSION EXPIRES _____

NOTARY PUBLIC _____ REGISTRATION NUMBER _____

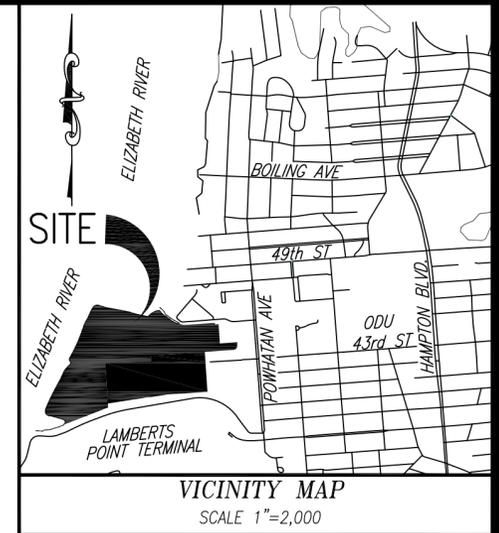
TOTAL AREA NOTE:
 THE TOTAL AREA ENCOMPASSED WITHIN THIS
 PLAT IS 3,522,803 SQ. FT. OR 80.872 ACRES.
 ALL AREAS ARE TO THE APPROXIMATE MEAN
 LOW WATER LINE

AREA TABLE

PARCEL	SQUARE FEET	ACRES
EXISTING CITY OF NORFOLK (GPIN: 1428-08-7730)	2,447,894	56.196
AREA TO BE ACQUIRED	1,751,362	40.206
GC	658,097	15.108
E1	38,436	0.882
EXISTING HRSD (GPIN: 1428-08-9087)	1,074,908	24.676
VIP-3	2,826,270	64.882
TOTAL PLAT AREA	3,522,803	80.872

SEE SHEET 4 FOR CURVE TABLE

SEE SHEET 4 FOR NOTES



REFERENCES:

- | | |
|--------------------|-------------------|
| INSTR.# 00005877 | INSTR.# 020024925 |
| INSTR.# 130008441 | INSTR.# 140005200 |
| INSTR.# 140005201 | INSTR.# 060020789 |
| D.B. 772, PG. 640 | D.B. 935, PG. 100 |
| D.B. 1135, PG. 563 | D.B. 1386, PG. 94 |
| M.B. 24, PG. 95 | M.B. 32, PG. 95 |
| M.B. 54, PG. 76-78 | M.B. 64, PG. 84 |
| M.B. 71, PG. 8 | M.B. 71, PG. 26 |
| M.B. 72, PG. 41 | |
| ORD.# 45,306 | ORD.# 39,868 |

DIRECTORS NOTE:
 THE UNDERSIGNED CERTIFY THAT THIS SUBDIVISION AS IT APPEARS ON
 THIS PLAT, CONFORMS TO THE APPLICABLE REGULATIONS RELATING TO
 THE SUBDIVISION OF LAND AND IS ACCORDINGLY APPROVED. BY SUCH
 APPROVAL, THE UNDERSIGNED DO NOT CERTIFY AS TO THE CORRECTNESS
 OF THE BOUNDARY, STREETS OR OTHER LINES ON THIS PLAT.

APPROVED: _____, DATE: _____
 DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT, NORFOLK, VIRGINIA

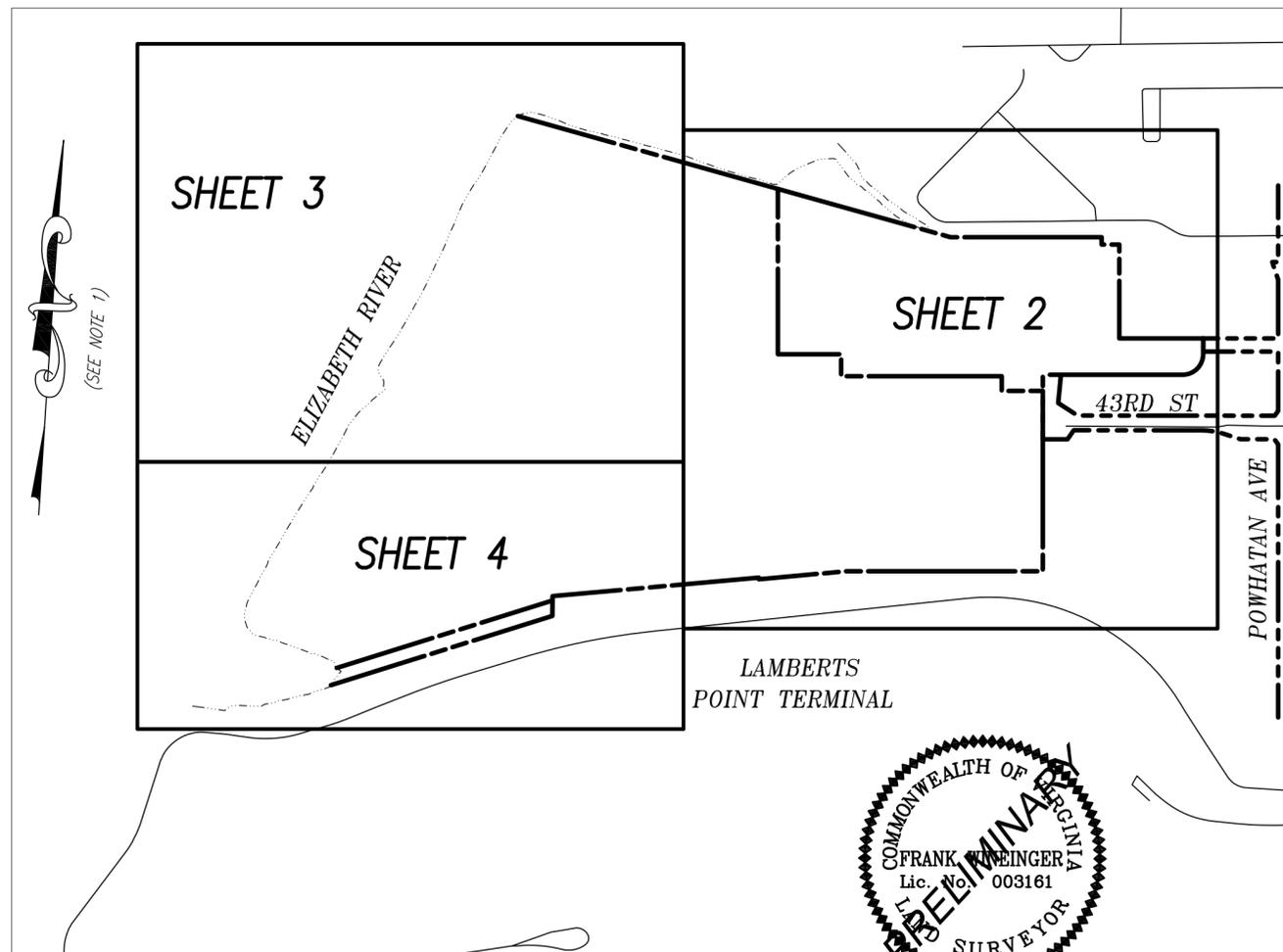
APPROVED: _____, DATE: _____
 DEPARTMENT OF PUBLIC WORKS, NORFOLK, VIRGINIA

APPROVED: _____, DATE: _____
 DEPARTMENT OF UTILITIES, NORFOLK, VIRGINIA

CHESAPEAKE BAY PRESERVATION AREA NOTE:
 THIS PROPERTY IS LOCATED IN THE CHESAPEAKE BAY PRESERVATION AREA (CBPA) AND
 IS SUBJECT TO CERTAIN DEVELOPMENT REQUIREMENTS AND LIMITATIONS. NO TREE
 REMOVAL, LAND DISTURBING ACTIVITY OR CONSTRUCTION ACTIVITY CAN BE COMMENCED
 WITHOUT PRIOR APPROVAL FROM THE CITY OF NORFOLK. PLEASE CONTACT THE
 BUREAU OF ENVIRONMENTAL SERVICES AT 664-4368 FOR FURTHER INFORMATION.

CLERK'S NOTE:
 VIRGINIA:
 IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF
 NORFOLK, VIRGINIA, ON THE ____ DAY OF _____, 20____
 AT _____, THIS PLAT WAS THIS DAY RECEIVED AND UPON
 CERTIFICATE OF ACKNOWLEDGMENT, THERETO ANNEXED, ADMITTED
 TO RECORD IN MAP BOOK: _____ AT PAGE: _____

BY: _____
 TESTE: GEORGE E. SCHAEFER CLERK



SHEET INDEX
 SCALE 1"=300'

SHEET 1 OF 4

RE-SUBDIVISION PLAT
 OF PROPERTY OF
 HAMPTON ROADS SANITATION DISTRICT
 AND THE
 CITY OF NORFOLK
 AT THE
 WESTERN TERMINUS OF 43RD STREET
 NORFOLK, VIRGINIA

SCALE: 1" = 100' DATE: MAY 25, 2018



PRECISION MEASUREMENTS, INC.
 SURVEYORS • GPS • 3-D SCANNING • GIS • MAPPERS
 VIRGINIA BEACH-RICHMOND-NEWPORT NEWS-CHANTILLY, VIRGINIA
 11835 CANON BLVD, SUITE B-103
 NEWPORT NEWS, VIRGINIA 23606
 TEL: (757) 595-7570



ELIZABETH RIVER

MONUMENTS LEGEND

○PIN(F)	5/8" IRON PIN FOUND
○PIPE(F)	PIPE FOUND
○DH(F)	DRILL HOLE FOUND
○MON(F)	5/8" IRON PIN FOUND IN CONC.
●MON(S)	5/8" IRON PIN IN CONCRETE SET
○PK(F)	PK NAIL FOUND

CLERK'S NOTE:
 VIRGINIA:
 IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF NORFOLK, VIRGINIA, ON THE _____ DAY OF _____, 20____ AT _____ THIS PLAT WAS THIS DAY RECEIVED AND UPON CERTIFICATE OF ACKNOWLEDGMENT, THERETO ANNEXED, ADMITTED TO RECORD IN MAP BOOK: _____ AT PAGE: _____

BY: _____
 TESTE: GEORGE E. SCHAEFER CLERK

46TH STREET
 CLOSED ORD# 29,993

NOW OR FORMERLY
 BOARD OF VISITORS OF
 OLD DOMINION UNIVERSITY

D.B. 1690, PG. 876
 ACCT# 8528-0925
 GPIN 1428-19-5026

N= 3,488,978.598
 E=12,121,959.164

KENOVA STREET
 CLOSED ORD# 29,993

NOW OR FORMERLY
 CITY OF NORFOLK
 D.B. 1071, PG. 500
 ACCT# 7884-6622
 GPIN 1428-29-3000
 PARCEL B

NOW OR FORMERLY
 BOARD OF VISITORS OF
 OLD DOMINION UNIVERSITY
 D.B. 1414, PG. 576
 ACCT# 8528-2140
 GPIN 1428-28-2871
 PARCEL 5

PARCEL GC

658,097 SQ. FEET
 15.108 ACRES
 PROPERTY OF
 THE CITY OF NORFOLK
 900 CITY HALL BUILDING
 810 UNION STREET
 NORFOLK, VA 23510
 ACCT# 78846620
 GPIN: 1428-08-7730

EXISTING 50' H.R.S.D.
 INGRESS/EGRESS EASEMENT
 TO BE VACATED
 (D.B. 2095, PG. 189)
 (M.B. 17, PG. 29)

EXISTING CITY OF NORFOLK
 VARIABLE WIDTH INGRESS/EGRESS
 & MAINTENANCE EASEMENT
 TO BE VACATED
 (INST# 140005201)(P.B. 72, PG. 41)

EXISTING 50' H.R.S.D.
 UTILITY EASEMENT
 TO BE VACATED
 (INST# 120017168)

EXISTING 50' O.D.U.
 ACCESS EASEMENT
 (D.B. 2687, PG. 124)

EXISTING 50' H.R.S.D.
 ACCESS EASEMENT
 (D.B. 1455, PG. 128)
 (M.B. 32, PG. 95)

20' UTILITY EASEMENT
 (M.B. 54, PG. 76)

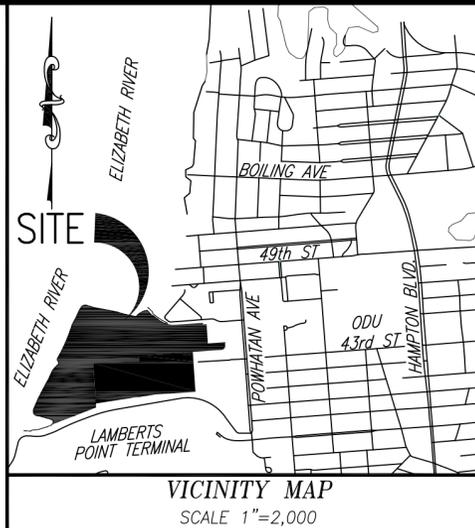
NOW OR FORMERLY
 CITY OF NORFOLK
 D.B. 422, PG. 275
 M.B. 64, PG. 84
 ACCT# 0000-0960
 GPIN 1428-28-2467
 PARCEL 3

43rd STREET
 (VARIABLE WIDTH R/W) (M.B. 64, PG. 84)

NOW OR FORMERLY
 CITY OF NORFOLK
 D.B. 422, PG. 275
 LEASED BY
 OLD DOMINION UNIVERSITY
 D.B. 2687, PG. 124
 M.B. 64, PG. 84
 ACCT# 0000-0962
 GPIN 1428-27-0909
 PARCEL 2

N= 3,487,828.882
 E=12,121,834.795

NOW OR FORMERLY
 NORFOLK AND SOUTHERN RAILWAY
 LAMBERTS POINT TERMINAL
 D.B. 890, PG. 184



REFERENCES:

- | | |
|--------------------|-------------------|
| INSTR.# 000005877 | INSTR.# 020024925 |
| INSTR.# 130008441 | INSTR.# 140005200 |
| INSTR.# 140005201 | D.B. 935, PG. 100 |
| D.B. 772, PG. 640 | D.B. 1386, PG. 94 |
| D.B. 1135, PG. 563 | M.B. 24, PG. 95 |
| M.B. 24, PG. 95 | M.B. 32, PG. 95 |
| M.B. 54, PG. 76-78 | M.B. 64, PG. 84 |
| M.B. 71, PG. 8 | M.B. 71, PG. 26 |
| M.B. 72, PG. 41 | ORD.# 45,306 |
| ORD.# 45,306 | ORD.# 39,868 |

SEE SHEET 4 FOR CURVE TABLE
 SEE SHEET 4 FOR NOTES

RE-SUBDIVISION PLAT
 OF PROPERTY OF
 HAMPTON ROADS SANITATION DISTRICT
 AND THE
 CITY OF NORFOLK
 AT THE
 WESTERN TERMINUS OF 43RD STREET
 NORFOLK, VIRGINIA

SCALE: 1" = 100' DATE: MAY 25, 2018



PRECISION MEASUREMENTS, INC.
 SURVEYORS • GPS • 3-D SCANNING • GIS • MAPPERS
 VIRGINIA BEACH-RICHMOND-NEWPORT NEWS-CHANTILLY, VIRGINIA
 11835 CANON BLVD, SUITE B-103
 NEWPORT NEWS, VIRGINIA 23606
 TEL: (757) 595-7570

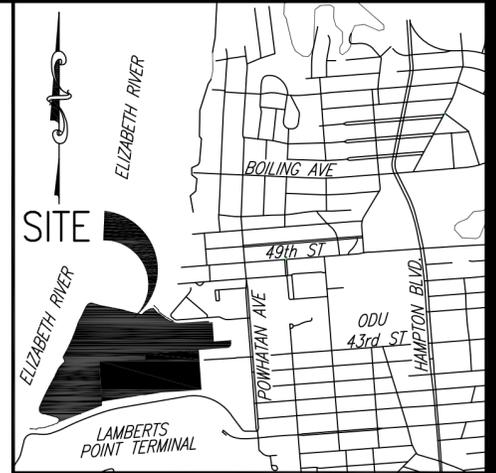


MATCH LINE SHEET 3

MATCH LINE SHEET 4

MONUMENTS LEGEND

● MON(S) 5/8" IRON PIN IN CONCRETE SET

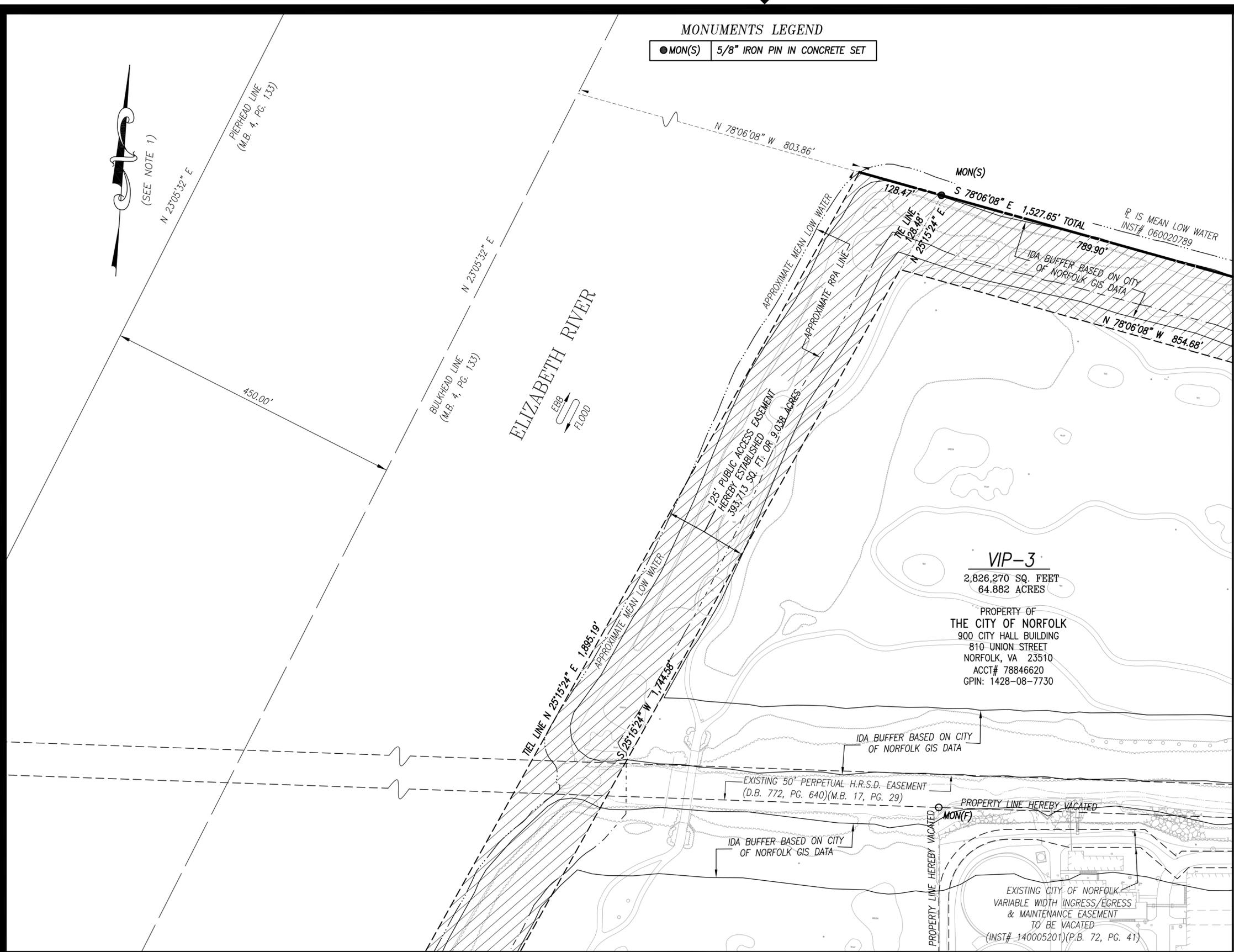


VICINITY MAP
SCALE 1"=2,000

REFERENCES:

- | | |
|--------------------|-------------------|
| INSTR.# 000005877 | INSTR.# 020024925 |
| INSTR.# 130008441 | INSTR.# 140005200 |
| INSTR.# 140005201 | D.B. 935, PG. 100 |
| D.B. 772, PG. 640 | D.B. 1386, PG. 94 |
| D.B. 1135, PG. 563 | M.B. 32, PG. 95 |
| M.B. 24, PG. 95 | M.B. 64, PG. 84 |
| M.B. 54, PG. 76-78 | M.B. 71, PG. 26 |
| M.B. 71, PG. 8 | M.B. 72, PG. 41 |
| M.B. 72, PG. 8 | ORD.# 45,306 |
| M.B. 72, PG. 41 | ORD.# 39,868 |

MATCH LINE SHEET 2



MATCH LINE SHEET 4

RE-SUBDIVISION PLAT
OF PROPERTY OF
HAMPTON ROADS SANITATION DISTRICT
AND THE
CITY OF NORFOLK
AT THE
WESTERN TERMINUS OF 43RD STREET
NORFOLK, VIRGINIA

SCALE: 1" = 100' DATE: MAY 25, 2018



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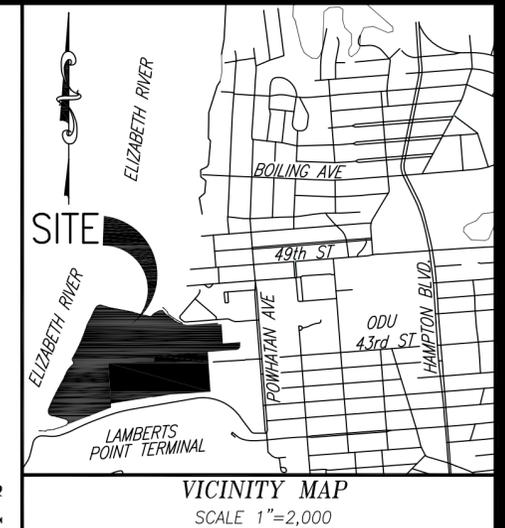


SEE SHEET 4 FOR CURVE TABLE
SEE SHEET 4 FOR NOTES



CLERK'S NOTE:
VIRGINIA:
IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF
NORFOLK, VIRGINIA, ON THE _____ DAY OF _____, 20____
AT _____ THIS PLAT WAS THIS DAY RECEIVED AND UPON
CERTIFICATE OF ACKNOWLEDGMENT, THERETO ANNEXED, ADMITTED
TO RECORD IN MAP BOOK: _____ AT PAGE: _____

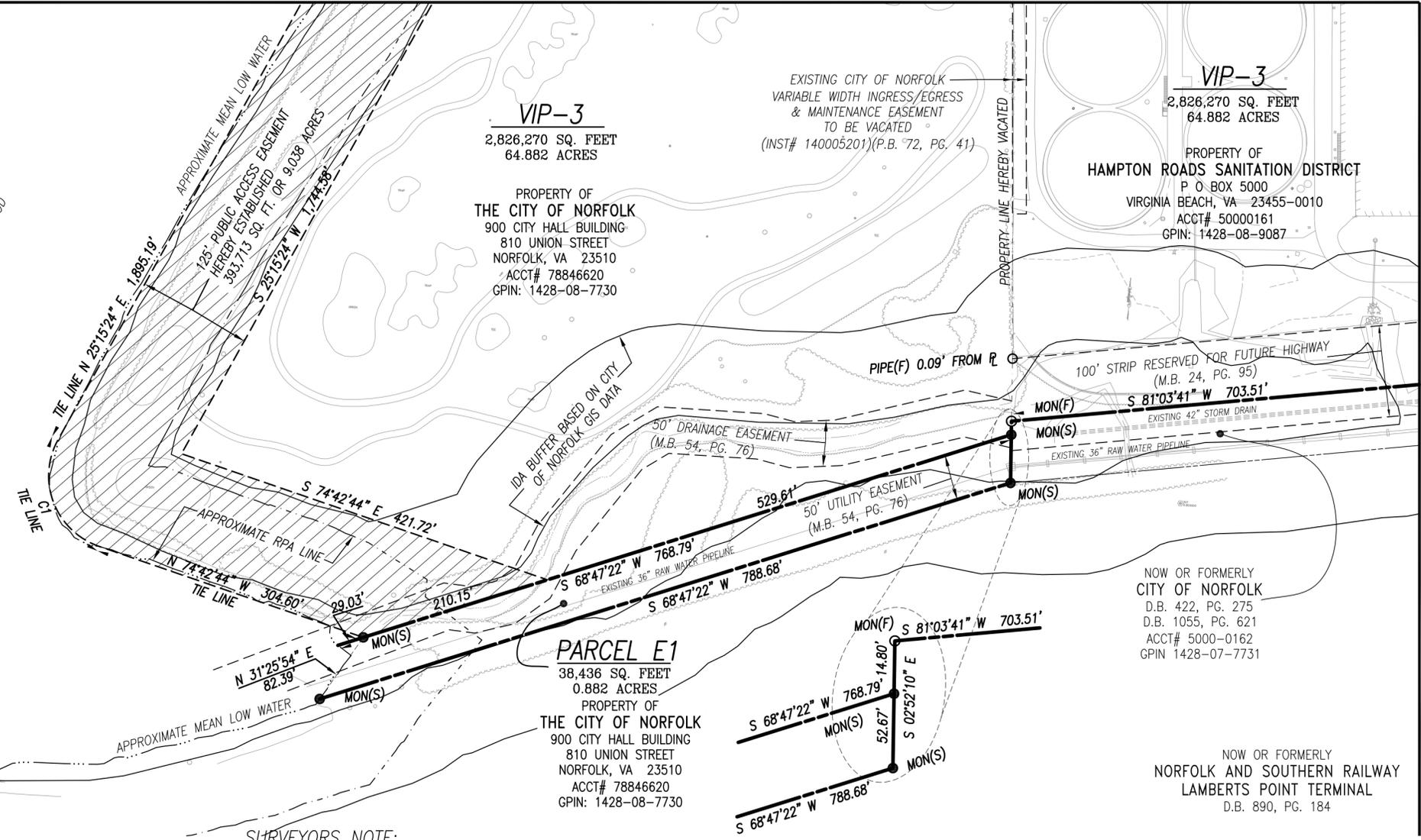
BY: _____
TESTE: GEORGE E. SCHAEFER CLERK



VICINITY MAP
SCALE 1"=2,000

REFERENCES:

- | | |
|--------------------|--------------------|
| INSTR.# 00005877 | INSTR.# 020024925 |
| INSTR.# 130008441 | INSTR.# 140005200 |
| INSTR.# 140005201 | D.B. 935, PG. 100 |
| D.B. 772, PG. 640 | D.B. 1386, PG. 94 |
| D.B. 1135, PG. 563 | M.B. 32, PG. 95 |
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| M.B. 54, PG. 76-78 | M.B. 64, PG. 84 |
| M.B. 71, PG. 8 | M.B. 71, PG. 26 |
| M.B. 72, PG. 41 | |
| ORD.# 45,306 | ORD.# 39,868 |



SURVEYORS NOTE:

I, FRANK WINEINGER, A LAND SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT WAS MADE BY ME, THE UNDERSIGNED, AT THE DIRECTION OF THE OWNER, AND THAT THIS SUBDIVISION IS ENTIRELY WITHIN THE BOUNDARIES OF LAND COVERED BY DEED DESCRIBED BELOW, AND THAT CONCRETED STEEL PINS, AS SPECIFIED BY THE SUBDIVISION REGULATIONS OF THE CITY OF NORFOLK, VIRGINIA, ARE ACTUALLY IN PLACE AT POINTS MARKED THUS "●" AND/OR AS SHOWN ON THE ACCOMPANY LEGEND, AND THAT THEIR LOCATIONS ARE CORRECTLY SHOWN.

SIGNED: _____ DATE: _____
FRANK WINEINGER, L.S. NO. 003161

SOURCE OF TITLE:
THE PROPERTY EMBRACED WITHIN THE LIMITS OF THIS SUBDIVISION WAS CONVEYED TO: HAMPTON ROADS SANITATION DISTRICT FROM CITY OF NORFOLK BY DEED DATED JANUARY 27, 1947 AND RECORDED IN DEED BOOK 772, PAGE 640, AND CONVEYED TO: HAMPTON ROADS SANITATION DISTRICT FROM NORFOLK AND WESTERN RAILWAY COMPANY, BY DEED DATED APRIL 3, 1963 AND RECORDED IN DEED BOOK 935, PAGE 100, AND CONVEYED TO: HAMPTON ROADS SANITATION DISTRICT FROM CITY OF NORFOLK BY DEED DATED JANUARY 17, 1969 AND RECORDED IN DEED BOOK 1135, PAGE 563, AND CONVEYED TO: HAMPTON ROADS SANITATION DISTRICT FROM CITY OF NORFOLK BY DEED DATED DECEMBER 3, 1976 AND RECORDED IN DEED BOOK 1386, PAGE 94, AND CONVEYED TO: HAMPTON ROADS SANITATION DISTRICT FROM CITY OF NORFOLK BY DEED DATED MARCH 25, 2013 AND RECORDED IN INSTRUMENT #130008441 AND CONVEYED TO: HAMPTON ROADS SANITATION DISTRICT FROM CITY OF NORFOLK BY DEED DATED MARCH 13, 2014 AND RECORDED IN INSTRUMENT & #140005200, ALL RECORDED IN THE CLERKS OFFICE OF THE CIRCUIT COURT OF THE CITY OF NORFOLK, VIRGINIA.

SOURCE OF TITLE:
THE PROPERTY EMBRACED WITHIN THE LIMITS OF THIS SUBDIVISION WAS CONVEYED TO: CITY OF NORFOLK FROM ECONOMIC DEVELOPMENT AUTHORITY OF THE CITY OF NORFOLK BY INSTRUMENT DATED JULY 1, 2002 IN INSTRUMENT #020024925 AND CONVEYED TO: CITY OF NORFOLK BY QUIT CLAIM DEED FROM THE VISITORS OF OLD DOMINION UNIVERSITY BY INSTRUMENT DATED APRIL, 2006 IN INSTRUMENT #060020789 ALL IN THE CLERKS OFFICE OF THE CIRCUIT COURT OF THE CITY OF NORFOLK, VIRGINIA.

CURVE TABLE

CURVE	RADIUS	DELTA	ARC	CHORD	CHORD BRG	TANGENT
C1	81.49'	99°58'07"	142.19'	124.83'	N 24°43'40" W	97.07'
C2	70.00'	90°00'00"	109.96'	98.99'	S 41°12'52" W	70.00'

MONUMENTS LEGEND

○ PIN(F)	5/8" IRON PIN FOUND
○ PIPE(F)	PIPE FOUND
○ MON(F)	5/8" IRON PIN FOUND IN CONC.
● MON(S)	5/8" IRON PIN IN CONCRETE SET

RE-SUBDIVISION PLAT
OF PROPERTY OF
HAMPTON ROADS SANITATION DISTRICT
AND THE
CITY OF NORFOLK
AT THE
WESTERN TERMINUS OF 43RD STREET
NORFOLK, VIRGINIA

SCALE: 1" = 100' DATE: MAY 25, 2018



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11835 CANON BLVD, SUITE B-103
NEWPORT NEWS, VIRGINIA 23606
TEL: (757) 595-7570



NOTES:

- THE MERIDIAN SOURCE OF THIS PLAT IS BASED ON VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83 (HARN 1993) REFERENCED TO MAP BOOK 64, PAGE 84 & 85. RECORDED IN THE CITY OF NORFOLK CIRCUIT COURT.
- SEE TITLE COMMITMENT FROM FIDELITY NATIONAL TITLE INSURANCE COMPANY FILE NO: 091055125, DATED MARCH 28, 2018. THIS SURVEY MAY NOT REFLECT ALL EASEMENTS OR RESTRICTIONS THAT AFFECT THE PROPERTY.
- THIS PLAT IS NOT INTENDED TO SHOW ALL PHYSICAL IMPROVEMENTS THAT MAY AFFECT THE PROPERTY.
- THE EXISTENCE OF HAZARDOUS WASTES, VEGETATED WETLANDS OR TIDAL WETLANDS WAS NEITHER INVESTIGATED NOR CONFIRMED DURING THE PERFORMANCE OF THIS SURVEY.
- THIS PROPERTY APPEARS TO BE IN FLOOD ZONE X, AREAS OF MINIMAL FLOOD HAZARD, ZONE X, AREAS OF 0.2% ANNUAL CHANCE FLOOD, AND ZONE AE AND ZONE VE, BASE FLOOD ELEVATIONS DETERMINED. FEDERAL EMERGENCY MANAGEMENT AGENCY COMMUNITY PANEL NUMBER 510104-0014H. MAP REVISED FEBRUARY 17, 2017.
- THIS PROPERTY IS ZONED I-DW (INDUSTRIAL - DEEP WATER) & OSP (OPEN SPACE AND PRESERVATION).

CLERK'S NOTE:
VIRGINIA:
IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF NORFOLK, VIRGINIA, ON THE _____ DAY OF _____, 20____ AT _____ THIS PLAT WAS THIS DAY RECEIVED AND UPON CERTIFICATE OF ACKNOWLEDGMENT, THERETO ANNEXED, ADMITTED TO RECORD IN MAP BOOK: _____ AT PAGE: _____

BY: _____
TESTE: GEORGE E. SCHAEFER CLERK

June 15, 2018

Ted Henifin, General Manager
Hampton Roads Sanitation District
1434 Air Rail Avenue
Virginia Beach, VA 23455

Re: Approval of Preliminary Subdivision Plat

Dear Mr. Henifin:

Section 42.5-5 of the Norfolk City Code provides that the City's approval of a preliminary subdivision plat shall be valid for a period of five (5) years provided a final subdivision plat is submitted within one (1) year of such approval, but goes on to provide that the City's Director of Public Works may grant an extension of these time periods. Pursuant to the authority granted to the Director of Public Works in Section 42.5-5 of Norfolk City Code, the approval of that certain preliminary subdivision plat entitled "Re-Subdivision Plat of Property of Hampton Roads Sanitation District and the City of Norfolk at the Western Terminus of 43rd Street" dated May 25, 2018 shall be valid until June 1, 2024 (the "Expiration Date") provided that the final subdivision plat is submitted to the City of Norfolk prior to the Expiration Date.

If you have any questions or concerns, please contact Michelle Foy, Assistant City Attorney at 757-664-4225.



Richard Broad, P.E.
Director, Department of Public Works

cc: John Ward, City Surveyor
Michelle G. Foy, Assistant City Attorney

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #10

AGENDA ITEM 11. – 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 with 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 or event coordinator
- 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
- Travel, lodging, meals, activities and logo clothing and related similar items associated with recruitment activities for permanent employment outside of HRSD while employed in an intern position

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

Intern Positions – *On-the-job experience for high school students, college and university students, or post-graduate adults, hired on a part-time seasonal or part-time temporary basis.*

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.

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, (ii) who are from a particular industry or profession, or (iii) who represent persons interested in a particular issue.

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 or benefit from 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 where the employee has a personal interest in or may benefit from 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 (excluding those associated with connection, payment or maintenance of a sewer service account or related activities available to all HRSD customers) with HRSD is prohibited for a period of six months post employment or appointment (excluding employees in intern positions).

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 return is not practicable, 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

This policy shall be communicated and provided to all HRSD employees and Commissioners upon commencement of employment and an acknowledgement of such shall be retained permanently in each employee's personnel file. Commissioners' acknowledgements shall be retained by the Commission Secretary.

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.
- Employees who are designated as "Acting" in a Position of Trust in excess of 60 days shall file the form found in Virginia Code § 2.2-3117 prior to assuming their 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.
- Completed disclosure forms shall be reviewed by legal counsel to include follow-up and necessary actions to communicate potential conflict of interest with internal stakeholders.

Employees who do not hold Positions of Trust and who receive gifts at widely attended events that exceed \$100 in value, or who have a personal interest in a company doing business with HRSD, or believe they have any other conflict requiring disclosure shall disclose those interests and/or gifts on the HRSD Ethics Disclosure Form within 60 days of receiving a qualifying gift, or immediately upon discovery of the personal interest in a company doing business with HRSD or other potential conflict. These forms shall be filed with and retained by the Commission Secretary and reviewed by legal counsel with all required filings herein.

Training on the Ethics Policy and ethics in public contracting for HRSD Commissioners and employees in Positions of Trust shall be conducted in accordance with Virginia Code §2.2-3128 and §2.2-3130. Records of attendance shall be maintained in accordance with Virginia Code §2.2-3129.



Adopted: October 27, 2015

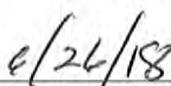
Revised: June 26, 2018

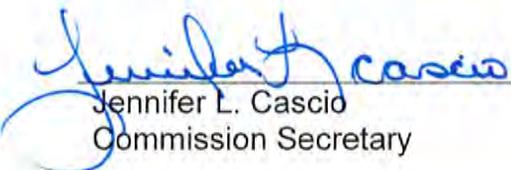
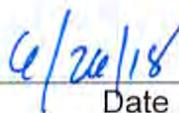
Page 5 of 5

Training on the Ethics Policy shall be provided to all HRSD employees on a biannual basis with records of attendance maintained with individual training records by the Talent Management Department.

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:  _____  _____
Frederick N. Elofson, CPA
Commission Chair
Date

Attest:  _____  _____
Jennifer L. Cascio
Commission Secretary
Date

HRSD COMMISSION MEETING MINUTES
June 26, 2018

ATTACHMENT #11

AGENDA ITEM 12. – 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.
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.
 - 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

HRSD Commission Governance Guidelines

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 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; review the Ethics Policy; 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.

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 be

HRSD Commission Governance Guidelines

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 as opposed to 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.

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.

HRSD Commission Governance Guidelines

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.

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.

HRSD Commission Governance Guidelines

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, including overseeing the Financial and Internal Auditors, 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.
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)

HRSD Commission Governance Guidelines

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
 - 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.

HRSD Commission Governance Guidelines

- 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

- 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
 - (1) Financial Auditors
 - (2) Internal 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

HRSD Commission Governance Guidelines

- 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. Provides a service or other benefit that spans multiple years
- e. Obligates significant financial resources (\$200,000 or more)
- f. Obligates significant personnel resources (one full time employee or more)
- g. Is or has the potential to be politically significant

B. Commission Recognition Items

- 1. Employees celebrating length of service 20 years and above (in increments of 5)
- 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
- 4. Internal Audit Reports and updates
- 5. Quarterly Investment Report
- 6. Quarterly CIP Update

HRSD Commission Governance Guidelines

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 with the chair prior to the meeting.

The agenda shall be structured to ensure efficient and effective use of Commissioner's 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

HRSD Commission Governance Guidelines

- j. Use of alternative project delivery methods for contracts
 - k. Agreements
 - l. Rejection of bids for contracts
 - m. Real estate acquisitions by condemnation including requisite public hearings
 - n. Real estate acquisitions
 - o. Sale, lease or conveyance of HRSD property
 - p. Intellectual property agreements
 - q. Patent applications
 - r. Changes, amendments or reissuance of the Industrial Wastewater Discharge Regulations or Enforcement Response Plan
 - s. Selection of Commission consultants
 - t. 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
 - b. Contract Change orders
 - c. Task orders
 - d. HRSD use of existing competitively awarded contract vehicle
 - e. Sole source procurement

HRSD Commission Governance Guidelines

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. Strategic Planning Metrics Summary
 - f. Effluent Summary (Monthly and Annual)
 - g. Air Summary (Monthly and Annual)
 - h. Other items as needed

B. Commission Workshops

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, with voice and 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.

HRSD Commission Governance Guidelines

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
Appoint Finance Committee	July
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

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 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 7. 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.

HRSD Commission Governance Guidelines

SECTION 8. 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 26, 2018

ATTACHMENT #12

AGENDA ITEM 18. – 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](#)
- f. [Emergency Declaration - Williamsburg Treatment Plant Emergency Generator Rental, Repairs and Associated Electrical Services](#)



June 19, 2018

Re: General Manager's Report

Dear Commissioners:

SWIFT dominated the month of May. Setting a firm deadline for the ribbon cutting to coincide with National Infrastructure Week created a palpable sense of urgency for the completion of the SWIFT Research Center (SWIFT RC) at the beginning of the month. Everyone involved with SWIFT worked long hours and made tremendous individual and team efforts to meet the goal of recharging the aquifer and having SWIFT Water available for tasting by the morning of the ribbon cutting. There was a great sense of relief when the recharge began at 1:50 pm on May 15, a full 68 hours and 10 minutes ahead of the May 18 event.

The opening of the SWIFT RC is just one more example of what HRSD can accomplish with our talented and dedicated staff. As I mentioned in my remarks at the ribbon cutting, I am proud of what our team accomplished, but even more proud of *how* they accomplished it – with joy, energy, passion and a firm belief that what they do matters. I know you share my pride.

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

- A. **Treatment Compliance and System Operations:** All treatment plants met permit requirements, a first since we took over Surry last fall. Highlights of the month are included in the Operations Director's report.
- B. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel:
 - 1. Two new employee orientation sessions
 - 2. A Senior Leadership team meeting
 - 3. Several conference calls to discuss response to DOJ/EPA request for additional information
 - 4. A meeting to review surcharge rate proposals
 - 5. Training for the audio visual systems at the SWIFT RC
 - 6. SWIFT RC tours for employee's friends and families
 - 7. A planning meeting for an open house at the Bridge Street Pump Station
 - 8. A length of service breakfast celebration
 - 9. Several planning meetings for the SWIFT RC ribbon cutting

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

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

1. The May meeting of the Norfolk Planning Commission
2. A briefing and tour of SWIFT RC with Charles Bott for a concerned resident
3. A meeting with Dave Mayfield about sponsorship opportunities for the Catch the King crowd sourced science event in the fall
4. The quarterly board meeting of the Virginia Association of Municipal Wastewater Agencies (VAMWA) with the Secretary of Natural Resources
5. Two conference calls to prepare for the US Water Alliance convening on utility consolidation
6. A conference call to discuss plans for the Public Officials Forum at WEFTEC
7. A meeting with the Navy at Oceana to discuss a new access road to the Atlantic Treatment Plant
8. An interview by a University of California, Berkley researcher focused on regulatory issues associated with reuse projects

While all attention was focused on SWIFT in May, the Customer Care Center was busy putting up outstanding numbers for call center responsiveness for the month. Their key metrics were the best since we began measuring. It is too early to fully understand the factors that have led to such great performance, but we are working on a complete analysis to better understand how this level of service was delivered and how we establish this level of service as our new benchmark. Once again, great people delivering great results!

The leadership and support you provide are the keys to our success as an organization. Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth and the environment. **I look forward to seeing you on Tuesday, June 26 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 2018
DATE: June 13, 2018

A. Publicity and Promotion

1. "Opioid disposal solution effective at killing pills" | May 16, 2018 | WVEC TV
<https://www.13newsnow.com/article/news/health/opioid-disposal-solution-effective-at-killing-pills/291-552617669>
2. "Portion of Back River in Hampton closed to shellfish harvesting due to sewage spill" | May 16, 2018 | WTKR TV
<http://wtkr.com/2018/05/16/portion-of-hampton-back-river-closed-to-shellfish-harvesting-due-to-sewage-spill/>
3. "Raw sewage spilled into Back River, no shellfish harvesting until June 8" | May 16, 2018 | WVEC TV
<https://www.13newsnow.com/article/news/raw-sewage-spilled-into-back-river-no-shellfish-harvesting-until-june-8/291-552740869>
4. "Affordable housing at the heart of proposed Cooks Corner project" | May 16, 2018 | Southside Sentinel
http://www.ssentinel.com/index.php/news/article/affordable_housing_at_the_heart_of_proposed_cooks_corner_project/
5. "Sewage spill in Hampton's Back River halts shellfish harvest" | May 17, 2018 | Daily Press
<http://www.dailypress.com/news/hampton/dp-nws-hampton-sewer-20180516-story.html>
(This story also ran in the Orlando Sentinel --
<http://www.orlandosentinel.com/dp-nws-hampton-sewer-20180516-story.html>)
6. "Sewage Project fights bay pollution _ and sea-level rise?" | May 18, 2018 | Associated Press News
<https://apnews.com/f657d1b37df34993aeca3434ea8091a4>
(Above story also ran in more than a dozen other print and online publications nationwide)

7. "Cutting the ribbon on sustainable hope" | May 18, 2018 | Suffolk News Herald
https://www.washingtonpost.com/local/new-sewage-project-fight-bay-pollution--and-sea-level-rise/2018/05/18/162d4ce0-5ac3-11e8-9889-07bcc1327f4b_story.html?noredirect=on&utm_term=.96fcd4af9232
8. "Wastewater treatment center targets sea level rise, improving Chesapeake Bay" | May 24, 2018 | WAVY TV
<http://www.wavy.com/news/local-news/suffolk/water-treatment-center-targets-sea-level-rise-improving-chesapeake-bay/1197424765>
9. "Groundwater Injection Combat Bay Pollution, Rising Seas" | May 24, 2018 | Storm Water Solutions
<https://www.estormwater.com/groundwater-injections-combat-bay-pollution-rising-seas>
10. "Norfolk has \$1.1 billion in debt, likely delaying major projects" | May 26, 2018 | The Bond Buyer <https://www.bondbuyer.com/articles/norfolk-has-11-billion-in-debt-likely-delaying-major-projects>
11. "New pipes, more test well sites at York dump sites" | May 27, 2018 | Daily Press
<http://www.dailypress.com/news/york-county/dp-nws-evg-chisman-20180516-story.html>
12. "Buchanan Creek, Part IV: What will future projects reveal?" | May 30, 2018 | Southside Daily
<https://southsidedaily.com/local-news/2018/05/30/buchanan-creek-part-iv-what-will-future-projects-reveal/>

B. Social Media and Online Engagement

1. Facebook Reach: 22,701 (nearly a 400% increase over previous month)
2. Twitter: 24,200 impressions (more than 300% increase over April)
3. SWIFT website visits: 1,164
4. LinkedIn Impressions: 3,206
5. Google My Business: 36,781 found HRSD on Google; 324 asked for directions; 607 visited website; 577 called
6. Construction Project Page Hits: 7,876

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

1. News Releases/Traffic Advisories: 2
2. Advertisements: 0
3. Project Notices: 8
 - a. Chesapeake: Deep Creek
 - b. Hampton: Chesapeake Avenue; Bridge Street Pump Station
 - c. James City County: Carters Grove
 - d. Newport News: Chesapeake Avenue; Center Avenue/Rivermont Pipeline; Warwick-Thorncliff to Lucas
 - e. Condition Assessment – Survey Notification
4. Project/Community Meetings: 1
Chesapeake – Civic League meeting re: Deep Creek/Canal Drive Pipeline Replacement, May 16
5. New Project Web Pages/Blogs/Videos: 0

D. Special Projects and Highlights

1. The Director of Communications attended a half-day advanced social media tactics workshop sponsored by the Public Relations Society of America (PRSA).
2. The SWIFT Research Center Ribbon Cutting, held on May 18, garnered robust attendance, significant national media coverage and active social media engagement across several channels.
3. Staff participated in the Elizabeth River Project Youth Resilience Strategy Roundtable.
4. Staff met with Ocean Lakes High School contacts to discuss educational outreach partnership opportunities.
5. Staff participated in the askHRgreen.org Green Learning workgroup meeting.

E. Internal Communications

1. The Director of Communications and staff continued weekly meetings with web designers, advancing the redesign of the HRSD.com website. New website was launched on May 30.
2. Director also participated in the following internal meetings:
 - a. RFP interviews with graphic design/photography/videography service providers
 - b. New employee orientation meetings
 - c. Meeting for Woodstock Park Storage Tank public relations/education planning
 - d. Interview preparation with staff subject matter experts ahead of on-camera interviews
 - e. Training meeting for SWIFT Research Center Interpretive elements and audio visual equipment.
 - f. Senior leadership meeting
 - g. Preparation meetings for SWIFT Research Center ribbon cutting event.
 - h. Kickoff meeting for Solids Master Plan
 - i. Meeting to discuss communication planning related to force main breaks and spills
3. Director conducted bi-weekly communications department status meetings, monthly social media content development meetings and project update meetings with staff.

F. Metrics

1. Educational and Outreach Activities: 3
 - a. Discovery STEM Academy, Newport News, 5/1
 - b. Norfolk Collegiate SWIFT Tour, 5/22
 - c. Salem High School presentations (Virginia Beach), 5/31
2. Number of Community Partners: 3
 - a. Newport News Public Schools
 - b. Norfolk Collegiate
 - c. Virginia Beach Public Schools

3. Additional Activities Coordinated by Department: 5

- a. STREAM Family Fun Day, St Gregory The Great Catholic School (Virginia Beach), 5/12
- b. Wastewater Activity, Nansemond Suffolk Academy (Suffolk), 5/14
- c. Lake Whitehurst West Civic League talk (Norfolk), 5/15
- d. What Not to Flush activity, Butts Road Primary (Chesapeake), 5/16
- e. Tent/display booth at Asian Fest (Norfolk), 5/26

4. Metrics Summary

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Total Training Hours per Full Time Employee (2) - Current Month	Hours / #FTE	3
M-1.4b	Total Training Hours per Full Time Employee (2) - Cumulative Fiscal Year-to-Date	Hours / #FTE	104
M-5.2	Educational and Outreach Events	Number	3
M-5.3	Number of Community Partners	Number	3

Respectfully,

Leila Rice, APR

Director of Communications

TO: General Manager

FROM: Director of Engineering

SUBJECT: Engineering Monthly Report for May 2018

DATE: June 14, 2018

A. General

1. Capital Improvement Program (CIP) spending for the tenth month of Fiscal Year (FY) 2018 met the planned spending target. CIP project spending has not kept pace with planned spending this fiscal year. Much of the expected shortfall in spending will occur in the next FY and has been added to next year's planned CIP financial target.

CIP Spending (\$M):

	Current Period	FYTD
Actual	8.40	81.98
Plan	8.03	124.94

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

2. Staff has begun a project to improve the enterprise capital project management system. These improvements will address concerns raised by SC&H as part of a recent audit and a review by a third party vendor Enstoa. The improvements will address the following limitations in the existing system:
 - Data transfer between software applications
 - Scheduling application
 - Project level risk
 - Portfolio manager
 - Reporting
 - CIP project initiation

B. Asset Management Division

1. The Asset Management Strategy & Risk Procedures Policy and Guidelines were finalized in May. These documents will be presented to HRSD Senior Management for final approval in the coming month. The information will be shared with staff and these documents will become a foundational aspect of the program implementation, guiding future infrastructure investment and resource allocations.

2. Staff met with other internal stakeholders to finalize the procurement for a Coatings Annual Services Contract. This contract will provide field-related installation services for coatings systems needed to address corrosion issues throughout HRSD. This contract will provide a measured volume of work for the selected contractor and will allow HRSD to more quickly address coatings-related issues through the use of individual task orders. Selection of a contractor to assist with this effort is estimated to be finalized by August.

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

1. Construction efforts are now complete for the Bridge Street Siphon and Vent Relocation project. This was a relatively small project administered by the City of Hampton as part of a bridge replacement. HRSD had a vent line on the old bridge and needed a replacement piping on the new structure. The new vent line was placed into service in May and final paving work is now underway. This was a very challenging project due to the complex sequence of construction needed as part of the bridge replacement.
2. HRSD's consultant, Guernsey Tingle, is nearing completion of the conceptual plans for the Water Quality Services Building Phase II project. This project will provide new space for the Technical Services Division located at the Virginia Beach Operations Center. These conceptual plans will be used as part of the Request for Proposals to be issued by HRSD to hire a Design-Build Team to complete the project. It is anticipated that the selection of the Design-Build firm will begin in August.
3. The Ribbon Cutting Ceremony for the SWIFT Research Center was successfully held in May and there are still a few issues still to be resolved as part of the project. Some of the outstanding items include; additional sidewalks, additional windows to isolate the upper level, deletion of some meter calibrations and other aesthetic issues.

D. Planning & Analysis Division

1. Staff is working as part of a cross-departmental team to evaluate the existing sewer system in Middlesex County. Additional flows are possible from the Bethpage Camp Resort and other residential development. Due to the relatively small size of the Urbanna Treatment Plant, small changes in flow can have a measurable impact to this facility. The P3 Division is also involved due to the strength of the waste coming from the campground.

2. Staff continues to develop new policies to address issues of growing concern. These policies will include:
 - Capacity management
 - Conveyance systems
 - Facilities transfers

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 7
 - a. Staff provided a local student a half-day job shadowing opportunity on May 4.
 - b. Staff attended presentations by students from Randolph Macon College on the subject of the benefits of SWIFT to the Commonwealth of Virginia on May 16.
 - c. Staff assisted as tour guides as part of the SWIFT Research Center Ribbon Cutting event on May 18.
 - d. Staff participated as part of panel discussion on upcoming infrastructure efforts in Hampton Roads as part of the American Society of Highway Engineers (ASHE) Monthly Meeting on May 22.
 - e. Staff participated in a webinar with the Milwaukee Metropolitan Sewerage District (MMSD) discussion on best practices in capital planning and implementation on May 23.
 - f. Staff gave a presentation entitled, "What Does the Future Hold?" at the Old Dominion University Civil and Environmental Engineering Visiting Council (CEEVC) Seminar on May 24.
 - g. Staff participated in a Water Environment Federation (WEF) Webcast entitled, "Envision for Sustainable Water Infrastructure" on May 31.
2. Number of Community Partners: 5
 - a. Randolph Macon College
 - b. ASHE
 - c. MMSD
 - d. Old Dominion University CEEVC
 - e. WEF

3. Number of Research Partners: 0

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Total Training Hours per Full Time Employee (40) - Current Month	Hours / #FTE	3.98
M-1.4b	Total Training Hours per Full Time Employee (40) - Cumulative Fiscal Year-to-Date	Hours / #FTE	36.54
M-5.2	Educational and Outreach Events	Number	7
M-5.3	Number of Community Partners	Number	5
M-5.4	Number of Research Partners	Number	0

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, P.E.

TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for May 2018
DATE: June 13, 2018

A. General

1. At the March Commission meeting, staff briefed the Commission on the benefits of joining VML/VACo Finance, a non-profit entity established in 2003 by the Virginia Municipal League (VML) and Virginia Association of Counties (VACo) to address many of the financial needs of Cities, Counties, Towns, School Divisions, and Authorities in the Commonwealth of Virginia. In May, Staff attended on-site due diligence meetings with their respective investment managers for their fixed income investment pool and Other Post-Employment Benefits (OPEB) Trust. Staff is recommending joining their fixed income investment pool at the June Commission meeting. Before our OPEB investment adviser's contract ends next summer, staff will review all proposals when determining how to proceed with our OPEB investments.
2. On May 11, staff briefed the U.S. Environmental Protection Agency (EPA), Department of Justice and their consultants on FuturePerfect, which is HRSD's financial forecast model developed by PFM. This is part of the ongoing negotiations with EPA on the Integrated Plan submittal.
3. The interest rate on HRSD's \$50 million variable rate interest debt dropped to 1.04 percent for its latest weekly reset. This is much lower than the 1.95 percent interest rate we are earning on approximately \$80 million invested in the Local Government Investment Pool.
4. Revenues continue to be higher than budget with water consumption higher than Fiscal Year 2017 and strong facility charge and interest income revenues. Expenses appear significantly lower than budget since this is on a cash basis, but a number of requisitions are in process to encumber funds by fiscal year end. We expect to end the fiscal year with revenues exceeding expenses.
5. Customer Interaction Center statistics have made considerable improvements in the last few months with the billing and payment implementation changes behind us and more customers becoming familiar with the new system. In addition, staff has been focused on diligently improving our service level and providing excellent customer service.
6. HRSD went "Live" with Fiserv (Checkfree) in May which restored the linkage to individual bank bill-pay systems. Since "Go-Live" over 7500 customers have signed up for bill presentment through the bank's system.

B. Interim Financial Report

1. Operating Budget for the Period Ended May 31, 2018

	Amended Budget	Current YTD	Current YTD as % of Budget (92% Budget to Date)	Prior YTD as % of Prior Year Budget
Wastewater	\$ 265,662,693	\$ 245,933,525	93%	92%
Surcharge	1,900,000	1,332,700	70%	109%
Indirect Discharge	2,500,000	2,432,157	97%	98%
Norfolk Sludge	90,000	63,443	70%	73%
Fees	2,935,000	2,596,441	88%	93%
Municipal Assistance	700,000	675,797	97%	75%
Miscellaneous	720,000	845,182	117%	114%
Total Operating Revenue	274,507,693	253,879,245	92%	92%
Non Operating Revenues				
Facility Charge	6,000,000	5,982,460	100%	102%
Interest Income	1,800,000	3,121,510	173%	79%
Build America Bond Subsidy	2,400,000	2,313,642	96%	98%
Other	845,000	1,058,083	125%	84%
Total Non Operating Revenue	11,045,000	12,475,695	113%	97%
Total Revenues	285,552,693	266,354,940	93%	92%
Transfers from Reserves	9,760,286	8,946,929	92%	92%
Total Revenues and Transfers	\$ 295,312,979	\$ 275,301,869	93%	92%
Operating Expenses				
Personal Services	\$ 53,773,327	\$ 50,604,831	94%	93%
Fringe Benefits	24,700,569	23,302,259	94%	92%
Materials & Supplies	7,614,552	6,902,837	91%	94%
Transportation	1,423,974	1,093,612	77%	82%
Utilities	11,973,115	10,626,380	89%	84%
Chemical Purchases	9,219,000	7,626,158	83%	75%
Contractual Services	37,473,915	25,856,217	69%	71%
Major Repairs	11,821,019	5,107,230	43%	63%
Capital Assets	1,716,528	1,470,833	86%	71%
Miscellaneous Expense	2,402,252	2,193,775	91%	84%
Total Operating Expenses	162,118,251	134,784,132	83%	84%
Debt Service and Transfers				
Debt Service	59,164,120	55,820,912	94%	92%
Cost of Issuance Bonds	900,000	869,495	97%	0%
Transfer to CIP	58,802,000	53,901,834	92%	92%
Transfer to General Reserve	14,068,608	12,896,224	92%	0%
Transfer to Risk management	260,000	238,344	92%	92%
Total Debt Service and Transfers	133,194,728	123,726,809	93%	91%
Total Expenses and Transfers	\$ 295,312,979	\$ 258,510,941	88%	87%

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, 2018

	General	Risk Management	Reserve	Capital
Beginning of Period - July 1, 2017	\$ 169,127,728	\$ 3,000,520	\$ 30,760,330	\$ 37,452,225
Add: Current Year Sources of Funds				
Cash Receipts	267,261,720			273,602
Capital Grants				2,946,739
VRA Draws				3,464,615
Bond Proceeds (includes interest)				75,298,027
Transfers In	494,006	238,344		53,901,834
Sources of Funds	<u>267,755,726</u>	<u>238,344</u>	<u>-</u>	<u>135,884,817</u>
Total Funds Available	<u>\$ 436,883,454</u>	<u>\$ 3,238,864</u>	<u>\$ 30,760,330</u>	<u>\$ 173,337,042</u>
Deduct: Current Year Uses of Funds				
Cash Disbursements	195,915,133			95,699,238
Transfers Out	54,140,178		494,006	-
Uses of Funds	<u>250,055,311</u>	<u>-</u>	<u>494,006</u>	<u>95,699,238</u>
End of Period - May 31, 2018	<u>\$ 186,828,143</u>	<u>\$ 3,238,864</u>	<u>\$ 30,266,324</u>	<u>\$ 77,637,804</u>

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended May 31, 2018

Classification/ Treatment Service Area	Expenditures		Year to Date		Total Expenditures	Outstanding Encumbrances	Available Balance
	Budget	prior to June 30, 2017	FY 2018 Expenditures				
Administration	\$ 62,245,711	\$ 39,641,464	\$ 642,117	\$ 40,283,581	\$ 397,934	\$ 21,564,196	
Army Base	158,584,000	120,527,300	2,594,406	123,121,706	3,529,877	31,932,417	
Atlantic	120,373,620	42,154,292	9,871,460	52,025,752	51,037,083	17,310,785	
Boat Harbor	103,352,008	42,142,558	11,675,969	53,818,527	4,721,434	44,812,047	
Ches-Eliz	148,955,317	6,729,890	2,716,378	9,446,268	6,092,846	133,416,203	
James River	89,151,802	50,821,444	3,042,027	53,863,471	4,725,179	30,563,152	
Middle Peninsula	48,944,866	6,398,032	1,323,297	7,721,329	4,773,936	36,449,601	
Nansemond	78,546,570	33,846,838	3,686,797	37,533,635	3,201,577	37,811,358	
Surry	3,236,000	-	72,777	72,777	285,067	2,878,156	
VIP	272,884,561	229,739,637	16,960,441	246,700,078	10,642,137	15,542,346	
Williamsburg	16,321,843	8,937,934	193,545	9,131,479	1,149,103	6,041,261	
York River	45,537,761	39,366,402	950,656	40,317,058	1,653,788	3,566,915	
General	249,202,915	166,626,066	28,609,139	195,235,205	21,951,173	32,016,537	
	<u>\$ 1,397,336,974</u>	<u>\$ 786,931,857</u>	<u>\$ 82,339,009</u>	<u>\$ 869,270,866</u>	<u>\$ 114,161,134</u>	<u>\$ 413,904,974</u>	

5. Debt Management Overview

	Debt Outstanding (\$000's)					
	Principal Apr 2018	Principal Payments	Principal Draws	Principal FY18 Bonds	Principal May 2018	Interest Payments
Fixed Rate						
Senior	\$ 332,141	\$ -	\$ -	\$ -	\$ 332,141	\$ (3,563)
Subordinate	436,527	-	-	-	436,527	-
Variable Rate						
Subordinate	50,000	-	-	-	50,000	(67)
Line of Credit	-	-	-	-	-	-
Total	<u>\$ 818,668</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 818,668</u>	<u>\$ (3,630)</u>

Series 2016 Variable Rate Interest Summary - Variable Rate Debt Benchmark (SIFMA) as of 06/01/18

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	1.81%	1.81%	0.00%
Average	0.33%	0.32%	-0.01%
Minimum	0.01%	0.01%	0.00%
As of 06/01/18	1.06%	1.04%	-0.02%

* Since October 20, 2011 HRSD has averaged 32 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended May 31, 2018

	Current YTD	Policy Minimum
Days Cash on Hand	459 days	270-365 days
Days Cash on Hand (Excl Reserve \$30.3m and Risk Mgmt \$3.2m)	392 days	270-365 days
Risk Management Reserve as % of Projected Claims Costs	25%	25%

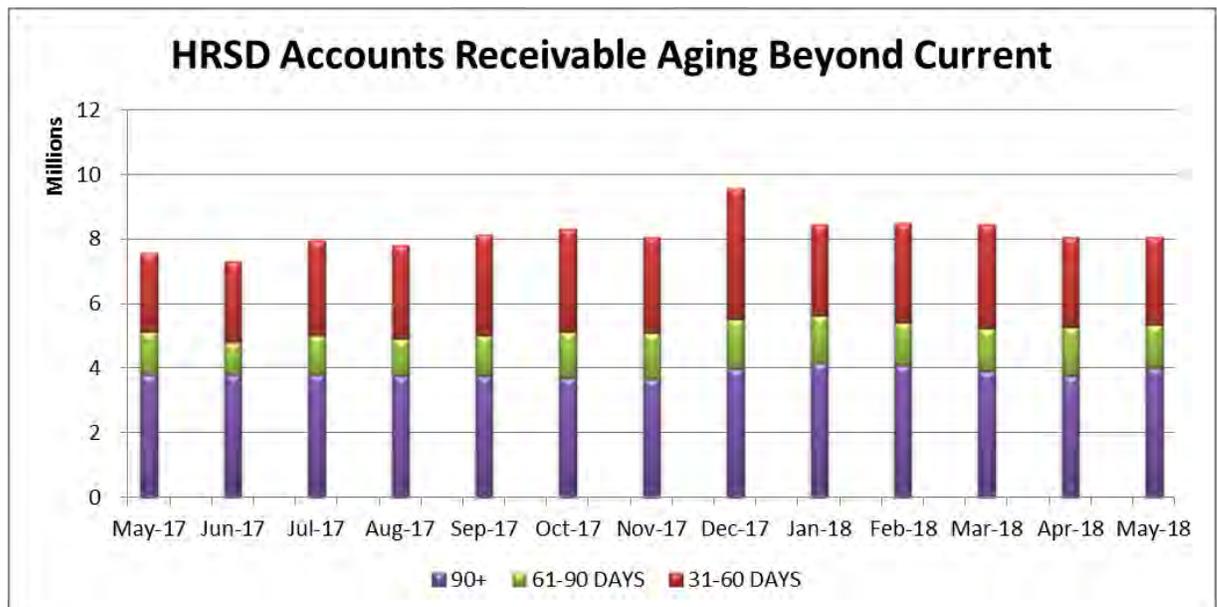
Total Return Strategy					
	Market Value June 30, 2017	YTD Buy/Sell	YTD Change in Market Value	YTD Adjustments	Market Value May 31, 2018
Investment Activity	\$ 123,687,020	\$ 245,750	\$ (1,288,564)	\$ -	\$ 122,644,206
Investment Cash	157,418	1,370,763			1,528,181
Unrestricted Reserve Fund	30,760,330			(494,006)	30,266,324
	\$ 154,604,768	\$ 1,616,513	\$ (1,288,564)	\$ (494,006)	\$ 154,438,712

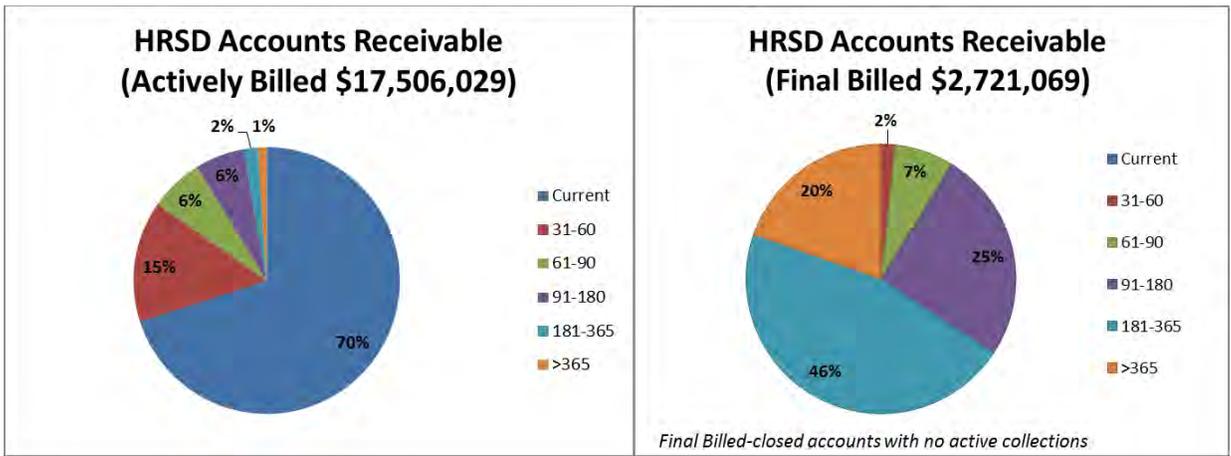
7. Summary of Billed Consumption

Summary of Billed Consumption (,000s ccf)							
Month	2018 Cumulative Budget Estimate	2018 Cumulative Actual	% Difference		% Difference		% Difference
			From Budget	Cumulative 2017 Actual	From 2017	Cumulative 3 Year Average	From 3 Year Average
July	4,427	4,869	10.0%	4,776	1.9%	4,798	1.5%
Aug	8,850	9,939	12.3%	9,275	7.2%	9,525	4.3%
Sept	13,271	14,632	10.3%	14,227	2.8%	14,215	2.9%
Oct	17,689	19,006	7.4%	19,017	-0.1%	18,999	0.0%
Nov	22,104	23,305	5.4%	23,282	0.1%	23,223	0.4%
Dec	26,516	27,462	3.6%	27,761	-1.1%	27,583	-0.4%
Jan	30,925	31,965	3.4%	32,036	-0.2%	31,959	0.0%
Feb	35,331	36,519	3.4%	36,263	0.7%	35,878	1.8%
March	39,734	40,741	2.5%	40,516	0.6%	40,678	0.2%
Apr	44,135	44,732	1.4%	44,383	0.8%	44,834	-0.2%
May	48,532	49,018	1.0%	48,553	1.0%	49,058	-0.1%
June	52,927	-	N/A	53,373	N/A	53,644	N/A

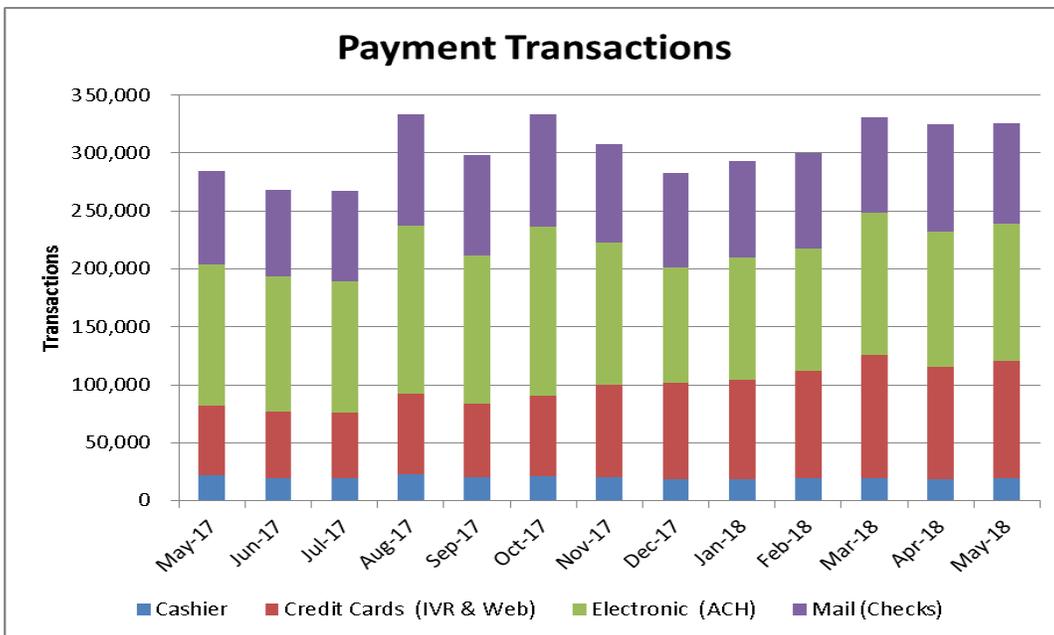
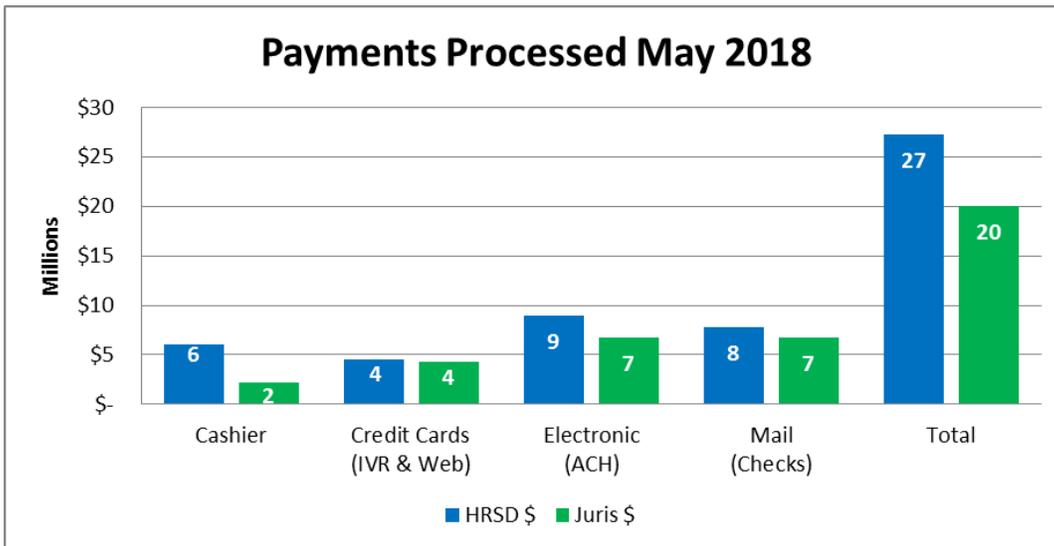
C. Customer Care Center

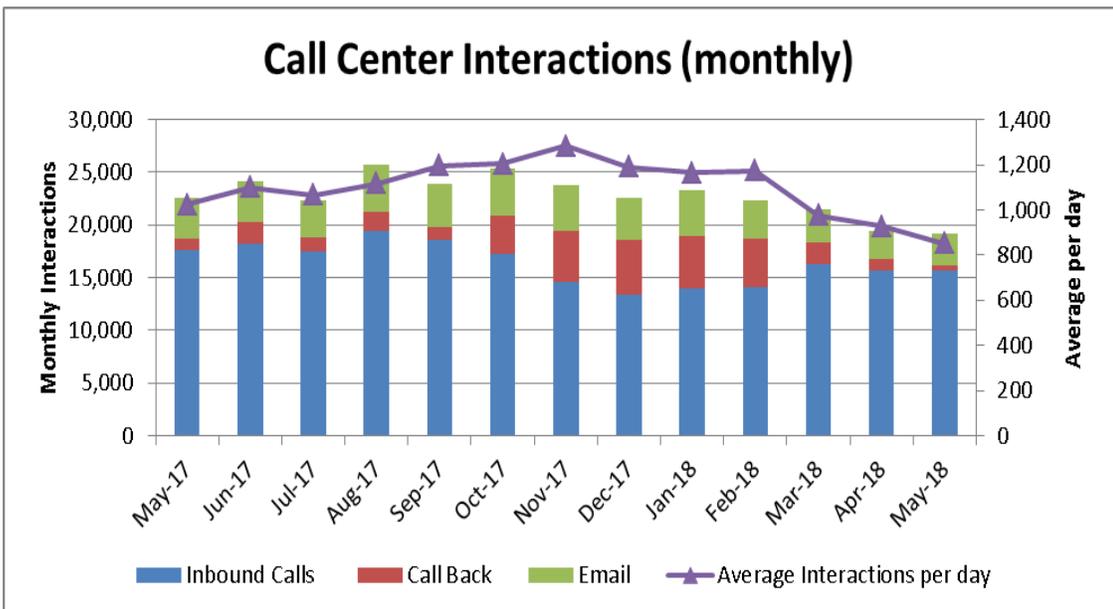
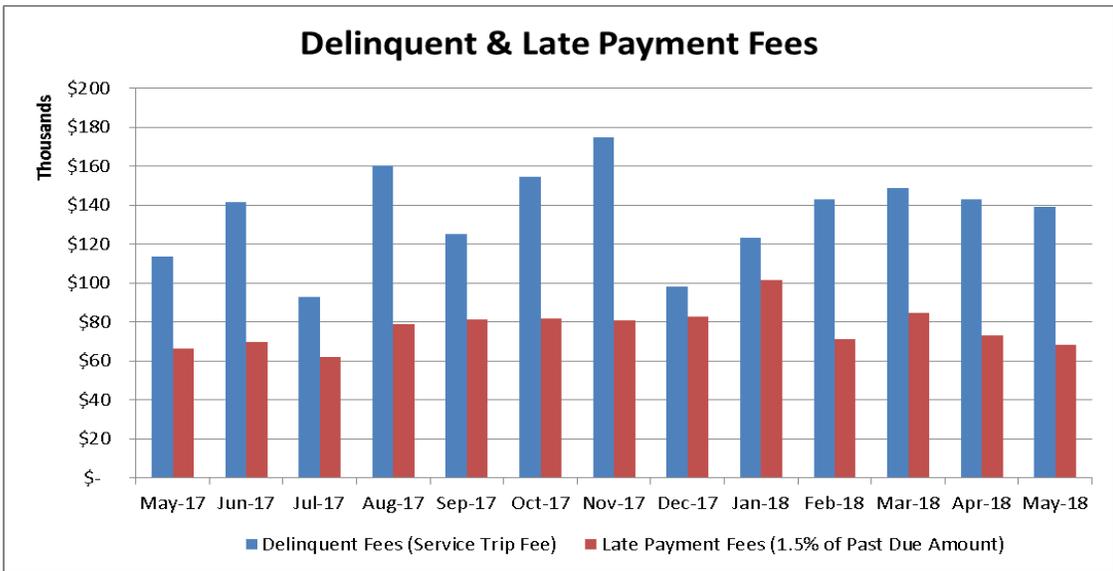
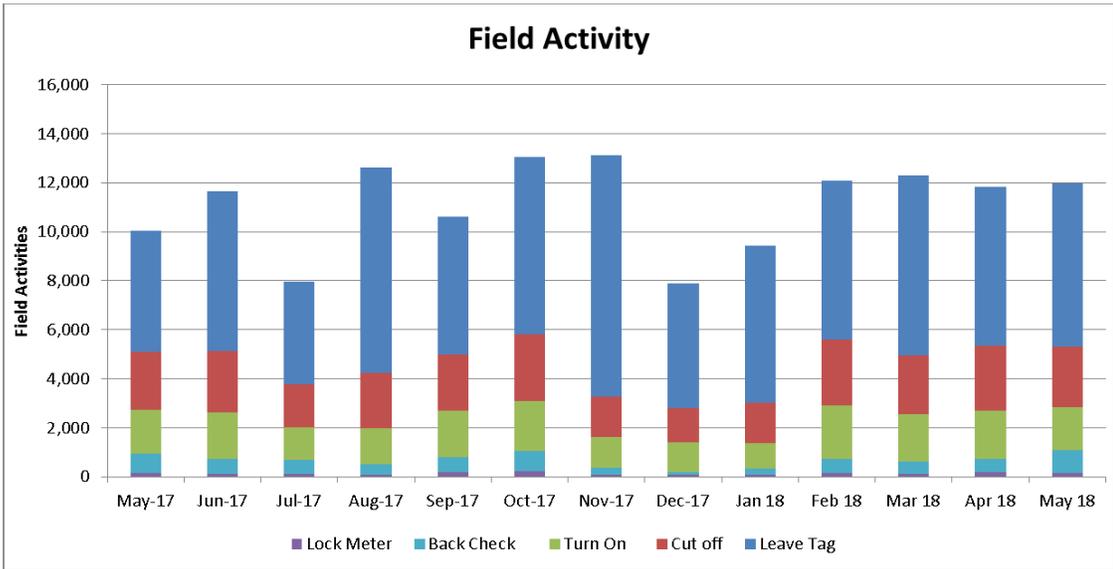
1. Accounts Receivable Overview

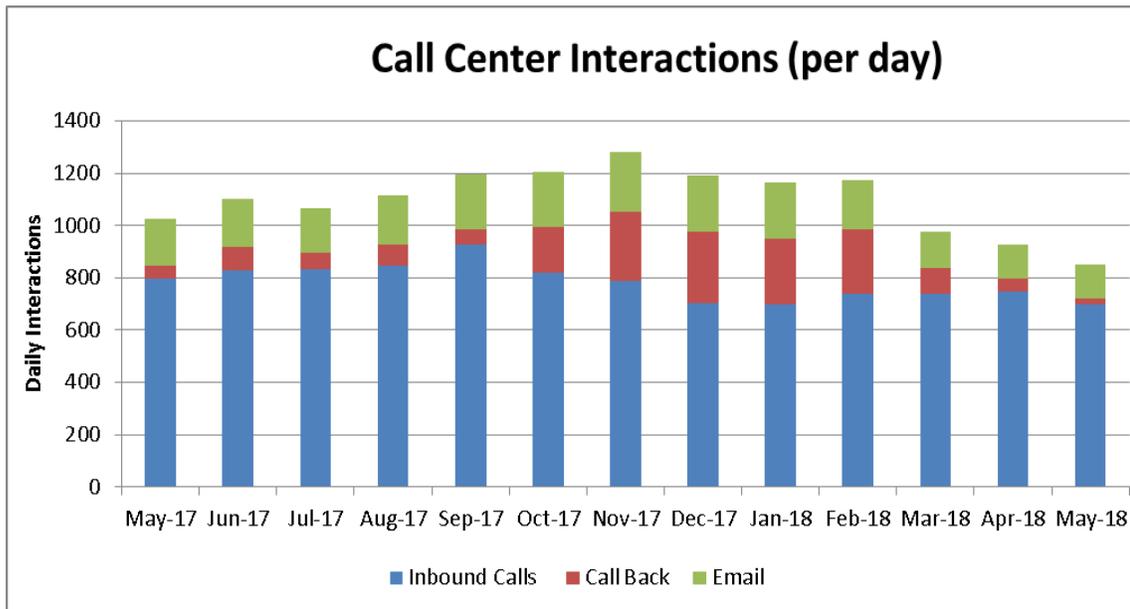




2. Customer Care Center Statistics







Customer Interaction Statistics	Dec	Jan	Feb	Mar	Apr	May
Calls Answered within 3 minutes	45%	49%	48%	68%	78%	88%
Average Wait Time (minutes)	6:39	5:41	5:31	2:51	1:53	1:06
Calls Abandoned	18%	17%	16%	10%	8%	5%

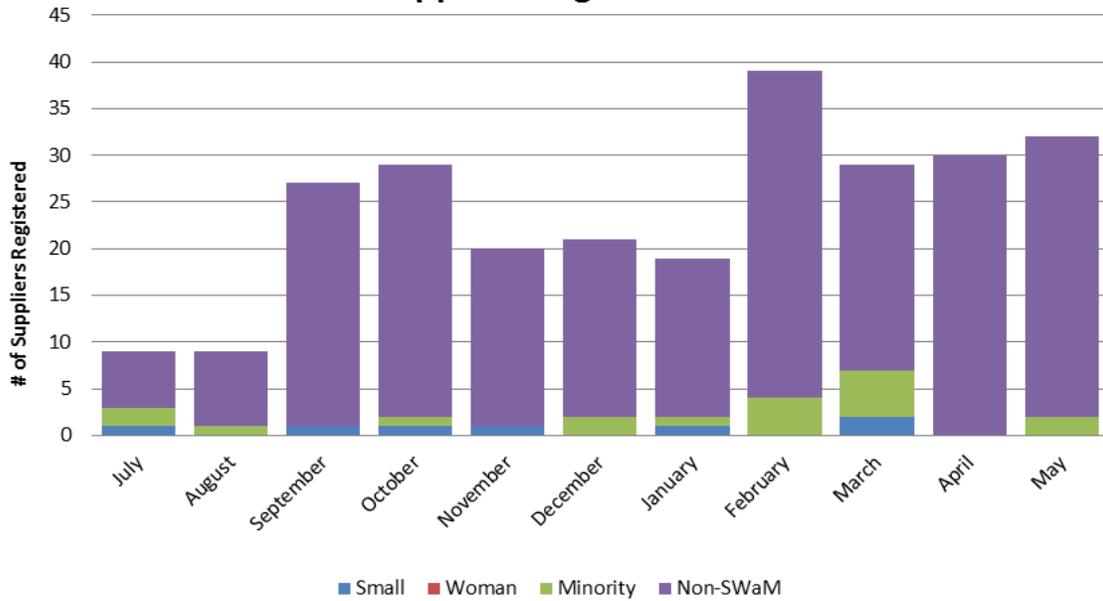
D. Procurement Statistics

Savings	Current Period	FYTD
Competitive Savings ¹	\$250,190	\$1,364,604
Negotiated Savings ²	\$21,859	\$2,169,375
Salvage Revenues	\$1,110	\$45,283
Corporate VISA Card - Estimated Rebate	\$18,262	\$195,134

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

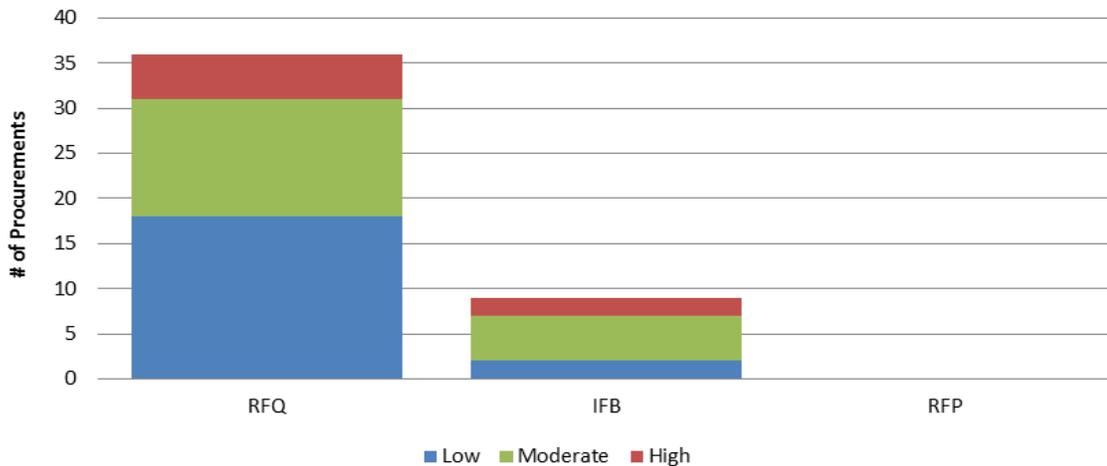
² Negotiated savings are savings obtained during a Request for Proposal process, or if all bids received exceed the budgeted amount, or if only one bid is received.

New Suppliers Registered in ERP

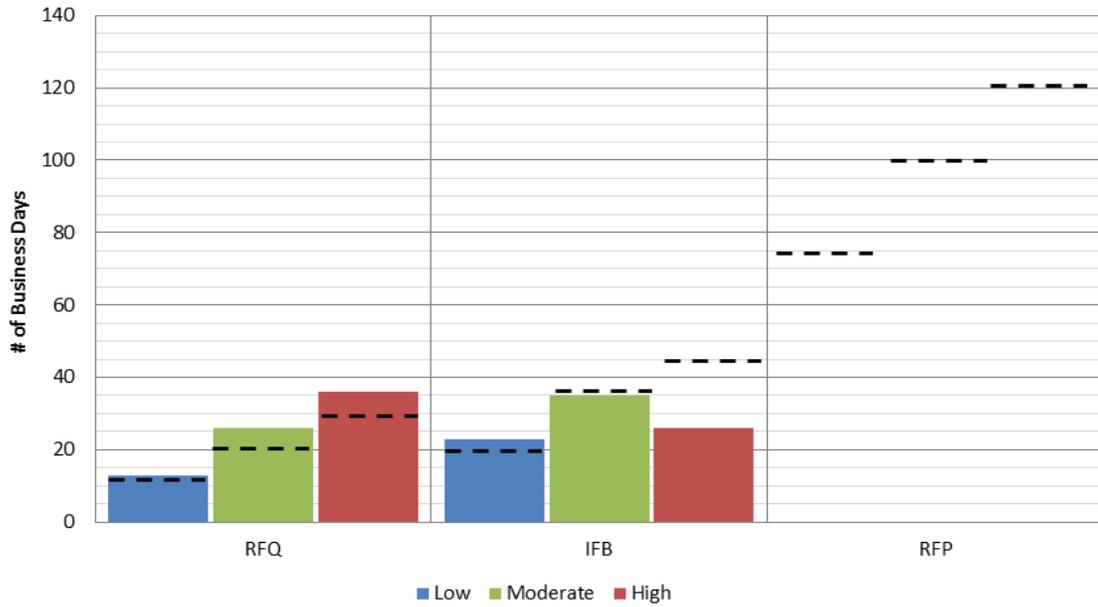


**Increased supplier registration due to supplier outreach at NIGP Forum 8/29/17, Water Jam 9/13/17, VASCUPP® SWaMFest 10/4/17, City of Richmond OMBD and CVMSDC, Procure Your Business Conference 10/18/17, Virginia Beach Minority Business Council Conference and Expo 11/2/17, CNU SWaM Fair 11/9/17, DGS Forum 11/14/17, CVMSDC Supplier Development 1/30/18*

Procurements Completed Based on Complexity



Cycle Time per Method of Procurement and Complexity

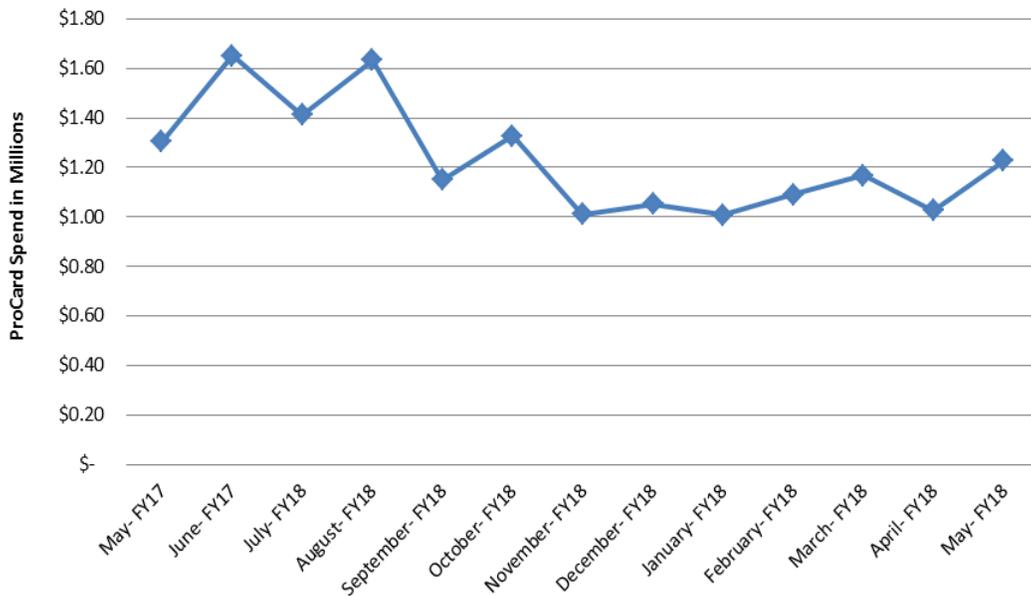


Dashed Line: Target Service Level Cycle Time

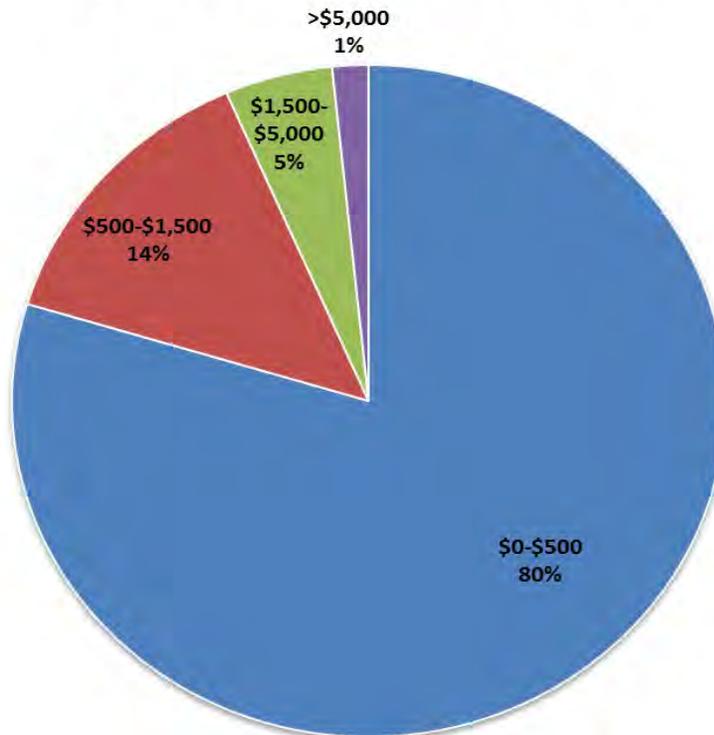
	Low	Moderate	High
RFQ	12	20	30
IFB	20	35	45
RFP	75	100	120

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

ProCard Spend



May ProCard Transaction Dollar Amounts



ProCard Fraud	External Fraud Transactions *	Comments
July	4	Caught by Bank immediately
August	6	Caught by Bank immediately
September	2	One caught by cardholder immediately, one caught by Bank immediately
October	0	
November	0	
December	4	Three caught by cardholders immediately, one caught by Bank immediately
January	0	
February	1	Caught by Bank immediately
March	9	Caught by Bank immediately
April	0	
May	0	
Total	26	

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

Accidental Use, which is anything that is not purchased for use and ownership by HRSD, was at 0.04% of May's ProCard transactions.

Procurement Client Training		
	Current Period	YTD
ProCard Policy and Process	4	50
Procurement Cycle	5	26
Specification Building Workshop	0	70
Total	5	146

E. Business Intelligence – Enterprise Resource Planning (ERP)

1. ERP Helpdesk currently has 282 open work orders in the following statuses: 3 escalated, 70 in progress, 17 on hold, 189 open, 3 waiting on user. ERP Helpdesk received 227 work orders in May. In May, 186 work orders were closed and 49 were closed within one hour.
2. ERP staff continues to work with consultants on functionality and improvements to the system.

F. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0
2. Community Partners: 0
3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Training During Work Hours Per Full Time Employee (101) – Current Month	Hours / #FTE	2.46
M-1.4b	Total Training During Work Hours Per Full Time Employee (101) – Cumulative Fiscal Year-to-Date	Hours / #FTE	39.77
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	101%
	General Reserves	Percentage of Operating Budget less Depreciation	115%
	Liquidity	Days Cash on Hand	459 Days
	Accounts Receivable (HRSD)	Dollars	\$20,227,098
	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 2018

DATE: June 13, 2018

A. General

1. HRSD.com went live this month, and has been well-received by internal and external visitors.
2. Site surveys for all SCADA platform locations are ongoing and should be complete by the end of June. The data gathered will be used to order the required cabling, connectors and other materials to install the Verizon Wireless 4G cellular modems.
3. The SWIFT demonstration facility successfully opened its doors and valves this month. Staff will continue its work in fine tuning operations at the facility.
4. Initial software testing of the virtualized desktop and laptop platform is complete. Detailed instructions are being developed for expanded testing by a representative sample of computer users and service consumers who are assigned laptops, desktops, iPads and smartphones.
5. As part of HRSD IT's ongoing security initiatives, all routers and switches were updated to minimize potential security vulnerabilities.

B. Strategic Planning Metrics Summary

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

C. Monthly Metrics

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Training During Work Hours Per Full Time Employee (50) – Current Month	Total Training Hours / # FTE	1.37
M-1.4b	Total Training During Work Hours Per Full Time Employee (50) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	33.75
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 2018
DATE: June 5, 2018

A. Highlights

1. SWIFT Research Center

Staff spent many hours preparing and supporting the successful ribbon cutting ceremony and open house for opening of the SWIFT Research Center May 18 and 19. Staff from the Nansemond Treatment Plant (NTP) and the Research Division spent many long hours ensuring the successful opening of the facility. Treatment plant staff is now fully supporting SWIFT operations with the plant operators responsible for evening and midnight shifts.

2. VIP Construction Project Update

The nutrient reduction portion of the major plant construction project is three months from substantial completion. Installation of the last three anaerobic recycle (ARCY) pumps will begin in early June. During this time, the plant will operate with only half the Anaerobic/Anoxic/Aerobic basins. Some of the remaining tasks include replacing influent gates; installing a new step gate from the anaerobic anoxic effluent channel; and installation of the classifying selector system pumps.

The hydraulic wet weather portion of the project is now the main focus. The preliminary treatment facility (PTF) and raw influent pumping station are nearing completion. Clear water testing of the new influent pumps takes place in late June. The new grit influent box, fermenter tank, odor control system and associated equipment as well as a few smaller jobs are moving forward. The completion of the duct bank to the PTF was a major accomplishment. It is the last major component of a very large electrical project to replace every major electrical cable at the plant.

Staff and the consultants continue to work remarkably well together to complete the project in a timely manner. Staff's efforts are notable and I'm proud of their efforts. They are removing equipment from service and cleaning tanks in order to keep the project on schedule. They completed 527 hours of new equipment/process training this month alone. Daily and

weekly meetings are held in order to ensure effective coordination between the numerous contractors and staff. The Electrical and Instrumentation staff worked long hours to coordinate the new PTF electrical start-up with the contractor. Electrical testing, loop checks and instrument settings, along with equipment startup, training, and troubleshooting will require all staff to make an extra effort to complete this project as successfully as it started.

3. Safety Awards

- a. The Carpentry Shop participated in the Safety Innovation Competition and received an award for creating a ladder stabilization device for attic access into pump stations. The extension ladder hooking system allows the user to safely hook a ladder, adjust a ladder, and enter an attic access space independently. The innovation also includes a pulley system that opens the attic's access door from the ground level, rather than from atop the ladder. The combination of the two devices easily allows one individual to safely access the attic space of any station.
- b. A second Safety Innovation award was awarded to staff from the Army Base Treatment Plant. When the preliminary treatment facility came online in 2015, staff discovered that hydrogen sulfide (H₂S) concentrations in the grit removal room were consistently 5-8 parts per million (ppm). Upon further investigation, staff found the source of the sulfides was emanating from the drains on the grit removal equipment. H₂S readings taken at the drains exceeded 100 ppm. Staff installed PVC vent lines and tied them into the existing odor control duct. This modification captured the escaping gases before they could be released into the room. H₂S readings in the room are now 0 ppm.

B. Interceptor Systems

1. North Shore (NS) Interceptor Systems

- a. There was one Sanitary Sewer Overflow (SSO) this month. This spill was the result of a 10-inch cast iron force main failure along Westminster Drive in Hampton. Once notified, HRSD's crew isolated this section of the pipeline within 40 minutes thereby stopping the leak, but not before an estimated 721,773 gallons of sewage was lost. Staff spent the entire day in the mud, rain, and sun repairing this line and was able to fix it and place it back in service by day's end. This section of pipe has experienced prior failures near this

location and is in the Capital Improvement Plan (CIP) for replacement.

- b. Staff spent a significant amount of time in the County and Town of Surry and at the Lawnes Point Treatment Plant (TP) adjusting and fixing facilities that were in need of repair. It is anticipated that Lawnes Point TP should be operational and begin discharging in June.
- c. Staff performed one caustic injection in the Gloucester system, two pump and haul operations of the Town of Surry Treatment Plant, and four pump and haul operations of the Lawnes Point Treatment Plant.

2. South Shore (SS) Interceptor Systems

- a. Staff assisted the City of Chesapeake with a valve replacement adjacent to one of their pump stations by isolating the station from the HRSD system.
- b. During a routine closed-circuit television (CCTV) inspection of the gravity system, staff found missing bricks in a brick manhole and a significant void above one of the influent pipes. Staff repaired the manhole to avoid potential structural failure.
- c. Staff facilitated a tour of the Norchester Pump Station (PS) for the Alleghany County Public Works Department.

C. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP)

- a. On May 18, the plant switched from pure methanol to a less costly chemical (MicroC 3000) which still provides an adequate source of supplemental carbon for nitrogen removal. The nitrogen removal system continues to perform exceptionally well. The final effluent total nitrogen average for April was 2.19 mg/L. At ABTP we must average 3.90 mg/L for the rest of the year to meet the annual permit of 5.0 mg/L Total Nitrogen.
- b. Staff completed the fabrication of a cover for the scum concentrator. The cover will optimize the process by keeping auxiliary heat inside the concentrated scum hopper.

- c. Staff completed the repair of the 4-inch non-potable water (NPW) pipe and a 1-inch sodium hydroxide pipe for Odor Control Station A.
- d. Staff replaced three ruptured peristaltic tubes in the methanol feed pumps. One pump appears to have a manufacturing defect that led to a ruptured tube. The pump manufacturer is scheduling a site visit to inspect the pump. The other two tubes were the original tubes supplied with the pumps. After replacing the tubes, no subsequent ruptures occurred.

2. Atlantic Treatment Plant (ATP)

- a. The City of Virginia Beach performed a storm water site inspection on May 8. No discrepancies were found
- b. The Department of Environmental Quality (DEQ) inspected the plant's VPDES permit paperwork and performed a site visit on May 10. No discrepancies were found.
- c. There was one Air reportable event on May 23. The problem occurred when the automatic controls for a caustic pump malfunctioned and caused the pH levels to drop resulting in a high hydrogen sulfide (H₂S) exhaust reading. The issue was quickly corrected.
- d. Construction of the Thermal Hydrolysis Process (THP) continues. Contractors have almost finished work on the yard piping that is required before laying the foundation for the THP skids. Work on enlarging the digester gas lines continues.
- e. The parallel testing of the Enterprise Data Server (EDS) system went well. The EDS system will go live on June 1.

3. Boat Harbor Treatment Plant (BHTP)

- a. The odor control system was offline on May 24 for four hours to allow contractors to perform maintenance on the electrical transformer that supplies power to this system.
- b. Maintenance staff performed a complete induced draft (ID) fan # 2 shaft bearing replacement in preparation for the scheduled furnace rotation.

4. Chesapeake-Elizabeth Treatment Plant (CETP)

- a. Plant staff completed the yearly preventive maintenance work on #3 aeration tank.
- b. Staff repaired two fans and motors in the hypochlorite building.

5. James River Treatment Plant (JRTP)

- a. Staff completed modifications to the Nitrified Recycle (NRCY) pipe lines on #7 Integrated Fixed Film Activated Solids (IFAS) Tank and installed a cylinder screen on the IFAS effluent NRCY pipe line. Modifications will create an anaerobic zone in the IFAS tank to promote biological phosphorus removal. The cylinder screen will ensure IFAS media is upstream of the IFAS effluent.
- b. Staff installed a rebuilt grit pump in the #2 grit tank. A new pump discharge connection was installed along with a new base. The old connection was corroded and would not make seal.
- c. Staff formed and poured a foundation for the new sign monument. The old monument had to be removed during the influent force main upgrade. Some cracked sidewalks around the plant were also repaired during concrete pouring.
- d. Staff installed piping to the magnesium hydroxide tank, the pump suction connection and drain fittings.
- e. Work to replace the outdated, explosion-proof power distribution center in the digester basement continued. Staff excavated, assembled conduit, poured concrete and replaced asphalt for the power supply from the new Motor Control Center building to the digesters.

6. Nansemond Treatment Plant (NTP)

- a. Staff continues the modifications on scum baffles for primary clarifiers 3 & 4. Estimated completion is June 15.
- b. The #2 digester coatings projects are complete. The digester is going into service Monday, June 4.

7. Virginia Initiative Plant (VIP)

- a. The construction contractor pumped approximately 875 gallons of non-potable water (NPW) down a storm drain while draining the new equalization tank. The contractor secured the pump immediately.
- b. There was a break in the bisulfite carrying water line. Staff secured NPW pumps and used sandbags to contain the spill. Approximately 150 gallons of NPW was lost into the ground and a nearby storm drain. The staff installed a new valve on the main line and restarted the NPW system.
- c. Staff installed a new gearbox for the Norfolk Water Solids holding tank mixer.
- d. Process control for the advanced five stage biological process was challenging this month due to high flows and an unknown industrial source periodically causing process upsets. Staff is working with the Water Quality Department to isolate the source of the industrial discharge. The effluent values of 0.98 mg/L total phosphorus and 6.22 mg/L total nitrogen are above the targets of 0.7 mg/L TP and 4 mg/L TN for May.

8. Williamsburg Treatment Plant (WBTP)

- a. Staff tested their emergency generator on May 29. The generator is the alternate power source which supports the plant's electrical system when utility power fails. During the test, the engine started and accelerated to the rated speed and then shut down. We discovered the #1 cylinder on the right bank of the engine had a broken rod which damaged the cylinder assembly. A contractor removed a cylinder assembly and found damage to the engine block. The block was inspected and deemed repairable. Estimated time to complete repairs is two weeks. A temporary emergency generator was connected to the plant's electric power in case of utility failure. An emergency declaration was entered for the repairs.
- b. Staff took the #4 aeration tank out of service to prepare for tank cleaning and to modify the nitrified recycle pipe lines.
- c. A contractor upgraded the #1 bar screen to a perforated plate screen. The perforated plate should provide better screenings with 6 millimeter diameter openings versus 14 millimeter slot openings.

d. A contractor drilled a SWIFT test well to a depth of about 1,400 feet.

9. York River Treatment Plant (YRTP)

a. One reportable wastewater event occurred when a contact tank's effluent had a low chlorine residual caused by the malfunction of a chemical feed pump. The malfunction was corrected.

b. The contractor who is replacing the digester cover completed the removal of the old membrane cover and welding of the new steel cover. Coating of the new steel cover began.

c. Staff relocated the SWIFT pilot from the plant to the SWIFT Research Center.

10. Minor Incinerator Operations Events Summary

Condition	Cause	ABTP	BHTP	CETP	VIP	WBTP
Use of Emergency bypass stack	Power anomaly	5	0	0	0	1
Use of Emergency bypass stack	Equipment malfunction	0	0	1	0	0
Missed daily cake sample	Oversight during incinerator shutdown	0	0	0	0	1
Invalid readings	Analyzer failure	0	0	0	0	1

D. Small Communities (SC)

1. Middle Peninsula

a. SC Treatment:

(1) West Point Treatment Plant (WPTP)

In-house design work continues on the WPTP Tertiary Filter, Aerobic Digester aeration upgrade and the Pond pumping and mixing upgrade.

(2) Urbanna Treatment Plant (UBTP)

Both process trains were returned to MLE (Modified Ludzack-Ettinger) mode.

(3) King William Treatment Plant (KWTP)

In-house work commenced on Train #1 rehabilitation and start-up. This train has never functioned as intended. Our intent is to add capacity by making both of the plant's treatment trains fully functional. If successful, this will give us time to reevaluate the current capital improvement project.

b. SC Collections:

(1) West Point System

Heavy rains in excess of 6 inches over 4 days, with 3.15 inches falling on May 18 in the Town of West Point, VA caused the collections system to surcharge the gravity mains and manholes in the PS #8 service area. A broken valve was also later found on the PS discharge force main after overflow rates increased and would not dissipate. The surcharge caused a manhole to overflow for five hours at approximately 150 gallons per minute (gpm) and 19.33 hours at approximately 250 gpm. Up to 11 septage and vacuum trucks were used to pump flow out of the manhole, reducing the spill volume by 242,000 gallons and protecting nearby residences. The broken valve was excavated and repaired and the station returned to normal. The area was cleaned and neutralized with pelletized lime.

(2) Urbanna System

Contractors completed the mechanical work for the Cross Street PS rehabilitation improvement project. Remaining work includes minor punch list items and landscaping.

(3) Mathews System

Phase VI of the Valve Pit Replacements CIP construction began.

2. Small Communities – Surry Systems

- a. Sussex Service Authority (SSA) continued contract operations of the Town of Surry TP and the Surry County TP.
- b. With the new permit limits in place for the Town of Surry TP, all permit levels were met.
- c. The rebuild of the second drum filter continues. In the future, when both filters are on line, backwash cycle improvements should help improve suspended solids removal.
- d. Staff installed the rebuilt #2 micro screen at the Town of Surry TP and removed the #1 micro screen for rebuild by the Machine Shop.

E. Support Systems

1. Automotive

- a. A contractor performed a generator acceptance test for the new Bridge Street PS generator on May 23. The generator operated as required.
- b. Staff performed load bank tests at Hilton School, Pine Tree, and Washington Street PS and at the North Shore (NS) and South Shore (SS) Main Office Complexes. All generators operated as designed and were returned to service.

2. Condition Assessment

- a. Condition Assessment, through use of CCTV, inspected 961.7 LF of gravity force main. Staff completed 58 manhole inspections bringing the total number of inspected manholes this year to 212. Staff also completed three flow control chamber inspections.
- b. Staff completed inspection assessments on coatings projects occurring at JRTP, NTP, and VIP. Staff completed inspections of manholes along City Line Road, Normandy Lane, and Terminal Avenue.
- c. The contractor completed restoration of the primary influent channel on ATP primary tanks #1-4.

- d. Rehabilitation work began on NTP's #5 secondary clarifier. Rehabilitation of Digester #2 is complete.

3. Facilities Maintenance

- a. At NTP, construction of the Condition Assessment offices continues. Installation of the HVAC system is scheduled for June 4.
- b. Carpentry Staff constructed filter holders for sequential batch reactors (SBR) for SWIFT, delivered and assembled televisions and stands for the SWIFT ribbon cutting, fabricated and installed a ladder holder for entry to the attic space at Laskin Road PS, and replaced locks with passage sets on numerous doors in the attic space of the Central Environmental Laboratory (CEL).
- c. Machine Shop Staff rebuilt pumps for Ferguson Park, Kingsmill, and Rodman Avenue PS and assisted in the repair of a main line valve at Kempsville PS. Staff fabricated a motor plate and drilled and tapped plastic flanges for SWIFT. Staff fabricated a drive, tail, and turned-down shaft for WBTP, and continued work on the #2 micro-filter at Surry Treatment Plant.

F. Electrical and Energy Management (EEM)

1. Staff hosted the annual Virginia Energy Purchasing Governmental Association's (VEPGA) annual conference at the NS Operations Center. Staff, presented a session entitled "A Practical Guide for Choosing the Appropriate LED Lighting."
2. The transfer switch failed to return the electrical system to normal power following a generator test run at Shipps Corner Pressure Reducing Station (PRS). Staff found corroded internal switch components. The switch was replaced, which required removal and replacement of the switch buss bar with cable and new connectors. The switch was tested and returned to normal operation. This effort provides a short-term solution until the construction project completely replaces the electrical system.
3. Staff responded to an after-hours call at WPTP. A lightning strike during a severe thunderstorm damaged equipment in multiple systems. Staff found two damaged programmable logic controllers (PLCs) providing the feed for chlorine and bisulfite as well as a damaged main effluent flow meter. The equipment was repaired and the systems returned to service.

4. Staff coordinated the removal of electrical utility service at Lee Hall PRS in advance of its demolition. Salvageable equipment will be returned to inventory. The utility feed for the rain gauge and data recorder will be converted to solar power and reinstalled following demolition.
5. The remote electrical system shutdown for the BHTP electrical system from the NTP was tested. This functionality protects the main electrical gear during a significant weather event when staff evacuates the BHTP plant site and rising salt water reaches the main electrical system components where it could cause a catastrophic failure. This test is performed annually to ensure proper working condition of equipment prior to hurricane season.
6. Staff met with a contractor to discuss heat anomalies in the intermediate PS variable frequency drive cabinets at ABTP. The group discovered abnormally hot cables feeding the motors. A contractor will replace the cables.
7. Contractors installed Supervisory and Control Data Acquisition (SCADA) ControlWave[®] remote telemetry units (RTUs) in the new Bridge Street PS and Cross Street PS. Since the new top-end SCADA software is not ready, staff installed legacy units at both locations to interface with the old SCADA system until the new SCADA system is fully implemented later this summer.
8. A contractor completed the annual infrared (IR) summary for electrical equipment throughout the district. The overall fault rate declined from 2.2 percent to 1.6 percent between 2017 and 2018. IR inspections identify anomalous heat signatures in electrical equipment which, if left alone, would continue to escalate until the equipment failed. IR inspections provide staff opportunities to see and repair these problems before they escalate.
9. Staff repaired electrical circuits and devices for the old Interceptor complex at 2401 G Avenue in Newport News.
10. Staff tested and installed fourth generation long term evolution (4G LTE) modems at Master Metering Program (MMP) sites. They will replace the current obsolete modems.

G. Water Technology and Research

One of the more significant sensor challenges for HRSD is online ammonia measurement in aeration tanks. This is important because of the significant cost savings and process benefits achieved by ammonia-based aeration control

(ABAC) over conventional dissolved oxygen control. Furthermore, accurate online ammonia measurement is now critical for ensuring nitrification reliability and appropriate secondary effluent quality for SWIFT feed.

It is widely known that colorimetric analyzers are well suited for this purpose, however these sensors have several important disadvantages: they are mechanically complex and difficult to maintain and service; they require sample filtration systems that are often large and difficult to manage and maintain; they often require proprietary and costly reagents; and the sensor systems themselves are quite expensive. Ammonia ion selective electrodes (ISE) are another technology that is commonly employed in aeration tanks. While these probes are substantially less expensive than colorimetric analyzers, they are much less accurate than colorimetric analyzers, frequently drifting out of calibration. These probes are also impacted by changes in background wastewater matrix, and they require frequent and expensive replacement of the sensing element.

At HRSD plants, we have generally standardized on an approach whereby the vast majority of the sensors are ammonia ISE probes, and these probes are used for ABAC, but we also employ one or two ammonia colorimetric analyzers at the aeration effluent to serve as more reliable verification for the ISE probes and to ensure nitrification reliability. This is not an ideal scenario.

As a result, HRSD Electrical & Instrumentation staff has embarked on a project to design and develop our own self-constructed colorimetric analyzers. The idea is that these systems would be designed to provide at least a month of uninterrupted and reliable service; be easily maintainable by HRSD staff; be considerably less expensive than commercially available hardware, and allow the same sensor platform to be used for ammonia, nitrate, nitrite, or phosphate analysis. While online ammonia analysis is currently our most significant sensor problem, there are considerable benefits (cost, reliability, standardization, maintenance, etc.) associated with extending this concept to the other analytes.

With minimal investment, staff has created the backbone of a colorimetric analyzer prototype for nitrite, which was selected initially because the analytical method chemistry is straightforward and well established. In coming months, the prototype will be tested, evaluated, and eventually extended to ammonia analysis.

H. MOM Reporting numbers

MOM Reporting #	Measure Name	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
2.7	# of PS Annual PMs Performed (NS)	2	4	4	2	2	1	9	3	3	3	2	
2.7	# of PS Annual PMs Performed (SS)	5	5	6	5	3	2	3	3	4	5	0	
2.7	# of Backup Generator PMs Performed (Target is 4.6)	9	10	10	12	7	9	12	11	12	9	7	
2.8	# of FM Air Release Valve PMs Performed (NS)	108	36	186	204	256	203	130	36	185	267	226	
2.8	# of FM Air Release Valve PMs Performed (SS)	79	153	115	409	140	210	153	271	263	252	251	
2.9	# of Linear Feet of Gravity Clean (NS) (Target is 2,417 for HRSD)	11,560	5,608	3,872	3,807	1,837	4,294	1,198	2,732	2,608	4,690	2,360	
2.9	# of Linear Feet of Gravity Clean (SS) (Target is 2,417 for HRSD)	5,838	8,330	3,354	0	12,580	5,071	0	1,987	11,777	9,319	9,857	
2.9	# of Linear Feet of Gravity CCTV Inspection (HRSD Target 3,300 LF)	9,186	5,796	4,017	2,717	2,019	655	1,057	3,611.9	3,816	4,286	961.7	

I. Strategic Measurement Data

1. Education and Outreach Events: 12

- a. JRTP tour for Singapore Public Utilities
- b. EVERAC tour of NTP and SWIFT
- c. YRTP tour for Singapore Public Utilities
- d. Chesapeake Bay Bridge Tunnel personnel came to CETP to look at implementation of an Ecopod filter cleaning plan with HRSD.
- e. Charles Bott and Jamie Mitchell provided a SWIFT Briefing to the Elizabeth River Project Tech Committee
- f. Charles Bott provided a SWIFT Briefing at the Grizzard Memorial Symposium
- g. Charles Bott provided a keynote presentation at the VWEA Education Seminar
- h. Stephanie Klaus provided a podium presentation at the VWEA Education Seminar
- i. Charles Bott provided a SWIFT Briefing to the Water Environment Federation/Water Research Foundation - Leaders Innovation Forum for Technology Working Group
- j. NS Operations staff attended a site visit/tour for Alleghany County (Maryland) and their consultants of the Bridge Street PS replacement project. Alleghany County is planning a PS upgrade and requested the visit/tour of HRSD facilities.
- k. SS Ops Staff participated in the St. Gregory the Great Catholic School STREAM Open House
- l. SS Operations staff attended a site visit/tour for Alleghany County Public Works Department of the Norchester PS

2. Community Partners: 5

- a. Chesapeake Bay Foundation – oyster cage maintenance at BHTP for oyster gardening program
- b. Virginia Institute of Marine Science
- c. Old Dominion University
- d. Chesapeake Bay Bridge Tunnel
- e. St. Gregory the Great Catholic School

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (510) – Current Month	Hours / FTE	4.52

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4b	Total Training During Work Hours per FTE (510) – Cumulative Year-to-Date	Hours / FTE	36.19
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	29,771
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	49.16
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	19.96
M-2.3d	Planned Maintenance - Projects	% of Total Maintenance Hours	30.88
M- 4.1a	Energy Use: Treatment *reported for April 2018	kWh/MG	2,570
M-4.1b	Energy Use: Pump Stations *reported for April 2018	kWh/MG	188
M-4.1c	Energy Use: Office Building *reported for April 2018	kWh/MG	99
M-5.2	Educational and Outreach Events	Number	12
M-5.3	Number of Community Partners	Number	5

Respectfully submitted,
Steve de Mik
 Director of Operations

TO: General Manager

FROM: Special Assistant for Compliance Assurance

SUBJECT: Monthly Report for May 2018

DATE: June 8, 2018

A. Submittals Completed in May 2018 – None required in May.

B. Activities

1. **Phase 6 – Rehabilitation Plan.** Ongoing system rehabilitation work associated with Prompt Repairs or other items in the Sewer Repair (SR) contract is as follows:
 - SR 037 – Bayshore Lane: Addressing final warranty manhole repair issues prior to closing out project.
 - SR 040 – Woodland Avenue: Construction nearly complete to replace sections of gravity sewer and rehabilitate manholes.
2. **Phase 7 – Regional Wet Weather Management Plan.** Several rounds of comments and requests for additional information have been exchanged with the EPA on the Integrated Plan/Regional Wet Weather Management Plan, mainly regarding HRSD's financial capability. The latest response was provided on March 23 regarding use of the financial model. A new letter was received June 4 from the Department of Justice and the comments are being addressed.
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. A new SharePoint site is being developed on HRSD's servers and data has been transferred to the new site.
4. **Phase 9 – Supplemental Services.** 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. A MOM Update workshop was held on **May 9** with North and South Shore staff to update Section 4 (Improvement Areas). Work continued in May on updating the MOM Program document with a draft for review in June.

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 (FMP2) program progressed in May. Force main inspection work order status is as follows:

- FMP2 039 Bowers Hill: Work is scheduled to resume in July.
- FMP2 049 Shore Drive (Reservoir Group): Field work is in progress, including multiple coupon taps.
- FMP2 050 Laskin Road: Coordination has been closed out.
- FMP2 051 Independence Blvd: Final recommendations were provided.

Field work planning continued in May under the Gravity Sewer Inspection Phase II Program. The gravity inspection work order status is as follows:

- GMP2 056 Jefferson Avenue Closed Circuit Television (CCTV) – This WO has been scheduled and will be completed by June 30.
- GMP2 059 NS Siphons FY18 - This WO has been scheduled and will be completed by June 30.
- GMP2 060 SS Siphon FY18 - This WO has been scheduled and will be completed by June 30.
- The following Small Communities Division (SCD) work orders in King William have been signed and work in this area is anticipated to start in FY19:
 - GMP2 SCD 026 Main Pump Station
 - GMP2 SCD 027 Commerce Pump Station
 - GMP2 SCD 028 Central Crossing
 - GMP2 SCD 029 McCauley Park Pump Station
 - GMP2 SCD 030 Kennington Pump Station
 - GMP2 SCD 033 School Pump Station
- Additional work orders are under development:
 - GMP2 SCD 031 Urbanna Manholes
 - GMP2 SCD 032 King William Manholes
 - GMP2 SCD 034 Matthews

Work continued on the Fiscal Year 2017 Condition Assessment Annual Report.

C. Next Submittals

Sanitary Sewer Overflow Response Plan – June 2018

D. Program Budget Status

The overall program budget is \$130,151,133, excluding the Master Metering Program. A summary of appropriations and expenses is attached.

E. Strategic Planning Metrics Summary

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

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Total Training Hours Per Full Time Employee (1) – Current Month	Total Training Hours / # FTE	0
M-1.4b	Total Training Hours Per Full Time Employee (1) – Cumulative Fiscal Year to Date	Total Training Hours / # FTE	40
M-5.2	Educational and Outreach Events	Number	0
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 2018 Obligations	Available Balance
Regional Consent Order and Other Consent Order Requirements			
Regional Hydraulic Model	\$109,541,497	\$109,051,147	\$490,350
Locality System Monitoring and Condition Assessment	\$20,609,636	\$20,294,563	\$315,073
Subtotal - In progress	\$130,151,133	\$129,345,710	\$805,423

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	\$144,979,485

TO: General Manager
FROM: Director of Talent Management
SUBJECT: Monthly Report for May 2018
DATE: June 13, 2018

A. Human Resources (HR)

1. Recruitment

a. Recruitment Summary

New Recruitment Campaigns	12
Job Offers Accepted – Internal Selections	9
Job Offers Accepted – External Selections	19
Internal Applications	25
External Applications	158
Average Days to Fill Position	61

b. Placement of Hampton Roads Public Works Academy (HRPWA) summer interns continued. Eleven interns enrolled in various trades were selected for summer internships at participating workcenters.

2. Enterprise Resource Planning (ERP)

a. HRSD worked with the Managed Services consultant on:

- (1) Benefit program setup
- (2) Benefit interface updates
- (3) Appraisal reminder notifications

b. ERP benefit module was opened for employees to select or update benefits during open enrollment.

c. The Cigna interface was tested and finalized, automating update to medical benefits based on employee open enrollment selections.

3. Benefits and Compensation

a. Staff worked with the benefit consultant on:

- (1) Demonstration of a new app to compare pharmacy costs
- (2) Open enrollment meetings, conducted on-site and virtually
- (3) Finalizing contract and scope for health advocate and second opinion services
- (4) Completion of an *Employee Benefits* presentation in Brainshark

b. Staff began compiling Information for a Compensation Study.

4. Wellness

a. Participation Activities

Year Six Participation Activities	Unit	May 2018	Year to Date (March 2018–February 2019)
Biometric Screenings	Number	1	3
Preventive Health Exams	Number	1	7
Preventive Health Assessments	Number	16	57
Coaching Calls	Number	0	0
On-Line Health Improvement Programs	Number	33	102
Web-MD Online Health Tracking	Number	137	434
Challenges Completed	Number	0	0
Fit-Bit Promotion	Number	0	29

b. The Wellness Specialist participated in open enrollment meetings.

c. A presentation for Learning Week was developed.

d. The summer visit schedule for a joint Employee Assistance and Wellness Program presentation was finalized.

e. The Wellness Specialist developed quarterly newsletter materials.

f. Year 5 Wellness payouts were provided to employees and spouses.

g. HR and Optima Wellness Program staff met to discuss 2019 updates.

5. Workers Compensation

Six new cases were opened with 11 cases remaining active.

6. Employee Relations

- a. Staff continued to partner with work center supervisors and employees to support employee relations and address HR issues. HR Specialists participated on Finance Department interview panels and worked on revisions to Operations Department job descriptions.
- b. The Employee Assistance Program conducted four training sessions at workcenters on team and change management.
- c. HR, Accounting and Payroll staff continued meeting to identify roles and outline ERP procedures for overlapping work processes.

7. General

- a. HR staff reviewed position information for the Fiscal Year 2019 Budget publication.
- b. Re-organization of HR file room and storage areas continued.
- c. Staff participated in the following HRSD activities:
 - (1) HRSD SWIFT Ribbon Cutting Event
 - (2) HRSD Leadership Forum
 - (3) HRSD Senior Leadership meeting
 - (4) HRSD Website Review meeting
 - (5) Your Role in Quality
 - (6) HRSD Fleetistics Team
- d. Staff participated in the following training:
 - (1) HRSD *Emotional Intelligence* training
 - (2) *Non-traditional Apprenticeships for a Diverse Workforce* webinar
 - (3) *Notary Basics*
 - (4) Skillpath's *Conference for Women*

B. Organization Development and Training (OD&T)

1. Training

- a. The *Teams and Problem Solving (TAPS) Workshop* was held, covering natural planning, problem solving, driver's model and effective teams. The workshop received exceptional evaluations.
- b. Staff facilitated a half-day workshop on Learning Styles. The workshop, presented in a "train the trainer" format, offered a challenge and incentive to the first participant facilitating the workshop at their workcenter.
- c. Leadership Facilitators continued revising the Leadership and Management Program to review content for relevancy and to enhance skills in alignment with the current workforce.
- d. Plans continued for Learning Week 2018 scheduled in June. This year's theme, "Bring Your 'A' Game" will focus on characteristics beginning with "A": *attitude, attribute, aptitude, and action*.

2. Apprenticeship Program

- a. Planning for new initiatives continued. The Instructor Program was scheduled and Summer Orientation planning was completed.
- b. The Apprenticeship Committee and Representatives met to address apprentice issues and to develop Mission and Vision statements with the support of TAPS Facilitators.
- c. Staff continued to enter historical training and apprenticeship program information into ERP and scan historical records.
- d. The Training Superintendent performed the following in relation to Apprenticeship courses:
 - (1) Evaluated *Wastewater Analysis and Wastewater Laboratory* course for conversion to an online format and revision of the Laboratory component to align with Plant Operator functions
 - (2) Evaluated Condition Assessment Technician Trade Revisions to *Disinfection* curriculum

4. General

- a. Staff continued cross-training to improve e-learning skills. A follow-up presentation of the *Refresh, Renew and Remember* workshop was developed in Storyline Articulate. Staff worked through technical issues to allow participants to view training.
- b. Staff participated in the following training:
 - (1) Mentor Coach *Intensive Individual Coaching Skills and Coaching Positive Leaders*
 - (2) TrainHR- *Using Non-Traditional Apprenticeships to Build a More Diverse Workforce*
 - (3) National Technology Transfer, *ArcFlash Training*

C. Safety

1. Mishaps and Work Related Injuries

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

	<u>2017</u>	<u>2018</u>
Mishaps	42	15
Lost Time Mishaps	10	2
<i>Numbers subject to change pending HR review of each case.</i>		

- b. MOM Program Year Performance Measure Work Related Injuries

May 2018 Injuries For Operations	May 2018 Injuries for Other HRSD Departments	Total Lost Time Injuries Since July 2017	Total HRSD Injuries Since July 2017
6	0	10	37

- c. Follow-up investigations were performed on six reported work-related injuries and four auto accidents.

2. HRSD Safety Training

Strategic Planning Measure	Unit	May 2018
Total Safety Training Hours per Full Time Employee (830) All HRSD – May 2018	411.42 Hours / 830 FTE	0.50
Total Safety Training Hours Per Full Time Employee (830) – Cumulative July 2017	3673.41 Hours / 830 FTE	4.43

3. In addition to regularly scheduled safety training and medical monitoring, the following sessions were conducted:
- a. Twelve external briefings for contractors working at treatment plants (TP) and pump stations
 - b. Several hot work permits for a Shipps Corner Pump Station contractor
 - c. Two forklift refresher training sessions for Army Base Treatment Plant (TP) employees
 - d. Emergency Response Training for Small Communities Division
 - e. New Employee safety orientation for Boater Pump-Out Program interns.
 - f. Sulfuric Acid Safety training for Nansemond TP employees.

4. Safety Inspections, Testing and Monitoring

- a. Weekly on-site inspections of the following construction sites:
 - (1) Army Base TP
 - (2) Atlantic TP
 - (3) James River TP
 - (4) SWIFT Research Center at Nansemond TP
 - (5) Virginia Initiative Plant
 - (6) York River TP

- b. Quarterly safety inspections of the following work centers:
 - (1) Air Rail Avenue Main Office Complex
 - (2) Central Environmental Lab (CEL)
 - (3) North Shore Pump Stations
 - (4) South Shore Pretreatment and Pollution Prevention (P3)
 - (5) South Shore Pump Stations
 - (6) Technical Services
 - (7) VIP
 - (8) York River TP

- c. Monitoring and testing for the following:
 - (1) Monthly velocity tests on CEL and Technical Services Division (TSD) lab hoods
 - (2) Asbestos inspection and sampling at several properties
 - (3) Air sampling during two bench testing events at Nansemond TP

- d. Safety walk-throughs and evaluations:
 - (1) Final safety walk-through of SWIFT Research Center
 - (2) Escorted City of Virginia Beach Fire Department on a CEL tour
 - (3) Escorted an insurance risk control consultant on a walk-through of Williamsburg TP

- e. Safety Technician inspected ladders, emergency lighting, eyewashes and showers for SWIFT Research Center.

- f. Staff completed inspections of hurricane lockers at all workcenters

5. Safety Programs

- a. The Safety Team selected the 2018 Safety Innovation Award winners. Two winning projects were selected based on innovation, overall impact on safety and feasibility. Three projects received honorable mention. Winners will receive QST recognition and all projects will be featured on SharePoint as part of National Safety Awareness month.

- b. Nansemond TP Emergency Response Procedures were updated.

- c. The following was performed in relation to the Respiratory Protection Program:
 - (1) Continued annual employee pulmonary function and respirator fit testing
 - (2) Compiled employee testing results for workcenters
- d. Industrial Hygienist prepared SWIFT Research Center chemical evaluations and response information for consultant.
- e. The Request for Proposal selection process was completed for the Prescription Safety Glasses program. Staff began developing policies and procedures for program implementation.
- e. Industrial Hygienist and Safety Technician created and updated confined space permits for SWIFT Research Center.
- f. Safety Manager investigated an unsafe work condition report involving an inoperable valve at a TP. The valve was immediately replaced and satisfactorily resolved by the workcenter.
- g. A meeting was held with Water Quality staff to discuss Chemical Hygiene Plan updates.
- h. Staff met with Process Engineer to discuss safety procedures for a Nansemond TP Ostara facility pilot study. A safe work practice for sulfuric acid was developed.
- i. The Safety Coordinator continued maintaining the Operations Safety Accident Tracking report.

6. General

- a. Activities continued for online implementation of the Material Safety Data Sheet system. Staff entered CEL Safety Data Sheet information and clarified Hazardous Communication program requirements.
- b. Staff attended the following training:
 - (1) National Fire Protection Association's 2018 70E Training
 - (2) Norfolk International Terminal training

c. Staff participated in the following HRSD activities:

(1) HRSD Uniform Committee

D. Monthly Strategic Planning Metrics Summary

1. Education and Outreach Events: 10

a. City of Suffolk Local Emergency Planning Commission meeting

b. Hampton Job Fest at Goodwill Community Outreach Center

c. Water Environment Federation Utility Management's Workforce Sustainability meeting and Culture sub-committee meeting (2)

d. Instructed HRPWA *Employability Skills* course (2)

e. Conducted HRPWA Intern interviews at New Horizons Regional Education Center, Virginia Beach Career and Technical Education Center and the College and Career Academy at Pruden Center (3)

f. International Public Managements Association's Benchmarking Committee meeting

2. Community Partners: (4)

a. HRPWA

b. Pruden Center College and Career Academy

c. Virginia Beach Career and Technical Education Center

d. New Horizons Regional Education Center

3. Monthly Metrics

Item #	Strategic Planning Measure	Unit	May 2018
M-1.1a	Employee Turnover Rate (Total)	Percentage	1.39
M-1.1b	Employee Turnover due to Service Retirements	Percentage	0.30
M-1.4a	Total Training Hours Per Full Time Employee (15) – Current Month	Total Training Hours/ FTE	7.37
M-1.4b	Total Training Hours Per FTE (15) Cumulative Fiscal Year-to-Date	Total Training Hours/ FTE	49.89
M-5.2	Educational and Outreach Events	Number	10
M-5.3	Community Partners	Number	4

Respectfully submitted,
Paula A. Hogg
Director of Talent Management

TO: General Manager
FROM: Director of Water Quality (WQ)
SUBJECT: Monthly Report for May 2018
DATE: June 13, 2018

A. General

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

Atlantic Heating & Cooling Service, Incorporated – Virginia Beach

An Enforcement Order was issued to Atlantic Heating & Cooling Service, Incorporated in April 2018 for technical violations that occurred in August 2017 and January 2018. The Order contained an invoice totaling \$4,000 in Civil Penalties.

A total of four violations were issued, each for failure to comply with Section 4 of the Regional Residuals Facility (RRF) Best Management Practice (BMP). Section 4 of the RRF BMP requires that hauled waste be decanted prior to discharge at the RRF. A compliance schedule was received from the permittee in November 2017. A Show Cause Meeting was held in January 2018. The permittee attributed violations to the general difficulty of successfully decanting hauled wastes as well as failure of employees to follow established procedures.

The August discharge required an HRSD response resulting in a cost of \$1810.78 that is recovered from the permittee. Atlantic Heating & Cooling Service, Incorporated has retrained all employees on the appropriate procedures for decanting prior to discharging at the RRF. The permittee has identified alternate discharge locations for use when decanting is unsuccessful. HRSD is actively working with Atlantic Heating & Cooling Service, Incorporated to address ongoing decanting issues. The Enforcement Order was accepted and the Civil Penalty was paid in May 2018.

Catalina Cylinders, Incorporated – Newport News

An Enforcement Order was issued to Catalina Cylinders Incorporated, in January 2017 for administrative and technical violations that occurred between August and December 2017. The Order contained an invoice totaling \$1,500 in Civil Penalties.

Administrative and technical violations were issued. The administrative violations were associated with late submittals of required data. The technical violations were due to exceedances related to Zinc. The facility is currently under an Administrative Order to address Zinc. A Show Cause Meeting was held and potential zinc sources were investigated. The facility found the source to be the aging of their Waste Treatment system #2; the facility has removed the #2 system and rerouted the wastewater to Waste Treatment system #1.

Neither the collection system nor the treatment plant was adversely impacted by the Zinc exceedances. The Enforcement Order was accepted and the Civil Penalty was paid in April 2018.

2. The Director attended the Water Research Foundation Conference held in Atlanta, Georgia. A significant percentage of the presentations made during the conference focused on measurements and risks involved in potable reuse projects relative to pathogens. Norovirus appears to be one of the primary pathogens that the U.S. Environmental Protection Agency (EPA) is focused on as it considers development of water quality criteria to protect recreational uses of surface waters. One apparent gap in the knowledge base here is how to represent the infectivity of virus particles. Given that molecular measures such as qPCR do not represent the ability of each viral particle to result in an infection with negative consequences such as gastrointestinal illness, it is important that this ability be considered independently when estimating risk of infection and compliance with a water quality criterion. The HRSD Water Quality Department is working with the University of North Carolina to investigate this question with the expectation that HRSD will be better able to inform risk decisions regarding pathogens like Norovirus.
3. The Director attended the annual meeting of the Water Research Foundation's Research Advisory Council (RAC) in Alexandria, Virginia. The RAC met to determine the projects that would be recommended for funding in the next year. These projects are developed by a number of issue area teams that include volunteers with expertise in specific fields of water research, including sustainable integrated water management, intelligent water systems, nutrients, energy, resource recovery, and linkages between water quality goals and regulatory standards. Approximately \$1.3 million in funding is available for these projects. The RAC was able to reach consensus in developing a research agenda for the next year which complies with the budget. The results of that process will be published soon.

B. Quality Improvement and Strategic Activities

1. The Sustainability Advocacy Group (SAG) did not report activity for the month of May.
2. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department.

C. Municipal Assistance

HRSD provided sampling and analytical services to the City of Hopewell to support their Virginia Pollution Discharge Elimination System (VPDES) monitoring requirements, and to the City of Virginia Beach to support their water quality monitoring program for Lake Trashmore.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 2
 - a. P3 staff coordinated and participated in Clean the Bay Day.
 - b. P3 staff participated in a 'What Not To Flush' presentation at Butt's Road Primary School.
2. Community Partners: 12
 - a. City of Norfolk
 - b. City of Newport News
 - c. Virginia Department of Health Division of Shellfish Sanitation
 - d. Virginia Department of Environmental Quality
 - e. Lynnhaven River NOW
 - f. Virginia Institute of Marine Science
 - g. City of Suffolk
 - h. Elizabeth River Project
 - i. Virginia Department of Health Office of Epidemiology
 - j. City of Virginia Beach
 - k. Hampton Roads Planning District Commission
 - l. Chesapeake Bay Foundation

Item #	Strategic Planning Measure	Unit	May 2018
M-1.4a	Training During Work Hours Per Full Time Employee (109) (Current Month)	Total Hours / # FTE	7.49
M-1.4b	Total Training During Work Hours Per Full Time Employee (109) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	50.03
M-2.5	North Shore/South Shore Capacity Related Overflows	# within Level of Service	0
M-3.1	Permit Compliance	# of Exceedances: # of Permitted Parameters	9:53,477
M-3.2	Odor Complaints	#	0
M-3.4	Pollutant Removal	Total Pounds Removed	174,790,253
M-3.5	Pollutant Discharge	% Pounds Discharged/Pounds Permitted	18%
M-5.2	Educational and Outreach Events	#	2
M-5.3	Community Partners	#	12
	Average Daily Flow	Total MGD for all Treatment Plants	153.85
	Industrial Waste Related System Issues	#	0

Respectfully submitted,
James Plett, PhD
 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

Corporate Governance: Ethics Function

- **Tasks Completed (May 2018)**
 - Followed up regarding clarifying items in management action plan responses
- **Upcoming Tasks (June 2018)**
 - Work with management to complete action plans and finalize report

Treatment Plant Operations

- **Tasks Completed (May 2018)**
 - Completed fieldwork tasks
 - Worked with process owners to resolve open items
 - Prepared draft findings
 - Drafted final report
- **Upcoming Tasks (June 2018)**
 - Hold findings discussion with process owners
 - Complete final report
 - Obtain and review management action plans

Business Continuity and Disaster Recovery

- **Tasks Completed (May 2018)**
 - Identified key business areas of focus and obtained available documentation
 - Reviewed documentation and held preliminary walkthrough discussions
 - Scheduled full walkthrough discussions
 - Began to develop audit plan and objectives
- **Upcoming Tasks (June 2018)**
 - Perform walkthrough procedures and document process understanding
 - Finalize audit program details and objectives
 - Request and obtain process documentation
 - Begin fieldwork testing procedures

II. Upcoming Projects (FY2018)

All FY18 audits have been started at this time. The first FY19 audit will begin in July 2018. The subject of this audit will be determined and communicated prior to commencement.

III. Management Action Plan (MAP) Monitoring

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



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

The following describes the current project monitoring status.

Audit	Report Date	Next Follow-up	Recommendations		
			Closed	Open	Total
D&C: CIP Project Management	5/11/2016	Dec-18	11	2	13
Biosolids Recycling	10/8/2016	Apr-18	7	1	8
HR Benefits	11/22/2016	Jun-18	12	3	15
Inventory	4/20/2017	Oct-18	1	4	5

Annual Metrics											
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%	6.66%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%	0.90%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	69.57%	71.43%	64.00%	69.00%	68.00%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56	67
M-1.4	Training Hours per Employee - cumulative fiscal year-to-date	Hours	> 40		30.0	43.8	37.5	35.9	42.8	49.0	48.4
M-1.5a	Safety OSHA 300 Incidence Rate Total Cases	# per 100 Employees	< 3.5	6.57	6.15	5.8	11.2	5.07	3.87	7	5.5
M-1.5b	Safety OSHA 300 Incidence Rate Cases with Days Away	# per 100 Employees	< 1.1	0.74	1.13	1.33	0.96	1.4	0.82	1.9	1
M-1.5c	Safety OSHA 300 Incidence Rate Cases with Restriction, etc.	# per 100 Employees	< 0.8	3.72	4.27	2.55	4.5	2	1.76	3.6	2.8
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%	156%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%	173%
M-2.3a	Total Maintenance Hours	Total Available Mtc Labor Hours Monthly Avg			16,495	22,347	27,615	30,863	35,431	34,168	28,786
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%	43%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%	25%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%	32%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%	5%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45	1.58
M-3.6	Alternate Energy	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096	6,052,142
M-4.1a	Energy Use: Treatment	kWh/MG Monthly Avg			2,473	2,571	2,229	2,189	2,176	2,205	2,294
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163	173
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97	104
M-4.2	R&D Budget	Percentage of Total Revenue	> 0.5%		1.0%	1.4%	1.0%	1.3%	1.0%	0.8%	1.3%
M-4.3	Total Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow		\$1,028	\$1,095	\$1,174	\$1,232	\$1,249	\$1,279	\$1,246	\$1,285
M-4.4	Affordability	8 CCF Monthly Charge/ Median Household Income	< 0.5%		0.48%	0.48%	0.41%	0.43%	0.53%	0.55%	0.59%
M-4.5	Total Operating Cost/MGD	Total Operating Expense/ 365/5-Year Average Daily Flow		\$2,741	\$2,970	\$3,262	\$3,316	\$3,305	\$3,526	\$3,434	\$3,592
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A	N/A
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%	143%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35	15
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09	154.24
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14	66.66
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%	73%
	Senior Debt Coverage	Net Revenue/Senior Annual Debt Service	> 1.5	2.51%	2.30%	2.07%	1.88%	1.72%	1.90%	2.56%	3.10%
	Total Debt Coverage	Net Revenue/Total Annual Debt	>1.4	1.67%	1.67%	1.46%	1.45%	1.32%	1.46%	1.77%	1.93%

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

Monthly Updated Metrics												FY-18	FY-18
Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	Apr-18	May-18
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	153.5	146.1	153.9
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	7	2	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	101%	101%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	114%	115%
	Accounts Receivable (HRSD)	Dollars (Monthly Avg)			\$ 17,013,784	\$ 17,359,488	\$ 18,795,475	\$ 20,524,316	\$ 20,758,439	\$ 22,444,273	\$ 22,572,788	\$20,315,287	\$20,227,098
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	18%	18%	20%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	6	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	9:53236	9:48235	9:53477
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	7	0	0
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	189,765,922	157,936,385	174,790,253
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	22%	18%	18%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	502	40	26
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	345	28	26

EFFLUENT SUMMARY FOR MAY 2018

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	TKN mg/l	NH3 mg/l	CONTACT TANK EX
ARMY BASE	10.95	61%	3	4.1	11	1	0.71	0.59	2.2	6.5	NA	NA	13
ATLANTIC	27.68	51%	12	6.9	2	1	NA	NA	NA	NA	NA	NA	2
BOAT HARBOR	14.81	59%	5	3.6	2	2	0.29	0.44	10	14	NA	NA	0
CENT. MIDDLESEX	0.013	52%	<2	<1.0	1	<1	NA	NA	NA	NA	NA	NA	NA
CHES-ELIZ	17.97	75%	13	11	9	2	0.84	0.81	30	30	NA	NA	5
JAMES RIVER	13.08	65%	2	3.7	1	<1	0.67	0.38	8.1	8.8	NA	NA	6
KING WILLIAM	0.048	48%	<2	<1.0	NA	1	0.23	0.064	0.25	1.1	<0.50	NA	NA
NANSEMOND	17.23	57%	4	4.3	3	3	0.81	1.1	3.8	4.5	NA	NA	6
SURRY, COUNTY	0.065	100%	<2	1.3	NA	1	NA	NA	NA	NA	<0.50	0.77	0
SURRY, TOWN	0.058	96%	5	4.6	NA	36	NA	NA	NA	NA	2.85	0.70	NA
URBANNA	0.049	49%	2	5.4	4	2	5.4	3.7	18	24	NA	0.07	NA
VIP	30.77	77%	5	4.3	2	1	0.98	0.61	6.2	7.9	NA	NA	3
WEST POINT	0.542	90%	19	17	3	8	2.9	2.8	17	19	NA	11	0
WILLIAMSBURG	8.19	36%	2	2.7	3	1	0.67	0.48	2.2	3.1	NA	NA	2
YORK RIVER	12.40	83%	5	2.3	1	2	0.42	0.30	4.1	3.4	NA	NA	1
	<u>153.85</u>												

	% of Capacity
North Shore	59%
South Shore	63%
Small Communities	78%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY18	YTD	Projection	CY18
	%	Lbs	%	%	Lbs	%
James River	36%	3,805,002	84%	30%	264,975	83%
York River	24%	243,883	85%	34%	15,999	83%
Rappahannock	96%	NA	NA	216%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY18 to Date: 9:53,477
Pounds of Pollutants Removed in FY18 to Date: 174,790,253
Pollutant Lbs Discharged/Permitted Discharge FY18 to Date: 18%

	Rainfall (inch)		
	North Shore (PHF)	South Shore (ORF)	Small Communities (FYJ)
Month	6.44"	7.68"	8.74"
Normal for Month	4.14"	4.27"	4.52"
Year to Date Total	18.95"	20.21"	20.19"
Normal for YTD	18.19"	16.48"	18.06"

AIR EMISSIONS SUMMARY FOR MAY 2018

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	BZ Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave (F)	12 hr ave (in. WC)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	12 hr ave (GPM)	pH 3 hr ave	Bypass Stack Use	Mo. Ave (PPM)	DC (%)	Daily Ave Days >Max
ARMY BASE	0	0	0	0	0	0	0	5	34	100	0
BOAT HARBOR	0	0	0	n/a	0	0	0	0	6	99	0
CHES-ELIZ	0	1	0	0	0	0	0	1	19	97	0
VIP	0	0	0	n/a	0	0	0	0	66	99	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	0	17	95	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	0
DEQ Request for Corrective Action (RCA):	0
DEQ Warning Letter:	0
DEQ Notice of Violation (NOV):	0
Other Air Permit Deviations:	1
Odor Complaints Received:	0
HRSD Odor Scrubber H2S Exceptions:	36

AGENDA ITEM 18.f. – June 26, 2018

Subject: Williamsburg Treatment Plant Emergency Generator Rental, Repairs and Associated Electrical Services
Emergency Declaration

Recommended Action: No action is required. Information Only

Brief: The Williamsburg Treatment Plant emergency generator is currently out of service. The connecting rod on the right bank of the number 1 cylinder broke and caused significant damage to the cylinder assembly and engine block.

An emergency declaration was authorized on May 31, 2018. This emergency was declared to prevent a shutdown of plant operations in the event of a power outage and to facilitate the repair of the engine block and replace damaged cylinder assemblies. Western Branch Diesel has been contracted to perform repairs to the generator. While this is being completed, electrical contractors JC Driskill and Marine Systems, Inc. will bypass existing generator connections and connect the transformer that was included as part of the emergency generator rental to the plant breaker.

The estimated cost of all work is \$115,619.