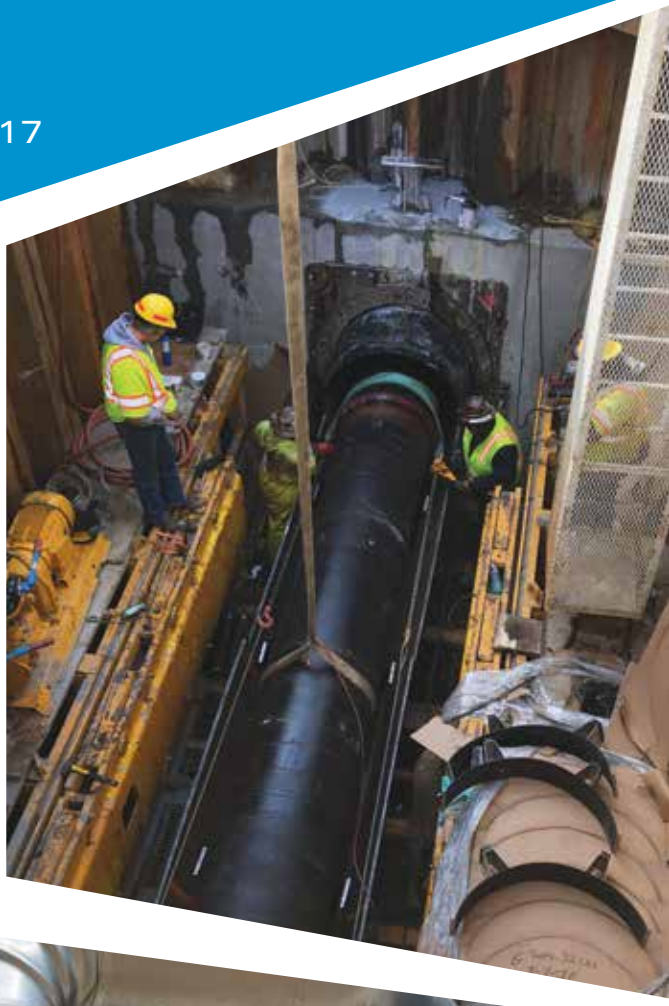
Annual Budget

FOR THE FISCAL YEAR ENDED JUNE 30, 2017



HRSD

Ensuring future generations inherit clean waterways

HRSD Annual Budget
For Fiscal Year Ended June 30, 2017

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Introduction

Upgrading Treatment Plants
A $156 million project will replace aging equipment, increase hydraulic capacity and further enhance nutrient removal at the Virginia Initiative Plant.

Photo by Backus Aerial Photography

General Manager's Introduction

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

Over the past 76 years, HRSD has developed into one of the premier wastewater treatment organizations in the nation. With 13 treatment plants capable of treating 249 million gallons of wastewater each day, HRSD has eliminated the discharge of untreated sewage into the waters of Hampton Roads from the homes and businesses within our region. However, there is more work to be done to further improve water quality as well as preserve our 76-year investment in wastewater infrastructure.

The Governor appointed, eight-member HRSD Commission approved this Fiscal Year-2017 budget at its regular meeting on May 24, 2016. The Commission and the HRSD staff worked diligently to balance our focus on stewardship of our ratepayers' hard earned dollars with our mission of stewardship of the waters of the Hampton Roads. The cost of wastewater treatment continues to rise here, as it does across the nation. However, wastewater treatment is still a bargain in Hampton Roads, with the typical household paying less than $30 per month for this essential service. That is less than one dollar each day to protect our treasured waterways.

Federal Mandates Drive HRSD Spending

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

The requirement to reduce the amount of nutrients that HRSD's 13 treatment plants discharge into the Chesapeake Bay, another Federally mandated program, while not as large as the overflow mandate, has required a significant investment in infrastructure and process improvements. Major plant upgrades have been completed at the Nansemond Treatment Plant in Suffolk, the James River Treatment Plant in Newport News and the York River Treatment Plant in Seaford. Additional projects underway in Norfolk at the Army Base Treatment Plant and the Virginia Initiative Plant will ensure HRSD meets the 2017 milestone requirements of the Chesapeake Bay Total Maximum Daily Load.

Pursuing Innovative Solutions to Reduce Costs and Protect Water Quality

HRSD continues to lead international research efforts to reduce the cost of removing nutrients from wastewater. HRSD's research work is leveraged with partnerships with leading universities and other innovative wastewater utilities throughout the world. Putting the knowledge gained into practice has already yielded a significant return on our investment by reducing operational costs for nutrient removal as well as minimizing the capital investment required to construct new systems.

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

With the various water related challenges facing Hampton Roads and the Commonwealth, it appears there could be significant benefit from HRSD investing in additional treatment processes to treat water to exceed drinking water standards as soon as possible, even before that becomes a regulatory requirement. The challenges of restoring the Chesapeake Bay, the depletion of our groundwater reserves, the impact of sea level rise and the threat of salt water contamination of coastal groundwater may all be addressed with HRSD's Sustainable Water Recycling Initiative. The concept is for HRSD to treat water to exceed drinking water standards and pump it into the ground to provide a sustainable source of groundwater, slow the rate at which the land is sinking due to over withdrawal of the groundwater, block salt water intrusion with a pressurized fresh water barrier and practically eliminate HRSD discharges to the York, James and Elizabeth Rivers. The benefits of this concept are significant and are needed immediately.

Financing a Sustainable Water Future

HRSD is pursuing the Sustainable Water Recycling Initiative with a goal of obtaining required approvals to construct beginning in 2020. HRSD is committed to implementing this initiative only if it can be accomplished within the financial framework laid out in the Financial Forecast as presented in this budget. To do that, many of the proposed capital improvements related to reducing system overflows will be deferred until after the Sustainable Water Recycling Initiative is complete. HRSD remains committed to eliminating system overflows; however, the impact of those transient events on local water quality is minimal and the benefits nearly unperceivable. In contrast, the positive impact the Sustainable Water Recycling Initiative will have on local waterways, eastern Virginia and the entire Chesapeake Bay is significant, will be immediately evident and critical to sustaining the vitality and prosperity of Hampton Roads and all of eastern Virginia for generations to come.

Reducing overflows from the regional sewer system and reducing the amount of nutrients discharged by our treatment plants are both driven by regulations with which HRSD must comply. These regulatory mandates consume over two-thirds of the $1.5 billion 10-year Capital

Improvement Plan. It is within that portion of our Capital Improvement Plan that we will reprioritize mandated projects to allow construction of the voluntary Sustainable Water Recycling Initiative to achieve significantly more environmental benefits without impacting our Financial Forecast.

HRSD finances its capital projects by issuing bonds and using cash on hand. Our payments on outstanding debt will increase during the next fiscal year to just under $64 million. Despite our best efforts to control costs through efficiency, conservation and innovation, our operating expenses are projected to increase in FY-2017 from $141 million to $146 million. These increases continue to be heavily dictated by regulatory compliance. As a result of the increased operating costs and debt payments, our average residential customers will see their monthly bills increase by approximately $2.47.

The Community's Role

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

As we reflect on 76 years of protecting public health and the waters of Hampton Roads, we remember the mandate so boldly declared by those environmentally concerned Virginians in 1940. It was their foresight that ensured we can enjoy the waters of Hampton Roads today. It will take our continued innovation, investment and foresight to ensure future generations will inherit clean waterways and be able to keep them clean.

Sincerely,

Ted Henifin, P.E.
General Manager

Principal Officials

June 30, 2016

COMMISSIONERS

Vishnu K. Lakdawala, PhD, Chair

Frederick N. Elofson, CPA, Vice-Chair

Michael E. Glenn

Arthur C. Bredemeyer

Maurice P. Lynch, PhD

Stephen C. Rodriguez

Susan M. Rotkis

Willie Levenston, Jr.

COMMISSION SECRETARY

Jennifer L. Cascio

SENIOR STAFF

Edward G. Henifin, PE
General Manager

Jay A. Bernas, PE
Director of Finance
and Treasurer

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

Donald C. Corrado
Director of Information
Technology

Steven G. de Mik, CPA
Director of Operations

Paula A. Hogg
Director of Talent Management

Phillip L. Hubbard, PE
Special Assistant for
Compliance Assurance

Bruce W. Husselbee, PE
Director of Engineering

James J. Pletl, PhD
Director of Water Quality

COUNSEL

Kellam, Pickrell, Cox & Anderson, PC
General Counsel

Jones, Blechman, Woltz & Kelly, PC
Associate Counsel

AquaLaw, PLC
Special Counsel

Sidley Austin, LLP
Bond Counsel

Key Facts

Service Area and Operations

Date Established	November 5, 1940
Communities Served	17 communities encompassing 2,808 square miles
	HRSD is a political subdivision of the Commonwealth of Virginia, created for the specific purpose of water pollution abatement in Hampton Roads by providing a system of interceptor mains and wastewater treatment plants.
Population Served	About 1.7 million, nearly one-fourth of Virginia's population, reside in HRSD's service area.

Operation and Facilities

No. of Positions (FY-2017)	818
Miles of Interceptor Systems	532 Miles
Wastewater Treated	152 million gallons per day average
Wastewater Capacity	249 million gallons per day average

Financial Information

Bond Ratings

Ratings Agency	Senior Debt	Subordinate Long-term	Subordinate Short-term
Standard & Poor's	AA+	AA	A-1+
Fitch Ratings	AA+	AA	F1+
Moody's Investors Service	Aa2	n/a	n/a

Operating Budget (FY-2017) $262,233,000

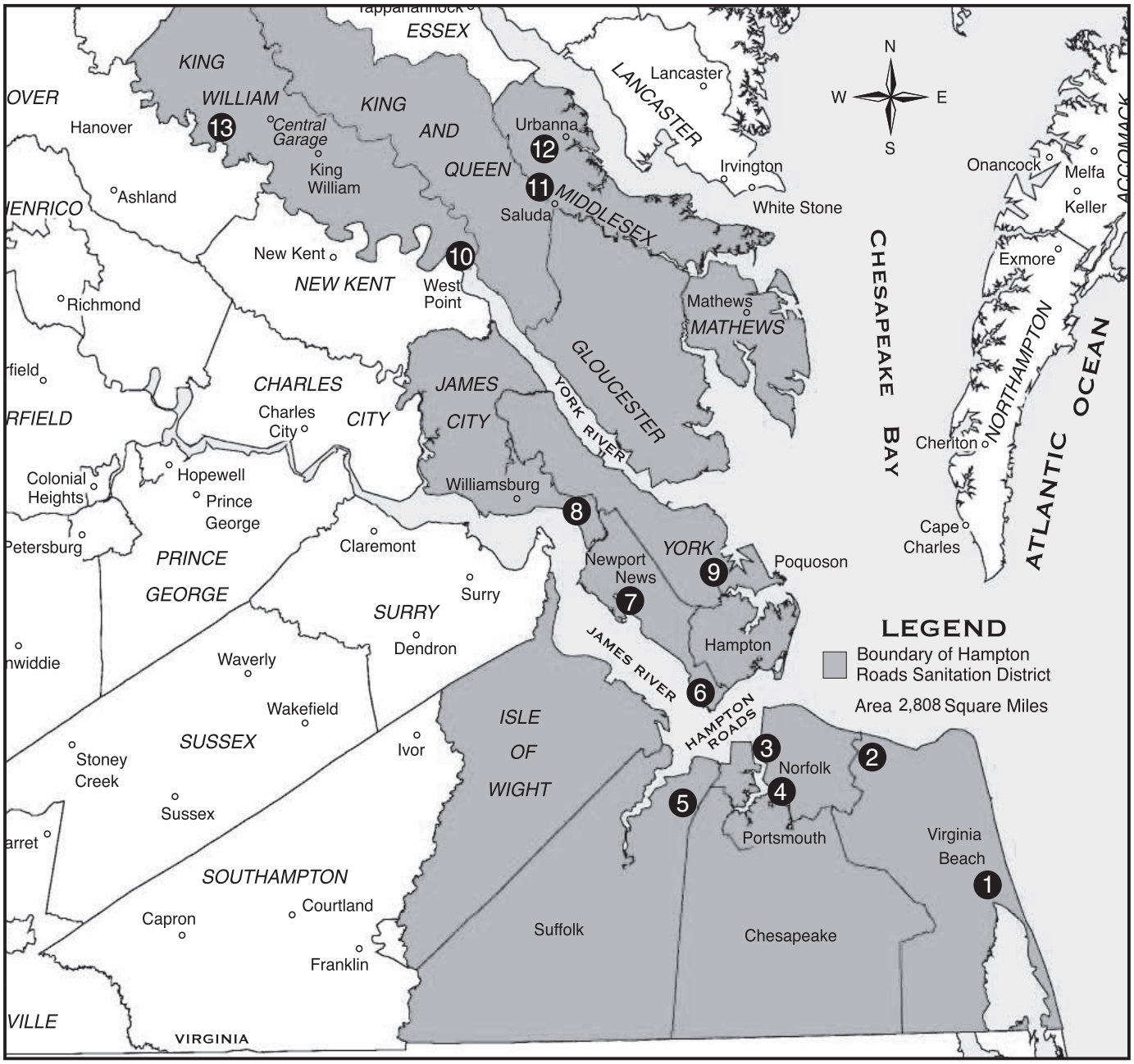
HRSD

A Political Subdivision of the Commonwealth of Virginia

Major facilities include the following treatment plants:

1. Atlantic, Virginia Beach
2. Chesapeake-Elizabeth, Va. Beach
3. Army Base, Norfolk
4. Virginia Initiative, Norfolk
5. Nansemond, Suffolk
6. Boat Harbor, Newport News
7. James River, Newport News
8. Williamsburg, James City County
9. York River, York County
10. West Point, King William County
11. Central Middlesex, Middlesex County
12. Urbanna, Middlesex County
13. King William, King William County

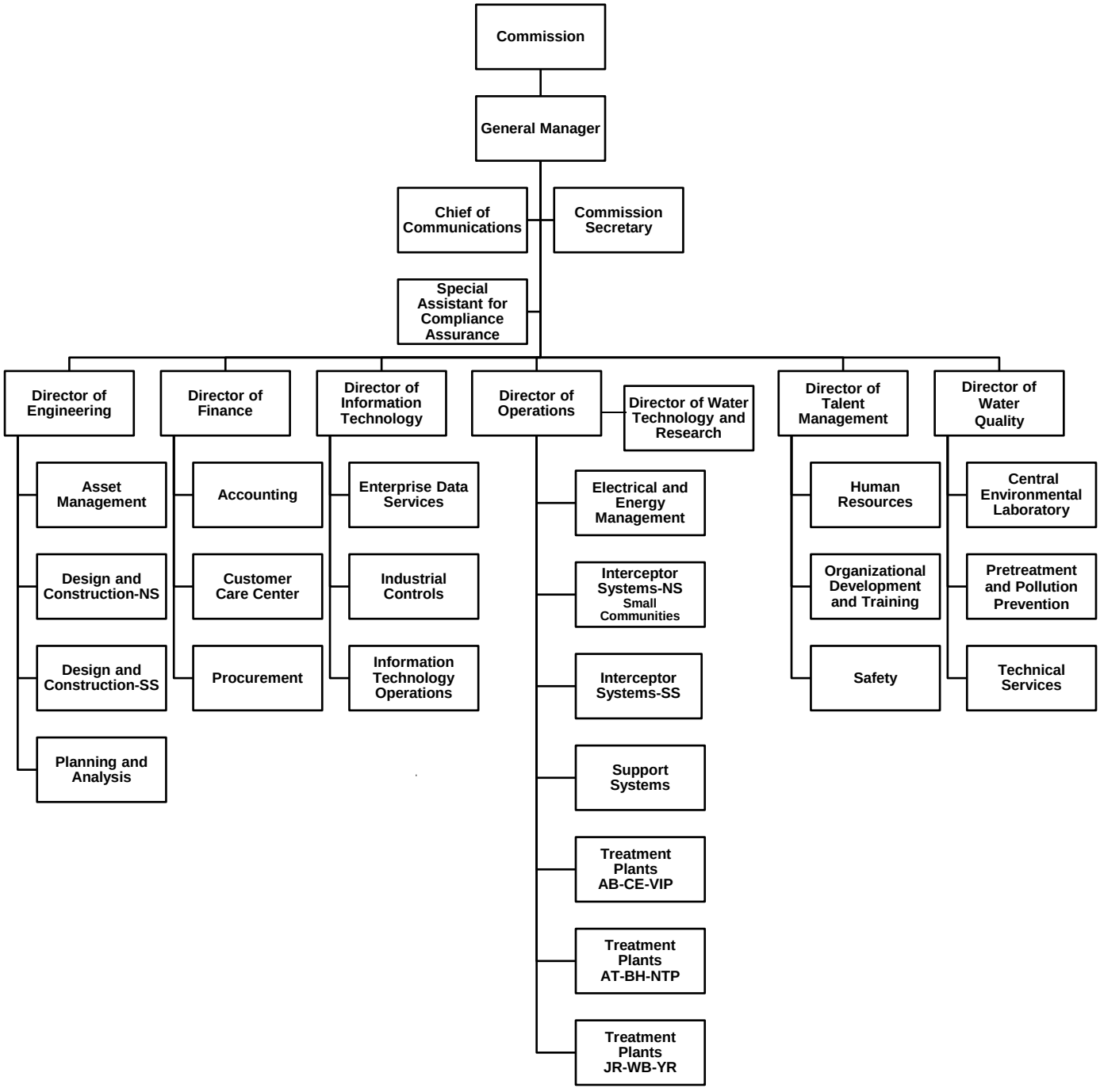
Serving the Cities of Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, Williamsburg, and the Counties of Gloucester, Isle of Wight, James City King and Queen, King William, Mathews, Middlesex and York



2016

HRSD Organization Chart

July 1, 2016



History of HRSD

June 30, 2015

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

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

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

HRSD began operations on July 1, 1946, using facilities acquired from the United States Government. The Warwick County Trunk Sewer, HRSD's first construction project, began on June 26, 1946, and was funded by HRSD's $6.5 million Primary Pledge Sewer Revenue Bonds, dated March 1, 1946. The first treatment plant, the Army Base Plant, began operation on October 14, 1947. Since that time, the facilities of HRSD have grown to provide sanitary sewer service to all major population centers in southeastern Virginia. The population served has increased from nearly 288,000 in 1940 to about 1.7 million in 2015.

Throughout its rich history HRSD has earned many of its industry's most prestigious awards. This tradition continued as the National Association of Clean Water Agencies (NACWA) presented Peak Performance Awards to every HRSD treatment plant for outstanding compliance with National Pollutant Discharge Elimination System (NPDES) permits during calendar year 2014. The Army Base Treatment Plant was honored for 28 consecutive years of perfect permit compliance, an achievement unsurpassed in the nation. The other major treatment plants received the following awards in recognition of their outstanding permit compliance status: Atlantic Plant—Silver, Boat Harbor—Platinum (13 consecutive years), Chesapeake-Elizabeth—Platinum, James River—Gold, Nansemond—Platinum (13 consecutive years), Virginia Initiative Plant—Platinum (19 consecutive years), Williamsburg—Platinum (20 consecutive years) and York River—Platinum (7 consecutive years). Three treatment plants in the Small Communities Division, Central Middlesex, King William and West Point, earned Gold Awards while Urbanna received a Silver.

HRSD's other Fiscal Year 2015 honors included one NACWA National Environmental Achievement Award in the Operations & Environmental Performance category and a second in the Research & Technology category for a joint initiative. HRSD and its partners also received a 2014 International Water Association Project Innovation Award for Applied Research. The US Green Building Council awarded Silver Leadership in Energy and Environmental Design (LEED) Certification for the South Shore Operations Center and the Elizabeth River Project recognized HRSD with a Living Lafayette Award. In addition, Team HRSD placed first overall in the International Operations Challenge Division 2 competition, a North Shore Interceptor Team received the Courageous Service Award presented by the Virginia Section of the American Water Works Association and the Chesapeake-Elizabeth Treatment Plant received the George W. Burke, Jr. Safety Award presented by the Virginia Water Environment Association.

Rate Schedules

WASTEWATER TREATMENT CHARGE SCHEDULE

Service		FY-2017	FY-2016
Flow (monthly basis)			
Per CCF *		$ 4.51	$ 4.13
Minimum charge (per day)		0.30	0.25
Surcharge, per milligrams/liter per CCF	In Excess of		
Biochemical Oxygen Demand (BOD)	282 mg/L	$ 0.000206	$ 0.000485
Total Suspended Solids (TSS)	261 mg/L	0.000454	0.000448
Total Phosphorus (TP)	6 mg/L	0.011642	0.004361
Total Kjeldahl Nitrogen (TKN)	47 mg/L	0.001660	0.000917
Surcharge, per 100 pounds			
BOD	282 mg/L	$ 3.30	$ 7.76
TSS	261 mg/L	7.27	7.18
TP	6 mg/L	186.49	69.85
TKN	47 mg/L	26.59	14.70
Septic, per gallon		$ 0.1366	$ 0.1362
Private water supply (per 30-day period)			
Residential, non-metered			
Flat rate		$ 29.32	$ 26.32

* CCF = 100 Cubic Feet (approximately 748 gallons)

VOLUME BASED FACILITY CHARGE SCHEDULE

Meter Size	FY-2017	FY-2016
5/8 Inch	$ 1,895	$ 1,895
3/4 Inch	4,830	4,830
1 Inch	8,170	8,170
1 ½ Inch	17,260	17,260
2 Inch	30,510	29,420
3 Inch	70,800	67,350
4 Inch	128,660	122,400
6 Inch	298,610	284,070
8 Inch	542,680	516,260
10 Inch	862,550	820,560
12 Inch	1,259,520	1,198,210
14 Inch	1,734,700	1,650,250
16 Inch	2,289,010	2,177,580

MIDDLE PENINSULA CHARGE SCHEDULE

(per 1,000 gallons)

Community	FY-2017	FY-2016
West Point	$ 13.61	$ 13.02
Mathews	11.37	10.86
Urbanna	13.50	13.00
King William	11.91	11.49

FEES AND SERVICE CHARGES

	FY-2017	FY-2016
Damaged lock	$ 100	$ 100
Service restoration	100	100
Meter reading (customer-owned meter)	75	75
Inaccessible meter	50	50
Returned payments	25	25
Delinquent	15	15
Deduction meter service	2	2

Reader's Guide to the Annual Budget

PURPOSE

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

- HRSD's mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively.

- HRSD's vision is future generations will inherit clean waterways and be able to keep them clean.

ANNUAL BUDGET OVERVIEW

HRSD's Annual Budget contains the following sections:

Financial Forecast

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

The forecast is an inflationary based model where trends from past fiscal years and proposed operating budgets are used to forecast future operating needs. Transfers to reserves and to the Capital budget are forecast to be in amounts that are not less than parameters established within HRSD's Financial Policy. Debt service for permanent financings are generally forecast to have a maximum term of 30 years at an interest rate that approximates 20-year average fixed rates for HRSD. Interim, or construction, financings' interest rates are based on a 10-year historical average.

Operating Budget

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

Capital Budget

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

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

A formal, detailed, Capital Improvement Program with more specific project information is available at http://www.hrsd.com/capitalimprovementprogram.shtml.

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

HRSD's Rate Schedule is available at http://www.hrsd.com/rateschedule.shtml.

BUDGETARY PROCESS

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

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

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

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

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

BUDGETARY ACCOUNTING AND CONTROL

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

The Operating Budget is adopted by department, with budgetary controls exercised administratively by management at the department level. The General Manager is authorized to

transfer funds among departments without further approval by the Commission. Appropriations lapse at the end of the fiscal year. Valid, outstanding encumbrances (those for which performance under a contract is expected in the next year) are re-appropriated without further approval by the Commission and become part of the subsequent year's budget.

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

Glossary of Financial Terms

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

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

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

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

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

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

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

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

General Reserve as Percent of Operating Revenues: Unrestricted cash and investments at fiscal year-end that are not earmarked for another purpose divided by budgeted appropriations for Operations adjusted by certain adjustments required by GAAP. HRSD's Financial Policy requires that the General Reserve at the end of any fiscal year not be less than 270 – 365 (75-100 percent) days of the current years' projected operating and maintenance expenses less depreciation. This reserve is intended to help HRSD cover unanticipated expenses that cannot be paid from the current fiscal year's budgetary resources.

Liquidity Ratio: Unrestricted cash and investments divided by Maximum Annual Debt Service. This ratio measures the liquidity available to meet debt service requirements.

Risk Management Reserve: HRSD maintains a self-insurance program for some of its risk exposures. HRSD'S Financial Policy requires HRSD to maintain a Risk Management Reserve as of the end of the fiscal year of not less than 25 percent of projected annual self-insured claims costs for known, retained risks.

Maximum Annual Debt Service: Represents the greatest long-term debt service requirement for the then current or succeeding fiscal year.

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

Total Debt Service (GAAP): Current-year net revenues available for total debt service divided by current-year total debt service accordingly to Generally Accepted Accounting Principles (GAAP). Total debt service represents the combination of senior lien and subordinate lien debt service. This ratio indicates the financial margin to meet current both senior lien debt service and subordinate lien debt service with current revenues available.

Total Debt Service (Adjusted): Current-year net revenues available for total debt service divided by current-year total debt service excluding 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. Total debt service represents the combination of senior lien and subordinate lien debt service. This ratio indicates the financial margin to meet current both senior lien debt service and subordinate lien debt service with current revenues available. HRSD's Financial Policy requires that total debt service coverage (adjusted) will not be less than 1.4 times total debt service. HRSD's Trust Agreement requires that Total Debt Service Coverage will not be less than 1.2 times total debt service coverage (adjusted).

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

Financial Forecast

Increasing Energy Efficiency
The Atlantic Treatment Plant system that generates renewable power and heat from digester gas provides 35 percent of the plant's electricity.

Photo by Mark Rhodes

Financial Forecast (in thousands)	2017	2018	2019	2020
Operating Budget Forecast				
Rate and Fees Increase - %	*9%*	*9%*	*9%*	*9%*
Revenues				
Operating Revenues	$ 251,863	$ 271,372	$ 292,040	$ 314,343
Non-Operating Revenues	10,370	10,683	10,689	10,717
Total Revenues	**$ 262,233**	**$ 282,056**	**$ 302,729**	**$ 325,060**
Operations	$ 137,198	$ 145,219	$ 152,225	$ 159,555
Major Repairs and Replacements	7,425	7,722	8,031	8,352
Capital Acquisitions	1,454	1,513	1,573	1,636
Total Operating Appropriations	**146,077**	**154,453**	**161,829**	**169,543**
Debt Service	63,795	64,394	63,848	63,911
Transfer to Capital Improvement Plan (PAYGO)	52,101	63,062	75,270	74,020
Transfer to General Reserve	-	-	1,561	17,368
Transfer to Risk Management Reserve	260	147	220	219
Total Appropriations	**$ 262,233**	**$ 282,056**	**$ 302,729**	**$ 325,060**
Capital Improvement Budget Forecast				
Beginning Capital Reserves	$ 66,361	$ 72,861	$ 31,523	$ -
Sources of Funds				
Debt Funded	75,000	-	9,207	60,980
HRSD - Cash	52,101	63,062	75,270	74,020
Grants and Other Reimbursements	9,400	5,600	2,000	-
Transfer from Debt Service Reserve Fund	-	-	-	-
Total Capital Resources	202,861	141,523	118,000	135,000
Uses of Funds - Capital Expenditures	130,000	110,000	118,000	135,000
Ending Capital Resources	**$ 72,861**	**$ 31,523**	**$ -**	**$ -**
Reserves Balance Forecast				
General Reserve as a % of Operating Expenses	82%	82%	75%	75%
General Reserve	$ 129,400	$ 129,400	$ 130,961	$ 148,329
Risk Reserve	3,001	3,148	3,369	3,588
Debt Service Reserve Fund	31,754	31,754	31,754	31,754
Total Reserves Balance	**$ 164,155**	**$ 164,302**	**$ 166,084**	**$ 183,671**
Financial Ratios Forecast				
Senior Debt Service Coverage (GAAP)	2.98	3.31	3.47	3.45
Subordinate Debt Service Coverage (GAAP)	3.85	4.68	4.88	4.83
Total Debt Service Coverage (GAAP)	**1.68**	**1.94**	**2.02**	**2.01**
Senior Debt Service Coverage (Adjusted)	3.02	3.29	3.66	3.97
Subordinate Debt Service Coverage (Adjusted)	3.91	4.66	5.15	5.56
Total Debt Service Coverage (Adjusted)	**1.70**	**1.93**	**2.14**	**2.31**
CIP % Cash Funded (current year contributions)	40%	57%	64%	55%
Debt Service as a % of Total Revenues	24%	23%	21%	20%

Financial Forecast (in thousands)	2021	2022	2023	2024
Operating Budget Forecast				
Rate and Fees Increase - %	*9%*	*9%*	*9%*	*7%*
Revenues				
Operating Revenues	$ 338,735	$ 364,645	$ 392,518	$ 415,400
Non-Operating Revenues	10,979	11,184	11,418	11,772
Total Revenues	**$ 349,714**	**$ 375,829**	**$ 403,935**	**$ 427,171**
Operations	$ 167,501	$ 175,191	$ 183,818	$ 192,849
Major Repairs and Replacements	8,686	9,034	9,395	9,771
Capital Acquisitions	1,701	1,769	1,840	1,914
Total Operating Appropriations	**177,889**	**185,994**	**195,053**	**204,533**
Debt Service	63,404	63,192	64,880	73,710
Transfer to Capital Improvement Plan (PAYGO)	94,471	110,598	119,733	137,535
Transfer to General Reserve	13,717	15,953	24,014	11,122
Transfer to Risk Management Reserve	233	91	254	271
Total Appropriations	**$ 349,714**	**$ 375,829**	**$ 403,935**	**$ 427,171**
Capital Improvement Budget Forecast				
Beginning Capital Reserves	$ -	$ -	$ -	$ -
Sources of Funds				
Debt Funded	41,029	20,402	37,267	44,965
HRSD - Cash	94,471	110,598	119,733	137,535
Grants and Other Reimbursements	-	1,000	-	-
Transfer from Debt Service Reserve Fund	-	-	-	-
Total Capital Resources	135,500	132,000	157,000	182,500
Uses of Funds - Capital Expenditures	135,500	132,000	157,000	182,500
Ending Capital Resources	**$ -**	**$ -**	**$ -**	**$ -**
Reserves Balance Forecast				
General Reserve as a % of Operating Expenses	75%	75%	75%	75%
General Reserve	$ 162,046	$ 177,999	$ 202,014	$ 213,135
Risk Reserve	3,821	3,912	4,166	4,437
Debt Service Reserve Fund	31,754	31,754	31,754	31,754
Total Reserves Balance	**$ 197,621**	**$ 213,666**	**$ 237,934**	**$ 249,327**
Financial Ratios Forecast				
Senior Debt Service Coverage (GAAP)	3.79	4.09	3.99	4.28
Subordinate Debt Service Coverage (GAAP)	4.87	4.88	4.49	3.62
Total Debt Service Coverage (GAAP)	**2.13**	**2.22**	**2.11**	**1.96**
Senior Debt Service Coverage (Adjusted)	4.65	5.33	5.87	6.42
Subordinate Debt Service Coverage (Adjusted)	5.97	6.36	6.59	5.43
Total Debt Service Coverage (Adjusted)	**2.61**	**2.90**	**3.10**	**2.94**
CIP % Cash Funded (current year contributions)	70%	84%	76%	75%
Debt Service as a % of Total Revenues	18%	17%	16%	17%

Financial Forecast (in thousands)	2025	2026	2027	2028
Operating Budget Forecast				
Rate and Fees Increase - %	*7%*	*7%*	*7%*	*6%*
Revenues				
Operating Revenues	$ 439,766	$ 465,565	$ 492,750	$ 517,016
Non-Operating Revenues	12,548	12,821	13,052	13,974
Total Revenues	**$ 452,314**	**$ 478,387**	**$ 505,802**	**$ 530,990**
Operations	$ 202,408	$ 214,561	$ 225,419	$ 236,928
Major Repairs and Replacements	10,161	10,568	10,991	11,430
Capital Acquisitions	1,990	2,070	2,153	2,239
Total Operating Appropriations	**214,560**	**227,199**	**238,563**	**250,597**
Debt Service	73,332	72,748	89,809	85,635
Transfer to Capital Improvement Plan (PAYGO)	147,335	163,616	164,946	178,324
Transfer to General Reserve	16,798	14,517	12,157	16,085
Transfer to Risk Management Reserve	288	307	327	348
Total Appropriations	**$ 452,314**	**$ 478,387**	**$ 505,802**	**$ 530,990**
Capital Improvement Budget Forecast				
Beginning Capital Reserves	$ -	$ -	$ -	$ -
Sources of Funds				
Debt Funded	35,165	77,763	88,039	86,167
HRSD - Cash	147,335	163,616	164,946	178,324
Grants and Other Reimbursements	-	-	-	-
Transfer from Debt Service Reserve Fund	-	-	-	-
Total Capital Resources	182,500	241,379	252,985	264,491
Uses of Funds - Capital Expenditures	182,500	241,379	252,985	264,491
Ending Capital Resources	**$ -**	**$ -**	**$ -**	**$ -**
Reserves Balance Forecast				
General Reserve as a % of Operating Expenses	75%	75%	75%	75%
General Reserve	$ 229,933	$ 244,450	$ 256,607	$ 272,692
Risk Reserve	4,726	5,033	5,360	5,708
Debt Service Reserve Fund	31,754	31,754	31,754	31,754
Total Reserves Balance	**$ 266,413**	**$ 281,237**	**$ 293,721**	**$ 310,155**
Financial Ratios Forecast				
Senior Debt Service Coverage (GAAP)	5.50	5.93	7.99	8.28
Subordinate Debt Service Coverage (GAAP)	3.16	3.30	2.41	2.59
Total Debt Service Coverage (GAAP)	**2.01**	**2.12**	**1.85**	**1.97**
Senior Debt Service Coverage (Adjusted)	8.52	9.31	12.72	13.32
Subordinate Debt Service Coverage (Adjusted)	4.90	5.18	3.84	4.17
Total Debt Service Coverage (Adjusted)	**3.11**	**3.33**	**2.94**	**3.18**
CIP % Cash Funded (current year contributions)	81%	68%	65%	67%
Debt Service as a % of Total Revenues	16%	15%	18%	16%

Financial Forecast (in thousands)	2029	2030	2031	2032
Operating Budget Forecast				
Rate and Fees Increase - %	*6%*	*6%*	*6%*	*6%*
Revenues				
Operating Revenues	$ 542,190	$ 568,699	$ 596,499	$ 625,544
Non-Operating Revenues	14,268	14,272	14,485	14,708
Total Revenues	**$ 556,458**	**$ 582,971**	**$ 610,984**	**$ 640,252**
Operations	$ 249,133	$ 262,081	$ 275,823	$ 290,415
Major Repairs and Replacements	11,888	12,363	12,858	13,372
Capital Acquisitions	2,329	2,422	2,519	2,619
Total Operating Appropriations	**263,349**	**276,866**	**291,199**	**306,406**
Debt Service	81,732	83,349	102,338	95,659
Transfer to Capital Improvement Plan (PAYGO)	199,313	210,031	204,018	224,009
Transfer to General Reserve	11,693	12,330	13,008	13,730
Transfer to Risk Management Reserve	371	395	421	448
Total Appropriations	**$ 556,458**	**$ 582,971**	**$ 610,984**	**$ 640,252**
Capital Improvement Budget Forecast				
Beginning Capital Reserves	$ -	$ -	$ -	$ -
Sources of Funds				
Debt Funded	67,516	83,549	97,426	93,590
HRSD - Cash	199,313	210,031	204,018	224,009
Grants and Other Reimbursements	-	-	-	-
Transfer from Debt Service Reserve Fund	10,000	-	-	-
Total Capital Resources	276,829	293,581	301,444	317,599
Uses of Funds - Capital Expenditures	276,829	293,581	301,444	317,599
Ending Capital Resources	**$ -**	**$ -**	**$ -**	**$ -**
Reserves Balance Forecast				
General Reserve as a % of Operating Expenses	75%	75%	75%	75%
General Reserve	$ 284,385	$ 296,715	$ 309,723	$ 323,453
Risk Reserve	6,079	6,474	6,895	7,343
Debt Service Reserve Fund	21,754	21,754	21,754	21,754
Total Reserves Balance	**$ 312,219**	**$ 324,944**	**$ 338,373**	**$ 352,550**
Financial Ratios Forecast				
Senior Debt Service Coverage (GAAP)	8.81	9.36	19.27	22.18
Subordinate Debt Service Coverage (GAAP)	2.91	3.00	2.19	2.45
Total Debt Service Coverage (GAAP)	**2.19**	**2.27**	**1.96**	**2.20**
Senior Debt Service Coverage (Adjusted)	14.04	14.79	30.67	34.25
Subordinate Debt Service Coverage (Adjusted)	4.65	4.73	3.49	3.78
Total Debt Service Coverage (Adjusted)	**3.49**	**3.58**	**3.13**	**3.40**
CIP % Cash Funded (current year contributions)	72%	72%	68%	71%
Debt Service as a % of Total Revenues	15%	14%	17%	15%

Financial Forecast (in thousands)	2033	2034	2035	2036
Operating Budget Forecast				
Rate and Fees Increase - %	*6%*	*6%*	*6%*	*6%*
Revenues				
Operating Revenues	$ 656,238	$ 688,080	$ 721,909	$ 757,222
Non-Operating Revenues	14,943	15,190	15,449	15,523
Total Revenues	**$ 671,181**	**$ 703,270**	**$ 737,359**	**$ 772,745**
Operations	$ 305,915	$ 322,386	$ 339,897	$ 358,520
Major Repairs and Replacements	13,907	14,463	15,041	15,643
Capital Acquisitions	2,724	2,833	2,946	3,064
Total Operating Appropriations	**322,546**	**339,682**	**357,885**	**377,228**
Debt Service	109,184	109,390	107,807	125,913
Transfer to Capital Improvement Plan (PAYGO)	224,476	238,372	254,936	251,908
Transfer to General Reserve	14,498	15,317	16,190	17,120
Transfer to Risk Management Reserve	477	508	541	577
Total Appropriations	**$ 671,181**	**$ 703,270**	**$ 737,359**	**$ 772,745**
Capital Improvement Budget Forecast				
Beginning Capital Reserves	$ -	$ -	$ -	$ -
Sources of Funds				
Debt Funded	120,028	119,526	107,913	135,855
HRSD - Cash	224,476	238,372	254,936	251,908
Grants and Other Reimbursements	-	-	-	-
Transfer from Debt Service Reserve Fund	-	-	10,000	-
Total Capital Resources	344,504	357,898	372,849	387,763
Uses of Funds - Capital Expenditures	344,504	357,898	372,849	387,763
Ending Capital Resources	**$ -**	**$ -**	**$ -**	**$ -**
Reserves Balance Forecast				
General Reserve as a % of Operating Expenses	75%	75%	75%	75%
General Reserve	$ 337,951	$ 353,268	$ 369,457	$ 386,577
Risk Reserve	7,821	8,329	8,870	9,447
Debt Service Reserve Fund	21,754	21,754	11,754	11,754
Total Reserves Balance	**$ 367,526**	**$ 383,351**	**$ 390,082**	**$ 407,779**
Financial Ratios Forecast				
Senior Debt Service Coverage (GAAP)	23.72	25.13	27.09	28.92
Subordinate Debt Service Coverage (GAAP)	2.23	2.36	2.50	2.22
Total Debt Service Coverage (GAAP)	**2.04**	**2.16**	**2.29**	**2.06**
Senior Debt Service Coverage (Adjusted)	36.82	38.26	40.77	43.95
Subordinate Debt Service Coverage (Adjusted)	3.46	3.60	3.76	3.37
Total Debt Service Coverage (Adjusted)	**3.16**	**3.29**	**3.44**	**3.13**
CIP % Cash Funded (current year contributions)	65%	67%	68%	65%
Debt Service as a % of Total Revenues	16%	16%	15%	16%

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Operating Budget

Building New Pipelines
Micro tunneling is one of the methods used to replace 6,000 linear feet of pipe in Downtown Norfolk installed in the 1940s.

Photo by Will Gibson, PE, AECOM Project Manager

Operating Budget

	FY-2017	Adopted FY-2016	Increase/ (Decrease)	Percent Change
Operating Revenues				
Wastewater Treatment Charges	$ 249,743,000	$ 228,700,000	$ 21,043,000	9%
Miscellaneous	2,120,000	2,050,000	70,000	3%
Total Operating Revenues	251,863,000	230,750,000	21,113,000	9%
Non-Operating Revenues				
Wastewater Facility Charges	5,850,000	6,000,000	(150,000)	(3%)
Investment Earnings	1,400,000	1,400,000	-	0%
Build America Bond Subsidy	2,400,000	2,400,000	-	0%
Other	720,000	1,090,000	(370,000)	(34%)
Total Non-Operating Revenues	10,370,000	10,890,000	(520,000)	(5%)
Total Revenues	$ 262,233,000	$ 241,640,000	$ 20,593,000	9%
Operating Appropriations				
General Management	$ 952,913	$ 891,401	$ 61,512	7%
Finance	13,274,002	12,704,429	569,573	4%
Information Technology	15,318,700	13,125,870	2,192,830	17%
Talent Management	2,243,164	2,151,542	91,622	4%
Operations	90,913,570	87,476,569	3,437,001	4%
Engineering	5,667,444	5,169,527	497,917	10%
Water Quality	13,477,883	13,681,951	(204,068)	(1%)
General Expenses	4,177,026	5,673,205	(1,496,179)	(26%)
Total Operating Appropriations	146,024,702	140,874,494	5,150,208	4%
Appropriations for Debt Service and Transfers				
Debt Service	63,847,000	60,522,000	3,325,000	5%
Transfer to CIP	52,101,298	39,983,506	12,117,792	30%
Transfer to Risk Management Reserve	260,000	260,000	-	0%
Total Appropriations for Debt Service and Transfers	116,208,298	100,765,506	15,442,792	15%
Total Appropriations	$ 262,233,000	$ 241,640,000	$ 20,593,000	9%

Operating Budget Summary

	General Management	Finance	Information Technology	Talent Management	Operations	Engineering	Water Quality	General Expenses
Personal Services	$ 624,432	$ 5,867,981	$ 4,229,958	$ 1,329,872	$ 31,696,205	$ 3,526,675	$ 6,996,034	$ (1,750,003)
Fringe Benefits	200,081	2,621,566	1,579,216	557,652	14,905,386	1,402,754	2,965,813	44,996
Materials & Supplies	10,000	131,127	948,500	65,500	4,628,977	25,100	1,156,170	60,000
Transportation	32,400	108,110	68,651	26,300	943,369	71,458	193,431	-
Utilities	-	266,600	1,424,700	-	9,884,191	-	-	535,000
Chemical Purchases	-	-	-	-	9,210,500	-	-	-
Contractual Services	85,000	4,004,364	5,310,200	48,800	12,404,645	510,062	723,250	5,153,500
Major Repairs	-	-	1,500,000	-	5,767,907	-	157,000	-
Capital Assets	-	35,000	-	-	564,400	-	855,000	-
Miscellaneous Expense	1,000	239,254	257,475	215,040	907,990	131,395	431,185	133,533
Operating Approporiations	**$ 952,913**	**$ 13,274,002**	**$ 15,318,700**	**$ 2,243,164**	**$ 90,913,570**	**$ 5,667,444**	**$ 13,477,883**	**$ 4,177,026**

Full-time Positions:

Current	4	98	46	14	502	39	104
Changes	0	2	2	1	5	0	1
Budgeted	4	100	48	15	507	39	105

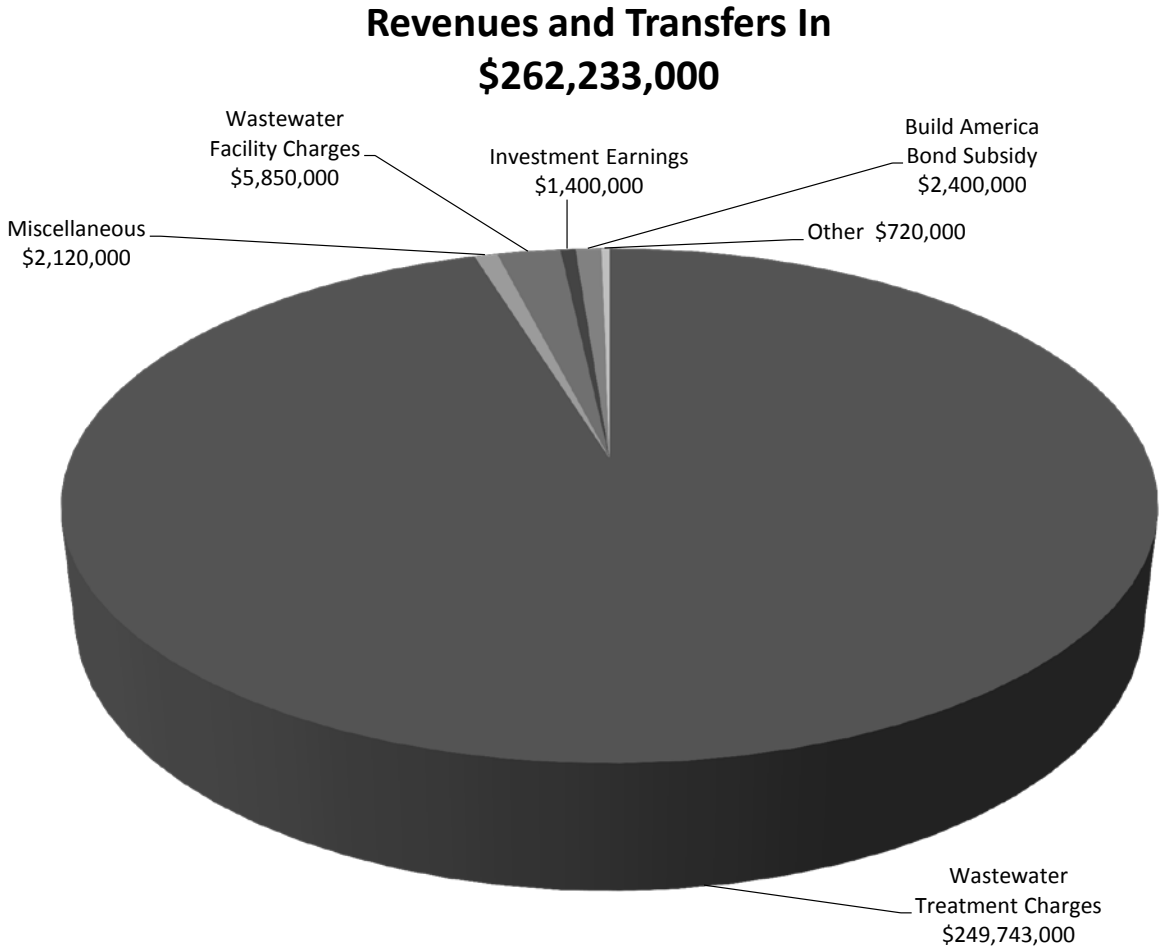
Operating Budget Summary

	FY-2017	Percent of Budget	FY-2016 Budget	Increase/ Decrease	Percent Inc/(Dec)
Personal Services	$ 52,521,154	20.0%	$ 53,040,035	$ (518,881)	(1%)
Fringe Benefits	24,277,464	9.3%	$ 24,385,426	(107,962)	(0%)
Materials & Supplies	7,025,374	2.7%	$ 5,648,453	1,376,921	24%
Transportation	1,443,719	0.6%	$ 1,330,169	113,550	9%
Utilities	12,110,491	4.6%	$ 12,304,591	(194,100)	(2%)
Chemical Purchases	9,210,500	3.5%	$ 8,454,600	755,900	9%
Contractual Services	28,239,821	10.8%	$ 22,528,143	5,711,678	25%
Major Repairs	7,424,907	2.8%	$ 8,120,920	(696,013)	(9%)
Capital Assets	1,454,400	0.6%	$ 2,880,000	(1,425,600)	(50%)
Miscellaneous Expense	2,316,872	0.9%	$ 2,182,157	134,715	6%
Operating Approporiations	146,024,702	55.7%	140,874,494	5,150,208	4%
Debt Service Costs	63,847,000	24.3%	60,522,000	3,325,000	5%
Transfer to CIP	52,101,298	19.9%	39,983,506	12,117,792	30%
Transfer to Risk Management	260,000	0.1%	260,000	0	0%
Appropriations for Debt Service and Transfers	116,208,298	44.3%	100,765,506	15,442,792	15%
	$ 262,233,000	100.0%	**$ 241,640,000**	**$ 20,593,000**	9%

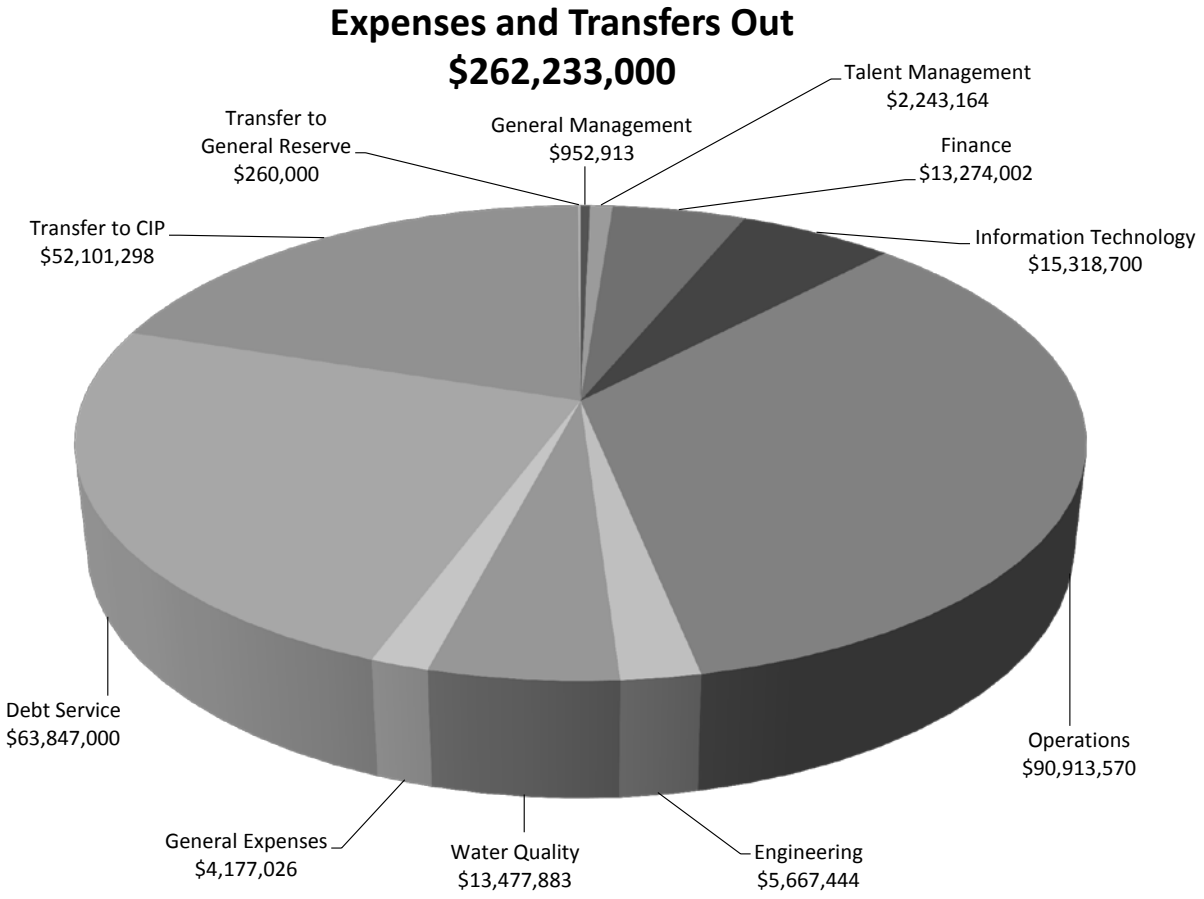
Full-time Positions:

Current	807
Changes	11
Budgeted	818

Operating Budget Charts



Operating Budget Charts



General Management

The General Manager supervises the department directors, Chief of Communications, Commission Secretary and the Special Assistant for Compliance Assurance. The Communications Division supports HRSD's mission through communications, community outreach and education programs. The Commission Secretary provides administrative support to the General Manager as well as the HRSD Commission. The Special Assistant for Compliance Assurance works closely with representatives of local jurisdictions, DEQ and EPA to ensure appropriate and timely adherence to the requirements of regulatory wet weather enforcement actions.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 624,432	$ 583,803	$ 40,629	7%
Fringe Benefits	200,081	178,243	21,838	12%
Material & Supplies	10,000	10,000	-	0%
Transportation	32,400	32,400	-	0%
Utilities	-	-	-	0%
Chemical Purchases	-	-	-	0%
Contractual Services	85,000	85,000	-	0%
Major Repairs	-	-	-	0%
Capital Assets	-	-	-	0%
Miscellaneous	1,000	1,955	(955)	(49%)
Total	**$ 952,913**	**$ 891,401**	**$ 61,512**	**7%**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
General Manager		1		1		1
Special Assistant for Compliance Assurance	12	1		1		1
Chief of Communications	11	1		1		1
Commission Secretary	6	1		1		1
Total		**4**	**0**	**4**	**0**	**4**

Finance Department

The Finance Department is responsible for HRSD's general financial and business functions, including financial reporting, investment portfolio, debt and risk management, and customer billing. The Accounting and Finance Division handles fiscal affairs such as preparing statements, budgets, management reports and payroll. The Procurement Division is responsible for purchasing, renting, leasing or otherwise acquiring goods and services, managing vendor relationships and disposing of surplus property. The Customer Care Center Division handles billing, collections, maintenance of customer accounts and liaison with HRSD's customers.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 5,867,981	$ 5,939,017	$ (71,036)	(1%)
Fringe Benefits	2,621,566	2,622,188	(622)	(0%)
Material & Supplies	131,127	128,158	2,969	2%
Transportation	108,110	108,200	(90)	(0%)
Utilities	266,600	263,291	3,309	1%
Contractual Services	4,004,364	3,354,732	649,632	19%
Capital Assets	35,000	32,500	2,500	8%
Miscellaneous	239,254	256,343	(17,089)	(7%)
Total	**$ 13,274,002**	**$ 12,704,429**	**$ 569,573**	**4%**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Director of Finance	12	1		1		1
Chief of Accounting & Finance	11	1		1		1
Chief of Customer Care Center (CCC)	11	1		1		1
Chief of Procurement	11	1		1		1
Accounting Manager	9	1		1		1
CCC Manager	9	3		3		3
Strategic Sourcing Manager	9	1		1		1
Business Analyst	8	2		2	1	3
Financial Analyst	8	2		2		2
CCC Operations Manager	8	1		1		1
CCC Supervisor	7	4		4		4
Procurement Analyst	7	1		1		1
Accounts Payable Supervisor	6	1		1		1
Accounts Receivable Specialist	6	3	(1)	2		2
Procurement Specialist	6	4		4		4
Payroll Technician	5	1		1		1
Accounting Coordinator	4	1		1		1
Accounts Receivable Technician	4	3		3		3
CCC Administrative Coordinator	4	1		1		1
CCC Coordinator	4	4		4		4
Procurement Coordinator	4	1		1		1
Account Investigator	3	14		14		14
Accounts Payable Associate	3	2		2		2
CCC Account Representative	3	41		41		41
Procurement Administrative Assistant	3	2		2	1	3
Mail Processing Clerk	2	2		2		2
Total		**99**	**(1)**	**98**	**2**	**100**

Information Technology Department

The Information Technology Department is responsible for HRSD's computer systems, communication systems, network systems, cyber security and data management functions. The Information Technology Operations Division assists HRSD departments in achieving their missions by ensuring all required hardware, storage and network devices are accessible and available to support all business and operational requirements. The Enterprise Data Services Division is responsible for data management, storage and all software supporting HRSD operations. Industrial Controls Division personnel also are responsible for programming industrial controls and automation at HRSD operation facilities.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 4,229,958	$ 3,977,146	$ 252,812	6%
Fringe Benefits	1,579,216	1,496,084	83,132	6%
Material & Supplies	948,500	819,600	128,900	16%
Transportation	68,651	53,551	15,100	28%
Utilities	1,424,700	1,326,800	97,900	7%
Contractual Services	5,310,200	4,493,229	816,971	18%
Major Repairs	1,500,000	750,000	750,000	100%
Miscellaneous	257,475	209,460	48,015	23%
Total	**$ 15,318,700**	**$ 13,125,870**	**$ 2,192,830**	**17%**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Director of Information Technology	12	1		1		1
Chief of Enterprise Data Services (EDS)	11	1		1		1
Chief of Industrial Controls	11	1		1		1
Chief of Information Technology (IT)	11	1		1		1
Database Administrator	9	3		3		3
Enterprise Architect	9	3		3	2	5
Industrial Control Manager	9	1		1		1
Oracle Developer	9	2		2		2
Programming Development Manager	9	1		1		1
Senior Systems Engineer	9	5		5		5
Systems Analysis Manager	9	1		1		1
Industrial Control Systems Manager	8	4		4		4
Senior Programmer Analyst	8	6		6		6
Senior Systems Analyst	8	3		3		3
Unix Systems Administrator	8	2		2		2
IT HelpDesk Supervisor	7	1		1		1
Desktop Support Analyst	6	5		5		5
Web Portal Programmer	5	1		1		1
IT Administrative Coordinator	4	1		1		1
Computer Operator	3	3		3		3
Total		**46**	**0**	**46**	**2**	**48**

Talent Management

The Talent Management Department attracts new talent, develops talent and retains existing talent. The department maintains employee records, handles employee recruiting and orientation, administers employee benefits, oversees training and ensures employee safety.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 1,329,872	$ 1,244,291	$ 85,581	7%
Fringe Benefits	557,652	505,250	52,402	10%
Material & Supplies	65,500	64,500	1,000	2%
Transportation	26,300	18,300	8,000	44%
Contractual Services	48,800	79,400	(30,600)	(39%)
Capital Assets	-	13,200	(13,200)	(100%)
Miscellaneous	215,040	226,601	(11,561)	(5%)
Total	**$ 2,243,164**	**$ 2,151,542**	**$ 91,622**	**4%**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Director of Talent Management	12	1		1		1
Human Resources Manager	9	0		0	1	1
Organizational Developemnt & Training Manager	9	0	1	1		1
Safety Manager	9	1		1		1
Training Manager	9	1	(1)	0		0
Human Resources Analyst	8	1		1	(1)	0
Human Resources Business Analyst	8	0		0	1	1
Industrial Hygienist	8	2		2		2
Training Superintendent	8	1		1		1
Human Resources Specialist	7	3		3		3
Administrative Coordinator Quality	4	1	(1)	0		0
Human Resources Coordinator	4	2		2		2
ODT Coordinator	4	0	1	1		1
Safety Coordinator	4	1		1		1
Total		**14**	**0**	**14**	**1**	**15**

Operations Department

The Operations Department is responsible for operating and maintaining all of HRSD's treatment plants, pump stations, pipelines, buildings and equipment. The department also includes the Director of Water Technology and Research developing new technology with a focus on rapid deployment of innovative solutions. Services are delivered through seven divisions. There are three treatment plant divisions (each with 3 treatment plants) treating wastewater from over 1.5 million people in 13 cities and counties in Hampton Roads. The Small Communities Division operates four smaller treatment plants and all the associated sewer collection systems for four counties on the Middle Peninsula, including the Town of West Point. The Electrical and Energy Management Division supports the electrical and instrumentation maintenance and construction needs of all HRSD facilities. The Interceptor Division operates and maintains over 500 miles of interceptor pipelines and over 100 pump stations ensuring wastewater is conveyed to each treatment plant. The Support Systems Division is responsible for the maintenance of the HRSD fleet, all buildings and operates two carpentry shops and a full service machine shop.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 31,696,205	$ 31,641,821	$ 54,384	0%
Fringe Benefits	14,905,386	14,814,423	90,963	1%
Material & Supplies	4,628,977	3,468,300	1,160,677	33%
Transportation	943,369	886,000	57,369	6%
Utilities	9,884,191	10,179,500	(295,309)	(3%)
Chemical Purchases	9,210,500	8,454,600	755,900	9%
Contractual Services	12,404,645	8,521,700	3,882,945	46%
Major Repairs	5,767,907	6,518,600	(750,693)	(12%)
Capital Assets	564,400	2,182,300	(1,617,900)	(74%)
Miscellaneous	907,990	809,325	98,665	12%
Total	**$ 90,913,570**	**$ 87,476,569**	**$ 3,437,001**	**4%**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Director of Operations	12	1		1		1
Director of Water Technology and Research	12	1		1		1
Chief of Electrical & Energy Management	11	1		1		1
Chief of Interceptor Operations	11	0	2	2		2
Chief of Interceptor Operations - NS	11	1	(1)	0		0
Chief of Interceptor Operations - SS	11	1	(1)	0		0
Senior Plant Manager	11	3		3		3
Electrical Manager	9	2		2		2
Instrumentation Manager	9	0	1	1		1
Interceptor Engineer	9	3	(2)	1		1
Plant Manager	9	6		6		6
Process Engineering & Research Manager	9	1		1		1
Water Recycling Project Manager	9	0	1	1		1
Support Systems Manager	9	1		1		1
Systems Manager	9	2	1	3		3
Automotive Superintendent	8	1		1		1
Electrical Superintendent	8	1		1		1
Facility Superintendent	8	1		1		1
Industrial Control Systems Manager	8	1	(1)	0		0
Instrumentation Supervisor	8	2		2		2
Interceptor Superintendent	8	3		3		3
Maintenance Superintendent	8	1	(1)	0		0
Plant Superintendent	8	0	18	18		18
Plant Maint Superintendent	8	9	(9)	0		0
Plant Ops Superintendent	8	9	(9)	0		0
Chief Foreman Pump Station	7	0	2	2		2
Chief Systems Operator	7	1		1		1
Coatings Inspector	7	0		0	2	2
Electrical Supervisor	7	2		2		2
Structural & Roofing Inspector	7	1		1		1
Instrumentation Specialist	7	27	1	28		28
Interceptor Chief Foreman	7	5	(2)	3		3
Operations Support Specialist	7	1		1		1

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Automotive Foreman	6	2		2		2
Condition Assessment Supervisor	6	1		1		1
Electrician	6	28		28		28
Engineering Assistant	6	3	1	4		4
Interceptor Foreman	6	7		7		7
Interceptor Systems Supervisor	6	1		1		1
Lead Operator	6	31		31		31
Machinist Foreman	6	1		1		1
Maintenance Specialist	6	2	1	3		3
Pump Station Supervisor	6	1		1		1
SCADA Technician	6	1	(1)	0		0
Automotive Technician	5	5		5		5
Carpenter	5	4		4		4
Equipment Technician	5	4	(1)	3		3
Facility Maintenance Technician	5	2		2		2
Interceptor Technician	5	28	3	31		31
Machinist	5	3		3		3
Maintenance Operator	5	56	1	57		57
Plant Operator	5	73	(1)	72		72
Heavy Equipment Operator 1	4	22		22		22
Materials Operations Coordinator	4	2		2		2
Operations Administrative Coordinator	4	1		1		1
Operations Coordinator	4	2		2		2
Utility Locator	4	1	(1)	0		0
Automotive Administrative Assistant	3	1		1		1
Support Systems Administrative Assistant	3	1		1		1
Utility Administrative Assistant	3	2		2		2
SCADA Administrative Assistant	3	1		1		1
Interceptor Assistant	2	28		28		28
Maintenance Operations Assistant	2	55	1	56		56
Plant Clerk	2	9		9		9
Custodian	1	0	2	2		2
Facility Assistant	1	12	(2)	10	2	12
Subtotal - Operations		**478**	**3**	**481**	**4**	**485**
Small Communities						
Systems Manager	9	1		1		1
Systems Superintendent	8	1		1		1
Systems Chief Foreman	7	1		1		1
Systems Lead Operator	6	3		3		3
Systems Operator	5	11		11		11
Administrative Coordinator	4	1		1		1
Heavy Equipment Operator I	4	0	1	1		1
Heavy Equipment Operator II	3	1	(1)	0		0
Maintenance Operations Assistant	2	2		2		2
Facility Assistant	1	0		0	1	1
Subtotal - Small Communities		**21**	**0**	**21**	**1**	**22**
Total		**499**	**3**	**502**	**5**	**507**

Engineering Department

The Engineering Department is responsible for HRSD facility planning, design and construction and related support. The Asset Management Division is responsible for managing asset information including condition to inform all maintenance, replacement and capital planning decisions. The Design and Construction Division works with consultants and contractors to ensure that work is performed in a manner consistent with our quality standards. The Planning and Analysis Division manages the Capital Improvement Program, Hydraulic Modeling, Geographic Information System (GIS), Data Analysis and Records Management System and plans the infrastructure required to meet the region's future wastewater needs.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 3,526,675	$ 3,392,629	$ 134,046	4%
Fringe Benefits	1,402,754	1,275,940	126,814	10%
Material & Supplies	25,100	22,120	2,980	13%
Transportation	71,458	68,288	3,170	5%
Contractual Services	510,062	259,512	250,550	97%
Major Repairs	-	50,000	(50,000)	(100%)
Miscellaneous	131,395	101,038	30,357	30%
Total	**$ 5,667,444**	**$ 5,169,527**	**$ 497,917**	**10%**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Director of Engineering	12	1		1		1
Chief of Asset Management	11	1		1		1
Chief of Condition Assessment	11	0	1	1		1
Chief of Design & Construction	11	2		2		2
Chief of Planning & Analysis	11	1		1		1
Capital Program Manager	9	1		1		1
Data Analysis Manager	9	1		1		1
GIS Manager	9	1		1		1
Hydraulic Analysis Manager	9	4		4		4
Project Manager	9	10	(1)	9		9
Real Estate Manager	8	1		1		1
Data Analyst	7	3		3		3
GIS Analyst	7	2		2		2
CMMS Analyst	6	1		1		1
Community Relations Liaison	6	1		1		1
Contract Specialist	6	2		2		2
GIS CAD Technician	5	3		3		3
Data Analysis Technician	4	1		1		1
Administrative Coordinator	4	1		1		1
CMMS Administrative Assistant	3	1		1		1
Engineering Clerk	2	1		1		1
Total		**39**	**0**	**39**	**0**	**39**

Water Quality Department

The Water Quality Department's mission is to provide quality environmental services to support HRSD and its partners. This department helps ensure compliance with HRSD environmental permits and leads regulatory advocacy efforts through the work of three divisions. The Central Environmental Laboratory Division (Lab) provides analytical support for numerous monitoring, research and regulatory purposes. The Pretreatment and Pollution Prevention Division (P3) monitors wastewater conveyed to treatment plants and implements its industrial permit regulations to protect treatment plant staff, facilities and processes. The Technical Services Division (TSD) is responsible for a number of activities including environmental monitoring, specialized sampling, treatment process and research studies as well as all reporting required by HRSD permits.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 6,996,034	$ 6,861,328	$ 134,706	2%
Fringe Benefits	2,965,813	2,929,743	36,070	1%
Material & Supplies	1,156,170	1,075,775	80,395	7%
Transportation	193,431	163,430	30,001	18%
Contractual Services	723,250	756,820	(33,570)	(4%)
Major Repairs	157,000	802,320	(645,320)	(80%)
Capital Assets	855,000	652,000	203,000	31%
Miscellaneous	431,185	440,535	(9,350)	(2%)
Total	**$ 13,477,883**	**$ 13,681,951**	**$ (204,068)**	**(1%)**

Positions

	Grade	Adopted FY-2016	Adjustments	Final FY-2016	Adjustments	FY-2017
Director of Water Quality (WQ)	12	1		1		1
Chief of Lab	11	1		1		1
Chief of P3	11	1		1		1
Chief of TSD	11	1		1		1
Environmental Scientist	9	6	1	7		7
Lab Manager	9	4		4		4
Lab Quality Assurance Manager	9	1		1		1
P3 Manager	9	4		4		4
Permit Manager	9	1	(1)	0		0
Recycling Manager	9	1		1		1
Lab Operations Manager	8	1		1		1
TSD Operations Manager	8	1		1		1
Lab EDMS Administrator	7	1		1		1
Lab Supervising Chemist	7	11		11		11
P3 Supervising Specialist	7	2	1	3		3
TSD Supervising Specialist	7	3		3		3
EDMS Analyst	6	1		1		1
Lab Quality Assurance Specialist	6	2	(1)	1		1
Lab Specialist	6	0	13	13		13
P3 Specialist	6	0	2	2		2
TSD Specialist	6	0	5	5		5
WQ Specialist	6	18	(18)	0		0
Lab Technician	5	5		5		5
P3 Administrative Technician	5	1		1		1
P3 Technician	5	0	11	11		11
TSD Technician	5	0	3	3		3
WQ Technician	5	14	(14)	0		0
P3 Administrative Coordinator	4	1		1		1
Lab Data Coordinator	4	2	(1)	1		1
MAP Coordinator	4	0	1	1		1
TSD Operations Coordinator	4	1		1		1
WQ Administrative Coordinator	4	1		1		1
P3 Administrative Assistant	3	2		2		2
TSD Investigator	3	7		7		7
Lab Assistant	2	6		6	1	7
TSD Assistant	2	1		1		1
Total		**102**	**2**	**104**	**1**	**105**

General Expenses, Debt Service and Transfers

General Expenses includes operating expenditures not assigned to any specific HRSD Department.

Expenditure Budget

	FY-2017 Budget	FY-2016 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ (1,750,003)	$ (600,000)	$ (1,150,003)	192%
Fringe Benefits	44,996	563,555	(518,559)	(92%)
Material & Supplies	60,000	60,000	-	0%
Utilities	535,000	535,000	-	0%
Contractual Services	5,153,500	4,977,750	175,750	4%
Miscellaneous	133,533	136,900	(3,367)	(2%)
Total General Expenses	**$ 4,177,026**	**$ 5,673,205**	**$ (1,496,179)**	**(26%)**
Publically Sold Bonds - Principal	16,780,000	18,780,000	$ (2,000,000)	(11%)
Publically Sold Bonds - Interest	29,979,180	26,906,584	3,072,596	11%
VRLF Bonds	16,187,820	13,935,416	2,252,404	16%
Cost of Issuance	900,000	900,000	-	100%
Subtotal - Debt Service	63,847,000	60,522,000	3,325,000	5%
Transfer to CIP	52,101,298	39,983,506	12,117,792	30%
Transfer to Risk Management	260,000	260,000	-	0%
Subtotal - Transfers	52,361,298	40,243,506	12,117,792	30%
Total Debt Service and Transfers	**$ 116,208,298**	**$ 100,765,506**	**$ 15,442,792**	**15%**

Capital Budget

Renewing Infrastructure
The new York River Treatment Plant outfall crosses a Dominion Virginia Power plant canal.

Photo by Ann Copeland, PE, HRSD Project Manager

Capital Budget

HRSD prepares a Capital Improvement Program (CIP) each year for the capital projects currently underway or proposed for the future. The first year of the CIP is authorized as the Capital Budget for FY-2017 in the amount of $130 million. The remaining years (FY-2018 to FY-2026) include all known projects planned for these years; however, approval of the plan does not authorize the Capital Budgets for those years. Each year's Capital Budget will be approved during the budget process for the specific year.

The ten-year Capital Improvement Program for FY-2017 to FY-2026 highlights the anticipated cost of each project and the fiscal year(s) in which the work is expected to occur. All costs listed in the CIP are stated in current year dollars and total approximately $1.5 billion.

CIP Budget Forecast (in thousands)	**Total FY-2017 to FY-2026**	**FY-2017**	**FY-2018**	**FY-2019**	**FY-2020**	**FY-2021**	**FY-2022**	**FY-2023**	**FY-2024**	**FY-2025**	**FY-2026**
Begin Capital Reserves	$ 66,361	$ 66,361	$ 72,861	$ 31,523	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Bonds	401,778	75,000	-	9,207	60,980	41,029	20,402	37,267	44,965	35,165	77,763
Cash	1,037,741	52,101	63,062	75,270	74,020	94,471	110,598	119,733	137,535	147,335	163,616
Grants and Other Reimbursements	18,000	9,400	5,600	2,000	-	-	1,000	-	-	-	-
Total Capital Resources		202,861	141,523	118,000	135,000	135,500	132,000	157,000	182,500	182,500	241,379
Capital Expenditures	1,523,879	130,000	110,000	118,000	135,000	135,500	132,000	157,000	182,500	182,500	241,379
End Capital Reserves	$ -	$ 72,861	$ 31,523	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Capital Expenditures (in thousands)	**Total FY-2017 to FY-2026**	**FY-2017**	**FY-2018**	**FY-2019**	**FY-2020**	**FY-2021**	**FY-2022**	**FY-2023**	**FY-2024**	**FY-2025**	**FY-2026**
Administration	$ 4,099	$ 4,099	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Army Base	26,430	2,000	-	-	-	1,785	5,282	14,882	2,480	-	-
Atlantic	69,800	5,318	18,872	17,089	11,826	1,985	991	3,319	5,492	4,908	-
Boat Harbor	86,545	12,014	8,589	13,743	12,029	14,138	14,828	11,204	-	-	-
Chesapeake-Elizabeth	106,089	3,423	6,799	24,717	32,952	25,262	8,301	3,627	1,008	-	-
James River	49,594	13,677	11,417	7,646	872	5,735	6,644	1,462	1,606	535	-
Middle Peninsula	38,872	1,235	6,949	3,041	8,573	7,252	3,273	1,900	1,900	2,375	2,375
Nansemond	49,425	12,723	9,532	8,927	10,429	5,650	128	113	1,925	-	-
Virginia Initiative Plant	107,254	42,001	18,181	3,401	8,086	9,015	9,936	7,513	5,867	3,255	-
Williamsburg	9,369	3,117	946	1,130	2,192	1,677	308	-	-	-	-
York River	26,020	7,187	1,223	1,124	692	1,759	3,984	3,935	3,876	2,203	36
General	158,666	23,204	25,336	18,161	13,314	12,135	13,461	14,533	12,835	12,709	12,979
Future Improvements	728,423	-	-	13,402	27,609	42,656	58,580	87,037	136,820	147,824	214,495
Subtotal	1,460,585	130,000	107,843	112,381	128,571	129,048	125,714	149,524	173,810	173,810	229,885
Contingency	63,293	-	2,157	5,619	6,429	6,452	6,286	7,476	8,690	8,690	11,494
Total Expenditures	$ 1,523,878	$ 130,000	$ 110,000	$ 118,000	$ 135,000	$ 135,500	$ 132,000	$ 157,000	$ 182,500	$ 182,500	$ 241,379

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

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

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

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2017 to FY-2026	FY-2017	FY-2018	FY-2019	FY-2020
Administration						
AD010400	Environmental Data Management System	$ 291	$ 291	$ -	$ -	$ -
AD011800	Central Environmental Laboratory Roof Replacement	$ 1,481	$ 1,481	$ -	$ -	$ -
AD011900	Central Environmental Laboratory HVAC	$ 2,022	$ 2,022	$ -	$ -	$ -
AD012000	Water Quality Department Work Space Expansion/Redesign	$ 306	$ 306	$ -	$ -	$ -
	Subtotal	$ 4,099	$ 4,099	$ -	$ -	$ -
Army Base						
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	$ 22,339	$ -	$ -	$ -	$ -
AB010100	Army Base Treatment Plant Improvements - Phase III	$ 2,000	$ 2,000	$ -	$ -	$ -
AB010500	Section W Force Main Replacement	$ 2,090	$ -	$ -	$ -	$ -
	Subtotal	$ 26,430	$ 2,000	$ -	$ -	$ -
Atlantic						
AT011410	Providence Road Interim Pressure Reducing Station	$ 661	$ -	$ 661	$ -	$ -
AT011510	Shipps Corner Interim Pressure Reducing Station	$ 2,284	$ 1,757	$ 527	$ -	$ -
AT011520	Shipps Corner Pressure Reducing Station Modifications	$ 4,851	$ -	$ -	$ -	$ -
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	$ 4,357	$ -	$ -	$ -	$ -
AT012000	Atlantic Treatment Plant Administration Building Renovation and	$ 2,631	$ (0)	$ 2,631	$ -	$ -
AT012300	Dominion Boulevard Force Main Relocations (Chesapeake)	$ 657	$ 657	$ -	$ -	$ -
AT012910	Atlantic Treatment Plant FOG Receiving Station	$ 3,305	$ 300	$ 925	$ 925	$ 925
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	$ 1,357	$ -	$ 10	$ 72	$ 51
AT013100	South Norfolk Area Gravity Sewer Improvements	$ 5,048	$ -	$ -	$ -	$ 90
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	$ 238	$ -	$ -	$ -	$ -
AT013320	Atlantic Treatment Plant Primary Clarifiers 1 thru 4 Automated Scum Removal	$ 1,003	$ 548	$ 455	$ -	$ -
AT013500	Atlantic Treatment Plant Thermal Hydrolysis Process	$ 42,636	$ 2,051	$ 13,169	$ 15,822	$ 10,760
AT013600	Atlantic Treatment Plant Motor Control Center Replacements	$ 476	$ 6	$ 222	$ 248	$ -
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	$ 295	$ -	$ 272	$ 23	$ -
	Subtotal	$ 69,800	$ 5,318	$ 18,872	$ 17,089	$ 11,826
Boat Harbor						
BH010000	33rd Street Pump Station Replacement Rehabilitation	$ 2,169	$ 2,169	$ -	$ -	$ -
BH010100	58th Street Connecting Sewer Rehabilitation	$ 971	$ 971	$ -	$ -	$ -
BH011600	Bridge Street Pump Station Replacement	$ 10,197	$ 6,788	$ 3,409	$ -	$ -
BH012000	Hampton Trunk Sewer Extension Division E Gravity Replacement	$ 1,562	$ 1,202	$ 360	$ -	$ -
BH012700	Hampton Trunk Sewer Extension Division B - Claremont Force Main	$ 3,844	$ -	$ 5	$ 3,839	$ -
BH013000	Willard Avenue Pump Station Upgrades	$ 5,224	$ -	$ -	$ 502	$ 2,696
BH013400	Bridge Street Siphon and Vent Relocation Replacement	$ 457	$ 457	$ -	$ -	$ -
BH013700	Ferguson Park Interceptor Force Main - Bridge Span Relocation	$ 1,021	$ 102	$ 919	$ -	$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	$ 3,137	$ -	$ -	$ -	$ -
BH014210	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase I	$ 107	$ 107	$ -	$ -	$ -
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	$ 11,172	$ -	$ -	$ 745	$ 2,572
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	$ 1,804	$ -	$ -	$ -	$ -
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	$ 9,497	$ 23	$ 280	$ 330	$ 1,308
BH014700	Boat Harbor Outlet Sewer Improvements	$ 3,463	$ 62	$ 200	$ 143	$ 2,043
BH014800	Jefferson Avenue Extension Gravity Improvements	$ 2,375	$ 132	$ 124	$ 1,331	$ 788
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	$ 3,549	$ -	$ -	$ -	$ 167
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	$ 5,788	$ -	$ 60	$ 3,608	$ 2,120
BH015100	Bloxoms Corner Force Main Replacement	$ 2,638	$ -	$ -	$ -	$ 98
BH015300	Boat Harbor Treatment Plant Switchgear and Controls Replacements	$ 6,479	$ 1	$ 3,233	$ 3,245	$ -
BH015500	LaSalle Avenue Interceptor Force Main Replacement	$ 1,730	$ -	$ -	$ -	$ 64
BH015600	Hampton Trunk A and B Replacement – Jefferson Ave. to Buxton	$ 9,360	$ -	$ -	$ -	$ 173
	Subtotal	$ 86,545	$ 12,014	$ 8,589	$ 13,743	$ 12,029

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2021	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026
Administration							
AD010400	Environmental Data Management System	$ -	$ -	$ -	$ -	$ -	$ -
AD011800	Central Environmental Laboratory Roof Replacement	$ -	$ -	$ -	$ -	$ -	$ -
AD011900	Central Environmental Laboratory HVAC	$ -	$ -	$ -	$ -	$ -	$ -
AD012000	Water Quality Department Work Space Expansion/Redesign	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -
Army Base							
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	$ 1,607	$ 4,832	$ 13,629	$ 2,271	$ -	$ -
AB010100	Army Base Treatment Plant Improvements - Phase III	$ -	$ -	$ -	$ -	$ -	$ -
AB010500	Section W Force Main Replacement	$ 178	$ 450	$ 1,253	$ 209	$ -	$ -
	Subtotal	$ 1,785	$ 5,282	$ 14,882	$ 2,480	$ -	$ -
Atlantic							
AT011410	Providence Road Interim Pressure Reducing Station	$ -	$ -	$ -	$ -	$ -	$ -
AT011510	Shipps Corner Interim Pressure Reducing Station	$ -	$ -	$ -	$ -	$ -	$ -
AT011520	Shipps Corner Pressure Reducing Station Modifications	$ 86	$ 129	$ 98	$ 1,877	$ 2,661	$ -
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	$ -	$ 20	$ 177	$ 2,099	$ 2,061	$ -
AT012000	Atlantic Treatment Plant Administration Building Renovation and	$ -	$ -	$ -	$ -	$ -	$ -
AT012300	Dominion Boulevard Force Main Relocations (Chesapeake)	$ -	$ -	$ -	$ -	$ -	$ -
AT012910	Atlantic Treatment Plant FOG Receiving Station	$ 231	$ -	$ -	$ -	$ -	$ -
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	$ 574	$ 651	$ -	$ -	$ -	$ -
AT013100	South Norfolk Area Gravity Sewer Improvements	$ 260	$ 191	$ 3,028	$ 1,479	$ -	$ -
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	$ -	$ -	$ 15	$ 36	$ 187	$ -
AT013320	Atlantic Treatment Plant Primary Clarifiers 1 thru 4 Automated Scum Removal	$ -	$ -	$ -	$ -	$ -	$ -
AT013500	Atlantic Treatment Plant Thermal Hydrolysis Process	$ 834	$ -	$ -	$ -	$ -	$ -
AT013600	Atlantic Treatment Plant Motor Control Center Replacements	$ -	$ -	$ -	$ -	$ -	$ -
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 1,985	$ 991	$ 3,319	$ 5,492	$ 4,908	$ -
Boat Harbor							
BH010000	33rd Street Pump Station Replacement Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
BH010100	58th Street Connecting Sewer Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
BH011600	Bridge Street Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
BH012000	Hampton Trunk Sewer Extension Division E Gravity Replacement	$ -	$ -	$ -	$ -	$ -	$ -
BH012700	Hampton Trunk Sewer Extension Division B - Claremont Force Main	$ -	$ -	$ -	$ -	$ -	$ -
BH013000	Willard Avenue Pump Station Upgrades	$ 2,026	$ -	$ -	$ -	$ -	$ -
BH013400	Bridge Street Siphon and Vent Relocation Replacement	$ -	$ -	$ -	$ -	$ -	$ -
BH013700	Ferguson Park Interceptor Force Main - Bridge Span Relocation	$ -	$ -	$ -	$ -	$ -	$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	$ 97	$ 1,152	$ 1,888	$ -	$ -	$ -
BH014210	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	$ 4,277	$ 3,571	$ 8	$ -	$ -	$ -
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	$ 14	$ 522	$ 1,269	$ -	$ -	$ -
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	$ 4,770	$ 2,787	$ 1	$ -	$ -	$ -
BH014700	Boat Harbor Outlet Sewer Improvements	$ 1,015	$ -	$ -	$ -	$ -	$ -
BH014800	Jefferson Avenue Extension Gravity Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	$ 171	$ 1,132	$ 2,080	$ -	$ -	$ -
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH015100	Bloxoms Corner Force Main Replacement	$ 149	$ 735	$ 1,656	$ -	$ -	$ -
BH015300	Boat Harbor Treatment Plant Switchgear and Controls Replacements	$ -	$ -	$ -	$ -	$ -	$ -
BH015500	LaSalle Avenue Interceptor Force Main Replacement	$ 1,038	$ 628	$ -	$ -	$ -	$ -
BH015600	Hampton Trunk A and B Replacement – Jefferson Ave. to Buxton	$ 583	$ 4,301	$ 4,303	$ -	$ -	$ -
	Subtotal	$ 14,138	$ 14,828	$ 11,204	$ -	$ -	$ -

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2017 to FY-2026	FY-2017	FY-2018	FY-2019	FY-2020
Chesapeake-Elizabeth						
CE010400	Independence Boulevard Pressure Reducing Station Modifications	$ 1,796	$ 30	$ 168	$ 667	$ 931
CE010510	Newtown Road Force Main Valving	$ 1,651	$ 90	$ 1,077	$ 484	$ -
CE010520	Newtown Road Interceptor Force Main Relocation	$ 7,015	$ 77	$ 317	$ 242	$ 3,590
CE011200	Central Trunk Interceptor Force Main A & B Main Line Valves	$ 204	$ 204	$ -	$ -	$ -
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	$ 860	$ -	$ -	$ -	$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	$ 1,802	$ -	$ -	$ -	$ -
CE011700	Western Trunk Force Main Replacement	$ 3,598	$ 258	$ 227	$ 220	$ 1,397
CE011810	Chesapeake-Elizabeth Regional Off-Line Storage Facility	$ 23,992	$ -	$ -	$ 888	$ 4,816
CE011820	Chesapeake-Elizabeth Interceptor System Diversion Improvements	$ 65,170	$ 2,765	$ 5,011	$ 22,217	$ 22,217
	Subtotal	$ 106,089	$ 3,423	$ 6,799	$ 24,717	$ 32,952
James River						
JR010100	Center Avenue Pump Station Service Area I I Remediation	$ 196	$ 196	$ -	$ -	$ -
JR010600	Lucas Creek Pump Station Upgrade	$ 6,347	$ -	$ 331	$ 6,016	$ -
JR010820	Warwick Boulevard to James River Influent Force Main Section 2	$ 6,885	$ 5,496	$ 1,389	$ -	$ -
JR011000	Middle Ground Boulevard - City Center Interconnect Force Main	$ 400	$ 400	$ -	$ -	$ -
JR011100	Warwick Boulevard to James River Influent Force Main Section 1	$ 6,010	$ 1,508	$ 3,590	$ 912	$ -
JR011300	Patrick Henry Pump Station Interconnection Force Main	$ 2,969	$ -	$ -	$ -	$ -
JR011500	Center Avenue I-I Remediation Phase II	$ 1,639	$ 1,639	$ -	$ -	$ -
JR011720	Jefferson Avenue Interceptor Force Main Replacement Phase II	$ 200	$ 200	$ -	$ -	$ -
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	$ 8,963	$ -	$ 143	$ 254	$ 560
JR012020	Warwick Boulevard to James River Influent Force Main Section 3,	$ 3,729	$ 1,864	$ 1,866	$ -	$ -
JR012100	Huxley to Middle Ground Force Main Extension	$ 2,056	$ 212	$ 1,698	$ 146	$ -
JR012800	James River Treatment Plant Hydraulic Improvements	$ 817	$ 817	$ -	$ -	$ -
JR012900	James River Treatment Plant Centrate Equalization Improvements	$ 897	$ 897	$ -	$ -	$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	$ 1,130	$ -	$ -	$ -	$ 120
JR013100	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I	$ 3,054	$ 449	$ 2,400	$ 205	$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	$ 4,302	$ -	$ -	$ 113	$ 192
	Subtotal	$ 49,594	$ 13,677	$ 11,417	$ 7,646	$ 872
Middle Peninsula						
MP011100	Urbanna and Central Middlesex Treatment Plants Replacement and Expansion	$ 14,697	$ -	$ -	$ 1,612	$ 5,188
MP011200	Central Middlesex Collection System	$ 4,323	$ -	$ 132	$ 553	$ 2,910
MP011400	Mathews Collection System Vacuum Valve Replacement	$ 803	$ 419	$ 384	$ -	$ -
MP011700	Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ 2,869	$ 121	$ 2,748	$ -	$ -
MP011800	Kirby Street Sanitary Sewer Rehabilitation	$ 358	$ 218	$ 140	$ -	$ -
MP012000	King William Treatment Plant Improvements	$ 1,640	$ 135	$ 1,500	$ 5	$ -
MP012400	West Point Treatment Plant Tertiary Filter	$ 524	$ 65	$ 414	$ 45	$ -
MP012500	Mathews Main Vacuum Pump Station Replacement	$ 1,639	$ 133	$ 1,155	$ 351	$ -
MP012600	Urbanna Treatment Plant Structural Modifications	$ 145	$ 145	$ -	$ -	$ -
MP012700	Middle Peninsula Sewer Lateral Improvements	$ 11,875	$ -	$ 475	$ 475	$ 475
	Subtotal	$ 38,872	$ 1,235	$ 6,949	$ 3,041	$ 8,573
Nansemond						
NP010620	Suffolk Pump Station Replacement	$ 10,105	$ -	$ 472	$ 606	$ 4,331
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	$ 992	$ -	$ -	$ 662	$ 331
NP011810	Holland Road 24-Inch Interceptor Force Main - Section A Phase I	$ 9,441	$ 6,290	$ 3,151	$ -	$ -
NP011820	Holland Road 24-Inch Interceptor Force Main - Section A Phase II	$ 2,019	$ 2,019	$ -	$ -	$ -
NP012200	Pughsville Pressure Reducing Station Upgrades	$ 2,406	$ 2,406	$ -	$ -	$ -
NP012400	Western Branch Sewer System Gravity Improvements	$ 2,183	$ -	$ -	$ -	$ -
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	$ 7,512	$ -	$ 355	$ 1,503	$ 5,220
NP012600	Deep Creek Interceptor Force Main Replacement	$ 5,561	$ 364	$ 3,211	$ 1,986	$ -
NP012700	Nansemond Treatment Plant AAA Tank Coating	$ 1,158	$ 861	$ 297	$ -	$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	$ 1,948	$ -	$ 500	$ 400	$ 548
NP013300	Nansemond Treatment Plant Digester Rehabilitation	$ 627	$ 627	$ -	$ -	$ -
NP013400	Deep Creek Interceptor Force Main Risk Mitigation Project	$ 2,024	$ 157	$ 1,246	$ 621	$ -
NP013500	Nansemond Treatment Plant Land Acquisition-Land Stabilization	$ 1,700	$ -	$ 300	$ 1,400	$ -
NP013600	Nansemond Treatment Plant Land Acquisition-Structure Demolition	$ 1,750	$ -	$ -	$ 1,750	$ -
	Subtotal	$ 49,425	$ 12,723	$ 9,532	$ 8,927	$ 10,429

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2021	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026
Chesapeake-Elizabeth							
CE010400	Independence Boulevard Pressure Reducing Station Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE010510	Newtown Road Force Main Valving	$ -	$ -	$ -	$ -	$ -	$ -
CE010520	Newtown Road Interceptor Force Main Relocation	$ 2,790	$ -	$ -	$ -	$ -	$ -
CE011200	Central Trunk Interceptor Force Main A & B Main Line Valves	$ -	$ -	$ -	$ -	$ -	$ -
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	$ -	$ 259	$ 601	$ -	$ -	$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	$ 20	$ 126	$ 648	$ 1,008	$ -	$ -
CE011700	Western Trunk Force Main Replacement	$ 1,497	$ -	$ -	$ -	$ -	$ -
CE011810	Chesapeake-Elizabeth Regional Off-Line Storage Facility	$ 7,995	$ 7,916	$ 2,377	$ -	$ -	$ -
CE011820	Chesapeake-Elizabeth Interceptor System Diversion Improvements	$ 12,960	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 25,262	$ 8,301	$ 3,627	$ 1,008	$ -	$ -
James River							
JR010100	Center Avenue Pump Station Service Area I I Remediation	$ -	$ -	$ -	$ -	$ -	$ -
JR010600	Lucas Creek Pump Station Upgrade	$ -	$ -	$ -	$ -	$ -	$ -
JR010820	Warwick Boulevard to James River Influent Force Main Section 2	$ -	$ -	$ -	$ -	$ -	$ -
JR011000	Middle Ground Boulevard - City Center Interconnect Force Main	$ -	$ -	$ -	$ -	$ -	$ -
JR011100	Warwick Boulevard to James River Influent Force Main Section 1	$ -	$ -	$ -	$ -	$ -	$ -
JR011300	Patrick Henry Pump Station Interconnection Force Main	$ 3	$ 87	$ 737	$ 1,606	$ 535	$ -
JR011500	Center Avenue I-I Remediation Phase II	$ -	$ -	$ -	$ -	$ -	$ -
JR011720	Jefferson Avenue Interceptor Force Main Replacement Phase II	$ -	$ -	$ -	$ -	$ -	$ -
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	$ 4,194	$ 3,811	$ -	$ -	$ -	$ -
JR012020	Warwick Boulevard to James River Influent Force Main Section 3,	$ -	$ -	$ -	$ -	$ -	$ -
JR012100	Huxley to Middle Ground Force Main Extension	$ -	$ -	$ -	$ -	$ -	$ -
JR012800	James River Treatment Plant Hydraulic Improvements	$ -	$ -	$ -	$ -	$ -	$ -
JR012900	James River Treatment Plant Centrate Equalization Improvements	$ -	$ -	$ -	$ -	$ -	$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	$ 422	$ 588	$ -	$ -	$ -	$ -
JR013100	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I	$ -	$ -	$ -	$ -	$ -	$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	$ 1,116	$ 2,157	$ 724	$ -	$ -	$ -
	Subtotal	$ 5,735	$ 6,644	$ 1,462	$ 1,606	$ 535	$ -
Middle Peninsula							
MP011100	Urbanna and Central Middlesex Treatment Plants Replacement and Expansion	$ 5,574	$ 2,323	$ -	$ -	$ -	$ -
MP011200	Central Middlesex Collection System	$ 727	$ -	$ -	$ -	$ -	$ -
MP011400	Mathews Collection System Vacuum Valve Replacement	$ -	$ -	$ -	$ -	$ -	$ -
MP011700	Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ -	$ -	$ -	$ -	$ -	$ -
MP011800	Kirby Street Sanitary Sewer Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
MP012000	King William Treatment Plant Improvements	$ -	$ -	$ -	$ -	$ -	$ -
MP012400	West Point Treatment Plant Tertiary Filter	$ -	$ -	$ -	$ -	$ -	$ -
MP012500	Mathews Main Vacuum Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
MP012600	Urbanna Treatment Plant Structural Modifications	$ -	$ -	$ -	$ -	$ -	$ -
MP012700	Middle Peninsula Sewer Lateral Improvements	$ 950	$ 950	$ 1,900	$ 1,900	$ 2,375	$ 2,375
	Subtotal	$ 7,252	$ 3,273	$ 1,900	$ 1,900	$ 2,375	$ 2,375
Nansemond							
NP010620	Suffolk Pump Station Replacement	$ 4,697	$ -	$ -	$ -	$ -	$ -
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP011810	Holland Road 24-Inch Interceptor Force Main - Section A Phase I	$ -	$ -	$ -	$ -	$ -	$ -
NP011820	Holland Road 24-Inch Interceptor Force Main - Section A Phase II	$ -	$ -	$ -	$ -	$ -	$ -
NP012200	Pughsville Pressure Reducing Station Upgrades	$ -	$ -	$ -	$ -	$ -	$ -
NP012400	Western Branch Sewer System Gravity Improvements	$ 18	$ 128	$ 113	$ 1,925	$ -	$ -
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	$ 435	$ -	$ -	$ -	$ -	$ -
NP012600	Deep Creek Interceptor Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP012700	Nansemond Treatment Plant AAA Tank Coating	$ -	$ -	$ -	$ -	$ -	$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	$ 500	$ -	$ -	$ -	$ -	$ -
NP013300	Nansemond Treatment Plant Digester Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
NP013400	Deep Creek Interceptor Force Main Risk Mitigation Project	$ -	$ -	$ -	$ -	$ -	$ -
NP013500	Nansemond Treatment Plant Land Acquisition-Land Stabilization	$ -	$ -	$ -	$ -	$ -	$ -
NP013600	Nansemond Treatment Plant Land Acquisition-Structure Demolition	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 5,650	$ 128	$ 113	$ 1,925	$ -	$ -

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2017 to FY-2026	FY-2017	FY-2018	FY-2019	FY-2020
Virginia Initiative Plant						
VP010910	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 1 (Norfolk Fairmount Park Phase IX)	$ 1,621	$ 241	$ 1,380	$ -	$ -
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	$ 1,013	$ -	$ -	$ 32	$ 64
VP011020	Park Avenue Pump Station Replacement	$ 3,165	$ 169	$ -	$ 355	$ 2,112
VP011600	Sewerage System Improvements Division C, Phase II Replacement	$ 1,602	$ 1,468	$ 133	$ -	$ -
VP013000	Norchester Street Pump Station Replacement Rehabilitation	$ (0)	$ -	$ -	$ -	$ -
VP013200	South Trunk Sewer Section G 36-Inch and 30-Inch Force Main	$ 4,766	$ 4,064	$ 702	$ -	$ -
VP014010	Ferebee Avenue Pump Station Replacement	$ 2,981	$ 27	$ 95	$ 423	$ 1,720
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	$ 4,604	$ 43	$ 117	$ 239	$ 2,655
VP014500	South Trunk Sewer Section Q 12-Inch Force Main Replacement	$ 2,435	$ -	$ -	$ -	$ -
VP014700	Ingleside Road Pump Station Replacement	$ 1,515	$ -	$ -	$ -	$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	$ 1,029	$ -	$ -	$ -	$ -
VP015300	Larchmont Area Pump Station Replacements	$ 8,579	$ -	$ 21	$ 245	$ 500
VP015400	Layfayette Norview-Estabrook Pump Station Replacements	$ 8,421	$ -	$ 10	$ 204	$ 548
VP015800	Sanitary Sewer System Portsmouth Va Western Diversion Force Main Relcoation (VDOT Turnpike Road Betterment)	$ 141	$ -	$ 141	$ -	$ -
VP016200	South Trunk Section G 30 and 24-Inch Force Main Replacement	$ 1,867	$ 1,867	$ -	$ -	$ -
VP016320	Virginia Initiative Plant Nutrient Reduction Improvements Contract B	$ 48,707	$ 33,936	$ 14,365	$ 405	$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	$ 2,551	$ -	$ -	$ -	$ 26
VP016600	Norview-Estabrook Division I 16-Inch Force Main Replacement	$ 2,908	$ -	$ -	$ -	$ 10
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	$ 2,150	$ 23	$ 181	$ 1,498	$ 449
VP017000	VIP Treatment Plant Incinerator Scrubber and ID Fans Replacement	$ -	$ -	$ -	$ -	$ -
VP017100	Central Norfolk Area Gravity Sewer Improvements	$ 2,398	$ -	$ -	$ -	$ -
VP017300	Rodman Avenue Pump Station Wet Well Rehabilitation	$ 1,046	$ 12	$ 1,034	$ -	$ -
VP017500	Effingham Street Interceptor Force Main Emergency Replacement	$ 150	$ 150	$ -	$ -	$ -
VP017800	Portsmouth Virginia Outlet Sewer Federal Housing Project Division A Phase I Replacement	$ 3,606	$ -	$ -	$ -	$ -
	Subtotal	$ 107,254	$ 42,001	$ 18,181	$ 3,401	$ 8,086
Williamsburg						
WB010700	Williamsburg Interceptor Force Main Contract A Replacement	$ 3,094	$ 3,094	$ -	$ -	$ -
WB012200	North Trunk Force Main Part B Replacement	$ 564	$ 23	$ 21	$ 295	$ 225
WB012400	Williamsburg Treatment Plant Switchgear Replacement	$ 4,311	$ -	$ 925	$ 770	$ 1,847
WB012500	Lodge Road Pump Station Upgrades	$ 1,400	$ -	$ -	$ 65	$ 120
	Subtotal	$ 9,369	$ 3,117	$ 946	$ 1,130	$ 2,192
York River						
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	$ 2,877	$ -	$ -	$ -	$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	$ 3,922	$ -	$ -	$ 63	$ 306
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	$ 5,163	$ -	$ -	$ 30	$ 53
YR011900	Bethel-Poquoson Force Main Part III Replacement	$ 1,137	$ 139	$ -	$ 666	$ 333
YR012220	York River Treatment Plant Digester Cover Replacement Phase II	$ 1,125	$ -	$ 896	$ 229	$ -
YR012600	York River Treatment Plant Distributive Control System Upgrade	$ 4,284	$ -	$ -	$ -	$ -
YR013110	York River Treatment Plant Outfall and Diffuser Modifications	$ 6,521	$ 6,521	$ -	$ -	$ -
YR013140	York River Treatment Plant Environmental Studies and Habitat	$ 841	$ 377	$ 327	$ 136	$ -
YR013200	York River Treatment Plant Chemical Facility Improvements	$ 100	$ 100	$ -	$ -	$ -
YR013300	York River Treatment Plant Hypochlorite Tanks Replacement	$ 50	$ 50	$ -	$ -	$ -
	Subtotal	$ 26,020	$ 7,187	$ 1,223	$ 1,124	$ 692

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2021	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026
Virginia Initiative Plant							
VP010910	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 1 (Norfolk Fairmount Park Phase IX)	$ -	$ -	$ -	$ -	$ -	$ -
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	$ 426	$ 491	$ -	$ -	$ -	$ -
VP011020	Park Avenue Pump Station Replacement	$ 528	$ -	$ -	$ -	$ -	$ -
VP011600	Sewerage System Improvements Division C, Phase II Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP013000	Norchester Street Pump Station Replacement Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
VP013200	South Trunk Sewer Section G 36-Inch and 30-Inch Force Main	$ -	$ -	$ -	$ -	$ -	$ -
VP014010	Ferebee Avenue Pump Station Replacement	$ 717	$ -	$ -	$ -	$ -	$ -
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	$ 1,549	$ -	$ -	$ -	$ -	$ -
VP014500	South Trunk Sewer Section Q 12-Inch Force Main Replacement	$ 8	$ 105	$ 106	$ 1,183	$ 1,033	$ -
VP014700	Ingleside Road Pump Station Replacement	$ -	$ -	$ 116	$ 543	$ 856	$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	$ -	$ 103	$ 926	$ -	$ -	$ -
VP015300	Larchmont Area Pump Station Replacements	$ 2,897	$ 3,470	$ 1,446	$ -	$ -	$ -
VP015400	Layfayette Norview-Estabrook Pump Station Replacements	$ 2,556	$ 3,401	$ 1,700	$ -	$ -	$ -
VP015800	Sanitary Sewer System Portsmouth Va Western Diversion Force Main Relcoation (VDOT Turnpike Road Betterment)	$ -	$ -	$ -	$ -	$ -	$ -
VP016200	South Trunk Section G 30 and 24-Inch Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP016320	Virginia Initiative Plant Nutrient Reduction Improvements Contract B	$ -	$ -	$ -	$ -	$ -	$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	$ 187	$ 1,624	$ 714	$ -	$ -	$ -
VP016600	Norview-Estabrook Division I 16-Inch Force Main Replacement	$ 147	$ 437	$ 1,983	$ 330	$ -	$ -
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	$ -	$ -	$ -	$ -	$ -	$ -
VP017000	VIP Treatment Plant Incinerator Scrubber and ID Fans Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP017100	Central Norfolk Area Gravity Sewer Improvements	$ -	$ 99	$ 137	$ 1,028	$ 1,135	$ -
VP017300	Rodman Avenue Pump Station Wet Well Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
VP017500	Effingham Street Interceptor Force Main Emergency Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP017800	Portsmouth Virginia Outlet Sewer Federal Housing Project Division A Phase I Replacement	$ -	$ 206	$ 384	$ 2,783	$ 232	$ -
	Subtotal	$ 9,015	$ 9,936	$ 7,513	$ 5,867	$ 3,255	$ -
Williamsburg							
WB010700	Williamsburg Interceptor Force Main Contract A Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012200	North Trunk Force Main Part B Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012400	Williamsburg Treatment Plant Switchgear Replacement	$ 770	$ -	$ -	$ -	$ -	$ -
WB012500	Lodge Road Pump Station Upgrades	$ 907	$ 308	$ -	$ -	$ -	$ -
	Subtotal	$ 1,677	$ 308	$ -	$ -	$ -	$ -
York River							
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	$ -	$ 210	$ 1,386	$ 1,282	$ -	$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	$ 1,289	$ 2,263	$ -	$ -	$ -	$ -
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	$ 470	$ 1,478	$ 2,210	$ 921	$ -	$ -
YR011900	Bethel-Poquoson Force Main Part III Replacement	$ -	$ -	$ -	$ -	$ -	$ -
YR012220	York River Treatment Plant Digester Cover Replacement Phase II	$ -	$ -	$ -	$ -	$ -	$ -
YR012600	York River Treatment Plant Distributive Control System Upgrade	$ -	$ 32	$ 339	$ 1,674	$ 2,203	$ 36
YR013110	York River Treatment Plant Outfall and Diffuser Modifications	$ -	$ -	$ -	$ -	$ -	$ -
YR013140	York River Treatment Plant Environmental Studies and Habitat	$ -	$ -	$ -	$ -	$ -	$ -
YR013200	York River Treatment Plant Chemical Facility Improvements	$ -	$ -	$ -	$ -	$ -	$ -
YR013300	York River Treatment Plant Hypochlorite Tanks Replacement	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 1,759	$ 3,984	$ 3,935	$ 3,876	$ 2,203	$ 36

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2017 to FY-2026	FY-2017	FY-2018	FY-2019	FY-2020
General						
GN010730	Horizontal Valve Replacement Phase III	$ 3,041	$ -	$ -	$ 1,207	$ 1,835
GN011700	Pump Station Generators	$ 5,428	$ 700	$ 1,363	$ 1,122	$ 1,122
GN012110	Regional Hydraulic Model and Other Consent Order Requirements	$ 8,100	$ 4,600	$ 1,500	$ 1,000	$ 1,000
GN012113	Condition Assessment - Pipeline Prompts Repairs	$ 15,000	$ 1,500	$ 1,500	$ 1,500	$ 1,500
GN012114	Condition Assessment - Gravity Main Pipeline Inspection	$ 3,000	$ 500	$ 500	$ 250	$ 250
GN012115	Continued Condition Assessment	$ 10,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
GN012120	Private Property Inflow and Infiltration Program	$ 132,944	$ -	$ -	$ -	$ 2,761
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	$ 6,275	$ 60	$ 1,554	$ 1,554	$ 1,554
GN012140	Pump Station Wet Well Rehabilitation Phase I	$ 2,916	$ 248	$ 696	$ 696	$ 696
GN012150	Locality System Monitoring and Condition Assessment	$ 4,100	$ 200	$ 200	$ 200	$ 500
GN012151	Locality Hydraulic Model	$ 2,800	$ 2,000	$ 400	$ 400	$ -
GN012800	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ 12,799	$ 7,643	$ 5,156	$ -	$ -
GN013300	Treatment Plant Grease Handling Facilities	$ 2,128	$ 110	$ 1,059	$ 959	$ -
GN013800	North Shore Odor Control and Chemical Injection Study	$ 149	$ 149	$ -	$ -	$ -
GN013900	South Shore Interceptors Air Vent Rehabilitation	$ 2,414	$ 999	$ 1,415	$ -	$ -
GN014300	North Shore Operations Unvented High Spot Correction	$ 575	$ 575	$ -	$ -	$ -
GN014500	Renewable Energy Facility and Associated Plant Improvements	$ 178,428	$ -	$ -	$ -	$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	$ 4,308	$ -	$ -	$ 76	$ 238
GN015000	South Shore Gravity Sewer Improvements Phase I	$ 696	$ -	$ -	$ -	$ -
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	$ 473	$ 209	$ 264	$ -	$ -
GN015300	Interceptor System Valve Improvements Phase I	$ 2,465	$ -	$ -	$ 70	$ 149
GN015400	South Shore Aerial Crossing Improvements	$ 248	$ -	$ -	$ -	$ 4
GN015700	Aquifer Replenishment System	$ 1,924	$ 1,924	$ -	$ -	$ -
GN015800	North Shore Automated Diversion Facilities	$ 1,432	$ 38	$ 123	$ 1,271	$ -
GN015900	PS and Plant Roof Replacement-Restoration Program Phase 1	$ 1,818	$ -	$ 606	$ 606	$ 606
GN016000	PS and Plant Roof Replacement-Restoration Program Phase 2	$ 1,898	$ -	$ -	$ -	$ 100
GN016100	PS and Plant Roof Replacement-Restoration Program Phase 3	$ 1,295	$ -	$ -	$ -	$ -
GN016200	Sustainable Water Recycling Phase 3	$ 15,000	$ 750	$ 8,000	$ 6,250	$ -
	Subtotal	$ 158,666	$ 23,204	$ 25,336	$ 18,161	$ 13,314
Future Improvements						
IP010200	Treatment Plant Expansions and Improvements	$ 81,231	$ -	$ -	$ -	$ -
IP010300	General Expansions and Improvements	$ 9,026	$ -	$ -	$ -	$ -
IP010600	Treatment Plant Rehabilitation and Replacement	$ 81,231	$ -	$ -	$ -	$ -
IP010700	General Rehabilitation and Replacement	$ 9,026	$ -	$ -	$ -	$ -
IP010800	Regional Wet Weather Improvements	$ 547,910	$ -	$ -	$ 13,402	$ 27,609
	Subtotal	$ 728,423	$ -	$ -	$ 13,402	$ 27,609
CIP TOTALS		$ 1,460,585	$ 130,000	$ 107,843	$ 112,381	$ 128,571

FY-2017 to FY-2026
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2021	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026
General							
GN010730	Horizontal Valve Replacement Phase III	$ -	$ -	$ -	$ -	$ -	$ -
GN011700	Pump Station Generators	$ 1,122	$ -	$ -	$ -	$ -	$ -
GN012110	Regional Hydraulic Model and Other Consent Order Requirements	$ -	$ -	$ -	$ -	$ -	$ -
GN012113	Condition Assessment - Pipeline Prompts Repairs	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500
GN012114	Condition Assessment - Gravity Main Pipeline Inspection	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250
GN012115	Continued Condition Assessment	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
GN012120	Private Property Inflow and Infiltration Program	$ 4,266	$ 5,858	$ 8,485	$ 8,740	$ 9,002	$ 9,272
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	$ 1,554	$ -	$ -	$ -	$ -	$ -
GN012140	Pump Station Wet Well Rehabilitation Phase I	$ 580	$ -	$ -	$ -	$ -	$ -
GN012150	Locality System Monitoring and Condition Assessment	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
GN012151	Locality Hydraulic Model	$ -	$ -	$ -	$ -	$ -	$ -
GN012800	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ -	$ -	$ -	$ -	$ -	$ -
GN013300	Treatment Plant Grease Handling Facilities	$ -	$ -	$ -	$ -	$ -	$ -
GN013800	North Shore Odor Control and Chemical Injection Study	$ -	$ -	$ -	$ -	$ -	$ -
GN013900	South Shore Interceptors Air Vent Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
GN014300	North Shore Operations Unvented High Spot Correction	$ -	$ -	$ -	$ -	$ -	$ -
GN014500	Renewable Energy Facility and Associated Plant Improvements	$ -	$ -	$ -	$ -	$ -	$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	$ 203	$ 2,381	$ 1,410	$ -	$ -	$ -
GN015000	South Shore Gravity Sewer Improvements Phase I	$ 35	$ 62	$ 224	$ 375	$ -	$ -
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	$ -	$ -	$ -	$ -	$ -	$ -
GN015300	Interceptor System Valve Improvements Phase I	$ 513	$ 1,300	$ 433	$ -	$ -	$ -
GN015400	South Shore Aerial Crossing Improvements	$ 14	$ 10	$ 130	$ 90	$ -	$ -
GN015700	Aquifer Replenishment System	$ -	$ -	$ -	$ -	$ -	$ -
GN015800	North Shore Automated Diversion Facilities	$ -	$ -	$ -	$ -	$ -	$ -
GN015900	PS and Plant Roof Replacement-Restoration Program Phase 1	$ -	$ -	$ -	$ -	$ -	$ -
GN016000	PS and Plant Roof Replacement-Restoration Program Phase 2	$ 600	$ 600	$ 600	$ -	$ -	$ -
GN016100	PS and Plant Roof Replacement-Restoration Program Phase 3	$ -	$ -	$ -	$ 381	$ 457	$ 457
GN016200	Sustainable Water Recycling Phase 3	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 12,135	$ 13,461	$ 14,533	$ 12,835	$ 12,709	$ 12,979
Future Improvements							
IP010200	Treatment Plant Expansions and Improvements	$ -	$ -	$ 984	$ 20,119	$ 17,143	$ 42,985
IP010300	General Expansions and Improvements	$ -	$ -	$ 109	$ 2,235	$ 1,905	$ 4,776
IP010600	Treatment Plant Rehabilitation and Replacement	$ -	$ -	$ 984	$ 20,119	$ 17,143	$ 42,985
IP010700	General Rehabilitation and Replacement	$ -	$ -	$ 109	$ 2,235	$ 1,905	$ 4,776
IP010800	Regional Wet Weather Improvements	$ 42,656	$ 58,580	$ 84,850	$ 92,110	$ 109,729	$ 118,974
	Subtotal	$ 42,656	$ 58,580	$ 87,037	$ 136,820	$ 147,824	$ 214,495
CIP TOTALS		$ 129,048	$ 125,714	$ 149,524	$ 173,810	$ 173,810	$ 229,885

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Photo by Mark Rhodes

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