Annual Budget

FOR THE FISCAL YEAR ENDED JUNE 30, 2018

HRSD

Ensuring future generations
inherit clean waterways

HRSD Annual Budget For Fiscal Year Ended June 30, 2018

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Introduction

Evaluating Technology

Carbon-Based Advanced Water Treatment at the SWIFT Research Center will purify HRSD's highly treated water to meet stringent drinking water standards.

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 77 years, HRSD has developed into one of the premier wastewater treatment organizations in the nation. With 16 treatment facilities 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 77-year investment in wastewater infrastructure.

The Governor-appointed, eight-member HRSD Commission approved this Fiscal Year-2018 budget at its regular meeting on May 23, 2017. 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 $32 per month for this essential service, basically 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, ground water 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 Federally mandated requirement to reduce the amount of nutrients that HRSD's treatment plants discharge into the Chesapeake Bay, 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, the York River Treatment Plant in Seaford, and the Army Base Treatment Plant in Norfolk. Work on HRSD's largest capital project continues at the Virginia Initiative Plant (VIP) that will improve nutrient removal performance while expanding wet weather capacity. With the completion of the VIP project, HRSD is on track to meet the 2017 milestone requirements of the Chesapeake Bay Total Maximum Daily Load.

Pursing 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 meet 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 Initiative for Tomorrow (SWIFT). The concept is for HRSD to treat water to meet drinking water standards and pump it into the ground to provide a sustainable source of groundwater, slow the rate of land subsidence 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 SWIFT are significant and are needed immediately.

Financing a Sustainable Water Future

HRSD is pursuing SWIFT 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 SWIFT 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 SWIFT 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 eighty percent of the $2.4 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 SWIFT, a voluntary initiative, to achieve significantly more environmental benefits without influencing our Financial Forecast.

HRSD finances its capital projects by issuing bonds and using cash on hand. Over the past ten years the annual investment in capital projects (debt payments and cash funded) has grown from less than 33 percent of HRSD's total revenue to more than 47 percent with the Fiscal Year 2018 budget. HRSD is investing in the regional wastewater infrastructure to ensure we leave a fully functional system to the next generation. While HRSD continues to focus on making the right investments in Hampton Roads, across the nation the need for investment in all infrastructure continues to grow. According to the American Society of Civil Engineers, the unmet need for wastewater exceeds $120 billion per year and the current state of wastewater infrastructure was graded at a D+ in 2017. The federal government contributed over 63 percent of the national investment in wastewater infrastructure in 1977. Last year the federal portion was 9 percent. State, regional and local governments have had to fill that funding gap, passing on significant rate increases as utilities must price service to recover full costs. In Fiscal Year 2018, despite the lack of federal funding and HRSD's significant commitment to maintaining the appropriate level of investment in wastewater infrastructure in Hampton Roads, our average residential customers will see their monthly bills increase by less than $2.67 per month.

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 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 77 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 allows us to 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

May 23, 2017

COMMISSIONERS

Frederick N. Elofson, CPA, Chair

Maurice P. Lynch, PhD, Vice-Chair

Arthur C. Bredemeyer

Michael E. Glenn

Vishnu K. Lakdawala, PhD

Willie Levenston, Jr.

Stephen C. Rodriguez

Ann W. Templeman

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

Leila E. Rice
Director of
Communications

COUNSEL

Kellam, Pickrell, Cox & Tayloe
General Counsel

Jones, Blechman, Woltz & Kelly, PC
Associate Counsel

AquaLaw, PLC
Special Counsel

Norton Rose Fulbright US, LLP
Bond Counsel

Key Facts

Service Area and Operations

Date Established	November 5, 1940
Communities Served	18 communities encompassing 3,087 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-fifth of Virginia's population, reside in HRSD's service area.

Operation and Facilities

No. of Positions (FY-2018)	830
Miles of Interceptor Systems	536 Miles
Wastewater Treated	155 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-2018) $285,553,000

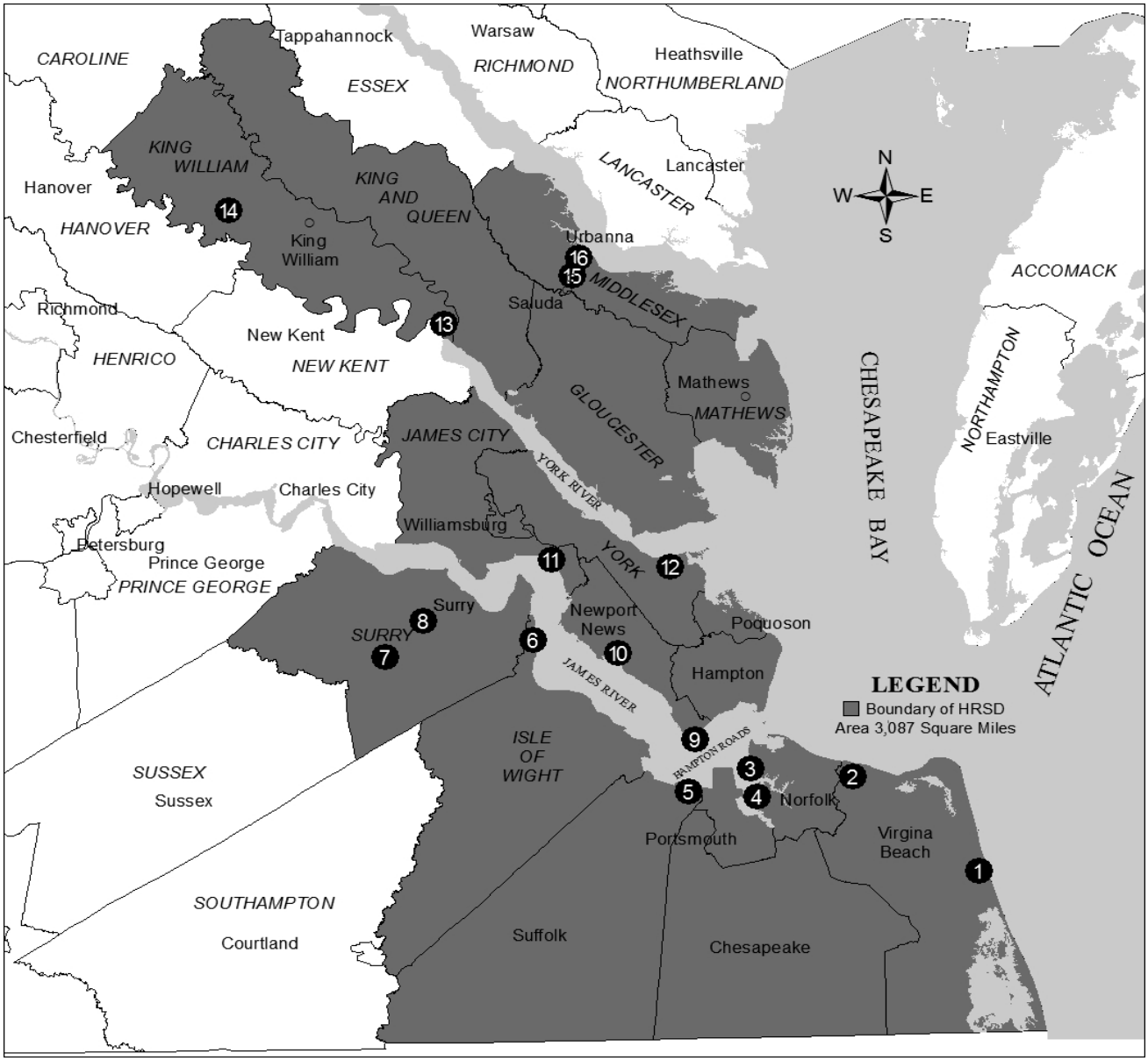
HRSD Service Area

A Political Subdivision of the Commonwealth of Virginia

Facilities include the following:

1. Atlantic, Virginia Beach
2. Chesapeake-Elizabeth, Va. Beach
3. Army Base, Norfolk
4. Virginia Initiative, Norfolk
5. Nansemond, Suffolk
6. Lawnes Point, Smithfield
7. County of Surry
8. Town of Surry
9. Boat Harbor, Newport News
10. James River, Newport News
11. Williamsburg, James City County
12. York River, York County
13. West Point, King William County
14. King William, King William County
15. Central Middlesex, Middlesex County
16. Urbanna, Middlesex 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, Surry* and York
*Excluding the Town of Claremont



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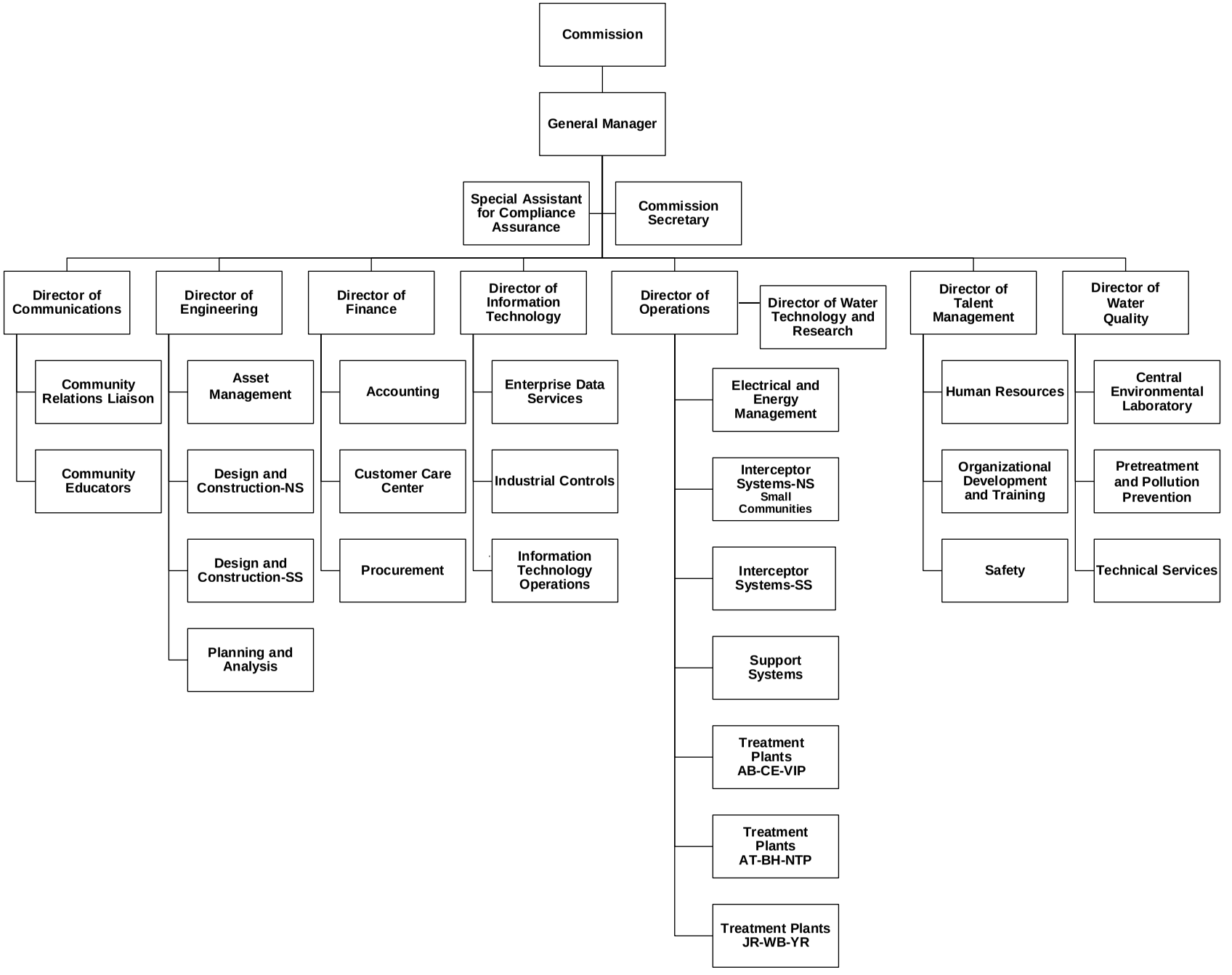
HRSD Organization Chart

July 1, 2017



History of HRSD

June 30, 2016

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, supported by department directors and their staffs.

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 2016.

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 2015. The Army Base Treatment Plant was honored for 29 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—Gold, Boat Harbor—Platinum (14 consecutive years), Chesapeake-Elizabeth—Platinum (6 consecutive years), James River—Gold, Nansemond—Platinum (14 consecutive years), Virginia Initiative Plant—Platinum (20 consecutive years), Williamsburg—Platinum (21 consecutive years) and York River— Platinum (8 consecutive years). Two treatment plants in the Small Communities Division, Central Middlesex and King William, earned Gold Awards while Urbanna received a Silver Award. West Point received a Platinum Award for 5 consecutive years of perfect compliance.

HRSD's other Fiscal Year 2016 honors included the NACWA Public Information & Education National Environmental Achievement Award for the Education Program *H2w0w: Wonders of Water*. In addition, HRSD and the Virginia STEAM Academy received from Governor Terry McAuliffe a 2016 Programs that Work award presented by the Virginia Mathematics and Science Coalition. HRSD was the 2016 winner of the prestigious Inside Business River Star Hall of Fame Award and also was recognized by the Elizabeth River Project for Sustained Distinguished Performance as a Model Level River Star Business. HRSD's sustainable water recycling initiative was among the water issue solutions featured during the March 22, 2016, White House Water Summit in Washington, D.C.

Rate Schedules

WASTEWATER TREATMENT CHARGE SCHEDULE

Service		FY-2018	FY-2017
Flow (monthly basis)			
Per CCF *		$ 4.92	$ 4.51
Minimum charge (per day)		0.30	0.30
Surcharge, per milligrams/liter per CCF	In Excess of		
Biochemical Oxygen Demand (BOD)	282 mg/L	$ 0.000091	$ 0.000206
Total Suspended Solids (TSS)	261 mg/L	$ 0.000520	0.000454
Total Phosphorus (TP)	6 mg/L	$ 0.011569	0.011642
Total Kjeldahl Nitrogen (TKN)	47 mg/L	$ 0.003156	0.001660
Surcharge, per 100 pounds			
BOD	282 mg/L	$ 1.46	$ 3.30
TSS	261 mg/L	8.32	7.27
TP	6 mg/L	185.32	186.49
TKN	47 mg/L	50.56	26.59
Septic, per gallon		$ 0.1300	$ 0.1366
Residential flat rate (per 30-day period)		$ 31.98	$ 29.32

* CCF = 100 Cubic Feet (approximately 748 gallons)

VOLUME BASED FACILITY CHARGE SCHEDULE

Meter Size	FY-2018	FY-2017
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	30,510
3 Inch	70,800	70,800
4 Inch	128,660	128,660
6 Inch	298,610	298,610
8 Inch	542,680	542,680
10 Inch	862,550	862,550
12 Inch	1,259,520	1,259,520
14 Inch	1,734,700	1,734,700
16 Inch	2,289,010	2,289,010

SMALL COMMUNITIES CHARGE SCHEDULE

Flow (monthly basis)	FY-2018	FY-2017
Per 1,000 gallons		
King William	$ 12.57	$ 11.91
Mathews	12.03	11.37
Surry	12.03	11.37
Urbanna	14.16	13.50
West Point	14.27	13.61
Residential flat rate (per 30-day period)		
King William	50.28	n/a
Mathews	48.12	n/a
Surry	48.12	n/a
Urbanna	56.64	n/a
West Point	$ 57.08	n/a

FEES AND SERVICE CHARGES

	FY-2018	FY-2017
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.

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

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.

Total Debt Service Coverage Ratio (GAAP): Calculated in accordance with HRSD's Senior Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets are considered an expense. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).

Total Debt Service Coverage Ratio (Adjusted): Calculated in accordance with HRSD's Subordinate Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets may be excluded from the calculation of Net Revenues under the circumstances described within the definitions of Net Revenues and Operating Expenses. Annual debt service will be based on actual principal and interest payments during the year (i.e., not accrual based).

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

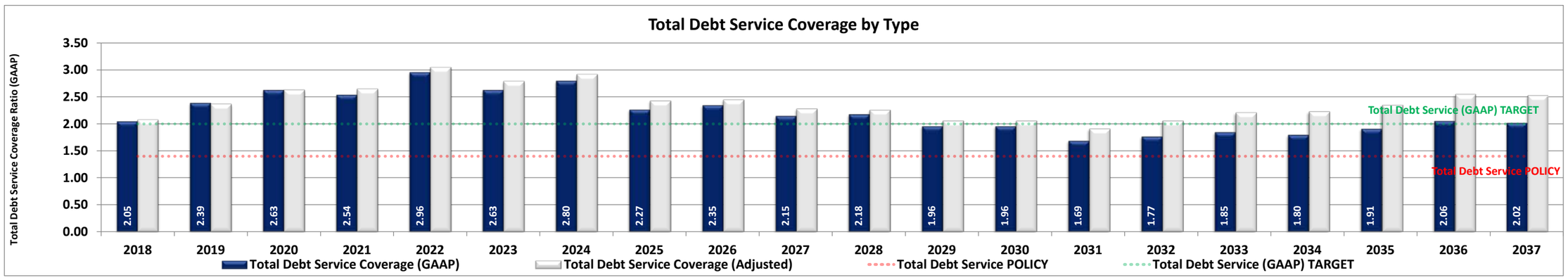
Unrestricted Cash as Percentage of Operating Expenses: Unrestricted cash and investments at fiscal year-end that are not earmarked for another purpose divided by budgeted appropriations for Operations adjusted by certain adjustments required by GAAP. HRSD's Financial Policy requires that the General 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.

Financial Forecast

Protecting Groundwater Supplies

Engineers at the SWIFT Pilot Facility analyzed multiple technologies to ensure the SWIFT Research Center incorporates the safest, most effective treatment options possible.

Financial Forecast (in thousands)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Operating Budget Forecast																				
Rate and Fees Increase - %	*9%*	*9%*	*9%*	*9%*	*9%*	*9%*	*7%*	*7%*	*7%*	*7%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*
Revenues																				
Operating Revenues	$ 274,633	$ 295,912	$ 318,831	$ 343,334	$ 369,875	$ 398,387	$ 421,328	$ 445,765	$ 471,645	$ 498,918	$ 523,227	$ 548,445	$ 575,006	$ 602,863	$ 631,969	$ 662,735	$ 695,102	$ 729,013	$ 764,413	$ 801,684
Non-Operating Revenues	10,920	11,208	11,146	11,162	11,288	11,321	11,456	12,072	12,408	12,556	13,296	13,652	13,832	14,193	14,725	15,072	15,384	15,651	15,883	16,088
Total Revenues	**$ 285,553**	**$ 307,120**	**$ 329,976**	**$ 354,496**	**$ 381,163**	**$ 409,708**	**$ 432,784**	**$ 457,837**	**$ 484,052**	**$ 511,474**	**$ 536,523**	**$ 562,097**	**$ 588,838**	**$ 617,056**	**$ 646,694**	**$ 677,807**	**$ 710,486**	**$ 744,664**	**$ 780,296**	**$ 817,772**
Operations	$ 142,578	$ 147,974	$ 152,868	$ 157,938	$ 160,191	$ 172,898	$ 178,669	$ 202,896	$ 216,741	$ 223,949	$ 248,007	$ 265,138	$ 281,437	$ 300,702	$ 310,690	$ 321,041	$ 331,770	$ 342,891	$ 354,423	$ 366,381
Major Repairs and Replacements	7,831	8,066	8,308	8,557	8,814	9,079	9,351	9,631	9,920	10,218	10,525	10,840	11,165	11,500	11,845	12,201	12,567	12,944	13,332	13,732
Capital Acquisitions	814	839	864	890	916	944	972	1,001	1,031	1,062	1,094	1,127	1,161	1,196	1,231	1,268	1,306	1,346	1,386	1,428
Total Operating Appropriations	**151,223**	**156,879**	**162,040**	**167,385**	**169,921**	**182,920**	**188,992**	**213,529**	**227,693**	**235,230**	**259,625**	**277,105**	**293,763**	**313,398**	**323,767**	**334,510**	**345,643**	**357,181**	**369,141**	**381,540**
Debt Service	60,849	60,295	61,239	67,860	65,691	78,256	80,804	98,268	101,015	118,396	118,355	135,633	138,266	155,705	150,880	149,906	159,967	158,987	156,711	168,935
Transfer to Capital Improvement Plan (PAYGO)	58,802	89,708	100,852	105,824	138,076	134,030	156,085	120,859	140,553	149,898	134,568	134,241	132,307	113,887	145,929	169,986	183,666	208,981	236,141	249,756
Transfer to General Reserve (Unrestricted Cash)	14,419	-	5,629	13,195	7,228	14,239	6,623	24,883	14,473	7,612	23,614	14,733	24,093	33,630	25,654	22,911	20,683	18,956	17,707	16,905
Transfer to Risk Management Reserve	260	239	218	232	247	263	280	299	318	339	361	384	409	436	464	494	526	560	597	636
Total Appropriations	**$ 285,553**	**$ 307,120**	**$ 329,976**	**$ 354,496**	**$ 381,163**	**$ 409,708**	**$ 432,784**	**$ 457,837**	**$ 484,052**	**$ 511,474**	**$ 536,523**	**$ 562,097**	**$ 588,838**	**$ 617,056**	**$ 646,694**	**$ 677,807**	**$ 710,486**	**$ 744,664**	**$ 780,296**	**$ 817,772**
Capital Improvement Budget Forecast																				
Beginning Capital Reserves	$ 22,787	$ -	$ 218	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sources of Funds																				
Debt Funded (Revenue Bonds and Interim Financing)	30,139	-	58,661	91,530	80,197	155,268	141,337	178,208	158,426	148,980	154,237	124,826	126,651	104,245	51,150	28,246	39,809	74,640	97,583	98,920
Virginia Clean Water Revolving Loan Fund	21,658	21,658	14,418	11,971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HRSD - Cash	58,802	89,708	100,852	105,824	138,076	134,030	156,085	120,859	140,553	149,898	134,568	134,241	132,307	113,887	145,929	169,986	183,666	208,981	236,141	249,756
Grants and Other Reimbursements	5,810	3,359	210	-	1,000	-	1,900	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfer from Debt Service Reserve Fund	804	494	642	674	727	702	679	933	1,021	1,123	1,195	933	1,042	1,868	2,921	1,768	1,525	1,379	1,276	1,324
Total Capital Resources	140,000	115,218	175,000	210,000	220,000	290,000	300,000	300,000	300,000	300,000	290,000	260,000	260,000	220,000	200,000	200,000	225,000	285,000	335,000	350,000
Uses of Funds - Capital Expenditures	140,000	115,000	175,000	210,000	220,000	290,000	300,000	300,000	300,000	300,000	290,000	260,000	260,000	220,000	200,000	200,000	225,000	285,000	335,000	350,000
Ending Capital Resources	**$ -**	**$ 218**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Reserves Balance Forecast																				
Unrestricted Cash as a % of Operating Expenses	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Unrestricted Cash	$ 162,838	$ 162,838	$ 168,466	$ 181,661	$ 188,889	$ 203,128	$ 209,751	$ 234,634	$ 249,107	$ 256,719	$ 280,333	$ 295,066	$ 319,158	$ 352,789	$ 378,443	$ 401,354	$ 422,037	$ 440,993	$ 458,699	$ 475,604
Risk Reserve	3,114	3,353	3,571	3,803	4,050	4,313	4,594	4,892	5,210	5,549	5,910	6,294	6,703	7,139	7,603	8,097	8,623	9,184	9,780	10,416
Debt Service Reserve Fund	30,950	30,456	29,814	29,140	28,413	27,711	27,033	26,100	25,079	23,957	22,762	21,829	20,787	18,919	15,998	14,230	12,705	11,326	10,050	8,727
Total Reserves Balance	**$ 196,902**	**$ 196,647**	**$ 201,851**	**$ 214,604**	**$ 221,353**	**$ 235,153**	**$ 241,378**	**$ 265,627**	**$ 279,397**	**$ 286,225**	**$ 309,005**	**$ 323,188**	**$ 346,648**	**$ 378,847**	**$ 402,044**	**$ 423,680**	**$ 443,365**	**$ 461,502**	**$ 478,530**	**$ 494,747**
Financial Ratios Forecast																				
Total Debt Service Coverage (GAAP)	**2.05**	**2.39**	**2.63**	**2.54**	**2.96**	**2.63**	**2.80**	**2.27**	**2.35**	**2.15**	**2.18**	**1.96**	**1.96**	**1.69**	**1.77**	**1.85**	**1.80**	**1.91**	**2.06**	**2.02**
Total Debt Service Coverage (Adjusted)	**2.08**	**2.37**	**2.63**	**2.65**	**3.05**	**2.79**	**2.92**	**2.43**	**2.45**	**2.28**	**2.26**	**2.06**	**2.06**	**1.91**	**2.06**	**2.21**	**2.23**	**2.35**	**2.55**	**2.53**
CIP % Cash Funded (current year contributions)	42%	78%	58%	50%	63%	46%	52%	40%	47%	50%	46%	52%	51%	52%	73%	85%	82%	73%	70%	71%
Debt Service as a % of Total Revenues	21%	20%	19%	19%	17%	19%	19%	21%	21%	23%	22%	24%	23%	25%	23%	22%	23%	21%	20%	21%
Moody's Projected Rating	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aaa*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aa1*	*Aaa*	*Aaa*
Regional Wet Weather Management Plan (RWWMP) Summary																				
HRSD Projected CIP Spending	$ -	$ -	$ 2,044	$ 7,174	$ 9,884	$ 11,152	$ 11,731	$ 12,106	$ 12,446	$ 12,552	$ 11,802	$ 9,088	$ 11,090	$ 15,490	$ 23,027	$ 29,033	$ 33,756	$ 37,433	$ 40,290	$ 42,539
Projected Locality/Private Property CIP Spending	$ -	$ -	$ 2,044	$ 7,174	$ 9,884	$ 11,152	$ 11,731	$ 12,106	$ 12,446	$ 12,552	$ 11,802	$ 9,088	$ 16,556	$ 30,587	$ 45,907	$ 58,112	$ 67,700	$ 75,157	$ 80,945	$ 85,491
Locality/Private Property % of Total CIP	0.0%	0.0%	1.2%	3.4%	4.5%	3.8%	3.9%	4.0%	4.1%	4.2%	4.1%	3.5%	6.4%	13.9%	23.0%	29.1%	30.1%	26.4%	24.2%	24.4%
RWWMP % of Total CIP	0.0%	0.0%	2.3%	6.8%	9.0%	7.7%	7.8%	8.1%	8.3%	8.4%	8.1%	7.0%	10.6%	20.9%	34.5%	43.6%	45.1%	39.5%	36.2%	36.6%
Line of Credit Balance	$ 30,139	$ 30,139	$ 88,800	$ 180,330	$ 60,528	$ 215,796	$ 57,133	$ 235,341	$ 93,767	$ 242,747	$ 96,984	$ 221,809	$ 48,461	$ 152,706	$ 203,856	$ 32,102	$ 71,911	$ 146,551	$ 44,134	$ 143,055
Total Bonds Issued	$ -	$ -	$ -	$ -	$ 201,207	$ -	$ 301,811	$ -	$ 301,811	$ -	$ 301,811	$ -	$ 301,811	$ -	$ -	$ 201,207	$ -	$ -	$ 201,207	$ -



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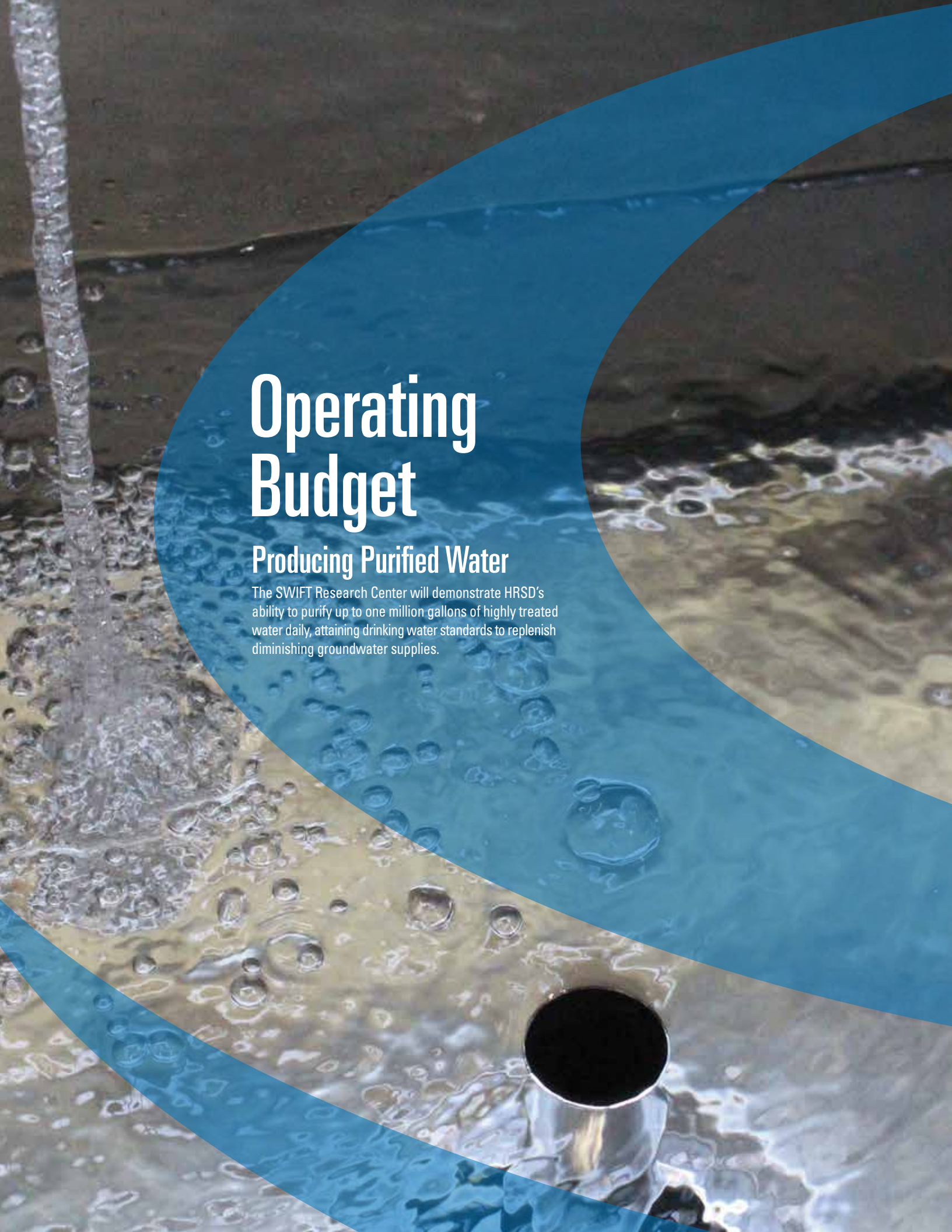


Operating Budget

Producing Purified Water

The SWIFT Research Center will demonstrate HRSD's ability to purify up to one million gallons of highly treated water daily, attaining drinking water standards to replenish diminishing groundwater supplies.

Operating Budget

	FY-2018	Adopted FY-2017	Increase/ (Decrease)	Percent Change
Operating Revenues				
Wastewater Treatment Charges	$ 273,087,693	$ 249,743,000	$ 23,344,693	9%
Miscellaneous	1,545,000	2,120,000	(575,000)	(27%)
Total Operating Revenue	274,632,693	251,863,000	22,769,693	9%
Non-Operating Revenues				
Wastewater Facility Charges	6,000,000	5,850,000	150,000	3%
Investment Earnings	1,800,000	1,400,000	400,000	29%
Build America Bond Subsidy	2,400,000	2,400,000	-	0%
Other	720,000	720,000	-	0%
Total Non-Operating Revenues	10,920,000	10,370,000	550,000	5%
Total Revenues	$ 285,552,693	$ 262,233,000	$ 23,319,693	9%
Operating Appropriations				
General Management	$ 680,710	$ 952,913	$ (272,203)	(29%)
Communications	470,615	-	470,615	0%
Finance	13,593,503	13,274,002	319,501	2%
Information Services	16,229,457	15,318,700	910,756	6%
Talent Management	2,280,395	2,243,164	37,231	2%
Operations	94,102,651	90,913,570	3,189,081	4%
Engineering	5,731,535	5,667,444	64,090	1%
Water Quality	14,205,703	13,477,883	727,820	5%
General Expenses	3,928,399	4,177,026	(248,627)	(6%)
Total Operating Appropriations	151,222,965	146,024,702	5,198,263	4%
Appropriations for Debt Service and Transfers				
Debt Service	60,849,120	63,847,000	(2,997,880)	(5%)
Transfer to Capital Improvement Program	58,802,000	52,101,298	6,700,702	13%
Transfer to General Reserve	14,418,608	-	14,418,608	0%
Transfer to Risk Management Reserve	260,000	260,000	-	0%
Total Appropriations for Debt Service and Transfers	134,329,728	116,208,298	18,121,430	16%
Total Appropriations	$ 285,552,693	$ 262,233,000	$ 23,319,693	9%

Operating Budget Summary

	General Management	Communications	Finance	Information Services	Talent Management	Operations	Engineering	Water Quality	General Expenses
Personal Services	$ 482,624	$ 278,347	$ 5,819,422	$ 4,389,837	$ 1,356,029	$ 32,428,555	$ 3,464,514	$ 7,304,005	$ (1,750,006)
Fringe Benefits	135,085	$ 87,268	2,721,921	1,679,289	541,996	15,407,324	1,351,675	3,161,895	(395,000)
Materials & Supplies	10,000	$ 45,000	73,140	902,250	65,500	4,622,095	29,778	1,310,329	30,000
Transportation	2,000	$ 3,000	14,000	87,251	27,600	1,218,155	16,723	50,656	-
Utilities	-	$ -	237,800	1,524,000	-	9,738,681	-	-	447,000
Chemical Purchases	-	$ -	-	-	-	10,324,400	-	-	-
Contractual Services	20,000	$ 35,000	4,464,850	5,626,354	53,200	12,926,502	703,904	1,649,095	5,515,305
Major Repairs	-	$ -	-	1,750,000	-	5,893,219	9,000	179,000	-
Capital Assets	-	$ -	-	-	-	771,100	-	43,000	-
Miscellaneous Expense	31,000	$ 22,000	262,369	270,475	236,070	772,620	155,941	507,723	81,100
Operating Approporiations	**$ 680,710**	**$ 470,615**	**$ 13,593,503**	**$ 16,229,457**	**$ 2,280,395**	**$ 94,102,651**	**$ 5,731,535**	**$ 14,205,703**	**$ 3,928,399**

Full-time Positions:

Current	4	0	100	48	15	509	39	106
Changes	(1)	2	1	2	0	2	0	3
Budgeted	3	2	101	50	15	511	39	109

Operating Budget Summary

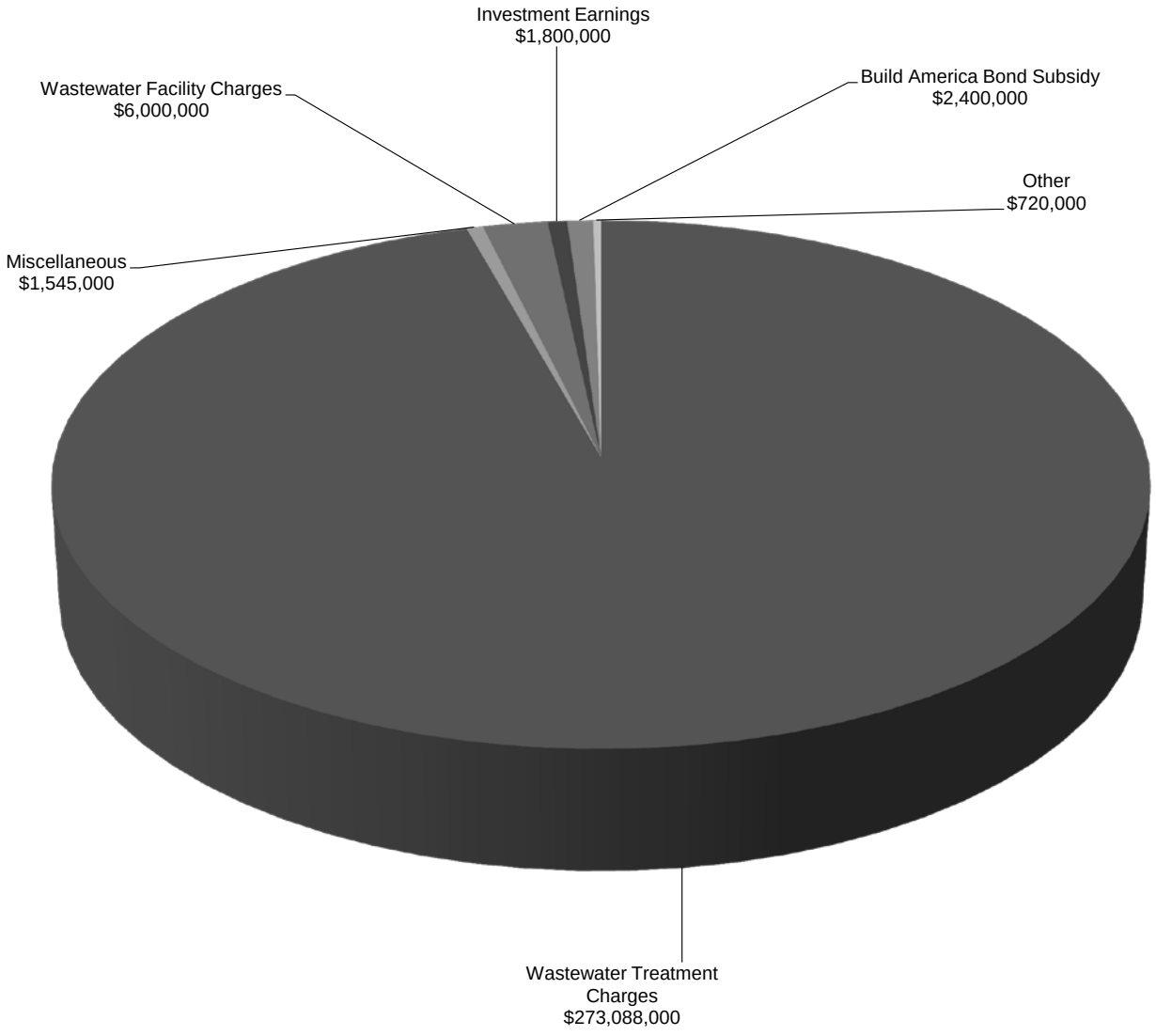
	FY-2018	Percent of Budget	FY-2017 Budget	Increase/ Decrease	Percent Inc/(Dec)
Personal Services	$ 53,773,327	18.8%	$ 52,521,153	$ 1,252,174	2%
Fringe Benefits	$ 24,691,453	8.6%	$ 24,277,464	413,990	2%
Materials & Supplies	$ 7,088,092	2.5%	$ 7,025,374	62,717	1%
Transportation	$ 1,419,385	0.5%	$ 1,443,719	(24,334)	(2%)
Utilities	$ 11,947,481	4.2%	$ 12,110,491	(163,010)	(1%)
Chemical Purchases	$ 10,324,400	3.6%	$ 9,210,500	1,113,900	12%
Contractual Services	$ 30,994,210	10.9%	$ 28,239,821	2,754,389	10%
Major Repairs	$ 7,831,219	2.7%	$ 7,424,907	406,312	5%
Capital Assets	$ 814,100	0.3%	$ 1,454,400	(640,300)	(44%)
Miscellaneous Expense	$ 2,339,298	0.8%	$ 2,316,872	22,426	1%
Operating Approporiations	$ 151,222,965	53.0%	146,024,702	5,198,263	4%
Debt Service Costs	$ 60,849,120	21.3%	63,847,000	(2,997,880)	(5%)
Transfer to Capital Improvement Program	$ 58,802,000	20.6%	52,101,298	6,700,702	13%
Transfer to General Reserve	$ 14,418,608	5.0%	-	14,418,608	0%
Transfer to Risk Management	$ 260,000	0.1%	260,000	0	0%
Appropriations for Debt Service and Transfers	$ 134,329,728	47.0%	116,208,298	18,121,430	16%
	$ 285,552,693	100.0%	**$ 262,233,000**	23,319,693	9%

Full-time Positions:

Current	821
Changes	9
Budgeted	830

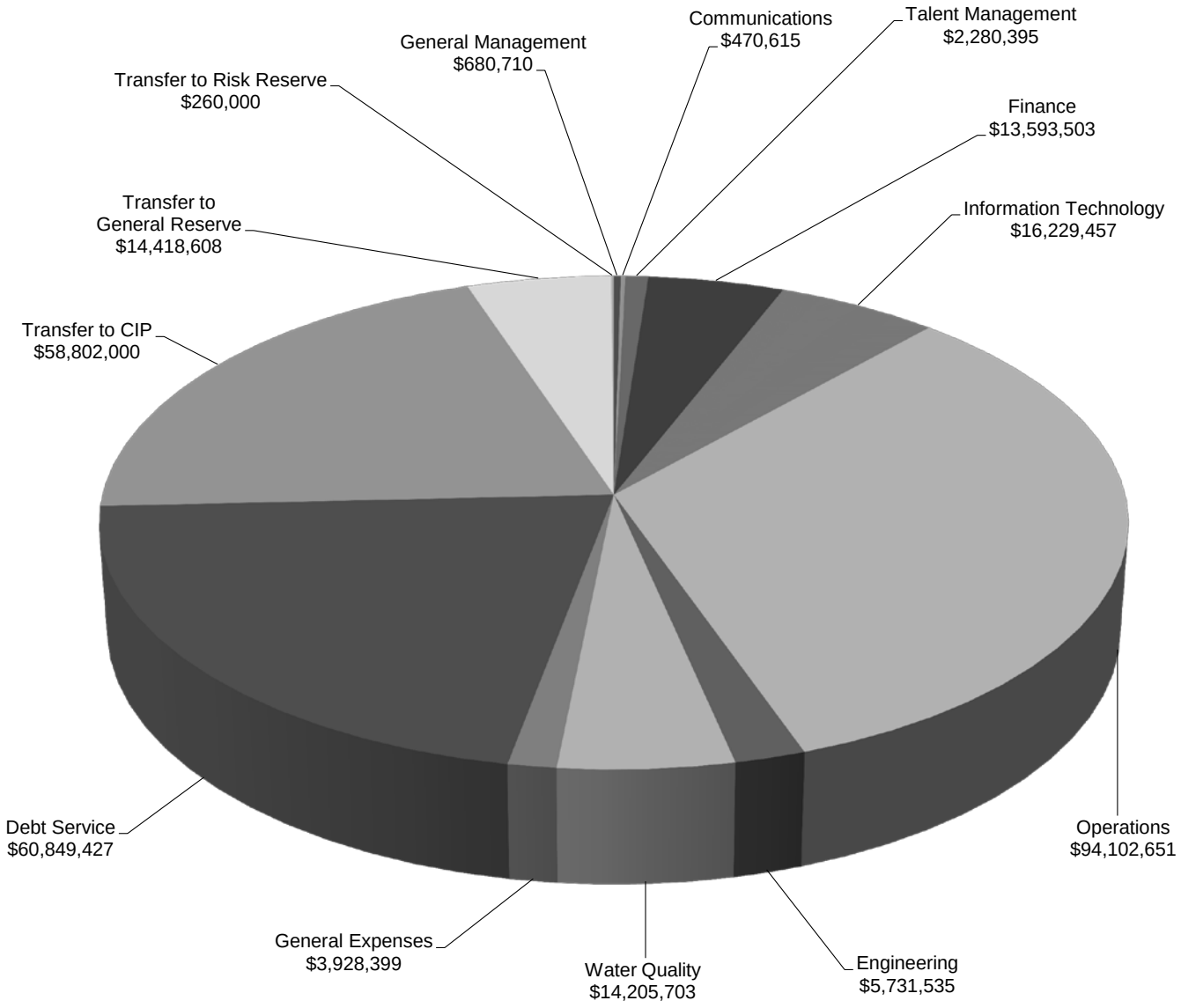
Operating Budget Charts

Revenues and Transfers In
$285,553,000



Operating Budget Charts

Expenses and Transfers Out
$285,553,000



General Management

The General Manager supervises the department directors, Commission Secretary and the Special Assistant for Compliance Assurance. 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, the Department of Environmental Quality (DEQ) and Environmental Protection Agency (EPA) to ensure appropriate and timely adherence to the requirements of regulatory wet weather enforcement actions.

Expenditure Budget

	FY-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 482,624	$ 624,432	$ (141,808)	(23%)
Fringe Benefits	135,085	200,081	(64,996)	(32%)
Material & Supplies	10,000	10,000	-	0%
Transportation	2,000	32,400	(30,400)	(94%)
Utilities	-	-	-	0%
Chemical Purchases	-	-	-	0%
Contractual Services	20,000	85,000	(65,000)	(76%)
Major Repairs	-	-	-	0%
Capital Assets	-	-	-	0%
Miscellaneous	31,000	1,000	30,000	3000%
Total	**$ 680,710**	**$ 952,913**	**$ (272,203)**	**(29%)**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
General Manager		1		1		1
Special Assistant for Compliance Assurance	12	1		1		1
Director of Communications	12	0	1	1	(1)	0
Chief of Communications	11	1	(1)	0		0
Commission Secretary	6	1		1		1
Total		**4**	**0**	**4**	**(1)**	**3**

Communications

The Communications Department supports HRSD's mission through public outreach, community engagement and educational programs and partnerships. The department also manages internal communications, media relations, social media and branding for both HRSD and SWIFT.

Expenditure Budget

	FY-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 278,347	$ -	$ 278,347	0%
Fringe Benefits	87,268	-	87,268	0%
Material & Supplies	45,000	-	45,000	0%
Transportation	3,000	-	3,000	0%
Utilities	-	-	-	0%
Chemical Purchases	-	-	-	0%
Contractual Services	35,000	-	35,000	0%
Major Repairs	-	-	-	0%
Capital Assets	-	-	-	0%
Miscellaneous	22,000	-	22,000	0%
Total	**$ 470,615**	**$ -**	**$ 470,615**	**0%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
Director of Communications	12	0		0	1	1
Community Relations Liaison	6	0		0	1	1
Total		0	0	0	2	2

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-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 5,819,422	$ 5,867,981	$ (48,558)	(1%)
Fringe Benefits	2,721,921	2,621,566	100,355	4%
Material & Supplies	73,140	131,127	(57,987)	(44%)
Transportation	14,000	108,110	(94,110)	(87%)
Utilities	237,800	266,600	(28,800)	(11%)
Contractual Services	4,464,850	4,004,364	460,486	11%
Capital Assets	-	35,000	(35,000)	(100%)
Miscellaneous	262,369	239,254	23,115	10%
Total	**$ 13,593,503**	**$ 13,274,002**	**$ 319,501**	**2%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
Director of Finance	12	1		1		1
Chief of Accounting & Finance	11	1		1		1
Chief of Customer Care Center	11	1		1		1
Chief of Procurement	11	1		1		1
Accounting Manager	9	1		1		1
Customer Care Manager	9	3		3		3
Strategic Sourcing Manager	9	1		1		1
Business Analyst	8	3		3		3
Customer Care Operations Manager	8	1		1		1
Financial Analyst	8	2		2	1	3
Procurement Analyst	8	0		0	1	1
Customer Care Supervisor	7	4		4		4
Procurement Analyst	7	1		1	(1)	0
Accounts Payable Supervisor	6	1		1		1
Accounts Receivable Specialist	6	3		3		3
Payroll Specialist	6	1		1		1
Procurement Specialist	6	4		4		4
Accounting Coordinator	4	1		1		1
Accounts Receivable Technician	4	3		3		3
Customer Care Administrative Coordinator	4	1		1		1
Customer Care Coordinator	4	4		4		4
Procurement Coordinator	4	1		1		1
Account Investigator	3	14		14		14
Accounts Payable Associate	3	2		2		2
Customer Care Account Representative	3	41		41		41
Procurement Administrative Assistant	3	2		2		2
Mail Processing Clerk	2	2		2		2
Total		**100**	**0**	**100**	**1**	**101**

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-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 4,389,837	$ 4,229,958	$ 159,879	4%
Fringe Benefits	1,679,289	1,579,216	100,073	6%
Material & Supplies	902,250	948,500	(46,250)	(5%)
Transportation	87,251	68,651	18,600	27%
Utilities	1,524,000	1,424,700	99,300	7%
Contractual Services	5,626,354	5,310,200	316,154	6%
Major Repairs	1,750,000	1,500,000	250,000	17%
Miscellaneous	270,475	257,475	13,000	5%
Total	**$ 16,229,457**	**$ 15,318,700**	**$ 910,756**	**6%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
Director of Information Technology (IT)	12	1		1		1
Chief of Enterprise Data Services	11	1		1		1
Chief of Industrial Controls	11	1		1		1
Chief of Information Technology	11	1		1		1
Database Administrator	9	3		3		3
Enterprise Architect	9	5		5	(2)	3
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	1	6
SharePoint Web Developer	9	0		0	1	1
Systems Analysis Manager	9	1		1		1
Industrial Automation Programmer	8	0		0	5	5
Industrial Control Systems Manager	8	4		4	(4)	0
Senior Programmer Analyst	8	6		6		6
Senior Systems Analyst	8	3		3		3
Unix Systems Administrator	8	2		2		2
IT HelpDesktop 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
Telecommunications Support Coordinator	4	0		0	1	1
Computer Operator	3	3		3		3
Total		**48**	**0**	**48**	**2**	**50**

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-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 1,356,029	$ 1,329,872	$ 26,157	2%
Fringe Benefits	541,996	557,651	(15,655)	(3%)
Material & Supplies	65,500	65,500	-	0%
Transportation	27,600	26,300	1,300	5%
Contractual Services	53,200	48,800	4,400	9%
Capital Assets	-	-	-	0%
Miscellaneous	236,070	215,040	21,030	10%
Total	**$ 2,280,395**	**$ 2,243,164**	**$ 37,231**	**2%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
Director of Talent Management	12	1		1		1
Human Resources Manager	9	1		1		1
Organizational Development and Training Manager	9	1		1		1
Safety Manager	9	1		1		1
Human Resources Business Analyst	8	1		1		1
Industrial Hygienist	8	2		2		2
Training Superintendent	8	1		1		1
Human Resources Specialist	7	3		3		3
Human Resources Coordinator	4	2		2		2
Organizational Development and Training Coordinator	4	1		1		1
Safety Coordinator	4	1		1		1
Total		**15**	**0**	**15**	**0**	**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 three treatment plants) treating wastewater from over 1.7 million people in 18 cities and counties in Hampton Roads. The Small Communities Divisions (SCD) 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 Divisions operate and maintain over 500 miles of interceptor pipelines and over 100 pump stations using Supervisory Control and Data Acquisition (SCADA) to monitor wastewater conveyed to each treatment plant. The Support Systems Division is responsible of the maintenance for the HRSD fleet, all buildings, operates two carpentry shops and a full service machine shop.

Expenditure Budget

	FY-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 32,428,555	$ 31,696,205	$ 732,350	2%
Fringe Benefits	15,407,324	14,905,386	501,938	3%
Material & Supplies	4,622,095	4,628,977	(6,883)	(0%)
Transportation	1,218,155	943,369	274,786	29%
Utilities	9,738,681	9,884,191	(145,510)	(1%)
Chemical Purchases	10,324,400	9,210,500	1,113,900	12%
Contractual Services	12,926,502	12,404,645	521,857	4%
Major Repairs	5,893,219	5,767,907	125,312	2%
Capital Assets	771,100	564,400	206,700	37%
Miscellaneous	772,620	907,990	(135,370)	(15%)
Total	**$ 94,102,651**	**$ 90,913,570**	**$ 3,189,081**	**4%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
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 South Shore Interceptor Operations	11	2		2	(1)	1
Chief of North Shore Interceptors & SCD	11	0		0	1	1
Senior Plant Manager	11	3		3		3
Electrical Manager	9	2		2		2
Instrumentation Manager	9	1		1		1
Interceptor Engineer	9	1	1	2		2
Plant Manager	9	6		6		6
Process Engineering & Research Manager	9	1		1		1
Support Systems Manager	9	1		1		1
SWIFT Project Manager	9	0	1	1		1
Systems Manager	9	3	(1)	2		2
Water Recycling Project Manager	9	1	(1)	0		0
Automotive Superintendent	8	1		1		1
Condition Assessment Superintendent	8	0	1	1		1
Electrical and Instrumentation Supervisor	8	0	4	4		4
Electrical Superintendent	8	1		1		1
Facility Superintendent	8	1		1		1
Instrumentation Supervisor	8	2	(2)	0		0
Interceptor Superintendent	8	3	(1)	2		2
Plant Superintendent	8	18	(1)	17	1	18
Chief Foreman	7	0		0	2	2
Chief Foreman Pump Station	7	2		2	(2)	0
Chief Maintenance Management	7	0		0	2	2
Chief Systems Operator	7	1		1	1	2
Coating, Concrete and Roofing Chief Inspector	7	0	1	1		1
Electrical & Instrumentation Process Specialist	7	0	1	1		1
Electrical & Instrumentation Specialist	7	0	57	57	1	58
Electrical Supervisor	7	2	(2)	0		0
Instrumentation Specialist	7	28	(28)	0		0
Interceptor Chief Foreman	7	3		3	(3)	0
Lead Operator	7	31	1	32	(1)	31
Operations Support Specialist	7	1		1		1
Structural & Roofing Inspector	7	1	(1)	0		0
Automotive Foreman	6	2		2		2
Coatings Inspector	6	2		2		2
Condition Assessment Supervisor	6	1		1		1

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
Electrician	6	28	(28)	0		0
Engineering Assistant	6	4		4		4
Interceptor Foreman	6	7		7		7
Interceptor Systems Supervisor	6	1		1	1	2
Machinist Foreman	6	1		1		1
Maintenance Specialist	6	3		3		3
Pump Station Supervisor	6	1		1	1	2
Automotive Technician	5	5		5		5
Carpenter	5	4		4		4
Condition Assessment Technician	5	0		0	2	2
Equipment Technician	5	3		3		3
Facility Maintenance Technician	5	2		2		2
Interceptor Technician	5	31		31	(2)	29
Machinist	5	3		3		3
Maintenance Operator	5	57	3	60	1	61
Plant Operator	5	72		72	1	73
Heavy Equipment Operator 1	4	22		22	(1)	21
Materials Operations Coordinator	4	2		2		2
Operations Admin Coordinator	4	1		1		1
Operations Coordinator	4	2		2		2
Automotive Administrative Assistant	3	1		1		1
Support Systems Administrative Assistant	3	1		1		1
Utility Administrative Assistant	3	2		2	(1)	1
SCADA Administrative Assistant	3	1		1		1
Interceptor Assistant	2	28		28	(1)	27
Maintenance Operations Assistant	2	56	(4)	52		52
Plant Clerk	2	9		9		9
Facility Assistant	1	12	(1)	11		11
Custodian	1	2	2	4		4
Subtotal - Operations		**485**	**2**	**487**	**2**	**489**
Small Communities						
Systems Manager	9	1		1		1
Systems Superintendent	8	1		1		1
Systems Chief Foreman	7	1		1		1
Systems Lead Operator	7	3		3		3
Systems Operator	5	11		11		11
Administrative Coordinator	4	1		1		1
Heavy Equipment Operator 1	4	1		1		1
Maintenance Operations Assistant	2	2		2		2
Facility Assistant	1	1		1		1
Subtotal - Small Communities		**22**	**0**	**22**	**0**	**22**
Total		**507**	**2**	**509**	**2**	**511**

Engineering Department

The Engineering Department is responsible for HRSD facility planning, design and construction and related support. The Asset Management Division is responsible for using the Computerized Maintenance Management System (CMMS) to manage asset information 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 (CIP), Hydraulic Modeling, Geographic Information System (GIS), Data Analysis, Computer Aided Design (CAD) and Records Management System and plans the capital infrastructure required to meet the region's future wastewater needs.

Expenditure Budget

	FY-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 3,464,514	$ 3,526,675	$ (62,161)	(2%)
Fringe Benefits	1,351,675	1,402,754	(51,079)	(4%)
Material & Supplies	29,778	25,100	4,678	19%
Transportation	16,723	71,458	(54,735)	(77%)
Contractual Services	703,904	510,062	193,842	38%
Major Repairs	9,000	-	9,000	0%
Miscellaneous	155,941	131,395	24,546	19%
Total	**$ 5,731,535**	**$ 5,667,444**	**$ 64,090**	**1%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
Director of Engineering	12	1		1		1
Chief of Asset Management	11	1		1		1
Chief of Condition Assessment	11	1		1	(1)	0
Chief of Design & Construction	11	2		2		2
Chief of Planning & Analysis	11	1		1		1
Capital Program Manager	9	1		1		1
Condition Assessment Manager	9	0		0	2	2
Data Analysis Manager	9	1		1		1
GIS Manager	9	1		1		1
Hydraulic Analysis Manager	9	4		4		4
Project Manager	9	9		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 Liaison	6	1		1	(1)	0
Contract Specialist	6	2		2		2
GIS CAD Technician	5	3		3		3
CIP Coordinator	4	0	1	1		1
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)	0		0
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 through the work of three divisions. The Central Environmental Laboratory (Lab) Division uses the Environmental Data Management System (EDMS) and other tools to provide analytical support for numerous monitoring, research and regulatory purposes. The Pretreatment and Pollution Prevention (P3) Division monitors wastewater conveyed to treatment plants using the Pretreatment Information Management System (PIMS) and other tools, 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, the Municipal Assistance Program (MAP) to assist localities and all reporting required by HRSD permits.

Expenditure Budget

	FY-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 7,304,005	$ 6,996,033	$ 307,971	4%
Fringe Benefits	3,161,895	2,965,813	196,082	7%
Material & Supplies	1,310,329	1,156,170	154,159	13%
Transportation	50,656	193,431	(142,775)	(74%)
Contractual Services	1,649,095	723,250	925,845	128%
Major Repairs	179,000	157,000	22,000	14%
Capital Assets	43,000	855,000	(812,000)	(95%)
Miscellaneous	507,723	431,185	76,538	18%
Total	**$ 14,205,703**	**$ 13,477,883**	**$ 727,820**	**5%**

Positions

	Grade	Adopted FY-2017	Adjustments	Final FY-2017	Adjustments	FY-2018
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	7		7		7
Lab Manager	9	4		4		4
Lab Quality Assurance Manager	9	1		1		1
P3 Manager	9	4		4		4
Recycling Manager	9	1		1		1
Lab EDMS Administrator	8	0		0	1	1
Lab Operations Manager	8	1		1		1
Lab Supervising Chemist	8	0		0	11	11
P3 Supervising Specialist	8	0		0	3	3
TSD Operations Manager	8	1		1		1
TSD Supervising Specialist	8	0		0	3	3
Lab EDMS Administrator	7	1		1	(1)	0
Lab Supervising Chemist	7	11		11	(11)	0
P3 Administrative Supervising Specialist	7	0		0	1	1
P3 Supervising Specialist	7	3	1	4	(4)	0
TSD Supervising Specialist	7	3		3	(3)	0
Lab EDMS Analyst	6	1		1		1
Lab Quality Assurance Specialist	6	1		1		1
Lab Specialist	6	13		13		13
P3 PIMS Analyst	6	0	1	1		1
P3 Specialist	6	2		2	1	3
TSD Specialist	6	5	3	8	2	10
Lab Data Technician	5	0		0	1	1
LabTechnician	5	5		5		5
P3 Administrative Technician	5	1	(1)	0		0
P3 Technician	5	11		11		11
TSD Technician	5	3	(3)	0		0
Lab Data Coordinator	4	1		1		1
MAP Coordinator	4	1		1	(1)	0
P3 Administrative Coordinator	4	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	7		7		7
TSD Assistant	2	1		1		1
Total		**105**	**1**	**106**	**3**	**109**

General Expenses, Debt Service and Transfers

General Expenses includes operating expenditures not assigned to any specific HRSD Department. Debt Service includes payments on bonds issued by HRSD and through the Virginia Clean Water Revolving Loan Fund (VCWRLF).

Expenditure Budget

	FY-2018 Budget	FY-2017 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ (1,750,006)	$ (1,750,003)	$ (3)	0%
Fringe Benefits	(395,000)	44,996	(439,996)	(978%)
Material & Supplies	30,000	60,000	(30,000)	(50%)
Utilities	447,000	535,000	(88,000)	(16%)
Contractual Services	5,515,305	5,153,500	361,805	7%
Miscellaneous	81,100	133,533	(52,433)	(39%)
Total General Expenses	**$ 3,928,399**	**$ 4,177,026**	**$ (248,627)**	**(6%)**
Publically Sold Bonds - Principal	15,845,000	16,780,000	(935,000)	(6%)
Publically Sold Bonds - Interest	30,122,320	29,979,180	143,140	0%
VCWRLF Bonds	13,981,800	16,187,820	(2,206,020)	(14%)
Cost of Issuance	900,000	900,000	-	100%
Subtotal - Debt Service	60,849,120	63,847,000	(2,997,880)	(5%)
Transfer to CIP	58,802,000	52,101,298	6,700,702	13%
Transfer to General Reserve	14,418,608	-	14,418,608	0%
Transfer to Risk Management	260,000	260,000	-	0%
Subtotal - Transfers	73,480,608	52,361,298	21,119,310	40%
Total Debt Service and Transfers	**$ 134,329,728**	**$ 116,208,298**	**$ 18,121,430**	**16%**

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Capital Budget

Delivering Bold Solutions

SWIFT is designed to replenish Virginia's diminishing groundwater supply, which in turn fights sea level rise and also reduces the amount of nutrients HRSD discharges into the Chesapeake Bay and its tributaries.

swift

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-2018 in the amount of $140 million. The remaining years (FY-2019 to FY-2027) 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-2018 to FY-2027 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 $2.35 billion.

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.

Capital Budget

CIP Budget Forecast (in thousands)	Total FY-2018 to FY-2027	FY-2018	FY-2019	FY-2020	FY-2021
Begin Capital Reserves	$ 22,787	$ 22,787	$ -	$ -	$ -
Bonds	1,042,995	30,139	0	58,879	91,532
VCWRLF	69,704	21,658	21,658	14,418	11,971
Cash	1,194,656	58,802	89,708	100,852	105,823
Grants and Other Reimbursements	12,061	5,810	3,141	210	-
Transfer from Debt Service Reserve Fund	7,797	804	494	642	674
Total Capital Resources	2,350,000	140,000	115,000	175,000	210,000
Capital Expenditures	2,350,000	140,000	115,000	175,000	210,000
End Capital Reserves	$ -	$ -	$ -	$ -	$ -

Capital Expenditures (in thousands)	Total FY-2018 to FY-2027	FY-2018	FY-2019	FY-2020	FY-2021
Administration	$ 2,507	$ 1,373	$ 567	$ 567	$ -
Army Base	27,827	2,148	1,250	-	1,785
Atlantic	79,350	13,819	25,219	14,333	2,740
Boat Harbor	79,977	11,080	13,492	14,499	14,327
Chesapeake-Elizabeth	125,470	7,589	12,158	56,703	27,526
James River	36,433	8,310	4,352	4,146	8,962
Middle Peninsula	12,164	5,368	5,456	932	408
Nansemond	47,557	11,167	16,620	11,598	5,547
Surry	2,850	104	895	1,850	-
Virginia Initiative Plant	81,822	23,289	2,289	6,075	18,113
Williamsburg	6,417	509	1,378	2,182	2,034
York River	16,608	2,185	1,210	493	879
General	879,016	53,058	17,876	19,305	67,950
Future Improvements	849,986	-	9,983	33,985	49,728
Subtotal	2,247,983	140,000	112,745	166,667	200,000
Contingency	102,017	-	2,255	8,333	10,000
Total Expenditures	$ 2,350,000	$140,000	$115,000	$175,000	$210,000

Capital Budget

CIP Budget Forecast (in thousands)	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027
Begin Capital Reserves	$ -	$ -	$ -	$ -	$ -	$ -
Bonds	80,201	155,273	141,342	178,214	158,431	148,985
VCWRLF	-	-	-	-	-	-
Cash	138,072	134,025	156,080	120,854	140,548	149,892
Grants and Other Reimbursements	1,000	-	1,900	-	-	-
Transfer from Debt Service Reserve Fund	727	702	679	933	1,021	1,123
Total Capital Resources	220,000	290,000	300,000	300,000	300,000	300,000
Capital Expenditures	220,000	290,000	300,000	300,000	300,000	300,000
End Capital Reserves	$ -	$ -	$ -	$ -	$ -	$ -

Capital Expenditures (in thousands)	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027
Administration	$ -	$ -	$ -	$ -	$ -	$ -
Army Base	5,282	14,882	2,480	-	-	-
Atlantic	1,428	3,513	8,734	9,565	-	-
Boat Harbor	15,027	11,547	4	-	-	-
Chesapeake-Elizabeth	2,373	3,226	3,033	1,343	6,174	5,343
James River	9,851	813	-	-	-	-
Middle Peninsula	-	-	-	-	-	-
Nansemond	151	151	2,322	-	-	-
Surry	-	-	-	-	-	-
Virginia Initiative Plant	15,632	6,753	4,918	4,753	-	-
Williamsburg	314	-	-	-	-	-
York River	1,566	3,779	1,794	1,508	2,255	939
General	89,216	103,488	132,117	152,360	125,606	118,041
Future Improvements	68,684	128,038	130,311	116,186	151,680	161,391
Subtotal	209,524	276,190	285,714	285,714	285,714	285,714
Contingency	10,476	13,810	14,286	14,286	14,286	14,286
Total Expenditures	$220,000	$290,000	$300,000	$300,000	$300,000	$300,000

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2018 to FY-2027	FY-2018	FY-2019	FY-2020	FY-2021
Administration						
AD010400	Environmental Data Management System	$ 582	$ 582	$ -	$ -	$ -
AD012000	Water Quality Department Work Space Expansion-Redesign	$ 224	$ 224	$ -	$ -	$ -
AD012100	Asset Management Implementation	$ 1,700	$ 567	$ 567	$ 567	$ -
	Subtotal	$ 2,507	$ 1,373	$ 567	$ 567	$ -
Army Base						
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	$ 22,339	$ -	$ -	$ -	$ 1,607
AB010100	Army Base Treatment Plant Improvements - Phase III	$ 1,848	$ 1,848	$ -	$ -	$ -
AB010500	Section W Force Main Replacement	$ 2,090	$ -	$ -	$ -	$ 178
AB011600	Army Base Treatment Plant Biosolids Loading Facility	$ 1,550	$ 300	$ 1,250	$ -	$ -
	Subtotal	$ 27,827	$ 2,148	$ 1,250	$ -	$ 1,785
Atlantic						
AT011410	Providence Road Interim Pressure Reducing Station	$ 661	$ 661	$ -	$ -	$ -
AT011510	Shipps Corner Interim Pressure Reducing Station	$ 1,514	$ 1,514	$ -	$ -	$ -
AT011520	Shipps Corner Pressure Reducing Station Modifications	$ 13,933	$ -	$ -	$ -	$ 662
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	$ 4,185	$ -	$ -	$ -	$ -
AT012000	Atlantic Treatment Plant Administration Building Renovation and Expansion	$ 2,654	$ 2,654	$ -	$ -	$ -
AT012910	Atlantic Treatment Plant FOG Receiving Station	$ 3,495	$ 1,075	$ 1,075	$ 1,075	$ 269
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	$ 1,479	$ -	$ 70	$ 80	$ 615
AT013100	South Norfolk Area Gravity Sewer Improvements	$ 5,141	$ -	$ -	$ -	$ 314
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	$ 243	$ -	$ -	$ -	$ -
AT013320	Atlantic Treatment Plant Primary Clarifiers 1 thru 4 Automated Scum Removal	$ 533	$ 533	$ -	$ -	$ -
AT013500	Atlantic Treatment Plant Thermal Hydrolysis Process	$ 42,863	$ 6,890	$ 22,550	$ 12,576	$ 847
AT013600	Atlantic Treatment Plant Motor Control Center Replacements	$ 495	$ 239	$ 256	$ -	$ -
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	$ 295	$ 66	$ 98	$ 98	$ 33
AT013900	Atlantic Treatment Plant Influent Screen Expansion	$ 1,859	$ 187	$ 1,169	$ 503	$ -
	Subtotal	$ 79,350	$ 13,819	$ 25,219	$ 14,333	$ 2,740
Boat Harbor						
BH010000	33rd Street Pump Station Replacement Rehabilitation	$ 227	$ 227	$ -	$ -	$ -
BH010100	58th Street Connecting Sewer Rehabilitation	$ 368	$ 368	$ -	$ -	$ -
BH011600	Bridge Street Pump Station Replacement	$ 5,529	$ 5,529	$ -	$ -	$ -
BH012000	Hampton Trunk Sewer Extension Division E Gravity Replacement	$ 703	$ 703	$ -	$ -	$ -
BH012700	Hampton Trunk Sewer Extension Division B - Claremont Force Main Replacement	$ 4,639	$ 2,418	$ 2,218	$ 3	$ -
BH013000	Willard Avenue Pump Station Upgrades	$ 5,320	$ -	$ 502	$ 2,751	$ 2,067
BH013400	Bridge Street Siphon and Vent Relocation Replacement	$ 239	$ 239	$ -	$ -	$ -
BH013700	Ferguson Park Interceptor Force Main - Bridge Span Relocation	$ 911	$ 911	$ -	$ -	$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	$ 3,200	$ -	$ -	$ -	$ 99
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	$ 11,172	$ -	$ 745	$ 2,572	$ 4,277
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	$ 2,013	$ -	$ -	$ -	$ 16
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	$ 9,664	$ 286	$ 337	$ 1,334	$ 4,865
BH014700	Boat Harbor Outlet Sewer Improvements	$ 3,429	$ 204	$ 114	$ 2,071	$ 1,040
BH014800	Jefferson Avenue Extension Gravity Improvements	$ 2,324	$ 127	$ 1,371	$ 826	$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	$ 3,578	$ -	$ -	$ 170	$ 174
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	$ 5,721	$ 60	$ 3,566	$ 2,095	$ -
BH015100	Bloxoms Corner Force Main Replacement	$ 2,633	$ -	$ -	$ 100	$ 135
BH015300	Boat Harbor Treatment Plant Switchgear and Controls Replacements	$ 6,986	$ 10	$ 4,640	$ 2,335	$ -
BH015500	LaSalle Avenue Interceptor Force Main Replacement	$ 1,765	$ -	$ -	$ 65	$ 1,059
BH015600	Hampton Trunk A and B Replacement – Jefferson Ave. to Buxton	$ 9,557	$ -	$ -	$ 176	$ 596
	Subtotal	$ 79,977	$ 11,080	$ 13,492	$ 14,499	$ 14,327
Note:	Fats, Oils and Grease (FOG) Virginia Department of Transportation (VDOT)					

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027
Administration							
AD010400	Environmental Data Management System	$ -	$ -	$ -	$ -	$ -	$ -
AD012000	Water Quality Department Work Space Expansion-Redesign	$ -	$ -	$ -	$ -	$ -	$ -
AD012100	Asset Management Implementation	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -
Army Base							
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	$ 4,832	$ 13,629	$ 2,271	$ -	$ -	$ -
AB010100	Army Base Treatment Plant Improvements - Phase III	$ -	$ -	$ -	$ -	$ -	$ -
AB010500	Section W Force Main Replacement	$ 450	$ 1,253	$ 209	$ -	$ -	$ -
AB011600	Army Base Treatment Plant Biosolids Loading Facility	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 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	$ 376	$ 251	$ 5,206	$ 7,438	$ -	$ -
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	$ 59	$ 214	$ 1,975	$ 1,937	$ -	$ -
AT012000	Atlantic Treatment Plant Administration Building Renovation and Expansion	$ -	$ -	$ -	$ -	$ -	$ -
AT012910	Atlantic Treatment Plant FOG Receiving Station	$ -	$ -	$ -	$ -	$ -	$ -
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	$ 713	$ -	$ -	$ -	$ -	$ -
AT013100	South Norfolk Area Gravity Sewer Improvements	$ 279	$ 3,032	$ 1,516	$ -	$ -	$ -
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	$ -	$ 16	$ 37	$ 190	$ -	$ -
AT013320	Atlantic Treatment Plant Primary Clarifiers 1 thru 4 Automated Scum Removal	$ -	$ -	$ -	$ -	$ -	$ -
AT013500	Atlantic Treatment Plant Thermal Hydrolysis Process	$ -	$ -	$ -	$ -	$ -	$ -
AT013600	Atlantic Treatment Plant Motor Control Center Replacements	$ -	$ -	$ -	$ -	$ -	$ -
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	$ -	$ -	$ -	$ -	$ -	$ -
AT013900	Atlantic Treatment Plant Influent Screen Expansion	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 1,428	$ 3,513	$ 8,734	$ 9,565	$ -	$ -
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 Replacement	$ -	$ -	$ -	$ -	$ -	$ -
BH013000	Willard Avenue Pump Station Upgrades	$ -	$ -	$ -	$ -	$ -	$ -
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	$ 1,175	$ 1,926	$ -	$ -	$ -	$ -
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	$ 3,571	$ 8	$ -	$ -	$ -	$ -
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	$ 584	$ 1,413	$ -	$ -	$ -	$ -
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	$ 2,843	$ -	$ -	$ -	$ -	$ -
BH014700	Boat Harbor Outlet Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH014800	Jefferson Avenue Extension Gravity Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	$ 1,107	$ 2,122	$ 4	$ -	$ -	$ -
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH015100	Bloxoms Corner Force Main Replacement	$ 714	$ 1,684	$ -	$ -	$ -	$ -
BH015300	Boat Harbor Treatment Plant Switchgear and Controls Replacements	$ -	$ -	$ -	$ -	$ -	$ -
BH015500	LaSalle Avenue Interceptor Force Main Replacement	$ 641	$ -	$ -	$ -	$ -	$ -
BH015600	Hampton Trunk A and B Replacement – Jefferson Ave. to Buxton	$ 4,391	$ 4,393	$ -	$ -	$ -	$ -
	Subtotal	$ 15,027	$ 11,547	$ 4	$ -	$ -	$ -
Note:	Fats, Oils and Grease (FOG) Virginia Department of Transportation (VDOT)						

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2018 to FY-2027	FY-2018	FY-2019	FY-2020	FY-2021
Chesapeake-Elizabeth						
CE010400	Independence Boulevard Pressure Reducing Station Modifications	$ 2,544	$ 278	$ -	$ 853	$ 1,413
CE010520	Newtown Road Interceptor Force Main Relocation	$ 12,961	$ 457	$ 291	$ 1,700	$ -
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	$ 1,425	$ -	$ -	$ -	$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	$ 1,685	$ -	$ -	$ -	$ 20
CE011700	Western Trunk Force Main Replacement	$ 3,641	$ 128	$ 83	$ 1,929	$ 1,501
CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	$ 10,759	$ -	$ 478	$ 1,674	$ 717
CE011821	Elbow Road Pressure Reducing Station	$ 7,397	$ 521	$ 1,398	$ 4,382	$ 1,096
CE011822	Providence Road PRS Upgrades and Interconnect Force Main	$ 4,389	$ 370	$ 1,355	$ 2,459	$ 205
CE011823	Virginia Beach Boulevard Force Main Phase VI	$ 13,128	$ 682	$ 613	$ 6,513	$ 5,321
CE011824	Lynnhaven Parkway Force Main Phase II	$ 16,718	$ 953	$ 1,500	$ 9,510	$ 4,755
CE011825	Salem Road Interconnect Force Main	$ 1,205	$ 88	$ 174	$ 943	$ -
CE011826	Providence Road Off-Line Storage Facility	$ 21,283	$ 1,041	$ 1,492	$ 13,754	$ 4,996
CE011827	Atlantic PRS Reliability Modifications	$ 6,292	$ 563	$ 174	$ 3,396	$ 2,158
CE011828	Kempsville PRS Reliability Modifications	$ 2,660	$ 257	$ 51	$ 1,179	$ 1,174
CE011829	Laskin Road PRS Reliability Modifications	$ 2,670	$ 258	$ 52	$ 1,183	$ 1,178
CE01182A	Pine Tree PRS Reliability Modifications	$ 2,885	$ 278	$ 1,051	$ 1,555	$ -
CE011830	Little Creek Pump Station Modifications	$ 698	$ 71	$ 44	$ 299	$ 283
CE011831	Virginia Beach City Pump Station Upgrades, Phase I	$ 3,456	$ 468	$ 1,360	$ 1,628	$ -
CE011832	Virginia Beach City Pump Station Upgrades, Phase II	$ 1,849	$ 122	$ 95	$ 725	$ 907
CE011833	Virginia Beach City Pump Station Upgrades, Phase III	$ 826	$ 111	$ 152	$ 564	$ -
CE011834	Virginia Beach City Pump Station Upgrades, Phase IV	$ 1,806	$ 300	$ 49	$ 644	$ 813
CE011835	Virginia Beach City Pump Station Upgrades, Phase V	$ 2,232	$ 359	$ 64	$ 819	$ 989
CE012000	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements (I-264 VDOT Betterment)	$ 118	$ 73	$ 45	$ -	$ -
CE012100	Southern Blvd and Witchduck Rd IFM Improvements	$ 2,843	$ 211	$ 1,638	$ 994	$ -
	Subtotal	$ 125,470	$ 7,589	$ 12,158	$ 56,703	$ 27,526
JR010100	Center Avenue Pump Station Service Area I I Remediation	$ 166	$ 166	$ -	$ -	$ -
JR010600	Lucas Creek Pump Station Upgrade	$ 6,347	$ -	$ -	$ 133	$ 303
JR010820	Warwick Boulevard to James River Influent Force Main Section 2	$ 723	$ 723	$ -	$ -	$ -
JR011100	Warwick Boulevard to James River Influent Force Main Section 1	$ 996	$ 996	$ -	$ -	$ -
JR011300	Patrick Henry Pump Station Interconnection Force Main	$ 3,284	$ 87	$ 320	$ 1,370	$ 1,507
JR011500	Center Avenue I-I Remediation Phase II	$ 235	$ 235	$ -	$ -	$ -
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	$ 9,407	$ 333	$ 580	$ 2,135	$ 5,442
JR012020	Warwick Boulevard to James River Influent Force Main Section 3, Phase 2	$ 1,516	$ 1,517	$ -	$ -	$ -
JR012100	Huxley to Middle Ground Force Main Extension	$ 3,361	$ 625	$ 2,730	$ 5	$ -
JR012800	James River Treatment Plant Hydraulic Improvements	$ 100	$ 100	$ -	$ -	$ -
JR012900	James River Treatment Plant Centrate Equalization Improvements	$ 100	$ 100	$ -	$ -	$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	$ 1,183	$ -	$ 31	$ 122	$ 430
JR013100	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I	$ 4,005	$ 3,429	$ 576	$ -	$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	$ 5,009	$ -	$ 115	$ 381	$ 1,280
	Subtotal	$ 36,433	$ 8,310	$ 4,352	$ 4,146	$ 8,962
Middle Peninsula						
MP011400	Mathews Collection System Vacuum Valve Replacement	$ 574	$ 574	$ -	$ -	$ -
MP011700	Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ 3,420	$ 2,400	$ 1,020	$ -	$ -
MP011800	Kirby Street Sanitary Sewer Rehabilitation	$ 495	$ 495	$ -	$ -	$ -
MP012000	King William Treatment Plant Improvements	$ 2,069	$ 778	$ 1,291	$ -	$ -
MP012400	West Point Treatment Plant Tertiary Filter	$ 460	$ 412	$ 48	$ -	$ -
MP012500	Mathews Main Vacuum Pump Station Replacement	$ 1,672	$ 140	$ 1,176	$ 357	$ -
MP012700	Middle Peninsula Sewer Lateral Improvements	$ 23,750	$ -	$ -	$ -	$ -
MP012900	Mathews Nursing Home Line Vacuum Sewer Main Improvements	$ 544	$ 80	$ 465	$ -	$ -
MP013000	Small Communities Collection System Rehabilitation Phase I	$ 1,900	$ 342	$ 575	$ 575	$ 408
MP013100	Small Communities Mobile Dewatering Facilities Installation	$ 1,030	$ 148	$ 881	$ -	$ -
	Subtotal	$ 12,164	$ 5,368	$ 5,456	$ 932	$ 408

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027
Chesapeake-Elizabeth							
CE010400	Independence Boulevard Pressure Reducing Station Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE010520	Newtown Road Interceptor Force Main Relocation	$ -	$ -	$ -	$ -	$ 5,170	$ 5,343
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	$ 509	$ 916	$ -	$ -	$ -	$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	$ 126	$ 605	$ 934	$ -	$ -	$ -
CE011700	Western Trunk Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	$ 1,738	$ 1,705	$ 2,100	$ 1,343	$ 1,004	$ -
CE011821	Elbow Road Pressure Reducing Station	$ -	$ -	$ -	$ -	$ -	$ -
CE011822	Providence Road PRS Upgrades and Interconnect Force Main	$ -	$ -	$ -	$ -	$ -	$ -
CE011823	Virginia Beach Boulevard Force Main Phase VI	$ -	$ -	$ -	$ -	$ -	$ -
CE011824	Lynnhaven Parkway Force Main Phase II	$ -	$ -	$ -	$ -	$ -	$ -
CE011825	Salem Road Interconnect Force Main	$ -	$ -	$ -	$ -	$ -	$ -
CE011826	Providence Road Off-Line Storage Facility	$ -	$ -	$ -	$ -	$ -	$ -
CE011827	Atlantic PRS Reliability Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE011828	Kempsville PRS Reliability Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE011829	Laskin Road PRS Reliability Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE01182A	Pine Tree PRS Reliability Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE011830	Little Creek Pump Station Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE011831	Virginia Beach City Pump Station Upgrades, Phase I	$ -	$ -	$ -	$ -	$ -	$ -
CE011832	Virginia Beach City Pump Station Upgrades, Phase II	$ -	$ -	$ -	$ -	$ -	$ -
CE011833	Virginia Beach City Pump Station Upgrades, Phase III	$ -	$ -	$ -	$ -	$ -	$ -
CE011834	Virginia Beach City Pump Station Upgrades, Phase IV	$ -	$ -	$ -	$ -	$ -	$ -
CE011835	Virginia Beach City Pump Station Upgrades, Phase V	$ -	$ -	$ -	$ -	$ -	$ -
CE012000	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements (I-264 VDOT Betterment)	$ -	$ -	$ -	$ -	$ -	$ -
CE012100	Southern Blvd and Witchduck Rd IFM Improvements	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 2,373	$ 3,226	$ 3,033	$ 1,343	$ 6,174	$ 5,343
JR010100	Center Avenue Pump Station Service Area I I Remediation	$ -	$ -	$ -	$ -	$ -	$ -
JR010600	Lucas Creek Pump Station Upgrade	$ 5,912	$ -	$ -	$ -	$ -	$ -
JR010820	Warwick Boulevard to James River Influent Force Main Section 2	$ -	$ -	$ -	$ -	$ -	$ -
JR011100	Warwick Boulevard to James River Influent Force Main Section 1	$ -	$ -	$ -	$ -	$ -	$ -
JR011300	Patrick Henry Pump Station Interconnection Force Main	$ -	$ -	$ -	$ -	$ -	$ -
JR011500	Center Avenue I-I Remediation Phase II	$ -	$ -	$ -	$ -	$ -	$ -
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	$ 917	$ -	$ -	$ -	$ -	$ -
JR012020	Warwick Boulevard to James River Influent Force Main Section 3, Phase 2	$ -	$ -	$ -	$ -	$ -	$ -
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	$ 600	$ -	$ -	$ -	$ -	$ -
JR013100	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I	$ -	$ -	$ -	$ -	$ -	$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	$ 2,422	$ 813	$ -	$ -	$ -	$ -
	Subtotal	$ 9,851	$ 813	$ -	$ -	$ -	$ -
Middle Peninsula							
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	$ -	$ -	$ -	$ -	$ -	$ -
MP012700	Middle Peninsula Sewer Lateral Improvements	$ -	$ -	$ -	$ -	$ -	$ -
MP012900	Mathews Nursing Home Line Vacuum Sewer Main Improvements	$ -	$ -	$ -	$ -	$ -	$ -
MP013000	Small Communities Collection System Rehabilitation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
MP013100	Small Communities Mobile Dewatering Facilities Installation	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2018 to FY-2027	FY-2018	FY-2019	FY-2020	FY-2021
Nansemond						
NP010620	Suffolk Pump Station Replacement	$ 10,107	$ 472	$ 606	$ 4,332	$ 4,698
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	$ 1,250	$ 2	$ 833	$ 415	$ -
NP011810	Holland Road 24-Inch Interceptor Force Main - Section A Phase I	$ 3,174	$ 3,174	$ -	$ -	$ -
NP012200	Pughsville Pressure Reducing Station Upgrades	$ 1,375	$ 1,375	$ -	$ -	$ -
NP012400	Western Branch Sewer System Gravity Improvements	$ 2,625	$ -	$ -	$ -	$ -
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	$ 7,512	$ 355	$ 1,503	$ 5,220	$ 435
NP012600	Deep Creek Interceptor Force Main Replacement	$ 5,587	$ 1,047	$ 3,405	$ 1,135	$ -
NP012700	Nansemond Treatment Plant AAA Tank Coating	$ 928	$ 928	$ -	$ -	$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	$ 1,904	$ 497	$ 497	$ 497	$ 414
NP013300	Nansemond Treatment Plant Digester Rehabilitation	$ 426	$ 426	$ -	$ -	$ -
NP013400	Deep Creek Interceptor Force Main Risk Mitigation Project	$ 3,310	$ 250	$ 3,060	$ -	$ -
NP013500	Nansemond Treatment Plant Land Acquisition-Land Stabilization	$ 1,734	$ 306	$ 1,428	$ -	$ -
NP013600	Nansemond Treatment Plant Land Acquisition-Structure Demolition	$ 1,785	$ -	$ 1,785	$ -	$ -
NP013700	Nansemond Treatment Plant Struvite Recovery Facility Improvements	$ 5,840	$ 2,336	$ 3,504	$ -	$ -
	Subtotal	$ 47,557	$ 11,167	$ 16,620	$ 11,598	$ 5,547
Surry						
SU010000	Town of Surry Pump Station and Discharge Force Main	$ 2,300	$ 75	$ 374	$ 1,850	$ -
SU010100	Surry Treatment Plant Infrastructure Improvements	$ 550	$ 29	$ 521	$ -	$ -
	Subtotal	$ 2,850	$ 104	$ 895	$ 1,850	$ -
Virginia Initiative Plant						
VP010910	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 1 (Norfolk Fairmount Park Phase IX)	$ 803	$ 803	$ -	$ -	$ -
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	$ 2,864	$ -	$ -	$ -	$ -
VP011020	Park Avenue Pump Station Replacement	$ 5,027	$ 155	$ 207	$ 662	$ 2,287
VP011600	Sewerage System Improvements Division C, Phase II Replacement	$ 1,600	$ 1,600	$ -	$ -	$ -
VP014010	Ferebee Avenue Pump Station Replacement	$ 4,941	$ 153	$ 293	$ 2,248	$ 2,248
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	$ 5,974	$ 79	$ 260	$ 2,492	$ 3,144
VP014700	Ingleside Road Pump Station Replacement	$ 2,925	$ -	$ -	$ -	$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	$ 1,029	$ -	$ -	$ -	$ -
VP015300	Larchmont Area Pump Station Replacements	$ 13,352	$ 94	$ 493	$ 288	$ 4,970
VP015400	Layfayette Norview-Estabrook Pump Station Replacements	$ 15,905	$ 56	$ 615	$ 349	$ 5,367
VP015800	Sanitary Sewer System Portsmouth Va Western Diversion Force Main Relcoation (VDOT Turnpike Road Betterment)	$ 86	$ 86	$ -	$ -	$ -
VP016320	Virginia Initiative Plant Nutrient Reduction Improvements Contract B	$ 19,603	$ 19,182	$ 421	$ -	$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	$ 1,905	$ -	$ -	$ 35	$ 98
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	$ 2,341	$ -	$ -	$ -	$ -
VP017000	VIP Treatment Plant Incinerator Scrubber and ID Fans Replacement	$ 18	$ 18	$ -	$ -	$ -
VP017100	Central Norfolk Area Gravity Sewer Improvements	$ 2,386	$ -	$ -	$ -	$ -
VP017300	Rodman Avenue Pump Station Wet Well Rehabilitation	$ 1,063	$ 1,063	$ -	$ -	$ -
	Subtotal	$ 81,822	$ 23,289	$ 2,289	$ 6,075	$ 18,113
Williamsburg						
WB010700	Williamsburg Interceptor Force Main Contract A Replacement	$ 220	$ 220	$ -	$ -	$ -
WB012200	North Trunk Force Main Part B Replacement	$ 700	$ 9	$ 515	$ 176	$ -
WB012400	Williamsburg Treatment Plant Switchgear Replacement	$ 4,070	$ 280	$ 796	$ 1,884	$ 1,109
WB012500	Lodge Road Pump Station Upgrades	$ 1,428	$ -	$ 66	$ 122	$ 925
	Subtotal	$ 6,417	$ 509	$ 1,378	$ 2,182	$ 2,034
York River						
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	$ 2,940	$ -	$ -	$ -	$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	$ 4,007	$ -	$ -	$ 64	$ 312
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	$ 5,266	$ -	$ -	$ -	$ -
YR011900	Bethel-Poquoson Force Main Part III Replacement	$ 999	$ -	$ 666	$ 333	$ -
YR012220	York River Treatment Plant Digester Cover Replacement Phase II	$ 1,127	$ 882	$ 245	$ -	$ -
YR013110	York River Treatment Plant Outfall and Diffuser Modifications	$ 825	$ 825	$ -	$ -	$ -
YR013140	York River Treatment Plant Environmental Studies and Habitat Enhancement	$ 777	$ 478	$ 299	$ -	$ -
YR013500	Westminster Drive Force Main Replacement	$ 668	$ -	$ -	$ 96	$ 567
	Subtotal	$ 16,608	$ 2,185	$ 1,210	$ 493	$ 879

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027
Nansemond							
NP010620	Suffolk Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP011810	Holland Road 24-Inch Interceptor Force Main - Section A Phase I	$ -	$ -	$ -	$ -	$ -	$ -
NP012200	Pughsville Pressure Reducing Station Upgrades	$ -	$ -	$ -	$ -	$ -	$ -
NP012400	Western Branch Sewer System Gravity Improvements	$ 151	$ 151	$ 2,322	$ -	$ -	$ -
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
NP012600	Deep Creek Interceptor Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP012700	Nansemond Treatment Plant AAA Tank Coating	$ -	$ -	$ -	$ -	$ -	$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	$ -	$ -	$ -	$ -	$ -	$ -
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	$ -	$ -	$ -	$ -	$ -	$ -
NP013700	Nansemond Treatment Plant Struvite Recovery Facility Improvements	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 151	$ 151	$ 2,322	$ -	$ -	$ -
Surry							
SU010000	Town of Surry Pump Station and Discharge Force Main	$ -	$ -	$ -	$ -	$ -	$ -
SU010100	Surry Treatment Plant Infrastructure Improvements	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -
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	$ 71	$ 142	$ 1,224	$ 1,427	$ -	$ -
VP011020	Park Avenue Pump Station Replacement	$ 1,715	$ -	$ -	$ -	$ -	$ -
VP011600	Sewerage System Improvements Division C, Phase II Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP014010	Ferebee Avenue Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP014700	Ingleside Road Pump Station Replacement	$ -	$ 213	$ 1,023	$ 1,689	$ -	$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	$ 103	$ 926	$ -	$ -	$ -	$ -
VP015300	Larchmont Area Pump Station Replacements	$ 5,659	$ 1,848	$ -	$ -	$ -	$ -
VP015400	Layfayette Norview-Estabrook Pump Station Replacements	$ 6,766	$ 2,752	$ -	$ -	$ -	$ -
VP015800	Sanitary Sewer System Portsmouth Va Western Diversion Force Main Relcoation (VDOT Turnpike Road Betterment)	$ -	$ -	$ -	$ -	$ -	$ -
VP016320	Virginia Initiative Plant Nutrient Reduction Improvements Contract B	$ -	$ -	$ -	$ -	$ -	$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	$ 1,229	$ 543	$ -	$ -	$ -	$ -
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	$ 44	$ 131	$ 1,667	$ 500	$ -	$ -
VP017000	VIP Treatment Plant Incinerator Scrubber and ID Fans Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP017100	Central Norfolk Area Gravity Sewer Improvements	$ 46	$ 199	$ 1,005	$ 1,137	$ -	$ -
VP017300	Rodman Avenue Pump Station Wet Well Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 15,632	$ 6,753	$ 4,918	$ 4,753	$ -	$ -
Williamsburg							
WB010700	Williamsburg Interceptor Force Main Contract A Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012200	North Trunk Force Main Part B Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012400	Williamsburg Treatment Plant Switchgear Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012500	Lodge Road Pump Station Upgrades	$ 314	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 314	$ -	$ -	$ -	$ -	$ -
York River							
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	$ 214	$ 1,414	$ 1,312	$ -	$ -	$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	$ 1,316	$ 2,311	$ 3	$ -	$ -	$ -
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	$ 30	$ 54	$ 480	$ 1,508	$ 2,255	$ 939
YR011900	Bethel-Poquoson Force Main Part III Replacement	$ -	$ -	$ -	$ -	$ -	$ -
YR012220	York River Treatment Plant Digester Cover Replacement Phase II	$ -	$ -	$ -	$ -	$ -	$ -
YR013110	York River Treatment Plant Outfall and Diffuser Modifications	$ -	$ -	$ -	$ -	$ -	$ -
YR013140	York River Treatment Plant Environmental Studies and Habitat Enhancement	$ -	$ -	$ -	$ -	$ -	$ -
YR013500	Westminster Drive Force Main Replacement	$ 5	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 1,566	$ 3,779	$ 1,794	$ 1,508	$ 2,255	$ 939

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2018 to FY-2027	FY-2018	FY-2019	FY-2020	FY-2021
General						
GN010730	Horizontal Valve Replacement Phase III	$ 3,041	$ -	$ 351	$ 577	$ 577
GN011700	Pump Station Generators	$ 5,181	$ 1,672	$ 1,239	$ 1,239	$ 1,032
GN012110	Regional Hydraulic Model and Other Consent Order Requirements	$ 6,180	$ 4,131	$ 2,049	$ -	$ -
GN012113	Condition Assessment - Pipeline Prompts Repairs	$ 3,700	$ 3,700	$ -	$ -	$ -
GN012114	Condition Assessment - Gravity Main Pipeline Inspection	$ 950	$ 950	$ -	$ -	$ -
GN012115	Continued Condition Assessment	$ 1,750	$ 1,750	$ -	$ -	$ -
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	$ 6,074	$ 1,617	$ 1,617	$ 1,617	$ 1,223
GN012140	Pump Station Wet Well Rehabilitation Phase I	$ 2,963	$ 726	$ 789	$ 789	$ 658
GN012151	Locality Hydraulic Model	$ 800	$ 400	$ 400	$ -	$ -
GN012800	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ 8,828	$ 6,188	$ 2,639	$ -	$ -
GN013300	Treatment Plant Grease Handling Facilities	$ 1,984	$ 1,287	$ 697	$ -	$ -
GN013900	South Shore Interceptors Air Vent Rehabilitation	$ 1,759	$ 1,759	$ -	$ -	$ -
GN014500	Renewable Energy Facility and Associated Plant Improvements	$ 181,996	$ -	$ -	$ -	$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	$ 4,352	$ -	$ 78	$ 216	$ 207
GN015000	South Shore Gravity Sewer Improvements Phase I	$ 710	$ -	$ -	$ -	$ 36
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	$ 502	$ 25	$ 477	$ -	$ -
GN015300	Interceptor System Valve Improvements Phase I	$ 2,514	$ -	$ 71	$ 152	$ 523
GN015400	South Shore Aerial Crossing Improvements	$ 253	$ -	$ -	$ 4	$ 14
GN015700	Aquifer Replenishment System (SWIFT)	$ 8,449	$ 8,449	$ -	$ -	$ -
GN015800	North Shore Automated Diversion Facilities	$ 1,432	$ 9	$ 148	$ 1,040	$ 235
GN016200	Sustainable Water Phase 3 – Demonstration Facility (SWIFT)	$ 20,028	$ 19,622	$ 375	$ 31	$ -
GN016300	Sustainable Water Initiative for Tomorrow (SWIFT)	$ 1,066,000	$ -	$ 5,187	$ 13,641	$ 63,445
GN016400	Treatment Plant Dewatering Replacement Phase I	$ 1,680	$ 672	$ 1,008	$ -	$ -
GN016500	JR and NTP Dewatering Building Mod and Centrifuge Replacement	$ 852	$ 100	$ 752	$ -	$ -
	Subtotal	$ 879,016	$ 53,058	$ 17,876	$ 19,305	$ 67,950
Future Improvements						
IP010000	Interceptor System Expansions and Improvements	$ 38,836	$ -	$ 2,415	$ 4,400	$ 3,015
IP010100	Pump Station Expansions and Improvements	$ 19,128	$ -	$ 1,190	$ 2,167	$ 1,485
IP010200	Treatment Plant Expansions and Improvements	$ 26,210	$ -	$ -	$ -	$ -
IP010300	General Expansions and Improvements	$ 5,824	$ -	$ -	$ -	$ -
IP010400	Interceptor System Rehabilitation and Replacement	$ 38,836	$ -	$ 2,415	$ 4,400	$ 3,015
IP010500	Pump Station Rehabilitation and Replacement	$ 19,128	$ -	$ 1,190	$ 2,167	$ 1,485
IP010600	Treatment Plant Rehabilitation and Replacement	$ 26,210	$ -	$ -	$ -	$ -
IP010700	General Rehabilitation and Replacement	$ 5,824	$ -	$ -	$ -	$ -
IP010800	Regional Wet Weather Improvements	$ 1,713,034	$ -	$ -	$ 7,313	$ 17,669
IP011000	Advanced Treatment Infrastructure Upgrades	$ 905,105	$ -	$ 2,773	$ 13,536	$ 23,058
	Subtotal	$ 849,986	$ -	$ 9,983	$ 33,985	$ 49,728
	CIP TOTALS	$ 2,247,983	$ 140,000	$ 112,745	$ 166,667	$ 200,000

FY-2017 to FY-2027
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2022	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027
General							
GN010730	Horizontal Valve Replacement Phase III	$ 577	$ 577	$ 384	$ -	$ -	$ -
GN011700	Pump Station Generators	$ -	$ -	$ -	$ -	$ -	$ -
GN012110	Regional Hydraulic Model and Other Consent Order Requirements	$ -	$ -	$ -	$ -	$ -	$ -
GN012113	Condition Assessment - Pipeline Prompts Repairs	$ -	$ -	$ -	$ -	$ -	$ -
GN012114	Condition Assessment - Gravity Main Pipeline Inspection	$ -	$ -	$ -	$ -	$ -	$ -
GN012115	Continued Condition Assessment	$ -	$ -	$ -	$ -	$ -	$ -
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN012140	Pump Station Wet Well Rehabilitation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN012151	Locality Hydraulic Model	$ -	$ -	$ -	$ -	$ -	$ -
GN012800	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ -	$ -	$ -	$ -	$ -	$ -
GN013300	Treatment Plant Grease Handling Facilities	$ -	$ -	$ -	$ -	$ -	$ -
GN013900	South Shore Interceptors Air Vent Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
GN014500	Renewable Energy Facility and Associated Plant Improvements	$ -	$ -	$ -	$ -	$ -	$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	$ 2,403	$ 1,449	$ -	$ -	$ -	$ -
GN015000	South Shore Gravity Sewer Improvements Phase I	$ 63	$ 229	$ 382	$ -	$ -	$ -
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	$ -	$ -	$ -	$ -	$ -	$ -
GN015300	Interceptor System Valve Improvements Phase I	$ 1,326	$ 442	$ -	$ -	$ -	$ -
GN015400	South Shore Aerial Crossing Improvements	$ 10	$ 133	$ 92	$ -	$ -	$ -
GN015700	Aquifer Replenishment System (SWIFT)	$ -	$ -	$ -	$ -	$ -	$ -
GN015800	North Shore Automated Diversion Facilities	$ -	$ -	$ -	$ -	$ -	$ -
GN016200	Sustainable Water Phase 3 – Demonstration Facility (SWIFT)	$ -	$ -	$ -	$ -	$ -	$ -
GN016300	Sustainable Water Initiative for Tomorrow (SWIFT)	$ 84,837	$ 100,659	$ 131,258	$ 152,360	$ 125,606	$ 118,041
GN016400	Treatment Plant Dewatering Replacement Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN016500	JR and NTP Dewatering Building Mod and Centrifuge Replacement	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 89,216	$ 103,488	$ 132,117	$ 152,360	$ 125,606	$ 118,041
Future Improvements							
IP010000	Interceptor System Expansions and Improvements	$ 284	$ 1,483	$ -	$ 4,751	$ 12,605	$ 9,882
IP010100	Pump Station Expansions and Improvements	$ 140	$ 730	$ -	$ 2,340	$ 6,208	$ 4,867
IP010200	Treatment Plant Expansions and Improvements	$ -	$ -	$ -	$ 819	$ 15,087	$ 10,304
IP010300	General Expansions and Improvements	$ -	$ -	$ -	$ 182	$ 3,353	$ 2,290
IP010400	Interceptor System Rehabilitation and Replacement	$ 284	$ 1,483	$ -	$ 4,751	$ 12,605	$ 9,882
IP010500	Pump Station Rehabilitation and Replacement	$ 140	$ 730	$ -	$ 2,340	$ 6,208	$ 4,867
IP010600	Treatment Plant Rehabilitation and Replacement	$ -	$ -	$ -	$ 819	$ 15,087	$ 10,304
IP010700	General Rehabilitation and Replacement	$ -	$ -	$ -	$ 182	$ 3,353	$ 2,290
IP010800	Regional Wet Weather Improvements	$ 23,189	$ 25,829	$ 27,093	$ 27,951	$ 28,743	$ 29,070
IP011000	Advanced Treatment Infrastructure Upgrades	$ 44,645	$ 97,783	$ 103,219	$ 72,051	$ 48,431	$ 77,636
	Subtotal	$ 68,684	$ 128,038	$ 130,311	$ 116,186	$ 151,680	$ 161,391
	CIP TOTALS	$ 209,524	$ 276,190	$ 285,714	$ 285,714	$ 285,714	$ 285,714

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Virginia Beach, VA 23455
www.hrsd.com

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