Annual Budget

Fiscal Year 2019 (July 1, 2018 – June 30, 2019)

HRSD

Ensuring future generations
inherit clean waterways

HRSD Annual Budget For
Fiscal Year 2019
(July 1, 2018 – June 30, 2019)

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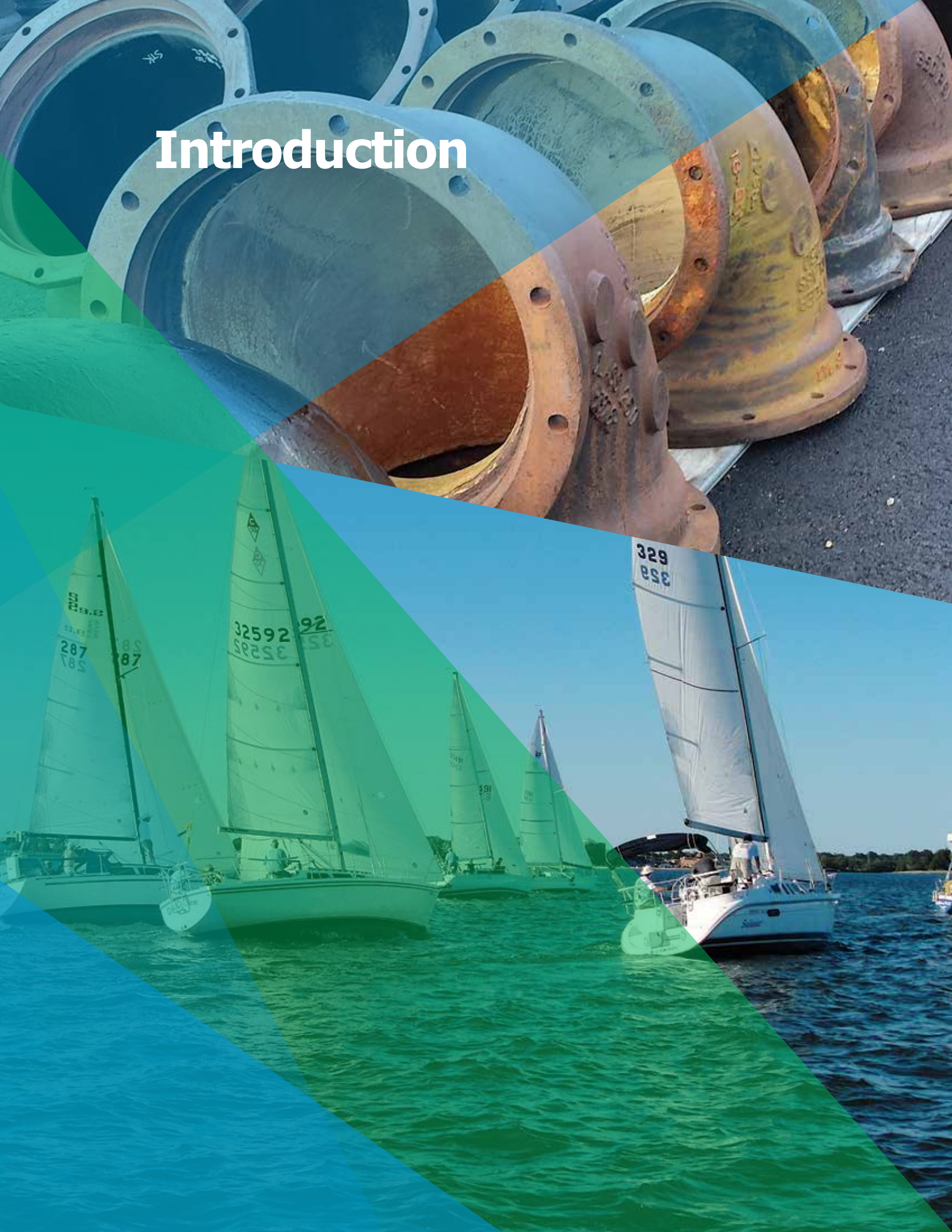


General Manager's Introduction

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 78 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 78-year investment in wastewater infrastructure.

The Governor-appointed, eight-member HRSD Commission approved this Fiscal Year-2019 budget at its regular meeting on May 22, 2018. 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 about $1 per day for this essential service, protecting public health and our treasured local 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 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 through 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 full-scale facilities 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 $2.5 billion 10-year Capital Improvement Plan. It is within that portion of our capital improvement plan that we will

reprioritize mandated projects to allow construction of 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 37 percent of HRSD's total revenue to more than 48 percent with the Fiscal Year 2019 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 2019, 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 10 cents per day.

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 78 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

June 30, 2018

COMMISSIONERS

Frederick N. Elofson, CPA, Chair

Maurice P. Lynch, PhD, Vice-Chair

Michael E. Glenn

Vishnu K. Lakdawala, PhD

Willie Levenston, Jr.

Stephen C. Rodriguez

Elizabeth A. Taraski, PhD

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, APR
Director of
Communications

COUNSEL

Kellam, Pickrell, Cox & Anderson, PC
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-2019)	836
Miles of Interceptor Systems	540 Miles
Wastewater Treated	153 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	Aa1	Aa2	n/a

Operating Budget (FY-2019) $310,262,000

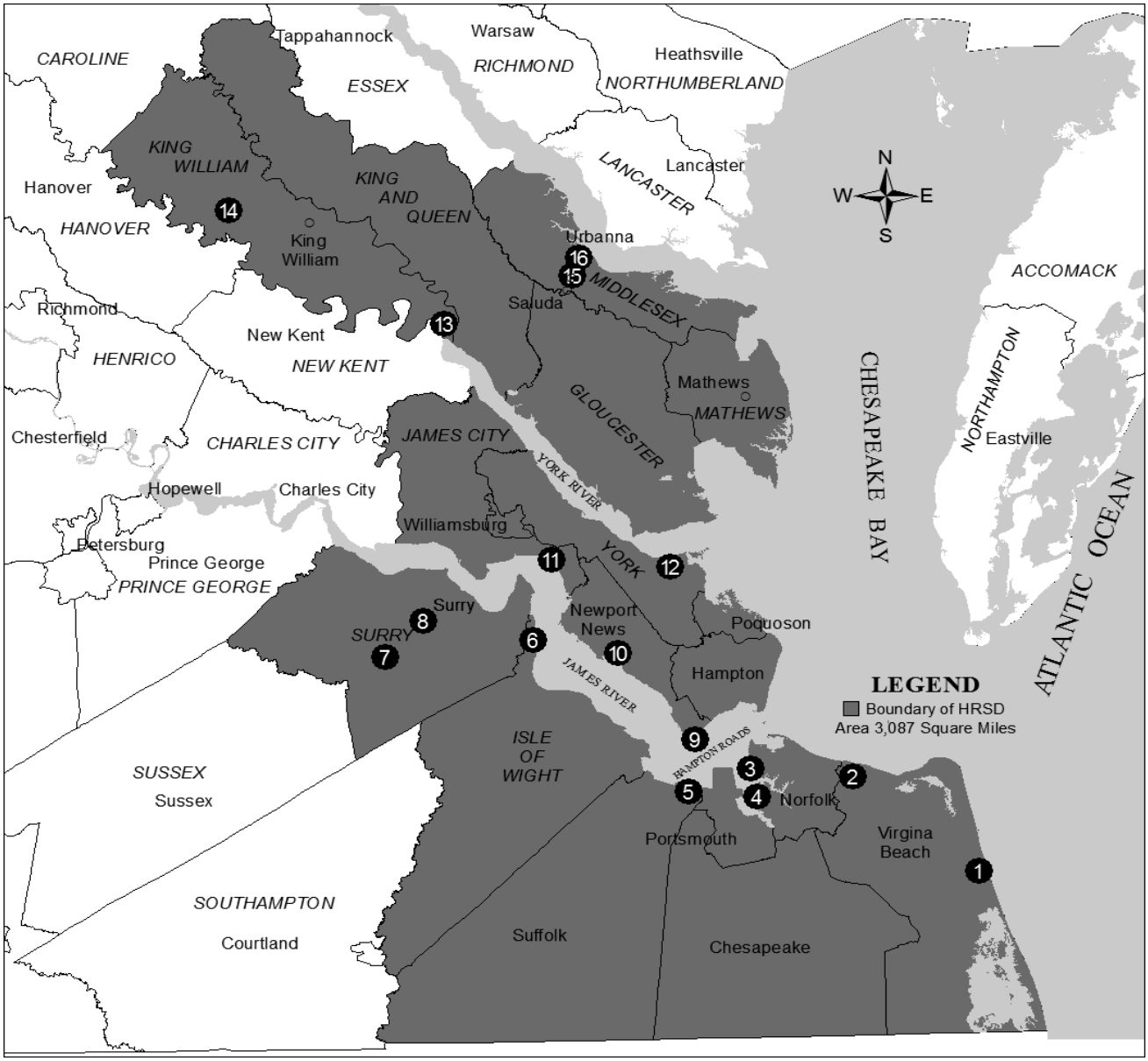
HRSD Service Area

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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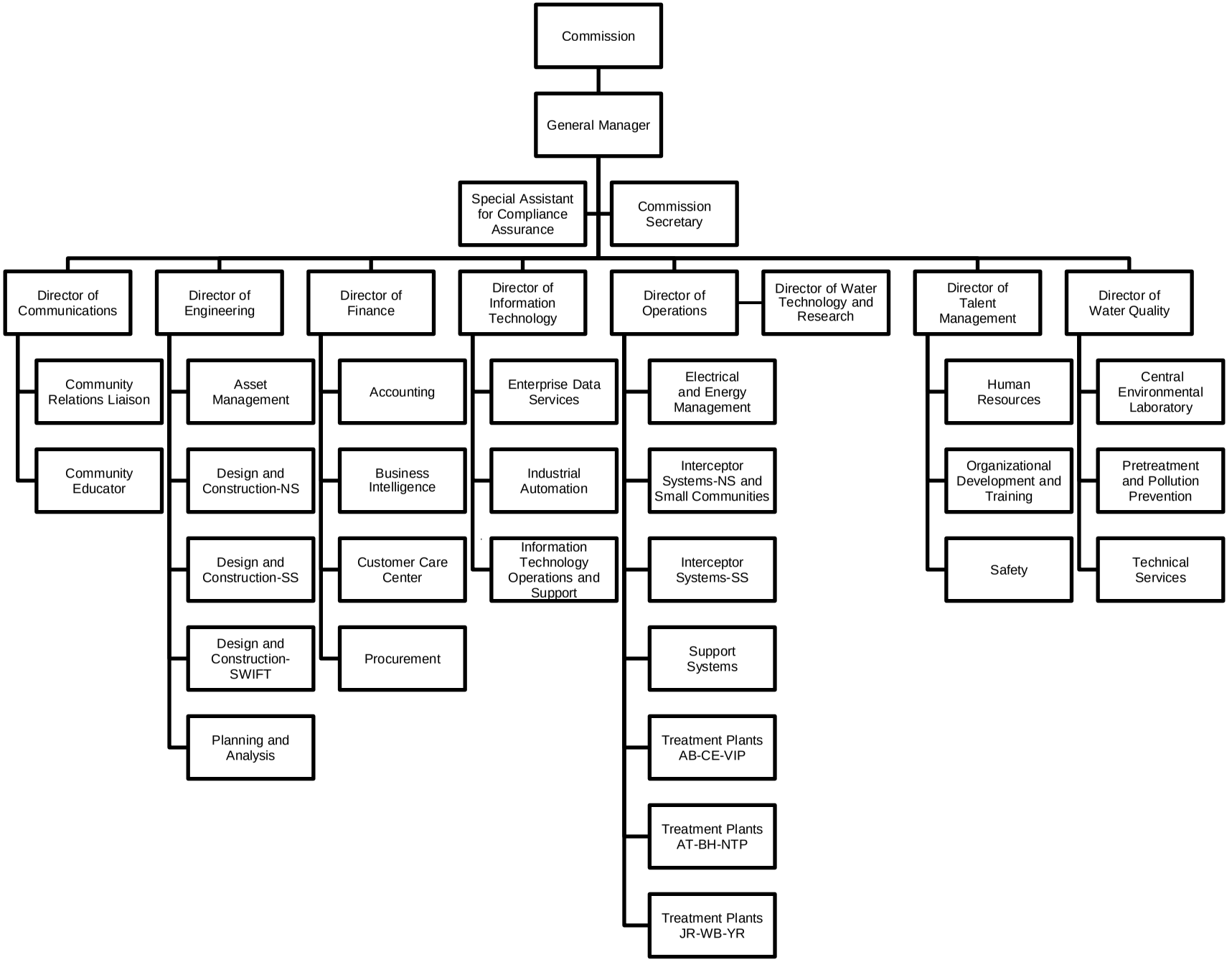
HRSD Organization Chart

July 1, 2018



History of HRSD

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 2017.

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 for outstanding compliance with National Pollutant Discharge Elimination System (NPDES) permits to every HRSD treatment plant during calendar year 2016. The major treatment plants received the following awards in recognition of their outstanding permit compliance status: Atlantic—Gold, Boat Harbor—Platinum (15 consecutive years), Chesapeake-Elizabeth—Silver, James River—Gold, Nansemond—Platinum (15 consecutive years), Virginia Initiative Plant—Platinum (21 consecutive years), Williamsburg—Platinum (22 consecutive years) and York River— Platinum (9 consecutive years). Three treatment plants in the Small Communities Division, Central Middlesex, King William and West Point, earned Silver Awards while Urbanna received a Gold Award.

HRSD's other honors received in 2017 included the Virginia Section American Water Works Association 2017 Public Information Award for Community Relations, large division for SWIFT Community Education and Outreach. In addition, HRSD earned National Environmental Achievement Awards (NEAA) in the following categories: Operations and Environmental Performance for *Molecular Tools for Environmental Management*; Research and Technology for *An International Collaboration: The InDENSE® Process*; Public Information & Education, Education Program for *Living the Legacy*; and Water Resources Utility of the Future for *Sustainable Water Initiative for Tomorrow (SWIFT*).

Rate Schedules

WASTEWATER TREATMENT CHARGE SCHEDULE

Service		FY-2019	FY-2018
Flow (monthly basis)			
Per CCF *		$ 5.37	$ 4.92
Minimum charge (per day)		0.30	0.30
Surcharge, per milligrams/liter per CCF	In Excess of		
Biochemical Oxygen Demand (BOD)	282 mg/L	$ 0.000104	$ 0.000091
Total Suspended Solids (TSS)	261 mg/L	0.000592	0.000520
Total Phosphorus (TP)	6 mg/L	0.009535	0.011569
Total Kjeldahl Nitrogen (TKN)	47 mg/L	0.003595	0.003156
Surcharge, per 100 pounds			
BOD	282 mg/L	$ 1.67	$ 1.46
TSS	261 mg/L	9.49	8.32
TP	6 mg/L	152.74	185.32
TKN	47 mg/L	57.59	50.56
Septic, per gallon		$ 0.1697	$ 0.1300
Residential flat rate (per 30-day period)		$ 34.91	$ 31.98

* CCF = 100 Cubic Feet (approximately 748 gallons)

VOLUME BASED FACILITY CHARGE SCHEDULE

Meter Size	FY-2019	FY-2018
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) Per 1,000 Gallons	FY-2019	FY-2018
King William	$ 13.25	$ 12.57
Mathews	12.71	12.03
Surry	12.71	12.03
Urbanna	14.84	14.16
West Point	14.95	14.27
Residential flat rate (per 30-day period)		
King William	$ 53.00	$ 50.28
Mathews	50.84	48.12
Surry	50.84	48.12
Urbanna	59.36	56.64
West Point	59.80	57.08

FEES AND SERVICE CHARGES

	FY-2019	FY-2018
Damaged lock	$ 100	$ 100
Service restoration	100	100
Meter reading (customer-owned meter)	75	75
Inaccessible meter	50	50
Access card replacement	25	25
Returned payments	25	25
Delinquent	15	15
Account documentation fee	10	10
Deduction meter service	2	2

Reader's Guide to the Annual Budget

PURPOSE

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

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

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

ANNUAL BUDGET OVERVIEW

HRSD's Annual Budget contains the following sections:

Financial Forecast

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

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

Operating Budget

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

Capital Budget

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

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

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

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

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

BUDGETARY PROCESS

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

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

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

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

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

BUDGETARY ACCOUNTING AND CONTROL

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

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

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

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

Glossary of Financial Terms

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

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

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

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

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

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

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

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

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

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

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.

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

Total Debt Service (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).

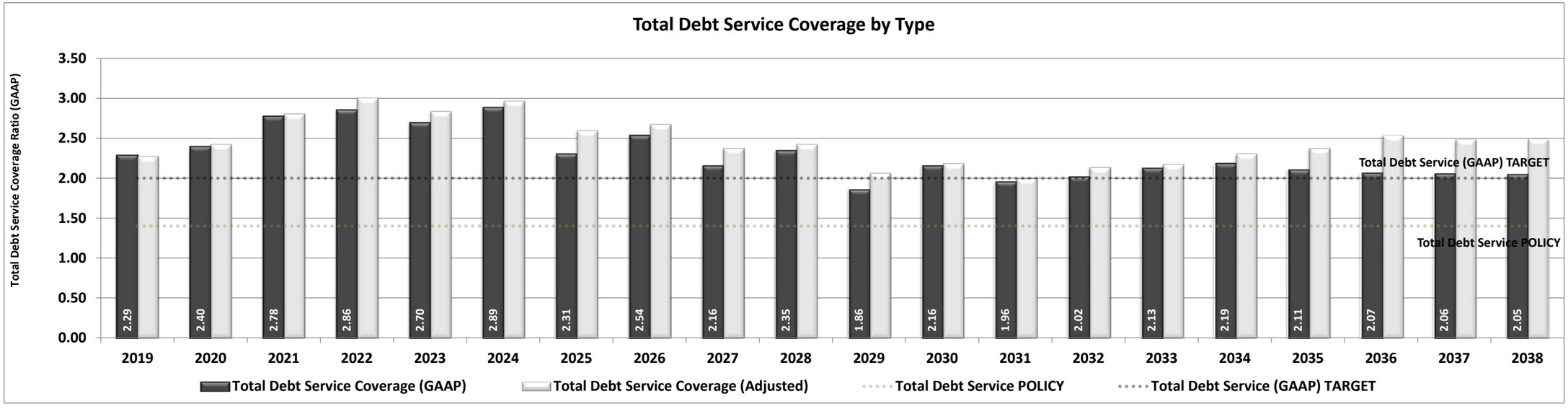
Total Debt Service Coverage Ratio (GAAP): Calculated in accordance with HRSD's Senior Trust Agreement, the ratio determined by dividing the Net Revenues by annual debt service. In such calculation, funds spent on Locality Assets are considered an expense. Annual debt service will be based on actual principal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

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

Financial Forecast (in thousands)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Operating Budget Forecast																				
Projected Wastewater Rate Increase	*9.1%*	*9.1%*	*9.0%*	*9.1%*	*9.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*3.5%*
Revenues																				
Operating Revenues	$ 298,467	$ 321,299	$ 345,722	$ 372,193	$ 400,643	$ 423,455	$ 447,766	$ 473,523	$ 500,675	$ 524,820	$ 549,870	$ 576,263	$ 603,951	$ 632,887	$ 663,485	$ 695,684	$ 729,428	$ 764,660	$ 801,765	$ 821,001
Non-operating Revenues	11,795	11,631	11,639	11,654	11,837	11,924	12,438	12,905	12,818	13,777	13,685	14,512	14,412	14,726	15,190	15,079	15,500	16,100	16,882	16,956
Total Revenues	**$ 310,262**	**$ 332,930**	**$ 357,361**	**$ 383,847**	**$ 412,480**	**$ 435,380**	**$ 460,204**	**$ 486,428**	**$ 513,493**	**$ 538,597**	**$ 563,555**	**$ 590,775**	**$ 618,364**	**$ 647,613**	**$ 678,675**	**$ 710,763**	**$ 744,929**	**$ 780,760**	**$ 818,648**	**$ 837,956**
Expenses																				
Operations	$ 151,303	$ 156,991	$ 162,907	$ 166,060	$ 178,237	$ 184,978	$ 199,387	$ 206,941	$ 222,978	$ 231,441	$ 265,592	$ 275,642	$ 306,571	$ 318,163	$ 330,220	$ 342,762	$ 355,809	$ 369,384	$ 383,510	$ 398,211
Major Repairs and Replacements	7,832	8,146	8,472	8,810	9,163	9,529	9,911	10,307	10,719	11,148	11,594	12,058	12,540	13,042	13,563	14,106	14,670	15,257	15,867	16,502
Capital Acquisitions	602	626	651	677	704	732	761	792	823	856	890	926	963	1,002	1,042	1,083	1,127	1,172	1,219	1,267
Total Operating Appropriations from Budget	**159,737**	**165,763**	**172,029**	**175,547**	**188,104**	**195,239**	**210,058**	**218,039**	**234,520**	**243,446**	**278,076**	**288,626**	**320,074**	**332,207**	**344,825**	**357,951**	**371,606**	**385,813**	**400,596**	**415,980**
Debt Service	62,811	67,458	65,191	66,748	77,572	78,617	95,847	97,256	117,148	118,292	138,016	134,704	148,110	143,824	151,583	149,373	154,600	152,150	166,646	167,358
Transfer to Capital Improvement Plan (PAYGO)	87,475	95,078	114,776	124,852	136,138	157,089	122,545	170,815	139,479	176,499	100,942	167,036	128,898	142,533	181,773	176,054	182,182	196,912	240,679	234,602
Transfer to General Reserve (Unrestricted Cash)	-	4,414	5,132	16,453	10,403	4,154	31,455	-	22,007	-	46,136	-	20,846	28,586	-	26,858	35,981	45,288	10,091	19,339
Transfer to Risk Management Reserve	239	218	232	247	263	280	299	318	339	361	384	409	436	464	494	526	560	597	636	677
Total Appropriations	**$ 310,262**	**$ 332,930**	**$ 357,361**	**$ 383,847**	**$ 412,480**	**$ 435,380**	**$ 460,204**	**$ 486,428**	**$ 513,493**	**$ 538,597**	**$ 563,555**	**$ 590,775**	**$ 618,364**	**$ 647,613**	**$ 678,675**	**$ 710,763**	**$ 744,929**	**$ 780,760**	**$ 818,648**	**$ 837,956**
Capital Improvement Budget Forecast																				
Beginning Capital Reserves	$ 75,000	$ 70,862	$ 12,446	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sources of Funds																				
Debt funded (Revenue Bonds and Interim Financing)	-	-	77,572	84,148	163,862	141,011	177,455	129,185	160,521	113,501	159,058	92,964	91,102	57,467	18,227	48,946	102,818	138,088	109,321	115,398
Va Clean Water Revolving Loan Fund	38,028	37,296	5,206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HRSD - Cash	87,475	95,078	114,776	124,852	136,138	157,089	122,545	170,815	139,479	176,499	100,942	167,036	128,898	142,533	181,773	176,054	182,182	196,912	240,679	234,602
Grants and Other Reimbursements	4,359	210	-	1,000	-	1,900	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Resources	204,862	203,446	210,000	210,000	300,000	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	350,000
Uses of Funds - Capital Expenditures	134,000	191,000	210,000	210,000	300,000	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	350,000
Ending Capital Resources	**$ 70,862**	**$ 12,446**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Reserves Balance Forecast																				
Unrestricted Cash as a % of Operating Expenses	100%	100%	100%	100%	100%	100%	100%	101%	100%	101%	100%	103%	100%	100%	100%	100%	100%	100%	100%	100%
Unrestricted Cash	$ 166,000	$ 170,414	$ 175,545	$ 191,998	$ 202,401	$ 206,555	$ 238,010	$ 238,010	$ 260,017	$ 260,017	$ 306,153	$ 306,153	$ 326,999	$ 355,585	$ 355,585	$ 382,444	$ 418,425	$ 463,713	$ 473,804	$ 493,143
Risk Reserve	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	11,093
Total Reserves Balance	**$ 169,353**	**$ 173,984**	**$ 179,348**	**$ 196,048**	**$ 206,714**	**$ 211,149**	**$ 242,902**	**$ 243,220**	**$ 265,566**	**$ 265,927**	**$ 312,447**	**$ 312,856**	**$ 334,138**	**$ 363,188**	**$ 363,682**	**$ 391,067**	**$ 427,608**	**$ 473,494**	**$ 484,220**	**$ 504,236**
Financial Ratios Forecast																				
Senior Debt Service Coverage (GAAP)	4.29	4.84	5.69	6.28	6.26	6.79	8.30	9.53	12.33	13.65	12.65	14.39	28.27	30.58	34.51	35.40	35.79	35.16	39.04	39.57
Subordinate Debt Service Coverage (GAAP)	4.96	4.79	5.46	5.24	4.77	5.03	3.21	3.48	2.62	2.85	2.18	2.54	2.11	2.16	2.27	2.33	2.24	2.20	2.18	2.16
Total Debt Service Coverage (GAAP)	**2.29**	**2.40**	**2.78**	**2.86**	**2.70**	**2.89**	**2.31**	**2.54**	**2.16**	**2.35**	**1.86**	**2.16**	**1.96**	**2.02**	**2.13**	**2.19**	**2.11**	**2.07**	**2.06**	**2.05**
Total Debt Service Coverage (Adjusted)	**2.28**	**2.43**	**2.81**	**3.01**	**2.84**	**2.97**	**2.60**	**2.68**	**2.38**	**2.43**	**2.07**	**2.19**	**2.00**	**2.14**	**2.18**	**2.31**	**2.38**	**2.54**	**2.49**	**2.50**
CIP % Cash Funded (current year contributions)	65%	50%	55%	59%	45%	52%	41%	57%	46%	61%	39%	64%	59%	71%	91%	78%	64%	59%	69%	67%
Debt Service as a % of Total Revenues	20%	20%	18%	18%	19%	18%	21%	20%	23%	22%	24%	23%	24%	22%	22%	21%	21%	20%	20%	20%



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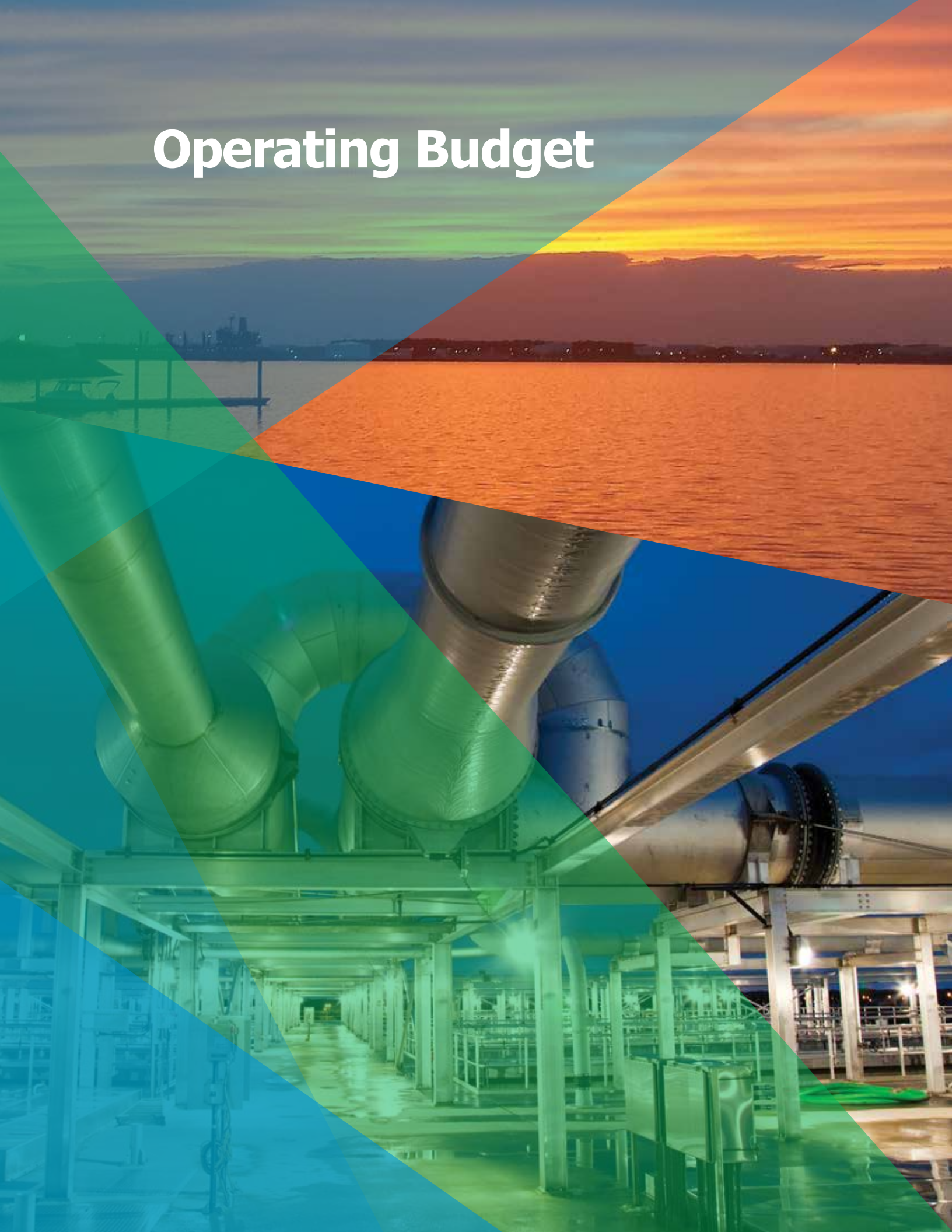
Operating Budget



Operating Budget

	FY-2019	Adopted FY-2018	Increase/ (Decrease)	Percent Change
Operating Revenues				
Wastewater Treatment Charges	$ 297,062,000	$ 273,087,693	$ 23,974,307	9%
Miscellaneous	1,405,000	1,545,000	(140,000)	(9%)
Total Operating Revenue	298,467,000	274,632,693	23,834,307	9%
Non-Operating Revenues				
Wastewater Facility Charges	6,075,000	6,000,000	75,000	1%
Investment Earnings	2,500,000	1,800,000	700,000	39%
Build America Bond Subsidy	2,400,000	2,400,000	-	0%
Other	820,000	720,000	100,000	14%
Total Non-Operating Revenues	11,795,000	10,920,000	875,000	8%
Total Revenues	$ 310,262,000	$ 285,552,693	$ 24,709,307	9%
Operating Appropriations				
General Management	$ 624,583	$ 680,710	$ (56,127)	(8%)
Communications	423,764	470,615	(46,851)	(10%)
Finance	13,884,533	13,593,503	291,030	2%
Information Technology	15,089,692	16,229,457	(1,139,765)	(7%)
Talent Management	2,293,202	2,280,395	12,807	1%
Operations	98,842,274	94,102,651	4,739,623	5%
Engineering	7,903,702	5,731,535	2,172,167	38%
Water Quality	14,913,423	14,205,703	707,720	5%
General Expenses	5,761,766	3,928,399	1,833,367	47%
Total Operating Appropriations	159,736,939	151,222,965	8,513,974	6%
Appropriations for Debt Service and Transfers				
Debt Service	62,811,000	60,849,120	1,961,880	3%
Transfer to Capital Improvement Program (CIP)	87,475,061	58,802,000	28,673,061	49%
Transfer to General Reserve	-	14,418,608	(14,418,608)	(100%)
Transfer to Risk Management Reserve	239,000	260,000	(21,000)	(8%)
Total Appropriations for Debt Service and Transfers	150,525,061	134,329,728	16,195,333	12%
Total Appropriations	$ 310,262,000	$ 285,552,693	$ 24,709,307	9%

Operating Budget Summary

	General Management	Communications	Finance	Information Technology	Talent Management	Operations	Engineering	Water Quality	General Expenses
Personal Services	$ 427,748	$ 247,062	$ 5,965,582	$ 4,427,273	$ 1,366,058	$ 33,328,889	$ 3,786,920	$ 7,582,353	$ (1,800,000)
Fringe Benefits	122,835	101,402	2,526,249	1,607,569	544,900	14,828,080	1,431,145	3,018,989	115,000
Materials & Supplies	10,000	45,000	86,610	851,000	68,100	4,631,734	28,201	1,439,600	30,000
Transportation	14,000	13,800	14,250	16,200	27,600	1,305,080	14,905	38,906	-
Utilities	-	-	271,430	1,224,000	-	10,247,264	-	2,700	499,744
Chemical Purchases	-	-	-	-	-	10,703,626	-	-	-
Contractual Services	20,000	-	4,781,891	6,541,000	53,200	14,737,567	2,484,557	2,117,200	6,628,022
Major Repairs	-	-	-	192,000	-	7,540,425	-	100,000	-
Capital Assets	-	-	-	-	-	546,500	-	55,000	-
Miscellaneous Expense	30,000	16,500	238,521	230,650	233,344	973,109	157,974	558,675	289,000
Operating Approporiations	**$ 624,583**	**$ 423,764**	**$ 13,884,533**	**$ 15,089,692**	**$ 2,293,202**	**$ 98,842,274**	**$ 7,903,702**	**$ 14,913,423**	**$ 5,761,766**

Full-time Positions:

Current	3	2	100	51	15	510	41	110
Changes	0	1	1	0	1	0	2	(1)
Budgeted	3	3	101	51	16	510	43	109

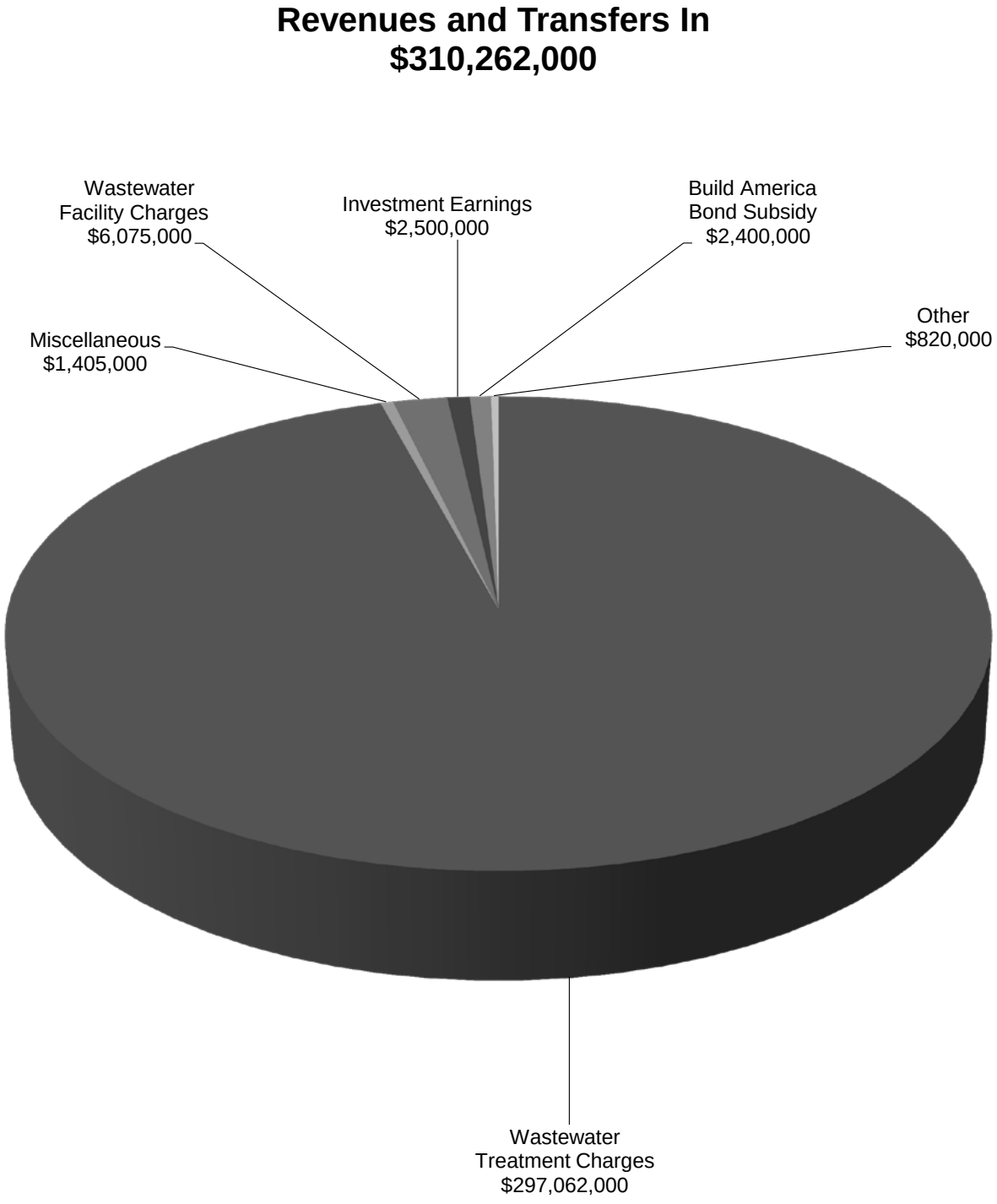
Operating Budget Summary

	FY-2019	Percent of Budget	FY-2018 Budget	Increase/ Decrease	Percent Inc/(Dec)
Personal Services	$ 55,331,885	17.8%	$ 53,773,327	$ 1,558,558	3%
Fringe Benefits	24,296,169	7.8%	24,691,453	(395,284)	(2%)
Materials & Supplies	7,190,245	2.3%	7,088,092	102,153	1%
Transportation	1,444,741	0.5%	1,419,385	25,356	2%
Utilities	12,245,138	3.9%	11,947,481	297,657	2%
Chemical Purchases	10,703,626	3.4%	10,324,400	379,226	4%
Contractual Services	37,363,437	12.0%	30,994,210	6,369,227	21%
Major Repairs	7,832,425	2.5%	7,831,219	1,206	0%
Capital Assets	601,500	0.2%	814,100	(212,600)	(26%)
Miscellaneous Expense	2,727,773	0.9%	2,339,298	388,475	17%
Operating Approporiations	159,736,939	51.5%	151,222,965	8,513,974	6%
Debt Service Costs	62,811,000	20.2%	60,849,120	1,961,880	3%
Transfer to Capital Improvement Program (CIP)	87,475,061	28.2%	58,802,000	28,673,061	49%
Transfer to General Reserve	-	0.0%	14,418,608	(14,418,608)	(100%)
Transfer to Risk Management	239,000	0.1%	260,000	(21,000)	(8%)
Appropriations for Debt Service and Transfers	150,525,061	48.5%	134,329,728	16,195,333	12%
	$ 310,262,000	100.0%	**$ 285,552,693**	**$ 24,709,307**	9%

Full-time Positions:

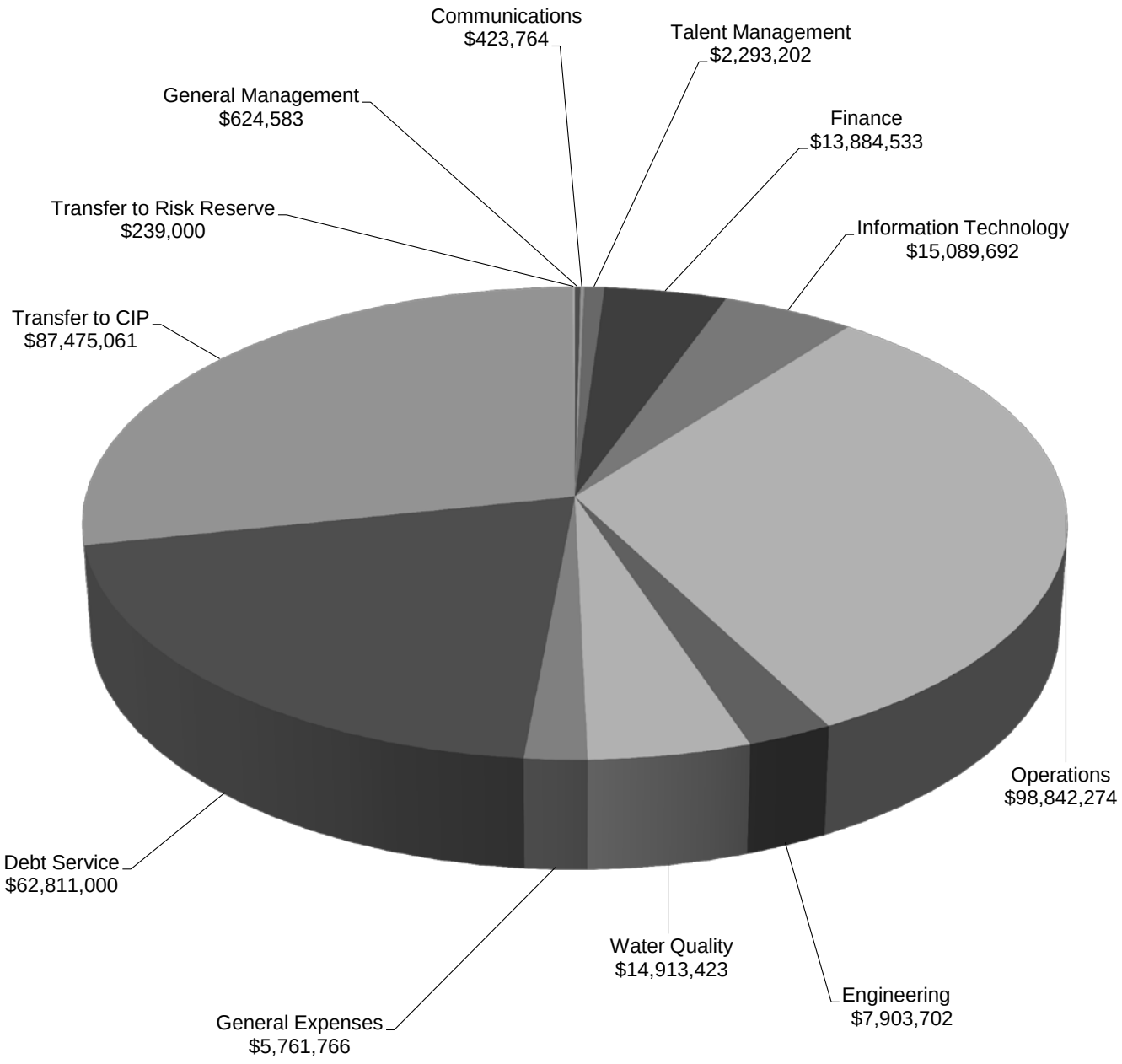
Current	832
Changes	4
Budgeted	836

Operating Budget Charts



Operating Budget Charts

Expenses and Transfers Out
$310,262,000



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 the Environmental Protection Agency (EPA) to ensure appropriate and timely adherence to the requirements of regulatory wet weather enforcement actions.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 427,748	$ 482,625	$ (54,877)	(11%)
Fringe Benefits	122,835	135,085	(12,250)	(9%)
Material & Supplies	10,000	10,000	-	0%
Transportation	14,000	2,000	12,000	600%
Contractual Services	20,000	20,000	-	0%
Miscellaneous	30,000	31,000	(1,000)	(3%)
Total	**$ 624,583**	**$ 680,710**	**$ (56,127)**	**(8%)**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
General Manager		1		1		1
Special Assistant for Compliance Assurance	12	1		1		1
Commission Secretary	6	1		1		1
Total		**3**	**0**	**3**	**0**	**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-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 247,062	$ 278,347	$ (31,285)	(11%)
Fringe Benefits	101,402	87,268	14,134	16%
Material & Supplies	45,000	45,000	-	0%
Transportation	13,800	3,000	10,800	360%
Contractual Services	-	35,000	(35,000)	(100%)
Miscellaneous	16,500	22,000	(5,500)	(25%)
Total	**$ 423,764**	**$ 470,615**	**$ (46,851)**	**(10%)**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
Director of Communications	12	1		1		1
Community Relations Liason	6	1		1		1
Community Educator	6	0		0	1	1
Total		2	0	2	1	3

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-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 5,965,582	$ 5,819,422	$ 146,160	3%
Fringe Benefits	2,526,249	2,721,921	(195,672)	(7%)
Material & Supplies	86,610	73,140	13,470	18%
Transportation	14,250	14,000	250	2%
Utilities	271,430	237,800	33,630	14%
Contractual Services	4,781,891	4,464,850	317,041	7%
Miscellaneous	238,521	262,370	(23,849)	(9%)
Total	**$ 13,884,533**	**$ 13,593,503**	**$ 291,030**	**2%**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
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	2		2
Customer Care Manager	9	3	1	4		4
Strategic Sourcing Manager	9	1		1	(1)	0
Business Analyst	8	3		3		3
Customer Care Operations Manager	8	1	(1)	0		0
Financial Analyst	8	3	(1)	2		2
Procurement Analyst	8	1		1	1	2
Customer Care Supervisor	7	4		4		4
Accounts Payable Supervisor	6	1		1		1
Accounts Receivable Specialist	6	2		2		2
Payroll Specialist	6	1		1		1
ProCard & Contract Administrator	6	0	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)	0		0
Account Investigator	3	14	(1)	13		13
Accounts Payable Associate	3	2		2	1	3
Customer Care Account Representative	3	41		41		41
Procurement Administrative Assistant	3	3		3		3
Mail Processing Clerk	2	2		2		2
Total		**101**	**(1)**	**100**	**1**	**101**

Information Technology Department

The Information Technology (IT) 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 operations facilities.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 4,427,273	$ 4,389,838	$ 37,435	1%
Fringe Benefits	1,607,569	1,679,289	(71,720)	(4%)
Material & Supplies	851,000	902,250	(51,250)	(6%)
Transportation	16,200	87,251	(71,051)	(81%)
Utilities	1,224,000	1,524,000	(300,000)	(20%)
Contractual Services	6,541,000	5,626,354	914,646	16%
Major Repairs	192,000	1,750,000	(1,558,000)	(89%)
Miscellaneous	230,650	270,475	(39,825)	(15%)
Total	**$ 15,089,692**	**$ 16,229,457**	**$ (1,139,765)**	**(7%)**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
Director of Information Technology	12	1		1		1
Chief of Enterprise Data Services	11	1		1		1
Chief of Industrial Controls	11	1		1	(1)	0
Chief of IT Operations and Support	11	1		1		1
Database Administrator	9	3		3		3
Enterprise Architect	9	3		3		3
Industrial Automation Manager	9	1		1		1
Oracle Developer	9	2		2		2
Programming Development Manager	9	1		1		1
Senior Systems Engineer	9	6		6		6
Systems Analysis Manager	9	1		1		1
Industrial Automation Programmer	8	5		5		5
Senior Programmer Analyst	8	6		6		6
Senior Systems Analyst	8	3		3		3
SharePoint Web Developer	8	1		1		1
Unix Systems Administrator	8	2		2		2
IT HelpDesk Supervisor	7	1		1		1
Desktop Support Analyst	6	5		5	1	6
Systems Analyst	6	0	1	1		1
Web Portal Programmer	5	1		1		1
IT Administrative Coordinator	4	1		1		1
Telecommunications Support Coordinator	4	1		1		1
Computer Operator	3	3		3		3
Total		**50**	**1**	**51**	**0**	**51**

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, the apprenticeship program and ensures employee safety.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 1,366,058	$ 1,356,029	$ 10,029	1%
Fringe Benefits	544,900	541,996	2,904	1%
Material & Supplies	68,100	65,500	2,600	4%
Transportation	27,600	27,600	-	0%
Contractual Services	53,200	53,200	-	0%
Miscellaneous	233,344	236,070	(2,726)	(1%)
Total	**$ 2,293,202**	**$ 2,280,395**	**$ 12,807**	**1%**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
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
Training Specialist	6	0		0	1	1
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**	**1**	**16**

Operations Department

The Operations Department is responsible for operating and maintaining all of HRSD's treatment plants, pump stations, pipelines, buildings and equipment. HRSD provides wastewater treatment services for over 1.7 million people in 18 cities and counties in Hampton Roads. 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 major treatment plant divisions (each with three treatment plants). Services to small communities that are in the HRSD service area are provided by the Small Communities Division (SCD) – Middle Peninsula, which 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, and the Small Communities Division – Surry, which includes the operation of two treatment plants and the associated sewer collection systems in the County of Surry. 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 of the HRSD fleet, all buildings and operates two carpentry shops and a full service machine shop.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 33,328,889	$ 32,428,555	$ 900,334	3%
Fringe Benefits	14,828,080	15,407,324	(579,244)	(4%)
Material & Supplies	4,631,734	4,622,095	9,639	0%
Transportation	1,305,080	1,218,155	86,925	7%
Utilities	10,247,264	9,738,681	508,583	5%
Chemical Purchases	10,703,626	10,324,400	379,226	4%
Contractual Services	14,737,567	13,176,502	1,561,065	12%
Major Repairs	7,540,425	5,893,219	1,647,206	28%
Capital Assets	546,500	771,100	(224,600)	(29%)
Miscellaneous	973,109	772,620	200,489	26%
Total	**$ 98,842,274**	**$ 94,352,651**	**$ 4,489,623**	**5%**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
Director of Operations	12	1		1		1
Director of Water Technology and Research	12	1		1		1
Chief of Electrical & Energy Management	11	1		1		1
Chief of Interceptor Operations	11	1		1		1
Chief of NS Interceptors & SCD	11	1		1		1
Chief of Process Engineering & Research	11	0	1	1		1
Chief of Treatment	11	0	3	3		3
Senior Plant Manager	11	3	(3)	0		0
Treatment Process Engineer-2	10	0	3	3		3
Electrical Manager	9	2		2		2
Instrumentation Manager	9	1		1		1
Interceptor Engineer	9	2		2		2
Plant Manager	9	6	(5)	1		1
Process Engineering & Research Manager	9	1	(1)	0		0
Project Manager	9	0	2	2		2
Support Systems Manager	9	1		1		1
SWIFT Project Manager	9	1		1		1
Systems Manager	9	2		2		2
Treatment Process Engineer-1	9	0		0	1	1
Automotive Superintendent	8	1		1		1
Condition Assessment Superintendent	8	1		1		1
Electrical & Instrumentation Supervisor	8	4		4		4
Electrical Superintendent	8	1		1		1
Facility Superintendent	8	1		1		1
Interceptor Superintendent	8	2		2		2
Plant Superintendent	8	18		18		18
Chief Foreman	7	2		2		2
Chief Maintenance Management	7	2		2		2
Chief Systems Operator	7	2		2		2
Coating, Concrete and Roofing Chief Inspector	7	1		1		1
Electrical & Instrumentation Process Specialist	7	1		1		1
Electrical & Instrumentation Specialist	7	58	1	59		59
Lead Operator	7	31	1	32		32
Operations Support Specialist	7	1		1		1
Automotive Foreman	6	2		2		2
Coatings Inspector	6	2		2		2
Condition Assessment Supervisor	6	1		1		1
Engineering Assistant	6	4		4		4
Interceptor Foreman	6	7		7		7

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
Interceptor Systems Supervisor	6	2		2		2
Machinist Foreman	6	1		1		1
Maintenance Planner	6	0	3	3		3
Maintenance Specialist	6	3	(3)	0		0
Pump Station Supervisor	6	2		2		2
Automotive Technician	5	5		5		5
Carpenter	5	4		4		4
Condition Assessment Technician	5	2		2		2
Equipment Technician	5	3		3		3
Facility Maintenance Technician	5	2		2		2
Interceptor Technician	5	29	1	30		30
Machinist	5	3		3	(1)	2
Maintenance Operator	5	61	4	65		65
Plant Operator	5	73	1	74		74
Heavy Equipment Operator I	4	21	(2)	19		19
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 Admin Assistant	3	1		1		1
Utility Administrative Assistant	3	1		1		1
SCADA Administrative Assistant	3	1		1		1
Interceptor Assistant	2	27	1	28		28
Maintenance Operations Assistant	2	52	1	53	(1)	52
Plant Clerk	2	9		9		9
Facility Assistant	1	11	(9)	2		2
Custodian	1	4		4		4
Subtotal - Operations		**489**	**(1)**	**488**	**(1)**	**487**
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 I	4	1		1		1
Maintenance Operations Assistant	2	2	1	3		3
SCD Lab Assistant	2	0		0	1	1
Facility Assistant	1	1	(1)	0		0
Subtotal - Small Communities		**22**	**0**	**22**	**1**	**23**
Total		**511**	**(1)**	**510**	**0**	**510**

Engineering Department

The Engineering Department is responsible for HRSD facility planning, design and construction and related support. The Asset Management Division is responsible for the Computerized Maintenance Management System (CMMS) to manage asset information to inform maintenance, replacement and capital planning decisions. The Design and Construction Divisions work 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 plans the capital infrastructure required to meet the region's future wastewater needs. The department is also responsible for all property and land acquisition to meet HRSD's needs.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 3,786,920	$ 3,464,514	$ 322,406	9%
Fringe Benefits	1,431,145	1,351,675	79,470	6%
Material & Supplies	28,201	29,778	(1,577)	(5%)
Transportation	14,905	16,723	(1,818)	(11%)
Contractual Services	2,484,557	703,904	1,780,653	253%
Major Repairs	-	9,000	(9,000)	(100%)
Miscellaneous	157,974	155,941	2,033	1%
Total	**$ 7,903,702**	**$ 5,731,535**	**$ 2,172,167**	**38%**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
Director of Engineering	12	1		1		1
Chief of Asset Management	11	1		1		1
Chief of Design & Construction	11	2		2		2
Chief of Design & Construction - SWIFT	11	0	1	1		1
Chief of Planning & Analysis	11	1		1		1
Capital Program Manager	9	1		1		1
Condition Assessment Manager	9	2		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	1	10	(1)	9
Real Estate Manager	8	1		1		1
CMMS Analyst	7	1		1		1
Data Analyst	7	3	1	4		4
Engineering Specialist	7	0		0	2	2
GIS Analyst	7	2		2		2
Contract Specialist	6	2		2	1	3
GIS CAD Technician	5	3		3	(1)	2
CIP Coordinator	4	1		1		1
Data Analysis Technician	4	1	(1)	0		0
Administrative Coordinator	4	1		1		1
CMMS Administrative Assistant	3	1		1		1
Engineering Clerk	2	0		0	1	1
Total		**39**	**2**	**41**	**2**	**43**

Water Quality Department

The Water Quality (WQ) 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 Wastewater Discharge Regulations 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 locations, and all reporting required by HRSD permits.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ 7,582,353	$ 7,304,005	$ 278,348	4%
Fringe Benefits	3,018,989	3,161,895	(142,906)	(5%)
Material & Supplies	1,439,600	1,310,329	129,271	10%
Transportation	38,906	50,656	(11,750)	(23%)
Utilities	2,700	-	2,700	0%
Contractual Services	2,117,200	1,649,095	468,105	28%
Major Repairs	100,000	179,000	(79,000)	(44%)
Capital Assets	55,000	43,000	12,000	28%
Miscellaneous	558,675	507,723	50,952	10%
Total	**$ 14,913,423**	**$ 14,205,703**	**$ 707,720**	**5%**

Positions

	Grade	Adopted FY-2018	Adjustments	Final FY-2018	Adjustments	FY-2019
Director of Water Quality	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)	0
Lab EDMS Administrator	8	1		1		1
Lab Operations Manager	8	1		1		1
Lab Supervising Chemist	8	11		11		11
P3 Supervising Specialist	8	3		3		3
TSD Operations Manager	8	1		1		1
TSD Supervising Specialist	8	3		3		3
P3 Administrative Supervising Specialist	7	1		1		1
Lab EDMS Analyst	6	1		1		1
Lab Quality Assurance Specialist	6	1		1		1
Lab Specialist	6	13	1	14		14
P3 PIMS Analyst	6	1		1		1
P3 Specialist	6	3		3		3
TSD Specialist	6	10	(1)	9		9
WQ Specialist	6	0	1	1		1
Lab Data Technician	5	1		1		1
Lab Technician	5	5		5		5
P3 Technician	5	11		11		11
Lab Data Coordinator	4	1		1		1
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		**109**	**1**	**110**	**(1)**	**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 issed by HRSD and through the Virginia Clean Water Revolving Loan Fund (VCWRLF). The costs incurred to issue bonds are included in General Expenses - Miscellaneous.

Expenditure Budget

	FY-2019 Budget	FY-2018 Budget	Increase/ (Decrease)	Percentage Change
Personal Services	$ (1,800,000)	$ (1,750,006)	$ (49,994)	3%
Fringe Benefits	115,000	(395,000)	510,000	(129%)
Material & Supplies	30,000	30,000	-	0%
Utilities	499,744	447,000	52,744	12%
Contractual Services	6,628,022	5,515,305	1,112,717	20%
Miscellaneous	289,000	981,100	(692,100)	(71%)
Total General Expenses	**$ 5,761,766**	**$ 4,828,399**	**$ 933,367**	**19%**
Publically Sold Bonds - Principal	16,740,000	15,845,000	895,000	6%
Publically Sold Bonds - Interest	32,110,000	30,122,320	1,987,680	7%
VCWRLF Bonds	13,961,000	13,981,800	(20,800)	(0%)
Subtotal - Debt Service	62,811,000	59,949,120	2,861,880	5%
Transfer to CIP	87,475,061	58,802,000	28,673,061	49%
Transfer to General Reserve	-	14,418,608	(14,418,608)	0%
Transfer to Risk Management	239,000	260,000	(21,000)	(8%)
Subtotal - Transfers	87,714,061	73,480,608	14,233,453	19%
Total Debt Service and Transfers	**$ 150,525,061**	**$ 133,429,728**	**$ 17,095,333**	**13%**

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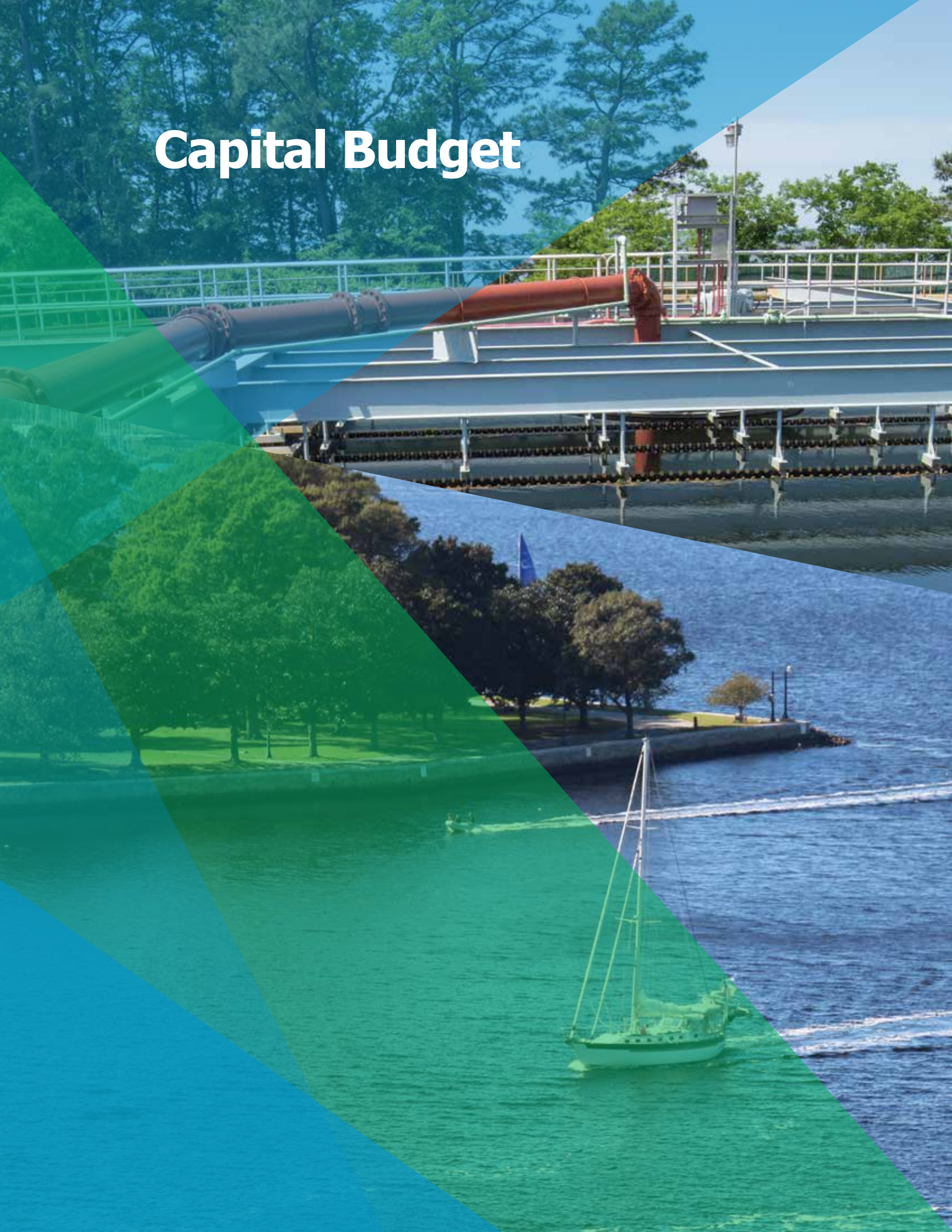
Capital Budget



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-2019 in the amount of $134 million. The remaining years (FY-2020 to FY-2028) 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-2019 to FY-2028 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 $2.54 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-2019 to FY-2028	FY-2019	FY-2020	FY-2021	FY-2022
Beginning Capital Reserves	$ 158,308	$ 75,000	$ 70,862	$ 12,446	$ -
Bonds	1,047,255			77,572	84,148
VCWRLF	80,530	38,028	37,296	5,206	
Cash	1,324,746	87,475	95,078	114,776	124,852
Grants and Other Reimbursements	7,469	4,359	210		1,000
Transfer from Debt Service Reserve Fund	-				
Total Capital Resources	2,618,308	204,862	203,446	210,000	210,000
Capital Expenditures	2,535,000	134,000	191,000	210,000	210,000
Ending Capital Reserves	$ 83,308	$ 70,862	$ 12,446	$ -	$ -

Capital Expenditures (in thousands)	Total FY-2019 to FY-2028	FY-2019	FY-2020	FY-2021	FY-2022
Administration	$ 13,592	$ 7,102	$ 5,210	$ 1,280	$ -
Army Base	38,253	1,341	1,825	6,085	14,151
Atlantic	75,492	25,570	24,009	9,606	3,388
Boat Harbor	204,998	14,291	21,487	21,669	14,152
Chesapeake-Elizabeth	115,593	13,338	34,283	44,941	13,501
James River	30,247	3,350	7,098	9,015	9,947
Middle Peninsula	23,546	8,224	7,391	699	1,005
Nansemond	41,822	10,415	21,991	5,937	577
Surry	16,500	4,131	8,307	4,061	-
Virginia Initiative Plant	64,673	9,326	6,328	15,831	15,831
Williamsburg	17,318	2,204	3,618	7,332	4,163
York River	15,603	1,318	386	1,691	1,614
General	1,154,062	33,194	40,225	49,945	76,348
Future Improvements	614,318	196	5,096	21,908	45,323
Subtotal	2,426,017	134,000	187,255	200,000	200,000
Contingency	108,983	-	3,745	10,000	10,000
Total Expenditures	$ 2,535,000	$ 134,000	$ 191,000	$ 210,000	$ 210,000

Capital Budget

CIP Budget Forecast (in thousands)

	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027	FY-2028
Beginning Capital Reserves	$ -	$ -	$ -	$ -	$ -	$ -
Bonds	163,862	141,011	177,455	129,185	160,521	113,501
VCWRLF						
Cash	136,138	157,089	122,545	170,815	139,479	176,499
Grants and Other Reimbursements		1,900				
Transfer from Debt Service Reserve Fund						
Total Capital Resources	300,000	300,000	300,000	300,000	300,000	290,000
Capital Expenditures	300,000	300,000	300,000	300,000	300,000	290,000
Ending Capital Reserves	$ -	$ -	$ -	$ -	$ -	$ -

Capital Expenditures (in thousands)

	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027	FY-2028
Administration	$ -	$ -	$ -	$ -	$ -	$ -
Army Base	2,271	413	4,167	8,000	-	-
Atlantic	7,088	3,637	2,193	-	-	-
Boat Harbor	17,612	17,222	24,642	24,642	24,642	24,642
Chesapeake-Elizabeth	3,948	2,856	1,722	1,004	-	-
James River	838	-	-	-	-	-
Middle Peninsula	900	2,664	2,664	-	-	-
Nansemond	507	2,394	-	-	-	-
Surry	-	-	-	-	-	-
Virginia Initiative Plant	9,631	4,872	2,855	-	-	-
Williamsburg	-	-	-	-	-	-
York River	3,897	1,850	1,555	2,325	969	-
General	157,847	132,294	139,059	187,184	164,182	173,784
Future Improvements	81,175	117,512	106,860	62,560	95,922	77,765
Subtotal	285,714	285,714	285,714	285,714	285,714	276,190
Contingency	14,286	14,286	14,286	14,286	14,286	13,810
Total Expenditures	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 290,000

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2019 to FY-2028	FY-2019	FY-2020	FY-2021	FY-2022
Administration						
AD010400	Environmental Data Management System	$ 328	$ 328	$ -	$ -	$ -
AD012100	Asset Management Implementation	$ 1,338	$ 669	$ 669	$ -	$ -
AD012200	Water Quality Services Building Phase II	$ 7,313	$ 4,388	$ 2,925	$ -	$ -
AD012300	Central Environmental Laboratory Phase II	$ 2,212	$ 117	$ 815	$ 1,280	$ -
AD012400	Capital Program Management Improvements Phase I	$ 2,400	$ 1,600	$ 800	$ -	$ -
	Subtotal	$ 13,592	$ 7,102	$ 5,210	$ 1,280	$ -
Army Base						
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	$ 22,339	$ -	$ 1,607	$ 4,832	$ 13,629
AB010100	Army Base Treatment Plant Improvements - Phase III	$ 1,244	$ 1,244	$ -	$ -	$ -
AB010500	Section W Force Main Replacement	$ 2,090	$ 97	$ 218	$ 1,253	$ 522
AB011700	Army Base Treatment Plant Solids Dewatering and Loading Facility	$ 12,580	$ -	$ -	$ -	$ -
	Subtotal	$ 38,253	$ 1,341	$ 1,825	$ 6,085	$ 14,151
Atlantic						
AT011510	Shipps Corner Interim Pressure Reducing Station	$ 283	$ 283	$ -	$ -	$ -
AT011520	Shipps Corner Pressure Reducing Station Modifications	$ 1,416	$ -	$ 9	$ 104	$ 652
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	$ 4,315	$ -	$ -	$ -	$ 61
AT012000	Atlantic Treatment Plant Administration Building Renovation and Expansion	$ 268	$ 268	$ -	$ -	$ -
AT012910	Atlantic Treatment Plant FOG Receiving Station	$ 4,153	$ 1,866	$ 1,847	$ 440	$ -
AT012920	Atlantic Treatment Plant Access Road Extension	$ 3,786	$ 33	$ -	$ 555	$ 125
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	$ 2,032	$ 72	$ 83	$ 864	$ 1,013
AT013100	South Norfolk Area Gravity Sewer Improvements	$ 5,301	$ -	$ -	$ 324	$ 288
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	$ 251	$ -	$ -	$ -	$ -
AT013500	Atlantic Treatment Plant Thermal Hydrolysis Process	$ 44,508	$ 20,000	$ 19,800	$ 4,708	$ -
AT013600	Atlantic Treatment Plant Motor Control Center Replacements	$ 335	$ 335	$ -	$ -	$ -
AT013700	Atlantic Trunk Interceptor Force Main Relocation (VDOT Laskin Road Betterment)	$ 250	$ 107	$ 107	$ 36	$ -
AT013900	Atlantic Treatment Plant Influent Screen Expansion	$ 1,666	$ 1,486	$ 180	$ -	$ -
AT014000	Lynnhaven-Great Neck IFM (SF-021) Relocation	$ 928	$ 403	$ 450	$ 75	$ -
AT014100	Suffolk Regional Landfill Transmission Force Main	$ 6,000	$ 717	$ 1,533	$ 2,500	$ 1,250
	Subtotal	$ 75,492	$ 25,570	$ 24,009	$ 9,606	$ 3,388
Boat Harbor						
BH011600	Bridge Street Pump Station Replacement	$ 15	$ 15	$ -	$ -	$ -
BH012700	Hampton Trunk Sewer Extension Division B - Claremont Force Main Replacement	$ 2	$ 2	$ -	$ -	$ -
BH013000	Willard Avenue Pump Station Upgrades	$ 5,320	$ 502	$ 2,751	$ 2,067	$ -
BH013400	Bridge Street Siphon and Vent Relocation Replacement	$ 13	$ 13	$ -	$ -	$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	$ 3,496	$ -	$ -	$ 225	$ 814
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	$ 11,173	$ 745	$ 2,572	$ 4,277	$ 3,572
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	$ 2,014	$ -	$ -	$ 16	$ 585
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	$ 9,847	$ 671	$ 1,468	$ 4,865	$ 2,843
BH014700	Boat Harbor Outlet Sewer Improvements	$ 5,517	$ 400	$ 4,134	$ 983	$ -
BH014800	Jefferson Avenue Extension Gravity Improvements	$ 2,416	$ 1,358	$ 1,058	$ -	$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	$ 3,689	$ -	$ 176	$ 179	$ 1,141
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	$ 5,798	$ 3,540	$ 2,258	$ -	$ -
BH015100	Bloxoms Corner Force Main Replacement	$ 2,784	$ -	$ 105	$ 177	$ 755
BH015300	Boat Harbor Treatment Plant Switchgear and Controls Replacements	$ 8,482	$ 4,707	$ 3,775	$ -	$ -
BH015500	LaSalle Avenue Interceptor Force Main Replacement	$ 1,832	$ -	$ 80	$ 1,092	$ 661
BH015600	Hampton Trunk A and B Replacement – Jefferson Ave. to Buxton	$ 9,971	$ 578	$ 1,348	$ 6,026	$ 2,019
BH015700	Boat Harbor Treatment Plant Effluent Pump Station and Transmission Force Main	$ 144,950	$ 1,762	$ 1,762	$ 1,762	$ 1,762
	Subtotal	$ 204,998	$ 14,291	$ 21,487	$ 21,669	$ 14,152
Note:	Fats, Oils, and Grease (FOG) Virginia Department of Transportation (VDOT) Force Main (FM)					

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027	FY-2028
Administration							
AD010400	Environmental Data Management System	$ -	$ -	$ -	$ -	$ -	$ -
AD012100	Asset Management Implementation	$ -	$ -	$ -	$ -	$ -	$ -
AD012200	Water Quality Services Building Phase II	$ -	$ -	$ -	$ -	$ -	$ -
AD012300	Central Environmental Laboratory Phase II	$ -	$ -	$ -	$ -	$ -	$ -
AD012400	Capital Program Management Improvements Phase I	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -
Army Base							
AB010000	Army Base 24-Inch and 20-Inch Transmission Main Replacements	$ 2,271	$ -	$ -	$ -	$ -	$ -
AB010100	Army Base Treatment Plant Improvements - Phase III	$ -	$ -	$ -	$ -	$ -	$ -
AB010500	Section W Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
AB011700	Army Base Treatment Plant Solids Dewatering and Loading Facility	$ -	$ 413	$ 4,167	$ 8,000	$ -	$ -
	Subtotal	$ 2,271	$ 413	$ 4,167	$ 8,000	$ -	$ -
Atlantic							
AT011510	Shipps Corner Interim Pressure Reducing Station	$ -	$ -	$ -	$ -	$ -	$ -
AT011520	Shipps Corner Pressure Reducing Station Modifications	$ 652	$ -	$ -	$ -	$ -	$ -
AT011900	Great Bridge Interceptor Extension 16-Inch Replacement	$ 221	$ 2,036	$ 1,997	$ -	$ -	$ -
AT012000	Atlantic Treatment Plant Administration Building Renovation and Expansion	$ -	$ -	$ -	$ -	$ -	$ -
AT012910	Atlantic Treatment Plant FOG Receiving Station	$ -	$ -	$ -	$ -	$ -	$ -
AT012920	Atlantic Treatment Plant Access Road Extension	$ 3,073	$ -	$ -	$ -	$ -	$ -
AT013000	Washington District Pump Station Area Sanitary Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
AT013100	South Norfolk Area Gravity Sewer Improvements	$ 3,126	$ 1,563	$ -	$ -	$ -	$ -
AT013200	Doziers Corner Pump Station and Washington District Pump Station Flooding Mitigation Improvements	$ 16	$ 38	$ 196	$ -	$ -	$ -
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	$ -	$ -	$ -	$ -	$ -	$ -
AT014000	Lynnhaven-Great Neck IFM (SF-021) Relocation	$ -	$ -	$ -	$ -	$ -	$ -
AT014100	Suffolk Regional Landfill Transmission Force Main	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 7,088	$ 3,637	$ 2,193	$ -	$ -	$ -
Boat Harbor							
BH011600	Bridge Street Pump Station 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	$ -	$ -	$ -	$ -	$ -	$ -
BH014000	West Avenue and 35th Street Interceptor Force Main Replacement	$ 2,454	$ 3	$ -	$ -	$ -	$ -
BH014220	Hampton Trunk Sewer Extension Divisions I and J Relocation Phase II	$ 8	$ -	$ -	$ -	$ -	$ -
BH014500	Ivy Home-Shell Road Sewer Extension Division I Replacement	$ 1,414	$ -	$ -	$ -	$ -	$ -
BH014600	46th Street Diversion Sewer Rehabilitation Replacement	$ -	$ -	$ -	$ -	$ -	$ -
BH014700	Boat Harbor Outlet Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH014800	Jefferson Avenue Extension Gravity Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH014900	Hampton Trunk Sewer Extension Division K Gravity Improvements	$ 2,193	$ -	$ -	$ -	$ -	$ -
BH015000	Orcutt Avenue and Mercury Blvd Gravity Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
BH015100	Bloxoms Corner Force Main Replacement	$ 1,747	$ -	$ -	$ -	$ -	$ -
BH015300	Boat Harbor Treatment Plant Switchgear and Controls Replacements	$ -	$ -	$ -	$ -	$ -	$ -
BH015500	LaSalle Avenue Interceptor Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
BH015600	Hampton Trunk A and B Replacement – Jefferson Ave. to Buxton	$ -	$ -	$ -	$ -	$ -	$ -
BH015700	Boat Harbor Treatment Plant Effluent Pump Station and Transmission Force Main	$ 9,797	$ 17,219	$ 24,642	$ 24,642	$ 24,642	$ 24,642
	Subtotal	$ 17,612	$ 17,222	$ 24,642	$ 24,642	$ 24,642	$ 24,642
Note:	Fats, Oils, and Grease (FOG) Virginia Department of Transportation (VDOT) Force Main (FM)						

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2019 to FY-2028	FY-2019	FY-2020	FY-2021	FY-2022
Chesapeake-Elizabeth						
CE010400	Independence Boulevard Pressure Reducing Station Modifications	$ 1,323	$ 114	$ 434	$ 775	$ -
CE010520	Newtown Road Interceptor Force Main Relocation	$ 15,506	$ 876	$ 4	$ 6,996	$ 7,630
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	$ 1,425	$ -	$ -	$ -	$ 509
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	$ 1,737	$ -	$ -	$ 21	$ 130
CE011700	Western Trunk Force Main Replacement	$ 1,359	$ 1,359	$ -	$ -	$ -
CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	$ 10,759	$ 478	$ 1,674	$ 717	$ 1,722
CE011821	Elbow Road Pressure Reducing Station	$ 7,104	$ 526	$ 3,659	$ 2,919	$ -
CE011822	Providence Road PRS Upgrades and Interconnect Force Main	$ 5,239	$ 1,364	$ 2,444	$ 1,431	$ -
CE011823	Virginia Beach Boulevard Force Main Phase VI	$ 14,447	$ 825	$ 5,459	$ 6,529	$ 1,635
CE011825	Salem Road Interconnect Force Main	$ 1,132	$ 188	$ 943	$ -	$ -
CE011826	Providence Road Off-Line Storage Facility	$ 24,110	$ 2,357	$ 9,467	$ 11,161	$ 1,125
CE011827	Atlantic PRS Reliability Modifications	$ 5,593	$ 1,021	$ 1,788	$ 2,781	$ 3
CE011828	Kempsville PRS Reliability Modifications	$ 2,840	$ 581	$ 889	$ 1,368	$ 3
CE011829	Laskin Road PRS Reliability Modifications	$ 1,342	$ 947	$ 395	$ -	$ -
CE011830	Little Creek Pump Station Modifications	$ 650	$ 44	$ 116	$ 485	$ 5
CE011835	Virginia Beach City Pump Station Upgrades, Phase V	$ 1,680	$ 220	$ 373	$ 1,084	$ 3
CE011840	Oceana Off-Line Storage Facility	$ 14,362	$ 1,638	$ 4,544	$ 8,130	$ 50
CE012000	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements (I-264 VDOT Betterment)	$ 11	$ -	$ -	$ 11	$ -
CE012110	Witchduck Road Interceptor Force Main Improvements Phase I	$ 860	$ 127	$ 733	$ -	$ -
CE012120	Witchduck Road Interceptor Force Main Improvements Phase II	$ 1,885	$ 25	$ 100	$ 214	$ 687
CE012200	Pine Tree PRS Reliability Modifications	$ 2,228	$ 647	$ 1,261	$ 320	$ -
	Subtotal	$ 115,593	$ 13,338	$ 34,283	$ 44,941	$ 13,501
James River						
JR010600	Lucas Creek Pump Station Upgrade	$ 6,347	$ -	$ 133	$ 303	$ 5,912
JR011300	Patrick Henry Pump Station Interconnection Force Main	$ 3,207	$ 330	$ 1,370	$ 1,504	$ 3
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	$ 9,095	$ 601	$ 2,135	$ 5,442	$ 917
JR012100	Huxley to Middle Ground Force Main Extension	$ 3,976	$ 1,032	$ 2,942	$ 3	$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	$ 1,236	$ 47	$ 126	$ 443	$ 619
JR013100	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I	$ 1,134	$ 1,134	$ -	$ -	$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	$ 5,252	$ 206	$ 392	$ 1,319	$ 2,497
	Subtotal	$ 30,247	$ 3,350	$ 7,098	$ 9,015	$ 9,947
Middle Peninsula						
MP011400	Mathews Collection System Vacuum Valve Replacement	$ 81	$ 81	$ -	$ -	$ -
MP011700	Middle Peninsula Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ 2,379	$ 2,359	$ 20	$ -	$ -
MP011800	Kirby Street Sanitary Sewer Rehabilitation	$ 695	$ 695	$ -	$ -	$ -
MP012000	King William Treatment Plant Improvements Phase I	$ 6,458	$ 1,388	$ 5,070	$ -	$ -
MP012400	West Point Treatment Plant Tertiary Filter	$ 221	$ 221	$ -	$ -	$ -
MP012500	Mathews Main Vacuum Pump Station Replacement	$ 2,283	$ 760	$ 1,517	$ 5	$ -
MP012700	Middle Peninsula Sewer Lateral Improvements	$ 23,750	$ -	$ -	$ -	$ -
MP012900	Mathews Nursing Home Line Vacuum Sewer Main Improvements	$ 626	$ 624	$ 3	$ -	$ -
MP013000	Small Communities Collection System Rehabilitation Phase I	$ 1,742	$ 647	$ 647	$ 449	$ -
MP013100	Small Communities Mobile Dewatering Facilities Installation	$ 1,214	$ 1,079	$ 135	$ -	$ -
MP013200	Middlesex County Sewer Service Expansion Study	$ 146	$ 146	$ -	$ -	$ -
MP013300	King William Treatment Plant Improvements Phase II	$ 2,150	$ -	$ -	$ 245	$ 1,005
MP013400	Small Communities Operation Center Parking and Laydown Area	$ 225	$ 225	$ -	$ -	$ -
	Subtotal	$ 23,546	$ 8,224	$ 7,391	$ 699	$ 1,005
Note:	Pressure Reducing Station (PRS)					

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027	FY-2028
Chesapeake-Elizabeth							
CE010400	Independence Boulevard Pressure Reducing Station Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE010520	Newtown Road Interceptor Force Main Relocation	$ -	$ -	$ -	$ -	$ -	$ -
CE011300	Birchwood Trunk 24-Inch 30-Inch Force Main at Independence Boulevard Replacement Phase II	$ 916	$ -	$ -	$ -	$ -	$ -
CE011600	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements	$ 624	$ 962	$ -	$ -	$ -	$ -
CE011700	Western Trunk Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
CE011810	Chesapeake-Elizabeth Treatment Plant Decommissioning	$ 1,722	$ 1,722	$ 1,722	$ 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	$ -	$ -	$ -	$ -	$ -	$ -
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	$ -	$ -	$ -	$ -	$ -	$ -
CE011830	Little Creek Pump Station Modifications	$ -	$ -	$ -	$ -	$ -	$ -
CE011835	Virginia Beach City Pump Station Upgrades, Phase V	$ -	$ -	$ -	$ -	$ -	$ -
CE011840	Oceana Off-Line Storage Facility	$ -	$ -	$ -	$ -	$ -	$ -
CE012000	Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements (I-264 VDOT Betterment)	$ -	$ -	$ -	$ -	$ -	$ -
CE012110	Witchduck Road Interceptor Force Main Improvements Phase I	$ -	$ -	$ -	$ -	$ -	$ -
CE012120	Witchduck Road Interceptor Force Main Improvements Phase II	$ 687	$ 172	$ -	$ -	$ -	$ -
CE012200	Pine Tree PRS Reliability Modifications	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 3,948	$ 2,856	$ 1,722	$ 1,004	$ -	$ -
James River							
JR010600	Lucas Creek Pump Station Upgrade	$ -	$ -	$ -	$ -	$ -	$ -
JR011300	Patrick Henry Pump Station Interconnection Force Main	$ -	$ -	$ -	$ -	$ -	$ -
JR011730	Jefferson Avenue Interceptor Force Main Replacement Phase III	$ -	$ -	$ -	$ -	$ -	$ -
JR012100	Huxley to Middle Ground Force Main Extension	$ -	$ -	$ -	$ -	$ -	$ -
JR013000	Morrison Pump Station Discharge Force Main Replacement & Capacity Enhancements	$ -	$ -	$ -	$ -	$ -	$ -
JR013100	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase I	$ -	$ -	$ -	$ -	$ -	$ -
JR013200	Lucas Creek-Woodhaven Interceptor Force Main Replacement Phase II	$ 838	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 838	$ -	$ -	$ -	$ -	$ -
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 Phase I	$ -	$ -	$ -	$ -	$ -	$ -
MP012400	West Point Treatment Plant Tertiary Filter	$ -	$ -	$ -	$ -	$ -	$ -
MP012500	Mathews Main Vacuum Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
MP012700	Middle Peninsula Sewer Lateral Improvements	$ -	$ 2,664	$ 2,664	$ -	$ -	$ -
MP012900	Mathews Nursing Home Line Vacuum Sewer Main Improvements	$ -	$ -	$ -	$ -	$ -	$ -
MP013000	Small Communities Collection System Rehabilitation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
MP013100	Small Communities Mobile Dewatering Facilities Installation	$ -	$ -	$ -	$ -	$ -	$ -
MP013200	Middlesex County Sewer Service Expansion Study	$ -	$ -	$ -	$ -	$ -	$ -
MP013300	King William Treatment Plant Improvements Phase II	$ 900	$ -	$ -	$ -	$ -	$ -
MP013400	Small Communities Operation Center Parking and Laydown Area	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 900	$ 2,664	$ 2,664	$ -	$ -	$ -
Note:	Pressure Reducing Station (PRS)						

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2019 to FY-2028	FY-2019	FY-2020	FY-2021	FY-2022
Nansemond						
NP010620	Suffolk Pump Station Replacement	$ 9,749	$ 719	$ 4,332	$ 4,698	$ -
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	$ 1,250	$ 282	$ 968	$ -	$ -
NP012400	Western Branch Sewer System Gravity Improvements	$ 2,707	$ -	$ -	$ -	$ 156
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	$ 7,261	$ 1,606	$ 5,220	$ 435	$ -
NP012600	Deep Creek Interceptor Force Main Replacement	$ 4,203	$ 2,055	$ 2,098	$ 50	$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	$ 2,036	$ 421	$ 421	$ 421	$ 421
NP013400	Deep Creek Interceptor Force Main Risk Mitigation Project	$ 2,291	$ 483	$ 1,808	$ -	$ -
NP013500	Nansemond Treatment Plant Land Acquisition-Land Stabilization	$ 4,632	$ 1,420	$ 3,212	$ -	$ -
NP013600	Nansemond Treatment Plant Land Acquisition-Structure Demolition	$ 1,840	$ 1,840	$ -	$ -	$ -
NP013700	Nansemond Treatment Plant Struvite Recovery Facility Improvements	$ 5,854	$ 1,588	$ 3,933	$ 333	$ -
	Subtotal	$ 41,822	$ 10,415	$ 21,991	$ 5,937	$ 577
Surry						
SU010200	Surry Hydraulic Improvements and Interceptor Force Main	$ 16,500	$ 4,131	$ 8,307	$ 4,061	$ -
	Subtotal	$ 16,500	$ 4,131	$ 8,307	$ 4,061	$ -
Virginia Initiative Plant						
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	$ 1,420	$ -	$ -	$ -	$ 73
VP014010	Ferebee Avenue Pump Station Replacement	$ 4,809	$ 313	$ 2,248	$ 2,248	$ -
VP014020	Sanitary Sewer Project 1950 12 Inch Force Main and 24 and 18 Inch Gravity Replacement	$ 6,115	$ 447	$ 2,524	$ 3,144	$ -
VP014700	Ingleside Road Pump Station Replacement	$ 3,015	$ -	$ 133	$ 65	$ 65
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	$ 1,029	$ -	$ -	$ -	$ 103
VP015310	Larchmont Sanitary Sewer Master Plan Study	$ 84	$ 84	$ -	$ -	$ -
VP015320	Larchmont Area Sanitary Sewer Improvements	$ 13,265	$ 281	$ 375	$ 2,574	$ 5,780
VP015400	Lafayette Norview-Estabrook Pump Station Replacements	$ 15,849	$ 615	$ 349	$ 5,367	$ 6,766
VP016320	Virginia Initiative Plant Nutrient Reduction Improvements Contract B	$ 6,379	$ 6,379	$ -	$ -	$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	$ 1,964	$ -	$ 37	$ 101	$ 1,267
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	$ 2,414	$ -	$ -	$ 45	$ 15
VP017100	Central Norfolk Area Gravity Sewer Improvements	$ 2,460	$ -	$ -	$ -	$ 47
VP017300	Rodman Avenue Pump Station Wet Well Rehabilitation	$ 176	$ 176	$ -	$ -	$ -
VP018000	Park Avenue Pump Station Replacement	$ 4,894	$ 229	$ 662	$ 2,287	$ 1,715
VP018200	Effingham Interceptor Vault Removal	$ 802	$ 802	$ -	$ -	$ -
	Subtotal	$ 64,673	$ 9,326	$ 6,328	$ 15,831	$ 15,831
Williamsburg						
WB010700	Williamsburg Interceptor Force Main Contract A Replacement	$ 18	$ 18	$ -	$ -	$ -
WB012200	North Trunk Force Main Part B Replacement	$ 1,378	$ 1,030	$ 347	$ -	$ -
WB012400	Williamsburg Treatment Plant Generator and Switchgear Replacement	$ 6,095	$ 588	$ 1,850	$ 2,918	$ 740
WB012500	Lodge Road Pump Station Upgrades	$ 1,472	$ 68	$ 126	$ 954	$ 323
WB012600	Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation	$ 1,075	$ 175	$ 540	$ 360	$ -
WB012700	Williamsburg Treatment Plant Advanced Nutrient Reduction Improvements	$ 7,155	$ 200	$ 755	$ 3,100	$ 3,100
WB012800	Williamsburg Treatment Plant Outfall and Diffuser Repair 2018	$ 125	$ 125	$ -	$ -	$ -
	Subtotal	$ 17,318	$ 2,204	$ 3,618	$ 7,332	$ 4,163
York River						
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	$ 3,031	$ -	$ -	$ -	$ 221
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	$ 4,131	$ -	$ 66	$ 322	$ 1,357
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	$ 5,429	$ -	$ -	$ -	$ 31
YR011900	Bethel-Poquoson Force Main Part III Replacement	$ 1,087	$ 82	$ 221	$ 784	$ -
YR012220	York River Treatment Plant Digester Cover Replacement Phase II	$ 572	$ 572	$ -	$ -	$ -
YR013140	York River Treatment Plant Environmental Studies and Habitat Enhancement	$ 305	$ 305	$ -	$ -	$ -
YR013500	Westminster Drive Force Main Replacement	$ 688	$ -	$ 99	$ 585	$ 5
YR013600	York River Treatment Plant Solids Handling Electrical Improvements	$ 360	$ 360	$ -	$ -	$ -
	Subtotal	$ 15,603	$ 1,318	$ 386	$ 1,691	$ 1,614

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027	FY-2028
Nansemond							
NP010620	Suffolk Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP011300	Suffolk Interceptor Force Main Section I Main Line Valving Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP012400	Western Branch Sewer System Gravity Improvements	$ 156	$ 2,394	$ -	$ -	$ -	$ -
NP012500	Shingle Creek and Hickman's Branch Gravity Sewer Improvements	$ -	$ -	$ -	$ -	$ -	$ -
NP012600	Deep Creek Interceptor Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
NP013000	Nansemond Treatment Plant Motor Control Center Replacements	$ 351	$ -	$ -	$ -	$ -	$ -
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	$ 507	$ 2,394	$ -	$ -	$ -	$ -
Surry							
SU010200	Surry Hydraulic Improvements and Interceptor Force Main	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -
Virginia Initiative Plant							
VP010920	Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2	$ 146	$ 554	$ 646	$ -	$ -	$ -
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	$ 668	$ 1,564	$ 521	$ -	$ -	$ -
VP014800	Lee Avenue-Wesley Street Horizontal Valve Replacement	$ 926	$ -	$ -	$ -	$ -	$ -
VP015310	Larchmont Sanitary Sewer Master Plan Study	$ -	$ -	$ -	$ -	$ -	$ -
VP015320	Larchmont Area Sanitary Sewer Improvements	$ 4,255	$ -	$ -	$ -	$ -	$ -
VP015400	Lafayette Norview-Estabrook Pump Station Replacements	$ 2,752	$ -	$ -	$ -	$ -	$ -
VP016320	Virginia Initiative Plant Nutrient Reduction Improvements Contract B	$ -	$ -	$ -	$ -	$ -	$ -
VP016500	Norview-Estabrook Division I 12-Inch Force Main Replacement	$ 559	$ -	$ -	$ -	$ -	$ -
VP016700	Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III	$ 120	$ 1,718	$ 516	$ -	$ -	$ -
VP017100	Central Norfolk Area Gravity Sewer Improvements	$ 205	$ 1,036	$ 1,172	$ -	$ -	$ -
VP017300	Rodman Avenue Pump Station Wet Well Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
VP018000	Park Avenue Pump Station Replacement	$ -	$ -	$ -	$ -	$ -	$ -
VP018200	Effingham Interceptor Vault Removal	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 9,631	$ 4,872	$ 2,855	$ -	$ -	$ -
Williamsburg							
WB010700	Williamsburg Interceptor Force Main Contract A Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012200	North Trunk Force Main Part B Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012400	Williamsburg Treatment Plant Generator and Switchgear Replacement	$ -	$ -	$ -	$ -	$ -	$ -
WB012500	Lodge Road Pump Station Upgrades	$ -	$ -	$ -	$ -	$ -	$ -
WB012600	Kingsmill Pump Station Piping Replacement and Wet Well Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
WB012700	Williamsburg Treatment Plant Advanced Nutrient Reduction Improvements	$ -	$ -	$ -	$ -	$ -	$ -
WB012800	Williamsburg Treatment Plant Outfall and Diffuser Repair 2018	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ -	$ -	$ -	$ -	$ -	$ -
York River							
YR010300	Foxridge Sanitary Sewer System Sections 1, 4 & 5 Gravity and Woodland Road Fox Hill Road Gravity Sewer Rehabilitation	$ 1,458	$ 1,353	$ -	$ -	$ -	$ -
YR010520	Magruder Mercury Interceptor Force Main Replacement - Section B	$ 2,383	$ 3	$ -	$ -	$ -	$ -
YR010530	Magruder Mercury Interceptor Force Main Replacement - Section C	$ 56	$ 494	$ 1,555	$ 2,325	$ 969	$ -
YR011900	Bethel-Poquoson Force Main Part III Replacement	$ -	$ -	$ -	$ -	$ -	$ -
YR012220	York River Treatment Plant Digester Cover Replacement Phase II	$ -	$ -	$ -	$ -	$ -	$ -
YR013140	York River Treatment Plant Environmental Studies and Habitat Enhancement	$ -	$ -	$ -	$ -	$ -	$ -
YR013500	Westminster Drive Force Main Replacement	$ -	$ -	$ -	$ -	$ -	$ -
YR013600	York River Treatment Plant Solids Handling Electrical Improvements	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 3,897	$ 1,850	$ 1,555	$ 2,325	$ 969	$ -

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	Total FY-2019 to FY-2028	FY-2019	FY-2020	FY-2021	FY-2022
General						
GN010730	Horizontal Valve Replacement Phase III	$ 3,136	$ 365	$ 605	$ 605	$ 605
GN011700	Pump Station Generators and Standby Pump Upgrades	$ 4,814	$ 2,027	$ 1,858	$ 929	$ -
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	$ 207	$ 207	$ (0)	$ (0)	$ -
GN012131	Manhole Rehabilitation Phase 1A (North Shore)	$ 712	$ 712	$ -	$ -	$ -
GN012132	Manhole Rehabilitation Phase 1B	$ 1,305	$ 913	$ 391	$ -	$ -
GN012133	Manhole Rehabilitation Phase 1C	$ 1,305	$ -	$ 1,174	$ 130	$ -
GN012134	North Shore Siphon Chamber Rehabilitation Phase 1	$ 1,305	$ 507	$ 797	$ -	$ -
GN012140	Pump Station Wet Well Rehabilitation Phase I	$ 2,422	$ 855	$ 855	$ 712	$ -
GN012800	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ 6,745	$ 5,729	$ 1,016	$ -	$ -
GN013300	Treatment Plant Grease Handling Facilities	$ 4,532	$ 867	$ 2,741	$ 924	$ -
GN014500	Renewable Energy Facility and Associated Plant Improvements	$ 187,638	$ -	$ -	$ -	$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	$ 4,487	$ 80	$ 222	$ 214	$ 2,477
GN015000	South Shore Gravity Sewer Improvements Phase I	$ 732	$ -	$ -	$ 37	$ 65
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	$ 457	$ 457	$ -	$ -	$ -
GN015300	Interceptor System Valve Improvements Phase I	$ 2,592	$ 74	$ 157	$ 539	$ 1,367
GN015400	South Shore Aerial Crossing Improvements	$ 260	$ -	$ 4	$ 15	$ 11
GN015800	North Shore Automated Diversion Facilities	$ 1,422	$ 148	$ 1,040	$ 235	$ -
GN016200	Sustainable Water Phase 3 – Demonstration Facility (SWIFT)	$ 219	$ 188	$ 31	$ -	$ -
GN016300	Sustainable Water Initiative for Tomorrow (SWIFT)	$ 704,021	$ -	$ -	$ -	$ -
GN016310	Integrated Planning of SWIFT	$ 8,500	$ 3,000	$ 2,000	$ 1,500	$ 1,000
GN016320	Program Management of SWIFT Full Scale Implementation	$ 80,000	$ 6,154	$ 6,154	$ 6,154	$ 6,154
GN016330	Well Services for SWIFT	$ 2,500	$ 2,500	$ -	$ -	$ -
GN016341	Virginia Initiative Plant SWIFT Land Acquisition	$ 15,000	$ -	$ -	$ -	$ -
GN016350	Williamsburg SWIFT Facility	$ 124,575	$ 4,560	$ 10,890	$ 15,150	$ 40,550
GN016360	James River SWIFT Facility	$ 173,130	$ -	$ 6,340	$ 20,646	$ 15,534
GN016370	York River SWIFT Facility	$ 163,806	$ -	$ -	$ -	$ 6,000
GN016400	Treatment Plant Dewatering Replacement Phase I	$ 1,848	$ 254	$ 1,594	$ -	$ -
GN016500	James River and Nansemond Treatment Plant Dewatering Building Mod and Centrifuge Replacement	$ 763	$ 763	$ -	$ -	$ -
GN016600	South Shore High Point Air Vent Installation Phase I	$ 450	$ 188	$ 263	$ -	$ -
GN016700	Treatment Plant Solids Handling Replacement Phase II	$ 3,315	$ -	$ 721	$ 849	$ 1,496
GN016800	Fleet Management	$ 4,381	$ 612	$ 1,372	$ 1,307	$ 1,090
GN016900	Mobile Workforce Implementation	$ 1,750	$ 1,750	$ -	$ -	$ -
GN017000	Water Quality Department Instrumentation and Monitoring Equipment	$ 285	$ 285	$ -	$ -	$ -
	Subtotal	$ 1,154,062	$ 33,194	$ 40,225	$ 49,945	$ 76,348
Future Improvements						
IP010200	Treatment Plant Expansions and Improvements	$ 16,368	$ -	$ -	$ 752	$ 3,311
IP010300	General Expansions and Improvements	$ 1,653	$ -	$ -	$ -	$ 338
IP010600	Treatment Plant Rehabilitation and Replacement	$ 16,368	$ -	$ -	$ 752	$ 3,311
IP010700	General Rehabilitation and Replacement	$ 1,653	$ -	$ -	$ -	$ 338
IP010800	Regional Wet Weather Improvements	$ 1,800,791	$ -	$ 1,773	$ 3,218	$ 15,553
IP011000	Advanced Treatment Infrastructure Upgrades	$ 529,868	$ 196	$ 3,323	$ 17,185	$ 22,471
	Subtotal	$ 614,318	$ 196	$ 5,096	$ 21,908	$ 45,323
	CIP TOTALS	$ 2,426,017	$ 134,000	$ 187,255	$ 200,000	$ 200,000

FY-2019 to FY-2028
Cash Flow Projections (in thousands)

CIP No	Project Name	FY-2023	FY-2024	FY-2025	FY-2026	FY-2027	FY-2028
General							
GN010730	Horizontal Valve Replacement Phase III	$ 605	$ 353	$ -	$ -	$ -	$ -
GN011700	Pump Station Generators and Standby Pump Upgrades	$ -	$ -	$ -	$ -	$ -	$ -
GN012130	Manhole Rehabilitation-Replacement Phase I and North Shore Siphon Chamber Rehabilitation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN012131	Manhole Rehabilitation Phase 1A (North Shore)	$ -	$ -	$ -	$ -	$ -	$ -
GN012132	Manhole Rehabilitation Phase 1B	$ -	$ -	$ -	$ -	$ -	$ -
GN012133	Manhole Rehabilitation Phase 1C	$ -	$ -	$ -	$ -	$ -	$ -
GN012134	North Shore Siphon Chamber Rehabilitation Phase 1	$ -	$ -	$ -	$ -	$ -	$ -
GN012140	Pump Station Wet Well Rehabilitation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN012800	Interceptor Systems Pump Station Control and SCADA Upgrades and Enhancements	$ -	$ -	$ -	$ -	$ -	$ -
GN013300	Treatment Plant Grease Handling Facilities	$ -	$ -	$ -	$ -	$ -	$ -
GN014500	Renewable Energy Facility and Associated Plant Improvements	$ -	$ -	$ -	$ -	$ -	$ -
GN014900	North Shore Gravity Sewer Improvements Phase I	$ 1,493	$ -	$ -	$ -	$ -	$ -
GN015000	South Shore Gravity Sewer Improvements Phase I	$ 236	$ 394	$ -	$ -	$ -	$ -
GN015100	Arctic Avenue Pump Station and Newtown Road Pump Station Electrical Improvements	$ -	$ -	$ -	$ -	$ -	$ -
GN015300	Interceptor System Valve Improvements Phase I	$ 456	$ -	$ -	$ -	$ -	$ -
GN015400	South Shore Aerial Crossing Improvements	$ 137	$ 94	$ -	$ -	$ -	$ -
GN015800	North Shore Automated Diversion Facilities	$ -	$ -	$ -	$ -	$ -	$ -
GN016200	Sustainable Water Phase 3 – Demonstration Facility (SWIFT)	$ -	$ -	$ -	$ -	$ -	$ -
GN016300	Sustainable Water Initiative for Tomorrow (SWIFT)	$ 12,115	$ 39,827	$ 67,195	$ 122,491	$ 146,312	$ 167,630
GN016310	Integrated Planning of SWIFT	$ 1,000	$ -	$ -	$ -	$ -	$ -
GN016320	Program Management of SWIFT Full Scale Implementation	$ 6,154	$ 6,154	$ 6,154	$ 6,154	$ 6,154	$ 6,154
GN016330	Well Services for SWIFT	$ -	$ -	$ -	$ -	$ -	$ -
GN016341	Virginia Initiative Plant SWIFT Land Acquisition	$ 15,000	$ -	$ -	$ -	$ -	$ -
GN016350	Williamsburg SWIFT Facility	$ 44,510	$ 8,915	$ -	$ -	$ -	$ -
GN016360	James River SWIFT Facility	$ 56,360	$ 61,860	$ 12,390	$ -	$ -	$ -
GN016370	York River SWIFT Facility	$ 19,533	$ 14,697	$ 53,320	$ 58,540	$ 11,716	$ -
GN016400	Treatment Plant Dewatering Replacement Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN016500	James River and Nansemond Treatment Plant Dewatering Building Mod and Centrifuge Replacement	$ -	$ -	$ -	$ -	$ -	$ -
GN016600	South Shore High Point Air Vent Installation Phase I	$ -	$ -	$ -	$ -	$ -	$ -
GN016700	Treatment Plant Solids Handling Replacement Phase II	$ 249	$ -	$ -	$ -	$ -	$ -
GN016800	Fleet Management	$ -	$ -	$ -	$ -	$ -	$ -
GN016900	Mobile Workforce Implementation	$ -	$ -	$ -	$ -	$ -	$ -
GN017000	Water Quality Department Instrumentation and Monitoring Equipment	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 157,847	$ 132,294	$ 139,059	$ 187,184	$ 164,182	$ 173,784
Future Improvements							
IP010200	Treatment Plant Expansions and Improvements	$ 1,701	$ 6,124	$ 1,379	$ 407	$ 515	$ 2,178
IP010300	General Expansions and Improvements	$ 138	$ 680	$ 153	$ 45	$ 57	$ 242
IP010600	Treatment Plant Rehabilitation and Replacement	$ 1,701	$ 6,124	$ 1,379	$ 407	$ 515	$ 2,178
IP010700	General Rehabilitation and Replacement	$ 138	$ 680	$ 153	$ 45	$ 57	$ 242
IP010800	Regional Wet Weather Improvements	$ 27,490	$ 29,516	$ 27,012	$ 31,655	$ 32,730	$ 27,926
IP011000	Advanced Treatment Infrastructure Upgrades	$ 50,008	$ 74,387	$ 76,783	$ 30,000	$ 62,048	$ 45,000
	Subtotal	$ 81,175	$ 117,512	$ 106,860	$ 62,560	$ 95,922	$ 77,765
	CIP TOTALS	$ 285,714	$ 285,714	$ 285,714	$ 285,714	$ 285,714	$ 276,190

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