



# ANNUAL REPORT

JANUARY 1, 2022 - JUNE 30, 2023



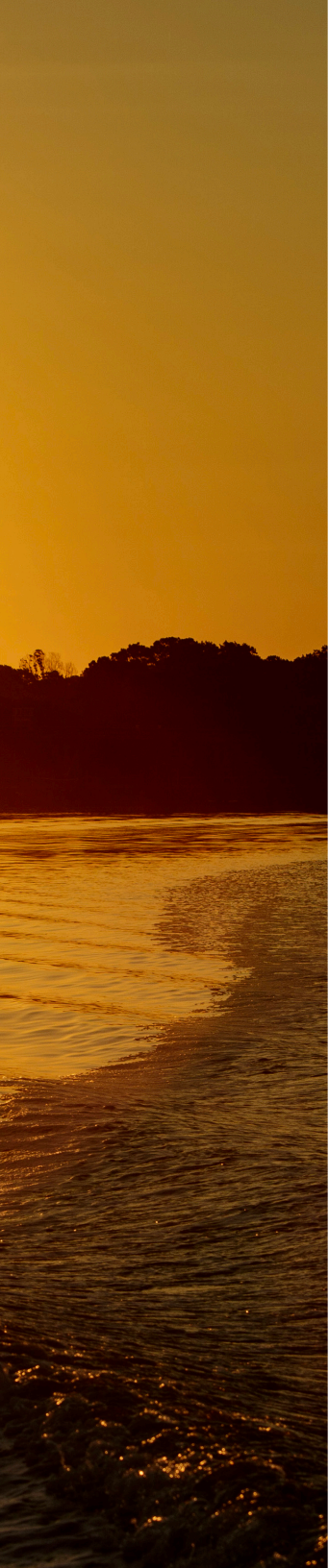


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Since its inception in 1940, HRSD has served the region by effectively treating wastewater and returning highly treated effluent to nature in a way that continues to nurture our delicate ecosystem. SWIFT (the Sustainable Initiative for Tomorrow) is HRSD's newest water treatment innovation. SWIFT takes highly treated wastewater that would otherwise be discharged into local rivers and puts it through additional rounds of advanced water treatment to meet drinking water standards. This SWIFT Water™ will be used to replenish the Potomac Aquifer, the primary source of groundwater for the region.

Our workforce of scientists, engineers, water quality professionals and other staff work together diligently to fulfill the HRSD Promise and Vision.

## **Our Promise:**

**We promise to treat wastewater and recover natural resources to protect public health and the environment.**

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## **Our Vision:**

**Our communities will have clean waterways and reliable water resources for generations to come.**



# From the General Manager

*Since 1940, HRSD has consistently kept our promise to protect public health and the environment. As our organization evolved over the years, we have become an innovative industry leader known throughout the country as a developer of clean water technologies that reduce human impact on the environment while also reducing costs. This commitment is at the heart of everything we do, and it guides our actions each day.*

*In 2023, HRSD launched our Strategic Plan 2030 that provides a bold vision for the future and a roadmap to help us achieve our goals and objectives in the coming years. One of the key components of our plan is Community Engagement. Based on a recent survey, most of our customers know very little about who we are and how HRSD's work is essential to ensure that our communities will have clean waterways and reliable water resources for generations to come. Clean waterways are at the heart of a prosperous*

*Coastal Virginia community, providing robust environmental, economic and recreational opportunities. Protecting our waterways allows the amazing sea turtles, dolphins and other aquatic life to thrive, and allows residents to enjoy all the benefits of living here like fishing, swimming, surfing and paddle*



## Jay Bernas, PE

General Manager  
Hampton Roads Sanitation District

*boarding. This Annual Report is intended to help bridge that information gap through a succinct, graphical format. Prudent financial management is essential to long-term sustainability. We have managed our resources wisely, ensuring that we can continue to invest in the infrastructure and technology needed to meet the evolving demands of our community.*

*As we look ahead, we recognize that our work is far from finished. We*

*face new challenges and opportunities in the years to come, from advancing technology to changing regulatory requirements. We are ready to embrace these challenges head-on, with the same commitment, dedication, and passion that have defined us for 83 years.*

*Please take a few moments to learn more about our achievements over the past 18 months. Your feedback and collaboration are invaluable to us as we continue our mission to protect public health and the environment. It's our promise and we intend to keep it.*



# Content Strategy

As HRSD's first annual report, this information is reported on the timeframe from January 1, 2022 through June 30, 2023; subsequent reports will fall in line with the HRSD fiscal year of July - June.

Content is driven largely by our 2022 Brand Perception Study that revealed three key focus areas of particular interest to our customers:

- **Cost Transparency**
- **Environmental Impacts**
- **Industry and Innovation Leadership**





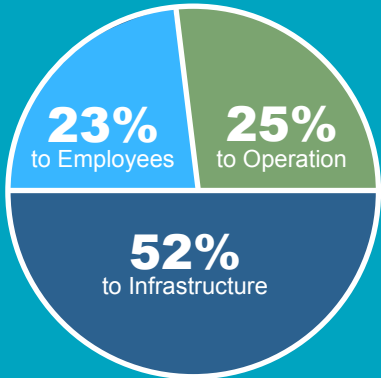
# HRSD by the Numbers

“How much are you charging me in Fiscal Year 2024?”

Average cost per gallon: \$0.01

“Where does my money go?”

Out of every dollar, \$.23 goes to our employees, \$.25 goes to our Operating Expenses, and \$.52 goes to our Infrastructure Projects.



“What is the 2024 Infrastructure Budget?”

**\$725,000,000**



“What is the 10-year Infrastructure Budget?”

**\$3,863,947,000**

“How much debt does HRSD have?”

- Total O/S Indebtedness (thousands, as of June 2023)

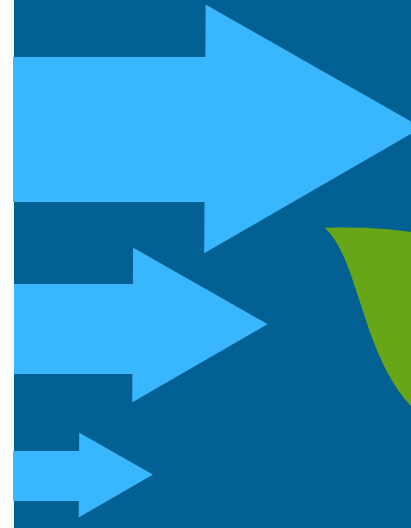
**\$979,742**

- Debt per account (June 2023)

**\$2,016**

“How much money will you borrow over the next 10 years?”

**\$1.8 Billion, representing 46% of the 10-year infrastructure budget**



“Where does your money come from?”

**97%**

Revenues from customer bills and only

**1%**

Revenues from new connections (economic growth)



“How many HRSD employees are there?”



**905**

full-time employees

“How many service connections do you have?”

- 486,000 Service Connections
- 20% of Virginia’s Population





Percent of HRSD's Infrastructure Improvement Program that is driven by federal and state mandates?

**73%**



"How much infrastructure is HRSD investing in the Region?"

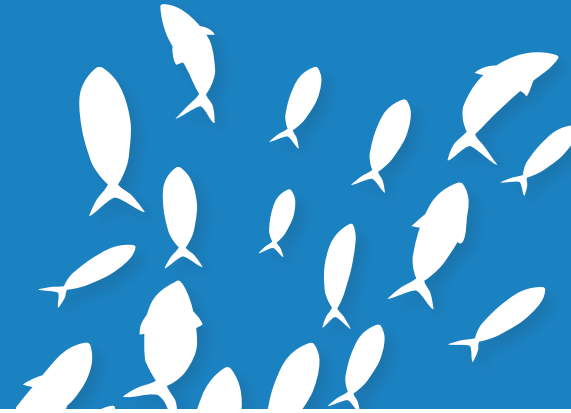


**\$3.9 billion** over the next 10 years

**\$8,025** Per service connection over the next 10 years

**\$6.8 billion** over the next 20 years

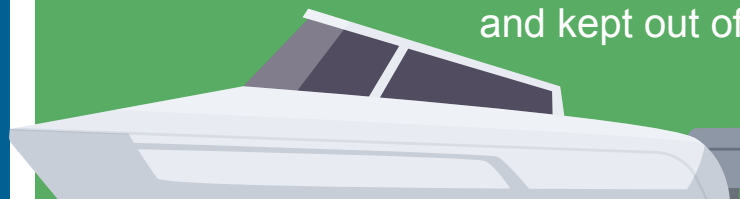
Removed more than **300,000,000 lbs.** of pollutants from wastewater, keeping it out of local waterways.



Kept **15.2 million gallons of grease waste** from entering the sewer system, minimizing grease-related sanitary sewer overflows.



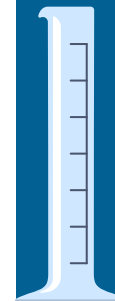
**36,409 gallons of sewage** pumped at no cost from recreational vessels and kept out of our local waterways.



HRSD's research vessel and crew logged **over 2,800 miles of continuous monitoring** in the lower James River, documenting **more than 560,000 water quality parameters** critical for detecting algal bloom formation.



Our Central Environmental Laboratory analyzed **more than 123,000 samples**, completing **392,000 analyses**.







## SWIFT and the Integrated Plan: Saving the Region \$5 Billion through Successful Collaboration

### Do you know where your water goes?

The water that runs down the drain after bathing or showering, washing dishes or flushing the toilet makes its way to HRSD largely through pipelines owned and operated by your city or county that are connected to HRSD's collection system, **made up of more than 500 miles of pipes**. These pipes ultimately deliver that wastewater to one of 14 HRSD treatment plants in southeastern Virginia where it is cleaned to meet regulatory standards before it is returned to the environment.

The water that runs into storm drains does not normally come to HRSD for treatment - it goes right out into local waterways

through a separate system operated by your locality, with most of it ultimately making its way into the Chesapeake Bay.

HRSD's sewer system was never designed to handle or treat this water (stormwater), but that's often what happens when the system becomes infiltrated with stormwater runoff, groundwater, and tidal water from larger storms. **So, what happens when the sewer system fills beyond its capacity?** That mix of storm water and wastewater must go somewhere and sometimes results in a sanitary sewer overflow (SSO) onto local streets and communities.

As part of the **Clean Water Act, the Environmental Protection Agency (EPA)**, made minimization of these types of events

a national priority. Thankfully, sanitary sewer overflows in Hampton Roads are relatively rare since the stormwater and wastewater systems are separate here (unlike many large cities where the stormwater and wastewater are combined).

Nonetheless, **HRSD recognized the significance of this priority effort** and worked with the cities and counties it serves in a cooperative regional approach to increase the region's wet weather flow capacity to greatly reduce sanitary sewer overflows. This was done by agreeing to make prioritized capacity-related improvements to HRSD's system as well as the systems of the cities and counties it serves, yielding a significant overall reduction of program compliance costs.





## Taking a “One Water” Approach with SWIFT: A Regional Collaboration Success Story

The EPA more recently shifted to a more holistic “one water” approach through their Integrated Planning framework. The Integrated Planning framework allows us to “best prioritize capital investments and achieve our human health and water quality objectives.” After years of negotiations with EPA and other key stakeholders, HRSD’s Integrated Plan was approved on February 8, 2022. The plan was a collaborative effort between HRSD, EPA, the Virginia Department of Environmental Quality (DEQ), the Virginia Department of Health (VDH) and localities that allows us to prioritize our region’s most important water quality issues. At the core of the Integrated Plan is HRSD’s Sustainable Water Initiative for Tomorrow (SWIFT) program. SWIFT takes HRSD’s already highly treated water that would otherwise be discharged into the James and Elizabeth rivers and puts it through Advanced Water Treatment to bring it to drinking water standards. The resulting SWIFT Water™ will be used to recharge the Potomac aquifer, providing multiple environmental benefits:

- Providing a sustainable source of groundwater
- Slowing the rate of land subsidence due to over withdrawal of the aquifer
- Blocking saltwater intrusion by creating a pressurized freshwater barrier, and
- Significantly reducing HRSD’s nutrient discharges to the James and Elizabeth rivers

Given SWIFT’s significant environmental benefits for the region, HRSD is prioritizing SWIFT construction and implementing two phases of high priority wet weather projects in our Integrated Plan to include over \$400 million of regional wet weather capacity improvements.

HRSD’s Integrated Plan not only complies with the Clean Water Act for SSOs, but also with nutrient reduction requirements for the Chesapeake Bay restoration. Between 2021 and 2028, over 70 percent of the total nitrogen and over 50 percent of the phosphorus will be eliminated from the Lower James River Basin.

## But Wait, There’s More!

In addition to the significant environmental benefits, HRSD’s regional approach to these regulatory requirements comes with significant cost savings. With HRSD’s SWIFT program anchoring the Integrated Plan, the region will save approximately \$5 billion when compared to the costs that would have likely occurred if each city and county individually tried to comply with the Clean Water Act and Chesapeake Bay nutrient reduction requirements on their own. SWIFT gives HRSD and the region a “one water” double benefit of environmental preservation and protection through aquifer recharge and sensible sanitary sewer overflow reduction as well as tremendous financial benefits for ratepayers and the cities and counties we serve. To learn more about SWIFT and to schedule a visit to the SWIFT Research Center to see the Advanced Water Treatment and sample some refreshing SWIFT Water™, visit [hrsd.com/swift](https://hrsd.com/swift).



2022 - 2023

# Year in Review

As our first Annual Report, this Year in Review data reflects the 18-month timeframe beginning January 1, 2022 through June 30, 2023. Information and data shared here highlights HRSD's five Priorities as outlined in HRSD's 2030 Vision: A Strategic Plan. To learn more about HRSD's updated Strategic Plan, visit [HRSD.com/HRSD-Strategic-Plan](https://www.hrzd.com/HRSD-Strategic-Plan).



# Environmental Responsibility

We protect public health and preserve natural resources to ensure a sustainable future.

## RECYCLING



RECYCLED NEARLY

**33,000**

WET TONS OF BIOSOLIDS, RETURNING ESSENTIAL NUTRIENTS AND NEEDED ORGANIC MATTER TO APPROXIMATELY

**2,900**

ACRES OF AGRICULTURAL LAND.

## COMMUNITY

**202**   
VOLUNTEERS SUPPORTED

**21**  
COMMUNITY CLEANUP EVENTS AND COLLECTED APPROXIMATELY

**3,700**  
POUNDS OF TRASH

PLANTED  
**523**  
TREES

## PUBLIC HEALTH



HRSD CONDUCTED WASTEWATER SURVEILLANCE MONITORING AT ITS URBAN WASTEWATER FACILITIES, COLLECTING MORE THAN

**700**

SAMPLES FOR HUMAN PATHOGENS SUCH AS SARS-COV-2 INCLUDING VARIANT TESTING, INFLUENZA A AND INFLUENZA B, MONKEY POX, AND RSV.

HRSD ALSO SUPPORTED STATE AND LOCAL HEALTH DEPARTMENT WASTEWATER SURVEILLANCE PROGRAMS, ANALYZING APPROXIMATELY

**1,000**

SAMPLES FOR HUMAN PATHOGENS SUCH AS SARS-COV-2 INCLUDING VARIANT TESTING, INFLUENZA A AND INFLUENZA B, MONKEY POX, AND RSV.



OVERALL, HRSD'S PATHOGEN ANALYSIS TEAM GENERATED MORE THAN

**17,000**  
RESULTS.



HRSD PARTNERED WITH HAMPTON ROADS LOCALITIES TO CONDUCT MICROBIAL SOURCE TRACKING (MST) IN LOCAL WATERS, PROCESSING NEARLY

**2,700**

SAMPLES TO IDENTIFY AND TRACE SOURCES OF WASTEWATER INTO OUR LOCAL WATERS.





# Innovation

We lead industry by boldly innovating in every aspect of our business to enable continuous improvement.

## HRSD Takes a DETOUR in Nitrogen Removal

One of the primary roles of wastewater treatment is to remove nutrients such as nitrogen and phosphorus, which in excess, are harmful to aquatic life. DETOUR (partial denitrification anammox or PdNA) is a nutrient reduction technology patented by HRSD that represents a paradigm shift for wastewater treatment. It offers an opportunity to achieve sustainable nitrogen removal, using less chemicals, energy neutral or even energy positive facilities, and providing a sustainable process within a small footprint. This means dramatic reductions in treatment costs, capacity benefits, and significant decreases in carbon footprint. HRSD has successfully deployed DETOUR technology full-scale at the York and James River treatment plants.

The Nansemond Treatment Plant in Suffolk will be the next treatment plant to undergo an upgrade to PdNA, with design and construction commencing in late 2023.

## Removing 1,4 dioxane from SWIFT Water with...Propane!

Improving 1,4-dioxane removal is an important aspect of SWIFT, both for the Research Center and the design of full-scale SWIFT facilities. This compound is classified by the EPA as a likely human carcinogen and is found in products that form suds, like shampoos, bath and shower washes, dish soaps, and laundry detergents. The application of propane (yes, the same propane that powers your grill!) for enhancing co-metabolic removal of 1,4-dioxane through biofiltration at the pilot scale has been successful and has now been implemented at the SWIFT Research Center. This is a completely novel technology development, and to the best of our knowledge, has never been attempted previously in a pilot- or full-scale biofiltration process.

## The SWIFT Research Center: A recharge and research update!

The SWIFT Research Center has recharged the Potomac Aquifer with a total of 750 million gallons of drinking water quality SWIFT Water™. In addition to this accomplishment, the staff and interns at the Research Center continue to conduct cutting edge research, to include PFAS and 1,4-dioxane removal, well monitoring and optimization, pathogen removal evaluation and confirmation, and ozonation process optimization.

**MARCH**

**2022**

**MAY**

**2022**

**JUNE**

**2023**

# Financial Stewardship

We preserve financial strength and integrity and sustainability through sound planning to help ensure long-term affordability.

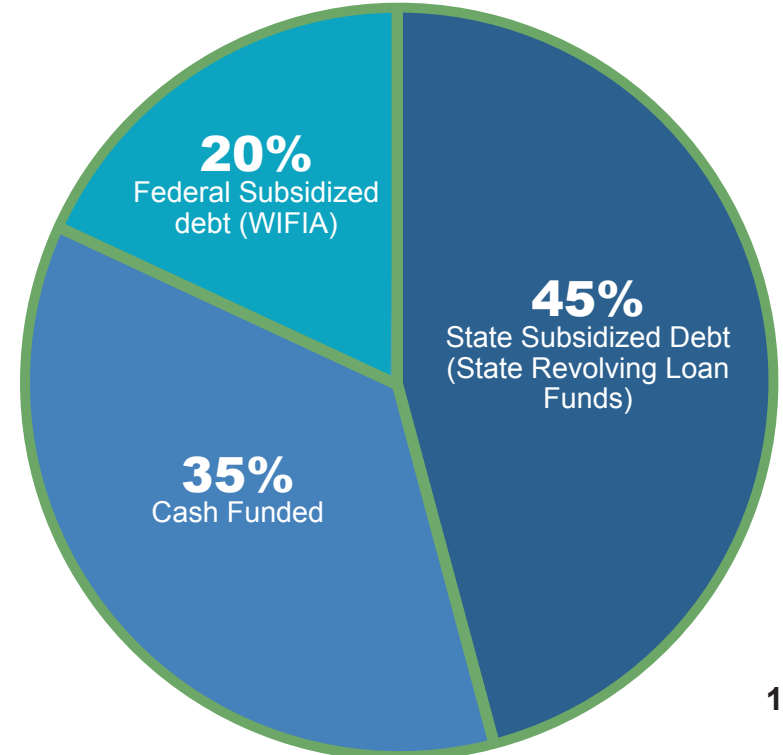
## Bond Ratings

S&P AA+ | Moody's Aa1 | Fitch AA

HRSD INVESTED

# \$436.4 MILLION

TO REPLACE AGING INFRASTRUCTURE, PROVIDE AND IMPROVE SERVICE TO SMALL COMMUNITIES, AND ADVANCE FULL-SCALE IMPLEMENTATION OF SWIFT.





# Community Engagement

We engage and partner with the communities we serve to enhance relationships, provide value, and foster trust.



**361**

COMMUNITY PARTNERS



**501**

SCHOOL AND COMMUNITY  
OUTREACH EVENTS,  
PRESENTATIONS AND  
TOURS



**656**

VIRTUAL SWIFT  
RESEARCH CENTER TOURS



**685**

SOCIAL MEDIA POSTS ON  
FACEBOOK, LINKEDIN AND  
TWITTER/X

# Talent

We attract, develop, and retain an exceptional and diverse workforce that reflects our principles.



**106**

APPRENTICESHIP  
COURSES  
DELIVERED



**149**  
APPRENTICES



**63**

JOB AND CAREER FAIR  
EVENTS HRSD  
PARTICIPATED

**293**



COLLEGE INTERNS HOSTED

**934**

APPRENTICESHIP COURSE  
ENROLLMENTS

**32**

APPRENTICESHIP  
GRADUATES



**23**

HIGH SCHOOL  
INTERNS  
HOSTED

**2,246**



TOTAL SAFETY TRAINING HOURS





# Awards and Honors

Thirteen of HRSD's treatment plants earned Peak Performance Awards in 2022 and 2023, receiving recognition by the National Association of Clean Water Agencies (NACWA) for outstanding compliance with their National Pollution Discharge Elimination System permits.

Silver Awards recognize facilities that have received no more than five permit violations per calendar year. Gold Awards honor those who have achieved perfect permit compliance for an entire calendar year, while Platinum Awards recognize 100 percent compliance for at least five consecutive years.

The following treatment plants were recognized for outstanding compliance during calendar year 2022, a remarkable accomplishment:

## Silver Awards

King William Treatment Plant  
Nassawodox Riverside  
(Eastern Shore)  
West Point Treatment Plant

## Gold Awards

Army Base Treatment Plant  
Central Middlesex Treatment Plant  
Onancock Wastewater  
Treatment Plant  
Urbanna Treatment Plant

## Platinum Awards

*Platinum 8*  
Atlantic Treatment Plant  
*Platinum 9*  
James River Treatment Plant  
*Platinum 14*  
York River Treatment Plant  
*Platinum 21*  
Boat Harbor Treatment Plant  
*Platinum 21*  
Nansemond Treatment Plant  
*Platinum 27*  
Virginia Initiative Plant  
*Platinum 28*  
Williamsburg Treatment Plant

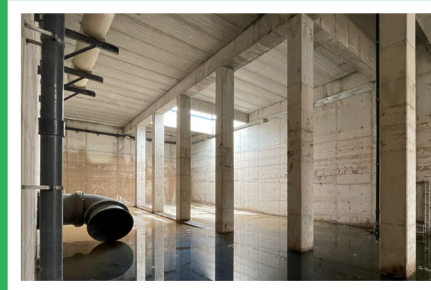
## Elizabeth River Project Award

HRSD is honored to receive the 2022 Elizabeth River Project's Sustained Distinguished Performance Award. This award is earned through demonstrating significant new efforts in either pollution prevention or wildlife habitat enhancement.



## American Council of Civil Engineering Companies (ACEC) Virginia Grand Award

Hazen and Sawyer, the firm which led the Providence Road Offline Storage Facility Woodstock Park Improvements Project, in conjunction with HRSD and the City of Virginia Beach, recently won the ACEC Virginia 2022 Grand Award. The Grand Award highlights projects which showcase engineering excellence through innovation and creativity and exceptional social, economic, and environmental benefits. This innovative project featured a skate park build atop a 5.2 million gallon, partially buried storage tank.



## 2022 DBIA Mid-Atlantic Region Honor Award for Best DB Project

## 2022 DBIA Mid-Atlantic Region Excellence in Teaming Award

## Build America Merit Award

The Providence Road Offline Storage Facility Woodstock Park Improvements Project was selected as the winner of the 2022 Construction Risk Partners Build America Merit Award, in the Design-Build Category.



## United Way Bronze Trailblazer Award

HRSD earned the United Way "Bronze Trailblazer Award" for the 13th consecutive year.

HRSD had an average of \$565.22 per contribution and received 67 pledges with 13 percent of employees contributing.

The United Way of the Virginia Peninsula recently honored HRSD with our third "Community Builder" award in recognition of work on the Williamsburg home project. The Community Builder award is given to companies and organizations that increase their workplace campaign not just by a dollar amount, but through participation, and through volunteering their time and employee talents throughout the community.

## 2022 Water Environment Federation (WEF) Project Excellence Award

Awarded to the Providence Road Offline Storage Facility and Woodstock Park Improvements project.



## 2022 DBIA Merit Award and Award of Excellence in the Water/Wastewater Sector



## NACWA's National Environmental Achievement Awards (NEAA)

NEAA recognize individuals and NACWA member agencies that have made outstanding contributions to environmental protection and the clean water community. HRSD earned NEAA awards in three categories this year:

- Research and Technology, in partnership with DC Water, recognizing their work in nitrogen removal, "Taking a DETOUR for Shortcut Nitrogen Removal: Partial Denitrification-Annamox (PdNA)"
- Public Information and Education for the Providence Road Offline Storage Facility and Woodstock Park Improvements Video, and
- Workforce Development, in partnership with the Hampton Roads Workforce Council for the HRSD Youth Summer Intensive (YSI) Program

## 2023 Grand and Pinnacle Awards from the American Council of Engineering Companies of Virginia

HRSD and design engineering firm Kimley-Horn were pleased to receive the **2023 Grand and Pinnacle** awards from the American Council of Engineering Companies (ACEC) of Virginia for the Chesapeake-Elizabeth Interceptor Diversion Improvements Program.

- **The Pinnacle Award** is given to the engineering firm that has demonstrated innovation commitment to improving the community, and dedication to the engineering profession's principles. This award is the highest honor of engineering excellence and is elected from the Grand Award winners.
- **The Grand Award** recognizes projects showcasing engineering excellence through innovation and creativity and exceptional social, economic, and environmental benefits.

## EPA's 2022 George F. Ames PISCES Award in the Innovation Finance Category

HRSD won this award for the creation of the programmatic revolving loan which bundled 48 individual projects to secure \$100,000,000 in funding at a rate of 1.15%.

## 2023 National Recognition Engineering Excellence Award from the American Council of Engineering Companies of Virginia

ACEC honors HRSD for the Chesapeake-Elizabeth Interceptor Diversion Improvements Program. The Engineering Excellence Awards are an annual celebration of engineering excellence, honoring projects worldwide that demonstrate innovation, creative problem-solving, and engineering's unique ability to improve our world. The competition is juried by a panel of industry, government, and academic experts.



# Financials

## Condensed Statements of Net Position

(in thousands of dollars)

	2023	2022	2021	2023 vs 2022	
				Dollars	Percent
<b>ASSETS</b>					
Capital Assets	\$2,012,351	\$1,715,108	\$1,604,841	\$ 297,243	17%
Current and other nonconcurrent assets	334,314	346,767	311,141	(12,453)	-4%
<b>Total Assets</b>	<b>2,346,665</b>	<b>2,061,875</b>	<b>1,915,982</b>	<b>284,790</b>	<b>14%</b>
Deferred outflows of resources	37,522	42,611	42,277	(5,089)	-12%
<b>LIABILITIES</b>					
Long-term liabilities	917,223	796,272	794,371	120,951	15%
Current liabilities	271,225	211,670	195,162	59,555	28%
<b>Total Liabilities</b>	<b>1,188,448</b>	<b>1,007,942</b>	<b>989,533</b>	<b>180,506</b>	<b>18%</b>
Deferred inflows of resources	18,717	37,060	17,902	(18,343)	-49%
<b>NET POSITION</b>					
Net investment in capital assets	981,437	832,427	776,253	149,010	18%
Restricted for debt service	33,830	33,134	30,455	696	2%
Unrestricted	161,755	193,923	144,116	(32,168)	-17%
<b>Total Net Position</b>	<b>\$1,177,022</b>	<b>\$1,059,484</b>	<b>\$950,824</b>	<b>\$ 117,538</b>	<b>11%</b>

**PLEASE NOTE** that this is a summary report intended for general readership and as such does not contain all the information available in HRSD's Annual Comprehensive Report (ACFR). To view the fiscal year 2023 ACFR which was prepared in accordance with accounting principles generally accepted in the United States of America, please visit HRSD's website at <https://www.hrsd.com/finance#annfinrpt>

# Condensed Statements of Revenues, Expenses and Changes in Net Position

(in thousands of dollars)

	2023	2022	2021	2023 vs 2022	
				Dollars	Percent
<b>REVENUES</b>					
Operating Revenues	\$387,935	\$357,946	\$329,769	\$ 29,989	8%
Facility Charges	7,293	7,072	7,379	221	3%
Miscellaneous	8,083	401	2,638	7,682	1916%
<b>Total Revenues</b>	<b>403,311</b>	<b>365,419</b>	<b>339,786</b>	<b>37,892</b>	<b>10%</b>
<b>EXPENSES</b>					
Operating	257,996	234,165	234,789	23,831	10%
Non-Operating	29,652	25,331	26,397	4,321	17%
<b>Total Expenses</b>	<b>287,648</b>	<b>259,496</b>	<b>261,186</b>	<b>28,152</b>	<b>11%</b>
Income before capital contributions	115,663	105,923	78,600	9,740	9%
Capital Contributions	1,875	2,737	2,317	(862)	-31%
Change in Net Position	117,538	108,660	80,917	8,878	8%
Net Position, Beginning of Year	1,059,484	950,824	869,907	108,660	11%
Net Position, End of Year	1,177,022	1,059,484	950,824	117,538	11%





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**HRSD**

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