



Miami-Dade Water and Sewer Department Business Plan

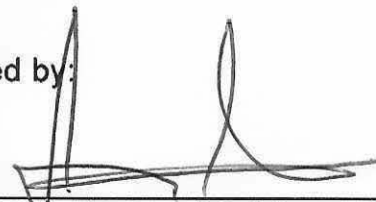
Fiscal Years: 2024 and 2025*
(10/1/2023 through 9/30/2025)



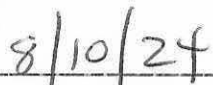
Roy Coley, Director



Date

Approved by:


Jimmy Morales, Chief Operations Officer



Date

Plan Date: June 10, 2024

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DEPARTMENT OVERVIEW

MISSION

"We deliver high-quality, safe, and reliable drinking water and wastewater services in Miami-Dade County where customers know the value of every drop, employees take pride in their contribution, and the pursuit for efficiency and community resilience drives every business decision."

VISION

"A model utility of excellence in reliability, resilience, and environmental stewardship, recognized as an essential partner in the protection of public health and an employer of choice in Miami-Dade County."



OUR CUSTOMER

The Miami-Dade Water and Sewer Department (WASD), the largest water and wastewater utility in the Southeastern United States, is committed to providing safe, high-quality, and reliable potable water and wastewater services at the lowest possible rates to its residential, business, and municipal customers.

The Department serves a population of more than 2.8 million people, including wholesale water service delivery to 15 municipalities and wholesale wastewater service to 12 municipalities and Homestead Airforce Base, as well as the unincorporated areas of Miami-Dade County.



MUNICIPAL DRINKING WATER CUSTOMERS

- BAL HARBOUR
- BAY HARBOR ISLANDS
- HIALEAH
- HIALEAH GARDENS
- HOMESTEAD
- INDIAN CREEK VILLAGE
- MEDLEY
- MIAMI BEACH
- NORTH BAY VILLAGE
- NORTH MIAMI
- NORTH MIAMI BEACH
- OPA-LOCKA
- SURFSIDE
- VIRGINIA GARDENS
- WEST MIAMI



MUNICIPAL & MILITARY SANITARY SEWER CUSTOMERS

- CORAL GABLES
- FLORIDA CITY
- HIALEAH
- HIALEAH GARDENS
- HOMESTEAD
- MEDLEY
- MIAMI BEACH
- NORTH BAY VILLAGE
- NORTH MIAMI
- NORTH MIAMI BEACH
- OPA-LOCKA
- WEST MIAMI
- HOMESTEAD AIR FORCE BASE

FY 2023-24 TABLE OF ORGANIZATION

WASD’s FY 2023-24 full-time equivalent positions total 3,086.

Office of the Director

Formulates and establishes departmental policies that set the course for the organization, directs overall operations, and maintains alignment with the larger County mission and vision. Also directs legislative activities, municipal policies, personnel, and public engagement.



FY 22-23	FY 23-24
18	12

Water & Wastewater Systems Operations

Operates and maintains water and wastewater systems, treatment plants, transmission and distribution systems, and pump stations, as well as SCADA and laboratory functions.



FY 22-23	FY 23-24
1,676	1,772

Finance, Administrative Compliance & Resilience

Directs financial, procurement, operating and capital budgets, contractual monitoring and compliance, and funding coordination as well as the Department’s resilience programs.



FY 22-23	FY 23-24
302	338

Planning, Regulatory Compliance & Capital Infrastructure

Leads water and wastewater design and construction activities for plants and pipelines. Directs capital improvement programs, and compliance with state and federal agreements.



FY 22-23	FY 23-24
351	380

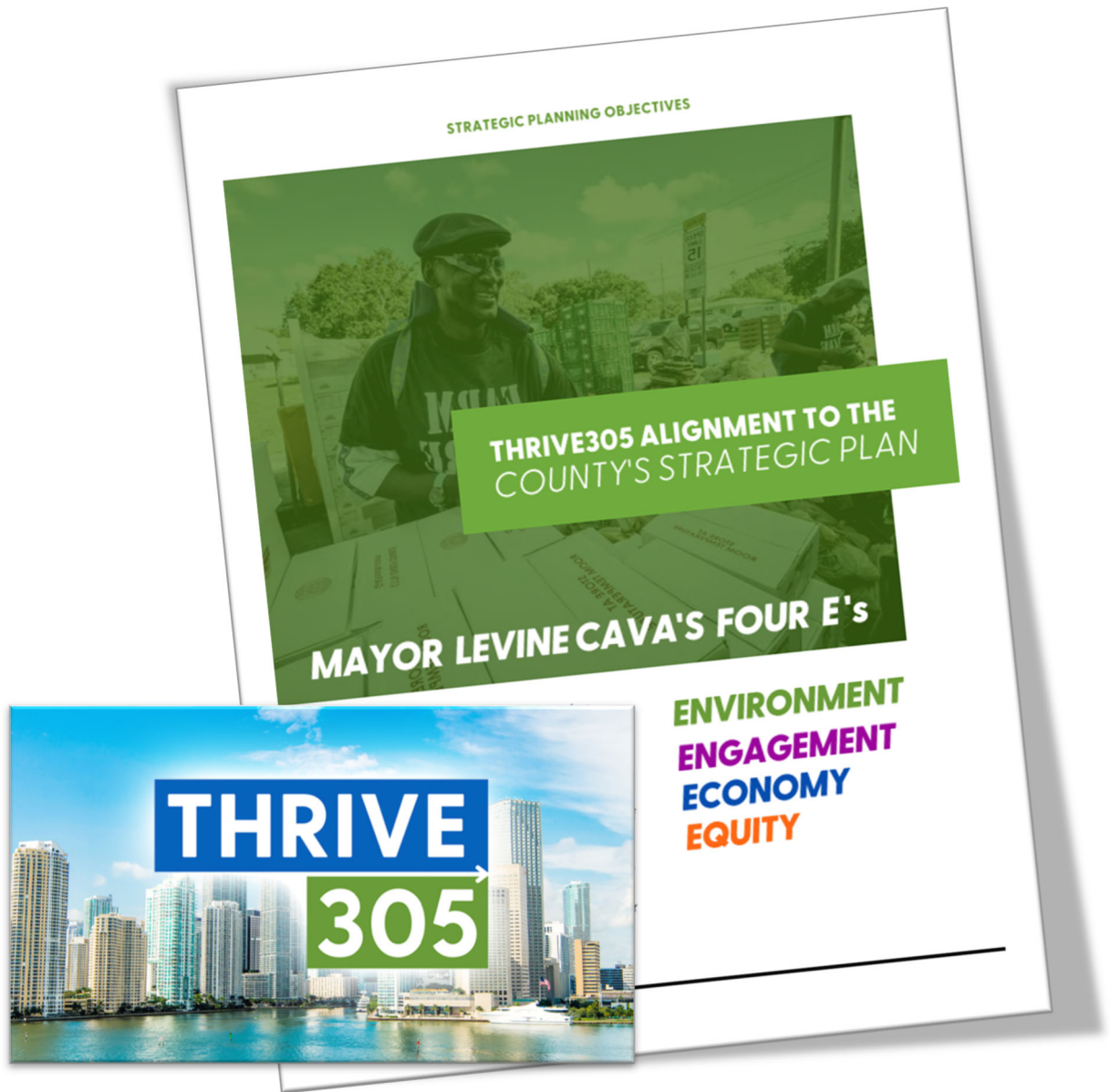
Internal & Administrative Services

Directs customer service and departmental security, as well as fleet and general activities, and the quality assurance of WASD work processes.



FY 22-23	FY 23-24
557	584

All residents of and visitors to Miami-Dade County require safe drinking water and sanitary sewer services, and WASD works diligently to provide these services without interruption. The Department’s efforts align with Mayor Levine Cava’s **Thrive305** public engagement initiative, highlighting her strategic planning objectives — Environment, Engagement, Economy, and Equity — also known as “**The Mayor’s 4Es.**”



The Department aligns with these overarching goals while providing continuous service to WASD customers and stakeholders. For example, guidance provided by Thrive305 underscores the need for investment in blue-green jobs that benefit our water and environment. Therefore, by bolstering opportunities for small and local businesses in County contracting, as well as recruiting new WASD employees to deliver government services effectively and efficiently, the Department is supporting Thrive305’s “Priority 7.”

Another closely related example of an alignment tool that WASD relies on is the **Mayor’s Future Ready Plan** to build the economy of the future today. Its three pillars — empowering our local workforce, supporting our small businesses, and unleashing the power of innovation — have provided the guidance needed for the Department to adopt a comprehensive employee development and retention strategy to attract skilled and talented graduates from local schools and colleges, while developing apprenticeship programs in collaboration with outside agencies.



By aligning its business with the Mayor’s collaborative and innovative approach, WASD will grow the dynamic workforce it needs, and residents will get quality career opportunities in the water industry.

STRATEGIC ALIGNMENT

STRATEGIC ALIGNMENT, 4Es, THRIVE305 & THE WAVE SUMMARY

WASD's direct alignment with the Miami-Dade County Strategic Plan, and mayoral priorities such as the Thrive305 Action Plan and the Miami-Dade Climate Action Strategy, have informed WASD's department-level strategic plan, **WAVE: Water, A Vision for Excellence**.



WASD launched the WAVE in 2023 to define the key priorities and investments that will propel and transform the way WASD does business. The WAVE includes internal and external strategies and bridges the County's Strategic Plan and WASD's Annual Business Plan by providing direction for the Department's business.

Therefore, when departmental staff and leadership reference the WAVE in planning and implementing their programs, initiatives, services, and projects, they ensure alignment with mayoral priorities.

THE MAYOR'S 4 Es					
	Environment	Economy	Equity	Engagement	Thrive 305 Priority or Action?
NEIGHBORHOOD AND INFRASTRUCTURE					
NI2: Continuity of clean water and community sanitation services					
Gallons of water saved per day (GPD) through the implementation of the Water Use Efficiency Plan	✓				Action 7.6
Finished Water Use Per Capita - Consumption (Gallons Per Capita per Day)		✓			Action 7.6
Number of Sanitary Sewer Overflow (SSO) and Building Backup (BBU) events in a calendar year	✓				Action 7.6
Compliance with drinking water standards	✓				Action 7.6
Percentage of compliance with wastewater standards	✓				Action 7.6
Systemwide available water supply capacity from the Biscayne Aquifer		✓			Action 7.6
GENERAL GOVERNMENT					
GG1: Accessible, equitable, transparent, and responsible government					
Average wait time per call monthly				✓	Action 1.1
Permit Review and Approval Time		✓			Action 5.4
GG4: Effective leadership and management practices					
Ensure execution of the Capital Infrastructure Improvement Plan		✓			Action 7.6

The Department implements infrastructure improvements throughout the County to ensure all residents have equal access to quality water and wastewater services. Accordingly, while the table on this page identifies alignment measures by a primary area, given the fundamental nature of WASD's work in our community providing necessary water and wastewater services, many measures may impact more than one of the Mayor's 4 Es.

STRATEGIC AREA: NEIGHBORHOOD AND INFRASTRUCTURE (NI)

Goal NI2: Continuity of clean water and community sanitation services

Objective NI2-1: Provide sustainable drinking water supply and wastewater disposal services.

Execute the Capital Improvement Program to expand, renew, and rehabilitate water and sewer infrastructure. The adopted FY 2023-2029 MYCIP is \$8.6 billion. The timely execution of the projects in the CIP will provide sustainable drinking water and wastewater disposal now and into the future.

Continue implementing the Connect 2 Protect Program to advance the near-term and long-term actions detailed in the “December 2020 Plan of Action – A Risk-Based Approach to Septic Systems Vulnerable to Sea Level Rise.” Key actions include incentivizing parcel connection to available sewer infrastructure through implementing the \$90 million sewer laterals program.

Keep rolling out the \$2 billion Water Reset program to address existing and emerging needs within the water treatment facilities and critical components of the water distribution system.



From the aboveground beauty of Miami-Dade County, it may be hard to imagine that WASH maintains more than 8,700 miles of underground water lines, as well as approximately 4,100 miles of sewer lines, serving some 2.8 million residents and thousands of visitors.

In keeping with the direction of the Miami-Dade County Strategic Plan, WASD's department-level strategic plan, the WAVE, features building a "Future-Ready Utility" as a guiding principle of our organization. Therefore, the future-ready actions that follow, which align with that principle, will also serve to meet the future water supply and wastewater disposal needs in Miami-Dade County.

Further develop and advance WASD's resilience framework and planning efforts, including vulnerability assessments, facility hardening, design guidelines, tools, and standard operating procedures to maximize the lifespan of public assets in the face of changing conditions.

Continue integrating future conditions, such as sea-level rise, rainfall frequency and intensity changes, heat, and other climate conditions, in the planning and design of infrastructure as well as operations planning.

Advance implementation of the ANSI/AWWA J100 Standard for Risk and Resilience of Water and Wastewater Systems.

Continue to apply the Sustainable Buildings Ordinance's requirements, including the LEED Sustainable Buildings Rating System for vertical assets and



the Envision Sustainable Infrastructure Rating System for industrial and other appropriate infrastructure types.

STRATEGIC AREA: GENERAL GOVERNMENT (GG)

Goal GG1: Accessible, equitable, transparent, and responsible government

Objective GG1-1: Support a customer-focused organization by providing convenient access to information and services and ensuring processes are easy to navigate. *(Communications & Customer Experience; all departments)*

Continue to roll out and track the Water is Life marketing and communications plan to improve internal and external perception and trust based on the insights received through employee and customer feedback. Water is Life focuses on developing engaging content and distributing helpful information that ensures the Department's customers and the community at large are aware of the essential work WASD performs and the critical services the utility provides daily.

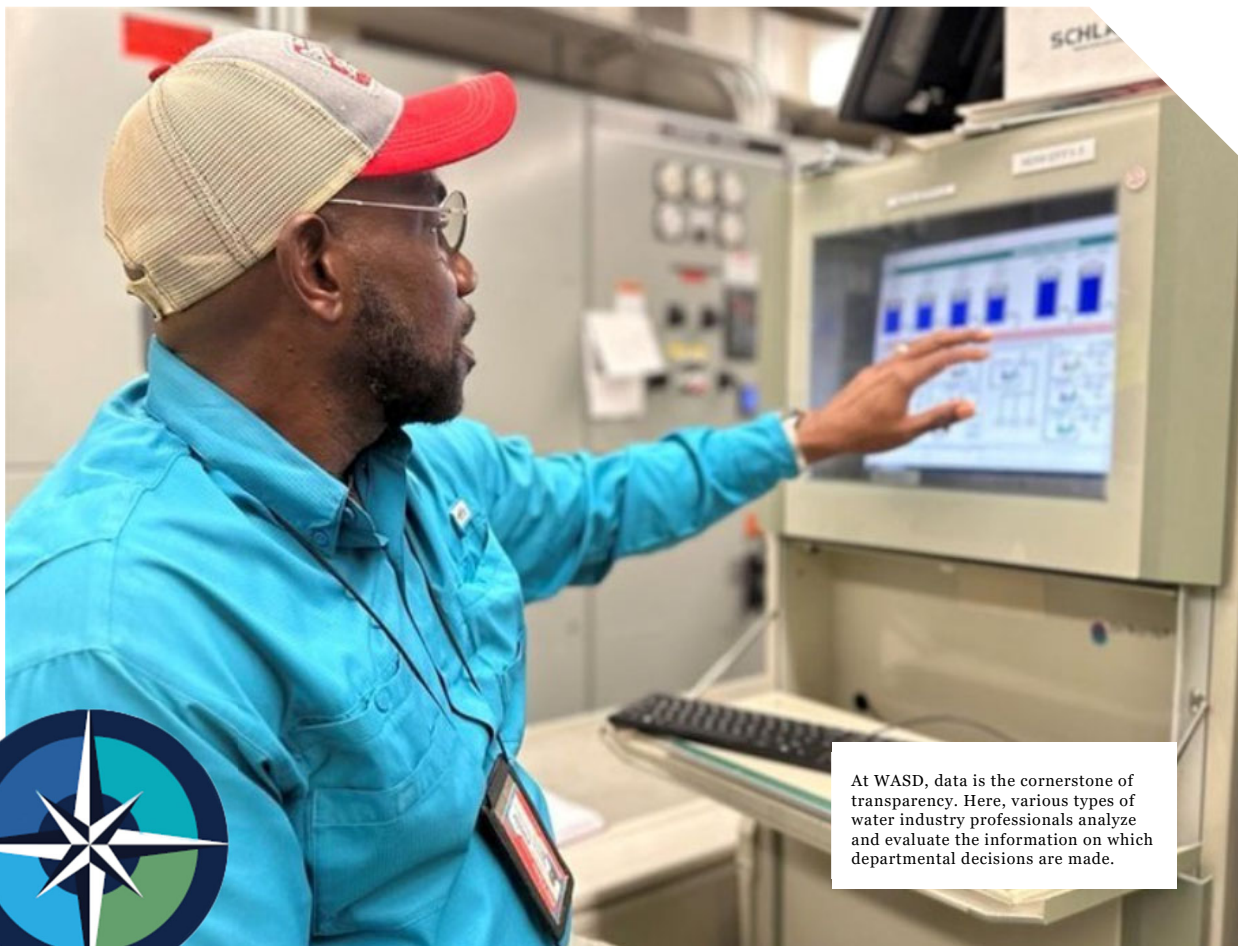


Provide timely, concise, and clear updates during emergencies as well as routine transparency publications on water quality, water use permits, annual budgets, comprehensive financial reports, and new and emerging rules and regulations.

Share information on water conservation that educates customers and promotes the Department's indoor and outdoor water conservation rebates.

Analyze and evaluate the quantity and quality of employee/customer interactions to improve the customer experience, including those provided via the Department's online self-service application. Currently, WASD captures data in dashboards, which provide metrics for analyzing these interactions. This year, the Department launched a customer service survey for the public to rate each transaction on staff professionalism, knowledge, empathy, first-call resolutions, and overall service. Survey results are available in real-time and are promptly evaluated by the management team to follow up with customers.

As memorialized in the WAVE, exceptional customer service is a cornerstone of WASD's business strategy, so the Department puts its customers' needs at the forefront of all decision-making. With this in mind, WASD will continue its partnership with the Information Technology Department (ITD) to expand



At WASD, data is the cornerstone of transparency. Here, various types of water industry professionals analyze and evaluate the information on which departmental decisions are made.



solutions that will enhance WASD's self-service application, improving the back-end Customer Care and Billing (CCB) system interfaces. This will continue to increase utility customers' access to typical service requests, which will help reduce telephone or walk-in center traffic and offer 24/7 access to simple inquiries.

Continue to explore the expansion of the self-service application, which currently offers varied user-friendly options, including the ability for commercial customers to enter their sub-meter readings and functionality for customers to reconnect their service, as well as to make payments directly through WASD's application instead of a third-party vendor.

WASD's online messaging system, "Chatbot," was launched in 2016 to provide transactional services to WASD customers. However, the tool has underperformed and has not effectively resolved many transactions. As a result, WASD works with ITD to improve the tool's functionality, allowing the utility's customers to receive real-time responses to inquiries through program enhancements.



Currently, WASD leadership is in meetings with IBM to upgrade the Chatbot software system with Artificial Intelligence (AI) functionality that will make it easier to “self-cure” instead of placing a call. Once these improvements are completed, WASD will promote the improved Chatbot’s use to those customers who prefer online solutions to resolve their service questions.

Objective GG1-2: Facilitate community outreach and engagement to promote better decision-making in County government. *(Communications & Customer Experience; all departments)*

WASD has continued its affiliation with the Community Action and Human Services Department (CASHD), the Public Engagement Office, and our Finance Division to create a streamlined process where our customers experiencing financial hardships can receive information on state or federal programs to assist in paying their utility bills.

Additionally, through recently awarded federal Low Income Household Water Assistance Program (LIHWAP) funding, WASD will help nearly 5,000 eligible customers pay their Miami-Dade Water and Sewer Department utility bills.



Miami-Dade County Chief Operations Officer Jimmy Morales, Miami-Dade Water and Sewer Department Chief Financial Officer Frances Morris, Miami-Dade County Mayor Daniella Levine Cava, and Miami-Dade Water and Sewer Department Director Roy Coley share the good news that WASD received \$12.1 million through the federal Low Income Household Water Assistance Program (LIHWAP). This funding will assist nearly 5,000 eligible customers to pay their water and wastewater utility bills.

Partnering with the Communications and Customer Experience Department, campaigns are created to advise customers of available assistance programs, including state and federal sources and the County’s WSD Cares Program.

Goal GG2: Excellent, engaged, and resilient workforce

Objective GG2-1: Attract and hire new talent to support operations.

A vibrant organizational culture is a goal of WSD’s business strategy outlined in the WAVE. So, it is of prime importance for WSD to implement a comprehensive staffing and succession plan to mentor, train, and transfer historical knowledge to new employees before workers in critical areas retire.

WSD will actively engage with educational, youth, and community-based organizations to increase awareness and pathways to water sector careers.

Florida International University and the University of Miami are assisting with targeted and sustained efforts to reach students and schools at all levels, including those in disadvantaged communities and others seeking career changes, with information on the value and benefits of these jobs and accessible career pathways to access them.

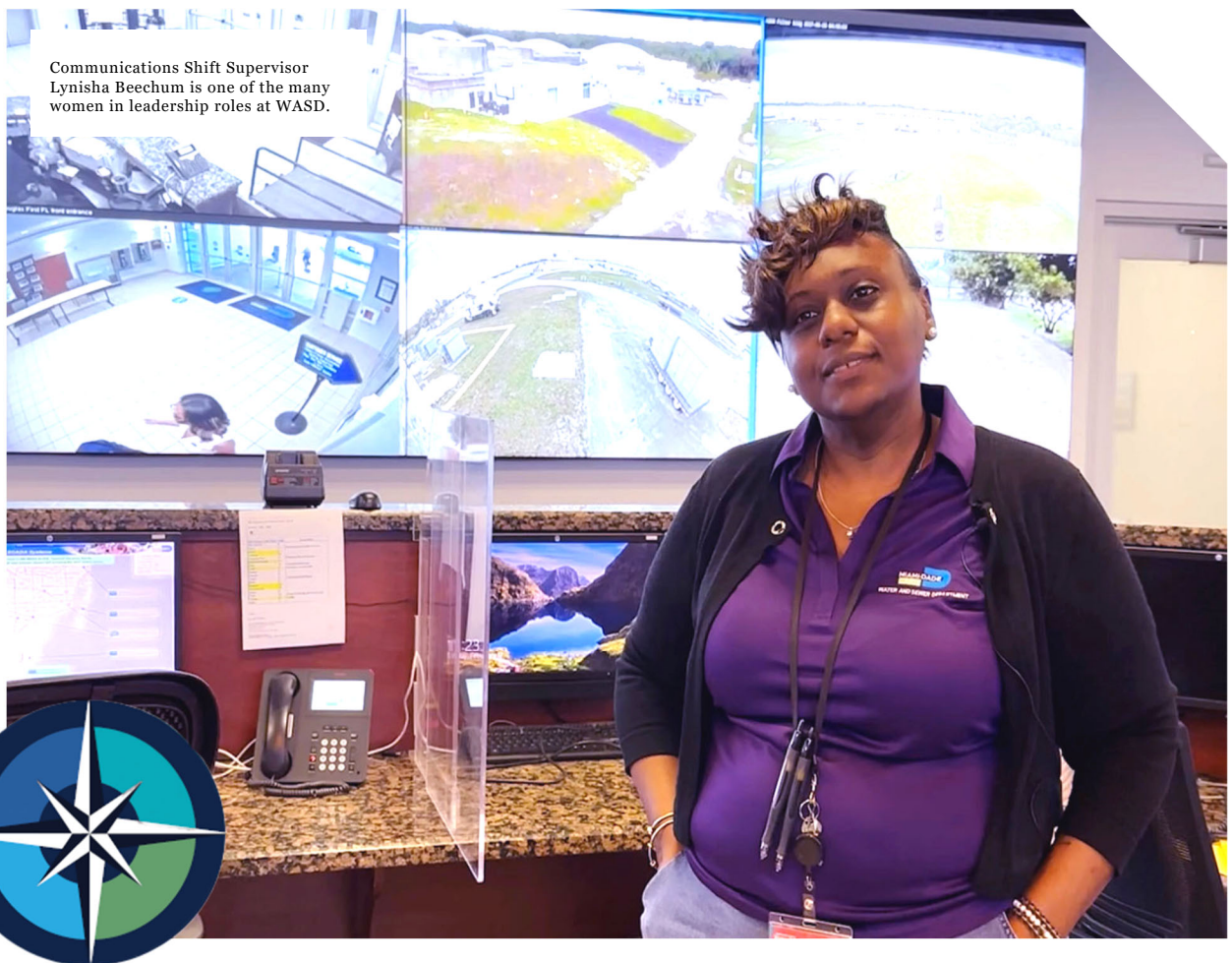


Additional recruitment efforts, such as open-competitive job opportunities, provide for attracting diverse and highly skilled candidates who will play a role in WASD’s achievement of its strategic goal efforts.

WASD Human Resources staff participate in the Mayor’s Career & Job Fairs, which rotate within different sections of Miami-Dade County, providing WASD with a diverse applicant pool reflective of the communities the Department serves. These monthly fairs include opportunities for on-the-spot interviews that focus on expediting hiring for hard-to-fill entry-level positions. Moving forward, WASD will continue demonstrating a strong presence at the Mayor’s Career & Job Fairs and implementing other new recruiting efforts.

Objective GG2-2: Promote employee development and leadership.

Continue implementing Employee Development Plans (EDPs) to motivate and inspire all employees to reach their full career potential—including 24 professional development hours— as part of the performance review process.



Promote professional development, which focuses on preparing subordinate-level employees with the necessary skills to become leaders.

Continue to engage all newly hired WASD employees with a formal, departmental “New Hire Onboarding Process” managed by the WASD Training and Development Section. This process lays the groundwork for developing new County water industry professionals at all levels of the WASD organization.

Extend WASD’s commitment to creating and maintaining a diverse and inclusive workforce valued and accepted for their differences and professional contributions.

Continue to provide workplace diversity and anti-harassment training to frontline and supervisory personnel to maintain awareness of WASD's safe work environment policies extended to every gender, race, and culture, as well as all people with disabilities.

Position the Department as an “Employer of Choice” through initiatives that promote diversity, inclusion, and growth opportunities, including implementing a “Racial Equity Toolkit,” a collection of processes and measures for operationalizing equity recommended by the Government Alliance on Race and Equity.

Morale matters! Recognition is a simple way for organizations to demonstrate their investment in and commitment to their employees. But it makes good business sense, too, as it can improve employee engagement and reduce turnover. WASD staff members who demonstrate exceptional customer service or find opportunities to improve service delivery to internal and external customers are recognized through the Department's quarterly Pebble Program Awards.



Goal GG4 – Effective leadership and management practices

Objective GG4-2: Effectively prioritize, allocate and use resources to meet current and future operating and capital needs for all our residents.

Continue implementing the WAVE, which will drive the development of a more efficient and innovative organization that will successfully address WASD’s water and sewer infrastructure and resource needs through the year 2050.

In addition, the effort will transform WASD’s current business practices to maximize operational efficiency and decision-making regarding future capital improvements.

Continue to seek funding to support the expansion of sanitary sewer and drinking water systems to address the needs of residents with vulnerable septic tank systems and contaminated drinking water wells.

Continuing to work together under a unifying mission to serve our great community while benefitting from the generation of ideas, solutions, experience and varied perspectives of WASD employees.



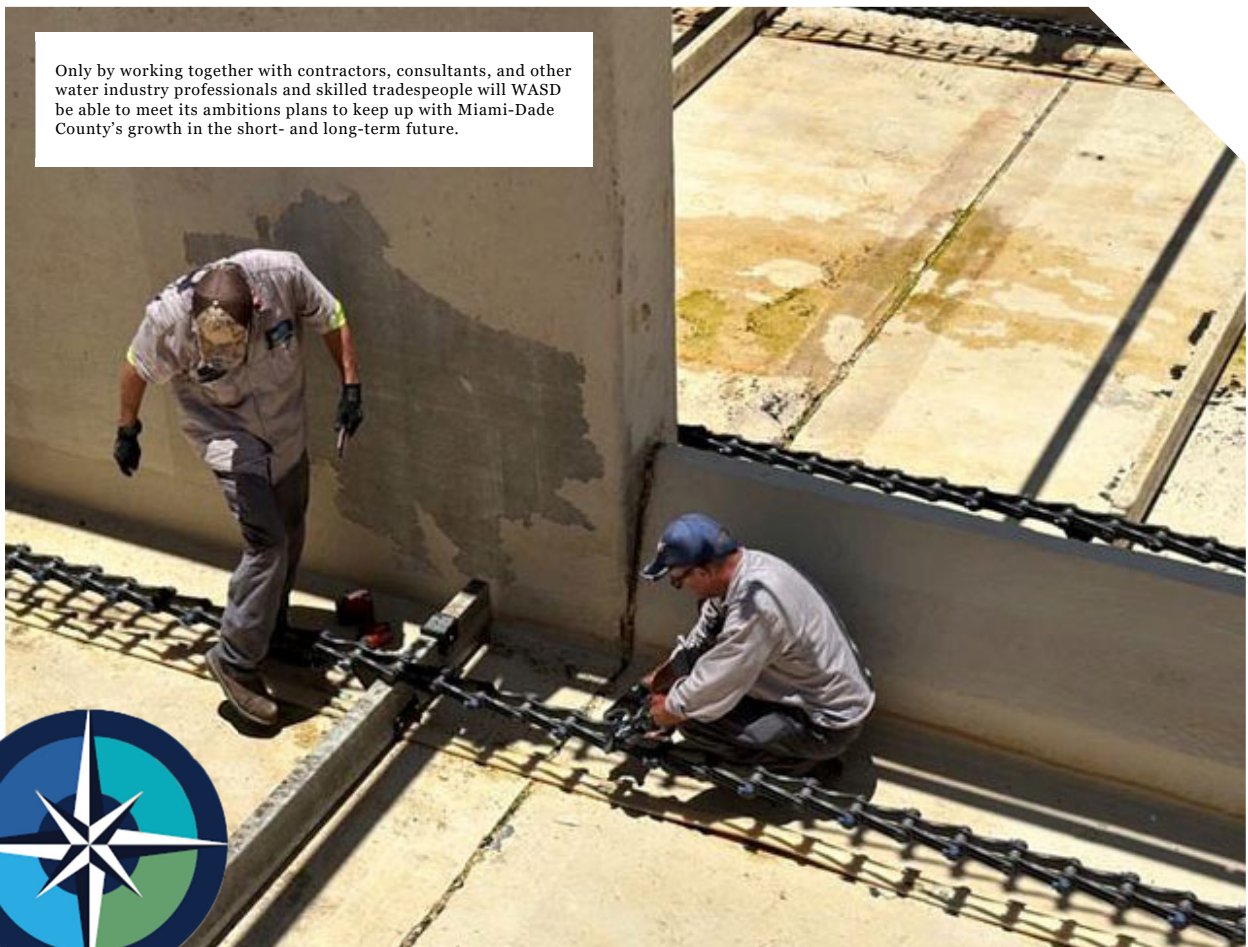
KEY ISSUES

CONTRACTOR SCARCITY

WASD plans to execute projects averaging \$786 million annually over the next five years. However, this output level can only be accomplished if the construction sector provides adequate resources. The industry continues to be impacted by volatility in material prices, increased labor costs, and an ongoing shortage of qualified, skilled workers.

As a result, during FY 2023-2024, WASD continued to experience construction contractor scarcity. These industry conditions have significantly reduced competition, and if current industry conditions persist or worsen, WASD will be limited in its ability to complete its multi-year capital program as currently planned. It would also jeopardize the utility's ability to meet mandated regulatory obligations.

Only by working together with contractors, consultants, and other water industry professionals and skilled tradespeople will WASD be able to meet its ambitions plans to keep up with Miami-Dade County's growth in the short- and long-term future.



As a mitigation measure, WASD has established quarterly construction forums to engage the industry, provide upcoming project information, and offer a platform to collaborate and incentivize bidding.

CONNECT 2 PROTECT FUNDING CHALLENGES

Miami-Dade County's Connect 2 Protect is a countywide program that provides sanitary sewer service to residents with septic systems. There are about 120,000 properties served by septic systems across Miami-Dade County, and about 9,000 of those are vulnerable to compromise or failure under current groundwater conditions. This number is expected to increase to approximately 13,500 by 2040 due to sea level rise. Compromised septic systems can cause health risks, environmental impacts, and impacts on private properties.

Expanding the public sanitary sewer system is estimated to cost from \$50,000 - 60,000 per property, in addition to private property connection costs, including the plumbing and abandonment of the septic tank system, which is estimated at \$10,000 - 15,000 per property, depending on the location of the system and specific property characteristics. Therefore, fully addressing this issue and expanding infrastructure will take time.



In October 2023, the Board of County Commissioners approved a \$19 million Lateral Expansion Program as part of Mayor Daniella Levine Cava's Connect 2 Protect septic to sewer conversion initiative. WASD will install 600 public-side sewer service laterals, a critical step in enabling future connections to sewer infrastructure.



County ordinances and implementing orders establish strict rules for using funds to expand the sanitary sewer system. These restrictions and the lack of an identified funding source require that WASD seek alternative funding sources to address these needs. The Department continues to apply for grants, leverage alternate financing mechanisms, and work with municipal partners and other community stakeholders to support the continued execution of necessary infrastructure projects to ensure a sustainable future for the residents of Miami-Dade County.

The County is prioritizing where investments will have the most significant environmental impact. As funding becomes available, the County prioritizes the conversion of parcels based on the greatest likelihood of an impact from failure. The County continues to seek funding, having been awarded more than \$75 million in grants and a \$190 million Water Resources Reduction Act Congressional authorization.

WASTEWATER TREATMENT PLANT COMPLIANCE AND I&I REDUCTION

The State of Florida issues permits to WASD for treating wastewater flow, defined as domestic and industrial wastewater that flows from



Highly trained WASD microbiologists, chemists, and specialists conduct thousands of analyses of water per year to ensure quality and safety.



customers to the County’s wastewater treatment system. Consistent with other wastewater utilities in the nation, inflow and infiltration (I&I) triggered by groundwater tables, illegal connections, rainfall, and flooding can dramatically increase wastewater flow in our system and at our wastewater treatment plants.

WASD is dedicated to meeting our compliance parameters and reducing infiltration and inflow. The Florida Department of Environmental Protection and the Consent Decree outline requirements that directly address these concerns. Programs such as Capacity, Management, Operation, and Maintenance (CMOM), Nominal Average Pump Operating Time (NAPOT), and the Volume Sewer Customer Ordinance work to ensure we systematically inspect and repair our wastewater system. At our treatment facilities, employee training, system and equipment upgrades, automation, and asset management and maintenance programs ensure we meet or exceed our treatment goals.

HUMAN RESOURCES / FILLING VACANCIES

Recruiting and retaining individuals with the necessary qualifications to deliver government services effectively and efficiently continues to be one of the public



sector's most significant issues. Consequently, WASD is experiencing difficulties finding and attracting qualified candidates for essential classifications due to several factors, including the lack of qualified candidates and intense competition from the private sector for the same pool of applicants. Although salary ranges have been updated for some of WASD's key positions to make them more competitive, that action has not solved the problem.

To alleviate the situation, WASD has engaged in monthly County sponsored career fairs featuring on-the-spot interviews to expedite the hiring of hard-to-fill entry-level positions such as semiskilled Laborers (SSL), Maintenance Repairers (MR), and Heavy Equipment Operators (HEO) requiring Commercial Driver's licenses (CDL) as a minimum requirement for the classification. WASD has also worked closely with the Human Resources Department's compensation specialists to initiate salary reviews for positions that have counterparts in the private sector.

As its existing workforce continues to evolve, WASD has emphasized providing competitive salaries for its current employees, as well as for those candidates entering the organization. The recruitment team has prioritized trainee positions with processes in place to start a focused program for developing internal talent pools and career paths.



Equip the WASD workforce with the skillsets necessary to deliver first-class service to our community. To this end, the Department has established a policy to pay for staff training and skill tests, as well as paying the fees for them to obtain required licenses. This will make the Department more competitive in a labor market where water and wastewater professionals are in short supply.

CUSTOMER DEMANDS & EXPECTATIONS

Customer service trends for 2024 indicate a need for more proactive customer service, and consumers will continue to embrace conversational and generative AI as this new era surfaces. As a result, WASD has partnered with ITD and CISCO to replace its outdated call center interactive voice response system to improve the customer experience. Though WASD will continue to have another challenging year for building and earning customer loyalty on all fronts, it will give customer service touchpoints a tremendous opportunity to drive value.

Customers compare WASD interactions to their interactions with other utilities or businesses. As a result, the Department must be prepared to rise to the occasion by getting the service experience right the first time. Accordingly, First Call Resolution



WASD has been ranked as the No. 1 large water utility in the South Region for customer satisfaction, for the second consecutive year by industry-leading market research firm, J.D. Power. "This accomplishment is a testament to our unwavering dedication to providing exceptional customer service," said WASD Director Roy Coley. "We have listened to our customers, made strategic investments, and implemented comprehensive initiatives to ensure their satisfaction."



(FCR) can help WASD meet customer service expectations.

WASD employees are on the front line to deliver that first impression; to be successful, they must remain committed. For that to happen, employees must be engaged, feel appreciated, and understand the importance of their role in the WASD organization. For these reasons, the utility started its department-specific strategic planning process, which includes input from staff at all levels of the organization to create an actionable strategy. Leadership is also currently analyzing the results of a recent WASD employee survey to identify areas of improvement for the organization.

Fair and balanced workloads and the tools to help staff better perform their jobs — proper staffing, employee training, employee recognition, and technology that facilitates their ability to do their work — all matter.

Still, the fact is that WASD is competing with other career options, departments, and employers due to today's job market. Despite the County's historically low turnover rates, the Call Center, for example, had a turnover rate of 25 percent in 2023.



Department supervisors offer hands-on asbestos training where staff gain crucial skills for ensuring a safe and compliant work environment.

The WASD Training and Development Section also offers a variety of other work-related courses that improve understanding, engagement, and organizational processes.

INFORMATION TECHNOLOGY & THE NEED FOR INNOVATIVE SOLUTIONS

While centralizing information technology services for the County, ITD has sought to increase efficiencies by systematically implementing “one size fits all” solutions across the enterprise. However, for WASD, this approach has been less than ideal. It has led to delays in employing more suitable or timely solutions that other utilities of comparable size have already validated.

WASD’s current Interactive Voice Response (IVR) system is outdated, cumbersome, and slow. Therefore, the Department needs to procure a platform that is dependable and easy to use, which provides effective and efficient results. The right customer service software should integrate with WASD’s other systems to reduce unnecessary wait times, customer frustrations, and erroneous solutions.

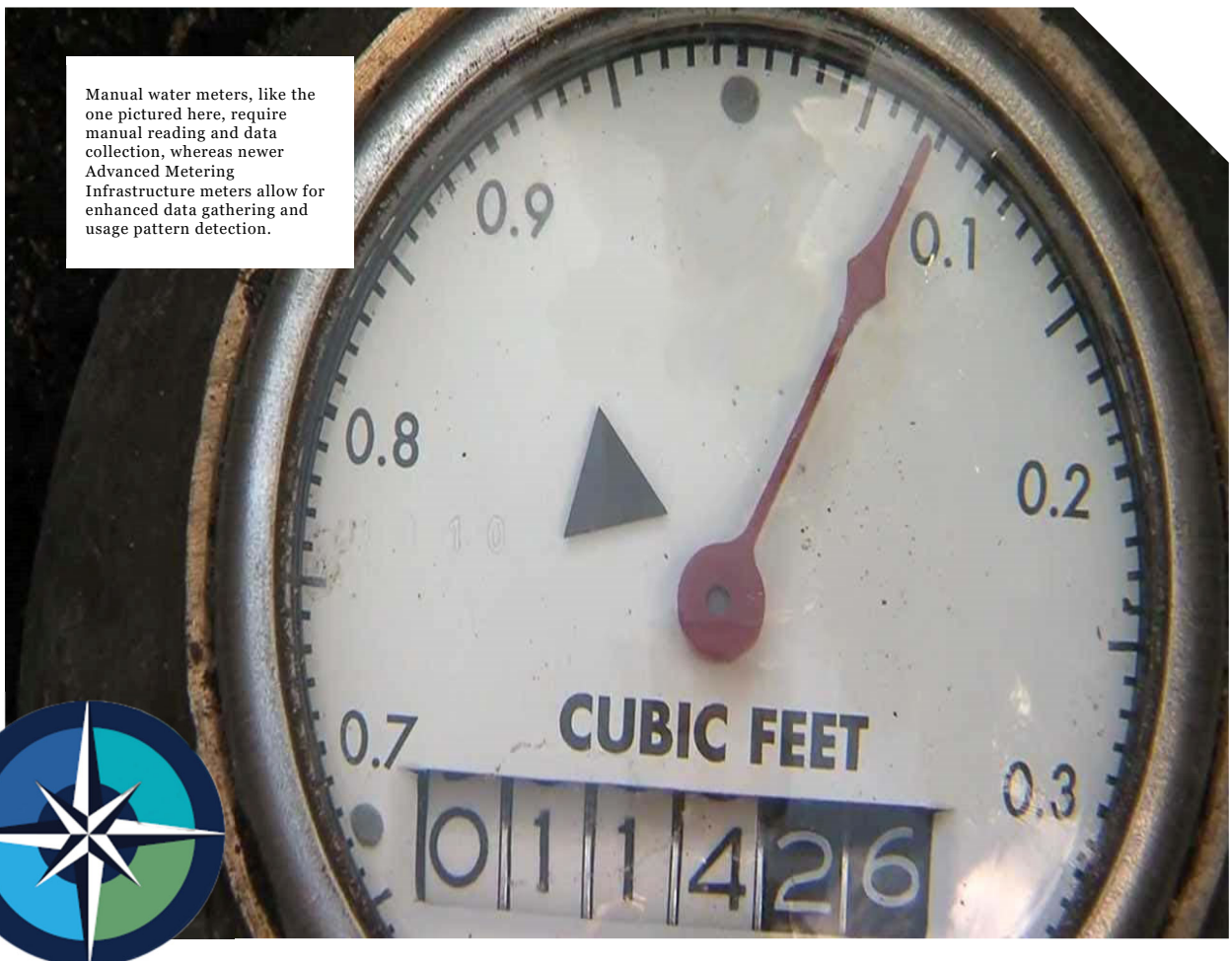
A state-of-the-art, user-friendly, intuitive system with functionalities that allow for customer preferences and efficient resolutions to their issues is the path WASD seeks to deliver a positive customer experience. Multiple platforms, for



example, Chatbox, outbound messaging, and Smart Meter dashboards are popular and effective consumer trends for utilities across the country. WAsD seriously requires much-needed software implementation catered to the needs of our Department.

WAsD utilizes water meters to collect usage data, providing a basis for a consumption-based billing system. Advanced Metering Infrastructure (AMI) leverages modern technology to transmit near real-time data to the Department. This will facilitate the Department's transition to monthly billing (currently, bills are processed quarterly) and significantly improve the WAsD's operations.

The data provided by AMI can be used to maximize efficiency, conduct proactive system improvements, and remedy leaks. It also will significantly improve customer service by improving the quality of our call center, providing the customer with a modern utility interface, and notifying them of potential issues. For example, this system would notify a customer of a possible leak within their privately owned plumbing system if the meter registers a persistently low flow.



Manual water meters, like the one pictured here, require manual reading and data collection, whereas newer Advanced Metering Infrastructure meters allow for enhanced data gathering and usage pattern detection.

A CHANGING ENVIRONMENT

The Department has been remarkably successful in continuing operations and maintaining service levels, even during extreme events such as 1992's devastating Hurricane Andrew and the destructive force of Hurricane Irma in 2017. The impacts of hurricanes and other climate-related influences will continue to increase due to sea level rise, directly impacting groundwater and storm surge levels. This poses a particular threat to coastal WASD infrastructure and operations staff. These changes also pose a risk to the long-term water supply by increasing the rate of saltwater intrusion.

WASD is experiencing increased impacts from heavy and prolonged precipitation events, which cause wastewater flow rates to increase beyond system design through stormwater inflow and infiltration into the sanitary sewer system.

These climate-induced issues are complex and crosscutting. Therefore, WASD continues collaborating with municipalities, County departments, regional stakeholders, state and federal agencies, and professional scientific and engineering industry partners to assess, plan and execute mitigation measures



The team at WASD knows water is essential for life. The amount of fresh water on earth is limited, and its quality is under constant pressure. Preserving the quality of fresh water is important for the drinking-water supply, food production and recreational water use.

to reduce risks to water and wastewater infrastructure and operations.

WASD is proactively taking measures to increase the system’s ability to weather severe storms through various pump station hardening projects and developing flood mitigation criteria for all water treatment plant assets. Additionally, the Department has multiple programs in place that address renewal and replacement needs, system capacity, and system modernization, such as the Small Water Main Replacement Program (SWRP), the Large Diameter Force Main Program (LDFP), Connect 2 Protect, and the Water Reset. These programs are expanded in this plan’s “Priority Initiatives” section.

BIOSOLIDS & THE FDEP NUTRIENT MANAGEMENT PLAN

Recently, regulations have significantly impacted WASD’s ability to “land apply” Class B biosolids. WASD currently produces approximately 400 wet tons of Class B biosolids, and the Department contracts with haulers responsible for transporting and applying those biosolids. As part of the application, haulers are required to establish agreements with farm sites or composting facilities to receive the biosolids.

In 2021, the Florida Department of Environmental Protection changed the rules for land application as part of its “Nutrient Management Plan.” The farms that receive WASD’s biosolids were not impacted until their permit renewal in 2023. The permit changes due to the Nutrient Management Plan have significantly decreased the volume of biosolids farms can land apply by restricting the volume of water-extractable phosphorus and increasing buffer zones. In August 2023, WASD’s contracted haulers were unable to haul 100 percent of the biosolids that WASD produces.

Wastewater Treatment is pursuing temporary and permanent solutions. As a temporary solution, WASD is requesting vendor pricing for composting and mobile Class A/AA treatment options. WASD will also investigate long-term solutions to switch from Class B to Class A or AA options.

- ◆ Class B is generally recognized as a basic, cost-effective solution to treat organic solids in wastewater processing. Class B biosolids significantly reduce pathogens but are not as stable; they are generally used as fertilizer in agriculture or forestry. They can also be incinerated or disposed of at a landfill.
- ◆ Class A treatment is recognized as an intermediate treatment; pathogen levels are similar to those found in native soil, with less odor and more stable. Class A biosolids can fertilize home lawns, gardens, parks, and golf courses.
- ◆ Class AA is like Class A but has the strictest limits for pathogen and heavy metal reductions.

UNPRECEDENTED FUNDING OPPORTUNITIES

The Infrastructure Investment and Jobs Act provides unprecedented water and wastewater funding that will allow WASD to modernize and strengthen its infrastructure and operations. Over \$55 billion will be made available for a variety of needs, including lead service line replacement, addressing emerging contaminants, hardening plants and systems to storms and sea level rise, expanding the sewer system to allow for the removal of legacy septic tank systems, smart water supply management through storage and other strategies, and more.

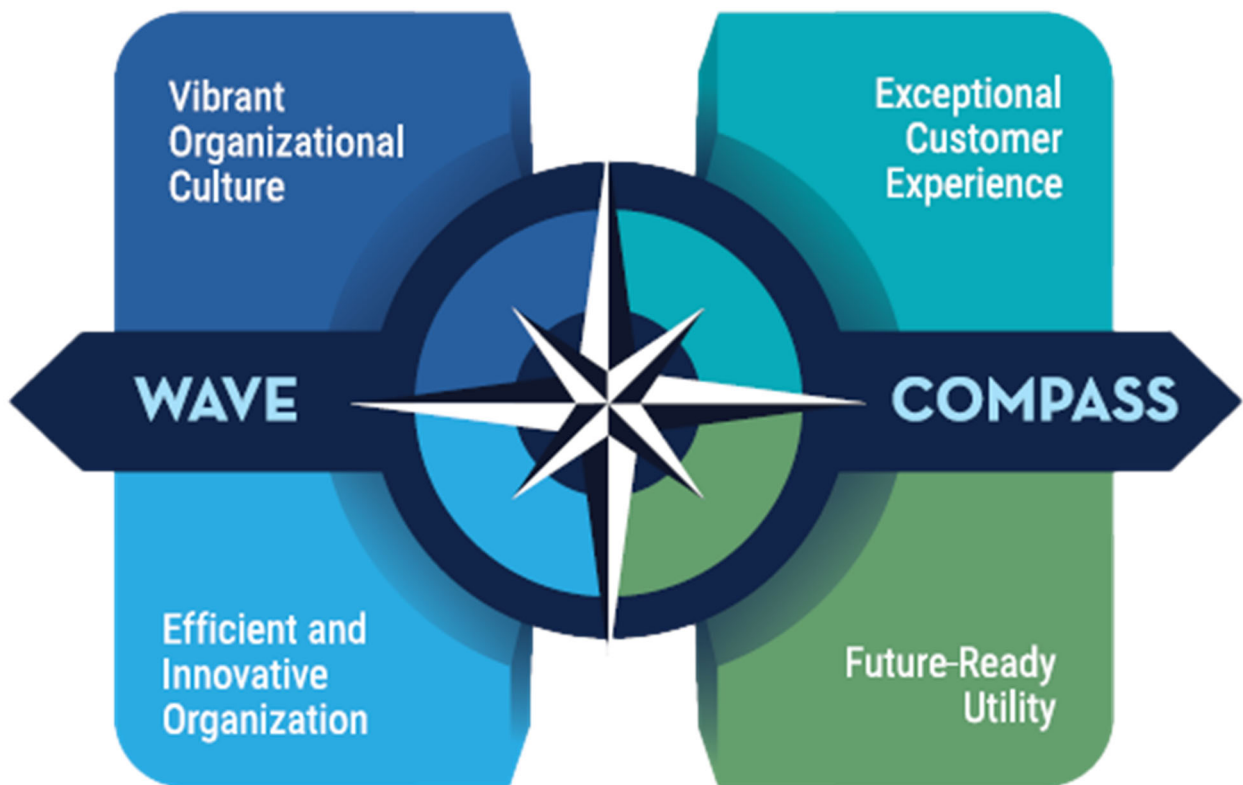
WASD continues aggressively seeking funding for its priorities to leverage and complement existing revenues and funding sources that address priorities and goals, including increasing infrastructure resilience, expanding the sanitary sewer system, and enhancing energy, water, and waste reduction strategies. From May 2022 through May 2023, WASD submitted ten applications totaling \$42 million for funding through grants and legislative appropriations, and it has received notice of \$222,152,972 in grant awards and authorizations.



PRIORITY INITIATIVES

THE WAVE STRATEGIC PLAN

WASD shifts to WAVE implementation in 2024 through a people-centered change management approach. Staff will implement defined actions to achieve the following five-year destination goals and objectives in the WAVE's four cardinal directions.



Vibrant Organizational Culture: The Department is recognized as the Miami-Dade County employer of choice with the most vibrant organizational culture.

The Department will first and foremost shift its attention toward the well-being of its workforce. This will require cultivating leaders who model these values, creating updated and fair job descriptions and pay scales, and transparent opportunities for career advancement, providing robust, accessible, and effective employee training and development programs, recognizing employees for their stellar performance, and fostering communication and collaboration across the entire Department.

Exceptional Customer Experience: The Department is recognized as a world-class, one water utility that prioritizes an exceptional customer experience.

The Department will put its customers' needs at the forefront of all decision-making. This will require understanding customer pain points and increasing personalization of all customer interactions, increasing access to information and customer service through diverse channels, increasing proactive partnership and engagement with all stakeholders, and ensuring the Department's mission and vision are well understood by ratepayers and other decision-makers.

Efficient and Innovative Organization: The Department will set the standard of practice for increasing organizational efficiency by improving processes and integrating innovation.

The Department will optimize its internal business systems, CIP, and daily operations while integrating innovation to the greatest extent possible. This will require improving recruitment procedures, enhancing the effectiveness of standardized policies and work processes, decreasing procurement hurdles and fulfillment times, decreasing execution time for IT support, optimizing the CIP and asset management programs, and integrating innovative tools and programs across the organization.

Future-Ready Utility: The Department is prepared for risks and uncertainties in economic and climate conditions and contributes to a thriving community.



The Department will prepare the organization for emergent and dynamic future conditions. This will require the Department to enhance emergency preparedness and response, advance its resilience framework, develop strong financial systems, increase sustainable practices, and adopt a one water approach.

WASD's Water Conservation Ambassador, D-ROP, is busy raising awareness of the utility's work in the community.

CONSENT DECREE PROGRAM



The County negotiated a Consent Decree with the United States Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP), lodged with the U.S. District Court on June 6, 2013, and entered on April 9, 2014. This Consent Decree is designed to build on the successes achieved by the Department under previous Consent Decree programs. The overarching goal of the Consent Decree is to reduce sanitary sewer overflows and meet the effluent limit requirements of the Clean Water Act.

The Consent Decree requires the Department to upgrade its collection, transmission, and treatment facilities by completing 81 capital improvement projects throughout the wastewater system. It also requires the County to implement Capacity, Management, Operations, and Maintenance (CMOM) programs to continue improving its systems and to eliminate, reduce, prevent, or otherwise control sanitary sewer overflows (SSOs).

CMOM programs will help WASD achieve these improvements in the following ways:

- ◆ Development of asset management programs and software
- ◆ Implementation of a SCADA master plan.
- ◆ Inspecting, maintaining, and upgrading our systems to extend the life of departmental assets and prevent premature failure

As of Nov. 30, 2023, the County's Consent Decree Program has completed 61 capital improvement projects at approximately \$911 million. Currently, 15 projects are under construction at an approximate cost of \$865 million, and five projects, estimated at \$215 million, are in the planning, design, permitting, and procurement phases.

Implementation of the Consent Decree is underway, and the County remains fully committed to completing the mandated Consent Decree Capital Improvement Projects by 2028 despite ongoing supply chain issues brought on by inflationary pressures and the economic environment, extreme weather events, and other issues.

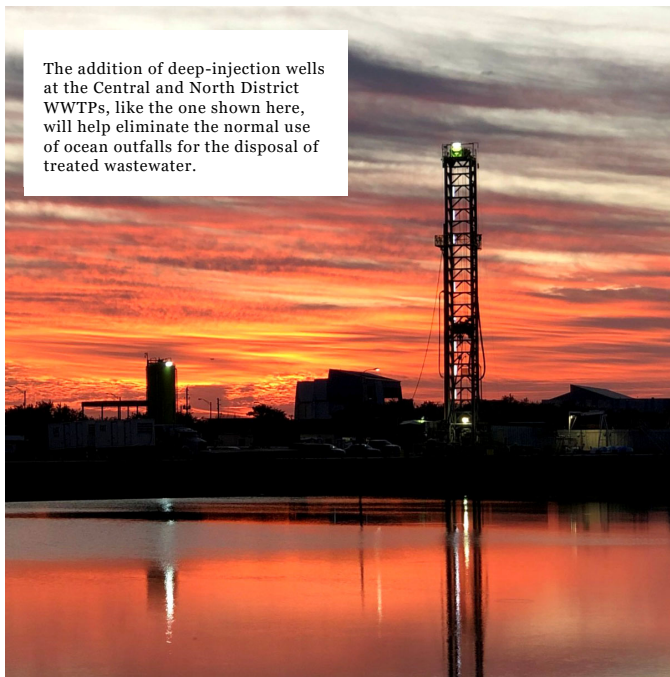
OCEAN OUTFALL LEGISLATION PROGRAM

In 2008, the Florida Legislature approved, and the Governor signed a law requiring all wastewater utilities in Southeast Florida to utilize ocean outfalls for disposal of treated wastewater to reduce nutrient discharges by implementing advanced wastewater treatment by 2018 or equivalent, cease using the outfalls by 2025 and reuse 60 percent of the wastewater flows by 2025.

In 2013, the statute was amended to provide greater flexibility in meeting reuse requirements by allowing the use of the ocean outfalls for peak flow management, with the condition that discharge comprises less than 5 percent of annual baseline flows. Because of this law, the Department has analyzed several compliance options. Each option includes the additional projected capacity to meet future average daily and peak flow demands, although permitting time challenges remain an issue for the North District WWTP.

After considering various options, the Department's recommended choice provides for upgrades to both the Central and North District WWTPs. The upgrades will include the addition of deep-injection wells at the Central and North District WWTPs to eliminate the normal use of ocean outfalls for the disposal of treated wastewater.

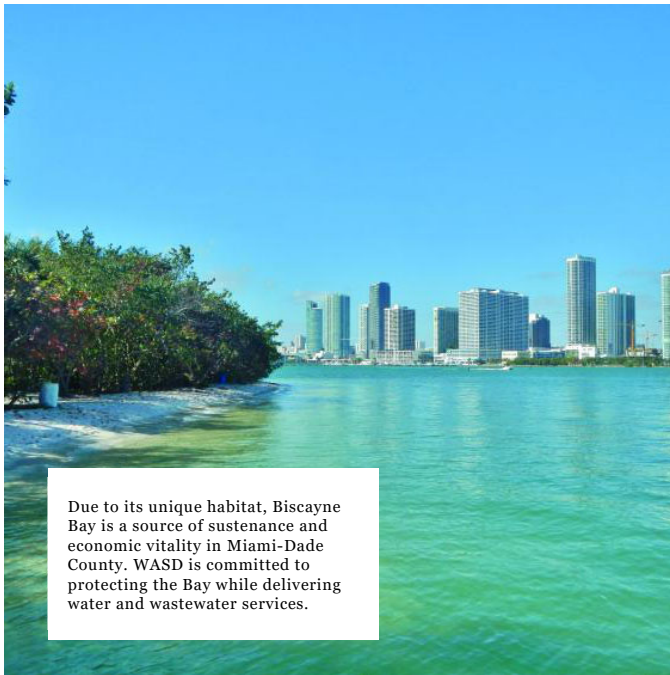
As part of the Department's normal planning activities, WASD thoroughly re-evaluated its 2035 projections, including average daily flows, peak hour flows (PHF), and influent solid loadings.



The addition of deep-injection wells at the Central and North District WWTPs, like the one shown here, will help eliminate the normal use of ocean outfalls for the disposal of treated wastewater.

Through the Department's continued water conservation efforts, together with its Inflow and Infiltration Program, wastewater flows have remained flat for the past fifteen years, reducing the current and future need for system capacity. The updated projections have pushed the need for a new plant beyond the initial 2025 target. Therefore, the addition of a proposed West District WWTP, part of the Department's 2013 Ocean Outfall Legislation Compliance Plan, will not be needed to comply with the legislation, nor will it be

required by 2025, as initially planned, for capacity purposes. Nevertheless, the facility is still included within WASD's 20-year planning horizon.



Due to its unique habitat, Biscayne Bay is a source of sustenance and economic vitality in Miami-Dade County. WASD is committed to protecting the Bay while delivering water and wastewater services.

The Department has implemented an equivalent to that which Advanced Wastewater Technology (AWT) would have achieved if the requirements were fully implemented beginning Dec. 31, 2018, and continued through Dec. 31, 2025. This has been accomplished by reducing the nutrients (total nitrogen and total phosphorus) disposed of through the ocean outfall and maximizing the flow sent to the existing wells at the North District WWTP and the new wells at the Central District WWTP.

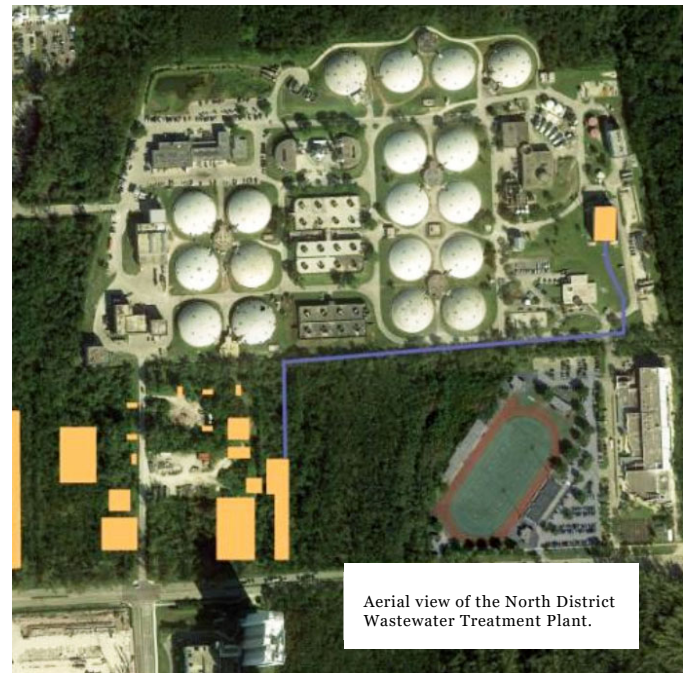
Since 2008, the Department has used the existing deep-injection wells at the North District WWTP to reduce the flow to the outfall. Additionally, in November 2019, the Department was authorized to start the operation of two new industrial deep-injection wells at the Central District WWTP. These wells have allowed the Department to divert approximately 30 million gallons of treated wastewater per day from the Central District WWTP's ocean outfall.

With the wells, the Department met the goal of reducing total phosphorus discharges by 2.9 million pounds in March 2023 and is on track to reducing total nitrogen discharges by approximately 59.9 million pounds by the end of 2025.

The Department is implementing an innovative effluent energy recovery system, which will result in the reuse of approximately 115 million gallons per day. When combined with the existing in-plant reuse and the FPL collaboration agreement, the Department will reuse 145.5 million gallons per day and become the largest reuse utility in the East Coast.

The Department has made significant progress towards completing the construction of the South District Wastewater Treatment Plant Expansion Project. This will increase the average daily flow capacity to 131 million gallons per day and the peak hourly flow capacity to 305 million gallons per day. The expansion will allow for continued service area growth, and the improvements will increase the facility's resilience. It is scheduled to be completed by July 2025.

The construction activities at the North District WWTP started with the installation of five deep injection wells, which are scheduled to be completed by February 2024. The installation of the deep injection wells will be followed by site development activities, which will prepare the site for the construction of new treatment units and support infrastructure. The design of the new treatment units and support infrastructure are in the final design phase.



At the Central District WWTP, the Department will complete the construction of 9 deep injection wells by November 2024 and start the construction of a new electrical distribution building. This project will provide the Central District WWTP with a

new electrical distribution building equipped with eight diesel engine generators, fuel storage facilities, maintenance facilities, a control room, and a safe room to be used during extreme weather events. The new building will provide electrical power and backup power to existing and proposed facilities.

FUTURE-PROOFING, RESILIENCE & SUSTAINABILITY

WASD has been remarkably successful in operating and maintaining service levels, even during extreme events such as 1992's devastating Hurricane Andrew and the destruction of Hurricane Irma in 2017.

But the impacts of hurricanes and other climate-related influences will continue to increase due to sea level rise, which directly influences the groundwater and storm surge levels, posing a threat to WASD infrastructure and operations staff.

In 2018, the Department developed a "Design Guide for Hardening Wastewater Treatment Facilities against Flooding from Surge, Sea Level Rise, and Extreme Rainfall" to assist engineers and consultants with designing the projects in its multi-billion-dollar Capital Improvement Program (CIP) to withstand wind, storm surge, and flood conditions based on priority criteria including personnel safety and system criticality. The infrastructure improvements planned to meet regulatory requirements, such as the Ocean Outfall Legislation and the Consent Decree, drive this work.

In addition to the regulatory work of the Ocean Outfall and Consent Decree, WAsD is proactively taking measures to harden all infrastructure and increase the system's ability to weather severe storms. These projects include the hardening of Pump Station 1, Pump Station 1310, Pump Station 536, and the Westwood Lakes Control Center through the Hazard Mitigation Grant Program (HMGP). Other critical hardening projects are being funded through the Resilient Florida Grant Program. As part of this program, the Department is working to develop flood mitigation criteria for all water treatment plant assets. Once these criteria are finalized, all future projects will be designed to meet these criteria.

Beyond the hardening work, WAsD has developed various infrastructure programs that address R&R needs, system capacity, and system modernization. These programs include SWRP, LDFP, Connect 2 Protect, and the Water Reset, which have been previously mentioned in this plan. All these programs are underway, with eight system betterment projects being designed as part of the SWRP, seven large-diameter force mains in design within the LDFP, and seven septic-to-sewer projects in Connect to Protect.



Along with WAsD's efforts to maintain, harden, and expand water and wastewater infrastructure, legislative solutions are being forged to ensure a sustainable supply of top-quality water to meet the future needs of our growing community. Miami-Dade County has recently approved legislation authorizing the execution of a Capacity Allocation Agreement in Phase 1 of the C-51 Reservoir, which provides the Department with a 15 million gallon per day allocation of alternative water supplies through at least 2065.

Notwithstanding the asset-related and legislative solutions underway, the need to harden existing assets remains essential to protecting infrastructure and personnel. This is particularly critical at pump stations and the three coastal wastewater treatment plants, where more than 70 percent of the assets are vulnerable to storm surge. Therefore, it is essential to seek all available funding opportunities to advance hardening initiatives to decrease the risk to existing infrastructure, as these are the weakest links in WAsD systems.

THE WATER RESET

The Water Reset is a program that was developed to comprehensively address aging infrastructure, capacity, and regulatory needs across the water system, which will also make positive impacts on:

- ◆ Life, Health, and Safety
- ◆ Legal and Current Regulatory Compliance
- ◆ Future Regulatory Compliance
- ◆ Essential Improvements
- ◆ Strategic Alignment
- ◆ Infrastructure Risk Management and Resilience
- ◆ Financial and Operational Benefits
- ◆ Shovel Ready Status

The Water Reset was developed to be forward-looking and flexible to address future needs. The intent was to create an approach and methodology that objectively prioritizes the multiple projects that are part of the Water Reset while accounting for several conditions that have not yet been fully defined. These include:

- ◆ PFAS (Per- and polyfluoroalkyl substances)
- ◆ GWUDI (Groundwater Under the Influence of Surface Water)
- ◆ Various capacity modification scenarios
- ◆ Disinfection Alternatives



The Water Reset budget is approximately \$2 billion. Currently, the program has \$277 million in active projects, consisting of four projects in construction and 34 projects in design. The remaining projects are programmed to be implemented over ten years.

In 2024, Director Roy Coley and the WAsD team will celebrate the Hialeah Water Treatment Plant's 100-year anniversary. The Department's Water Reset will ensure the water County's water distribution system will last another 100 years.

CONNECT 2 PROTECT PROGRAM

Miami-Dade County's Connect 2 Protect is the County's approach to extending sanitary sewer service to residents with septic systems to protect properties, health, and natural areas such as Biscayne Bay.



Mayor Daniella Levine Cava and District 1 Commissioner, Chairman Oliver G. Gilbert, III joined WASD Director, Roy Coley and others to break ground on District 1's Septic to Sewer Conversion Program—a major step towards a cleaner, more sustainable future.

Septic systems continually discharge nutrients into our water resources even when properly cared for. Improving Biscayne Bay's water quality will require significant pollution reduction within its watershed. Excess nutrients come from many sources, including septic tanks, which can lead to a shift to an algae-based ecosystem that impacts fish, birds, marine mammals, and other marine species' habitats.

Compromised and failing septic systems can cause public health risks, environmental impacts, and impacts to private

properties. Rising groundwater from sea-level rise will only increase the threat to human health and the quality of ground and surface waters including those that discharge to Biscayne Bay.

Approximately 120,000 properties are served by septic systems. Of that, 9,000 septic systems are vulnerable to compromise or failure under current groundwater conditions. This number increases to approximately 13,500 by 2040.

As of Fall 2023, more than 11,000 connections in various stages of design, permitting, or construction. In the next few years, these 11,000+ septic tanks will be removed, eliminating the threat they pose to our County's environment and waterways.

FIRE HYDRANT INSPECTION AND MAINTENANCE

WASD's water transmission and distribution staff is best prepared to ensure Miami-Dade's fire hydrants are fully operational and well-maintained. But until 2023, Miami-Dade Fire and Rescue (MDFR) was responsible for the inspection and annual flow of WASD's approximately 37,195 hydrants. WASD was responsible solely for installing or inspecting contractor-installed fire hydrants, maintaining a calibrated fire flow model per the International

Organization for Standardization (ISO), and maintaining adequate fire flow at the water main.

This year, through an agreed transfer of responsibilities, WASD will continue its in-place hydrant responsibilities and assume the responsibility of all inspection and maintenance of hydrants from MDRF. This will include annually inspecting, flowing, and making all hydrants free from debris in accordance with Florida Statute 633.312. WASD's goal is to have no hydrant out of service for more than seven days. To achieve this task, WASD will hire and train 18 hydrant crews with two supervisors and provide all needed vehicles and tools.



ADVANCED METERING INFRASTRUCTURE



As mentioned previously in this document, WASD owns and operates three regional water treatment plants and provides potable water to over 2 million residents and visitors to the County through more than 495,000 metered service connections. Yet only 35 meter readers are currently assigned to read these 495,000 accounts on a quarterly or monthly basis. Consequently, the service area is split into various reading cycles, and routes are read daily throughout the month.

The current meter infrastructure combines manually read meters with readings captured via handheld devices. For this reason, the Department is embarking on an Advanced Metering Infrastructure (AMI) to convert the existing water meters

and meter reading system to a state-of-the-art solution that leverages smart devices to improve the County's water and sewer operations. This project includes all hardware, cloud-based software, equipment, materials, technical labor, installation labor, and related services, including testing, supervision, project management and all other items necessary to install an integrated turnkey solution for the County, with the following objectives:

- ◆ Collect and store hourly meter reading data for all water meters in the WASD service area
- ◆ Improve non-revenue water losses through enhanced analytics
- ◆ Improve the customer service experience
- ◆ Allow for monthly billing of customers
- ◆ Improve the meter-to-cash process
- ◆ Provide a customer-facing online portal for customers to view their water usage
- ◆ Provide flexibility to connect to various sensors for future expansion.

INDUSTRY ENGAGEMENT



To carry out its mission of delivering high-quality, safe, and reliable drinking water and wastewater services in Miami-Dade County, WASD must support and enable a robust and resilient construction industry — especially during the current historic labor shortfall in the U.S. construction sector. The utility's ability to secure contractors and forge other dynamic partnerships is vital to completing its multi-year capital program as planned.

Recognizing that early, frequent, and constructive communication with the

construction industry and other partners leads to better outcomes, the utility has implemented its Industry Engagement Initiative (IEI) through various efforts:

- ◆ Holding quarterly industry meetings to discuss upcoming projects and their respective scopes
- ◆ Partnering with professional associations to gain interest from contractors
- ◆ Accelerating Joint Participation Agreements with other municipalities to combine project scopes that will attract contractors

WASD’s success is only possible in concert with its industry partners and other stakeholders, who have worked with the utility every step of the way in delivering top-notch services to its customers. Through its three-pronged IEI approach, WASD will attract the contractors and other partners needed to produce innovative and affordable solutions for County residents and businesses.

SUCCESSION PLANNING & EMPLOYEE DEVELOPMENT

As part of its overall business plan, WASD has adopted a comprehensive employee development and retention strategy, which starts with recruitment and directly aligns with Priority 7 of Mayor Levine Cava’s Thrive305 public engagement initiative — investment in blue-green jobs that benefit our water and environment.

The Department has organized several career fairs and implemented internship programs to attract skilled and talented graduates from local schools and colleges. WASD is also developing apprenticeship programs for treatment plant operators in collaboration with agencies such as the Florida Rural Water Association and the Florida Water and Pollution Control Operators Association. WASD is developing a comprehensive onboarding program for new hires, as well.



At WASD, we learn, grow, and achieve together. Here, Instrument Technicians from the South District WWTP show the course materials they used while receiving an on-the-job skill development course.

The Department provides training opportunities for all employees to enhance their skills and chart a career pathway. However, a critical issue is that several of the Department’s senior employees with vast institutional knowledge are approaching retirement age. To retain this crucial knowledge, WASD provides on-the-job training and develops standard operating procedures and work instructions for new employees. WASD is also developing electronic operations and maintenance manuals for all water and wastewater treatment plants, providing employees with easy access to vital information.

Potential internal candidates suited for mission-critical and hard-to-fill positions are identified and provided with the opportunity for training and career development. In addition, overage requests are needed for certain vital positions requiring external hiring so new hires can shadow and learn from senior employees before they retire.

EMERGING & CHANGING REGULATIONS



Complying with new federal regulations will require WASD to spend more on maintenance and infrastructure.

In April 2024, the EPA established national limits for six types of perfluoroalkyl and polyfluoroalkyl substances (PFAS). Under the new regulations, two types of PFAS (PFOA and PFOS) cannot exceed four parts per trillion in public drinking water, and three additional PFAS cannot exceed 10 parts per trillion in public drinking water. As of April 2024, public water systems have three years to begin monitoring for PFAS, and then two additional years (until 2029) to become compliant with the new limits.

The Department first began sampling for PFAS — then an unregulated contaminant — in 2015 and has continuously tested quarterly since 2019, meeting the EPA’s then Health Advisory Levels for PFAS instituted in 2016, which was 70 parts per trillion. The Department has sampled and included the results of PFOA and PFOS in its Water Quality Report since 2019. These were the only two PFAS compounds that the EPA had Health Advisory Guidelines for at the time (since 2016). When the EPA announced in 2022 that additional PFAS-related compounds were being considered, the Department proactively began sampling for them despite there being no established criterion.

According to December 2023’s PFAS sampling results, the Department’s Alex Orr, Jr. Water Treatment Plant and Preston Plant passed the now-regulated requirements for the new compounds, and the Hialeah Plant only exceeded by one part per trillion for Perfluorohexanesulfonic Acid (PFHxS) and exceeded the Hazard level by 1.22.

The Department is in the process of initiating pilot programs to identify which PFAS treatment methods (granular activated carbon, reverse osmosis, and ion exchange systems and direct wellhead treatment activities) work best at each of the Department’s three main treatment plants and at its South Dade Utilities. Varying concentrations at each plant may require a different treatment method

from facility to facility. This will be a delicate process to safeguard the public's drinking water supply while keeping it affordable.



The Employee Service Awards Ceremony recently celebrated Julian M. Hope, a WAsD Engineer 2 with the Pump Station Compliance Section, who creates the reports that send utility data to the EPA. His work, and that of many other WAsD professionals, helps ensure compliance and transparency with federal, state, and local requirements.

Moreover, changes in federal regulations, such as the Lead and Copper Rule (LCRR), impact departmental operations because they require additional Operating and Maintenance (O&M) expenses and capital investments. O&M expenses are closely related to complying with a more aggressive sampling program and other environmental regulations, such as preparing and regularly updating a lead service line (LSL) inventory.

Additional capital expenses are due to new projects needed

to replace these service lines, following a replacement plan to be established as required by the revised LCRR.

ECONOMIC UNCERTAINTIES

Any overall economic slowdown or potential recession could present challenges for the Water and Sewer Department, limiting WAsD's ability to meet desired service levels and execute anticipated infrastructure improvement projects.

Currently, the Department manages a diverse funding portfolio with a solid financial profile to tap into during adverse conditions. Still, it would cut into the planned budget if reliable funding were limited or restricted. Moreover, at this point, the Department would be faced with the impossible task of choosing between investments to comply with new regulatory requirements to replace deteriorating assets or to prepare and harden infrastructure for the next hurricane. WAsD strives to mitigate this risk and continue to provide sustainable, equitable, and efficient service by implementing improved asset management, best accounting practices, and strategic financial planning while evaluating the economic outlook and forecasts before engaging in new investment programs.

AGING INFRASTRUCTURE

The American Society of Civil Engineers grades America's infrastructure every four years, and it has recognized a stark reality and troublesome path forward. U.S. drinking water systems received a C- and wastewater systems a D+. Much of this is because water and wastewater system funding nationwide has not kept pace with the need to address aging infrastructure — and Miami-Dade County is no different.

The Miami-Dade Water and Sewer networks are one of the largest in the country, consisting of 95 active water production wells, three major water treatment plants, approximately 8,700 miles of water mains, three major wastewater plants, over 1,000 pump stations, and more than 4,100 miles of collection and force mains. Portions of the system and associated equipment are from the original construction era, nearing or having already surpassed their useful life. In the coming years, Miami-Dade will face a significant investment in replacing substantial portions of the network.


















Expanding the County's water and wastewater infrastructure is a proactive strategy for protecting its freshwater source while preventing waste from spewing into the Bay. With the expected growth of our community, these investments will ensure the County is prepared for sea level rise, tidal changes, storm surge, high winds, or any worst-case scenario.

A growing population further compounds this need with greater demand and stricter, newly emerging regulations. Without reliable and significant investment in drinking water and wastewater infrastructure, it will become increasingly more challenging to operate the system, maintain a high level of service, and meet customer expectations.💧

BUSINESS PLAN REPORT

WATER & SEWER SCORECARD 6/3/2024

Perspective Name	Objective Name	Grand Parent Objective Name	Parent Objective Name	Measure Name	Last Period Updated		Actual	Target	FY2023-24 Annualized Target	FY2024-25 Annualized Target
Customer	Support a customer-focused organization by providing convenient access to information and services. (Business Plan) (GG1-1)	GG1-2: Facilitate community outreach and engagement to promote better decision-making in County government 	Maintain a high level of responsiveness to customer service requests (WASD) (GG1-1)	Abandoned Calls Ratio (%) (Fiscal Year) (Retail Customer Service and Emergency Communications)	2023 FY		22.12%	8.00%	8.00%	8.00%
				Average Wait Time per Call (Fiscal Year) (Retail Customer Service and Emergency Communications)	2023 FY		4.69 minutes	2.00 minutes	2.00 minutes	2.00 minutes
				Percentage of calls answered within the two-minute threshold (monthly) (Retail Customer Service)	Apr '24		44.00%	70.00%	70.00%	70.00%
Financial	Maintain Fitch, Moody's, and/or Standard and Poor's (S&P) bond ratings (GG4)	GG4: Effective leadership and management practices	GG4-1: Provide sound financial and risk management	WASD Revenue Bond Ratings - Fitch	'24 FQ2		AA-	AA-	AA-	AA-
				WASD Revenue Bond Ratings - Moody's	'24 FQ2		Aa3	Aa3	Aa3	Aa3
				WASD Revenue Bond Ratings - Standard & Poor's	'24 FQ2		AA-	AA-	AA	AA
	Meet Budget Targets (WASD) (GG4-2)	GG4: Effective leadership and management practices	GG4-2: Effectively prioritize, allocate and use resources to meet the current and future operating and capital needs for all our residents 	Capital Infrastructure Improvement Plan Expenditure Ratio	'24 FQ2		75%	75%	75%	75%
				Expen: Total (Water and Sewer)	'24 FQ2		\$186,389K	\$260,744K	\$1,042,976K	N/A
				Positions: Full-Time Filled (Water and Sewer)	'24 FQ2		2,742	3,086	3,086	3,086
				Revenue: Total (Water and Sewer)	'24 FQ2		\$262,432K	\$260,744K	\$1,042,976K	N/A
				Wastewater Capital Infrastructure Improvements Ratio (in percent) Using GOB Funds	'24 FQ2		31.90%	70.00%	70.00%	70.00%
Internal	Compliance with regulatory requirements for Water & Wastewater systems (WASD) (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide sustainable drinking water supply and wastewater disposal services 	Compliance with drinking water standards (% Days) (monthly) (WASD)	Apr '24		100.00%	100.00%	100.00%	100.00%
				Percent compliance with wastewater standards (FY Quarterly) (WASD)	'24 FQ2		83.52%	100.00%	100.00%	100.00%
				System-wide Available Water Supply Capacity From the Biscayne Aquifer	Apr '24		14.47MGD	10.10MGD	10.10MGD	10.10MGD
	Ensure timely completion of Consent Decree Wastewater Capital Improvement projects (WASD) (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide sustainable drinking water supply and wastewater disposal services 	Percentage (%) of Consent Decree Wastewater Projects on or before Schedule (FY Quarterly) (WASD)	'24 FQ2		66.7%	100.0%	100.0%	100.0%
				Improve Water-Use Efficiency (WASD) (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide sustainable drinking water supply and wastewater disposal services 	Finished Water Use Per Capita - Consumption (gpcd) (Calendar Year)	2023		66.7%
	Gallons of water saved per day (GPD) through implementation of the Water Use Efficiency Plan (FY Quarterly) (WASD)	'24 FQ2					132.47gpcd	128.00gpcd	N/A	N/A

Legend:  Featured Objective