Attachment B

Miami-Dade Water and Sewer Department Business Plan

Fiscal Years: 2021 and 2022

(10/1/2020 through 9/30/2022)

Approved by:

Josenrique Cueto

Josenrique Cueto, Interim Director

03/09/2021

Date

Jimmy Morales, Chief Operations Officer

3/14/21

Date

Plan Date: February 2021

FM

CFO Initials

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DEPARTMENT OVERVIEW

Department Mission

The Miami-Dade Water and Sewer Department (WASD or Department, interchangeably) is committed to providing Miami-Dade County's residents, businesses, and visitors with high-quality drinking water and wastewater services; fostering future economic growth through progressive planning; implementing water conservation measures; safeguarding public health and the environment; while embracing continuous process improvements and cost efficiencies, as well as the highest level of customer service.

Our Customer

WASD, one of the largest public utilities in the United States, is committed to providing dependable potable water and wastewater services at the lowest possible rate to a service area of approximately 2.4 million. At the retail level, there are approximately 452,000 water and 368,000 wastewater customer accounts. At the wholesale level, there are 15 (municipal) water and 13 (12 municipal and the Homestead Air Reserve Base) wastewater customers accounts. Services include water supply, treatment, transmission, distribution, conservation, wastewater collection, disposal, and water reclamation.

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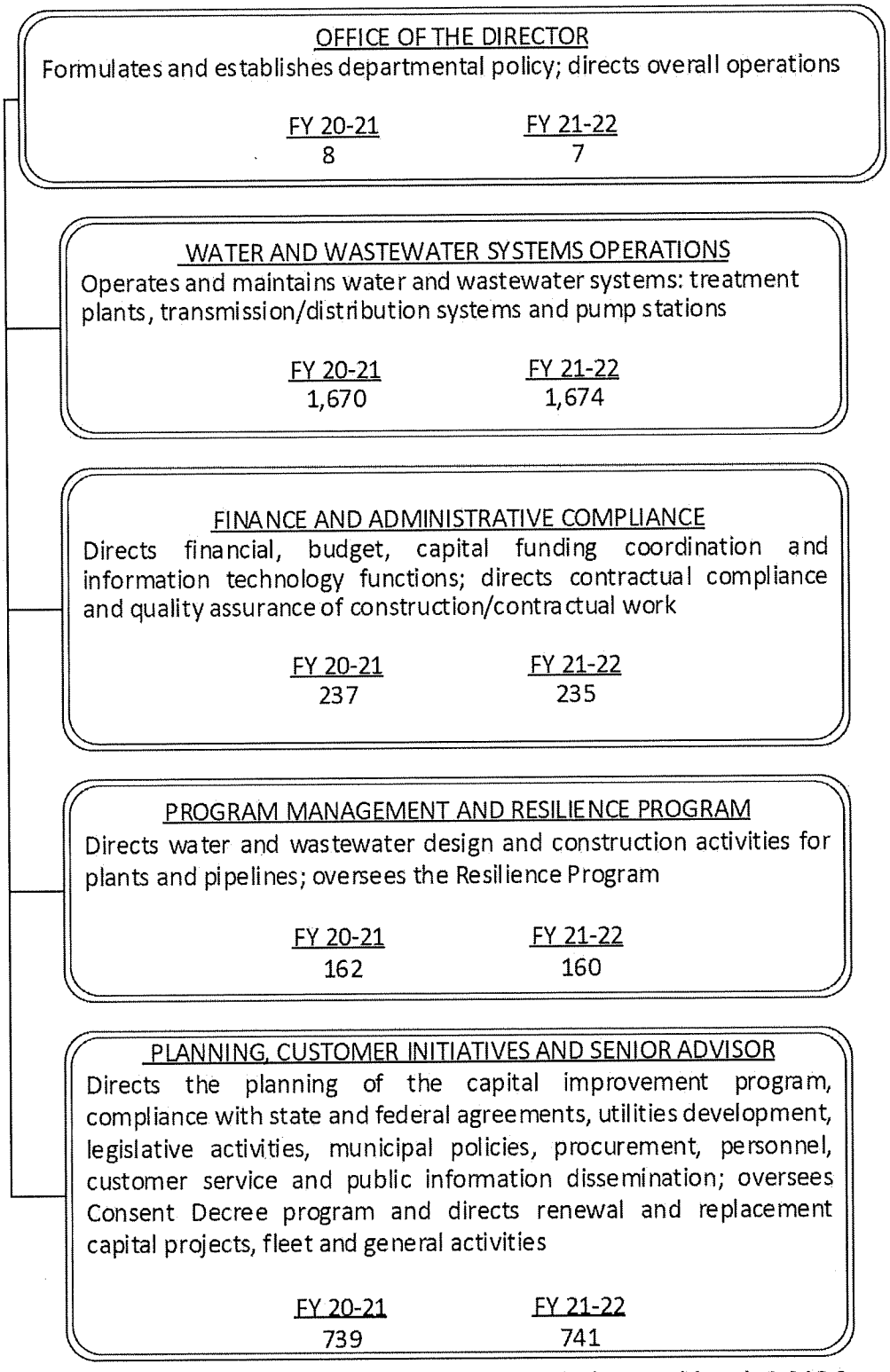
WATER AND SEWER DEPARTMENT

Table of Organization



The FY 2021-22 total number of full-time equivalent positions is 2,816.6

Strategic Alignment Summary

Strategic Area: Neighborhood and Infrastructure (NI)

Goal NI2: Continuity of clean water and community sanitation services
Objective NI2-1: Provide adequate drinking water supply and wastewater disposal services
Administer and implement one of the largest Capital Improvement Program (CIP) initiatives in the United States to improve the reliability and sustainability of the Miami-Dade County water and sewer system. Over the next 10 years, the $7.5 billion CIP will utilize state of the art technology to enhance and upgrade WASD's infrastructure. This economic engine during the first decade alone, will have an economic impact on our community of $24.9 billion, and create approximately 16,500 new jobs and increase service capacity to support more businesses and residences.

Operate and expand the salt monitoring network in Miami-Dade County in partnership with the U.S. Geological Survey. The robust monitoring system enables the mapping of the saltwater/freshwater interface and provides a web-based mapping tool to allow ongoing assessment of saltwater intrusion in the aquifer.

Work with stakeholders 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 and prioritizing the sewer system's expansion to support impactful and cost-effective solutions for the environment and our community.

Strategic Area: General Government (GG)

Goal GG1: Accessible, fair, and responsible government
Objective GG1-1: Provide easy access to information and services

Utilize various outreach methods to inform/educate the public about the Department's programs and initiatives. Message points to include the benefits of the multi-year CIP, water quality, water conservation, customer service and "Stop the Clog". Communication is achieved through both traditional and non-traditional outlets including social media (Facebook, Twitter, Instagram, Nextdoor and YouTube), radio, television, print, community events, transit bus benches, publications and WASD's website. Targeted emails can also be sent as determined by Geographic Information Systewasd cm (GIS) layer.

Provide timely updates during emergency situations such as extreme weather events, pipeline breaches, water service interruptions, and sewer surface overflow events, Precautionary Boil Water Orders and traffic impacts using social media posts, press releases, news media interviews and emails to established stakeholders, such as, affected County Commission Districts, municipalities, medical facilities, and schools to name a few.

Generate support and solicit feedback for WASD initiatives using social media platforms such as, Facebook, Twitter, Instagram, and YouTube. Monitor these platforms and resolve customer service inquiries immediately in real-time.

Develop government mandated documents for transparency, which includes the annual Consumer Confidence Report, that outlines WASD's water quality and the annual Comprehensive Annual Financial Report.

Continue service improvements made through collaborative initiatives with the Utilities Development Division (UDD) and the Regulatory and Economic Resources (RER) Department that enhance the use of electronic documents for construction plans. Through this partnership, a simultaneous review of plans by both WASD and RER will improve customer outcomes and expedite compliance requirements that satisfy County Ordinances.

Objective GG1-2: Support a customer-focused organization

Continue updating and expanding WASD's online self-service application, which interfaces with the backend Customer Care and Billing (CCB) system, to initiate requests for new service. The self-service application currently allows customers to submit request for disconnections of existing services, payment extensions, bill payments, pool credit, high bill investigations and updates contact information using an online format. This self-service tool gives customers access to account information and transactions 24-hours a day, thereby reducing calls to the Customer Care Center or visits to one of the walk-in customer centers. Other functionalities are being developed to expand this service.

Promote the use of WASD's online messaging Chatbot launched in 2016, to provide transactional services to WASD customers, such as updating account information, requesting payment extensions, pool credits, underground leaks, disconnection of service and online payments. In 2020, the Self-Service application had 1.1 million visits and nearly 60,000 submission requests without promotional activities and is expected to grow rapidly with promotion of the application.

Goal GG2: Excellent, engaged and resilient workforce
Objective GG2-1: Attract and hire new talent

Implement a comprehensive staffing and succession plan to mentor, train, and transfer historical knowledge to new employees before the retirement of existing staff in key areas.

Objective GG2-2: Promote employee development and leadership

Continue to conduct employee training sessions for employee development and regulatory compliance.

Objective GG2-3: Ensure an inclusive and diverse workforce

The Department is committed to creating and maintaining a work environment that is both diverse and inclusive. This extends to having a workforce that is both valued and accepted for their differences in addition to their professional contributions. This will be achieved by:

- Establishing the importance of inclusion and diversity in the workplace during new employee orientations.
- Encourage tenured employee trainings administered by the Human Resources Department's cultural diversity and inclusion modules. Thereby reinforcing and maintaining employee awareness of WASD safe work environment policies extended to every gender, race, culture, and disabled persons.
- WASD workforce policies will reflect the County's overall policies in leadership, leadership roles and management practices.

Goal GG4 – Effective leadership and management practices
Objective GG4-2: Effectively allocate and utilize resources to meet current and future operating and capital needs

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 to integrate future conditions, such as sea-level rise, changes in rainfall frequency and intensity, heat, and other climate conditions, in the planning and design of infrastructure and operations planning. Advance a risk-based approach for the management of assets through the implementation of the ANSI/AWWA J100 Standard for Risk and Resilience of Water and Wastewater Systems.

Begin the implementation of an Integrated Master Plan, which will assist in developing a framework to comprehensively address WASD's water and sewer infrastructure and resource needs through the year 2050. The effort will transform WASD's current business practices to maximize operational efficiency and decision-making regarding future capital improvements.

Prioritize staffing and budget for the operation and maintenance of water and wastewater hydraulic computer models, that are used to develop facilities needed for system growth, replacement of aged infrastructure, development of design conditions for new pumping stations and associated piping, analyzing capacity of the various systems for new projects, performance of internal regulatory compliance inspection and audits of permitted operating facilities, as well as staffing to meet environmental compliance requirements.

Continue to develop an efficient data library and analytics management utilizing adequate staffing and data analytics software to maximize operational and planning efficiencies and reduce capital expenditure.

Objective GG4-3: Reduce County government's greenhouse gas emissions and resource consumption

Maximize the use of digester gas, a byproduct of the wastewater treatment process, as a fuel to power the energy demand at the South and Central District Wastewater Treatment Plants. Further maximize onsite cogeneration of energy at the South District Wastewater Treatment Plant through utilizing the methane gas from the adjacent landfill.

Implement the Energy Management Plan for Wastewater Treatment, which builds upon existing efforts and establishes a collection of measures to achieve thirty percent (30%) energy intensity savings by 2030.

Establish similar energy management plans for water treatment and pumping operations through participation in the US Department of Energy Better Plants Program and development of an energy management system by implementing International Organization for Standardization (ISO) 50001 standard. To improve the Department's bottom line through efficient energy management.

WASD is committed to promoting water use efficiency in County operations, as well as in the community by utilizing the County's utility billing management system. Utilize this data source to perform consumption trend analysis that assist departments with developing measures to reduce water consumption.

WASD continues to aggressively detect and remediate leaks throughout its transmission and distribution system countywide. During the calendar year 2020, the Department identified and

repaired over 696 Non-Breaking Ground Leaks, which are difficult to detect because they do not break the ground's surface. Additionally, the backlogs of leak repairs were reduced from 157 to 93. The repairs of the identified leaks have resulted in the prevention of over 5.5 billion gallons of water loss and savings of more than $2.043 million. Continue to use advanced dynamic hydraulic modeling of pump station operational and energy data to minimize pump size and pump starts.

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Alignment of Selected Scorecard Measures to Resilience

Scorecard Measures	*Resilience Driver*
Primary distribution system maintaining 35 lbs psi *Total MDWASD Population Served (Potable Water Service)* *Water Treatment Capacity in Millions of Gallons per Day (MGD)* *Wastewater Treatment Capacity (Permitted)* *Number of Water Pipeline Breaks (AWWA/FBC)* *Wastewater Unplanned Disruptions Lasting between 4 to 12 hours (Fiscal Year) (AWWA)* *Water Unplanned Disruptions Between 4 and 12 hours (AWWA)* *Percent compliance with wastewater standards (FY Quarterly) (AWWA)(OMB)* *Compliance with Drinking Water Standards % (Fiscal Year) (AWWA)*	*HW1: Meets Basic Needs*
Disruptions of Water Service (Fiscal Year) per 1,000 Retail Customers (AWWA) *Disruptions of Sewer Service (Fiscal Year) (AWWA) (per 1,000 Wastewater Retail Accounts)*	*HW2: Supports Livelihoods and Employment*
Sewer Overflow Rate (Per 100 Miles of Pipe) (AWWA) *Response time to sewage overflows* *Percent compliance wastewater effluent limits* *What % of emergency work orders have been completed within 6 hours*	*HW3: Ensures Public Health Services*
Percentage (%) of Ocean Outfall Legislation (OOL) Projects on Schedule *Percentage (%) of Consent Decree Wastewater Projects on or before Schedule*	*IE1: Provide and Enhances Protective Natural and Man-Made Assets*
Water Pipe Network System Inspection (%) (AWWA) *Total hours of WASTEWATER planned and corrective maintenance (AWWA/FBC)* *Emergency Employee Response Readiness Training (Fiscal Year) (hours/employee)* *Collection System Failure (Integrity) Rate (%) (Fiscal Year) (Per Miles of Pipe) (AWWA)* *System-wide Available Water Supply Capacity from the Biscayne Aquifer* *Available Future Water Supply (Years)* *Five-year average water demand (MG)(AWWA)* *Total Planned Maintenance Ratio (planned maintenance as % of total Maintenance – water and wastewater (AWWA)*	*IE2: Ensure Continuity of Critical Services*
Organization's Policies, Plans, Directions, state Commitment to integrating and Balancing Environmental, Social, and Economic Goals (AWWA)	*LS1: Promote Leadership and Effective Management*
Training Hours Per Employee *Review all Sources of Stakeholder Feedback and Develop Actions Regularly*	*LS2: Empower a Broad Range of Stakeholders*
Succession Planning (AWWA) *Continuous Improvement program participation (AWWA)*	*ES3: Foster Long-Term and Integrated Planning*
Resilience Drivers: *LS1: Promote Leadership and Effective Management* *LS2: Empower a Broad Range of Stakeholders* *LS3: Foster Long-Term and Integrated Planning* *HW1: Meets Basic Needs* *HW2: Supports Livelihoods and Employment* *HW3: Ensures Public Health Services*	*ES1: Promote Cohesive and Engaged Communities* *ES2: Ensure Social Stability, Security, and Justice* *ES3: Foster Economic Prosperity* *IE1: Provide and Enhances Protective Natural and Man-Made Assets* *IE2: Ensure Continuity of Critical Services* *IE3: Provide Reliable Communication and Mobility*

KEY ISSUES

Multi –Year Capital Program

Deferred maintenance and regulatory requirements in the form of consent decrees, agreements, permit conditions, and statutory changes continue to create a series of unfunded mandates that can only be met through extensive capital investment. To this end, WASD's $7.5 billion Multi-Year Capital Improvement Program (MYCIP), will address deficiencies in facilities and pipelines resulting from age and deferred maintenance that have led to expensive equipment failures such as water and wastewater main breaks, plant failures, and decreased efficiency of operation. In some instances, fines and penalties have been imposed by regulatory agencies because of these failures. The dramatic failure of large diameter water and wastewater mains during the past few years indicates that dedicated attention to the evaluation, repair and replacement of this critical infrastructure is required. Key components of this program as follows:

Consent Decree

A Consent Decree (CD) between Miami-Dade County, the United States Environmental Protection Agency, State of Florida, and Florida Department of Environmental Protection (FDEP) was entered into on April 9, 2014. It settled alleged violations of federal and state environmental laws related to the County's sewage system and the replacement of aging and unreliable sewer infrastructure. The Consent Decree Program includes a series of improvements in management, assessments, audits, modeling, ordinances, and planning. It also leverages the strength of a larger capital improvement program, which encompasses all Miami-Dade Water & Sewer wastewater operations. This consists of the Wastewater Collection and Treatment System (WCTS), wastewater treatment facilities, effluent disposal operations, and financial management and reporting systems. The Consent Decree Program covers 176 projects with a projected estimate cost at $1.94 billion dollars. To date, ninety-four percent (94%) of Consent Decree projects are on schedule and sixty-seven percent (67%) of the program is complete.

The CD outlines certain Capacity, Management, Operations and Maintenance (CMOM) programs, to be undertaken, to reduce sanitary sewer overflows and ensure proper practices. These include a continuation of CMOM programs from previous Consent Decrees, such as the Transmission and Treatment Capacity Program, Pump Station Remote Monitoring, Wastewater and Collection Transmission System Model, Spare Parts Program, and Volume Sewer Customer Ordinance Program. New CMOM programs related to the current Consent Decree include: Fats, Oils & Grease (FOG) Control Program; Sewer Overflow Response Plan; Information Management System Program; Sewer System Asset Management Program; Gravity Sewer System Operations & Maintenance Program; Pump Station Operations and Preventative Maintenance Program; Force Main Operations; Preventative Maintenance & Assessment/Rehabilitation Program; Wastewater Treatment Plant Operation and Maintenance Program; and the Financial Analysis Program. All CMOM programs have been approved by the United States Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP).

WASD's Pump Station Improvement Program (PSIP) manages the improvements of pump stations, force mains and gravity lines. The PSIP is intended to monitor pump station activity to ensure that WASD is following the Nominal Average Pump Operating Time policy as defined

by the EPA. The Pump Station Compliance Section constantly monitors over 1,000 pump stations to determine if any are trending out of compliance and alerts the operational divisions to address the problem. If a pump station requires an upgrade, preliminary engineering reports are prepared for engineering design and construction work to begin. This key issue, if not properly managed, not only poses an impediment to economic development but also negatively impacts the reliability of systems that are critical for day-to-day maintenance and operations.

Pump Station Improvement Program

The PSIP includes 153 projects valued at $156 million and will improve infrastructure within the community, boost the economy by creating new jobs and providing opportunities to local Small Business Enterprise (SBE) firms, and build a sustainable system that will prepare the utility's wastewater collection and transmission system for sea-level rise and climate change.

Ocean Outfall

In 2008, the State of Florida enacted the Ocean Outfall Legislation (OOL) requiring all wastewater utilities in Southeast Florida, utilizing ocean outfalls for treated wastewater disposal to:

- Eliminate the normal use of ocean outfalls by the end of 2025.
- To reduce nutrient discharges, WASD Implemented the equivalent reduction approach of advance wastewater treatment. WASD is maximizing the use of existing municipal deep injection wells at North District Wastewater Treatment Plant (NDWWTP) and utilizing new industrial deep injection wells at Central District Wastewater Treatment Plant (CDWWTP) to achieve equivalent reduction in the cumulative outfall loadings of total nitrogen and total phosphorus.
- Currently, it is anticipated that WASD will not meet the 60% reuse target by 2025. However, the Legislation requires implementing reuse that is technically, environmentally, and economically feasible. Therefore, WASD in collaboration with FPL is pursuing 15 mgd of reuse for cooling water. In addition, WASD is exploring other opportunities through its Reuse Feasibility Study and has found other limited use.
- In 2013, the OOL was amended to provide greater flexibility to meet wastewater reuse requirements and manage peak flows by standby outfalls. As of September 30, 2020, the Department has expended approximately $178 million on projects to meet Legislation. Future expenditures will include costs to complete design, permit fees, construction, and construction management for the required infrastructure improvements. The OOL Program includes projects to meet the legislation, as well as projects for overall treatment capacity at the County's three (3) existing Wastewater Treatment Plants (WWTP). The following is the overall status of the OOL Program:
- Conceptual designs for the WWTPs with ocean outfalls that are affected by the Legislation (Central District and North District WWTPs) have been completed and associated designs are underway.
- Conceptual design for the South District WWTP, which includes infrastructure improvements to increase treatment capacity is completed. The final designs for the improvements are also completed, and procurement is currently underway.
- The design, permitting and procurement of municipal injection wells has been completed

at the South District and Central District WWTPs, and construction is now underway. Additionally, design and permitting is 100 percent (100%) complete for the municipal injection wells at North District WWTP, and procurement is underway.

WASD Managed Projects

Miami-Dade County's water and wastewater systems necessitate utility improvements that are implemented through the WASD Managed Projects Program (Program). The Program addresses future capacity and aging infrastructure through fast-tracked projects that encompass water treatment plants, water distribution and wastewater treatment plants, as well as over 15,000 miles of pipe. These improvements will not only maintain compliance with the requirements of the State Water Use Permit but will also ensure the continuous delivery of water and the ability to meet future service demands.

- Currently, this Program includes 168 projects totaling $886 million that are scheduled to be completed by 2028. Of these projects, twenty (20) are future, ninety-seven (97) are in the planning, design and procurement phase, forty-two (42) under construction, and nine (9) in close-out.
- In addition to the projects currently in the Program, nearly $2.2 billion of new projects are under development. These projects will transition into active design and construction, thereby expanding the Program to approximately $3.3 billion. Projects focusing on pump station resiliency sewer flow reduction and water system operations efficiency will be prioritized.
- $28 million of grant-funded resilience and strengthening projects are expected to be completed in the next five years.
- A recently approved Special Sanitary Sewer Benefit Area requested by property owners will be constructed serving ninety-nine (99) commercial and multifamily parcels in the Ojus area.
- The Program encompasses all emergency repairs, post-disaster recovery and damage assessment services. Approximately 10-15 emergency repairs or urgently needed systems improvements are required on a yearly basis.

General Obligation Bond (GOB) Program Projects

WASD has an allocation of $206.7 million from the General Obligation Bond (GOB) Program to support the Department's water and sewer system enhancements. The largest of WASD's is the implementation of the "Sewer Service to Commercial Properties in Miami-Dade County," created by Resolution R-597-13, adopted on July 2, 2012 project cost $126 million. This project consists of installation of 116,000 linear feet of pipe and construction of eleven (11) new pump stations. In addition to improving the chances for economic development and job creation, the protection of the County's water supply will also be improved and enhanced by eliminating commercial/industrial septic tanks from these areas. The initial five commercial corridors funded through this program were identified by criteria adopted by the Board of County Commissioners that considered planning & environmental factors, economic, land use, and current and socioeconomic conditions. When coupled with planned water infrastructure upgrades, it reflects a $200 million project, which would place it among the largest commitments of septic to sewer conversions in the state.

Major commercial corridors where significant clusters of commercial and industrial zoned property lack access to sewer infrastructure includes NW 7th Avenue, NW 22nd Avenue, NW 27th Avenue, NW 79th Street, NE 2nd Avenue, Biscayne Boulevard, SW 40th Street and South Dixie Highway, and Hialeah Transfer area NW 37th Avenue.

Consumer Line Relocation

The Consumer Line Relocation Program (CLR) was established to replace undersized water mains, as well as to transfer water service to the front of properties. The objective is to improve water service, reduce leakage losses from deteriorating aging lines, improve water quality, and enhance fire protection flows. This program will, in part, satisfy a condition by the South Florida Water Management District within the County's 20-Year Water Use Permit, requiring a reduction in water losses in the distribution system. WASD has completed Phase 1, the Department is in the procurement process to select a contractor that will transfer water services to properties which are currently being served by a rear water main and that have a water main service, and meter in the front.

Utilities Development

The conversion of paper plans and municipal Certificate of Use (CU) to electronic submittals have impacted the level of service and completion of our processes. The increase of additional electronic submittals has affected our operation by increasing the number of projects per reviewer which now have to be completed with reduced timelines.

The Department is looking at ways to improve systems integration for a more efficient access to review projects and manage workflows, recurring processes, and standard operating procedures (SOPs).

Timely processing of developer donations of water and wastewater infrastructure is of key importance to the Department. The Department needs to keep pace with development in the community and the water, wastewater and reclaimed water infrastructure projects that become a part of the Department's water and wastewater systems. Larger developer projects require the use and maintenance of the Department's Wastewater Transmission and Collection System (WCTS) hydraulic computer model, which is used to determine the correct size of infrastructure to install. This work, and the equivalent for the Department's water transmission and distribution system, is critical for the determination of capacity for developers, as well as for long-range planning and optimal system operation.

Operations

Replacement of aging and worn-out equipment and vehicles is an ongoing challenge in meeting WASD's operational needs and regulatory requirements. An aging electrical system requires substantial funding to upgrade the network/data infrastructure and equipment to improve energy efficiency. Updating and improving the mechanical/HVAC and incorporating a more efficient parallel approach is needed. As the Department continues to add capacity, new pump stations and buildings with modern technology, HVAC staff require continuing education and adequate staffing levels.

Technology continues to be at the forefront of WASD operations to improve productivity in our budget and accounting, customer information, geographic information, enterprise asset management, system control data, project tracking, scheduling, security, metering, and monitoring of automation of the operations through SCADA. The core systems that support these functions require maintenance, training, and funding for them to continue to serve their purpose. Additionally, technology changes are introduced by hardware and software suppliers, internal business improvements, regulations, and expanded customer expectations.

Beyond these core systems, WASD, working with the Information Technology Department, has introduced innovative solutions and technologies that extend the Department's capabilities by improving productivity, efficiency and enabling better data analysis. Continued improvements have been implemented by enhancing data and systems access through mobile and cloud solutions; proactively managing infrastructure; and diversifying customer channels of communication, thus improving customer service and satisfaction as well. Among these are: new GIS tools to support better analysis of the Department's infrastructure; a Big Data Analytics solution based on Microsoft Azure Cloud to handle the SCADA data; asset management mobile solutions to support field and warehouse operations; the Microsoft SharePoint platform along with Office 365 that encourages better business collaboration anytime, anywhere and from any device; Business Intelligence architecture and tools to analyze and visually present disparate data using intuitive dashboards; expanded self-service functionality on-line for customers to access 24/7; and AVA (Watson) Chatbot, which allows customers to ask questions and request payment extensions using natural language. Although these newer technologies provide substantial benefits, it places a burden on both the workforce adapting to the change and the Information Technology team delivering the support that must be managed. Coordinating these changes requires significant planning to ensure a smooth transition.

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PRIORITY INITIATIVES

Multi-Year Capital Program

WASD will continue to ensure the implementation of the projects in the MYCIP to provide adequate facilities to meet capacity requirements and comply with regulations and infrastructure renewal and replacement.

The MYCIP will also address the support systems associated with implementation, including climate change mitigation and adaptation strategies references below:

Consent Decree

Continuation of existing Capacity Management Operation and Maintenance (CMOM) programs including implementation of the developed Sewer Overflow Response Plan; Information Management System; Sewer System Asset Management; Gravity Sewer System Operation and Maintenance; Pump Station Operations and Preventive Maintenance; Force Main Operations and Assessment, Preventive Maintenance and Rehabilitation; Wastewater Treatment Plant Operations and Maintenance; and Financial Analysis Programs.

Further utilization and optimization of existing technology to meet all CD requirements and to support the overall operation and management of the enterprise. Implementation of key automated support systems will assist in providing insight and meaningful monitoring, tracking, and reporting.

Pump Station Improvement Program (PSIP)

- Completion and certification of the remaining PSIP projects. To date, 136 projects have been completed or certified.
- Four (4) projects have been substantially completed and are pending final certification.
- Nine (9) projects are currently under construction and are scheduled for completion over the next few months.
- An additional two (2) projects are in the procurement process.
- Two (2) projects are in permitting/design or planning.

Ocean Outfall

WASD is fully committed to complying with the requirements of the OOL, specifically regarding the following stipulations: 1) Advanced Wastewater Treatment and Management (AWTM) Requirement; 2) Functional Reuse System; and 3) Elimination of the normal use of the Ocean Outfall by December 31, 2025.

Advanced Wastewater Treatment and Management Requirement: WASD selected the equivalent nutrient diversion method to meet the AWTM requirement and is on target for compliance. The most current projections for Total Nitrogen (TN) and Total Phosphorus (TP) diversions anticipate the TP goal being met in 2021 and TN goal being met in 2025. WASD is

maximizing the use of its existing municipal deep injection wells at NDWWTP. Its recently operational industrial deep injection wells at CDWWTP to meet the nutrient diversion objectives set forth by the OOL.

Functional Reuse System: The OOL statute defines a functional reuse system as "an environmentally, economically, and technically feasible system that provides a minimum of 60 percent (60%) of a facility's baseline flow on an annual basis" for various wastewater reuse applications listed in the statute. WASD has undertaken a series of analyses, including the April 2018 Update of the Reuse Feasibility Study, to identify candidate projects that fulfill a water supply need and that can be evaluated in terms of environmental, economic, and technical feasibility. On April 10, 2018, the Miami-Dade Board of County Commissioners (BCC) approved Resolution No. R-292-18, authorizing the County Mayor or County Mayor's Designee to execute a Joint Participation Agreement with FPL for development of an Advanced Reclaimed Water Project, subsequently on June 16, 2020, under Resolution R-579-20 the BCC approved an Agreement with FPL for up to fifteen (15) million gallons of reclaimed water use at FPL's Turkey Point Complex.

Elimination of Ocean Outfall Discharges by December 31, 2025: WASD, through its commitment and actions to advance the OOL Program, is currently working toward meeting the requirements set forth by the legislation to eliminate the ocean outfall discharges (with exception of the permitted five (5) percent peak flow provision in the statute) by December 31, 2025. Through continuous monitoring of increases in flow and population over several years, WASD has been better able to forecast system needs and make corresponding adjustments to future projections. To ensure accurate and efficient infrastructure planning, WASD has embarked on a comprehensive evaluation of its 2035 flow projections, including Average Annual Daily Flows (AADF), Peak Hour Flows (PHF), and loading capacity to its wastewater treatment plants. Currently, WASD's existing wastewater treatment plants significantly exceed anticipated system demands beyond 2025 and, therefore, WASD will use of existing assets to address the requirements of the legislation and future wastewater flows. Among the projects to be completed are high-level disinfection facilities and new injection wells that will enable WASD to eliminate the normal use of the outfalls. Additionally, due to the re-evaluation of flow projections through 2025, WASD submitted a 2019 Update Compliance Plan to include only those projects essential for OOL compliance by December 31, 2025.

The C-51 Reservoir Phase 1 Project

A regional alternative water supply project and multi-stakeholder public-private partnership that provide utilities with sustainable water supplies in South Florida. It involves the construction of a 14,000 acre-foot in-ground reservoir in central Palm Beach County immediately adjacent to the existing SFWMD L-8 Flow Equalization Basin that will provide 35 mgd in alternative water supply benefits to utilities through rights to additional Biscayne Aquifer allocation in respective Water Use Permits. The project has environmental benefits including aquifer recharge and reduction of tidal discharges. The in-ground reservoir will store and route water supplies through primary and secondary canal system to individual utility wellfields to provide direct aquifer recharge to offset withdrawals from the Biscayne Aquifer. Broward County Water and Wastewater Services, the City of Sunrise, the City of Lauderhill, and the City of Dania Beach have submitted Letters of Intent to utilize water made available via the C-51 Reservoir and entered into allocation agreements. Participating water utilities will be able to expand use of

the Biscayne Aquifer in full accordance with the Regional Water Availability Rule, while also taking advantage of existing wellfields and treatment facilities.

For MD-WASD this means obtaining 15 mgd of additional Biscayne Aquifer withdrawal rights. Unlike other sources, this water can be withdrawn from WASD's existing well fields and treated at the utility's existing water treatment plants with no additional capital investment. The operating expense associated with the C-51 project is minimal. The South Florida Water Management District will serve as the project operator with reimbursement for operational expenses by the project partners.

Below is a summary of each of the primary components of the project/partnership.

C-51 WASD Allocation:

- 15 mgd allocation – this allocation will be through WASD 20 Year Water Use Permit Condition, and the C-51 Reservoir, Inc. a Florida Not-for-Profit (C-51 NFP) Consumptive Use Permit (CUP) (currently expires 12/27/2065).
- Once WASD completes the C-51 allocation agreement and payment, WASD becomes part of the C-51 NFP (note: with a 15 mgd agreement we would have 15 of 35 voting rights per the C-51 NFP By Laws).

WASD Water Use Permits:
Once an allocation has been permitted by the SFWMD, the applicant can renew permit at any time, and as long applicant can demonstrate the District's 3 prong approval process, the permitted allocation is extended to the updated expiration date of the permit.

- For example: If WASD initial 20-year WUP expired in 2027, with a base of 347 mgd. WASD has since submitted several permit modifications since then, most recently in 2015, so our permit now expires in 2035 with an allocation of 350 (as we were able to demonstrate in one of the permit mods increased Biscayne Water with no impacts to regional system).
- For the C-51 NFP CUP the C-51 NFP can modify that permit to extend it periodically going into the future, as long as the C-51 is operational - meaning that 15 mgd allocation can be extended for as long as the life of the C-51 reservoir (estimated 100 years if we're all not under the bottom of the sea by then).
- Once Palm Beach Aggregates transfers the C-51 reservoir over to the C-51 NTP, they are no longer involved in the CUP. PBA will transfer ownership of the Phase 1 Reservoir to C-51 NFP on or about the 30th day after the date on which commercial operation of the Phase 1 Reservoir is achieved.
- No further payments to PBA after the initial payment, even if that 15 MGD allocation is extended to 2100.

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Flow Reduction

WASD aims to reduce average and peak flows in the sewer system via the Flow Reduction Program. Comprised of two main components, Inflow, and Infiltration (I/I) reduction and Pump Station Optimization (PSO), this program implements system betterment as well as real-time controls to reduce flows into the conveyance system. Through this program, additional savings in capital infrastructure are achieved while also helping the Department comply with the Wellfield Protection Ordinance (WPO).

- The Flow Reduction Program aims to address I/I repairs for basins as identified by the Wastewater Collection and Transmission Division, Pump Station Compliance Section (PSCS) and different programs such as the Pump Station Improvement Program (PSIP). Currently, the Program has seven contracts (totaling $22 million) scheduled to target I/I repairs.
- WASD has completed over 3,711 in-house repairs and over 2,034 contract repairs in compliance with the current local legislation (WPO and VCSO ordinances). This work included CIP Liners, Sectional Liners, Dig & Replace, Large Diameter Cleaning, and Manhole Repairs.

Asset Management

To comply with Consent Decree (CD) requirements, WASD will implement key initiatives that enhance the useful life cycle of the water and wastewater infrastructure and components identified as critical assets, to aid in maintaining an adequate level of service, for Miami-Dade residents and customers.

e-Builder Implementation

Finalize implementation of the e-Builder project management software application to manage WASD's MYCIP projects and maintain, enhance, and provide support and training for the live e-Builder system for donation projects and processes. This cloud-based solution is being integrated with other WASD systems such as PeopleSoft Enterprise Resource Planning (ERP) and ArcGIS (a geographic information system) to provide a single point of access for project data and related business processes for all users from project and program managers to designers, consultants, permitting agencies, contractors, suppliers, and other project stakeholders. e-Builder will result in increased productivity, efficiency, and faster project delivery by helping to manage and control projects' scopes, schedules, costs and documents throughout their lifecycles from planning and design, all the way through procurement, construction, closeout and operations. e-Builder supports policies and processes that will ensure governance, while increasing efficiency, transparency, and accountability. One of the many benefits of e-Builder is its ability to automate workflows, create notifications, and incorporate document repository capabilities. This software will undoubtedly help improve work synergies amongst project teams and stakeholders, impacting the way users communicate and collaborate within one platform. Built-in features within e-Builder will streamline processes, improve data security, and provide integrated accountability across one solution while expanding access to information and empowering users to make better-informed decisions. As a result, e-Builder will keep responsible parties current and up to date with any changes to their account and provide them with an audit trail of all project transactions. Ultimately, e-Builder will replace the Proliance Project Control Tracking System (PCTS).

Continue rollout, training, and support of the Bluebeam Revu software application to facilitate and accelerate the design plans review process. Bluebeam Revu is pre-integrated into e-Builder and allows for document markup, comparison, and collaboration by multiple users in real-time. It includes a suite of measurement tools that allow capturing project scope and producing higher-quality bids and simplifies the creation and approval of submittals.

Expand the WASD Services e-Builder application developed by WASD staff to better track and manage planning, water certification, hydrogeology, and utility coordination projects. The application provides dashboards allowing project managers and other users to track and manage correspondence and work effort.

Resilience Program

Continue to work across departments and external agencies to advance the Risk-Based Plan of Action for Septic Systems vulnerable to sea-level rise. Recognizing that 9,000 septic systems are vulnerable to compromise or failure under current groundwater conditions and increases to approximately 13,500 by 2040, the following are the next steps:

- Implement a program to install public laterals to support connection of properties abutting sewer infrastructure, prioritizing those that are vulnerable to compromise/failure by 2040.
- Prioritize Areas for Expansion of the Sanitary Sewer System Based on environmental, social, and economic impacts. 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 public assets' lifespan as a result of changing conditions. Continue to integrate future conditions, including sea-level rise; and changes in rainfall frequency and intensity; as well as heat and other climate conditions, in the planning and design of infrastructure and operations planning. Develop processes to quantify and document the cost-benefit of efforts, including the added cost of resilient design and the estimated risk reduction to measure performance and offset risk-based insurance or bond ratings that may integrate regional climate risks in future evaluations.
- Communicate and advance the recommendations and implementation plan developed through the Risk Assessment (RA) performed pursuant to the America's Water Infrastructure Act of 2018, which requires that each community water system shall assess the risks to, and resilience of, its system, including the following elements risk to the system from malevolent acts and natural hazards, monitoring practices, financial and chemical systems, and operations and maintenance. The outcomes include an implementation plan for capital and operational needs for risk and resilience management of the system, including strategies to improve the system's resilience.
- Operationalize the application of the Envision Rating System across planning, design, and construction by developing policies, guidelines, and other tools.
- Advance the priority areas identified through the two-year City Water Resilience Framework efforts coordinated with the Miami-Dade County Resilience Office, Arup, and the Stockholm International Water Institute (SIWI) to bring together regional stakeholders to diagnose the strengths and weaknesses of the water system using quantitative and qualitative indicators.
- Complete the $27 million design in FEMA Hazard Mitigation Grant Program projects (Phase 1) to harden critical wastewater pump stations from flooding, wind, and power

outages. Prepare design bidding packages to obtain funding for the construction of these projects (Phase 2).

- Continue to work across WASD divisions and County departments to assess impacts from sea-level rise, as well as other climate impacts, using tools such as the U.S. Geological Survey ground and surface water modeling, which provides information on future conditions that may impact the water supply and wastewater services. Enhance and expand WASD's water conservation plan to reduce non-revenue water and countywide per-capita water consumption to maximize existing water allocation and facilities.
- Advance the Energy Management Plan for Wastewater Treatment (2019) recommendations, which builds upon existing efforts and establishes a collection of measures to achieve thirty percent (30%) energy intensity savings by 2030. Expand this effort to water production and conveyance, wastewater conveyance, and buildings to reduce its approximately $26 million in annual electricity expenditures.
- Lead the Biogas Steering Committee in maximizing the use of wastewater biogas and landfill gas to offset the use of electricity at the South and Central District Wastewater Plants, and update the Local Mitigation Strategy list of needs, seek additional funding opportunities for these projects, and facilitate implementation.

Water and Wastewater Improvements

The Department will upgrade its digesters with new mixers resulting in a more efficient and improved performance while also producing additional methane gas; the methane gas produced will be used to fuel cogeneration engines, thereby providing additional alternative energy for use within the plant. The quantified savings are approximately $1 million in operating costs over the asset's 20-year life cycle.

- Continue to enhance efforts to reduce non-revenue water losses by expanding mobile network loggers across all major corridors. Finalize GIS layer for non-breaking ground (NBG) leaks.
- Continue initiative to replace approximately 20,000 linear feet of aging water mains with in-house forces. Continuation of the Consumer Line Relocation Program (CLR) with the objective to improve water service, reduce leakage losses from deteriorating aging lines, improve water quality, and enhance fire protection flows by replacing small insufficient diameter rear alley mains.
- Continue the replacement of undersized and aged water mains throughout the County to include unincorporated Miami-Dade County, the City of Homestead and Florida City. Current, aging water mains contain leaks and may not be providing adequate water pressure for fire flow. The increasing population and current conditions demand adequate infrastructure, increased water capacity, the provision of high-quality water and the protection of public health and safety.
- Improvements to the Wastewater Transmission Mains and Pump Stations throughout the County will allow the Department to increase the flexibility of the wastewater systems and improve their ability to monitor and control wastewater flows. Improvements in metering and monitoring pressures will assist in reducing non-revenue water use or losses.

Other Initiatives

- Embark on the implementation of an Integrated Master Plan. The Integrated Master Plan will help develop a framework that will comprehensively address WASD's water and sewer and reuse infrastructure and water supply needs through the year 2050. The effort will transform WASD's current business practices to maximize operational efficiency and decision-making regarding future capital improvements.
- WASD remains committed to cultivating and encouraging local small businesses to bid for Department projects, especially as a part of the $7.5 billion CIP.
- Provide continuous monitoring of proposed rules and regulations by State and Federal agencies, identifying their impact on WASD operations, propose modifications and actively participate in the rulemaking process.
- Leverage WASD's data streams, including WASD's SCADA, asset management, laboratory information management, computerized maintenance management, and geographic information systems, among others, to make data-driven planning, capital improvement, and utility operations decisions.
- Development of SCADA Operation Historian system, development of documentation for SCADA Standards and Convention, and continuous integration of plant processes into SCADA system for monitoring, controlling (including Automation) and data collection purposes, as part of Consent Decree, OOL and Internal R&R projects.
- Align WASD's business practices with international standards (ISO or equivalent) in areas of Asset Management (55000), Energy Management (50001), Environmental Management (14001), and Quality Management (9001), among others.
- The Department has instituted a Quality Assurance and Quality Control team to plan, develop, and subsequently implement a Quality Management System (QMS) based on ISO 9001. The adoption of a QMS is a strategic decision for the Department to improve its overall performance and provide a sound basis for sustainable initiatives. The adoption of a QMS will lead to the implementation of an internal audit program to ensure conformance and compliance with the organization's objectives and regulations. The internal audit program is based upon a strategy that considers the status and importance of each process/system that comprises the QMS.
- Ensure compliance with the 20-year Water Use Permit (WUP) through implementation of alternative water supplies (AWS), water conservation and water loss reduction projects; adequate wastewater transmission capacity; groundwater studies for the North and South District Wastewater Treatment Plants, in compliance with the Florida Department of Environmental Protection (FDEP) Underground Injection Control Program; Infiltration and Inflow Program; Brickell, Doral, and Biscayne Boulevard basin wastewater improvements; the Integrated Water and Wastewater Master Plan to address system needs for future growth, including the OOL, climate change, and sea-level rise; and continuation of comprehensive Lead Service Replacement Program to systematically eliminate lead from water service piping and fittings.
- Provide additional resources to optimize the implementation of infiltration and inflow reduction. The Wastewater Collection System Infiltration and Inflow Reduction (I/I) Program will reduce flow resulting in collection system efficiencies, lower associated operations and maintenance costs and the prevention of additional pump station

moratoria.

- The current Infiltration and Inflow (I&I) Program implemented to achieve the level of service that aligns with the Department's goals.
- Continue implementation of the Water and Wastewater Infrastructure Service Improvement Plan to achieve efficiencies.
- Complete a water system hydraulic model calibration. This modeling effort ensures right-sized infrastructure planning, as well as supports the County's ISO fire insurance rate credits.
- Address the findings of the 2020 Risk & Resilience Assessment (RRA) performed to identify natural and manmade threats to the water system, pursuant to the America's Water Infrastructure Act of 2018.
- Develop priorities and leads for the risk mitigation measures outlined in the implementation plan of capital, policy, and procedural improvements. Re-establish the FEMA Incident Command Structure (ICS) and defining roles.
- Activate the all-hazards Emergency Response Plan, which includes an incident command structure, training and exercise drills, and incident action checklists for cybersecurity and other emergency incidents.

Operations

- Leverage innovative technologies, along with the development of a utility-wide process for screening and performance validation of technologies for piloting and possible implementation.
- Prioritize staffing and budget for the operation and maintenance of water and wastewater hydraulic computer models, which are used to develop facilities needed for system growth, replacement of aged infrastructure, development of design conditions for new pumping stations and associated piping, analyzing capacity of the various systems for new projects, and performance of internal regulatory compliance inspection and audits of permitted operating facilities.
- Maintain up-to-date facility master plans and Standard Operating Procedures (SOPs) for water, wastewater, and reclaimed water systems.
- Expand the technology for monitoring flows at all wastewater pumping stations for use in tracking available capacity and improved hydraulic model accuracy.
- Continue hydrogeological modeling to determine whether additional raw water can be withdrawn from the Biscayne Aquifer. Allocation increases approved by the South Florida Water Management District will allow for the use of existing facilities for pumping and treating groundwater to meet additional water demands with minimum cost.
- Proceed with evaluation techniques, such as water distribution pressure control and water treatment modifications to increase available water for public consumption and decrease energy requirements.
- Evaluate the effectiveness of alternative wastewater pump station operational modes to reduce wet weather water infiltration into the sewer. These reductions may reduce capital and energy costs for new facilities.

- Implement a comprehensive staffing and succession plan to mentor, train and transfer historical knowledge to new employees before the retirement of existing staff in key areas.
- Enhance efforts to reduce non-revenue water losses which amount to an estimated twenty-nine percent (29%) during FY 2020.
- Strengthen meter replacement program to reduce loss of revenues resulting from aging infrastructure.
- Bolster operation's automation opportunities through smart use of SCADA data to improve alarms and process dosing opportunities.
- The Department's Regulatory Compliance & Monitoring Division continues to monitor WASD's participation in the countywide Recycling Program while further establishing the components of the WASD iRECYCLE Program. The iRECYCLE Program has been shared through the Miami-Dade Resource Conservation Committee and serves as a model for other County departments.
- The Field Services Section is working with Procurement to upgrade its Field Collection (Itron) system and hardware used for meter reading. The upgrade includes an Itron Mobile meter data collection solution designed to transform the meter reading function with the use of rugged smart Android devices with advanced capabilities. Among other benefits, the new version allows the Department to get the most value, productivity and efficiency from the Field Services workforce while also enhancing employee safety through GIS.

Customer Service and Community Outreach

The Department continues to strive towards delivering an excellent customer experience to its retail water and sewer customers. The Retail Customer Service Division (RCSD) responds to approximately 600,000 calls annually and the average customer wait time is less than two (2) minutes. The customer experience through all touchpoints is equally important. For this reason, there is an emphasis on an effective multi-channel communication strategy and comprehensive customer experience whether it is by phone, in person or online.

- RCSD, in collaboration with the Information and Technology Department (ITD) continues to explore options for improving digital communication with customers via text and email.
- The Utilities Development Division (UDD) is continuing to enhance the website, to make it more welcoming, user friendly, more practical, and transparent with supplementary content for a more inclusive customer service experience. Continue to optimize and integrate processes making it easier to understand.
- UDD has continued to enhance customer dialogue. Additional features have been added to the telephone system and to continue to improve the communication infrastructure to serve our customers more efficiently. We have created a call center within New Business Section to optimize customer satisfaction and maintain control of the high call volume.

(Continue)

Finance

Annual review of water and wastewater fees continues to be a priority to improve services and finance the rising cost of capital projects.

As part of the FY 2020-21 Adopted Budget, the BCC approved a revenue increase of six-point three percent (6.3%), effective October 1, 2020. This increase is in continuation of the retail rate structure adjustments that were initiated with the adopted budget for FY 2017-18 to address average water decreases due to water usage trends and proactive conservation.

History of Customer Rate Adjustment			
Fiscal Year	Effective Date	Retail Rate Adjustment	Ordinance/ Resolution
FY2013-14	October 1, 2013	8%	Resolution 444-13
FY 2014-15	October 1, 2014	6%	Ordinance 14-92
FY 2015-16	October 1, 2015	6%	Ordinance 15-99
FY 2016-17	October 1, 2016	8%	Ordinance 16-104
FY 2017-18	October 1, 2017	6% revenue increase	Ordinance 17-65
FY 2018-19	October 1, 2018	3% revenue increase	Ordinance 18-102
FY 2019-20	October 1, 2019	4.3% revenue increase	Ordinance 19-113
FY 2020-21	October 1, 2020	6.3% revenue increase	Ordinance O20-96

As part of the FY 2020-21 Adopted Budget, the BCC approved effective October 1, 2020, a continuation of retail water and wastewater usage structures for residential and multi-family retail customers in combination with a rate increase to all retail customer revenues tiers which is reflective of actual usage combined with consideration of fiscal requirements related to capital investments that are mandated. Effective October 1, 2019 the BCC approved a continuation of the retail rate adjustments that commenced in FY 2017-18, in combination with a rate increase to usage tiers. Effective October 1, 2018, an increase to the sewer base facility fee of $1.80 for retail customers with 5/8-inch meters, was also adopted in continuation of the retail rate structure adjustments that were adopted for FY 2017-18 to address average water decreases due to pro-active conservation and low flow water fixtures; this modification to the Department's tiered rate structure has provided the Department with the ability to generate revenues to support fixed costs of operations. Wholesale rates for water and wastewater services are also adjusted annual based on cost of service. Future water and wastewater retail and wholesale rate increases are also projected to continue to fund the Multi-Year CIP. The table below includes rate adjustments imposed since the Department entered the Consent Decree:

WASD's Bond Ratings	FY2019 Actual	FY2020 Projection	FY2021 Target
Bond rating evaluation by Fitch Retail Rate Adjustment	A+	A+	A+
Bond rating evaluation by Standard and Poor's	Aa-	Aa-	Aa+
Bond rating evaluation by Moody's	Aa3	Aa3	Aa3

Protecting the financial strength of the Department continues to be a priority for WASD. The Department was once again rated by Moody's Investor Service, Fitch Ratings, and S&P Global Ratings in relation to Series 2019B Revenue, Taxable Series 2019C Bonds and EPA WIFIA loan. As a result, all ratings remain unchanged.

Previously S&P Global Rating raised WASD's bond rating for water and sewer revenue bonds to Aa- from A+, noting that: "The upgrade reflects the county's demonstrated ability to generate revenue sufficient to support strong financial performance while it works through its substantial capital investment plan. At the end of fiscal 2020, WASD had $3.2 billion in total revenue bond debt outstanding. The rating reflects our assessment of the water and sewer Department's very strong enterprise and financial risk profiles."

These ratings are an independent assessment of WASD's creditworthiness and ability to honor its debt obligations. Ultimately, these positive changes in ratings will help WASD retain access to markets and sell bonds to obtain financing for key projects and initiatives that will improve services rendered to Miami-Dade County residents. The following bond issues have been adopted by the BCC:

- June 4, 2013 fund obligation authorizing the issuance of Miami-Dade County Water and Sewer systems bonds (not to exceed $4.245 billion in multiple bonds) fund the cost of the capital improvement plan including replacement of aging infrastructure that is more than 50 years old and upgrades to comply with a portion of the CD. In addition, proceeds fund capital interest, reserve funds and cost of issuances.
- Series 2013A bonds issued on August 2, 2013, for $345.2 million is the first of the multiple bond issues authorized through Ordinance 13-47. This issuance provided $300 million for capital project funding. Series 2013B Revenue Refunding Bond for $162.1 million was issued to refund Series 1999A; this bond series is estimated to provide the Department a savings of approximately $26.5 million over the next 16 years.
- Series 2015 Revenue Refunding Bond for $481.2 million was issued and adopted by the BCC on April 21, 2015, via Resolution R-298-15. The 2015 Series Bond allows the Department to realize estimated savings of $47.8 million through FY 2026, through the refunding of Series 2007 and Series 2008C.
- In May 2016, the Department instituted a commercial paper program with a maximum outstanding principal amount of $400 million. The program was authorized in compliance with the Master Bond Ordinance, Ordinance No. 09-67, and Resolution No. R-347-16, which allows the Department to issue commercial paper. Proceeds from the Commercial Paper program will be used to finance the short-term capital requirements of the Capital Improvement Plan. Revenue Bonds will be issued alongside commercial paper notes, in the amount no less than the current outstanding aggregate principal commercial paper debt. The Department anticipates future needs for additional funding for capital projects in the CIP.
- Ordinance 13-47 also strengthens the Department's rate covenant, previously 110 percent (110%), whereby the County promised to maintain net operating revenues in each fiscal year at least equal to 125 percent (125%) of the debt service requirement. Rating agencies view higher rate covenants to be more robust when compared to other highly rated water and wastewater authorities. In addition, this higher rate covenant is

a way to improve the Department's legal credit structure.

- Miami-Dade County Water and Sewer Revenue and Revenue Refunding Bonds, Series 2017, was executed for a total of $1.03 billion. Series 2017A Revenue Bond for $414.6 million provides an additional $400 million to fund the multi-year Capital Improvement Program, and Series 2017B Revenue Refunding Bond for $624.7 million realizes savings of $101.4 million by refunding Series 2010.
- Miami-Dade County Water and Sewer Revenue Bonds, Series 2019, was executed for $223.3 million to continue funding for the MYCIP. Additionally, Series 2019B issued for $663.9 million as funding for the MYCIP and Taxable Series 2019C Revenue Refunding Bonds issued for $548.1 million refunding Series 2013A and B.

WASD makes it a priority to seek alternative funding to support infrastructure-related projects that support environmental improvements. The adoption of Ordinance 18-7 authorizes the County Mayor or County Mayor's designee to: 1) apply for U.S. Environmental Protection, Water Infrastructure and Innovation Act (WIFIA) loans; 2) enter into and execute the related loan agreements and any amendments thereto that are consistent with the authorization provided by the Board in this Ordinance; and 3) expend the loan(s). WIFIA loans are applied for on a project-by-project basis as projects are identified and approved by EPA.

In 2017, the United States Environmental Protection Agency ("EPA") selected the Department to be one of 12 entities invited to apply for funding through the inaugural Water Infrastructure Finance and Innovation Act ("WIFIA") loan program. By the end of FY 2020 the Department is the only utility nation-wide to close on all three WIFIA loan agreements which will save our rate payers approximately $210 million in interest payments for the lifetime of the three WIFIA loans.

The Department has also secured $326.2 million in funding as part of the second round of the 2018 WIFIA loan program. The funding will provide forty-nine percent (49%) of the project estimate, or $326.2 million for the design and construction of five new electrical distribution buildings at three wastewater treatment plants. The Department is currently negotiating terms of the agreement and should close the loan early in FY2020. Final funding is dependent upon approval by the EPA and the Board. It is anticipated that the remainder of this project will be partially funded through the State Revolving Fund Loan Program and the issuance of subordinate debt in 2020. This WIFIA loan will partially fund projects to meet compliance with the Ocean Outfall Legislation (OOL).

On July 15, 2020, the Department closed on the third WIFIA loan to fund upgrades to the South District Wastewater Treatment Plant with total estimated project costs of $480 million. The WIFIA Loan provides $235.2 million, or forty-nine percent (49%). The reminder of the project anticipates funding from sub-ordinate debt.

The Department submitted the fourth Letter of Interest for the 2020 WIFIA selection round and was invited to apply for the fourth consecutive loan. This WIFIA loan will secure funding of $385 million or 49% of total project costs of $785.8 million for the North District and Central District Wastewater Treatment Plants upgrades within Ocean Outfall Legislation Projects.

The Department continuously looks for innovative ways to reduce the fiscal impact to its customers, including reviewing the organizational structure and related business processes to find competitive approaches to addressing the needs of its customers in the most cost- effective manner while maintaining regulatory compliance. As these approaches are identified, the Department, along with the Office of Management and Budget and the Mayor's Office, will present the proposals to the BCC for final determination.

FUTURE OUTLOOK

Utility of the Future

In keeping with its "Utility of the Future" title, as designated by a partnership of national water sector organizations including the National Association of Clean Water Agencies (NACWA), the Water Environment Federation (WEF), the Water Environment Research Foundation (WERF) and the Water Reuse Association, with advisory support from the U.S. Environmental Protection Agency (EPA), WASD will continue to focus on several initiatives to assist in complying with the business model developed by this partnership while also maintaining our status as a leader in the industry. WASD's success with initiatives supporting water quality, sustainability and resilience, efficiency and economic growth has contributed to this honor.

The water system infrastructure averages 45 years with the oldest pipes in the system dating back to the mid-1920s. Similarly, the wastewater infrastructure averages 55 years with the oldest pipes in the system dating back to the 1930s or earlier. As an example, the Central District Wastewater Treatment Plant, a large portion of which was constructed in the 1950s, processes the largest volume of wastewater flows for the Department daily. The plant's age, as well as the physical corrosion due to its proximity to the Atlantic Ocean, continues to require extensive equipment and structural repairs to meet operational demands and regulatory requirements. The Department's MYCIP will continue to address these deficiencies: via testing and replacement, as needed, of all large-diameter concrete water and wastewater pipes; substantial overhauls of all wastewater plants; reconstruction of nine (9) seriously deteriorated sewage pump stations; capacity expansion of more than one hundred (100) pump stations to accommodate additional flows; and the installation of redundant water supply mains and storage tanks to ensure continuous delivery of water even when pipe failures occur.

The MYCIP also includes planning and design of extensive changes to the wastewater system. This is required to satisfy State mandated eliminating use of ocean outfalls for continuous disposal of treated wastewater and reuse of 60 percent (60%) of that water; and completion of water supply projects as required in the State Water Use Permit to meet service demands in the future. As the MYCIP progresses, WASD will continue to target outreach in the communities that are affected by the improvement projects and Countywide to educate and provide updates on the progress of the CIP, CD, PSIP, and OOL programs. WASD also continues to build positive relationships with municipalities and wholesale customers through industry meetings, face-to-face interactions, training sessions, and business process reviews.

WASD has begun the process of developing an Asset Management (AM) framework to meet the CD requirements to assist the Department in realizing its vision of maturing into a resilient and sustainable utility. The vision is to implement an AM framework across both water and sewer divisions that will go beyond the CD requirement by providing a holistic approach that

embraces and blends elements from the industry's best management practices.

With an improving local economy, the number of developer donation construction projects is increasing rapidly. WASD's water and wastewater mains and pump stations systems have increased in size and capacity due to developers designing, building, and donating this infrastructure to the Department.

- The Utilities Development Division (UDD) is looking for ways to streamline workflows by combining project management, request intake, and online proofing tools to optimize productivity and utilization of resources across projects, teams, departments, and processes.
- UDD is working on accommodating more online processes to reduce customer walk-in traffic and improve efficiency.
- UDD remains committed to expanding and establishing a call center to have better communication and contact with developers and property owners.

Customer Service

WASD's Retail Customer Service Division (RCSD) incorporates best management practices, including advanced technology and management strategies that focus on improved business processes and multi-channel access to information and services. Call center performance has consistently improved in the last few years through effective management, technology, and expanded self-service tools. Great strides were made to implement underground leak adjustment options and payment extensions via the self-service online application in 2020. RCSD will continue to expand the self-service options to include all key activities such as requesting the start of service, transfers, and reconnects. These tools will further improve access and overall customer experience.

The Retail Customer Service Division is researching best practices and performance standards to improve functionality and management of staff in a work from home environment as an option during emergency operations.

Ocean Outfall

WASD intends to spend approximately $2 billion as part of its OOL Program in two principal investment categories: OOL Compliance projects, and WWTP capacity expansion projects. Funding has been secured for the deep injection wells through the Water Infrastructure Finance and Innovation Act (WIFIA) and State Revolving Fund (SRF). WIFIA loans have also been closed for funding the proposed new WWTP electrical distribution buildings (switchgear/ back-up generators) and the South District Expansion Projects. WIFIA is being pursued for the remaining portions of the OOL Compliance projects. These investments have a strong resilience component for the existing WWTPs.

Resilience

The Department has become a recognized national utility leader in planning for the challenges of climate change.

Operating in a subtropical climate with a long history of tropical storm activity has required the Department to design facilities to withstand wind, storm surge, and flood conditions that can damage facilities and interrupt critical water and sewer services. Historically the Department has been remarkably successful in maintaining service levels, even though extreme events such as, Hurricane Andrew in 1992, a Category 5 hurricane, and Hurricane Irma in 2017. Now, a longer-term challenge has been recognized in the form of climate change that is causing the sea level to rise at an increasing rate, rainfall events to be more intense, and increased impacts from storm surge.

Over the past ten years, the Department has made significant investments in sophisticated computer modeling programs that help anticipate and monitor groundwater levels and project water supply levels, including future sea-level rise scenarios. Other modeling efforts to estimate sea-level rise in combination with storm surge, changes in precipitation intensity and frequency, heat, and wave action have been performed as a basis for flood design guidelines for wastewater plants and pump stations. The infrastructure improvements planned through the significant capital program are one driver for this work, in an effort to assure these investments withstand future conditions to limit the damage from storm surge and flooding over the expected life of those renewed assets.

The establishment of the WASD Resilience Program in 2017 underscored the Department's need and commitment to this work, which will be built upon in the future and will be expanded to the water treatment and distribution system infrastructure. Miami-Dade Water and Sewer Department and the Office of Resilience, as part of the Greater Miami and the Beaches region partnered with Arup, The Rockefeller Foundation, 100 Resilient Cities, and others in a project to assess the resilience of our water systems and to identify actions that will promote resilience-building activities and outcomes across geographic and geopolitical boundaries. The **long-term objectives** of this project are to realize water resilience, which means having the capacity to:

- Provide access to high-quality water-related services for all residents, including water supply and sanitation services, and access to water amenities.
- Protect residents from water-related hazards, such as droughts, flooding and contaminated water.

More than 60 stakeholders in key government, business, academia and community roles diagnosed the strength and weaknesses of our water systems using qualitative and quantitative indicators, based on a shared understanding of resilience, and developed a collective action plan. Some key messages we heard from our stakeholders include the importance of coordination between water stakeholders, the need for catchment-level partnerships and water management projects and practices, and a strong call for sharing data and technical information to ensure evidence-based decision-making. The three prioritized actions from this process focus on data and governance:

1. Establish an open-data platform to improve data accessibility and sharing between key stakeholders to support sound decision-making.
2. Establish a "One Water" knowledge portal to improve capacity and knowledge sharing around water resilience including online training and seminars and case studies for water stakeholders.

3. Build collaboration pathways between governmental, community, academia, and other stakeholder groups to monitor advancement of actions addressing areas of lower scoring indicators, and to advance key joint projects to achieve social, environmental, and economic outcomes that benefit all.

While there is not a formal or structured implementation effort across stakeholder agencies, the initiatives listed below are examples of how the Department and its partner stakeholders are making improvements in the areas of weakness identified through the assessment. The assessment and the actions below serve as a foundation to build a formal "One Water" approach that aligns resources and current and future initiatives.

Biscayne Bay:

- Task Force reiteration of needs for more comprehensive data, formalizing a position and group to increase coordination among stakeholders.
- Call for evaluating existing data and collecting additional data to better understand the sources of pollution and develop effective mitigation measures.

Septic Tanks vulnerable to sea level rise (SLR):

- Improving septic tank inventory data.
- Refined modeling to support more granular prioritization based on a hierarchy of vulnerabilities.
- Moving forward with additional water quality sampling and monitoring to understand effluent transport characteristics and quantities.
- Coordinating with cities that have concerns over systems in their jurisdiction.
- Developing sewer system expansion plan using a risk-based approach that addresses the connection of systems with the greatest likelihood and consequence of failure.

Water Supply Initiatives:

- Seasonal Optimization and Storage.
- Directing excess flows into storage (Aquifer Storage and Recovery - ASR).
- Future flow reservoirs (C-51).
- Use stored water for environmental flow restoration and recharge and for flood control in agricultural and flood-prone areas.

Continue robust saltwater intrusion monitoring network to increase operational efficiency of wellfield withdrawals that reduce impact on regional water supply and guard against landward movement of salt front line:

- Adapting vulnerable water and wastewater infrastructure to storm surge and sea level rise.
- Using climate data from international, national, and regional climate scientists to establish the unified SLR projections (Compact).
- Developing flood protection design elevations and guidance documents for engineers and planners.

- Incorporating SLR into the design of infrastructure based on the asset criticality and life of the asset.
- Implementing FEMA Hazard Mitigation Grant projects at critical wastewater treatment pump stations to protect them from 500-year storm scenarios.

(Continue)

As Of <= 03/08/2021

Business Plan Report
Water and Sewer Department

Perspective Name	Objective Name	Grand Parent Objective Name	Parent Objective Name	Measure Name	Details	Resilience Driver	As of	VR Flag	Actual	Target	FY2020-21 Annualized Target	FY2021-22 Annualized Target
Customer	Maintain high level of responsiveness to customer service requests (WASD)	GG1: Accessible, fair and responsible government	GG1-2: Support a customer-focused organization	Response time to sewage overflows		HW-1: Meets Basic Needs	'21 FQ1		60mn	45mn	45mn	n/a
				Percent of all non-emergency requests/calls dispatched in less than 3 business days (OMB)		HW-1: Meets Basic Needs	'20 FQ4		90.83%	99.00%	n/a	n/a
	Continue to make information available to customers in a timely manner (WASD)	GG1: Accessible, fair and responsible government	GG1-2: Support a customer-focused organization	Average Wait Time Per Call monthly (WASD- Retail Customer Service) (OMB)		LS-2: Empower a Broad Range of Stakeholders	Dec '20		100sec	n/a	n/a	n/a
				Percentage of calls answered within the two-minute threshold (monthly) (OMB)		LS-2: Empower a Broad Range of Stakeholders	Dec '20		77.10%	n/a	n/a	n/a
	Ensure compliance with 20-Year Water Use Permit	NI3: Protected and restored environmental resources	NI3-2: Protect and maintain surface and drinking water sources	20-YR WUP Compliance Rate (in percent %)		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	Nov '20		3.0%	100.0%	n/a	n/a
		NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	20-YR WUP Compliance Rate (in percent %)		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	Nov '20		3.0%	100.0%	n/a	n/a
	Ensure timely completion of Consent Decree Wastewater Capital Improvement projects (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	Percentage (%) of Consent Decree Wastewater Projects on or before Schedule (sorte) (OMB)		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	'20 FQ1		91.4%	90.0%	n/a	n/a
	Ensure timely completion of Capital Improvement Projects related to the Ocean Outfall Legislation Program (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	Percentage (%) of South District Ocean Outfall Legislation (OOL) Projects on Schedule		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	'20 FQ4		100%	n/a	n/a	n/a
				Percentage (%) of North District Ocean Outfall Legislation (OOL) Projects on Schedule		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	'20 FQ4		100%	n/a	n/a	n/a
				Percentage (%) of Ocean Outfall Legislation (OOL) Projects on Schedule (OMB)		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	'20 FQ4		95.65%	90.00%	n/a	n/a
				Percentage (%) of Central District Ocean Outfall Legislations (OOL) projects on schedule		IE-1: Provide and Enhances Protective Natural and Man-Made Assets	'20 FQ4		100.00%	n/a	n/a	n/a
	Ensure Adequate Water and Wastewater Capacity (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	Average number of days to complete capacity evaluations per month.		HW-1: Meets Basic Needs	Dec '20		18.4days	n/a	n/a	n/a
				System-wide Available Water Supply Capacity From the Biscayne Aquifer		HW-1: Meets Basic Needs	Nov '20		40.53MGD	n/a	n/a	n/a
Financial	Meet Budget Targets (Water and Sewer) (GG4-2)	GG4: Effective leadership and management practices	GG4-2: Effectively allocate and utilize resources to meet current and future operating and capital needs	Expen: Total (Water and Sewer)		LS-1: Promote Leadership and Effective Management	'20 FQ4		$365,799K	$213,289K	$889,424K	n/a
				Revenue: Total (Water and Sewer)		LS-1: Promote Leadership and Effective Management	'21 FQ1		$271,375K	$222,356K	$889,424K	n/a
				Positions: Full-Time Filled (WASD)		LS-1: Promote Leadership and Effective Management	'21 FQ1		2,523	2,816	2,816	n/a
				Capital Improvement Expenditure Ratio (in Percent)		ES-3: Foster Economic Prosperity	'21 FQ1		74%	75%	n/a	n/a
				Capital Infrastructure Improvements Ratio (in percent) General Obligation Bonds (GOB) Funds		ES-3: Foster Economic Prosperity	'21 FQ1		0%	75%	n/a	n/a
				Total Liabilities (AWWA)		ES-3: Foster Economic Prosperity	2020 FY		4,043,274,848	n/a	n/a	n/a
				Total Wastewater Liabilities (AWWA)		ES-3: Foster Economic Prosperity	2020 FY		2,911,095,294.0	n/a	n/a	n/a
				Total Liabilities - Water (AWWA)		ES-3: Foster Economic Prosperity	2020 FY		1,132,180,554	n/a	n/a	n/a
Internal	Continue to fully comply with drinking water standards (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	Primary distribution system maintaining 35 lbs psi -WASD		HW-1: Meets Basic Needs	'21 FQ1		99.00%	99.00%	n/a	n/a
				Water Distribution Valves Exercised		HW-1: Meets Basic Needs	'21 FQ1		4,017	n/a	n/a	n/a
				Compliance with drinking water standards (% Days) (OMB)		HW-1: Meets Basic Needs	Dec '20		100.00%	100.00%	n/a	n/a
				Collect a minimum of 420 samples per month for total coliform analysis		HW-1: Meets Basic Needs	Dec '20		439	n/a	n/a	n/a
	Continue to ensure the proper maintenance and operation of sewage system -Wastewater (NI2-1)	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	Feet of sewer line cleaned		HW-1: Meets Basic Needs	'20 FQ4		753,233	600,000	n/a	n/a
				Feet of Sanitary Sewer Evaluation Completed (SSES)		HW-1: Meets Basic Needs	Dec '20		163,757	125,000	n/a	n/a
				Percentage of pumps in service (OMB)		HW-1: Meets Basic Needs	Oct '20		96.47%	99.00%	n/a	n/a
				O&M Wastewater Cost per account (Wastewater) (FBC)		ES-3: Foster Economic Prosperity	2018 FY		$500	n/a	n/a	n/a
				SCADA Network Availability Ratio		IE-2: Ensure Continuity of Critical Services	Jan '21		100.00%	99.00%	n/a	n/a
				Total hours of corrective maintenance - WW Coll. & Trans. (AWWA/FBC)		HW-1: Meets Basic Needs	2020 FY		258,765hours	n/a	n/a	n/a
				Total hours of corrective maintenance - WW Treat. & Maint. (AWWA/FBC)		HW-1: Meets Basic Needs	2018 FY		142,932hours	n/a	n/a	n/a
				Total cost WASTEWATER planned and corrective maintenance (AWWA/FBC)		ES-3: Foster Economic Prosperity	2019 FY		$24,729,985	n/a	n/a	n/a
				Total cost of WASTEWATER planned maintenance (AWWA)		ES-3: Foster Economic Prosperity	2019 FY		$5,624,703	n/a	n/a	n/a
				Total cost of planned maintenance - Wastewater Treatment and Maintenance (AWWA/FBC)		ES-3: Foster Economic Prosperity	2018 FY		$29,409,475	n/a	n/a	n/a
				Total cost of WASTEWATER corrective maintenance - Treatment and Maintenance (AWWA/FBC)		ES-3: Foster Economic Prosperity	2018 FY		$11,566,427	n/a	n/a	n/a
				Wastewater Mainline Valves Exercised (OMB)		HW-1: Meets Basic Needs	'21 FQ1		1,570	n/a	n/a	n/a
				Percent compliance with wastewater standards (FY Quarterly) (AWWA) (OMB)		HW-1: Meets Basic Needs	'20 FQ1		64.13%	100.00%	n/a	n/a
				Pipeline Failures (FBC)		HW-1: Meets Basic Needs	2020 FY		1,672	n/a	n/a	n/a
		GG3: Optimal internal Miami-Dade County operations and service delivery	GG3-1: Deploy effective and reliable technology solutions that support Miami-Dade County services	Feet of sewer line cleaned		HW-1: Meets Basic Needs	'20 FQ4		753,233	600,000	n/a	n/a
				Feet of Sanitary Sewer Evaluation Completed (SSES)		HW-1: Meets Basic Needs	Dec '20		163,757	125,000	n/a	n/a
				Percentage of pumps in service (OMB)		HW-1: Meets Basic Needs	Oct '20		96.47%	99.00%	n/a	n/a
				O&M Wastewater Cost per account (Wastewater) (FBC)		ES-3: Foster Economic Prosperity	2018 FY		$500	n/a	n/a	n/a
				SCADA Network Availability Ratio		IE-2: Ensure Continuity of Critical Services	Jan '21		100.00%	99.00%	n/a	n/a
				Total hours of corrective maintenance - WW Coll. & Trans. (AWWA/FBC)		HW-1: Meets Basic Needs	2020 FY		258,765hours	n/a	n/a	n/a
				Total hours of corrective maintenance - WW Treat. & Maint. (AWWA/FBC)		HW-1: Meets Basic Needs	2018 FY		142,932hours	n/a	n/a	n/a
				Total cost WASTEWATER planned and corrective maintenance (AWWA/FBC)		ES-3: Foster Economic Prosperity	2019 FY		$24,729,985	n/a	n/a	n/a
				Total cost of WASTEWATER planned maintenance (AWWA)		ES-3: Foster Economic Prosperity	2019 FY		$5,624,703	n/a	n/a	n/a
				Total cost of planned maintenance - Wastewater Treatment and Maintenance (AWWA/FBC)		ES-3: Foster Economic Prosperity	2018 FY		$29,409,475	n/a	n/a	n/a
				Total cost of WASTEWATER corrective maintenance - Treatment and Maintenance (AWWA/FBC)		ES-3: Foster Economic Prosperity	2018 FY		$11,566,427	n/a	n/a	n/a
				Wastewater Mainline Valves Exercised (OMB)		HW-1: Meets Basic Needs	'21 FQ1		1,570	n/a	n/a	n/a
				Percent compliance with wastewater standards (FY Quarterly) (AWWA) (OMB)		HW-1: Meets Basic Needs	'20 FQ1		64.13%	100.00%	n/a	n/a
				Pipeline Failures (FBC)		HW-1: Meets Basic Needs	2020 FY		1,672	n/a	n/a	n/a
	WASD Operations Facts and Figures			Total MDWASD Population Served (Potable Water Service, Calendar Year)		HW-1: Meets Basic Needs	2020 FY		2,407,121	n/a	n/a	n/a
				Total MDWASD Population Served (Wastewater Collection/Treatment, Calendar year)		HW-1: Meets Basic Needs	2020 FY		2,732,449	n/a	n/a	n/a
				Retail Population Served (Wastewater Collection/Treatment, Calendar Year)		HW-1: Meets Basic Needs	2020 FY		2,046,805	n/a	n/a	n/a
				Water Miles of Pipe (Excluding Lateral Service Lines)		HW-1: Meets Basic Needs	2020 FY		6,276	n/a	n/a	n/a
	Provide Stewardship to the CDMP and Zoning Application Process. (WASD)	NI1: Safe, healthy and attractive neighborhoods and communities	NI1-3: Promote the efficient and best use of land	(%) Percent of CDMP comments submitted timely (OMB)		LS-3: Foster Long-Term and Integrated Planning	'20 FH2		100%	100%	100%	100%
				# of CDMP applications per cycle		LS-3: Foster Long-Term and Integrated Planning	'20 FH2		2	n/a	n/a	n/a
				(%) Percent of DIC comments provided timely (OMB)		LS-3: Foster Long-Term and Integrated Planning	'21 FQ1		100%	100%	100%	100%
				# of applications evaluated for DIC		LS-3: Foster Long-Term and Integrated Planning	'21 FQ1		4	n/a	n/a	n/a
	Improve Water-Use Efficiency	NI2: Continuity of clean water and community sanitation services	NI2-1: Provide adequate drinking water supply and wastewater disposal services	Gallons of water saved per day (GPD) through implementation of the Water Use Efficiency Plan (OMB)		HW-1: Meets Basic Needs	'20 FQ4		41,856GPD	71,100GPD	260,000GPD	n/a
	Compliance with regulatory requirements for water &	NI2: Continuity of clean water and community sanitation	NI2-1: Provide adequate drinking water supply and	Percentage (%) of DEP Tank Inspections in Compliance		HW-1: Meets Basic Needs	'21 FQ1		100%	99%	n/a	n/a

Perspective Name	Objective Name	Grand Parent Objective Name	Parent Objective Name	Measure Name	Details	Resilience Driver	As of	VR Flag	Actual	Target	FY2020-21 Annualized Target	FY2021-22 Annualized Target
Internal	wastewater systems (NI2-1)	services	wastewater disposal services									
Learning and Growth	Provide Education, Training & Technology to Develop an Efficient and Flexible Workforce- WASD (GG2-2)	GG2: Excellent, engaged and resilient workforce	GG2-2: Promote employee development and leadership	Training Hours per Employee (Quarterly) (AWWA)	▭	LS-1: Promote Leadership and Effective Management	'20 FQ1		1.76	n/a	n/a	n/a
				Training Hours Per Employee (Fiscal Year) (AWWA/OMB)	📉	LS-1: Promote Leadership and Effective Management	2020 FY		4.51	n/a	n/a	n/a
				Emergency Employee Response Readiness Training (Fiscal Year) (hours/employee) (AWWA)	📉	LS-1: Promote Leadership and Effective Management	2020 FY		4.45	n/a	n/a	n/a
	Improve employees knowledge and skills (GG2-2)	GG2: Excellent, engaged and resilient workforce	GG2-2: Promote employee development and leadership	Water Employees Training Hours Per WATER Employee	📉	LS-1: Promote Leadership and Effective Management	2020 FY		2.6	n/a	n/a	n/a
				Water ERR (Emergency response readiness) training hours	▭	LS-1: Promote Leadership and Effective Management	2020 FY		3,371	n/a	n/a	n/a
				Wastewater Employee Training hours per Wastewater FTE	📉	LS-1: Promote Leadership and Effective Management	2019 FY		15.1	n/a	n/a	n/a
				Wastewater Employees Training Hours	▭	LS-1: Promote Leadership and Effective Management	2020 FY		4,857	n/a	n/a	n/a
				Water Employees Training Hours	▭	LS-1: Promote Leadership and Effective Management	2020 FY		3,479	n/a	n/a	n/a
				Wastewater ERR Training Hours	▭	LS-1: Promote Leadership and Effective Management	2020 FY		4,809	n/a	n/a	n/a

Initiatives

Objective Name	Initiative	As Of	Status	Budget	Timing	Quality	Risk	Scope	Owners
Improve Water-Use Efficiency	Water Use Efficiency 20-Year Plan	12/31/2018	In Progress						Cueto, Josenrique (WASD); Martin, Patrick (WASD)
	Implement Water Use Efficiency Outreach Plan	12/31/2018	In Progress						Cueto, Josenrique (WASD); Fries, Donna (WASD); Martin, Patrick (WASD)
Ensure timely completion of Consent Decree Wastewater Capital Improvement projects (NI2-1)	WASD Consent Decree Initatives Report	2/4/2016	In Progress		🔺				
Ensure timely completion of Capital Improvement Projects related to the Ocean Outfall Legislation Program (NI2-1)	WASD Ocean Outfall Legislation (OOL) Initatives Report	1/26/2016	In Progress	🔺	🔺				Ferguson, James (WASD); Malone, Kevin B. (Consultant)

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WASD_FY21-22_Business Plan

Final Audit Report 2021-03-09

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