Miami-Dade Water and Sewer Department Business Plan

Fiscal Years: 2020 and 2021

(10/1/2019 through 9/30/2021)

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Date

Date

Plan Date: February 2020

TABLE OF CONTENTS

DEPARTMENT OVERVIEW Page 2

- Departmental Mission
- Our Customer
- Table of Organization
- Strategic Alignment Summary
- Alignment of Selected Scorecard Measures to Resilience

KEY ISSUES Page 8

PRIORITY INITIATIVES Page 12

FUTURE OUTLOOK Page 23

ATTACHMENT 1 Page 28
BUSINESS PLAN REPORT

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; providing for future economic growth via progressive planning; implementing water conservation measures; safeguarding public health and the environment; providing for continuous process improvements and cost efficiencies; and the highest level of customer service.

Our Customer

WASD, as one of the largest public utilities in the United States, is committed to providing dependable potable water and wastewater services at the lowest available cost to its approximately 450,000 retail water and 366,000 wastewater customers as well as its 15 wholesale (municipal) water and 13 wholesale (12 municipal and the Homestead Air Reserve Base) wastewater customers. These services are provided to a total combined population at the retail and wholesale level of about 2.3 million, include water supply, treatment, transmission, distribution, conservation, wastewater collection, disposal, and water reclamation.

Table of Organization

WATER AND SEWER DEPARTMENT

OFFICE OF THE DIRECTOR

Formulates and establishes departmental policy; directs overall operations.

FY 18-19	FY 19-20
12	12

WATER AND WASTEWATER SYSTEMS OPERATIONS

Operates and maintains water and wastewater systems: treatment plants, transmission/ distribution systems and pump stations

FY 18-19	FY 19-20
1,622	1,635

FINANCE AND ADMINISTRATIVE COMPLIANCE

Directs financial, budget, capital funding coordination, and information technology liaisons functions; directs contractual compliance and quality assurance of construction/contractual work as well as compliance with the Small Business Enterprise Program

FY 18-19	FY 19-20
240	238

PROGRAM MANAGEMENT, REGULATORY COMPLIANCE

Manages capital improvement program: consent decree projects; directs compliance with state and federal agreements and utilities development

FY 18-19	FY 19-20
319	329

CUSTOMER INITIATIVES AND INTERNAL OPERATIONS

Directs legislative activities, municipal policies, and public information dissemination. directs customer service, procurement, personnel, fleet and general activities

FY 18-19	FY 19-20
598	602

The FY 2018-19 total number of full-time equivalent positions is 2,817.6

Strategic Alignment Summary

Strategic Area: Neighborhood and Infrastructure (NI)

Goal NI2: Effective Infrastructure Services

Objective N12-1: Provide adequate potable water supply and wastewater disposal

- Continue to administer and implement one of the largest Capital Improvement Program (CIP) initiatives in the United States to improve the reliability and sustainability of the 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 will, during the first decade alone, have an economic impact on our community of $24.9 billion, create approximately 16,500 new jobs and increase service capacity to support more businesses and residences.
- Continue to 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.

Strategic Area: General Government (GG)

Goal GG1: Friendly Government

Objective GG1-1: Provide easy access to information and services

- Remain committed to providing information and updates to the community about key components of the CIP, including the Consent Decree (CD), Ocean Outfall Legislation (OOL) and Pump Station Improvement Program (PSIP) among others, through a variety of outlets including radio, television, print, community events, transit bus benches, movie theatres, publications and WASD's website.
- Generate support and solicit feedback for WASD initiatives using social media, including Facebook, Twitter, Instagram and YouTube.
- Continue service improvements made through collaborative initiatives with the Utilities Development Division (UDD) and the Regulatory and Economic Resources (RER) Department that enhance drop-off options for construction plans. Through this partnership, a simultaneous review of plans by both WASD and RER will improve customer outcomes and expedites compliance requirements that satisfy County Ordinances. (Previously in GG1-4)

Objective GG1-2: Develop a Customer-Oriented Organization

- Continue to update and expand WASD's online self-service application, which interfaces with the backend Customer Care and Billing (CCB) system, to initiate requests for new service, bill pay, turnoff, pool credit, and contact information updates via an online format. Customers can now request high bill investigations through the web portal. In the first five months of the launch, nearly 2,000 (or 20%) requests have been received and processed online. This self-service tool gives customers access to account information and transactions 24-hours a day, thereby reducing the need to call the Customer Care Center or visit one of the walk-in

centers. Other functionalities are being developed to expand this service.

- Implement Frontdesk Kiosks to receive and intake walk-in customers, to improve the customer's waiting experience, at the four service centers.
- Continue to promote the use of WASD's online messaging Chatbot that was launched in 2017, to handle general inquiries and transactions, such as requesting payment extensions. To date, the Chatbox has processed over 68,000 customer interactions, including approximately 28,400 billing inquires and processing over 22,000 customer requests for a bill payment time extension.
- Re-initiate the call recording functionality, in the Customer Care Center, to perform quality assurance checks, identify training opportunities and improve customer service.

Goal GG2: Excellent. engaged 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: Develop and retain excellent employees and leaders

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

Goal GG4 - Effective 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, including 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.
- Embark upon the implementation of an Integrated Master Plan, which will help develop 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 with regards to future capital improvements.
- 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, as well as staffing to meet environmental compliance requirements.

- Develop an efficient data library and analytics management through adequate staffing and data analytics software to maximize operational and planning efficiencies and minimize capital expenditure.

Goal GG6 - Green Government

Objective GG6-1: Reduce County government's greenhouse gas emissions and resource consumption

- WASD began using digester gas, a byproduct of the wastewater treatment process, as a fuel to power the energy demand at the South Dade Wastewater Treatment Plant in the early 1990s. This was recognized as a key renewable energy measure in the County's Urban CO2 Reduction Program due to its role in decreasing emissions from electricity consumption. Methane from the neighboring landfill was added to a new source to increase onsite power generation in 2014. In 2019, WASD developed an Energy Management Plan for Wastewater Treatment, which builds upon existing efforts and establishes a collection of measures to achieve 30% energy intensity savings by 2030. This plan will be expanded to include water treatment and pumping operations.
- WASD is committed to promoting water use efficiency in County operations as well as in the community. The County's utility billing management system (ECAP) is being expanded to include water utility billing for County departments, which is expected to result in a more robust consumption trend analysis and the development of measures to reduce water consumption.
- WASD continues to aggressively detect and remediate leaks throughout its transmission and distribution system countywide. During the calendar year 2019, the Department identified and repaired over 485 Non-Breaking Ground Leaks, which are difficult to detect because they do not break the ground surface. Additionally, the backlog of leak repairs was reduced from 571 to 118. The repairs of the identified leaks have resulted in the prevention of over 3.7 billion gallons of water loss and savings of more than $1.4 million.
- WASD uses advanced dynamic hydraulic modeling of pump station operational and energy data to minimize pump size and pump starts.

Departmental Business Plan and Outlook
Department Name: Miami-Dade Water and Sewer
FY2019-20 & FY2020-21

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

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 Capital Improvement Program (CIP) 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 include:

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, for the settlement of alleged violations of federal and state environmental laws related to the County's sewage system and for 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, including the Wastewater Collection and Treatment System (WCTS), wastewater treatment facilities, effluent disposal operations, and financial management and reporting systems. The FY 2020-2026 Proposed Capital and Multi-Year Plan (CIP) includes a list of 176 CD-related projects to be completed within 10 years at the cost of $1.7 billion. To date, 99 percent of Consent Decree Wastewater Projects are on schedule.

- 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. As of June 4, 2018, all CMOM programs have been approved by the EPA and 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 in compliance with the Nominal Average Pump Operating Time policy times as defined by the United States Environmental Protection Agency. The Pump Station Compliance Section constantly monitors over 1,000 pump stations to determine if any of them are going 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
- Reduce nutrient discharges by implementing advanced wastewater treatment (AWT) by 2018 or equivalent
- Reuse 60 percent (60%) of the wastewater flows by 2025

In 2013, the OOL was amended to provide greater flexibility to meet wastewater reuse requirements and manage peak flows by standby outfalls. To date, the Department has expended $248 million on planning, design and construction initiatives to meet regulatory deadlines. Expenditures are projected to cover the planning cost for conceptual designs, purchasing of land, permit processing, and construction fees 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 existing wastewater treatment plants (WWTP) including:

- 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 have been initiated
- Conceptual design for the South District WWTP, which includes infrastructure improvements to increase treatment capacity, is complete and final designs of the improvements are nearing completion
- Conceptual designs for the three Wastewater Treatment Plants (WWTP)
- Infrastructure improvements to the South District WWTP
- 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 90 percent complete for the municipal injection wells at North District WWTP.

- Operational testing of two industrial injection wells and the industrial well pump station at the Central District WWTP is complete, and they are now operational

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 190 projects totaling $783 million that are scheduled to be completed by 2027. Of these projects, 190 are active, with 87 in the planning, design and procurement phase, 71 under construction and 32 in project close-out.
- In addition to the projects currently in the Program, nearly $2.2 billion in 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 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 26 active projects currently funded by GOB is the implementation of the "Sewer Service to Commercial Properties in Miami-Dade County," approved by the Board of County Commissioners in 2004. This project will be completed in phases by 2024.

- The total estimated cost of extending sewers to approximately 2,200 properties is about $274 million, of which about $148 million would need to come from non-restricted WASD funds to comply with the requirements of bond ordinances.
- Projects totaling 100 million will be completed within the next five years.

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.

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 of design for the program and construction is ongoing.

Utilities Development

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 the 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; 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.

PRIORITY INITIATIVES

Capital Program

WASD will continue to ensure the implementation of the projects in the CIP to provide adequate facilities to meet capacity requirements and to comply with regulations and infrastructure renewal and replacement. The CIP will also address the support systems associated with implementation, including climate change mitigation and adaptation strategies:

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, 118 projects have been completed or certified.
    - Three projects have been substantially completed and are pending final certification.
    - 17 projects are currently under construction and are scheduled for completion over the next few months.
    - An additional four projects are in the procurement process.
    - The remaining 11 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 Ocean Outfall Discharges 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. Moreover, WASD has achieved substantial progress to date on its Injection Well Program in order to advance the nutrient diversion objectives set forth by the OOL.
- Functional Reuse System: The OOL statute defines a functional reuse system to be "an environmentally, economically and technically feasible system that provides a minimum of 60 percent of a facility's baseline flow on an annual basis" for a variety of 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. In addition, through the Miami-Dade Board of County Commissioners Resolution 292-18, a joint participation agreement was entered into by the County and FPL to explore collaboration in this regard. Such a plan, however, would require extensive collaboration and financial participation of additional stakeholders, including Federal and State partners, to become a reality. WASD has also preliminarily evaluated some non-wastewater reuse options that might provide at least some of the rehydration benefits at a much lower cost and much lower energy demands. It is WASD's intent to continue those discussions to achieve a rational and cost-effective plan that optimizes the use of all water resources.
- Elimination of Ocean Outfall Discharges by December 31, 2025: WASD, through its commitment and actions to advance the OOL Program, is currently on schedule to meet 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 make 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, as a result of the reevaluation 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.

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.
- Through the program, over the past 14 months, WASD has completed over 6,500 in-house repairs and over 1,000 contract repairs in compliance with the current local legislation (WPO and VCSO ordinances). This work included CIP 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 Capital Improvement Program 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 ERP (Enterprise Resource Planning) 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

- 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, including sea-level rise, changes in rainfall frequency and intensity, heat, and other climate conditions, in the planning and design of infrastructure and operations planning.
- Prepare Risk Assessment (RRA) and Emergency Response Plan reports that are necessary to comply with 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 detailed RRA shall culminate with an implementation plan for capital and operational needs for risk and resilience management of the system, including strategies to improve the resilience of the system. This effort utilizes a risk-based approach for the management of assets through the implementation of the ANSI/AWW J100 Standard for Risk and Resilience of Water and Wastewater Systems, which is called for in the department's asset management framework.
- WASD worked 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 by applying the City Water Resilience Framework. These efforts were supported by workshops with community stakeholders to assess urban water resilience in the metropolitan area and identify actions that will promote resilience-building activities in Greater Miami and the Beaches. Water resilience describes the capacity of cities to function in the face of water-related shocks and stresses so that those living and working within the city can survive and thrive.
- Implement $27 million in FEMA Hazard Mitigation Grant Program funding awarded to WASD for hardening critical wastewater pump stations from flooding, wind and power outages. WASD will continue to seek funding for projects that realize resilience benefits.

- Continue to work across divisions and County departments to assess impacts from sea-level rise and 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.
- Continue to work across departments and external agencies to advance the Risk-Based Plan of Action for Septic Systems vulnerable to sea-level rise.
- Enhance and expand WASD's water conservation plan with the objective of reducing non-revenue water and countywide per-capita water consumption to maximize existing water allocation and facilities.
- Continue outreach for WASD's robust water conservation program that encourages residents to use less water and lower their water costs while helping the utility reduce expenses and be more resilient. Information on the various programs offered can be found on WASD's water conservation website www.miamidade.gov/waterconservation. Recent additions to the program include electronic rebate application processing and customer dashboard software programs for real-time information on water consumption in neighborhoods with automated meters.
- As part of its resilience efforts, the Department is focusing on implementing efforts to manage and reduce energy consumption. To this end, WASD developed an Energy Management Plan for Wastewater Treatment in 2019, which builds upon existing efforts and establishes a collection of measures to achieve 30 percent energy intensity savings by 2030. WASD will expand this effort to water production and conveyance, wastewater conveyance, and buildings, in order to reduce its approximately $26 million in annual electricity expenditures.

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 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.
- 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 control (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.
- Continue implementation of the Water and Wastewater Infrastructure Service Improvement Plan to achieve efficiencies.
- Complete a water system hydraulic model calibration. The modeling effort ensures right-sized infrastructure planning as well as supports the County's ISO fire insurance rate credits.

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.
- Continue to evaluate techniques such as water distribution pressure control and water treatment modifications to increase available water for public consumption and decrease energy requirements.
- Continue to 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 27% during FY 2018
- Enhance meter replacement program to reduce loss of revenues resulting from aging infrastructure.
- Enhance 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 in the final stages of upgrading 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 and rugged smart Android devices with superior 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 (CSD) responds to approximately 616,000 calls annually and the average customer wait time is less than two 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's by phone, in person or online.
- CSD, in collaboration with the Information and Technology Department (ITD) are considering opportunities for expanding communication with customers via text and email.
- The Utilities Development Division (UDD) is also working on enhancing its communication infrastructure to better serve its customers. Improvements are being made to optimize the functionality of the telephone system; overhaul the developer and first-time connector's experience by improving and expediting numerous approval processes; re-engineering the as-built plans process; securing a new information system that will be integrated with the countywide construction and permitting functions; and redesigning a more customer-friendly website that provides additional online functionality such as the payment of connection charges online.

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 2019-20 Adopted Budget, the BCC approved a revenue increase of 4.3%, effective October 1, 2019. This increase is in continuation of the retail rate structure adjustments that were adopted for FY 2017-18, and FY 2018-19 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 incr.	Ordinance 17-65
FY 2018-19	October 1, 2018	3% revenue incr.	Ordinance 18-102
FY 2019-20	October 1, 2019	4.3% revenue incr.	Ordinance 19-113

As part of the FY 2019-20 Adopted Budget, the BCC approved a continuation of water and wastewater rate restructuring to all customer revenues tiers that results in a rate which is reflective of actual usage combined with consideration of fiscal requirements related to capital investments that are mandated. 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 Capital Improvement Plan (CIP).

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.

WASD Bond Ratings as of September 2019	
Bond rating evaluation by Fitch Retail Rate Adjustment	A+
Bond rating evaluation by Standard and Poor's	Aa-
Bond rating evaluation by Moody's	Aa3

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 2019, WASD had $2.521 billion in total 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 Board of County Commissioners:

- 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 Board of County Commissioners 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, whereby the County promised to maintain net operating revenues in each fiscal year at least equal to 125 percent 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 Department1s 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 to provide funding for the CIP.
- Miami-Dade County Water and Sewer Revenue Bonds, Series 2019B issued for $663.9 million and Taxable Series 2019C Revenue Refunding Bonds issued for $548.1 million. Series 2019B provides $663.9 million in funding for the CIP.

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. The Department closed on $99.7 million

in WIFIA funding at an interest rate of 2.89% on March 22, 2019 for its Ocean Outfall Reduction and Resiliency Enhancement Project. WIFIA will fund up to 49% of the project estimate on a reimbursement basis, or $99.7 million of this project's costs, the remainder of which is being funded through the State Revolving Fund Loan Program and Department cash on hand. In addition to the $99.7 million project cost, the WIFIA loan will also fund capitalized interest. Payments on the WIFIA loan are not due until the earlier of (i) five years after substantial completion of the project or (ii) April 1, 2028. This WIFIA loan will partially fund projects to meet compliance with the Ocean Outfall Legislation (OOL).

The Department has also applied for approximately $326.2 million in funding as part of the second round of the 2018 WIFIA loan program. The funding will provide 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).

In 2019, the Department submitted a Letter of Interest (LOI) to fund upgrades to the South District Wastewater Treatment Plant with total estimated project costs of $413.6 million. The WIFIA LOI was submitted as part of the third round of the 2019 WIFIA Loan Program for $202.7 million, or 49%. The reminder of the project anticipates funding from sub-ordinate debt. The department was subsequently invited to apply and is currently working on the application. The department is the only utility invited to apply for all three WIFIA loan offerings.

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 WateReuse 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 on a daily basis. 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. WASD has identified the need to replace or rehabilitate approximately 2,600 miles of the total 6,463 miles of wastewater pipes. The Department's CIP 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 seriously deteriorated sewage pump stations; capacity expansion of more than 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 CIP also includes planning and design of extensive changes to the wastewater system required to satisfy the State mandate to eliminate use of the ocean outfalls for continuous disposal of treated wastewater and the reuse of 60 percent of that water; and completion of water supply projects required in the State Water Use Permit to meet service demands in the future. As the CIP 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 interaction, training sessions, and business process reviews.

WASD has begun the process of developing an Asset Management (AM) framework to meet the CD requirements as well as 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.

- With the successful launch of e-Builder, project development processes in UDD are transparent and expeditious for all projects and developments. This success has led to further implementation of efficiencies and controls that allow for enhanced quality control within projects. e-Builder will be integrated with other WASD systems to facilitate communication and improve coordination.
- 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 (CSD) incorporates best management practices, which include 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. Moving forward, CSD 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.

Ocean Outfall

WASD intends to spend approximately $2 billion as part of its compliance program in three principal investment categories: High-Level Disinfection (HLD) program, expanded deep well injection program, and WWTP capacity expansion projects. Funding is being pursued for the deep injection well program through the Water Infrastructure Finance and Innovation Act (WIFIA) and State Revolving Fund (SRF). WIFIA funding is also being pursued for the proposed new electrical distribution buildings (switchgear/ back-up generators), which will power the OOL improvements and the existing processes. These investments include a strong resilience component for the existing WWTPs. WASD is currently proposing to update its current OOL Compliance Plan to reflect this program.

Additionally, WASD is looking at various available data, relating to the original intent of the legislation, to identify potential investments to reduce nutrient loads (and other potential pollutants) introduced into the environment and to benefit fresh water and the reef system.

Resilience

The Department has become a recognized national utility leader in planning for the challenges of climate change. Operating in a subtropical climate that has 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. 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 10 years, the Department has made significant investments in sophisticated computer modeling programs that help to anticipate and monitor groundwater levels and project water supply levels (including future sea-level rise scenarios) and monitor and model the rates of saltwater intrusion into the groundwater that supplies our water supply wells. Other modeling efforts to estimate the 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, 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 for and commitment to this work, which will continue to be built upon and expanded to the water treatment and distribution system infrastructure.

WASD will continue to play a key role in tackling issues caused or exacerbated by climate change, such as addressing septic systems vulnerable to sea-level rise. Today's king tides are higher due to sea-level rise and they are already flooding some coastal areas with septic systems. Inland areas affected by higher groundwater levels and flooding may have also experienced compromised septic systems. In order to protect public health and the value of these properties, it is important to ensure all residents have access to safe, effective, sanitary wastewater disposal. Because these improvements can take decades to implement, proactive planning is necessary to stay ahead of rising water levels. WASD will continue to work across departments and external agencies to advance the Risk-Based Plan of Action for Septic Systems vulnerable to sea-level rise, which introduces a methodical, phased approach that prioritizes solutions for systems that pose the highest risk and therefore are expected to yield the most cost-effective and impactful outcome. This approach also helps to mitigate the financial burden that wholesale conversion of septic systems would pose on property owners and public funding resources alike.

Wastewater from sanitary sewer systems and septic systems are just some of the sources of nutrients and pathogens that pose a threat to surface and recreational waters. As such, it is imperative to develop a successful long-term strategy to manage threats to water resources, which requires a comprehensive understanding of these drivers and actions to be taken, including:

1. Identification of existing and potential pollutants
2. Quantification of potential adverse impacts of each pollutant
3. Characterization of pollutant sources and transmission paths

Improving critical information enables local officials and regulators to develop effective policy initiatives and investment strategies to keep our waters clean to support thriving communities, businesses and industries.

A major effort that will facilitate and enhance this type of evidence-based and broad stakeholder-driven solutions is the development of the Greater Miami and the Beaches (GM&B) City Water Resilience Framework. GM&B is a partnership of Miami-Dade County and the cities of Miami and Miami Beach, which have come together to address shocks and stresses challenging our region. WASD, in partnership with GM&B, is leading the development of climate change resilience for the region in part through the City Water Resilience Approach (CWRA), a tool developed by the multinational professional services firm, Arup, and the Stockholm International Water Institute (SIWI) to help cities understand the risks they face, and improve the way they plan, manage and maintain their water system in order to become water resilient cities.

CWRA provides a basis for measuring city resilience, which includes four dimensions of resilience: Leadership & Strategy; Health & Wellbeing; Infrastructure & Ecosystems; and Planning & Finance. The framework's four dimensions of resilience align directly with those of the Resilient 305 Strategy. WASD and the Miami-Dade County Resilience Office worked with Arup and SIWI to bring together more than 60 regional stakeholders to diagnose the strengths and weaknesses of the water system using quantitative and qualitative indicators. The findings of the assessment will be used to: identify and develop indicators for a more resilient water supply and management system; improve interagency collaboration on water issues; and develop and implement a One Water resilience action plan.

The three priority actions listed below were identified and will be advanced cooperatively by key organizations and stakeholders through formal development of action plans, where appropriate. This process will require time, resources and energy from all stakeholders. It is expected to be an ever-evolving blueprint of action -- one that takes advantage of existing programs and relationships while building an enhanced network or people advancing change through their individual and collaborative efforts towards outcomes that enhance our water systems and services.

Priority 1: <u>Evidence-based decisions: water & environmental data for decision-making</u>

- Create an open-data portal to improve data accessibility and sharing between key stakeholders to support sound decision-making

Priority 2: <u>Institutionalizing Resilience</u>

- Establish a One Water Knowledge Platform to improve capacity and knowledge sharing around resilience, including online training, seminars, and case studies for water stakeholders

Priority 3: <u>Look up(stream)! Improving coordination with upstream water users</u>

- Build collaboration between governmental, community, academia, and other stakeholder groups to monitor the advancement of actions addressing areas of lower-scoring quantitative and qualitative indicators, as well as to advance key joint projects to achieve outcomes that benefit all

Another tool used during the assessment is OurWater, which is an online software developed to help governmental entities share information between different stakeholders and visualize complex interactions. OurWater helps users visualize the processes,

stakeholders and infrastructure networks that make up a water system. The goal of understanding a water system is one critical element of moving towards the goal of building capacity to endure, adapt and transform in the face of water challenges.

These tools and the partnerships that will be formed and enhanced through this approach will be critical to WASD's ability to withstand and thrive in the face of shocks and stresses in order to achieve and exceed its mission to provide high-quality drinking water and wastewater services; providing for future economic growth via progressive planning; implementing water conservation measures; safeguarding public health and the environment; providing for continuous process improvements and cost efficiencies; and the highest level of customer service.

Scorecard	Description	Owners
Water and Sewer Department	The Miami-Dade Water and Sewer Department (MDWASD) is a proprietary fund county department, established to provide water and wastewater services throughout Miami-Dade County. The services consist of water treatment, transmission, and distribution; and wastewater collection, treatment, and disposal.	Lynskey, Kevin T.

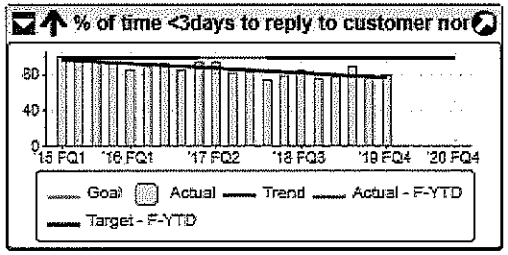
1.0 Customer

Objective	Description	Owners
1.1 Maintain high level of responsiveness to customer service requests (WASD)		Pita, Albert (WASD); Garcia, Marcelo M. (WASD); Mendez, John; Arias, Ruben J. (WASD); Toledo, Andy W. (WASD); Martinez, Francisco J. (WASD); Vasquez, Oscar R. (WASD)

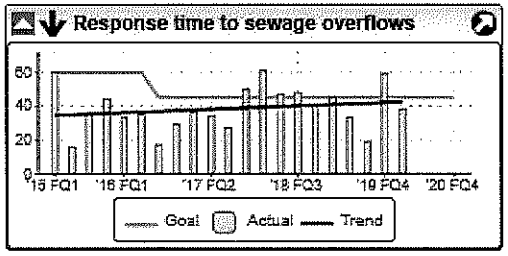
Grandparent Objectives	Description	Owners
GG1: Accessible, fair and responsible government		Miami-Dade County

Parent Objectives	Description	Owners
GG1-2: Support a customer-focused organization		Miami-Dade County

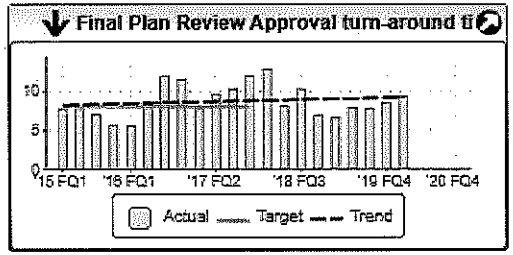
Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Percent of all non-emergency requests/ calls dispatched in less than 3 business days (OMB)	▼	'19 FQ4	79.29% (425.00 / 536.00)	99.00%	-19.71%	Pita, Albert (WASD); Garcia, Marcelo M. (WASD)



Response time to sewage overflows	▲	'20 FQ1	38min	45min	7min	Vasquez, Oscar R. (WASD); Tanis-Ferdinand, Wilnie (WASD)



Final Plan Review Approval turn-around time (Qtly)	'20 FQ1	9Days	n/a	n/a	Mena, Jacqueline (WASD); Guerra, Lazaro (WASD)



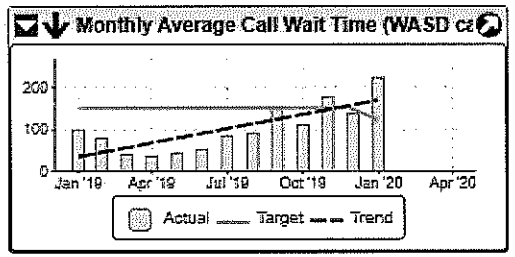
Child Measures	Period	Actual	Target	Variance	Owners
Final Plan review approval turn-around time (Monthly)	Jan '20	5days	n/a	n/a	Rabbat, Antoine (WASD); Guerra, Lazaro (WASD); Mena, Jacqueline (WASD)

Objective	Description	Owners
1.2 Continue to make information available to customers in a timely manner (WASD)		Mendez, John

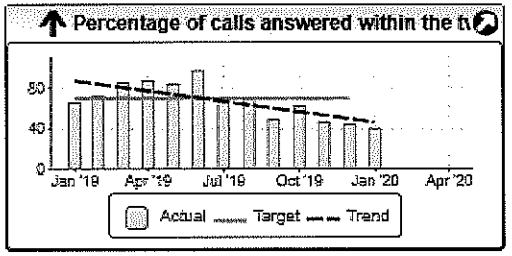
Grandparent Objectives	Description	Owners
GG1: Accessible, fair and responsible government		Miami-Dade County

Parent Objectives	Description	Owners
GG1-2: Support a customer-focused organization		Miami-Dade County

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Average Wait Time Per Call monthly (WASD- Retail Customer Service) (OMB)	Jan '20	223sec	120sec	-103sec	Martinez, Aimee (WASD); Rivero, Yanima (WASD); Mena, Jason J. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Calls Received (monthly) (Retail) (AWWA)	Jan '20	59,236	n/a	n/a	Mena, Jason J. (WASD); Rivero, Yanima (WASD)
Number of walk-in customers	Dec '19	8,147	n/a	n/a	Mena, Jason J. (WASD); Rivero, Yanima (WASD)
Number of web mail requests	Jan '20	2,773	n/a	n/a	Jordan, Juliette (WASD); Kemp, Sylvia H. (WASD)
Percentage of calls answered within the two-minute threshold (monthly) (OMB)	Jan '20	40.10%	n/a	n/a	Rivero, Yanima (WASD); Martinez, Aimee (WASD); Mena, Jason J. (WASD)

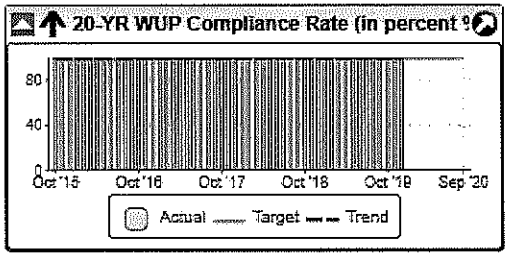


Objective	Description	Owners
1.3 Ensure compliance with 20-Year Water Use Permit	On November 15, 2007, the South Florida Water Management District issued a 20-year Water Use Permit to the County; including, but not limited to, the implementation of the Alternative Water Supply Plan (AWS). The permit provides the water allocation needed for the County to have adequate water supply	O'Rourke, Richard M. (WASD); Negahban, Sherry (WASD); Cueto, Josenrique (WASD)

Grandparent Objectives	Description	Owners
NI2: Continuity of clean water and community sanitation services		Miami-Dade County
NI3: Protected and restored environmental resources.		Miami-Dade County

Parent Objectives	Description	Owners
NI2-1: Provide adequate drinking water supply and wastewater disposal services		Miami-Dade County
NI3-2: Protect and maintain surface and drinking water sources		Miami-Dade County

Measures Linked to Objective		Period	Actual	Target	Variance	Owners
20-YR WUP Compliance Rate (in percent %)		Dec '19	100.0%	100.0%	0.0%	Cueto, Josenrique (WASD); Martin, Patrick (WASD)



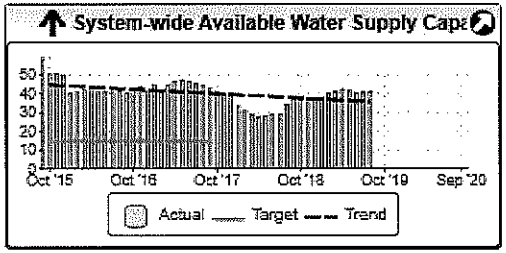
Child Measures		Period	Actual	Target	Variance	Owners
Water Production and Maintenance Division WUP-Compliance Rate (%)		Dec '19	100.0% (31.0 / 31.0)	100.0%	0.0%	O'Rourke, Richard M. (WASD); Cueto, Josenrique (WASD)
WUP-Water-Use Efficiency Section Compliance Rate (%)		Jan '20	100.0% (31.0 / 31.0)	100.0%	0.0%	O'Rourke, Richard M. (WASD); Cueto, Josenrique (WASD); Martin, Patrick (WASD)
Regulatory Compliance and Monitoring Division WUP Deliverable Compliance Rate (%) (OMB)		Dec '19	100.0% (31.0 / 31.0)	100.0%	0.0%	O'Rourke, Richard M. (WASD); Negahban, Sherry (WASD); Martin, Patrick (WASD)

Objective	Description	Owners
1.4 Ensure Adequate Water and Wastewater Capacity (NI2-1)		Cueto, Josenrique (WASD); Water and Sewer

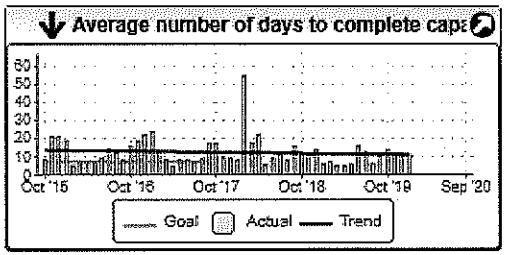
Grandparent Objectives	Description	Owners
NI2: Continuity of clean water and community sanitation services		Miami-Dade County

Parent Objectives	Description	Owners
NI2-1: Provide adequate drinking water supply and wastewater disposal services		Miami-Dade County

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
System-wide Available Water Supply Capacity From the Biscayne Aquifer	Aug '19	41.19MGD	n/a	n/a	Valdes, Maria A. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Number of projects reviewed for Water Supply Certification	Sep '19	524	n/a	n/a	Valdes, Maria A. (WASD)
Average number of days to complete capacity evaluations per month.	Jan '20	11.5days	n/a	n/a	Mannix, Annalise (WASD); Sosnikhina, Irina (WASD)



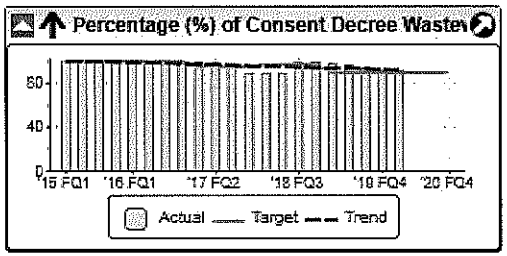
Child Measures	Period	Actual	Target	Variance	Owners
Number of capacity evaluations completed per month	Jan '20	55	n/a	n/a	Mannix, Annalise (WASD); Sosnikhina, Irina (WASD)

Objective	Description	Owners
1.5 Ensure timely completion of Consent Decree Wastewater Capital Improvement projects (NI2-1)		Edwards, Daniel J. (WASD); Eckler, Scott (Consultant)

Grandparent Objectives	Description	Owners
NI2: Continuity of clean water and community sanitation services		Miami-Dade County

Parent Objectives	Description	Owners
NI2-1: Provide adequate drinking water supply and wastewater disposal services		Miami-Dade County

Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Percentage (%) of Consent Decree Wastewater Projects on or before Schedule (sortie) (OMB)		'20 FQ1	91.4% (74.0 / 81.0)	90.0%	1.4%	Eckler, Scott (Consultant); Edwards, Daniel J. (WASD)



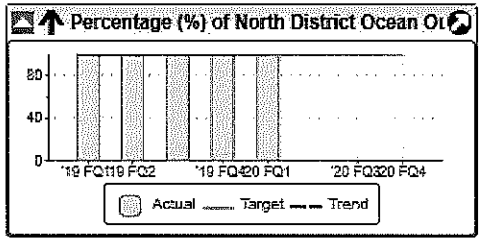
Child Measures		Period	Actual	Target	Variance	Owners
Percentage (%) of SDWWTP Consent Decree Projects on or before Schedule		'20 FQ1	100.0% (12.0 / 12.0)	100.0%	0.0%	Moncholi, Manuel E. (WASD); Eckler, Scott (Consultant)
Percentage (%) of CDWWTP Consent Decree Capital Wastewater Projects on or before Schedule		'20 FQ1	89.3% (25.0 / 28.0)	100.0%	-10.7%	Moncholi, Manuel E. (WASD); Eckler, Scott (Consultant)
Percentage (%) of NDWWTP Consent Decree Capital Improvement Projects on or before Schedule		'20 FQ1	100.00% (11.00 / 11.00)	100.00%	0.00%	Moncholi, Manuel E. (WASD); Eckler, Scott (Consultant)
Percentage (%) of Wastewater Collection & Transmission Line Consent Decree Projects on or before Schedule		'20 FQ1	90.0% (9.0 / 10.0)	90.0%	0.0%	Eckler, Scott (Consultant); Edwards, Daniel J. (WASD)
Percentage (%) of Sewer Pump Station System Consent Decree Projects on or before Schedule		'20 FQ1	84.2% (16.0 / 19.0)	90.0%	-5.8%	Edwards, Daniel J. (WASD); Eckler, Scott (Consultant)
Percentage of Supplemental Environmental Projects on or before Schedule		'20 FQ1	100.00% (1.00 / 1.00)	100.00%	0.00%	Edwards, Daniel J. (WASD); Eckler, Scott (Consultant)

Objective	Description	Owners
1.8 Ensure timely completion of Capital Improvement Projects related to the Ocean Outfall Legislation Program (NI2-1)		Ferguson, James (WASD)

Grandparent Objectives	Description	Owners
NI2: Continuity of clean water and community sanitation services		Miami-Dade County

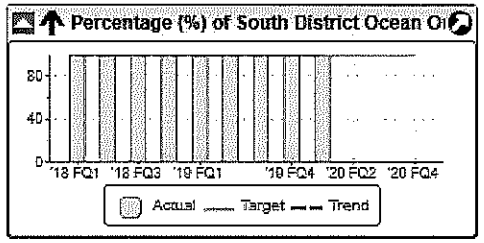
Parent Objectives	Description	Owners
NI2-1: Provide adequate drinking water supply and wastewater disposal services		Miami-Dade County

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Percentage (%) of North District Ocean Outfall Legislation (OOL) Projects on Schedule	'20 FQ1	100 (1/1)	100	0	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)



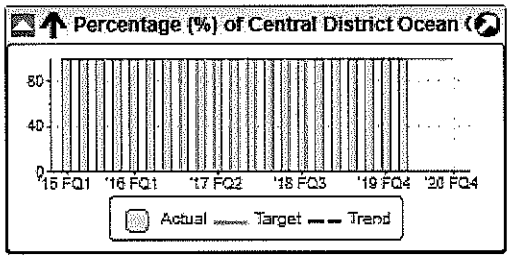
Initiatives Linked to Measure	Est. Start	Est. End	Type	As Of	%	Status	Owners
NE-2: NDWWTP – Municipal Injection Wells	3/1/2018	3/1/2023		10/10/2019	2%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)

Percentage (%) of South District Ocean Outfall Legislation (OOL) Projects on Schedule	'20 FQ1	100 (7/7)	100	0	Ferguson, James (WASD); Bermudez, Milton E. (Consultant)



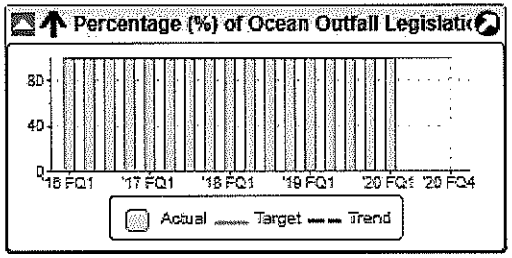
Initiatives Linked to Measure	Est. Start	Est. End	Type	As Of	%	Status	Owners
ST-1C: SDWWTP - Filter Backwash	3/31/2016	2/20/2023		10/10/2019	6%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
ST-2A: SDWWTP - Headworks and Oxygenation Train	3/31/2016	3/10/2023		10/10/2019	6%	In Progress	Ferguson, James (WASD); Bermudez, Milton E. (Consultant)
ST-2B: SDWWTP - Clarifiers and HLD	3/31/2016	2/27/2023		10/10/2019	6%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
ST-2C: SDWWTP - Chlorine Contact and Generation and Wells PS	3/31/2016	6/2/2023		10/10/2019	5%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
ST-2D: SDWWTP - Electrical Building	3/31/2016	4/29/2024		10/10/2019	4%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
SE-2: SDWWTP - Municipal Injection Wells	12/23/2015	9/8/2021		10/10/2019	4%	In Progress	Ferguson, James (WASD); Bermudez, Milton E. (Consultant)

Percentage (%) of Central District Ocean Outfall Legislations (OOL) projects on schedule	'20 FQ1	100.00% (6.00 / 6.00)	100.00%	0.00%	Ferguson, James (WASD); Smith, Isaac (WASD)



Initiatives Linked to Measure	Est. Start	Est. End	Type	As Of	%	Status	Owners
CT-2A: CDWWTP – HLD Improvements & Filtration Pilot Test	12/9/2016	11/21/2025		10/9/2019	3%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
CE-1: CDWWTP – Municipal Injection Well PS	12/9/2016	12/23/2025		10/9/2019	1%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
CT-3C: CDWWTP – EDB 2 & EDB 3	12/9/2016	1/13/2025		10/9/2019	2%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
CT-2B: CDWWTP – Preliminary Site Prep	12/9/2016	7/21/2022		10/9/2019	1%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
CT-3B: CDWWTP – Oxygenation Trains & Secondary Clarifiers	12/9/2016	1/9/2025		10/9/2019	2%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
CE-2: CDWWTP - Municipal Injection Wells	12/23/2015	12/11/2023		10/9/2019	4%	In Progress	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)

Percentage (%) of Ocean Outfall Legislation (OOL) Projects on Schedule (OMB)	'20 FQ1	100.00% (6.00 / 6.00)	100.00%	0.00%	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Percentage (%) of South District Ocean Outfall Legislation (OOL) Projects on Schedule	'20 FQ1	100 (7 / 7)	100	0	Ferguson, James (WASD); Bermudez, Milton E. (Consultant)

Percentage (%) of North District Ocean Outfall Legislation (OOL) Projects on Schedule		'20 FQ1	100 (1 / 1)	100	0	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)
Percentage (%) of Central District Ocean Outfall Legislations (OOL) projects on schedule		'20 FQ1	100.00% (6.00 / 6.00)	100.00%	0.00%	Ferguson, James (WASD); Smith, Isaac (WASD)

Initiatives Linked to Measure	Est. Start	Est. End	Type	As Of					%	Status	Owners
Implementation of Ocean Outfall Legislation Program	3/1/2013	1/7/2025		10/10/2019					3%	In Progress	Ferguson, James (WASD)

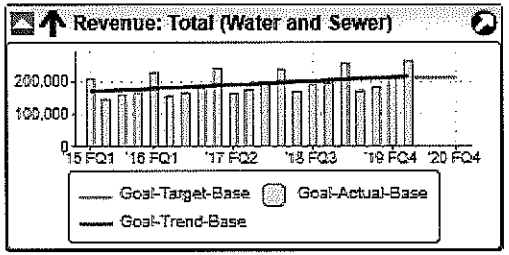
2.0 Financial

Objective	Description	Owners
2.2 Meet Budget Targets (Water and Sewer) (GG4-2)		Suarez, Maria C. (WASD); Morris, Frances G. (WASD)

Grandparent Objectives	Description	Owners
GG4-2: Effectively allocate and utilize resources to meet current and future operating and capital needs		Miami-Dade County

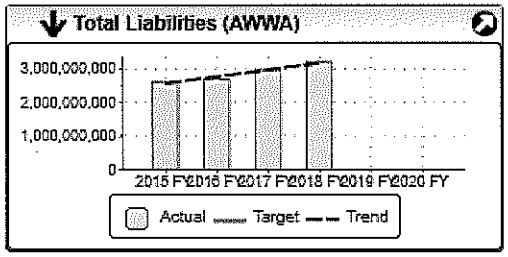
Parent Objectives	Description	Owners
Meet Budget Targets (All Miami-Dade County)	This is the parent objectives to all departmental "Meet Budget Targets" objective. This is the child objective to the County's Strategic Plan Objective, "GG4-2: Effectively allocate and utilize resources to meet current and future operating and capital needs."	Moon, Jennifer (OMB)

Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Revenue: Total (Water and Sewer)		'20 FQ1	$264,237K	$213,287K	$50,950K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD)



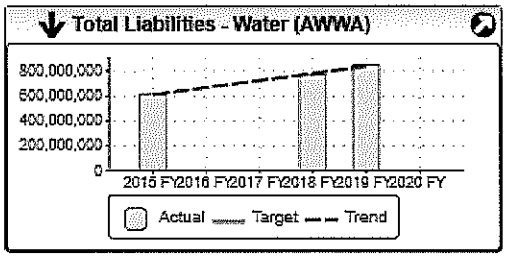
Child Measures		Period	Actual	Target	Variance	Owners
Revenue: Carryover (WASD)		'20 FQ1	$78,099K	$19,524K	$58,575K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Revenue: Proprietary (WASD)		'20 FQ1	$186,138K	$193,314K	$-7,176K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD); Portuondo, Ileana (WASD)
Revenue: Interagency/Intradepartmental (WASD)		'20 FQ1	$0K	$449K	$449K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)

Total Liabilities (AWWA)	2018 FY	3,196,533,000	n/a	n/a	Morris, Frances G. (WASD); Barrios, Josephine (WASD)

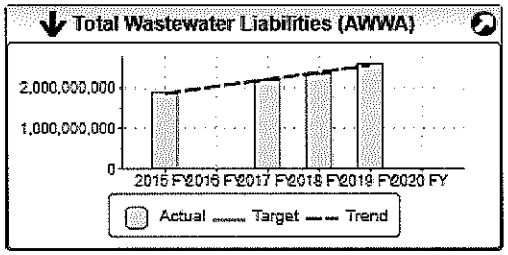


Child Measures	Period	Actual	Target	Variance	Owners
Total Liabilities - Water (AWWA)	2019 FY	846,608,000	n/a	n/a	Barrios, Josephine (WASD)
Total Wastewater Liabilities (AWWA)	2019 FY	2,588,936,000.0	n/a	n/a	Clark, Tekeia (WASD); Barrios, Josephine (WASD)

Total Liabilities - Water (AWWA)	2019 FY	846,608,000	n/a	n/a	Barrios, Josephine (WASD)

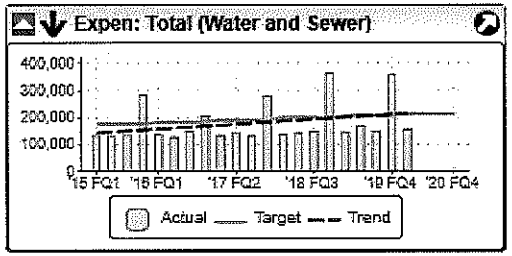


Total Wastewater Liabilities (AWWA)	2019 FY	2,588,936,000.0	n/a	n/a	Clark, Tekeia (WASD); Barrios, Josephine (WASD)



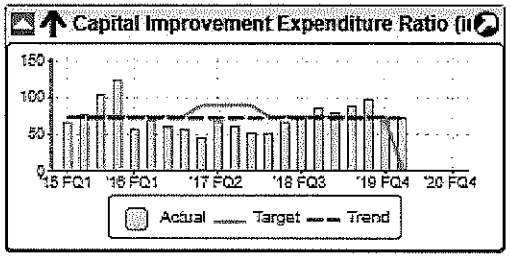
Expen: Total (Water and Sewer)	'20 FQ1	$157,622K	$213,287K	$55,665K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD)

Expen: Total (Water and Sewer)		'20 FQ1	$157,622K	$213,287K	$55,665K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD)



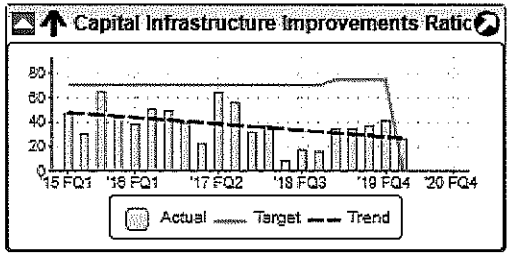
Child Measures		Period	Actual	Target	Variance	Owners
Expenditure: Personnel Costs (WASD)		'20 FQ1	$64,268K	$66,871K	$2,603K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD); Portuondo, Ileana (WASD)
Expenditure: Court Costs (WASD)		'20 FQ1	$0K	$0K	$0K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Expenditure: Contractual Services (WASD)		'20 FQ1	$14,134K	$23,671K	$9,537K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Expenditure: Other Operating (WASD)		'20 FQ1	$5,380K	$10,254K	$4,874K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Expenditure: Charges for County Services (WASD)		'20 FQ1	$12,183K	$19,294K	$7,111K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Expenditure: Capital (WASD)		'20 FQ1	$723K	$23,110K	$22,387K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD); Portuondo, Ileana (WASD)
Expenditure: Transfers Out (WASD)		'20 FQ1	$0K	$0K	$0K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Expenditure: Debt Service (WASD)		'20 FQ1	$60,934K	$50,072K	$-10,862K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)
Expenditure: Reserves (WASD)		'20 FQ1	$0K	$20,015K	$20,015K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD); Portuondo, Ileana (WASD)
Expenditure: Intradepartmental Transfers (WASD)		'20 FQ1	$0K	$0K	$0K	Suarez, Maria C. (WASD); Portuondo, Ileana (WASD); Morris, Frances G. (WASD)

Capital Improvement Expenditure Ratio (in Percent)	'20 FQ1	72% (105,552 / 160,361,170)	1%	71%	Charran, David (WASD); Morris, Frances G. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Capital Infrastructure Improvements Ratio (in Percent)	'20 FQ1	72% (171,539 / 145,627,478)	70%	2%	Charran, David (WASD); Rao, Kishore K. (WASD)
Capital Purchases Expenditure Ratio in Percent	'20 FQ1	75% (,034,013 / 14,733,692)	80%	-5%	Charran, David (WASD); Rao, Kishore K. (WASD)

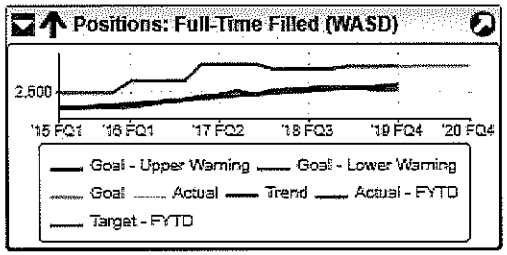
Capital Infrastructure Improvements Ratio (in percent) General Obligation Bonds (GOB) Funds	'20 FQ1	26% (773,540 / 3,000,000)	1%	25%	Charran, David (WASD); Morris, Frances G. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Water Capital Infrastructure Improvements Ratio (In Percent) Using GOB Funds	'20 FQ1	0% (0 / 300,000)	70%	-70%	Charran, David (WASD); Rao, Kishore K. (WASD)
Wastewater Capital Infrastructure Improvements Ratio (in percent) Using GOB Funds	'20 FQ1	29% (773,540 / 2,700,000)	70%	-41%	Charran, David (WASD); Rao, Kishore K. (WASD)

Positions: Full-Time Filled (WASD)	'19 FQ4	2,528	2,792	-264	Suarez, Maria C. (WASD); Morris, Frances G. (WASD)

Date	VR Comment	Author
10/17/2019	FY 2018-19 Adopted Budget included 2,791.8 positions. Part-time position budget is the equivalent of a 0.8 FTE in the Utilities Development Division. Wasd continues to work on streamlining the hiring process to hire staffing to meet EPA, Consent Decree key performance indicators.	Suarez, Maria C. (WASD)



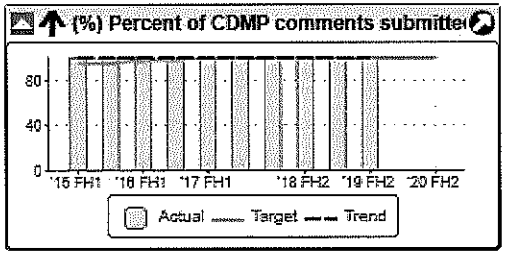
3.0 Internal

Objective	Description	Owners
3.1 Provide Stewardship to the CDMP and Zoning Application Process. (WASD)	Provide assessment of water and sewer services as required by the Comprehensive Development Master Plan (CDMP) bi-annual process for Land Use change, and by the monthly zoning application review process conducted by the County's Development of Impact Committee (DIC).	Valdes, Maria A. (WASD)

Grandparent Objectives	Description	Owners
NI1: Safe, healthy and attractive neighborhoods and communities		Miami-Dade County

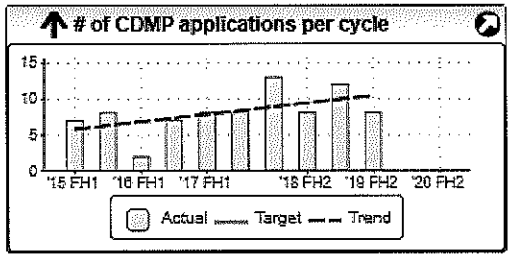
Parent Objectives	Description	Owners
NI1-3: Promote the efficient and best use of land		Miami-Dade County

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
(%) Percent of CDMP comments submitted timely (OMB)	'19 FH2	100 (8 / 8)	100	0	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)

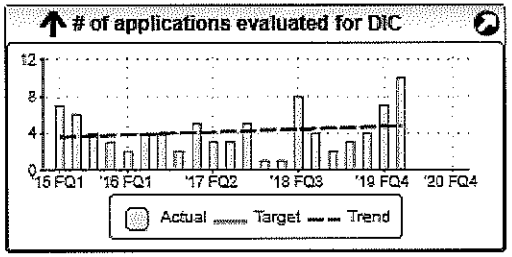


Child Measures	Period	Actual	Target	Variance	Owners
# of CDMP applications per cycle	'19 FH2	8	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)

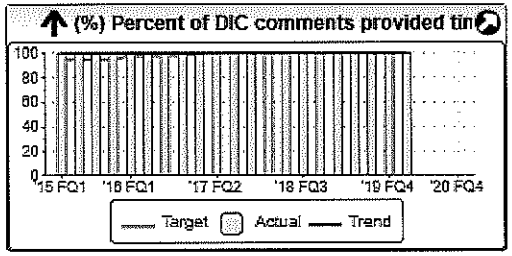
# of CDMP applications per cycle	'19 FH2	8	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)



# of applications evaluated for DIC	'20 FQ1	10	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)



(%) Percent of DIC comments provided timely (OMB)	'20 FQ1	100 (10 / 10)	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)



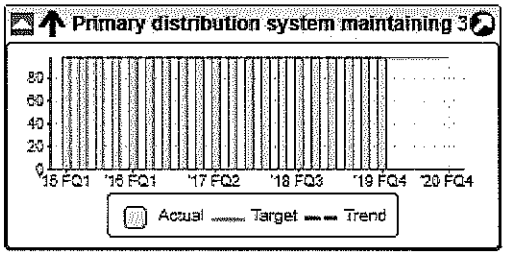
Child Measures	Period	Actual	Target	Variance	Owners
# of applications evaluated for DIC	'20 FQ1	10	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)

3.2 Continue to fully comply with drinking water standards (NI2-1)	Continue to fully comply with drinking water standards through water treatment and distribution processes.	Martinez, Francisco J. (WASD); Toledo, Andy W. (WASD)

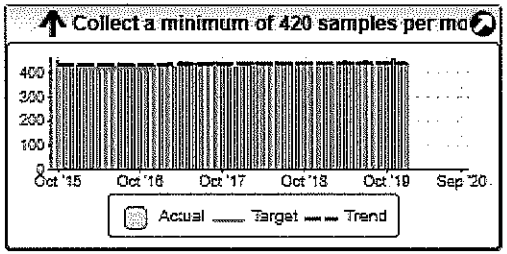
Grandparent Objectives	Description	Owners
NI2: Continuity of clean water and community sanitation services		Miami-Dade County

Parent Objectives	Description	Owners
NI2-1: Provide adequate drinking water supply and wastewater disposal services		Miami-Dade County

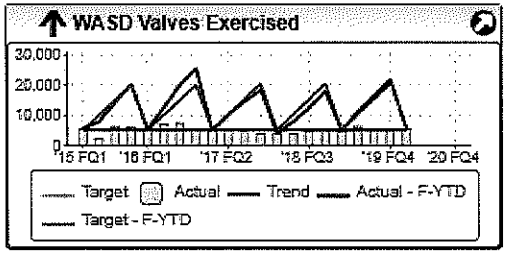
Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Primary distribution system maintaining 35 lbs.psi -WASD	'19 FQ4	99.00%	99.00%	0.00%	Baldwin, Arthur L. (WASD); Llewelyn, Lancelot (WASD)



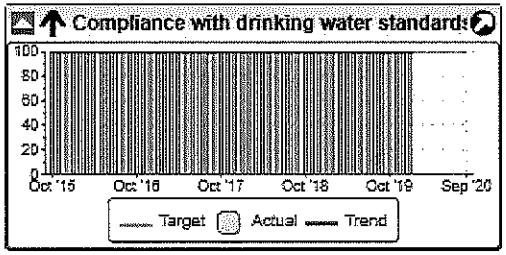
Collect a minimum of 420 samples per month for total coliform analysis	Jan '20	437	n/a	n/a	Navarro, Ivonne P. (WASD)



Water Distribution Valves Exercised	'20 FQ1	5,429	n/a	n/a	Garcia, Antonio (WASD); Cabrera, Lazaro (WASD); Airado, Luis M. (WASD); Llewelyn, Lancelot (WASD)



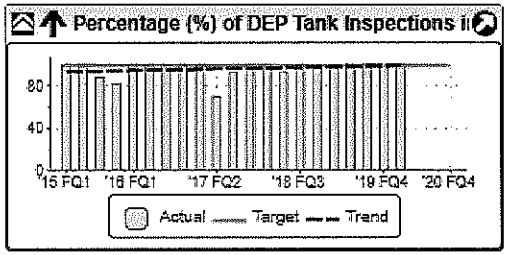
Compliance with drinking water standards (% Days) (OMB)	Jan '20	100.00%	100.00%	0.00%	Navarro, Ivonne P. (WASD); Toledo, Andy W. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Collect a minimum of 420 samples per month for total coliform analysis	Jan '20	437	n/a	n/a	Navarro, Ivonne P. (WASD)
Maintain TTHM (trihalometane) levels < 80 ppb	'20 FQ1	30.00ppb	80.00ppb	50.00ppb	Toledo, Andy W. (WASD)

Objective	Description	Owners
3.3 Compliance with regulatory requirements for water & wastewater systems (NI2-1)		Caveda, Ana T. (WASD); Negahban, Sherry (WASD); Chow, Yeekee (WASD); Water and Sewer

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Percentage (%) of DEP Tank Inspections in Compliance	'20 FQ1	100% (3 / 3)	99%	1%	Caveda, Ana T. (WASD); Negahban, Sherry (WASD); Chow, Yeekee (WASD)



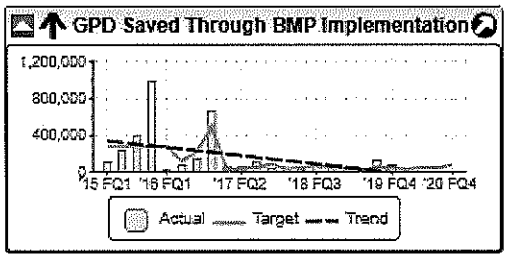
Objective	Description	Owners
3.4 Improve Water-Use Efficiency		Martin, Patrick (WASD); Cueto, Josenrique (WASD); Water and Sewer

Grandparent Objectives	Description	Owners
Ensure compliance with 20-Year Water Use Permit	On November 15, 2007, the South Florida Water Management District issued a 20-year Water Use Permit to the County; including, but not limited to, the implementation of the Alternative Water Supply Plan (AWS). The permit provides the water allocation needed for the County to have adequate water supply	O'Rourke, Richard M. (WASD); Negahban, Sherry (WASD); Cueto, Josenrique (WASD)

Parent Objectives	Description	Owners
Ensure water supply availability to meet demand (NI2-1)		Martin, Patrick (WASD); Valdes, Maria A. (WASD); Cueto, Josenrique (WASD)
Reduce the Loss and Waste of Water (NI2-1)	Limit unaccounted-for water to no more than 10% of the volume of water delivered based on five year moving average.....	Martin, Patrick (WASD)

Initiatives Linked to Objective	Est. Start	Est. End	Type	As Of	%	Status	Owners
Water Use Efficiency 20-Year Plan	10/2/2006	9/28/2027		12/31/2018	79%	In Progress	Martin, Patrick (WASD); Cueto, Josenrique (WASD)
Implement Water Use Efficiency Outreach Plan	1/1/2010	12/15/2026		12/31/2018	79%	In Progress	Martin, Patrick (WASD); Cueto, Josenrique (WASD)

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Gallons of water saved per day (GPD) through implementation of the Water Use Efficiency Plan (OMB)	'19 FQ4	74,740GPD	44,405GPD	30,335GPD	Cueto, Josenrique (WASD); Martin, Patrick (WASD)

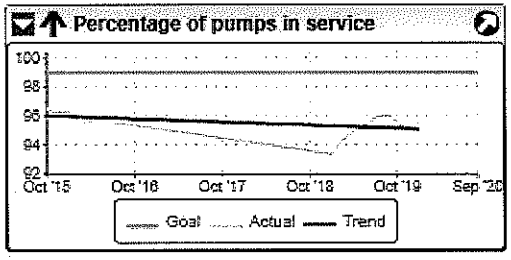


Objective	Description	Owners
3.5 Continue to ensure the proper maintenance and operation of sewage system -Wastewater (NI2-1)	Reduce sewage overflows by maintaining 99 percent of pumps in service at pump stations on a daily basis and continue to dispatch emergency calls for sewage overflow, and upgrade wastewater treatment.	Lynskey, Kevin T.

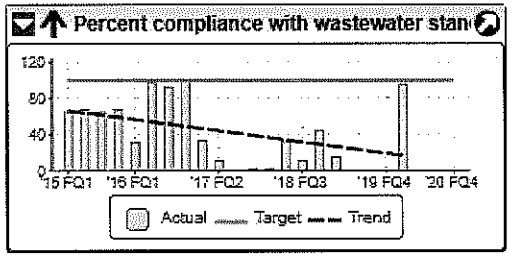
Grandparent Objectives	Description	Owners
GG3: Optimal internal Miami-Dade County operations and service delivery		Miami-Dade County
NI2: Continuity of clean water and community sanitation services		Miami-Dade County

Parent Objectives	Description	Owners
GG3-1: Deploy effective and reliable technology solutions that support Miami-Dade County services		Miami-Dade County
NI2-1: Provide adequate drinking water supply and wastewater disposal services		Miami-Dade County

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Percentage of pumps in service (OMB)	Jan '20	95.61%	99.00%	-3.39%	Castro, Carlos; Rivera, Elsie M. (WASD)

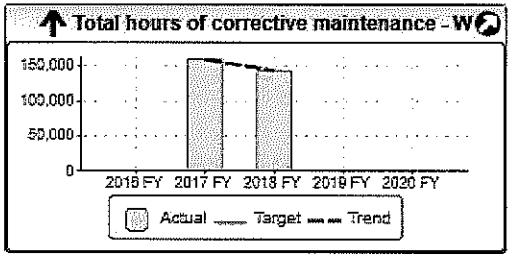


Percent compliance with wastewater standards (FY Quarterly) (AWWA) (OMB)	'20 FQ1	95.65% (88.00 / 92.00)	100.00%	-4.35%	O'Rourke, Richard M. (WASD); Torres, Phillip (WASD); Fergen, Robert (WASD)

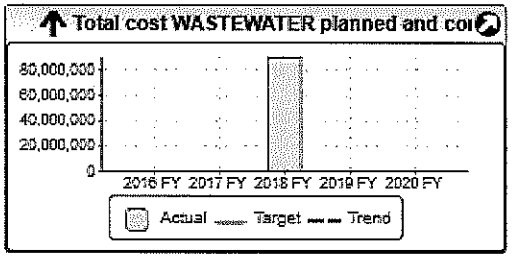


Child Measures	Period	Actual	Target	Variance	Owners
Percent compliance wastewater effluent limits (Plants) (OMB)	'20 FQ1	98.19%	100.00%	-1.81%	O'Rourke, Richard M. (WASD); Torres, Phillip (WASD)

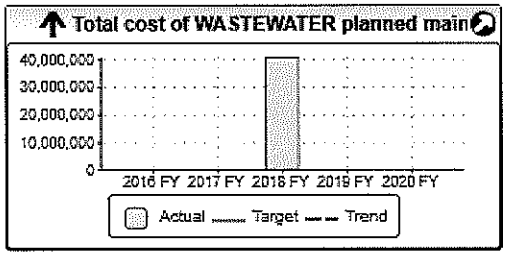
Total hours of corrective maintenance - WW Treat. & Maint. (AWWA/FBC)	2018 FY	142,932hours	n/a	n/a	Fergen, Robert (WASD)



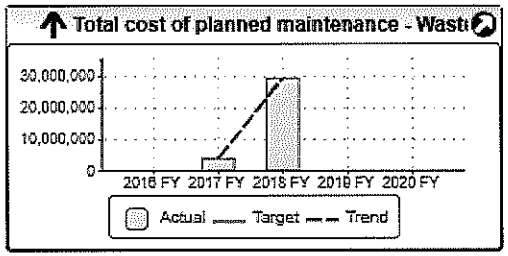
Total cost WASTEWATER planned and corrective maintenance (AWWA/FBC)	2018 FY	$89,838,404	n/a	n/a	Fergen, Robert (WASD); Vasquez, Oscar R. (WASD); Castro, Carlos



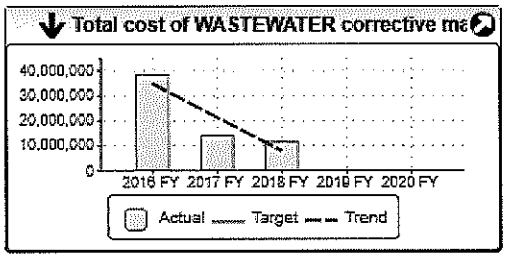
Child Measures	Period	Actual	Target	Variance	Owners
Total cost of planned maintenance - PUMP Station Division (AWWA/FBC)	2018 FY	$8,202,427	n/a	n/a	Castro, Carlos; Rivera, Elsie M. (WASD)
Total cost of planned maintenance - Wastewater Collection and Transmission (AWWA/FBC)	2019 FY	$5,624,703	n/a	n/a	Vasquez, Oscar R. (WASD); Tanis-Ferdinand, Winie (WASD)
Total cost of planned maintenance - Wastewater Treatment and Maintenance (AWWA/FBC)	2018 FY	$29,409,475	n/a	n/a	Fergen, Robert (WASD)
Total cost of WASTEWATER corrective maintenance - PUMP Station (AWWA/FBC)	2018 FY	$14,331,282	n/a	n/a	Rivera, Elsie M. (WASD); Castro, Carlos
Total cost of WASTEWATER corrective maintenance - Collection and Transmission (AWWA/FBC)	2019 FY	$19,105,282	n/a	n/a	Vasquez, Oscar R. (WASD); Tanis-Ferdinand, Winie (WASD)
Total cost of WASTEWATER corrective maintenance - Treatment and Maintenance (AWWA/FBC)	2018 FY	$11,566,427	n/a	n/a	Fergen, Robert (WASD)
Total cost of WASTEWATER planned maintenance (AWWA)	2018 FY	$40,898,026	n/a	n/a	Fergen, Robert (WASD); Porro-Vazquez, Mayler (WASD); Bedoya, Juan C. (WASD)



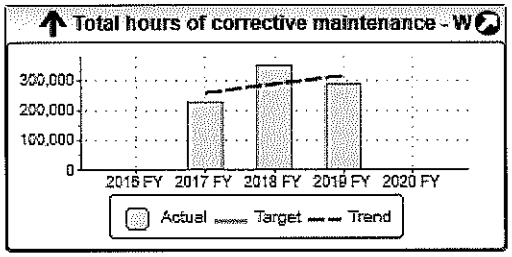
Child Measures	Period	Actual	Target	Variance	Owners
Total cost of planned maintenance - PUMP Station Division (AWWA/FBC)	2018 FY	$8,202,427	n/a	n/a	Castro, Carlos; Rivera, Elsie M. (WASD)
Total cost of planned maintenance - Wastewater Collection and Transmission (AWWA/FBC)	2018 FY	$6,624,703	n/a	n/a	Vasquez, Oscar R. (WASD); Tanis-Ferdinand, Winie (WASD)
Total cost of planned maintenance - Wastewater Treatment and Maintenance (AWWA/FBC)	2018 FY	$29,409,475	n/a	n/a	Fergen, Robert (WASD)
Total cost of planned maintenance - Wastewater Treatment and Maintenance (AWWA/FBC)	2018 FY	$29,409,475	n/a	n/a	Fergen, Robert (WASD)



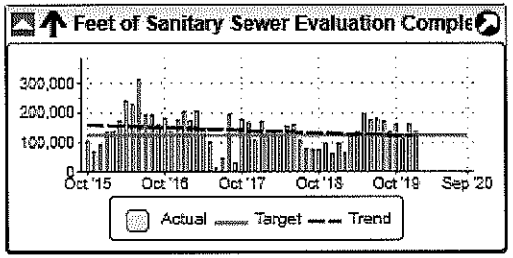
Total cost of WASTEWATER corrective maintenance - Treatment and Maintenance (AWWA/FBC)	2018 FY	$11,566,427	n/a	n/a	Fergen, Robert (WASD)



Total hours of corrective maintenance - WW Coll. & Trans. (AWWA/FBC)	2019 FY	285,311hours	n/a	n/a	Tanis-Ferdinand, Wilnie (WASD); Vasquez, Oscar R. (WASD)



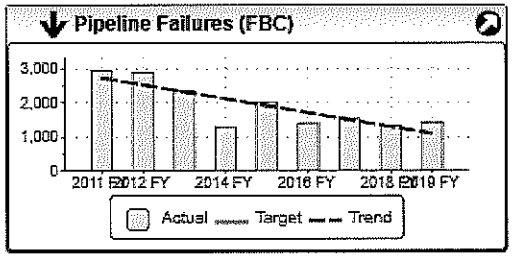
Feet of Sanitary Sewer Evaluation Completed (SSES)	Jan '20	135,244	125,000	10,244	Bedoya, Juan C. (WASD); Tanis-Ferdinand, Wilnie (WASD)



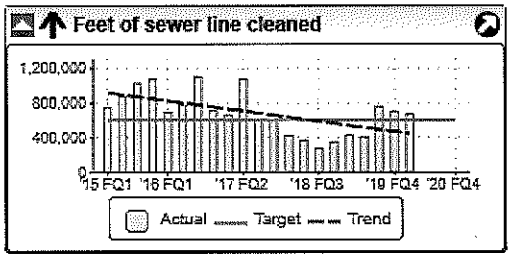
O&M Wastewater Cost per account (Wastewater) (FBC)	2018 FY	$500 (248,936,000 / 498,117)	n/a	n/a	Morris, Frances G. (WASD); Clark, Tekela (WASD); Barrios, Josephine (WASD)

Child Measures	Period	Actual	Target	Variance	Owners
Total (O&M) operations and maintenance costs for wastewater operations (excludes depreciation) (AWWA/FBC)	2018 FY	$248,936,000	n/a	n/a	Morris, Frances G. (WASD); Clark, Tekela (WASD); Barrios, Josephine (WASD)
Wastewater Retail and Wholesale Customer Accounts (Number of Active WASTEWATER accounts)(AWWA)(FBC)	2018 FY	498,117	n/a	n/a	Reese, Richard A. (WASD); Caballero, Enrique (WASD)

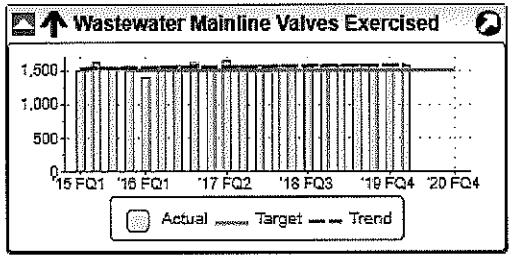
Pipeline Failures (FBC)	2019 FY	1,429	n/a	n/a	Bedoya, Juan C. (WASD); Roberts, Ini T. (WASD); Tanis-Ferdinand, Wilnie (WASD)



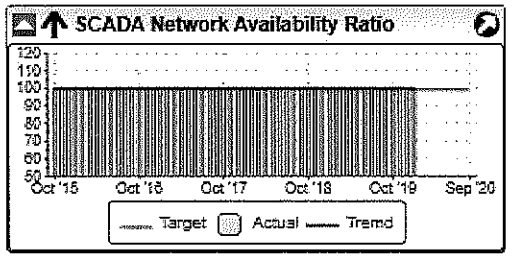
Feet of sewer line cleaned		'20 FQ1	669,091	600,000	69,091	Bedoya, Juan C. (WASD)



Wastewater Mainline Valves Exercised (OMB)		'20 FQ1	1,568	1,500	68	Vasquez, Oscar R. (WASD); Tanis-Ferdinand, Wilnie (WASD)

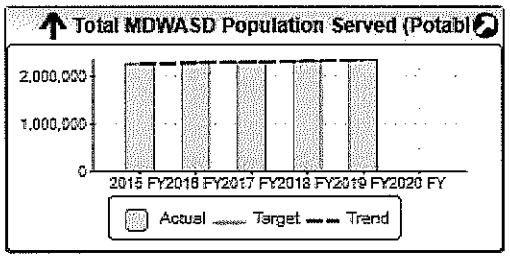


SCADA Network Availability Ratio		Jan '20	99.80% (742.52 / 744.00)	99.00%	0.80%	Adams, Franklin C. (WASD); Burgos, Leonardo (WASD)

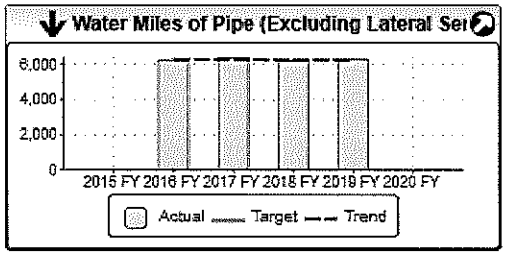


Objective	Description	Owners
3.6 WASD Operations Facts and Figures		Cueto, Josenrique (WASD); Martinez, Francisco J. (WASD)

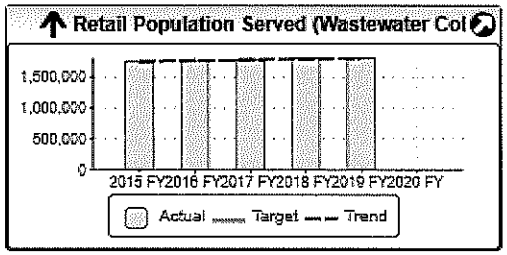
Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Total MDWASD Population Served (Potable Water Service)	2019 FY	2,344,599	n/a	n/a	Mannix, Annalise (WASD); Cueto, Josenrique (WASD); Valdes, Maria A. (WASD)



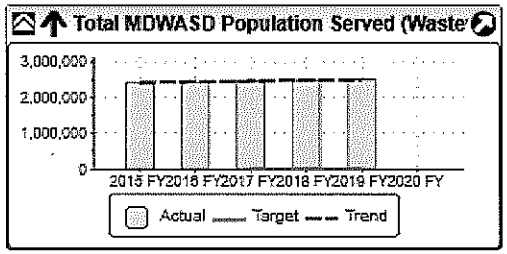
Child Measures	Period	Actual	Target	Variance	Owners
Retail Population Served (Potable Water Service) (AWWA)	2019 FY	1,908,871	n/a	n/a	Mannix, Annalise (WASD); Cueto, Josenrique (WASD); Valdes, Maria A. (WASD)
Wholesale Population Served (Potable Water Service) (AWWA)	2019 FY	435,728	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)
Water Miles of Pipe (Excluding Lateral Service Lines)	2019 FY	6,276	n/a	n/a	Llewelyn, Lancelot (WASD); Garcia, Antonio (WASD); Cabrera, Lazaro (WASD)



Retail Population Served (Wastewater Collection/Treatment)	2019 FY	1,811,524	n/a	n/a	Valdes, Maria A. (WASD)



Total MDWASD Population Served (Wastewater Collection/Treatment)	2019 FY	2,502,142	0	2,502,142	Cueto, Joseirique (WASD); Mannix, Annalise (WASD); Valdes, Maria A. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Retail Population Served (Wastewater Collection/Treatment)	2019 FY	1,811,524	n/a	n/a	Valdes, Maria A. (WASD)
Wholesale Population Served (Wastewater Collection/Treatment) (AWWA)	2018 FY	684,767	n/a	n/a	Valdes, Maria A. (WASD); Mannix, Annalise (WASD)

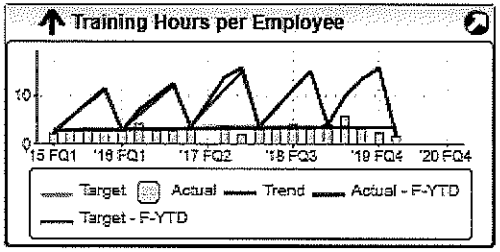
4.0 Learning and Growth

Objective	Description	Owners
4.1 Provide Education, Training & Technology to Develop an Efficient and Flexible Workforce- WASD (GG2-2)		Brewer-McDuffie, Cecilia (WASD)

Grandparent Objectives	Description	Owners
GG2: Excellent, engaged and resilient workforce		Miami-Dade County

Parent Objectives	Description	Owners
GG2-2: Promote employee development and leadership		Miami-Dade County

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Training Hours per Employee (Quarterly) (AWWA)	'20 FQ1	1.76 (4,465.50 / 2,536.00)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)



Employee Turnover Rate (%) (Fiscal Year) (AWWA)	2018 FY	2.0% (51.0 / 2,553.0)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD)

Child Measures	Period	Actual	Target	Variance	Owners
Wastewater Employee Turnover (%)	2018 FY	0.9% (13.0 / 1,409.0)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Saller, Timothy R. (WASD)
Water Employee Turnover (%)	2018 FY	3.32% (38.00 / 1,144.00)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Saller, Timothy R. (WASD)

Training Hours Per Employee (Fiscal Year) (AWWA/OMB)	2019 FY	14.11 (35,751.00 / 2,533.00)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)

Date	VR Comment	Author
10/28/2019	The total Training Hours Per Employee does not reflect training hours completed by WASD employees who attended online and classroom training provided by County's Human Resources Department. At the time of this report, the Peoplesoft eTraining reporting feature was "Unable to connect to the RenServer."	Brown, Lakeisha G. (WASD)

Child Measures	Period	Actual	Target	Variance	Owners
General Employees Training Hours	2015 FY	3.810	n/a	n/a	WASD Historical Measure Owner
Wastewater Employee Training hours per Wastewater FTE	2019 FY	15.1 (12,831.0 / 852.0)	n/a	n/a	Brown, Lakeisha G. (WASD); Brewer-McDuffie, Cecilia (WASD)
Water Employees Training Hours Per WATER Employee	2019 FY	13.2 (8,763.0 / 664.0)	n/a	n/a	Suarez, Maria C. (WASD); Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)

Emergency Employee Response Readiness Training (Fiscal Year) (hours/ employee) (AWWA)	2019 FY	7.61 (19,308.00 / 2,536.00)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD); Fries, Donna (WASD)

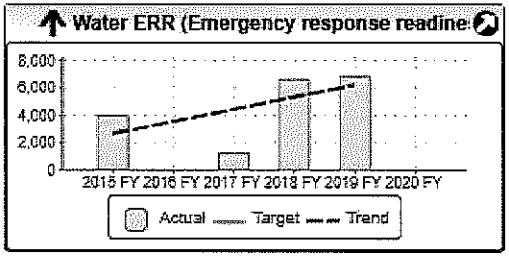
Child Measures	Period	Actual	Target	Variance	Owners
General Employees Emergency Response Readiness (ERR) (Non-W and Non-WW) Training Hours	2015 FY	1,360	n/a	n/a	WASD Historical Measure Owner
Wastewater Emergency Employee Response Readiness (ERR) Training Hours Per Employee (AWWA)	2018 FY	10.15 (13,819.00 / 1,361.00)	n/a	n/a	Brown, Lakeisha G. (WASD); Brewer-McDuffie, Cecilia (WASD)
Water Emergency Employee Response Readiness (ERR) Training (hours/ employee) (AWWA)	2018 FY	5.37 (6,620.00 / 1,233.00)	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)

Objective	Description	Owners
4.2 Improve employees knowledge and skills (GG2-2)	Reflect organization's commitement to formal training as a means of improving employees knowledge and skills.	Cueto, Josenrique (WASD)

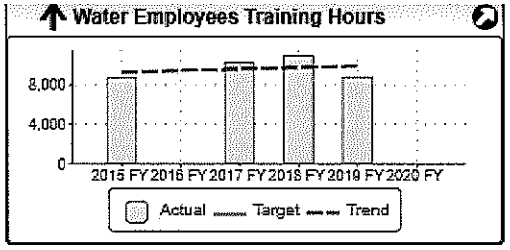
Grandparent Objectives	Description	Owners
GG2-2: Promote employee development and leadership		Miami-Dade County

Parent Objectives	Description	Owners
Develop and retain excellent employees and leaders (GG2-2)		Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)
Provide Education, Training & Technology to Develop an Efficient and Flexible Workforce- WASD (GG2-2)		Brewer-McDuffie, Cecilia (WASD)

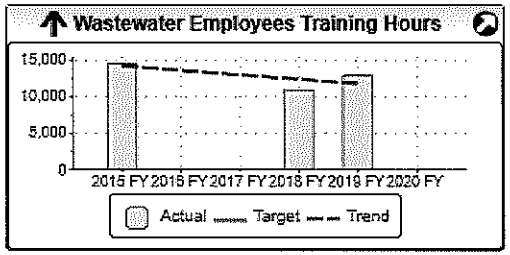
Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Water ERR (Emergency response readiness) training hours	2019 FY	6,868	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)



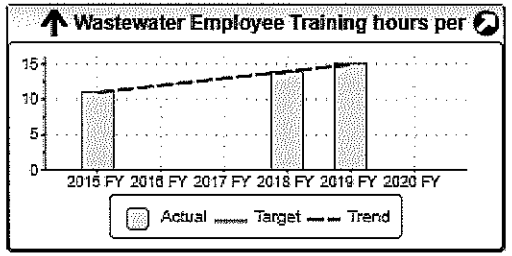
Water Employees Training Hours	2019 FY	8,763	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)



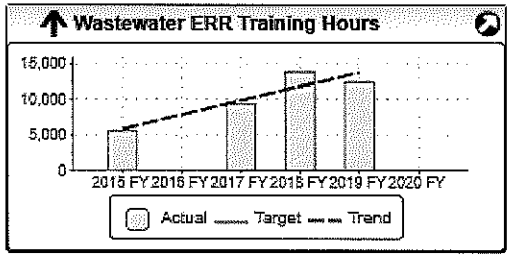
Wastewater Employees Training Hours	2019 FY	12,831	n/a	n/a	Brown, Lakeisha G. (WASD); Brewer-McDuffie, Cecilia (WASD)



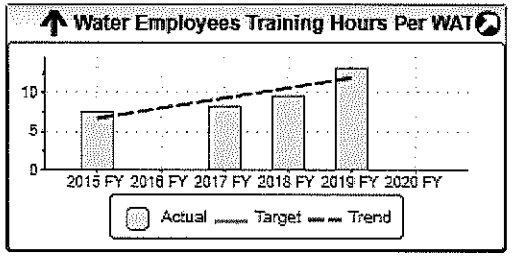
Wastewater Employee Training hours per Wastewater FTE	2019 FY	15.1 (12,831.0 / 852.0)	n/a	n/a	Brown, Lakeisha G. (WASD); Brewer-McDuffie, Cecilia (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Wastewater Employees Training Hours	2019 FY	12,831	n/a	n/a	Brown, Lakeisha G. (WASD); Brewer-McDuffie, Cecilia (WASD)
Number of FTEs supporting WASTEWATER service (include all supporting functions) (AWWA)	2018 FY	1,409	n/a	n/a	Suarez, Maria C. (WASD); Saller, Timothy R. (WASD); Brewer-McDuffie, Cecilia (WASD)
Wastewater ERR Training Hours	2019 FY	12,440	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)



Water Employees Training Hours Per WATER Employee	2019 FY	13.2 (8,763.0 / 664.0)	n/a	n/a	Suarez, Maria C. (WASD); Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)



Child Measures	Period	Actual	Target	Variance	Owners
Water Employees Training Hours	2019 FY	8,763	n/a	n/a	Brewer-McDuffie, Cecilia (WASD); Brown, Lakeisha G. (WASD)
Number of FTEs supporting WATER service (include all supporting functions) (AWWA)	2018 FY	1,144	n/a	n/a	Suarez, Maria C. (WASD); Brewer-McDuffie, Cecilia (WASD); Saller, Timothy R. (WASD)

Alignment of Selected Scorecard Measures to Resilience

Scorecard Measures	*Resilience Driver*
1.3 Ensure water supply availability to meet demand (NI2-1)	*HW1: Meets Basic Needs*
3.0 Monitor and Ensure Compliance with 20-YR WUP planning and Regulatory Compliance (NI2-1)	*IE2: Ensure Continuity of Critical Services*
1.1 Expedite Capacity Evaluation Delivery (NI2-1)	*LS3: Foster Long-Term and Integrated Planning*
1.2 Provide Stewardship to the CDMP and Zoning Application Process (WASD)	*ES3: Foster Economic Prosperity*
4.1 Develop and retain excellent employees and leaders (GC2-2)	*LS1: Promote Leadership and Effective Management*
3.0 Monitor and Ensure Compliance with 20-YR WUP planning and Regulatory Compliance	*LS3: Foster Long-Term and Integrated Planning*
3.0 Improve Plans Review Turnaround Time (GG1-3)	*ES3: Foster Economic Prosperity*
3.0 Ensure timely implementation of Capital Improvement Projects related to the Ocean Outfall Legislation Program (NI2-1)	*LS3: Foster Long-Term and Integrated Planning*
1.3 Ensure adequate water and wastewater capacity (NI2-1)	*HW1: Meets Basic Needs*

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

As part of the FY 2019-20 Adopted Budget, the BCC approved a continuation of water and wastewater rate restructuring to all customer revenues tiers that results in a rate which is reflective of actual usage combined with consideration of fiscal requirements related to capital investments that are mandated. 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 Capital Improvement Plan (CIP). ~~The table below includes rate adjustments imposed since the Department~~ entered the Consent Decree.

WASD Bond Ratings as of September 2019	
Bond rating evaluation by Fitch Retail Rate Adjustment	A+
Bond rating evaluation by Standard and Poor's	Aa-
Bond rating evaluation by Moody's	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 2019, WASD had $2.521 billion in total 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 Board of County Commissioners:

- 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