



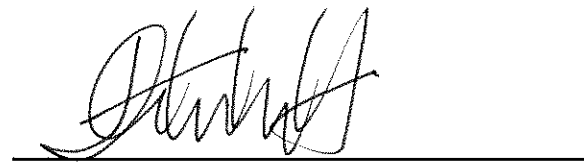
Miami-Dade Water and Sewer Department Business Plan

Fiscal Years: 2018 and 2019
(10/1/2017 through 9/30/2019)

Approved by:



Lester Sola, Department Director



Jack Osterholt, Deputy Mayor

Date

Date

Plan Date: February 12, 2018

Delivering Excellence Every Day



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DEPARTMENT OVERVIEW

Department Mission

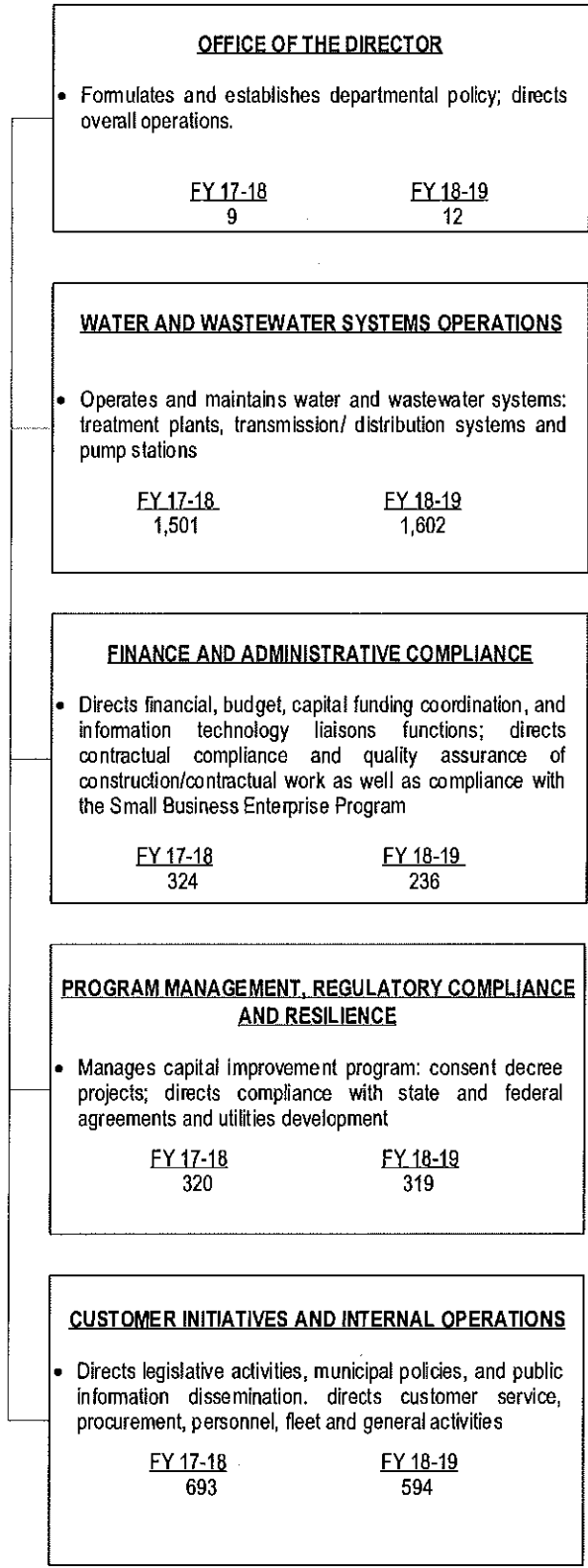
The Miami-Dade Water and Sewer Department (WASD or Department, interchangeably) is committed to providing Miami-Dade County's residents, businesses, and visitors with high-quality drinking water and wastewater services; providing for future economic growth via progressive planning; implementing water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

Table of Organization

Following is a functional table of organization for WASD.



WATER AND SEWER DEPARTMENT



The FY 2018-19 total number of full-time equivalent positions is 2,763



Strategic Alignment Summary

In accordance with Miami-Dade County's Strategic Plan, WASD contributes to the goal of ensuring **Effective Infrastructure Services** for residents, businesses and visitors to Miami-Dade County via the provision of **adequate potable water supply and wastewater disposal services** (Miami-Dade County Strategic Plan, p. 23, **Goal N12/Objective N12-1**).

The Department also aligns itself with the below Strategic Plan goals and objectives. WASD's identifier, "Quality. Value. Economic Growth.", presents a natural association with the County's Strategic Plan, and epitomizes WASD's mission.

Neighborhood and Infrastructure

N11 Responsible growth and a sustainable built environment

N11-1 Promote mixed-use, multi-modal, well designed and sustainable communities

Economic Development

ED4 Entrepreneurial development opportunities within Miami-Dade County

ED4-3 Expand opportunities for small businesses to compete for County contracts

ED5 Revitalized communities

ED5-1 Provide adequate public infrastructure that is supportive of new and existing businesses

ED5-2 Develop urban corridors (TUAs, CRAs, Enterprise Zones, NRSAs) as destination centers

General Government

GG1 Friendly Government

GG1-1 Provide easy access to information and services

GG1-2 Develop a customer-oriented organization

GG1-3 Foster a positive image of County government

GG1-4 Improve relations between communities and governments

GG2 Excellent, engaged workforce

GG2-1 Attract and hire new talent

GG2-2 Develop and retain excellent employees and leaders

GG2-3 Ensure an inclusive workforce that reflects diversity

GG3 Efficient and effective service delivery through technology

GG3-1 Ensure available and reliable systems

GG3-2 Effectively deploy technology solutions

GG4 Effective Management Practices

GG4-1 Provide sound financial and risk management

GG4-2 Effectively allocate and utilize resources to meet current and future operating and capital needs



Our Customers

WASD, as one of the largest public utilities in the United States, is committed to providing the highest level of customer service to its customers and the public. The Department strives to provide dependable potable water and wastewater services at the lowest available cost to its approximately 465,000 retail water/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, 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.

Our customers are our priority and the inspiration for all we do. To this end, WASD is administering and implementing a systematic and responsible Capital Improvement Program (CIP). At \$11.4 billion, WASD's CIP is one of the largest in the United States that will, over the next 15 to 20 years, enhance and upgrade WASD's infrastructure utilizing state-of-the-art technology. The CIP is an economic engine that, during the first decade alone, will have an economic impact on our community of \$24.9 billion, create approximately 16,500 new jobs, increase service capacity to support more businesses and residences and improve the reliability and sustainability of the water and sewer system.

Communicating with our customers is a key component of the CIP. Information and updates about the various components of the CIP, including the Consent Decree (CD), Ocean Outfall Legislation (OOL) and Pump Station Improvement Program (PSIP) among others, is provided through a variety of media including radio, television, print, community events, transit bus benches, movie theatres, publications and WASD's website. Recently, WASD partnered with WAZE to provide WASD construction updates to the traffic network. Additionally, WASD utilizes social media, including Facebook, Twitter, Instagram and YouTube, to capture a wider and more diverse audience.

Three full service WASD Customer Service Centers (Douglas Facility, South Dade Government Center, and Martin Luther King Center) supplement the Customer Care Call Center and web portal, as well as several other payment-only locations, for customer assistance and transactions. A Customer Service Representative is stationed at each of the office entrances to greet incoming customers and provide immediate assistance. Minor transactions and payments are referred to self-service kiosks located in the Customer Service Center, thereby eliminating the need to wait for a representative.

WASD's new Internet Self-Service application, which interfaces with the back-end Customer Care and Billing (CCB) system, allows customers to request new service, pay their bill and update their contact information online. Soon, customers will be able to request the disconnection of service and request pool credits and high bill investigations via the web portal as well. The online chatbot launched in FY 16-17 continues to be expanded to respond to inquiries from customers who would otherwise call the Customer Care Center or visit one of the walk-in centers. WASD also introduced new functionality to the Interactive Voice Response (IVR) system which now identifies customers by the phone number they are calling



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via an Automatic Number Identifier (ANI) lookup feature. This gives customers access to current account information and several self-service options 24-hours a day.

To achieve greater efficiencies, the Retail Customer Service Division is partnering with the Water Conversation unit on a pilot program where approximately 3,200 customers currently on an Automatic Meter Reading (AMR) system will begin to receive quarterly reports that will provide information to them on their water usage. As part of this pilot, customers will also be given 24-hour access to a customer portal where they will be alerted to potential leaks within a 48-hour period, along with many other account specific features and information.

Customer service improvements have also been made at the Utilities Development Division (UDD). UDD's integration with the Regulatory and Economic Resources (RER) Department provides expanded drop-off options for construction plans and allows for the simultaneous review of plans by both WASD and RER ensuring satisfaction and compliance with County Ordinances and expedited reviews. Also, UDD's Additional Service Program (ASP) notifies affected property owners of the requirement, per County Code, to connect to the water and sewer system, thereby minimizing future pavement cuts and traffic disruptions at the time the customer is ready to connect. The Revenue Recovery and Disbursement Unit (RRDU) brings project review full circle by following up on pending projects where water and sewer connection charges may be due. The RRDU also manages and processes direct payments for refunds to customers.

KEY ISSUES

Following are key issues to be addressed in the current and upcoming fiscal years that are reflected in WASD's budget submission:

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 \$11.4 billion Capital Improvement Program 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 FY 2018-2023 Adopted



Capital and Multi-Year Plan (CIP) includes a list of 179 CD related projects (81 line items) to be completed within 15 years at the cost of \$1.8 billion.

- The CD outlines certain Capacity, Management, Operations and Maintenance (CMOM) projects 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 Adequate Pumping, 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 January.1, 2018, all CMOM programs have been approved except the Wastewater Treatment Plant Operation and Maintenance Program, which is conditionally approved, pending satisfactory answers/response to the provided comments.

Pump Station Improvement Program

WASD's Pump Station and Improvement Program (PSIP) ensures that any pump station that is out of compliance is upgraded and certified to meet the United States Environmental Protection Agency (USEPA) schedule as agreed under the CD.

- The PSIP, involving an investment of \$161 million and encompassing 147 projects, includes pump stations, force mains and sanitary sewer gravity lines. This program ensures that any pump station that is out of compliance with a given criteria is upgraded and certified to meet the United States Environmental Protection Agency (USEPA) schedule as agreed under a federal consent decree. Moratoria of these pump stations impede the economic development in their service areas, thus, bringing these pump stations into compliance is critical. In addition to remediation, the PSIP includes upgrades to the utility's wastewater collection and transmission system for sea level rise and climate change.

Ocean Outfall

State laws restricting the routine use of two ocean outfalls for treated wastewater disposal have significant cost and rate implications. In 2008, the Florida legislature approved, and the Governor signed into law, the Ocean Outfall legislation (OOL) requiring that all wastewater utilities in Southeast Florida that use ocean outfalls to dispose of treated wastewater, reduce nutrient discharges by 2018, cease the use of outfalls by 2025, and reuse 60 percent of the wastewater flows by 2025.



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- WASD's OOL program includes 72 projects totaling \$5.8 billion, subject to funding availability. At present, the program is on track and has progressed from the planning phase to the design phase with the issuance of design contracts to pipeline, pump station and wastewater treatment plant design consultants. Associated requirements of the OOL call for more stringent treatment and water quality standards, while complying with requirements of operation and maintenance of Public Water Systems, including the removal of lead components in water services, and limited use of the Biscayne Aquifer to meet future water supply needs. After years of diligent efforts, revisions to the OOL have resulted in \$1 billion cost avoidance to the County to date.

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 plants and wastewater treatment plants as well as 15,000 miles of pipes. 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 253 projects totaling \$1.73 billion that are scheduled to be completed by 2027. Of these projects, 203 are active with 36 in the planning/pre-design/procurement phase and 116 under construction.
- In addition to the projects currently in the Program, nearly \$2 billion in new projects are under development in the Planning Division. These projects will transition into active design and construction, thereby expanding the program to approximately \$3.7 billion.
- 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 project 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.

- 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.



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- Major commercial corridors where significant clusters of commercial and industrial zoned property lack access to sewer infrastructure include: 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 in issuing a 20-Year Water Use Permit to the County which requires a reduction in water losses in the County's distribution system. WASD has completed Phase 1 of the CLR program.

Utilities Development

Developer donations of water and wastewater infrastructure and timely processing is of key importance to the Department. The Department needs to keep pace with the 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. As well, the CD calls for maintenance of the Department's wastewater transmission and collection system (WCTS) hydraulic computer model. This work, and the equivalent for the Department's water transmission and distribution system, are 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 with the Engineering Design Services and Construction phase is needed. As the department continues to add capacity, new pump stations and buildings with modern technology, HVAC staff requires continuing education and adequate staffing levels in order to work with these latest technologies.
- Technology continues to be at the forefront of WASD operations to improve productivity, including budget and accounting, customer information, geographic information systems, enterprise asset management, system control data, project tracking, schedules, security, and metering. The core systems that support these functions require maintenance, training, and funding for them to continue to serve their



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purpose. Additionally, technology changes are introduced by hardware and software suppliers, internal business improvements, regulations, and expanded customer expectations.

- Beyond these core systems, the Information Technology Department, working with WASD, has introduced innovative solutions and technologies that extend the department's capabilities by improving productivity, efficiency, and enabling better data analysis to improve decision-making; foster continued improvements 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. Among these are new GIS tools to support better analysis of the department's infrastructure; Big Data Analytics solution based on Microsoft Azure Cloud to handle the SCADA data; asset management mobile solutions to support field and warehouse operations; 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) Chatbox, which allows customers to ask questions using natural language, and to request payment extensions. 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 implementation of the projects in the CIP to provide adequate facilities to meet capacity requirements, comply with regulations and infrastructure renewal and replacement as well as the support systems associated with implementation, including climate change mitigation and adaptation strategies. Initiatives include the development of more detailed project scheduling to identify key milestone dates, improved forecasting of required resources and improved tracking of project phases to ensure timely project delivery and use of associated appropriated funds.

Consent Decree

- Continuation of existing Capacity Management Operation and Maintenance (CMOM) programs and 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, Preventive Maintenance, Assessment and Rehabilitation; Wastewater Treatment Plant Operations and Maintenance; and Financial Analysis Programs.

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- Further utilization and optimization of existing technology and implementation of additional enhanced technology and key automated support systems, providing insight and meaningful monitoring, tracking, and reporting to meet all CD requirements and support the overall operation and management of the enterprise.

Pump Station Improvement

- The PSIP includes 147 projects, and a total of 75 of those projects have been certified, completed or substantially completed to date. There are an additional 23 projects under construction that are scheduled for completion over the next few months.

Ocean Outfall

- Ensure compliance with Ocean Outfall Legislation (OOL) through systemwide wastewater facility upgrades including construction of one new wastewater treatment plant and reducing flows to two existing treatment plants.
- Continue to work with the Department of Justice and the Environmental Protection Agency in prioritizing and realigning milestones and mitigating penalties for \$5.8 billion in projects in compliance with OOL Legislation.

Flow Reduction

The Flow Reduction Program is comprised of two main components: Inflow and Infiltration (I/I) reduction and Pump Station Optimization (PSO) by implementing real time controls at Pump Stations. By leveraging these two components, WASD aims to significantly and cost effectively reduce average and peak flows in the sewer system. In addition, the reduction of flows into the conveyance system provides additional savings in capital infrastructure while helping to comply with Wellfield Protection Ordinance regulations by December 2018.

- The Program aims to address I/I repairs for basins monitored by Pump Station Compliance Section (PSCS) and different programs such as PSIP and PMCM.
- The Program has completed over 2,000 projects in the previous two years, including work on CIP Liners, Dig & Replace, Large Diameter Cleaning and Manhole Repairs.
- Currently, the Program has seven contracts totaling \$25 million scheduled to target I/I repairs.

Asset Management

- Per Consent Decree (CD) requirements, WASD must establish a sustainable Asset Management (AM) program. However, the AM development, as mandated by the CD, does not include any integration of the water system.



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- Once implemented, potential AM program benefits include: Improved Quality of Service & Safety; Improved Response Time; Improved Ability to Meet Changing Customer Expectations; More Reliable Systems & Services; and Greater Accountability. A final AM Roadmap is scheduled for completion in March 2018.

e-Builder Integration

- Implement the eBuilder software to manage the projects/programs involved in WASD's capital plan and donations process. eBuilder will be integrated with other WASD systems to facilitate communication and improve coordination within project teams, while increasing visibility and reducing risk. In all, there are 31 WASD projects that will be integrated into e-Builder by May 2018.
- Continue leveraging the deployment of e-Builder within WASD to drive efficiencies and allow for enhanced quality control within projects.

Resilience Program

- Develop and implement a utility-wide energy strategy that will optimize WASD's energy usage, while advancing resource recovery and other efforts intended to significantly reduce the department's electrical consumption.
- Further develop and advance WASD's resilience framework and planning efforts, including vulnerability analyses, facility hardening, and design guidelines and standards. Comprehensively address disaster preparedness, cyber security, energy, terrorism, and other potential disruptions to utility operations and service. This initiative aligns with Miami-Dade County's efforts through the Rockefeller Foundation's 100 Resilient Cities Program and the efforts of the Miami-Dade County Office of Resilience. In an effort to solidify a working partnership with other local municipalities facing similar resilience issues, WASD applied to the City Water Resilience Framework Challenge with the participation of City of Miami Beach, City of Miami, and the Miami-Dade County Office of Resilience. As a result of the submission, WASD will be embarking on a partnership with international engineering firm Arup to develop the City Water Resilience Framework, which will ultimately be used to support cities in making more resilient decisions.
- 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.
- As part of its resiliency efforts, the Department is focusing on implementing efforts to manage/ reduce energy consumption. To this end, the Department requires the



development of an energy benchmarking tool for WASD's four energy segments, including buildings, pump stations, water plants, and wastewater plants.

Transmission Line to Port Miami

- The design of a 42-inch water transmission line, located at the intersection along Biscayne Boulevard and NW 5th Street to PortMiami, will enhance the reliability of the system and provide better water pressure and fire protection to the port. Construction is expected to start in February 2018 with projected completion by the end of the year.

Water and Wastewater Improvements

- Continue implementation of improvements, repair and replacement of water and wastewater infrastructure to include water service expansion in southwest Miami-Dade County. The construction of the South Miami Heights Water Treatment Plant and Wellfield seeks to improve reliability in water service and quality by allowing for the decommissioning of satellite plants with over 40 years of service. Construction of the plant will benefit the consumers in the southwest area and will bolster water treatment production capacity. The plant is located at 11800 SW 208 Street in County Commission District 9.
- 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 resulting savings is approximately \$1 million in operating costs over the asset's 20-year life cycle.
- Continue the replacement of undersized and aged water mains in the southwest area to include unincorporated Miami-Dade County, the City of Homestead and Florida City. Current aging water mains contain leaks and are not providing adequate water pressure or fire flows. The increasing population and current conditions demand adequate infrastructure, increased water capacity, the provision of high quality water and the protection of the public health and safety.
- Improvements to the Wastewater Transmission Mains and Pump Stations and the Wastewater Telemetry System in North Miami-Dade will allow the Department to increase the flexibility of the wastewater systems and improve their ability to monitor and control wastewater flows. The estimated annual operating impact to the department will amount to approximately \$2.34 million beginning in FY 2017-18.

Other Capital Initiatives

- Embark upon the implementation of an Integrated Master Plan. The Integrated Master Plan will develop a framework to comprehensively address WASD's water and sewer infrastructure 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.



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- WASD remains committed to cultivating and encouraging local small businesses to bid for department projects especially as a part of the \$11.4 billion CIP.
- Provide continuous monitoring of proposed rules and regulations by State and Federal agencies, identifying their impact on WASD operation, propose modifications and actively participate in the rule making 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 (90001), among others.
- Ensure compliance with the 20-year Water Use Permit (WUP) through implementation of alternative water supplies (AWS), water conservation and water loss reduction projects; the Northwest Wellfield Surface Water Treatment Plant (WTP) for the Hialeah/Preston service area; 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.

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.



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- Prioritize the 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 system for available capacity for water and wastewater service for new projects, and performance of internal regulatory compliance inspection and audits of permitted operating facilities.
- Maintain up-to-date facilities master plans and standard operating procedures 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 and for which allocation can be approved by the South Florida Water Management District. Allocation increases 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 implement alternative wastewater pump station operational modes to reduce wet weather water infiltration into the sewer. These reductions will 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.
- The Department's Regulatory Compliance & Monitoring Division is increasing attention and evaluation of WASD's participation in the countywide Recycling Program launched in 2016, in order to ensure compliance with the State's requirement to attain a 75% recycling rate by 2020.
- The Field Services Section is in the process of upgrading its Field Collection (Itron) system application used for meter reading. The latest version includes the Itron Mobile meter data collection solution designed to transform the meter reading function. It enables the department to get the most value, productivity and efficiency from the Field Services workforce while also enhancing employee safety. It provides flexibility, allowing staff to choose the best device to perform the meter reading function. It also facilitates the more efficient transfer of data remotely via wireless or through a Wi-Fi connection, allows for alerts to staff, mapping functionality, and real-time data transmission, all at a lower cost. In addition to system upgrades, the Unit is



analyzing the use of smaller, lighter, more durable and cost-effective, rugged handhelds and tablets to replace existing FC300 devices.

Customer Service and Community Outreach

- Continue to provide high quality customer service. The Customer Service Division responds to approximately 570,000 calls annually and the average customer wait time is less than seventy seconds. Unforeseen events and patterns in customer behavior drive wait times up so that the customer experience is not always consistent. The Department continues to analyze business processes and implement advanced technologies to assist with maintaining acceptable wait times. Self-service tools are key in reducing the workload in the call center and provide greater accessibility to customers.
- 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 County-wide construction and permitting functions; and redesigning a more customer-friendly website that provides more online functionality such as the payment of connection charges online.

Finance

Nationwide, water and wastewater utilities of comparable size experienced a Maintenance Index of 3.7 percent average during 2016; based on the United States Department of Labor, Bureau of Labor Statistics, 2016 Consumer Price Index (CPI), All Urban Consumers, Water and Sewerage Maintenance U.S. city average. Future rate increases to retail and wholesale customers above the maintenance index are critical to fund the Capital Improvement Plan and additional operating expenses that relate to improvements.

The Board of County Commissioners (BCC) has passed various Resolutions and Ordinances increasing water and wastewater retail rates as well as adjusted wholesale water and wastewater rates per thousand gallons to support increased costs of operations and maintenance. These rate increases have also funded debt issuances necessary to complete capital projects in compliance with the 20-Year WUP and conditions, state-mandated OOL, CD, sea level rise and other regulatory requirements. Future water and wastewater retail and wholesale rate increases are also projected to continue funding the Multi-Year Capital Improvement Plan (CIP). The table below includes rate adjustments imposed since the Department entered the Consent Decree:



History of Customer Rate Adjustments			
Fiscal Year	Effective Date	Retail Rate Adjustment	Ordinance/ Resolution
FY 2013-14	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

Effective October 9, 2017, retail rate structure changes were adopted 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. The modification adopted in FY 2017-18 will generate a six percent revenue increase to cover current and future operations and debt obligations.

Multiple bond issues adopted by the Board of County Commissioners on June 4, 2013 authorizing the issuance of Miami-Dade County Water and Sewer systems bonds (not to exceed \$4.245 billion in multiple bonds) will 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 will 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 bonds 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 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 Department's legal credit structure.

Miami-Dade County Water and Sewer Revenue and Revenue Refunding Bonds, Series 2017, was executed for a total of \$1.03 billion. Series 2017A Revenue Bond for \$414.6 million provides an additional \$400 million to fund the Multi-Year Capital Improvement Program, and Series 2017B Revenue Refunding Bond for \$624.7 million realizes savings of \$101.4 million by refunding Series 2010.

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.

The Department submitted a Letter of Interest and was invited to apply to obtain low interest federal funding through the WIFIA program. The initial application will provide approximately \$78.6 million in funding for the Ocean Outfall Discharge Reduction and Resiliency Enhancement Project. This project will enable the routine elimination of discharges to the ocean to reduce nutrient loadings by redirecting effluent discharges from the ocean outfalls to injection wells. This will allow for compliance with the State of Florida's Ocean Outfall Legislation (OOL) which requires the use of Class I injection wells as the primary wastewater disposal method by 2025.

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 WateReuse—with advisory support from the U.S. Environmental Protection Agency (EPA), WASD will continue to focus on several initiatives that will assist in complying with the business model developed by this partnership and also maintain our status as a

Departmental Business Plan and Outlook
Department Name: Miami-Dade Water and Sewer Department
FY2017-18 & FY2018-19

leader in the industry. WASD's success with initiatives including water quality, sustainability and resilience, efficiency and economic growth have contributed to this honor.

The water system infrastructure averages 45 years with the oldest pipes in the system dating back to the mid 1920's. Similarly, the wastewater infrastructure averages 55 years with the oldest pipes in the system dating back to the 1930's or earlier. The Department's CIP includes the testing and replacement as needed, of all large diameter concrete water and wastewater pipes; substantial overhauls of all the water and wastewater plants; reconstruction of nine seriously deteriorated sewage pump stations and 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. WASD has identified the need to replace or rehabilitate approximately 2,600 miles of the total 6,300 miles of wastewater pipes. Similarly, the Department has identified 160 miles of sewage pipes that need to be rehabilitated along with the CD estimated at \$1.8 billion. The Central District Wastewater Treatment Plant, a large portion of which was constructed in the 1950's, 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.

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% 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 targeted 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 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 of the Future." 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 industry's best management practices.

With an improving local economy, the number of developer donation construction projects is increasing rapidly. WASD's water and wastewater mains and pump stations systems have increased in size and capacity due to developers designing, building, and donating this infrastructure to the Department. The UDD's processes relating to developer, business and resident first-time connections to water and wastewater services, are being overhauled for improved efficiency and customer service. In addition, new permit types have been added for review and approval by WASD staff (2-detached additions & 3-interior alterations) for all Municipalities ("M" numbers in unincorporated and incorporated area-located projects) for both residential and commercial, which were currently reviewed and activated by RER. WASD anticipates adding certificates of use (CU) categories, via cooperation with RER-Zoning, to



ensure that proper reviews and approvals are completed with projects applying for certificates of use when changing the square footage or use, in conjunction with Ordinance 89-95 and Chapter 24.

Customer Service

To continue updating and improving the customer experience, WASD's Retail Customer Service Division (CSD) incorporates best management practices which include modern technology and strategies that focus on improved efficiency and performance levels.

Call center performance has consistently improved in the last two years through effective management, advanced technology, extended hours, and self-service tools. Moving forward, CSD will continue to expand the self-service options to include all key activities such as requesting start service, transfers, and reconnects. The chat-bot will follow suit with additional functionalities beyond payment extensions. These tools will further improve access and overall customer experience.

The Department continues to pursue a Project Management contract to assist with the future implementation of an Advanced Metering Infrastructure (AMI) system which uses smart water meters to obtain real-time reads remotely. This initiative allows the Department to use advanced technology to provide better customer service through timely data of water consumption trends and spikes which ultimately affect water bills. It will also create efficiencies through the automation of the meter reading function currently being performed manually for approximately 98% of the service area. Lastly, AMI can facilitate the capital improvement efforts of the department by identifying the more critical areas resulting from the data from the AMI system and reflective of the health of the distribution system.

Resilience

The Department has become a recognized national utility leader in planning for the challenges of climate change, having been recently named "Resilient Utility of the Year" by the Resilient Utility Coalition.

Operating in a sub-tropical 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. Now a longer-term challenge has been recognized in the form of climate change that is causing sea level to rise at an increasing rate, rainfall events to be more intense, and the possibility of more numerous or intense tropical storm activities over time.

The geological realities of southeast Florida mean that as sea level rises, shallow ground water levels also rise. At the same time, the regional drainage system, which operates largely on gravity moving higher fresh water levels from the land to the lower water levels of the ocean, will operate less efficiently as the sea level rises. As sea level rises, salt water will



eventually intrude into the fresh water that is the main source of drinking water. The salt can be removed, but at a significant cost in facilities and energy. Over the past ten years, the Department has made significant investments in evaluating through sophisticated computer modeling programs the increasing risk to the coastal wastewater treatment plants from storm surge and flooding and the likely rates of salt water intrusion into the ground water that supplies our water supply wells. New design guidelines have been developed to mitigate these risks so that the very substantial planned renewal of the wastewater plants can be done in ways to limit the damage from storm surge and flooding over the expected life of those renewed assets.

Through the Four County Compact established with Palm Beach, Broward, and Monroe counties, an agreement has been achieved for future sea level rise projections extending to 2100. These assumptions are being incorporated into all design work for the very large capital investments in water and sewer infrastructure over the next twenty years.

Also, the Department is incorporating energy efficiency into all its facilities, thereby reducing greenhouse gas emissions associated with utility services and avoiding escalating energy costs. The Department's work is now being utilized in the County's larger infrastructure assessment across all departments to fulfill the Board mandate to incorporate sea level rise considerations into the design of all County projects.



Attachment 1

Business Plan Report

The following Business Plan Report for the Water and Sewer Department is drawn from the ActiveStrategy Enterprise Strategy and Performance Management software program.



Business Plan Report - Water and Sewer Department (FY 2017-2018)

Scorecard	Description	Owners
Water and Sewer Department (FY 2017-2018)	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.	Sola, Lester
1.0 Customer		
Objective	Description	Owners
1.1 Maintain high level of responsiveness to customer service requests (WASD)		Garcia, Marcelo M. (WASD); Mendez, John; Arias, Ruben J. (WASD); Bedoya, Juan C. (WASD); Toledo, Andy W. (WASD); Martinez, Francisco J. (WASD)
Measures Linked to Objective	Period	Variance
Percent of all non-emergency requests/calls dispatched in less than 3 business days	'17 FQ2	-5.21%
		99.00%
		93.79%
		(423.00 / 451.00)
<div style="border: 1px solid black; padding: 5px;"> <p>↑ % of time <3days to reply to customer non-emergency requests</p> <p>Legend: Goal (dotted line), Actual (solid line), Trend (dashed line), Actual - F-YTD (shaded area)</p> </div>		
Response time to sewage overflows	'17 FQ4	-5 min
		50 min
		45 min
		-5 min
<div style="border: 1px solid black; padding: 5px;"> <p>↓ Response time to sewage overflows</p> <p>Legend: Goal (dotted line), Actual (solid line), Trend (dashed line), Actual - F-YTD (shaded area)</p> </div>		

Business Plan Report - Water and Sewer Department (FY 2017-2018)

Final Plan Review Approval turn-around time (Qty)

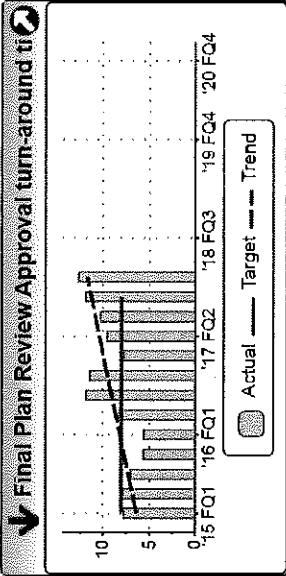
13 Days

n/a

n/a

18 FQ1

Garcia, Sergio (WASD);
Antas, Ruben J. (WASD)



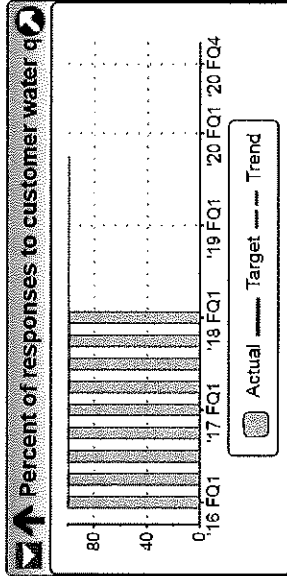
Percent of responses to customer water quality complaints per Lab Section in <24 hrs

18 FQ1

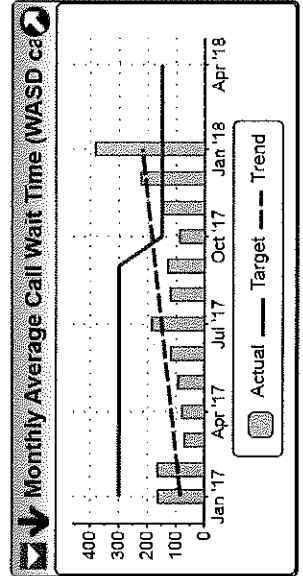
99.62% (259.00 / 260.00)

100.00%

-0.38% Toledo, Andy W. (WASD)



Objective	Description	Period	Actual	Target	Variance	Owners
1.2 Continue to make information available to customers in a timely manner (WASD)		Jan '18	383 sec	150 sec	-233 sec	Mendez, John
Measures Linked to Objective						
Average Wait Time Per Call monthly (WASD- Retail Customer Service)						Martinez, Aimee (WASD); Rivero, Yanina (WASD); Mena, Jason J. (WASD)



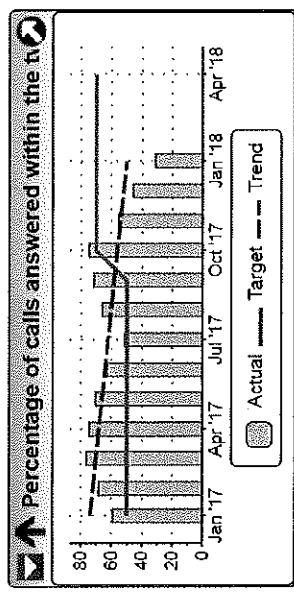
Business Plan Report - Water and Sewer Department (FY 2017-2018)

Percentage of calls answered within the two-minute threshold (monthly)

Jan '18

31.10% 70.00% -38.90%

Rivero, Yanima (WASD);
Martinez, Aimee (WASD);
Mena, Jason J. (WASD)



Objective

1.3 Ensure compliance with 20-Year Water Use Permit

Description

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

Owners

Goldenberg, Bertha M. (WASD);
O'Rourke, Richard M. (WASD);
Negahban, Sherry (WASD);
Cueto, Josenrique (WASD)

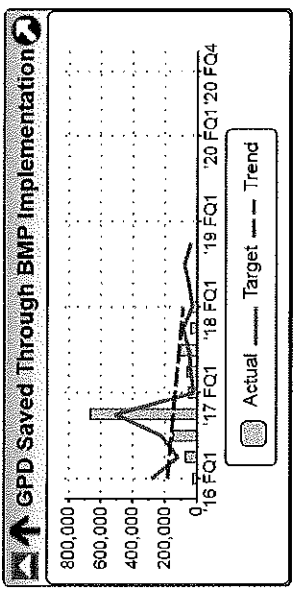
Measures Linked to Objective

Gallons of water saved per day (GPD) through implementation of the Water Use Efficiency Plan

'18 FQ1

Actual 37,447GPD Target 30,000GPD Variance 7,447GPD

Owners Cueto, Josenrique; Martin, Patrick (WASD)

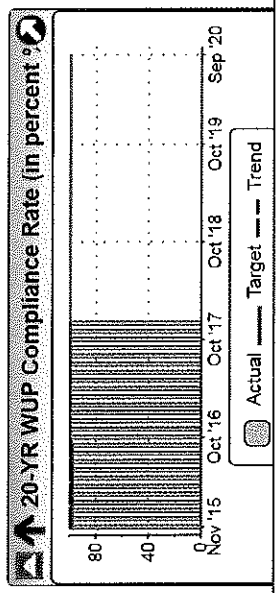


20-YR WUP Compliance Rate (in percent %)

Dec '17

100.0% 100.0% 0.0%

Owners Goldenberg, Bertha M. (WASD);
Cueto, Josenrique; Martin, Patrick (WASD)

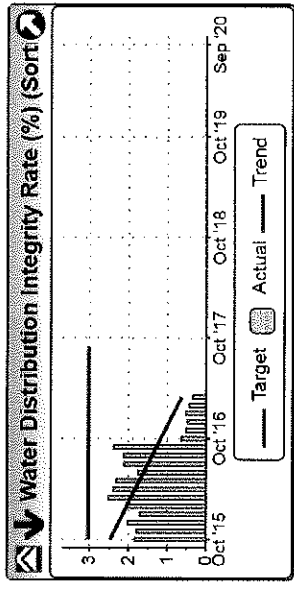


Water Distribution Integrity Rate (%) (Monthly)

0.34

(29.00 / 8,574.00)

Mar '17



3.03

(29.00 / 8,574.00)

Mar '17



Objective
1.4 Ensure Adequate Water and Wastewater Capacity (NI2-1)

Description

System-wide Available Water Supply Capacity From the Biscayne Aquifer

Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective

Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective

Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective

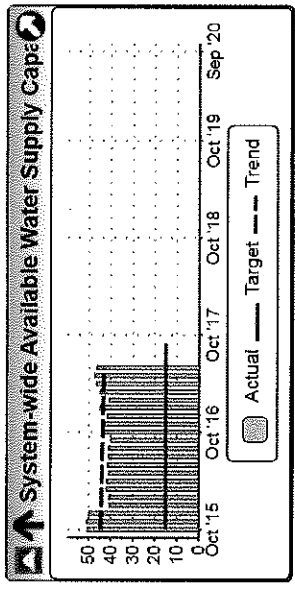
Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective



15.00MGD

46.26MGD

Jun '17



Measures Linked to Objective

Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective

Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective

Owners
Goldenberg, Bertha M. (WASD); Cueto, Josenrique (WASD)

Actual
46.26MGD

Jun '17



Measures Linked to Objective

Owners
Fallon Jr., Howard J. (WASD); Sosnikhina, Irina (WASD); Valdes, Maria A. (WASD)

Actual
9.4days

Dec '17



Measures Linked to Objective

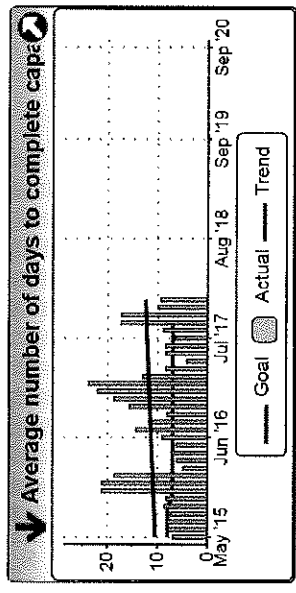
Owners
Fallon Jr., Howard J. (WASD); Sosnikhina, Irina (WASD); Valdes, Maria A. (WASD)

Actual
9.4days

Dec '17



Measures Linked to Objective



n/a

9.4days

Dec '17



Measures Linked to Objective

Owners
Fallon Jr., Howard J. (WASD); Sosnikhina, Irina (WASD); Valdes, Maria A. (WASD)

Actual
9.4days

Dec '17



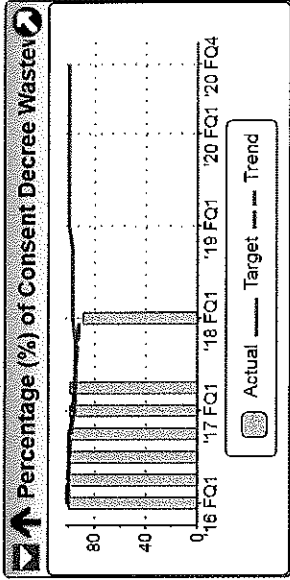
Measures Linked to Objective

Objective **Description** **Owners**

1.5 Ensure timely completion of Consent Decree Wastewater Capital Improvement projects (NI2-1)

Moncholi, Manuel E. (WASD);
Edwards, Daniel J. (WASD);
Eckler, Scott (Consultant)

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Percentage (%) of Consent Decree Wastewater Projects on or before Schedule (sortie)	'18 FQ1	88.9% (72.0 / 81.0)	97.0%	-8.1%	Eckler, Scott (Consultant); Moncholi, Manuel E. (WASD); Edwards, Daniel J. (WASD)

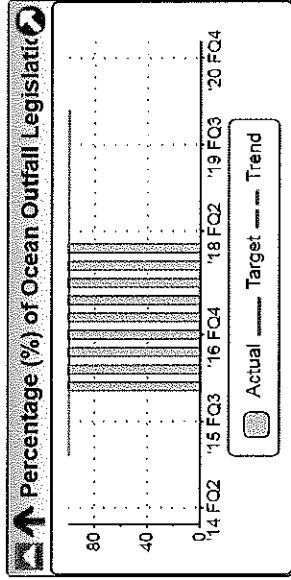


Objective **Description** **Owners**

1.6 Ensure timely completion of Capital Improvement Projects related to the Ocean Outfall Legislation Program (NI2-1)

Ferguson, James (WASD)

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Percentage (%) of Ocean Outfall Legislation (OOL) Projects on Schedule	'18 FQ1	100.00% (28.00 / 28.00)	100.00%	0.00%	Bermudez, Milton E. (Consultant); Ferguson, James (WASD)



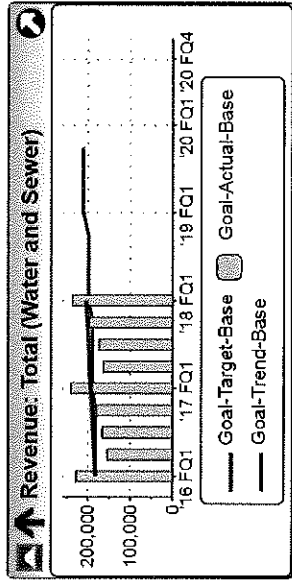
Business Plan Report - Water and Sewer Department (FY 2017-2018)

2.0 Financial

Objective: 2.2 Meet Budget Targets (Water and Sewer) (GG4-2)

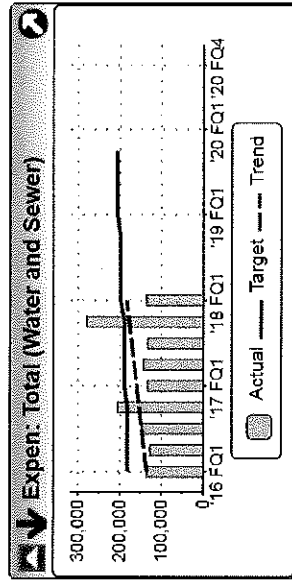
Owners: Suarez, Maria C. (WASD); Morris, Frances G. (WASD)

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Revenue: Total (Water and Sewer)	'18 FQ1	\$237,559K	\$199,103K	\$38,456K	Suarez, Maria C. (WASD); Morris, Frances G. (WASD)



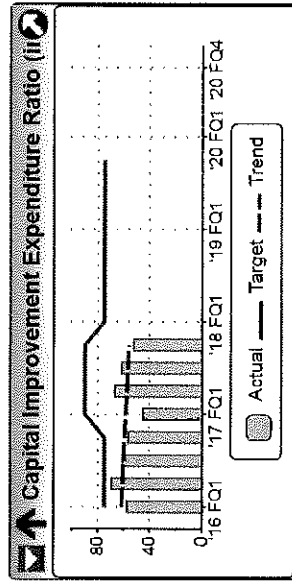
Expend: Total (Water and Sewer) '18 FQ1 \$136,379K \$199,103K \$62,724K

Owners: Suarez, Maria C. (WASD); Morris, Frances G. (WASD)



Capital Improvement Expenditure Ratio (in Percent) '17 FQ4 53% 90% -37%

Owners: Charran, David (WASD); Morris, Frances G. (WASD)



Business Plan Report - Water and Sewer Department (FY 2017-2018)



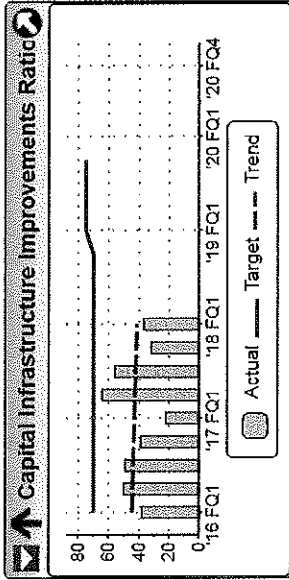
Capital Infrastructure Improvements Ratio
(in percent) General Obligation Bonds
(GOB) Funds

'18 FQ1

37%
1,226,024 / 3,333,132

70%

-33% Charran, David (WASD);
Morris, Frances G. (WASD)



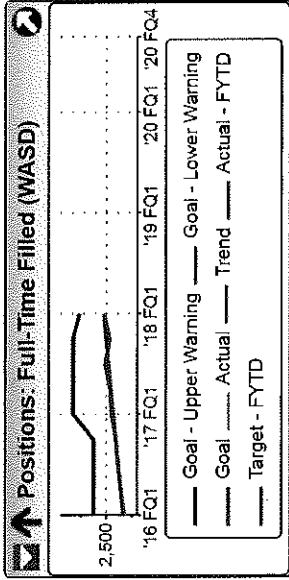
Positions: Full-Time Filled (WASD)

'18 FQ1

2,519

2,763

-244 Suarez, Maria C. (WASD);
Morris, Frances G. (WASD)



3.0 Internal

Objective	Description	Owners
3.1 Continue implementation of water and wastewater system capital projects -	Proceed with planning and construction of water and wastewater capital projects which will modify or enhance existing water distribution system, improve and protect wellfield, and upgrade water and wastewater treatment. These are non-Consent Decree capital projects.	Goldenberg, Bertha M. (WASD); Yoder, L. Douglas (WASD); Cueto, Jose Enrique (WASD)
3.2 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)

Business Plan Report - Water and Sewer Department (FY 2017-2018)

Compliance with drinking water standards

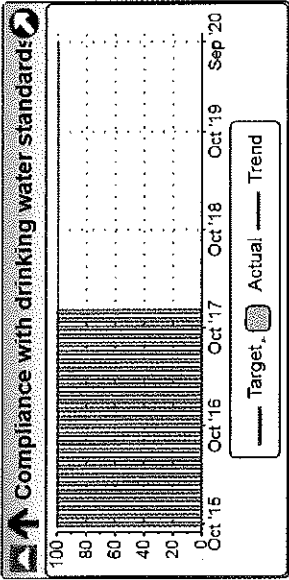


Dec '17

100.00%

100.00%

0.00% Toledo, Andy W. (WASD)



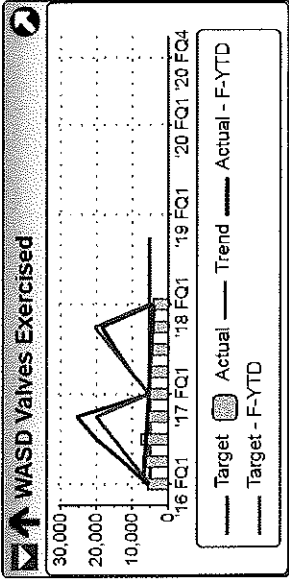
Water Distribution Valves Exercised '18 FQ1



5,100

-1,035

Cabrera, Lazaro (WASD);
Ajrado, Luis M. (WASD);
Llewelyn, Lancelot (WASD)



Objective

3.5 Continue to ensure the proper maintenance and operation of sewage system -Wastewater (N2-1)

Description

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.

Owners

Sola, Lester
Galambos, Albert D. (WASD)

Measures Linked to Objective
Percentage of pumps in service

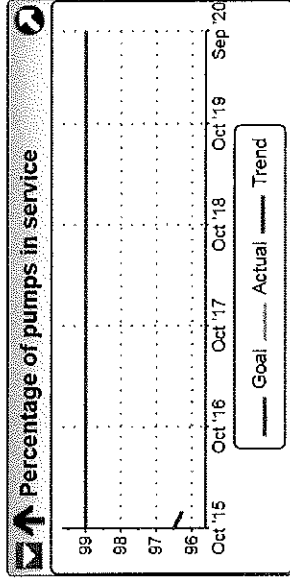
Dec '15

96.29%

99.00%

Variance

-2.71%



Business Plan Report - Water and Sewer Department (FY 2017-2018)

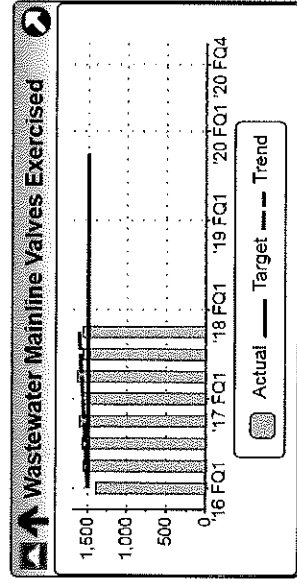
Wastewater Mainline Valves Exercised

'17 FQ4

1,570

1,500

70 Bedoya, Juan C. (WASD)



Lift Station Failure Rate (quarterly)

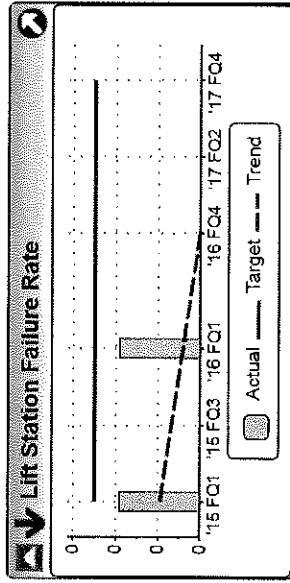
'16 FQ4

0.00

0.13

0.13 Galambos, Albert D. (WASD)

(0.00 / 1,047.00)



SCADA Network Availability Ratio

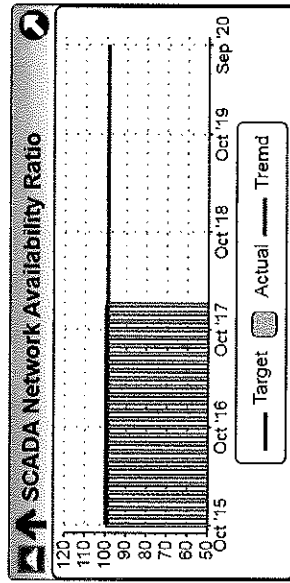
Jan '18

99.60%

99.00%

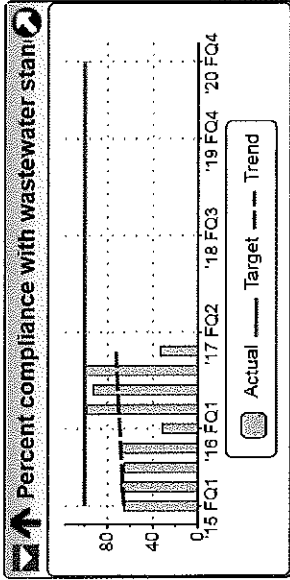
0.60% Adams, Franklin C. (WASD)

(741.00 / 744.00)

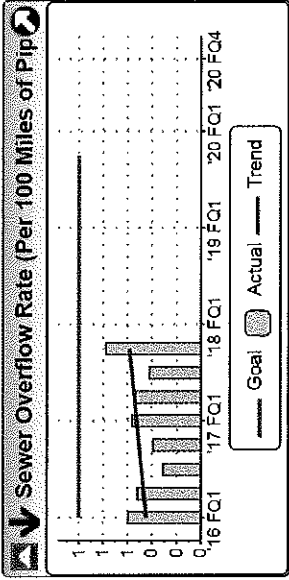


Business Plan Report - Water and Sewer Department (FY 2017-2018)

Percent compliance with wastewater standards (FY Quarterly) '17 FQ1 -66.30% O'Rourke, Richard M. (WASD) 100.00% 33.70% (31.00 / 92.00)



Sewer Overflow Rate (Per 100 Miles of Pipe) '17 FQ4 0.22 Bedoya, Juan C. (WASD) 1.00 0.78 (50.00 / 6,422.00)

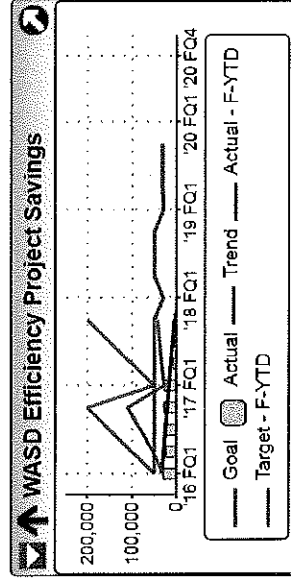


Objective: 3.6 Continuously Improve Government (WASD)

Owners: Goldenberg, Bertha M. (WASD); Cueto, Jose Enrique (WASD)

Measures Linked to Objective: WASD Efficiency Project Savings '17 FQ4

Actual: \$4,472 Target: \$50,000 Variance: \$-45,528 Saez, Deborah (WASD)



Business Plan Report - Water and Sewer Department (FY 2017-2018)

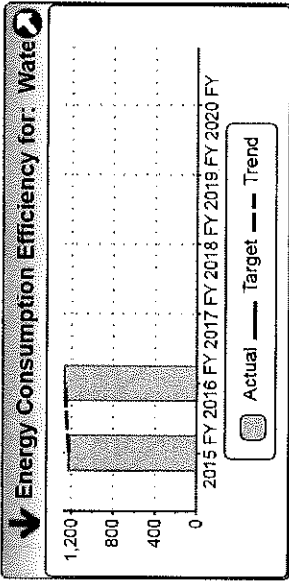
Energy Consumption Efficiency for: Water Supply, Treatment and Distribution (KWH/MG) (GG6-1)

2016 FY

1,270KWH/MG

n/a

n/a Goldenberg, Bertha M. (WASD);
Coro, Ernesto (WASD);
Cueto, Joseenrique (WASD)



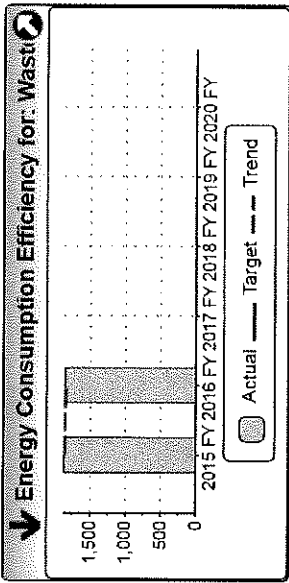
Energy Consumption Efficiency for: Wastewater Collection, Treatment, and Disposal (KWH/MG) (GG6-1)

2016 FY

1,851KWH/MG

n/a

n/a Goldenberg, Bertha M. (WASD);
Coro, Ernesto (WASD);
Cueto, Joseenrique (WASD)



Objective

3.8 Ensure available and reliable systems (WASD) (GG3-1)

Description

Barra, Mario R. (WASD);
Adams, Franklin C. (WASD)

Owners

4.0 Learning and Growth

Objective

4.1 Develop and retain excellent employees and leaders (GG2-2)

Description

Yoder, L. Douglas (WASD);
Brewer-McDuffie, Cecilia (WASD)

Owners

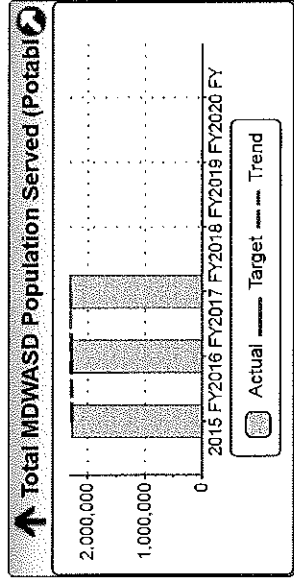
Business Plan Report - Water and Sewer Department (FY 2017-2018)

Measures Linked to Objective	Period	Actual	Target	Variance	Owners
Training Hours per Employee (Quarterly)	'17 FQ1	3.44 (8,176.00 / 2,374.00)	3.75	-0.31	Brewer-McDuffie, Cecilia (WASD); Carcache, Alvaro A. (WASD); Brown, Lakeisha G. (WASD)

Training Hours per Employee

Legend: Target (dashed line), Actual (solid line), Trend (dotted line), Actual - F-YTD (thick solid line), Target - F-YTD (thick dashed line)

Objective	Description	Actual	Target	Variance	Owners
4.2 WASD Operations Facts and Figures					Goldenberg, Bertha M. (WASD); Fallon Jr., Howard J. (WASD); Cueto, Josenrique (WASD); Martinez, Francisco J. (WASD)
Measures Linked to Objective					
Total MDWASD Population Served (Potable Water Service)		2,302,728	n/a	n/a	Goldenberg, Bertha M. (WASD); Fallon Jr., Howard J. (WASD); Cueto, Josenrique (WASD); Valdes, Maria A. (WASD)



Business Plan Report - Water and Sewer Department (FY 2017-2018)

Total MDWASD Population Served
(Wastewater Collection/Treatment)

2016 FY

2,321,569

0

2,321,569

Goldenberg, Bertha M. (WASD);
Fallon Jr., Howard J. (WASD);
Cueto, Josefrigue;
Valdes, Maria A. (WASD)

