



# Miami-Dade Water and Sewer Department Business Plan

**Fiscal Years: 2010 and 2011**  
(10/1/09 through 9/30/11)

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## EXECUTIVE SUMMARY

### Summary of Department Description

Miami-Dade Water and Sewer Department's (MDWASD) principal responsibilities are to provide potable water and wastewater services. This includes water supply, transmission, treatment, distribution, conservation, and wastewater collection, treatment, disposal, and water reclamation. The Department is one of the largest public utilities in the United States, serving approximately 417,983 retail water customers and 336,272 retail wastewater customers as of September 30, 2009. In terms of population, this represents about 2.25 million residents. The Department operates three regional water treatment plants (WTPs) and five smaller plants, and three regional wastewater treatment plants (WWTPs).

### Challenges and Strategic Approaches

The Department must respond to three distinct and related forces and requirements:

1. Much of the existing treatment and transmission infrastructure is more than 40 years old. For many years, maintenance has been deferred to avoid short term cost impacts, resulting in expensive equipment failures in the form of water and sewer main breaks, plant failures, and decreased efficiency of operation. In some instances, fines and penalties have been imposed by regulatory agencies as a result of these failures.
2. Regulatory requirements in the form of consent agreements, permit conditions, and statutory changes continue to create a series of unfunded mandates that can only be met through extensive capital investment. Chief among these are the state law requiring abandonment of two ocean outfalls for treated wastewater disposal, an associated requirement for wastewater reclamation and reuse, Federal consent agreement requirements for managing peak wastewater flows, and restrictions on further use of the Biscayne aquifer to meet future water supply needs.
3. While current economic conditions have virtually stopped new housing and commercial construction, longer range population projections still require plans to expand water and wastewater treatment and transmission systems in advance of new service demands.

Failure to respond effectively to each of these conditions will place at risk the ability of the Department to deliver these fundamental and essential services to residents on a daily basis, thereby jeopardizing the County's ability to compete economically, and, in the worst case, creating public health risks. The Department's strategic approach to respond to these challenges includes the following initiatives:

- Accurately characterize and address the maintenance, repair, and replacement needs of existing infrastructure. Engineering consultants have been assigned to each water and wastewater plant to conduct this analysis and to recommend a prioritized list of improvement projects which are reflected in the Department's capital plan. In addition, an Electronic Asset Management System (EAMS) has been designed and will continue

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to be implemented throughout the Department over the next two years. This system includes maintenance schedules for all assets and will capture all of the scheduling, inventory, labor, and performance data associated with the Department's plants and equipment. This system will extend equipment life, improve efficiency of maintenance, avoid expensive catastrophic failures, improve regulatory compliance, and document the Department's control of asset management to meet accounting and bond rating requirements.

- Review periodically and systematically the continuing validity of regulatory requirements, technology opportunities, and planning and growth assumptions underlying future facility needs. Population growth and changing environmental and public health standards are key drivers of the capital program. Large scale capital projects such as treatment plants require seven to ten years to design and build. Reviewing trends and requirements to minimize the risk of either under-building or over-building is an essential strategic approach. The Department has identified several projects to eliminate or defer in the Water Use Permit (WUP) as a result of an effective conservation program and reduced water demands.
- Improve the efficiency of service delivery through effective applications of proven technology and process improvements developed by staff. The use of Automated Meter Reading (AMR) by which water meters can electronically transmit data to a central location is currently being pilot tested in Miami Springs in anticipation of system-wide application of this technology over a multi-year period as old water meters are replaced. This can greatly increase the efficiency of the billing process as well as identify areas and individual customers experiencing leaks leading to excessive water losses and high bills.
- Timely comply with all permit conditions, consent order requirements, and regulatory schedules. In particular, the effective management of large scale construction projects such as the High Level Disinfection (HLD) project at the South District Wastewater Treatment Plant is a critical aspect of maintaining schedules, and the on-going implementation of a Project Control and Tracking System (PCTS) in conjunction with a blend of in-house and contract management staff has proven to be very effective in keeping projects on schedule and on budget. Large scale projects coming into construction, in addition to HLD, include the South Miami Heights Water Treatment Plant and the South District Water Reclamation Plant.
- Anticipate staffing needs for new facilities and plan for replacement of staff preparing for retirement. The Department has included in its table of organization additional positions to be available in advance of completion of new facilities such as HLD so that employees can be hired and trained for deployment when those facilities are completed. In addition, internships with local universities are in place to channel new graduates into career positions as retirements and promotions occur. The Department has a high percentage of employees with 30 years or more of service. A program to develop training programs with local vocational schools for the various skill sets required in the Department is under development.

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- Maintain the highest standards of financial management. Identified capital needs over the next 20 years will range from \$8 billion to \$10 billion or more, depending on growth and regulatory trends. Financing substantial debt to meet these needs requires proven and sustained financial management practices, maintenance of significant capital reserves, confidence within the financial markets that systems are being maintained, and a rate structure that supports operations and debt. The use of the Bureau of Labor Statistics from Department of Labor, Consumer Price Index of water and sewer maintenance cost which the department refers to as the “maintenance index” as the basis for annual rate adjustments to cover the operating costs of current facilities has been a very positive step in stabilizing the revenue stream of the Department. Additional rate adjustments to support the debt service required for new facilities will be necessary well into the future. After a ten year lapse in bond sales, the Department anticipates the need to be in the bond market every 18 to 24 months for the next decade or so. For years the Department’s rates have been among the lowest water and sewer rates in Florida and the nation. Because most other utilities are experiencing forces similar to those present in south Florida, it is likely that the Department’s rates will continue to be low relative to many other utilities and relative to other services such as cable service and electricity. However, there will be no way to meet system needs going forward without regular and substantial rate adjustments.
- Maintain an effective customer information and customer feedback system. The Department has conducted customer satisfaction surveys on a regular basis and includes service feedback opportunities at customer service offices, through telephone access, through 311, and via the Department’s website. A newsletter is distributed through the billing process, and public service spots are used particularly to reinforce conservation and other sustainability choices that can be made by customers. Feedback data are analyzed to identify opportunities for improved service.

**Summary of Major Programs and Initiatives:**

- Ensure compliance with 20-year Water Use Permit (WUP) including, but not limited to, implementation of the alternative water supply (AWS), reclaimed water, and water loss reduction projects.
- Ensure implementation of the regulatory-mandated projects: High Level Disinfection (HLD) at the South District Wastewater Treatment Plant (WWTP); design of the Surface Water Treatment Plant (WTP) for the Hialeah/Preston service area; wastewater collection system Peak Flow Management Study Results; groundwater studies for the North and South District WWTPs; Infiltration and Inflow Program; Pump Station Optimization Program (PSOP); Water Allocation System; development of a comprehensive water and wastewater master plan to address the 2008 State Outfall Legislation; and the support systems associated with implementation, such as the Supervisory Control and Data Acquisition System (SCADA), Enterprise Asset Management System (EAMS) and Automatic Meter Reading (AMR).

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- Ensure implementation of the projects in the Multi-Year Capital Plan to provide adequate facilities to meet capacity requirements and infrastructure renewal and replacement as well as the support systems associated with implementation, such as Project Control Tracking System (PCTS) and Geographic Information System (GIS).
- Complete the issuance of the first series of fixed rate bonds to fund the long term Capital Improvement Program (CIP), when feasible, and continue to utilize the \$100 million Line of Credit facility to reduce the long-term financing costs.
- Continue to implement efficiency initiatives, process improvements, and Sterling performance excellence initiatives.

**Summary of Critical Success Factors**

- Ability to obtain support from the public and legislative bodies, and appropriate funding level to comply with regulatory requirements, including the 20-year WUP, water supply projects, Wastewater Facilities Master Plan, and water reclamation projects.
- Ability to retain and hire qualified staff.

**Adequate Funding and Appropriate Rates**

In order to implement the Business Plan, it is evident that the Department will need to obtain adequate funding to meet all the regulatory requirements, including the 20-Year Water Use Permit and conditions, state mandated ocean outfall, consent decrees, other regulatory requirements, and the need to replace the aging infrastructure. The funding is dependent on the water and sewer rates, which relies solely on the customers who have enjoyed low rates for many years. The impact of the regulatory requirements and aging infrastructure will significantly increase the cost of water and sewer services. A rate increase will be proposed for FY 2010-11 above the maintenance index in order to meet the anticipated increases to operating cost, prior delays to repairing existing infrastructure needs, and additional regulatory requirements.

## **DEPARTMENT PURPOSE/MISSION**

### **Vision Statement**

The continuous delivery of excellent, cost-effective water supply and wastewater services in compliance with all regulatory requirements.

### **Mission Statement**

The Miami-Dade Water and Sewer Department is committed to serving the needs of Miami-Dade County residents, businesses, and visitors by providing high-quality drinking water and wastewater disposal services while providing for future economic growth via progressive planning; implementing water conservation measures; safeguarding public health and the environment; and providing for continuous process improvements and cost efficiencies.

Additional departmental information can be found in the Departmental Profile (Attachment 1).

## **STRATEGIC ALIGNMENT**

- I. The Department's efforts align with the following Miami-Dade County Strategic Plan Goals:**
- Empower the community by increasing communication and coordination with local, state, and federal entities. (NU2)
  - Promote responsible stewardship of natural resources and unique community environments. (NU3)
  - Provide timely and reliable public infrastructure services including road maintenance, storm water, solid waste and wastewater management, and a safe and clean water delivery system consistent with the Comprehensive Development Master Plan (CDMP). (NU6)
  - Ensure the timely acquisition of "best value" goods and services while maintaining integrity and inclusion. (ES3)
  - Attract, develop and retain an effective, diverse and dedicated team of employees. (ES5)
  - Plan, construct and maintain well-designed County facilities in time to meet the needs of Miami-Dade County. (ES6)
  - Provide quality, sufficient and well-maintained County vehicles. (ES7)

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- Ensure the financial viability of the County through sound financial management practices. (ES8)
- Deliver on promises and be accountable for performance. (ES9)

**II. Department-related Strategic Plan Outcomes, Departmental Objectives, and Programs & Initiatives:**

**Improved community access to information and services. (NU2-2)**

- Maintain high level of responsiveness to customer service requests.
  - Enhance Water Conservation web page to better promote water saving practices, rebate projects, and educational materials. (ongoing)
  - Respond to customer water quality complaints and inquiries within 24 hours of notification. (ongoing)
  - Respond to emergency request to repair water leaks within one hour. (ongoing through FY10-11)
  - Improve customer service by developing surveys and listening posts to obtain customer feedback. (starts FY09-10)
- Continue to make information available to customers in a timely manner.
  - Reduce average call waiting time. (ongoing)
  - Continue to provide *The Pipeline* quarterly newsletter and the annual *Consumer Confidence Report* on the quality of the County's drinking water. (ongoing)
  - Continue to update WASD's website. (ongoing)
  - Proactively inform and educate WASD's customers via various media outlets. (ongoing)
  - Continue implementing the Water Use Permit (WUP) Communications Plan to inform residents of the requirements, goals and benefits of the WUP. (ongoing)
  - Expand and enhance the phone system by developing a proactive approach in notifying customers prior to service and collection field visits, and add capabilities to track trends, employee performance, provide forecasting, and to assist in optimizing scheduling, thus enhancing customer service and creating efficiencies. (starts FY10-11)

**Continuing supplies of quality drinking water to meet demand (NU3-1)**

- Ensure compliance with 20-year WUP, including, but not limited to, the implementation of the Alternative Water Supply (AWS) Plan.

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- Implement and monitor WUP Efficiency 20-Year Plan. (ongoing)
  - Oversee Accelerated Projects included in Ordinance creating Section 2-8.2.11 of the Code. The ordinance expedites projects that are necessary to comply with the 20-year WUP and the Consent Order for High Level Disinfection (HLD). (ongoing)
  - Reevaluate WUP projects and water consumption to ensure facilities are built based on needs. (starts FY09-10)
  - Implement Long Range AWS Plan. (ongoing).
  - Implement Water Loss Reduction Plan. (ongoing)
  - Continue to implement Automatic Meter Reading (AMR) system. (ongoing)
  - Enhance metering infrastructure to ensure proper water accountability. (ongoing)
  - Complete the calibration and installation of wellfield meters. (ongoing through FY09-10)
  - Update Water Facilities Master Plan and portions of Integrated Water, Wastewater, and Reclaimed Water Master Plan which pertain to drinking water. (ongoing through FY09-10)
  - Implement Water Allocation System to track water supply availability as required by Chapter 163 F.S. (ongoing through FY09-10)
  - Maintain water treatment plant capacity at 80% of design capacity. (ongoing)
  - Complete electronic monthly operating reports (MORs) on demand at all water treatment plant facilities for paperless documentation. (ongoing through FY09-10)
  - Maintain water transmission system hydraulic computer model including periodic calibration. (ongoing through FY09-10)
  - Complete the assessment of seawater encroachment and monitoring network improvements in Miami-Dade County. (ongoing through FY09-10)
  - Complete model for quantification of ground-water flows in support of simulation of surface and groundwater flows to Biscayne Bay. (ongoing through FY09-10)
- Evaluate and implement options to increase water availability.
- Streamline infrastructure business services provided by WASD's New Business Division (NBD). (ongoing through FY09-10)

**Improved neighborhood roadways, sidewalks, drainage, and reduced flooding (NU6-1)**

- Allocate necessary resources to provide level-of-service desired by the public

- Restore damaged rights-of-way related to water and sewer infrastructure in a timely manner. (ongoing)

**Reduction in sewage overflows and provision of sewage systems to unconnected commercial corridors. Protection of water quality and improved water pressure. (NU6-2)**

- Continue implementation of wastewater systems capital projects.
  - Continue development of South District Wastewater Treatment Plant HLD. (ongoing)
  - Continue to implement Replacement and Renewal (R&R) upgrades to the wastewater facilities. (ongoing)
  - Continue Treatment Plant water reclamation. (ongoing)
  - Enhance metering infrastructure to ensure proper accountability and revenue generation. (ongoing)
  - Continue Groundwater Replenishment. (ongoing through FY09-10)
- Continue master planning to identify capital wastewater projects necessary to meet future demands and regulations, including outfall diversion requirements.
  - Continue preparation of portions of Integrated Water, Wastewater, and Reclaimed Water Master Plan which pertain to wastewater processing. (ongoing through FY09-10)
  - Continue to maintain and calibrate the Department's wastewater collection and transmission system hydraulics computer model. (ongoing through FY09-10)
  - Continue development and deployment of Pump Station Optimization Program to reduce wet weather peak flows. (ongoing through FY10-11)
- Continue upgrading the Supervisory Control & Data Acquisition System (SCADA)
  - Expand Pump Station Optimization Program (PSOP) and SCADA operating program and have system operable in those basins identified through the Peak Flow Management Study. (ongoing through FY09-10)
  - Continue to upgrade and replace all remote terminal units from 3300 series (discontinued) to new control wave units for more control application capabilities and increased battery life in all pump stations and plants. (ongoing)
  - Increase SCADA resources to meet system demands and consent decree requirements. (ongoing)
- Continue to ensure the maintenance and operation of wastewater system
  - Continue the Infiltration/Inflow Program including evaluation and cleaning of sanitary sewer lines as mandated by Miami Dade County Chapter 24-43 of the Wellfield Protection Ordinance and Chapter 24-42.2 of the Volume Sewer Customer Ordinance. (ongoing)

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- Continue the maintenance and repair of transmission lines and force mains in order to reduce sanitary sewer overflows in compliance with the EPA Clean Water Act, as well as to ensure the health and welfare of the community. (ongoing)
- Accelerate the replacement of damaged/corroded sewer force mains and gravity interceptors. (ongoing)
- Continue to maintain pumps stations. (ongoing)
- Develop a plan to comply with 2008 Florida Ocean Outfall Legislation. (ongoing through FY12-13)
- Continue to ensure the maintenance and operation of the water system
  - Increase the maintenance of fire hydrants to comply with the requirements of Florida Statute #633.082. (starts FY09-10)
- Continue implementation of water systems capital projects
  - Continue South Miami Heights Water Treatment Plant. (ongoing)
  - Continue water distribution system extension enhancement. (ongoing)
  - Continue Hialeah Upper Floridian Reverse Osmosis Water Treatment Plant. (ongoing)
  - Continue mechanical and electrical wellfield improvements. (ongoing)
- Continue full compliance with drinking water standards
  - Initiate design of Hialeah/Preston Water Treatment Plants (WTP) to provide surface water treatment with partial funding from the Miami-Dade County lake belt rock-mining fee. (ongoing)
  - Initiate installment of high service pump number 5 and issue purchase order for pump 6 at the Alex Orr WTP. (ongoing through FY 09-10)
  - Continue calcium carbonate removal at Miami Springs and Southwest wellfield sites. (ongoing)
  - Design on-site Chlorine Generation Facilities at the Hialeah/Preston WTP. (ongoing)
  - Complete electronic monthly operating reports (MORs) on demand at all water treatment facilities for paperless documentation. (ongoing through FY09-10)
  - Complete Ultra Violet Disinfection at the Aquifer Storage and Recovery (ASR) wells located at the West and Southwest wellfields. (ongoing)
  - Continue to perform all testing to demonstrate compliance with Federal, State and Local drinking water standards and submit reports to designated regulatory agencies. (ongoing)
  - Maintain In-house Laboratory Certification with the Florida Department of Health in accordance with National Environmental Laboratory Accreditation Conference standards. (ongoing)

- Continue implementation of Cross-Connection Control ordinance
  - Protect existing public water supply wells and well fields. (ongoing)
  - Complete groundwater studies at the South and North District Wastewater Treatment Plants. (ongoing through FY09-10)

**Improved public infrastructure level-of-service standards and policies (NU6-3)**

- Improve communication and level-of-service to meet residents and development industry demands
  - Streamline New Customer Division's (NCD) operations in particular business processes relating to conveyance, collection, and meter installation. (ongoing through FY09-10)
  - Realign NCB organizational units' structure and revise policies and procedures to improve internal control and accountability. (ongoing through FY09-10)

**Best-value goods and services (price, quality, terms and conditions) (ES3-3)**

- Maximize advance acquisition planning
  - Improve the easement acquisition process by implementing a Review Team to analyze easement necessities, recommendations and provide resolution. (starts FY09-10)
  - Procure goods and services in a timely fashion. (ongoing)

**Workforce skills to support County priorities (ES5-4)**

- Provide education, training, and technology to develop an efficient and flexible workforce
  - Guarantee training hours per employee to comply with certification and license requirements at water and wastewater facilities. (ongoing)
  - Provide Project Control Tracking System (PCTS) training for engineering and construction management staff to implement and manage construction contracts. (ongoing)
  - Continue to develop a Succession Plan. Conduct an organizational assessment, which will include analyzing the organizational structure, conducting a skills assessment, and an assessment of future job requirements. This information will then take us into the development of a succession planning matrix, which will include target groups and development of learning plans, processes, programs, models, and methods. (ongoing)
  - Implement customer service recognition program-Pebble Program. (ongoing)
  - Continue to evaluate and improve existing mentorship program, and expansion of program to other classifications. (ongoing)

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- Develop internship for positions difficult to fill. (ongoing)
- Implement a specialized training program for NCD. (starts FY09-10)

**Safe, convenient, and accessible facilities planned and built ready to meet needs**

**(ES6-1)**

- Ensure secure facilities and workplaces at WASD facilities
  - Build a Security Operations Center to provide streamlined command and control of security operations. (starts FY10-11)
  - Install uniform electronic access control system in order to standardize access control measures and procedures to comply with Miami-Dade County Ordinance 02-68. (ongoing)
  - Install cost-effective Close Circuit Television System (CCTV), physical security measures and systems at critical plants, facilities, and operations. (ongoing)
  - Provide security awareness training for WASD employees, contractors, and vendors. (ongoing)
  - Streamline billing system/process for contracted security guard force and other contracted services. (ongoing)
  - Ensure appropriate identification procedures are compliant with Miami-Dade County Ordinance 02-68. (ongoing)

**Safe and reliable vehicles ready to meet needs (ES7-1)**

- Ensure safe and efficient operation of WASD's vehicles
  - Perform preventative maintenance on all heavy equipment as scheduled. (starts FY09-10)

**Streamlined and responsive procurement process (ES3-1)**

- Reduce processing time and steps is essential
  - Procure goods in a timely fashion by returning contract reviews to Department of Procurement Management (DPM) with responsive information after meeting with end users and securing budget information to correspond to contract allocation requests and the best estimated quantities. (ongoing)
  - Complete quality assurance testing for specialized stock items to ensure that the product being secured is what was specified and that the item meets all requirements before accepting orders. (ongoing)

**Planned necessary resources to meet current and future operating and capital needs (ES8-2)**

- Wholesale Municipal System Acquisition through a quality of system review
  - Improve infrastructure to municipal system fire flow capabilities. (ongoing)
  - Complete replacement of water meters at Miami Springs. (ongoing through FY09-10)
  - Monitor progress made on projects undertaken to upgrade the acquired water and sewer systems of the City of Miami Springs (ongoing through FY09-10).
  - Coordinate potential acquisition of wholesale water and sewer utility systems. (ongoing)
- Ensure cost efficient funding available to meet capital and operational needs
  - Develop efficient financing program to provide cost effective funding for Capital Improvement Program. (ongoing through FY09-10)
  - Continue to work with FDEP to obtain State Revolving Fund (SRF) low interest loans for the HLD project. (ongoing through FY 09-10)
  - Perform annual quality review of the Department's Rules and Regulations governing water and wastewater services. (ongoing)
- Ensure adequate revenue streams
  - Monitor wholesale water meter calibration tests and repairs to ensure adequate collection of revenues. (ongoing)
  - Monitor wholesale wastewater meter calibration tests and repairs to ensure adequate collection of revenues. (ongoing)
  - Monitor wholesale water and wastewater billing via Quality Assurance review process. (ongoing)
  - Monitor private high-volume wastewater billing via Quality Assurance review process. (ongoing)
  - Integrate Financial Management and Business Systems to protect WASD's capital assets revenue-generating capacity. (ongoing through FY09-10)

**Achievement of performance targets (ES9-3)**

- Complete performance measures development and establish a continuous monitoring program. (ongoing through FY 09-10)
- Continue deployment of performance measurement system and appropriate business review techniques. (ongoing through FY09-10)

**Accountability to the public at every level of the organization (ES9-4)**

- Upgrade and update operating and financial management systems (technology) to permit timely and continuous performance monitoring.
  - Develop a Quality Assurance Manual for management and construction projects. (ongoing through FY 09-10)

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- Integrate the water and wastewater master planning process to plan for growth and regulatory compliance in an efficient and effective manner. (ongoing through FY09-10)
- Implement PCTS (ongoing through FY09-10).
- Implement consultant recommendations concerning the Capital Improvement Program. (ongoing through FY10-11)
- Monitor the implementation of the construction management procedures manual by construction managers. (ongoing)
- Conduct performance audit on construction projects associated with large scale capital projects such as High Level Disinfection (HLD) and Water Reclamation Plants. (ongoing)

**Continuously Improving Government (ES9-5)**

➤ Continue performance excellence initiatives

- Continue the analysis and reorganization of NCD operations to ensure consistent, accountable, and efficient review of new business applications and plans for development. (ongoing through FY09-10)
- Implement Florida Sterling Feedback recommendations to provide for continuous improvements and prepare application for award. (ongoing through FY 10-11)
- Implement efficiency projects to promote cost savings. (ongoing).
- Ensure compliance with the requirements of the Chicago Climate Exchange membership, the U.S. Cool Counties Program and Climate Stabilization Declaration, and the County's Energy consumption Reduction Resolution. (ongoing).
- Identify and document administrative and operational procedures. (ongoing through FY09-10)
- Conduct performance audit on the Standard Operating Procedures (SOP) for various Divisions to ensure effectiveness of service delivery and adherence of the Department Rules and Regulations. (ongoing)
- Develop and implement employee survey feedback action plan. (ongoing through FY09-10)
- Develop a human resource communication strategy. (starts FY09-10)
- Implement Information Technology (IT) Governance Program in accordance with the Information Technology Leadership Council (ITLC) published policy and procedures. (ongoing)
- Continue implementation of the EAMS (Enterprise Asset Management System) to Track 2 (Water Distribution and Transmission, Sewer Collection and Transmission, and Meter Divisions) and Track 3 (Water and Wastewater Treatment Plants and General Maintenance Divisions) Divisions. (ongoing through FY10-11)

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- Continue updating the Geographic Information System backlog. (ongoing through FY 10-11)
- Complete migration of all desktop telephony to Voice over Internet Protocol (VoIP). (ongoing through FY10-11)
- Upgrade billing system to Customer Care and Billing (CC&B). (ongoing through FY 10-11)
- Migrate desktop and server infrastructure to less complex and more sustainable model. (ongoing through FY 10-11)
- Expand wireless infrastructure to meet IT and communication initiatives at WASD sites to support operations and maintenance functions. (ongoing)
- Provide enhanced customer service through support and enhancement of Interactive Voice Response (IVR) system and internet site. (ongoing)
- Support of fiscal and construction processes through use of current enterprise applications, specifically, Enterprise Resource Planning (ERP) and Project Control and Tracking (PCTS). (ongoing)
- Obtain wireless devices (laptop computers or handheld devices) for Customer Service Division field personnel to improve customer service and increase productivity. (starts FY10-11)

## **PERFORMANCE MEASURES AND TARGETS**

For ease of reference, specific information regarding departmental objectives and performance measures including the targets for FY2009-10 and FY2010-11 can be found in Attachment 2 – Business Plan Report.

## **CRITICAL SUCCESS FACTORS**

### **Department-wide Critical Success Factors**

- Continuing supplies of quality drinking water to meet demand (NU3-1)
  - Ability to obtain support and appropriate funding level to comply with regulatory requirements, including the 20-year Water Use Permit (WUP), water supply development projects, Integrated Water, Wastewater, Reclaimed Water Facilities Master Plan, and water reclamation projects.

**Critical Success Factors for Objectives:**

- Ability to accelerate capital projects to meet regulatory requirements
  - Ability to procure goods and services expeditiously to implement programs and initiatives.
- Ability to obtain adequate funding to meet regulatory requirements
  - Obtain approval from BCC of appropriate rate structure.
  - Obtain funding through the timely sale of bond issues.
  - Develop cost effective rates for all customers, for reclaimed water, and expand revenue streams.
- Ability to obtain public acceptance of water reclamation, water use efficiency, and water loss reduction efforts
  - Continue to develop long-term communications plan.
  - Continue to develop plan to implement WUP projects.
- Ability to obtain funding to support infrastructure that needs replacement
  - Continue to develop a facilities master plan by integration with the 20-year Water Use Plan.
  - Implement the facilities master plan.
- Ability to fund and implement State mandated regulations, EPA Consent Decree, FDEP Consent Orders, WUP, ocean outfall requirements, and aging infrastructure
  - Develop a funding mechanism that supports meeting all regulatory requirements.
  - Design/build projects within schedule
- Ability to procure goods and services in a timely fashion
  - Reduce processing time and steps in the process
- Ability to retain the knowledge of employees due to retirement eligibility of the workforce and train the newly acquired employees from other departments.
  - Continue development of a succession plan

## **INTERNAL SUPPORT REQUIREMENTS**

### **Procurement Support from Department of Procurement Management (DPM)**

- Ensure that all contracts are renewed prior to expiration.
- Ensure that vendor compliance issues are resolved prior to award of contract.
- Process Vendor Non Performance Reports within one week of submission.
- Allocate requested funding as noted from department.
- Ensure that all contracts (bridge, valve box) or extensions are provided with adequate funding based on actual usage.
- Improve timeline (180 work days or less) to establish new contracts.
- Reduce blanket contract turnaround time.
- Perform market research of goods and services requested by departments.
- Ensure that appropriate number of vendors are available for contracts such as barricades, EZ Street Asphalt, Ready Road Repair, Maintenance Traffic Plan (MOT), etc., in order to improve service delivery.

### **Support from General Service Administration (GSA) Fleet**

- Perform preventative maintenance (PM) of light vehicles within four hours.
- Schedule and perform more extensive PMs within twenty-four hours.
- Assist with review of specifications for new or replacement equipment within three business days.
- Share “best practices” and technology information with departments.
- Assist with procurement recommendations to DPM within two weeks of submittal.
- Ensure that all equipment and vehicles assigned include index code 100% of the time prior to assignment.
- Coordinate fuel deliveries during emergency periods with department on a daily basis.
- Reduce vehicle down-time to average of 55 hours or less per shop visit.
- Expedite necessary unplanned repairs of critical vehicles.
- Manage inventory levels to maintain vehicle parts inventory at four times per year or higher.
- Maintain accuracy of inventory at 95% or higher and vehicle parts inventory at 97% or higher.
- Maintain a high level of customer satisfaction with pool vehicles.
- Reduce maintenance expenditures of vehicles that do not meet replacement guidelines based on age or mileage.
- Develop plan to keep older vehicles operating in a cost effective manner and utilize beyond normal useful life.

### **Support from GSA Materials Management**

- Provide 100% of requested supplies within two work days.
- Provide upfront pricing for graphic and reproduction services.
- Design attractive printed materials using County branding guidelines.
- Provide high-quality printing of designed materials and deliver by our deadlines.

**Support from GSA Risk Management**

- Review and approval of insurance on construction and engineering contacts within two-weeks (approval of insurance).
- Provide updates and information regarding open enrollment.
- Provide information regarding changes to policies involving benefits.
- Communicate to department deadlines for enrollment periods.
- Provide guidance on long term worker compensation injuries.

**Support from GSA Safety Unit**

- Approve vendor safety training in timely fashion.
- Provide flexibility in choosing training specific vendor choice based on training history, previous training relationship, and demonstrated expertise versus open bid.

**Support from Finance Department - Director's Office**

- Provide timely assistance with financing and refinancing issues. Limited technical staffing has created significant delays.

**Support from Finance Department - Controller's Office**

- Provide timely processing of reimbursement request such as FEMA.

**Support from Enterprise Technology Service (ETSD)**

- Provide business application service during business hours of 7:00 am – 6:00 pm. (This requires maintenance to be completed off hours and is performed on Sundays. In the case of a production outage, the expectation is that all efforts to bring the application up will be immediate).
- Run job streams and reports according to established schedules.
- Monitor network operations and plan necessary changes.
- Consider unplanned outages as top priority until full restoration of service.
- Plan and closely coordinate upgrades and scheduled maintenance to applications and infrastructure to minimize interruption of business operations.
- Monitor and filter threats to the network to ensure protection of data and IT assets against hostile attacks, either external or internal.
- Back-up data over the storage array network (SAN) in an effective and consistent manner.
- Deliver reports and bills on time.
- Provide CIS, ERP, GIS and EAMS application environments and services. (EAMS go-live will have to be provided 24/7.)
- Provide I3 as tool for troubleshooting ERP and CIS.
- Provide continuity of operations for all production systems.
- Remove points of failure for production applications by providing redundancy in operation.
- Provide maintenance of telephone equipment and engineering services as required.

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- Research and coordinate procurement of contracts for cell phones; research services; database contracts and other enterprise services and hardware.
- Provide updates and maintenance of time and labor module of ERP.
- Share recommendations to change time and labor module of ERP.
- Assist with Legacy (Mainframe) payroll system.

**Support from Office of Strategic Business Management**

- Provide a five working day turnaround time for request to hire and fill positions.
- Provide timely review and approval of construction contracts.

**Support from Office of Capital Improvements**

- Provide timely review and approval of construction contracts.
- Provide the coordination effort on the GOB funding allocation.

**Support from Legislation**

- Disseminate accurate and timely information to all stakeholders regarding legislation.

**Support from Human Resources**

- Improved and efficient system for drug testing employees.
- Timely response (five working days) to request to hire and approval of positions.
- Expand ESP database in include data fields required by Departments to assist with efficient processing of suggestions.
- Increase effectiveness in attracting and retaining employees.
- Support for updates and maintenance of Time and Labor Module.
- Share recommendations to changes of Time and Labor Module.
- Improve turnaround timeline in processing Personnel Change Documents.
- Documented information regarding changes to policies.
- Provide guidance and information regarding tuition reimbursements, labor management issues, and ADA (employee accommodation).
- Improve scheduling on Fitness for Duty.
- Provide a departmental improved and effective system that sustains disciplinary actions.

**Support from Fair Employment Office**

- Provide assessment and investigation support for employee complaints.
- Provide guidance on inquires.

**Support from Government Information Center (GIC)**

- Update and revise WASD website content as needed and by requested deadlines.
- Provide photography and video production/distribution services including MDTV and "On-Demand" online video.
- Provide translation services (Spanish and Creole) when needed.
- Assist with purchasing media for advertising, when needed.
- Disseminate all news releases to media.
- Provide assistance with contacting media on news stories, when needed.

## **Sustainability**

### **Develop Sustainable Water Supply**

- Monitor Phase 1: Alternative Water Supply (AWS) Project Development Program
  - Water Use Permit (WUP) Accelerated Projects (Sortie) - South District Water Reclamation Plant (SDWRP) Groundwater Recharge-Treatment Plant. Pipe reclaimed water to the Metro Zoo area for recharge of Biscayne Aquifer. SDWRP will produce approximately 21 million gallons per day (MGD) using advanced treatment technologies. Recharge will offset future withdrawals from the South Miami Heights wellfield and allow sustainable growth/development pertaining to portable water use.
- Water Use Efficiency 20-Year Plan
  - Improve County's current level of water use efficiency. Implemented through the Water Use Efficiency Program. This plan includes best management practices that once implemented will provide water savings throughout the County that will be reported to the BCC on an annual basis; adopted by BCC April 2005.

### **Ensure Energy Consumption Reduction (KWH)**

- Landfill Gas Conveyance System from the South Dade Landfill to the South District Waste Water Treatment Plant (SDWWTP).
  - Design, permitting, procurement and construction of required systems to process and convey landfill gas from the South Dade Landfill flare station to the SDWWTP cogeneration facility. A bridge will be constructed to support the pipeline crossing over the canal.
- Study for the Use of Hydrogen, obtained as by-product of Chlorine On-Site Generation (OSG)
  - By-product is obtained free as a residual of Chlorine OSG which can be stored and deployed in several applications; fuel for vehicles, heating source in existing processes, etc. Working with the Office of Sustainability to identify potential use.
- Installation of Power Factor Correction (PFCC) on induction motors > 30 HP.
  - Increase performance on the induction motors and reduce related energy usage by 10% to 15%.
- Installation of Hi-Bay lighting.
  - Replace the current hi-bay lights (high energy usage) with more energy efficient light (compact fluorescent, light-emitting diode (LED), etc) that would reduce related energy usage by approximately 15%.
- Installation of motion sensors

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- Install sensors in buildings that were constructed prior to the standards enforced by the U.S. Department of Energy. Lighting would only be utilized when the areas are occupied. Reduce related energy by approximately 10%.

➤ **Production Well Rehabilitation**

- Removal of well pump televideo well casing and formation, assess necessary mechanical and/or chemical procedures to be employed to rehabilitate the well to optimum performance.

**Ensure Energy Consumption Reduction (fuel)**

- Implement Pilot Program for conversion of Diesel Generators and Pump Station Engines from diesel fuel to dual fuel system.
- Study the feasibility of converting existing diesel engines at pump stations to run on a diesel/natural gas mixture.

**Promote Green Initiatives in WASD (Resource Conservation)**

- Create WASD Resource Conservation Committee (MD-RCC) The Green Team
- The Green Team is a liaison between the MD-RCC and all Division staff and was created to promote recycling, energy/water conservation, environmentally preferred purchasing and to help initiate and implement green initiatives; per Resolution R-374-03 adopted by the BCC on 04/22/03. Liaisons for all areas established to disseminate information to all employees.
- Promote operational energy conservation awareness measures for employees and facilities.
- Request *Volunteer Energy Facilitators* within each work area to ensure that lights are turned off at the end of each workday, provides employees with periodic energy conservation ideas and reminders (through e-mails, flyers, etc.) and surveys facilities to determine where lights and equipment on-time (raise temperatures, etc.) can be used to reduce and adjust where feasible without risking environmental health and safety.
- Implement energy reduction measures for service and equipment at office buildings, including Douglas, LeJeune, and Medley Buildings.

### **3 to 5 YEAR OUTLOOK**

In order to implement the Business Plan, it is evident that the Department will need to obtain adequate funding to meet all the regulatory requirements, including the 20-Year Water Use Permit and conditions, state mandated ocean outfall, consent decrees, other regulatory requirements, and the need to replace the aging infrastructure. The funding is dependent on the water and sewer rates, which relies solely on the customers who have enjoyed low rates for many years. The impact of the regulatory requirements and aging infrastructure will significantly increase the cost of water and sewer services.

The consumers, which are retail and wholesale customers, may see a significant increase in water and sewer rates; current estimates project the increases will range between 100% to over 250% of the current rates within the next 10 years. In FY10-11, the Department anticipates the need to propose a retail rate increase above the 2009 maintenance index, in addition to the rate increases already adopted by the BCC of six percent (2008 maintenance index) on October 1, 2009 and an additional six percent on April 1, 2010 above the 2008 maintenance index. As is customary during the annual budget process, the Department will be looking for innovative ways to reduce this impact to the customers. The Department has started a significant effort at looking for competitive approaches to addressing these needs in the most cost effective manner while maintaining regulatory compliance. As these approaches are identified, the Department, along with the Office of Strategic Business Management and the County Manager's Office, will present the proposals to the Board of County Commissioners for final determination.

*Attachment 1*  
**DEPARTMENTAL PROFILE**

## **Department Description**

In December 1972, the Board of County Commissioners (the Board) of Miami-Dade County, Florida (the County) created the Miami-Dade Water and Sewer Authority (the Authority) for the purpose of establishing an agency responsible for providing water and wastewater services throughout the County. In 1973, all properties of the water and wastewater systems of the City of Miami and of the County were placed under the control of the Authority. The Board changed the status of the Authority to that of a County department effective November 1, 1983. Under the provisions of Miami-Dade County Ordinance 83-92, which directed the transition, the Authority was established as the "Miami-Dade Water and Sewer Authority Department ("the Department")." On October 19, 1993, the Department changed its name to the Miami-Dade Water and Sewer Department. The principal responsibilities of the Department are water supply, transmission, treatment, distribution, conservation, and wastewater collection, treatment, disposal, and water reclamation.

The Department is one of the largest public utilities in the United States, currently serving approximately 417,983 retail water customers and 336,272 retail wastewater customers. During September of 2008, the Department acquired the City of Miami Springs water and sewer system, a former wholesale customer. This acquisition added approximately 4,200 water and sewer customers to the Department's retail customer database. In addition to providing service to the unincorporated areas of the county, wholesale water service is also provided to 14 municipalities, and wholesale wastewater service to 11 municipalities, of Miami-Dade County's 35 municipalities. In addition, wastewater service is provided to Homestead Air Reserve Base. In terms of population this represents about 2.25 million residents.

The Department provides high-quality drinking water and wastewater disposal services, while planning for future growth, implementing water conservation measures, safeguarding public health and the environment, and providing for process improvements and cost efficiencies.

The Department operates three regional water treatment plants (WTPs): the Hialeah, John E. Preston and Alex Orr, Jr. WTPs; and five smaller plants in the southern part of the County, with a permitted water treatment capacity of 452 million gallons per day (MGD). The water supply for these plants comes from the Biscayne Aquifer through 100 water supply wells, located in 15 separate wellfields with a permitted allocation of approximately 346 MGD. The principal treatment at the regional plants is disinfection with chlorine and lime softening. In addition, aquifer storage and recovery (ASR) wells have been used to store excess water during the wet season at the West and Southwest wellfields and the water recovered is used to supplement the higher demands in the dry season. These ASR wells are being used for blending in accordance with the WUP. The water distribution system consists of 7,559 miles of pipes.

The Department also operates three regional wastewater treatment plants (WWTPs): the North, Central, and South District WWTPs; with a permitted treatment capacity of 368 MGD. The North and Central District WWTPs discharge the treated wastewater through deep ocean

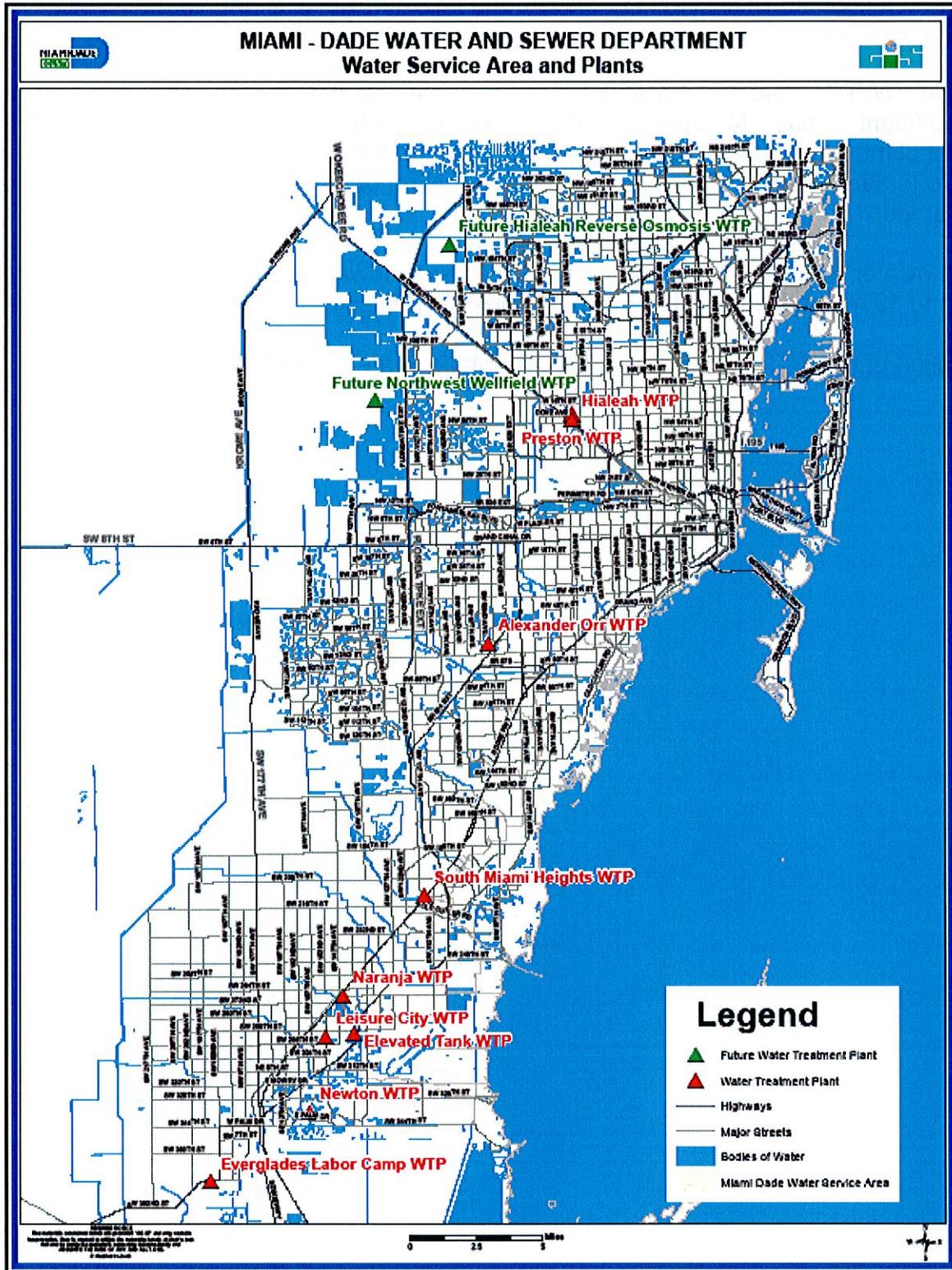
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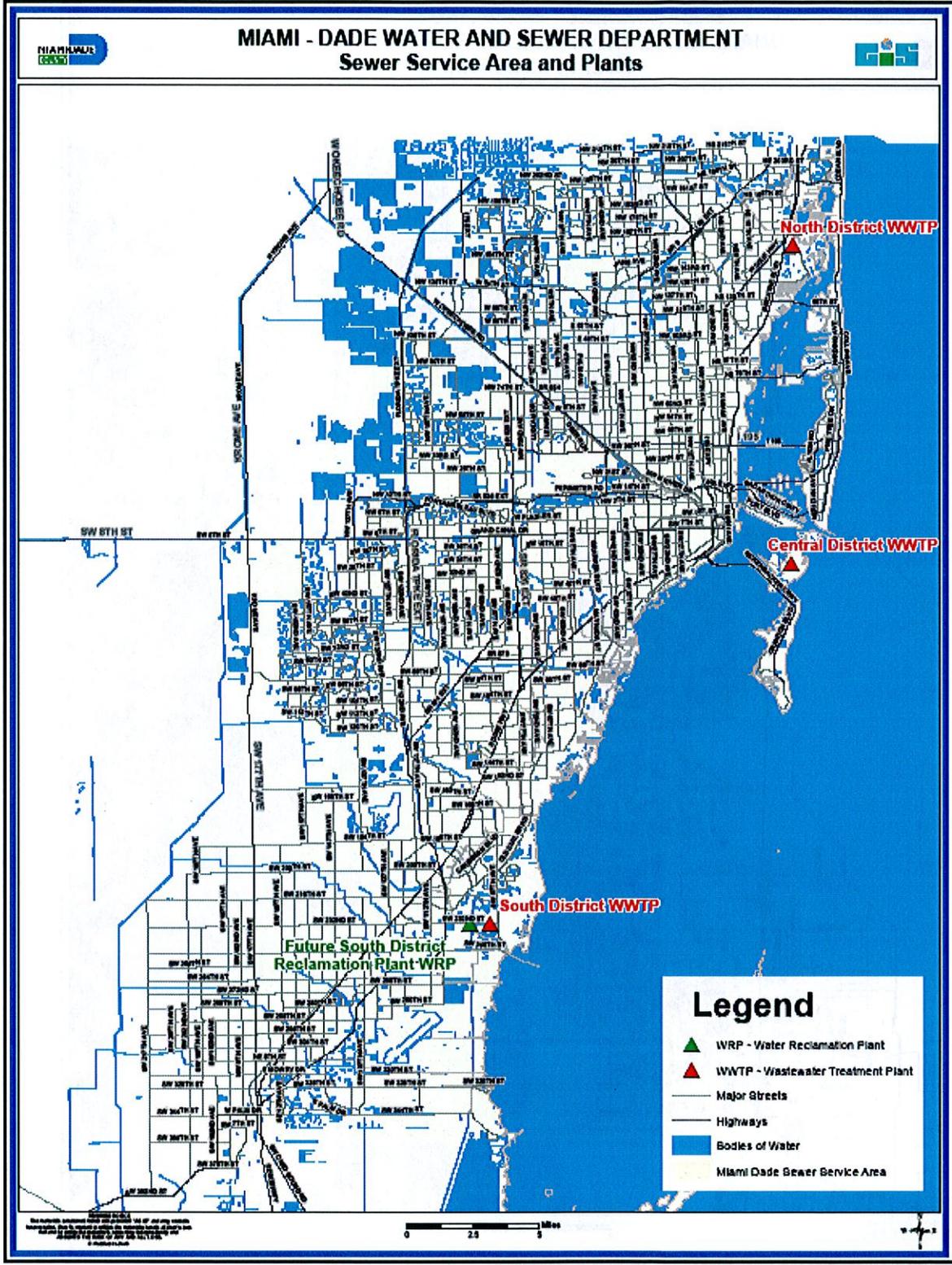
outfalls and the South District WWTP uses deep injection wells. At the North District WWTP, four injection wells have been constructed and received operating permits.

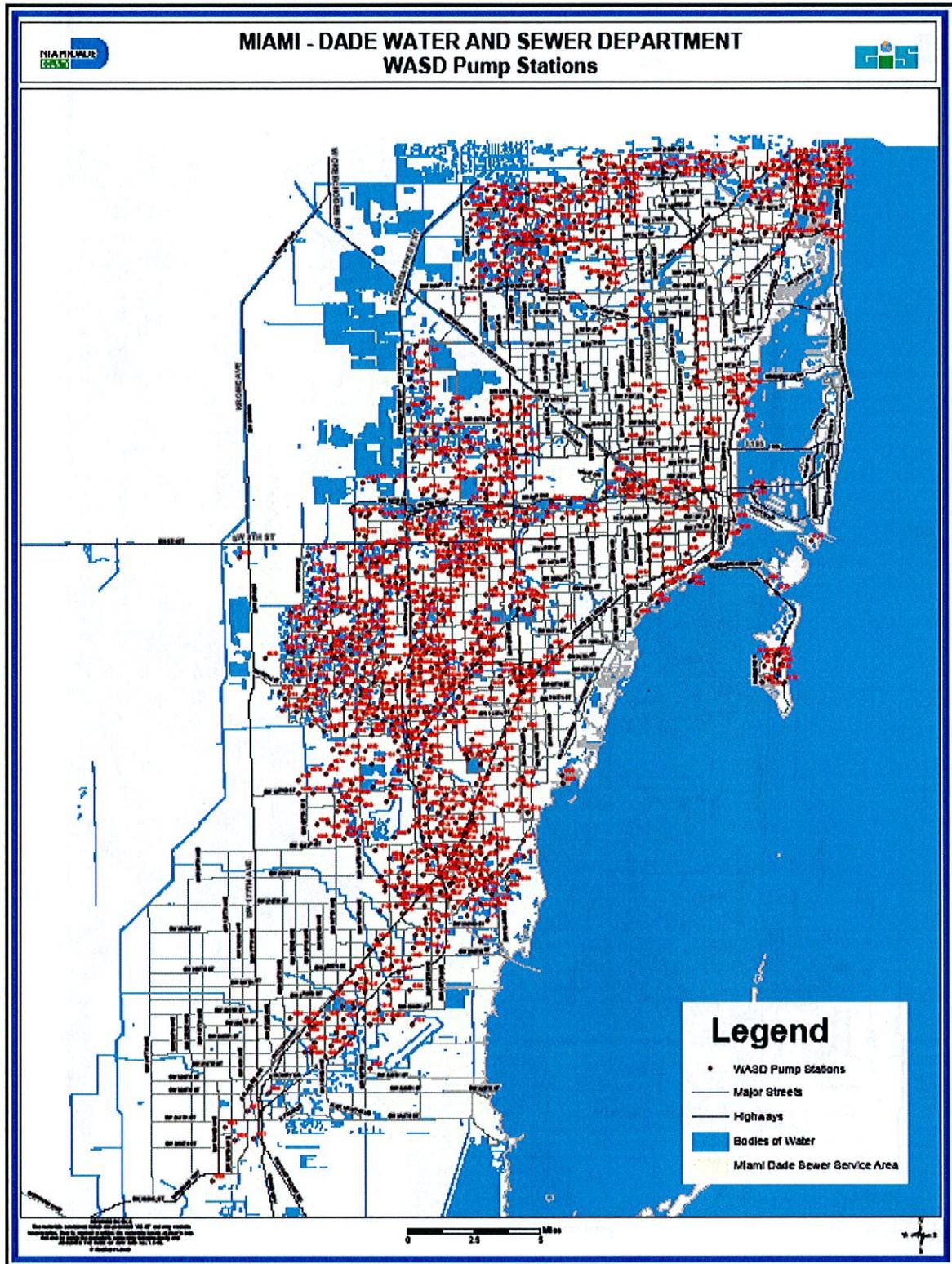
The three WWTPs treat the wastewater to secondary treatment standards and part of the treated effluent is used for process water or further treated to use for irrigation within the treatment plant. At the North District WWTP, about 100,000 gallons of wastewater per day are treated to tertiary treatment levels and used for irrigation of the Florida International University North Campus.

The wastewater collection system consists of 1,035 wastewater pump stations (1,016 County-owned and 19 maintained for other entities) and 6,111 miles of wastewater collection pipes.

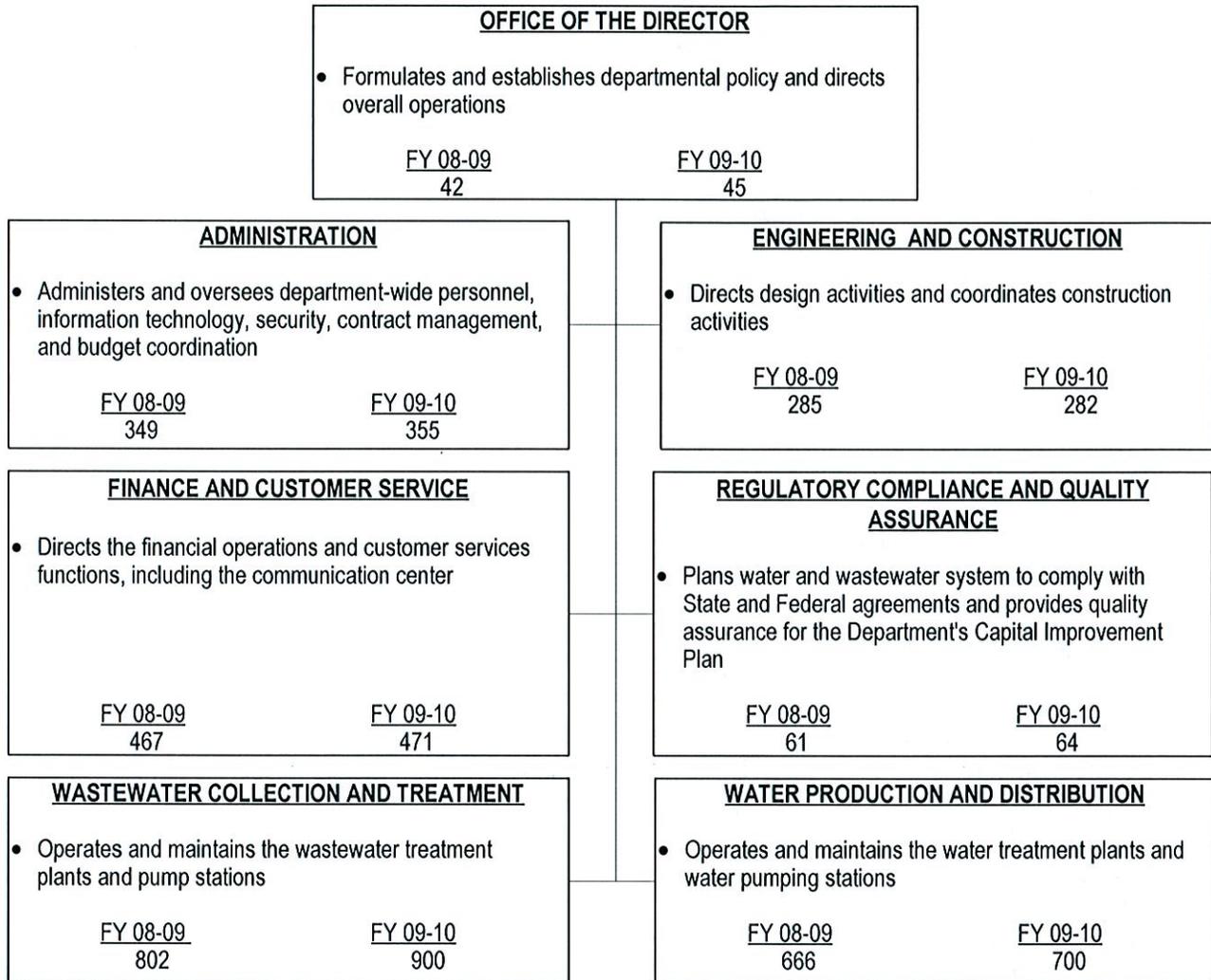
The location of the WTPs, WWTPs, and Pump Stations are on the following pages.







**TABLE OF  
ORGANIZATION**



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**FINANCIAL SUMMARY**

(dollars in thousands)	Actual FY 07-08	Budget FY 08-09	Adopted FY 09-10
<b>Revenue Summary</b>			
Carryover	53,242	55,046	58,666
Delinquency, Billing, and Service Charges	10,594	9,980	11,481
Fire Protection and Fire Hydrant Fees	4,558	4,645	4,733
Maintenance Fees	245	242	249
Miscellaneous Non-Operating Revenue	39,037	17,557	11,340
Miscellaneous Revenues	5,118	3,984	5,881
Rock Mining Mitigation Fees	4,501	5,000	0
Septic Tanks and High Strength Sewage	2,412	2,710	2,609
Transfer From Other Funds	0	24,088	35,256
Wastewater Revenue	236,844	246,051	264,556
Water Revenue	177,705	211,708	225,068
<b>Total Revenues</b>	<b>534,256</b>	<b>581,011</b>	<b>619,839</b>
<b>Operating Expenditures Summary</b>			
Salary	137,152	136,333	149,756
Fringe Benefits	43,892	43,905	46,980
Other Operating	140,920	171,763	182,622
Capital	2,568	38,690	49,550
<b>Total Operating Expenditures</b>	<b>324,532</b>	<b>390,691</b>	<b>428,908</b>
<b>Non-Operating Expenditures Summary</b>			
Debt Service	124,404	126,154	127,705
Reserve	25,773	58,666	63,226
Transfers	4,501	5,500	0
Other Non-Operating Adjustments	0	0	0
<b>Total Non-Operating Expenditures</b>	<b>154,678</b>	<b>190,320</b>	<b>190,931</b>

(dollars in thousands)	Total Funding		Total Positions	
Expenditure By Program	Budget FY 08-09	Adopted FY 09-10	Budget FY 08-09	Adopted FY 09-10
<b>Strategic Area: Neighborhood and Unincorporated Area Municipal Services</b>				
Engineering and Construction	16,201	17,177	285	282
Finance and Customer Service	36,402	35,936	467	471
Office of the Director and Administration	71,881	86,151	391	400
Regulatory Compliance, Quality Assurance and Priority Capital Projects	11,275	10,823	61	64
Wastewater Collection and Treatment	132,392	143,398	802	900
Water Production and Distribution	122,540	135,423	666	700
<b>Total Operating Expenditures</b>	<b>390,691</b>	<b>428,908</b>	<b>2,672</b>	<b>2,817</b>

**CAPITAL BUDGET SUMMARY**

(dollars in thousands)	PRIOR	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FUTURE	TOTAL
<b>Revenue</b>									
Building Better Communities GOB Program	31,207	15,805	20,511	13,827	7,064	7,116	14,588	96,652	206,770
EPA Grant	3,880	0	0	2,125	0	0	0	0	6,005
Fire Hydrant Fund	14,368	1,467	1,458	1,448	1,436	1,424	1,411	1,430	24,442
Future WASD Revenue Bonds	0	0	784,665	772,147	646,280	588,551	446,916	1,483,227	4,721,786
HLD Special Construction Fund	57,696	0	0	0	0	0	0	0	57,696
Rock Mining Mitigation Fees	13,966	5,000	5,000	4,034	0	0	0	0	28,000
State Revolving Loan Wastewater Program	10,000	10,000	10,000	10,000	10,000	10,000	0	0	60,000
State Revolving Loan Water Program	0	0	0	375	0	0	0	0	375
WASD Revenue Bonds Sold	173,759	0	0	0	0	0	0	0	173,759
WASD Wastewater Commercial Paper	0	192,704	0	0	0	0	0	0	192,704
WASD Water Commercial Paper	0	60,138	0	0	0	0	0	0	60,138
Wastewater Connection Charges	118,519	8,478	8,492	3,273	355	33	0	0	139,150
Wastewater Construction Fund	906	0	0	0	0	0	0	0	906
Wastewater Renewal Fund	74,812	48,028	25,000	25,000	25,000	24,999	25,000	25,000	272,839
Wastewater Special Construction Fund	5,691	0	0	0	0	0	0	0	5,691
Water Connection Charges	52,214	9,540	11,136	10,824	1,121	0	0	0	84,835
Water Construction Fund	31,297	0	0	0	0	0	0	0	31,297
Water Renewal and Replacement Fund	113,960	38,237	25,433	25,433	25,433	25,433	25,433	25,433	304,795
Water Special Construction Fund	3,468	0	0	0	0	0	0	0	3,468
<b>Total:</b>	<b>705,743</b>	<b>389,397</b>	<b>891,695</b>	<b>868,486</b>	<b>716,689</b>	<b>657,556</b>	<b>513,348</b>	<b>1,631,742</b>	<b>6,374,656</b>
<b>Expenditures</b>									
<b>Strategic Area: Neighborhood And Unincorporated Area Municipal Services</b>									
Wastewater Projects	300,051	337,488	645,045	584,409	495,184	453,296	382,290	1,502,083	4,699,846
Water Projects	214,477	151,933	316,621	295,008	228,256	205,651	132,281	130,583	1,674,810
<b>Total:</b>	<b>514,528</b>	<b>489,421</b>	<b>961,666</b>	<b>879,417</b>	<b>723,440</b>	<b>658,947</b>	<b>514,571</b>	<b>1,632,666</b>	<b>6,374,656</b>

**Current Business Environment**

The Department serves approximately 417,983 retail water customers and 336,272 retail wastewater customers. In addition, wholesale water service is provided to 14 municipalities, and wholesale wastewater service to 11 municipalities, of Miami-Dade County's 35 municipalities, excluding unincorporated area, and wastewater services are provided to Homestead Air Force Base. In terms of population, this represents about 2.25 million residents. The County continues to experience growth. The population in Miami-Dade County is anticipated to grow 6 percent from 2008 to 2013.

The following is a summary of the Department's Financial Environment:

- The Department serves the majority of the population of Miami-Dade County either as retail or wholesale customers. Limited exceptions include wholesale customers such as North Miami, North Miami Beach, and Homestead along with certain other limited small service facilities. The Home Rule Amendment and Charter allow the Board of County Commissioners exclusive rights to provide retail water and wastewater services and establish rates which have consistently been extremely competitive. In fact, MDWASD rates are among the lowest rates in the country.
- As a Department, MDWASD operates as an enterprise fund whereby all of its operational capital and administrative costs are funded through its customer rates and fees.
- As part of the FY 2009-10 Adopted Resource Allocation Plan, a retail water and wastewater rate adjustment was approved utilizing a Maintenance Index of six percent based on the United States Department of Labor, Bureau of Labor Statistics, 2008 Consumer Price Index (CPI), All Urban Consumers, Water and Sewerage Maintenance U.S. City Average; an additional six percent increase was adopted effective, April 1, 2010 above the Maintenance Index to provide funding for increased debt service payments, funding of 146 additional positions required to meet current and future regulatory demands and to improve WASD overall operation and maintenance processes, and additional funding to Renewal and Replacement capital funds; these increases, combined with transfers from other Department funds, are required to cover the current operating and maintenance costs and the current level of capital expenditures; the adopted rate increases will not be applied to the retail lifeline rate; effective October 1, 2009 the bill of the average retail water and sewer customer (6,750 gallons per month) will increase by \$2.14 per month to approximately \$37.88 per month in FY 2009-10 from \$35.74 per month in FY 2008-09; effective April 1, 2010 the bill of the average retail water and sewer customer will increase by \$2.15 per month to approximately \$40.03 per month.
- During the FY 2009-10 budget hearings, the BCC adopted a change to the Department's Table of Organization that increased positions by a net of 145 as follows: 97 new positions to implement the Pump Station Optimization Program (PSOP), maintain and repair pump stations and emergency generators, operate the High Level Disinfection (HLD) expansion at the South District Wastewater Treatment Plant, handle peak flows at new facilities and transmission system; 36 new positions to conduct

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analytical work at the department's laboratories, improve dispatching and monitoring of meter box replacement and sidewalk restoration, maintain equipment at water plants and pump stations, perform additional repairs at water transmission infrastructure, increase the number of valves exercised annually, perform maintenance for the Fire Hydrant Annual Maintenance Program; five new positions to enhance security supervision and identification and maintain and support water and wastewater system software applications; five new positions to assist with the implementation of the Enterprise Assets Management System (EAMS), decrease response time to infrastructure emergencies, and improve construction contract monitoring; three new positions to prepare the Department's master plans and to update the Department's GIS water and wastewater transmission systems models; one position was transferred to Office of Sustainability.

- During the FY 2008-09 budget hearings, the BCC implemented a change that applies various rate structures to residential, multi-family dwelling and non-residential, retail revenue customers, to more equitably distribute the recovery of fixed costs. Additionally, a South Florida Water Management District (SFWMD) restriction surcharge was adopted to incentivize water conservation by penalizing large volume users in accordance with SFWMD strategies.
- During the FY 2008-09 budget hearings, the BCC adopted the "True-Up Methodology" to provide actual cost recovery from the wholesale customers while eliminating the smoothing mechanism previously in effect. Additionally, as of FY 2008-09, the transmission credit to the City of Hialeah will be phased-out during a five year period. FY 2009-2010 represents the second year of the transmission credit phase-out.
- During the FY 2005-06 Budget Hearings, the Board of County Commission (BCC) established an annual adjustment to the Departments retail rates utilizing a Maintenance Index based on the United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, Water and Sewerage Maintenance - U.S. City Average.
- Other events affecting the Department include ongoing interest from various wholesale customers in having the Department take over their distribution and collection systems. The Department is currently evaluating the request from several municipalities. The acquisition of Miami Springs was completed September, 2008, which added over 4,200 customers to the retail customer base.
- The Department has more than \$1.4 billion of outstanding revenue bonds and State loans that are rated as A1 or A+.
- The financial markets continue to be affected by the liquidity crisis has continuously impacted the Department over the past two years. During FY 2008-09, the Department had planned to implement a commercial paper program to provide low cost interim financing for the large regulatory driven capital improvement program. Unfortunately, the Department was unable to find a letter of credit provider and instead chose to enter into a Line of Credit arrangement for \$100 million. While this program is cost effective,

the amount of the Line is not sufficient to fund even one year of the Capital Improvement Program (CIP) forcing the Department into the bond market earlier than anticipated in FY 2009-10. Therefore, the Department will be selling approximately \$500 million in new money bonds during FY 2009-10. To mitigate the unanticipated debt service cost, the Department is planning to capitalize interest during FY 2009-10 and a portion in FY 2010-11. There is some good news in that as a result of the three refundings during FY 2007-08 and FY 2008-09, along with the benefit of two new low cost State Loans (\$22M), the Department's cost of capital has continued to decline annually the past two years. Investment yields continue to be almost absent; however, actual interest income was consistent with budgeted amounts this past year. Going forward the Department has continued to project interest rates conservatively.

- The Department's FY 2008-09 Water and Wastewater Multi-Year Capital Improvement Plan includes funding for more than \$6.4 billion in future capital projects.
- The Department is considered a leader in the water and wastewater industry. The Department received the Platinum Award for Utility Excellence and Sustained Competiveness Achievement by the Association of Metropolitan Water Agencies in 2009.
- Independent survey results indicate that customers are highly satisfied with the level of services provided by the Department. Customers are satisfied with the technology improvements for interacting with the Department, including the "On-line" bill payment option.

**The following is a summary of the Department's Regulatory Environment:**

- The Department's operations are regulated by the United States Environmental Protection Agency (USEPA), the Florida Department of Environmental Protection (FDEP), the South Florida Water Management District (SFWMD), the Florida Department of Health (DOH), and the Miami-Dade County Department of Environmental Resources Management (DERM).
- On October 30, 2009, the Final Mandatory Reporting of Greenhouse Gases (GHG) Rule was published the Environmental Protection Agency. The rule became effective on December 29, 2009 requiring that all facilities operating boilers, process heaters, incinerators, turbines, and internal combustion engines that emit more than 25,000 metric tons or more of carbon dioxide CO<sub>2</sub> equivalent (CO<sub>2</sub>e) GHG emissions per year and specific source categories to report their GHG emissions on an annual basis. This requirement results in MDWASD having to develop a GHG Monitoring Plan, begin collecting data on January 1, 2010, and will submit an Annual GHG report for each facility emitting more than 25,000 metric tons or more of (CO<sub>2</sub>e) GHG emissions in 2010 on March 31, 2011. Based on clarification from the EPA, this rule will apply the Alexander Orr, Jr. Water Treatment Plant only.
- In 2008, the Florida Legislature passed a bill prohibiting the use of ocean outfalls, for disposal of average flows. The bill requires all facilities that discharge domestic wastewater through ocean outfalls to achieve, at a minimum, 60% reuse by December 31, 2025. This requirement results in MDWASD having to implement 117 MGD of

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reuse by 2025. The bill also requires that ocean discharges, after December 31, 2018, meet the requirements of advanced wastewater treatment or equivalent. MDWASD intends to meet this requirement by diverting flows from the outfalls into existing and proposed injection wells and implementing reuse. In accordance with the bill (amended Section 403.086 F.S.), on December 31, 2009, MDWASD submitted a progress report to the Secretary of the Florida Department of Environmental Protection (FDEP) summarizing the accomplishments to date and the actions remaining to comply with the bill. By July 1, 2013, MDWASD has to submit a detailed plan to the FDEP detailing how the Department will meet the requirements of the legislation, including an identification of all land acquisition and facilities necessary to provide for reuse of the domestic wastewater; an analysis of the costs to meet the requirements; and a financing plan for meeting the requirements, including identifying any actions necessary to implement the financing plan, such as bond issuance or other borrowing, assessments, rate increases, fees, other charges, or other financing mechanisms. The plan also has to include a detailed schedule for the completion of all necessary actions.

- On March 8, 2007, the State of FDEP issued an Administrative Order Number AO-06-004- DW-13-SED. The Order establishes a compliance schedule for the SDWWTP to construct treatment plant improvements to address peak flows; provide appropriate odor controls; provide appropriate pretreatment of grease trap/septage wastes; develop and submit a Reuse Feasibility Study; and assure accuracy of effluent flow-proportioned composite sampling methods.
- In 2007, the SFWMD Governing Board approved revisions to the “Basis of Review for Water Use Permit Applications within the South Florida Water Management District” to incorporate changes to limit the use of water from the Regional System in the Lower East Coast for new and existing uses. Increased allocations above the base condition, as defined by the Rule, must come from alternative water supplies, if there is an impact to the Regional System.
- On November 8, 2006, the USEPA published the Ground Water Rule (GWR). The purpose of this rule is to provide for increased protection against microbial pathogens in public water systems that use ground water sources. The compliance date for triggered monitoring or alternately 4-log virus treatment and associated compliance monitoring is December 1, 2009. If MDWASD does not have approval from the State for 4-log treatment of viruses and an approved compliance plan to show the effectiveness of such treatment, triggered monitoring of source water (wells) will be required if there is a positive total coliform indicator in the water distribution system.
- On January 4 and 5, 2006, the USEPA published two new major drinking water rules: the Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR) and the Long Term 2 Enhanced Surface Water Rule (LT2ESWTR), respectively. The Stage 2 DBPR’s purpose is to target and reduce long-term exposures to elevated levels of Disinfection Byproducts (DBPs) to address possible chronic health risks from cancer. The Department is in compliance with the Initial Distribution System Evaluations (IDSEs) required by this rule. The Department has assisted its wholesale customers with compliance to the Stage 2 DBPR. Effective April 2012, the Department’s water

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treatment plants must meet the new maximum contaminant levels established by the Stage 2 DBPR. The LT2ESWTR's purpose is to improve control of microbial pathogens, specifically Cryptosporidium, for surface water systems. This rule will apply to the Hialeah/John E. Preston Water Treatment Plants if the rock mining lakes in the area of the Northwest Wellfield (NWWF) cause surface water influences to the groundwater.

- In 2006, the Florida Legislature recognized the impact of rock mining in the area of the NWWF. A bill was passed that imposed a mitigation fee for each ton of limerock and sand sold which would be used to upgrade the Hialeah/John E. Preston WTPs to meet the surface water treatment rule (LT2ESWTR) requirements. The WTPs upgrade fee imposed is 15 cents per ton of limerock and sand sold, beginning on January 1, 2007. The collection of this fee will cease once the total amount of proceeds collected for this fee reaches the amount of the actual moneys necessary to design and construct the water treatment plant.
- The Consent Order (CO) requires the treatment process to be updated to meet the high level disinfection (HLD) requirements in Chapter 62-600.440(5) Florida Administrative Code (FAC) and provides for expansion of the treatment and disposal capacity to meet future growth. The CO became effective on April 29, 2004. As of November 11, 2009, the Department completed 314 milestones. The CO is currently being amended and it is anticipated that a final amended CO will be approved by December 2009. The amended CO allows additional time for the installation of HLD.
- The South District Wastewater Treatment Plant CO also states that the FDEP agrees to work with the County to obtain funding for the improvements required by the Consent Order, in the form of low-interest loans. As of the end of September 2009, the FDEP has already provided \$20 million in loan. For the next four years, the Department will be completing the construction of the facilities required under the South District Wastewater Treatment Plant CO.
- On May 10, 2006, the County and the SFWMD entered into the Miami-Dade County Interim Consumptive Use Authorization and Agreement. This Agreement authorized water supply for a period of 18 months to allow MDWASD to complete an alternative water supply plan and other regulatory information necessary to obtain a 20-year Water Use Permit. The Agreement was terminated on November 15, 2007, with the issuance of the 20-year Water Use Permit for Miami-Dade County.
- In 2005, the Florida Legislature passed senate bills 444 and 360, which addressed alternative water supplies and growth management, respectively. Alternative water supplies include salt water, brackish water, surface water, groundwater, surface water captured predominately during wet-weather flows, sources made available through the addition of new storage capacity for surface or groundwater, reclaimed water, stormwater and any other water supply source that is designated as nontraditional. Senate bill 444 provided for alternative water supply funding.

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- On July 22, 2003, the Board approved a CO entered into between the FDEP and the County, to address wastewater disposal at the South District Wastewater Treatment Plant (SDWWTP).
- In the early nineties, the Department entered into two Consent Decrees with the USEPA and two Settlement agreements with the FDEP. The Department has established the Compliance Reporting Unit to ensure compliance with these decrees and orders. The Department continues complying with these agreements and has completed 1,791 milestones set forth in these enforcement actions and has not incurred any penalties.
- On December 7, 1999, the Board of County Commissioners adopted Ordinance 99-165 that created the Cross-Connection Control/Backflow Prevention Program, and created Article VIII of Chapter 32 of the Miami-Dade County Code. This code section establishes requirements for backflow preventers' installation and empowers the Department to enforce these regulations. The FDEP has proposed new cross connection rules that MDWASD would be required to implement. These rules will impose extensive recordkeeping and reporting requirements on MDWASD.
- Ongoing Compliance of Federal Public Health Security and Bioterrorism Preparedness and Response Act / Risk Assessment Methodology for Water Systems/Reduction of Unacceptable Security Risks.
- On-going compliance with the Federal Process Safety Management rule and compliance with both the Federal and State Risk Management Planning rules. MDWASD is currently updating the Department's Process Safety Management Manual.

### **Customer Feedback Plan**

During the fall of 2008, ETC Institute administered a Resident Satisfaction Survey for Miami-Dade County to assess resident satisfaction with the delivery of county services and to help determine priorities for the community. The level of satisfaction with water and sewer services was relatively high in all areas that were rated. According to the survey results, 77% were satisfied or very satisfied with overall quality of drinking water and 75% were satisfied with the quality of sewer services. The results showed an improvement from the 2005 survey results that showed 75% satisfaction in water and 70% satisfaction for sewer. The report also noted that the satisfaction level was higher than other large communities in the United States.

MDWASD also conducted an in-depth Customer Satisfaction Survey of 1,207 residential customers during September and October 2006. The survey highlighted the excellent service provided by the Department.

Following are some of the responses:

- 92% of single family and 85% of multi-family customers are either very satisfied or satisfied with the reliability of water service.

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- 87% of single family and 81% of multi-family customers are either very satisfied or satisfied with the quality of water service.
- 82% of single family and 69% of multi-family customers are either very satisfied or satisfied with the quality of wastewater service.
- 89% of single family and 83% of multi-family customers rated MDWASD as always or usually reliable and the most reliable utility as compared to the local phone company, natural gas, cellular phone, electric company, internet service provider or cable/satellite companies.
- 90% satisfied with public education on Showerhead Exchange Program. This information correlates with the number of showerheads exchanged at events and the department's customer service offices.
- 95% satisfied with pool credits

Two additional surveys were conducted between January and March 2007. One targeted customers that had contacted the department for a customer service/billing issue and the other addressed the needs of WASD's wholesale customers. Responses from the first survey were overwhelmingly positive, with customers rating our employees as courteous (96.6%), respectful (97.3%), and technically competent (93.5%). The Department is proud of the fact that one of its performance measures is the continuous improvement of its employees' knowledge and skills through various training programs. Likewise, the other survey targeting WASD's wholesale customers also confirmed the responsiveness of Department staff, the high quality of water we provide to their areas, and the fact that the Department is efficient and well-organized.

In order to improve the areas where the Department did not score as well, MDWASD continues to expand outreach and education efforts. The Department continues to respond to buck-slips and customer complaints in a timely manner. The Department also has a Customer Service Committee that is working to develop a standard customer complaint tracking and reporting system so complaints can be reviewed systematically to see what corrective action should be taken to ensure excellent customer services is delivered.

Miami-Dade County has also undertaken a survey of customers from the development, construction, building and related industries. The surveying mostly takes place at the Miami-Dade Permitting and Inspection Center (PIC) in west Miami-Dade. This center, known as the "PIC," is a one-stop location for the building industry to seek permits and as such, the surveys taken there are based on voluntary participation and usually cut across various departments. MDWASD has been part of this effort of improving customer service. During FY08-09, 79% of survey respondents' perceived that WASD provided an "often excellent" customer service, compare to 78% who considered the same during FY07-08. As part of the feedback action plan, business process modifications were implemented to reduce the overall completion waiting time as follows:

- New Business Representatives were divided in two teams: one dedicated to less complex projects such as residential applications and the second team dedicated to manage more complex projects requiring a more comprehensive review.

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- Established a check list containing required documents for submitting an application, and provided training to New Business Processors on how to implement this tool.
- Created a drop-off accelerated review process for less complex and residential projects.

### **Outreach and Education**

In November 2007, the South Florida Water Management District (SFWMD) issued a 20-year Water Use Permit (WUP) to the Department. The WUP allows the Department to continue drawing water from its primary source, the Biscayne Aquifer, for the next 20 years. The permit is conditioned on the Department developing alternative sources of water to address any future demand beyond today's demand for water. Outreach efforts continue to inform and educate the Department's customers and Miami-Dade residents on the importance of water and the WUP—and any related projects for developing new water supplies, especially the major groundwater recharge project—to the County. These efforts performed by the Department to create awareness among Miami-Dade residents about the importance of the WUP and how it will affect the lives of residents for the next two decades. Components include: press releases; feature articles to Community Periodical Program newspapers; newspaper messages; monitoring placement of Water Use Permit related articles and features in all media (print, broadcast and web); radio spots program; radio "infomercial" shows; radio and TV interviews; number of hits to the "WUP Central website created specifically for WUP related issues; brochure; articles in the Department's customer newsletter, *The Pipeline*; fact sheets for the various WUP related projects; presentations to various audiences including community events, civic/residential/business organizations and governmental/community councils; and internal communications including attendance at the regularly scheduled WUP Meetings, and the Department's employee newsletter, *The Splash*.

The Department continues to measure the number of Consumer Confidence Reports (CCRs) produced and distributed. The 2008 report was sent as a separate mailer in April 2009 and provided not only information about water quality but of the department's efforts regarding alternative water supplies (including information on the WUP) and future plans. The Department plans to continue producing the CCR as a separate mailer, and includes updates on the WUP. The Department also tracks the number of quarterly customer newsletters (*Pipeline*) produced and distributed with the water and sewer bills.

The Departments outreach effort addresses the issue of the critical water situation in the community and how the Department is working to balance costs and efficiencies for the benefit of the entire community. The Department continues to track the number of messages disseminated to the public, including educational and informative radio spots broadcast per month; news releases disseminated per month; articles produced and disseminated per month; and more.

Ensuring the availability of water is a priority for the community. Outreach efforts are ongoing in print, radio, on the Department's web page, "Time and Temperature" phone line (305-324-8811) messages and on bus benches throughout the community educating the community about water awareness issues. Targeted community meetings to address water quality and cost issues are ongoing as additional outreach tool.