



# Public Works and Waste Management Business Plan

**Fiscal Years: 2012 and 2013**  
(10/1/011 through 9/30/13)

Approved by:

A handwritten signature in black ink that reads "Kathleen Woods Richardson". The signature is written in a cursive style with a long, sweeping underline.

Kathleen Woods-Richardson, Director

A handwritten signature in blue ink that reads "Alina Hudak". The signature is written in a cursive style with a long, sweeping underline.

Alina Hudak, Deputy Mayor/County Manager

Plan Date: December 23, 2011

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**Departmental Business Plan and Outlook**  
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**DEPARTMENT OVERVIEW**

**Department Mission**

The mission of Public Works and Waste Management (PWWM) Department is to provide efficient, accountable, accessible, and safe infrastructure services that enhance and improve the quality of life through well maintained public streets and rights-of-way (ROW), waste collection and disposal services.

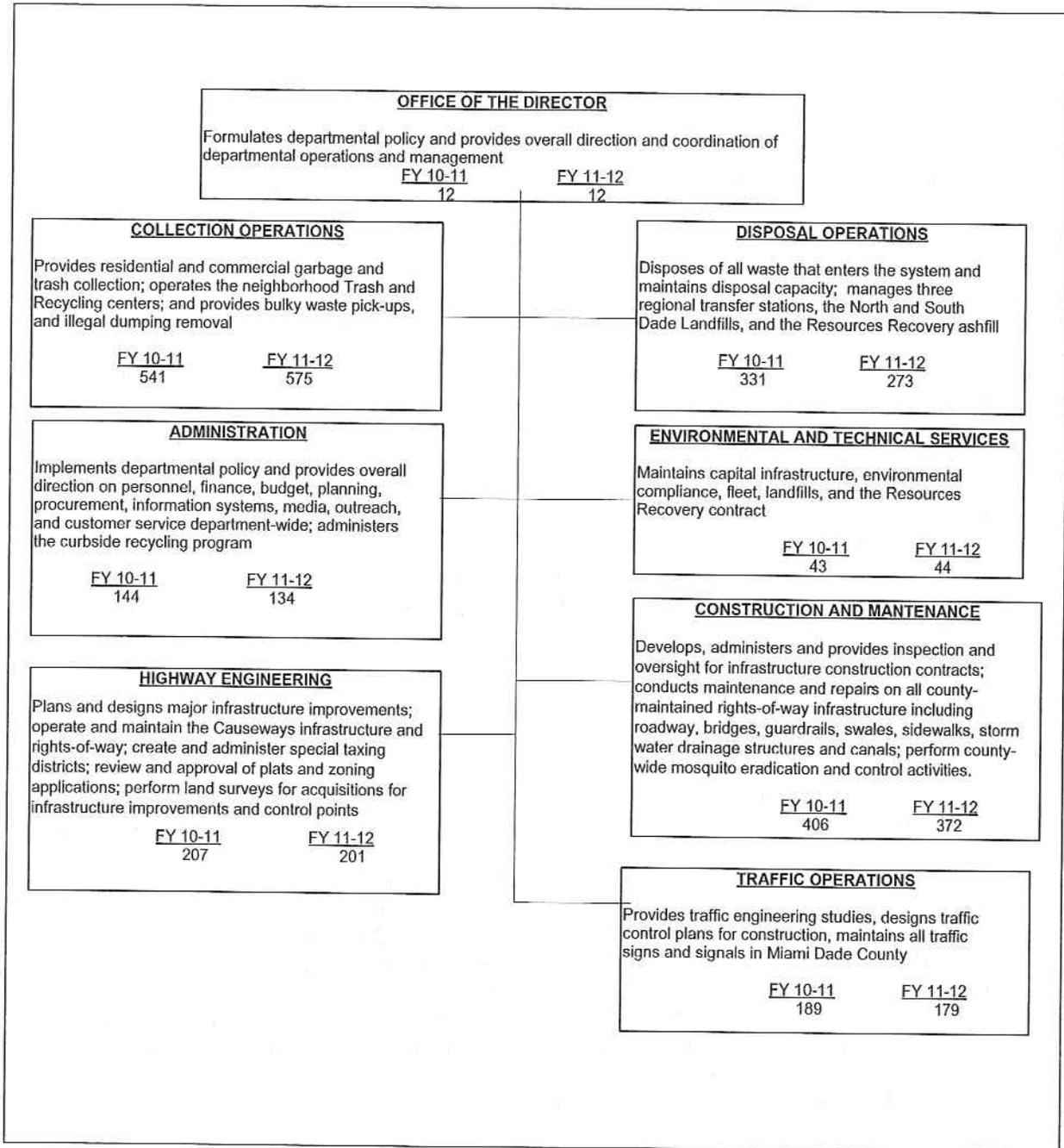
**Major Duties, Services and Programs:**

The Department's major duties, services and programs currently provided are as follows:

- Provision of waste collection and disposal service to more than 320,000 residential households in the solid waste service area; providing curbside collection of garbage twice-per-week and once every other week curbside recycling services
- Unlimited authorized customer access to any of the 13 Trash and Recycling Centers (TRCs) located throughout UMSA and scheduled bulky waste pick-ups
- Operation of waste disposal comprises of two landfills (North Dade and South Dade Landfills) and the Resources Recovery facility (waste-to-energy-facility) and the associated ashfill
- Operation of three Transfer Stations to reduce travels and waste delivery obligations
- The Home Chemical Collection Centers for disposal of household chemical waste generated
- Enforcement of Chapter 15 of the Miami-Dade County Code: issuing citations for residential and commercial recycling, issuing permits to general haulers, landscapers, tire generators and any other solid waste violations
- Maintain environmental compliance with federal, state and local regulations
- Manage traffic Countywide by performing traffic studies and related traffic improvement designs for roadway safety and capacity
- Install, construct, operate, and maintain all County traffic signalization services; maintain and repair all traffic control signs and street signs and pavement markings; operate and maintain street lights
- Maintain all infrastructure along county-maintained roadways and rights-of-way including movable and fixed bridges, swales, roadway surface repairs, guardrails, sidewalks, vertical separations for compliance with the Americans with Disabilities Act (ADA); maintain the secondary and tertiary canal system including storm drain cleaning as required by the County's National Pollutant Discharge System (NPDES) permit
- Review and approve plat applications and waivers of plats, zoning application reviews, and development plans; acquire land for rights-of-way and road improvements and maintain all maps, horizontal and vertical control benchmarks
- Proactively monitor all county-maintained roadways with NEAT Teams to identify and correct minor aesthetic and landscape enhancements
- Operate the Rickenbacker and Venetian Causeways toll facilities and maintain all the associated bridges
- Create and administer all County Special Taxing Districts
- Provide Countywide mosquito prevention and control activities

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### Strategic Alignment Summary

I. The Department's efforts align with the following Miami-Dade County Strategic Plan Goals:

- Efficient transportation network (TP1)
- Reduce traffic accidents (TP2)
- Well-maintained transportation system and infrastructure (TP3)
- Effective infrastructure services (NI2)
- Protected and restored environmental resources (NI3)
- Safe, healthy and attractive neighborhoods and communities (NI4)
- Friendly Government (GG1)
- Efficient and effective service delivery through technology (GG3)
- Goods, services and assets that support County operations (GG5)
- Green Government (GG6)

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

**1. Minimize traffic congestion (TP1-1)**

- Provide effective roadway and rights-of-way infrastructure
  - Implementation of capacity improvements on targeted locations to enhance traffic flow (ongoing)
  - Installation of traffic calming devices (ongoing)
  - Repair and replace damaged vehicle loop detectors (ongoing)
- Effective signalized traffic systems
  - Continue traffic signalized intersections with Advance Traffic Management System (ATMS), (ongoing)
  - Perform in-house signal retiming activities (ongoing)
  - Retrofit mast arm support system (ongoing)

**2. Provide easy access to transportation information (TP2-1)**

- Ensure effective and aesthetically pleasing signage
  - Continue installation of illuminated street name signs at intersections (ongoing)
  - Installation, repair and replacement of traffic control and street name signs (ongoing)
- Enhance the accessibility of services to customers
  - Provide opportunities for online department services to customers (ongoing)

**3. Improve safety for bicycles and pedestrians (TP2-2)**

- Improve bicycle and pedestrian paths
  - Continue construction of bike lanes (ongoing)

**4. Maintain roadway infrastructure (TP3-1)**

- Ensure safe and effective traffic solutions
  - Continue traffic studies (ongoing)
  - Perform capacity improvements as funded (ongoing)
  - Provide roadway infrastructure asset inventory (ongoing)
  - Ensure resolution of roadway and rights-of-way safety concerns

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- Ensure timely rights-of-way acquisition and engineering, plans reviews and preparation of legal descriptions
  - Acquisition of ROW parcels for infrastructure improvement (ongoing)
  - Provide commercial and residential plans review for paving, drainage and traffic concurrency (ongoing)
- Improve Quality and Safety of Roadways and Pathways
  - Continue NEAT Program (ongoing)
  - Ensure timely streetlight repairs (ongoing)
- 5. Provide functional and well maintained drainage to minimize flooding (NI2-2)**
  - Improve drainage and canal maintenance
    - Continue chemical maintenance cycles of the secondary canal system (ongoing)
    - Continue curb and gutter sweeping cycles (ongoing)
    - Continue roadway repairs through resurfacing and pothole repairs (ongoing)
    - Continue monthly aesthetic canal cleaning (ongoing)
    - Proactive arterial local storm drain and storm drain top cleaning (ongoing)
- 6. Provide adequate solid waste disposal capacity that meets adopted level-of-service standard (NI2-3)**
  - Ensure Landfill capacity
    - Disposal Operations (ongoing)
    - South Dade Landfill Cell 5 Construction (ongoing)
    - Operation of the Resources Recovery Plant
- 7. Protect groundwater and drinking water wellfield areas (NI3-3)**
  - Ensure control of exotic plants in preserved wetlands
    - Wetland Exotic Control Program (ongoing)
  - Ensure that the treatment and delivery of existing public water supply well and well fields meet or exceeds regulated standards
    - Minimize leachate production and monitor leachate treatment (ongoing)
    - Household Chemical Collection Program (ongoing)
- 8. Promote livable and beautiful neighborhoods (NI4-2)**
  - Improve collection of residential curbside garbage and trash
    - Twice-a-week residential garbage pick-up service (ongoing)
    - Scheduled Bulky-Waste Pick-up Program (ongoing)
    - Operations of 13 neighborhood TRCs
    - Garbage Route Balancing Project (ongoing)
  - Increase recycling programs
    - Contracted curbside recycling pick-up, once every other week (ongoing)
    - Continue E-Waste Program
    - Recycling campaigns (ongoing)
    - Multi-Family/Commercial Recycling Education and Enforcement (ongoing)
  - Enhance Neighborhood and rights-of-way aesthetics
    - NEAT crews to enhance ROW safety and aesthetics (ongoing)

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- Reduce Mosquito Nuisances
  - Chemical treatment to storm drains (ongoing)
  - Perform breeding grounds and residential site inspections (ongoing)
  
- 9. Preserve and enhance well maintained public streets and rights of way (NI4-3)**
  - Ensure the enforcement and compliance of Chapter 15 of the Code
    - Code Enforcement Programs (ongoing)
    - E-Ticketing Initiative (start FY 12)
  - Ensure accuracy of collection accounts and haulers compliance
    - Compliance auditing of disposal facility fee (ongoing)
    - Compliance auditing of residential, commercial, recycling and collection accounts (ongoing)
  
- 10. Provide easy access to information and services (GG1-1)**
  - Increase community awareness through increased community outreach events
    - Outreach Events and Community Fairs (ongoing)
    - Dissemination of brochures and public notices (ongoing)
  
- 11. Ensure available and reliable systems (GG3-1)**
  - Enhance internal applications for adequate information demands reliability
    - Replacement of the Waste Collection System (WCS), (ongoing)
    - CSR Mobile (ongoing)
    - 311 Integration (ongoing)
    - Scalehouse Automation Project (ongoing)
  
- 12. Provide well maintained, accessible facilities and assets (GG5-2)**
  - Ensure safe facilities and equipment
    - Continue building renovations and repairs (ongoing)
    - Maintain safe and operational bridges (ongoing)
    - Annual Fleet Replacement Plan (ongoing)
  
- 13. Reduce County government's greenhouse gas emissions and resource consumption (GG6-1)**
  - Ensure compliance with Clean-Air Act (Title V)
    - Landfill Gas Utilization System (ongoing)
    - Green House Gas Monitoring (ongoing)
    - Landfill Gas Export (ongoing)
  - Ensure Greenhouse Gas reduction
    - Fuel Reduction Consumption (ongoing)
    - Hybrid Truck Fleet (ongoing)

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**Our Customer**

The Department's key customers and/or market segments are County and municipal residents, commercial establishments, and other County departments. Most feedback is gathered through the County's 311 call center and measured on the Active Strategy Balanced Scorecard (ASE) and/or the Resident Satisfaction Survey.

• **Customers served**

1. Collections is comprised of garbage and trash operations and consist of the more than 320,000 household residents within the Waste Collection Service Area and nine municipalities (City of Aventura, the City of Doral, the City of Miami Gardens, the City of Sunny Isles Beach, the City of Sweetwater, the Town of Cutler Bay, the Town of Miami Lakes, the Village of Palmetto Bay and the Village of Pinecrest), serving approximately 322,000 residential customers. Data reflects a downward trend in garbage complaints significantly over the years as reflected in ASE.
2. Disposal customers consist of the PWWM collection operation, municipal waste collection operations and a number of private and municipal haulers from throughout the entire County. Data trends reflect a slight increase in tonnage; however, the economy has still not completely recovered.
3. The constituents of Miami-Dade County that traverse County maintained roadways and rights-of-ways in which complaints are monitored through 311 call center.
4. Residents residing in created special taxing districts in which feedback is provided through the district security guards and home owner associations.
5. Traffic operations consist of all Miami-Dade County residents which travel local roads, ROW, and some major highways.

- **Customer Feedback:** In a Department, such as the PWWM, where service provisions are so direct and immediate, customer feedback is equally direct and immediate. The feedback, received in the form of phone calls, emails and 311 call center reports enables management to identify and act quickly to effectively address customer service problems and improve performance.

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### Key Issues

- **Maintain Financial Stability:** The PWWM needs to maintain financial stability. The funding sources that support the Public Works operations are Road Impact Fees (RIF), General Obligation Bond Program (GOB), Quality Neighborhood Improvement Program (QNIP), Peoples Transportation Plan (PTP), Storm Water Utility, Secondary Gas Tax and Ad Valorem Tax. The Waste Management operations are mainly supported by household waste fees and disposal fees. The downturn in the economy has negatively impacted the PWWM funding levels (i.e. decrease in waste disposal & land development/construction). However, the PWWM will continue to seek additional funding sources and implement efficiencies to maintain financial stability.
- **Personnel Matters:**
  1. Challenges to attract, attain and retain new hires
  2. Experiencing shortage of resources
  3. Lack of adequate staffing ratios
  4. Contract Negotiations
  5. Succession Planning
  6. Licensure
- **Toll Collection System Upgrade:** Upgrade both Venetian & Rickenbacker Causeways to accept SunPass and Toll-by-Plate as payment methods. Delay in the upgrade has had the following impacts:
  1. No transponders available to sell or replace defective transponders; toll cards being used instead and consequently slows the speed at which traffic is processed.
  2. Due to the age of the electronic toll system, spare parts difficult to find and very expensive, which reduces the accuracy of the system and increases maintenance expenses.
  3. Toll system servers operating at maximum capacity and cannot be upgraded due to several software bugs that reduce the efficiency of toll operations.
- **Department Reorganization:**
  1. Consolidation of administrative staff; identify and eliminate duplicate efforts for efficiencies
  2. Continuation of merger transition of all back office functions (i.e. Procurement, Budget, Accounting, Human Resources)
  3. Impacts on information technology systems and applications
  4. Integration of policies, procedures and plans
  5. Change in financial structure (i.e. procurement, invoice payments)
- **Aging Equipment & Facilities:** The PWWM needs to ensure future viability of all bridges, equipment and facilities. The PWWM has Multi-Year Fleet & Capital Plans in place to address these issues. Adequate funding levels are important for plan implementation.
- **New/Amended Laws & Regulations:**
  1. Monitor legislation for Numerical Nutrient Criteria and the Statewide Storm-Water Treat Rule Development which will greatly affect the ability and cost of discharging storm-water into bodies of water.
  2. Monitor and Meet State 75% Recycling Goal (40% by December 31, 2012, 50% by December 31, 2014, 60% by December 31, 2016, 70% by December 31, 2018 and 75% by December 31, 2020).

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3. Monitor legislative proposed changes for 2012 in permitting facilities that are currently permitted for five years to extend the permit duration for 20 years, provided that there are no significant changes to the facility and environmental controls existing in it, such as leachate collection systems and groundwater monitoring networks. Costs of permits would be prorated. Pending approval by state legislature. Should it pass, the Department may not benefit from this until current permits expire, the first of which will be in mid FY 2012- 2013.
- **Completion of Long-Term Solid Waste Master Plan:** The Department needs to complete Phase II of the Solid Waste Master Plan. The goal is to identify and develop long-term waste strategies that will enhance and improve resource conservation, recycling, disposal and collection options, environmental protection, and public health for the next generation of Miami-Dade County residents.
  - **Electric Power Purchase Agreement (PPA) and Related Agreements:** The PPA with Progress Energy Florida (PEF) will expire on November 30, 2013. The current utility portfolio and suite of standard offer contracts offer energy only payments (as opposed to energy plus firm capacity). Current pricing will result in approximately half the revenue offered in the existing contract. Additionally, the Transmission Service Agreement with FPL for transmission of power to PEF expires October 31, 2013 and the Interconnection Agreement for operation and maintenance of the Doral substation expires September 29, 2014.
  - **Technology:** The PWWM needs to integrate information technology systems (as a part of the merger) and continue new, innovative technological efforts that will allow the Department to operate more efficiently and effectively.
  - **Sustainability:** The PWWM will continue to implement sustainable solutions in its operations, programs and services:
    1. Increase the participation in the Curbside Recycling Program (measured in total tons collected).
    2. Purchase additional Hybrid Automated Garbage Trucks (tracked as an initiative in ASE)
    3. Continue to develop the Solid Waste Management Master Plan (tracked as an initiative in ASE).
    4. Continue the Landfill Gas Utilization Project for conversion to electricity (tracked as an initiative in ASE).
    5. Continue a carbon sequestration (reforestation) project at the Old South Dade Landfill (tracked as an initiative in ASE).
    6. Track the amount of fuel used (both heavy and light fleet) and search for trends and opportunities for fuel reduction (measured in number of gallons purchased).
    7. Continue to enforce the Department's *No Idling Policy* (measured by monitoring GPS systems).
    8. Continue to enforce the Department's *Green Office* procedures (no clear way to measure), but the Director's Office will continue to push the information through the Department.
    9. Explore ways to reduce paper usage (measured by number of reams purchased).
    10. Extract all freon from older refrigerators and air-conditioning units that contain contaminants.
    11. Installation of solar-powered flashers in place of traditional electric pedestrian and school flashers.
    12. Roadway widening on main thorough fares to increase capacity and reduce congestion.
    13. Direct services available electronically to reduce customer miles traveled/fuel

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- usage/carbon emissions.
- 14. Replace traffic signalized intersections with roundabouts where and when applicable for new proposed and existing locations to reduce electricity consumption and maintenance and improve traffic flow.
- 15. Replace about 1,000 8" signal heads with 65-watt incandescent bulbs with higher visibility 12" signal heads.

### ▪ Business Environment:

#### Changes in Business Practices

The PWWM disposal system operates within a competitive environment from which it has attempted to insulate itself through a series of efficiencies, such as night shift operations and stabilization measures (long-term disposal contracts with municipal and private haulers) which expires in year 2015. The current disposal environment has been impacted by a slow recovering economy with decreased tonnages which have resulted in decreased disposal revenues. The Department is working to identify and implement cost saving efficiencies in addition to exploring other revenue opportunities.

The current economic climate and the decline of the building and construction industry continue to have an adverse impact on the PWWM public works operating and capital revenues collected by the Department. Despite the financial impact to the capital program, the Department prioritizes projects in order to maximize available resources in a manner that will yield the greatest benefit to the community. Furthermore, the Department continues to implement critical improvement programs such as ADA compliance and Transition Plan, the ATMS, County-wide traffic safety studies and capacity improvements, the Venetian Causeway Bridge Rehabilitation, the Rickenbacker Shoreline Renourishment, and the SunPass Conversion Projects.

The reduction in the Countywide Ad Valorem Tax revenues has further impacted the Department's level of services due to its reliance on that source of funding for operational and maintenance costs, including personnel salaries. These resource reductions impact the gains in improved levels of service the Department had accomplished over the past years, especially in the proactive work accomplished by the NEAT. Performance data are beginning to trend signs of the impact to service reductions, through an increase in customer driven service and liability claims. Additionally, citizens will be affected by an increased response time to complaints, as well as by rights-of-ways that are less attractive and safe for longer periods of time.

The current environment has provided an opportunity to be creative and innovative, in order to continue to be successful. In order to maintain organizational viability, the Department has and continues to make adjustments in order to increase efficiency and maintain adequate levels of services, and continues to pursue innovative business practices and adjusting manpower resources by merging responsibilities and streamlining processes. The Department has found means to maximize the capacity of existing technological systems in order to improve processes and service delivery to our major customers and stakeholders; participating in and pursuing shared services opportunities with other Departments by competitively providing services they would normally procure from private sources thus sharing in mutually beneficial efficiencies; and consolidating functions, streamlining and cross training of staff. Some of these innovative ideas have resulted from a collaboration of staff's input and customer feedback to improve service delivery. As such, the Department continues to consistently evaluate and make modifications for effectiveness and efficiencies in order to provide the best level of service possible with the current levels of funding.

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### Effects of Privatization

Consideration is given to privatization of certain programs or elements in terms of their overall impact on the Department's operations and the potential to realize efficiencies or service improvements. Potential privatization is reviewed on a case-by-case basis and can, as occurred in the case of the operation of the PWWM household chemical collection program, result in the movement of a contracted or privatized operation to an in-house project. In this case, this transition permitted the days and hours of service availability to be approximately doubled for the same cost of service.

### ▪ **Municipal Landfill Closures:**

PWWM administers grants for closure and remediation of Municipal landfills to ensure long term care of landfill cells and landfills. PWWM is currently funding or intending to fund the following municipal closure grant projects: Virginia Key Landfill, Munisport Landfill and Taylor Park. Virginia Key has been slow in progressing. The City has yet to enter into the \$45M Grant Agreement for Closure and Remediation of the site since the City of Miami has experienced a number of management turnovers in recent years and it has expressed continuing concerns of the cost of long term care of the site. Munisport Landfill is currently in the groundwater remediation permitting process. The effort has been complicated and slowed somewhat by the insistence by the regulators that the system be constructed and implemented in two phases with a period of monitoring, additional modeling and study after the first phase is implemented and prior to authorization to construct the second phase of the system. The City of North Miami is also in the process of securing another developer to complete the landfill closure due to the failure and subsequent foreclosure upon the former developer. Taylor Park is a new project. The City of North Miami Beach has been exploring the Grant opportunity with the County based on a range of options for the remedial action.

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### Priority Initiatives

- PWWM re-organization and associated compensation/recruitment analysis
- Agreements:
  1. Renegotiate new Power Purchase Agreement
  2. Renew FPL Transmission Service Agreement
- Complete Phase II Long-Term Solid Waste Master Plan
- EPA Grant Award (\$1.5 million) to purchase 15 New Automated Hybrid Hydraulic Refuse Vehicles
- Toll System Upgrade: The PWWM is in the process of upgrading the C Pass System with a Sun Pass System to accept Sun Pass and Toll-by-Plate as payment methods at both the Venetian & Rickenbacker Causeways. The current system is old and replacement parts are costly and difficult to find. The toll servers are operating at maximum capacity and cannot be upgraded because of several software bugs. The upgrade is scheduled to be completed by July 2012.
- Advance Traffic Management System (ATMS) – Complete implementation this year and continue communication subsystem migration to wireless. The ATMS system monitors and controls operation of traffic signals. The central software and equipment presently used by the PWWM has been tailored to address current traffic signal operational issues and to help staff and management to respond to every traffic signal operational issue in most efficiency and effective manner.
- Technology:
  1. Citizens Relations Management (CiRM) System – The development, implementation and integration of CIAO's new CiRM system and PWWM's new Waste Collection Systems(WCS) will provide bi-directional Interfaces between both ORACLE database systems. CIAO's CiRM system is Miami-Dade County's 311 citizen call intake center (currently in development). 311's CiRM system will receive, create and update PWWM service requests which consist of public complaints, requests for service, Garbage and Trash pickup information, etc. The new CiRM will be interfaced with PWWM's new Waste Collection Systems and several other departments' database systems. The new WCS consist of three tightly integrated PWWM Operations and Administrative modules (Code Enforcement, Accounting/Billing and Trash Routing). These three WCS modules will work seamlessly together to process CiRM system service requests related to PWWM services, to manage residential and commercial Enforcement violations and to coordinate Bulky Waste scheduling. It will also manage the account billing process.
  2. Visual Inventory of Roadway Assets System (VISIRA) – VISIRA system is a GIS image based asset inventory and pavement management solution for the County. The system is comprised of a survey vehicle that collects roadway images with its respective on-board hardware, software and vehicle cameras. The images collected in 2008 were used to create a GIS layers for road signs, sidewalks, ADA access points, bridges and streetlights on County maintained roads. The images can also be used to capture additional assets such as guardrails, trees, waste collection bins, manholes, inlets, curb, gutter, pavement condition, fire hydrants, etc. If you can see it in the image it can

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be collected and entered into a GIS database at a fraction of the cost of traditional field crew deployments. This solution also provides an effective way of going back to verify the correctness and completeness of the data collected. This system needs to be reassigned to Information Technology Division along with staff and perform necessary hardware/software upgrades.

3. Supervisory Control & Data Acquisition System (SCADA) – system consists of a Human Machine Interface (HMI) system that pulls data from pumps station utilizing the Emerson software to graphically view the data collected from the stations such as pumps status (on/off) rain gauge level, canal level, generator status and run time. The current number of pump stations on the system is seven (7) and we have a project out for additional 34 pump stations and canal control points. As part of this project, we are obtaining new software, Visual Tag System (VTS), which will allow us to view the information collected by the existing SCADA system. The new software will also allow us to poll the SQL tables in near real-time information as well as give us the capability to display it both internally and externally via the web. New development and programming are needed.
  4. Web Services – Within the scope of the new WCS, the public will have access the following: report/file a complaint, online payments (bills, services, fines), verify availability of a free bulky pick up, request bulky waste service, check status of bulky order, request an inspection, complete a permit renewal application and check the status of an enforcement action.
  5. Biometric Time Clock System - The PWWM is an active member of a multi-department effort to draft and issue an RFP for a biometric time clock system that will interface with the PeopleSoft ERP time and attendance module in order to accurately and efficiently capture employee time. The biometric feature will rely on a unique attribute of the user, such as a hand print, finger print, facial, iris or retina recognition, to identify and then “clock-in” the staff member.
  6. Enterprise Asset Management System (EAMS) - The PWWM is planning to be a full participant in the county-wide EAMS deployment being coordinated by ITD. This project will involve the implementation of a software product that will efficiently and accurately track department physical assets throughout the item's complete lifecycle including the maintenance of data concerning originating work or purchase orders, cost and depreciation history, warranties, etc. up to and including its final disposal. Significantly, through a barcode reading functionality it will assist in the effort to confirm asset location and condition by automating the conduct of the annual inventory process.
- Landfills Additional Capacity: The PWMM is in the process of constructing the following projects for additional disposal capacity: Cell 5 Construction (South Dade) & Cell 20 (Resources Recovery Ashfill).
  - Landfill Gas Utilization System: The program will install electrical generators that will export power to the bulk electric power grid. The generators will be located at the North Dade and South Dade Landfills and will operate on Landfill Gas.

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- Continue to increase customer satisfaction through the prompt response to customer requests received via 311 Service Requests, written correspondence, email and the web (PWWM mailbox, online bulky);
- Continue to engage staff in business plan implementation – via Monthly ASE/Business Review meetings, Annual Staff Retreats, Supervisors Forums and Regular Weekly Staff Meetings
- Continue to Monitor Revenue and Expenditures – senior staff is responsible for monitoring their division's costs on a monthly basis. In addition, budget staff monitors the total department's revenues and expenditures. Cost savings and efficiencies are implemented as needed.
- Continue to research grant and other funding opportunities to supplement funding to address overall services, programs and capital projects.

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### FUTURE OUTLOOK

Below are a few significant factors which are anticipated within the next three to five years that may impact operations' most relevant activities, programs and initiatives.

#### Solid Waste Master Plan:

The Solid Waste Management Master Plan will provide a framework for policies and decisions, operational efficiencies, funding mechanisms, waste system concurrency, waste collection, disposal alternatives, waste stream analysis (long-term disposal contract reviews), waste diversion, and facility needs for the next 50 years. The project will engage citizens in the process through community outreach to solicit their feedback. The results of the plan will be utilized to effectively formulate long-term departmental waste collection and disposal strategies. The results will also be used to address the challenge to meet capacity requirements.

The Department completed Phase I in August 2010. The development of Phase II has begun and will be completed within the next three years.

#### Landfill Construction:

The PWWM is responsible for planning and ensuring that disposal needs are met in both the incorporated and unincorporated areas of the County. The County's system must collectively maintain a solid waste disposal capacity sufficient to accommodate waste flows committed to the long-term interlocal agreements or contracts with municipalities and private waste haulers and anticipated waste flows for a minimum of 5 years. The PWWM is in the process of constructing the following projects for additional disposal capacity: South Dade Landfill cell 5 and, Resources Recovery Cell 20

#### Municipal Landfill Closures:

The PWWM administers grants for closure and remediation of Municipal landfills to ensure long term care of landfill cells and landfills. The Department is currently funding or intends to fund the following municipal closure grant projects: Virginia Key Landfill, Muni-Sport Landfill and Taylor Park.

#### Legislation - Environmental

There are looming legislative changes at the Federal and State levels that will affect PWWM's operations as it relates to recycling and renewable/clean energy. A comprehensive legislative item regarding Renewable Energy reflects the PWWM's ongoing efforts to both preserve waste-to-energy's inclusion in applicable definitions of "renewable energy" and "green energy" and to provide incentives and other support for the production of such renewable energy. The Department is working with the Office of Intergovernmental Affairs and has included language in the legislative package to address these issues.

There are two air emission standards established by the United States Environmental Protection Agency/ Florida Department of Environmental Protection (USEPA/FDEP) that may be modified and therefore, could affect our facilities in the foreseeable future, (Mercury (Hg) and Greenhouse gases (GHGs). They both include Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>) and Nitrous Oxide (N<sub>2</sub>O). The FDEP has expressed that Hg from the Waste-to Energy plant may require continuous emissions monitors (CEM's) which are equipment that analyze stack emissions continuously on a real time basis. Currently, the stack emissions are monitored once yearly. Effective January 1, 2010, Landfills and the Waste-to-energy plant must keep an inventory of GHG emissions. Data collected through the inventory will be used as a basis for limiting (capping) GHGs from solid waste facilities. Facilities emitting over a certain threshold will have to offset the GHGs by buying credits and/or paying a fee.

Effective July 1, 2010, the legislation passed House Bill (HB) 7243 that requires counties to meet specific recycling benchmarks. By 2020, the long-term goal for the recycling efforts of state and local governmental entities, private companies and organizations, and the general public is to recycle at

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75% of municipal solid waste that would otherwise be disposed of in waste management facilities, landfills, or incineration facilities. However, any solid waste used for the production of renewable energy shall count toward the long-term recycling goal. This particular piece of the bill is important for the Department because of production of renewable energy at the Waste-to-Energy facility. Another part of the bill calls for the implementation of a construction and demolition debris recycling program. This will have an impact on the department.

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. State of Florida changes to the current requirements of NPDES permit may obligate the Department to increase maintenance frequencies which would result in additional staff and capital equipment purchases. Ongoing deliberations have been in effect for nearly two years.

The Department submitted grant funding requests in this year's legislative package. We have been actively pursuing grant funding opportunities and will continue to do so.

### Legislation – Traffic

The PWWM may experience a fiscal impact and unfunded mandate from House Bill 33 which has recently been filed for consideration during the 2012 session. The Bill will require traffic lights to be recalibrated for longer yellow lights at intersections based on a formula. It also requires that signage be installed on the approach to intersections with a traffic light on roads with a speed limit greater than 55 mph. There is a December 31, 2013, compliance deadline with the exception of intersections with red light cameras, which have a sooner December 31, 2012 deadline. The Bill does not provide funding any changes required.

The PWWM is monitoring a draft legislative proposal from the State University System that would require local governments to pay for off-campus improvements such as sidewalks, turning lanes and traffic signals associated with university construction. The area near the Florida International University would be an issue for the Department. The proposal is the result of the discontinued surcharge on local option fuel taxes and a state trust fund that previously covered the cost of these types of improvements. The Department will experience a fiscal impact should the proposal pass the legislative session.

### Financial Stability

The PWWM has experienced some revenue shortfalls and continues to monitor and reduce expenditures while attaining operational efficiencies that help minimize cost. Reductions in the General Fund support continue to substantially impact the Public Works operation staffing and capital project needs. The PWWM will continue to seek additional funding sources to supplement operations and maintain financial stability.

### New Technology

The nature of information technology is constant change and new innovations. The Solid Waste Management Master Plan will identify new technologies for the collection and disposal of waste. PWWM will continue to explore and implement new IT technology such as implementation of an E-ticketing mobile solution, trash, garbage and enforcement routings, customer information management systems, and enhancement of the waste collection system and the GIS application for traffic engineering improvement.

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**Departmental Business Plan and Outlook**  
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Succession Planning

The PWWM currently has a large percentage of its workforce that is and will be able to retire within the next three to five years. The department has implemented many programs to react to this oncoming issue such as succession planning, supervisory forums, supervisory academy and continues to push training efforts in the wake of budgetary constraints. The department continues to monitor its workforce to ensure that the skill sets necessary for the continuity of operation are maintained.

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