

PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT **BUSINESS PLAN**

Fiscal Years: 2015 and 2016

(10/1/2014 through 9/30/2016)

Approved by:

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DEPARTMENT OVERVIEW

Department Mission

The mission of the Miami-Dade County Public Works and Waste Management Department (PWWM) is to provide vital transportation infrastructure systems and services and an integrated waste management program that promote the mobility, health, safety, comfort, sustainability and prosperity of our community.

Major Duties, Services and Programs:

The PWWM's major duties, services and programs currently provided are:

Transportation Related Programs

- Install, operate, and maintain all traffic signalization devices countywide; install, maintain and repair all traffic control signs, street signage and pavement markings; operate and maintain all County and State-owned street lights within unlimited access roadways
- Administer the design and construction of all improvements within the public rights-of-ways
- Manage the County Stormwater Utility for flood and water quality protection; maintain the secondary canal system including storm drain cleaning in accordance with the County's National Pollutant Discharge Elimination System (NPDES) permit
- Acquire land for rights-of-way and road improvements; maintain all rights-of-way maps, as well as horizontal and vertical control benchmarks
- Maintain all infrastructure along county-jurisdictional road rights-of-way including movable and fixed bridges, swales, roadway surface repairs, guardrails, and sidewalks, and ensure accessibility and compliance with the Americans with Disabilities Act (ADA)
- Manage traffic County-wide by performing traffic studies and related traffic designs for roadway safety and capacity improvement
- Operate the Rickenbacker and Venetian Causeways toll facilities and maintain all the associated bridges and causeway rights-of-way
- Assess permitting fees for work within rights-of-way and conduct code enforcement of unpermitted work within the rights-of-way in accordance to Miami-Dade County Code, Chapters 2 and 10

Neighborhood Related Programs

- Proactively monitor all County-maintained roadways with Neighborhood Enhancement Action Teams (NEAT) to identify and correct minor deficiencies
- Provide waste collection and disposal services to more than 350,000 residential households in the solid waste collection service area; providing curbside collection of garbage twice-per-week and once every other week contracted curbside recycling services
- Manage and operate 13 Trash and Recycling Centers (TRCs) with unlimited authorized customer access located throughout the Unincorporated Municipal Service Area and two scheduled bulky waste pick-ups each year
- Operate two Home Chemical Collection Centers for disposal of household chemicals by residents
- Operate waste disposal facilities, including three landfills (North Dade, Resources Recovery Ashfill and South Dade) and contracted operation of the Resources Recovery facility (waste-toenergy-facility)



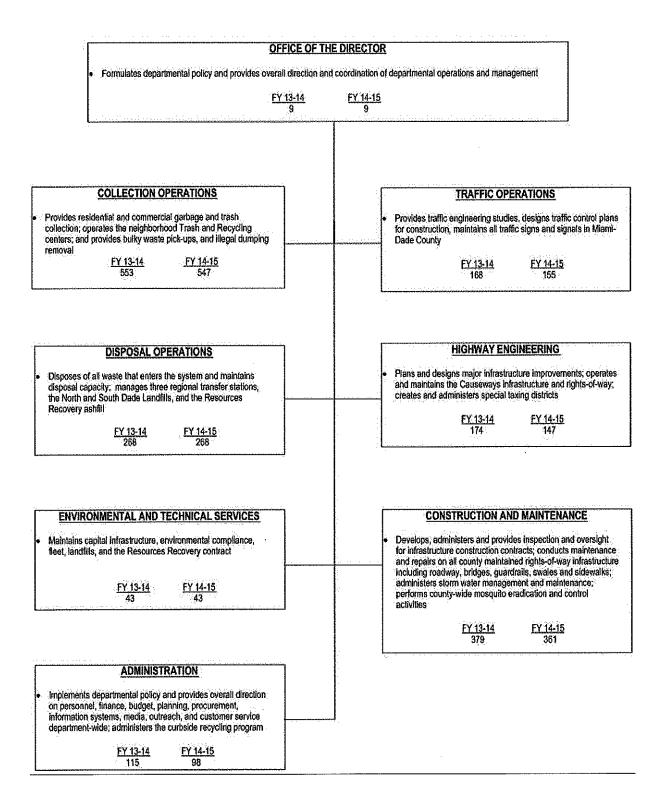
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- Operate three waste Transfer Stations to reduce travel time and better enable the County to meet its waste delivery obligations
- Enforcement of Chapter 15 of the Miami-Dade County Code including: commercial and multifamily recycling education and outreach, issuance of permits to general haulers, landscapers, tire generators and issuance of warnings and citations for waste related code violations
- Maintain environmental compliance with federal, state and local waste-related regulations
- Provide County-wide mosquito prevention and control services; education and outreach
- Create and administer all County Special Taxing Districts



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PWWM FUNCTIONAL TABLE of ORGANIZATION





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Strategic Alignment Summary

PWWM's responsibilities include the provision of effective traffic signalization services County-wide; the planning, design, operation and maintenance of all County-owned transportation rights-of-way infrastructure; and ensuring that all rights-of-way are available, accessible, safe and effective for all users. Accordingly, the Department promotes and primarily supports the following goals and outcomes in the Miami Dade County's Strategic Plan:

Efficient Transportation Network (TP1)

- Minimize traffic congestion TP1-1
- o Expand and improve bikeway, greenway and sidewalk system TP1-2
- Safe and Customer-friendly Transportation System (TP2)
 - Reduce traffic accidents TP2-1
 - o Improve safety for bicycles and pedestrians TP2-2
- Well-maintained Transportation System and Infrastructure (TP3)
 - Maintain roadway infrastructure **TP3-1**

PWWM also supports the following strategic goals and outcomes through the delivery of its integrated waste management collection, recycling and disposal programs; stormwater design, construction and maintenance; and the planning and design of roadway infrastructure services:

- Effective Infrastructure Services (NI2)
 - Provide functional and well maintained drainage to minimize flooding NI2-2
 - Provide adequate solid waste disposal capacity that meets adopted level-of service standard NI2-3
 - Provide adequate local roadway capacity NI2-4
- Safe, Healthy and Attractive Neighborhoods and Communities (NI4)
 - Promote livable and beautiful neighborhoods NI4-2
 - o Preserve and enhance well maintained public streets and rights-of-way NI4-3



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Our Customer

All residents and visitors of Miami-Dade County are customers of PWWM. The Department's key customers and/or market segments are County and municipal residents, visitors, commercial establishments, and other County departments. Most feedback is gathered through the County's 311 Call Center, direct calls and requests and measured on the Active Strategy Enterprise Balanced Scorecard (ASE).

Customers Served

- All residents, commuters and visitors within Miami-Dade County that utilize County maintained roadways, Venetian and Rickenbacker Causeways, rights-of-way which include swales, sidewalks with street lighting, bikeways and walkways, storm drainage systems and bridges.
- Over 350,000 households within the Waste Collection Service Area, including eight municipalities (City of Aventura, the City of Doral, the City of Miami Gardens, the City of Sunny Isles Beach, the Town of Cutler Bay, the Town of Miami Lakes, the Village of Palmetto Bay and the Village of Pinecrest).
- Disposal customers include the PWWM collection operation, municipal waste collection operations and a number of private haulers throughout the entire County.
- Residents in special taxing districts which includes lighting, guardhouses, landscape and lake maintenance districts.
- Internal customers such as departments which solicit survey and property acquisition services. In addition, PWWM provides contractual services to others through shared services agreements.

Customer Trends

- PWWM's authority to provide major services is established in the Miami-Dade County Code and the Home Rule Charter; therefore, consistency of its customer base remains relatively constant. It is anticipated that some service sectors may increase if the economy continues to recover. As it relates to the waste customers, there are signs of a consistent increase, albeit slight, in the demand for waste collection and disposal services in the moderate economic recovery.
- Subsets of PWWM's infrastructure customers, such as bicycle riders continue to demand more safety, availability, accessibility and effective connectivity related to our roadway infrastructure services that accommodates their needs.
- Increased traffic congestion has accelerated demands for increased levels of roadway services such as traffic calming devices and increased capacity.

Customer Feedback

• In PWWM, customer feedback is direct and immediate. Feedback is received in the form of letters, phone calls, emails and 311 call center reports. This enables management to



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identify problems and act quickly to effectively address and improve performance. Finally, Special Taxing District feedback is provided through the district security guards and homeowner associations.

KEY ISSUES

Changes in Business Environment

Disposal Services: The PWWM disposal system (System) operates within a competitive environment, in that private firms provide the same or similar services. To ensure that the System remains financially stable and the County's waste delivery obligations are met, the Department utilizes several means to control the flow of waste into the System. First, the Department itself collects waste from approximately 350,000 households; second, the department enters into long-term waste disposal agreements with municipalities, private waste disposal companies and private waste haulers at predictable rates; finally, the Department enforces Sections 15-18 and 24-18 of the County Code relating to Resource Recovery and Management Facility Permitting, as well as Section 612 of Bond Ordinance 96-168 related to competitive facilities. While the disposal volume had been adversely impacted by the economy during the past few years, more recently, the tonnage numbers and related revenues have stabilized and are gradually increasing. Energy sales revenues, however, have been impacted as a result of the expiration of the Power Purchase Agreement. Accordingly, the Department continues to work to identify and implement cost saving efficiencies in addition to exploring other revenue opportunities.

As stated above, private firms provide the same or similar waste collection and disposal services as the PWWM. Privatization of these services changes our business environment. One of the issues that the Department is dealing with involves municipalities with County waste disposal agreements (Contract Cities) privatizing their waste collection services. This can have a negative impact on our ability to monitor Contract City compliance with their waste delivery obligation to the County because the private hauler they use does work elsewhere in the County, often with the same vehicles used to service the Contract City. To minimize the impact of privatization and potential tonnage decreases, the PWWM is in the process of implementing procedures to ensure that Contract Cities are meeting the terms and conditions of their waste disposal interlocal agreements. It is imperative that disposal revenue is not negatively impacted because it supports the System. Any reduction in System revenue equates to a reduction in additional bonding capacity that may be required in the near-term and long-term to cover projected costs.

Transportation Infrastructure: The most significant issue affecting the transportation infrastructure is the availability of appropriate levels of funding for maintenance and much needed capital improvements. While there are indications of economic upturn, current funding levels impair the Department's ability to effectively and consistently address issues such as:

- 1. Roadway capacity improvements to optimize traffic flow
- 2. Critical improvements identified through traffic safety studies to enhance rights-of-way safety for pedestrians, cyclists and vehicular traffic
- 3. ADA compliance projects
- 4. Drainage improvements to reduce flooding and associated adverse impacts
- Technological advances to increase the efficiency and effectiveness of our Traffic Management System
- 6. Preventive maintenance infrastructure repairs and maintenance on roadway and right-of-way infrastructure and bridges to reduce the descent into critical state of repairs
- 7. Capital improvement projects to replace infrastructure that has outlived its lifespan



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Department revenues for the public works operations and capital projects continue below historic levels. This impedes the ability of the Department to adequately address currently identified unfunded needs for infrastructure improvements totaling \$1.6 billion. With limited resources, PWWM prioritizes projects in order to maximize the benefit to the community. Furthermore, the Department continues to implement programs such as the ATMS, County-wide traffic safety studies and capacity improvements and Bridge Rehabilitation.

The lack of dedicated funding to maintain safe and effective rights-of-way will continue to compromise the Department's ability to maintain the transportation infrastructure system in a good consistent state of repair. This in turn has a direct impact to the economy and welfare of Miami-Dade County. Moving forward, the Department will rely on identified funding sources as well as those generated from any increases in revenues experienced due to expanded building and construction industry activity.

In order to increase efficiency and maintain adequate levels of services, innovative business practices are pursued and adjustments have been made to manpower resources by merging responsibilities and streamlining processes. However, further adjustments to manpower have and will continue to impact the services provided since the consolidation of duties and responsibilities has strained the span of control for existing personnel. The loss of experienced personnel through retirement and personnel reduction continues to impact the Department's ability to maintain the transportation infrastructure system in a consistent state of good repair.

Achievement of Milestones

Department Reorganization: PWWM has completed the departmental merger of back office functions, but continues to make adjustments in other areas of the department to realize further opportunities to streamline and improve operations without diminishing levels of service delivery.

Maintain Financial Stability: PWWM needs to maintain financial stability in order to meet its service delivery obligations as it relates to both General Fund and proprietary operations. While the economic climate has shown some signs of improvement, funding remains below adequate levels especially for critical capital needs. While the Department continues to seek additional funding sources and makes every effort to implement efficiencies to maintain financial stability, the demand for a number of services and for infrastructure improvements continues to exceed available funding.

Sustainability: PWWM will continue to implement sustainable solutions in its operations, programs and services. Critical elements of this effort include:

- Electric Power Purchase Agreement (PPA): PWWM generates renewable energy at its Resources Recovery Facility from a portion of the refuse it collects and that delivered by others. This form of electrical power production results in less greenhouse gas emissions than a more traditional fossil fuel plant. Waste-to-Energy is also an alternative to landfill disposal.
- Automated Garbage Routing: Automated routing is complete in all seven (7) waste collection areas. The PWWM is now in the process of developing overlay routes, which are routes serviced by alternate automated or non-automated vehicles that collect from small areas where maneuverability and room for cart storage is limited.
- Landfill Gas Utilization: Continue implementation of Methane Landfill Gas Utilization Project at Landfills for renewable energy generation. The South Dade Landfill pipeline has been completed



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and tested but, commercial operation is pending. At the North Dade Landfill, Ingenco is attempting to procure a favorable Power Purchase Agreement (PPA) and examining other reuse alternatives should it be unable to secure a favorable PPA.

 Stormwater Master Planning: The Stormwater Management Program supports the Miami-Dade County's Comprehensive Development Master Plan process, the National Pollutant Discharge Elimination Systems (NPDES) Permit, the engineering and evaluation of improvements to meet the County's Flood Protection and Water Quality Level of Service, and the County's local and regional efforts in climate change, sea level rise and adaptation planning.

With increased urbanization, permeable areas are lost due to development. As a result, surface areas lose their ability to absorb rainwater. As a mitigation measure, one of the most common best management practices used to handle stormwater is the french drain system, also referred to as an exfiltration trench. They replicate natural percolation, are a cost effective solution, and have low environmental impact. Stormwater runoff passes through the exfiltration trench directly into the shallow aquifer allowing direct recharge of said aquifer making this approach a greener infrastructure.

- Solar-School Zone Flashers (SSZF): Approximately 865 SSZFs have been installed in the County's elementary and middle school speed zones in the past two decades. For the past five years, 231 new installations have been solar powered. This program is continuing and all elementary and middle schools should have SSZFs installed within the next few fiscal years. These SSZFs are programmed weekly using pager technology that offers the County a significant cost savings; however, this communication system has been prone to continual and sporadic failures which have resulted in a number of SSZF not operating properly. An effort to upgrade the School Zone Flashers scheduling and communications system to address these issues is underway.
- Light Emitting Diodes (LED) Street Lights: PWWM has implemented two corridors with LED street lights for evaluation. The lights are functioning as designed with little or no degradation on the illumination levels. In addition, PWWM will continue to evaluate the lights' performance to determine if there is a reduction of maintenance costs. While this technology is still evolving, the Department anticipates a reduction of energy consumption and the associated carbon emissions. The technology will continue to be tracked to determine the feasibility of a future conversion program for all County-maintained streetlights within rights-of-way.
- Energy Saving LED Conversion: Following the conversion of the 12 inch Traffic Signal Heads Countywide to LED lighting technology, the Department realized an estimated annual energy consumption reduction of 67% from pre-conversion levels and the associated resulting carbon emissions reduction.

Opportunities

In order to increase efficiency and levels of services, PWWM will continue to evaluate all possible opportunities that provide a net benefit to its operations including the use of private contractors. Some potential opportunities currently in process and/or under consideration are as follows:

• Generating Cost Savings: As part of ongoing efforts to fully utilize all existing assets, PWWM has identified a potential opportunity to maximize current disposal contract capacity while reducing operational cost. Currently, the Department uses the Medley Landfill during outages, plant



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interruptions and/or delays, and for the removal of by-products from Resource Recovery Facility to meet the minimal requirement of 100,000 tons per fiscal year. The Department can take better advantage of this agreement by maximizing the contract allowance of 250,000 tons for the hauling of by-products to the Medley Landfill rather than hauling them to a more distant location, such as the South Dade Landfill or North Dade Landfill. The airspace at Medley Landfill is currently priced at approximately \$35 per ton, while PWWM airspace is priced at \$66.34 on a contract basis and \$87.47 on a non-contract basis. Fully utilizing the Medley Landfill will provide the Department a savings in fuel, maintenance, and help conserve valuable landfill air space. The Medley Landfill is an external disposal resource that plays a significant role in the day-to-day operations of the Transfer Division.

- Maximizing Operational Efficiencies: As we continue to make changes to our organizational structure to maximize efficiencies and implement controls, the Department is in the process of reorganizing the Special Taxing District Division (STD) by merging it with the Causeways Division and incorporating its financial functions into the Accounting Division. Management is evaluating all operating procedures and are identifying improved accountability initiatives for implementation.
- Streamlining Functions: PWWM's Fleet Management Division will analyze the benefit of using lighter waste-hauling equipment. The modification of existing procurement contracts, in coordination with Internal Services Department, would allow the Department to purchase lighter tractors and trailers. The goal is to achieve a reduced tare weight, and increase net tonnage hauled per trip. Essentially, more solid waste can be transported with each load resulting in a reduced number of overall trips in-between disposal facilities to generate cost savings.

The Department is further evaluating its Accounting functions to ensure that they are all consolidated for improved financial control and to maximize efforts. However, the drawback becomes the deficiency in technical knowledge.

- Maximizing Efficiency Through Use of Technology: Installing onboard scales on waste transfer vehicles would help reduce overtime expenditures and operating costs. The onboard scale system will reduce the number of trips to and from facilities by ensuring that each load is filled to capacity, as outlined during a Six Sigma study, but not overfilled. Underweight loads are counterproductive, causing the Division to utilize more trips for a given amount of tonnage. On the flipside, loads that are overweight pose a liability to the Department and promote faster wear and tear on equipment.
- Increased Shared Services: Future opportunities are being explored to increase shared services
 with other County departments including cost sharing agreements with municipalities for canal and
 stormwater maintenance. The PWWM currently has eleven (11) canal cost sharing maintenance
 agreements and is working with three additional municipalities for this service as well.

Additionally, the PWWM continues to offer services for public works infrastructure maintenance such as drainage cleaning, pavement and concrete repairs and striping to other county departments through shared services, which achieves substantial cost savings and time.

• Maximizing Partnerships for Efficiencies: PWWM, through partnership with other agencies, continues its Community Services Program which was developed to address litter and illegal dumping. By effectively utilizing court-ordered community service hours, the Department has enhanced the ability to address litter control and illegal dumping without impacting routine staff assignments. The Department continues to evaluate and make modifications to all its processes



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as applicable in order to provide the best level of service possible within current funding levels.

- **Purchase of Buffer Land:** The PWWM is actively pursuing the opportunity to purchase vacant land in proximity to the South Dade Landfill (SDL) and Resource Recovery Facility (RRF). Staff has identified available properties and is working with the Internal Services Department to acquire this land. Acquisition of this land will allow the PWWM to enhance its operations and facilitate various uses around the SDL such as a future transfer station and a parking facility for collections fleet. The purchase of land near the RRF will enable the Department to create a buffer zone on the south side of the facility with adequate acreage for any future landfill expansion and/or land lease for the purpose of steam or electrical power sales to a private entity.
- Labor Relations: The Department has established an Accident Review Committee (ARC) to evaluate departmental industrial and vehicular accidents in a timely manner and to report those findings accordingly. In accordance with the National Safety Council, the purpose of the ARC is to decide cases fairly and consistently and to enhance the Department's safety and collision prevention efforts. The ARC will also provide an additional level of review which supports the PWWM investigative and reporting preparation process that currently exists as well as suggest methods to prevent reoccurrences and promote accident prevention.

Through a joint coordination effort with Miami Dade Transit (MDT), the PWWM is in the process of implementing a CDL testing and training program. The purpose of the program is to ensure the department has a pool of qualified applicants available to fill positions in a timely manner. The CDL testing and training program also enhances the department's succession planning efforts.

Obstacles

PWWM has major operational and capital hurdles to resolve or overcome in order to continue to deliver quality levels of services efficiently and effectively. Some of them include:

• Traffic Control Center and Technology Systems: The PWWM needs to integrate information technology systems and continue new, innovative technological efforts that will allow the Department to operate more efficiently and effectively. In addition, the Traffic Signals and Signs Division (TS&S), facilities at 7100 NW 36 Street are antiquated. A new facility requiring a substantial investment in technology in order to develop a Traffic Control Center that can meet the current and future needs of the County is of the utmost importance. It is estimated a new Traffic Control Center will cost approximately \$30 million.

In addition to the facilities, there is a need to implement an information technology system at TS&S for dispatching, documenting and recording the repairs and maintenance of all traffic signals, devices, and signs. The current paper systems must be automated and will require the procurement, maintenance, and use of laptops or tablets with wireless communications. This need is becoming more critical since the TS&S' Central database is reaching a point where it is no longer a supported application. Additionally, the ATMS is not currently being backed up to any County-maintained system; with existing backups of the system being housed by our consultant, Kimley Horn and Associates. As such County-supported backup system needs to be implemented.

• Traffic Operations and Maintenance: The County's Traffic Signal Infrastructure is becoming increasingly vulnerable to failure. There are a large number of traffic signals exceeding 20 years in



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service, resulting in frequent outages and transitions to flash mode. Continued reductions in staffing no longer allows for preventive maintenance to the traffic signal system.

The ratio of traffic signals to Traffic Signal Operations Engineers is currently 238:1 (2,860 signals to 12 engineers) which is below the Federal Highway Administration (FHWA) recommendation of 75 to 100:1. By relying on the efficiencies provided by the new ATMS, PWWM has been able to manage the staffing shortage to some degree, although this is not sustainable. The current staffing levels prevent PWWM from re-evaluating and re-timing traffic signals in a proactive manner. It is critical that staffing be increased to meet the growing needs and challenges facing traffic movement within Miami-Dade County.

- Personnel Matters: Impending Retirements PWWM currently has a large percentage of its workforce, critical staff with specific technical expertise and management experience, that are close to retirement. Departure of senior staff in key areas in operations and administration and the associated loss of institutional knowledge continues to impact the continuity of operations without adequate succession plans in place. The PWWM tracks pending retirements of critical positions to project and plan for the replacement of employees through recruitment planning however, timely replacements are often an issue. The Department continues to evaluate means to monitor the retention of its workforce by developing innovative programs and automating HR Systems to track, monitor and analyze data to prepare for retirements. Other departmental efforts include training and monitoring the workforce to ensure that the skill sets necessary for the continuity of operations are maintained.
- Staffing: PWWM continues to evaluate staffing needs and realignment of resources to best
 address needs and reduce any staffing shortfalls within operations. In addition, the Department
 seeks to provide training opportunities in order to ensure that staff is adequately trained and that
 middle and senior level staff have the necessary competencies to be effective. Department
 activities have been significantly affected by position eliminations or retirements which have led to
 an immediate knowledge deficit in key areas.
- Delays in the Hiring Process: Delays in the hiring process are impacting all aspects of departmental operations. Some of the impacts include increased costs; reduced opportunities to have appropriately experienced personnel to effectively implement succession planning transitions; lack of ability to effectively perform critical tasks and deliver services; and increased operational costs through the use of overtime and temporary expenditures.

With the County's recent procedural changes in the hiring process, it is anticipated that delays maybe somewhat reduced; however, the delays will still be felt due to the limited HR resources in the Department to meet these demands. Additionally, the difficulty in obtaining qualified applicants for positions also result in delays and present challenges in the hiring process.

 Aging Facilities and Equipment: PWWM needs to ensure future viability of aging infrastructure including bridges, traffic signals, street lighting, equipment and facilities. The Department continues to face challenges in performing basic critical repairs that are required to maintain safe and effective roadway infrastructure. In addition, most of our facilities are over 40 years old and therefore require upgrades and/or modifications to improve operations and extend their useful life.

The Department has Multi-Year Fleet and Capital Plans in place to address the aging fleet issues within the Waste Functions; however, plans are not in place for similar implementations of operational and especially capital funding for the Public Works functions, where a need of over



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\$1.6 billion, is estimated in infrastructure need due primarily to funding shortfalls. Waste functions have also started to experience a cash flow reduction and the PWWM is pursuing financing of waste vehicles to fund its fleet replacement plan. Adhering to the 10-Year Fleet Replacement Plan in advance of the proposed transition to compressed natural gas vehicles has been a challenge, but recent approvals will ease this situation. This issue affects waste collection, transfer and disposal vehicles and equipment.

- Electric Power Purchase Agreement (PPA): The PPA with Progress Energy Florida (PEF), now Duke, expired November 30, 2013 and PWWM and the Resources Recovery Facility (RRF) Operator were unable to secure a replacement. Therefore, the Department began selling power to Florida Power Light and Duke on an "As-Available" basis starting December 1, 2013. The As-Available rate is the lowest rate, which is anticipated to be approximately \$27 per megawatt hour; about 70% less than the prior \$85 per megawatt hour PPA rate with PEF. PWWM is seeking out and responding to RFPs for energy sales throughout the state to find the best long-term value for the County. The County has responded to a few offerings and is currently marketing power through a specialty company, Rainbow Energy Marketing, to obtain very short term (spot market type compensation) for the energy in addition to sending power to the highest "As Available" offer.
- Weakness in the Energy Market: The sale of biomass fuel from the Resources Recovery Facility (RRF) to other waste-to-energy facilities in Florida is also affected by lower energy prices. To the extent that the RRF operator requests less recyclable trash for processing into biomass fuel, the additional trash will be placed in the County's landfills, shortening their expected life. This situation highlights the need to be prepared for future waste disposal needs as described in the Solid Waste Master Plan.
- Delays in Replacement of Light Fleet Vehicles: Delays in the replacement of light fleet vehicles has led to a lack of shop loaner vehicles, which is affecting operations. PWWM is having difficulty finding transportation options for its employees that rely on automobiles and pick-up trucks to perform their work. Preventative maintenance visits are delayed due to the lack of shop loaner vehicles.
- Compressed Natural Gas (CNG): PWWM plans to initiate a CNG pilot program where 10 CNG powered waste transfer vehicles will be purchased and fueled using a portable fueling station located at the Resources Recovery Facility. The new CNG vehicles should be delivered toward the end of FY2014-15. This program is intended to familiarize both waste operations and Internal Services Department Fleet Management Division with CNG vehicle operations and maintenance. Once a permanent CNG fueling solution is in place, the pilot will be discontinued. This project will change the types of trucks purchased and how we operate on a daily basis. It is still too early to tell how this project will evolve and there are too many variables that must be decided before the Department can determine the true operational impact of the implementation.

Legislative Changes/Mandates

Legislative changes that can potentially affect the operations of the Department include:

• Numerical Nutrient Criteria and the Statewide Stormwater Treatment Rule Development: The EPA approved the Numerical Nutrient Criteria in late 2012, and the State approved the legislation in June 2013. The Department continues to communicate with FDEP to discuss rule impact on MS4s and continues conducting water sampling and monitoring activities under the current NPDES Permit. As approved, Biscayne Bay is included but the South Florida canals are



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not. Surface water sampling stations include both fresh water canal and estuarine sites within Biscayne Bay and its tributaries. The sampling results are evaluated relative to established surface water quality criteria of the State of Florida (62-302.530 and 62-302-532, FAC) and the Code of Miami-Dade County, Chapter 24-42(4). Miami-Dade County has nine estuarine regions identified for the evaluation of nutrient impairments. Five of these are not meeting the chlorophyll criterion, but all estuarine regions meet the criteria for Total Nitrogen and Total Phosphorus. Current water sampling results show improvement in the County's surface water quality. This is evident by the number of samples found to be compliant with all surface water criteria compared to earlier results, with the greatest improvement being noted in the decrease of non-compliance with the Fecal Coliform criteria.

- Recycling Benchmarks: PWWM has been monitoring HB 7243, and opposes any efforts to change legislation that diminishes the ability of a county to count the production of renewable energy toward achievement of the long-term recycling goal. As the bill stands today, the PWWM will be able to count Waste-to-Energy production, Landfill Gas Utilization (methane gas converted to energy), materials collected in its single stream recycling programs, as well as other recycling programming, toward the long-term recycling goal. Any changes to the bill that disallows inclusion of renewable energy towards achievement of the goal will have an adverse impact on the PWWM and the County meeting the goal. By the year 2020, the long-term goal for recycling efforts of state and local governmental entities, private companies and organizations, and the general public is to recycle at least 75% of municipal solid waste (40% by 2012, 50% by 2014, 60% by, 2016, 70% by 2018, and 75% by 2020). The Florida Department of Environmental Protection Annual Solid Waste Management Annual Report states that overall State recycling goal achieved for 2012 was 48%. The PWWM will continue to monitor this legislation and enhance its efforts to meet the incremental and ultimate 75% recycling goal.
- Net Metering: PWWM has included an item in its State Legislative package that proposes legislative/statutory change revisions to the definitions of "Customer-owned renewable generation" and "Net metering." These revisions would allow the County to use the power it produces at its Waste-to-Energy facility to offset the electricity it purchases from the local electrical utility via net metering. This modest change will bring substantial savings to Miami-Dade County tax payers while having a minimal impact on electrical utilities in terms of revenue losses.
- Amendment to Florida Statute Waive Sovereign Immunity for Storm Water Fees: The
 requested amendment to Florida Statute §403.0893, Stormwater funding/dedicated funds for
 stormwater management, will strengthen the existing statute language, by adding that the state, for
 itself and for its agencies and subdivisions, waives sovereign immunity for the express and limited
 purpose necessary including payment of stormwater fees due for state, state agency and state
 subdivision properties. This is a key issue to ensure that revenue collections from State facilities
 such as Miami Dade College, the Miami Dade School Board and other smaller State facilities
 resume and continue in a timely manner.
- Municipal Waste Combustor Maximum Achievable Control Technology (MACT) Standards: The Environmental Protection Agency (EPA) is expected to release a revised MWC MACT rule in the coming months which involves lowering emission levels of pollutants such as dioxins, mercury, nitrogen oxides and carbon monoxide. While the PWWM does not know exactly when the EPA plans to release these new rules, without intervention from Covanta and client communities including PWWM, all indications are that new standards will be developed with the problematic "pollutant-by-pollutant" methodology. Per the new rule, each waste-to-energy plant will have to achieve the emission levels of the best performing plant for each pollutant. There are positive



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environmental impacts to maintaining low pollutant levels. However, if the proposed rule is approved, it will negatively impact the PWWM's WTE facility (increased costs due to the need for new equipment/technology and payment of fines if standards are not met) to the extent of a potential shutdown. The Department has invested approximately \$500 million into the WTE facility.

PRIORITY INITIATIVES

The most important initiatives for the PWWM which are planned or ongoing for the upcoming fiscal year include:

• Bridge Rehabilitations: There is a need to renovate and/or replace several bridges within the County; including critical projects such as the West Venetian Bascule, Tamiami Swing and the Miami Avenue bridges. The PWWM has begun the process to replace Venetian and Tamiami Swing bridges. Construction and design build contracts have been awarded for the replacement and or refurbishing of these bridges. The Westernmost 730 feet and 9 inches of the West Venetian Bascule Bridge on the Venetian Causeway needs to be replaced. It is critical to expedite the replacement of the affected segment of the bridge to avoid any further damage to the bridge deck, avoid the associated costs for temporary repairs, and impacts to the travelling public. This project will consist of the complete demolition of 730 feet and 9 inches of the existing bridge, and the current five (5) ton weight restriction will be removed and the life expectancy of the entire West Venetian Bascule Bridge will be approximately 60 years. The total project cost is \$13.964 million and the duration of construction is expected to be six to nine months.

Replacing the Tamiami Swing Bridge that currently spans the Tamiami Canal along NW South River Drive and relocating the existing historic swing bridge to span the C-5 canal, also known as the Comfort Canal, west of NW 22 Avenue between the Miami Police Benevolent Association Park and Fern Isle Park over the C-5 Canal is to start construction during FY2014-15 and be completed by FY2016-17. The work will also include providing pedestrian and bicycle access between the two (2) public facilities in the City of Miami. This project also includes the widening and improvements to the approach roadways, dredging the Tamiami Canal, and relocating the existing 24-inch water main. Life expectancy for the proposed bascule bridge is approximately 75 years and for the relocated historic pedestrian bridge approximately 50 years. The total project cost is \$37.953 million.

The Miami Avenue Bascule Bridge is currently under construction and is expected to be completed during the first quarter of FY2015-16. The project will include bicycle plates to improve safety for bicyclists. The total project cost is \$6.264 million.

- Stormwater Master Planning: The Stormwater Management Program is an important priority initiative which supports the Miami-Dade County's Comprehensive Development Master Plan process, emergency preparedness and management activities, the National Pollutant Discharge Elimination Systems (NPDES) Permit, the engineering and evaluation of improvements to the County's Flood Protection Level of Service and Water Quality Level of Service, and most recently the County's local and regional efforts in climate change, sea level rise and adaptation planning.
- Advance Traffic Management System (ATMS): All of the County's signalized intersections have been migrated to the ATMS. PWWM continues to make progress on improving the communication system supporting the traffic signals and the ATMS system. In the current fiscal year, additional signals will be migrated to the wireless communication subsystem as a collaborative effort with ITD. This effort will increase communication capabilities, reduce operational costs, and allow for



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continued operations in the event of an emergency. An extension of Phase 2 has been approved for current and upcoming fiscal years to serve as a bridge between Phase 2 and Phase 3 to assure that progress with ongoing efforts will continue without interruption. Beginning in January 2015, TS&S will begin evaluating new controller technologies for implementation in future years. The transition to new traffic controller technologies will be necessary in the coming years, and implementation is currently estimated at \$75 million spanning a five year period.

- **Bus Priority:** As part of the ATMS, PWWM provides bus priority to MDT busses at a few traffic signals on Kendall Drive, as well as four other corridors. The Department is working closely with the Metropolitan Planning Organization (MPO) and MDT to prioritize and develop the requirements for the system. PWWM is currently working with MDT on the Bus Priority system project along North Kendall Drive.
- Additional Waste Disposal Capacity: Cell 5 Construction at South Dade and Cell 20 Construction at Resources Recovery Ashfill. These two projects will ensure the availability of 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 five years.
- Landfill Gas Utilization System: The program installed electrical generators that will export power to the bulk electric power grid. The generators sited at the North Dade and South Dade Landfills and will operate on Landfill Gas. At the North Dade landfill plant, Ingenco is attempting to procure a favorable PPA and examining other reuse alternatives should it be unable to secure a favorable PPA. The South Dade Project pipeline construction has been completed and tested. Commercial production is pending.
- **Municipal Landfill Closures:** PWWM administers grants/interlocal agreements for closure and remediation of Municipal landfills to ensure regulatory compliance. The Department is currently funding or intends to fund the following municipal closure grant projects: Munisport Landfill, Virginia Key Landfill and Taylor Park.
- Comprehensive Landfill Closure Plan: The Comprehensive Landfill Closure Plan (CLCP) includes County and municipal landfill sites that are eligible for remediation and closure funding from the Utility Service Fee (USF) and sets out the criteria, terms and timing of this funding. Several potential municipal sites are currently being evaluated for USF eligibility and inclusion in the CLCP. For funding to be allocated to County and municipal projects, the CLCP must be approved by Board of County Commissioners. This document should be completed within FY2014-15.
- Replace Existing Power Purchase and Transmission Agreement: The Power Purchase Agreement (PPA) with Progress Energy Florida (PEF) expired November 30, 2013 and PWVVM and the Resources Recovery Facility (RRF) Operator were unable to secure a replacement. Therefore, the Department began selling power to Florida Power and Light on an "As-Available" basis starting December 1, 2013. The As-Available rate is the lowest rate, which is anticipated to be approximately \$27 per megawatt hour; about 70% less than the prior \$85 per megawatt hour PPA rate with PEF. An "As-Available" power sales agreement has also been signed with Duke Power, to take advantage of price differences between the two agreements as warranted. PWVVM is seeking out and responding to RFPs for energy sales throughout the state to find the best long-term value for the County. The County has responded to a few offerings and is currently marketing power through a specialty company, Rainbow Energy Marketing, to obtain very short term (spot



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market type compensation) for the energy in addition to sending power to the highest "As Available" offer.

• Flood Control, Flood Insurance Savings, and Management of the Federal Emergency Management Agency (FEMA Community Rating System (CRS) Program): County residents saved over \$21 million on flood insurance in 2012. These savings represent an average of over \$120 in flood insurance premium reduction per unincorporated Miami-Dade County flood insurance policy in the special flood hazard areas. These total savings were provided to Miami-Dade property owners because the County received a rating of five (5) from a scale of one (best rating) to ten (lowest rating), in the CRS Program from FEMA. Since 2003, Miami-Dade County has continued to receive the excellent CRS rating of five (5) from FEMA thanks to its efforts to improve and maintain the local Stormwater and flood control system. This is a remarkable accomplishment for the County which is currently in the top 8% of all CRS participating communities nationwide. Only twelve of the CRS participating communities (from a total of 1,296) currently have a better CRS rating than unincorporated Miami-Dade County. Within the CRS participating communities nationwide, unincorporated Miami-Dade County is one of the top communities in terms of insurance premium savings received by residents.

The current County CRS rating generally results in a 25% discount on flood insurance premiums for properties in special flood hazard areas of unincorporated Miami-Dade County. Premiums for properties outside the special flood hazard zones generally receive a 10% discount.

- Waste and Recycling Cart Program: PWWM is exploring the purchase of an inventory management software for the Waste and Recycling Cart Program: a) to enhance inventory management to ensure continuous availability of carts and the Department's capability to properly deliver, retrieve, repair and refurbish carts for our 325,000 service area customers and 31,000 municipal recycling customers, and b) to enhance staffing efficiency to ensure adequate operation. PWWM is working with ITD on the specifications for this system.
- Pedestrian and Vehicular Traffic Safety and Flow Improvements: PWWM reviews more than 4,000 traffic related requests per year and conducts engineering studies in-house. Solutions are implemented for a large volume of traffic related problems that enhance mobility and reduce travel delay as well as increase the safety of all users. In addition, 24-hour and 72-hour machine counts are provided to the traffic engineers. This allows them to monitor traffic patterns and trends throughout Miami-Dade County for planning new facilities, timing and refining of traffic signal operations, selection of optimum traffic controls, development needs, and highway planning and design.
- Safe Routes to Schools Project: Through Safe Routes to School and FDOT Grants, PWWM implements improvements in the rights-of-way including installation of school flashing signs, school feedback signs, school related pavement markings and signage to ensure safety while encouraging students to ride and walk to and from school. To date, PWWM completed improvements along 32 schools and has construction improvements scheduled for 12 additional schools to be completed by September 2015; designs for 10 additional schools are anticipated to be complete by September 2015.
- Nesbitt ADA Compliance Retrofitting: PWWM is tasked with implementing ADA improvements in compliance with the ADA Act of 1990 whereby the Department's main responsibility is to remove wherever physically feasible sidewalk obstructions in the path of travel to a bus stop (existing



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sidewalks on the block where the bus stop is located) and to install the needed curb cuts on the designated sidewalks.

- Compressed Natural Gas Pilot: PWWM plans to initiate a compressed natural gas (CNG) pilot
 program where ten (10) CNG powered waste transfer vehicles will be purchased and fueled using
 a portable fueling station located at the Resources Recovery Facility. The new CNG vehicles
 should be delivered toward the end of 2014-15. This program is intended to familiarize both waste
 operations and Internal Services Department Fleet Management Division with CNG vehicle
 operations and maintenance. Once a permanent CNG fueling solution is in place, the pilot will be
 discontinued.
- Additional Cart Program: An annual fee of \$79.50 per cart (subject to annual adjustment) was established by the PWWM and approved by the Board of County Commissioners (Implementing Order 4-68) to cover the cost of providing twice-weekly curbside collection for each additional green waste cart. The Additional Cart Program consists of a four (4) components: 1) Citizens notification via mail (Public Information and Outreach), 2) Citizen responses and 3) Cart fee placed on the annual tax bill (Accounting) and 4) Program monitoring (Enforcement). The first three steps will be implemented during the current fiscal year. Monitoring and enforcement will begin in FY2015-16.

Technology Initiatives

In addition to program based initiatives, the PWWM has a number of technology initiatives that are in place or will be implemented in the near term to help support and improve operations. They are as follows:

- Waste Collection System Replacement: The development and integration of Community Information and Outreach Department's (CIAO) 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. 311's CiRM system receives, creates and updates PWWM service requests which consist of public complaints, requests for service. Garbage and Trash pickup information, etc. The new CiRM will interface with PWWM's new Waste Collection System and several other departments' database systems. The new WCS will 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. Within the scope of the new WCS, the public will access the following: report/file a complaint, online payments (bills, services, fines), verify availability of a bulky waste pick up, request bulky waste service, check status of the bulky waste order, request an inspection, complete a permit renewal application and check the status of an enforcement action. The new WCS is under development. Two Java contractors are spearheading the programming code and are bringing up-to-speed the divisional staff who were Java trained. The development is 60% completed with expected delivery in 2015.
- Visual Inventory of Roadway Assets System (VIRAS): The VIRAS 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 are then used to create GIS layers for road signs, sidewalks, ADA access points, bridges and streetlights on County maintained roads. The



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images can also be used to capture additional assets such as guardrails, trees, manholes, inlets, curb, gutter, pavement condition, fire hydrants, etc. This technology provides an effective way of verifying conditions of our roadway infrastructure inventory to prioritize needed improvements.

- **Biometric Time Clock System:** The PWWM is an active member of a multi-department effort to procure and implement 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, (finger print), to identify and then "clock-in" the staff member. The Biometric time clock system back-end infrastructure (server, database and interface to Peoplesoft) has been set-up. The time clocks for the Pilot Phase have been installed and deployment will take place in 2015.
- Oracle Forms: Oracle is a software product for creating screens that generate reports from an Oracle database that was originally introduced over 20 years ago. While continuously updated, Oracle is now recommending a newer report generating solution and is advising customers to have migration plans in place. Accordingly, the Department, along with the rest of the County (and in compliance with the ITD Directive) is re-writing the applications utilizing "Forms"; moving towards utilizing a more current technology, resulting in many current applications requiring to be re-written in a different code.
- Trash Routing: Based on the successful cost-savings achieved by the automated routing solution
 applied to Garbage operations (regular daily routes), the Department is proposing to use the same
 software to route bulky waste pick-ups (unique daily routes). Utilizing the previously purchased
 "RouteSmart" software product, the project goal is to provide automated route planning tools to
 create balanced workloads, optimize service sequences, and generate route plan reports to help
 crews be more productive.
- An Electronic Document Management System (EDMS): EDMS is a technology/system
 providing a comprehensive solution for managing the electronic/automated creation, capture,
 indexing, storage, retrieval, and disposition of records and information assets of the organization
 and avoiding the costs and potential loss of data associated with paper files. In FY2015-16, the
 PWWM is proposing to introduce this existing County technology into three divisions, Traffic
 Signals & Signs, Technical Services, and Enforcement.
- INFOR'S EAMS: This is the County's software application for conducting and maintaining the County Asset Inventory process. The software has the additional capability of being configured to meet specific needs of specific activities within the organization. Accordingly the PWWM is proposing to utilize this application to develop custom solutions for both the Traffic Signals and Signs Division (Street Lights, Intersection Signals, etc.) and the Garbage Division (garbage and recycling carts).
- The Trash & Recycling Center Access Management System (TRCAMS) or landscaper enhancement: This system offers a solution to build on the success of the PWWM's NACo awardwinning software application that enables the secure screening of residential visitors to the TRCs. The Department is proposing to develop and implement an additional functionality to automate the use of the facility by private landscaping companies.
- HC2 Application: The PWWM is proposing to develop an application similar to the TRCAMS to confirm eligibility and track usage of the County's Household Hazardous Waste Collection Program.



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- Video Surveillance: This project consists of implementing and/or updating, a network of security cameras at various facilities and operations with the department, including waste facilities, Traffic Signals and Signs facility, and County bridges to provide for safety, and loss prevention as well as improve productivity and assist in addressing customer service issues.
- Traffic Signals Wireless Conversion Project: The County's traffic signal network communicates with the Control Center in order to provide data concerning incidents or problems that would impede traffic flows or impact safety; this project will make the system more cost-effective by converting the current communication lines to a wireless technology.
- Phone Upgrades and New Intercoms: PWWM disposal facilities have older phone systems and lines and have experienced malfunctions, up to and including complete loss of service; accordingly phone and related network improvements is recommended as the solution. Additionally the replacement of intercoms with more current technology, allows for improved communication and better customer service.
- TED Software Update/Upgrade: The Traffic Engineering Division is requesting several new software products to assist in being more efficient and cost-effective. This includes a collision diagramming software and a traffic circle design product.

FUTURE OUTLOOK

There are various factors that have the potential to significantly impact Departmental operations within the upcoming years. Below are a few of those significant:

- Light Speed Building: The County must prioritize the design and construction of new facilities for the Traffic Signals and Signs Division at the Lightspeed Building or elsewhere. The existing Traffic Signals and Signs facilities, including the Traffic Control Center, were constructed in the mid 1970's and will be required to undergo the 40 year certification in the coming years. The aging of the facilities and postponement of maintenance and upgrades have left the facilities in poor condition and vulnerable to failing the 40 year certification. Further, the facilities were built prior to the enactment of more stringent building codes and are vulnerable to storm events as well as security threats. In addition, in 2006, PWWM contributed \$4.7 million in People's Transportation Plan County Charter Surplus Tax funds for the purchase of the Lightspeed Building with the intent of housing the Traffic Signal and Signs Division and implementing a new Traffic Control Center. Failure of the County to progress in the implementation of the design, construction, and relocation of the Traffic Signals and Signs Division to the Lightspeed was the only finding in the 2010 Audit Report of the Charter County Transportation System Surtax conducted by the County's Audit Management Services.
- The Solid Waste Management Master Plan: A key component of Solid Waste Master Plan implementation in the near to medium term will be the transfer of waste to non-county disposal facilities. The department needs to better balance the higher out-of-pocket costs to utilize non-county disposal facilities against its lower internal marginal costs to use County-owned landfill space. Continued reliance on artificially low internal disposal rates is not sustainable in the long-term, as remaining disposal capacity in County-owned landfills continues to be depleted. Balancing of external and internal costs will allow the County to more gradually transition from current heavy reliance on its own disposal capacity to increased reliance on outside sources, which more accurately reflect the true cost of waste disposal replacement. The Department needs to begin



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analyzing and evaluating the best methodologies to economically transfer waste longer distances and incorporate the results of that analysis into our capital and fleet planning.

- **Power Purchase Agreement:** PWWM's ability to secure a replacement power purchase agreement (PPA) that provides a financial return similar to the prior PPA is essential to the long-term economic viability of the Resources Recovery Facility (RRF). The most straight forward means to accomplish this is to amend Florida Statutes to change the definition of "Net Metering" to include power produced by local government owned waste-to-energy facilities. This would allow the County to exclude from its electric bill energy produced by the Resources Recovery Facility that is exported to the electrical grid, thereby providing discounted power to County departments and funding the RRF operation at a sustainable level. This concept is the department's highest state legislative priority.
- Compressed Natural Gas: PWWM should be able to realize significant cost savings in all its
 waste operations by converting its heavy fleet to compressed natural gas fueling. This will better
 enable the Department to minimize increases in the household waste collection fee. In the
 meantime, the Department will continue to purchase hybrid diesel garbage collection vehicles,
 which also have lower operational costs.
- State Changes to National Pollutant Discharge Elimination System (NPDES) Permit Requirements: The State of Florida changes to the current requirements of the NPDES permit may obligate the Department to increase maintenance frequencies which in turn would require additional staffing and purchasing of capital equipment. Ongoing deliberations have been in effect for approximately two (2) years. These changes will affect the Storm Water Utility's staffing and operational methodology. Future opportunities are being explored including the option for municipalities to request an increase of canal maintenance services through their maintenance cost sharing agreements with the County.
- Infrastructure Improvements: PWWM continues to lack adequate funding to implement improvements for vehicular and pedestrian traffic safety and flow; for the continued implementation of the ATMS, and for other capital improvement projects that are critical to the safety and welfare of all users. The Department will continue to pursue funding, including federal and state sources, to help address the current \$1.3 billion of identified unfunded needs.
- Succession Planning: PWWM currently has a large percentage of its workforce that is eligible to
 retire within the next three to five years. To address this oncoming issue, PWWM offers
 shadowing, training, cross-training and opportunities for employees to work out-of-class during
 short-term absences of current incumbents to develop the necessary skills. The Department
 continues to monitor its workforce to ensure that the expertise needed for the continuity of
 operations is maintained.
- Road Impact Fees: The purpose of the Road Impact Fee (RIF) is to add capacity to Miami-Dade County's arterial road system at pace with the demands of new development. The amount of the RIF is determined by the amount of additional demand a development will introduce and what it will cost the County to meet that demand through expanded capacity. RIF is only charged to development that will increase Vehicle Miles of Travel. RIF is the most important funding source the County has that is devoted to mitigating the congestion costs introduced by development. If RIF were eliminated, other sources of funding would need to be identified.



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• **Revenue Analysis:** The Department is currently evaluating the appropriateness of all fees since many of the Public Works fees have not been adjusted in some time. Analysis may include options for proposed, new, or an increase in fees.

Legislation – Environmental

- National Pollutant Discharge Elimination System Permit Progress: 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 the 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.
- Waste to Energy: Additionally, there are several potential 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 request 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.
- Green House Gas Regulations: There are two air emission requirements 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). The GHG regulations include Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O). Effective January 1, 2010, an inventory of GHG emissions from the County's Landfills and the Waste-to-Energy plant must be kept. 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. The FDEP has advocated the position to require continuous emissions monitors (CEM's), which are devices that analyze stack emissions continuously on a real time basis, to track Hg emissions from the Waste-to Energy plant. Currently, the stack emissions are monitored by discrete stack testing periodically.
- Revise Pollutant Standards: The Environmental Protection Agency (EPA) is expected to release a revised MWC MACT rule in the coming months which involves lowering emission levels of pollutants such as dioxins, mercury, nitrogen oxides and carbon monoxide. Covanta (the PVWWM's Waste-to-Energy Facility Operator) has been working with EPA and Congressional members to encourage the EPA to issue a rule that is reasonable and achievable. Recent MACT rules promulgated by EPA for the Medical Waste, Cement, Utility and Industrial Boiler industries have utilized the problematic "pollutant-by-pollutant" methodology and there is reason to believe that they will use the same approach on the MWC MACT rule. While PWWM does not know exactly when the EPA plans to release these new rules, without intervention from Covanta and client communities including PWWM, all indications are that new standards will be developed with the problematic "pollutant-by-pollutant" methodology. Per the new rule, each waste-to-energy plant will have to achieve the emission levels of the best performing plant for each pollutant. If this new rule becomes effective, it will have a negative impact on the Department.

It is important to oppose any MWC MACT rule that set standards using the pollutant-by-pollutant methodology. The EPA should set standards by selecting facilities that have the best overall



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pollutant levels, and also by considering waste content and emissions variability. Setting standards by the best individual pollutant levels (which may come from various facilities) would likely result in unrealistic and unachievable emission standards, some of which could not be met by the PWWM's Waste-to-Energy facility or possibly by any other facility of its kind. This in turn could result in increased operational and capital costs as well as costly fines and the potential of closing down the facility.

Local Legislative Issues

- Local Legislative Changes (Will Require Coordination with RER): Another issue of interest for the Stormwater Utility Planning Division, which could be critical to continue the advancement of the Stormwater Management Program, is the future updates to Chapter 11C of the Miami-Dade County Code (e.g. increase of the building required freeboard to 12 inches). This code change is a pre-requisite for unincorporated Miami-Dade County to be able to improve the current CRS rating from a Class 5 to a Class 4. This classification improvement will increase the percent of savings available for residents in their flood insurance premiums from 25% (current savings level for special hazard flood zones) to 30%.
- 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 continues to impact the Public Works operation staffing and capital project needs. The Department submitted grant funding requests in this year's legislative package and will continue to seek additional funding sources to supplement operations and maintain financial stability.
- **New Technology:** PWWM will continue to explore and implement new IT technology such as implementation of an E-ticketing mobile automated and enforcement routing, customer information management systems, and enhancement of the waste collection system and the GIS application for traffic engineering improvement.

Other Significant Impacts

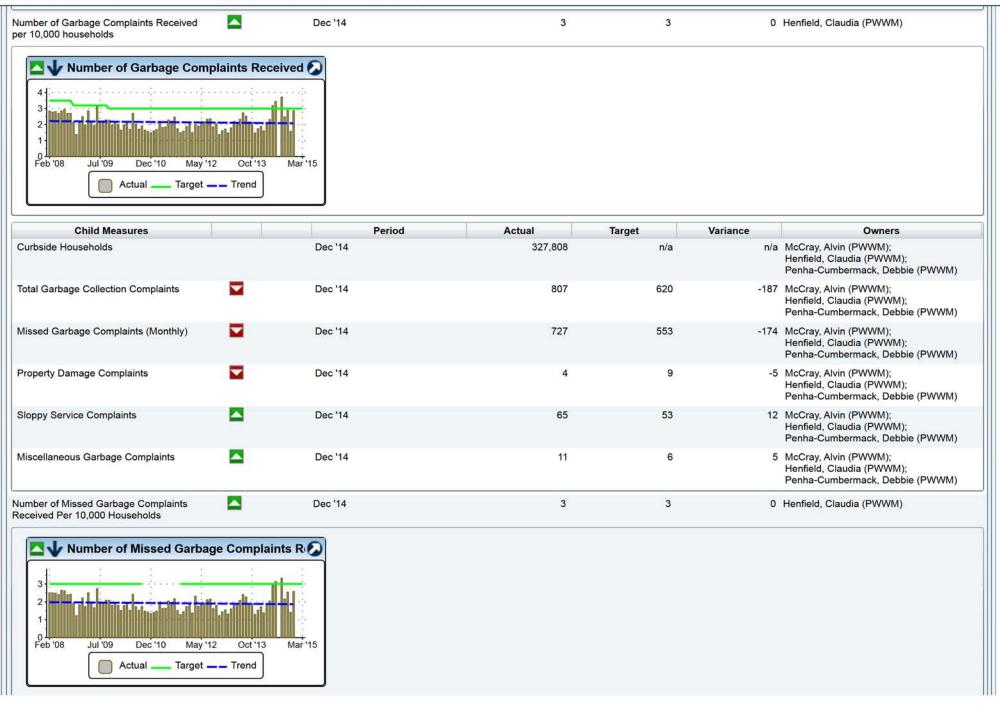
Some of the other factors that have the potential to impact PWWM's operations and levels of service delivery include:

- 1. The completion of Cell 5 at the South Dade Landfill, which provides an increase in landfill disposal capacity.
- 2. New construction of residential communities within the surrounding area of the Resources Recovery Facility may create land use conflicts relating to odor, dust, traffic etc.
- 3. A number of Disposal Contracts with municipalities and private haulers will expire in 2015. Although PWWM has secured nearly 60% of the municipal tonnage through agreement extensions, the remaining tonnage is still at risk.
- 4. Potential annexation and incorporation policies can impact PWWM. Annexations in particular have the potential to reduce the Waste Service Area and the associated revenues. This could have a profound impact on revenues, debt service coverage and ultimately fees charged to the remaining collection customers.
- 5. Potential creation of a Mosquito Control Special Taxing District can impact PWWM. The additional revenue will enhance the current operation and enable the General Fund to reallocate \$1.8 million to other needed Public Works operational activities.

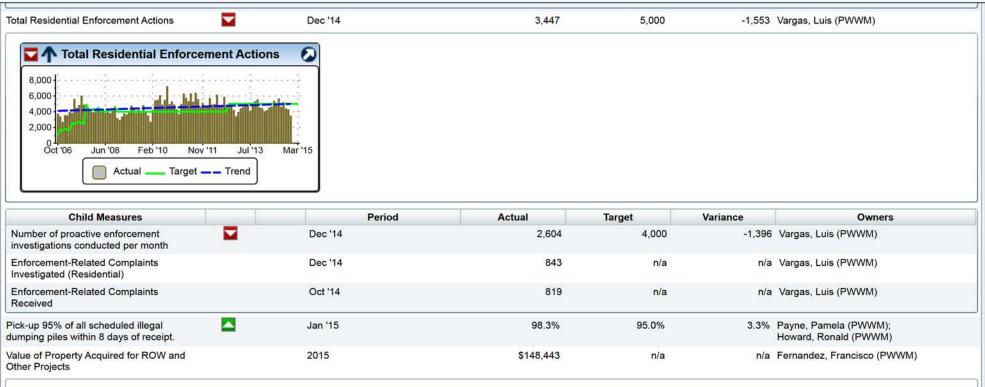


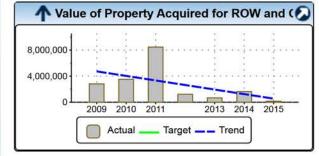
Scorecard				Description								Owners
ublic Works and Waste Management	The Department's mission is to provide efficient, accountable, accessible, and safe infrastructure services that enhance and improve the quality of life through well maintained public streets and right-of-ways, waste collection and disposal services.							Hudak, Alina T. (Office of the Mayor)				
.0 Customer												
Objective				Description								Owners
Provide Quality Residential Garbage, Trash nd Recycling Collection Services												Hudak, Alina T. (Office of the Mayor)
Initiatives Linked to Objective	Est. Start	Est. End	Туре	As Of		8	1	0	0	%	Status	Owners
Waste and Recycling Cart Inventory Program	10/1/2013	9/30/2014		1/30/2015						15%	In Progress	Henfield, Claudia (PWWM)
Replace PWWM Waste Collection System (WCS)	12/1/2009	12/31/2015		1/8/2015						61%	On Hold	Fuentes-Smart, Teresa (ITD); Silver, Deborah F. (PWWM)
Measures Linked to Objective			Period	Actual			Targ	et			Variance	Owners
Number of Bulky Waste complaints per 1000 Regular Bulky Waste orders created		Dec '14			6.5				6.0		0.5	Payne, Pamela (PWWM); Howard, Ronald (PWWM)
Child Measures			Period	Actual			Targ	et			Variance	Owners
No. of Regular Bulky Work Orders Opened		Jan '15		l	6,558				4,343	l.	2,215	Ferguson, Virginia T. (PWWM); Penha-Cumbermack, Debbie (PWWM); Howard, Ronald (PWWM)
No. of Bulky Trash Complaints received		Dec '14			41				55	i	14	Penha-Cumbermack, Debbie (PWWM) Ferguson, Virginia T. (PWWM)
Bulky Waste Trash Tons per Pick Up		Jan '15		(10,379.80/5,462	1.90 2.00)				1.68		0.22	Howard, Ronald (PWWM)
Child Measures			Period	Actual			Targ	et			Variance	Owners
Bulky Waste Pick ups		Dec '14			6,476				4,305	i	2,171	Ferguson, Virginia T. (PWWM); Penha-Cumbermack, Debbie (PWWM); Howard, Ronald (PWWM)
Percentage of Automated Garbage Routes completed on time		Dec '14		(2,056/2,	98% 106)				98%		0%	Henfield, Claudia (PWWM)

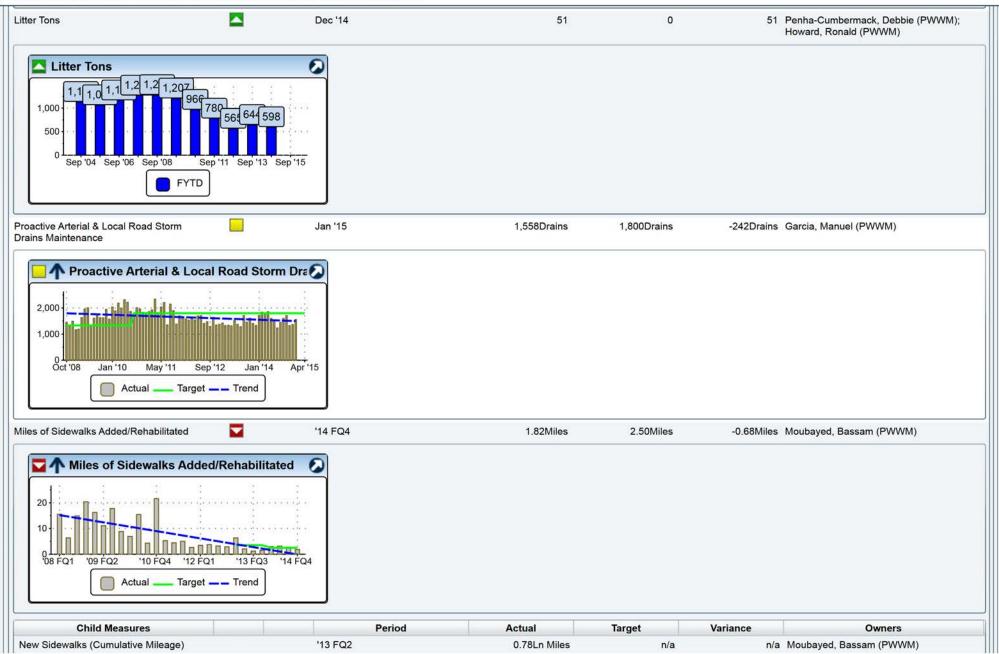
	Period	Actual	Target	Variance	Owners
No. of automated routes completed on	Dec '14	2,056.00	2,067.00	-11.00	McCray, Alvin (PWWM); Henfield, Claudia (PWWM); Penha-Cumbermack, Debbie (PWWM)
No. of Automated Garbage Collection Routes	Dec '14	2,106	n/a	n/a	McCray, Alvin (PWWM); Henfield, Claudia (PWWM); Penha-Cumbermack, Debbie (PWWM)
umber of curbside recycling complaints er 10,000 participating households	Dec '14	1.2	3.0	1.8	Love, Gayle (PWWM)
Child Measures	Period	Actual	Target	Variance	Owners
Recycling Households	Dec '14	353,412	351,000	2,412	Massa, Jeanmarie (PWWM); Love, Gayle (PWWM)
No. of curbside recycling complaints received	Dec '14	425	n/a	n/a	Metellus, Gerard (PWWM); Love, Gayle (PWWM)
ercentage of Manual Garbage Routes	Dec '14	97%	98%	-1%	Henfield, Claudia (PWWM)
Percentage of Manual Garbage R	outes co 🕗	(467/482)			
	'13 Mar '15	(467/462)			
Percentage of Manual Garbage R	'13 Mar '15	(467/462) Actual	Target	Variance	Owners
Percentage of Manual Garbage R	'13 Mar '15		Target 475	Cristilla (Children)	Owners McCray, Alvin (PWWM); Henfield, Claudia (PWWM); Penha-Cumbermack, Debbie (PWWM)

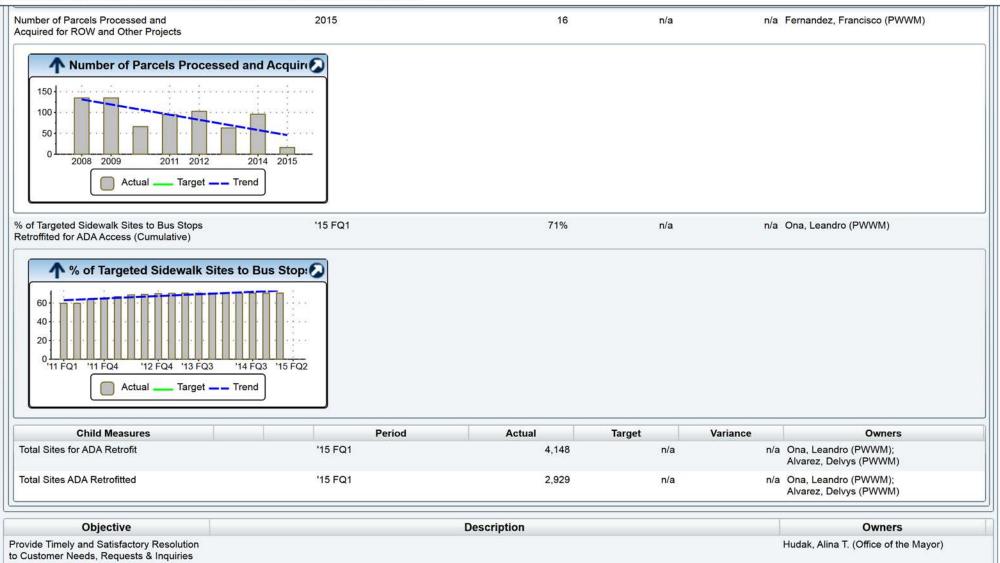


Child Measures			Period	Actual	Target	Variance	Owners
Missed Garbage Complaints (Monthly)		Dec '14		727	553	-174	McCray, Alvin (PWWM); Henfield, Claudia (PWWM); Penha-Cumbermack, Debbie (PWWM)
Curbside Households		Dec '14		327,808	n/a	n/a	McCray, Alvin (PWWM); Henfield, Claudia (PWWM); Penha-Cumbermack, Debbie (PWWM)
Objective				Description			Owners
rovide Safe, Attractive and Structurally ound ROWs and Infrastructure for Both eneral and Special Populations							Hudak, Alina T. (Office of the Mayor)
Grandparent Objectives				Description			Owners
TP2 Safe and customer-friendly transportation system							Miami-Dade County
TP3 Well-maintained transportation system and infrastructure							Miami-Dade County
Parent Objectives				Description			Owners
TP2-2 Improve safety for bicycles and pedestrians							Miami-Dade County
TP3-1 Maintain roadway infrastructure							Miami-Dade County
Initiatives Linked to Objective	Est. Start	Est. End	Туре	As Of 🤌 🖞	👸 🗸 🐠 🎯 🦻	Status	Owners
Safe Routes to School	10/1/2009	9/30/2020		1/22/2015		In Progress	Shen, Joan (PWWM); Faulkner, Brenda (PWWM)
Advanced Traffic Management System (ATMS)	1/1/2004	6/14/2016		1/15/2015		In Progress	Aira, Frank (PWWM)
Measures Linked to Objective			Period	Actual	Target	Variance	Owners
Total Number of Traffic Control & Street Name Signs Installed, Repaired and or Replaced		Jan '15		1,842Signs	2,750Signs	-908Signs	Aira, Frank (PWWM)
Total Number of Traffic Co	ontrol & Street	N 🕢					
6,000 4,000 2,000							
Oct '05 Oct '07 Oct '09 Oct '		ep '15					

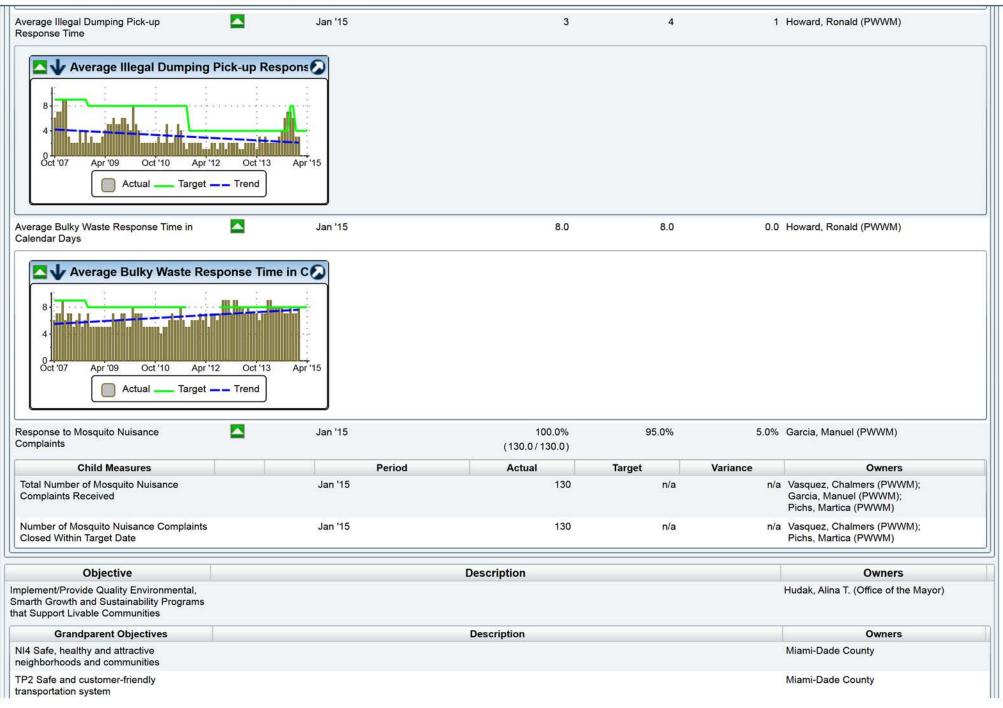


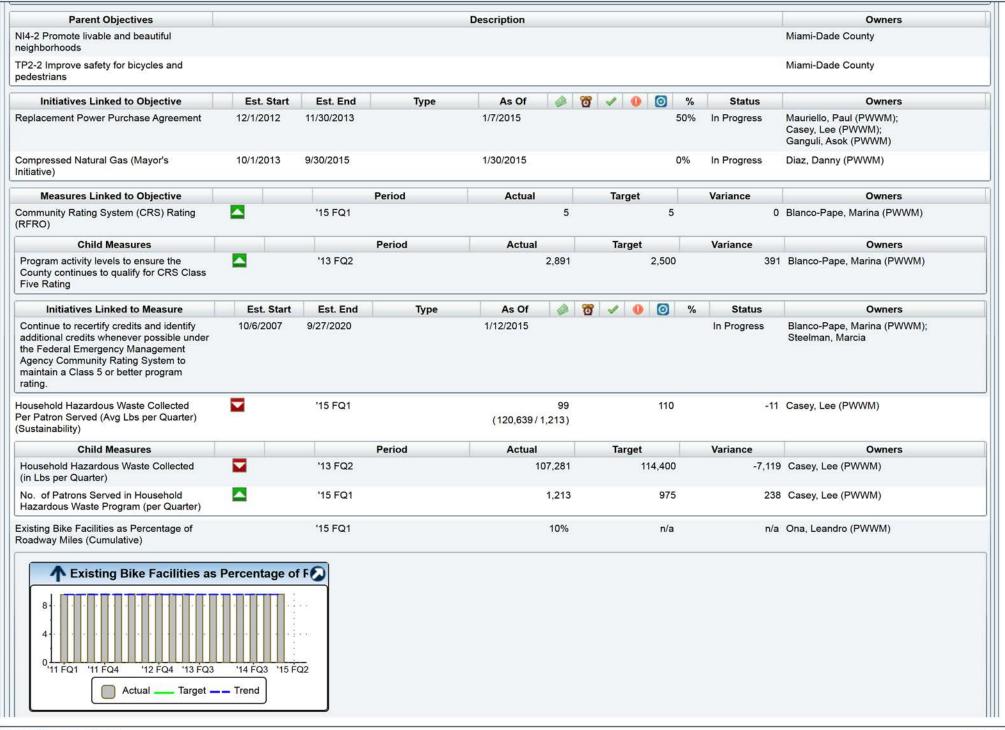


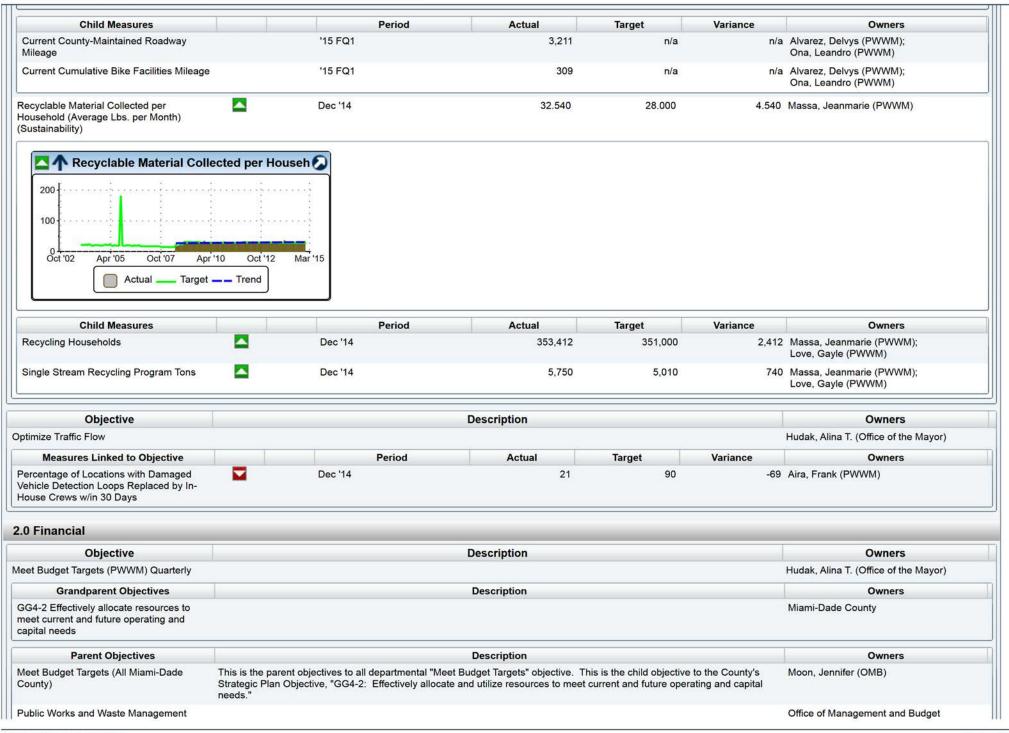




	Period	Actual	Target	Variance	Owners
ustomer Service Request Response Rate	Dec '14	99.7% (2,928.0/2,938.0)	98.0%	1.7%	Silver, Deborah F. (PWWM); Cotarelo, Antonio
Customer Service Request Respon					
Child Measures	Perio	d Actual	Target	Variance	Owners
Total Number of PWD Service Requests Received	Dec '14	2,938Requests	n/a	n/a	Aira, Frank (PWWM)
Number of Service Requests Completed vithin the target/goal period	Dec '14	2,928Requests	n/a	n/a	Aira, Frank (PWWM)
idewalk Complaints Received For	Jan '15	97.6% (121.0/124.0)	100.0%	-2.4%	Ruiz, Antolin (PWWM)
Sidewalk Complaints Received For	Inspec				
200 100 Jan '09 Apr '10 Jul '11 Oct '12 Jan '1 Actual Target — Trend	4 Apr '15				
200 100 Jan '09 Apr '10 Jul '11 Oct '12 Jan '1 Actual Target — Trend Child Measures	Perio		Target	Variance	Owners
200 100 Jan '09 Apr '10 Jul '11 Oct '12 Jan '1 Actual Target — Trend Child Measures otal Number of Outstanding Sidewalk		d Actual 0	Target n/a		Owners Garcia, Manuel (PWWM)
200 1	Perio			n/a	The second s
200 100 Jan '09 Apr '10 Jul '11 Oct '12 Jan '1 Actual Target — Trend	Jan '15	0	n/a	n/a n/a	Garcia, Manuel (PWWM)







Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Revenue: Total (PWWM)		'14 FQ4	\$106,382K	\$144,324K	\$-37,942K	Hudak, Alina T. (Office of the Mayor)
Expen: Total (PWWM)	A	'14 FQ4	\$111,340K	\$144,324K	\$32,984K	Hudak, Alina T. (Office of the Mayor)
Positions: Full-Time Filled (PWWM)		'15 FQ1	1,521	1,628 (1,600 - 1,628)	-107	Hudak, Alina T. (Office of the Mayor)
Disposal Full Fee Revenue Tons	A	Dec '14	143,922	128,500	15,422	Gomez, Francisco (PWWM)
Disposal Revenue Tons - Garbage		Dec '14	100,172	92,186	7,986	Gomez, Francisco (PWWM)
Disposal Revenue Tons - Trash		Dec '14	43,750	45,377	<mark>-1,6</mark> 27	Gomez, Francisco (PWWM)
Objective			Owners			
Monitor Overtime and Temporary Expenditures	To ensure that	ensure that all overtime and temporary usage is prudent and necessary to delivering mandatory levels of services.				Hudak, Alina T. (Office of the Mayor)
Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Overtime expenditure (PW Operations)	_	Dec '14	\$25,682	\$56,658	\$30,976	Cotarelo, Antonio
Temporary Expenditure (PW Operations)	-	Dec '14	\$2,145.20	\$7,784.66	\$5,639.46	Cotarelo, Antonio
Temporary Expenditure (Administration)		Dec '14	\$15,349	n/a	n/a	Daniel, Aneisha D. (PWWM)
Overtime expenditure (Administration)		Dec '14	\$1,330	n/a	n/a	Daniel, Aneisha D. (PWWM)
Overtime Expenditure (WM Operations)		Dec '14	\$386,195	\$292,902	\$-93,293	Mauriello, Paul (PWWM)
Temporary Expenditure (WM Operations)		Dec '14	\$116,066	\$79,034	\$-37,032	Mauriello, Paul (PWWM)
Objective			Description			Owners
Fo Reduce Disposal Accounts receivable delinquencies						Sanchez, Maria (PWWM)
Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Accounts receivable Disposal delinquent balance 90 days+ old {Workload Measure}		'15 Q1	\$67,375	n/a	n/a	Rayborn, Rick (PWWM)
Total Accounts Receivable (PWWM)		'15 FQ1	\$5,830.0K	\$0.0K	n/a	Sanchez, Maria (PWWM)
3.0 Internal						
Objective			Description			Owners
Office of the Mayor Assignments	Assignments a	ssigned to the Director's Office from the	Office of the Mayor.			Chong, Michelle (PWWM)
Measures Linked to Objective		Period	Actual	Target	Variance	Owners
Percentage of the Mayor's Office Assignments Completed Ontime		Dec '14	54% (7 / 13)	100%	-46%	Lee, Margaret (PWWM); Hankerson, Andrea A. (PWWM)
Objective			Description			Owners
Ensure Ongoing Compliance with local,						Hudak, Alina T. (Office of the Mayor)

Initiatives Linked to Objective	Est. Start	Est. End	Туре	As Of 🤌	👸 🖌 🌒 🧿 %	Status	Owners
Cell 5 Construction	10/1/2007	9/30/2015		1/7/2015	30%	In Progress	Ganguli, Asok (PWWM); Casey, Lee (PWWM)
Virginia Key Landfill Grant	5/1/2010	1/31/2018		1/7/2015	5%	In Progress	Casey, Lee (PWWM)
Landfill Gas Utilization System Implementation	3/1/2009	9/30/2013		1/7/2015	88%	In Progress	Casey, Lee (PWWM)
Munisport Landfill Grant	5/1/2010	9/30/2022		1/7/2015	64%	In Progress	Casey, Lee (PWWM)
Measures Linked to Objective			Period	Actual	Target	Variance	Owners
Disposal System Level of Service (In Years)		2014 FY		16	5	11	Casey, Lee (PWWM)
Percentage of FDEP Reporting Deadlines Met		Dec '14		100.0%	100.0%	0.0%	Casey, Lee (PWWM)
Objective				Description			Owners
Provide Quality Administrative and Operational Support that Drives Effectiveness and Efficiency in Service Delivery							Hudak, Alina T. (Office of the Mayor)
Initiatives Linked to Objective	Est. Start	Est. End	Туре	As Of 🥔	👸 🖌 🚺 🙆 %	Status	Owners
Visual Inventory of Roadway Assets	4/1/2007	10/31/2013		3/17/2014		In Progress	Fuentes-Smart, Teresa (ITD)
Biometric Time Clocks Project Deployment	9/30/2013	12/31/2015		1/8/2015	30%	In Progress	Silver, Deborah F. (PWWM)
4.0 Learning and Growth							
Objective				Description			Owners
Provide Training and Employee Development Opportunities							Hudak, Alina T. (Office of the Mayor)
Measures Linked to Objective			Period	Actual	Target	Variance	Owners
		Dec '14		4	n/a	n/a	Sifontes, Michelle (PWWM)
Total No. of Training Sessions (revised format as of 4/11)							
				Description			Owners
format as of 4/11) Objective Ensure a Safe Working Environment for				Description litions to ensure that all train nment for all employees.	ning, education and resou	ces provided are	Owners Hudak, Alina T. (Office of the Mayor)
format as of 4/11)				ditions to ensure that all trai	ning, education and resour	ces provided are Variance	