MIAMI-DADE COUNTY

Miami-Dade Water and Sewer Department
P.O. Box 330316 • 3071 SW 38th Avenue
Miami, Florida 33233-0316
T 305-665-7471

Carlos A. Gimenez, Mayor

miamidade.gov

Electronic Correspondence/
Original via Certified Mail/
Return Receipt Requested
7001 0360 0001 6783 8277
CCN: 56186
File No. 8DC.19.40b/8DC19.42

March 15, 2012

Mr. Curt Thompson, Senior Regulatory Professional
Water Use Division
Regulatory and Public Affairs
South Florida Water Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680
Email: cthompso@sfwmd.gov

Re: Miami-Dade County Consolidated PWS, Water Use Permit 13-00017-W, Alternative Water Supply Plan Annual Report, Limiting Condition 40, and Reuse Feasibility Annual Report, Limiting Condition 42

Dear Mr. Thompson:

In accordance with Limiting Conditions 40 and 42, of the Miami-Dade County Water Use Permit No. 13-00017-W, please find enclosed the Alternative Water Supply (AWS) Plan and Reuse Feasibility Plan Annual Report, detailing progress through December 31, 2011.

If you have any questions concerning this submittal, please contact me at (786) 552-8979 or Ms. Bertha M. Goldenberg, P.E. at (786) 552-8120.

Sincerely,

for L. Douglas Yoder
Deputy Director,
Regulatory Compliance and Capital Improvements

LDY/BMG/ro

Enclosures

ec: S. Trost strost@sfwmd.gov
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L12048SFWMD-AWSP-RF-LC40-42

MIAMI-DADE COUNTY

Miami-Dade
Water and Sewer Department

Miami-Dade Consolidated PWS
Water Use Permit No. 13-00017-W

Alternative Water Supply Plan
and Reuse Feasibility Plan
Annual Progress Report

Progress Through December 31, 2011

Miami-Dade
Water and Sewer Department
P.O. Box 33-0316, Miami, FL 33233-0316

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SECTION I INTRODUCTION

On November 1, 2010, the South Florida Water Management District Governing Board approved the reissuance of the Miami-Dade Consolidated Public Water Supply Water Use Permit (WUP).

Limiting Condition 40 of the WUP requires that the permittee provide annual updates per Limiting Condition 50, of the status of all alternative water supply (AWS) projects. The status report shall include work completed to date, expenditures, and any anticipated changes in the timelines.

Limiting Condition 42 of the WUP requires that the permittee provide the District with annual updates, describing the activities associated with the implementation of the approved reuse feasibility plan including the following information: (1) the status of distribution system construction, including location and capacity of a) existing reuse lines; b) proposed reuse lines to be constructed in the next five years; (2) a summary of uncommitted supplies for the next five years; (3) the status of reuse plan implementation including status of pilot projects, plan design construction, volume of reuse available, volume of wastewater disposed of; and (4) the status/copies of any ordinances related to reuse; (5) any proposed changes to the reuse plan.

Miami-Dade Water & Sewer Department (MDWASD) hereby submits the Alternative Water Supply Plan and Reuse Feasibility Plan Annual Progress Report summarizing the County's actions and efforts to comply with Limiting Conditions 40 and 42 of the WUP.

SECTION II STATUS OF REUSE DISTRIBUTION SYSTEM CONSTRUCTION

The status of distribution system construction, including location and capacity of a) existing reuse lines b) proposed reuse lines to be constructed in the next five years:

Existing Reuse Lines

Currently MDWASD has a distribution line to Florida International University's (FIU) Biscayne Bay Campus located at 3000 N.E. 151st Street, North Miami, Florida. The capacity of the existing reuse system for FIU irrigation is 1.5 MGD. MDWASD currently delivers an annual average flow of 0.11 MGD for irrigating 40 acres of landscape.

Installation of reclaimed water piping in the Village of Key Biscayne has been completed. The maximum capacity of the Village of Key Biscayne piping is 3 MGD.

Appendix A contains maps of the existing reuse lines.

Proposed Reuse Lines

Future reuse lines are being evaluated as part of the revised Reuse Feasibility Study being completed as part of the Ocean Outfall elimination study. Additionally, MDWASD is evaluating the future water needs for the South Dade System, to determine the scope and timing of future reuse projects. A permit modification has been submitted to the SFWMD for the South Dade System.

SECTION III SUMMARY OF UNCOMMITTED REUSE SUPPLIES

Summary of uncommitted supplies for the next five years:

It is not anticipated that MDWASD will have any uncommitted reuse supplies in the next five years.

To ensure commitment to reclaimed water supplies, on July 20, 2010 MDWASD and FPL signed a Joint Participation Agreement for the delivery of reclaimed water from the South District Wastewater Treatment Plant to the FPL Turkey Point Plant.

SECTION IV STATUS OF ALTERNATIVE WATER SUPPLY AND REUSE PLAN IMPLEMENTATION

The status of both the alternative water supply plan, and the reuse plan implementation including status of pilot projects, plan design construction, volume of reuse available, volume of wastewater disposed of, is described below:

On July 14, 2005, MDWASD issued a Notice to Proceed to Ecology & Environment, Inc. to update the Reuse Feasibility Study (RFS). On June 13, 2006, the MDWASD received joint comments from the Florida Department of Environmental Protection (FDEP) and the SFWMD on the draft RFS Update. On September 18, 2006, the MDWASD held a workshop with the regulatory agencies to further discuss their comments and on May 3, 2007, the MDWASD submitted the Final Reuse Feasibility Study Update. On May 10, 2007, MDWASD submitted an Alternative Water Supply (AWS) Plan to the SFWMD and the FDEP. On November 1, 2007, MDWASD submitted the AWS Plan and schedule to the SFWMD, incorporating comments from FDEP and the SFWMD. On November 1, 2010, the SFWMD Governing Board approved the reissuance of the Miami-Dade WUP containing the revised AWS Plan.

Details on the volume of reuse available and the volume of the wastewater disposed of, is contained in Appendix B.

Individual projects are described below:

Hialeah Floridan Aquifer Reverse Osmosis (RO) Water Treatment Plant

On July 26, 2007, the Miami-Dade Board of County Commissioners (BCC) approved a Joint Participation Agreement (JPA) between Miami-Dade County and the City of Hialeah for this project. On October 25, 2007, the City of Hialeah provided MDWASD with a tentative schedule for the construction of the RO plant. Miami-Dade County Mayor Carlos Alvarez and City of Hialeah Mayor Julio Robaina signed the JPA on December 27, 2007.

On February 7 and February 8, 2008, MDWASD attended a workshop hosted by the City of Hialeah's consultant, Parsons, regarding the design and construction of the Hialeah Floridan Aquifer Reverse Osmosis Water Treatment Plant.

On March 26, 2008, the City issued a Request for Proposals (RFP) for the drilling, construction and testing of Floridan aquifer test well systems for the Project. On April 24 and May 13, 2008, the City extended the deadlines for the RFP submittals.

On June 5, 2008, the City of Hialeah held a non-mandatory Pre-Request for Qualifications meeting for interested firms for the design, construction, start–up, testing, commissioning and operation of the Reverse Osmosis Water Treatment Plant and Wellfield System. On September 3, 2008, the Committee met for the ranking of the companies who responded to the Request for Qualifications. On September 5, 2008, Mayor Julio Robaina recommended that the City Council select three responding companies, American Water-Pridesa, LLC, Inima USA Corp. and Veolia Water North American-South, LLC, as sufficiently qualified to respond to the forthcoming RFP for the Design/Build/Operate (DBO) contract.

On November 19, 2008, the City of Hialeah received the RFPs for Drilling, Construction, and Testing of the Floridan Test Wells. The contract was approved by the City Council on December 23, 2008, and awarded to Diversified Drilling Corporation.

On January 22, 2009, the Miami-Dade BCC approved Amendment 1 to the JPA which included the conveyance of the property on which the RO WTP will be constructed from Miami-Dade County to the City of Hialeah.

On March 16, 2009, the City received draft injection well permits from the Florida Department of Environmental Protection (FDEP), for the RO brine disposal. On May 18, 2009, FDEP held a public meeting to receive comments on the permits. On March 12, 2009, final permits were received from the SFWMD for the test and production wells.

The Request for Proposals (RFP) for the *Hialeah Reverse Osmosis Water Treatment Plant Design, Build, Operate (DBO) Project* was issued on October 15, 2009. Pilot testing with the three potential DBO contractors is continuing.

Proposals for the *Drilling, Construction and Testing of Class 1 Test/Injection Wells and Dual Zone Monitor Well* were received by the City of Hialeah on September 17, 2009. On November 7, 2009, the selected contractor began drilling Injection Well 1. Injection wells 1 and 2 were completed on May 31, 2010.

The City issued a RFP clarification/change on April 19, 2010, in the form of an additional procurement step entitled the *Addendum and Request for Best and Final Offers* (BAFO) for the DBO contract. The City also issued Addenda on April 21, 2010 and May 4, 2010 to provide additional clarification to the BAFO process.

On May 25, 2010, the Selection Committee evaluated the BAFO Non-Price Proposals and ranked the DBO Teams. The BAFO Price Proposals were opened on May 26, 2010, and were scored and ranked. On June 1, 2010 the Selection Committee met to determine the overall rankings based on the combined scores and provided the City of Hialeah Mayor with their recommendations. On June 6, 2010 the Mayor provided the recommendations to the City Council and requested approval to authorize negotiations.

On September 7, 2010, Inima, the selected DBO contractor began mobilization. On September 28, 2010, the City of Hialeah received 40/50% design drawing and a Basis of Design Report from the contractor. On December 6, 2010, Inima and AECOM submitted minor design changes to the Florida Department of Health. On December 17, 2010, 90% design drawings were submitted to the City.

On September 14, 2010 FDEP issued the Environmental Resource Permit (ERP) for the site. On October 12, 2010 the City of Hialeah approved the payment for wetland mitigation bank credits and on November 5, 2010, a final permit was issued for wetland impacts, by the Army Corps of Engineers.

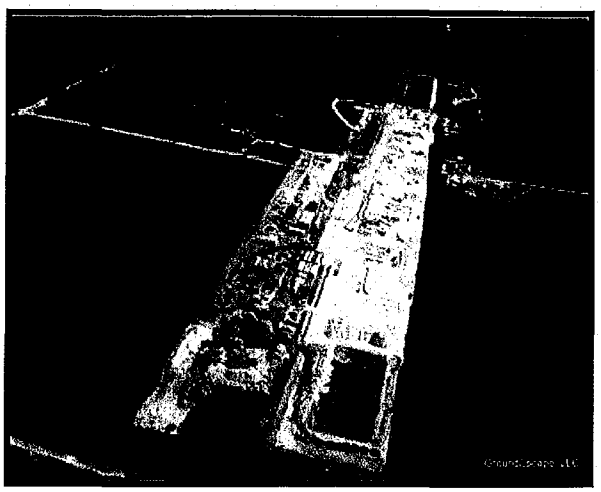
On October 14, 2010, the City received as-built drawings for the injection wells. On November 22, 2010 Schlumberger submitted the final Deep Well report to the City.

On November 23, 2010, the City authorized the Site Preparation contractor to begin work, and on December 7, 2010, a pre-construction meeting and field review was held with the selected contractor.

On December 17, 2010, Inima/AECOM submitted 90% design documents. On January 12, 2011, the City of Hialeah provided comments on the 90% design to the consultants and a meeting was held between Hialeah and the consultant on January 20, 2011 to discuss the comments.

On May 7, 2011, FDEP approved the sampling frequency for the monitoring well. On May 7, 2011, construction of injection wells 1 and 2, along with the dual zone monitoring well, was completed.

On June 6, 2011, Hialeah issued a request for bid proposals for the installation of production wells 2, 3, and 4, and on July 8, 2011 responses were received by the City. On August 23, 2011, the Hialeah City Council authorized A.C. Schultes of Florida, Inc for the installation of production wells 2, 3, and 4. On November 7, 2011 the Notice to Proceed was issued for the construction of wells 2, 3, and 4.



A temporary production well permit was issued on September 28, 2011 by the SFWMD. From October 24 through October 31 the footers were poured for the Reverse Osmosis building and the generator building and the sewer line to the RO building were completed on November 2, 2011.

On February 29, 2012, MDWASD requested that the turnover/project completion date for the Hialeah Floridan Aquifer Reverse Osmosis Water Treatment be changed to December 31, 2012.

The City of Hialeah is tracking all expenditures.

South District Water Reclamation Plant

The scope of the South District Water Reclamation Plant (SDWRP) will be determined as part of the evaluation of the future water needs for the South Dade System. The SDWRP project is on hold pending the SFWMD's approval of MDWASD's request for a permit modification for the South Dade System.

On-site irrigation and in-plant use of reclaimed water resulted in 3.116 MGD of water reclamation at the SDWWTP in FY2011. The estimated capacity of the current SDWWTP reuse system is 4.173 MGD.

Expenditures through December 31, 2011 for the SDWRP Plant and Pilot are $25,021,431. Expenditures through December 31, 2011 for the SDWRP Pipeline are $1,084,731.

West District Water Reclamation Plant

Currently various alternatives, including plant capacity associated with reclaimed water opportunities, are being developed in conjunction with system-wide wastewater transmission and treatment facilities planning and the ocean outfall legislation implementation.

Expenditures through this reporting period for the WDWRP were $309,829.

North District Wastewater Treatment Plant Reuse Projects

The scope of the North District Water Reclamation Plant will be determined as part of the Ocean Outfall Legislation implementation plan which will be submitted to FDEP by July 1, 2013.

The NDWWTP currently has a reuse capacity of 4.44 MGD. In FY2011, 1.97 MGD of wastewater was treated and reused for in-plant processes at NDWWTP. Irrigation at Florida International University's Biscayne Bay campus accounted for an additional 0.11 MGD of reuse from the NDWWTP.

Central District Wastewater Treatment Plant Reuse Projects
The scope of the Central District Water Reclamation Plant will be determined as part of the Ocean Outfall Legislation implementation plan which will be submitted to FDEP by July 1, 2013.

In FY2011, the CDWWTP used 4.95 MGD of reclaimed water for in-plant processes. The CDWWTP has an estimated maximum reuse capacity of 7.878 MGD.

FPL Turkey Point

MDWASD staffs met regularly with representatives from FPL in the development of the Joint Participation Agreement, which was approved by the Board of County Commissioners in July 20, 2010 . Four (4) main alternatives were considered for providing reuse water to Turkey Point. MDWASD developed cost estimates for these alternatives, and the selected alternative will provide up to 90 MGD of HLD-treated water from the SDWWTP for FPL use. The construction of the treated water pipeline is scheduled to be completed by 2022.

Expenditures for the FPL Turkey Point Reuse Project, through December 31, 2011, are approximately $110,283.

Biscayne Bay Coastal Wetlands Rehydration Pilot Project

On November 10, 2007, MDWASD submitted a conceptual plan and basis of design for the revised project to the SFWMD. The Notice to Professional Consultants requesting project proposals was advertised on May 12, 2008. On May 22, 2008, MDWASD received comments on the Conceptual Plan from the SFWMD. On May 27, 2008 Miami-Dade County held a RFP Pre-Submittal Project Briefing for the Project.

The recommendation for consultant selection for this project was approved by the BCC on January 22, 2009 and the first Task Authorization was issued on February 2, 2009. A kick-off meeting was held with the consultant on February 19, 2009.

The Agreement with Florida International University (FIU) for ecological and aquatic toxicity testing was approved by the BCC on March 3, 2009. On March 5, 2009, MDWASD sent letters to FDEP, Biscayne National Park (BNP), the SFWMD, and DERM, requesting appointment of staff members to the BBCWRP project stakeholder's leadership team. The designated Leadership Team met on April 28, 2009. On June 16, 2009 a public meeting of all stakeholders was held at MDWASD. The second stakeholder meeting was held on July 21, 2009.

On June 29, 2009, the consultant submitted a Water Quality Evaluation and a Process Technology Assessment report. On August 25, 2009, a stakeholders' workshop was held to review treatment efficiencies of the proposed pilot plant treatment trains. On November 4, 2009, a public meeting was held to update stakeholders on the progress of the pilot. On December 4, 2009, a stakeholder workshop was held to discuss the draft literature review and the draft report on monitoring data sources.

On January 28, 2010, the consultant, MWH, proposed changing from the originally proposed biologically aerated filters for nitrification and deep bed sand filters for denitrification to a membrane bioreactor (MBR). The consultant proposed the MBR technology to lower nutrient levels and because the MBR can be more easily procured. MDWASD has approved the change.

A meeting of the stakeholders was held on February 26, 2010 to discuss the changes in the

process equipment and the proposed water quality testing plan. On March 30, 2010, a stakeholder meeting was held to further discuss the water quality testing plan.

On April 6, 2010, the proposed Aquatic Toxicity testing plan that will be conducted by Florida International University (FIU) was submitted to MDWASD. On May 12, 2010, the stakeholders continued discussions on the water quality testing plan. A consensus was reached among the stakeholders on the water quality testing plan objectives.

On May 18, 2010, MWH submitted the drawings for the BBCWRP pilot plant to the Miami-Dade County Building Department for permitting. A permit was issued on June 30, 2010.

A stakeholder meeting was held on June 23, 2010 to review the proposed Aquatic Toxicity Testing Plan. Dr. Rand from FIU presented an overview of the proposed plan for the first year of testing.

Construction of the pilot plant has been completed and the membrane bioreactor (MBR) was seeded on October 12, 2010. On November 8, 2010, the stakeholders met at the SDWWTP and toured the pilot plant.

On December 16, 2010 a tour of the eco-toxicology and chemistry labs at Florida International University's Biscayne Bay Campus was held for interested stakeholders.

Chemical testing began the second week of November 2010. The first series of provisional water quality data for microconstituents and nutrients was distributed to the stakeholders on January 7 and 10, 2011, respectively, for review. The second series of sampling was conducted on December 21, 2010 and the provisional results were sent to stakeholders on February 4, 2011. Additional sampling events took place on February 7 and 10, and March 7 and 9, 2011, as the pilot plant continued operation and the sample results were transmitted to the stakeholders for review.

On April 6, 2011, a stakeholders' meeting was held to discuss the results of the sampling activities in comparison to the BBCWRP Project's goals, including the various treatment trains ability to meet the nutrient targets established by the stakeholder group. The data generated substantiated that reverse osmosis would likely be needed as part of a treatment system to reclaim wastewater to meet the proposed targets for rehydrating the Biscayne Bay Coastal Wetlands with reclaimed water from the South District Wastewater Treatment Plant. Potential alternatives, such as using treated water from the Floridan aquifer were also discussed at the stakeholders' meeting. A joint decision was made to complete the pilot study.

On November 15, 2011, MDWASD submitted the *Pilot Plant Closeout Report* documenting the set-up and operation of the pilot plant over a 5 month period. The Report also included the data resulting from the study. A technical memorandum was also prepared to compare the cost of a reclaimed water option versus utilization of the Floridan aquifer as a potential source of water to rehydrate the coastal wetlands. MDWASD believes that this report expands the scientific knowledge needed to address the important issue of restoring and enhancing coastal wetlands and this information should be considered in the development of alternatives as part of the Biscayne Bay Coastal Wetlands Comprehensive Everglades Restoration Project.

With submittal of the closure report, MDWASD has fulfilled the requirements of Limiting Condition 45.

Expenditures through December 31, 2011, for the BBCWRP were $ 4,241,091.48.

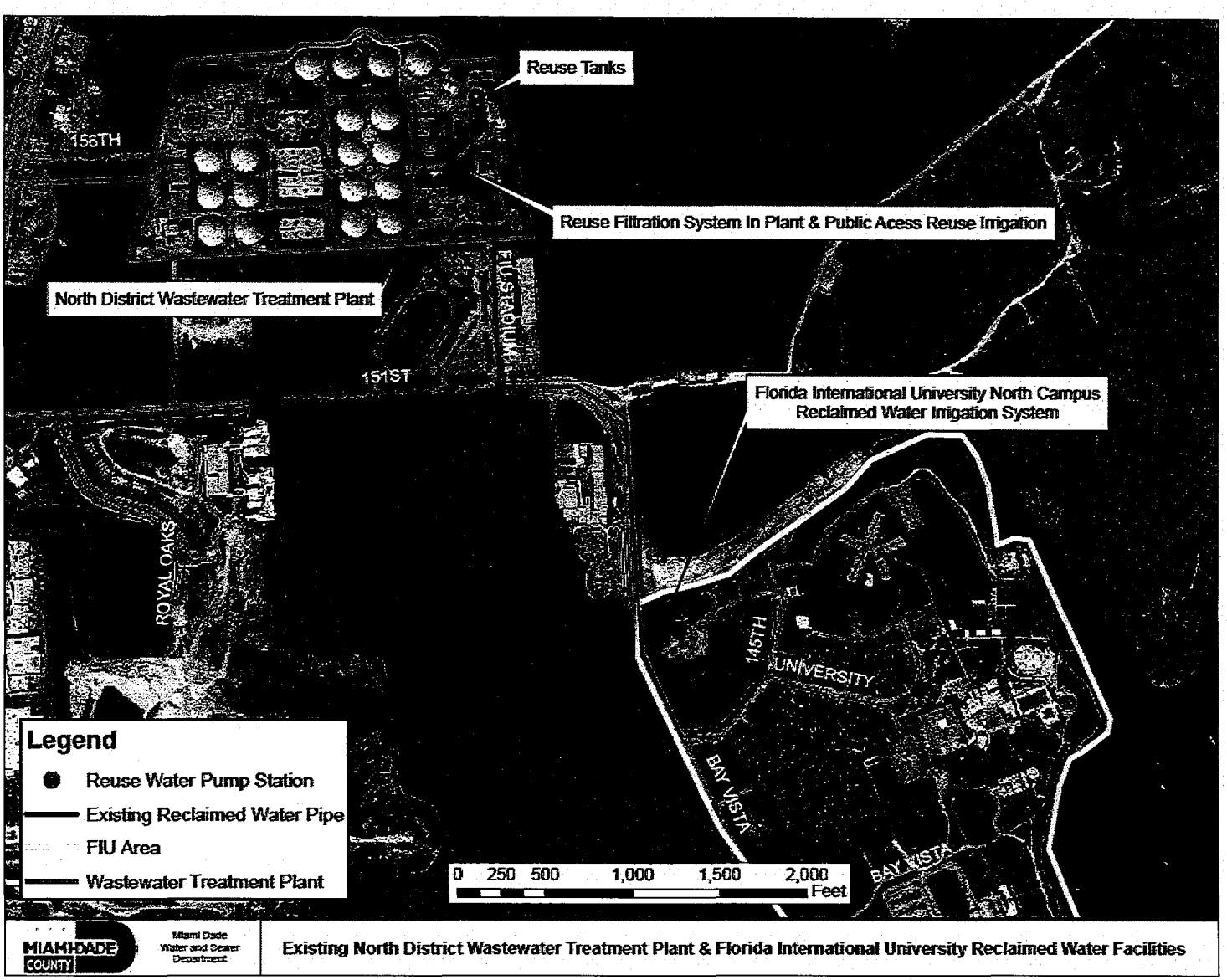
SECTION V STATUS OF REUSE ORDINANCES

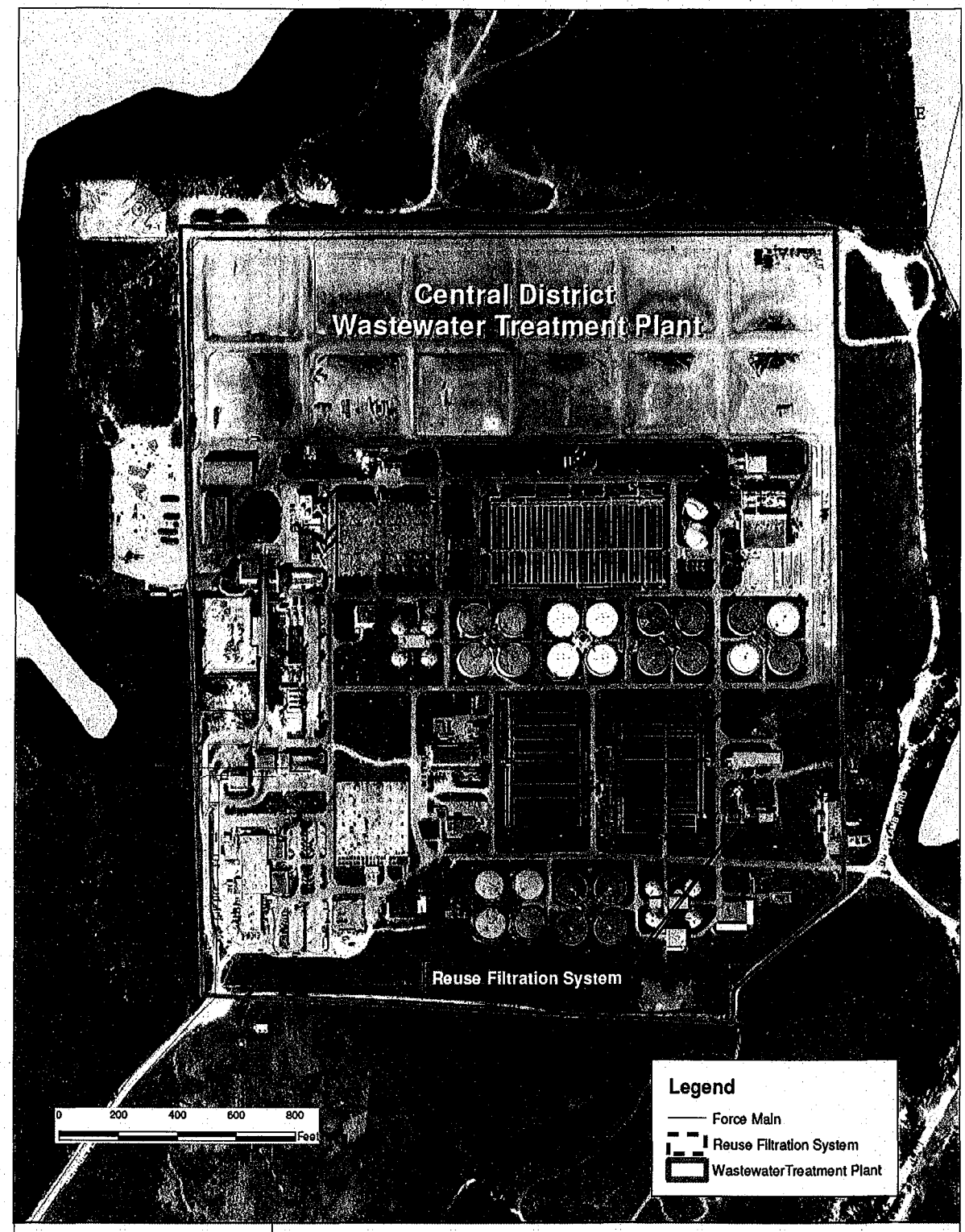
MDWASD will establish reuse rates, as needed, upon completion of the July 2013 Ocean Outfall legislation implementation reuse plan.

SECTION VI PROPOSED CHANGES TO EXHIBIT 13 AND 14

MDWASD has submitted an application for a permit modification to the SFWMD. As a result of lower demands and updated population projections, along with additional reuse opportunities, MDWASD has reevaluated the demands for the South Miami Heights Water Treatment Plant, and the corresponding AWS projects and project schedules. The application for the permit modification is pending SFWMD approval.

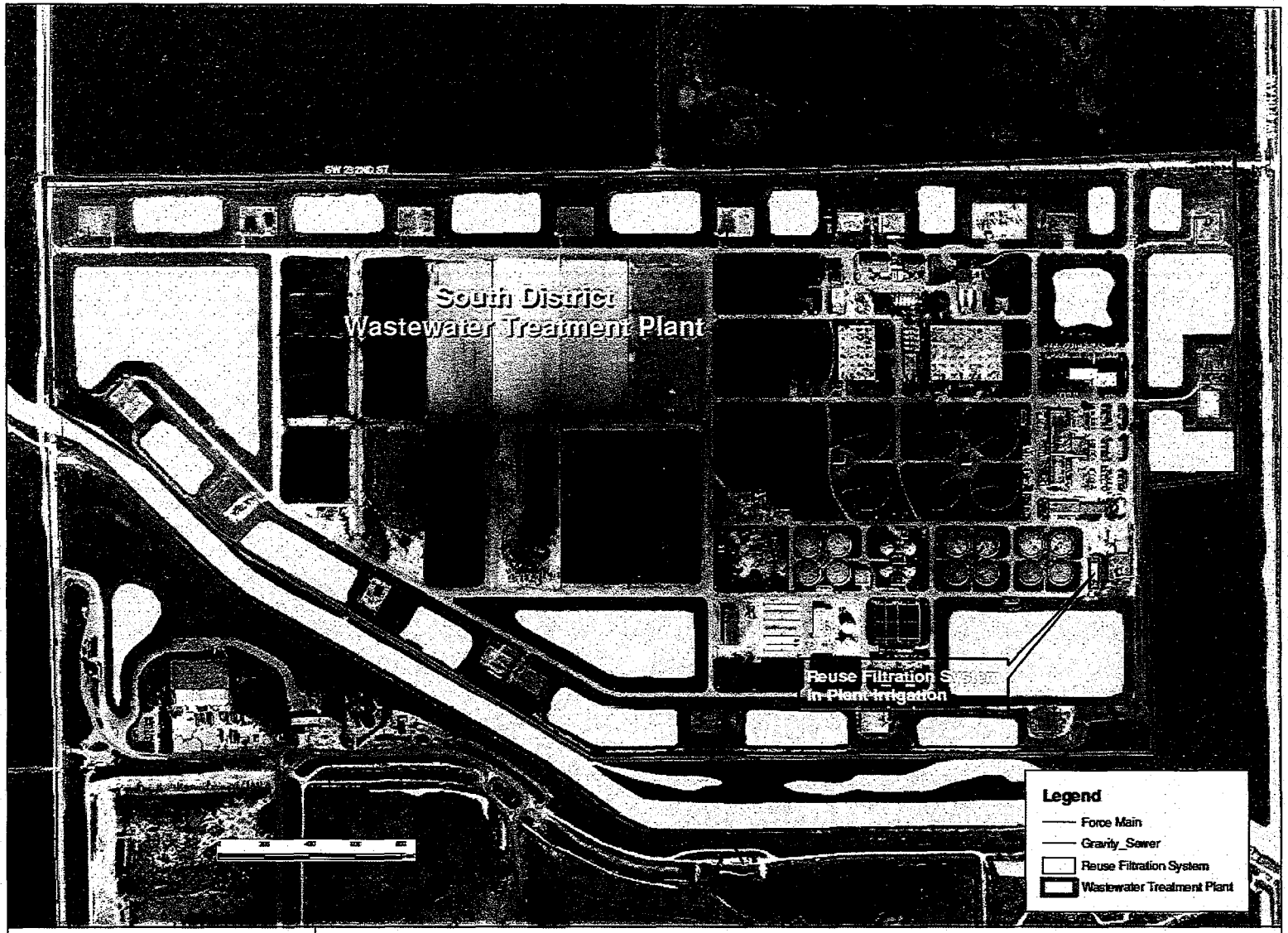
APPENDIX A EXISTING REUSE LINES


Reuse Tanks
156TH
Reuse Filtration System In Plant & Public Acess Reuse Irrigation
North District Wastewater Treatment Plant
FIU STADIUM
151ST
Florida International University North Campus
Reclaimed Water Irrigation System
ROYAL OAKS
145TH
UNIVERSITY
BAY VISTA
BAY VISTA
Legend
Reuse Water Pump Station
Existing Reclaimed Water Pipe
FIU Area
Wastewater Treatment Plant
0 250 500 1,000 1,500 2,000
Feet
MIAMI-DADE COUNTY
Miami Dade Water and Sewer Department
Existing North District Wastewater Treatment Plant & Florida International University Reclaimed Water Facilities



MIAMI-DADE COUNTY
MIAMI - DADE
WATER AND SEWER
DEPARTMENT

Existing Central District Wastewater Treatment Reclaimed Water Facilities



MIAMI - DADE
WATER AND SEWER
DEPARTMENT

Existing South District Wastewater Treatment Plant
Reclaimed Water Facilities

APPENDIX B ANNUAL REUSE REPORTS

Florida Department of Environmental Protection
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

ANNUAL REUSE REPORT

Part I - Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit one copy (including all attachments) to each of the following three addresses:

   a. DEP Water Reuse Coordinator
   Mail Station 3540
   2600 Blair Stone Road
   Tallahassee, Florida 32399-2400

   b. The appropriate DEP district office (attention Domestic Wastewater Program).

   c. The appropriate water management district.

3. Please type or print legibly. Submit all pages of this form.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2010 through September 30, 2011

2. Date Submitted: December 20, 2011

3. Person Completing This Form

   Name: Phillip Torres

   Title: Engineer 2

   Organization: Miami-Dade Water and Sewer Department

   Mailing Address: PO Box 330316

   City/State/Zip Code: Miami, Fl 33233-0316

   Telephone: (786) 552-8152

   E-mail: PTORR01@miamidade.gov

4. Reuse System Name: South District Wastewater Treatment Plant / On-Site Irrigation

5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

      City: Miami County: Miami-Dade

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☒ Southeast (West Palm Beach)
- ☐ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☒ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
South District WWTP	5013M04555	HB*	112.50	89.83
Total Treated Wastewater			112.50	**89.83**

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(5), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(6), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(4), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(7), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.
*High-Level Disinfection for SDWWTP/On-Site Reuse System Only.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the total from bottom of table in Part II]	**89.83**
Supplemental Water Supplies (Enter the flow for each supplemental water source added by the utility)	
Surface Water	**0**
Stormwater	**0**
Ground Water	**0**
Drinking Water	**0**
Demineralization Concentrate (Blended with final reclaimed water only)	**0**
Water Recovered from ASR [b]	
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	**89.83**

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III			
	Residential Irrigation	III			
	Other Public Access Areas	III	**0.443 Est.**	**0.036**	
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII	**3.73 Est.**	**3.08**	
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			
Wetlands					
Other (Specify)					
Total Reuse **[Enter total flow on Line 1 in Part VI of this form.]**			**4.173**	**3.116**	

[c] To be considered "reuse," either of the following conditions must exist:

* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall		
	To Coastal or Estuarine Waters		
	To Wetlands		
	To Other Surface Waters		
Deep Well Disposal		**112.50**	**93.39**
Other (specify)			
Total Flow Disposed [Enter total flow on Line 2 in Part VI of this form.]		**112.50**	**93.39**

Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)
1. Reuse (From bottom of Part IV of this form)	**3.116**
2. Effluent Disposal (From bottom of Part V)	**93.39**
3. Flow Stored in ASR (See note [b] on ASR in Part III.)	**0**
Total (Should equal the total in Part III of this form.) [d]	**96.506**

[d] The totals in Parts III and VI will not be equal if one of the following conditions exists (check as appropriate):

☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.

☒ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service? None

2. How many golf courses are irrigated using reclaimed water? None

3. How many parks or playgrounds are irrigated using reclaimed water? None

4. How many schools are irrigated using reclaimed water? None

5. Is reclaimed water used to flush toilets? ☐ Yes ☒ No If yes, list locations where reclaimed water is used for toilet flushing. _____

6. Is reclaimed water used for fire protection? ☐ No ☐ Yes, in sprinkler systems

   ☒ Yes, in fire hydrants ☐ Yes, other (please describe)_____

7. How many cooling towers use reclaimed water from this reuse system? None

8. List or describe any unique or unusual uses of reclaimed water. In co-generation engine cooling water,flushing, wash down, pump seal lubricant, and WWTP on-site irrigation

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

   ☒ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

   ☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

   ☐ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

    ☒ Yes ☐ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

    ☐ Yes ☒ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs? ☒ Yes ☐ No

   Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☒ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? None

   How many of these cross-connections have been eliminated? N/A

   Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? None

   How many of the new reclaimed water connections were inspected at the time of initial connection? N/A

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? N/A

   How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? N/A

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period? N/A

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

   Flat rate ($/month/connection) N/A

   Gallonage charge (cents/1000 gal.) N/A

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

Flat rate ($/month/connection) N/A

Gallonage charge (cents/1000 gal.) N/A

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name of the agricultural operation.
b. Name and telephone number of the owner or operator of the agricultural operation.
c. Address of the agricultural operation.
d. Edible crops irrigated using reclaimed water.
e. Type of application (irrigation) method used.
f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☐ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.
b. Location.
c. Function of the storage system (system storage or reject storage).
d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).
e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.
f. Distance to the nearest public water supply well.
g. Distance to the nearest potable water supply well, which is not a public water supply well.
h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☐ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).
b. Summary of activities involving the news media.
c. Use of advisory signs.
d. Other public notification activities.

☐ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16),

F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.
b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.
c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.
d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).
e. Provide a summary of the utility's plans for metering reclaimed water customers.

☒ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: December 20, 2011

Signature

Phone: (786) 552-8116

Vicente E. Arrebola, P.E., Assistant Director Wastewater
Name and Title (please print/type)

Company Name: Miami-Dade Water and Sewer Department

Address: P.O. Box 330316

City/State/Zip Code: Miami, Fl 33233-0316

E-Mail: arrebv@miamidade.gov

Florida Department of Environmental Protection
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

ANNUAL REUSE REPORT

Part I - Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit one copy (including all attachments) to each of the following three addresses:

   a. DEP Water Reuse Coordinator
   Mail Station 3540
   2600 Blair Stone Road
   Tallahassee, Florida 32399-2400

   b. The appropriate DEP district office (attention Domestic Wastewater Program).

   c. The appropriate water management district.

3. Please type or print legibly. Submit all pages of this form.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2010 through September 30, 2011

2. Date Submitted: December 20, 2011

3. Person Completing This Form

   Name: Phillip Torres

   Title: Engineer 2

   Organization: Miami-Dade Water and Sewer Department

   Mailing Address: PO Box 330316

   City/State/Zip Code: Miami, Fl 33233-0316

   Telephone: (786) 552-8152

   E-mail: PTORR01@miamidade.gov

4. Reuse System Name: Central District Wastewater Treatment Plant / In – Plant Reuse System

5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

      City: Miami County: Miami-Dade

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☒ Southeast (West Palm Beach)
- ☐ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☒ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
Central District WWTP	5013M00797	HB*	143.00	103.5
Total Treated Wastewater			143.00	**103.5**

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(5), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(6), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(4), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(7), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.
*High-Level Disinfection for CDWWTP/ In Plant Reuse System Only.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the total from bottom of table in Part II]	**103.5**
Supplemental Water Supplies (Enter the flow for each supplemental water source added by the utility)	
Surface Water	**0**
Stormwater	**0**
Ground Water	**0**
Drinking Water	**0**
Demineralization Concentrate (Blended with final reclaimed water only)	**0**
Water Recovered from ASR [b]	**0**
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	**103.5**

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III			
	Residential Irrigation	III			
	Other Public Access Areas	III			
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII	**7.84 Est.**	**4.95**	
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			
Wetlands					
Other (Specify)	At Treatment Plant (On Site)		**0.038**	**0.00**	
Total Reuse [Enter total flow on Line 1 in Part VI of this form.]			**7.878 Est.**	**4.95**	

[c] To be considered "reuse," either of the following conditions must exist:

* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall	**143.00**	**103.2**
	To Coastal or Estuarine Waters		**0**
	To Wetlands		**0**
	To Other Surface Waters		**0**
Deep Well Disposal		**0**	**0**
Other (specify)			
Total Flow Disposed [Enter total flow on Line 2 in Part VI of this form.]		**143.00**	**103.2**

Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)
1. Reuse (From bottom of Part IV of this form)	**4.95**
2. Effluent Disposal (From bottom of Part V)	**103.2**
3. Flow Stored in ASR (See note [b] on ASR in Part III.)	**0**
Total (Should equal the total in Part III of this form.) [d]	**108.15**

[d] The totals in Parts III and VI will not be equal if one of the following conditions exists (check as appropriate):

☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.

☒ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service? None

2. How many golf courses are irrigated using reclaimed water? None

3. How many parks or playgrounds are irrigated using reclaimed water? None

4. How many schools are irrigated using reclaimed water? None

5. Is reclaimed water used to flush toilets? ☐ Yes ☒ No If yes, list locations where reclaimed water is used for toilet flushing. _____

6. Is reclaimed water used for fire protection? ☒ No ☐ Yes, in sprinkler systems

   ☐ Yes, in fire hydrants ☐ Yes, other (please describe) _____

7. How many cooling towers use reclaimed water from this reuse system? None

8. List or describe any unique or unusual uses of reclaimed water.

   Flushing, wash down, pump seal lubricant and WWTP on-site potable water replacement.

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

   ☐ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

   ☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

   ☒ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

    ☒ Yes ☐ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

    ☐ Yes ☒ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs? ☐ Yes ☐ No **N/A**

   Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☐ Yes ☐ No **N/A**

2. How many illegal cross-connections have been identified during the reporting period? N/A

   How many of these cross-connections have been eliminated? N/A

   Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? N/A

   How many of the new reclaimed water connections were inspected at the time of initial connection? N/A

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? N/A

   How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? N/A

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period? N/A

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

   Flat rate ($/month/connection) N/A

   Gallonage charge (cents/1000 gal.) N/A

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

Flat rate ($/month/connection) N/A

Gallonage charge (cents/1000 gal.) N/A

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name of the agricultural operation.
b. Name and telephone number of the owner or operator of the agricultural operation.
c. Address of the agricultural operation.
d. Edible crops irrigated using reclaimed water.
e. Type of application (irrigation) method used.
f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☐ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.
b. Location.
c. Function of the storage system (system storage or reject storage).
d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).
e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.
f. Distance to the nearest public water supply well.
g. Distance to the nearest potable water supply well, which is not a public water supply well.
h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☐ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).
b. Summary of activities involving the news media.
c. Use of advisory signs.
d. Other public notification activities.

☐ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16),

F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.
b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.
c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.
d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).
e. Provide a summary of the utility's plans for metering reclaimed water customers.

☒ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: December 20, 2011

Signature

Phone: (786) 552-8116

Vicente E. Arrebola, P.E., Assistant Director Wastewater
Name and Title (please print/type)

Company Name: Miami-Dade Water and Sewer Department

Address: P.O. Box 330316

City/State/Zip Code: Miami, Fl 33233-0316

E-Mail: arrebv@miamidade.gov

Florida Department of Environmental Protection
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

ANNUAL REUSE REPORT

Part I - Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit one copy (including all attachments) to each of the following three addresses:

   a. DEP Water Reuse Coordinator
   Mail Station 3540
   2600 Blair Stone Road
   Tallahassee, Florida 32399-2400

   b. The appropriate DEP district office (attention Domestic Wastewater Program).

   c. The appropriate water management district.

3. Please type or print legibly. Submit all pages of this form.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2010 through September 30, 2011

2. Date Submitted: December 12, 2011

3. Person Completing This Form

   Name: Phillip Torres

   Title: Engineer 2

   Organization: Miami-Dade Water and Sewer Department

   Mailing Address: PO Box 330316

   City/State/Zip Code: Miami, Fl 33233-0316

   Telephone: (786) 552-8152

   E-mail: PTORR01@miamidade.gov

4. Reuse System Name: North District Wastewater Treatment Plant / In – Plant Reuse System

5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

      City: Miami County: Miami-Dade

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☒ Southeast (West Palm Beach)
- ☐ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☒ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
North District WWTP	5013M02271	HB*	112.50	75.08
Total Treated Wastewater			112.50	**75.08**

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(5), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(6), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(4), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(7), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.
*High-Level Disinfection for NDWWTP 1.5 MGD Reuse System Only.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the total from bottom of table in Part II]	**75.08**
Supplemental Water Supplies (Enter the flow for each supplemental water source added by the utility)	
Surface Water	**0**
Stormwater	**0**
Ground Water	**0**
Drinking Water	**0**
Demineralization Concentrate (Blended with final reclaimed water only)	**0**
Water Recovered from ASR [b]	
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	**75.08**

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III			
	Residential Irrigation	III			
	Other Public Access Areas	III	**1.5**	**0.11**	**40**
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII	**2.94**	**1.97**	
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			
Wetlands					
Other (Specify)					
Total Reuse [Enter total flow on Line 1 in Part VI of this form.]			**4.44**	**2.08**	**40**

[c] To be considered "reuse," either of the following conditions must exist:

* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall	**100.0**	**36.52**
	To Coastal or Estuarine Waters		
	To Wetlands		
	To Other Surface Waters		
Deep Well Disposal		**70.87**	**36.88**
Other (specify)		**N/A**	**3.11**
Total Flow Disposed [Enter total flow on Line 2 in Part VI of this form.]		**112.5**	**76.51**

Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)
1. **Reuse** (From bottom of Part IV of this form)	**2.08**
2. **Effluent Disposal** (From bottom of Part V)	**76.51**
3. **Flow Stored in ASR** (See note [b] on ASR in Part III.)	**0**
Total (Should equal the total in Part III of this form.) [d]	**78.59**

[d] The totals in Parts III and VI will not be equal if one of the following conditions exists (check as appropriate):

- ☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.
- ☒ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service? None

2. How many golf courses are irrigated using reclaimed water? None

3. How many parks or playgrounds are irrigated using reclaimed water? None

4. How many schools are irrigated using reclaimed water? One, F.I.U. North Campus

5. Is reclaimed water used to flush toilets? ☐ Yes ☒ No If yes, list locations where reclaimed water is used for toilet flushing. _____

6. Is reclaimed water used for fire protection? ☒ No ☐ Yes, in sprinkler systems

   ☐ Yes, in fire hydrants ☐ Yes, other (please describe) _____

7. How many cooling towers use reclaimed water from this reuse system? None

8. List or describe any unique or unusual uses of reclaimed water. _____

   Flushing, wash down, pump seal lubricant and WWTP on-site irrigation

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

   ☐ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

   ☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

   ☒ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

    ☒ Yes ☐ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

    ☐ Yes ☒ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs? ☒ Yes ☐ No

   Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☒ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? None

   How many of these cross-connections have been eliminated? N/A

   Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? None

   How many of the new reclaimed water connections were inspected at the time of initial connection? N/A

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? N/A

   How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? N/A

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period? N/A

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

   Flat rate ($/month/connection) N/A

   Gallonage charge (cents/1000 gal.) N/A

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

Flat rate ($/month/connection) N/A

Gallonage charge (cents/1000 gal.) N/A

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name of the agricultural operation.
b. Name and telephone number of the owner or operator of the agricultural operation.
c. Address of the agricultural operation.
d. Edible crops irrigated using reclaimed water.
e. Type of application (irrigation) method used.
f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☒ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.
b. Location.
c. Function of the storage system (system storage or reject storage).
d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).
e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.
f. Distance to the nearest public water supply well.
g. Distance to the nearest potable water supply well, which is not a public water supply well.
h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☒ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).
b. Summary of activities involving the news media.
c. Use of advisory signs.
d. Other public notification activities.

☐ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16),

Part X- Required Attachments

Inventory of Storage Facilities

a. **Name or identifier for the storage system.**
Covered Storage Tanks, Nos. 1 and 2

b. **Location.**
Latitude 25" 55' 04" N Longitude 80" 09' 12" W
North District Wastewater Treatment Plant, 2575 NE 156th St. North Miami

c. **Function of the storage system (system storage or reject storage).**
Covered Tanks are used as system storage for the reclaimed water.

d. **Type of facility (covered tank, uncovered tank, lined pond, unlined pond).**
Covered Tank

e. **Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.**
Not applicable, covered tank

f. **Distance to the nearest public water supply well.**
Not applicable, covered storage tank

g. **Distance to the nearest potable water supply well, which is not a public water supply well.**
Not applicable, covered storage tank

h. **Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).**
Total storage volume of all storage tanks (2) is 0.15 million gallons.

Summary of Public Notification Program

a. **Details of written public notification activities (include copies of written notices).**
See item c.

b. **Summary of activities involving the news media.**
None

c. **Use of advisory signs.**
Advisory signs have been posted at the entrance of the Florida International University North Campus in English and Spanish. These signs are in addition to existing signs placed in areas where reclaimed water is used for irrigation.

d. **Other public notification activities.**
None

F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.
b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.
c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.
d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).
e. Provide a summary of the utility's plans for metering reclaimed water customers.

☐ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: December 12, 2011

Signature

Phone: (786) 552-8116

Vicente E. Arrebola, P.E., Assistant Director Wastewater
Name and Title (please print/type)

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