

# 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, 2013

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

# TABLE OF CONTENTS

SECTION I INTRODUCTION
SECTION II STATUS OF REUSE DISTRIBUTION SYSTEM CONSTRUCTION
SECTION III SUMMARY OF UNCOMMITTED REUSE SUPPLIES
SECTION IV STATUS OF ALTERNATIVE WATER SUPPLY AND REUSE PLAN
IMPLEMENTATION
Hialeah Floridan Aquifer Reverse Osmosis (RO) Water Treatment Plant
South District Water Reclamation Plant3
West District Water Reclamation Plant3
North District Wastewater Treatment Plant Reuse Projects4
Central District Wastewater Treatment Plant Reuse Projects4
FPL Turkey Point
Biscayne Bay Coastal Wetlands Rehydration Pilot Project4
SECTION V STATUS OF REUSE ORDINANCES
SECTION VI PROPOSED CHANGES TO EXHIBIT 13 AND 14
APPENDIX A EXISTING REUSE LINESi
APPENDIX B ANNUAL REUSE REPORTSv

# **SECTION I INTRODUCTION**

On November 15, 2007, the South Florida Water Management District (SFWMD) Governing Board approved the Miami-Dade Consolidated Water Use Permit (WUP). On November 1, 2010, the SFWMD Governing Board approved the reissuance of the permit extending the WUP for an additional three years. On December 16, 2012, the permit was reissued to increase the permitted allocation and to modify the water supply for the South Miami Heights Water Treatment Plant to include allocation from the Floridan aquifer.

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 for 2013 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 0.1 MGD for irrigating 40 acres of landscape.

Appendix A contains maps of the existing reuse lines.

#### Proposed Reuse Lines

Future reuse lines will be developed as part of the design for the FPL Turkey Point Project.

# 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. On January 4, 2013 MDWASD submitted a revised Exhibit 13 with an updated Alternative Water Supply Schedule.

As part of the development of the Ocean Outfall Legislation implementation plan, which was submitted to FDEP by June 28, 2013, MDWASD analyzed several options for reuse of 117.5 million gallons of treated wastewater per day. This will be accomplished through a Joint Participation Agreement with Florida Power and Light to provide up to 90 MGD of reuse water for cooling purposes at their Turkey Point facilities. An additional 27.5 MGD of reuse water will be used to replenish the Floridan aquifer at the Central, South, and West District plants. Based on this analysis conducted as part of the Ocean Outfall Legislation implementation plan, it was also determined that the South District, North District, Central District and West District reuse projects are not needed for future drinking water supplies.

Individual projects are described below:

#### Hialeah Floridan Aquifer Reverse Osmosis (RO) Water Treatment Plant

The Hialeah Reverse Osmosis Plant was commissioned on October 28, 2013.

The City of Hialeah is tracking all expenditures.

#### South District Water Reclamation Plant

Analysis conducted as part of the Ocean Outfall Legislation implementation plan, submitted to FDEP by June 28, 2013 has determined that the South District Water Reclamation Plant is not needed for future drinking water supplies.

#### 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 implementation plan for the Ocean Outfall Legislation. It should be noted that the analysis conducted as part of the development of the implementation plan, has determined that the West District Water Reclamation Plant is not needed for future drinking water supplies.

#### North District Wastewater Treatment Plant Reuse Projects

Analysis conducted as part of the Ocean Outfall Legislation implementation plan, submitted to FDEP by June 28, 2013 has determined that the North District Water Reclamation Plant is not needed for future drinking water supplies.

#### **Central District Wastewater Treatment Plant Reuse Projects**

Analysis conducted as part of the Ocean Outfall Legislation implementation plan, submitted to FDEP by June 28, 2013 has determined that the Central District Water Reclamation Plant is not needed for future drinking water supplies.

#### 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.

#### 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 the pilot project specified in Limiting Condition 45.

# SECTION V STATUS OF REUSE ORDINANCES

MDWASD will establish reuse rates, as needed, upon completion of reuse projects.

# **SECTION VI PROPOSED CHANGES TO EXHIBIT 13 AND 14**

On January 4, 2013 MDWASD submitted a revised Exhibit 13. MDWASD anticipates submitting an additional permit modification to update Exhibits 13 and 14 in 2014.

# **APPENDIX A EXISTING REUSE LINES**







# APPENDIX B ANNUAL REUSE REPORTS



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

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## 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, 2012 t	hrough September 30, 2013
2.	Date Submitted: _December 04, 2013	
3.	Person Completing This Form	
	Name: Phillip Torres	
	Title: <u>Engineer 2</u>	
	Organization: <u>Miami-Dade Water and Sewer Dep</u>	partment
	Mailing Address: P.O. Box 330316	
	City/State/Zip Code: <u>Miami, FI 33233-0316</u>	
	Telephone: (786) 552-8152	
	E-mail: PTORR01@miamidade.gov	
4.	Reuse System Name: Central District Wastewater T	reatment Plant/ In-Plant Reuse System
5.	Domestic Wastewater Treatment Facilities Providing F	Reclaimed Water to This Reuse System
	a. Location of Facilities	
	City: <u>Miami</u>	County: <u>Miami-Dade</u>
	DEP District (check one):	Water Management District (check one):
	Northwest (Pensacola)	🔲 Northwest Florida (Havana)
	Northeast (Jacksonville)	Suwannee River (Live Oak)
	Southwest (Tampa)	Southwest Florida (Brooksville)
	Central (Orlando)	St. Johns River (Palatka)
	Southeast (West Palm Beach)	South Florida (West Palm Beach)

South (Ft. Myers)

b. Domestic Wastewater Treatment Facility Information

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

Facility Name	DEP Identification Number	Disinfection Level <sup>a</sup>	Permitted Capacity (mgd)	Average Flow (mgd)
Central District WWTP	5013M00797	BA	143.00	102.23
Total Treated Wastewater			143.00	102.23

<sup>a</sup> 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.

#### 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]	102.23
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 <sup>b</sup>	0
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	102.23

<sup>b</sup> 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 &	Golf Course Irrigation	III			
Landscape Irrigation	Residential Irrigation	III			
	Other Public Access Areas	Ш			
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation, See Part X of this form.)	Ш		:	
	Grass, Pasture, Other Crops	I			
Ground Water Recharge & Indirect	Rapid Infiltration Basins (Including Some Perc Ponds) <sup>c</sup>	IV			
Potable Reuse	Absorption Fields <sup>c</sup>	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V		· · · ·	
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII	7.84 Est.	4.80	
	At Other Facilities	VII			
Toilet Flushing		Ш			
Fire Protection		ш			
Wetlands		a landar			
Other (Specify)	At Treatment Plant (On Site)		0.038	0	
Total Reuse [Enter total flow on Line 1 in Part VI of this form.]			7.878 Est.	4.80	

° 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	118.9
	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	118.9

#### Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)	
1. Reuse (From bottom of Part IV of this form)	4.80	· .
2. Effluent Disposal (From bottom of Part V)	118.9	
<b>3.</b> Flow Stored in ASR (See note <sup>b</sup> on ASR in Part III.)	0	
<b>Total</b> (Should equal the total in Part III of this form.) <sup>d</sup>	123.70	

<sup>d</sup> 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? <u>None</u>
2.	How many golf courses are irrigated using reclaimed water? <u>None</u>
3.	How many parks or playgrounds are irrigated using reclaimed water? <u>None</u>
4.	How many schools are irrigated using reclaimed water? <u>None</u>
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
7. 8.	How many cooling towers use reclaimed water from this reuse system?         List or describe any unique or unusual uses of reclaimed water
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.]
	Xes, permitted under other rules governing surface water discharges
10.	Do you require construction of reclaimed water piping in new residential or other developments?
	TYes 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 crossconnection 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?  $\Box$  Yes  $\Box$  No N/A

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

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)? <u>N/A</u>

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) <u>N/A</u>

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 50acre site) for the use of reclaimed water?

Flat rate (\$/month/connection) <u>N/A</u>

Gallonage charge (cents/1000 gal.) <u>N/A</u>

#### 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: 12/4/13	Alerento Signature
Phone: (786)_552-8112	<u>Rafael A. Terrero, P.E., Assistant Director Wastewater</u> 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: TERRERO@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, 2012	through <u>September 30, 2013</u>
2.	Date Submitted:December 02, 2013	
3.	Person Completing This Form	
	Name: Phillip Torres	
	Title: Engineer 2	·
	Organization: <u>Miami-Dade Water and Sewer De</u>	epartment
	Mailing Address: P.O. Box 330316	
	City/State/Zip Code: <u>Miami, FI 33233-0316</u>	·
	Telephone: (786) 552-8152	
	E-mail:PTORR01@miamidade.gov	
4.	Reuse System Name: South District Wastewater 1	reatment Plant/ On-site Irrigation
5.	Domestic Wastewater Treatment Facilities Providing	Reclaimed Water to This Reuse System
	a. Location of Facilities	
	City: <u>Miami</u>	County: Miami-Dade
	DEP District (check one):	Water Management District (check one):
	Northwest (Pensacola)	🗌 Northwest Florida (Havana)
	Northeast (Jacksonville)	Suwannee River (Live Oak)
	Southwest (Tampa)	Southwest Florida (Brooksville)
	Central (Orlando)	St. Johns River (Palatka)
	Southeast (West Palm Beach)	South Florida (West Palm Beach)

South (Ft. Myers)

b. Domestic Wastewater Treatment Facility Information

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

Facility Name	DEP Identification Number	Disinfection Level <sup>a</sup>	Permitted Capacity (mgd)	Average Flow (mgd)
South District WWTP	5013M04555	HI	112.50	99.55
Total Treated Wastewater			112.50	99.55

<sup>a</sup> 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.

#### 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]	99.55
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 <sup>b</sup>	0
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	99.55

<sup>b</sup> 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 &	Golf Course Irrigation	Ш		sterring betweet and a merid of the set of t	
Landscape Irrigation	Residential Irrigation	III			
	Other Public Access Areas	III	0.443	0	
			Est.	U	
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	п			
Ground Water Recharge & Indirect	Rapid Infiltration Basins (Including Some Perc Ponds) <sup>c</sup>	IV			
Potable Reuse	Absorption Fields <sup>c</sup>	IV			
	Surface Water Augmentation	v			
	(Discharge to Class I Waters)			119-11-21 <sup>15</sup> -11-1-11-11-1-1-1-1-1-1-1-1-1-1-1-1-1	
	Injection to Potable Aquifers	V	-		
Industrial	At Treatment Plant	VII	3.73 Est.	5.04	
	At Other Facilities	VII			
<b>Toilet Flushing</b>		Ш			
Fire Protection		Ш			
Wetlands					
Other (Specify)					
Total Reuse [Enter total flow on Line 1 in Part VI of this form.]			4.173	5.04	

<sup>°</sup> 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	namene en	n an a' sharan na marka a sana a s
· · ·	To Coastal or Estuarine Waters		
	To Wetlands		
	To Other Surface Waters		
Deep Well Disposal		112.50	102.83
Other (specify)			
Total Flow Disposed [Enter total flow on Line 2 in Part VI of this form.]		112.50	102.83

#### Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)	
1. Reuse (From bottom of Part IV of this form)	5.04	
2. Effluent Disposal (From bottom of Part V)	102.83	
3. Flow Stored in ASR (See note <sup>b</sup> on ASR in Part III.)	0	
<b>Total</b> (Should equal the total in Part III of this form.) <sup>d</sup>	107.87	

<sup>d</sup> 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? <u>None</u>
2.	How many golf courses are irrigated using reclaimed water? <u>None</u>
3.	How many parks or playgrounds are irrigated using reclaimed water? <u>None</u>
4.	How many schools are irrigated using reclaimed water? <u>None</u>
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? INO Yes, in sprinkler systems Yes, in fire hydrants Yes, other (please describe)
7. 8.	How many cooling towers use reclaimed water from this reuse system? <u>None</u> List or describe any unique or unusual uses of reclaimed water. <u>In co-generation engine cooling water</u> , 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 Ses, 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 crossconnection 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? X Yes No

Have all of these cross-connection control programs been accepted by the DEP or the approved county health department?  $\boxtimes$  Yes  $\square$  No

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

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

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? <u>None</u>

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)? <u>N/A</u>\_\_\_\_\_

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

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? (Miami-Dade has Year-Round Water Use Restrictions)

Flat rate (\$/month/connection) \$3.20

Gallonage charge (cents/1000 gal.) 50 cents / 1,000

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

Flat rate (\$/month/connection) \$188.16 / 6" meter connection

Gallonage charge (cents/1000 gal.) <u>\$3.33 / 1000 gal. (857,000 gals.)</u>

#### 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.

L 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: 12/2/13	Signature
Phone: (786) 552-8112	Rafael A. Terrero, P.E., Assistant Director Wastewater Systems Name and Title (please print/type)
Company Name: <u>Miami-Dade Wate</u>	er and Sewer Department
Address: _P.O. Box 330316	
City/State/Zip Code: _Miami, FI 3323	33-0316
E-Mail: TERRERO@miamidade.c	JOV



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, 2012	through September 30, 2013
2.	Date Submitted:December 04, 2013	
3.	Person Completing This Form	
	Name: Phillip Torres	
	Title: Engineer 2	
	Organization: <u>Miami-Dade Water and Sewer D</u>	epartment
	Mailing Address: <u>P.O. Box 330316</u>	
	City/State/Zip Code:Miami, Fl 33233-0316	
	Telephone: (786) 552-8152	
	E-mail: <u>PTORR01@miamidade.gov</u>	
4.	Reuse System Name: North District Wastewater	Treatment Plant/ In-Plant Reuse System
5.	Domestic Wastewater Treatment Facilities Providing	g Reclaimed Water to This Reuse System
	a. Location of Facilities	
	City: <u>Miami</u>	County: <u>Miami-Dade</u>
	DEP District (check one):	Water Management District (check one):
	Northwest (Pensacola)	Northwest Florida (Havana)
	Northeast (Jacksonville)	Suwannee River (Live Oak)
	Southwest (Tampa)	Southwest Florida (Brooksville)
	Central (Orlando)	St. Johns River (Palatka)
	Southeast (West Palm Beach)	South Florida (West Palm Beach)

South (Ft. Myers)

b. Domestic Wastewater Treatment Facility Information

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

Facility Name	DEP Identification Number	Disinfection Level <sup>a</sup>	Permitted Capacity (mgd)	Average Flow (mgd)
North District WWTP	5013M02271	HB*	120	87.68
······································				
Total Treated Wastewater			120	87.68

<sup>a</sup> 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]	87.68
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 <sup>b</sup>	
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	87.68

<sup>b</sup> 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 &	Golf Course Irrigation	III		2 million and a sharing and a start of the star	
Landscape Irrigation	Residential Irrigation	III			
	Other Public Access Areas	Ш	1.5	0.1	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	П	-		
Ground Water Recharge & Indirect	Rapid Infiltration Basins (Including Some Perc Ponds) <sup>c</sup>	IV			
Potable Reuse	Absorption Fields <sup>c</sup>	IV			
	Surface Water Augmentation	V			
	(Discharge to Class I Waters)				
	Injection to Potable Aquifers	v			
Industrial	At Treatment Plant	VII	2.94	3.06	
	At Other Facilities	VII			
Toilet Flushing		Ш			
Fire Protection		Ш			
Wetlands					
Other (Specify)					
Total Reuse [Enter total flow on Line 1 in Part VI of this form.]			4.44	3.16	40

<sup>°</sup> 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	51.38
	To Coastal or Estuarine Waters		
	To Wetlands		
	To Other Surface Waters		
Deep Well Disposal		70.87	37.40
Other (specify)	Residuals Transfer CDWWTP	N/A	1.98
Total Flow Disposed [Enter total flow on Line 2 in Part VI of this form.]		120	90.76

#### Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)	
1. Reuse (From bottom of Part IV of this form)	3.16	
2. Effluent Disposal (From bottom of Part V)	90.76	
<b>3.</b> Flow Stored in ASR (See note <sup>b</sup> on ASR in Part III.)	0	
<b>Total</b> (Should equal the total in Part III of this form.) <sup>d</sup>	93.92	

<sup>d</sup> 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? <u>None</u>
2.	How many golf courses are irrigated using reclaimed water? <u>None</u>
3.	How many parks or playgrounds are irrigated using reclaimed water? <u>None</u>
4.	How many schools are irrigated using reclaimed water? <u>One, F.I.U. North Campus</u>
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. 8.	How many cooling towers use reclaimed water from this reuse system?         List or describe any unique or unusual uses of reclaimed water         Flushing, wash down, pump seal lubricant and WWTP on-site irrigation
9. Г	Is there a surface water discharge that serves as a backup discharge for the reuse system?
L	No Yes, a Limited wet weather Discharge permitted under Kule 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?
11.	Yes No 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 crossconnection 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? X Yes No

Have all of these cross-connection control programs been accepted by the DEP or the approved county health department?  $\boxtimes$  Yes  $\square$  No

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

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

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? <u>None</u>

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)? <u>N/A</u>

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

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

#### 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) <u>N/A</u>

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 50acre site) for the use of reclaimed water?

Flat rate (\$/month/connection) <u>N/A</u>

Gallonage charge (cents/1000 gal.) <u>N/A</u>

#### Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

- L 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 of 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 156<sup>th</sup> 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.

Note: Note:

#### 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: 12/4/13	12 aftereno
	Signature
Phone: (786) 552-8112	Rafael A. Terrero, P.E. DEE., 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: TERRERO@miamidade.gov	