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VIA ELECTRONIC CORRESPONDENCE

March 2, 2015

CCN: 59190
File No: 8.DC.20.34

Chief, Environmental Enforcement Section
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RE: DOJ No. 90-5-1-1-4022/1
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Florida Department of Environmental Protection
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Attn: Compliance/Enforcement Section
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RE: Consent Decree (Case: No. 1:12-cv-24400-FAM)
Reference DOJ Case No. 90-5-1-1-4022/1
Section IX – Reporting Requirements, Paragraph 34- Annual
2014 Annual Report

Dear Sir/Madam:

In accordance with the provisions of Paragraph 34 of the above referenced Consent Decree, on behalf of Miami Dade County, the Miami-Dade Water and Sewer Department (MSWASD) submits to the United States Environmental Protection Agency (EPA) and the State of Florida Department of Environmental Protection (FDEP) the 2014 Annual Report, that includes a narrative of the progress made in implementing CMOM programs pursuant to the above reference Consent Decree for the period of time from January 1, 2014 through December 31, 2014; and a trend analysis of the number, volume, average duration, and cause of Miami-Dade's SSO for the previous two (2) calendar year. Since this report is the first Annual Report, additional information has been provided on any work completed prior to the reporting period. The County has met all of the Consent Decree requirements for the calendar year of 2014 and is in full compliance with the Consent Decree.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel

properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Should you have any questions regarding this matter, please call me at (786) 552-8571.

Sincerely,

Juan Carlos Arteaga, AIA, NCARB, CBO, APA, LEED® AP
Deputy Director

Attachment: 2014 Annual Report

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2014 Annual Report

January 1, 2014 through December 31, 2014

Prepared for

United States Environmental Protection Agency and
Florida Department of Environmental Protection

Consent Decree
Case: No. 1:12-cv-24400-FAM

Prepared by

Miami-Dade Water and Sewer Department and the
Consent Decree Program Management Construction Management Team

Contents

List of Figures

List of Tables

Acronyms and Abbreviations

AC	Asbestos Cement
BODR	Basis of Design Report
CMOM	Capacity, Management, Operations, and Maintenance
CDWWTP	Central District Wastewater Treatment Plant
CD	Consent Decree
CIP	Capital Improvement Project
CIPP	Cured in Place Pipe
EFT	Electronic Funds Transfer
USEPA	United States Environmental Protection Agency
FOG	Fats, Oils, and Grease
FDEP	Florida Department of Environmental Protection
GPD	Gallons per Day
GPM	Gallons per Minute
GIS	Geographic Information Systems
I/I	Inflow/Infiltration
IMS	Information Management System
LF	Linear Foot
MDWASD	Miami-Dade Water and Sewer Department
MGD	Million Gallons per Day
NPDES	National Pollutant Discharge Elimination System
N/A	Not Applicable
PDR	Public Document Repository

PS	Pump Station
RER-DERM	Department of Regulatory and Economic Resources-Division of Environmental Resources Management
RTU	Remote Telemetry Unit
R & R	Renewal and Replacement
SSO	Sanitary Sewer Overflow
SEP	Supplemental Environmental Project
SORP	Sewer Overflow Response Plan
SCADA	Supervisory Control and Data Acquisition
VFD	Variable Frequency Drive
VSC	Volume Sewer Customer
WCTL	Wastewater Collection and Transmission Line
WCTS	Wastewater Collection and Transmission System
WWTP	Wastewater Treatment Plant

1.0 Introduction

The County submits this Annual Report ("Report") to the Environmental Protection Agency (“EPA”) and the State of Florida Department of Environmental Protection (“FDEP”) for review and comment in accordance with the requirements of paragraph 34 of the Consent Decree. This Report includes a narrative summary of progress made on implemented or modified Capacity, Management, Operations and Maintenance (“CMOM”) Programs, including key accomplishments and significant activities during the most recent calendar year (January 1, 2014 through December 31, 2014), and also provides a trends analysis of the number, volume, average duration, and cause of Miami-Dade’s SSOs for the previous two (2) calendar years.

On May 21, 2013, Miami-Dade County ("County") approved a Consent Decree (“CD”) with the United States of America, the State of Florida Department of Environmental Protection, and the State of Florida, in the case styled United States of America et. al. v. Miami-Dade County, Florida, No. 1:12-cv-24400-FAM. On June 6, 2013 the CD was lodged with the United States District Court for the Southern District of Florida (“Court”). The Effective Date of the CD is December 6, 2013 (six months after the date of lodging). On April 9, 2014, the Court approved the CD with the United States of America, the State of Florida Department of Environmental Protection, and the State of Florida. Pursuant to Section IX of the CD, the County is required to submit an Annual Report to EPA and FDEP. Miami-Dade has prepared this Annual Report to satisfy the reporting requirements found in Paragraph 34 of the CD.

2.0 Requirements

Annual reports are to be submitted to the EPA and FDEP beginning two (2) months after the first full calendar year following the effective date of the CD, and two (2) months after each subsequent calendar year until termination of the CD, Miami-Dade shall submit to EPA and FDEP for review and comment an Annual Report. Each Annual Report shall cover the most recent applicable calendar year and shall include, at a minimum, the above requirements.

As detailed in Section IX, Paragraph 34 of the CD, the County is required to report the following information concerning CD compliance.

1. “A narrative summary of progress made, including key accomplishments and significant activities, under the CMOM Programs implemented or modified pursuant to this Consent Decree for the most recent Calendar Year.”

2. “A trends analysis of the number, volume, average duration, and cause of Miami-Dade’s SSOs for the previous two (2) Calendar Years.”

3.0 Implementation Progress to Date

The County has met all CD requirements for the previous calendar year and is in full compliance with the CD. Following are some of the key accomplishments achieved in 2014.

MDWASD has contracted with AECOM Consent Decree Program Management Construction Management (PMCM) Team to assist MDWASD to manage and implement its Consent Decree Program. The PMCM Team's Notice to Proceed was issued on June 2, 2014 by the County. Woolpert was also contracted to assist in the development of the CMOM Programs. Woolpert's Notice to Proceed was issued on December 16, 2014 by the County. Integrated Green Technologies was selected on December 19, 2014 to head Phase 2 of the Fats, Oils and Grease ('FOG") Control Program. In addition, MWH and HDR were selected as Wastewater Treatment Plant and Wastewater Collection and Transmission Line Design Consultants, respectively.

Continuing CMOM Programs

The Adequate Pumping, Transmission and Treatment Capacity Program ensures adequate transmission capacity for its Pump Stations and adequate treatment capacity for its Wastewater Treatment Plants. Pursuant to Paragraph 18(a) of the CD, Miami-Dade has incorporated the criteria in Appendix A of the CD into Section 24-42.3 of the Code of Miami-Dade County. The amendment was submitted to EPA/FDEP on May 20, 2014 ahead of CD compliance date of June 4, 2014.

The purpose of the Volume Sewer Customer ("VSC') Ordinance Program is to eliminate or otherwise control SSOs from the WCTS and the collection and transmission systems of present and future VSCs. The amendment to the VSC Ordinance pursuant to Paragraph 18(e)(ii) was submitted to the EPA/FDEP on March 14, 2014 ahead of CD compliance date of April 7, 2014. In addition, a proposed amendment to the VSC Ordinance to include scheduling requirements and an approved VSC Plan of Compliance as defined in Appendix B of the CD existing and future VSCs must implement, was drafted by RER-DERM and submitted to the EPA /FDEP on April 4, 2014 ahead of CD compliance date of April 7, 2014.

CD Reporting

The County submitted three Quarterly Reports during the calendar year. Quarterly Reports include the date, time, location, source estimated duration, estimated volume, receiving water (if any) and cause of all SSOs occurring in the reporting period.

One Semi-Annual Report was submitted to EPA/FDEP during the calendar year. The report contains a description of projects and activities completed and milestones achieved during the reporting period, and those anticipated in the successive reporting period, in Gantt chart. It

includes a description of the status of compliance or non-compliance with the requirements of this CD and, if applicable, the reasons of non-compliance. Also, it contains the amount, recipient and the date of transfer or use during the reporting period of funds obtained by the County from the collection of sewer rates for any purpose not related to the management, operation or maintenance of the Sewer System or to any capital improvement needs of the Sewer System that is required to be tracked and reported pursuant to the Financial Analysis Program set forth in Subparagraph 19(j)(v) of the CD.

On March 18, 2014, the County approved a resolution of commitment not to transfer funds from the collection of sewer rates for purposes not related to the management, operation, or maintenance of the Sewer System or its capital improvement needs. During this reporting period, there were no transfers of funds from the Miami-Dade Water and Sewer Department ("MDWASD") that are required to be tracked and reported by Paragraph 19(j)(v) of the CD and the Policy Resolutions.

Finally, it contains additional information the County determines is appropriate to demonstrate that the County is implementing the remedial actions required under the CD in an adequate and timely manner.

New CMOM Programs

CMOM Plans
The purpose of the Financial Analysis Program is to effectively establish and track the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with the Sewer System, including, without limitation, the continued work pursuant to the CD. The County developed and submitted this program to EPA and FDEP on December 4, 2014 ahead of the compliance date of December 8, 2014.

Based on previous investigations the County has identified certain rehabilitation projects that are intended to address conditions currently causing SSOs or contributing to National Pollutant Discharge Elimination System ("NPDES") permit violations. These are defined as Specific Capital Improvement Projects ("CIPs") in Paragraph 19(i) of the CD. Key accomplishments for this program are listed below:

Specific Capital Improvement Projects
Wastewater Treatment Plants ("WWTPs")
Central District WWTP –

- SCADA remote telemetry unit upgrades to maintain operational sustainability were completed on February 10, 2014 ahead of the March 29, 2014 CD compliance date.
- A High Strength Influent Impact Study was completed on June 4, 2014 ahead of the June 24, 2014 CD compliance date.

North District WWTP

- SCADA remote telemetry unit upgrades to maintain operational sustainability were completed on November 26, 2014 ahead of the March 24, 2015 CD compliance date.

Wastewater Collection and Transmission Lines ("WCTL")

- Government Cut Force Main Phase 1 & 2 Project was completed on September 26, 2013 ahead of the September 30, 2013 CD compliance date.
- Replacement of Tamiami Canal Aerial Crossing Force Mains at NW 37th Avenue Project was completed on May 27, 2014 ahead of the October 29, 2016 CD compliance date.
- Replacement of asbestos cement force main from pump station no. 0356 to NW 183rd Street and 52nd Avenue was completed on August 11, 2014 ahead of the compliance date of October 8, 2019.

Sewer Pump Station Systems

- Pump station no. 0086 upgrade was completed on July 15, 2013 and pump station no. 0492 upgrade was completed on April 25, 2013. Both were completed ahead of the December 31, 2013 CD compliance date.
- Pump station no. 0374 was certified to be in compliance on January 21, 2014 ahead of the December 31, 2015 CD compliance date.

SSO Trend Analysis

A majority of the SSOs that occur in Miami-Dade County's Wastewater Collection and Transmission System are due to blockage related incidents which are primarily due to grease. It is apparent in the SSO trend analysis contained in this report that the majority of the discharge volume does not come from grease related blockages, but in fact, pipe breaks. Of these breaks, thirty-two percent during the previous two calendar years are contractor related incidents and beyond the control of Miami-Dade County.

Supplemental Environmental Project ("SEP")

The County has identified an area in the County which is zoned business, commercial, and industrial, from light to heavy manufacturing where there currently is no access to sewers, and where septic systems are inadequate or failing and many businesses pre-date the current septic system regulations. Disconnecting the industrial users from septic tanks and connecting them to the sewer system will improve water quality in the aquifer and nearby surface waters, and prevent future contamination. Miami-Dade will install at least seven thousand six hundred sixty (7,660) linear feet of Gravity Sewer Mains within an industrial area which currently has no access to sanitary sewers and relies on septic systems.

During the reporting period, the CD Program Management Construction Management Team has conducted site investigations and collected technical data as part of the design validation process, and has prepared a draft Technical Memorandum for internal Quality

Assurance/Quality Control.

4.0 CMOM Programs Subject to Reporting Requirements

4.1 Continuation of Capacity, Management, Operations and Maintenance ("CMOM") Programs of the First Partial Consent Decree and Second and Final Partial Consent Decree – Paragraph 18

A narrative summary of the continuing CMOM programs and their significant activities for the previous calendar year can be found in Appendix A Table A-1.

4.2 New CMOM Programs – Paragraph 19(a) through (h) and (j)

A narrative summary of the new CMOM programs in Paragraphs 19(a) through (h), (j) and their significant activities for the previous calendar year can be found in Appendix A Table A-2. During this reporting period, none of the new CMOM Programs submitted to EPA/FDEP have been approved by EPA/FDEP, and therefore, have not been implemented.

4.2.1 Specific Capital Improvement Projects (“CIPs”) Program – Paragraph 19(i)

The County has identified certain rehabilitation projects that are intended to address conditions currently causing SSOs or contributing to NPDES permit violations. In accordance with Paragraph 19(i), these specific capital improvements are identified and described in the Work Plan set forth in Appendix D of the CD. A narrative summary of these CIPs and their significant activities for the previous calendar year can be found in Tables A-3.1, A-3.2, and A-3.3 for the WWTPs; Tables A-4.1 and A-4.2 for the WCTLs; and Table A-5 for the Sewer Pump Station Systems included in Appendix A.

The County has met all of the CD requirements for the previous full calendar year, i.e. January 1, 2014 through December 31, 2014, following the effective date of the CD and is in full compliance with the CD. The required Capacity, Management, Operations and Maintenance (CMOM) Program CD projects, activities and deliverables submitted to EPA/FDEP for review and comment are listed in Table 1-1.

Table 1-1 - Submittals of CD CMOM Program Projects and Deliverables

CD CMOM Deliverable	CD Reference	CD Deadline	Completion or Submittal Date	EPA/FDEP Comments	Resubmittal Date	EPA/FDEP Approval
Amendment to Section 24-42.3 of the Code of Miami-Dade County for Adequate Pumping, Transmission and Treatment Capacity	Section VI, para 18(a)	6/4/2014	5/20/2014	N/A	N/A	N/A
Amendments to Volume Sewer Customer (VSC) Program and VSC Ordinance	Section VI, para 18(e)(ii)	4/7/2014	3/14/2014	N/A	N/A	N/A
Submit to EPA/FDEP proposed amendment to the VSC Ordinance	Section VI, para 18(e)(iii)	4/7/2014	4/4/2014	N/A	N/A	N/A
Notification of Unpermitted Discharges to Surface Water	Section VI, para 19(b)	Within 24 hours and 5 days of known occurrence	Ongoing	N/A	N/A	N/A
2013 Unpermitted Discharges Contingency Plan	Section VI, para 19(b)	N/A	12/23/13	N/A	N/A	N/A
2013 Unpermitted Discharges Contingency (Revised) Plan	Section VI, para 19(b)	N/A	05/20/14	N/A	N/A	N/A
Annual Update of Unpermitted Discharges Contingency Plan Year 2014	Section VI, para 19(b)	N/A	12/22/2014	N/A	N/A	N/A
CDWWTP Septage Uploading Station – CIP Exhibit D-1 Project No. 2.20	Section VI, para 19(i) and Appendix D	6/3/2022	On January of 2013, CDWWTP no longer accepted Septage. Project Closed Out	N/A	N/A	N/A
CDWWTP R&R SCADA RTU Upgrades – CIP Exhibit D-1 Project No. 2.28	Section VI, para 19(i) and Appendix D	3/29/2014	2/10/2014	N/A	N/A	N/A
CDWWTP R&R High Strength Influent Impact Study – CIP Exhibit D-1 Project No. 2.29	Section VI, para 19(i) and Appendix D	6/24/2014	6/04/2014	N/A	N/A	N/A
Government Cut FM – Phase 1 & 2 CIP Exhibit D-1 Project No. 4.2	Section VI, para 19(i) and Appendix D	9/30/2013	9/26/2013	N/A	N/A	N/A

Table 1-1 - Submittals of CD CMOM Program Projects and Deliverables						
CD CMOM Deliverable	**CD Reference**	**CD Deadline**	**Completion or Submittal Date**	**EPA/FDEP comments**	**Resubmittal Date**	**EPA/FDEP Approval**
WCTL Replacement of Tamiami Canal Aerial Crossing FMs at NW 37th Avenue Study – CIP Exhibit D-1 Project No. 4.6	Section VI, para 19(i) and Appendix D	10/29/2016	5/27/2014	N/A	N/A	N/A
Pump Station Nos. 0086 and 0492 Upgrades - CIP Exhibit D-1 Project No. 5.14	Section VI, para 19(i) and Appendix D	12/31/2013	7/15/2013 and 4/25/13	N/A	N/A	N/A
Pump Station No. 0374 Upgrade - CIP Exhibit D-1 Project No. 5.15	Section VI, para 19(i) and Appendix D	12/31/2015	1/21/2014	N/A	N/A	N/A
Financial Analysis Program	Section VI, para 19(j)	12/8/2014	12/4/2014	N/A	N/A	N/A
2014 Quarterly Report No. 1	Section IX, para 32	5/1/2014	4/24/2014	N/A	7/28/2014 and 9/12/2014	N/A
2014 Quarterly Report No. 2	Section IX, para 32	7/30/2014	7/28/2014	N/A	N/A	N/A
2014 Quarterly Report No. 3	Section IX, para 32	10/30/2014	10/27/2014	N/A	N/A	N/A
2014 Semi-Annual Report No. 1	Section IX, para 33	7/30/2014	7/30/2014	N/A	N/A	N/A

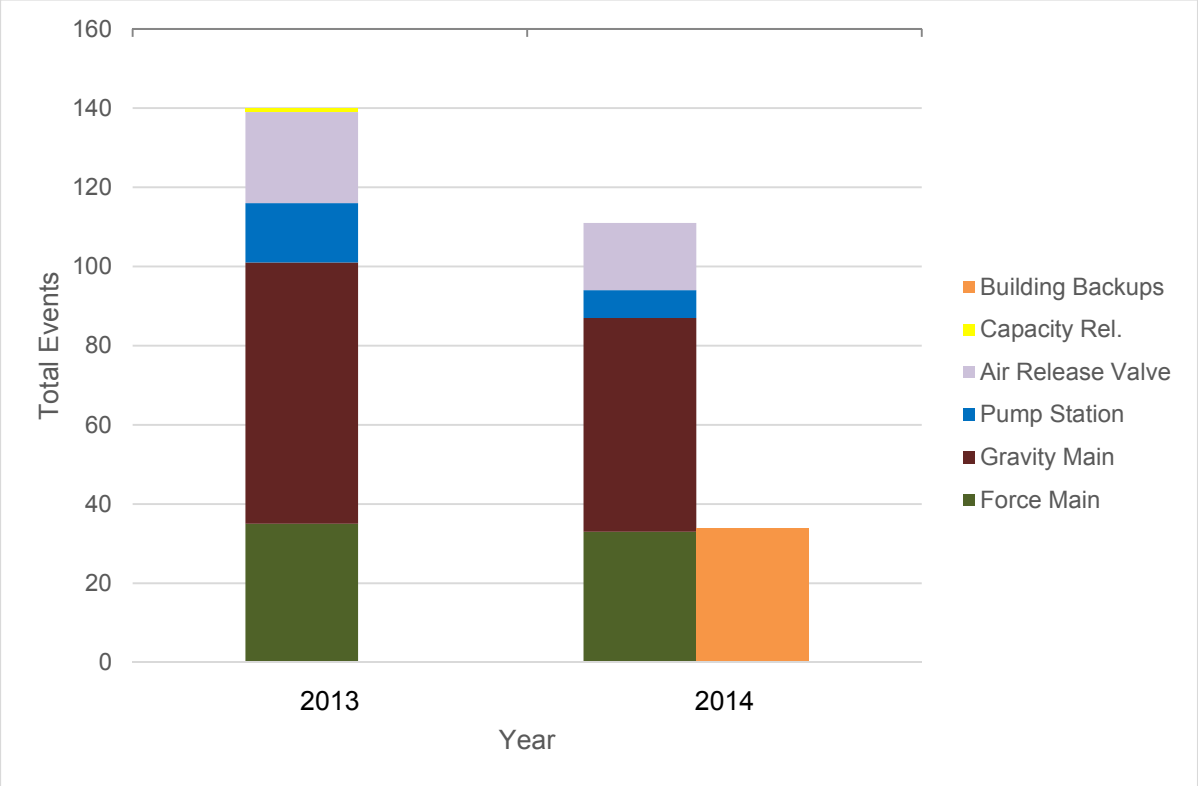
5.0 Sanitary Sewer Overflow Analysis

A trend analysis of the number, volume, average duration, and cause of Miami-Dade's Sanitary Sewer Overflow (SSO) and Building Backup events was conducted for the previous two (2) Calendar Years spanning January 1, 2013 through December 31, 2014. Prior to entry of the Consent Decree, the County had treated Building Backups separately from SSOs. Since the Consent Decree was entered on December 6, 2013, the County has only one full year of Building Backup data. The next annual report, however, will include a full twenty-four (24) months of data.

5.1 Number of Sanitary Sewer Overflows

Figure 5.1 provides a summary of the number of SSO and Building Backup events by year for the reporting period. Building Backups are treated separately from SSOs by Miami-Dade Water and Sewer Department. Therefore, the number of Building Backups are shown separately in Figure 5.1. Building Backup protocols for response, cleanup and reporting will be detailed in the Sewer Overflow Response Plan (SORP) currently being developed.

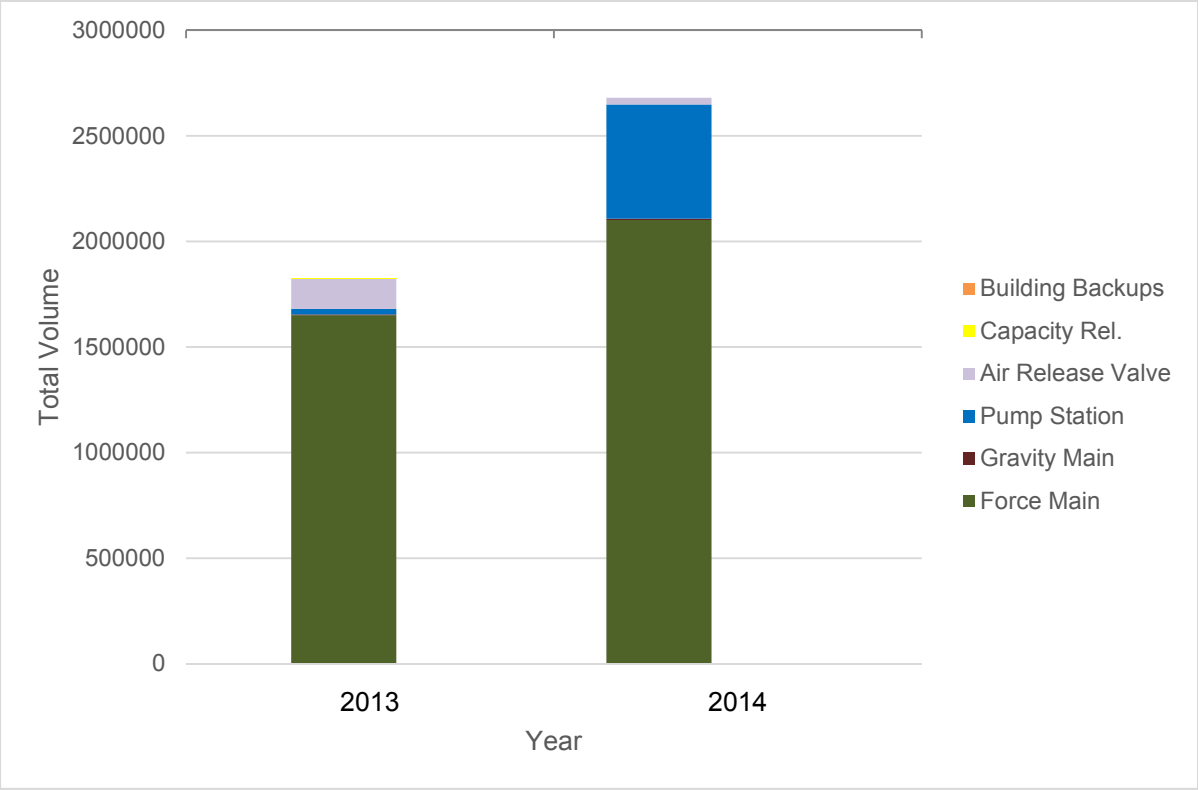
Figure 5.1 – Total SSO Events by Year



5.2 Volume of Sanitary Sewer Overflows

Figure 5.2 shows the total volume of all SSOs broken down by the source of the SSO. The 2014 SSO volume associated with pump stations was very large due to an SSO that occurred on November 6, 2014. This discharge of 540,500 gallons was due to an electrical failure at the pump station. If this outlier is removed the total volume for pump stations is 928 gallons. For the most part, the largest SSO volumes are from force mains.

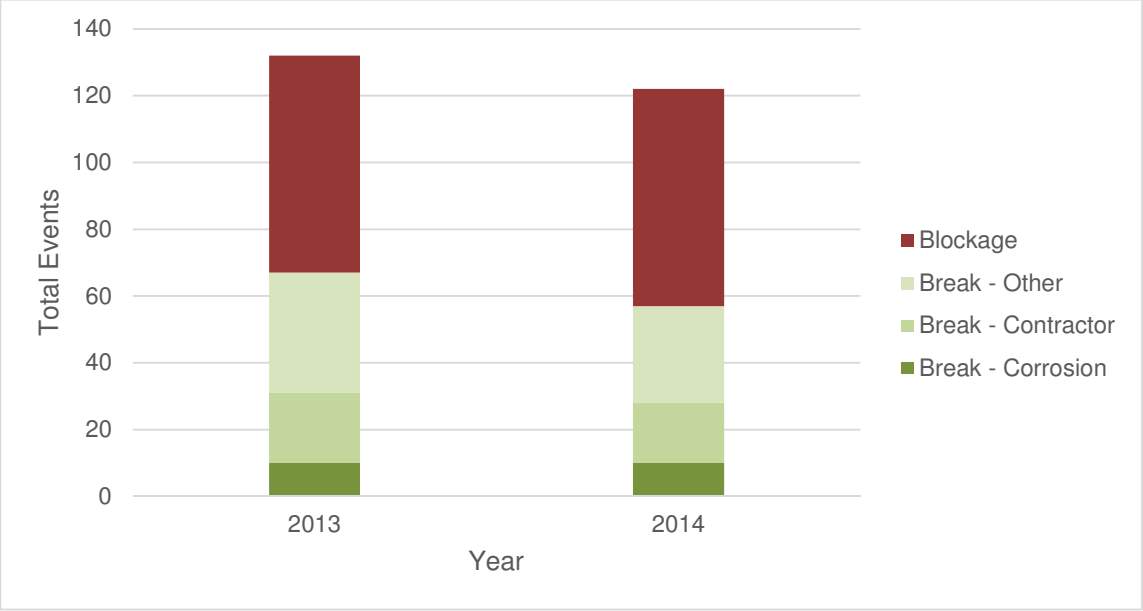
Figure 5.2 - Total Volume of SSOs



5.3 Cause of Sanitary Sewer Overflows

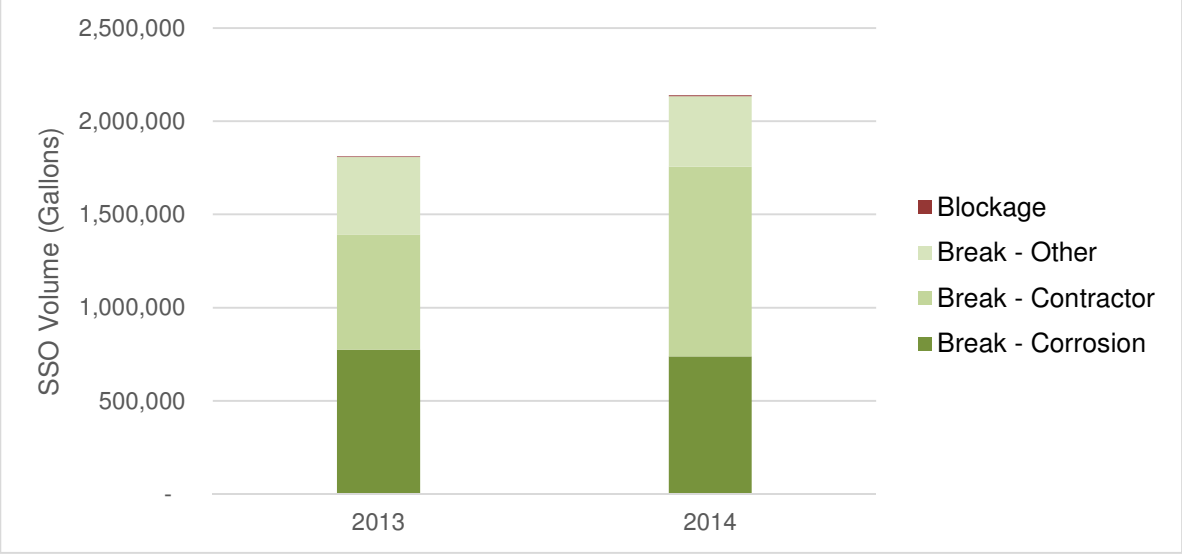
A cause breakdown of SSOs is shown in Figure 5.3, shows that the majority of SSOs occur from blockages, particularly due to grease. A full breakdown of all SSO causes is available in Appendix B of this document.

Figure 5.3 – SSO Events by Cause



The increase in force main SSOs is largely due to an increase in contractor related incidents, which can be seen in Figure 5.4. A full breakdown of all SSO volumes is available in Appendix B of this document.

Figure 5.4 – SSO Volume by Cause



5.4 Average Duration of Sanitary Sewer Overflows

The average duration of SSO events can be viewed in Table 2-1. For Building Backups, customers may not realize until after the fact that they need to report the event making it impossible to determine a duration for the backup event. Some of the identified Building Backups are only identified well after the event when the customers submit a reimbursement claim. Due to the incomplete duration records associated with Building Backups, Table 2.1 only includes SSO durations. As the SORP is completed and goes through the regulatory review process, WASD may be able to develop a methodology for assessing Building Backup durations.

Table 2.1 - Average Duration of SSO Events

Year	Average Duration (HH:MM)
2013	6:44
2014	2:07

Appendix A
CMOM Programs Significant Activities / Key Accomplishments

Table A-1 Continuing CMOM Programs January 1, 2014 through December 31, 2014

CMOM Program	CMOM Program Status	CD Reference	Significant Activities / Key Accomplishments
Adequate Pumping, Transmission and Treatment Capacity Program	Submitted to the EPA and FDEP on May 20, 2014 ahead of the June 4, 2014 CD deadline.	Section VI, Paragraph 18(a)	Miami-Dade has incorporated the criteria in Appendix A of the CD into Section 24-42.3 of the Code of Miami-Dade County. Regulatory and Economic Resources – Division of Environmental Resources Management (RER-DERM) sent the Volume Sewer Customers (VSCs) a new computer program for the Pump Station operating hours, recorded monthly. The monthly average daily pump operating hours are calculated on the webpage.
Pump Station Remote Monitoring Program	Work on the program is ongoing.	Section VI, Paragraph 18(b)	The continuing program involves the installation and operation of remote monitoring equipment in all Pump Stations in the Wastewater Collection and Transmission System (WCTS) within 6 months after the County becomes operationally responsible for Pump Station.
Waste Collection and Transmission Model	Work on the program is ongoing.	Section VI, Paragraph 18(c)	The CD projects were input into the model; collection of latest ArcGIS files and development of draft plan for ongoing model were updated; initiated model verification process; the dry and wet weather flow data were input into model; and, developed post-processing tool for comparison of SCADA information and model results. Completed refinement/verfication of model; developed baseline scenarios and project validation scenarios; and CD projects validation and prioritization with inclusion of proposed OOL and PSIP projects was completed. Completion of CD projects validation inlcuding Projects 4.5, 4.8, 4.9,4.10, 5.2, 5.3, 5.5, 5.6, 5.7, and 5.11. completion fo dry Weather Flow (DWF) update, completion of CD DWF and Wet Weather Flow (WWF) projections according to Paragraph 18 (C)(i), and CD Model refinement and development of GIS discrepancies database.
Spare Parts Program	Work on the program is ongoing.	Section VI, Paragraph 18(d)	This program is a continuing inventory management program for spare parts for the WCTS and WWTPs.

Table A-1 Continuing CMOM Programs January 1, 2014 through December 31, 2014

CMOM Program	CMOM Program Status	CD Reference	Significant Activities / Key Accomplishments
Volume Sewer Customer ("VSC") Ordinance Program	Section VI, Paragraph 18(e)(ii) and Section VI, Paragraph 18(e)(iii) were submitted to EPA/FDEP on March 14, 2014 and April 4, 2014, respectively. Both were submitted ahead of April 7, 2014 CD compliance date.	Section VI, Paragraph 18(e)	The amendment to the VSC Ordinance pursuant to Paragraph 18(e)(ii) was submitted to the EPA and FDEP on March 14, 2014. Pursuant to Paragraph 18(e)(iii), a proposed amendment to the VSC Ordinance to include scheduling requirements and an approved VSC Plan of Compliance as defined in Appendix B of the CD, existing and future VSCs must implement, was drafted by RER-DERM. These proposed changes were submitted to the EPA /FDEP on April 4, 2014. RER-DERM has held four Utility Round Table meetings with the VSCs to share information about the draft amended VSC Ordinance and provide technical presentations on CMOM programs.

Table A-2 New CMOM Programs January 1, 2014 through December 31, 2014

CMOM Program	CMOM Program Status	CD Reference	Significant Activities / Key Accomplishments
Fats, Oils and Grease ("FOG") control Program	On schedule to submit in June of 2015	Section VI, Paragraph 19(a)	FOG Characterization was completed. Outreach meetings were held with stakeholders and VSCOs/Utilities. Design meetings were held. FOG Interim Program was developped to expand and implement FOG plan review process; to revise and implement Grease Discharge Operating Permit conditions; and to develop FOG manifest.
Sewer Overflow Response Plan ("SORP")	On schedule to submit in July of 2015	Section VI, Paragraph 19(b)	Program is under development.
Information Management System ("IMS") Program	On schedule to submit in December of 2015	Section VI, Paragraph 19(c)	Program is under development.
Geographic Management Systems ("IMS") Program	On schedule to submit in June of 2015	Section VI, Paragraph 19(c)(x)	Program is under development.
Sewer System Asset Management Program	On schedule to submit in October of 2015	Section VI, Paragraph 19(d)	Program is under development.
Gravity Sewer System Operations and Maintenance Program	On schedule to submit on February 6, 2015	Section VI, Paragraph 19(e)	Program to be submitted to EPA/FDEP on February 6, 2015.
Pump Station Operations and Preventative Maintenance Program	On schedule to submit in April of 2015	Section VI, Paragraph 19(f)	Program is under development.
Force Main Operations, Preventative Maintenance and Assessment/Rehabilitation Program	On schedule to submit in August of 2015	Section VI, Paragraph 19(g)	Program is under development.
Force Main Rehabilitation/Replacement Program	On schedule to submit in December of 2015	Section VI, Paragraph 19(g)(iv)	CMOM Consultant contract was approved. Documents development was initiated. Repair/Rehabilitation designs commenced.

Table A-2 New CMOM Programs January 1, 2014 through December 31, 2014

CMOM Program	CMOM Program Status	CD Reference	Significant Activities / Key Accomplishments
WWTP Operations and Maintenance Program	On schedule to submit in May of 2015	Section VI, Paragraph 19(h)	Scope of Services was awarded and program is under development.
Financial Analysis Program	Submitted to EPA and FDEP on December 4, 2014 ahead of the compliance date of December 8, 2014.	Section VI, Paragraph 19(j)	Program is pending approval and is not being implemented at the time of this report.

Table A-3.1 South District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities /Key Accomplishments
1.1	Headworks	The SDWWTP Headworks project will be performed pursuant to Paragraph 19(i) and Appendix D. This project involves routine repairs on existing bar screen mechanisms in headwork structure prior to aerated grit chambers. Failure of bar screen mechanism could result in the blinding of the bar screen and cause an overflow of raw sewage from the plant headworks structure towards nearby surface waters, especially during peak wet weather.	Planning was ongoing and design is scheduled to begin in October 2015.
1.2	Oxygen Production	The SDWWTP Oxygen Production project will be performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to replace and retrofit existing air compression units.	The R&R Consultant submitted a preliminary proposal to start this design.
1.3	Oxygenation Trains	The SDWWTP Oxygen Trains project will be performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to retrofit aeration mixers and rehabilitate and apply surface coating to the structure. This projects was split into two child projects: the structural rehab of the trains and the mixer upgrades, which includes electrical and building upgrades. the structural rehab will be performed by in-house forces and the mixer/building work will be designed and constructed in the future.	The Oxygenation Trains mixer upgrades are scheduled to commence in November 2016. the Oxygenation Trains structural rehab is scheduled to begin on November 2019.
1.4	Chlorine Building	The SDWWTP Chlorine Building project will be performed pursuant to Paragraph 19(i) and Appendix D. This project involves replacement of motor control centers, relocation of electrical panels and roof repairs of the old chlorine building where flushing water pumps are to remain.	Planning was ongoing and design is scheduled to begin in December 2017.
1.5	Effluent Pump Station	The SDWWTP Effluent Pump Station project will be performed pursuant to Paragraph 19(i) and Appendix D. This project involves an upgrade of the existing obsolete pump control systems, upgrade of the pumps drives and motors, and structural rehabilitation of pump station wet well, i.e. chambers 2 through 4. This project has been split into two separate child projects for the electrical equipment and the building improvements respectively.	The electrical equipment was purchased and was in construction. The required building improvements to the pump station were in the validation process and scheduled to begin in December 2017.

Table A-3.1 South District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities /Key Accomplishments
1.6	Gravity Sludge Thickeners	The SDWWTP Gravity Sludge Thickeners project will be performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of the thickened sludge pumps, and electrical systems in the concentrator pump station. It also entails the rehabilitation of the concentrator collector mechanisms and structural rehabilitation and coating of the concentrators.	R&R Consultant worked on a technical evaluation of alternatives for this project. The balance of the design commenced and was performed by WWTP Design Consultant.
1.7	Digesters and Control Buildings	The SDWWTP Digester and Control Buildings project will be performed pursuant to Paragraph 19(i) and Appendix D. The project involves the rehabilitation or replacement of digester roofs; digester tank cleaning, structural rehabilitation and coating, sludge mixers improvement. This will prevent the loss of digestion capacity and the decline in biogas/methane production for power generation. In addition, it will decrease the amount of unstabilized sludge that will require landfill disposal.	MDWASD acquired a design consultant for this project. The design consultant initiated a BODR.
1.8	Dewatering Facility	The SDWWTP Dewatering Facility project is being performed pursuant to Paragraph 19(i) and Appendix A. The purpose of this project is to replace the existing interim dewatering building with a new permanent dewatering facility. This will improve sludge dewatering and decrease solids accumulation in the secondary treatment process and prevent effluent limit violations.	Planning was ongoing.
1.9	FOG Removal Facility	The SDWWTP FOG Removal Facility project is being performed pursuant to Paragraph 19(i) and Appendix D. The current FOG separation tank is not capable of adequately handing solids load, resulting in excess odors and unanticipated manual labor to remove large amounts of grit, settled soils and hardened grease. The purpose of this project is to improve separation operations to the recently constructed FOG removal facility. This will result in the conveyance of oils and floating grease to a beneficial use option process and the removal of excess grit and settled solids.	R&R Consultant worked on a technical evaluation of alternatives for this project. The balance of the design commenced and was performed by WWTP Design Consultant.
1.10	Odor Control	The SDWWTP Odor Control project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to upgrade the odor control facilities**.**	Planning was ongoing.

Table A-3.1 South District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities /Key Accomplishments
1.11	General Electrical	The SDWWTP General Electrical project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation and replacement of electrical controls and wiring as needed throughout the plant.	Planning was ongoing.
1.12	Chlorine Contact Chamber Structural	The SDWWTP Chlorine Contact Chamber Structural project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the structural rehabilitation and coating of chlorine contact chambers 1 through 4.	Planning was ongoing.

Table A-3.2 Central District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
2.1	Electrical Improvements	The CDWWTP Electrical Improvements project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation and replacement of electrical controls and wiring as needed throughout the plant.	Planning was ongoing.
2.2	Building Improvements	The CDWWTP Building Improvements project is being performed pursuant to Paragraph 19(i) and Appendix D. The project involves the repair of maintenance, operations control and administration buildings at the plant. It includes the repair of the roofs and the staff facility. This project was split into two child projects; one for the building improvements to the Administrative Building and another for required repairs to other buildings, e.g. Maintenance, Operations, Storage, etc.	Design work for the Admistrative Building was completed and permitting commenced. The required repairs to other buildings were in planning phase.
2.3	Headworks Plant 1	The CDWWTP Headworks/Grit Basin Plant 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing screening facilities at the CDWWTP influent pump station are inefficient. This results in the accumulation of rags and plastics in plant processes which sometimes leads to pump, mixer and clarifier collection mechanism failure. This project involves the addition of influent screens and an electrical room with upgraded electrical instrumentation.	MDWASD acquired a design consultant for this project. The design consultant initiated a Basis of Design Report (BODR).
2.4	Headworks Plant 2	The CDWWTP Headworks/Grit Basin project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing screening facilities at the CDWWTP influent pump station are inefficient. This results in the accumulation of rags and plastics in plant processes which sometimes leads to pump, mixer and clarifier collection mechanism failure. This project involves the addition of influent screens and an electrical room with upgraded electrical instrumentation.	MDWASD acquired a design consultant for this project. The design consultant prepared a Basis of Design Report (BODR).
2.5	Oxygenation Trains Plant 1	The CDWWTP Oxygenation Trains Plant 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. The project involves the retrofitting of the aeration mixers, structural rehabilitation and surface coating application.	In-house design for this project was completed, completed the procurement for construction and commenced construction.
2.6	Oxygenation Trains Plant 2	The CDWWTP Oxygenation Trains Plant 2 project is being performed pursuant to Paragraph 19(i) and Appendix D. The project involves the retrofitting of the aeration mixers, structural rehabilitation and surface coating application.	MDWASD acquired a design consultant for this project. The design consultant prepared a Basis of Design Report (BODR).

Table A-3.2 Central District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
2.7	Secondary Clarifiers Plant 1	The CDWWTP Secondary Clarifiers Plant 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to rehabilitate the structure and replace the sludge collection mechanisms in the plant.	Planning was ongoing.
2.8	Secondary Clarifiers Plant 2	The CDWWTP Secondary Clarifiers Plant 2 project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to rehabilitate the structure and replace the sludge collection mechanisms in the plant.	Planning was ongoing.
2.9	RS Pump Stations Plant 1	The CDWWTP RS Pump Stations Plant 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of return sludge pump, piping, motor control centers and structural repairs to the pump stations.	Planning was ongoing.
2.10	RS Pump Stations Plant 2	The CDWWTP RS Pump Stations Plant 2 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of return sludge pump, piping, motor control centers and structural repairs to the pump stations.	Planning was ongoing.
2.11	Effluent Pump Station	The CDWWTP Effluent Pump Station project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to replace the pump in the effluent pump station.	Planning was ongoing.
2.12	Sludge Thickeners Plant 1	The CDWWTP Sludge Thickeners Plant 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of the thickened sludge pumps, sanitary sewer pumps, HVAC and electrical systems in the concentrator pump station. It also involves the rehabilitation of concentrator collector mechanisms and structural rehabilitation and coating of concentrators.	Planning was ongoing.
2.13	Sludge Thickeners Plant 2	The CDWWTP Sludge Thickeners Plant 2 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of the thickened sludge pumps, sanitary sewer pumps, HVAC and electrical systems in the concentrator pump station. It also involves the rehabilitation of concentrator collector mechanisms and structural rehabilitation and coating of concentrators.	Design commenced.

Table A-3.2 Central District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
2.14	Digesters Plant 1	The CDWWTP Digesters Plant 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the complete rehabilitation of sludge digester clusters, i.e. roofs, concrete structures, recirculation and transfer pumps, mixers, and electrical pumps. This will prevent the loss of digestion capacity and the decline in biogas/methane production for power generation. In addition, it will decrease the amount of unstabilized sludge that will require landfill disposal.	Planning was ongoing.
2.15	Digesters Plant 2	The CDWWTP Digesters Plant 2 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the complete rehabilitation of sludge digester clusters, i.e. roofs, concrete structures, recirculation and transfer pumps, mixers, and electrical pumps. This will prevent the loss of digestion capacity and the decline in biogas/methane production for power generation. In addition, it will decrease the amount of unstabilized sludge that will require landfill disposal.	Cluster 1 was in the design phase. Cluster 4 was in the planning phase. Clusters 2 and 3 are scheduled to begin in October 2017 and April 2016, respectively.
2.16	Dewatering Building	The CDWWTP Dewatering Building project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to construct a new dewatering facility and sludge cake conveyance system to the sludge storage buildings.	Planning was ongoing.
2.17	Chlorination Facilities	The CDWWTP Chlorination Facilities project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the design and construction of a new bulk sodium hypochlorite storage and dosing system in separate outdoor structures to replace the existing chlorine gas system.	Evaluation of design alternatives was completed for this project. Design was ongoing
2.18	Odor Control Systems	The CDWWTP Cogeneration Facility Improvements project is being performed pursuant to Paragraph 19(i) and Appendix D. This involves the replacement of the motor control center of the odor control buildings including air-conditioned electrical rooms. It also involves replacement of odor control chemical pumps, piping, valves and gas stripping tower media.	Planning was ongoing.

Table A-3.2 Central District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
2.19	Co-Gen Facility	The CDWWTP Cogeneration Facility Improvements project is being performed pursuant to Paragraph 19(i) and Appendix D. The project involves the installation of two new cogeneration engines, cogeneration building improvements, replacement of biogas pipeline and installation of biogas conditioning system. Thus, this project has been split into two separate child projects: the replacement of the generators and the biogas treatment facilities.	Construction commenced for the Co-Gen generator replacement. Co-Gen biogas treatment facilites improvements was in the planning phase.
2.20	Septage Uploading	The CDWWTP Septage Unloading project is required under Paragraph 19(i) and Appendix D. The CD scope of this project included the construction of a new septage handling station to remove FOG from the main wastewater treatment stream and treat either through digestion or an off-site third part facility. However, the violation associated with this project was resolved by requiring all hauled waste to be sent to the South District WWTP as of January 2013.	In lieu of constructing improvements to the CDWWTP Septage Unloading facilities, MDWASD discontinued the process of receiving septage at the CDWWTP and has shut down the Septage Unloading facilities. Septage has been diverted to the SDWWTP as of January 2013 ahead of the compliance date of 6/3/2022.
2.21	Pump Station 1	The CDWWTP Pump Station No. 1 project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to rehabilitate the pump station for the odor control system and rehabilitate the bar screen mechanisms.	Planning was ongoing.
2.22	Pump Station 2	The CDWWTP Pump Station No. 2 project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation of the pump station odor control system, rehabilitation of bar screen mechanism, and replacement pump stations flow metering to improve maintenance accessibility.	Planning was ongoing.
2.23	O_2 Plant Process Controls Phase 2	The CDWWTP O_2 Plant Process Controls project is being performed pursuant to Paragraph 19(i) and Appendix D. Existing oxygen production systems are either failing or obsolete. The purpose of this project is to replace existing oxygen production systems.	Procurement for construction commenced.
2.24	Gas Monitoring	The CDWWTP Gas Monitoring project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to monitor gas levels and place alarms in hazardous areas.	Planning was ongoing.

Table A-3.2 Central District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
2.25	Ventilation Improvements	The CDWWTP Ventilation Improvements project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to improve ventilation in hazardous areas.	Planning was ongoing.
2.26	Rehabilitation of Walkways and Stairways	The CDWWTP Rehabilitation of Walkways and Stairways project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of corroded walkways, stairways, railings, grating throughout the plant.	Procurement for construction was completed and construction commenced.
2.27	Oxygen Production	The CDWWTP Oxygen Production project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing units are near the end of useful life and prone to failure. The purpose of this project is to construct a new 80 ton/day oxygen production cryogenic tower and air compression unit to provide full redundancy.	Planning was ongoing.
2.28	SCADA RTU Upgrades	The CDWWTP Building Improvements project was performed pursuant to Paragraph 19(i) and Appendix D. The old radio communication system was obsolete and it was difficult to procure parts. The purpose of the project was to upgrade the SCADA remote telemetry units to maintain operational sustainability.	Completed on February 10, 2014 ahead of the March 29, 2014 CD compliance date.
2.29	High Strength Influent Impact Study	The CDWWTP High Strength Influent Impact Study was performed pursuant to Paragraph 19(i) and Appendix D. The CDWWTP was experiencing an increase in TSS and BOD loading. This study investigated the sources and conceptualized solutions to eliminate or mitigate the change in plant influent characteristics.	Completed on June 4, 2014 ahead of the June 24, 2014 CD compliance date.

Table A-3.3 North District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
3.1	Headworks and Sludge Degritting Transfer	The NDWWTP Headworks and Sludge Degritting and Transfer project is being performed pursuant to Paragraph 19(i) and Appendix D. This project is a 2 Phase approach to improve the existing screening facilities at the NDWWTP. In Phase 1, bar screens are replaced with perforated plate screens and Phase 2 involves the upgrade of the pretreatment buildings for fire code compliance and replacement of primary sludge grit separation equipment.	Design was completed and permitting commenced.
3.2	Primary Clarifiers and Odor Control	The NDWWTP Primary Clarifiers and Odor Control project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation of the structures of the primary clarifiers. It also involves the rehabilitation of the mechanical and odor control systems at the plant.	MDWASD acquired a design consultant for this project. The design consultant initiated a Basis of Design Report (BODR). Design commenced.
3.3	Oxygenation Trains	The NDWWTP Oxygenation Trains project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to rehabilitate the structures of the aeration tanks and its mechanical and electrical systems.	Plannning was ongoing.
3.4	Oxygen Production	The NDWWTP Oxygen Production project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation of the structure of the oxygen plant and its mechanical and electrical systems.	Plannning was ongoing.
3.5	Secondary Clarifiers	The NDWWTP Secondary Clarifiers project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation of the structure of the secondary clarifiers and its mechanical and electrical systems.	Replacement of mechanism nos. 3, 6 and 8 were in procurement. Design commenced for the remaining scope of work.
3.6	Disinfection	The NDWWTP Disinfection project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the replacement of the chlorine gas storage, liquid chlorination and dosing system with bulk sodium hypochlorite storage and dosing system in the existing chlorine building.	Design was re-evaluated for any required modifications due to code changes and sea level rise impacts. Design was ongoing.

Table A-3.3 North District WWTP Capital Improvement Projects January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
3.7	Effluent Disposal	The NDWWTP Effluent Disposal project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the installation of standby pumps to ensure effluent disposal capacity and the structural rehabilitation of the ocean outfall pump station wet well. This project has been split into two separates child projects: the Deep Injection Well (DIW) Pump Station and the Ocean Outfall (OOF) Pump Station.	MDWASD acquired a design consultant for this project. The design consultant commenced the design for DIW and the OOF was in planning phase.
3.8	Plant Wide Electrical	The NDWWTP Plant Wide Electrical project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation and replacement of electrical controls and wiring as needed at the NDWWTP.	Design was ongoing.
3.9	Flood Mitigation	The NDWWTP Flood Mitigation project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to mitigate the flood potential in the Generator and Electrical Building at the NDWWTP.	The design consultant initiated a Basis of Design Report (BODR). Design was ongoing.
3.10	Yard Piping Replacement	The NDWWTP Yard Piping Replacement project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to replace the wastewater piping that interconnects unit processes throughout the plant.	MDWASD acquired a design consultant for this project. The design consultant prepared a Basis of Design Report (BODR).
3.11	SCADA RTU Upgrades	The NDWWTP SCADA RTU Upgrades project is being performed pursuant to Paragraph 19(i) and Appendix D. The current radio communication system is obsolete and it is difficult to procure parts. The purpose of the project is to upgrade the SCADA remote telemetry units to maintain operational sustainability.	Construction was ongoing and project was completed.

Table A-4.1 Wastewater Collection and Transmission Lines January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
4.1	Collection System I/I Repairs	The Collection System I/I Repairs project is being performed in accordance with Paragraph 19(i) and Appendix D of the CD. The project targets defective gravity sewers with excessive inflow/infiltration. It involves rehabilitation of the Collection System, i.e. dig & replace mainlines and laterals, manhole replacement, cured-in-place liners and sectional liners and will be performed concurrently with other work.	Work was ongoing.
4.2	Government Cut FM Phase 1 & 2	The Government Cut FM Phases 1 & 2 project was performed in accordance with Paragraph 19(i) and Appendix D. The purpose of this two phase project is to replace critically damaged sections of 54-inch force main to avert catastrophic failures in Government Cut. This project involved the replacement of 54 inch FM with 60 inch FM from the water shaft in Government Cut to mainland Miami Beach.	Completed on September 26, 2013 ahead of the September 30, 2013 CD compliance date.
4.3	Government Cut FM Phase 3	The Government Cut FM Phases 3 project is being performed in accordance with Paragraph 19(i) and Appendix D. Phase 3 of this project involves the replacement of 54 inch FM from the land shaft at Fisher Island to CDWWTP at Virginia Key.	A design-build delivery method is being performed. 70% of design was completed. Permitting and construction was ongoing.
4.4	North Dade 72 inch PCCP FM Rehabilitation	This North Dade Force Main Rehabilitation project is being performed in accordance with Paragraph 19(i) and Appendix D. The project replaces a damaged section of 72-inch force main that has experienced catastrophic failure. The rehabilitation involves 3.5 miles of 72 inch PCCP FM located between NW 17 Avenue and NE 10 Avenue in North Dade.	A design-build delivery method is being performed. The design phase was completed and procurement commenced.
4.5	South Dade 54 inch PCCP FM Rehabilitation	This South Dade Force Main Rehabilitation project is being performed in accordance with Paragraph 19(i) and Appendix D. The project involves the rehabilitation of 2.5 miles of 54 inch PCCP FM from SW 112 Avenue and SW 280 Street to SW 107 Avenue and SW 248 Street in South Dade. It replaces sections of the 54-inch force main that has critically damaged pipe segments. This project has been split into two (2) separate child projects; one which includes the 2.5 miles of 54" pipe rehabilitation and another for required bypasses.	A design-build delivery method is being performed. Design commenced for both child projects.

Table A-4.1 Wastewater Collection and Transmission Lines January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
4.6	Replacement of Tamiami Canal Aerial Crossing FMs at NW 37th Avenue	This Tamiami Force Main Replacement project is being performed in accordance with Paragraph 19(i) and Appendix D. This project replaces corroded twin 24 inch FM's crossing the Tamiami Canal at NW 37 Avenue, just south of NW 21 Street in the Tamiami area. The twin 24-inch force mains have experienced failures and are in need of replacement.	Construction was completed on May 27, 2014 ahead of the October 29, 2016 CD compliance date. Also, closed out and certified.
4.7	Rehabilitation of 18 DIP FM in Miami Lakes	This Miami Lakes Force Main Replacement project is being replaced in accordance with Paragraph 19(i) and Appendix D. The purpose of this project is to replace severely corroded 18-inch pipe that has had multiple failures. It replaces one mile of 18 inch DIP FM located at NW 60 Avenue and NW 138 Street.	Design and permitting were completed and Procurement commenced.
4.8	Rehabilitation of 54 inch PCCP FM in the City of Miami	This City of Miami Force Main Rehabilitation project is being performed pursuant to Paragraph 19(i) and Appendix D. A section of 54-inch force main in the City of Miami is deteriorated and has experienced failures. The project involves the rehabilitation of 2 miles of 54 inch PCCP FM by cured-in-place liner located on NW 2 Street between NW 67 Avenue and NW 37 Avenue in the City of Miami.	A design-build delivery method will be performed. Planning was ongoing.
4.9	Replace Approximately 30 miles of AC FM Transmission System	This Force Main Transmission System Replacement project is being performed pursuant to Paragraph 19(i) and Appendix D. The purpose of this project is to replace asbestos cement force mains that have experienced failures and are difficult to locate in the field. This includes approximately 30 miles of AC FM transmission system.	See Table A-4.2.
4.10	Opa-Locka Airport FM Replacement	The Opa-Locka Airport PCCP Force Main Replacement project is being performed pursuant to Paragraph 19(i) and Appendix D. This project involves the rehabilitation of 2.5 miles of 48" PCCP force main running along the Biscayne Canal between NW 57th Avenue & NW 32nd Avenue. The length has been determined to have approximately one quarter of its line segments distressed based on in-situ condition assessments.	A design-build delivery method is being performed. Design commenced.

Table A-4.2 Project 4.9 Replacement of Approximately 26 Miles AC FM Transmission System January 1, 2014 through December 31, 2014

Line Number	Diameter	From Location	To Location	Significant Activities / Key Accomplishments
1	12	SW 112 Ave. & SW 104 St.	SW 112 Ave. & SW 112 St.	Planning was ongoing.
2	8	NE 14 Ave. & 191 St.	NE 14 Ave. & Miami Gardens Dr.	Planning was completed and design commenced.
3	6	PS 356	NW 53 Ct. & NW 195 Dr.	Completed on August 11, 2014
4	8	NW 53 Ct. & NW 195 Dr.	NW 52 Ct. & NW 191 Dr.	Completed on August 11, 2014
5	10	NW 52 Ct. & NW 191 St.	NW 52 Ct. & NW 188 Dr.	Completed on August 11, 2014
6	6	PS 362	NW 52 Ct. & NW 190 Dr.	Planning was ongoing.
7	10	NW 52 Ct. & NW 190 St.	NW 52 Ave. & NW 189 Ter.	Planning was ongoing.
8	10	NW 52 Ct. & NW 188 St.	NW 52 Ave. & NW 183 St.	Completed on August 11, 2014
9	8	PS 385	NW 29 Ct. & NW 199 St.	Permitting was completed and procurement commenced.
10	12	NW 29 Ct. & NW 199 St.	NW 30 Pl. & NW 199 St.	Permitting was completed and procurement commenced.
11	8	NW 29 Ct. & NW 199 St.	NW 28 Ave. & NW 199 St.	Permitting was completed and procurement commenced.
12	6	PS 374	NW 28 Ave. & NW 199 St.	Permitting was completed and procurement commenced.
13	12	NW 30 Pl. & NW 199 St.	NW 37 Ave. & NW 199 St.	Permitting was completed and procurement commenced.
14	8	PS 368	NW 37 Ave. & NW 194 Ter.	Permitting was completed and procurement commenced.
15	4	PS 375	NW 29 Pl. and NW 191 St.	Permitting was completed and procurement commenced.
16	10	PS 427	NW 29 Pl. and NW 191 St.	Permitting was completed and procurement commenced.
17	10	NW 29 Pl. and NW 191 St.	NW 32 Ave. & NW 191 St.	Permitting was completed and procurement commenced.
18	6	PS 376	NW 32 Ave. & NW 191 St.	Permitting was completed and procurement commenced.
19	6	PS 377	NW 36 Ave. & NW 183 St.	Permitting was completed and procurement commenced..
20	8	PS 366	NW 42 Pl. & NW 199 Ter.	Planning was ongoing.
21	10	NW 42 Pl. & NW 199 Ter.	NW 39 Ct. & NW 199 St.	Planning was ongoing.
22	6	PS 358	PS 352	Planning was ongoing.
23	8	PS 1022	PS 1072	Planning was ongoing.
24	8	PS 353	NW 48 Ct. & NW 178 Ter.	Planning was ongoing.
25	10	NW 52 Ave. & NW 173 Dr.	NW 52 Ave. & NW 178 Ter.	Planning was ongoing.
26	6	PS 354	NW 52 Ave. & NW 173 Dr.	Planning was ongoing.
27	4	Pvt. PS @ SW 149 Ter.	MH 14 @ PS 719	Planning was ongoing.
28	8	PS 786	MH 5 @ PS 785	Planning was ongoing.
29	12	PS 811	SW 107 Ave. & SW 76 St.	Design was ongoing.
30	12	PS 811	SW 102 Ave. & SW 81 St.	Design was ongoing.

Table A-4.2 Project 4.9 Replacement of Approximately 26 Miles AC FM Transmission System January 1, 2014 through December 31, 2014

Line Number	Diameter	From Location	To Location	Significant Activities / Key Accomplishments
31	10	PS 812	SW 102 Ave. & SW 84 St.	Design was ongoing.
32	12	SW 107 Ave. & SW 104 St.	SW 107 Ave. & Kendale Blvd.	Planning was ongoing.
33	4	Pvt. PS @ 114 Ave. & SW 169 St.	MH 59 @ SW 103 Ave.	Planning was ongoing.
34	10	PS 709	Homestead Ave. & Kumquat St.	Planning was ongoing.
35	6	SW 110 Ave. & Banyan St.	SW 95 Ave. & SW Banyan St.	Planning was ongoing.
36	4	PS 721	US1 & Banyan St.	Planning was ongoing.
37	4	PS 749	PS 731	Planning was ongoing.
38	4	PS 747	US1 & East Indigo St.	Planning was ongoing.
39	10	SW 102 Ave. & SW 176 St.	Homestead Ave. & West Jessamine	Planning was ongoing.
40	8	PS 745	SW 102 Ave. & SW 175 St.	Planning was ongoing.
41	4	PS 731	SW Duval Ave. & West Indigo St.	Planning was ongoing.
42	10	SW 102 Ave. & West Jessamine	US1 & SW 184 St.	Planning was ongoing.
43	12	Homestead Ave. & 180 St.	Railroad St. & SW 184 St.	Planning was ongoing.
44	8	PS 810	SW 118 Pl. & SW 72 St.	Planning was ongoing.
45	12	PS 793	SW 118 Pl. & SW 72 St.	Planning was ongoing.
46	6	PS 724	SW 106 Ave. & SW 155 St.	Planning was ongoing.
47	8	PS 869	SW 122 Ave. & SW 88 St.	Planning was ongoing.
48	10	PS 1017	SW 123 Pl. & SW 268 St.	Planning was ongoing.
49	10	PS 1029	SW 132 Ave. & 268 St.	Planning was ongoing.
50	8	SW 137 Ave. & SW 268 St.	SW 128 Ave. & 268 St.	Planning was ongoing.
51	10	PS 1028	SW 137 Ave. & 288 St.	Planning was ongoing.
52	10	PS 1027	SW 132 Ave. & 280 St.	Planning was ongoing.
53	8	PS 1018	MH 44A @ SW 132 Ave.	Planning was ongoing.
54	12	SW 137 Ave. & SW 72 St.	SW 142 Ave. & SW 72 St.	Planning was ongoing.
55	12	SW 142 Ave. & SW 72 St.	SW 147 Ave. & SW 72 St.	Planning was ongoing.
56	8	PS 864	SW 147 Ave. & SW 72 St.	Planning was ongoing.

Table A-4.2 Project 4.9 Replacement of Approximately 26 Miles AC FM Transmission System January 1, 2014 through December 31, 2014

Line Number	Diameter	From Location	To Location	Significant Activities / Key Accomplishments
57	8	SW 142 Ave. & Kendale Lakes Blvd.	SW 140 Ave. & Kendale Lakes Blvd.	Planning was ongoing.
58	10	SW 140 Ave. & Kendale Lakes Blvd.	SW 137 Ave. & Kendale Lakes Blvd.	Planning was ongoing.
59	12	SW 137 Ave. & Kendale Lakes Blvd.	SW 137 Ave. & SW 81 St.	Planning was ongoing.
60	8	PS 1013	PS 1012	Planning was ongoing.
61	10	PS 1012	SW 144 Ave. & SW 280 St.	Planning was ongoing.
62	8	PS 1011	SW 144 Ct. & SW 280 St.	Planning was ongoing.
63	10	SW 147 Ave. & SW 288 St.	SW 134 Pl. & SW 288 St.	Planning was ongoing.
64	6	PS 1009	SW 147 Ave. & SW 296 St.	Planning was ongoing.
65	6	PS 1006	PS 1005	Planning was ongoing.
66	8	PS 1002	SW 152 & SW 304 St.	Planning was ongoing.

Table A-5 Sewer Pump Station Systems January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
5.1	Upgrade of PS No. 0418	The Upgrade of PS No. 0418 project is being performed pursuant to Paragraph 19(i) and Appendix D. The station has reached the end of its useful life and a booster station is needed to relieve pressures in the Doral area. The purpose of this project is to convert PS No. 0418 into a booster type station.	Design was completed and permitting commenced.
5.2	Upgrade of PS No. 0691	The Upgrade of PS No. 0691 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment of the PS is beyond its useful life and capacity increase is required to handle increased Homestead flows. This project involves the replacement of pumping and electrical equipment in PS No. 0691.	A design-build delivery method is being performed. Design commenced.
5.3	Upgrade of PS No. 0692	The Upgrade of PS No. 0692 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment of the PS is beyond its useful life and capacity increase is required to handle increased Homestead flows. This project involves the replacement of pumping and electrical equipment in PS No. 0692.	A design-build delivery method is being performed. Design commenced.
5.4	Replacement of Switchgear PS No. 0414	The Replacement of Switchgear PS No. 0414 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment of the PS is beyond its useful life. This project involves the replacement of electrical switchgear in PS No. 0414.	Planning was ongoing.
5.5	Replacement of Switchgear and Rehabilitation of Wet Well PS No. 0415	The Replacement of Switchgear and Rehabilitation of Wet Well PS No. 0415 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment of the PS is beyond its useful life and the wet well structure is badly deteriorated due to H_2S. This project involves the replacement of electrical switchgear and the rehabilitation of the wet well to include an odor control unit.	Planning was ongoing.
5.6	Replacement of Switchgear PS No. 0416	The Replacement of Switchgear PS No. 0416 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment of the PS is beyond its useful life. This project involves the replacement of electrical switchgear in PS No. 0416.	Planning was ongoing.

Table A-5 Sewer Pump Station Systems January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
5.7	Replacement of Switchgear and Rehabilitation of Wet Well PS No. 0417	The Replacement of Switchgear and Rehabilitation of Wet Well PS No. 0417 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment of the PS is beyond its useful life and the wet well structure is badly deteriorated due to H_2S. This project involves the replacement of electrical switchgear and the rehabilitation of the wet well of PS No. 0417 to include an odor control unit.	Planning was ongoing.
5.8	Replacement of Electrical and Mechanical Equipment PS No 0107	The Replacement of Electrical and Mechanical Equipment PS No. 0107 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment is beyond of the PS is beyond its useful life and parts are not readily available for the load cell type controllers. This project involves the replacement of pumping and electrical equipment of PS No. 0107.	Planning was ongoing.
5.9	Replacement of Pumping and Electrical Equipment PS No. 0301	The Replacement of Pumping and Electrical Equipment PS No. 0301 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment is beyond its useful life due to the saltwater environment. This project involves the replacement of pumping and electrical equipment of PS No. 0301 to include a generator.	Planning was completed and design commenced.
5.10	Upgrade of PS No. 0488	The Upgrade of PS No. 0488 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment is beyond its useful life. This project involves the conversion of the PS a submersible type station.	Planning was ongoing.
5.11	Installation of 60 inch FM from Kendall Dr. to PS No. 0536	The Installation of 60 inch FM from Kendall Dr. to PS No. 0536 project is being performed pursuant to Paragraph 19(i) and Appendix D. Currently, there is a pressure differential and increase flow transfer between PS No. 0559 and PS No. 0536. The purpose of this project is to install a 60 inch FM from Kendall Dr. to PS No. 0536 to eliminate the 42 inch reduction in the 60 inch FM.	A design-build delivery method is being performed. Design commenced.

Table A-5 Sewer Pump Station Systems January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
5.12	Replacement of Switchgear PS No. 0187	The Replacement of Switchgear PS No. 0187 project is being performed pursuant to Paragraph 19(i) and Appendix D. The existing equipment is beyond of the PS is beyond its useful life and parts are not readily available. This project involves the replacement of the Anvic Drive with a VFD.	Planning was ongoing.
5.13	Refurbish Emergency Generators and Controls at Regional PSs	The Refurbish Emergency Generators and Controls at regional PSs project is being performed pursuant to Paragraph 19(i) and Appendix D. The emergency backup generators are unreliable due to the age of the controllers and the condition of the wiring on the engines. The purpose of this project is to refurbish emergency generators and controls at regional PSs.	Planning, design and permitting were completed and procurement commenced.
5.14	Upgrade of PSs Nos. 0086 and 0492	The Upgrade of Pump Stations No. 0086 and 0492 project was performed and completed pursuant to Paragraph 19(i) and Appendix D. The project was designed to increase reliability and extend the service life of the pump station. The pump stations also exceeded the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. For this project, Pump Station No. 0086 was converted to a submersible type pump station with an existing wet well and the electrical controls and instrumentation were upgraded. The electrical controls and instrumentation for Pump Station No. 0492 were upgraded. It was also rehabilitated to a new submersible type pump station.	PS No. 0086 was completed on July 15, 2013 and PS No. 0492 on April 25, 2013. Both were completed ahead of the December 31, 2013 CD compliance date.

Table A-5 Sewer Pump Station Systems January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
5.15	Upgrade of PSs Nos. 0065, 0201, 0374, 0607	The Upgrade of PSs No. 0065, 0201, 0334, 0374, 0607 project is being performed pursuant to Paragraph 19(i) and Appendix D. The pump stations exceed the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. The PS No. 0065 is being upgraded to include new submersible pumps in the existing dry well, installation of larger suction and discharge piping, and an electrical upgrade. The PS No. 0201 is being upgraded to include new submersible pumps, installation of a new valve box, an electrical upgrade and 48 I/I repairs for a flow of 176 gpm. The PS No. 0334 project involves the conversion to a new submersible type pump station, an electrical upgrade and the installation of 2,200 L.F. of new 8 inch FM. The PS No. 0374 is being upgraded to include new submersible pumps, installation of a new valve box, an electrical upgrade and the installation of 320 L.F. of new 8 inch FM. The PS No. 0607 project involves the conversion to a new submersible type pump station and an electrical upgrade.	Design was completed. PS No. 0374 was certified to be in compliance on January 21, 2014 ahead of the CD compliance date of December 31, 2015. The PS was certified using the criteria set forth in Paragraph 18(a) and Appendix A(A)(iii) of CD. The upgrades for this PS consisted of station maintenance and I/I repairs in the station collection system. PS No. 0065 was in the design phase and permitting on the pump stations Nos. 0201, 0334 & 0607 was completed and procurement for construction commenced.
5.16	Upgrade of PSs Nos.0198, 0437, 0466, 0680	The Upgrade of PSs No. 0198, 0437, 0466, 0680 project is being performed pursuant to Paragraph 19(i) and Appendix D. The pump stations exceed the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. The PS No. 0198 is being upgraded to include new submersible pumps in the existing dry well, an electrical upgrade and flow isolation and I/I repairs if necessary. The PSs No. 0437 and 0466 are being upgraded to include new submersible pumps, installation of a new valve box, an electrical upgrade. The PS No. 0680 is being upgraded to include new submersible pumps, new valves above ground and an electrical upgrade.	Planning was ongoing.

Table A-5 Sewer Pump Station Systems January 1, 2014 through December 31, 2014

Project Number	Project Name	Project Description	Significant Activities / Key Accomplishments
5.17	Upgrade of PSs Nos. 0037, 0351, 0370, 0403	The Upgrade of PSs No. 0037, 0351, 0370, 0403 project is being performed pursuant to Paragraph 19(i) and Appendix D. The pump stations exceed the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. The PS No. 0037 project involves the conversion to a new submersible type pump station and an electrical upgrade. The PS No. 0351 is being upgraded to include new submersible pumps, installation of a new valve box, an electrical upgrade and the replacement of 360 L.F. of 4 inch with 8 inch FM. The PS No. 0370 project involves the conversion to a new submersible type pump station, an electrical upgrade and the installation of 760 L.F. of new 8 inch FM. The PS No. 0403 project involves the conversion to a new submersible type pump station, an electrical upgrade and the installation of an on-site generator.	Planning was ongoing.
5.18	Upgrade of PSs Nos. 0441, 0491, 0710, 0827, 0852, 1236	The Upgrade of PSs No. 0441, 0491, 0710, 0827, 0852, 1236 project is being performed pursuant to Paragraph 19(i) and Appendix D. The pump stations exceed the Adequate Transmission Capacity Criteria with a NAPOT of greater than 10 hours. The PS No. 0441 project involves the conversion to a new submersible type pump station and an electrical upgrade. PS No. 0491 is undergoing flow isolation and I/I repairs if necessary. The PS No. 710 project involves the conversion to a new submersible type pump station, an electrical upgrade and the installation of 1,800 L.F. of new 8 inch FM. The PS No. 0827 is being upgraded to include larger submersible pumps, installation of a new valve vault, an electrical upgrade and the replacement of 1,600 L.F. of 4 inch FM with 8 inch FM. The PS No. 0852 project involves the conversion to a new submersible type pump station and an electrical upgrade. PS No. 1236 is undergoing 300 I/I repairs to achieve a flow of 130 gpm.	Planning was ongoing.
5.19	SCADA RTU Upgrades	The SCADA RTU Upgrades project is being performed pursuant to Paragraph 19(i) and Appendix D. The current radio communication system is obsolete and it is difficult to procure parts. The purpose of the project is to upgrade the SCADA remote telemetry units for 635 pump stations to maintain operational sustainability.	495 of the 635 RTU upgrades were completed. Construction continues.

Appendix B
SSO Cause Analysis Tables

Table B-1: SSO Cause Event Analysis Table

CAUSE		2013	2014	2015	2016	2017	2018
1. Building Backups (Laterals)		**-**	**34**				
	(i) PM Activity*	*	20				
Blockage	(ii) Roots	*	2				
	(iii) Grease	*	3				
	(iv) Debris	*	1				
Break	(v) Contractor Involved	*	3				
	(vi) Other	*	5				
2. Air Release Valves		**23**	**17**				
(a) Automatic		**13**	**13**				
Break/Mal-functioning	(i) Malfunctioning/Other	5	1				
	(ii) Riser/Nipple	4	1				
	(iii) Valve	1	1				
	(iv) Contractor Involved	-	1				
	(v) Vandalism	-	-				
Blockage	(iv) Grease Blockage	-	1				
	(v) Debris Blockage	3	8				
(b) Manual		**10**	**4**				
Broken	(i) Riser/Nipple	3	1				
	(ii) Valve	3	2				
	(iii) Contractor Involved	4	1				
	(iv) Vandalism	-	-				
3. Pump Station		**15**	**7**				
	(i) FPL Service Outage	4	-				
Other/ Broken	(ii) Pump	3	1				
	(iii) Pipe/Pump-out	4	1				
	(iv) Electrical	1	2				
	(v) Level/Bubbler	-	-				
	(vi) Valve	-	3				
	(vii) Bypass Operation	3	-				
	(viii) Contractor Involved	-	-				
	(ix) SCADA	-	-				
	(x) Other		-				
4. Gravity Main		**66**	**54**				
Blockage	(i) Grease	53	44				
	(ii) Debris	9	5				
	(iii) Roots	-	1				
	(iv) Other	3	1				
Break	(iv) Contractor Involved	1	3				
	(v) Other	-	-				
5. Force Main		**35**	**33**				
Break	(i) Contractor Involved	13	10				
	(ii) Vandalism	-	-				
	(iii) Corrosion	9	10				
	(iv) Bedding/Settlement	8	6				
	(v) Other	5	7				
6. Capacity Rel. - Rain/Sur/Press		**1**	**-**				
	(i) No Improvement Ness.	1	-				
	(ii) Improvement Rec.	-	-				
SSOs (Excluding BBUs)		**140**	**111**				
Total		**140**	**145**				

* Prior to entry of the Consent Decree the County had not treated Building Backups as SSOs as it was not required to do so. Because the Consent decree was entered on December 6, 2013, the County only has one full year of Building Backup data.

Table B-2: Volume of SSO Cause Analysis Table

CAUSE		2013	2014	2015	2016	2017	2018
1. Building Backups (Laterals)		**-**	**612 gal.**				
	(i) PM Activity*	*	76 gal.				
Blockage	(ii) Roots	*	5 gal.				
	(iii) Grease	*	455 gal.				
	(iv) Debris	*	2 gal.				
Break	(v) Contractor Involved	*	56 gal.				
	(vi) Other	*	18 gal.				
2. Air Release Valves		**145,735 gal.**	**31,685 gal.**				
(a) Automatic		**58,557 gal.**	**12,485 gal.**				
Break/Mal-functioning	(i) Malfunctioning/Other	7,214 gal.	2 gal.				
	(ii) Riser/Nipple	35,023 gal.	2,232 gal.				
	(iii) Valve	16,065 gal.	90 gal.				
	(iv) Contractor Involved	-	9,930 gal.				
	(v) Vandalism	-	-				
Blockage	(iv) Grease Blockage	-	5 gal.				
	(v) Debris Blockage	255 gal.	226 gal.				
(b) Manual		**87,178 gal.**	**19,200 gal.**				
Broken	(i) Riser/Nipple	63,098 gal.	5,800 gal.				
	(ii) Valve	230 gal.	2,600 gal.				
	(iii) Contractor Involved	23,850 gal.	10,800 gal.				
	(iv) Vandalism	-	-				
3. Pump Station		**25,914 gal.**	**541,428 gal.**				
	(i) FPL Service Outage	12,130 gal.	-				
Other/ Broken	(ii) Pump	10,484 gal.	100 gal.				
	(iii) Pipe/Pump-out	1,950 gal.	200 gal.				
	(iv) Electrical	300 gal.	540,500 gal.				
	(v) Level/Bubbler	-	-				
	(vi) Valve	-	628 gal.				
	(vii) Bypass Operation	1,050 gal.	-				
	(viii) Contractor Involved	-	-				
	(ix) SCADA	-	-				
	(x) Other	-	-				
4. Gravity Main		**4,072 gal.**	**5,447 gal.**				
Blockage	(i) Grease	1,850 gal.	1,682 gal.				
	(ii) Debris	191 gal.	180 gal.				
	(iii) Roots	-	2,400 gal.				
	(iv) Other	2,025 gal.	900 gal.				
Break	(iv) Contractor Involved	6 gal.	285 gal.				
	(v) Other	-	-				
5. Force Main		**1,650,264 gal.**	**2,101,705 gal.**				
Break	(i) Contractor Involved	595,018 gal.	995,860 gal.				
	(ii) Vandalism	-	-				
	(iii) Corrosion	773,586 gal.	738,446 gal.				
	(iv) Bedding/Settlement	280,850 gal.	39,139 gal.				
	(v) Other	810 gal.	328,260 gal.				
6. Capacity Rel. - Rain/Sur/Press		**1,000 gal.**	**-**				
	(i) No Improvement Ness.	1,000 gal.	-				
	(ii) Improvement Rec.	-	-				
SSOs (Excluding BBUs)		**1,826,985 gal.**	**2,680,265 gal.**				
Total		**1,826,985 gal.**	**2,680,877 gal.**				

* Prior to entry of the Consent Decree the County had not treated Building Backups as SSOs as it was not required to do so. Because the Consent decree was entered on December 6, 2013, the County only has one full year of Building Backup data.