

MEMORANDUM

Agenda Item No. 14(A)(1)

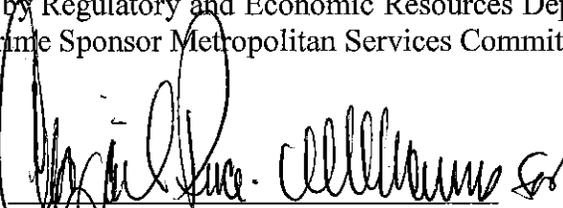
TO: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

DATE: (Second Reading 9-1-15)
June 30, 2015

FROM: R. A. Cuevas, Jr.
County Attorney

SUBJECT: Ordinance amending
Section 24-5 of the Code of
Miami-Dade County, providing
definitions related to Sanitary
Sewer Collection and
Transmission Systems; amending
Section 24-18 of the Code,
relating to operating permits;
amending Section 24-42.2 of the
Code, providing capacity,
management, operation and
maintenance requirements for the
volume sewer customer sanitary
sewer collection and
transmission systems
for the Consent Decree between
Miami-Dade County, the United
States of America, the State of
Florida, and Florida Department
of Environmental Protection

The accompanying ordinance was prepared by Regulatory and Economic Resources Department and placed on the agenda at the request of Prime Sponsor Metropolitan Services Committee.



R. A. Cuevas, Jr.
County Attorney

RAC/cp

Memorandum



Date: September 1, 2015

To: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor

****CONSENT DECREE****

Subject: Ordinance Amending Section 24-5 of the Code of Miami-Dade County, Providing Definitions Related to Sanitary Sewer Collection and Transmission Systems; Amending Section 24-18 of the Code, Relating to Operating Permits; Amending Section 24-42.2 of the Code, Providing Capacity, Management, Operation and Maintenance Requirements for the Volume Sewer Customer Sanitary Sewer Collection and Transmission Systems

Recommendation

It is recommended that the Board of County Commissioners (Board) approve the attached ordinance amending Section 24-5 of the Code of Miami-Dade County (Code), relating to definitions; amending Section 24-18 of the Code, relating to operating permits; and amending Section 24-42.2 of the Code, relating to sanitary sewer collection and transmission systems, providing Capacity, Management, Operation and Maintenance (CMOM) requirements for the Volume Sewer Customer sanitary sewer collection and transmission systems.

Scope

The proposed ordinance involves environmental regulations countywide.

Fiscal Impact/Funding Source

This ordinance requires increased technical reviews and monitoring activities by the Department of Regulatory and Economic Resources, Division of Environmental Resource Management (RER-DERM), which will require additional staff at an estimated annual cost of \$310,000.00, which includes salary, fringe and other operating expenses. These expenses are in addition to the fiscal impact of the improvements to the County's sanitary system as contemplated in Resolution No. R-393-13, and will be paid by the Utility Service Fee and other proprietary revenues.

Track Record / Monitor

The Assistant Director of RER-DERM, Lee Hefty, will implement the provisions of this ordinance.

Background

On May 21, 2013, the Board approved Resolution No. R-393-13, which authorized the execution of the Consent Decree in Case No. 1:12-cv-24400-FAM, effective December 6, 2013, between Miami-Dade County, the United States of America, the State of Florida, and the Florida Department of Environmental Protection, in order to comply with the Federal Clean Water Act and federal and state laws, regulations and permits, with the goal of eliminating sanitary sewer overflows and prohibited bypasses.

Paragraph 18(e)(iii) of the Consent Decree required Miami-Dade County to submit proposed amendments to Chapter 24 of the Code to the Environmental Protection Agency (EPA) for review and approval within four (4) months of the effective date of the Consent Decree, to incorporate Capacity, Management, Operation and Maintenance requirements for Volume Sewer Customers' Sanitary Sewer Collection and Transmission Systems. The proposed amendments were submitted to the EPA on April 4, 2014.

Honorable Chairman Jean Monestime
and Members, Board of County Commissioners
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The Consent Decree further requires enactment of the proposed amendments within 180 days of receipt of the EPA's approval, which was provided on March 17, 2015. The proposed ordinance complies with Paragraph 18(e)(iii) of the Consent Decree by requiring each existing and future Volume Sewer Customer to implement Capacity, Management, Operation and Maintenance requirements: (A) Sewer Overflow Response Plan, (B) Information Management System Program, (C) Sewer System Asset Management Plan, (D) Gravity Sewer System Operation and Maintenance Program, (E) Pump Station Operation and Preventive Maintenance Program, and (F) Force Main Operations, Preventive Maintenance and Assessment/Rehabilitation Program.

Under the proposed ordinance, these provisions of the Consent Decree require the municipal utilities to comply with the same standards applicable to the Miami-Dade County Water and Sewer Department. Coordination meetings with utilities were conducted as part of the development of the proposed ordinance.



Jack Osterholt, Deputy Mayor



MEMORANDUM

(Revised)

TO: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

DATE: September 1, 2015

FROM: 
R. A. Cuevas, Jr.
County Attorney

SUBJECT: Agenda Item No. 14(A)(1)

Please note any items checked.

- "3-Day Rule" for committees applicable if raised
- 6 weeks required between first reading and public hearing
- 4 weeks notification to municipal officials required prior to public hearing
- Decreases revenues or increases expenditures without balancing budget
- Budget required
- Statement of fiscal impact required
- Ordinance creating a new board requires detailed County Mayor's report for public hearing
- No committee review
- Applicable legislation requires more than a majority vote (i.e., 2/3's _____, 3/5's _____, unanimous _____) to approve
- Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 14(A)(1)
9-1-15

ORDINANCE NO. _____

ORDINANCE AMENDING SECTION 24-5 OF THE CODE OF MIAMI-DADE COUNTY, PROVIDING DEFINITIONS RELATED TO SANITARY SEWER COLLECTION AND TRANSMISSION SYSTEMS; AMENDING SECTION 24-18 OF THE CODE, RELATING TO OPERATING PERMITS; AMENDING SECTION 24-42.2 OF THE CODE, PROVIDING CAPACITY, MANAGEMENT, OPERATION AND MAINTENANCE REQUIREMENTS FOR THE VOLUME SEWER CUSTOMER SANITARY SEWER COLLECTION AND TRANSMISSION SYSTEMS FOR THE CONSENT DECREE BETWEEN MIAMI-DADE COUNTY, THE UNITED STATES OF AMERICA, THE STATE OF FLORIDA, AND FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION; PROVIDING SEVERABILITY, INCLUSION IN THE CODE, AND AN EFFECTIVE DATE

WHEREAS, on May 21, 2013, the Board approved Resolution No. R-393-13, which authorized the execution of the Consent Decree in Case No. 1:12-cv-24400-FAM, effective December 6, 2013, between Miami-Dade County, the United States of America, the State of Florida, and the Florida Department of Environmental Protection; and

WHEREAS, this Consent Decree was designed to facilitate compliance with the Federal Clean Water Act and federal and state laws, regulations and permits, with the goal of eliminating sanitary sewer overflows and prohibited bypasses; and

WHEREAS, paragraph 18(e)(iii) of the Consent Decree required submittal to the U.S. Environmental Protection Agency (EPA) for approval of proposed amendments to Chapter 24 of the Code, within four months of the effective date of the Consent Decree; and

WHEREAS, the proposed amendments shall incorporate Capacity, Management, Operation and Maintenance (CMOM) requirements for Volume Sewer Customers' Sanitary Sewer Collection and Transmission Systems; and

WHEREAS, the Consent Decree further requires enactment of the proposed amendments within one hundred and eighty (180) days of receipt of EPA's approval, which was provided March 17, 2015; and

WHEREAS, the proposed ordinance shall comply with Paragraph 18(e)(iii) of the Consent Decree by requiring each existing and future Volume Sewer Customer to implement the following Capacity, Management, Operation and Maintenance requirements: (A) Sewer Overflow Response Plan, (B) Information Management System Program, (C) Sewer System Asset Management Plan, (D) Gravity Sewer System Operation and Maintenance Program, (E) Pump Station Operation and Preventive Maintenance Program, and (F) Force Main Operations, Preventive Maintenance and Assessment/Rehabilitation Program; and

WHEREAS, pursuant to the Consent Decree, the proposed ordinance shall require the municipal utilities to comply with the same standards applicable to the Miami-Dade County Water & Sewer Department,

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:

Section 1. Section 24-5 of the Code of Miami-Dade County, Florida, is hereby amended to read as follows:¹

Sec. 24-5. Definitions

* * *

Asbestos shall mean a fibrous, rock-forming material, including, but not limited to, such amphibole varieties as tremilite, actinolite, anthophyllite, grunerite, richterite, edenite, amosite, crocicolite, and such serpentine varieties as amianthus and chrysotile, as well as synthetic asbestos fibers, including, but not limited to, fluor-tremilite, fluor-richterite, and fluor-edenite.

>>Asset Management Program shall mean a management program that maintains a desired level of service for utility owned or operated WCTS, considering life cycle cost, to ensure compliance with regulatory requirements.<<

Association of primary and secondary wetland plant species shall mean an assemblage of primary and secondary wetland species within a defined area. In order for said assemblage to be classified as an association, it must be composed of at least twenty-five (25) percent primary wetland species.

* * *

Capacity, Management, Operations and Maintenance (CMOM) shall mean a program of accepted industry practices to properly manage, operate and maintain sanitary wastewater collection, transmission and treatment systems, investigate capacity-constrained areas of these systems, and respond to Sanitary Sewer Overflow (SSO) events.

* * *

Landscape replacement plan shall mean a drawing containing proposed tree removal, tree replacement planting, tree relocation and preservation areas.

>>Level of Service (LOS) shall mean the quality of service to be delivered by a utility to its customers, and shall include

¹ Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

consideration of the prevention of overflows, provision for uninterrupted service without backups, limitation of excessive infiltration and inflow, odor control, provision of suitable maintenance and replacement of aging components, prevention of nuisance conditions at pump stations, avoidance of excessive costs, and compliance with regulatory requirements. Life cycle costs shall also be considered.<<

>>Life Cycle Cost (LCC) shall mean the sum of all recurring and one-time (non-recurring) costs over the full life span, or a specified period, of a structure, component, or system, less the remaining (residual or salvage) value at the end of ownership or its useful life.<<

Liquid waste generator shall mean any person or entity whose act or process produces liquid waste, or who by the nature of its operations uses materials in a process which would subsequently require disposal as a liquid waste as defined in this chapter.

* * *

Party or parties responsible for site rehabilitation actions shall mean the discharger or, if the discharger is unknown or the contamination was the result of a previously unreported discharge, the property owner or operator who is subject to the provisions of Section 24-44(2).

>>Peak flow shall mean the greatest one hour flow at any point in the WCTS expected to occur as a result of a 4.5 inch one day rain event.<<

Permeability shall mean the ability of an aquifer, soil, rock or other geological formation to transmit water.

* * *

Sanitary Sewer Overflow (SSO) shall mean any discharge of wastewater to waters of the United States or the State from any WCTS in the County through a point source or sources not permitted in any NPDES permit, as well as any overflow, spill, or release of wastewater to public or private property from a WCTS that may not have reached waters of the United States or the State, including all building backups.

* * *

Substantial reduction in recharge of water to the Biscayne Aquifer shall mean a reduction in natural infiltration rates or reduction of volume of surface water from a defined area; or transportation of surface waters off-site to the extent that a site's natural hydrological regimen is changed.

>>Supervisory Control and Data Acquisition (SCADA) shall mean an electronic system to provide a utility with information and control functions for all pump stations in the WCTS at a central location. These systems are generally intended to be monitored on a 24-hour basis.<<

Surcharged gravity sanitary sewer shall mean a condition during which a gravity sanitary sewer contains sewerage flows above the crown of the pipe.

* * *

Utility shall mean the entity that owns or operates any water transmission, distribution or treatment facilities and/or sanitary sewer collection, transmission or treatment facilities that provides water and/or sewer service to entities other than itself.

* * *

WCTS shall mean Wastewater Collection and Transmission Systems, including all pipes, force mains, gravity sewer lines, pump stations, manholes and appurtenances thereto, designed to collect and convey sewage (domestic, commercial and industrial) to a wastewater treatment plant.

Section 2. Section 24-18 of the Code of Miami-Dade County, Florida, is hereby amended to read as follows:

Sec. 24-18. Operating permits

(A) *Permit Required* No person shall operate, maintain or permit, cause, allow, let or suffer the operation or maintenance of a public water system, public sewerage system, location at which a site rehabilitation action has been completed in accordance with the provisions set forth in Section 24-44(2)(k)(ii) or any of the following facilities, all of which will reasonably be expected to be a source of air pollution, ground pollution or water pollution, without a valid operating permit issued by the Director or the

Director's designee or in violation of any condition, limitation or restriction which is part of an operating permit:

* * *

(3) ~~[[Private sewage pumping station]]~~ >>Non-utility owned or operated sanitary sewer collection systems:

(a) Which include a sanitary sewer pump station that receives sewage from a building drain and conveys sewage to a utility or non-utility; or

(b) Which include a gravity collection system containing 1000 or more feet of six (6) inch nominal size or larger pipe beyond the building drain(s).<<

* * *

~~[[19] Privately owned or operated sanitary sewer collection systems, except sanitary sewers which are less than six (6) inches in diameter.]]~~

~~[[20]]~~>>(19)<<Locations at which a site rehabilitation action has been completed in accordance with the provisions set forth in Section 24-44(2)(k)(ii).

* * *

Section 3. Section 24-42.2 of the Code of Miami-Dade County, Florida, is hereby amended to read as follows:

Sec. 24-42.2. Sanitary sewer ~~[[system]]~~ collection and transmission systems.

>>(1) Reference Documents. The following documents, as amended from time to time, shall be used as a reference for the requirements set forth in this Section:

(a) U.S. EPA's Sewer System Infrastructure Analysis and Rehabilitation Handbook (October 1991, EPA/625/6-91/030).

- (b) EPA's Handbook: State of Technology Report for Force Main Rehabilitation, EPA/600/R-10/10/044, March 2010.
- (c) EPA's Handbook: Condition Assessment of Wastewater Collection Systems (State of Technology Review Report), EPA/600/R-09/049, May 2009.
- (d) Existing Sewer Evaluation and Rehabilitation, WEF Manual of Practice No. FD-6, 1994.
- (e) Design of Wastewater and Stormwater pumping Stations, WEF Manual of Practice No FD-4.
- (f) Guide for Evaluating Capacity, Management, Operations, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems, EPA 305-B-05-002.
- (g) Manpower Requirements for Wastewater Collection Systems in Cities and Towns of up to 150,000 Population. EPA 832-R-73-104.
- (h) Manpower Requirements for Wastewater Collection Systems in Cities and Towns of 150,000 to 500,000 Population. EPA 832-R-74-102.
- (i) Gravity Sanitary Sewer Design and Construction, WEF Manual of Practice No. FD-5, 2007.
- (j) Wastewater Collection Systems Management, WEF Manual of Practice No. FD-7, 2009.
- (k) Recommended Standards for Wastewater Facilities, Policies for the Design, Review, and Approval of Plans and Specifications for Wastewater Collection and Treatment Facilities. Health Research Inc., Health Education Services Division, Albany, NY, 2004.
- (l) AWWA Standard for Installation of Ductile-Iron Water Mains and their Appurtenances, ANSI/AWWA C600-82, American Water Works Association.

- (2) New sanitary sewer system requirements. All new sanitary sewer systems shall be designed, constructed, tested and operated in accordance with the latest editions of the reference documents listed in Section 24-42.2 (1).<<

~~[(1)]~~>>(3)<<Existing gravity sanitary sewer requirements.

- (a) Each ~~[[publicly or privately]]~~ >>utility or non-utility<< owned or operated sanitary sewer collection system shall be evaluated in order to identify and reduce infiltration and inflow into the sanitary sewer collection system >>to less than five thousand (5,000) gallons per inch pipe diameter per day per mile of pipe and laterals<<. The >>utility or non-utility<< ~~[[person responsible for the sewer system's operation]]~~ shall implement a sewer system evaluation survey (SSES) >>and submit a report summarizing the findings of the SSES to the Department for review and approval.<< ~~[[and, if required, a rehabilitation program, incorporating the provisions and requirements set forth in the U.S. EPA's Sewer System Infrastructure Analysis and Rehabilitation Handbook (October 1991, EPA/625/6-91/030), designed to identify and reduce sewer system infiltration and inflow to a level which meets the standards set forth in Section 24-42.2(1)(d). Such evaluation activities shall be conducted in a manner so that the total length of the gravity sewer lines and associated manholes in the sanitary sewer collection system is evaluated during the first five year period of the program, and every ten year period, thereafter. Alternatively, the person responsible for the sewer system's operation shall, within forty five (45) days after the effective date of this section, submit to the Director or the Director's designee for the Director's or the Director's designee's review and approval a report which provides a detailed description of a sewer system evaluation survey and rehabilitation program which incorporates the provisions and requirements set forth in the U.S. EPA's Sewer System Infrastructure Analysis and Rehabilitation Handbook (October, 1991 EPA/626/6-91/030) and which, when implemented, provides effective and substantial compliance with the requirements of this section of the Code.]]~~ >>SSES reports are due on or before

each and every ten (10) year anniversary of November 12, 2002, the original due date required by this Chapter. Such evaluation activities shall consider the total length of the gravity sewer lines and associated manholes in the sanitary sewer collection system.<< Said report shall include, in addition to any of the above requirements, decision making criteria, procedures and protocols for prioritization of the evaluation of gravity sewer lines and associated manholes, and ~~[[for the selection of]]~~ >>selected << rehabilitation methods to be used >>if the infiltration and inflow into the sanitary sewer collection system is greater than or equal to five thousand (5,000) gallons per inch pipe diameter per day per mile of pipe and laterals. Any and all rehabilitation work proposed to correct deficiencies identified during the SSES shall be completed within four (4) years after the submission of the SSES report. A second report, noting the completion of this work and describing the testing done showing compliance with the Code requirements, shall be submitted to the Department within four (4) years after the submission of the SSES report<<. ~~[[Upon its approval, the program shall be implemented in a manner so that the sewer system evaluation survey is conducted on the total length of the gravity sewer lines and associated manholes during the first five-year period of the program and every ten-year period thereafter. For purpose of compliance with either alternative, infiltration and inflow evaluations and rehabilitation work performed between July 1, 1992 and the effective date of this section can be credited towards the first five-year requirements provided the person responsible for the sewer system's operation submits to the Director or the Director's designee, for the Director's or the Director's designee's review and approval, a report detailing the work performed and the results obtained as required under Section 24-42.2(1)(f)(iv).]]~~

- >>(i) Flow testing for the SSES shall be done between June 1 and November 30 of the same calendar year, except as otherwise approved in writing by the Director or the Director's designee. In areas where the

groundwater level is tidally influenced, the testing shall be carried out within two (2) hours of the local high tide.

(ii) In the event that implementation of the initial sewer system infiltration and inflow rehabilitation programs fail to achieve the performance standards established in this Section, the person responsible for the system's operation may, in lieu of performing additional rehabilitation, submit a cost-benefit analysis which analyzes the feasibility of performing additional rehabilitation to achieve said performance standards. If the Director or the Director's designee determines that there is no technically feasible, economically reasonable means of compliance, then no further rehabilitation shall be required during the current cycle.<<

(b) ~~[[Those portions of a sewage lateral connection which are the responsibility of the private property owner as identified by policy or ordinance of the publicly owned or operated sanitary sewer collection system, or when no such identification exists, the portions of lateral located upon privately owned real property, are the responsibility of the private real property owner who shall insure the proper operation, maintenance and repair of said portions of the sewage lateral connection.]]~~ Where an evaluation pursuant to >>this<< Section ~~[[24-42.2(1) above]]~~ indicates that a >>private lateral<< ~~[[privately owned portion of a sewage lateral connection]]~~ is a source of infiltration or inflow, or both, to a ~~[[publicly or privately]]~~ >>utility or non-utility<< owned or operated sanitary sewer, the >>utility or non-utility<< ~~[[owner or operator of the sanitary sewer collection system]]~~ shall report to the Director or the Director's designee the source of the infiltration or inflow within thirty (30) days from the date of discovery of said discharges. >>The property owner shall repair or replace the portion of private lateral which is the source of infiltration or inflow, or both, within ninety (90) days of notification.<< The

Director or the Director's designee shall commence enforcement actions, if required, to cause the cessation of the infiltration or inflow.

- [[~~(e)~~ Notwithstanding any other provision in this section, all publicly owned or operated sanitary sewer collection systems shall participate in a County-wide, regional rainfall dependent peak flow management study. Said peak flow management study shall, at a minimum, perform the following functions: (a) characterize infiltration and inflow of water into the sanitary sewer collection system; (b) predict peak flows to each pump station in the sanitary sewer collection system; and (c) assess each pump station's ability to manage peak flows with the back up pump out of service. Upon implementation of a peak flow management study the person responsible for the operation of the publicly owned or operated sanitary sewer collection system shall submit to the Director or the Director's designee the results of said study along with a plan of corrective actions and schedule of implementation for each and every pump station within the sanitary sewer collection system which was identified as not capable of managing peak flows with the back up pump out of service.
- ~~(d)~~ The sewer system infiltration and inflow rehabilitation programs shall be sufficient to insure that sewer system infiltration and inflow into the rehabilitated sanitary sewer collection system shall be less than five thousand (5,000) gallons per inch pipe diameter per day per mile of pipe and laterals, or complies with best management practices as required by the U.S. EPA's Sewer System Infrastructure Analysis and Rehabilitation Handbook (October 1991, EPA/625/6-91/030).
- ~~(e)~~ In the event that implementation of the initial sewer system infiltration and inflow rehabilitation programs fail to achieve the performance standards established in this section, the person responsible for the system's operation may, in lieu of performing additional rehabilitation, submit a cost-benefit analysis which analyzes the feasibility of performing additional rehabilitation to achieve said

~~performance standards. If the Director or the Director's designee determines that there is no technically feasible, economically reasonable means of compliance, then no further rehabilitation shall be required.]~~

~~[(c)]~~>>(c)<< ~~[[All persons operating a publicly or privately]]~~
>>Each utility or non-utility<< owned or operated sanitary sewer system shall provide the following reports to the Director or the Director's designee>>:;<<[[:]

(i) The daily average pump station operating time and the multiple and variable speed daily average pump station power consumption, as applicable, for each pump station in the sanitary sewer system shall be reported to the Director or the Director's designee on a monthly basis no later than >>fourteen (14) calendar days<< ~~[[the seventh day]]~~ after the end of the preceding monthly reporting period. The report shall be in such form as prescribed by the Director or the Director's designee. The report shall include an explanation for any single event, Act of God, or other documentable reason which leads to excessive pump station operating time or power consumption. >>The Director or Director's designee may exclude<< ~~[[These can be cause for exclusion of]]~~ such data from the nominal average pump operating time calculations.

(ii) The existence of stormwater discharges into any ~~[[publicly or privately]]~~ >>utility or non-utility<< owned or operated sanitary sewer collection system shall be reported to the Director or the Director's designee within thirty (30) days from the date of discovery of said discharges ~~[[by the person responsible for the operation of said system]]~~. >>All stormwater discharges into sanitary sewers shall be corrected within six (6) months of discovery.<< The status of corrective actions to eliminate stormwater

discharges into any sanitary sewer collection system shall be reported >>to<< [[by]] the Director or the Director's designee semiannually, January 1 and July 1 of each year, >>by<< [[to]] the person responsible for the operation of said system.

~~[[iii]] An electronic sanitary sewer system atlas, in a format compatible with Miami-Dade County Water and Sewer Department's electronic atlas and approved by the Director or the Director's designee, shall be submitted to the Director or the Director's designee no later than January 6, 2016. The electronic atlas shall include delineation of all pump station basins (i.e., sewer service areas) and pump station locations (including X, Y coordinates); pump station specifications, which at a minimum shall include number of pumps, horsepower and pump drive type for each pump, flow rate and total dynamic head at rated operating point; emergency power supply; all gravity sewer lines, including diameter, material, and year installed; manholes and siphons with all inverts and rim elevations; force mains, including diameter, material, and year installed; valves, including air release, check, and isolating (plug, gate, butterfly, and ball valves); flow meters and other items as may be determined by the Director or the Director's designee.~~

~~Updates to the electronic atlas shall be submitted to the Director or the Director's designee annually.]~~

>>(iii)<<[[iv]] An annual report documenting all completed sewer system evaluations and rehabilitation work, as well as a schedule for any proposed rehabilitation work shall be submitted to the Director or the Director's designee no later than [[thirty (30)]] >>sixty (60)<< days after the end of each calendar year. [[Notwithstanding the foregoing, any and all rehabilitation work proposed to

~~correct deficiencies identified during the sewer system evaluation survey shall be completed within four (4) years after completion of the evaluation work, or unless a revised schedule is approved by the Director or the Director's designee.]]~~

~~[(2)]>>(4)<<[[Monitoring requirements]]>>Utility and non-utility identification requirements.<<~~

(a) ~~[[All publicly or privately owned or operated sanitary sewer collection systems shall provide a properly functioning meter for each]] >>Each<< pump in each and every pump station >>shall be provided with a properly functioning meter,<< which measures either elapsed pump operating time or power consumption for each pump station or the equivalent thereof as approved by the Director or the Director's designee.~~

(b) ~~[[All publicly owned or operated sanitary sewer collection systems shall have the capacity or capability to monitor their pump stations in a manner so as to prevent overflows.]]>>All pump stations shall be clearly marked with the identification number for the pump station and a 24-hour contact phone number for the operator of the pump station.<<~~

~~[(i) All pump stations shall, at a minimum, install alarm or monitoring equipment which reports the following information:~~

- ~~a. High water level alarms in wet wells;~~
- ~~b. Pump station power failures.~~

~~(ii) All system operators shall monitor their systems in a manner that allows sufficient response time to correct the detected problem prior to overflow occurring or to minimize the extent of an overflow.]]~~

[[3]]>>(5)<<[[~~Pump station inspection and repairs.~~]]>>Requirements for non-utility pump stations.<<

- (a) All ~~[[publicly or privately owned or operated sanitary sewer system]]~~ pump stations shall be inspected >>not less than quarterly, by duly licensed professionals in the relevant fields or trades,<<[[~~annually~~]] for the purpose of identifying any equipment malfunction and physical deficiencies that could lead to equipment malfunctions. All persons operating any and all ~~[[publicly or privately owned or operated]]~~ sanitary sewer pump stations shall complete the correction of all equipment malfunctions and physical deficiencies that could lead to equipment malfunctions identified during the pump station inspections no later than six (6) months after the date during which the inspection was completed. If an equipment malfunction or physical deficiency causes or contributes to an overflow condition, correction or repair of the malfunction or deficiency shall be completed no later than sixty (60) days from the date that the overflow condition is identified.

- (b) In the event that the person responsible for the operation of any ~~[[publicly or privately owned or operated]]~~ sanitary sewer pump station determines that a pump station which has caused or contributed to an overflow condition, should be upgraded, rather than repaired as set forth in ~~[[1] above]]~~ >>this Section<< ~~[[above]]~~, said person shall, within thirty (30) days of the date the overflow condition is identified, submit to the Director or the Director's designee for approval a plan for the upgrade along with a proposed schedule of implementation.

- >>(c) All sanitary sewer collection systems shall be maintained in a manner so as to prevent or minimize the possibility of overflows.

- (d) All sanitary sewer collection systems shall have a written maintenance plan including, but not limited to, inspection procedures, preventative maintenance schedules, corrective maintenance procedures, and reporting procedures.
- (e) All pump stations shall, at a minimum, contain fully operable alarm or monitoring equipment which reports the following information:
 - (i) High water level alarms in wet wells;
 - (ii) Pump station power failures.
- (f) All system operators shall monitor their systems in a manner that allows sufficient response time to correct the detected problem prior to overflow occurring and to minimize the extent of an overflow.<<

~~[(4) Collection and transmission system model. All utility owned or operated sanitary sewer collection systems shall participate in a County wide, regional computerized collection and transmission system model or models to: i) assist in the development and implementation of operation and maintenance procedures to optimize transmission capacity within the collection system; and ii) evaluate the impact of infiltration and inflow rehabilitation programs, proposed system modifications, upgrades and expansions to the transmission capacity and performance of the collection system. The model or models for each collection and transmission system shall be updated at intervals of no more than five (5) years. The model for each utility shall be capable of predicting, during conditions of expected peak flow, the flow in each force main and major gravity main, the hydraulic pressure at any point in any force main, the flow capacity at each pump station with and without the backup pump, the peak pumping rate at each station, and the likelihood and location of SSOs and surcharged conditions where the backup pump is out of service. The design and development and subsequent updates of the model~~

~~or models required herein shall be approved by the Director or the Director's designee prior to implementation.~~

(5) ~~Maintenance.~~

~~(a) All publicly or privately owned or operated sanitary sewer collection system shall maintain their respective systems in a manner so as to prevent or minimize the possibility of overflows.~~

~~(b) All publicly or privately owned and operated sanitary sewer collection systems shall have a written maintenance plan including, but not limited to, inspection procedures preventative maintenance schedules, corrective maintenance procedures and reporting procedures.]]~~

>>(6) Electronic Atlas.

Each utility shall provide an electronic sanitary sewer system atlas, in a format compatible with Miami-Dade County Water and Sewer Department's electronic atlas and approved by the Director or the Director's designee, which shall be submitted to the Director or the Director's designee no later than January 6, 2016. The electronic atlas shall include delineation of all pump station basins (i.e., sewer service areas) and pump station locations (including X,Y coordinates); pump station specifications, which at a minimum shall include number of pumps, horsepower and pump drive type for each pump, flow rate and total dynamic head at rated operating point; emergency power supply; all gravity sewer lines, including diameter, material, and year installed; manholes and siphons with all inverts and rim elevations; force mains, including diameter, material, and year installed; valves, including air release, check, and isolating (plug, gate, butterfly, and ball valves); flow meters and other items as may be determined by the Director or the Director's designee.

Updates to the electronic atlas shall be submitted to the Director or the Director's designee annually. If no changes have been made to the WCTS, the Utility shall certify to the Department that no changes have been made during the previous year.<<

~~[(6) *Spare parts.* All publicly owned or operated sanitary sewer collection systems shall, maintain an inventory of spare parts or suppliers and vendors necessary to prevent sustained sewage spills, overflows and surcharge conditions resulting from equipment malfunction or deterioration. The inventory of spare parts required pursuant to this section shall be reviewed and updated by the Utility, at a minimum, on an annual basis. Certain critical parts may be secured from vendors or other systems on an as-needed basis provided, however, that the overall system integrity is maintained.]]~~

>>(7) Collection and transmission system model. All utility owned or operated sanitary sewer collection systems shall participate in a County-wide, regional computerized collection and transmission system model or models to: i) assist in the development and implementation of operation and maintenance procedures to optimize transmission capacity within the collection system; and ii) evaluate the impact of infiltration and inflow rehabilitation programs, proposed system modifications, upgrades and expansions to the transmission capacity and performance of the collection system. The model or models for each collection and transmission system shall be updated at intervals of no more than five (5) years. The model for each utility shall be capable of predicting, during conditions of expected peak flow, the flow in each force main and major gravity main, the hydraulic pressure at any point in any force main, the flow capacity at each pump station with and without the backup pump, the peak pumping rate at each station, and the likelihood and location of SSOs and surcharged conditions where the backup pump is out of service. The design and development and subsequent updates of the model or models required herein shall be approved by the

Director or the Director's designee prior to implementation.<<

[[7 ~~Exemptions. Notwithstanding the foregoing, any publicly owned and operated sanitary sewer collection system which operates a federal or state permitted wastewater treatment facility and which discharges wastewater to the County's regional system on an emergency basis only, will not be required to comply with the provisions set forth in Section 24-42.2(1) through (6).]]~~

>>(8) CMOM requirements for utilities. CMOM requirements set forth herein shall apply to all utilities, except that for requirements other than those of Sections 24-42.2(3)(a) and 24-42.2(9)(a), where a utility is required to implement CMOM requirements under a U.S. E.P.A. Consent Decree, the utility shall adhere to the requirements and timeframes stipulated by the U.S. E.P.A. Consent Decree until such time that the U.S. E.P.A. CMOM requirement is terminated or the U.S. E.P.A. Consent Decree is terminated. Upon U.S. E.P.A. CMOM requirement termination or Consent Decree termination, the utility shall continue to implement the requirements of the U.S. E.P.A. approved CMOM requirements as enforceable requirements of this section and shall be reviewed and updated annually by the utility and submitted as a CMOM Plan to the Director on or before February 15 of each year. If the utility proposes no changes, the utility shall submit a letter of no changes to the Director on or before February 15. The Director or Director's designee shall approve, approve with conditions or disapprove the CMOM Plan. If the Director or Director's designee disapproves the CMOM Plan, the utility shall resubmit the corrected CMOM Plan within sixty (60) days of disapproval notification.

Within one hundred and eighty (180) days of the effective date of this Section, each utility shall submit to the Department an approvable Plan of Compliance for the implementation of a CMOM program that shall include all the requirements set forth in Section 24-42.2(9) through (14). All of the

staffing requirements not otherwise noted in Section 24-42.2(9) through (14), shall be satisfied within three hundred and sixty-five (365) days of the Director or Director's designee approving the Plan of Compliance.

If the Director or Director's designee disapproves the Plan of Compliance, the utility shall resubmit the corrected Plan of Compliance within sixty (60) days of notification. If the resubmitted Plan of Compliance is disapproved by the Director or Director's designee, the utility shall resubmit the corrected Plan within thirty (30) days of disapproval notification. If the utility does not provide the required documents within the times noted, or if the second resubmittal is determined to be inadequate, or the utility does not implement the actions proposed in a timely manner, the utility shall be determined to be nonresponsive. The Director or Director's designee shall not issue any certification of adequate transmission and treatment capacity for new additional sewage flow for any facility served by a utility determined to be nonresponsive. Once the Plan of Compliance is approved by the Director or the Director's designee, the utility shall implement the Plan of Compliance according to the schedules provided in Section 24-42.2(9) through (14) or as provided in the Plan of Compliance approved by the Director or the Director's designee.

(9) Sewer Overflow Response Plan (SORP). All utilities shall develop and maintain a SORP requiring, at a minimum, the following:

(a) Whenever a Sanitary Sewer Overflow (SSO) is identified, the utility shall provide the following reports:

(i) Within four (4) hours of the utility's discovery of a SSO, the utility shall verbally report all SSOs to the Department's emergency phone number, providing the following information: location and source of the SSO, whether the release is ongoing, whether the release has

reached surface water, and the estimated flow rate or total discharge.

(ii) Within twenty-four (24) hours of the utility's discovery of a SSO reaching waters of the United States or the State, or a SSO equal to or exceeding one thousand (1000) gallons, or a SSO that will reasonably be expected to endanger public health or the environment, the utility shall verbally report the SSO to the FDEP by way of the State Warning Point Hotline, noting the location and volume of the overflow.

(iii) Within five (5) days of the utility's discovery of a SSO, the utility shall provide to the Department a written report containing the following:

1. The location of the SSO by street address, or any other appropriate method (i.e., latitude-longitude); and
2. The estimated date and time when the SSO began and stopped, or, if it is still an active SSO, the anticipated time to stop the SSO; and
3. All steps taken to respond to the SSO; and
4. The name of the receiving water, if applicable; and
5. An estimate of the volume (in gallons) of the sewage spilled; and
6. A description of the WCTS component from which the SSO was released (such as

manhole, crack in pipe, pump station wet well or constructed overflow pipe); and

7. Subject to available information, an estimate of the SSO's impact on public health and to water quality in the receiving water body; and
8. The cause(s) or suspected cause(s) of the SSO; and
9. The date of the last SSO at the same point; and
10. All steps taken or to be taken to reduce, prevent, or eliminate reoccurrence of the SSO; and
11. A list of all notifications to the public and other agencies or departments; and
12. All steps taken or to be taken to clean up any surfaces that have been in contact and/or contaminated by the SSO.

If the SSO reaches waters of the United States or the State, or exceeds 1,000 gallons, or will reasonably be expected to endanger public health or the environment, the written report shall also be sent to the FDEP.

- (iv) Each utility shall provide a report to the Director or the Director's designee, within ninety (90) days of the start of the event, detailing all steps taken to prevent a reoccurrence of the event, including work order records from investigation and repair activities related to the SSO, and a

list and description of complaints from customers or others regarding the SSO.

(b) Each utility shall maintain, for not less than five (5) years, all records associated with each SSO. The implementation of the required records program shall be completed within six (6) months of approval of the Plan of Compliance.

(c) Each utility shall provide and maintain a set of procedures for anticipated response to all SSOs to stop the SSO, repair the damaged component that caused the SSO, minimize the environmental impact, and minimize the chance of injury and health risk of SSOs. These procedures shall include, at a minimum, the following:

(i) A detailed description of actions the utility will undertake to immediately provide notice to the public (through the local news media or other means including signs or barricades to restrict access) of a SSO; and

(ii) A detailed description of actions the utility will undertake to provide notice to appropriate local, state, and federal agencies/authorities; and

(iii) A detailed plan (including the development of responsive standard operating procedures) to minimize the volume of untreated wastewater transmitted to the portion of the WCTS impacted by the events precipitating the SSO to minimize the overflow volume; and

(iv) A detailed description of the utility's response to building backups, including the time frame for responses and the measures to be taken to clean up building backups caused by conditions in the utility's sewer system, including procedures necessary to disinfect and/or remove items potentially contaminated by building backups. This shall also include a description of the

utility's follow-up process to insure adequacy of cleanup.

- (d) Each utility shall maintain a detailed plan of the resources to be used to correct or repair the conditions causing or contributing to the SSO.
- (e) Each utility shall maintain a detailed plan to ensure its preparedness to respond to a SSO, including response training of utility employees and personnel of other affected agencies necessary for effective implementation of the SORP in the event of a SSO, and establish procedures and provide adequate training to response personnel to estimate SSO volumes. The required training shall be completed within six (6) months of approval of the Plan of Compliance, and a description of the training completed shall be included in the annual CMOM report described in Section 24-42.2(15).
- (f) Each utility shall maintain a list of those SSO locations within the area of the WCTS served by each pump station that have been recorded as overflowing more than once within the previous twelve (12) month period and/or those locations at which a SSO is likely to occur first in the event of a failure at the pump station.
- (g) Each utility shall maintain a description of pump station emergency bypass/pump-around strategies and procedures.
- (h) Each utility shall provide an active public contact point, available twenty-four (24) hours a day for reporting overflows, with an established plan for activating a response to the overflow. Pump stations shall be marked with a twenty-four (24) hour contact number to report overflows and other problems.
- (i) Each utility shall develop and maintain a rain event inspection route for inspections of known potential points of overflow. Locations shall be selected based on system construction and historical data (e.g., Rain Derived Infiltration Inflow (RDII), SSOs, and areas subject to stormwater and/or tidal

flooding). The rain event inspection routes shall be created and submitted to the Director or the Director's designees within six (6) months of the approval of the Plan of Compliance.

(10) Information Management System (IMS). All utilities shall develop and maintain an IMS requiring, at a minimum, the following:

(a) System component and functions:

(i) A management component to provide utility managers with guidance and instruction to adequately evaluate operations, personnel training and history, maintenance, customer service and sewer system rehabilitation activities so that overall sewer system performance can be determined and utility planning can be conducted. Management reports and standard management forms shall be used.

(ii) An operations function to provide utility managers and field supervisors with guidance to adequately track scheduled operational activities and to enhance operational performance. This component shall use operating reports, with standard operation forms for field personnel and shall provide for field supervisor review.

(iii) A maintenance function to provide utility managers and field supervisors with guidance to adequately track scheduled maintenance activities and enhance maintenance performance. This component shall use maintenance reports, with standard maintenance forms for field personnel and shall provide for field supervisor review.

(iv) The IMS programs shall be implemented within one year of approval of the Plan of Compliance. A summary, demonstrating that the IMS programs have been fully implemented, shall be submitted to the Department within eighteen (18) months of

approval of the Plan of Compliance and thereafter included in the CMOM report.

- (b) A description of information that will be entered into the system, and how it will be entered and recorded.
- (c) A description of the management and work reports that will be generated from inputted data, including examples and frequency for review of the reports.
- (d) A set of standard forms to be used by field and management personnel.
- (e) A description of how the records will be maintained.
- (f) A description of the computer software to be utilized for the system and cited references for software training and procedures for utilizing the software.
- (g) A Geographic Information System (GIS) map for the entire WCTS using software compatible with the GIS system used by Miami-Dade County, and a program for keeping the data current in this system, including as-built drawings and information, in an electronic format compatible with the GIS system used by Miami-Dade County which shall be made available to the Department by January 6, 2017, and annually thereafter. In addition to storing and displaying the existing WCTS data, the system shall, at a minimum, include the following capabilities:
 - (i) As-built drawings and information, including new and corrected asset attribute data.
 - (ii) A streamlined data entry process for new assets, including electronic as-built data and necessary standards so that all new assets are added to the GIS system within ninety (90) calendar days of their activation in the field.

- (iii) The GIS shall interface with the hydraulic computer model used by the utility to model the WCTS to allow information to be efficiently exported to the model.
 - (iv) Provide a flagging process for investigators to note GIS inaccuracies.
 - (v) Provide for additional GIS training and refresher training.
 - (vi) Determination of all manhole rim elevations and sewer inverts at connections to manholes and pump stations and their inclusion into GIS via suitable as-built drawings, or GPS or traditional surveying field measurements.
- (h) Development and implementation of performance indicators to provide utility managers with guidance to adequately evaluate data collected in the IMS for use in determining the condition of the sewer system and an evaluation of the utility's CMOM program. Performance indicators shall include, without limitation, the linear footage of gravity sewer line and force main inspections, the linear footage of gravity sewers cleaned, the number of manholes inspected, the number of manholes cleaned/maintained, the number of inverted siphons inspected, the number of inverted siphons cleaned/maintained, the number of SSOs per mile of gravity sewer, the number of SSOs per mile of force main, the number of SSOs per pump station, per capita wastewater flow, and such other performance indicators as the utility may suggest and the Department approve.
- (i) Maintenance activity tracked by type (corrective, preventative, and emergency).
- (11) Sewer System Asset Management Plan (SSAMP): All utilities shall develop and maintain an Asset Management Program requiring, at a minimum, the following:
- (a) A Current Condition Assessment of all Sewer System components shall be performed every five

- (5) years, including, but not limited to, pump station components, gravity sewer lines, manholes, siphons, aerial crossings, and force mains. Data gathered from the latest round of Infiltration/Exfiltration/Inflow (I/E/I) sewer assessments may be used as a baseline conditional assessment to meet this component for the first year. For future years, the evaluation shall be done according to the practices described in sections 24-42.2(12) through (14).
- (b) A statement of the Level of Service (LOS) the utility intends to provide the customers it serves.
- (c) Identification of Critical Assets within the sewer system that are absolutely necessary to have in service to maintain the developed LOS. This list shall be evaluated and updated as necessary at intervals of no more than five (5) years.
- (d) Identification of minimum Life Cycle Cost (LCC) for each critical asset using Generally Acceptable Accounting Principles with all assumptions noted. The calculations of minimum LCC for each critical asset shall be repeated at intervals of no more than three (3) years.
- (e) A long-term funding plan to fully implement and pay for all identified LCCs for each critical asset. The long-term funding plan shall include all potential sources of revenue and the likelihood of securing funding from each source. Long term evaluation of costs and funding shall be done according to currently recognized accounting practices. The Department shall be immediately notified of any changes in the availability or disposition of any revenue sources. The long-term funding plan shall be submitted to the Department for review and approval within one year of approval of the Plan of Compliance and thereafter included in the annual CMOM report.
- (12) Gravity Sewer System Operation and Maintenance (O&M) Program: Each utility shall develop and maintain a gravity sewer system O&M program to address SSOs and blockages, particularly those caused by fats, oils and

grease, roots, and debris. The program shall, at a minimum, include the following:

- (a) Written preventative O&M schedules and procedures which shall be scheduled appropriately and shall include, but not be limited to:
 - (i) Inspection and maintenance of all gravity sewers, manholes, and inverted siphons.
 - (ii) Identification and documentation of gravity sewers, manholes, and inverted siphons condition, including grease, roots, and debris accumulation.
 - (iii) Identification of maintenance needs.
 - (iv) Scheduling preventative maintenance work and cleaning which the utility may schedule in connection with the force main assessment program or the force main rehabilitation/replacement program.
- (b) Engineering evaluation of potential sulfide and corrosion control options and control of other forms of deterioration which shall include potential problems and control options including a recommendation of preferred control methods. The engineering evaluation of required corrosion controls shall be completed and a report summarizing the findings and recommendations shall be submitted to the Department within one year of the approval of the Plan of Compliance.
- (c) Prioritization for evaluation of gravity sewers based on size of pipe, locations of past SSOs, community input or other appropriate criteria. The prioritization for evaluation of the gravity sewers shall be completed and submitted to the Department within six (6) months of the approval of the Plan of Compliance.
- (d) Inspection of gravity sewers, manholes, inverted siphons and easements, including inspection of river/creek/canal crossings, stream bank encroachment toward sewers, easement

accessibility, including the need to control vegetative growth or encroachment of man-made structures or activities that could threaten the integrity of the affected gravity sewers, manholes, or inverted siphons. Inspections shall include written reports and photographic/video records where appropriate. Inspectors shall promptly report any evidence of past SSOs. Any observed SSO shall be promptly reported in accordance with the SORP.

- (e) A schedule for the maintenance of easements.
- (f) A staffing and funding plan sufficient in structure, skills, numbers and funding to allow completions of the operation and maintenance activities required by this Section. The staffing requirements for the collection system O&M shall be met within six (6) months of the approval of the Plan of Compliance. A staffing report, demonstrating that the staffing requirements have been met, shall be submitted to the Department within one year of the approval of the Plan of Compliance and thereafter included in the annual CMOM report.
- (g) Data attributes for the mapping program allowing program data to be compared in the IMS against other pertinent data such as the occurrence of SSOs, including repeat SSO locations and permit violations.
- (h) An inventory management system that includes:
 - (i) A list of all critical equipment and critical spare parts, identifying each as stored by the utility or not stored by the utility; and
 - (ii) A list identifying where critical equipment and critical spare parts that are not stored by the utility may be secured to allow for timely repairs; and
 - (iii) Written procedures for annually updating the critical equipment and spare parts inventories in the inventory management system.

- (i) Monthly reports which list equipment problems and the status of work orders generated during the previous month.
 - (j) Storm event preparation and recovery plan.
- (13) Pump Station Operations and Preventative Maintenance Program: Each utility shall develop and maintain a pump station operations and preventive maintenance program to facilitate proper operation and maintenance activities associated with pump stations within the WCTS. The program shall, at a minimum, include the following:
- (a) Identification of the means and modes of communication between pump stations, field crews, and supervising staff.
 - (b) Technical specifications for each pump station within the utility WCTS including, at a minimum: number of pumps, horsepower and operating point of pumps, manufacturer and model and serial numbers for pumps, voltage and full load current for motors, pump speed(s), type and description of station controls, station type, type and size of station valves, generator type, if present, including prime mover, kilowatt rating, fuel type and capacity, and nominal voltage.
 - (c) A description of the monitoring system for each pump station which shall continuously monitor, report, and transmit information for each pump station. All utility owned or operated sanitary sewer collection systems shall be continuously monitored and recorded at a central location via a SCADA system, or equal. All pump stations shall report a minimum of high water level, power failure, low battery voltage, and remote signal failure. Pump stations with dry wells or pumps larger than twenty-five (25) horsepower shall also report operating hours after midnight, pump starts, wet well level, high and low level alarm set points, kilowatt power usage based on pump amperage, instantaneous and average station flow based on flow meter or calculated from pump amperage and discharge pressure, discharge pressure, high and

low pressure alarm set points, intrusion alarm, and drywell flooding at drywell stations.

(d) Written preventative operations and maintenance schedules and procedures which shall be scheduled not less than monthly and shall include, but not be limited to:

(i) Written procedures for periodic service and calibration of instrumentation such as sensors, alarm systems, and remote monitoring equipment.

(ii) Predictive inspection and service for all pump stations including, but not limited to:

1. Reading and maintaining records from elapsed time meters and pump start counters; and

2. Observing and documenting wet well conditions.

3. Checking and resetting as necessary system operating points.

4. Checking and maintaining records of system pressure.

5. Checking pump station SCADA system.

6. Checking stand-by power sources.

7. Checking motor electrical systems including, but not limited to, phase line voltages, quarterly checks of motor phase current draw and winding resistance; and

8. Identifying maintenance needs.

(e) Written standard emergency and reactive O&M procedures. The utility may use portable pumps, portable generators, or alternate power sources as it deems appropriate. The procedures shall, at a minimum, include:

- (i) Criteria used to determine the need for emergency operations and maintenance.
 - (ii) Initiation/use of stand-by power or portable pumps, where applicable.
 - (iii) Evaluation of the need for additional equipment for emergency or reactive operations including, but not limited to, additional generators and portable pumps (for pump around operations).
 - (iv) Evaluation of the need for on-site standby power for each pump station.
 - (v) Establishment of standard forms, reporting procedures and performance measures for emergency and reactive operations and maintenance.
- (f) Inventory Management System: Each utility shall provide an inventory management system that includes:
- (i) A list of all critical equipment and critical spare parts, identifying whether each is stored by the utility or not stored by the utility.
 - (ii) A list identifying where critical equipment and critical spare parts that are not stored by the utility may be secured to allow for timely repairs.
 - (iii) Written procedures for annually updating the critical equipment and spare parts inventories in the inventory management system.
- (g) Monthly reports which list equipment problems and the status of work orders generated during the previous month.
- (h) A staffing and funding plan sufficient in structure, skills, numbers and funding to allow completions of the operation and maintenance activities required by this Section. The listing of required resource

commitments including staffing, contractual support and equipment shall be submitted to the Department for review and approval within six (6) months of the Director or the Director's designee approval of the Plan of Compliance and shall thereafter be included in the annual CMOM report.

- (i) Storm event preparation and recovery plan.
- (14) Force Main Operations, Preventative Maintenance and Assessment/Rehabilitation Program. Each utility shall develop and maintain a force main operations, preventive maintenance and assessment/rehabilitation program to facilitate proper operation and maintenance activities associated with force mains within the WCTS. The program shall include, at a minimum, the following:
- (a) Analysis of all utility force mains including an evaluation of corrosion and sulfide control options which shall include potential problems and corrosion control options including recommendations of preferred corrosion control methods.
 - (b) Inspection of force mains and easements, including inspection of river/creek/canal crossings, bank encroachment toward sewers, easement accessibility including control of vegetative growth and man-made structures. Inspections shall include written reports and photographic/video records where appropriate, and shall include any evidence of past SSOs. Any observed SSO shall be promptly reported in accordance with the SORP.
 - (c) A schedule and procedures for the maintenance of easements.
 - (d) A staffing and funding plan sufficient in structure, skills, numbers and funding to allow completions of the operation and maintenance activities required by this Section. The listing of required resource commitments including staffing, contractual support and equipment shall be submitted to the Department for review and approval within six (6) months of the approving the Plan of Compliance and thereafter included in the annual CMOM report.

- (e) Inventory Management System: Each utility shall provide an inventory management system that includes:
- (i) A list of all critical equipment and critical spare parts, identifying whether each is stored by the utility or not stored by the utility.
 - (ii) A list identifying where critical equipment and critical spare parts that are not stored by the utility may be secured to allow for timely repairs.
 - (iii) Written procedures for annually updating the critical equipment and spare parts inventories in the inventory management system.
- (f) Monthly reports which list equipment problems and the status of work orders generated during the previous month.
- (g) A force main criticality assessment of the structural integrity of all utility force mains and the risk of critical failure to prioritize further assessment and/or rehabilitation/replacement. The assessment shall be based on previous assessment of the structural integrity of the force main, size, age, pipe material of the force main, length of the force main and availability of the nearest WCTS component which could handle flows from that force main in the event of failure, the operating pressure in the force main during peak flow events, and the availability of new pipe in the event of failure.
- (h) A force main prioritization report providing the result of the utility's force main criticality assessment, including a prioritized schedule for the implementation of the force main assessment program. The force main prioritization report shall be submitted to the Director or the Director's designee for review and approval.
- (i) A force main assessment program in accordance with the schedule set forth in the force main

prioritization report. At a minimum, the force main assessment program shall include:

- (i) Standard procedures and schedule for continual above-ground assessment of each force main in the WCTS, including standard forms for the visual assessment of force main routes and guidelines for assessment of unusual conditions, and
- (ii) Standard procedures and schedule for continual assessment of each force main in the WCTS where it crosses a surface water body or drainage way. This section shall include standard forms for the visual assessment of force main routes and above ground conditions that may show structural or leakage issues with the force main, and
- (iii) Standard procedures and schedules for inspecting and identifying force mains that are corroded or at risk of corrosion or other degradation, including a system for prioritizing repair of corrosion defects and corrosion identification forms, and
- (iv) Standard procedures and schedules for monitoring existing cathodic protection measures on existing force mains, and detailed cathodic protection requirements for any newly installed force mains, and
- (v) Standard procedures and schedules for implementing acoustic monitoring of the utility force mains including leak detection, acoustic monitoring for wire-breaks in prestressed concrete cylinder pipe, and sonar or ultrasonic monitoring for pipe defect analysis. Any information from this testing shall be used to establish a list of potential corrosion problems and need for rehabilitation of the force main to prevent future failures and SSO, and
- (vi) Criteria for use of ground-penetrating radar to determine leaks, force main bedding

conditions and/or force main bedding voids,
and

(vii) Assessment of the feasibility and need of installation of parallel force mains to provide continuity of service in the event of a force main determined by the utility to be highly critical. Highly critical force mains include, but are not limited to, 24-inch diameter or larger force mains that, in the event of a failure, pose a significant impact to the environment, public health or safety, or economy, or any combination of those matters, as a result of not being able to be isolated, bypassed, or repaired before said impacts occur.

(j) A force main rehabilitation/replacement program which shall include, at a minimum, the following:

(i) Standard procedures for repairing each force main in the WCTS that is deemed to be in need of repair pursuant to the force main prioritization report and/or force main assessment program. Repair technologies shall include, but not be limited to, open cut replacement of section(s) of pipe, spot repairs using cured-in-place pipe, mechanical sleeves or repair clamps, or joint repairs using internal sleeves or external devices.

(ii) Standard procedures for rehabilitating each force main in the WCTS that is deemed to be in need of rehabilitation pursuant to the force main prioritization report and/or force main assessment program. Rehabilitation technologies shall include, but not be limited to, spray-on linings, close fit linings, cured-in-place pipe, and woven hose linings.

(iii) Standard procedures for replacing each force main in the WCTS that is deemed to be in need of replacement pursuant to the force main prioritization report and/or force main assessment program. Replacement

technologies shall include, but not be limited to, open cut replacement of pipe, slip-lining, pipe bursting, directional drilling, and micro-tunneling/pipe jacking.

(k) Storm event preparation and recovery plan.

(1) The assessment of all the force mains in the utility WCTS shall be completed and a report summarizing the findings of the assessment and a plan to remedy all deficiencies shall be submitted to the Department within six (6) months of the approval of the Plan of Compliance, and within six months of each five (5) year anniversary of the date of the approval of the Plan of Compliance. All force main deficiencies discovered in each assessment shall be remedied within fifty-four (54) months of the due date of the respective assessment.

(15) Annual CMOM Report. Each utility shall provide, by January 31 of each year, beginning in 2016, an approvable report describing changes needed to update the utility's CMOM program for the upcoming year. The report shall include, at a minimum, the current staffing in all positions, new work required to maintain the utility's WCTS, new capital work identified in the previous year, training carried out in the previous year, SSOs from the system during the previous year and corrective actions for the SSOs, pump station and mains determined to have inadequate capacity during the previous year, the corrective plans for those pump station and mains, any changes in the funding sources level and availability, how the funding requirements for the previous year were met, and expected funding requirements for the upcoming year.<<

Section 3. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 4. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance, including any sunset provision, shall become and be made a part of the Code of Miami-Dade County, Florida. The sections of this ordinance may

be renumbered or relettered to accomplish such intention, and the word "ordinance" may be changed to "section," "article," or other appropriate word.

Section 5. This ordinance shall become effective ten (10) days after the date of enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

PASSED AND ADOPTED:

Approved by County Attorney as
to form and legal sufficiency:

APW
DS

Prepared by:

David Sherman