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# SEWER SYSTEM EVALUATION SURVEY (SSES)

## PLAN A

### 3<sup>RD</sup> CYCLE REPORT REQUIREMENTS

5/07/2019



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES

DIVISION OF ENVIRONMENTAL RESOURCES MANAGEMENT

WATER AND WASTEWATER



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## INTRODUCTION

The main purpose of the Sewer System Evaluation Survey (SSES) is to identify and correct excessive infiltration and inflow (I/I) in the sanitary sewer collection system. The survey consists of a visual inspection of the system components performing flow and smoke tests to identify sources of I/I in the system, as well as defects, and illegal connections. The goal of the SSES is to assure that the sanitary sewer system is working properly, as designed. Identifying deficiencies in the collection system and correcting them will minimize and/or prevent sanitary sewer overflows (SSOs), reduce the wear and tear of the sanitary sewer pump station, and will lower electrical bills, allowing the appropriate wastewater collection and transmission system (WCTS) operation.

These requirements were prepared to assist in the preparation of the SSES reports, and include the minimum requirements needed to comply with the Miami-Dade County code. Since each collection system is different, the guidelines are general and therefore the survey shall not be limited to its contents.

## 1. COUNTY CODE REGULATORY REQUIREMENTS

### 1.1 EXISTING GRAVITY SANITARY SEWER CODE REQUIREMENTS

Miami-Dade County, Chapter 24, Section 24-42.2(3)(a)

*“Each 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 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. 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 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.”*

### 1.2 STORMWATER DISCHARGES INTO SANITARY SEWER COLLECTION SYSTEMS

Miami-Dade County, Chapter 24, Section 24-42.2(3)(c)(ii)

*“The existence of stormwater discharges into any 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. 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 the Director or the Director's designee semiannually, January 1 and July 1 of each year, by the person responsible for the operation of said system”*

Therefore, when cross-connections are detected during the SSES studies, the consultant/contractor conducting the tests has the obligation to provide detailed information of the cross-connection as part of the SSES report and the permittee/property owner shall implement repairs within the six (6) months following the discovery of the cross-connection.

### 1.3 CONSEQUENCES OF NON-COMPLIANCE WITH THE SSES REPORT REQUIREMENTS

Miami-Dade County, Chapter 24, Section 24-42.3(3)

- (3) No new additional sewage flows shall be authorized for any sanitary sewer basin, sewage pump station, or system pursuant to Section 24-42.3 unless and until:
- (a) The official responsible for issuing certificates of occupancy, certificates of use or equivalent municipal occupational licenses provides a monthly report that identifies projects that have been issued a certificate of occupancy, certificate of completion, certificate of use or an equivalent municipal occupational license that have also received a conditional or unconditional written approval, and
  - (b) All actions or reports required by Section 24-42.2 and Section 24-42.6(12) for the basin, pump station, or system have been completed according to the schedules required therein.

Pursuant to Section 24-42.3(3) of the Code, no new additional flows can be authorized for any pump station or system until all actions or reports for the pump station or system have been completed. Consequently, DERM cannot issue a Certification of Sanitary Sewer Collection, Transmission and treatment Capacity (also known as Sanitary Sewer Allocation Letter) to projects located in a collection system that is not in compliance with the SSES report requirements.

## 1.4 PROFESSIONAL ENGINEER SIGNATURE REQUIRED

Miami-Dade County, Chapter 24, Section 24-15.2

The Sewer System Evaluation Survey report and the the Sanitary Sewer Collection System (SSCS) drawings must be signed, sealed and dated by a Professional Engineer (PE) licensed in the state of Florida. The engineer of record shall provide name, and registration number.

Reports submitted without the required PE signature and seal will be considered not submitted/incomplete, and will not be reviewed.

## 1.5 REVIEW FEES

The SSES report, Plan A, shall be submitted with the required review fee of one hundred and twenty-nine dollars (\$129.00), which includes the 7.5% County surcharge fee.

Every time a “Non Compliance Letter” is issued, a review fee of fifty-three dollars and seventy-five cents (\$53.75), will be required, which includes the 7.5% County surcharge fee.

The County surcharge fee of 7.5% was added to review fees since October 3, 2017.

The payment confirmation number shall be included in the report’s cover sheet.

For payments by credit card, or for questions about payments call the DERM Cashier at (305) 372-6755, or at [RER-DERMC@MiamiDade.gov](mailto:RER-DERMC@MiamiDade.gov). Payments submitted by check must be made payable to Miami-Dade County.

Reports submitted without the required review fee will be considered “non-submitted” and the facility will remain in “non-compliance”.

## 1.6 DEFINITIONS

Miami-Dade County, Chapter 24, Section 24-5

*Cross-connection* shall mean any physical connection or arrangement whereby contamination may enter a water supply system; such as two (2) otherwise separate piping systems, one (1) of which contains or is designed to contain potable water and the other waste water or other fluids or material of unknown or questionable safety, where intermixing may occur depending on the pressure or temperature differential between the two (2) systems.

*Force main* shall mean any pipe that receives and conveys, under pressure, wastewater from the discharge side of a pump. A force main is intended to convey wastewater under pressure.

*Gravity sewer line* or gravity sewer shall mean a pipe that receives, contains and conveys wastewater, not normally under pressure, but is intended to flow unassisted under the influence of gravity.

*Infiltration*, when used in the context of a WCTS, shall mean water, other than wastewater, that enters the WCTS (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes.

*Inflow* shall mean water, other than wastewater, that enters the WCTS (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, storm water surface runoff, street wash waters, or drainage.

*Sanitary sewer* shall mean a conduit which is a part of a gravity or pressurized force main system which receives and transports waste water for treatment and disposal.

*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.

## 2. GENERAL INFORMATION

The SSES report shall have all required sections and include at the minimum the information described in this guideline. Partial submittals are not allowed and will not be reviewed. Therefore any time a non-compliance letter is issued, the corrections or incomplete items must be incorporated in the original report to be re-submitted to DERM as a complete SSES report.

Submit the SSES report to:

Department of Regulatory and Economic Resources  
Division of Environmental Resources Management (DERM)  
Water and Wastewater Division  
Attn: PSO Program  
701 NW 1st Court, 7th Floor  
Miami, FL 33136-3912

For questions regarding the SSES reports 305-372-6486.

### 2.1 TYPES OF COLLECTION SYSTEMS

For the effects of the SSES report, depending on the length of the gravity pipe and the existence or not of a Pump Station, there are two types of collection systems, Plan A and Plan B. Systems with a pump station and less than 1,000 feet of gravity pipe are classified as **Plan A**. Systems with 1,000 feet or more of qualifying pipe, with or without a private sanitary pump station, are classified as **Plan B**.

Qualifying pipe is defined as pipe six (6) inches or larger in nominal diameter, located out of the building structures.

## 2.2 SSES CYCLES

The SSES reports subject to this requirements are due on or before each and every ten (10) year anniversary of November 12, 2002 [MDC code, Chapter 24, Section 24-42.2(3)(a)]. The first cycle was due on 11/12/2002, the second cycle on 11/12/2012, the third cycle on or before 11/12/2022, and the forth cycle on or before 11/12/2032.

## 3. COVER SHEET

The cover sheet of the report shall contain at a minimum:

### Report information

- Date
- Submittal number (first, second, etc)

### Facility information

- PSO permit number
- Address
- Folio number (from property appraiser’s webpage)
- Name of the site/facility
- Type of Survey (**Plan A**)

### Property owner/permittee information

- Name of the Individual or entity that owns the property
- If property owner is an entity, provide name of authorized representative
- Contact information (address, telephone number, and e-mail address)

### Contact information of the consultant that prepared the report

- Company Name
- Address
- Professional Engineer’s name, license number
- Professional Engineer’s telephone number and e-mail address

## 3.1 SANITARY SEWER COLLECTION SYSTEM DESCRIPTION

Provide a description of the system to include at a minimum:

- Total length of piping per diameter. For large systems, a table that includes lengths of the system per segments is required (see sample below). Total piping reported in this section shall be consistent with the information in the Sanitary Sewer Collection System drawing. The total piping reported shall include mains and laterals.

SEGMENT	4-INCH PIPING	6-INCH	8-INCH	10-INCH
MH#__ to MH#__	LF	LF	LF	LF
MH#__ to MH#__	LF	LF	LF	LF
	TOTAL 4-INCH LF	TOTAL 6-INCH LF	TOTAL 8-INCH LF	TOTAL 10-INCH LF

- Number of clean outs.
- Number of manholes in the system.

- Number of pump stations.
- Characteristics of each pump station, including: number of pumps, type, manufacturer, model number, pump capacity, impeller size, RPMs and a picture of the Emergency Contact sign at the pump station.
- Number of grease interceptors, if any.

### 3.2 EVALUATION SURVEY INFORMATION

Provide detailed information about the survey, indicating date of the visual inspection, smoke test(s), and flow test, as well as dates of re-test, if required. Also include name of company that conducted the survey and names of persons/companies doing specific parts of the work.

### 3.3 VISUAL OBSERVATION OF THE SANITARY SEWER COLLECTION SYSTEM

Before the visual inspection, conduct a search in the DERM electronic public records for previous site plans, recent field inspections, recent notices of violation (pumps missing, overflows, etc.).

Find instructions on how to search the Department records at <http://ecmrer.miamidade.gov:8080/hpi/search>, by clicking on “Help with Searching”.

#### 3.3.1 VISUAL INSPECTION OF THE PUMP STATION

Provide in this section results of the visual inspection, including conclusions on the operating conditions of the pumps (on/off); conditions of the wet well walls (good condition?, visible cracks?), conditions of the wet well covers, control panel, valve vault, damaged or missing valves, etc.

Provide a statement indicating whether or not the pumps were operating in normal conditions. If surcharge conditions were observed in the collection system, report this finding under this section.

Include photos of the of the pump station’s major components; to include, but not limited to:

- Wet well (exterior and interior)
- Valve box (exterior and interior)
- Control panel showing ET meters
- Control panel showing pumps light switches on/off
- Manholes
- Cleanouts.

The photos added to the report must be clear/legible and properly labeled.

#### 3.3.2 VISUAL INSPECTION OF THE CLEAN-OUTS

Include a table listing the cleanouts (numbered) and conditions observed. The report shall include photos of the cleanouts.

#### 3.3.3 VISUAL INSPECTION OF THE MANHOLES

Include in this section the manhole inspection forms (see **Appendix A** for a sample form), and conclusions of the manholes’ inspections.

### 3.4 SMOKE TEST

Please note that you are required to notify DERM with at least three (3) working days in advance prior to smoke testing activities, in order for DERM personnel to be present during the test. Submit notification via e-mail to [PSO@miamidade.gov](mailto:PSO@miamidade.gov).

Make sure to receive confirmation before conducting the test, as the Department reserves the right to be present or to change test date and/or time. **Failure to provide advance notification of the test schedule may result in non-acceptance of the test.**

If the schedule for the test changes, the Department shall be notified as well.

The e-mail sent to DERM with the test schedule shall include at least the following:

- PSO permit number
- Name of the facility
- Facility's complete Address
- Smoke test date
- Proposed time to commence the test
- Meeting point
- Name and cell phone number for personnel on site

### 3.4.1 SMOKE TEST PROCEDURES

Smoke shall be introduced in the entire gravity collection system in as many places as necessary. To show that smoke passed through the entire system, include with the report photos of smoke released from roof top vent stacks, terminal manholes, wet well, etc.

Surcharged conditions in the gravity mains prevent the smoke flow; such conditions shall be reported, addressed, and corrected before any valid smoke test activities.

### 3.4.2 REPORTING RESULTS OF THE SMOKE TEST

The report shall indicate:

- If smoke was observed emitting from storm drains, which should be regarded as an illegal connection. Show locations on the sanitary sewer collection system (SSCS) drawing.
- If smoke was observed emitting from the ground surface, which indicates a broken pipe.
- If smoke reached the entire system.
- Weather or other conditions that might have affected the testing.
- Date DERM was notified of the test, and whether or not the test was witnessed by DERM.
- Date of testing.
- Method and equipment used for testing (indicating number of smoke bombs used and capacity in cubic feet).
- Points of smoke injection.
- If all cleanouts were inspected (include photos of numbered cleanouts).
- List required repairs or indicate no repairs required.

Keep in mind that all problems discovered during the smoke test shall be corrected. Re-testing is required after repairs.

Pursuant to Chapter 24, Section 24-42.2(3)(c)(ii), DERM shall be notified of any stormwater discharges into the collection system within 30 days from the day of discovery of said discharges. All stormwater discharges shall be corrected within six (6) months of discovery. See Section 3.4 of these requirements.



### 3.5 SYSTEM REPAIRS

All sanitary sewer collection system deficiencies detected during the visual inspection and testing activities shall be listed in this section of the report with indication of the actions and methods employed in correcting the problems, dates of completion of the repairs and name of contractor that performed the repairs.

Include in this section photos of conditions prior and after repairs.

### 3.6 RE-TESTING (SMOKE TEST)

Provide in this section the date of re-testing and indicate the type of test.

Additional support information required shall be according to Section 3.4 for smoke test re-testing.

### 3.7 UPDATED SANITARY SEWER COLLECTION SYSTEM (SSCS) DRAWING

The SSCS drawing shall be to scale, signed and sealed by a Florida licensed professional engineer, or land surveyor. The minimum paper size is 11" x 17". The drawings and the fonts shall be legible appropriately; larger size might be required depending on the length/size of the collection system.

The minimum information required is listed below:

- Property boundaries and surrounding main streets. Use P/L for property lines
- Existing landscaping, structures, driveways, pathways, parking spaces
- Footprint of all buildings within the property
- Buildings' name or number
- North arrow
- Scale
- Location, lineal feet (LF), diameter, and material of all underground sanitary sewer pipes in the system (laterals and mains)
- Numbered manholes, and cleanouts
- Grease interceptors and other structures in the system
- Location of the lift station(s)
- Point of connection of the gravity sewer collection system to the public or private sewer system
- Point of connection of pump station(s) force main pipe(s) to public or private sewer system
- Write the FOLIO number(s) for each property shown on the drawings

Information through the report shall be consistent, therefore total piping in Section 3.1, shall be in concordance with the piping lengths in the SSCS Drawing.

### 3.8 SURVEY CONCLUSION / FINAL STATUS

Based on the overall results of the evaluation and testing activities performed, indicate whether or not the facility is in compliance with the Code requirements pertaining to the Sewer System Evaluation Survey (SSES).

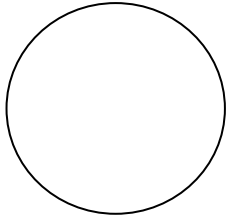
**APPENDIX A.**

**Manhole Visual Inspection Form**

PSO- \_\_\_\_\_

- Make copies of this form as necessary.
- Use arrows to show all mains (lines) connected to MH and flow direction. See sample on the back of this form.
- Indicate pipe material, if possible, and pipe size.

Manhole #:



Surcharged: \_\_\_\_\_ WW Flow : \_\_\_\_\_  
Infiltration: \_\_\_\_\_ MH Inserts: \_\_\_\_\_  
MH Cover Damaged: \_\_\_\_\_ Grease : \_\_\_\_\_

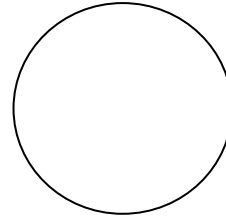
Comments:

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Manhole #:



Surcharged: \_\_\_\_\_ WW Flow : \_\_\_\_\_  
Infiltration: \_\_\_\_\_ MH Inserts: \_\_\_\_\_  
MH Cover Damaged: \_\_\_\_\_ Grease : \_\_\_\_\_

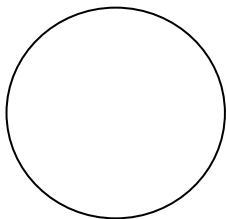
Comments:

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Manhole #:



Surcharged: \_\_\_\_\_ WW Flow : \_\_\_\_\_  
Infiltration: \_\_\_\_\_ MH Inserts: \_\_\_\_\_  
MH Cover Damaged: \_\_\_\_\_ Grease : \_\_\_\_\_

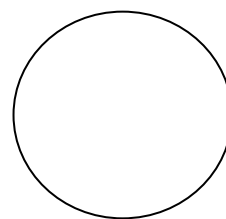
Comments:

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Manhole #:



Surcharged: \_\_\_\_\_ WW Flow : \_\_\_\_\_  
Infiltration: \_\_\_\_\_ MH Inserts: \_\_\_\_\_  
MH Cover Damaged: \_\_\_\_\_ Grease : \_\_\_\_\_

Comments:

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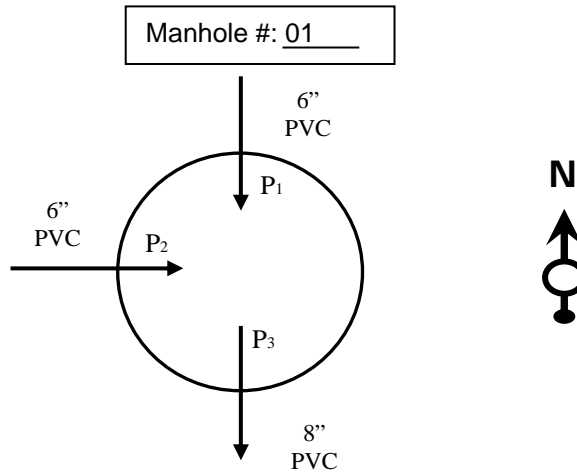
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Completed by (print name): \_\_\_\_\_

Date: \_\_\_\_\_

# SAMPLE DIAGRAM



**Surcharged:** No      **WW Flow:** Yes  
**Infiltration:** Yes      **MH Inserts:** Yes  
**MH Cover Damaged:** No      **Grease:** No

**Comments:**

Normal sanitary Flow observed. No stains on  
walls from surcharging. Good Condition.  
Rain Guard observed.

## **NOTE:**

Direction of the flow reported in the Manhole inspection forms shall coincide with the Sanitary Sewer Collection System Drawing.