MIAMI-DADE COUNTY
miamidade.gov

Water and Sewer
PO Box 330316 • 3071 SW 38 Avenue
Miami, Florida 33233-0316
T 305-665-7471

VIA ELECTRONIC CORRESPONDENCE

March 11, 2016

CCN: 60134
File No: 8.DC.20.50

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611
RE: DOJ No. 90-5-1-1-4022/1
Walter.Benjamin.Fisherow@usdoj.gov

Chief, Clean Water Enforcement Branch
Water Protection Division
Attn: Brad Ammons
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303
Ammons.Brad@epa.gov

Rachael Amy Kamons
Environmental Enforcement Section
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611
Rachael.Kamons@usdoj.gov

Florida Department of Environmental Protection
Southeast District – West Palm Beach
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406
Attn: Compliance/Enforcement Section
Diane.Pupa@dep.state.fl.us

RE: Consent Decree (Case: No. 1:12-cv-24400-FAM),
Reference DOJ Case No. 90-5-1-1-4022/1,
Section X – Stipulated Penalties, Paragraph 50 – Standard Operating Procedure for Calculating Recovered Sanitary Sewer Overflow Volume

Dear Sir/Madam:

In accordance with the provisions of Paragraph 50 of the above referenced Consent Decree, on behalf of Miami-Dade County, the Water and Sewer Department (WASD) submits to both the United States Environmental Protection Agency (EPA) and the State of Florida Department of Environmental Protection (FDEP) a Standard Operating Procedure (SOP) for Calculating Recovered Sanitary Sewer Overflow (SSO) Volume. This Standard Operating Procedure includes a method of measuring recovered SSO volume for WASD to implement when responding to a SSO event subject to stipulated penalties.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate

and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Should you have any questions regarding this matter, please call me at (786) 552-8120.

Sincerely,

Bertha Goldenberg, P.E., LEED® Green Associate
Assistant Director, Regulatory Compliance and Planning

Attachment: Standard Operating Procedure for Calculating Recovered Sanitary Sewer Overflow Volume

ec: Jonathan A. Glogau
Special Counsel
Chief, Complex Litigation
Office of the Attorney General
PL-01, The Capitol
Tallahassee, FL 32399-1050
850-414-3817
Jon.Glogau@myfloridalegal.com

Florida Department of Environmental Protection
Southeast District – West Palm Beach
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406
Attn: Compliance/Enforcement Section
Jason.Andreotta@dep.state.fl.us
Lisa.M.Self@dep.state.fl.us
Sed.wastewater@dep.state.fl.us

Mayor Carlos A. Gimenez
Miami-Dade County
111 NW First Street 29th Floor
Miami, Florida 33128

Lester Sola, Director
Miami-Dade Water and Sewer Department
3071 SW 38th Avenue
Miami, Florida 33146

Jack Osterholt, Deputy Mayor/Director
Miami-Dade Regulatory and
Economic Resources
111 NW 1st. Street. 29th Floor
Miami, FL 33128
Josterholt@miamidade.gov

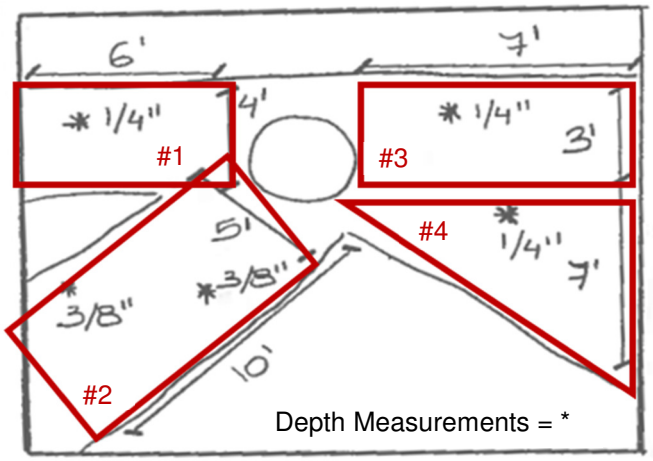
Abigail Price-Williams
Miami-Dade County Attorney
111 NW First Street Suite 2810
Miami, Florida 33128

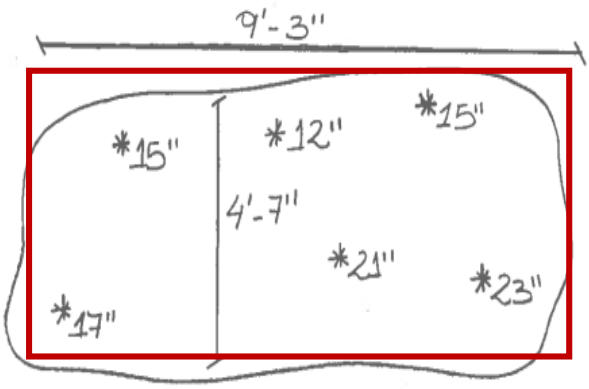
William Bush
Associate Regional Counsel
U.S. EPA, Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303
Bush.William@epa.gov

William A. Weinischke
Senior Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044
Bill.Weinischke@usdoj.gov

Standard Operating Procedure for Calculating Recovered Sanitary Sewer Overflow (SSO) Volume for Force Main and Spills >1000 gal.

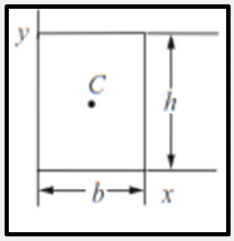
General Purposes		The purpose of this Standard Operating Procedure is to assist WWCTLD staff (Field Investigation Crews, Cleaning Investigation Crews, Repair Crews, Valve Repair Crews and Supervisors) in calculating the recovered volume of sanitary sewer overflows (SSOs). This method is useful for force main spills on non-porous (e.g. concrete or asphalt pavement) areas or spills greater than 1000 gallons.
Procedures	**WASD Communication Center**	1. Initiates an incident investigation and dispatches Field Investigation Crew.
	Field Investigation Crew	2. Verifies the spill is from a force main on non-porous area or greater than 1000 gallons and immediately calls WASD Communication Center.
	WASD Communication Center	3. Initiates the Discharge/Abnormal Event Notification and calls the responsible WWCTLD supervisor.
	Supervisor	4. Assesses the magnitude of spill and dispatches responding crews and an additional Cleaning Investigation Crew.
	Field Investigation Crew, Cleaning Crew No.1 & Repair Crew	5. Once the dispatched crews arrive at the SSO site, they proceed to stop and contain the spill and repair the force main according to Standard Operating Procedures for Responding to SSOs.
	Cleaning Investigation Crew No.2	6. Arrives at the site and documents all affected areas by the SSO by taking pictures and completing SSO Response Data Form (copy can be found on the last page of this document). a. Prevents any SSO that could possibly reach surface waters or storm drain(s) by deploying sand bags and/or diverting the flow.
		7. Begins the spill recovery process.
		8. Vacuum truck operator initiates the recovery from non-porous areas.
		9. A crew member sketches the shape of the contained spill on non-porous area on the SSO Response Data Form: a. Measures the dimensions to the nearest inch. b. Measures the depth of the spill at various locations to the nearest eighth of an inch and indicates where these measurements were taken on the sketch. *Note: A) Figure 1 illustrates the sketch. B) Please refer to the Sewer Overflow Response Plan (Page 6-29) and apply the Hole Releases Method for SSO Volume Estimations, when applicable.*
		10. Vacuum truck operator notes the volume recovered if applicable, i.e. one or two debris tank load(s). A crew member documents the information on the SSO Response Data Form.
		11. Locates swale/ditch areas where the spill has accumulated. Vacuum truck operator initiates the recovery process from swale/ditch areas.
		12. A crew member documents the size and location of swale or ditch by completing SSO Response Data Form.
		13. The crew member sketches the shape of the swale or ditch on the SSO Response Data Form: a. Measures the dimensions to the nearest inch. b. Measures the depth at various locations (at least 6 points) of the cross-section for further calculations to the nearest eight of an inch. c. Notes the measurements and units on the sketch.
		14. Next, the crew recovers the accumulation of sewage and takes notes of the volume recovered if applicable, i.e. one or two debris tank load(s), on the SSO Response Data Form. *Note: At this point, if any sewage has reached surface waters or a storm drain(s) it can be vacuumed up but the volume cannot be claimed as recovered.*

Procedures	**Cleaning Investigation Crew No.2**	15. Proceeds with cleaning the spill according to Sewer Overflow Response Plan (Page 6-22).	
	Supervisor	16. The portion of the spill recovered from non-porous area may not have a regular shape. Supervisors will divide the area sketched into different sections.	 Figure 1: Sketch analysis.
		17. Calculates the area for every segment based on the information collected by the Field Investigation Crew (see attached area formulas sheet). *Note: Convert all dimensions to similar units, i.e. feet.*	*The following calculations are based on the previous example:* • *Area of rectangle #1:* $Area = 6\ ft. \times 4\ ft. = 24\ sq. ft.$ • *Area of rectangle #2:* $Area = 10\ ft. \times 5\ ft. = 50\ sq. ft.$ • *Area of rectangle #3:* $Area = 7\ ft. \times 3\ ft. = 21\ sq. ft.$ • *Area of triangle #4:* $Area = \frac{7\ ft. \times 7\ ft.}{2} = 24.5\ sq. ft.$
		18. Calculates the average depth and convert it to similar units, i.e. feet.	• *Average Depth:* $Depth = \frac{\left(3 \times \frac{1}{4} in.\right) + \left(2 \times \frac{3}{8in}.\right)}{5} = 0.3\ in.$ $0.3\ in. \times \frac{1ft.}{12in.} = 0.02\ ft.$
		19. Calculates the total area.	• *Total Area:* $Area\ of\ Triangle + Area\ of\ Rectangles$ $= 24.5\ sq. ft. + 21\ sq. ft. + 50\ sq. ft. + 24\ sq. ft.$ $= 119.5\ sq. ft.$
		20. Calculates the volume by multiplying the total area times the average depth.	• *Volume (cubic feet):* $Area \times Depth = 119.5\ sq. ft. \times 0.02\ ft. = 2.39\ cu. ft.$

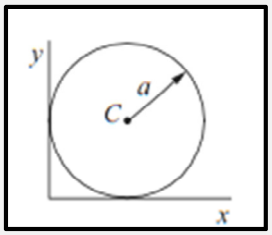
Procedures	**Supervisor**	21. Converts the volume in cubic feet to the nearest gallons (1 cubic foot equals to 7.48 gallons).	• *Volume (gallons):* $2.39\ cu.ft. \times 7.48\ \frac{gal}{cu.ft.} = 18\ gal.$
		22. Calculates volume of swale area or ditch. *Note: Convert all dimensions to similar units, i.e. feet.*	 Figure 2: Swale area sketch.
		23. Calculates the area based on the information collected by the Field Investigation Crew.	• *Area of rectangle:* $Area = 9.25\ ft. \times 4.58\ ft. = 42.37\ sq.ft.$
		24. Calculates the average depth.	• *Average Depth:* $= \frac{(2 \times 15\ in.) + (12in.) + (17in.) + (21in.) + (23in.)}{6}$ $= 17\ in. = 1.43ft.$
		25. Calculates the volume of the swale or ditch by multiplying the area times the average depth.	• *Average Depth x Area:* $= 42.37\ sq.ft. \times 1.43\ ft. = 60.6\ cu.ft.$
		26. Converts the volume in cubic feet to the nearest gallons (1 cubic foot equals to 7.48 gallons).	• *Volume (gallons):* $60.6\ cu.ft. \times 7.48\ \frac{gal}{cu.ft.} = 453\ gal.$
		27. Adds the volumes obtained and reports to WASD Communication Center.	$Volume = 18gal. + 453\ gal. = 471\ gal.$
Closeout		All pictures and data must be timely submitted to the supervisor and CD PMCM Team for review. Recovered volumes will be evaluated during Monthly WWCTLD Spill Evaluation Meetings.	

Area Formulas

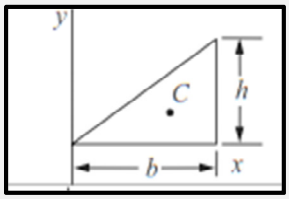
$$Area\ of\ Rectangle = length\ (feet)\ \times width\ (feet) = b\ \times h$$



$$Area\ of\ Circle = \frac{3.14\ \times radius\ (feet)\ \times\ radius\ (feet)}{2} = \frac{3.14\ \times a\ \times a}{2}$$



$$Area\ of\ Triangle = \frac{base\ (feet)\ \times\ height\ (feet)}{2} = \frac{b\ \times\ h}{2}$$



Recovered SSO Volume Data Form

Miami-Dade Water and Sewer Department
Wastewater Collection and Transmission Line Division

SSO Response Data Form

Spill Information			
Date:	**Time:**	**Rainy weather:** Yes/No	**Incident No.:**
Location:		**Reached storm drain and/or surface water:** Yes/No	
Crew Member:		**Submitted to:**	**Date:**

Pictures taken of all affected areas: Yes/No

Sketch of spill area on non-porous surface with dimensions

Debris Tanks load:
Model No. of vacuum truck:

Sketch of ditch or swale area with dimensions

Debris Tanks load:
Model No. of vacuum truck: