



March 19, 2019

Mr. Bryan Hartsook, P.E.
Wastewater Supervisor- South District-East (Milwaukee)
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Dr.
Milwaukee, WI 53212

Subject: March 14-16, 2019 Combined Sewer Overflow Event
Five-Day Notification Letter
WPDES Permit No. WI-0036820-03-1

Mr. Hartsook:

The following information describes the combined sewer overflow and combined sewer wet weather flow treatment process that occurred March 14-16, 2019. This information complies with the terms and conditions listed in section 10.2.6 and 10.2.8 of MMSD's (District) WPDES permit.

Reason for Combined Sewer Overflow

The combined sewer overflows occurred because rainfall and unusually warm temperatures caused significant snowmelt over frozen ground. Between March 13 and March 14, 0.49 inches of rain was recorded at the NOAA MKE rain gauge. On March 12 before rainfall began, there was as much as 11 inches of snow cover in Milwaukee according to NOAA station US1WIMW0014 at N. 60th St. and W. Villard Ave. The frozen ground was unable to absorb the rapidly melting snow which then flowed into tributary areas and overwhelmed the combined sewers. On March 14 at 4:23 PM, when the decision was made to close the combined sewer gates to reserve the remaining capacity for separate sewage and to prevent basement backups, the volume in the Inline Storage System (ISS) was 379 million gallons and the volume in the Northwest Side Relief Sewer was 53.7 million gallons.

Estimated Duration of Combined Sewer Discharge

The discharges from the Combined Sewer Outfalls began after the combined sewer gates began to close on March 14 at 4:23 PM. All discharges were concluded by 4:00 PM on March 16 for a total estimated duration of 47.6 hours. A table of CSO discharge points with estimated discharge times and volumes is attached.

Estimated Volume of Discharge

The current estimate of the overflow volume is 281 MG. This amount includes three combined sewer overflows not tributary to the Inline Storage System (ISS). The District will continue its analysis of the overflow volumes and will report any significant volume revisions.

Milwaukee Metropolitan Sewerage District

260 W. Seeboth Street, Milwaukee, WI 53204-1446

414-272-5100 www.mmsd.com 

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Combined Sewer Wet Weather Flow Treatment Process

To minimize the volume of combined sewer overflows, the Combined Sewer Wet Weather Flow Treatment process was utilized at Jones Island Water Reclamation Facility from March 14 at 09:25 AM until March 16 at 11:25 AM for a total of 50 hours. Total volume for this process is estimated to be 133 million gallons. The use of the Combined Sewer Wet Weather Flow Treatment process complied with Section 2.2.3 of the District's WPDES permit.

Steps Taken to Prevent another Discharge

The District's six-year investment plan calls for \$1.4 billion in improvements to its regional water reclamation facilities and sewers to reduce the risk of overflows and basement backups. Part of that spending includes the private property inflow and infiltration reduction program throughout our service area. MMSD and Veolia Water Milwaukee will continue to operate the conveyance system, ISS, Northwest Side Relief Sewer and the water reclamation facilities in a manner to prevent separate sewer overflows and to maximize the capture of combined sewer flow volumes.

The following supporting documents are attached:

- WDNR Form 3400-184 – Overflow Notification Summary Report
- MMSD Reported Overflows Table of CSO discharge points

If you have any questions concerning this report, please contact me at (414) 277-6384.

Sincerely,



Sharon K. Mertens
Director, Water Quality Protection
Milwaukee Metropolitan Sewerage District

c: S. Anthony, MMSD
T. Nowicki, MMSD
S. Royer, Veolia Water Milwaukee

**Sanitary Sewage Overflow
 Notification Summary Report**

Form 3400-184 (R 7/17) Page 1 of 2

- Sanitary Sewer Overflow (SSO)
 Treatment Facility Overflow (TFO)

Notice: An overflow is defined as a release of wastewater from a sewage collection system (SSO) or from a location within a sewage treatment facility (TFO) other than a permitted outfall structure, directly to a water of the state or land surface. Pursuant to s. 283.55(1)(dm), Wis. Stats., s. NR 210.21(4)(5)(6) Wis. Adm. Code and in accordance with reporting requirements in your WPDES permit, permittees shall submit a written report form for each overflow. This record is used to administer the water quality program, and any personally identifiable information may be provided to requesters as required under the Wisconsin Open Records law (ss. 19.31-19.39, Wis. Stats.)."

Use one form per SSO location. Submit within five calendar days to your Department wastewater representative. Attach additional information as necessary to explain or document each overflow occurrence. A single SSO may be more than one day if the circumstance causing the overflow results in discharge duration more than 24 hours. If there is a stop and restart of the overflow within 24 hours, but it's caused by the same circumstances, report it as one SSO. If the discharges are separated by more than 24 hours, they should be reported as separate SSOs.

Notifications

Department Notification

Permittee (Municipality or Facility Name)	Permit No.
Milwaukee Metropolitan Sewerage District	WI-0036820-03-1
Person Who Contacted the DNR	

Sharon K. Mertens		DNR Person Contacted		Date (mm/dd/yyyy)	Time of Day	<input checked="" type="radio"/> am <input type="radio"/> pm	Within 24 hours?
Bryan Hartsook		03/15/2019		8:30	<input type="radio"/> am <input checked="" type="radio"/> pm	<input checked="" type="radio"/> Yes <input type="radio"/> No	

Public Notification

Date (mm/dd/yyyy)	How the Public was Notified
03/14/2019	Posted on MMSD's website

Describe the actual or potential for human exposure or contact with overflowing wastewater

Combined sewer overflows discharged to the Menomonee River, Milwaukee, River, Lincoln Creek, Kinnickinnic River and Lake Michigan. There is potential for human exposure through use of these waterways.

Other Notifications (if applicable)	Drinking Water Intake Owner	Date (mm/dd/yyyy)
	Cudahy, Milwaukee, North Shore, Oak Creek and South Milw. Waterworks	03/14/2019
	Regional Wastewater Treatment Facility	Date (mm/dd/yyyy)
	NA	

(Satellite collection permittees are required to submit a copy of this report to the regional plant to which they discharge.)

Wet Weather Information (if applicable)

Was this overflow wet weather related? Yes No (skip this section)

Rainfall Start: 03/13/2019 1:10 am pm 0.5 inches
 Date (mm/dd/yyyy) Start Time Rainfall Amount

Rainfall End: 03/14/2019 2:50 am pm
 Date (mm/dd/yyyy) End Time

Contributing Soil or Other Conditions (saturated, frozen, soil type, snowmelt, etc.): frozen ground.

Above average temperatures led to rapidly melting snow over highly saturated and still

Overflow Details

Location (Street Address)
 See attached table

Location (GPS coordinates, WGS84 standard coordinate system) Latitude: _____ Longitude: _____
 (e.g. 43.075350) (e.g. -89.379770)

Overflow Start: <u>03/14/2019</u> <u>4:23</u> <input type="radio"/> am <input checked="" type="radio"/> pm	Duration	281,000,000 gallons
Date (mm/dd/yyyy) Start Time		
Overflow End: <u>03/16/2019</u> <u>4:00</u> <input type="radio"/> am <input checked="" type="radio"/> pm		
Date (mm/dd/yyyy) End Time		

Cause: (select all that apply)	Overflow Occurred From: (select only one)
<input checked="" type="checkbox"/> Rain <input type="checkbox"/> Plugged Pipe	<input type="radio"/> Lift Station - Name: _____
<input checked="" type="checkbox"/> Snow Melt <input type="checkbox"/> Broken Pipe	<input type="radio"/> Manhole - MH#: _____
<input checked="" type="checkbox"/> Flooding <input type="checkbox"/> Equipment Failure	<input type="radio"/> Gravity Sewer Pipe
<input type="checkbox"/> Power Outage <input type="checkbox"/> Contractor Related	<input type="radio"/> Pressure Sewer Pipe (Forcemain)
<input type="checkbox"/> Other-Explain: _____	<input type="radio"/> River or Stream Crossing- Select one: <input type="radio"/> Forcemain <input type="radio"/> Siphon
	<input checked="" type="radio"/> Permanent Overflow Structure
	<input type="radio"/> Treatment Plant Unit or Pipe: _____
	<input type="radio"/> Other: _____

Destination: (select all that apply)

Ditch - Name of surface water it drains to: _____

Storm sewer - Name of surface water it goes to: _____

Surface water - Name of waterbody: _____

Ground - Seeps into soil: _____

Other - Describe: See attachment for details

Overflow Explanation (This includes any information, whether the overflow was unavoidable to prevent loss of life, personal injury, or severe property damage and whether there were feasible alternatives to the overflow.)

The combined sewer overflows occurred because rainfall and unusually warm temperatures caused significant snowmelt over frozen ground. Between March 13 and March 14, 0.49 inches of rain was recorded at the NOAA MKE rain gauge. On March 12 before rainfall began, there was as much as 11 inches of snow cover in Milwaukee according to NOAA station US1WIMW0014 at N. 60th St. and W. Villard Ave. The frozen ground was unable to absorb the rapidly melting snow which then flowed into tributary areas and overwhelmed combined sewers. On March 14 at 4:23 PM, when the decision was made to close the combined sewer gates to reserve the remaining capacity for separate sewage and to prevent basement backups, the volume in the Inline Storage System (ISS) was 379 million gallons and the volume in the Northwest Side Relief Sewer was 53.7 million gallons.

Immediate Corrective Action and Steps Taken to Reduce this Overflow Volume and Impacts

To minimize the volume of combined sewer overflows, the Combined Sewer Wet weather flow treatment process was utilized at Jones Island Water Reclamation Facility from March 14 at 9:25 AM until March 16 at 11:25 AM for a total of 50 hours. Total volume for this process was estimated to be 133 million gallons.

Long Term Plan to Reduce, Eliminate, Prevent Reoccurrence of this Overflow

The District's six-year investment plan calls for \$1.4 billion in improvements to regional water reclamation facilities and sewers to reduce the risk of overflows and basement backups. Part of that spending includes the private property inflow and infiltration reduction program throughout our service area. MMSD and Veolia Water Milwaukee will continue to operate the conveyance system, ISS, Northwest Side Relief Sewer and the water reclamation facilities in a manner to prevent separate sewer overflows and to maximize the capture of combined sewer flow volumes.

Building Backups

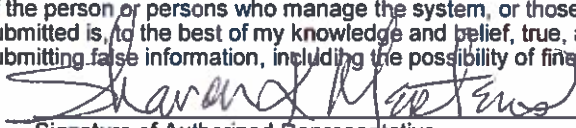
Number of building backups occurring during this time in Area of Overflow: 0

Locations of Building Backups:
(list each one)

Certification

Authorized Representative Name Sharon K. Mertens	Authorized Representative Title Water Quality Protection Division Director
Email Address smertens@mmsd.com	Phone Number (414) 277-6384

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 the 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.


Signature of Authorized Representative

3/19/19
Signed Date (mm/dd/yyyy)

Note: Submit this form to your DNR wastewater representative. Permittees who are required to submit monthly Discharge Monitoring Reports (DMRs) shall report this overflow on the DMR.

DNR Follow-Up Action (DNR Use Only)	
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MMSD Reported Overflows

CSO Event: 3/14/19 - 3/16/19

Event Type		Event Date Range		Volume (MG)		Event Reason				
CSO	Event	3/14/19	3/16/19	281		Conveyance Capacity, ISS Gate Closures				
Dropshaft/ Structure	Point No	Serial No	Date	Volume (MG)	Duration (Hrs)	Waterway	Latitude	Longitude	Location	
CT02	113	184	3/14/19	6.7	3	Menomonee River	43.04260	-87.98286	N. Hawley Road	
CT3/4	114	182	3/14/19	11.7	3	Menomonee River	43.04116	-87.96752	N. 43rd Street	
		182A	3/14/19	1.8	3		43.04131	-87.96758	4251 W. State Street	
NS04	104	090	3/15/19	0.1	3	Milwaukee River	43.08198	-87.89250	E. Keefe Avenue	
			3/14/19	16.8	7					
NS07	107	091	3/14/19	12.2	3		43.08192	-87.89150	E. Edgewood Avenue	
		099	3/16/19	2.0	15	Milwaukee River	43.05740	-87.89420	E. Boylston Street	
		103A	3/15/19	4.4	24					
			3/14/19	1.3	5					
			3/16/19	19.5	15		43.05678	-87.90121	1944 N. Commerce Street	
			3/15/19	31.2	24					
			3/14/19	6.6	5					
NS08	108	108B	3/14/19	0.9	3	Milwaukee River	43.05154	-87.90725	E. Pleasant Street at N. Water Street	
NS11	111	089	3/16/19	3.0	17	Milwaukee River	43.08932	-87.89910	E. Capitol Drive	
			3/15/19	5.4	24					
			3/14/19	2.0	7					
Non-Trib	CSO-197	197	3/14/19	1.1	3.4	Lincoln Creek	43.10509	-87.95225	W. Hampton Avenue at N. 32nd St	
	CSO-260	260	3/15/19	48.3	8.9	Kinnickinnic River	42.99501	-87.91759	S. 6th Street at W. Oklahoma Avenue	
			3/14/19	44.2	6.5					
	CSO-262	262	3/15/19	34.6	17.9	Menomonee River	43.04229	-87.98661	N. 59th Street and W. State Street	
			3/14/19	26.9	6.4					