



September 18, 2019

Mr. Jacob Wedesky  
Wastewater Engineer  
Wisconsin Department of Natural Resources  
2300 N. Dr. Martin Luther King, Jr. Dr.  
Milwaukee, WI 53212

**Subject:** September 13-14, 2019 Combined Sewer Overflow Event Five-Day Notification Letter  
WPDES Permit No. WI-0036820-04-0

Mr. Wedesky:

The following information describes the combined sewer overflow and combined sewer wet weather flow treatment process that occurred September 13-14, 2019. This information complies with the reporting terms and conditions listed in section 4.3.5 and 9.2.9 of MMSD's (District) WPDES permit.

#### **Reason for Overflow**

The combined sewer overflows occurred due to intense rainfall beginning at 12:00 AM on September 13. From 12:00 AM to 3:30 AM, MMSD rain gauge WS1211 at Jones Island Water Reclamation Facility measured 2.60 inches of rain with a maximum intensity of 4.32 inches per hour and the volume of the Inline Storage System (ISS) increased from 15 million gallons to 380 million gallons with a maximum inflow rate of 7.5 billion gallons a day. At 1:15 AM on September 13, an isolated combined sewer overflow began at CSO 197, which is not tributary to the ISS. At approximately 3:25 AM the decision was made to close the combined sewer gates to reserve the remaining capacity for separate sewage and to prevent basement backups.

#### **Estimated Duration of Combined Sewer Discharge**

The event began on September 13 at 1:15 AM and all discharges concluded by 10:00 AM on September 14 for a total duration of 32.75 hours.

#### **Estimated Volume of Discharge**

The current estimate of the overflow volume is 282 million gallons. This amount includes three combined sewer overflows not tributary to the Inline Storage System (ISS). See attached Combined Sewer Discharge Points and Receiving Waters Table. 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](http://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 September 13 at 1:25 AM until 11:50 PM for a total of 22.4 hours. Total volume for this process is estimated to be 48.4 million gallons. The use of the Combined Sewer Wet Weather Flow Treatment process complied with Section 3.2.2.1 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 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.

For the DNR Compliance Maintenance Annual Report (CMAR), all overflows are assigned to the Jones Island Water Reclamation Facility and the outfall with the highest volume of discharge, which in this event was CSO 103A at 194 N. Commerce Street.

The following supporting documents are attached:

- WDNR Form 3400-184 – Overflow Notification Summary Report
- Combined Sewer Discharge Points and Receiving Waters Table
- September 10-13 Precipitation Map at District Rain Gauges

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: K. Lazarski, MMSD  
T. Nowicki, MMSD  
S. Royer, Veolia Water Milwaukee

**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.).

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

**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) Milwaukee Metropolitan Sewerage District	Permit No. WI-0036820-04-0
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Person Who Contacted the DNR  
Sharon K. Mertens

DNR Person Contacted Jacob Wedesky	Date (mm/dd/yyyy) 09/13/2019	Time of Day 1:12 <input type="radio"/> am <input checked="" type="radio"/> pm	Within 24 hours? <input checked="" type="radio"/> Yes <input type="radio"/> No
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**Public Notification**

Date (mm/dd/yyyy) 09/13/2019	How the Public was Notified Posted on MMSD's website
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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 Cudahy, Milwaukee, North Shore, Oak Creek and South Milw. Waterworks	Date (mm/dd/yyyy) 09/13/2019
	Regional Wastewater Treatment Facility NA	Date (mm/dd/yyyy)

(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: 09/13/2019 12:05  am  pm      2.9 inches  
 Date (mm/dd/yyyy)      Start Time      Rainfall Amount

Rainfall End: 09/13/2019 5:30  am  pm  
 Date (mm/dd/yyyy)      End Time

Contributing Soil or Other Conditions (saturated, frozen, soil type, snowmelt, etc.): According to NOAA, as of 9/13/19, Milwaukee was 1.45 inches above normal for monthly rainfall.

**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: 09/13/2019 1:15 <input checked="" type="radio"/> am <input type="radio"/> pm Date (mm/dd/yyyy)      Start Time	32.75 hours	282,000,000 gallons
Overflow End: 09/14/2019 10:00 <input checked="" type="radio"/> am <input type="radio"/> pm Date (mm/dd/yyyy)      End Time	Duration	Volume

<b>Cause:</b> (select all that apply)	<b>Overflow Occurred From:</b> (select only one)
<input checked="" type="checkbox"/> Rain <input type="checkbox"/> Plugged Pipe	<input type="radio"/> Lift Station – Name: _____
<input type="checkbox"/> Snow Melt <input type="checkbox"/> Broken Pipe	<input type="radio"/> Manhole – MH#: _____
<input 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 due to intense rainfall beginning 12:00 AM on September 13. From 12:00 AM to 3:30 AM, MMSD rain gauge WS1211 at Jones Island measured 2.60 inches of rain with a maximum intensity of 4.32 inches per hour and the volume of the Inline Storage System (ISS) went from 15 million gallons to 380 million gallons with a maximum inflow rate of 7.5 billion gallons a day. At approximately 3:25 AM the decision was made to close the combined sewer gates to reserve the remaining capacity for separate sewage and to prevent basement backups.

**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 September 13 at 1:25 AM until 11:50 PM for a total of 22.4 hours. Total volume for this process was estimated to be 48.4 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

9/18/19  
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.

<b>DNR Follow-Up Action (DNR Use Only)</b>	
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# MMSD Combined Sewer Discharge Points and Receiving Waters Table

CSO Event: 9/13/2019 - 9/14/2019

Event Type		Event Date Range		Volume (MG)		Event Reason				
CSO	Event	9/13/2019 - 9/14/2019		282		Conveyance Capacity, ISS Gate Closures				
Dropshaft/ Structure	Point No	Serial No	Date	Volume (MG)	Duration (Hrs)	Waterway	Latitude	Longitude	Location	
CT02	113	184	9/13/2019	4.4	2	Menomonee River	43.04260	-87.98286	N. Hawley Road	
CT3/4	114	182	9/13/2019	30.4	5	Menomonee River	43.04116	-87.96752	N. 43rd Street	
		182A	9/13/2019	2.2	4		43.04131	-87.96758	4251 W. State Street	
CTS/6	115	176	9/13/2019	9.0	2	Menomonee River	43.03271	-87.94498	N. 25th Street	
		177	9/13/2019	7.0	2		43.03252	-87.94573	N. 26th Street	
		178	9/13/2019	1.8	2		43.02792	-87.94793	S. 27th Street at Menomonee River (West outfall)	
KK01	118	166	9/14/2019	1.0	1	Kinnickinnic River	42.99555	-87.91841	S. 6th Street at W. Cleveland Avenue (North outfall)	
			9/13/2019	4.0	9					
		166A	9/14/2019	1.0	1		42.99549	-87.91839	S. 6th Street at W. Cleveland Avenue (South outfall)	
KK03	120	154	9/13/2019	0.1	1	Kinnickinnic River	43.00856	-87.91109	S. 1st Street (North bank)	
			9/13/2019	0.1	1		43.00806	-87.91127	S. 1st Street (South bank)	
			9/13/2019	0.3	1		43.00844	-87.91249	S. 2nd Street at Kinnickinnic River	
			9/13/2019	0.4	1		43.00824	-87.91418	W. Rogers Street	
			9/13/2019	1.0	1		43.00673	-87.91423	W. Becher Street (North outfall)	
			9/13/2019	0.6	1		43.00662	-87.91409	W. Becher Street (South outfall)	
LMN	122	195	9/13/2019	8.7	10	Lake Michigan	43.00825	-87.89198	E. Bay Street	
NS04	104	091	9/13/2019	2.8	4	Milwaukee River	43.08192	-87.89150	E. Edgewood Avenue	
NS05	105	094	9/13/2019	0.4	1	Milwaukee River	43.07467	-87.89295	E. Burleigh Street	
NS06	106	097A	9/13/2019	1.5	3	Milwaukee River	43.06736	-87.89444	E. Park Place	
		098	9/13/2019	1.0	3		43.06375	-87.89234	E. Bradford Avenue	
NS07	107	099	9/14/2019	2.5	8	Milwaukee River	43.05740	-87.89420	E. Boylston Street	
			9/13/2019	13.4	18					
		103	9/14/2019	0.2	8		43.05614	-87.90120	N. Marshall Street	
		9/13/2019	1.5	18						
		103A	9/14/2019	13.6	8		43.05678	-87.90121	1944 N. Commerce Street	
			9/13/2019	66.1	18					
			104	9/13/2019	0.0	1		43.05456	-87.90463	N. Holton Street
NS08	108	106	9/13/2019	5.8	4	Milwaukee River	43.05222	-87.90744	N. of E. Pleasant Street	
		107	9/13/2019	0.2	4		43.05167	-87.90787	E. Walnut Street	



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Event Type		Event Date Range		Volume (MG)		Event Reason				
CSO	Event	9/13/2019 - 9/14/2019		282		Conveyance Capacity, ISS Gate Closures				
Dropshaft/ Structure	Point No	Serial No	Date	Volume (MG)	Duration (Hrs)	Waterway	Latitude	Longitude	Location	
NS08	108	108B	9/13/2019	11.7	4	Milwaukee River	43.05154	-87.90725	E. Pleasant Street at N. Water Street	
		111	9/13/2019	0.6	4		43.04966	-87.90884	E. Lyon Street	
NS11	111	089	9/13/2019	1.2	3	Milwaukee River	43.08932	-87.89910	E. Capitol Drive	
Non-Trib	CSO-197	197	9/13/2019	2.1	1.5	Lincoln Creek	43.10509	-87.95225	W. Hampton Avenue at N. 32nd St	
	CSO-260	260	9/13/2019	47.9	9	Kinnickinnic River	42.99501	-87.91759	S. 6th Street at W. Oklahoma Avenue	
	CSO-262	262	9/13/2019	32.8	8	Menomonee River	43.04229	-87.98661	N. 59th Street and W. State Street	
<b>Total Dropshafts:</b>		<b>15</b>	<b>Total Event Vol (MG):</b>		<b>281.5</b>					

# MMSD WEATHER STATIONS

Total Precipitation  
(Inches)

Sept. 10-13, 2019

Maintenance Outages:  
WS1218, WS1220,  
& WS1227

**Legend**

- MMSD Weather Station
- △ NOAA Weather Station
- ▭ Service Area
- ▭ Combined Sewer Area
- Deep Tunnel

