



April 8, 2024

Mr. Jacob Van Susteren-Wedesky
Wastewater Engineer – Environmental Management/Water Quality
Wisconsin Department of Natural Resources
1027 W. Saint Paul Avenue
Milwaukee, WI 53233

Subject: April 2 – 4, 2024 Combined Sewer Overflow Event Report
WPDES Permit No. WI-0036820-04-0

Mr. Van Susteren-Wedesky:

The following information describes the combined sewer overflow and combined sewer wet weather flow treatment process that occurred April 2 – 4, 2024. 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 prolonged heavy rain that began at 2:45 PM on April 1 and continued through 8:00 PM on April 4. By 5:40 PM on April 2, an average of 1.7 inches had been measured at District rain gauges. The precipitation, when combined with already saturated ground, overwhelmed the Inline Storage System (ISS). At 5:40 PM on April 2, the ISS was storing 324 million gallons with an inflow rate of 992 million gallons per day. With the status of the ISS and additional precipitation forecasted, 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

Discharges began shortly after the combined sewer gates closed to the ISS on April 2 at approximately 5:55 PM. All discharges concluded by 8:10 PM on April 4th for a total duration of 50.25 hours.

Estimated Volume of Discharge

The current estimate of the overflow is 357 MG. This amount includes four combined sewer overflows not tributary to the ISS. See attached Combined Sewer Discharge Points and Receiving Waters Table. The District will continue its analysis of overflow volumes and report any significant volume revisions. Discharges were estimated using MMSD model CSOLOG Version 3.1.

Milwaukee Metropolitan Sewerage District

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

414-272-5100 www.mmsd.com 

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 the Jones Island Water Reclamation Facility on April 2 from 3:50 PM to 8:50 AM on April 4 for a duration of 41 hours. Total volume for this process was 129 MG. 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 10-year investment plan calls for \$2.1 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. The plan also calls for additional wetland protections through MMSD's Greenseams® program which is currently at more than 5,400 acres of land that can capture and store more than 3 billion gallons of rain and melting snow. One inch of rain on MMSD's service area equals 7.1 billion gallons of rain and melting snow. The District and Veolia Water Milwaukee will continue to operate the conveyance system, Inline Storage System, Northwest Side Relief Sewer and water reclamation facilities in a manner to prevent separate sewer overflows and to maximize the capture of combined sewer flow volumes.

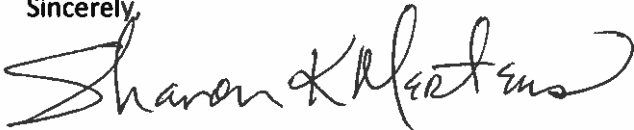
For the DNR Compliance Maintenance Annual Report (CMAR), all overflows are assigned to the Jones Island Water Reclamation Facility and the CSO outfall with the highest volume of discharge for this event was CSO 260 at 6th Street and West Oklahoma Avenue.

The following supporting documentation is attached:

- WDNR Form 3400-184 -Overflow Notification Summary Report
- Combined Sewer Discharge Points and Receiving Waters Table
- April 1-4, 2024: Precipitation Map at District Rain Gauges

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

Sincerely,



Sharon Mertens
Director
Milwaukee Metropolitan Sewerage District

c: K. Lazarski, MMSD
D. Raines, MMSD
J. Hoisak, Veolia Water Milwaukee

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Sanitary Sewage Overflow Notification Summary Report

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

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

Milwaukee Metropolitan Sewerage District (MMSD)

Permit No.
0036820-04-0

Person Who Contacted the DNR
Micki Klappa-Sullivan

DNR Person Contacted Jacob Van Susteren-Wedesky	Date (mm/dd/yyyy) 04/03/2024	Time of Day 12:12	<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) 04/02/2024	How the Public was Notified Posted on MMSD.COM website
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Describe the actual or potential for human exposure or contact with overflowing wastewater
There is a potential for human exposure through recreational use of the waterway.

Other Notifications (if applicable)	Drinking Water Intake Owner Cudahy, Milwaukee, North Shore, Oak Creek and South Milwaukee Water Works	Date (mm/dd/yyyy) 04/02/2024
	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: **04/01/2024 2:45** am pm **2.38** inches
Date (mm/dd/yyyy) Start Time Rainfall Amount

Rainfall End: **04/04/2024 5:00** am pm

Date (mm/dd/yyyy) End Time

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

Overflow Details

Location (Street Address)

Please see Combined Sewer Discharge Points and Receiving Waters Table

Location (GPS coordinates, WGS84 standard coordinate system)	Latitude: _____ <small>(e.g. 43.075350)</small>	Longitude: - _____ <small>(e.g. -89.379770)</small>
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Overflow Start: **04/02/2024 5:55** am pm **50.25** hours **357,000,000** gallons
Date (mm/dd/yyyy) Start Time Duration Volume

Overflow End: **04/04/2024 8:10** am pm

Date (mm/dd/yyyy) End Time

Cause: (select all that apply)

- Rain
- Plugged Pipe
- Snow Melt
- Broken Pipe
- Flooding
- Equipment Failure
- Power Outage
- Contractor Related
- Other—Explain: **Frozen Ground**

Overflow Occurred From: (select only one)

- Lift Station - Name: _____
- Manhole - MH#: _____
- Gravity Sewer Pipe
- Pressure Sewer Pipe (Forcemain)
- River or Stream Crossing - Select one: Forcemain Siphon
- Permanent Overflow Structure
- Treatment Plant Unit or Pipe: _____
- Other: **Please see Combined Sewer Discharge Points and Receiving Waters Table**

**Sanitary Sewage Overflow
Notification Summary Report**

Form 3400-184 (R 7/17)

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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: Please see Combined Sewer Discharge Points and Receiving Waters Table

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 prolonged heavy rain that began at 2:45 PM on April 1 and continued through 8:00 PM on April 4. By 5:40 PM on April 2, an average of 1.7 inches had been measured at District rain gauges. The precipitation, combined with already saturated ground, overwhelmed the Inline Storage System (ISS). At 5:40 PM on April 2, the ISS was storing 324 million gallons with an inflow rate of 992 million gallons per day. With the status of the ISS and additional precipitation forecasted, 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 the Jones Island Water Reclamation Facility on April 2 from 3:50 PM to 8:50 AM on April 4 for a duration of 41 hours. The total volume for this process was 129 MG. The use of the Combined Sewer Wet Weather Flow Treatment process complied with Section 3.2.2.1 of the District's WPDES permit.

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

The District's 10-year investment plan calls for \$2.1 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. The plan also calls for additional wetland protections through MMSD's Greenseams program which is currently at more than 5,400 acres of land that can capture and store more than 3 billion gallons of rain and melting snow. One inch of rain on MMSD's service area equals 7.1 billion gallons of water. The District and Veolia Water Milwaukee will continue to operate the conveyance system, Inline Storage System, Northwest Side Relief Sewer and 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: _____


Locations of Building Backups:
(list each one)

Tributary Municipalities respond to basements backups

Certification

Authorized Representative Name Sharon Mertens	Authorized Representative Title 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.

 _____ 4/8/24
Signature of Authorized Representative 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 Combined Sewer Discharge Points and Receiving Waters Table

CSO Event: 4/2/24 - 4/4/24

Event Type		Event Date Range		Volume (MG)		Event Reason										
CSO	Event	4/2/24	- 4/4/24	357		Conveyance Capacity, ISS Gate Closures										
Dropshaft/ Structure	Point No	Serial No	Date	Volume (MG)	Duration (Hrs)	Waterway	Latitude	Longitude	Location							
CT3/4	114	182	4/3/24	5.3	4	Menomonee River	43.04116	-87.96752	N. 43rd Street							
			4/2/24	34.1	7											
		182A	4/3/24	0.1	2	Menomonee River	43.04131	-87.96758	4251 W. State Street							
			4/2/24	0.8	4											
CT5/6	115	176	4/3/24	0.6	2	Menomonee River	43.03271	-87.94498	N. 25th Street							
			177	4/3/24	0.9						2	Menomonee River	43.03252	-87.94573	N. 26th Street	
			178	4/3/24	0.1						2					
NS04	104	091	4/3/24	0.4	3	Milwaukee River	43.08192	-87.89150	E. Edgewood Avenue							
			4/2/24	1.6	7											
NS07	107	099	4/3/24	0.1	1	Milwaukee River	43.05740	-87.89420	E. Boylston Street							
			103A	4/4/24	18.4						21	Milwaukee River	43.05678	-87.90121	1944 N. Commerce Street	
		103A	4/3/24	41.8	24	Milwaukee River	43.05222	-87.90744	N. of E. Pleasant Street							
			4/2/24	15.4	6											
NS08	108	106	4/3/24	1.2	12	Milwaukee River	43.05222	-87.90744	N. of E. Pleasant Street							
			4/2/24	0.8	6											
			108B	4/3/24	10.4						13	Milwaukee River	43.05154	-87.90725	E. Pleasant Street at N. Water Street	
		4/2/24	7.6	6												
		111	4/3/24	0.1	10	Milwaukee River	43.04966	-87.90884	E. Lyon Street							
4/2/24	0.1		4													
NS09	109	112	4/3/24	0.1	1	Milwaukee River	43.04837	-87.91128	E. Ogden Avenue							
Non-Trib	CSO-197	197	4/2/24	1.3	3.3	Lincoln Creek	43.10509	-87.95225	W Hampton Ave at N 32nd St							
	CSO-230	230	4/3/24	0.4	9.4	Milwaukee River	43.09654	-87.90702	N Richards St at E Congress St							
CSO-260	260	260	4/2/24	0.5	3	Kinnickinnic River	42.99501	-87.91759	S. 6th Street at W. Oklahoma Avenue							
			4/4/24	3.2	2.1											
			4/3/24	108.6	24											
			4/2/24	41.5	5.9											
CSO-262	262	262	4/3/24	41.3	13.2	Menomonee River	43.04229	-87.98661	N. 59th Street and W. State Street							
			4/2/24	20.3	4.1											

Total Dropshafts: 6 Total Event Vol (MG): 357

MMSD WEATHER STATIONS

Total Precipitation
(Inches)

April 01-04, 2024

