



October 8, 2018

Via Email and US Mail

Ms. Geisa Thielen  
Wastewater Engineer- Water Quality Bureau /SE District  
Wisconsin Department of Natural Resources  
2300 N. Dr. Martin Luther King Jr Dr.  
Milwaukee, WI 53212

**Subject:** October 1-4, 2018 Combined Sewer Overflow Event Five-Day Notification Letter  
WPDES Permit No. WI-0036820-03-1

Dear Ms. Thielen:

The following information describes the combined sewer overflow and combined sewer wet weather flow treatment process that occurred October 1-4, 2018. This information complies with the terms and conditions listed in section 10.2.6 and 10.2.8 of MMSD's (District) WPDES permit.

#### **Reasons for Overflow**

The combined sewer overflows occurred because of record precipitation combined with saturated ground and a treatment capacity issue at the South Shore Water Reclamation Facility.

#### **Precipitation September 29 through October 1, 2018**

As of the morning of October 1, the National Oceanic and Atmospheric Administration (NOAA) measured precipitation 8.7 inches above average to date in 2018 for the Milwaukee area. Total precipitation recorded at District rain gauge WS1204 at 300 S. 84<sup>th</sup> St. from September 29 through October 1 was 3.17 inches with over 2 inches measured on October 1, which is a record for this date. On October 1 at 9:35 PM, the decision was made to close the combined sewer gates to reserve the remaining capacity for separate sewage and to prevent basements backups, the volume in the Inline Storage System (ISS) was 381 million gallons and inflow rate was 1.6 billion gallons per day with an estimated time to fill the ISS at 48 minutes. Please see the attached precipitation map.

#### **Capacity Issue at the South Shore Water Reclamation Facility**

Work commenced on September 18, 2018 at the South Shore Water Reclamation Facility on the Return Activated Sludge (RAS) piping. The work was completed on September 21. However, when the RAS system was restarted, two additional pipes developed leaks that needed to be repaired. The repairs were completed and the RAS system went back into operation on September 27. The extended outage of the RAS system and loss of viable biology in the secondary system reduced the South Shore Water Reclamation Facility capacity down to as low as 40 million gallons per day (MGD) on September 27. When the combined gates closed on October 1, the plant capacity had risen to 70 MGD. When the combined gates were fully open on October 4, the plant capacity had risen to 80 MGD.

**Milwaukee Metropolitan Sewerage District**

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

414-272-5100 [www.mmsd.com](http://www.mmsd.com) 

Ms. Geisa Thielen  
October 8, 2018  
Page 2

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

The discharges from the Combined Sewer Outfalls began after the combined sewer gates began to close on October 1 at 9:35 PM. All discharges were concluded by 2:15 AM on October 4 for a total estimated duration of 52.7 hours. The CSO Monitoring Report, which is a table of CSO discharge points with estimated discharge times and estimated volumes, is attached.

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

The current estimated overflow volume is 368 million gallons. This amount includes three combined sewer overflows not tributary to the ISS. The District will continue its analysis of the overflow volumes and will report any significant volume revisions in the District's quarterly submitted WDNR Wastewater Monitoring Short Report.

#### **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 October 1 at 6:10 AM until October 3 at 2:00 AM for a total of 43.8 hours. Total volume for this process is estimated to be 175 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**

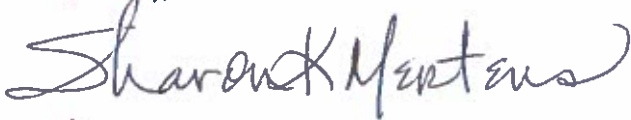
The District and Veolia Water Milwaukee will continue to operate the conveyance system, ISS, Northwest Side Relief Sewer (NWSRS), and the water reclamation facilities in a manner to prevent separate sewer overflows and to maximize the capture of combined sewer flow volumes.

The following supporting documents are attached:

- CSO Monitoring Report Summary
- Precipitation Map at District Rain Gauges for September 29 through October 1, 2018

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

enclosures

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



# Milwaukee Metropolitan Sewerage District

## CSO Monitoring Report Summary

Report Period Start Date: 10/1/18  
 Reporting Period End Date: 10/4/18

Collector System	Waterbody	Total Estimated Volume (MG)	Total Estimated Duration (Hours)
CT2 WPDES 113 North Hawley Road & West State Street	Menomonee	0.4	2
CT3/4 WPDES 114 North 44th Street & West Wells Street	Menomonee	31.9	8
CT5/6 WPDES 115 North 25th Street at the Menomonee River	Menomonee	0.0	0
CT7 WPDES 116 South 16th Street & West Canal Street	Menomonee	0.0	0
CT8 WPDES 117 South 3rd Street & West Seeboth Street	Menomonee	0.0	0
KK1 WPDES 118 South 6th Street & West Cleveland Avenue	Kinnickinnic	0.0	0
KK2 WPDES 119 South 1st Street & South Chase Avenue	Kinnickinnic	0.0	0
KK3 WPDES 120 South 4th Street & West Becher Street	Kinnickinnic	0.0	0
KK4 WPDES 121 South 1st Street & West Lincoln Avenue	Kinnickinnic	0.0	0
LMN WPDES 122 East Bay Street & East Ward Street	Lake Michigan	2.9	4
LMS WPDES 123 South Lincoln Memorial Drive & East Russell Avenue NS4	Lake Michigan	0.0	0
WPDES 104 North Cambridge Avenue & East Providence Avenue NS5	Milwaukee	1.1	4
WPDES 105 East Burleigh Street at the Milwaukee River	Milwaukee	0.6	1
NS6 WPDES 106 East Park Place at the Milwaukee River	Milwaukee	1.5	3
NS7 WPDES 107 North Commerce Street & North Booth Street	Milwaukee	120.7	44
NS8 WPDES 108 North Commerce Street & East Pleasant Street	Milwaukee	1.2	1
NS9 WPDES 109 North Old World 3rd Street & West McKinley Avenue NS10	Milwaukee	0.0	0
WPDES 110 North Water Street & East St. Paul Avenue	Milwaukee	0.0	0
NS11 WPDES 111 North Humboldt Avenue & East Capitol Drive	Milwaukee	0.6	2
NS12 WPDES 112 North 31st Street & West Capitol Drive	Lincoln Creek	0.0	0

**Total Estimated CSO Discharge for Dropshaft Basins** **160.8**

Combined Sewer Overflow Volumes from CSO Outfalls Not Tributary to the ISS Dropshafts			
CSO-197 West Hampton Avenue & North 32nd Street	Lincoln Creek	0.2	.12
CSO-260 South 6th Street & West Oklahoma Avenue	Kinnickinnic	119.6	25
CSO-262 North 59th Street & West Trenton Place	Menomonee	87.4	16

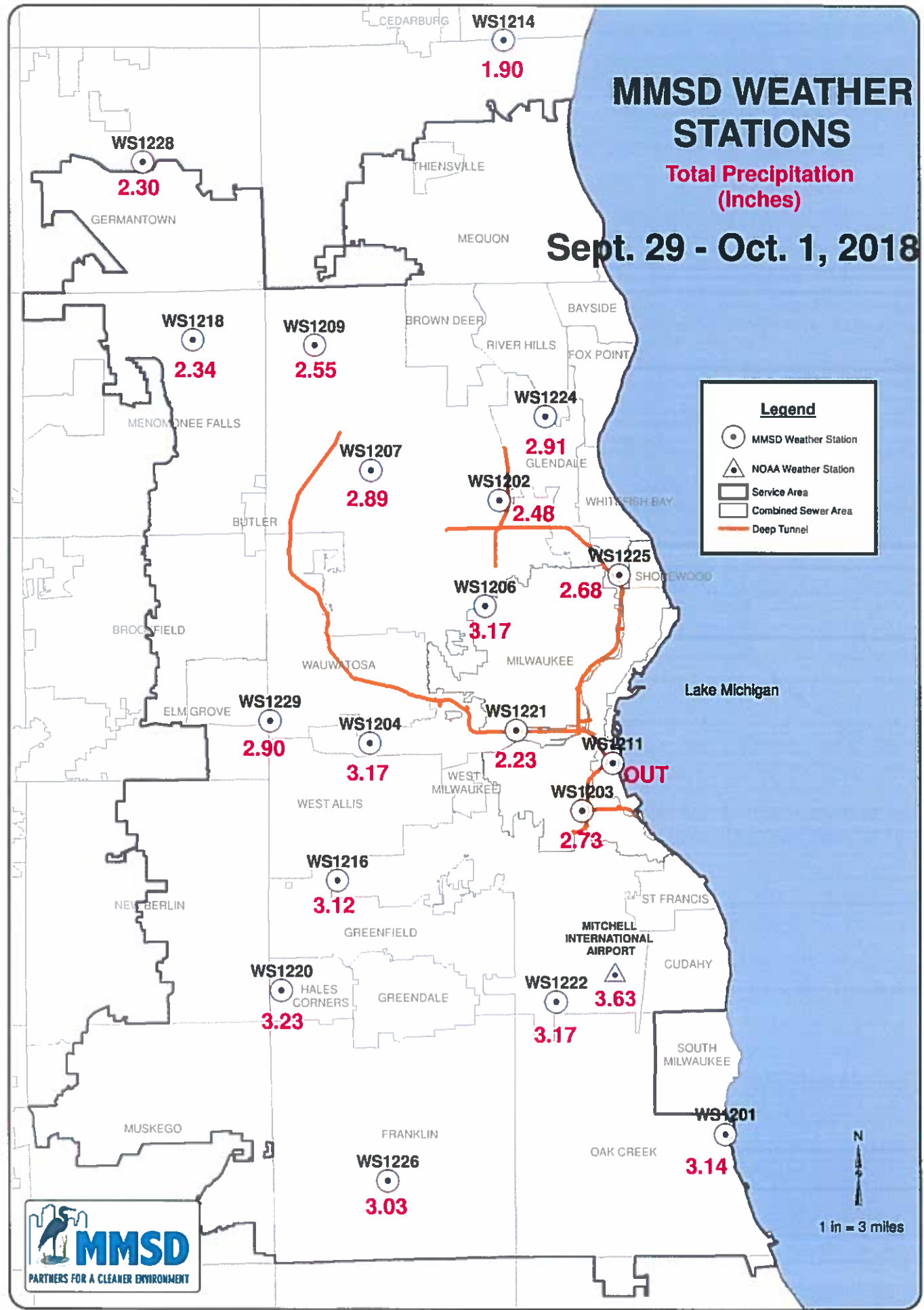
**Total Estimated CSO Discharge:** **207.2**

**Total Estimated CSO Discharge:** **368.0 MG**  
 For 10/1/18 through 10/4/18 5 minute Calculation

# MMSD WEATHER STATIONS

Total Precipitation  
(Inches)

## Sept. 29 - Oct. 1, 2018



### Legend

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



1 in = 3 miles