Milwaukee Metropolitan Sewerage District
WPDES Permit No. WI-0036820-04-0

Annual Notice
2018 Combined Sewer Overflow
Public Notification
May 1, 2019

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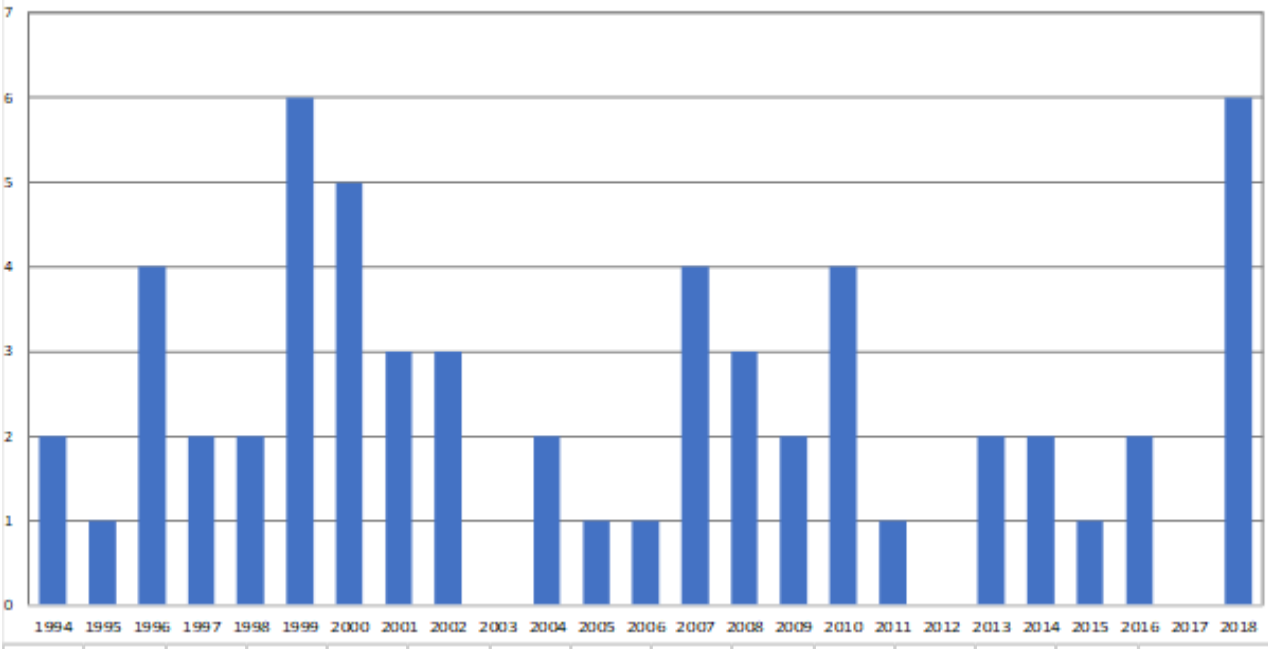
Section 1 Introduction

The Milwaukee Metropolitan Sewerage District (District) serves 1.1 million people ŦŃ2Y 28 communities in six watersheds 2ØŜŃ 411 square miles. The District operates two water reclamation facilities: Jones Island and South Shore. To manage peak flows, the District operates a storage system with a capacity of 521 million gallons. The storage system became operational in 1994. The capacity of the water reclamation facilities and storage system has made overflows rare. In 2018, the District treated 96.6% of the flow that entered the sewerage system. Figure 1.1 shows the number of combined sewer overflow events per year since 1994.

The District notifies the public and other governmental agencies of combined sewer overflows (CSO) on a real time basis. The District is submitting this Annual Notice in response to new federal regulations, 40 CFR 122.38, which were published in the *Federal Register* on January 8, 2018, and became effective on February 7, 2018 as they apply to CSO to the Great Lakes Basin. This report includes a description of each of the CSO's discharge points, receiving waters, and public access points that were potentially affected. The report also addresses the District's implementation of the nine minimum controls and the status of our long-term CSO control plan as well as other plans to reduce or prevent CSO discharges. Pertinent information on each of the six wet-weather CSOs in 2018 are presented in the body of this report. Complete information on each event, as reported in the 5-day notification letters, is presented in Appendices A through F. There were no dry weather CSO discharges in 2018. A summary report of available monitoring data for CSO discharges from the нлму is presented in Appendix G .

Figure 1.1

Number of Combined Sewer Overflow Events Per Year



Section 2 Combined Sewer Discharge Points and Receiving Waters

Among the communities served by the District, Milwaukee and Shorewood are served, in part, by combined sewers. The combined sewer service area is 24 square miles. Figure 2.1 shows the District's service area and the combined sewer service area. Figures 2.2 to 2.5 show the location of combined sewer outfalls.

The combined sewer service area has 115 combined sewer overflow outfalls. These outfalls discharge to seven waterways, as shown in Table 2.1. Tables 2.2 to 2.8 identify individual combined sewer overflow outfalls by the receiving surface water.

Figure 2.1
Service Area Map

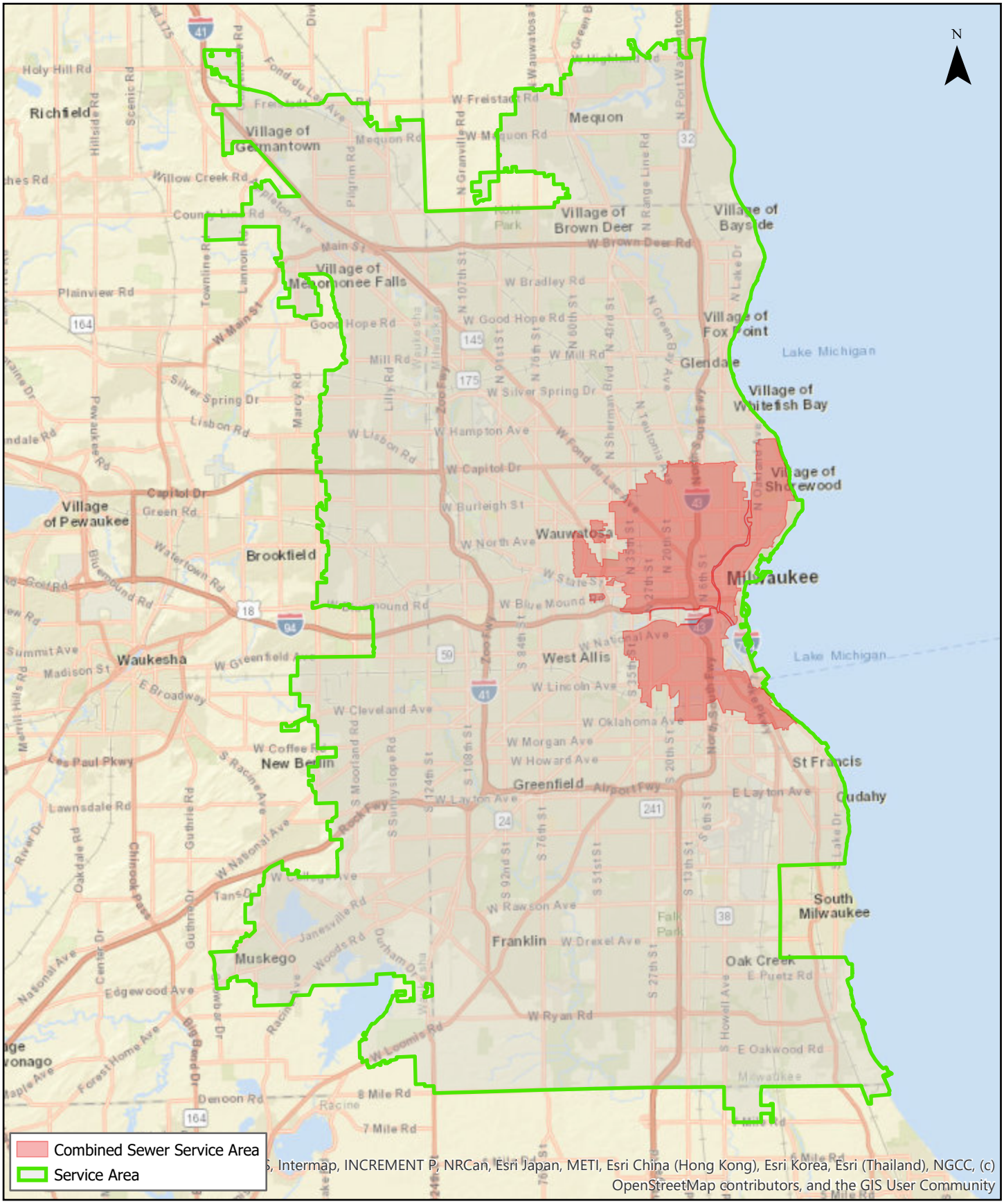
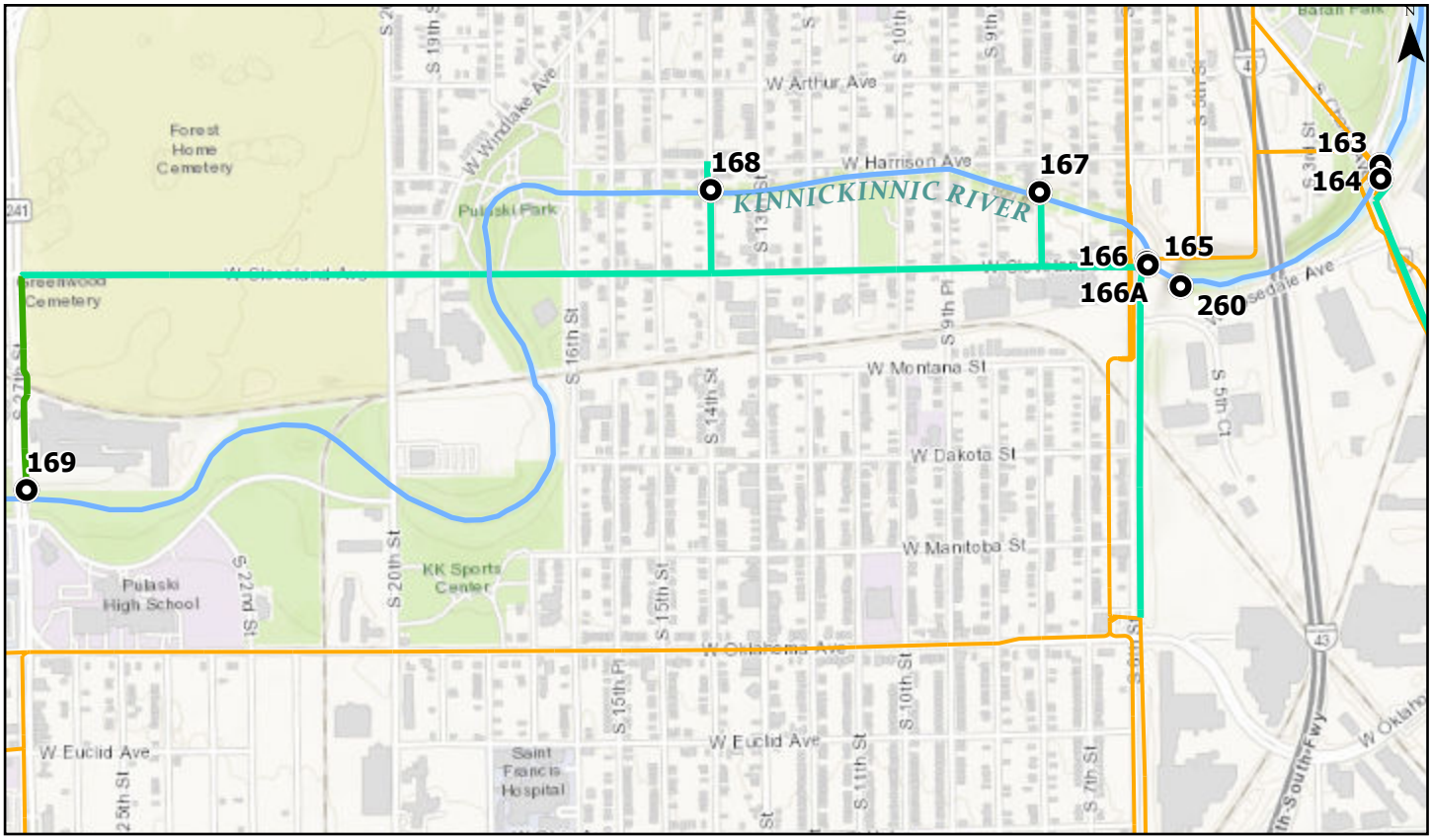


Figure 2.2

Kinnickinnic River and Lake Michigan Combined Sewer Overflow Outfalls



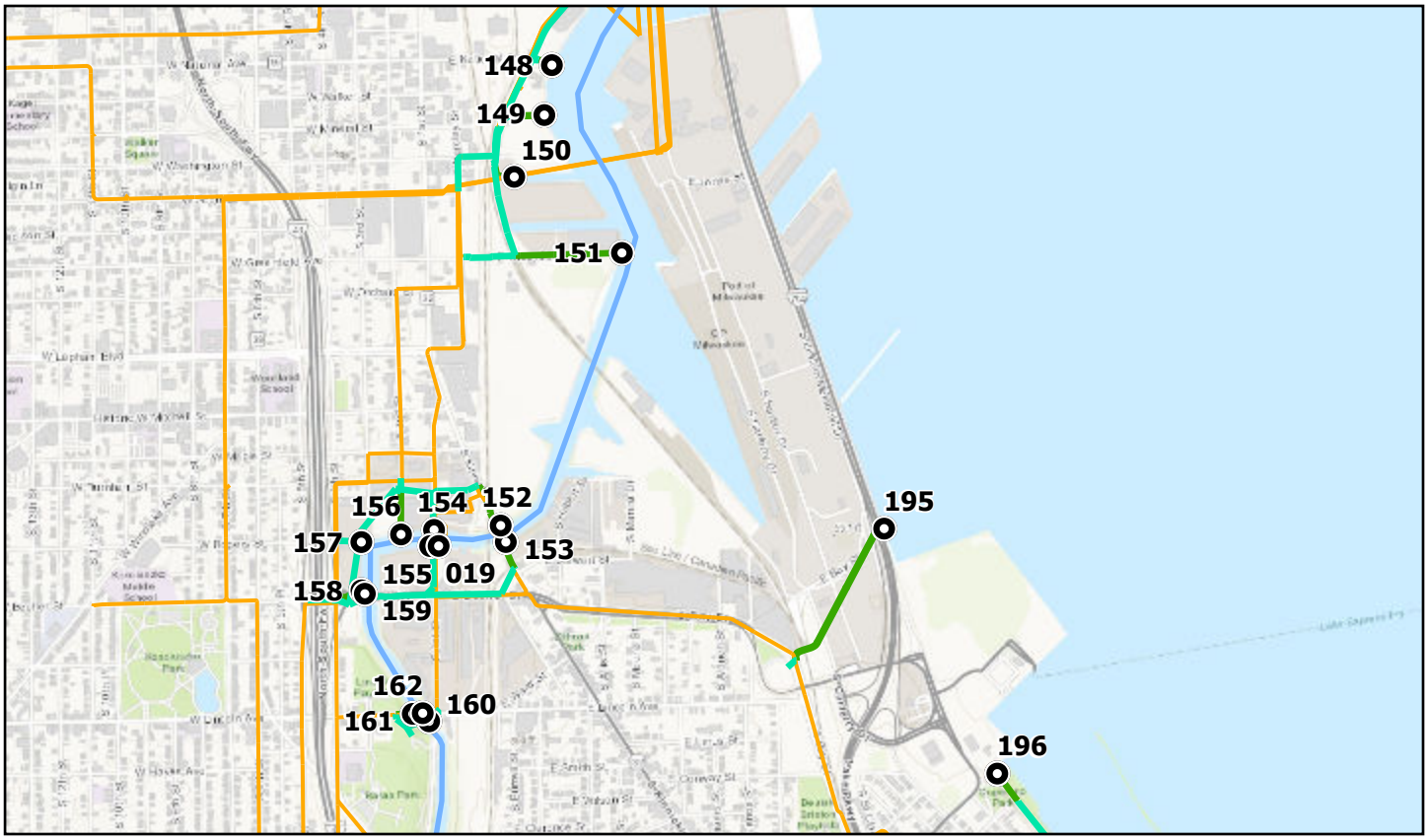
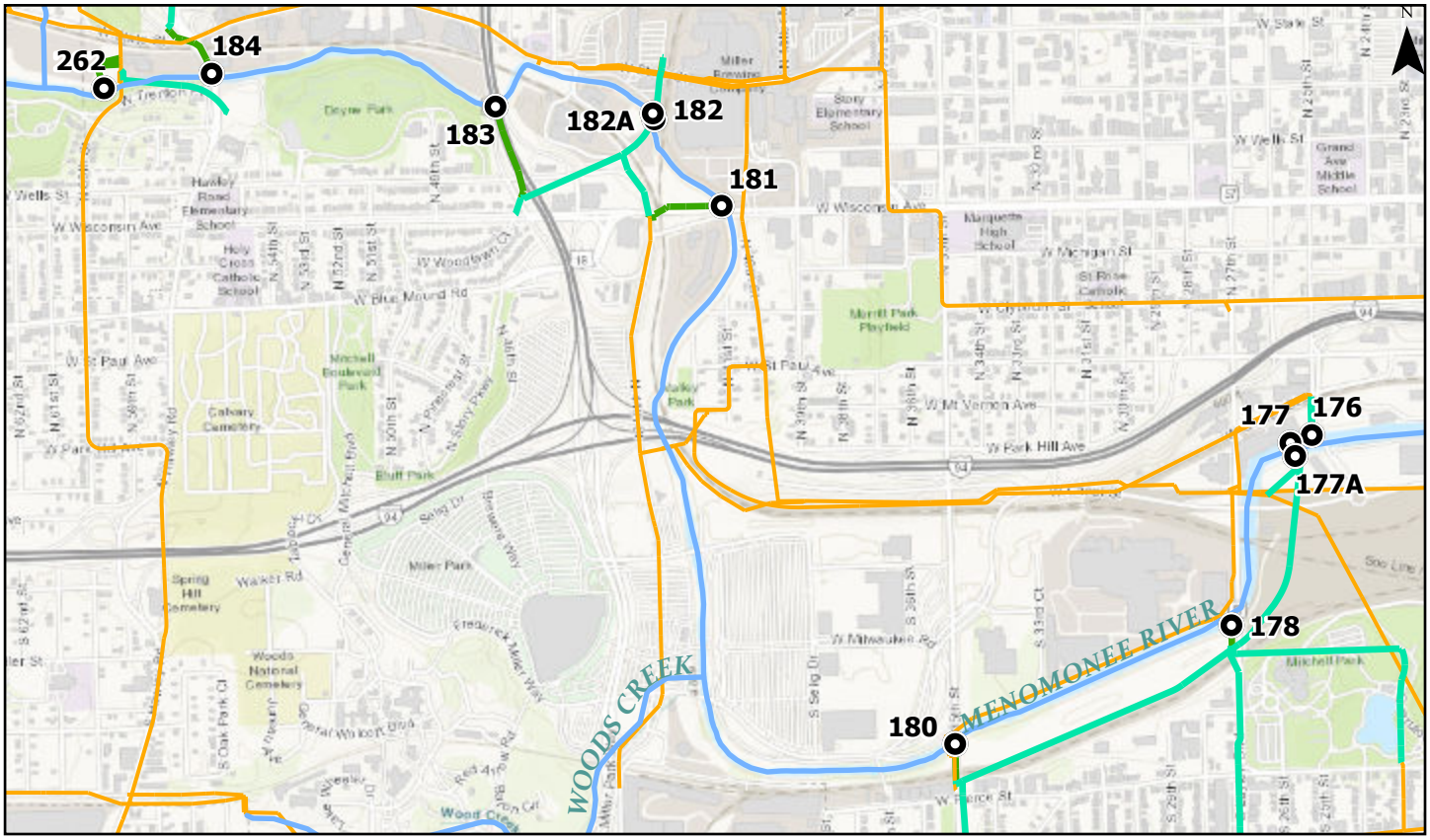


Figure 2.3
Menomonee River Combined Sewer Outfalls



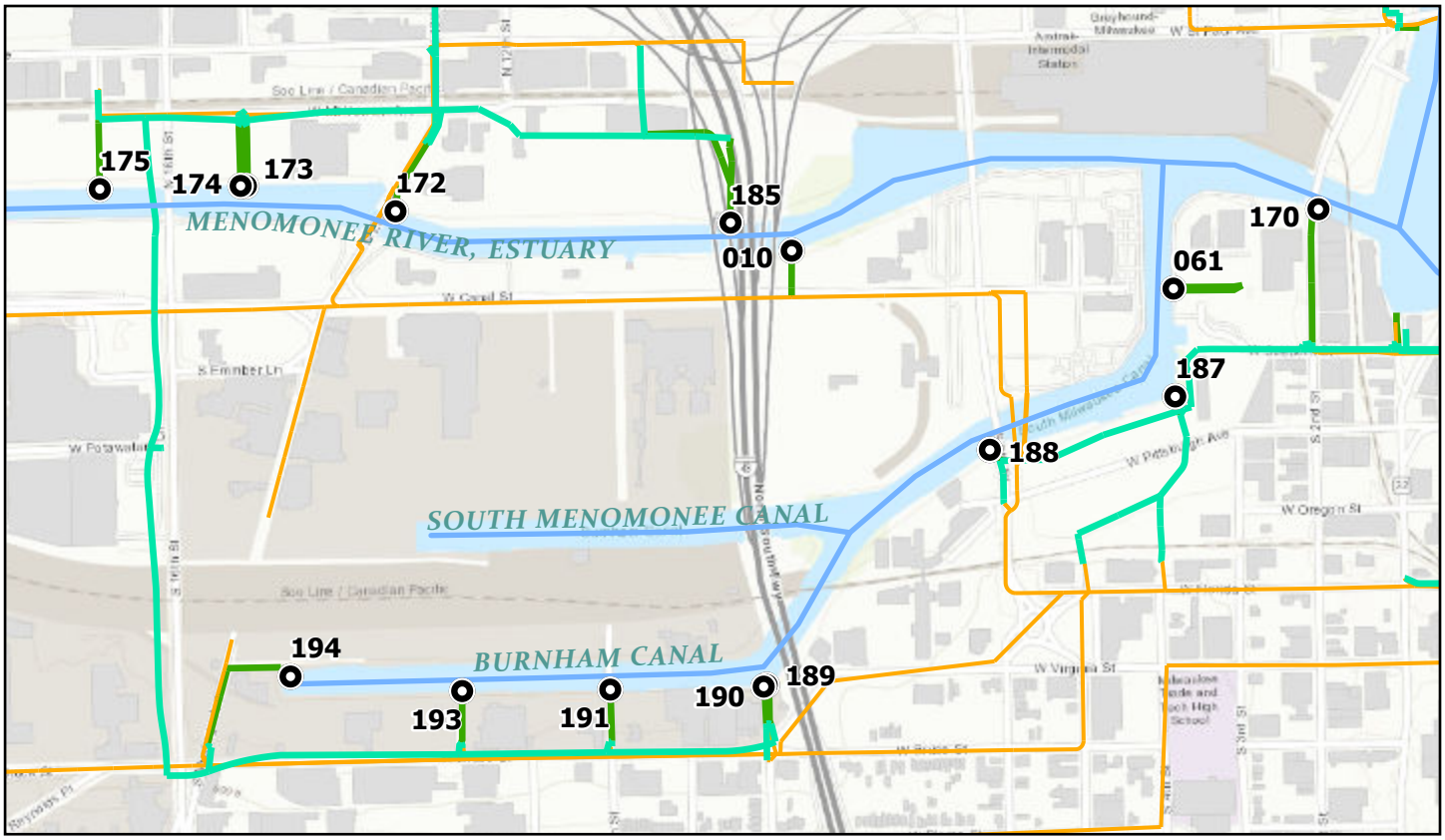


Figure 2.4

Milwaukee River and Lincoln Creek Combined Sewer Outfalls

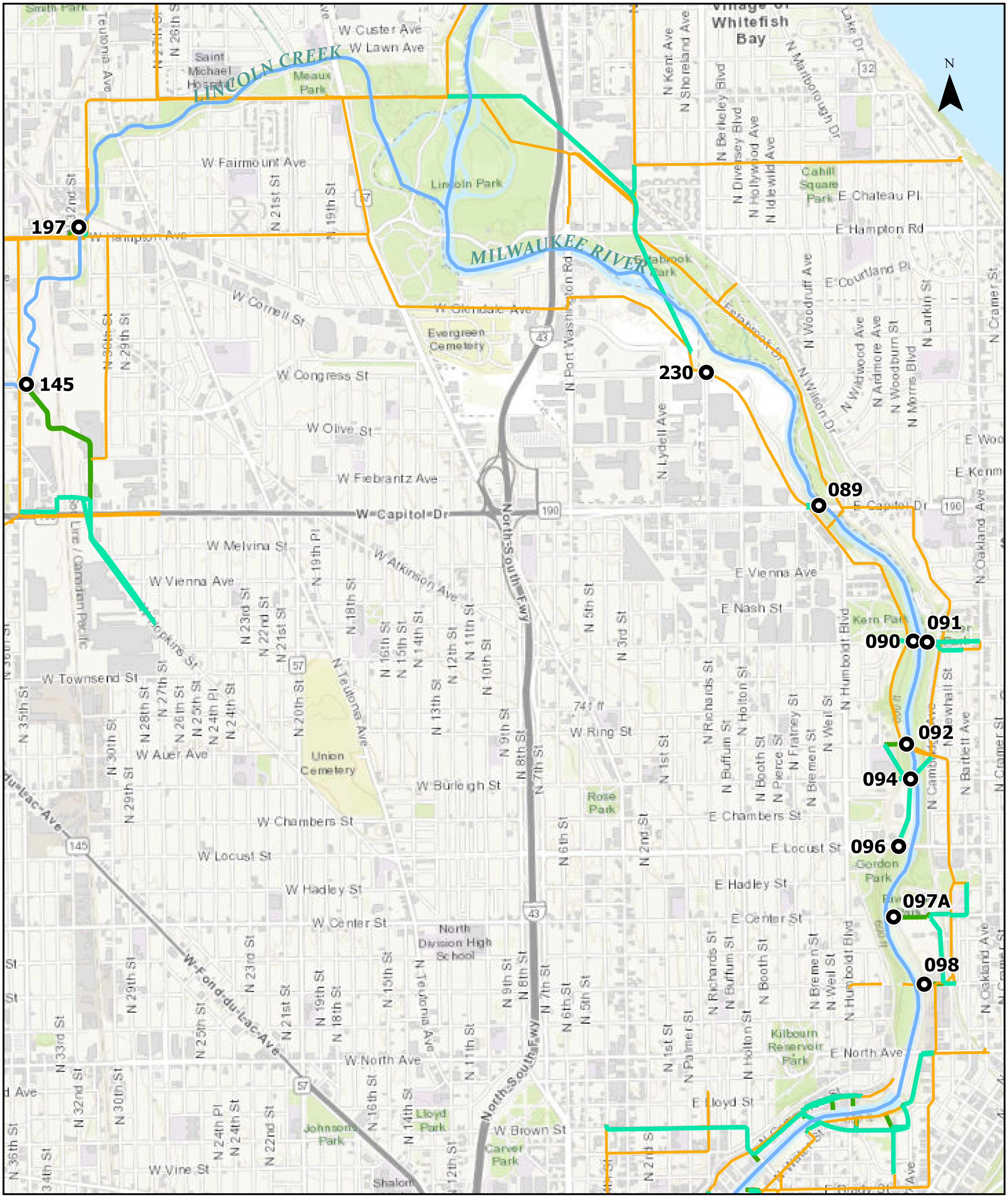


Figure 2.5
Milwaukee River Combined Sewer Outfalls

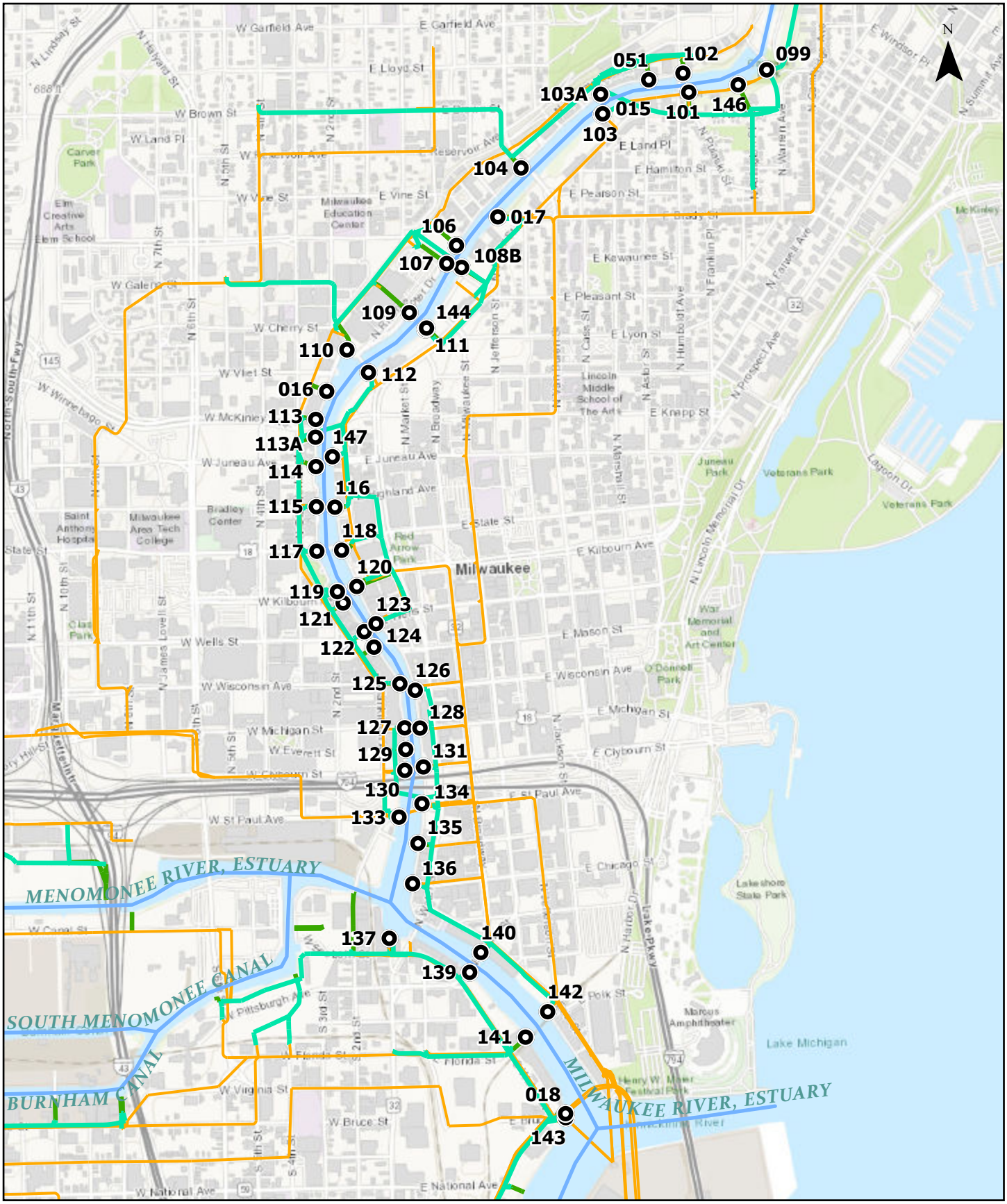


Table 2.1
Combined Sewer Overflow Outfall Summary

Surface Water	Number of Outfalls
Milwaukee River	60
Kinnickinnic River	25
Menomonee River	18
Menomonee Canal	3
Burnham Canal	5
Lincoln Creek	2
Lake Michigan	2
Total	115

Table 2.2
Combined Sewer Overflow Outfalls Discharging to the Milwaukee River

Outfall Number	Location
015	N. Marshall Street extended
016	W. Vliet Street extended, east of N. 3rd Street
017	N. Van Buren Street at E. Brady Street
018	S. Water Street at E. Bruce Street
051	300 ft. west of N. Humboldt Avenue & N. Weil Avenue extended
089	E. Capitol Drive
090	E. Keefe Avenue
091	E. Edgewood Avenue
092	E. Auer Avenue
094	E. Burleigh Street
096	E. Locust Street
097A	E. Park Place
098	E. Bradford Avenue
099	E. Boylston Street
101	N. Pulaski Street
102	N. Humboldt Avenue
103	N. Marshall Street
103A	1944 N. Commerce Street
104	N. Holton Street
106	N. of E. Pleasant Street
107	E. Walnut Street
108B	E. Pleasant Street at N. Water Street
109	N. of W. Cherry Street
110	W. Cherry Street

Table 2.2 (cont.)

Combined Sewer Overflow Outfalls Discharging to the Milwaukee River

Outfall Number	Location
111	E. Lyon Street
112	E. Ogden Avenue
113	W. McKinley Avenue
113A	W. McKinley Avenue
114	W. Juneau Avenue
115	W. Highland Avenue
116	E. Highland Avenue
117	W. State Street
118	E. State Street
119	W. Kilbourn Avenue
120	E. Kilbourn Avenue
121	N. of W. Wells Street
122	W. Wells Street
123	E. Wells Street
124	N. of W. Wisconsin Avenue
125	W. Wisconsin Avenue at Milwaukee River
126	E. Wisconsin Avenue
127	W. Michigan Street
128	E. Michigan Street
129	N. of W. Clybourn Street
130	W. Clyboun Street
131	E. Clybourn Street
133	W. St. Paul Avenue
134	E. St. Paul Avenue
135	E. Buffalo Street
136	E. Chicago Street
137	S. 1st Place
139	E. Pittsburgh Avenue
140	N. Broadway
141	E. Florida Street
142	E. Polk Street
143	E. Bruce Street
144	E. Lyon Street
146	N. Arlington Place
147	E. Juneau Avenue
230	N. Richards Street at E. Congress Street

Table 2.3

Combined Sewer Overflow Outfalls Discharging to the Kinnickinnic River

Outfall Number	Location
019	S. First Street
148	E. National Avenue
149	S. of E. Walker Street
150	S. of E. Washington Street
151	E. Greenfield Avenue
152	S. Kinnickinnic Avenue (north bank)
153	S. Kinnickinnic Avenue (south bank)
154	S. 1st Street (north Bank)
155	S. 1st Street (south Bank)
156	S. 2nd Street
157	W. Rogers Street
158	W. Becher Street (north outfall)
159	W. Becher Street (south outfall)
160	South of E. Lincoln Avenue
161	W. Lincoln Avenue (west bank)
162	W. Lincoln Avenue (east bank)
163	S. Chase Avenue (north bank)
164	S. Chase Avenue (south bank)
165	S. 6th Street at W. Cleveland Avenue (middle outfall)
166	S. 6th Street at W. Cleveland Avenue (north outfall)
166A	S. 6th Street at W. Cleveland Avenue (south outfall)
167	S. 8th Street
168	S. 14th Street
169	S. 27th Street
260	S. 6th Street at W. Oklahoma Avenue

Table 2.4

Combined Sewer Overflow Outfalls Discharging to the Menomonee River

Outfall Number	Location
010	West Canal Street at 8th Street
170	S. 2nd Street at Menomonee River
172	N. Emmber Lane (east outfall)
173	N. 15th Street (east outfall)
174	N. 15th Street (west outfall)
175	N. 17th Street
176	N. 25th Street
177	N. 26th Street
177A	123 N. 25th Street
178	S. 27th Street at Menomonee River (west outfall)
180	S. 35th Street
181	W. Wisconsin Avenue at Menomonee River
182	N. 43rd Street
182A	4251 W. State Street
183	N. 45th Street
184	N. Hawley Road
185	N. 9th Street Extended
262	59th Street and State Street

Table 2.5

Combined Sewer Overflow Outfalls Discharging to the Menomonee Canal

Outfall Number	Location
061	Emergency Wastewater Exit Facility
187	S. 4th Street
188	S. 6th Street

Table 2.6

Combined Sewer Overflow Outfalls Discharging to the Burnham Canal

Outfall Number	Location
189	S. 9th Street (east outfall)
190	S. 9th Street (west outfall)
191	S. 11th Street
193	S. 13th Street
194	S. Muskego Avenue

Table 2.7

Combined Sewer Overflow Outfalls Discharging to Lincoln Creek

Outfall Number	Location
145	N. 35th Street and W. Congress Street
197	Hampton Avenue at 32nd Street

Table 2.8

Combined Sewer Overflow Outfalls Discharging to Lake Michigan

Outfall Number	Location
195	E. Bay Street
196	E. Russell Avenue

Section 3 Potentially Impacted Public Access Areas

This section identifies surface water public access areas within the combined sewer area. Although a potential exists for combined sewer overflows to affect these areas, combined sewer overflows are only one of many factors that affect water quality. The identification of a public access area in this section does not imply that combined sewer overflows are the actual cause of any specific water quality impairments at these locations at any specific time.

Figures 3.1, 3.2, and 3.3 show the water supply intakes, beaches, and recreational boat launches within the combined sewer area.

The City of Milwaukee Water Works has two water intakes in Lake Michigan near the combined sewer area. However, the Linnwood intake is 1.25 miles from the shoreline at a depth of 60 feet and the Texas Avenue intake is 2.5 miles from the shore at a depth of 60 feet. (Contact: Milwaukee Water Works, 414-286-2830)

Milwaukee County operates three beaches near the combined sewer area: Bradford, McKinley, and South Shore. From Memorial Day through Labor Day, the City of Milwaukee Health Department samples surface water at these beaches and provides water quality advice to beach users. Information is available from the main health department web page and a beach page:

http://city.milwaukee.gov/Health/#.WzUh79JKjic

http://city.milwaukee.gov/health/recreational-Water/health/beach-Advisories.htm#.WzUiGNJKjic

Atwater Beach in Shorewood is within the combined sewer area. However, the combined sewer overflow outfalls discharge to the Milwaukee River, far from the beach, rather than to Lake Michigan. Therefore, combined sewer overflows will not affect Atwater Beach.

Contact: Milwaukee Health Department, 414-286-3521
North Shore Health Department (Shorewood Atwater Beach), 414-371-2980

Six sites for boat launching are within or near the combined sewer area. These sites are within the City of Milwaukee. The Milwaukee Health Department does not routinely monitor these sites.

Table 3.1
Boat Launch Sites

Waterway	Launch Site
Lake Michigan	McKinley, South Shore
Milwaukee River	Riverfront, Kiwanis Landing
Menomonee River	Emmber Lane, Valley Passage

Contact: Milwaukee Health Department, 414-286-3521

Figure 3.1

Potentially Impacted Public Access Areas – Kinnickinnic River and South Shore

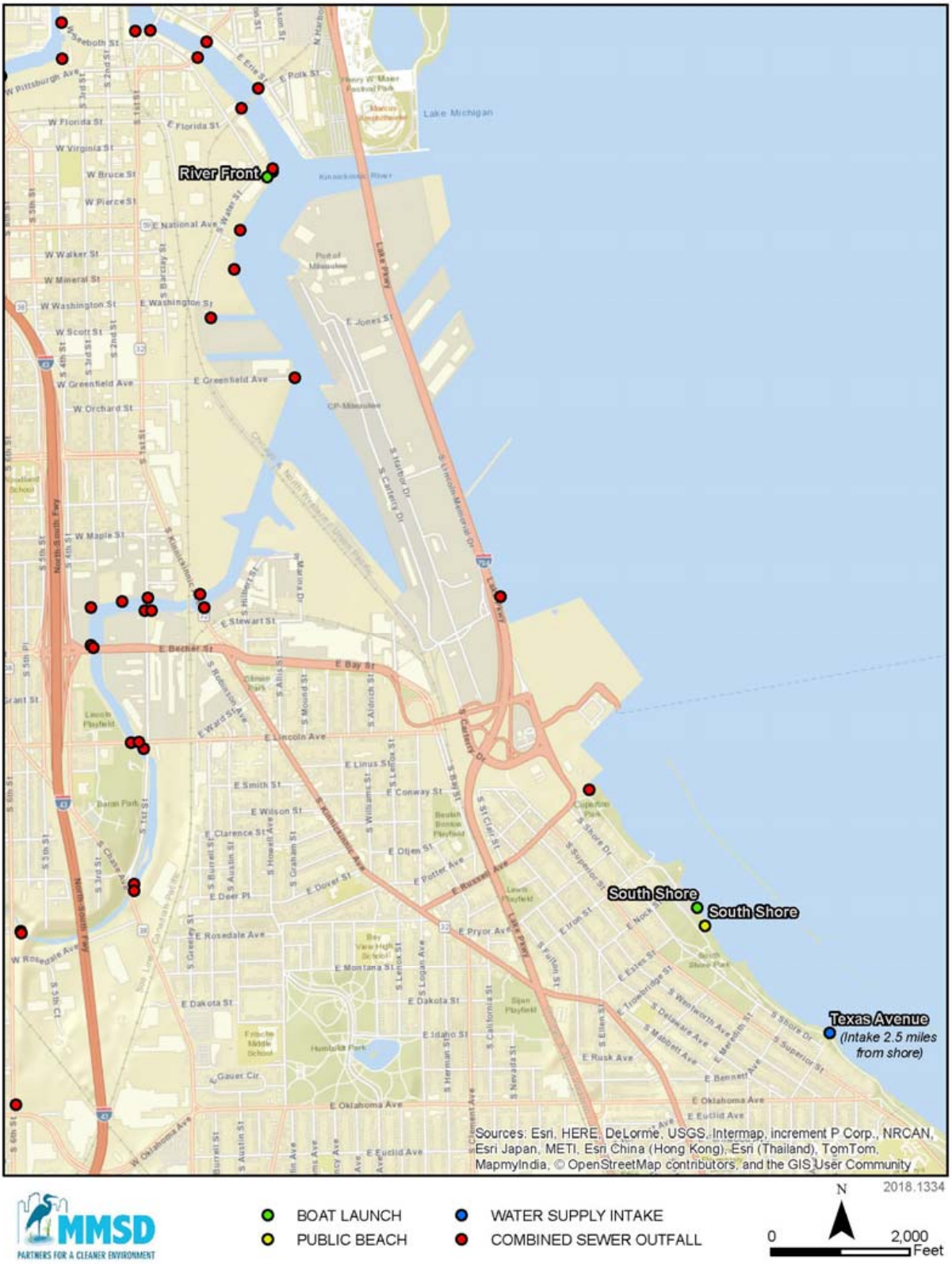


Figure 3.2

Potentially Impacted Public Access Areas – Milwaukee River and North Shore

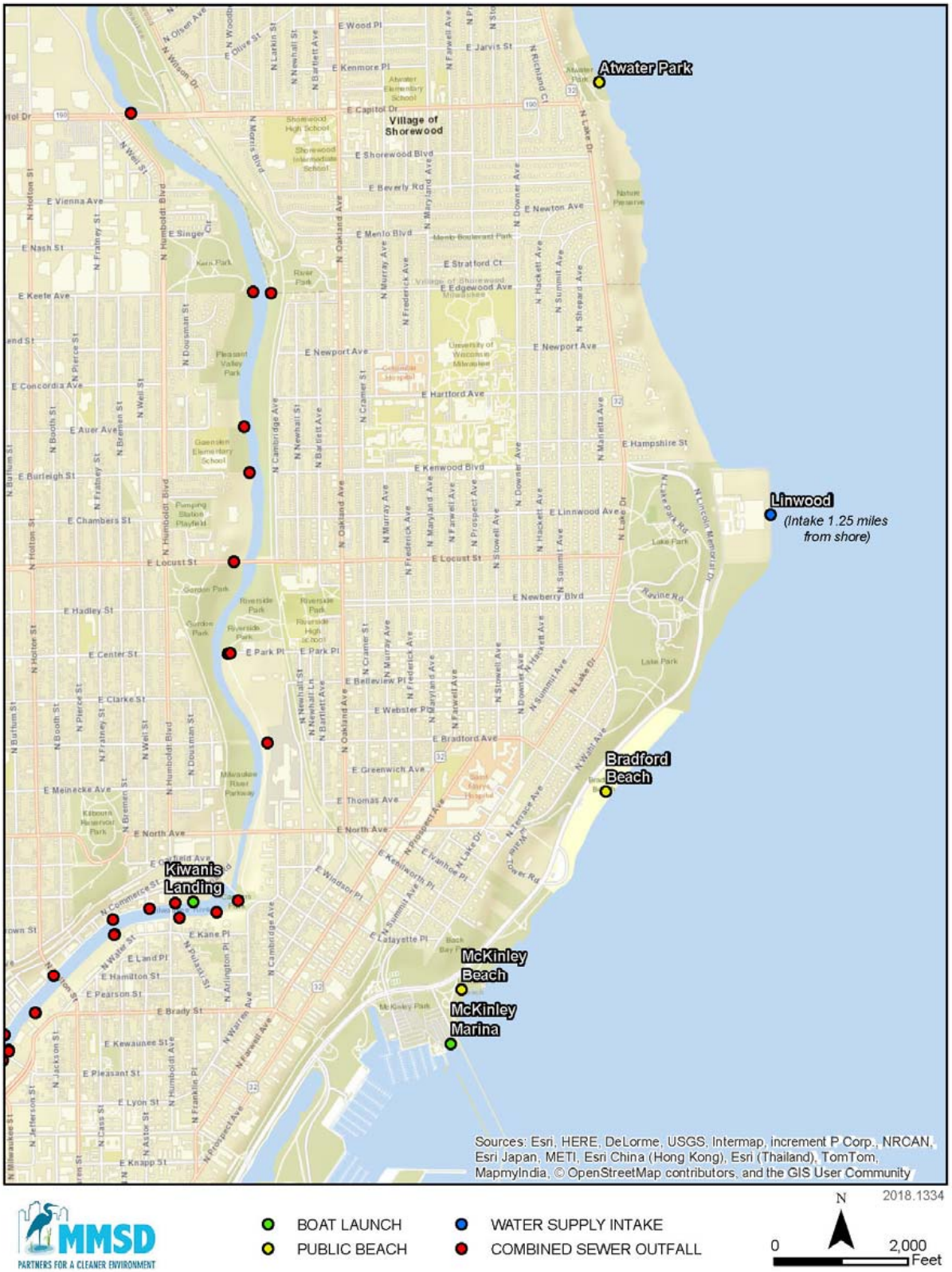
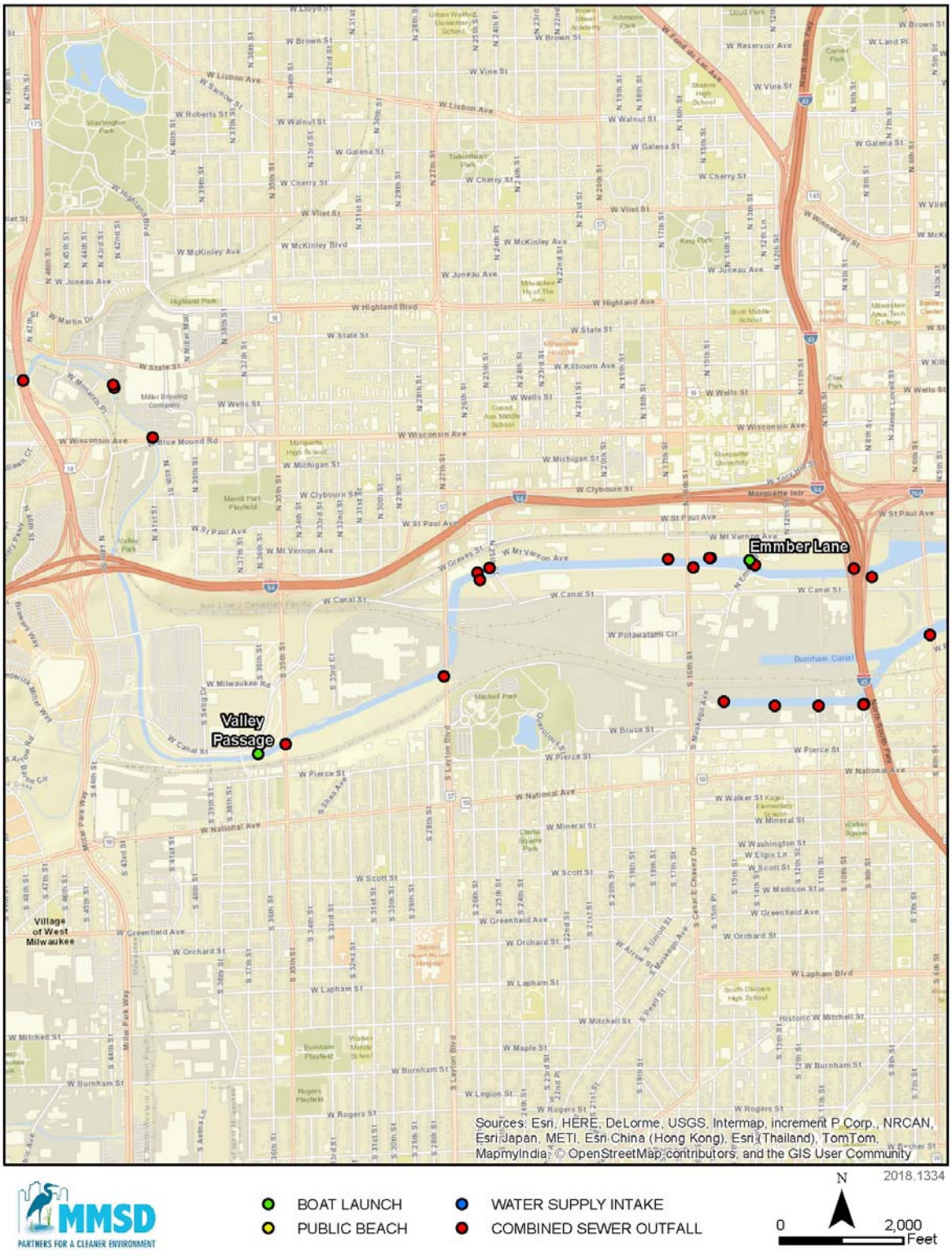


Figure 3.3

Potentially Impacted Public Access Areas – Menomonee River



Section 4 Combined Sewer Overflows in 2018

There were six CSO events in 2018, all wet weather related. The year 2018 was one of the wettest on record as measured at the General Mitchell International Airport (MKE) National Weather Service weather station. The average annual rainfall at the MKE weather station is 34.76 inches. The total rainfall measured at the MKE weather station for 2018 was 45.08 inches, nearly 30% greater than the historical average. Below are the dates and volumes of each CSO event in 2018.

2018 CSO Event Date	Estimated Discharge Million Gallons (MG)
June 18-20	360
July 4	0.6
August 20-21	98.7
August 27-29	295.7
September 5-6	148
October 1-4	368
2018 Total	1,271 MG

For CSO events, the District provides various notices to other government agencies and the public. These are described in detail in Sections 6 and 7 of our Combined Sewer Overflow Public Notification Plan. The final notification for each event is a five-day notification letter sent to the Wisconsin Department of Natural Resources (WDNR). Each of the Five Day notification letters for 2018 are contained in this report as Appendices A through F. These letters include date, location, cause, duration and estimated volume of the discharges measured at the District's Inline Storage System (ISS) dropshafts. The District is required by our WPDES permit to collect samples at overflowing ISS dropshafts during each event. Appendix G contains the monitoring data for the samples collected in 2018.

Section 5 Permittee Contact Information

For information or questions regarding this report or any of the information contained herein, submit questions through our website: https://www.mmsd.com/about-us/contact-us or contact District Executive Director Kevin Shafer at kshafer@mmsd.com.

Our address is Milwaukee Metropolitan Sewerage District
260 West Seeboth St.
Milwaukee Wisconsin 53204

Section 6 CSO Control Policy Compliance

The District continues to consistently meet CSO Performance Standards for water quality-based requirements as outlined in our permit. As stated in the current WPDES Permit (Section 4.3.3 (10):
"The permittee has submitted the documentation that demonstrated implementation of each of the nine minimum controls in accordance with Section IIB of the U.S. EPA CSO Control Policy. The permittee submitted this documentation to the Department as an element of its 2020 Facilities Plan, approved by the Department on December 26, 2007."

Not content with just maintaining status quo, however, the District has a goal of 0 CSOs as targeted in our 2035 Vision Statement. The District's current six-year capital financing plan includes $834 million (and another $606 million in debt service payments related to prior years capital expenditures) in capital expenditures to maintain and improve the regional capital infrastructure that helps protect public health, homes, businesses and waterways. This includes spending to fix private property sources of excess water that can overwhelm sanitary sewer systems. Having already committed $4 billion for clean water infrastructure in previous years, MMSD's asset management is vital for optimizing reliability and performance of new and aging resources for our treatment plants, sewers, and flood management facilities.

APPENDIX A

June 18-20, 2018
Combined Sewer Overflow Event Five-Day Notification Letter

MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

June 22, 2018

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: June 18-20, 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 treatment that occurred June 18-20, 2018. This information complies with the reporting requirements of sections 10.2.6 and 10.2.8 of District's WPDES permit.

Reason for Overflow
The combined sewer overflows occurred as a result of intense rainfall on June 18th. At 2:50 PM the volume in the ISS was 32 million gallons. Within one hour, the volume in the ISS was 324 million gallons and the intensity of the rainfall was measured at 6.84 inches per hour at District rain gauge WS1207. With the flow rate into the ISS at 6.5 billion gallons per day and the estimated time to fill the ISS of 24 minutes the decision was made to close the combined sewage gates and reserve the remaining capacity for separate sewerage. The total precipitation measured for this event was 4.04" at District gauge WS1206.

The Depth Duration Frequency Curves are attached and were generated for District rain gauge WS1207, using National Oceanic and Atmospheric Administration Atlas 14, Volume 8, Version 2. This reference shows that this rainfall event was representative of a 50- year recurrence interval storm.

Estimated Duration of Combined Sewer Discharge
The combined sewer gates to the ISS began to close at approximately 3:50 PM on June 18, 2018. All discharges were concluded on or before 4:00 AM on June 20th.

Estimated Volume of Discharge
The current estimate of the overflow volume is 360 million gallons. This amount includes four combined sewer overflows from outfalls that are not tributary to the 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

Combined Sewer Wet Weather Flow Treatment

To minimize the volume of combined sewer overflows the Combined Sewer Wet Weather Flow Treatment at Jones Island was utilized. The process began on June 18, 2018 at 4:00 PM and concluded on June 20, 2018 at 1:00 AM. The total amount treated in this process was 112 million gallons.

Steps Taken to Prevent another Discharge
The District and Veolia Water Milwaukee will continue to operate the conveyance system, ISS, 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 District is also funding a 10 year, $58 million-dollar Private Party Inflow and Infiltration Reduction Program throughout our service area to further reduce the risk of basement backups and separate sewer overflows.

The following supporting documents are attached:

- CSO Monitoring Report Summary
- Precipitation Map at District Rain Gauges for June 18-19
- Depth Duration Frequency Curve

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

Milwaukee Metropolitan Sewerage District
CSO Monitoring Report Summary

Reporting Period Start Date 6/18/18
Reporting Period End Date: 6/20/18

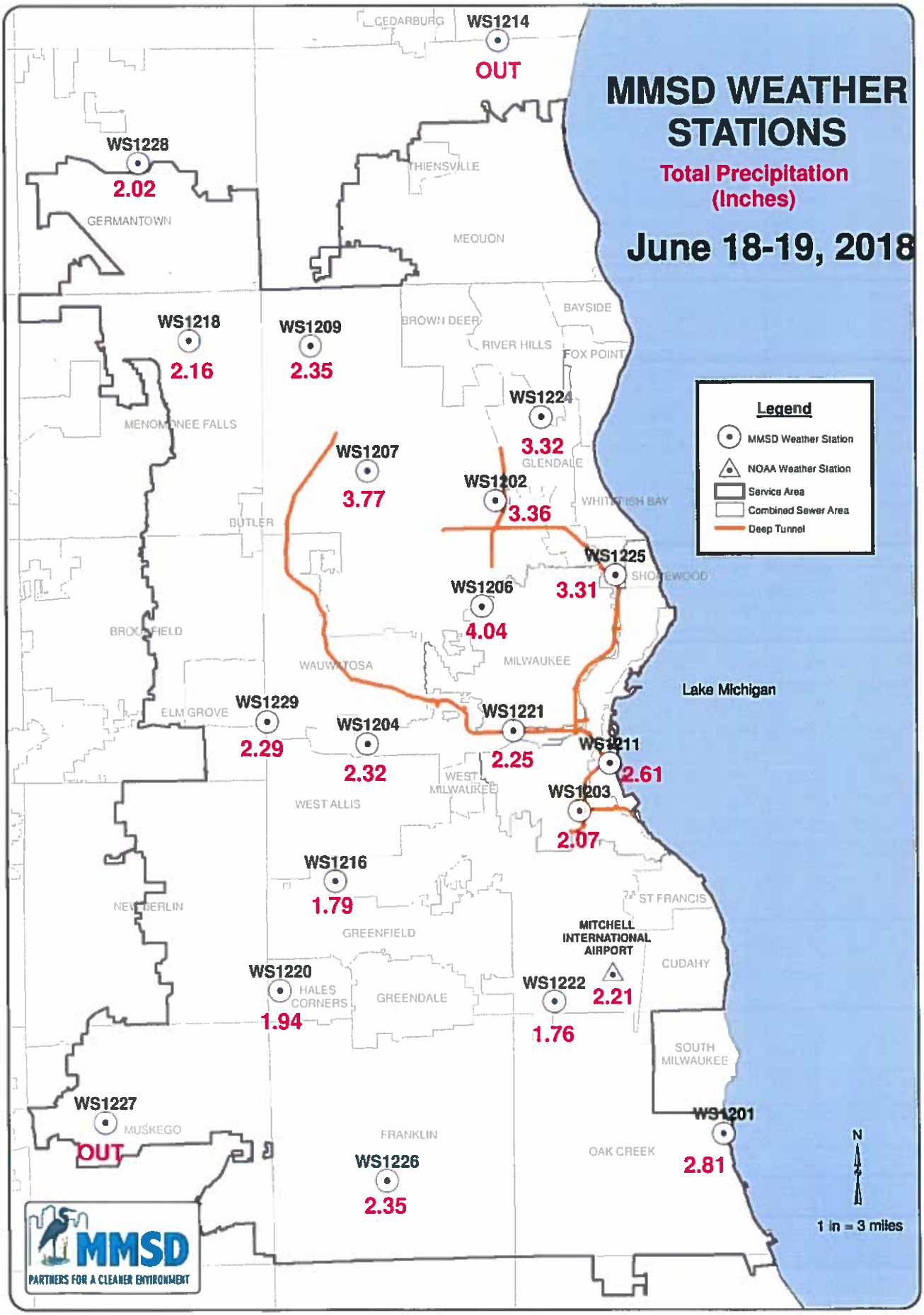
Collector System		Waterbody	Total Estimated Volume (MG)	Total Estimated Duration (Hours)
CT2	WPDES 113 North Hawley Road & West State Street	Menomonee	0.8	2
CT3/4	WPDES 114 North 44th Street & West Wells Street	Menomonee	46.7	10
CT5/6	WPDES 115 North 25th Street at the Menomonee River	Menomonee	13.9	2
CT7	WPDES 116 South 16th Street & West Canal Street	Menomonee	1.3	5
CT8	WPDES 117 South 3rd Street & West Seeboth Street	Menomonee	4.5 *	5
KK1	WPDES 118 South 6th Street & West Cleveland Avenue	Kinnickinnic	9.7	9
KK2	WPDES 119 South 1st Street & South Chase Avenue	Kinnickinnic	1.3	3
KK3	WPDES 120 South 4th Street & West Becher Street	Kinnickinnic	14.0	3
KK4	WPDES 121 South 1st Street & West Lincoln Avenue	Kinnickinnic	3.3 *	3
LMN	WPDES 122 East Bay Street & East Ward Street	Lake Michigan	13.8	4
LMS	WPDES 123 South Lincoln Memorial Drive & East Russell Avenue	Lake Michigan	0.0	0
NS4	WPDES 104 North Cambridge Avenue & East Providence Avenue	Milwaukee	9.1	16
NS5	WPDES 105 East Burleigh Street at the Milwaukee River	Milwaukee	4.3	3
NS6	WPDES 106 East Park Place at the Milwaukee River	Milwaukee	10.4	11
NS7	WPDES 107 North Commerce Street & North Booth Street	Milwaukee	118.6	31
NS8	WPDES 108 North Commerce Street & East Pleasant Street	Milwaukee	32.5	19
NS9	WPDES 109 North Old World 3rd Street & West McKinley Avenue	Milwaukee	5.4	9
NS10	WPDES 110 North Water Street & East St. Paul Avenue	Milwaukee	6.0 *	5
NS11	WPDES 111 North Humboldt Avenue & East Capitol Drive	Milwaukee	6.6	10
NS12	WPDES 112 North 31st Street & West Capitol Drive	Lincoln Creek	5.2 *	2
Total Estimated CSO Discharge For Dropshaft Basins			**307.4**	

Combined Sewer Overflow Volumes from CSO Outfalls Not Tributary to the ISS Dropshafts

CSO-015 North Marshall Street at the Milwaukee River	Milwaukee	0.0	1
CSO-018 South Water Street & E. Bruce Street	Estuary	1.2	3
CSO-197 West Hampton Avenue & North 32nd Street	Lincoln Creek	3.4	2
CSO-262 North 59th Street & West Trenton Place	Menomonee	48.0	20
Total Estimated Non-Tributary Discharge		**52.6**	

TOTAL ESTIMATED CSO DISCHARGE: **360.0 MG**
For 6/18/18 Through 6/20/18 **5 Minute Calculation**

* Flow adjusted; see CSO Flow Adjustment Report for details.


MMSD WEATHER STATIONS
Total Precipitation (Inches)
June 18-19, 2018
Legend
MMSD Weather Station
NOAA Weather Station
Service Area
Combined Sewer Area
Deep Tunnel
WS1214 OUT
WS1228 2.02
WS1218 2.16
WS1209 2.35
WS1224 3.32
WS1207 3.77
WS1202 3.36
WS1225 3.31
WS1206 4.04
WS1229 2.29
WS1204 2.32
WS1221 2.25
WS1211 2.61
WS1203 2.07
WS1216 1.79
WS1220 1.94
WS1222 2.21
1.76
WS1227 OUT
WS1226 2.35
WS1201 2.81
CEDARBURG
THIENSVILLE
GERMANTOWN
MEQUON
BROWN DEER
BAYSIDE
RIVER HILLS
FOX POINT
MENOMONEE FALLS
GLENDALE
WHITEFISH BAY
BUTLER
SHOREWOOD
BROOKFIELD
WAUWATOSA
MILWAUKEE
Lake Michigan
ELM GROVE
WEST MILWAUKEE
WEST ALLIS
NEW BERLIN
ST FRANCIS
GREENFIELD
MITCHELL INTERNATIONAL AIRPORT
CUDAHY
HALES CORNERS
GREENDALE
SOUTH MILWAUKEE
MUSKEGO
FRANKLIN
OAK CREEK
N
1 in = 3 miles
MMSD
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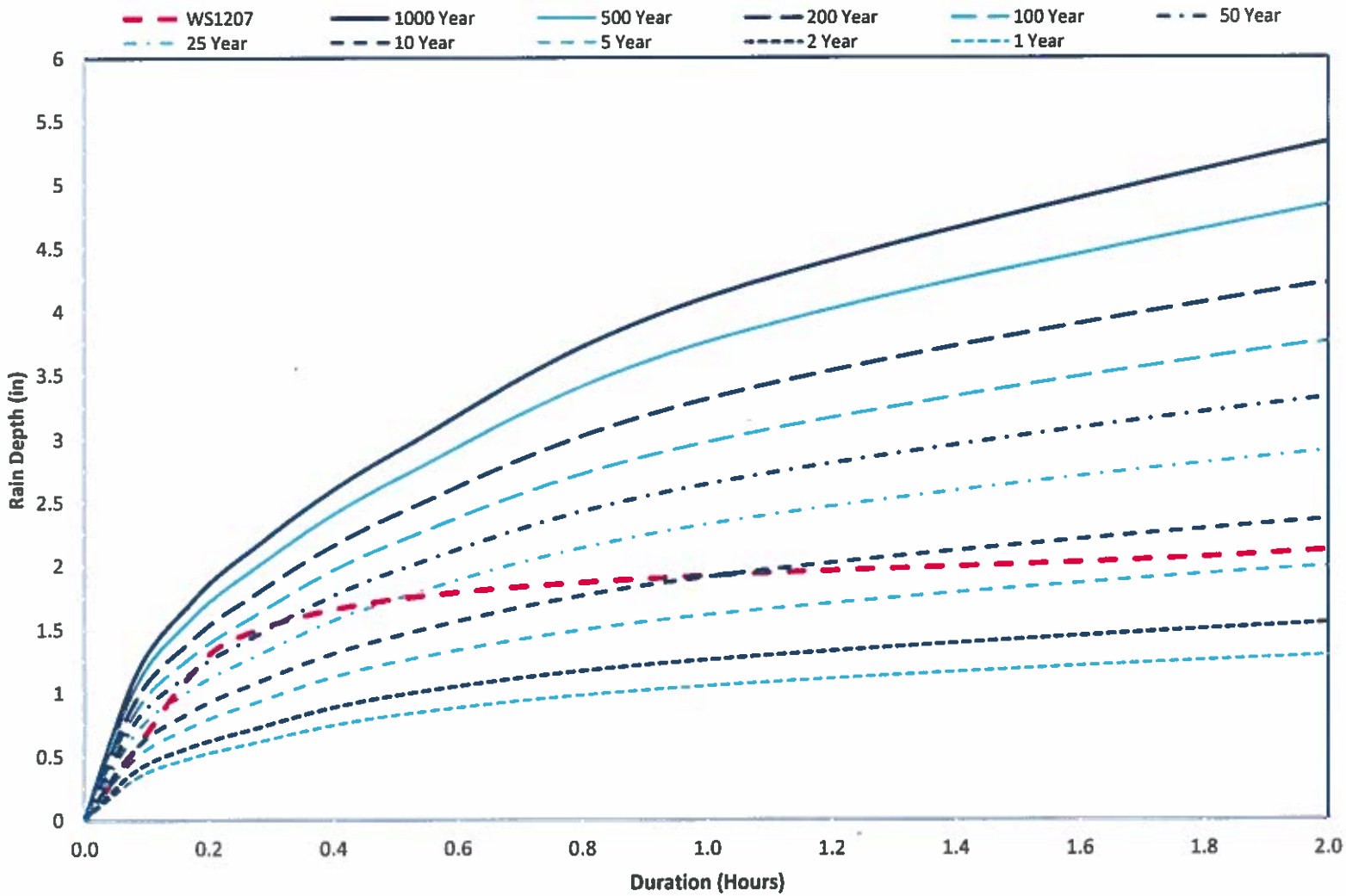
Depth Duration Frequency Curve
Based on NOAA Atlas 14, Vol. 8, Ver. 2
With Rainfall Data from Gauge WS1207 Reported to MMSD
June 18-19, 2018



APPENDIX B

July 4, 2018
Combined Sewer Overflow Event Five-Day Notification Letter

MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

July 9, 2018

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: July 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 that occurred July 4, 2018. This information complies with the reporting requirements of section 10.2.6 of the MMSD WPDES permit.

Reason for Overflow
The combined sewer overflow occurred due to heavy precipitation on July 4, 2018. Between 7:07 PM and 7:57 PM, District rain gauge WS1206 at 3626 W. Fond du Lac Ave. recorded 2.03 inches of rain at a maximum intensity of 4.92 inches per hour.

The results of a site investigation and data analysis show that the intense rainfall caused three City of Milwaukee relief sewers (72", 60" and 36") to overwhelm the 84" near surface collector. This caused the emergency relief gate at Diversion Structure 145A to open to protect against basement backups and localized flooding.

The Depth Duration Frequency Curves are attached and were generated for District rain gauge WS1206, using National Oceanic and Atmospheric Administration Atlas 14, Volume 8, Version 2. This reference shows that this rainfall event was representative of a 25-year recurrence interval storm.

Estimated Duration of Combined Sewer Discharge
The discharge from WPDES Outfall 145, located at N. 35th Street and W. Congress Street, began at 7:40 PM and ended by 7:52 PM on July 4, 2018.

Estimated Volume of Discharge
The estimate of the overflow volume is 0.6 million gallons.

Milwaukee Metropolitan Sewerage District
260 W. Seeboth Street, Milwaukee, WI 53204-1446
414-272-5100 www.mmsd.com

Steps Taken to Prevent another Discharge

The District continues to move forward implementing a solution regarding isolated combined sewer overflows at WPDES Outfall 145 during high intensity precipitation events. The preliminary design report was prepared by our consultant and the alternatives were presented to District staff. District staff reviewed the various alternatives, selected an alternative, and directed the consultant to proceed with final design.

The District and Veolia Water Milwaukee will continue to operate the conveyance system, Inline Storage System (ISS), and the Jones Island and South Shore water reclamation facilities to prevent separated sewer overflows and 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 July 4
- Depth Duration Frequency Curve

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

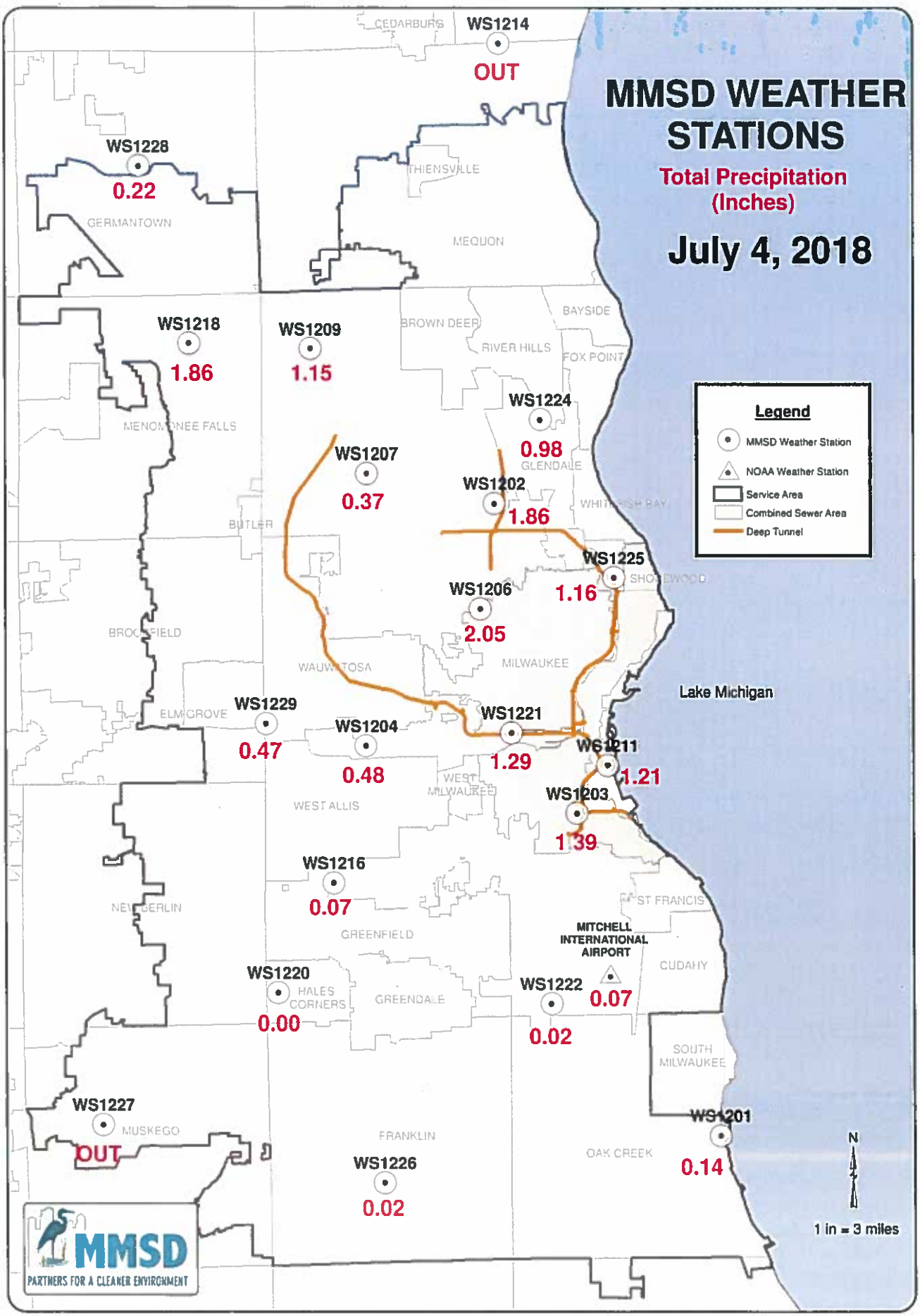
c: S. Anthony, MMSD
T. Nowicki, MMSD
S. Royer, Veolia Water Milwaukee

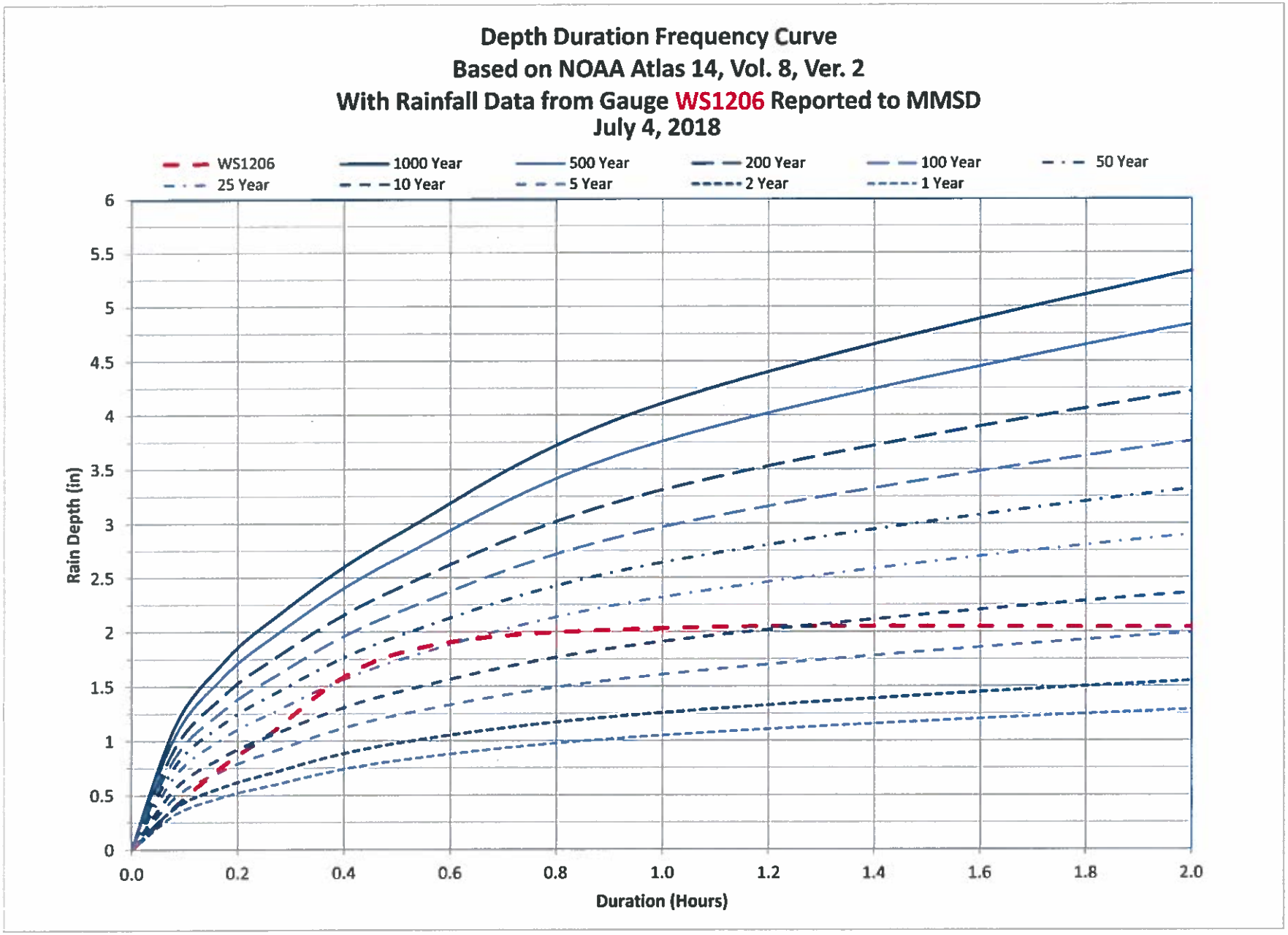
Milwaukee Metropolitan Sewerage District
CSO Monitoring Report Summary

Reporting Period Start Date 7/4/18
Reporting Period End Date: 7/4/18

Collector System		Waterbody	Total Estimated Volume (MG)	Total Estimated Duration (Hours)
CT2	WPDES 113 North Hawley Road & West State Street	Menomonee	0.0	0
CT3/4	WPDES 114 North 44th Street & West Wells Street	Menomonee	0.0	0
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	0.0	0
LMS	WPDES 123 South Lincoln Memorial Drive & East Russell Avenue	Lake Michigan	0.0	0
NS4	WPDES 104 North Cambridge Avenue & East Providence Avenue	Milwaukee	0.0	0
NS5	WPDES 105 East Burleigh Street at the Milwaukee River	Milwaukee	0.0	0
NS6	WPDES 106 East Park Place at the Milwaukee River	Milwaukee	0.0	0
NS7	WPDES 107 North Commerce Street & North Booth Street	Milwaukee	0.0	0
NS8	WPDES 108 North Commerce Street & East Pleasant Street	Milwaukee	0.0	0
NS9	WPDES 109 North Old World 3rd Street & West McKinley Avenue	Milwaukee	0.0	0
NS10	WPDES 110 North Water Street & East St. Paul Avenue	Milwaukee	0.0	0
NS11	WPDES 111 North Humboldt Avenue & East Capitol Drive	Milwaukee	0.0	0
NS12	WPDES 112 North 31st Street & West Capitol Drive	Lincoln Creek	0.6	.20
Total Estimated CSO Discharge for Dropshaft Basins			**.6**	

TOTAL ESTIMATED CSO DISCHARGE: **0.6 MG**
For 7/4/18 Through 7/4/18 **5 Minute Calculation**


MMSD WEATHER STATIONS
Total Precipitation (Inches)
July 4, 2018
Legend
MMSD Weather Station
NOAA Weather Station
Service Area
Combined Sewer Area
Deep Tunnel
WS1214 OUT
WS1228 0.22
WS1218 1.86
WS1209 1.15
WS1224 0.98
WS1207 0.37
WS1202 1.86
WS1225 1.16
WS1206 2.05
WS1229 0.47
WS1204 0.48
WS1221 1.29
WS1211 1.21
WS1203 1.39
WS1216 0.07
WS1220 0.00
WS1222 0.07
WS1227 OUT
WS1226 0.02
WS1201 0.14
CEDARBURG
THIENSVILLE
GERMANTOWN
MEQUON
BROWN DEER
BAYSIDE
RIVER HILLS
FOX POINT
MENOMONEE FALLS
GLENDALE
WHITEFISH BAY
BUTLER
SHOREWOOD
BROOKFIELD
WAUWATOSA
MILWAUKEE
Lake Michigan
ELM GROVE
WEST MILWAUKEE
WEST ALLIS
NEW BERLIN
ST FRANCIS
GREENFIELD
MITCHELL INTERNATIONAL AIRPORT
CUDAHY
HALES CORNERS
GREENDALE
SOUTH MILWAUKEE
MUSKEGO
FRANKLIN
OAK CREEK
N
1 in = 3 miles
MMSD
PARTNERS FOR A CLEANER ENVIRONMENT


Depth Duration Frequency Curve
Based on NOAA Atlas 14, Vol. 8, Ver. 2
With Rainfall Data from Gauge WS1206 Reported to MMSD
July 4, 2018
WS1206
1000 Year
500 Year
200 Year
100 Year
50 Year
25 Year
10 Year
5 Year
2 Year
1 Year
Rain Depth (in)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
5.5
6
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Duration (Hours)

APPENDIX C

August 20-21, 2018
Combined Sewer Overflow Event Five-Day Notification Letter

PARTNERS FOR A CLEANER ENVIRONMENT

August 24, 2018

Via Email (geisa.thielen@wisconsin.gov) and
Certified Mail - Return Receipt Requested

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

Subject: August 20-21, 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 overflows and the combined sewer wet weather treatment process that occurred August 20-21, 2018. This information complies with the reporting requirements of sections 10.2.6 and 10.2.8 of the District's WPDES permit.

Reason for Overflow

The combined sewer overflows occurred as a result of intense rainfall on the evening of August 20th. At 11:20 PM, the volume in the Inline Storage System (ISS) was 288 million gallons with an inflow rate of 6.35 billion gallons per day and an estimated time to fill of 27 minutes. By 11:30 PM, the decision was made to close the combined sewer gates to prevent basement backups and reserve the remaining capacity for separate sewage. The precipitation amount measured at District rain gauge WS1224 between 10:30 PM and 11:30 PM was 2.65 inches with a maximum intensity of 6.12 inches per hour.

The Depth Duration Frequency Curves are attached and were generated for District rain gauge WS1224, using National Oceanic and Atmospheric Administration Atlas 14, Volume 8, Version 2. This reference shows that this rainfall event was representative of a 50-year recurrence interval storm.

Estimated Duration of Combined Sewer Discharge

The discharges began shortly after the combined sewer gates closed at 11:30 PM on August 20th. All discharges were concluded by 4:00 PM on August 21st for a duration of 16.5 hours.

Estimated Volume of Discharge

The current estimate of the overflow volume is 98.7 million gallons. This amount includes one combined sewer overflow from an outfall that is 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 Discharge Monitoring Short Report.

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 at Jones Island was utilized. The process began on August 20, 2018 at 11:11 PM and concluded on August 21, 2018 at 6:22 AM. The total amount treated in this process was 21.8 million gallons.

Steps Taken to Prevent another Discharge

The District and Veolia Water Milwaukee will continue to operate the conveyance system, ISS, 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 District is also funding a 10 year, $58 million-dollar Private Party Inflow and Infiltration Reduction Program throughout our service area to further reduce the risk of basement backups and separate sewer overflows.

The following supporting documents are attached:

- CSO Monitoring Report Summary
- Precipitation Map at District Rain Gauges
- Depth Duration Frequency Curve

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

Sincerely,

Sharon K. Mertens

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

enc.

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

Milwaukee Metropolitan Sewerage District
CSO Monitoring Report Summary

Reporting Period Start Date 8/20/18
Reporting Period End Date: 8/21/18

Collector System		Waterbody	Total Estimated Volume (MG)	Total Estimated Duration (Hours)
CT2	WPDES 113 North Hawley Road & West State Street	Menomonee	1.0	2
CT3/4	WPDES 114 North 44th Street & West Wells Street	Menomonee	26.3	4
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	4.4 *	4
LMS	WPDES 123 South Lincoln Memorial Drive & East Russell Avenue	Lake Michigan	0.0	0
NS4	WPDES 104 North Cambridge Avenue & East Providence Avenue	Milwaukee	3.4	4
NS5	WPDES 105 East Burleigh Street at the Milwaukee River	Milwaukee	1.4	1
NS6	WPDES 106 East Park Place at the Milwaukee River	Milwaukee	3.0	4
NS7	WPDES 107 North Commerce Street & North Booth Street	Milwaukee	43.6	16
NS8	WPDES 108 North Commerce Street & East Pleasant Street	Milwaukee	0.9	2
NS9	WPDES 109 North Old World 3rd Street & West McKinley Avenue	Milwaukee	0.0	0
NS10	WPDES 110 North Water Street & East St. Paul Avenue	Milwaukee	0.0	0
NS11	WPDES 111 North Humboldt Avenue & East Capitol Drive	Milwaukee	3.4	5
NS12	WPDES 112 North 31st Street & West Capitol Drive	Lincoln Creek	1.0	1
Total Estimated CSO Discharge For Dropshaft Basins			**88.4**	

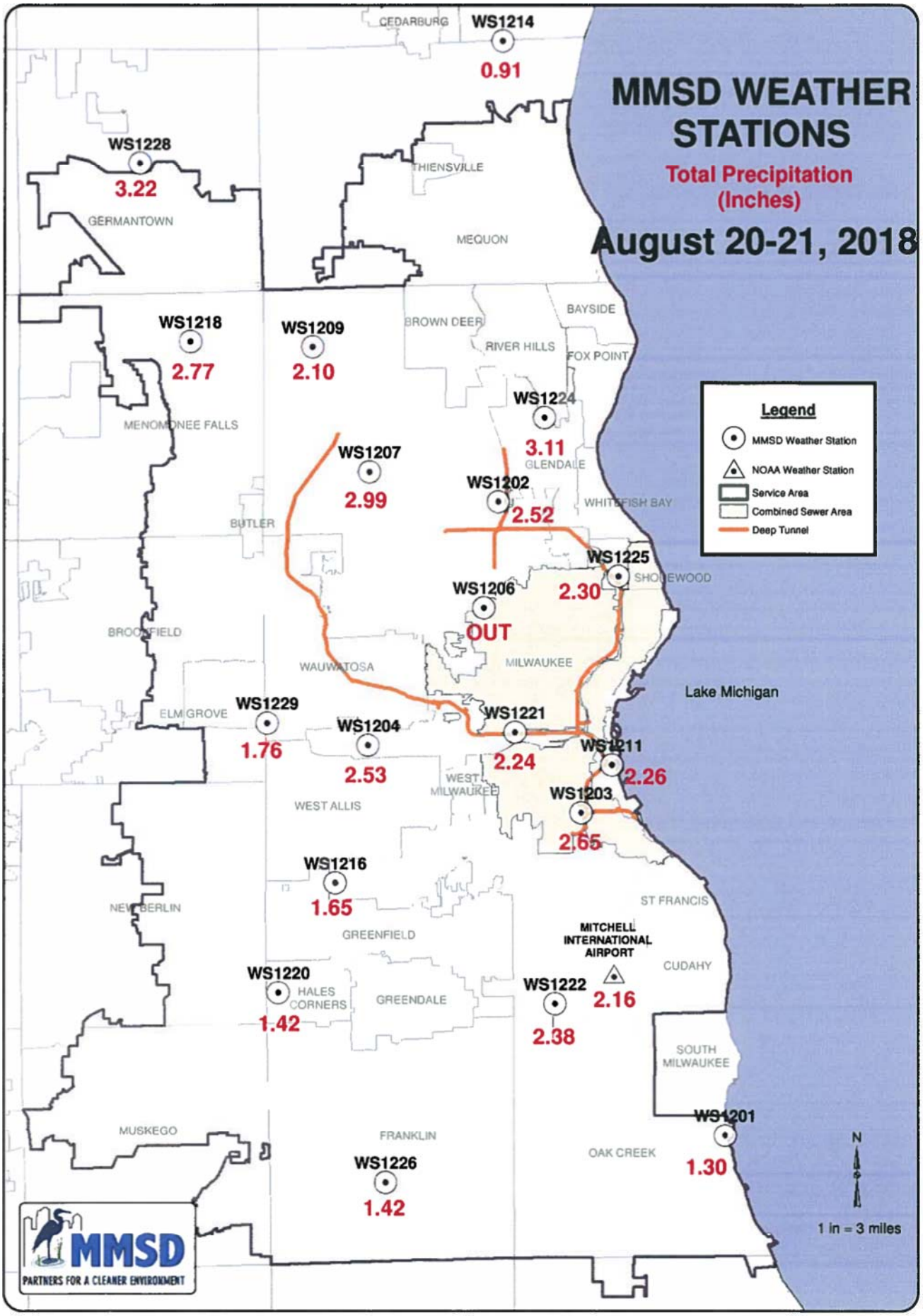
Combined Sewer Overflow Volumes from CSO Outfalls Not Tributary to the ISS Dropshafts

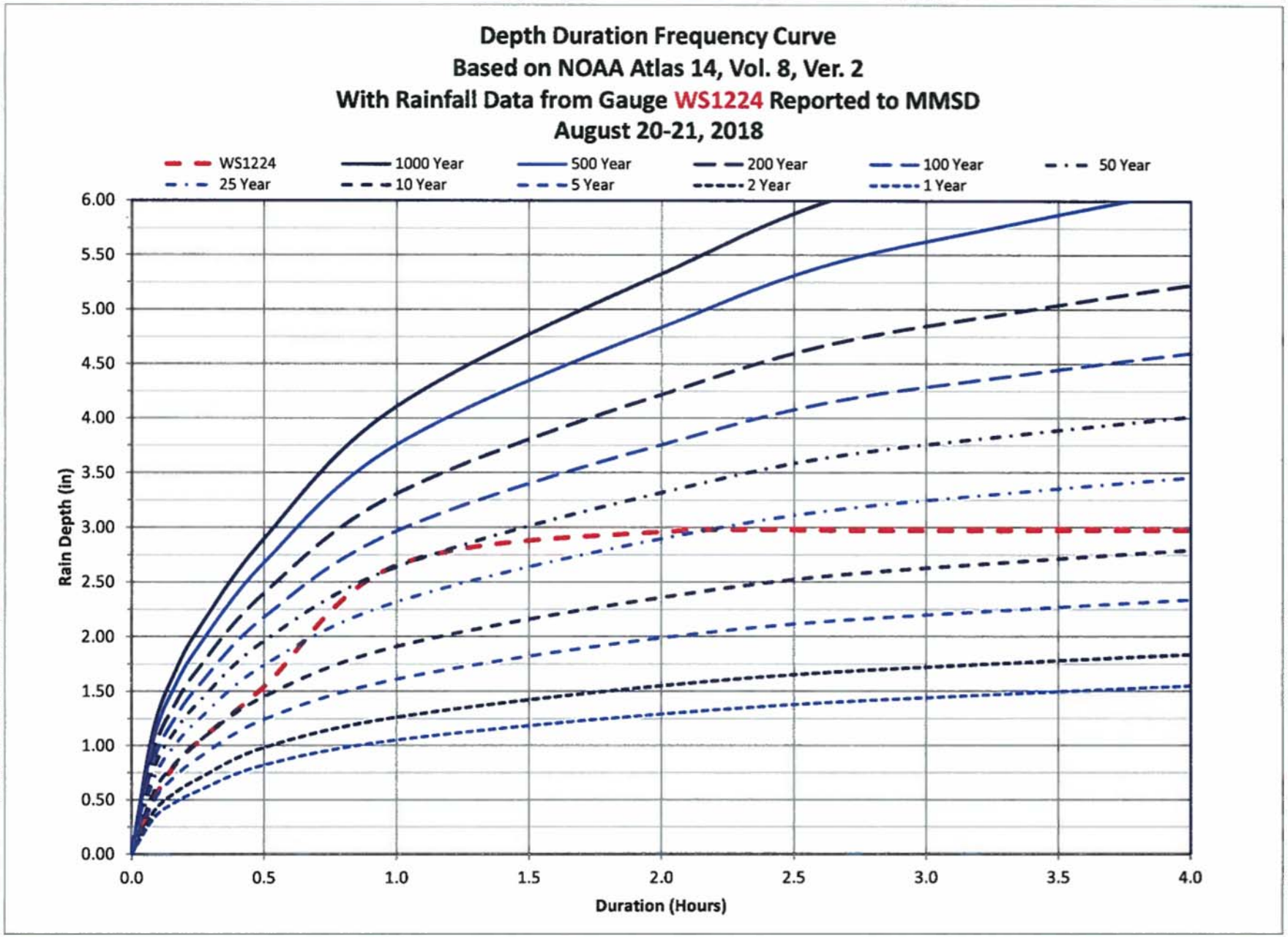
	CSO-262 North 59th Street & West Trenton Place	Menomonee	10.3	6
Total Estimated Non-Tributary Discharge			**10.3**	

TOTAL ESTIMATED CSO DISCHARGE: **98.7 MG**

For 8/20/18 Through 8/21/18 **5 Minute Calculation**

* Flow adjusted; see CSO Flow Adjustment Report for details.


MMSD WEATHER STATIONS
Total Precipitation (Inches)
August 20-21, 2018
Legend
MMSD Weather Station
NOAA Weather Station
Service Area
Combined Sewer Area
Deep Tunnel
WS1214 0.91
WS1228 3.22
WS1218 2.77
WS1209 2.10
WS1224 3.11
WS1207 2.99
WS1202 2.52
WS1225 2.30
WS1206 OUT
WS1229 1.76
WS1204 2.53
WS1221 2.24
WS1211 2.26
WS1203 2.65
WS1216 1.65
WS1220 1.42
WS1222 2.38
WS1201 1.30
WS1226 1.42
CEDARBURG
THIENSVILLE
GERMANTOWN
MEQUON
BROWN DEER
BAYSIDE
RIVER HILLS
FOX POINT
MENOMONEE FALLS
GLENDALE
WHITEFISH BAY
BUTLER
SHOREWOOD
BROOKFIELD
WAUWATOSA
MILWAUKEE
Lake Michigan
ELM GROVE
WEST MILWAUKEE
WEST ALLIS
NEW BERLIN
ST FRANCIS
GREENFIELD
MITCHELL INTERNATIONAL AIRPORT
CUDAHY
HALES CORNERS
GREENDALE
SOUTH MILWAUKEE
MUSKEGO
FRANKLIN
OAK CREEK
N
1 in = 3 miles
MMSD
PARTNERS FOR A CLEANER ENVIRONMENT


Depth Duration Frequency Curve
Based on NOAA Atlas 14, Vol. 8, Ver. 2
With Rainfall Data from Gauge WS1224 Reported to MMSD
August 20-21, 2018
WS1224
1000 Year
500 Year
200 Year
100 Year
50 Year
25 Year
10 Year
5 Year
2 Year
1 Year
Rain Depth (in)
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
Duration (Hours)

APPENDIX D

August 27-29, 2018
Combined Sewer Overflow Event Five-Day Notification Letter

PARTNERS FOR A CLEANER ENVIRONMENT

Via Email and US Mail

August 31, 2018

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: August 27-29, 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 August 27-29, 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.

Reason for Overflow
The combined sewer overflows occurred as a result of heavy rains that began on August 26th. By 11:50 PM, 3.48 inches of rain was recorded at District rain gauge WS1224 located at 6985 N. River Road in the Village of River Hills. Due to this precipitation, the decision was made to close the combined sewer gates at 12:27 AM on August 27th. The remaining capacity in the Inline Storage System (ISS) was reserved to prevent separate sewer overflows and basement backups because there was the potential for an additional 1.5 inches of rain between midnight and 4:00 AM. Total precipitation recorded at WS1224 for the duration of this event was 5.46 inches and significant precipitation was measured throughout the service area. Please see the attached precipitation map.

The Depth Duration Frequency Curves are attached and were generated for District rain gauge WS1224, using National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 8, Version 2. This reference shows that this rainfall event was representative of a 10-25 year storm. In addition, ground saturation was high. As of August 27th, NOAA measured precipitation 4.25 inches above average in the Milwaukee area.

Estimated Duration of Combined Sewer Discharge
The discharges began after the combined sewer gates began to close on August 27, 2018 at 12:27 AM. All discharges were concluded by 8:45 PM on August 29th, 2018 for a total duration of 68.25 hours. The CSO Monitoring Report which is a table of CSO discharge points, with estimated discharge times and estimated volumes, is attached.

Milwaukee Metropolitan Sewerage District
260 W. Seeboth Street, Milwaukee, WI 53204-1446
414-272-5100 www.mmsd.com

Estimated Volume of Discharge
The current estimate of the overflow volume is 295.7 MG. This amount includes one combined sewer overflow 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 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 during the time periods summarized in the table below.

START	STOP	VOLUME (MG)	DURATION (HOURS)
8/27/18 0:05	8/27/18 9:20	18.2	9.25
8/28/18 14:20	8/28/18 18:20	10.2	4.00
8/28/18 21:25	8/29/18 6:35	27.1	9.17
Totals		55.5	22.42

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 District is also funding a 10 year, $58 million-dollar Private Property Inflow and Infiltration Reduction Program throughout our service area to further reduce the risk of basement backups and separate sewer overflows.

The following supporting documents are attached:

- CSO Monitoring Report Summary
- Precipitation Map at District Rain Gauges for August 26-29, 2018
- Depth Duration Frequency Curve

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

Sincerely,

Sharon K. Mertens

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

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

Milwaukee Metropolitan Sewerage District
CSO Monitoring Report Summary

Reporting Period Start Date: 8/27/18
Reporting Period End Date: 8/29/18

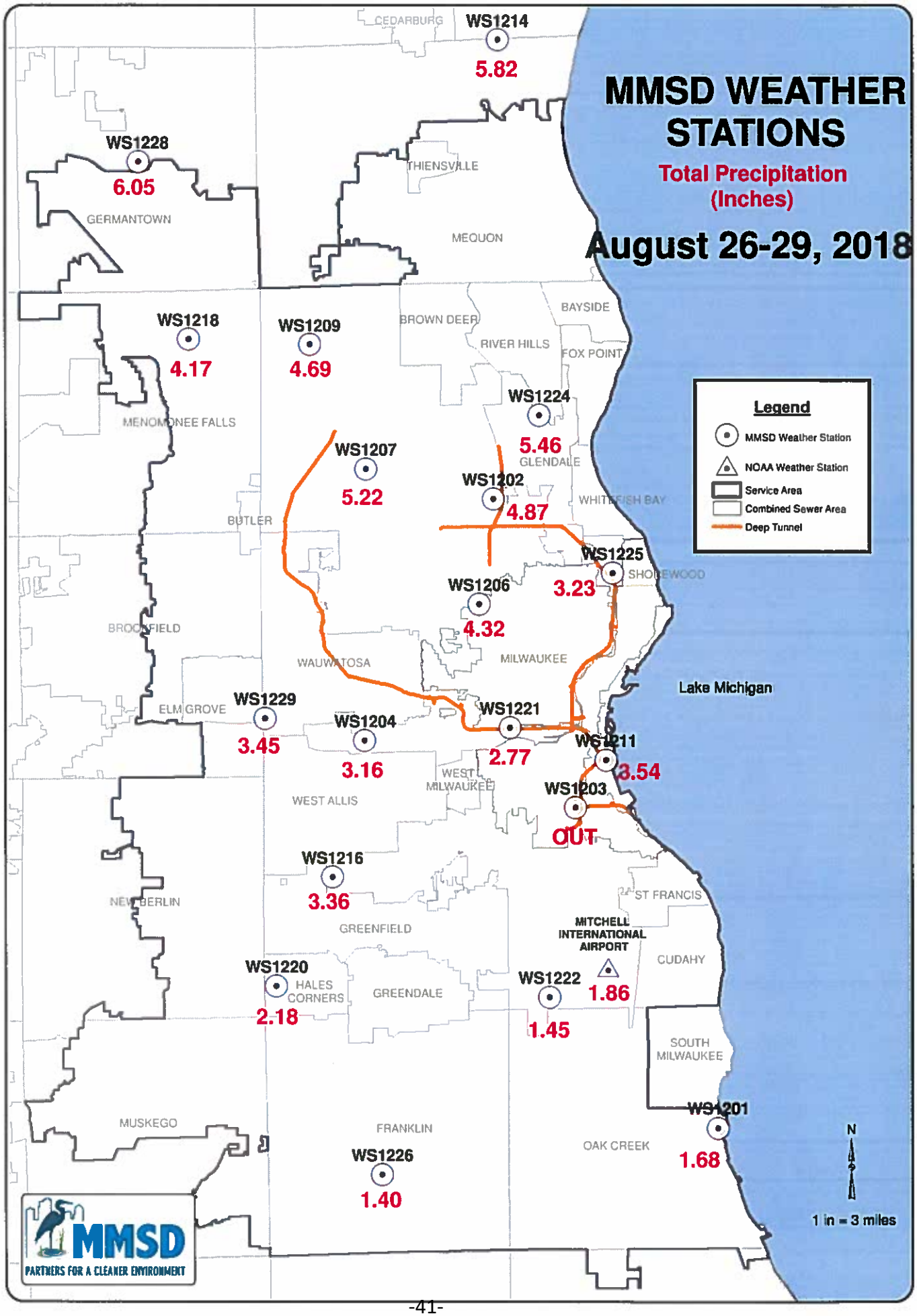
Collector System		Waterbody	Total Estimated Volume (MG)	Total Estimated Duration (Hours)
CT2	WPDES 113 North Hawley Road & West State Street	Menomonee	5.5	9
CT3/4	WPDES 114 North 44th Street & West Wells Street	Menomonee	61.4	19
CT5/6	WPDES 115 North 25th Street at the Menomonee River	Menomonee	9.9	1
CT7	WPDES 116 South 16th Street & West Canal Street	Menomonee	3.5	2
CT8	WPDES 117 South 3rd Street & West Seeboth Street	Menomonee	0.0	0
KK1	WPDES 118 South 6th Street & West Cleveland Avenue	Kinnickinnic	6.9	5
KK2	WPDES 119 South 1st Street & South Chase Avenue	Kinnickinnic	0.0	0
KK3	WPDES 120 South 4th Street & West Becher Street	Kinnickinnic	1.1	1
KK4	WPDES 121 South 1st Street & West Lincoln Avenue	Kinnickinnic	0.0	0
LMN	WPDES 122 East Bay Street & East Ward Street	Lake Michigan	0.0	0
LMS	WPDES 123 South Lincoln Memorial Drive & East Russell Avenue	Lake Michigan	0.0	0
NS4	WPDES 104 North Cambridge Avenue & East Providence Avenue	Milwaukee	5.7	10
NS5	WPDES 105 East Burleigh Street at the Milwaukee River	Milwaukee	1.5	3
NS6	WPDES 106 East Park Place at the Milwaukee River	Milwaukee	8.1	7
NS7	WPDES 107 North Commerce Street & North Booth Street	Milwaukee	154.6	52
NS8	WPDES 108 North Commerce Street & East Pleasant Street	Milwaukee	16.1	8
NS9	WPDES 109 North Old World 3rd Street & West McKinley Avenue	Milwaukee	6.2	3
NS10	WPDES 110 North Water Street & East St. Paul Avenue	Milwaukee	0.2	1
NS11	WPDES 111 North Humboldt Avenue & East Capitol Drive	Milwaukee	4.0	9
NS12	WPDES 112 North 31st Street & West Capitol Drive	Lincoln Creek	0.0	0
Total Estimated CSO Discharge For Dropshaft Basins			**284.7**	

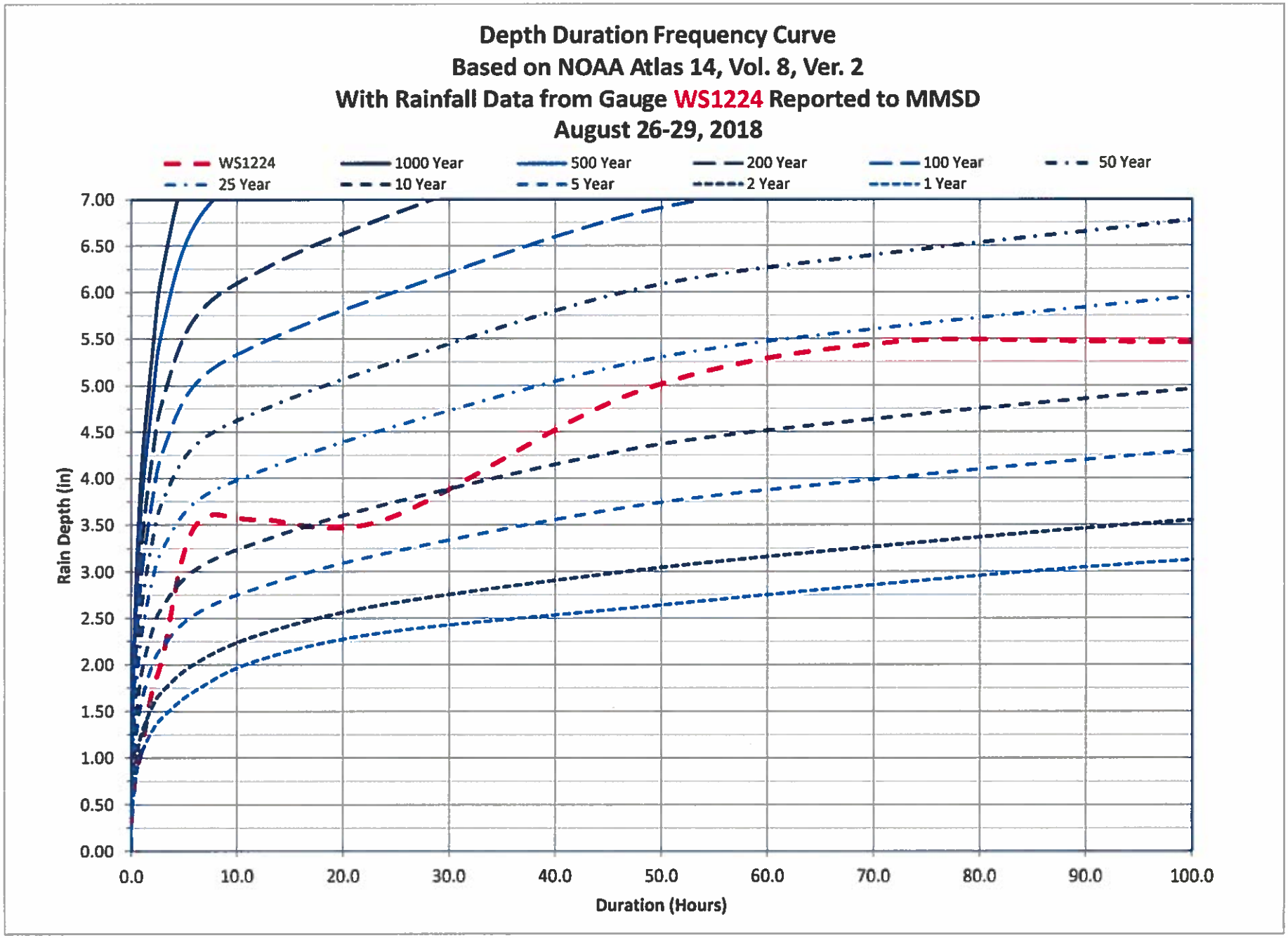
Combined Sewer Overflow Volumes from CSO Outfalls Not Tributary to the ISS Dropshafts

CSO-262 North 59th Street & West Trenton Place	Menomonee	11.0	6
CT8A16 Water Street & National Avenue*		NA	NA
Total Estimated Non-Tributary Discharge		**11.0**	

TOTAL ESTIMATED CSO DISCHARGE: **295.7 MG**
For 8/27/18 Through 8/29/18 **5 Minute Calculation**

* A discharge from a manhole at this location was reported to MMSD on 8/27/18. We are investigating the cause, but we are not able to estimate volume at this time. We do not know duration, but we estimate it to be on order of minutes.


MMSD WEATHER STATIONS
Total Precipitation (Inches)
August 26-29, 2018
Legend
MMSD Weather Station
NOAA Weather Station
Service Area
Combined Sewer Area
Deep Tunnel
WS1214 5.82
WS1228 6.05
WS1218 4.17
WS1209 4.69
WS1224 5.46
WS1207 5.22
WS1202 4.87
WS1225 3.23
WS1206 4.32
WS1229 3.45
WS1204 3.16
WS1221 2.77
WS1211 3.54
WS1203 OUT
WS1216 3.36
WS1220 2.18
WS1222 1.45
WS1201 1.68
WS1226 1.40
CEDARBURG
THIENSVILLE
GERMANTOWN
MEQUON
BROWN DEER
BAYSIDE
RIVER HILLS
FOX POINT
MENOMONEE FALLS
GLENDALE
WHITEFISH BAY
BUTLER
SHOREWOOD
BROOKFIELD
WAUWATOSA
MILWAUKEE
Lake Michigan
ELM GROVE
WEST MILWAUKEE
WEST ALLIS
NEW BERLIN
GREENFIELD
ST FRANCIS
MITCHELL INTERNATIONAL AIRPORT
CUDAHY
HALES CORNERS
GREENDALE
SOUTH MILWAUKEE
MUSKEGO
FRANKLIN
OAK CREEK
N
1 in = 3 miles
MMSD
PARTNERS FOR A CLEANER ENVIRONMENT


Depth Duration Frequency Curve
Based on NOAA Atlas 14, Vol. 8, Ver. 2
With Rainfall Data from Gauge WS1224 Reported to MMSD
August 26-29, 2018
WS1224
1000 Year
500 Year
200 Year
100 Year
50 Year
25 Year
10 Year
5 Year
2 Year
1 Year
Rain Depth (in)
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
Duration (Hours)

APPENDIX E

September 5-6, 2018
Combined Sewer Overflow Event Five-Day Notification Letter

PARTNERS FOR A CLEANER ENVIRONMENT

Via Email and US Mail

September 10, 2018

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: September 5-6, 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 September 5-6, 2018. This information complies with the terms and conditions listed in section 10.2.6 and 10.2.8 of Milwaukee Metropolitan Sewerage District (District) WPDES permit.

Reason for Overflow
The combined sewer overflows occurred because of extremely saturated ground and an active weather system that produced precipitation from September 1st through the evening of September 5th. As of the morning of September 5, the National Oceanic and Atmospheric Administration (NOAA) measured precipitation 6.2 inches above average in the Milwaukee area. Total precipitation recorded at District rain gauge WS1206 at 3626 W. Fond du Lac Ave from September 1st through the 5th was 4.13 inches. On September 5th at 11:30 AM, the Inline Storage System (ISS) was already storing 130 million gallons. Between 11:30 AM and 6:30 PM on September 5th, District rain gauge WS1206 measured over 2 inches of rain. When the decision was made at 6:30 PM to close the combined sewer gates to reserve the remaining capacity for separate sewage and to prevent basements backups, the volume in the ISS was 340 million gallons and inflow rate was 950 million gallons a day. The Northwest Side Relief Sewer (NWSRS) was storing 55 million gallons. Please see the attached precipitation map.

Estimated Duration of Combined Sewer Discharge
The discharges began after the combined sewer gates closed on September 5th, 2018 at 6:45 PM. All discharges were concluded by 10:40 PM on September 6th, 2018 for a total duration of 27.9 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 estimate of the overflow volume is 148 MG. This amount includes one combined sewer overflow 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 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 from 9/5/18 at 4:52 PM until 9/7/18 at 5:50 AM for a total of 37 hours. Total volume for this process was 93 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 District is also funding a 10 year, $58 million-dollar Private Property Inflow and Infiltration Reduction Program throughout our service area to further reduce the risk of basement backups and separate sewer overflows.

The following supporting documents are attached:

- CSO Monitoring Report Summary
- Precipitation Map at District Rain Gauges for September 1 through September 5, 2018

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

Sincerely,

Sharon K Mertens

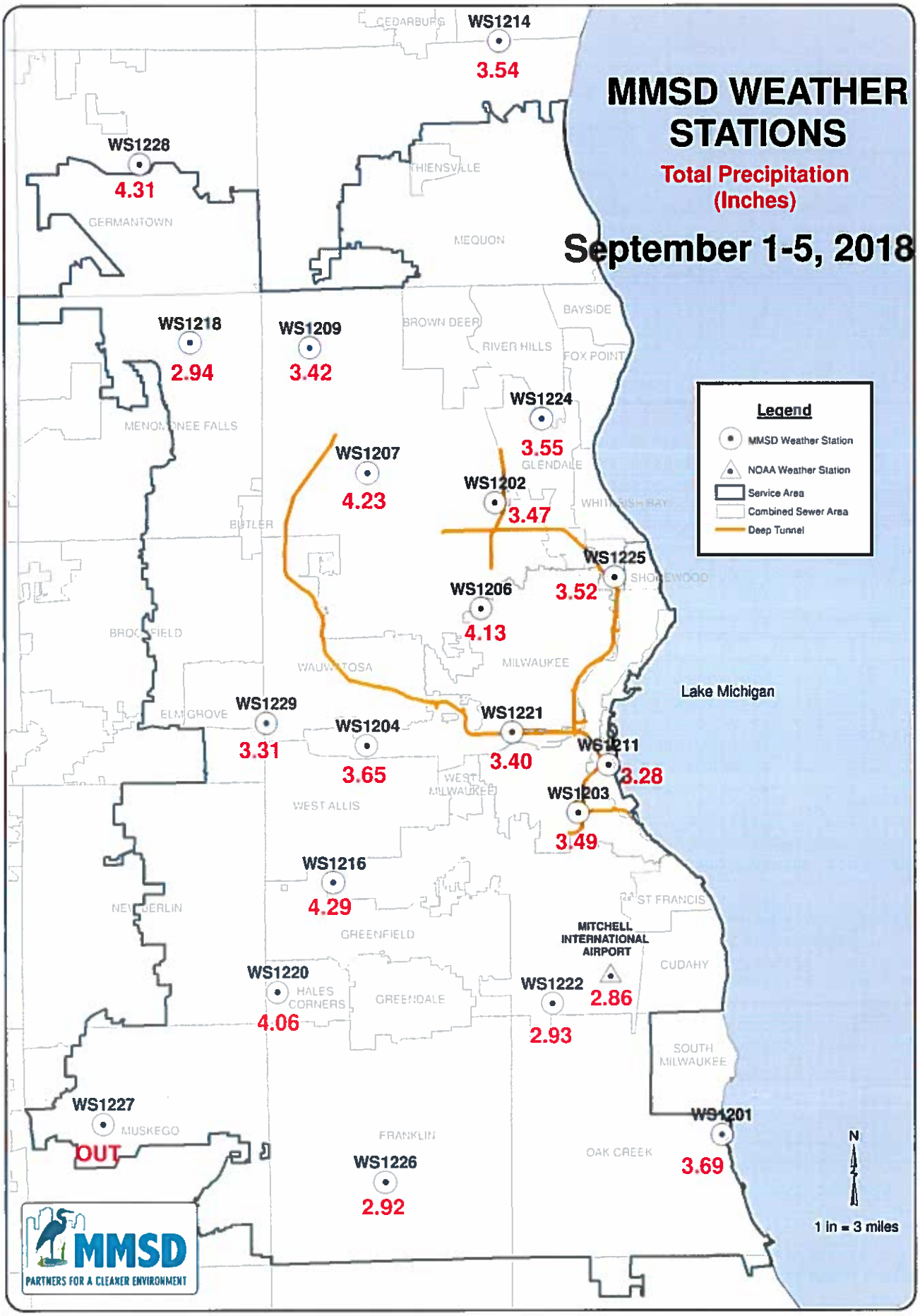
Sharon K. Mertens
Director, Water Quality Protection
Milwaukee Metropolitan Sewerage District

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

Milwaukee Metropolitan Sewerage District
CSO Monitoring Report Summary

Reporting Period Start Date: 9/5/18
Reporting Period End Date: 9/6/18

	Collector System	Waterbody	Total Estimated Volume (MG)	Total Estimated Duration (Hours)
CT2	WPDES 113 North Hawley Road & West State Street	Menomonee	0.5	2
CT3/4	WPDES 114 North 44th Street & West Wells Street	Menomonee	26.1	6
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	0.0	0
LMS	WPDES 123 South Lincoln Memorial Drive & East Russell Avenue	Lake Michigan	0.0	0
NS4	WPDES 104 North Cambridge Avenue & East Providence Avenue	Milwaukee	1.1	5
NS5	WPDES 105 East Burleigh Street at the Milwaukee River	Milwaukee	0.0	0
NS6	WPDES 106 East Park Place at the Milwaukee River	Milwaukee	0.0	0
NS7	WPDES 107 North Commerce Street & North Booth Street	Milwaukee	77.6	23
NS8	WPDES 108 North Commerce Street & East Pleasant Street	Milwaukee	0.6	1
NS9	WPDES 109 North Old World 3rd Street & West McKinley Avenue	Milwaukee	0.0	0
NS10	WPDES 110 North Water Street & East St. Paul Avenue	Milwaukee	0.0	0
NS11	WPDES 111 North Humboldt Avenue & East Capitol Drive	Milwaukee	0.1	2
NS12	WPDES 112 North 31st Street & West Capitol Drive	Lincoln Creek	0.0	0
Total Estimated CSO Discharge for Dropshaft Basins			***106.0***	
Combined Sewer Overflow Volumes from CSO Outfalls not Tributary to the ISS Dropshafts				
	CSO-262 North 59th Street & West Trenton Place		***42.0***	***12***
TOTAL ESTIMATED CSO DISCHARGE:			***148.0***	
	For 9/5/18 Through 9/6/18		***5 minute calculation***	


MMSD WEATHER STATIONS
Total Precipitation (Inches)
September 1-5, 2018
Legend
MMSD Weather Station
NOAA Weather Station
Service Area
Combined Sewer Area
Deep Tunnel
WS1214 3.54
WS1228 4.31
WS1218 2.94
WS1209 3.42
WS1224 3.55
WS1207 4.23
WS1202 3.47
WS1225 3.52
WS1206 4.13
WS1229 3.31
WS1204 3.65
WS1221 3.40
WS1211 3.28
WS1203 3.49
WS1216 4.29
WS1220 4.06
WS1222 2.93
2.86
WS1227 OUT
WS1226 2.92
WS1201 3.69
CEDARBURG
THIENSVILLE
GERMANTOWN
MEQUON
BROWN DEER
BAYSIDE
RIVER HILLS
FOX POINT
MENOMONEE FALLS
GLENDALE
WHITEFISH BAY
BUTLER
SHOREWOOD
BROOKFIELD
WAUWATOSA
MILWAUKEE
Lake Michigan
ELM GROVE
WEST MILWAUKEE
WEST ALLIS
NEW BERLIN
GREENFIELD
ST FRANCIS
MITCHELL INTERNATIONAL AIRPORT
CUDAHY
HALES CORNERS
GREENDALE
SOUTH MILWAUKEE
MUSKEGO
FRANKLIN
OAK CREEK
N
1 in = 3 miles
MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

APPENDIX F

October 1-4, 2018
Combined Sewer Overflow Event Five-Day Notification Letter

MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

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. 84th 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

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

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

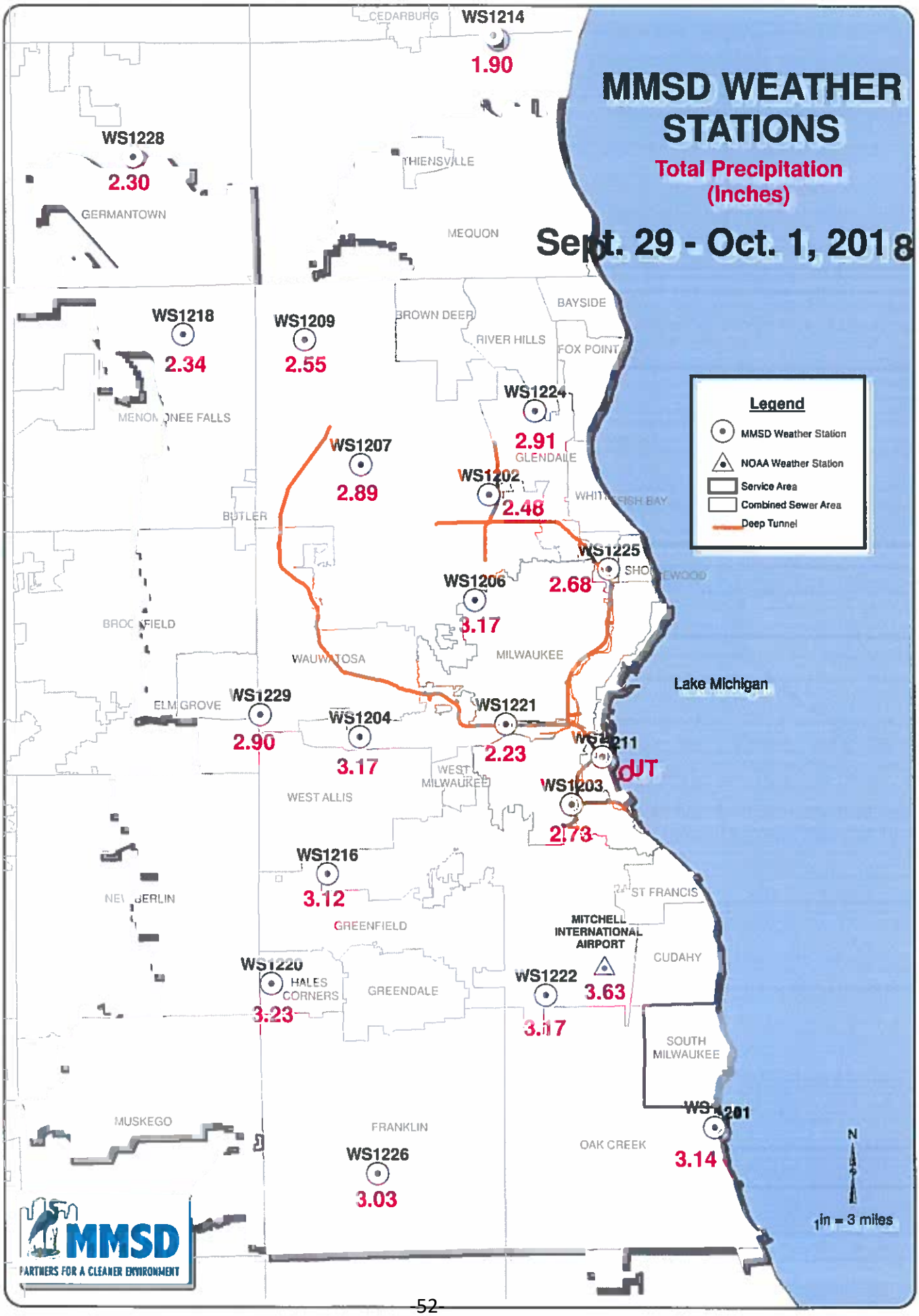
Collector System	Waterbody	Total Estimated Volume (MG	Total Estimated Duration (Hours)
CT2 WPDES 113 North Hawley Road & West State Street	Menomonee	0.4	2
CT3/4 WPDES 114 North 44th Street & West Wells Street	Menomonee	31.9	8
CT5/6 WPDES 115 North 25th Street at the Menomonee River	Menomonee	0.0	0
CT7 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
Lake Michigan
WS1214 1.90
WS1228 2.30
WS1218 2.34
WS1209 2.55
WS1224 2.91
WS1207 2.89
WS1202 2.48
WS1225 2.68
WS1206 3.17
WS1229 2.90
WS1204 3.17
WS1221 2.23
WS1211 OUT
WS1203 2.73
WS1216 3.12
WS1220 3.23
WS1222 3.17
MITCHELL INTERNATIONAL AIRPORT 3.63
WS1201 3.14
WS1226 3.03
CEDARBURG
THIENSVILLE
GERMANTOWN
MEQUON
BROWN DEER
BAYSIDE
RIVER HILLS
FOX POINT
GLENDALE
BUTLER
WAUWATOSA
MILWAUKEE
ELM GROVE
WEST MILWAUKEE
WEST ALLIS
GREENFIELD
GREENDALE
HALES CORNERS
ST FRANCIS
CUDAHY
SOUTH MILWAUKEE
OAK CREEK
FRANKLIN
MUSKEGO
N
1 in = 3 miles
MMSD
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APPENDIX G

ISS Dropshaft Monitoring Report: 2018 Annual

MMSD
PARTNERS FOR A CLEANER ENVIRONMENT

Memorandum

April 19, 2019

TO: Sharon Mertens

FROM: Zach Vogel

COPY: Joe Leszczynski, Alfredo Sotomayor, Jessica Nanes, Richard Vincent, Lab File

SUBJECT: ISS Dropshaft Monitoring Report: 2018 Annual

Attached is the summary report of available monitoring data for CSO discharges from 2018. This data has previously been reported to the WDNR as part of the quarterly report for the period in which each event occurred. Note that this report updated site descriptions. These are descriptive– the location and numbering has not changed. All samples were run in a set with other samples that received required laboratory quality control procedures. The analyses were performed by Milwaukee Metropolitan Sewerage District in Milwaukee, WI (Wisconsin Certification #: 241325920, Florida NELAP Certification #: E571010).

Please contact the Central Laboratory if there are any questions or comments regarding these data.

Thank you.

Data Review By:	Data Review By:	Report Review By:
4-19-19	Richard Vincent 4/19/19	4-19-19
Jessica Nanes Date	Richard Vincent Date	Zach Vogel Date
Laboratory Team Supervisor	Laboratory Team Supervisor	Laboratory Project Manager

NELAP ACCREDITED TNI LABORATORY

Milwaukee Metropolitan Sewerage District
260 West Seeboth Street, Milwaukee, WI 53204

ISS Overflow Event Report

January 1 to December 31, 2018

IssNS04	N. Cambridge & Providence	18012984	6/18/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.11	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.01	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	31000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	45000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.047	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.41	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	110	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.095	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS05	Burleigh & Milwaukee River	18012985	6/18/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.17	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	6.4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.016	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	25000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	35000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.11	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.39	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	180	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.17	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT02	Hawley Road	18012988	6/18/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.18	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0067	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	46000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	38000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.04	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.22	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	73	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.075	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS07	Commerce & Booth	18012992	6/18/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.19	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	6.9	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.015	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	52000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	77000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.1	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.42	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	180	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.12	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS08	Commerce & Pleasant	18012993	6/18/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.15	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	7.2	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.036	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	0.048	mg/L	0.036	0.11	J.	EPA 200.7	MMSD
E-Coli QT	19000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	31000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.077	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.32	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	140	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.14	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssKK03	S. 4th & Becher	18012996	6/18/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.1	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	19	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0075	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	210000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	290000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.043	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.44	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	82	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.087	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS06 — Park Place and Milwaukee River — 18012999 — 6/18/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.11	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	7.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.013	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	30000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	38000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.062	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.26	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	0.033	mg/L	0.032	0.095	J.	EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	120	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.098	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS09 — N. Old World 3rd & McKinley — 18013000 — 6/18/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.19	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.018	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	25000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	57000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.11	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.32	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	290	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.19	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT07 — S. 16th & Canal — 18013002 — 6/18/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.36	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.012	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	65000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	110000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.052	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.32	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	120	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.11	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT08 — S. 3rd & Seeboth — 18013003 — 6/18/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.5	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	25	mg/L	20			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.037	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	340000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	470000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.036	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.66	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	100	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.13	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT56 — N. 25th & Menomonee River — 18013006 — 6/18/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.39	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	10	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.019	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	0.046	mg/L	0.036	0.11	J.	EPA 200.7	MMSD
E-Coli QT	55000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	130000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.16	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.59	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	260	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.2	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS11 — N. Humboldt & Capitol — 18012986 — 6/19/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.26	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	6.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0065	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	93000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	66000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.16	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	54	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.11	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS12	N. 31st & Capitol	18012987	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.031	mg/L	0.017	0.054	J.	SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	0.0017	mg/L	0.0014	0.0063	J.	EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0066	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	21000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	20000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.14	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	20	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.079	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT34	N. 44th & Wells	18012989	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.28	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.3	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	110000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	100000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.18	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	10	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssKK01	S. 6th & Cleveland	18012994	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.6	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	13	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	550000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	1100000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.028	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.37	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	44	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.086	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssKK02	S. 1st & Chase	18012995	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.94	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	12	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	370000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	740000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.35	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	21	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssLMN	E. Bay & Ward Street	18012997	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.6	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	14	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	470000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	310000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.53	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	60	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS10	N. Water & St. Paul	18013001	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.29	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	250000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	260000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.15	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	31	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssKK04	S. 1st & Lincoln	18013005	6/19/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.24	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	1200	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	2100	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.1	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	8	mg/L	1		T9.	SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT02	Hawley Road	18019306	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.061	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	5.4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	25000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	59000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.03	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.2	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	84	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT34 — N. 44th & Wells — 18019307 — 8/20/18

Site ID — *Site Description* — *LIMS Sample ID* — *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.11	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	5.4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0081	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	34000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	25000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.054	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.27	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	94	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.088	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT56 — N. 25th & Menomonee River — 18019308 — 8/20/18

Site ID — *Site Description* — *LIMS Sample ID* — *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.11	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	5.9	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.015	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	0.038	mg/L	0.036	0.11	J.	EPA 200.7	MMSD
E-Coli QT	38000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	150000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.13	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.46	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	280	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.2	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssLMN	E. Bay & Ward Street	18019312	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.16	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.3	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	25000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	290000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.027	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.19	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	48	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssLMS	Lincoln Memorial Drive & Russell	18019313	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.28	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	21	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.015	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	0.04	mg/L	0.036	0.11	J.	EPA 200.7	MMSD
E-Coli QT	170000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	320000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.069	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.6	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	290	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.15	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS09	N. Old World 3rd & McKinley	18019322	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.11	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0067	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	39000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	580000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.04	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.21	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	34	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT08	S. 3rd & Seeboth	18019323	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.29	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	7.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0075	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	31000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	450000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.032	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.22	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	52	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS04 — N. Cambridge & Providence — 18019326 — 8/20/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.12	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0071	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	49000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	600000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.039	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.24	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	78	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22	Q2.	EPA 200.7	MMSD

IssNS05 — Burleigh & Milwaukee River — 18019327 — 8/20/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.12	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	6.7	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0085	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	49000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	180000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.093	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.35	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	180	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.13	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS07	Commerce & Booth	18019329	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.18	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.007	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	61000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	50000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.059	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.25	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	85	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.079	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS08	Commerce & Pleasant	18019330	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.12	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	7.9	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.014	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	0.045	mg/L	0.036	0.11	J.	EPA 200.7	MMSD
E-Coli QT	44000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	200000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.064	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.35	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	120	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.12	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS11	N. Humboldt & Capitol	18019371	8/20/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.076	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	5.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.012	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	73000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	590000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.065	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.24	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	120	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.14	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssKK03	S. 4th & Becher	18019324	8/21/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.32	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	5.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	280000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	670000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.24	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	22	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.11	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssKK04	S. 1st & Lincoln	18019325	8/21/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.26	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.5	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	10000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	300000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.2	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	20	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS06	Park Place and Milwaukee River	18019328	8/21/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.089	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	0.0054	mg/L	0.0014	0.0063	J.	EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	26000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	480000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.024	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.14	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	22	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS11	N. Humboldt & Capitol	18019752	8/27/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.23	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	5.9	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	39000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	83000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.024	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.16	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	32	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS04	N. Cambridge & Providence	18019753	8/27/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.31	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.2	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	130000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	150000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.032	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	20	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS07	Commerce & Booth	18019754	8/27/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.1	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	9.5	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	330000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	730000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.04	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.39	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	22	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS05	Burleigh & Milwaukee River	18019841	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.2	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	26	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	0.0015	mg/L	0.0014	0.0063	J.	EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	790000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	300000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.058	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.61	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	72	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS06 — Park Place and Milwaukee River — 18019842 — 8/28/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.3	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	12	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	250000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	75000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.04	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.3	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	34	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS08 — Commerce & Pleasant — 18019843 — 8/28/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.25	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	19	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0084	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	290000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	75000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.073	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.49	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	88	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.1	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS09	N. Old World 3rd & McKinley	18019844	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.93	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	16	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.012	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	3800000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	1200000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.074	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.55	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	170	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.16	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS10	N. Water & St. Paul	18019845	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.3	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	9	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	2800000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	500000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.025	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.41	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	16	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT02	Hawley Road	18019846	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	1.9	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	35	mg/L	20			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	2600000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	670000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.039	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	1	mg/L	0.012	0.04		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	96	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.1	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT34	N. 44th & Wells	18019847	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.63	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	16	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	0.0018	mg/L	0.0014	0.0063	J.	EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	480000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	100000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.043	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.5	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	44	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT56	N. 25th & Menomonee River	18019848	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.43	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	17	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	520000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	150000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.055	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.45	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	77	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.078	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssCT07	S. 16th & Canal	18019849	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.32	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	720000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	150000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.25	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	33	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT08	S. 3rd & Seeboth	18019850	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.26	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	15	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.01	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	930000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	350000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.042	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.37	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	58	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssKK01	S. 6th & Cleveland	18019851	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.58	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	11	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	300000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	50000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.05	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.41	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	60	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssKK03	S. 4th & Becher	18019852	8/28/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.47	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	7.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	380000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	50000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.038	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.32	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	23	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS04	N. Cambridge & Providence	18020746	9/5/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.15	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	100000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	180000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	24	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS07	Commerce & Booth	18020748	9/5/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.38	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	14	mg/L	8			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	160000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	490000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.38	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	24	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS11	N. Humboldt & Capitol	18020750	9/5/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.023	mg/L	0.013	0.044	J.	SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	4.8	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	31000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	90000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.18	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	22	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

ISS Overflow Event Report

January 1 to December 31, 2018

IssCT02	Hawley Road	18020751	9/5/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.13	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	7.3	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	110000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	200000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.25	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	22	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT34	N. 44th & Wells	18020752	9/5/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.16	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	11	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	110000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	180000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.26	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	24	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS06	Park Place and Milwaukee River	18020747	9/6/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	< 0.013	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	0.032	mg/L	0.03	0.09	J.	EPA 200.7	MMSD
BOD- 5 Day Total	5.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	1100000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	1200000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	11	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS08	Commerce & Pleasant	18020749	9/6/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	< 0.013	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	12	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0066	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	1800000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	4700000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.3	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	11	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT56	N. 25th & Menomonee River	18020779	9/6/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.066	mg/L	0.013	0.044		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	0.038	mg/L	0.03	0.09	J.	EPA 200.7	MMSD
BOD- 5 Day Total	6.5	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	280000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	1000000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.26	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	12	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS04	N. Cambridge & Providence	18023142	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.24	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	9	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	87000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	140000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.29	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	39	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS05	Burleigh & Milwaukee River	18023143	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.15	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 8	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	100000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	120000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.04	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.25	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	0.041	mg/L	0.032	0.095	J.	EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	67	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS06	Park Place and Milwaukee River	18023144	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.25	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	14	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	170000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	190000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.023	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.35	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	58	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS07	Commerce & Booth	18023145	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.19	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.6	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	200000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	210000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.044	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	45	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS08	Commerce & Pleasant	18023146	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.16	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 8	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0075	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	92000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	160000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.24	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	65	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT02	Hawley Road	18023148	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.15	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.6	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	98000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	160000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.033	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.26	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	59	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT34	N. 44th & Wells	18023149	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.21	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	0.031	mg/L	0.03	0.09	J.	EPA 200.7	MMSD
BOD- 5 Day Total	8.5	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	98000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	120000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.028	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.24	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	0.055	mg/L	0.032	0.095	J.	EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	57	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT56 — N. 25th & Menomonee River — 18023150 — 10/1/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.25	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	8.4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	100000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	180000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.025	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	74	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssCT08 — S. 3rd & Seeboth — 18023151 — 10/1/18

Site ID | *Site Description* | *LIMS Sample ID* | *Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.73	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	12	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	200000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	210000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	0.039	mg/L	0.032	0.095	J.	EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	29	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssLMN	E. Bay & Ward Street	18023154	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.18	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	13	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.0069	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	87000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	83000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.051	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.49	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	150	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.091	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssLMS	Lincoln Memorial Drive & Russell	18023155	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.14	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	12	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	0.012	mg/L	0.0065	0.02	J.	EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	120000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	180000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	0.05	mg/L	0.022	0.066	J.	EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.48	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	170	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	0.099	mg/L	0.074	0.22	J.	EPA 200.7	MMSD

IssNS11	N. Humboldt & Capitol	18023205	10/1/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.1	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 4	mg/L	4			SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	7100	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	39000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.1	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	24	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

IssNS09	N. Old World 3rd & McKinley	18023147	10/2/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.2	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	< 8	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	100000	MPN/100 mL	100		H1.	SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	170000	CFU/100 mL	1000		H1.	SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.16	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	20	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

ISS Overflow Event Report

January 1 to December 31, 2018

IssKK03	S. 4th & Becher	18023152	10/2/18
Site ID	*Site Description*	*LIMS Sample ID*	*Sample Date*

Test Description	Result		LOD	LOQ	QA Flags	Analytical Method	Lab
Ammonia (ISE)	0.47	mg/L	0.017	0.054		SM 4500 NH3 D (1997)	MMSD
ARSENIC ICP METHOD	< 0.03	mg/L	0.03	0.09		EPA 200.7	MMSD
BOD- 5 Day Total	9.4	mg/L	8		T4.	SM 5210 B (2001)	MMSD
CADMIUM ICP METHOD	< 0.0014	mg/L	0.0014	0.0063		EPA 200.7	MMSD
CHROMIUM ICP METHOD	< 0.0065	mg/L	0.0065	0.02		EPA 200.7	MMSD
COPPER ICP METHOD	< 0.036	mg/L	0.036	0.11		EPA 200.7	MMSD
E-Coli QT	340000	MPN/100 mL	100			SM 9223 B (2004)	MMSD
FECAL COLIFORM MF	380000	CFU/100 mL	1000			SM 9222 D (1997)	MMSD
LEAD ICP METHOD	< 0.022	mg/L	0.022	0.066		EPA 200.7	MMSD
NICKEL ICP METHOD	< 0.021	mg/L	0.021	0.063		EPA 200.7	MMSD
Phosphorus - Total (Auto chemistry)	0.28	mg/L	0.0061	0.02		EPA 365.1	MMSD
SELENIUM ICP METHOD	< 0.032	mg/L	0.032	0.095		EPA 200.7	MMSD
SILVER ICP METHOD	< 0.0065	mg/L	0.0065	0.027		EPA 200.7	MMSD
Solids (Suspended)	28	mg/L	1			SM 2540 D (1997)	MMSD
ZINC ICP METHOD	< 0.074	mg/L	0.074	0.22		EPA 200.7	MMSD

Flag Descriptions

AO	Other – Flag requires additional explanation
AX	Qualified data - see contract lab report
B3	Target analyte detected in method blank > 10% of sample concentration.
B7	LCS recovery was above control limits.
B8	LCS recovery was below control limits.
B9	Low Level CCV recovery was outside of method acceptance limits
CQ	Data used for calculation of result was qualified
D1	Duplicate precision control limit was exceeded.
D2	Matrix spike precision control limit was exceeded.
D3	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
D4	Sample matrix interferences did not allow completing the analysis.
D5	The reported result is an estimate because the concentration of HEM in this sample exceeded the maximum allowed in the method for the sample volume collected.
H1	Sample was received past holding time.
H3	Analysis performed beyond holding time.
H4	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H5	Analysis performed beyond holding time.
IS	Insufficient sample volume for analysis.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
LA	Not analyzed - lab accident.
M1	Too numerous to count.
M2	Sample incubation period outside method requirement.
M3	Spreading colonies - unable to determine result.
M4	Results are an approximation due to spreading colonies.
M5	Incubator/water bath temperature was outside method requirements.
M7	Micro sample received without adequate headspace.
M9	Target organism detected in associated method blank.
NR	Not usable data. (Water Quality only.)
NU	Not usable Data.
P2	Sample received with improper or inadequate chemical preservation.
Q2	Matrix spike recovery for this sample was above control limits.
Q3	Matrix spike recovery for this sample was below control limits.
RT	Sample temperature upon receipt exceeded regulatory or project requirements.
S5	Reading was not confirmed by a constant weight measurement
SD	Supplemental details provided.(Water Quality only.)
T3	The dilution water D.O. depletion was > 0.2 mg/L.
T4	GGA BOD was below method acceptance criteria.
T5	GGA BOD was above method acceptance criteria.
T7	The dilution water D.O. increase was > 0.2 mg/L.
T8	Sample matrix did not allow adjusting sample pH for BOD.
T9	Sample exceeded prescribed method temperature range.