

**CSO Annual
Notification**

2018

Compiled annual data pursuant to the requirement of 40 CFR Part 122.38(b)



2018

CSO Annual Notice

40 CFR Part 122.38(b)

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1. Description of the Location and Receiving Water for CSOs

Table 1.1 lists the location and receiving stream of each Combined Sewer Overflow (CSO). In addition, these location are graphically represented on a map of the City of Mishawaka in Figure 1.1

**Table 1.1
Permitted CSO Locations**

Outfall	Location	Latitude ^a	Longitude ^a	Receiving Water
002	Middlesboro Street	41°39' 37" N	86° 12' 48" W	St. Joseph River
003	Logan Street	41° 39' 36" N	86° 11' 48" W	St. Joseph River
004	Calhoun Street	41°39' 44" N	86°11' 43" W	St. Joseph River
006	Clay Street	41°39' 51" N	86° 11' 34" W	St. Joseph River
008	Charlotte Street	41°39' 54" N	86°11' 17" W	St. Joseph River
009	West Street	41°39' 51" N	86°11' 10" W	St. Joseph River
011	Christyann Street	41°39' 52" N	86°10' 42" W	St. Joseph River
012	Cedar Street	41° 39' 43" N	86°10' 24" W	St. Joseph River
012A	Lincolnway, East of Cedar	41° 39' 43" N	86° 10' 24" W	St. Joseph River
013	Laurel Street	41° 39' 42" N	86° 10' 21" W	St. Joseph River
014	Merrifield Park	41°39' 50" N	86°10' 03" W	St. Joseph River
015	Merrifield Park West	41° 39' 56" N	86° 10' 02" W	St. Joseph River
016	Battell Street	41° 40' 9" N	86°10' 3" W	St. Joseph River
018	Roosevelt Avenue	41°39' 56" N	86° 08' 53" W	St. Joseph River
019	Main Street	41° 39' 56" N	86° 10' 54" W	St. Joseph River
020	Vistula Rd. at Ballard Ave.	41° 40' 14" N	86° 07' 05" W	Eller Ditch
021	Linden at Home St.	41°39' 56" N	86° 08' 52" W	St. Joseph River
022	Virginia at LWE CSO	41°39' 46" N	86° 07' 46" W	Eller Ditch
023	Manor Dr. at LWE CSO	41° 39' 46" N	86° 07' 46" W	Eller Ditch
023A	N.E. quadrant of Manor Drive at LWE CSO	41° 39' 46" N	86° 07' 42" W	Eller Ditch
024	Oakley Ave. at Vistula Rd.	41° 39' 49" N	86° 07' 28" W	Eller Ditch

^a CSO locations based on 2011 NPDES Permit

2. Documentation of CSO Volume and Duration

Table 2.1 Summarizes CSO volume and duration for each occurrence during the year.

3. Documentation of Dry Weather CSO Volume and Duration

During 2018, one (1) Dry Weather Overflow occurred. The DWO was the result of a sewer obstruction. The event occurred on 10/25/2018 and is documented on Table 2.1. Due to the nature and location of the overflow at CSO12A, an estimate of volume and

duration was not possible. The overflow was immediately reported to the Indiana Department of Environmental Management by Overflow Incident Report.

4. CSO Monitoring Data

CSO volume and duration is quantified through a calibrated SWMM model. Other monitoring is not conducted.

5. Description of Potentially-impacted Public Access Areas

Mishawaka has four (4) locations in which public access could be potentially impacted. These locations are:

- Lincoln Park Boat Ramp
- Merrifield Park Boat Ramp
- Monkey Island Boat Ramp
- Zappia Fishing Park

The location of public access areas is marked on Figure 1.1

6. Precipitation Data

All precipitation data that resulted in a CSO is documented in Table 1.1

7. Permittee Contact Information

City of Mishawaka
Mishawaka Utilities Wastewater Division
1020 Lincolnway West
Mishawaka, IN 46545
(574) 258-1655

8. Nine Minimum Controls Summary

- a. Implementation status of LTCP

NMC #1: Proper Operation and Maintenance

The Mishawaka Sewer Department has 17 employees, 2 combination sewer cleaning machines, 2 video inspection trucks, several utility vehicles including a backhoe, and a cement mixer trailer to perform various duties. We have a GIS/Locates/New Inspection Department, which

locates sewer lines for contractors before digging, inspects new construction connections, and locates City assets in the ground to document their actual locations.

2018 Collection System Summary	
Total Sewer (Sanitary and Storm)	200 miles
Sewer Lines Cleaned	33.94 miles
Sewer Lines Televised	43.27 miles
Residential Service Calls	216
Residential Service after hours	18
Residential Laterals Televised	53
Sewer Insurance Claims	50
Sewer Permit Inspections	178
As-built Inspections	12
Sewer Line Rehab. CIP	8800 feet
Manhole Rehab. (poly line)	35
Rehab. Cost Total	\$650,000

System Inventory:

The City has a detailed GIS collection system map drawn to scale showing all separate, combined and storm sewers with sewer sizes, length, slope, material, direction of flow, interceptors, manhole location and elevations, catch basins, pump stations, CSO locations, and the WWTP.

NMC #2: Maximum Use of the Collection System for Storage

The City has modified CSO diversion structures by raising weirs to provide additional in-system storage and additional hydraulic capacity in the Interceptor. Between the years 1989 and 2015, at least 20 CSO diversion structures have been modified which increased the Interceptor capacity. In addition, the City added parallel Front St. interceptor sewer from CSO 009 to the WWTP and expanded the capacity of River Crossing #2 in Central Park.

NMC #3: Review/Modification of Pretreatment Program

The purpose of the Mishawaka Industrial Pretreatment Program is to prevent pollutants from being introduced into the sewer system that may be discharged through a CSO during wet weather or may interfere with plant operations and to prevent pollutants that cannot be treated from passing through the plant and into the environment. All permitted industries are required to monitor and reduce the amount of pollutants being discharged into the city sewer system before entering the wastewater plant.

The pretreatment program currently employs one pretreatment coordinator and one pretreatment assistant. Pretreatment duties consist of, but are not limited to the following:

- Permitting and Classification
- Self-monitoring and IU Submission
- Pretreatment Monitoring
- Inspection and Analysis
- Compliance and Enforcement

The City currently has seven permitted Significant Industrial Users and several non-permitted industries that are routinely monitored and inspected.

NMC #4: Maximization of Flow to the WWTP

Flow maximization through the wastewater treatment plant is an important element of Mishawaka's CSO LTCP. Hydraulically, the WWTP can pass approximately 42 mgd through the treatment facility. The WWTP expansion, completed in late 2008, provided an average design capacity of 20 mgd and 42 mgd peak sustained flow. The capacity of the upgraded facility is currently being utilized to the maximum extent possible to treat peak wet weather flows and minimize combined sewer overflows. Peak flows of up to 60 mgd have been treated while meeting all NPDES permit effluent limits.

In 2018 the highest peak flow rate treated was 57.2 mgd on June 30th. The maximum total flow treated on a single day was 42.10 million gallons on February 20th. In 2018 the average daily flow was 11.53 million gallons.

NMC #5: Prohibition of Dry Weather Overflows

Dry weather overflows are self-reported to IDEM and kept on file at the City. CSOs structures are inspected weekly for evidence of dry weather overflows, debris, or anything out of the ordinary. CSOs that show evidence of unusual flow are inspected more frequently.

To provide a higher degree of preventive maintenance, the Sewer Maintenance Department is equipped with two combination jetting/vacuuming trucks that routinely operate 5 days per week.

In 2008 there was one instance of dry weather overflow when a 15-inch sewer, downstream of CSO 012A became obstructed with debris from a broken sewer cleaning root cutting cable that must have been left in the sewer by a private cleaning contractor. The Sewer Maintenance Department removed the cable and the debris that had collected on it and flow in the line returned to normal and the DWO ceased.

NMC #6: Control of Solids and Flotables

The following activities comprise the NMC #6 activities in Mishawaka:

- Street Cleaning – The City operates a street cleaning program, with cleaning conducted approximately 9 months out of the year. A complete cycle is made throughout the city every 9 to 11 days.
- New Sign Campaign to Raise Awareness – In conjunction with the Michiana Stormwater Partnership (MSP) , signs have been installed near all major surface water bodies in the City. The signs are intended to alert residents to the abundant surface water bodies in the area, and to serve as a reminder to keep these vulnerable resources clean and free of pollutants.
- Leaf Removal Program – The City limits the amount of litter and debris that enters the collection system by operating a leaf and yard waste collection program with weekly pickup through each fall and spring.
- Household Hazardous Waste Collection Program – The Household Hazardous Waste facility located at 1105 East Fifth St. collects hazardous waste from St. Joseph County residents during regular business hours, 8:30 to 3:30 Tuesday through Saturday.
- Recycling Program – The City operates a curbside pick-up recycling program to collect newspapers, glass, plastic, aluminum, metal cans, cardboard, and mixed paper. Recyclables are picked up weekly.
- Catch Basin Signs – To prevent oil and other contaminants from reaching the river, catch basin signs with the words “DUMP NO WASTE. DRAINS TO RIVER” ARE UTILIZED BY THE City.
- Erosion Control – The City has adopted standards concerning erosion control, post-construction stormwater pollution prevention and other provisions related to the regulation of earthmoving, excavation, and stormwater discharge.

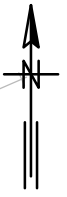
NMC #7 – Pollution Prevention – Mishawaka is dedicated to a pollution prevention program to reduce contaminants to the St. Joseph River. The programs described in NMC #6 are pollution prevention programs. A public education program has been implemented that utilizes the City’s website and includes a public education video, and information on CSOs.

NMC #8 – Public Notification – In accordance with Federal Law (40 CFR 122.38 (c), Mishawaka operates a CSO notification program. The program provides an initial notification of a CSO event within four (4) hours of becoming aware of an overflow, and a supplemental notice within seven (7) days of the event that provides an estimated CSO volume and estimated start and stop times. Interested persons may get notifications by following Mishawaka CSO Alerts on Twitter. Go to <https://twitter.com/CSOAlerts>. Persons may also search Twitter for “Mishawaka CSO Alerts”.

NMC #9 – Monitoring – The purpose of Mishawaka’s monitoring program is to characterize CSO impacts and record rainfall data to estimate CSO frequency, volumes and durations to complete the CSO Monthly Report of Operations (MRO). The river is sampled on a weekly basis for E. coli at five locations. CSO structures are inspected weekly to ensure that there are no instances of dry weather overflows or other impending issues. Dry weather overflows are a very rare occurrence in Mishawaka.

8.(a) Implementation Status of LTCP

The current status of the Implementation of the LTCP is summarized in Table 8.1



LEGEND

- CSO
- △ WWTP (001)
- CSO IMPACTED PUBLIC ACCESS
- 1. LINCOLN PARK BOAT RAMP
- 2. MERRIFIELD PARK BOAT RAMP
- 3. MONKEY ISLAND BOAT RAMP
- 4. ZAPPIA FISHING PARK

CSO LOCATION MAP

SCALE: 1" = 2000'



CITY OF MISHAWAKA
MARCH 2019



CITY OF MISHAWAKA
 Combined Sewer Overflow Annual Report
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2018

TABLE 2.1

DATE	Total Daily Precip. (Inches)	CSO 002		CSO 003		CSO 004		CSO 006		CSO 008		CSO 009		CSO 011		CSO 012		CSO 012A		CSO 013		
		Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	
01/08/19	0.5															0.14	0.000268	0.05	0.000262			
01/22/18	0.8															4.42	0.008320	1.42	0.008112			
02/14/18	0.6															1.57	0.002952	0.50	0.002878			
02/15/18	1.3															5.58	0.081992	2.44	0.040394			
02/19/18	1.6															5.88	0.140355	2.79	0.066050			
02/20/18	4.5			1.39	0.243670					1.00	0.049383	13.03	1.061574	1.01	0.061661	9.41	0.729635	6.44	0.341369	1.59	0.025292	
02/21/18	0.8															4.42	0.008320	1.42	0.008112			
03/01/18	1.2															5.42	0.063426	2.27	0.032327			
03/27/18	0.6															1.57	0.002952	0.50	0.002878			
04/03/18	1.2															5.42	0.063426	2.27	0.032327			
04/14/18	1.2															5.42	0.063426	2.27	0.032327			
04/15/18	1.3															5.58	0.081992	2.44	0.040394			
05/02/18	1.7															5.96	0.158644	2.88	0.074223			
05/03/18	2.3			0.42	0.000309					0.56	0.001399					6.34	0.268744	3.49	0.124689			
05/14/18	1.5															5.79	0.122065	2.71	0.057876			
05/30/18	2.3			0.42	0.000309					0.56	0.001399					6.34	0.268744	3.49	0.124689			
06/08/18	0.5															0.14	0.000268	0.05	0.000262			
06/09/18	0.5															0.14	0.000268	0.05	0.000262			
06/10/18	1.2															5.42	0.063426	2.27	0.032327			
06/19/18	0.5															0.14	0.000268	0.05	0.000262			
06/21/18	1.3															5.58	0.081992	2.44	0.040394			
06/22/18	0.9															4.67	0.022097	1.63	0.014165			
07/20/18	1.6															5.88	0.140355	2.79	0.066050			
07/21/18	1.3															5.58	0.081992	2.44	0.040394			
08/06/18	1.7															5.96	0.158644	2.88	0.074223			
08/09/18	0.6															1.57	0.002952	0.50	0.002878			
08/21/18	0.9															4.67	0.022097	1.63	0.014165			
08/25/18	0.9															4.67	0.022097	1.63	0.014165			
09/03/18	1.7															5.96	0.158644	2.88	0.074223			
09/05/18	0.5															0.14	0.000268	0.05	0.000262			
09/20/18	2.2			0.25	0.000185					0.33	0.000839					6.31	0.250310	3.36	0.115946			
09/25/18	1.0															4.92	0.035873	1.84	0.020219			
10/06/18	1.1															5.17	0.049650	2.06	0.026273			
10/10/18	1.3															5.58	0.081992	2.44	0.040394			
10/25/18		DWO*																	Unknown			
10/28/18	0.5															0.14	0.000268	0.05	0.000262			
10/31/18	0.9															4.67	0.022097	1.63	0.014165			
11/26/18	0.5															0.14	0.000268	0.05	0.000262			
12/01/18	0.6															1.57	0.002952	0.50	0.002878			
12/31/18	1.3															5.58	0.081992	2.44	0.040394			
Totals:	46.9		0.00	0.000000	2.48	0.244473	0.00	0.000000	0.00	0.000000	2.44	0.053020	13.03	1.061574	1.01	0.061661	163.85	3.346036	72.99	1.623733	1.59	0.025292

*On 10/25 a DWO occurred as a result of an obstructed sewer. Overflow Report was filed with IDEM on 10/30



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2018

DATE	CSO 014		CSO 015		CSO 016		CSO 018		CSO 019		CSO 020		CSO 021		CSO 022		CSO 023		CSO 023A		CSO 024			
	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Duration Time (Hours)	Discharge Volume (MG)	Event Duration (Hours)	Event Discharge (MG)	Event Duration (Hours)	Event Discharge (MG)	Event Duration (Hours)	Event Discharge (MG)	Event Duration (Hours)	Event Discharge (MG)		
1/8/19																								
1/22/18																								
2/14/18																								
2/15/18							0.13	0.000039											0.21	0.000035	0.11	0.000003		
2/19/18	0.08	0.000887	0.75	0.044192			0.75	0.013557											0.75	0.000491	0.46	0.000111		
2/20/18	2.09	0.682813	4.38	0.934618			3.02	0.412522			1.39	0.057870							2.02	0.026699	1.87	0.014265		
2/21/18																								
3/1/18																								
3/27/18																								
4/3/18																								
4/14/18																								
4/15/18							0.13	0.000039												0.21	0.000035	0.11	0.000003	
5/2/18	0.14	0.001478	1.25	0.073654			0.97	0.022513												0.81	0.000747	0.54	0.000179	
5/3/18	0.66	0.033692	3.14	0.266272			2.07	0.089665			0.60	0.003056								1.09	0.002819	0.93	0.000833	
5/14/18	0.03	0.000296	0.25	0.014731			0.53	0.004602												0.69	0.000236	0.38	0.000043	
5/30/18	0.66	0.033692	3.14	0.266272			2.07	0.089665			0.60	0.003056								1.09	0.002819	0.93	0.000833	
6/8/18																								
6/9/18																								
6/10/18																								
6/19/18																								
6/21/18							0.13	0.000039												0.21	0.000035	0.11	0.000003	
6/22/18																								
7/20/18	0.08	0.000887	0.75	0.044192			0.75	0.013557												0.75	0.000491	0.46	0.000111	
7/21/18							0.13	0.000039												0.21	0.000035	0.11	0.000003	
8/6/18	0.14	0.001478	1.25	0.073654			0.97	0.022513												0.81	0.000747	0.54	0.000179	
8/9/18																								
8/21/18																								
8/25/18																								
9/3/18	0.14	0.001478	1.25	0.073654			0.97	0.022513												0.81	0.000747	0.54	0.000179	
9/5/18																								
9/20/18	0.53	0.021634	3.08	0.230471			1.94	0.075342			0.36	0.001834								1.06	0.002347	0.89	0.000667	
9/25/18																								
10/6/18																								
10/10/18							0.13	0.000039												0.21	0.000035	0.11	0.000003	
10/25/18																								
10/28/18																								
10/31/18																								
11/26/18																								
12/1/18																								
12/31/18							0.13	0.000039												0.21	0.000035	0.11	0.000003	
	4.54	0.778334	19.24	2.021709	0.00	0.000000	14.85	0.766685	0.00	0.000000	2.96	0.065816	0.00	0.000000	0.00	0.000000	0.00	0.000000	0.00	0.000000	11.14	0.038352	8.16	0.017420

TABLE 8.1

Project	No.	Start Date	End Date	Description	Note	Status	Work this Period (April 1, 2018 - September 30, 2018)	Work Projected Next Period (October 1, 2018 - March 31, 2019)
Milburn Area	1	2007	2026	Sewer Separation and Middleboro LS Improvements		Divisions A – G Completed Middleboro LS Upgrade Complete		
Wilson Boulevard Area	2	Dec. 2011	Dec. 2020	Parallel interceptor to redirect Flows from CSO 004, 005, 006, 007 and 008 to RC 4.		Phase I Completed Phase II - Completed		
Central Park Area	3	Started	Dec. 2013	Main St. Underpass Sewer Improvements		Completed		
	4	Dec. 2021	Dec. 2029	Daisy Road Lift Station	*	Property Acquired from AEP June 21, 2011		
				Forcemain	*	65% of Forcemain Installed		
				RC 5		River Crossing 5 Installed		
				Conveyance from RC 5 to Merrifield Park	*	Preliminary Alignment		
	5	Started 2008	Dec. 2014	Front Street Sewer		Completed		
	6	Started 2008	Dec. 2031	CSO 016 Improvements	*			
CSO 019 Sewer Improvements					Completed			
CSO 011 Sewer Improvements					Completed			
			RC 2 Improvements		Completed			
East Area	7	Dec. 2016	Dec. 2028	Linden Area Sewer Separation	*	2014 Model Recalibration Completed, Sewer Improvements Study Completed, Design & Construction of Division A, Phase I & II, Division B, Division C and Divisions N&P are completed.	Completed Design and Permitting Divisions N&P and Bidding. Construction Initiated on Divisions N&P.	Progress Construction on Divisions N&P. Initiate Design on Division M.
	8	Dec. 2017	Dec. 2028	Storage and Conveyance – Capital Ave to Merrifield Avenue	*	2014 Model Recalibration Completed Preliminary alignment developed. 60% Design Completed for 1 block, incorporated in Item 10 Project.		
	9	Started 2011	Dec. 2031	Sewer Improvements East of Capital Ave.	*	2014 Model Recalibration Completed		
Mariellen Lift Station (US 331 Underpass)					Phase I - LS w/ 2 Pumps and 3 Siphons Completed and in Operation			
				*	Phase II - LS Capacity Upgrade			
River Center / CSO 009 Area	10	Dec. 2015	Dec. 2023	Storage and Conveyance Merrifield Park to 4th Street	*	Survey 80% Complete Geotechnical Investigation Completed Preliminary Engineering Completed 2014 Model Recalibration Completed 60% Design Completed (Merrifield Ave.)	Evaluation of Potential Cost Savings Alternatives. Progressed Design on Storage/Conveyance in Crawford (Merrifield) Park.	Progress Design on Storage/Conveyance in Crawford (Merrifield) Park. Initiate Permitting of Storage/Conveyance in Crawford (Merrifield) Park.
	11	Dec. 2014	Dec. 2022	Storage and Conveyance Merrifield to Main Street	*	90% GBR Completed Phase I & II Geotechnical Investigation Completed Preliminary Engineering Report Completed 2014 Model Recalibration Completed Environmental Screening Completed 90% Design Completed	Progress ROW Acquisition/Demolition/Remediation. Evaluation of Potential Cost Savings Alternatives.	Progress ROW Acquisition/Demolition/Remediation.
	12	Dec. 2012	Dec. 2020	Storage and Conveyance Main Street to WWTP	*	90% GBR Completed Phase I & II Geotechnical Investigation Completed Preliminary Engineering Report Completed 2014 Model Recalibration Completed 90% Design Completed ROW Acquisition Completed for 2 Parcels Environmental Screening Completed	Evaluation of Potential Cost Savings Alternatives.	Progress ROW Demolition/Remediation

Shading indicates project completed.

* The City of Mishawaka submitted a request for modifications to their current Consent Decree on August 23, 2018. Modifications are being requested for projects identified with '*'. As part of the submittal, the City requested that the schedule for projects 10, 11 and 12 be placed in abeyance during agency review.