National Pollutant Discharge Elimination System (NPDES)
CSO Monthly Report of Operation (CSO MRO)
State Form 50546 (R3 / 7-13)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

City: City of South Bend		Page 1 of 11	Permit Number: IN0024520
Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Hourly Flow (MGD): 77	Design Average Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

WWTP Influent Data			Precipitation Data					CSO Outfall No. 001						CSO Outfall No. 002					
Day of Month	Average Daily Flow (MGD)	Peak Hourly Flow (MGD)	Time Precip. Began (am/pm)	Precip. Duration (Hours)	Total Daily Precip. (Inches)	Peak Intensity (Inch/hr)	Measurement Interval (hr, 30 m, 15 m)	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
1	38.2	54.0			-														
2	35.5	39.2			-														
3	34.9	38.3			-														
4	35.0	39.2			-														
5	34.5	39.0			-														
6	33.7	37.1			-														
7	34.3	39.2	1:10 PM	1.33	0.08	0.03	1 hr												
8	33.2	36.3			-														
9	32.6	35.4			-														
10	32.1	34.7	11:25 AM	0.08	0.01	0.01	1 hr												
11	32.4	35.7			-														
12	31.6	35.5	12:00 PM	3.42	0.18	0.05	1 hr												
13	32.2	37.5			-														
14	31.7	35.9			-														
15	31.6	34.6			-														
16	31.7	34.6			-														
17	31.5	34.8	10:50 AM	0.75	0.03	0.01	1 hr												
18	31.8	34.3			-														
19	31.2	35.4	5:25 AM	1.83	0.10	0.05	1 hr												
20	30.8	34.2			-														
21	31.3	35.6			-														
22	31.7	34.2	2:00 PM	4.17	0.22	0.05	1 hr												
23	49.9	76.9	12:10 AM	6.00	0.38	0.07	1 hr												
24	34.0	37.2			-														
25	32.8	35.8			-														
26	32.3	37.8	7:00 PM	1.75	0.09	0.03	1 hr												
27	31.7	35.6	1:05 AM	0.08	0.01	0.01	1 hr												
28	32.0	34.8	5:30 AM	6.42	0.50	0.11	1 hr	7:35 AM	E	0.26	E	0.01	E						
29	32.0	35.9			-														
30	32.1	36.3			-														
31	32.8	37.7			-														
Totals:	1033.2			25.83	1.60			1	Days	0.26		0.01		0	Days			0.00	

Typed or Printed Name and Title of Principal Executive Officer or Authorized Agent	Telephone
Al Greek , Director of Utilities	574-271-4210

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION; THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

Signature of Principal Executive Officer or Authorized Agent	Date (mm/dd/yy)
Al Greek	02/22/19

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CSO Monthly Report of Operation (CSO MRO)
State Form 50546 (R3 / 7-13)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

City: City of South Bend		Page 2 of 11	Permit Number: IN0024520
Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 003						CSO Outfall No. 004						CSO Outfall No. 006						CSO Outfall No. 007					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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Totals:	0	Days			0.00		0	Days			0.00		1	Days	2.75		0.07		0	Days			0.00	

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City: City of South Bend		Page 3 of 11	Permit Number: IN0024520
Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 008						CSO Outfall No. 010						CSO Outfall No. 11A						CSO Outfall No. 11B					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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12	2:35 PM	E	2.38	E	0.01	E	2:35 PM	E	0.63	E	0.01	E							2:35 PM	E	0.54	E	0.03	E
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19	8:45 AM	E	0.00	E	0.00	E																		
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22	4:35 PM	E	0.88	E	0.00	E																		
23	2:35 AM	E	3.02	E	0.02	E	2:35 AM	E	1.27	E	0.01	E							2:35 AM	E	1.08	E	0.05	E
24																								
25																								
26	10:00 PM	E	0.22	E	0.00	E																		
27																								
28	7:50 AM	E	3.44	E	0.02	E	7:50 AM	E	1.69	E	0.02	E							7:50 AM	E	1.44	E	0.07	E
29																								
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31																								
Totals:	6	Days	9.94		0.05		3	Days	3.59		0.04		0	Days			0.00		3	Days	3.06		0.14	

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Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 014						CSO Outfall No. 018						CSO Outfall No. 019						CSO Outfall No. 021					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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28													7:40 AM	E	0.30	E	0.00	E						
29																								
30																								
31																								
Totals:	0	Days			0.00		0	Days			0.00		2	Days	0.69		0.01		0	Days			0.00	

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City: City of South Bend		Page 5 of 11	Permit Number: IN0024520
Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 022						CSO Outfall No. 025						CSO Outfall No. 026						CSO Outfall No. 027					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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23	12:20 PM	M	1.00	M	0.02	E																		
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28																			7:30 AM	E	0.05	E	0.00	E
29																								
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31																								
Totals:	1	Days	1.00		0.02		0	Days			0.00		0	Days			0.00		1	Days	0.05		0.00	

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Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 028						CSO Outfall No. 029						CSO Outfall No. 031						CSO Outfall No. 033					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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26																								
27																								
28							7:50 AM	E	0.41	E	0.00	E	7:50 AM	E	2.10	E	0.09	E	7:50 AM	E	0.97	E	0.00	E
29																								
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Totals:	0	Days			0.00		3	Days	0.87		0.00		3	Days	4.47		0.20		3	Days	2.07		0.00	

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Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 035						CSO Outfall No. 036						CSO Outfall No. 037						CSO Outfall No. 038					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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19	8:45 AM	E	0.00	E	0.00	E																		
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22	4:35 PM	E	0.17	E	0.00	E																		
23	2:35 AM	E	2.64	E	0.02	E																		
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26	10:00 PM	E	0.04	E	0.00	E																		
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28	7:50 AM	E	3.41	E	0.02	E																		
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Totals:	6	Days	7.75		0.05		0	Days			0.00		0	Days			0.00		0	Days			0.00	

National Pollutant Discharge Elimination System (NPDES)
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City: City of South Bend		Page 8 of 11	Permit Number: IN0024520
Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 039						CSO Outfall No. 040						CSO Outfall No. 041						CSO Outfall No. 042					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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23	2:10 AM	E	1.26	E	0.03	E																		
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28	7:40 AM	E	0.97	E	0.02	E	7:30 AM	E	0.05	E	0.00	E												
29																								
30																								
31																								
Totals:	2	Days	2.23		0.06		1	Days	0.05		0.00		0	Days			0.00		0	Days			0.00	

National Pollutant Discharge Elimination System (NPDES)
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Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 044						CSO Outfall No. 045						CSO Outfall No. 048						CSO Outfall No. 049					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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23													2:10 AM	E	4.16	E	0.18	E						
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26																								
27																								
28													7:40 AM	E	3.72	E	0.16	E						
29																								
30																								
31																								
Totals:	0	Days			0.00		0	Days			0.00		3	Days	8.05		0.35		0	Days			0.00	

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Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Flow (Hourly) (MGD): 77	Design Flow (MGD): 48	Measured/Metered (M) or Estimated (E) must be specified	

	CSO Outfall No. 060						CSO Outfall No.						CSO Outfall No. [#]						CSO Outfall No. [#]					
Day of Month	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E	Time Discharge Began	M or E	Event Duration (Hours)	M or E	Event Discharge (MG)	M or E
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12	2:35 PM	E	1.35	E	0.00	E																		
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23	2:35 AM	E	2.69	E	0.00	E																		
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28	7:50 AM	E	3.59	E	0.00	E																		
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31																								
Totals:	3	Days	7.63		0.00		0	Days			0.00		0	Days			0.00		0	Days			0.00	

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City: City of South Bend		Page: 11 of 11	Permit Number: IN0024520
Facility: South Bend Municipal WWTP		Public Notification Requirements Met? Y	
Monitoring Period: January Year: 2019		Check box if no CSO discharge occurred for the month: ☐	
Design Peak Hourly Flow (MGD): 77	Design Average Flow (MGD): 48		

Day of Month	Comments (further explanation as to why each CSO event occurred)
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12	Precipitation Event Observed
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18	
19	Precipitation Event Observed
20	
21	
22	Precipitation Event Observed
23	Precipitation Event Observed
24	
25	
26	Precipitation Event Observed
27	
28	Precipitation Event Observed
29	
30	
31	

Typed or Printed Name and Title of Principal Executive Officer or Authorized Agent	Telephone
Al Greek , Director of Utilities	574-271-4210

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION; THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

Signature of Principal Executive Officer or Authorized Agent	Date (mm/dd/yy)
Al Greek	02/22/19

CSO Public Notification - January

Day of Month	Day of Week	Total Daily Precip. (Inches)	Total Daily CSO Discharge Volume (MG)	Notification Sent	Notes
1	Tue	-	-		
2	Wed	-	-		
3	Thu	-	-		
4	Fri	-	-		
5	Sat	-	-		
6	Sun	-	-		
7	Mon	0.08	0.00	Yes	Notification sent due to precipitation, but no overflow occurred
8	Tue	-	-		
9	Wed	-	-		
10	Thu	0.01	0.00		
11	Fri	-	-		
12	Sat	0.18	0.09	Yes	
13	Sun	-	-		
14	Mon	-	-		
15	Tue	-	-		
16	Wed	-	-		
17	Thu	0.03	0.00		
18	Fri	-	-		
19	Sat	0.10	0.00	Yes	Estimated <10,000 gallons of overflow
20	Sun	-	-		
21	Mon	-	-		
22	Tue	0.22	0.00	Yes	Estimated <10,000 gallons of overflow
23	Wed	0.38	0.48	Yes	
24	Thu	-	-		
25	Fri	-	-		
26	Sat	0.09	0.00	Yes	Estimated <10,000 gallons of overflow
27	Sun	0.01	0.00		
28	Mon	0.50	0.43	Yes	
29	Tue	-	-		
30	Wed	-	-		
31	Thu	-	-		

Notes

Average Daily Flow	Average value of 5-min WWTP flow data
Peak Hourly Flow	Maximum value of the rolling hourly average flow rate
Time Precipitation Bega	First precipitation recorded between the six rain gauges
Precipitation Duration	Cumulative duration of all precipitation for the day
Total Daily Precipitation	Maximum value of precipitation for all the six rain gauges
Peak Intensity	Maximum precipitation depth in an hour
Design Peak Hourly Flc	Per the NPDES Permit, the WWTP facility has a peak design flow of 77 MGD

Metered CSOs

- CSOs 3, 6, 22, 37 and 45 are metered with flow meter equipment.
- Data is downloaded from these sites and entered into the report.
- Discharge begin time and duration is obtained from this data.
- Discharge volume is calculated using level data.
- On January 24th and 25th, the meters at CSOs 3, 6, 22, and 37 were down part of the time. During the times the meters were down, the matrix relating precipitation to CSO volume was used to calculate CSO volume and duration.

Other CSOs

For non-metered CSOs, matrix relating precipitation to CSO volume is used to calculate CSO volume and the same for duration. The matrix was created from the South Bend design storms SWMM model results. The discharge time is estimated from the precipitation start time

Rain Gauges

Used the following rain gauges data in the CSO MRO: Colfax, Ethanol, Vaness, Southfield, WWTP and Ironwood. January 23rd - 29th, the Ironwood rain gauge was not working. During this time, the Southfield rain gauge data was used for the Ironwood readings.

Overflows less than 10,000 gallons are reported as 0.00 MG on the CSO MRO and as <0.01 MG on the NetDMR.

Precipitation Data Summary - January

Day of Month	Day of Week	Daily Precipitation (in)						Average Daily Precipitation (in)
		Colfax RG1	Ethanol RG2	Vaness RG3	Southfield RG4	WWTP RG5	Ironwood RG6	
1	Tue	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Wed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Thu	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Fri	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Sat	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Mon	0.02	0.04	0.03	0.08	0.01	0.05	0.04
8	Tue	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Wed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Thu	0.00	0.00	0.00	0.00	0.00	0.01	0.00
11	Fri	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Sat	0.14	0.02	0.18	0.00	0.10	0.13	0.09
13	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	Mon	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Tue	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Wed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Thu	0.01	0.00	0.03	0.02	0.02	0.01	0.01
18	Fri	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Sat	0.04	0.00	0.10	0.03	0.09	0.07	0.05
20	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Mon	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Tue	0.08	0.11	0.15	0.22	0.08	0.06	0.12
23	Wed	0.18	0.14	0.24	0.38	0.20	0.38	0.25
24	Thu	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Fri	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	Sat	0.05	0.04	0.08	0.09	0.05	0.09	0.07
27	Sun	0.01	0.00	0.00	0.00	0.00	0.00	0.00
28	Mon	0.20	0.07	0.50	0.34	0.31	0.34	0.29
29	Tue	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	Wed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	Thu	0.00	0.00	0.00	0.00	0.00	0.00	0.00

City of South Bend, Indiana
CSO Overflow Summary
JANUARY 2019

NUMBER OF OVERFLOW EVENTS IN JANUARY 2019 : 6

CSO Outfall	Total Overflow Duration (Hours)	Total Overflow Volume (MG)	Number of Overflow Events[1]
001	0.26	0.01	1
002			0
003			0
004			0
006	2.75	0.07	1
007			0
008	9.94	0.05	6
010	3.59	0.04	3
11A			0
11B	3.06	0.14	3
014			0
018			0
019	0.69	0.01	2
021			0
022	1.00	0.02	1
025			0
026			0
027	0.05	0.00	1
028			0
029	0.87	0.00	3
031	4.47	0.20	3
033	2.07	0.00	3
035	7.75	0.05	6
036			0
037			0
038			0
039	2.23	0.06	2
040	0.05	0.00	1
041			0
042			0
044			0
045			0
048	8.05	0.35	3
049			0
060	7.63	0.00	3
Total		**1.00**	

[1]More than one event on the same day is counted as one event.
If an Overflow event is rolled over to the next day, it is still counted as one event.

This a summary of total estimated overflow volume, total estimated overflow duration, and number of estimated overflow events for each CSO this month.