

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Compliance

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## COMBINED SEWER OVERFLOWS ANNUAL REPORT

**GENERAL INSTRUCTIONS:** The Combined Sewer Overflows (CSO) Annual Report is consistent with the EPA CSO Long-Term Control Policy requiring permitting authorities to report “Measures of Success” of the policy implementation. Hence, the goal of this report is to obtain information regarding:

1. Compliance with the 15 CSO Best Management Practices,
2. The condition and operation of the combine sewer system (CSS) components. Most importantly, the end-of-pipe measures that show trends in the discharge of CSS flows to the receiving water body, such as reduction of pollutant loadings, the frequency of CSOs, and the duration of CSOs,
3. Receiving water body measures that show trends of the conditions in the water body to which the CSO occurs;
4. Overall status of the CSO Long-Term Control Plan (LTCP) and Post Construction Compliance Monitoring (PCCM) Program,
5. Key CSO control accomplishments and design and construction progress in the reporting year, and
6. Planned modifications or projects affecting operations, maintenance, or installation of CSO controls, and sewer separations for the upcoming year.

**Permittees must complete ALL parts of the form.** Please be aware that this annual report form template highlights the minimum requirements a permittee is expected to submit. If additional space is needed for the narrative response, please provide the responses as an attachment to the Form. Permittees are obligated to complete abatement activities to ensure compliance with the Clean Water Act. This report is also consistent with *6NYCRR Part 750-2.1(i)*. Please **DO NOT** provide copies of the State Pollutant Discharge Elimination System (SPDES) Permit, Order on Consent, Wet Weather Operating Plan (WWOP), or Mercury Minimization Program (MMP) as attachments to this Annual Report Form.

This CSO BMP Annual Report Form must be submitted to the Regional Office and the Bureau of Water Compliance (Albany) by January 31<sup>st</sup> of each year (unless otherwise specified in the SPDES permit). Information on the NYSDEC CSO Program, including the current Form, can be found online at <https://www.dec.ny.gov/chemical/48595.html>. Any other questions or issues with completing this Form should be directed to Steve Wood, CSO Program Coordinator, Bureau of Water Compliance via email ([steven.wood@dec.ny.gov](mailto:steven.wood@dec.ny.gov)) or via phone at (518) 402-8129.

SPDES Permit Number: 0028410  
NYSDEC Region: 9  
Permittee Name: Buffalo Sewer Au  
Facility Name (if applicable): Bird Island Sewaç  
Reporting Year: 2021



Department of  
Environmental  
Conservation

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

**GENERAL CSO PROGRAM INFORMATION** Use the following tables to provide current general information on the CSO Program.

Number of CSO outfalls in the permittee owned system	52
Number of CSO events occurring in reporting year	35
Percentage of the collection system, owned by the permittee, that is combined	92%
Approximate length (mi) of combined sewers in the permittee-owned system	790
Population served by the permittee owned system	278,349
Number of publicly owned sewer system (POSS) connections	7
Number of non-POSS satellite system connections	0
Number of significant industrial users (SIU) connected to the combined sewer system	52

<b>When was the LTCP Submitted?</b>	January 10, 2014	Not Required <input type="checkbox"/>
<b>When was the LTCP Approved?</b>	March 18, 2014	Pending <input type="checkbox"/>
<b>What was/is the selected approach?</b>	Presumptive (4-6 events) <input checked="" type="checkbox"/> Presumptive (85% capture) <input type="checkbox"/> Presumptive (Equivalent Load) <input type="checkbox"/>	Demonstrative <input type="checkbox"/>
<b>Is LTCP Implementation completed?</b>	Yes	No

What is the status of the PCCM Plan?		What is the status of the PCCM Sampling Program?	
In Development	<input type="checkbox"/>	Not Yet Conducted/Started	<input type="checkbox"/>
Submitted	<input type="checkbox"/>	Baseline Sampling Conducted	<input checked="" type="checkbox"/>
Approved	<input checked="" type="checkbox"/>	In Progress	<input type="checkbox"/>
Not Yet Required	<input type="checkbox"/>	Previously Conducted	<input type="checkbox"/>
No Requirement	<input type="checkbox"/>	Not Yet Required	<input type="checkbox"/>

<b>When was the latest PCCM Report Submitted to NYSDEC?</b>	N/A	
<b>Was the selected CSO Policy Approach Criteria achieved?</b>	<input type="radio"/> Yes	<input type="radio"/> No
<b>Was water quality found to be attained?</b>	<input type="radio"/> Yes	<input type="radio"/> No

**Provide a brief list of all the recommendations and CSO controls to be implemented under the Long-Term Control Plan. Be sure to identify the year these items were completed and any remaining milestones dates not yet achieved.**

The Long-Term Control Plan includes weir raising, a floatable control facility, a new relief tunnel, in-line, pumping station upgrades, and off-line storage facilities and green infrastructure. Buffalo Sewer is currently in year 8 of a 20 year plan. For progress to date please see the September 1, 2021 Semi-Annual LTCP which includes work through July 1, 2021 located at: <https://buffalosewer.org/app/uploads/2021/09/September-2021-Semi-Annual.pdf>. In the second half of 2021, the Babcock PS RTC and Smith at Eagle In-line storage RTC were substantially completed, design continued on the Primary System NFA project, and work continued on the Secondary System Upgrade.

**COMBINED SEWER OVERFLOWS ANNUAL REPORT**  
**Part II - CSO Outfall Information**

**CSO OUTFALL INFORMATION** Use the following table to provide information for all CSO outfalls currently listed in the SPDES permit. The latitude and longitude must be that of the CSO outfall to the receiving water, not some other appurtenance such as a regulator structure.

Outfall No.	Latitude	Longitude	Receiving Water & Water Classification	Number of Regulators Associated	Type of Regulator(s) Associated (Fixed Dam, Float / Dynamic, Elevated Pipe, Wet Well Overflow, etc.)	Type of Treatment Provided (None, Screening, Surface Boom / Net, Overflow Retention, Settling, Disinfection)
003	42.9372	-78.9072	Black Rock Canal/C	11	Weir & Orifice	None
004	42.9261	-78.8992	Black Rock Canal/C	1	Leaping Weir	None
005	42.9242	-78.8908	Black Rock Canal/C	2	Elevated Pipe	None
006	42.9222	-78.8914	Black Rock Canal/C	7	Weir & Orifice	Bar Screening
007	42.9222	-78.9222	Black Rock Canal/C	1	Weir & Orifice	None
008	42.9208	-78.9000	Black Rock Canal/C	1	Leaping Weir	None
009	42.9189	-78.9008	Black Rock Canal/C	1	Leaping Weir	None
010	42.9172	-78.9014	Black Rock Canal/C	1	Leaping Weir	None
011	42.9136	-78.9033	Niagara River/A-Special	1	Weir & Orifice	None
012	42.9133	-78.9019	Black Rock Canal/C	1	Weir & Orifice	None
013	42.8889	-78.8936	Buffalo Inner Harbor/C	1	Weir & Orifice	None
014	42.8836	-78.8867	Erie Basin/C	2	Weir	None
015	42.8828	-78.8853	Erie Basin/C	2	Leaping Weir	None
016	42.8819	-78.8825	Buffalo River/C	2	Weir & Orifice	None
017	42.8772	-78.8797	Buffalo River/C	20	Weir, Orifice, Elevated Pipe	Screening
022	42.8731	-78.8747	Buffalo River/C	4	Weir, High Pt. Sewer, Elevated Pipe	None
023	42.8669	-78.8681	Buffalo River/C	1	Weir	None
025	42.8642	-78.8603	Buffalo River/C	1	Weir	None
026	42.8636	-78.8508	Buffalo River/C	45	RTC, Weir & Leaping Weir	None
027	42.8633	-78.8378	Buffalo River/C	1	Weir & Orifice	None
028	42.8606	-78.8322	Buffalo River/C	7	Weirs & Elevated Pipe	None
029	42.8606	-78.8322	Buffalo River/C	3	Weir & Orifice	None

**COMBINED SEWER OVERFLOWS ANNUAL REPORT**  
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Outfall No.	Latitude	Longitude	Receiving Water & Water Classification	Number of Regulators Associated	Type of Regulator(s) Associated (Fixed Dam, Float / Dynamic, Elevated Pipe, Wet Well Overflow, etc.)	Type of Treatment Provided (None, Screening, Surface Boom / Net, Overflow Retention, Settling, Disinfection)
031	42.8603	-78.8247	Cazenovia Creek/C	1	Weir	None
032	42.8619	-78.8258	Buffalo River/C	1	Leaping Weir	None
033	42.8633	-78.8258	Buffalo River/C	5	Leaping Weir	None
035	42.8506	-78.8086	Cazenovia Creek/B	2	Weir & Orifice	None
037	42.8525	-78.8114	Cazenovia Creek/C	1	Weir	None
038	42.8528	-78.8111	Cazenovia Creek/C	3	Weir	None
039	42.8536	-78.8128	Cazenovia Creek/C	1	Leaping Weir	None
040	42.8542	-78.8128	Cazenovia Creek/C	1	Weir	None
042	42.8553	-78.8142	Cazenovia Creek/C	3	Weir & Elevated Pipe	None
044	42.8575	-78.8183	Cazenovia Creek/C	4	Leaping Weir	None
046	42.8589	-78.8203	Cazenovia Creek/C	1	Leaping Weir	None
047	42.8597	-78.8228	Cazenovia Creek/C	5	Weir	None
048	42.8606	-78.8247	Cazenovia Creek/C	2	Weir & Orifice	None
049	42.8617	-78.8267	Buffalo River/C	1	Weir & Orifice	None
050	42.8556	-78.8211	Buffalo River/C	1	Weir & Orifice	None
051	42.8619	-78.8106	Buffalo River/C	1	Weir & Orifice	None
052	42.8650	-78.8022	Buffalo River/C	2	Weir & Orifice	None
053	42.9239	-78.8572	Scajaquada Creek/B	42	Weir & Orifice	Bar Screening
054	42.9519	-78.9100	Niagara River/A-Special	7	Weir	None
055	42.9431	-79.9097	Niagara River (Cornelius Creek)/A-Special	1	Weir	None
056	42.9350	-78.8775	Scajaquada Creek/B	2	Weir	None
057	42.9286	-78.8978	Scajaquada Creek/B	1	Weir	None

**COMBINED SEWER OVERFLOWS ANNUAL REPORT**  
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Outfall No.	Latitude	Longitude	Receiving Water & Water Classification	Number of Regulators Associated	Type of Regulator(s) Associated (Fixed Dam, Float / Dynamic, Elevated Pipe, Wet Well Overflow, etc.)	Type of Treatment Provided (None, Screening, Surface Boom / Net, Overflow Retention, Settling, Disinfection)
058	42.9303	-78.8958	Scajaquada Creek/B	3	Weir	None
059	42.9308	-78.8942	Scajaquada Creek/B	3	Weir	None
060	42.9344	-78.8783	Scajaquada Creek/B	12	Weir	None
061	42.9208	-78.9003	Black Rock Canal/C	1	Weir	None
062	42.9153	-78.9019	Black Rock Canal/C	1	Weir	None
063	42.9028	-78.9019	Black Rock Canal/C	1	Weir	None
064	42.8517	-78.8683	Buffalo River/C	7	Weir	None
065	42.8558	-78.8225	Buffalo River/C	9	Weir	None

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

**CSO DISCHARGE INFORMATION** Use the following table to provide an estimate or actual data (preferred) for the number of overflow events and CSO volumes discharged for each CSO Outfall.

Outfall No.	No. of Overflow Events			Annual CSO Volume (MG)			Measurement Method (Metered, Estimated, Modeled, Unknown)
	Baseline	Previous Reporting Year	Current Reporting Year	Baseline	Previous Reporting Year	Current Reporting Year	
031	N/A	0	0	N/A	0.00	0.00	Modeled
032	0	0	0	0.00	0.00	0.00	Modeled
033	9	18	19	37.77	65.68	147.42	Modeled
035	0	0	1	0.00	0.00	0.21	Modeled
037	13	8	9	23.30	10.36	24.72	Modeled
038	N/A	1	4	N/A	0.18	1.10	Modeled
039	0	0	0	0.00	0.00	0.00	Modeled
040	N/A	0	2	N/A	0.00	0.58	Modeled
042	N/A	0	2	N/A	0.00	0.55	Modeled
044	7	1	4	2.32	0.71	7.00	Modeled
046	1	0	1	1.31	0.00	0.51	Modeled
047	44	4	6	8.65	1.22	6.37	Modeled
048	0	0	0	0.00	0.00	0.00	Modeled
049	0	0	0	0.00	0.00	0.00	Modeled
050	14	6	8	3.17	1.59	5.75	Modeled
051	4	0	2	1.22	0.00	0.55	Modeled
052	10	0	2	10.87	0.00	0.54	Modeled
053	65	39	35	268.00	266.58	481.05	Modeled
054	0	0	0	0.00	0.00	0.00	Modeled
055	41	30	29	601.09	498.2	945.75	Modeled
056	5	0	0	0.04	0.00	0.00	Modeled
057	0	0	0	0.00	0.00	0.00	Modeled
<b>TOTAL</b>	See	page	3	of	this	section.	

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

**CSO DISCHARGE INFORMATION** Use the following table to provide an estimate or actual data (preferred) for the number of overflow events and CSO volumes discharged for each CSO Outfall.

Outfall No.	No. of Overflow Events			Annual CSO Volume (MG)			Measurement Method (Metered, Estimated, Modeled, Unknown)
	Baseline	Previous Reporting Year	Current Reporting Year	Baseline	Previous Reporting Year	Current Reporting Year	
003	6	5	5	0.11	1.46	7.51	Modeled
004	5	7	9	11.25	4.82	22.15	Modeled
005	4	0	0	0.08	0.00	0.00	Modeled
006	65	14	35	198.92	21.64	47.47	Modeled
007	N/A	1	5	N/A	0.14	1.13	Modeled
008	39	0	0	6.11	0.00	0.00	Modeled
009	N/A	0	0	N/A	0.00	0.00	Modeled
010	44	15	15	11.85	7.16	14.9	Modeled
011	41	34	31	134.29	173.34	230.62	Modeled
012	42	35	32	52.48	54.66	103.84	Modeled
013	7	4	7	6.75	4.13	16.23	Modeled
014	4	8	9	4.19	13.18	45.58	Modeled
015	12	0	1	6.14	0.00	0.67	Modeled
016	0	0	0	0.00	0.00	0.00	Modeled
017	49	20	21	71.26	97.71	233.18	Modeled
022	49	6	8	29.79	1.45	3.07	Modeled
023	N/A	1	4	N/A	0.17	1.08	Modeled
025	11	5	6	1.44	1.52	5.23	Modeled
026	63	8	8	124.16	56.87	64.93	Modeled
027	36	8	11	31.67	22.65	90.42	Modeled
028	69	37	31	45.54	16.77	32.67	Modeled
029	0	7	8	0.00	6.02	11.04	Modeled
TOTAL	See	page	3	of	this	section.	

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

**CSO DISCHARGE INFORMATION** Use the following table to provide an estimate or actual data (preferred) for the number of overflow events and CSO volumes discharged for each CSO Outfall.

Outfall No.	No. of Overflow Events			Annual CSO Volume (MG)			Measurement Method (Metered, Estimated, Modeled, Unknown)
	Baseline	Previous Reporting Year	Current Reporting Year	Baseline	Previous Reporting Year	Current Reporting Year	
058	0	0	1	0.00	0.00	0.14	Modeled
059	0	0	3	0.00	0.42	1.75	Modeled
060	5	0	2	0.70	0.00	0.36	Modeled
061	10	0	2	31.19	0.00	5.49	Modeled
062	N/A	0	0	N/A	0.00	0.00	Modeled
063	13	2	4	0.63	0.30	0.75	Modeled
064	56	7	10	21.11	7.29	18.04	Modeled
066	10	5	6	1.72	4.21	20.66	Modeled
<b>TOTAL</b>	<b>69</b>	<b>39</b>	<b>35</b>	<b>1749.1</b>	<b>1340.43</b>	<b>2601.01</b>	





**COMBINED SEWER OVERFLOWS ANNUAL REPORT**  
**Part III - Collection System Information**

**COLLECTION SYSTEM INFORMATION** Use the following table to provide baseline and post-LTCP information on the collection system.

	Baseline	Post-LTCP Implementation
Percentage of the collection system owned by the permittee that is combined.	92%	92%
Approximate no. of miles of combined sewers in the permittee owned system	790	790
No. of combined sewer outfalls in the permittee owned system	65	52
Avg. annual no. of CSO events in the permittee owned system	85	9
Avg. annual CSO volume discharged from the permittee owned system (MG)	1886	486
Population served by the permittee owned system	292,648	261,310
Number of satellite system connections	7	7

Use the space below to provide any further relevant information on the collection system. This should include a description of any unique ownership, operation and maintenance agreements or further explanation and description of POSS/satellite system connections. For POTW's with POSS's, please indicate which municipality owns/operates which infrastructure (Pump Stations, trunk sewers, interceptors, regulators, outfall structures, etc.) as well as who is responsible for reporting CSO events from CSOs within the POSS and who is responsible for reporting SSOs within the POSS.

Discharges to the Buffalo Sewer Authority's Combined Sewer System from satellite sanitary sewer districts are restricted through inter-municipal agreements, these values were utilized in constructing the flow model or the LTCP:

1. Town of Cheektowaga: 45 MGD
2. Erie County Sewer District #4: 20 MGD
3. Erie County Sewer District #1: 17.82 MGD
4. West Seneca Town Sewer Districts #5, 13, \* 14: 12.8 MGD
5. Village of Sloan: 5.18 MGD
6. West Seneca Town Sewer Districts #1, 2, 3, 4, 9, & 10: 3.49 MGD
7. West Seneca Town Sewer District #15: 0.39 MGD

Infrastructure upstream of the points of connection specified in the inter-municipal agreements are operated and maintained by the POSS's. The POSS's are separate sanitary sewer systems, as such they do not have CSOs. Reporting of SSOs within the POSS's is the responsibility of the respective POSS.

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

### Part IV - Implementation Information

**REPORTING YEAR INFORMATION** Use the following section to provide a summary of any significant LTCP or PCCM projects completed within the reporting year and any milestones for the reporting year that were not achieved.

1. Construction of Smith at Eagle RTC and Babcock Pumping Station RTC was substantially completed;
2. Construction contracts for Mill Race RTC and Broadway at Oak RTC were awarded;
3. Construction of Niagara Street Phase 3 was substantially completed and construction of Niagara Street Phase 4A began;
4. Design commenced on a CSO 061,010, & 008 mitigation project, a new RTC project at Gates Circle, and the SPP 170B/333 off-line storage facility.
5. Design of the Primary System NFA project commenced and contracts were awarded of the Secondary System Rehabilitation project.
6. On October 6, 2021 the EPA and NYSDEC approved the updated hydraulic model for the Long-Term Control Plan
7. Buffalo Sewer is currently working to utilize the model to update our approach to achieving compliance with the presumptive approach standards as they exist within the current Long-Term Control Plan in a cost-effective and affordable manner with a focus on achieving the greatest water quality benefit in the most timely way.

**UPCOMING YEAR INFORMATION** Use the following section to summarize significant LTCP and PCCM projects planned and milestones due for the upcoming year.

1. Buffalo Sewer intends to complete designs for the CSO 061,010, &008 mitigation project, Gates Circle RTC, and SPP 170B/333 off-line storage facility in 2022.
2. Design of the Primary System NFA is also expected to be completed in 2022.
3. Construction of the Secondary System Rehabilitation project is expected to commence in 2022.
4. Green infrastructure projects including Niagara Phase 4B, Jefferson Avenue permeable pavement, and several projects targeting the Raincheck 2.0 priority basins of CSOs 14, 26, 27, 33, and 35 are expected to be awarded for construction in 2022.
5. Throughout 2022 Buffalo Sewer intends to continue to reevaluate projects, develop more feasible alternatives, and work to optimize capacity utilizing globalized system logic while continuing to progress the above projects.

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

### Part V - CSO Best Management Practices

**PERMIT REQUIRED APPLICABILITY** Identify which CSO BMPs are listed as “Applicable” or “Not-Applicable” in your current SPDES permit. For those that are applicable, you must complete each of the corresponding sections that follow. For those that are not applicable, you may skip the questions in the corresponding sections that follow.

CSO BMP Name	Applicable	Not Applicable
CSO Maintenance / Inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Maximize Use of the Collection System for Storage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Industrial Pretreatment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Maximize Flow to POTW	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wet Weather Operating Plan (WWOP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prohibition of Dry Weather Overflows	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Control of Floatables and Settleable Solids	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Combined Sewer System Replacement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Combined Sewer / Extension	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Connection Prohibitions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Septage and Hauled waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Control of Runoff	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Notification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Characterization and Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 1. CSO Maintenance/Inspection</b> 6 NYCRR 750-2.8(a)(2) (EPA NMC No. 1: Proper Operation and Regular Maintenance)	YES	NO
Is there a written program for the maintenance and inspection of the CSS and CSOs?	<input checked="" type="radio"/>	<input type="radio"/>
What is the minimum frequency of CSO inspections (Yes = weekly or No = monthly)?	<input type="radio"/>	<input checked="" type="radio"/>
Are inspections conducted during both dry and wet weather?	<input checked="" type="radio"/>	<input type="radio"/>
Do the inspection reports indicate visual inspection observations, observed flows or indication of prior flow, weather conditions, condition of equipment, and any repair work recommended?	<input checked="" type="radio"/>	<input type="radio"/>
Are the inspection reports submitted to the DEC regional office with the monthly operating reports?	<input checked="" type="radio"/>	<input type="radio"/>
Indicate which of the following additional components are included in the plan:		
Pump Stations	<input checked="" type="radio"/>	<input type="radio"/>
Sewer Pipes & Interceptors	<input checked="" type="radio"/>	<input type="radio"/>
Sewer Manholes and Catch Basins	<input checked="" type="radio"/>	<input type="radio"/>
CSO Outfalls	<input checked="" type="radio"/>	<input type="radio"/>
CSO Controls (e.g. Regulators, Screening/Storage/Treatment facilities)	<input checked="" type="radio"/>	<input type="radio"/>
Are there existing inter-municipal agreements which specify responsibilities for inspection, maintenance, and/or repair?	<input checked="" type="radio"/>	<input type="radio"/>
When was the IMA(s) last reviewed for revision or update?	1996	
Is the collection system mapped using GIS?	<input checked="" type="radio"/>	<input type="radio"/>
The entire system, including manholes and catch basins?	<input checked="" type="radio"/>	<input type="radio"/>
Only portions of the system?	<input type="radio"/>	<input checked="" type="radio"/>
If the collection system is not mapped using GIS, is GIS mapping planned?	<input type="radio"/>	<input checked="" type="radio"/>
Is the collection system monitored using a SCADA system or other flow monitoring system?	<input checked="" type="radio"/>	<input type="radio"/>
In the past year, was progress made to install, upgrade, or expand monitoring with SCADA?	<input checked="" type="radio"/>	<input type="radio"/>
In the upcoming year, is installation, upgrade, or expansion of SCADA planned?    Yes                  No	<input checked="" type="radio"/>	<input type="radio"/>
Does the municipality have an asset management program in place that includes the collection system?	<input checked="" type="radio"/>	<input type="radio"/>

**COMBINED SEWER OVERFLOWS ANNUAL REPORT**

BMP No. 1. CSO Maintenance/Inspection - <i>Continued</i>	YES	NO
Have any work efforts or problems in the past year resulted in changes in overflows? If yes, describe below.	<input checked="" type="radio"/>	<input type="radio"/>
In the past year, was the inspection and maintenance program mostly:		
Reactive (responding to problems)? Describe below any plans to shift the emphasis to prevention	<input checked="" type="radio"/>	<input type="radio"/>
Proactive (focusing on preventative maintenance to avoid problems)?	<input type="radio"/>	<input checked="" type="radio"/>
<p><b>Use the space below to provide a narrative description of the following:</b></p> <ul style="list-style-type: none"> <li>a) Lengths of sewer cleaned and inspected,</li> <li>b) Number of manholes and catch basins cleaned and inspected,</li> <li>c) Any repairs or replacements conducted in the CSS,</li> <li>d) Any large equipment purchases made in the reporting year or planned for the upcoming year (e.g. vacuum trucks, pumps, etc.)</li> <li>e) any work efforts or problems in the past year that resulted in changes to the collection system maintenance and inspection program,</li> <li>f) noticeable results of the system changes (e.g. fewer events, less CSO volume, a reduction in floatables or other pollutants discharges, visible improvement in water quality of receiving water).</li> </ul> <p>a) Over \$500,000.00 was spent cleaning and inspecting sewers through proactive outsourcing contracts in addition to work conducted by internal staffing utilizing a televising truck and three vacuum trucks;</p> <p>b) Catch basin cleaning routes were developed to ensure that all catch basins throughout Buffalo Sewer's system are cleaned annually;</p> <p>c) Over a million dollars was spent on outsourced sewer main repairs in addition to repairs conducted by in-house staff utilizing three sewer repair crews;</p> <p>d) A crew truck and camera truck were purchased for the Sewer Maintenance department and a dump truck and pickup were purchased for the Green Infrastructure division;</p> <p>e) Updated catch basin cleaning routes were created and implemented, tablets with a GIS linked work order system were deployed, and a new Green Infrastructure workforce development program was launched;</p> <p>f) Despite more intense rainfall events in 2021 in comparison to the LTCP Modified 1993 Typical Year, the number of overflow events has decreased significantly.</p>		

**COMBINED SEWER OVERFLOWS ANNUAL REPORT**

<b>BMP No. 2. Maximum Use of Collection System for Storage</b> 6 NYCRR 750-2.7(f), 750-2.8(a)(2), 750-2.8(a)(5) (EPA NMC No. 2: Maximization of Storage in the Collection System)	Yes	No
In the past year, was the collection system able to convey the required minimum flows to the treatment plant during all wet-weather events?	<input checked="" type="radio"/>	<input type="radio"/>
Has the hydraulic capacity of the system been evaluated?	<input checked="" type="radio"/>	<input type="radio"/>
When was the hydraulic capacity last evaluated?	2021	
Have regulators and weirs ever been adjusted/modified to maximize storage?	<input checked="" type="radio"/>	<input type="radio"/>
In the past year or the upcoming year, indicate if any of the following items been changed or if changes are planned to improve use of the collection system for storage? If so, describe below.		
Tidegates maintenance/repairs/replacement	<input checked="" type="radio"/>	<input type="radio"/>
FOG program	<input checked="" type="radio"/>	<input type="radio"/>
Removal of small systems bottlenecks	<input checked="" type="radio"/>	<input type="radio"/>
Sewer cleaning and sediment removal	<input checked="" type="radio"/>	<input type="radio"/>
Removal of flow obstructions	<input checked="" type="radio"/>	<input type="radio"/>
Regulator or weir adjustment - list locations below	<input checked="" type="radio"/>	<input type="radio"/>
In-line storage: Inflatable dams or sluice gates	<input checked="" type="radio"/>	<input type="radio"/>
<p><b>Use the space below to provide a narrative description of the changes to structures or procedures that will improve use of the collection system for storage (e.g. tide gate maintenance/repairs/replacement, regulator or weir adjustment, FOG program changes, removal of bottlenecks/flow obstructions, sewer cleaning and sediment removal, in-line storage, etc.).</b></p> <p>The ongoing LTCP incorporates real-time control in-line storage, off-line storage, weir adjustments, a relief sewer, and pump station improvements to improve use of the collection system for storage. In the past year in particular, the Smith at Eagle RTC and Babcock Pumping Station RTC were substantially completed and construction contracts for the Mill Race RTC and Broadway at Oak RTC were awarded with construction expected to commence in 2022. Additionally, the Mill Race RTC contract incorporates the replacement of several existing backflow prevention gates and the preliminary design of additional backflow prevention systems is planned for the next year.</p> <p>Construction of Niagara Street Phase 3 was substantially completed and construction of Niagara Street Phase 4A began in 2021 both of which use green infrastructure to divert flows out and store flows within the system. Phase 4B of this project is expected to be awarded in 2022 with similar impacts.</p> <p>Design commenced on a CSO 061,010, &amp; 008 mitigation project, a Gates Circle RTC, and the SPP 170B/333 detention facility, all of which are expected to be bid in 2022. Continued proactive and reactive sewer cleaning and televising and green infrastructure maintenance were conducted in 2021 and will continue in 2022.</p> <p>FOG issues at a dozen sites were identified and corrected and additional initiatives to identify dischargers were started in 2021; it is anticipated this program will continue to be developed in 2022.</p>		

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 3. Industrial Pretreatment</b> <i>6 NYCRR 750-2.7(f) and 2.9(a)(4)</i> <i>(EPA NMC No. 3 &amp; 7: Review and Modification of Pretreatment Requirements &amp; Pollution Prevention Programs to Reduce Contaminants in CSOs)</i>	<b>YES</b>	<b>NO</b>
Is there an approved pretreatment or mini-pretreatment program? (If neither exist <u>and</u> no nondomestic users, select NO & go to BMP No. 4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the pretreatment program consider CSOs in the calculation of local limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Has the impact on CSOs from nondomestic users that discharge toxic pollutants been evaluated, and steps taken to minimize such impacts?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there an inventory of industrial dischargers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are there any restrictions on IU discharges to the collection system during wet weather events?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are there any industrial discharges that could reach CSO outfalls?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Do IUs upstream of CSOs discharge any bioaccumulative pollutants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Do any IUs have a holding tank or EQ tank to store wastewater prior to discharge to the CSS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
In the past year or in the upcoming year, have there been or will there be negotiations or changes to agreements with industrial dischargers, which will potentially reduce impacts during CSO events? Describe these changes below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Use the space below to provide a narrative description of industrial discharges to the collection system, any restrictions on industrial discharges during wet-weather events, and any agreements that will potentially reduce impacts during CSO events.</b></p> <p>Industrial discharges who violate their permits are cited by the Buffalo Sewer Authority and are required to come into compliance or face revocations of their permits. Permits are reviewed and renewed with any changed required to comply with EPA and NYSDEC regulations incorporated into the new permit on a three year cycle. All permits which require in the next year will be reviewed for compliance with 40 CFR Part 403 and sewer use rules, regulations, and laws.</p>		



## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 4. Maximize Flow to POTW</b> 6 NYCRR 750-2.7(f), 2.8(a)(2), and 2.8(a)(5) (EPA NMC No. 4: Maximization of Flow to the POTW for Treatment)	YES	NO
What are the permit required minimum flows during wet weather events? <div style="text-align: right; margin-right: 50px;">Headworks/Primary/Disinfection: _____ MGD Secondary: _____ MGD</div>	180 _____ MGD 180 _____ MGD	MGD MGD
In the past year, were the headworks, primary treatment works and disinfection works able to pass the flows specified in the permit for all wet weather flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
In the past year, was the secondary treatment works able to treat the flows specified in the permit for all wet weather flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If the minimum flows were not achieved for all wet-weather events in the reporting year, has a plan to accomplish this been developed and submitted to the Department?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
In the past year or in the upcoming year, have there been or will there be any physical modifications to the collection system which have allowed more flow to reach the POTW? Describe below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are there areas of the collection system, including pump stations that need additional study to evaluate capacity, condition, or to determine if illegal connections (i.e. inflow) exist? List below	<input type="checkbox"/>	<input checked="" type="checkbox"/>
In the past year, have any new problem areas been identified that restrict flow to the plant? List locations below.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Use the space below to provide a narrative description of:</b></p> <p><b>a) any physical modifications to the collection system which are completed or anticipated and will allow for more flow to reach the WWTP,</b></p> <p><b>b) any areas of the collection system which need additional study to evaluate capacity or inflow issues,</b></p> <p><b>c) any known problem areas that restrict flow to the WWTP, and</b></p> <p><b>d) any plans to address hydraulic restrictions (e.g. pipe replacement, construction of relief sewer or overflow tanks, pump station improvements, weir adjustment, smoke/dye testing to identify illicit connections).</b></p> <p>a) The ongoing LTCP incorporates real-time control in-line storage, off-line storage, weir adjustments, a relief sewer, and pump station improvements to allow more flow to reach the WWTP;</p> <p>b) Buffalo Sewer has begun flow monitoring in areas with complaints of basement back-ups and/or suspected seiche impacts in order to better understand the dynamics of issues and develop solutions, these areas are generally located along the Niagara and Buffalo Rivers;</p> <p>c) There are no known restrictions in flow to the WWTP;</p> <p>d) The ongoing LTCP incorporates real-time control in-line storage, off-line storage, weir adjustments, a relief sewer, and pump station improvements to address hydraulic restrictions, additionally Buffalo Sewer annually cleans and inspects sewers and repairs pipes and manholes and is currently exploring back-flow prevention options for newly identified locations and is replacing existing backwater gates in the next year to address issues. Over the past year, the Buffalo Sewer Authority began the deployment of sensors throughout the combined sewer system to further real-time decision making and in the next year plans to continue this effort with a particular focus of implementing rain gauging within both the Buffalo Sewer Authority's system and the upstream POSS's.</p>		

**COMBINED SEWER OVERFLOWS ANNUAL REPORT**

<b>BMP No. 5. Wet Weather Operating Plan (WWOP) 6 NYCRR 750-2.8(a)</b> <i>(EPA NMC: None)</i>	<b>YES</b>	<b>NO</b>
Does the plan identify the maximum flows through preliminary, primary, secondary treatment, tertiary, and disinfection units?	<input type="radio"/>	<input checked="" type="radio"/>
In the past year, did treatment of wet weather flows cause any effluent violations or destabilize treatment upon return to normal service? Describe below.	<input type="radio"/>	<input checked="" type="radio"/>
If the collection system or plant has been modified or upgraded, has the WWOP been modified to reflect new flow rates or new procedures and the revised plan submitted to the NYSDEC Regional Office?	<input type="radio"/>	<input type="radio"/>
In the upcoming year, are changes to the WWOP expected? Describe below.	<input type="radio"/>	<input checked="" type="radio"/>
When was the WWOP last updated?	2014 _____	
When was the WWOP last submitted and approved by NYSDEC?	2007 _____	
<p><b>Use the space below to provide a narrative description of any changes to the WWOP during the reporting year or anticipated in the upcoming year.</b></p> <p>The Wet Weather Operating Plan was submitted to the NYSDEC in September 2007 and an updated version was submitted in May 2007. The primary bypass improvements project was completed in 2014 and the Wet Weather Operating Plan was updated to reflect changes associated with the distribution of wet weather flow through the WWTP that have resulted from this project and submitted to the NYSDEC Regional Office. Upon completion of the Primary System Upgrade project, it is anticipated that changes to the WWOP will be required; at this time, however no revised plan is warranted.</p>		

<b>BMP No. 6. Prohibition of Dry Weather Overflows 6 NYCRR 750-2.7 and 2.8(b)(2)</b> <i>(EPA NMC No. 5: Elimination of CSOs During Dry Weather)</i>	<b>YES</b>	<b>NO</b>
In the past year, were there any dry weather overflows? If no, skip to BMP No. 7.	<input type="radio"/>	<input checked="" type="radio"/>
Were all dry weather overflows reported via NY-Alert, in accordance with 6 NYCRR Part 750-2.7?	<input type="radio"/>	<input type="radio"/>
If dry weather overflows occurred, did this result in improvement of procedures or equipment?	<input type="radio"/>	<input type="radio"/>
Has the likelihood of future dry weather overflows been eliminated? If not, describe why below.	<input type="radio"/>	<input type="radio"/>
<p><b>Use the space below to provide a narrative description of the both the <u>causes</u> of any dry weather events that occurred in the reporting year and <u>resulting changes or improvements</u> that were made to procedures or equipment (e.g. routine inspection schedule, OMIP, inter-municipal agreements, FOG program, removal of illicit connections, I/I Control program, leaky tidegates, adjustment and/or repair of regulators, upgraded auxiliary power, elimination of hydraulic bottlenecks, etc.).</b></p>		

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 7. Control of Floatables and Settleable Solids</b> 6 NYCRR 750-2.8(a)(4) <i>(EPA NMC No. 6: Control of Solid and Floatable Materials in CSOs)</i>	YES	NO
In the past year, did any outfalls discharge floating solids, oil and grease, or solids of sewage origin?	<input checked="" type="radio"/>	<input type="radio"/>
Indicate which of the following engineering controls or control measures, if any, have been implemented or will be implemented in the upcoming year?		
Source controls (street cleaning, public education, household hazardous waste collection, solid waste collection, recycling, and/or composting of lawn/leaf/roadkill deer)	<input checked="" type="radio"/>	<input type="radio"/>
Catch basin hoods	<input checked="" type="radio"/>	<input type="radio"/>
Screens	<input checked="" type="radio"/>	<input type="radio"/>
In-line netting	<input type="radio"/>	<input checked="" type="radio"/>
Booming and skimming of open waters	<input checked="" type="radio"/>	<input type="radio"/>
<p><b>Use the space below to provide a narrative description of any ongoing issues with control of floatables and settleable solids from CSO outfalls and any existing or planned engineering controls or control measure to be implemented.</b></p> <p>Floatables capture by the Hamburg Drain Floatable Control Facility are quantified prior to disposal. Hoods have long been installed on catch basins and receivers within the Buffalo Sewer Authority's combined sewer system and are routinely replaced.</p>		

<b>BMP No. 8. Combined Sewer System Replacement</b> 6 NYCRR 750-2.10(i) <i>(EPA NMC: None)</i>	YES	NO
In the past year, were any combined sewers designed or constructed that were not approved by NYSDEC?	<input type="radio"/>	<input checked="" type="radio"/>
Are there any plans or current projects to separate combined sewers into sanitary and storm sewers?	<input type="radio"/>	<input checked="" type="radio"/>
Is there an approved engineering plan for the project(s)?	<input type="radio"/>	<input checked="" type="radio"/>
Were any cross-connections eliminated in the past year or planned for the upcoming year?	<input checked="" type="radio"/>	<input type="radio"/>
In the past year, how many miles of combined sewer were separated?	0 _____ Miles	
In the upcoming year, how many miles of combined sewer are scheduled to be separated?	0 _____ Miles	
<p><b>Use the space below to provide a narrative description of how this BMP was implemented during the reporting year.</b> (Attach extra sheets or additional documentation, if necessary):</p> <p>Buffalo Sewer does not currently have any plans for sewer separation.</p>		

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 9. Combined Sewer / Extension</b> 6 NYCRR 750-2.10(i) (EPA NMC: None)	YES	NO
In the past year, were any combined sewers extended, not using separate sewers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If separate sewers were extended from combined sewers, was it demonstrated that the sewerage system had the ability to convey, and the treatment plant had the ability to adequately treat, the increased dry-weather flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If determined necessary by the Regional Water Engineer, was an assessment made of the effects of the increased flow of sanitary sewage or industrial waste on the strength of CSOs and their frequency of occurrence, including the impacts upon best usage of the receiving water?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Has a recent combined sewer extension resulted in increased discharge from a CSO?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has a recent combined sewer extension resulted in increased flow to the POTW? Describe any CSO impacts below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is any development planned upstream of a combined sewer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If yes, has a sewer extension plan been submitted for review and approval?	<input type="checkbox"/>	<input type="checkbox"/>
Does the plan include any flow retention, storage, or treatment structures?	<input type="checkbox"/>	<input type="checkbox"/>
If the approval contained a flow credit requiring removal of I/I, what was the requirement or ratio?	_____	
<p><b>Use the space below to provide a narrative description of how this BMP was implemented during the reporting year.</b> (Attach extra sheets or additional documentation, if necessary):</p> <p>Any proposed sanitary sewer taps in excess of 2500 gpd are required to submit a downstream capacity analysis to the Regional Water Engineer for review demonstrating that there is capacity. In addition, as part of the Buffalo Sewer Authority's sewer tap permitting process for storm discharges, new development which involves a soil disturbance of 0.25 acres or more which are upstream of or directly discharge to the combined sewer system retain/detain on site post-construction flows during a 25 year storm in excess of pre-construction flows during a 2 year storm.</p>		

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 10. Connection Prohibitions</b> 6 NYCRR750-2.9(a)(5) <i>(EPA NMC: None)</i>	YES	NO
Are new connections prohibited by the DEC? If no, skip to BMP No. 11.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is this due to basement backups?	<input type="checkbox"/>	<input type="checkbox"/>
Is this due to surcharging manholes?	<input type="checkbox"/>	<input type="checkbox"/>
In the upcoming year, is any work planned to either increase capacity or reduce hydraulic loading to the WWTP? Describe below.	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Use the space below to provide a narrative description of how this BMP was implemented during the reporting year.</b> (Attach extra sheets or additional documentation, if necessary):</p>           		

<b>BMP No. 11. Septage and Hauled Waste</b> 6 NYCRR750-2.7(f) and 2.8(a)(1) <i>(EPA NMC: None)</i>	YES	NO
Does the POTW accept septage or hauled waste? If no, skip to BMP No. 12.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
In the past year, were there any discharges or releases of septage or hauled waste into the collection system upstream of a CSO?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are there restrictions on when the POTW accepts hauled waste or septage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there a dedicated location to discharge septage at the WWTP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Does the facility have authorization from NYSDEC to accept hauled waste or septage at a location other than the WWTP?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are any of these locations upstream of a CSO?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any changes to the POTW's policy on septage and hauled waste in the past year? Are any changes needed or planned in the upcoming year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Use the space below to provide a narrative description of how septage and hauled waste are received by the POTW, where remote acceptance locations are, any POTW restrictions on when these wastes can be received, and the total volume of these wastes received at remote locations during the reporting year.</b></p> <p>All septage, leachate, and sludge are received at a dedicated receiving station adjacent to the Bird Island WWTF settled wastewater well. Grease is received at a receiving station adjacent to the Bird Island WWTF digesters. Sludge cake is received from the Town of Amherst at a dedicated sludge cake receiving station in the Bird Island WWTF Megastructure. Hours of acceptance of septage, leachate, sludge and grease: Monday- Friday 8:00 am to 5:30 pm. Saturday 7:30 am to 3:30 pm. Amherst Cake 24 hours per day/7 days a week.</p>		

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 12. Control of Run-off</b> 6 NYCRR750- 2.1(e) (EPA NMC: None)	YES	NO
Is sediment in runoff from construction zones entering catch basins in the combined sewer system?	<input checked="" type="radio"/>	<input type="radio"/>
Are impacts of run-off, from development and re-development in areas served by combined sewers, reduced by requiring compliance with the New York Standards for Erosion and Sediment Control and the quantity control requirements included in the New York State Stormwater Management Design Manual?	<input checked="" type="radio"/>	<input type="radio"/>
Is there adequate communication between the local municipal department that enforces local stormwater codes and ordinances and the collection system staff regarding stormwater runoff?	<input checked="" type="radio"/>	<input type="radio"/>
Do the municipalities within the combined sewer system have adequate storm water pollution prevention programs to reduce pollutants in stormwater?	<input checked="" type="radio"/>	<input type="radio"/>
Are any changes needed in the implementation of this BMP to reduce the number of CSO events, the volume discharged, or pollutants in the discharge? If yes, describe below.	<input type="radio"/>	<input checked="" type="radio"/>
<p><b>Use the space below to provide a narrative description of how this BMP was implemented during the reporting year and any planned changes for the upcoming year.</b></p> <p>The Buffalo Sewer Authority under MS4 Permit #NYR20A461 is regulated as a non-traditional MS4. As such those projects which involve the disturbance of one acre or more of soil and which discharge to sewers that drain directly to the waters of the United States rather than the Bird Island STP are subject to NYSDEC SPDES General Permit for Construction Activity Permit No. GP-0-15--2. This includes routine inspection of construction sites for compliance with the permit. For those sites with 0.25-1.0 acre of soil disturbance, a sediment and erosion control plan is required, but inspections are only conducted upon receipt of a complaint. For areas of the Buffalo Sewer Authority's system which discharge upstream of or directly to the combined sewer system, construction projects are restricted in final peak flow which could be discharged to the sewer, thereby reducing the peak flow discharging through the CSOs. In addition to the post-construction flow standards, for sites with 0.25 or more acres of soil disturbance a sediment and erosion control plan is created. For those sites of 1 acre or more, weekly inspections by the owner/operator are required and the Buffalo Sewer Authority verifies these inspections on a routine basis. It is expected, however that sediment is still entering the system through smaller sites and between inspections.</p>		

<b>BMP No. 13. Public Notification</b> 6 NYCRR 750-1.12 (EPA NMC No. 8: Public Notification)	YES	NO
In accordance with the Discharge Notification Act Requirements of the SPDES permit, outfall identification signs must be installed and maintained at all permitted CSO outfalls. Are these signs installed and maintained at all permitted CSO outfalls?	<input checked="" type="radio"/>	<input type="radio"/>
In accordance with the Sewage Pollution Right to Know Law, as detailed in 6 NYCRR Part 750-2.7, all CSO discharge events must be reported via the NY-Alert electronic notification system.		
Are all CSO events in accordance with the SPDES permit reported via NY-Alert?	<input checked="" type="radio"/>	<input type="radio"/>
CSO events not in accordance with the SPDES permit conditions should be reported as a bypass via NY-Alert. When these events occur, are they being reported via NY-Alert?	<input checked="" type="radio"/>	<input type="radio"/>
Beyond the use of NY-Alert, does the POTW maintain any other public notification systems (e.g. websites, social media, email systems, public media broadcasts) to alert potential users of receiving waters affected by CSOs?	<input checked="" type="radio"/>	<input type="radio"/>
For all CSOs to receiving waters that are Class B or higher, a written public notification program (PNP) is required to be developed, implemented, and publicly available to inform citizens of the location and occurrence of CSO events. Is there a written PNP?	<input checked="" type="radio"/>	<input type="radio"/>
For all CSO communities within the Great Lakes Basin, a written PNP is required. For Great Lakes Basin communities, when was the PNP last updated? (All other communities may skip to BMP No. 14)	<u>6/14/19</u>	
<p><b>Use the space below to provide a narrative description of how any updates to CSO outfall signs and PNPs, as well as a summary of any other public notification systems (beyond NY-Alert) used to alert the public of CSO events.</b></p> <p>The Buffalo Sewer Authority utilizes the NY-Alert system and the CSO outfall signs which are checked on an annual basis for condition as required to alert the public to the potential presence of CSO events. On the buffalosewer.org website, Buffalo Sewer also maintains a map of CSOs and their current modeled probability of overflow based on a simplified linear regression of the model for each outfall.</p>		

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

<b>BMP No. 14. Characterization and Monitoring</b> (6 NYCRR 750-1.11(a), 2.5(a) and 2.7(g)) (EPA NMC No. 9: Monitoring to Characterize CSO Impacts and the Efficacy of CSO Controls)	YES	NO
Has the combined sewer system been modeled for use in determining or estimating the frequency of overflows and identifying CSO impacts?	<input checked="" type="radio"/>	<input type="radio"/>
Was baseline sampling conducted as part of LTCP development?	<input checked="" type="radio"/>	<input type="radio"/>
Was any Post Construction Compliance Monitoring (PCCM) sampling conducted in the reporting year or planned for the upcoming year?	<input type="radio"/>	<input checked="" type="radio"/>
In what years does the SPDES permit, Order on Consent, or other enforcement mechanism require PCCM sampling to be conducted?	2034	
With the available CSO data and any PCCM conducted, has the permittee verified:		
Compliance with the selected LTCP approach (presumptive or demonstrative)?	<input type="radio"/>	<input type="radio"/>
Attainment of water quality standards, despite any remaining CSO events?	<input type="radio"/>	<input type="radio"/>
<p><b>CSO discharge monitoring methods should be specified for each CSO outfall in Part II of this Annual Report. For all CSO outfalls that are not metered, explain how overflow volumes are either modeled or estimated to collect sufficient data and document permit compliance and the success of CSO BMP implementation. In addition, please provide a brief summary of the findings from the most recently submitted PCCM Report (including compliance with the selected CSO Policy Approach criteria and attainment of water quality standards).</b></p> <p>Extensive characterization and metering were undertaken during the development of the Buffalo Sewer Authority's Combined Sewer Overflow Long Term Control Plan. As many of the BSA's CSO outfalls are submerged and/or have separate storm sewer connections downstream of regulators, CSO outfall monitoring is achieved through bimonthly inspection of regulators. A system-wide hydraulic model was developed using flow meters and level gages which is used to estimate CSO activation frequency and volume. A system-wide water quality model was developed which can predict pollutant impacts based on a "Modified Typical Year" which has been reviewed and approved by regulatory agencies. In calibrating the metering data to the "Modified Typical Year" rain gages were installed throughout the City of Buffalo. The post-construction monitoring plan was submitted on March 17, 2015 and approved on March 1, 2016. In accordance with this plan, a recalibrated model was submitted to regulators for comment on January 8, 2019. Final approval of the recalibrated model was received on October 6, 2021.</p>		

<p><i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></p>		
<p><b>Name:</b> Oluwole A. McFoy</p>	<p><b>Official Title:</b> General Manager</p>	<p><b>Phone:</b> 716851-4664</p>
<p><b>Signature:</b> Oluwole A. McFoy, PE <small>Digitally signed by Oluwole A. McFoy, PE Date: 2022.01.28 21:11:41 -05'00'</small></p>	<p><b>Date:</b> 1/28/2022</p>	<p><b>Email:</b> omcfoy@buffalosewer.org</p>

## COMBINED SEWER OVERFLOWS ANNUAL REPORT

### GLOSSARY/ACCRONYMS

For the purposes of this annual report, the following terms and acronyms are described below:

**Best Management Practice (BMP):** Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements (if determined necessary by the permittee), operating procedures, and practices to control plant site runoff, spillage and leaks, sludge or waste disposal, or drainage from raw material storage.

**Bypass:** The intentional or unintentional diversion of wastewater or stormwater around any portion of a treatment facility having the effect of reducing the degree of treatment designed for the bypassed portion of the treatment facility.

**Catch Basin:** A chamber usually built at the curblin of a street, which admits surface water for discharge into a storm drain.

**Combined Sewer Overflows (CSO):** A discharge from a combined sewer system (CSS) at a point before the POTW wastewater treatment plant.

**Combined Sewer System (CSS):** A sewer system which conveys sewage and storm water through a single pipe system to a POTW wastewater treatment plant.

**CSO-related Bypass:** A bypass within the WWTP (after the headworks) that may/may not receive additional treatment or be blended with the WWTP effluent.

**Demonstration Approach:** CSO Control Policy approach where a permittee develops and implements an LTCP that meets the state water quality standards. A permittee could develop an LTCP that would provide for attainment of water quality standards, or it could use a total maximum daily load (TMDL) to *demonstrate* that water quality standards can be attained through a combination of CSO controls and other controls.

**Environmental Conservation Law (ECL): Chapter 43-B of the Consolidated Laws of the State of New York.**

**Geographic Information System (GIS):** A computer-based tool for mapping and analyzing features in the environment. GIS support a wide range of activities including water quality modeling, watershed planning, and wetlands permitting and mitigation.

**Green Infrastructure (GI):** A variety of site design techniques and structural practices used by communities, businesses, homeowners and others for managing stormwater. GI includes preserving and restoring natural landscape features (such as forests, floodplains and wetlands), and reducing the amount of land covered by impervious surfaces. Example GI practices include green roofs, pervious pavement, bioretention, rain gardens, vegetated swales, planters and stream buffers.

**Infiltration/Inflow (I/I):** Inflow is water other than wastewater that enters a sewerage system (including sewer service connections) from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers, process and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from infiltration. Infiltration means water other than wastewater that enters a sewerage system (including sewer service connections) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include and is distinguished from inflow.

**Reporting Year:** Period of 12 months, from January to December, covering the preceding calendar year.

**Long-Term Control Plan (LTCP):** An engineering document that characterizes and assesses CSO discharge to a receiving waterbody, considering the site-specific nature of CSOs and evaluating the cost effectiveness of a range of control options/strategies. The goal of the Plan is to comply with the requirements of the Clean Water Act.

**Million Gallons per Day (MGD):** A unit of flow commonly used for wastewater discharges.

**Nine Minimum Controls (NMCs):** Nine minimum technology-based controls that CSO permittees are expected to implement to address CSO problems, without extensive engineering studies or significant construction costs, before long-term measures are taken.



## COMBINED SEWER OVERFLOWS ANNUAL REPORT

**Publicly Owned Treatment Works (POTW):** Any device or system used in the treatment (including recycling and reclamation) of municipal sewage that is owned by a municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

**State Pollutant Discharge Elimination System (SPDES) Permit:** A permit issued by DEC, under the system established pursuant to Article 17 of the ECL and Part 750 for issuance of permits authorizing discharges to the waters of the State.

**CSO Event:** A discharge from one or more overflows from a CSS as the result of a precipitation event, that does not receive the minimum treatment specified in the CSO Control Policy II.C.4.a.

**Presumption Approach:** CSO Control Policy approach based on the assumption that implementation of a LTCP that meets certain minimum defined performance (i.e., 4-6 untreated overflow events or 85 percent by volume capture) criteria will be adequate meet water quality standards.

**Sewage:** The water-carried human or animal wastes from residences, buildings, industrial establishments or other places, together with such groundwater infiltration and surface water as may be present. The admixture with sewage as above defined of industrial wastes or other wastes as hereafter defined, shall also be considered sewage.

**Sanitary Sewer Overflow (SSO):** A discharge of untreated or partially treated sewage from a sanitary sewer system.

**Separate Sewer System (SSS):** A public or privately owned pipe lines or conduits, pumping stations, force mains, and all other constructions, devices, and appliances appurtenant thereto, used for conducting storm water, sewage, industrial waste or other wastes, alone or in combination to a disposal system.

**Supervisory Control And Data Acquisition (SCADA):** A complex computer system that provides automatic control of stormwater storage and overflows at various locations within the sewer system.

**Untreated Sewage:** Sewage that has not entered the treatment plant of a sewage treatment works.

**Upcoming Year:** Period of 12 months, from January to December, covering the current calendar year.

**Volume Discharged:** Total discharge volume for a period of time (e.g. a CSO event or a Reporting Year) from a given CSO outfall(s).

**Volume Captured:** Total volume for a period of time (e.g. a CSO event or a Reporting Year) that were either captured via an offline treatment facility before discharge or diverted to the WWTP for treatment.

**Wet Weather Operating Plan (WWOP):** Written procedures detailing how to treat maximum flows through the WWTP, while not appreciably diminishing effluent quality or destabilizing treatment upon return to dry weather operation.

**Wastewater Treatment Plant (WWTP) / Sewage Treatment Works:** A facility for the purpose of treating, neutralizing or stabilizing sewage, including treatment or disposal plants, the necessary collection, intercepting, out fall and outlet sewers, pumping stations integral to such plants or sewers, equipment and furnishings thereof and their appurtenances.

**Water Quality Standards (WQS):** Regulations that establish the uses for which surface waters of the state are protected and include numeric and narrative criteria to protect those uses.