2023 Annual Plan Report

Onondaga County, New York

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December 16, 2024

Prepared for:
New York State Department
Of Environmental Conservation

Prepared by:

2023 ANNUAL PLAN REPORT

Prepared for the New York State Department of Environmental Conservation
on behalf of the Onondaga County Department of Water Environment Protection

December 16, 2024

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Acronyms and Abbreviations

ACJ	Amended Consent Judgment
ASLF	Atlantic States Legal Foundation
AWQS	Ambient Water Quality Standards
BMP	Best Management Practice
cfu	Colony Forming Units
the City	the City of Syracuse
the County	Onondaga County
CSF	Clinton Storage Facility
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
DQI	Data Quality Indicator
DQO	Data Quality Objective
DUAR	Data Usability Assessment Report
EBSS	Erie Boulevard Storage System
ECL	Environmental Conservation Law
EDO	Effective Date of Order
EIS	Environmental Impact Statement
FC	Fecal Coliform
FCF	Floatables Control Facility
GIF	Green Improvement Fund
GPM	gallons per minute
HB	Harbor Brook
HBIS	Harbor Brook Interceptor Sewer
hr	Hour
ICMP	Interim Corrective Measures Plan
IMA	Inter-Municipal Agreement
in	Inch(es)
LF	Linear Feet
LTCP	Long-Term Control Plan
Metro	Metropolitan Syracuse Wastewater Treatment Plant

MG	Million Gallons
mg/L	Milligrams per Liter
MIS	Main Interceptor Sewer
mL	Milliliter
MOU	Memorandum of understanding
MTS	Microbial Trackdown Study
NYCRR	New York Codes, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
OC	Onondaga Creek
OCDWEP	Onondaga County Department of Water Environment Protection
O&M	Operation and Maintenance
OEC	Onondaga Earth Corps
OEI	Onondaga Environmental Institute
%	Percent
PCCM	Post-Construction Compliance Monitoring
QA/QC	Quality Assurance/Quality Control
RTF	Regional Treatment Facility
SAPA	State Administrative Procedures Act
SCADA	Supervisory Control and Data Acquisition
SF	Storage Facility
SPDES	State Pollutant Discharge Elimination System
STR	Save the Rain
SWMM	Stormwater Management Model
TDS	Total Dissolved Solids
TOGS	Technical & Operational Guidance Series
UAA	Use Attainability Analysis
USEPA	U.S. Environmental Protection Agency
WQS	Water Quality Standards
WQX	Water Quality Exchange
yr	Year

Executive Summary

Regulatory Background

The County's CSO control program, also known as Save the Rain, has been guided by the requirements of the Fourth Stipulation of the Amended Consent Judgment (ACJ), an update to the 1998 ACJ, since 2009. The ACJ was terminated on October 8, 2021. Despite fulfillment of all construction related milestones and attainment of all CSO capture goals set forth in the ACJ Fourth Stipulation (to capture for treatment or eliminate, within the meaning of EPA's National CSO Control Policy, no less than 95% by volume, on a system-wide annual average basis, of the combined sewage generated during precipitation events by December 31, 2018), water quality assessments determined that CSOs continued to cause and/or contribute to the non-attainment of Ambient Water Quality Standards (AWQS) for fecal coliform in the tributaries. The Order on Consent between the County and NYSDEC executed on March 16, 2021, regulates the County's remaining CSO discharges for a five (5) year period beginning on October 8, 2021.

The Order requires that the County submit an Annual Plan Report, due on or before April 1st of each year while the County is under the Order. The 2023 Annual Plan Report serves as the report for the third year under the Order and summarizes the 2023 County's combined sewer overflow (CSO) control projects and monitoring program. For the 2023 Report, submission was delayed due to procurement issues related to the CSO/CMOM Program Manager.

Combined Sewer System Overview

The County manages the combined sewer system (CSS) which directs flow to the Metropolitan Syracuse Wastewater Treatment Plant (Metro). The CSS drainage area encompasses 7,337 acres, or approximately 11 square miles. The two major combined sewer areas are the Harbor Brook basin and the Onondaga Creek basin, and a third smaller area is the Ley Creek basin. Beginning in 1998, a phased program of improvements, including sewer separations and other green and gray infrastructure projects, has led to closure or abatement of 61 out of 72 CSO outfalls. As of December 31, 2023, eleven (11) residual CSOs remain operational.

Interim CSO Corrective Measure Plan

The County's ICMP dated September 16, 2022, defines the County's limited CSO abatement project plans, a Focused Post Construction Compliance Monitoring (PCCM) program and CSO Metering Plan, for the five-year duration of the Order.

2023 Completed Projects

The County continued implementing green infrastructure in 2023 with two projects completed, both of which were funded by the Green Improvement Fund (GIF). Through 2023, the County has completed a total of 250 green infrastructure projects. The completed green infrastructure projects provide a total of over 210 MG of runoff reduction on an annual basis throughout the CSS and account for approximately 32 percent of the average annual calculated combined sewage volume captured, treated, or eliminated since 2009, based on SWMM results for the typical year (1991) precipitation record. The only gray infrastructure project completed in 2023 was the County-led CSO 052 Regulator Modification Project. This project demonstrates the County's proactive approach for Combined Sewer Overflow (CSO) reduction and maintenance improvements. The three (3) projects completed in 2023 are projected to decrease CSO discharges by 2.8MG/year for the 1991 typical year, per original SWMM estimates.

Future Planned Projects

The planned CSO abatement projects are broken down into County-led and opportunistic projects with other entities to maximize its capital investment to provide greatest CSO reduction with the funds. In addition to the planned projects listed in the ICMP, the County added 5 new projects in 2023, which are planned for construction through 2025. An important long-term future planned project is related to the NYSDOT's Interstate 81 (I-81) viaduct project. Specific to the County's CSO Abatement Program, I-81 passes through several combined sewersheds in the City, and runoff from the currently elevated viaduct enters the CSS in several locations. During 2023, NYSDOT and the County continued to coordinate on this project. The County is also planning a series of betterments to be completed in conjunction with the I-81 project, including the construction of a new floatables control facility and the replacement of two trunk sewers in the CSS due to conflicts with NYSDOT's proposed infrastructure.

Focused PCCM

As required by the Order, the County continued to implement a focused PCCM during 2023 to support Use Attainability Analysis (UAAs) for fecal coliform and track water quality improvements resulting from abatement efforts. Due to delays in procuring a contract for flow monitoring services, the County's 2023 CSO metering plan to support and report the County's Storm Water Management Model (SWMM) model recalibration, SWMM annual update to represent the 2023 CSO abatement projects and comparison between SWMM estimates for CSO discharge using the 2023 rainfall to the 2023 metered data are not included in this Annual Plan Report. An extensive CSO metering plan to support the Harbor Brook combined sewershed and CSO 028 & 029 (Onondaga Creek) SWMM recalibration, is underway this year, and will be reported in the 2024/2025 Annual Plan Report(s).

2023 Tributary Water Quality Monitoring Program – Compliance, Trends

In 2023, the County's tributary water quality monitoring program included a continued assessment of the three CSO receiving streams: Onondaga Creek, Harbor Brook, and Ley Creek. The sampling program was conducted biweekly from January through December to support compliance evaluations and track fecal coliform concentration trends. To provide data for evaluating receiving water impacts and effectiveness of CSO controls, samples collected in 2023 captured dry and wet-weather events. Results of the 2023 data continue to document exceedances of the Ambient Water Quality Standards (AWQS) for Fecal Coliform in these tributaries, including the non-CSO affected streams, during both wet and dry weather, indicating contributions from other potential rural and urban inputs, in addition to CSOs. Long-term Fecal Coliform trends indicate no significant trends in 2023 and that 2023 fecal coliform concentrations are comparable to recent years. Fecal coliform concentrations at the Ley Creek Thompson Road were often equal to or exceeded concentrations at the downstream Park Street location indicating a potential major non-CSO source(s) of fecal coliform to Ley Creek likely exist upstream of CSOs.

Use Attainability Analysis

The 2020 Memorandum of Understanding (MOU) requires the County to complete limited use attainability analyses (UAAs) for CSO affected segments of Onondaga Creek, Harbor Brook, and Ley Creek. The UAAs will be necessary to support NYSDEC's review and, if appropriate, revision of water quality standards and approval of the County's long-term control plan. In 2022, DEC drafted a Standard Operating Procedure (SOP) for developing UAAs. As of the end of 2023, NYSDEC was awaiting USEPA guidance, prior to proceeding with the next steps. Following EPA's approval of the SOP, the County and DEC will meet to assess additional data and information needs for developing the UAAs for each of the three CSO tributaries.

1. Introduction

This Annual Plan Report is being submitted by Onondaga County (the County) in accordance with the State Order on Consent (Order) Docket #R7-202100304-6 between the County and New York State Department of Environmental Conservation (NYSDEC) that was executed on March 16, 2021, and became effective on October 8, 2021. The Order imposes requirements related to further abatement of the County's remaining combined sewer overflows (CSOs). In addition to satisfying the reporting requirements of the Order, the Annual Plan Report provides information required by the County's State Pollutant Discharge Elimination System (SPDES) permit related to CSO control.

This Section provides the following:

- Summary of the legal documents requiring and governing the Annual Plan Report, namely the Order and the SPDES Permit; and
- Overview of the combined sewer system and CSOs

1.1 State Order on Consent

The NYSDEC and the County entered into a federal Amended Consent Judgment (ACJ), effective January 20, 1998, concerning its Combined Sewer Overflow (CSO) abatement program. The ACJ required the implementation of a CSO Abatement Program, consistent with the Long-Term Control Plan (LTCP) requirements of the USEPA CSO Control Policy. On October 8, 2021, the 1998 ACJ between the County, the State of New York, and Atlantic States Legal Foundation (ASLF) was deemed satisfied by the Honorable Frederick J. Scullin Jr., Senior United States District Judge. The County successfully completed all the Phase I requirements of the CSO Control Policy. Despite considerable public investment and fulfillment of all construction related milestones and attainment of all CSO capture goals set forth in the ACJ Fourth Stipulation (to capture for treatment or eliminate, within the meaning of EPA's National CSO Control Policy, no less than 95% by volume, on a system-wide annual average basis, of the combined sewage generated during precipitation events by December 31, 2018), water quality assessments determined that CSOs continued to cause and/or contribute to the non-attainment of Ambient Water Quality Standards (AWQS) for fecal coliform in the CSO tributaries, a violation of ECL §17-0501 (General prohibition against pollution). The EPA 1994 CSO Control Policy indicates that a CSO control plan needs to provide an adequate level of control to meet the water quality requirements of the CWA.

Upon termination of the ACJ on October 8, 2021, the Order between the County and NYSDEC that was executed on March 16, 2021, became effective (EDO). The Order regulates the County's remaining CSO discharges for a five (5) year period beginning on October 8, 2021. The Order requires the County to submit an approvable Interim CSO Corrective Measures Plan (ICMP). The County's ICMP dated September 16, 2022, as approved by the NYSDEC, defines the County's CSO abatement project plans and includes a Focused Post Construction Compliance Monitoring (PCCM) program. The objectives of the Focused PCCM program are to support the Use Attainability Analysis (UAA) efforts, track water quality improvements resulting

from abatement efforts and the continued maintenance of the County's Storm Water Management Model (SWMM).

Prior to and leading up to the Order, the County and NYSDEC finalized a memorandum of understanding (MOU) in 2020 for the County to complete limited use attainability analysis for CSO affected segments of Onondaga Creek, Harbor Brook, and Ley Creek. The goal of the UAAs is to identify what aquatic life, recreational, and aesthetic uses can be attained through implementation of the County's LTCP, as revised. The UAAs will be necessary to support NYSDEC's review and, if appropriate, revision of the AWQS and approval of the County's LTCP. The County will include the UAAs for each waterbody in its future LTCP. Compliance with the Order requires the County to submit an approvable revised LTCP to the NYSDEC, together with UAA reports, within four (4) years and six (6) months from the effective date of the Order (by April 8, 2026), to NYSDEC for review and approval, so as to have an approved LTCP and UAA Reports within five (5) years of the EDO (by October 8, 2026).

The Order also requires that the County submit an Annual Plan Report, due on or before April 1st of each Year, for five years. This 2023 Annual Plan Report serves as the report for the third year under the Order.

The four (4) requirements for the Annual Plan Report, as specified in the Order and listed below, form the basis for the content of this Report and include an update of the following topics:

1) ***Status of any County owned/managed/funded CSO abatement projects that have been implemented or are in planning stages over the past year.***

   As required by the Order, the County's ICMP includes a list of projects the County has currently committed to funding or constructing/implementing over the five (5) year period. Section 2 of this Report includes an update on the CSO Control Projects status and a description of the gray and green projects that were active in 2023.

   Public outreach efforts included the continuation of the County's Rain Barrel Program activities.

2) ***Status of any non-County owned/managed/funded "opportunistic" projects that have been implemented or are in planning stages over the past year, including the upcoming New York State I-81 improvement project.***

   Section 2 of this Report also includes the status and summarizes the non-County owned/managed/funded "opportunistic" projects that were implemented and in planning stages in 2023, including the NYS I-81 Improvement Project. This section also includes the O&M requirements for the gray and green projects, and summary of 2023 maintenance activities.

3) ***Summary of the metering data and review of any discrepancies between the County's stormwater management model (SWMM) and the metered data obtained over the past year, and an update and recalibration of the County's system in accordance with the recalibration plan.***

SWMM related topics are not included in this annual plan report. Due to an unanticipated delay in procuring a contract for CSO Flow Metering support and CSO Program Consultant services, the following tasks planned in 2023, as per the ICMP, were not completed:

- SWMM Recalibration: The County has progressed several CSO abatement projects, including CSO regulator modifications at CSOs 005, 010, and 011, since the 2016 calibration. Flow metering was proposed in 2023 for a one-year period at a minimum or until sufficient storms and data have been collected to support the SWMM recalibration of the Harbor Brook sewershed, continued maintenance and utilization of SWMM for system performance calculations. Recalibration of the Harbor Brook sewershed in SWMM is planned to be reported in the 2024/2025 Annual Plan Report(s).
- SWMM Update: The SWMM annual update consisting of modifying the model to represent the 2023 CSO abatement projects and any other system or operational changes that necessitate an update to the model (for example sewer lining or replacement projects). This annual update of the County's SWMM model was completed under contract by a Consultant in previous years.
- Flow Meter Summary: The County was not required to continue flow metering of the ACJ "representative" CSOs in 2023, as per the ICMP. With no CSO flow metering, a summary and comparison between the County's SWMM estimates for CSO discharge and activation frequency utilizing the 2023 rainfall and metered data is not included in this report. SPDES permit required 2023 flow monitoring for the CSO facilities were reported to NYSDEC as part of the facility Quarterly Performance Reports.

4) ***Summary of any post-construction compliance monitoring (PCCM) data and determination of water quality improvements resulting from implementation of CSO abatement projects.***

Section 3 of this Report provides a summary and water quality results of the 2023 Focused PCCM.

1.2 SPDES Permit

The SPDES permit (No. NY 002 7081) issued by NYSDEC also imposes limits and controls on the Metropolitan Syracuse Wastewater Treatment Plant (Metro) and related conveyances to reduce or eliminate pollutant loads to Onondaga Lake and its tributaries in order to avoid contravention of the water quality standards. The current version of the Metro SPDES permit was received on June 16, 2017, effective July 1, 2017, and expired on June 30, 2022. In 2022, the permit was modified on May 24th without an end date extension under the State Administrative Procedures Act (SAPA).

The Metro SPDES permit outlines compliance actions for all CSOs and requires the County to submit to the NYSDEC an annual report addressing compliance with the USEPA National CSO Policy, the SPDES permit, and the ambient water quality standards (AWQS). The permit requires the County to issue an annual report for CSO best management practices (BMPs).

The Metro SPDES Permit is available online at:
http://ongov.net/wep/documents/Permit_Mod_NY0027081_FINAL.pdf

Onondaga County has included the annual reporting items for CSOs required by the Metro SPDES permit in this report, with the intention of consolidating information rather than duplicating it.

1.2.1 Monitoring Program

Section XVI of the current Metro SPDES permit outlines specific monitoring requirements for the CSO treatment facilities.

Section 3 of this report provides details on the County's 2023 monitoring program.

1.2.2 Combined Sewer Overflows Annual Report

The SPDES permit requires the County to implement BMPs for CSOs which include operation and maintenance (O&M) procedures, maximizing the existing treatment facility and collection system to the extent practicable, maximizing pollutant capture, and minimizing water quality impacts from CSOs. The Combined Sewer Overflows Annual Report required by the SPDES permit summarizes the implementation of the BMPs as per Section VII.15 of the SPDES permit. The Annual Combined Sewer Overflow BMP Report was submitted separately by the County to the NYSDEC, as required by the SPDES permit by April 1, 2024, and is included in this Annual Plan Report as Appendix A.

1.2.3 Special Conditions CSO Control Policy

Pursuant to Section VIII.B. of the SPDES permit, the County is required to submit a PCCM Program Report consistent with the Department-approved PCCM Plan which addresses compliance with the USEPA CSO strategy requirements, the SPDES permit, and water quality standards to the NYSDEC. The County has included this information in this report.

1.3 Combined Sewer System Overview

The combined sewer system (CSS) directing flow to Metro encompasses 7,337 acres, or approximately 11 square miles. The two major combined sewer areas are the Harbor Brook basin via the Harbor Brook Interceptor Sewer (HBIS) and the Onondaga Creek basin via the Main Interceptor Sewer (MIS). In addition, the upper Butternut/Grant Trunk Sewer and the Hiawatha Trunk Sewer overflow to Ley Creek when pipe capacities are exceeded during wet weather; dry weather flows are conveyed to Metro via the MIS. Onondaga County manages the CSS to maximize the capture and treatment of combined sewage, in accordance with it's NYSDEC's approved Wet Weather Operating Plan, updated 2019. Even so, the capacity of the CSS can be overwhelmed during periods of intense or prolonged rainfall and/or snowmelt, which can result in CSO discharges.

Beginning in 1998, a phased program of improvements, including sewer separations and other infrastructure projects, has led to closure or abatement of 61 CSO outfalls. Abated CSOs are still open outfalls able to discharge during larger storm events; however, they do not discharge up to the 1-year, 2-hour design storm. Refer to Section 2 for further information on the abated and operational CSO outfalls. No new outfalls were abated in 2023.

Table 1-1 details the pre-abatement and current residual number of active CSO locations, as well as the acreage of drainage areas tributary to Metro.

Table 1-1. Pre-ACJ and Current CSOs and Drainage Basins Tributary to Metro (as of December 31, 2023)

Drainage Basin	Pre-ACJ Number of Operational CSO Locations (1998)[1]	Current Number of Operational CSO Locations	Current Number of Abated CSO Locations[2]	Combined Sewer Area (acres)	Percentage of Total Combined Sewer Area
Harbor Brook	20	5	11	1,707	23.3%
Onondaga Creek	50	5	22	5,386	73.4%
Ley Creek	2	1	1	244	3.3%
Total	**72**	**11**	**34**	**7,337**	**100.0%**

[1] *The number of pre-ACJ operational CSO locations is based on the CSO outfalls listed in Table 1-2.*
[2] *Abated CSOs are open outfalls that do not discharge up to the 1-year, 2-hour design storm.*

Table 1-2 includes an updated list of the status of the CSOs along with the information regarding their location, design storm overflow volume, rainfall trigger intensity, imperviousness, land use, CSO abatement strategy, status or scheduled completion date, and current flow monitoring.

Figure 1-1 shows the CSO outfalls listed in Table 1-2 and graphically delineates the CSO basins by receiving waterbody.

Table 1-2: CSO Outfall Information

CSO Outfall	CSO Status	CSO Location	Latitude	Longitude	Basin Characteristics						CSO Abatement Strategy (completed items in bold)	Status or Scheduled Completion Date (completed items in bold)	Flow Monitoring
					Area (acres)	Design Storm CSO Overflow Volume (MG) [7]	Rainfall Trigger Intensity (in/hr)	Imperviousness (%)	Slope (%)	Land Use			
Harbor Brook Drainage Basin													
003	Abated	Hiawatha Blvd. (West side of HB)	43° 03' 20" N	76° 11' 07" W	95.4	0.0	>0.9	51	0.9	mostly residential; some commercial	**Harbor Brook Storage Facility**	**In service 12/31/2013**	N/A[5]
										and community facilities	**Green Infrastructure**	**12/31/2013**	
004	Abated	State Fair Blvd.	43° 03' 13" N	76° 10' 54" W	372.6	0.0	>0.9	43	0.9	mostly residential; some commercial	**Harbor Brook Storage Facility**	**In service 12/31/2013**	N/A[5]
											Green Infrastructure	**12/31/2013**	
04A (LHBS)	Abated	Lower Harbor Brook Storage Facility Main Outfall	43° 03' 15" N	76° 10' 58" W	-	0.0	>0.9	-	-	-	**Harbor Brook Storage Facility**	**In service 12/31/2013**	Ultrasonic Level Sensor [4]
005	Abated	W. Genesee and Sackett Street	43° 03' 11" N	76° 10' 38" W	11.2	0.0	0.4	81	0.4	mostly commercial; some residential	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
											Sewer Reconfiguration	**12/31/2019**	
006	Abated	Park Ave. and Sackett Street (West side of HB)	43° 03' 07" N	76° 10' 35" W	15.1	0.0	>0.9	61	0.5	mostly commercial and residential;	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
										some community facilities and open space	Green Infrastructure	**12/31/2019**	
06A	Abated	Park Ave. and Sackett Street (East side of HB)	43° 03' 07" N	76° 10' 35" W	13.8	0.0	0.4	62	0.4	mostly commercial and residential;	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
										some community facilities and open space			
007	Operational	Richmond Avenue and Liberty Street	43° 03' 00" N	76° 10' 26" W	31.3	0.2	0.3	62	0.5	mostly commercial and residential;	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
										some community facilities and vacant land	Green or Gray Infrastructure	ICMP[10]	
008	Closed	Lakeview Avenue and Liberty Street	43° 02' 57" N	76° 10' 59" W	5.1			51	0.9	mostly residential; some commercial			
009	Operational	W. Fayette Street (West side of HB)	43° 02' 47" N	76° 10' 33" W	28.6	0.4	0.6	37	1.4	mostly residential and open space; some	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
										commercial	Green or Gray Infrastructure	ICMP[10]	
010	Abated	W. Fayette Street (East side of HB)	43° 02' 45" N	76° 10' 21" W	16.9	0.1	>0.9	44	0.6	mostly commercial and public; some	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
										residential	Green Infrastructure	**Completed 12/31/2020**	
011	Operational	Gifford Street at Fowler HS (East side of HB)	43° 02' 34" N	76° 10' 23" W	55.7	0.1	0.4	41	0.5	mostly commercial, community facilities, and	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
										residential; some industrial and vacant land	Green or Gray Infrastructure	ICMP[10]	
012	Closed	Gifford Street at Fowler HS (West side of HB)	-	-	-			-	-	-	**Closure**	**Completed** [1]	N/A
013	Closed	Seymour Street	-	-	-			-	-	-	**Separation**	**Completed 12/31/2011**	N/A
014	Operational	Delaware Street	43° 02' 24" N	76° 10' 29" W	206.9	0.3	0.4	43	0.7	mostly residential; some vacant land	Floatables Plan	Plan Re-submittal 3/12/13	N/A [12]
											Green or Gray Infrastructure	ICMP[10]	
015	Operational	Herriman Street and Grand Avenue	43° 02' 20" N	76° 10' 38" W	49.9	0.3	0.9	44	0.8	mostly residential; some vacant land	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
											Green or Gray Infrastructure	ICMP[10]	
016	Closed	Lydell Street	-	-	-	-	-	-	-	-	**Separation**	**Completed 12/31/2011**	N/A
017	Abated	Hoeffler Street	43° 02' 12" N	76° 10' 47" W	72.1	0.0	>0.9	28	1.1	mostly residential and vacant; some commercial and public facilities	Floatables Plan	Plan Re-submittal 3/12/13	Water Level Sensor [3]
018	Abated	Constructed Wetland Outfall/ Emergency Bypass	43° 02' 10" N	76° 10' 57" W	152.8	0.0	>0.9	36	1.3	mostly residential; some recreational	**Green Infrastructure - Wetland Treatment with Floatables Control**	**Completed 12/31/2021**	Flow Meter
63A	Abated	Harbor Brook	43° 03' 28" N	76° 11' 16" W	366.6	0.0	>0.9	42	1.2	mostly residential; some commercial	**Harbor Brook Storage Facility**	**In service 9/11/2015**	N/A[5]
		(1000 LF NW of Hiawatha Blvd W.)											
078	Abated	Bellevue and Velasko	43° 02' 08" N	76° 11' 19" W	212.5	0.0	>0.9	27	1.3	mostly residential; some recreational	Floatables Plan	Plan Re-submittal 3/12/13	Flow Meter for NY-Alert Notifications
											Green Infrastructure	**12/31/2019**	
Onondaga Creek Drainage Basin													
020	Operational	Butternut Street and I-690	43° 03' 17" N	76° 09' 26" W	643.8	2.7	0.3	52	1.4	mostly residential; some commercial	**Butternut Street FCF**	**Completed 2000**	Existing Flow Meter [6]
											Green or Gray Infrastructure	ICMP, Coordinate with I-81 project	
021	Operational	Burnet Avenue and I-690	43° 03' 16" N	76° 09' 25" W	97.2	2.9	0.2	70	0.6	mostly commercial; some residential	**Burnet Street FCF**	**Completed 2000**	Existing Flow Meter [6]
											Green or Gray Infrastructure	ICMP, Coordinate with I-81 project	
022	Closed	West Genesee Street (East side of OC)	-	-	-	-	-	-	-	-	**Separation, Green Infrastructure**	**In service 4/30/2013**	N/A
024	Closed	Water Street	-	-	-	-	-	-	-	-	**Separation**	**Completed 2001**	N/A
025	Closed		-	-	-	-	-	-	-	-	**Separation**	**Completed** [1]	N/A

Notes:

(1) Actual completion date unknown at this time
(2) Upstream subcatchment areas tributary to EBSS
(3) Event Indicator: record date and duration of overflow
(4) Water levels to be used to approximate flow rate
(5) Flow Meter was removed on 9/27/19, DEC approved
(6) Existing facility with flow metering
(7) SWMM results based on the 1-year, 2-hour design storm
(8) Not used
(9) Not used
(10) Strategy to be updated in ICMP
(11) Formally 060/077 - The outfall name was changed to 60M to meet formatting requirements from EPA and DEC and is planned to be updated in a future modification.
(12) As per ICMP, representative flow monitoring no longer required

Abbreviations:

Temp. = Temporary
N/A = Not Applicable
TBD = To be determined
ICMP = Interim CSO Corrective Measure Plan

Definitions:

Abated = CSO is zero or minimal for the 1-year, 2-hour design storm
Operational = CSO still discharges
Closed = CSO no longer capable of discharging

Table 1-2: CSO Outfall Information

CSO Outfall	CSO Status	CSO Location	Latitude	Longitude	Basin Characteristics						CSO Abatement Strategy (completed items in bold)	Status or Scheduled Completion Date (completed items in bold)	Flow Monitoring
					Area (acres)	Design Storm CSO Overflow Volume (MG) [7]	Rainfall Trigger Intensity (in/hr)	Imperviousness (%)	Slope (%)	Land Use			
Onondaga Creek Drainage Basin (continued)													
026	Closed		-	-	-	-	-	-	-	-	**Separation**	**Completed** [1]	N/A
027	Operational	West Fayette Street (East side of OC)	43° 02' 55" N	76° 09' 28" W	162.8	1.3	0.3	68	0.6	mostly commercial	Floatables Plan	ICMP, Coordinate with I-81 project	N/A [12]
											Green or Gray Infrastructure		
028	Abated	Walton Street (West side of OC)	43° 02' 53" N	76° 09' 27" W	23.7	0.0	0.4	68	0.7	mostly commercial and residential; some	**Clinton Storage Facility**	**In service 12/31/2013**	Water Level Sensor [3]
										vacant	**Green or Gray Infrastructure**	**12/31/2019**	
029	Operational	Walton Street (East side of OC)	43° 02' 53" N	76° 09' 27" W	9.9	0.2	0.9	93	0.8	mostly commercial	**Sewer Reconfiguration**	ICMP, Coordinate with I-81 project	N/A
030	Abated	West Jefferson Street (East side of OC)	43° 02' 50" N	76° 09' 27" W	302.3	0.0	>0.9	45	4.0	mostly commercial, open space, residential,	**Clinton Storage Facility**	**In service 12/31/2013**	Ultrasonic Level Sensor [4]
										and community facilities	**Green Infrastructure**	**12/31/2013**	
031	Abated	West Jefferson Street (West side of OC)	43° 02' 49" N	76° 09' 28" W	23.9	0.0	>0.9	40	0.7	mostly commercial and residential; some	**Clinton Storage Facility**	**In service 12/31/2013**	Water Level Sensor (3)
										vacant land and open space	**Green Infrastructure**	**12/31/2016**	
032	Abated	Tully Street	43° 02' 45" N	76° 09' 28" W	23.2	0.0	>0.9	47	0.6	mostly commercial; some residential and	**Clinton Storage Facility**	**In service 12/31/2013**	Water Level Sensor (3)
										community facilities	**Green Infrastructure**	**12/31/2013**	
033	Abated	Dickerson Street	43° 02' 40" N	76° 09' 19" W	15.4	0.0	>0.9	47	0.3	mostly commercial; some residential and community facilities	**Clinton Storage Facility**	**In service 12/31/2013**	Water Level Sensor [3]
33A	Abated	Clinton Storage Facility Main Outfall	43° 02' 47" N	76° 09' 25" W	-	0.0	0.4	-	-	-	**Clinton Storage Facility**	**In service 12/31/2013**	Flow Meter
034	Abated	Clinton and West Onondaga Street	43° 02' 37" N	76° 09' 17" W	172.9	0.0	>0.9	70	1.6	mostly commercial and community facilities	**Clinton Storage Facility**	**In service 12/31/2013**	N/A [5]
											Green Infrastructure	**12/31/2013**	
035	Abated	Gifford Street (West side of OC)	43° 02' 37" N	76° 09' 17" W	22.8	0.0	>0.9	48	0.9	mostly vacant land, commercial, and	**Clinton Storage Facility**	**In service 12/31/2013**	Water Level Sensor [3]
										community facilities	**Green Infrastructure**	**12/31/2013**	
036	Abated	West Onondaga Street	43° 02' 33" N	76° 09' 18" W	162.4	0.0	>0.9	41	2.7	mostly residential, some commercial and	**Clinton Storage Facility**	**In service 12/31/2013**	N/A
										vacant land	**Green Infrastructure**	**12/31/2013**	
037	Abated	East Adams Street	43° 02' 32" N	76° 09' 18" W	39.0	0.0	>0.9	54	1.6	mostly commercial and community facilities	**Clinton Storage Facility**	**In service 12/31/2013**	Water Level Sensor [3]
											Green Infrastructure	**12/31/2013**	
038	Closed	Taylor Street	-	-	-			-	-	-	**Separation**	**Completed 2005**	N/A
039	Abated	Tallman Street (East side of OC)	43° 02' 12" N	76° 09' 19" W	479.7	0.0	>0.9	43	0.6	mostly community facilities; some	**Midland Avenue RTF**	**Completed 2008**	Ultrasonic Level Sensor [4]
										commercial	**Green Infrastructure**	**12/31/2016**	
040	Closed	Tallman Street (West side of OC)	-	-	-	-	-	-	-	-	**Separation**	**Completed 2005**	N/A
M01	Abated	Midland RTF Main Outfall (previously CSO 041)	43° 02' 00" N	76° 09' 30" W	-			-	-	-	**Midland Avenue RTF**	**Completed 2008**	Ultrasonic Level Sensor [4]
042	Abated	Midland Avenue (West side of OC)	43° 01' 59" N	76° 09' 29" W	289.8	0.0	>0.9	41	1.3	mostly residential; some open space and	**Midland Avenue RTF**	**Completed 2008**	Ultrasonic Level Sensor [4]
M02	Abated	Midland RTF Emergency Outfall (previously CSO 043)	43° 02' 01" N	76° 09' 30" W	-	-	-	-	-	-	**Midland Avenue RTF**	**Completed 2008**	Ultrasonic Level Sensor [4]
044	Abated	West Castle Street and South Avenue	43° 01' 50" N	76° 09' 34" W	122.6	0.0	>0.9	39	2.0	mostly residential; some vacant land	**Midland Avenue RTF**	**Completed 12/31/2011**	Ultrasonic Level Sensor [4]
											Green Infrastructure	**12/31/2013**	
045	Closed	Hudson and West Castle Street	-	-	-	-	-	-	-	-	**Separation**	**4/30/2013**	N/A
46A/B	Closed	Onondaga Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 2005**	N/A
047	Closed	South Avenue near Centennial Drive	-	-	-	-	-	-	-	-	**Separation**	**Completed 2006**	N/A
048	Closed	South Avenue near Kirk Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 2006**	N/A
049	Closed	Kirk Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed** [1]	N/A
050	Closed	Rockland and Hunt Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 2008**	N/A
051	Closed	West Colvin Street and Hunt Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 2009**	N/A

Notes:

(1) Actual completion date unknown at this time
(2) Upstream subcatchment areas tributary to EBSS
(3) Event Indicator: record date and duration of overflow
(4) Water levels to be used to approximate flow rate
(5) Flow Meter was removed on 9/27/19, DEC approved
(6) Existing facility with flow metering
(7) SWMM results based on the 1-year, 2-hour design storm
(8) Not used
(9) Not used
(10) Strategy to be updated in ICMP
(11) Formally 060/077 - The outfall name was changed to 60M to meet formatting requirements from EPA and DEC and is planned to be updated in a future modification.
(12) As per ICMP, representative flow monitoring no longer required

Abbreviations:

Temp. = Temporary
N/A = Not Applicable
TBD = To be determined
ICMP = Interim CSO Corrective Measure Plan

Definitions:

Abated = CSO is zero or minimal up to the 1-year, 2-hour design storm
Operational = CSO still discharges
Closed = CSO no longer discharges

Table 1-2: CSO Outfall Information

CSO Outfall	CSO Status	CSO Location	Latitude	Longitude	Basin Characteristics						CSO Abatement Strategy (completed items in bold)	Status or Scheduled Completion Date (completed items in bold)	Flow Monitoring
					Area (acres)	Design Storm CSO Overflow Volume (MG) [7]	Rainfall Trigger Intensity (in/hr)	Imperviousness (%)	Slope (%)	Land Use			
Onondaga Creek Drainage Basin (continued)													
052	Abated	Elmhurst and Hunt Avenue	43° 01' 15" N	76° 09' 21" W	295.3	0.0	0.4	33	4.8	mostly residential	**Green Infrastructure**	**12/31/2019**	Flow Meter for NY-Alert Notifications
053	Closed	Marguerite and Hunt Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 2003**	N/A
054	Closed	West Brighton and Hunt Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 2003**	N/A
055	Closed		-	-	-	-	-	-	-	-	**Separation**	**Completed** [1]	N/A
056	Closed		-	-	-	-	-	-	-	-	**Separation**	**Completed** [1]	N/A
057	Closed	West Genesee Street (West side of OC)	-	-	-	-	-	-	-	-	**Separation**	**Completed 1999**	N/A
058	Closed	Tracy Street	-	-	-	-	-	-	-	-	**Separation**	**Completed 1999**	N/A
059	Closed	Park Avenue	-	-	-	-	-	-	-	-	**Separation**	**Completed 1999**	N/A
60M[11]	Abated	West Colvin Street (East side of OC)	43° 01' 25" N	76° 09' 17" W	491.3	0.0	>0.9	39	2.6	mostly residential; some vacant land	**Sewer Reconfiguration**	**12/31/2019**	N/A [12]
											Green Infrastructure	**12/31/2019**	
061	Closed	Crehange St.	43° 01' 19" N	76° 09' 18" W	1.8	-	-	-	-	-	**Separation**	**12/31/2016**	N/A
062	Closed	W. Brighton East	-	-	-			-	-	-	**Eliminate**	**Completed** [1]	N/A
065	Closed	Maltbie St.	-	-	-	-	-	-	-	-	**Maltbie Street FCF**	**Completed 1999**	N/A
066	Operational	Maltbie St.	43° 03' 20" N	76° 09' 41" W	119.8	0.4	0.4	71	0.7	mostly commercial; some residential	**Maltbie Street FCF**	**Completed 1999**	Existing Flow Meter [6]
											Green or Gray Infrastructure	ICMP[10]	
067	Abated	W. Newell St.	43° 00' 58" N	76° 09' 28" W	41.9	0.0	>0.9	40	0.5	mostly residential; some open space	**Green Infrastructure**	**12/31/2019**	Existing Flow Meter [6]
071	Abated	Spencer St. Bypass	43° 03' 26" N	76° 09' 41" W	-	0.0	>0.9	-	-	-	**Captured up to 2-year storm**	**Completed** [1]	
075	Abated	Hiawatha Blvd.	43° 03' 54" N	76° 10' 25" W	111.5	0.0	>0.9	57	1.2	mostly commercial and residential; some	**Regulator Modification**	**Completed** [1]	N/A
										vacant land and community facilities	**Green and Gray Infrastructure**	**Completed 12/31/21**	
076	Abated	Brighton and Midland	43° 01' 09" N	76° 09' 18" W	76.9	0.0	>0.9	38	1.0	mostly commercial; some residential	**Floatables Plan**	**Plan Re-submittal 3/12/13**	Water Level Sensor [3]
080	Abated	Erie Blvd. (East side of OC)	43° 03' 08" N	76° 10' 36" W	656.1	0.0	0.4	44	1.8	mostly residential; some commercial	**Erie Blvd. Storage System (EBSS)**	**Completed 2002**	Flow Meter. Event indicators at sub-basin CSOs A-I
		A - James Street Relief Sewer			367.5						**EBSS Gate Modifications**	**Completed 2011**	
		B - Fayette Street and Irving Avenue			137.0								
		C- South Crouse Avenue and Washington Street			44.5								
		D - Burnet Avenue and Elm Street			49.2								
		E - East Washington Street and Pine Street			38.4								
		F - South Beech and Canal Street			70.7								
		G - Burnet and Sherwood Avenue			62.7								
		H - Burnet and Teall Avenue			216.7								
		I - East Genesee and Westcott Street			13.2								
Ley Creek Drainage Basin													
073	Operational	Teall Ave.	43° 04' 42" N	76° 07' 25" W	238.4	1.2	0.5	47	1.4	mostly residential	**Teall Brook FCF**	**Complete 2001**	Existing Flow Meter [6]
											Green or Gray Infrastructure	ICMP[10]	
074	Abated	Hiawatha Blvd.	43° 04' 36" N	76° 10' 19" W	6.0	0.0	>0.9	62	1.9	mostly residential; some commercial	**Hiawatha Blvd. RTF**	**Completed 2001**	Existing Flow Meter [6]

Notes:

(1) Actual completion date unknown at this time
(2) Upstream subcatchment areas tributary to EBSS
(3) Event Indicator: record date and duration of overflow
(4) Water levels to be used to approximate flow rate
(5) Flow Meter was removed on 9/27/19, DEC approved
(6) Existing facility with flow metering
(7) SWMM results based on the 1-year, 2-hour design storm
(8) Not used
(9) Not used
(10) Strategy to be updated in ICMP
(11) Formally 060/077 - The outfall name was changed to 60M to meet formatting requirements from EPA and DEC and is planned to be updated in a future modification.
(12) As per ICMP, representative flow monitoring no longer required 12/31/22

Abbreviations:

Temp. = Temporary
N/A = Not Applicable
TBD = To be determined
ICMP = Interim CSO Corrective Measure Plan

Definitions:

Abated = CSO is zero or minimal up to the 1-year, 2-hour design storm
Operational = CSO still discharges
Closed = CSO no longer discharges

Save the Rain

Onondaga County Department of WATER ENVIRONMENT PROTECTION

Figure 1-1
Metro Service Area CSO Basin Map

Legend

CSO Outfall Status
- Abated
- Closed
- Operational

CSO Basin by Receiving Water Body
- Harbor Brook
- Ley Creek
- Onondaga Creek

- CSO Boundary
- Stream
- Water Body
- Interceptor
- Trunk Sewer

N

0 1,500 3,000

Feet

Jacobs

Map Prepared: 03/23/2023

Inset Map 1

Inset Map 2

Esri Community Maps Contributors, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

2. Combined Sewer Overflow Project Status

The CSO control projects discussed in this section represent the current scope of the County's CSO abatement program. This section provides project descriptions, locations, scope of work, and status for projects that have been implemented or are in the planning stages in 2023. For additional project-specific information, please go to the Save the Rain (STR) website at https://savetherain.us/.

2.1 2023 Completed Projects

Onondaga County has successfully incorporated gray and green infrastructure into its CSO control program. This section describes the CSO control projects advanced in 2023.

2.1.1 Green Infrastructure Projects Completed in 2023

The County continued implementing green infrastructure in 2023 with two projects completed, both of which were funded by the Green Improvement Fund (GIF). Details, including their location, lead agency, CSO basin, dominant green infrastructure technology, impervious drainage area managed, and estimated runoff reduction are provided in Table 2-1. Figure 2-1 shows the locations of the green infrastructure projects completed in 2023.

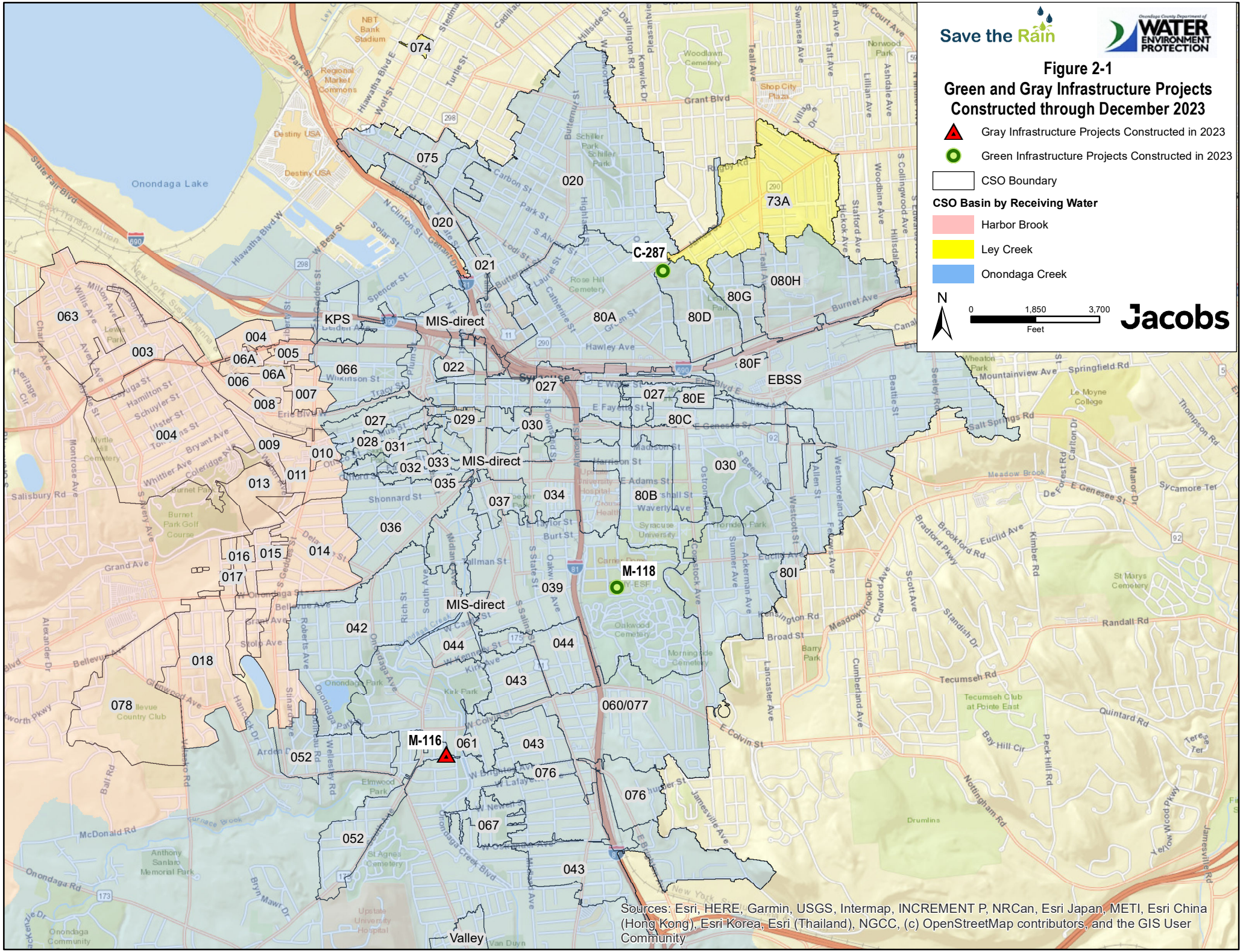
Photographs of the Interfaith Works GIF project's porous pavement parking lot and bioretention (left), and the ESF GIF project's bioretention areas (right).

Through 2023, the County has completed a total of 250 green infrastructure projects. The completed green infrastructure projects provide a total of over 210 MG of runoff reduction on an annual basis throughout the CSS and account for approximately 32 percent of the average annual calculated combined sewage volume captured, treated, or eliminated since 2009, based on SWMM results for the typical year (1991) precipitation record. For a summary of projects completed in previous years, please refer to previous ACJ Annual Reports posted on the Save the Rain website at https://savetherain.us/str-reports/

Table 2-1. Green Infrastructure Projects Completed in 2023

Project ID[1]	Project Name	Project Address	Lead Agency	CSO Basin	Green Infrastructure Technology	Impervious Drainage Area (ft^2)	Runoff Reduction (gal/yr)
M-118	GIF #186 Marshall Hall	1 Forestry Drive	Private	039	Rain Garden, Bioretention, Tree Planting, Cistern	59,942	1,071,600
C-287	GIF #189 InterFaith Works	1010 James St.	Private	080A	Bioretention, Porous Pavement	47,077	906,100
TOTAL ESTIMATED RUNOFF REDUCTION FOR 2023 PROJECTS (gal/yr)							1,977,700

[1]Project ID's are assigned based on CSS Service Area: C = Clinton; H = Harbor Brook; M = Midland.
NOTE: The green infrastructure database is constantly being updated as information is received. Post-construction as-built information is incorporated upon receipt. For this reason, there might be slight variations in database information versus SWMM versus www.savetherain.us at any point in time.


Save the Rain
Onondaga County Department of WATER ENVIRONMENT PROTECTION
Figure 2-1
Green and Gray Infrastructure Projects Constructed through December 2023
Gray Infrastructure Projects Constructed in 2023
Green Infrastructure Projects Constructed in 2023
CSO Boundary
CSO Basin by Receiving Water
Harbor Brook
Ley Creek
Onondaga Creek
N
0
1,850
3,700
Feet
Jacobs
C-287
M-118
M-116
MIS-direct
KPS
EBSS
Onondaga Lake
Syracuse
Valley
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

2.1.2 Gray Infrastructure Projects in 2023

The County continued construction of gray infrastructure projects in 2023 with one completed project. Details on the completed project are provided in Table 2-2 and location is shown in Figure 2-1.

The only gray infrastructure project completed in 2023 was the County-led CSO 052 Regulator Modification Project. This project demonstrates the County's proactive approach for Combined Sewer Overflow (CSO) reduction and maintenance improvements. The previous configuration of the CSO 052 regulator structure and regulator pipe connection to the County's main interceptor sewer was hydraulically inefficient, resulting in undesirable solids settlement, which created a frequent maintenance burden for the County. The goals of the CSO 052 Regulator Modification project were to 1) improve flow hydraulics into the main interceptor sewer (MIS) and ease the maintenance burden by reducing solids from capturing in the regulator structure; and 2) upsize the regulator pipe to the main interceptor sewer to increase conveyance of flows to Metro for treatment. Additional benefits include milling & overlay of the intersection limits and replacement ADA compliant curb ramps and portions of sidewalk. Constructing this project is projected to decrease CSO discharges by 300,000 gallons/year for the 1991 typical year, per original SWMM estimates at the time the project was conceived.

Construction of the CSO 052 Regulator Modification Project

Table 2-2. Gray Infrastructure Projects Completed in 2023

Project ID	Project Name	Project Address	County-Led or Partnership Project	Basin	Gray Technology	Project Basin(s) CSO Reduction[1,2] (gal/yr)	Overall System CSO Reduction[1,2] (gal/yr)
M-116	CSO 052 Regulator Modification	Intersection of Hunt Avenue and Elmhurst Avenue near Onondaga Creek	County-Led	052	Sewer Reconfiguration	300,000	300,000

NOTE: The gray infrastructure database is constantly being updated as information is received. Post-construction as-built information is incorporated upon receipt. For this reason, there might be slight variations in database information versus SWMM versus www.savetherain.us at any point in time.

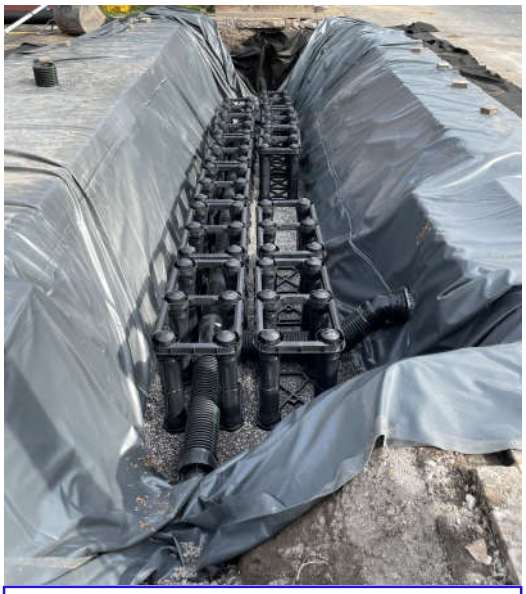
[1] CSO reduction estimates were calculated using the December 2019 conditions SWMM. The current CSO reduction estimates may vary from previously published estimates because improvements to the overall system over time have increased capacity in the system. The amount of estimated CSO reduction achieved by a gray project may decrease, therefore, because there is less potential CSO discharge.

[2] The CSO reduction values are shown for each project basin(s) and for the overall system. Because hydraulic changes in one part of the system can affect what happens in other parts of the system, a project may cause an increase or decrease in CSO in other basins, which causes the overall system CSO reduction to be less than or greater than the CSO reduction in the project basin(s).

2.2 Future Planned Projects

The County continues to use SWMM to identify specific sewersheds where green and gray infrastructure implementation will provide the most efficient CSO reductions and lead to further water quality improvements. The County has several CSO control projects currently planned, as well as projects that were awarded or began construction in 2023, with completion anticipated in 2024.

A list of the future planned projects, their location, the lead agency, CSO basin, BMP type, status, and anticipated schedule, if known, is provided in Table 2-3. It is important to note that the schedule for implementation of these projects is fluid and not solely controlled by the County.



Construction of the Butternut Street Green Corridor project was completed in 2023. The project is in CSO 020 and consists of infiltration trenches, street trees, bioretention, and porous pavers that are estimated to capture 4.2 MG of runoff on an annual basis once complete.

Table 2-3. Future Planned Projects (Sorted by Anticipated Schedule Date)

Project ID	Project Name	Location	CSO Basin	Brief Project Scope	Estimated Annual Runoff Reduction (gallons)[a]	Estimated Annual CSO Reduction (gallons)[b]	Current Estimated County Construction Cost[c]	Lead Agency	Status	Anticipated Schedule, If Known[d]
C-273	Butternut Street Green Corridor	Butternut St. between North Salina St. and Lodi St.	20	Infiltration Trench, Street Trees, Bioretention	4,200,000	2,016,000	$2,781,777	Onondaga County	Under Construction	2024
C-277	CSO 066 Regulator Modification	Maltbie St. and Evans St.	66	Sewer/Structure Reconfiguration	N/A	3,100,000	$1,109,167	Onondaga County	In Design	2024
C-303a*	Lodi Street Road Reconstruction (North)	Lodi Street Between Isabella St. and N Townsend St.	20	Infiltration Trench	299,000	143,520	$202,398	Onondaga County	In Design	2024
C-303b*	Lodi Street Road Reconstruction (South)	Lodi Street Between Catawba St. and McBride St.	20	Infiltration Trench	175,000	84,000	$98,584	Onondaga County	In Design	2024
M-108	CSO 067 Vortex Decommissioning and Hydraulic Improvements	West Newell St. at Onondaga Creek	067, 061, 60M (060/077)	Sewer/Structure Reconfiguration, System Optimization	N/A	N/A	$1,740,000	Onondaga County	In Design	2024
C-293**	Prospect Hill Green Corridor	Willow St between State St. and McBride St, Townsend St between Hickory St and James St	021/080A	Street Trees, Infiltration Trench, Porous Pavement	2,600,000	1,248,000	$2,370,727	Onondaga County	Planning	2025
C-304*	Water Street Sewer Separation (Road Reconstruction)	Water Street Between State St. and McBride St.	27	Sewer Separation	1,726,000	300,000	$400,000	Onondaga County	In Design	2025

Table 2-3. Future Planned Projects (Sorted by Anticipated Schedule Date)

Project ID	Project Name	Location	CSO Basin	Brief Project Scope	Estimated Annual Runoff Reduction (gallons)[a]	Estimated Annual CSO Reduction (gallons)[b]	Current Estimated County Construction Cost[c]	Lead Agency	Status	Anticipated Schedule, If Known[d]
C-305a*	Fayette Street Sewer Separation (Road Reconstruction)	Fayette Street Between Irving Ave. and Almond St.	27	Sewer Separation	2,056,000	987,000	$500,000	Onondaga County	In Design	2025
C-305b*	Forman Ave. Sewer Separation	Forman Avenue Between Wellington Pl. and Washington St.	27	Sewer Separation	763,000	366,000	$500,000	Onondaga County	In Design	2025
M-120	East Side Interceptor Sewer Replacement	West Colvin St. and Kirk Park Drive (60M (060/077) Regulator Structure) to MIS Junction	60M (060/077)	Sewer Replacement and Upsizing, Structure Reconfiguration, Sewer Reconfiguration	N/A	2,100,000	$1,960,000	Onondaga County	To be Determined	TBD
C-264	GIF#171 Lowery Bros. 637-647 W. Genesee St	656-660 W. Genesee St	067	Porous Pavement	623,100	299,088	$209,000	Private	In Design	TBD
C-265	GIF#171 Lowery Bros. 637-647 W. Genesee St	637-647 W. Genesee St	067	Porous Pavement	1,203,900	577,872	$409,037	Private	In Design	TBD
C-267	I-81 Renovation	Interstate 81 between Exit 16A (I-481 North) to just north of Destiny USA	60M (060/077), 039, 034, MIS, 030, 027, 80A, 066, 020, 021, 022, 075	Pavement Removal, Stormwater Detention, Sewer Modification	TBD	TBD	TBD	NYSDOT	Planning	TBD
C-275	GIF #176 Middle Ages Brewing	120 Wilkinson St.	66	Porous Pavement	878,100	421,488	$343,500	Private	In Design	TBD
C-276	GIF #177 Goodman Service	901 W Genesee St.	66	Porous Pavement	1,363,800	654,624	$468,200	Private	In Design	TBD

Table 2-3. Future Planned Projects (Sorted by Anticipated Schedule Date)

Project ID	Project Name	Location	CSO Basin	Brief Project Scope	Estimated Annual Runoff Reduction (gallons)[a]	Estimated Annual CSO Reduction (gallons)[b]	Current Estimated County Construction Cost[c]	Lead Agency	Status	Anticipated Schedule, If Known[d]
C-284	GIF #184 Home Headquarters - Oak St.	101 Oak St.	080A	Porous Pavement	247,300	118,704	$78,700	Private	In Design	TBD
C-286	GIF #188 – Peace Inc. 811 Washington St.	811 E. Washington St.	027	Porous Pavement	440,700	211,536	$176,034	Private	In Design	TBD
C-294a	Rose Hill Cemetery Greening	Lodi St. Between Douglas, Highland, and East Willow St.	20	Bioretention	2,257,000	1,083,360	$1,259,437	Onondaga County	Planning	TBD
C-294b	Highland Park Greening	Highland St. and Beecher St.	20	Bioretention	257,000	123,360	$345,002	Onondaga County	Planning	TBD
C-299	GIF #196 - Barnes Foundation	930 James St.	080A	Porous Pavement	1,234,000	592,320	$200,000	Private	In Design	TBD
C-306	GIF #198 716-28 James St.	716-28 James St.	080A	Porous Pavement	785,000	376,800	$190,500	Private	In Design	TBD
M-78	GIF #142 Deb's Convenient Mart	2419 South Salina St.	60M (060/077)	Porous Pavement	378,500	181,680	$140,200	Private	In Design	TBD
M-117	GIF #185 Musso Properties	235 Cortland Ave.	39	Porous Pavement	1,683,200	807,930	$200,000	Private	In Design	TBD
M-119	GIF #197 - Peace Inc. Martin Luther King Blvd.	138 Martin Luther King Blvd.	39	Porous Pavement	163,500	78,480	$50,800	Private	In Design	TBD
Totals					23,334,100	15,871,762	15,733,063			

NOTE: The infrastructure database is constantly being updated as information is received. Some project plans have been added or amended since the 2022 implementation of Onondaga County's CSO Program Interim Corrective Measures Plan (ICMP). These new projects are identified in the above table, with details listed below. Additionally, several projects have been completed, and one has been abandoned (C-242) due to lack of interest from the current property owner.

* Denotes project newly added since implementation of the ICMP. All are opportunistic, with the Lodi project conceived to coincide with the City of Syracuse DPW's paving schedule, and the sewer separation projects designed to capitalize on new stormwater infrastructure planned as part of NYSDOT's I-81 project.

** C-293 is a new project number designation that combines the previously separate, but related, projects C-293a and C-293b.

[a] Estimated Annual Runoff Reduction is calculated based on the average annual rainfall for the CSS (39.34"). Upon completion of the projects, the projects will be entered into the SWMM model and SWMM model estimated calculations of runoff reductions will be provided in the Annual Plan Reports. Note that gray infrastructure projects do not provide runoff reduction.

[b] For green infrastructure projects, estimated annual CSO reductions are calculated based on the system-wide average of CSO reduction volume equating to 48% of the annual runoff reduction volume. For gray infrastructure projects, estimated annual CSO reductions are provided from SWMM calculation estimates. Upon completion of the projects, the projects will be entered into the SWMM model and SWMM model estimated calculations of CSO reductions will be provided in the Annual Plan Reports.

[c] Estimated cost and anticipated schedule for each project are subject to change. The County currently has funds budgeted for each of the projects listed in Table 2-3. Any changes to the anticipated construction completion schedule will be submitted for review and approval by DEC as part of future Annual Report submissions.

[d] Anticipated schedule for each project is subject to change. Any changes to the anticipated construction completion schedule will be submitted for review and approval by DEC as part of this and subsequent Annual Reports.

2.2.1 Interstate 81 Renovation

The Interstate 81 (I-81) viaduct project is a massive infrastructure improvement project planned by NYSDOT in the City of Syracuse. Specific to the County's CSO Abatement Program, I-81 passes through several combined sewersheds in the City and runoff from the currently elevated viaduct enters the combined sewer system in several locations. In 2023, the NYSDOT finalized the Environmental Impact Statement (EIS) for the project and continued coordinating with the County, meeting roughly on a quarterly basis. In the EIS, NYSDOT has identified a stormwater management area of 230 acres that is currently tributary to the combined sewer system that will be separated to Onondaga Creek as part of the project (Figure 2-2). NYSDOT has committed to sizing the separate storm sewer receiving this runoff for the 50-year storm and providing "stubs" off the storm sewer for potential future sewer separation by the County to further reduce CSOs. The added capacity and "stubs" will provide the County with significant opportunity for further stormwater and CSO management after construction of the I-81 project.

Three specific projects included in Table 2-3 are being progressed by the County to align with the future stormwater separation of this area. The Water Street, Fayette Street, and Forman Avenue Sewer Separation projects (C-304, C-305a and C-305b) are planned to be constructed in advance of the I-81 project. Each project will feature a future connection point to the I-81 storm sewer to be constructed by NYSDOT. NYSDOT has committed to making the future connections when the storm sewer is built. The sewer separation projects will temporarily tie-back into the combined system until the I-81 storm sewer is constructed. These three sewer separation projects are estimated to remove 3,763,000 gallons of stormwater runoff from the combined system on an annual basis.

With the planned stormwater management areas currently in the EIS (excluding the sewer separation projects being progressed by the County), approximately 85 MG of runoff reduction from the CSS is estimated. This massive removal of volume from the CSS will benefit numerous CSOs along the MIS, most significantly CSOs 020, 021, 027, and 080/EBSS.

The County and NYSDOT also continued coordination on several other items related to the I-81 project, including the items listed below. These items are being discussed on a preliminary basis with NYSDOT. They have not been finalized and should not be construed as firm commitments by NYSDOT or the County at this time. These items are provided as information to the NYSDEC to show the County's continued progress on coordinating with NYSDOT on the I-81 project. It is anticipated that final agreements between NYSDOT and the County will be reached in the future. At that time, the County will be submitting a basis of design with more specifics on each item for NYSDEC approval.

- **Potential conflicts with the proposed storm sewer work and existing County-owned combined trunk sewers**

  The County and NYSDOT are finalizing protection and/or relocation details to resolve elevation conflicts with the new I-81 storm sewer for the County-owned trunk sewers along Colvin Street, Erie Boulevard, Fayette Street, Jefferson Street, Harrison Street, and Tallman Avenue. The final actions will be funded by NYSDOT.

- **Potential modifications to the connections of the Butternut and Burnet trunk sewers and their connections to the MIS (CSOs 020/021)**

  The County and NYSDOT are finalizing a plan to relocate and replace portions of both the Butternut and Burnet trunk sewers. It is currently planned to relocate and combine both sewers into one larger sewer with a new connection to the MIS, new floatables facility on the overflow, and a single new overflow point to Onondaga Creek. Refer to Figure 2-3 for a visual representation of this work. Preliminarily, SWMM estimates that these potential changes will reduce CSOs by 25 MG on an annual basis. The County will be funding the cost of the new floatables facility and NYSDOT will be funding the cost of the remainder of this work.

- **Potential modification of the Burnet trunk sewer and CSO 080A regulator at James Street to improve combined sewer system performance and reduce CSOs**

  Currently a serpentine "S" exists in the Burnet trunk sewer that is a maintenance challenge for the County (Figure 2-4). Furthermore, the CSO 080A regulator could be modified to optimize CSO performance. The James Street Relief Sewer will also be rerouted to avoid conflict with the I-81 storm sewer. The County and NYSDOT are planning to include this work in the project, funded by the County.

- **Potential replacement of the Hiawatha trunk sewer crossing I-81**

  Presently, the Hiawatha trunk sewer crossing I-81 is mostly 33" diameter, except for approximately 100 linear feet of pipe that is 18" diameter (Figure 2-5). SWMM modeling has indicated that this 18" pipe constriction has the potential to cause manhole flooding during large storms. Therefore, the County desires replacing the entirety of the Hiawatha trunk sewer across I-81 and upsizing the portion of pipe that is currently 18" diameter to 33" diameter. The County and NYSDOT are planning to include this work in this project, funded by the County.

The County plans on replacing both the Butternut (shown) and Burnet FCFs with one larger joint facility and adding a new connection to the MIS in conjunction with the NYSDOT project.

Each of these items offer significant potential for the County to further reduce CSOs and improve operability and maintainability of the CSS within and near the I-81 project limits. The County and NYSDOT will continue to coordinate with NYSDEC as this extremely important and impactful project evolves.

Save the Rain

Onondaga County Department of WATER ENVIRONMENT PROTECTION

Figure 2-2
I-81 Viaduct Project
Proposed Stormwater Management Areas

Legend

- CSO Boundary
- DOT Proposed Storm Sewer Trunk Line
- DOT Proposed Stormwater Management Area

N

0 1,300 2,600

Feet

Jacobs

Map Prepared on 02/09/2022

Total Area to be Managed by the I-81 Viaduct Project	
CSO Basin	**Area Managed (ft²)**
020	761,800
021	598,100
022	5,400
027	591,300
030	176,100
034	494,900
039	854,500
043	367,400
044	4,700
066	189,200
075	298,800
080A	963,300
080B	7,200
080C	52,800
MIS-direct	327,600
EBSS	1,284,200
KPS	36,700

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Onondaga County Department of WATER ENVIRONMENT PROTECTION

Figure 2-3
I-81 Project: Evans Street Floatables Control Facility and Butternut/Burnet Trunk Sewer Replacement Conceptual Plan

Legend

- Onondaga Creek
- Existing Combined Sewer
- Existing Trunk Sewer
- MIS
- New Underflow to MIS
- New Overflow Piping
- Proposed Trunk Sewer
- Proposed Trunk Sewer Alternative 1
- Proposed Trunk Sewer Alternative 2
- Proposed Combined Sewer
- Proposed Structures

N

0 150 300

Feet

Jacobs

Map Prepared: 02/09/2023

Butternut Trunk Sewer Routing

Connect Existing Combined Sewer to New Trunk Sewer

Butternut Trunk Sewer Routing Alternative 1

Butternut Trunk Sewer Routing Alternative 2

Existing Butternut Trunk Sewer Routing

Junction Box Alternative 1

Junction Box Alternative 2

Burnet Trunk Sewer Routing Alternative 1

Burnet Trunk Sewer Routing Alternative 2

Main Interceptor Sewer (MIS)

New CSO 020/021 Regulator Structure

New Evans Street Floatables Control Facility

Connect Existing Combined Sewer to New Trunk Sewer

Burnet Trunk Sewer Routing

New MIS Connection

Existing Butternut Floatables Control Facility

Existing Burnet Floatables Control Facility

New Combined CSO 020/021 Outfall to Onondaga Creek

Existing Burnet Trunk Sewer Routing

Extend Existing Combined Sewer to Connect to New Trunk Sewer (TYP x 3)

Existing CSO 020 and 021 Outfalls to Onondaga Creek to be Closed

Onondaga Creek

8-in Combined

42-in Combined

36"32-in Trunk

60" diameter

Salt St

N State St

0-in Combined

12-in Sanitary

Schlosser Park

11

8-in Sanitary

18-in Combined

19

20

81

690

7'X10'

72" diameter

Evans St

87-in TrunkMIS

90-in TrunkMIS

24-in Trunk

0-in Trunk

60-in Trunk

Websters Crnr

72-in Trunk

15-in Combined

Pearl St

Ashland Park

E Belden Ave

12-in Combined

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Figure 2-4
I-81 Project: Proposed Burnet Trunk Sewer and James Street Relief Sewer Modification

Legend

- Existing Combined Sewer
- Existing Trunk Sewer
- Existing Storm Sewer
- Existing Burnet Trunk Sewer
- Proposed Burnet Trunk Sewer
- Existing Jame Street Relief Sewer
- Proposed James Street Relief Sewer

N

0 110 220
Feet

Jacobs

Map Prepared: 02/14/2023

Burnet Trunk Sewer Flows to the MIS

Burnet Trunk Sewer Routing

Existing Burnet Trunk Sewer Routing

James Street Relief Sewer Routing

CSO 080A Regulator Manhole with Adjustable Weir

Existing James Street Relief Sewer Routing

Existing Connection to EBSS

Erie Boulevard Storm Sewer (EBSS)

Connection to EBSS

72" diameter

54" diameter

48" diameter

60" diameter

7.5'X10.5'

E Willow St

James St

Burnet Ave

N Salina St

N Warren St

Oswego Blvd

Erie Blvd E

Clinton Square

Pitts Park

QUALITY INN & Suites-Syracuse

81

690

290

11

5

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Onondaga County Department of WATER ENVIRONMENT PROTECTION

Figure 2-5
I-81 Project: Proposed Hiawatha Trunk Sewer Replacement

Legend

- Combined Sewer
- Trunk Sewer
- Storm Sewer
- Proposed 33" Sewer Replacement
- Sanitary Sewer

N

0 65 130
Feet

Jacobs

Map Prepared: 02/20/2023

Existing section of 18" sewer to be replaced with 33" sewer

Existing 33" sewer to be replaced

8-in Sanitary
0-in Sanitary
20-in Combined
24-in Sanitary
33-in Trunk
36-in Trunk
21-in Sanitary
24-in Sanitary
18-in Trunk
33-in New Trunk
15-in Combined
14-in Combined
24-in Combined
12-in Combined
0-in Storm
33-in Trunk
Hiawatha Blvd W
Lodi St
Destiny USA Dr
Wolf St
24A-B-23
81

2.3 Maintenance Update

2.3.1 Green Infrastructure

Landscape Maintenance on East Genesee St.

In 2023, O&M continued to be performed on green infrastructure projects that were implemented to reduce CSO discharges in Onondaga County. Green infrastructure technologies typically do not have any specific operating requirements; however, regular maintenance activity is required for most green infrastructure technologies to keep them functioning in an effective manner. The County uses the Save the Rain Program Green Infrastructure Maintenance Manual, dated April 2013, to guide the green infrastructure maintenance program. The County continues to track its maintenance responsibilities using Maximo, its asset management software program. Maintenance of green infrastructure practices is performed at each installation. For each green infrastructure project installed, a responsible party has been assigned to maintain the asset. In some locations, multiple parties work together to ensure the facility is not only functioning as intended but is also aesthetically pleasing. The approach for maintenance of green infrastructure is a tiered approach:

- The first minimum tier is safety; is it safe or a potential hazard for the public and/or maintenance personnel?
- The second tier is functionality; is the stormwater facility providing the intended function storing, releasing, and treating stormwater?
- The third tier is aesthetics, which is subjective. Much of the green infrastructure that has been installed is meant to mimic nature and as such functions as nature. Nature, and some green infrastructure, is generally not neat and sometimes does not appear to be maintained. This is by design, as some of the green infrastructure projects are not highly manicured, to mimic nature, and this does not diminish the stormwater capture effectiveness or aesthetic value.

This tiered approach allows the County and its partners to prioritize maintenance across the completed green infrastructure projects to date and also allows for a greater focus on the sites that require additional attention throughout the year.

The County provides maintenance using a variety of traditional and creative workforces:

- Filter Inserts – An outside contractor that is procured through the County's Purchasing Department utilizes a vacuum truck that allows for cleaning without the actual removal of the

insert from the catch basin. Replacement and standardization of filter insert units to a single model continues.

- Landscaping – A combination of County staff, property landowners (i.e., City of Syracuse, Onondaga County Libraries, etc.), volunteers, and Onondaga Earth Corps (through a County contract) complete mulching, pruning, weeding, and other plant maintenance.
- Porous Pavement Maintenance – An outside contractor that is procured through the County's Purchasing Department is utilized to conduct this maintenance activity.
- Green Roof Maintenance – An outside contractor that is procured through the County's Purchasing Department is utilized to conduct green roof maintenance.
- Drainage System Maintenance – County staff vacuum and jet clean underground piping systems connected to green infrastructure projects to ensure their functionality utilizing their fleet of standard sewer maintenance vehicles.

For green infrastructure projects on public property, maintenance is performed by the County, City, their contractors, and/or volunteers. The County completes monthly maintenance inspections of each site during the growing season to determine maintenance needs. Maintenance for green infrastructure projects on private property under the GIF program is provided by the Owner, with the County providing general oversight for compliance. The County inspects these projects every 3 to 5 years. If, in the County's opinion, a GIF project owner is neglecting maintenance to the point that the project is no longer functioning as designed, the County reserves the contractual right to complete the required maintenance and back-charge the property owner for the costs. The maintenance program is a key element in the long-term success of the GIF program.

The County's goal is that the green infrastructure systems prevent stormwater from entering into the combined sewer system as designed. "Volunteer" vegetation (i.e., vegetation that was not originally intended to grow in this location) in green infrastructure practices is the responsibility of the property owner to address to their level of maintenance service satisfaction. Volunteer species, while possibly being unsightly, are commonly deliberately allowed to grow and will provide similar stormwater treatment capacity as planted species. These volunteer species will not affect the longevity and continued effectiveness of the green infrastructure practices.

The County continues to maintain their installed CSO abatement infrastructure, employing both contractors and in-house services.

The Onondaga Earth Corps and other volunteer staff remain a key partner for delivering landscape maintenance for the County.

2.3.2 Gray Infrastructure Maintenance

This section provides a summary of the Operation and Maintenance (O&M) requirements for gray infrastructure implemented to abate CSO discharges in Onondaga County. The County tracks and schedules O&M tasks using its Maximo software system. Below is a summary of O&M requirements by project type consistent with the USEPA's suggested proper O&M of combined sewer systems (CSSs) and associated facilities. Appendix A, Combined Sewer Overflows Annual Report, includes additional information on the County's CSO maintenance and inspection procedures.

- Sewer Separation - Typical O&M for sanitary and storm sewers includes routine inspections and cleaning of the sewers. When combined sewers are separated within the City of Syracuse, the City owns the resulting separate sanitary sewers and separate storm sewers. As a result, through an Inter-Municipal Agreement (IMA) between the City and the County, the City is responsible for the O&M of the separated basins.

- Interceptor/CSO Conveyance Piping - The County applies a tiered approach to its interceptor pipelines and CSO conveyance sewers. Newly-installed large diameter pipelines have their flushing chambers exercised and maintained after storm events. The County inspects and maintains siphons, CSO regulators, and regulator sewers connected to existing or new smaller diameter pipelines monthly. In addition, the County visually inspects CSO conveyance and interceptor manholes for grit deposition, blockages, and deterioration. If excessive grit or debris is present, a crew removes the deposits, followed by cleaning and flushing of the sewer. If the problem persists, the County televises the section of sewer and repairs it if necessary. The grit chambers located along the interceptor sewer alignments are on a yearly cleaning and maintenance schedule.

- Maintenance of CSO storage and/or treatment facilities during dry weather conditions includes:

    - Pull and service pumps
    - Inspect, lubricate, and exercise mechanical equipment
    - Calibrate flow metering/measuring devices
    - Adjust limits on valves/actuators
    - Service air handling units
    - Calibrate gas detectors
    - Perform house and groundskeeping
    - Prepare and review staffing plans

- Operation of CSO storage and/or treatment facilities, pre-wet weather event includes:

    - Plan staffing
    - Check condition/charge chemical feed system (where applicable)
    - Record baseline levels and readings
    - Check SCADA system for proper operation
    - Check equipment fluid levels

- Operation of CSO storage and/or treatment facilities during wet weather events includes:
  - Monitor flow levels
  - Record start and end times and other data on operational logs
  - Monitor and operate equipment
  - Dewater
- Operation of CSO storage and/or treatment facilities, post-wet weather event includes:
  - Flush and clean basins and wet wells
  - Flush and clean equipment
  - Remove grit and floatable material
  - Compile/report data
  - Debrief staff
  - Lubricate equipment
  - Check fluid levels
- O&M of floatable control facilities includes:
  - Routine visual inspection and cleaning of the facility, specifically the floatables removal equipment
  - Routine cleaning of associated regulators and chambers
  - Removal and replacement of net bags following storm events (where applicable)
  - Removal, cleaning and reinsertion of trash racks following storm events (where applicable)

2.4 Floatables Control Program Update

The County's Best Management Practices for Combined Sewer Overflows and the control of floatables is regulated by the Metro SPDES Permit. The following paragraphs provide updates on the status of the floatables program, in the areas impacted by the combined sewer overflow (CSO) system within the Onondaga County Consolidated Sanitary District. Onondaga County currently operates five floatable control facilities (FCF). These include the Burnet FCF, Butternut FCF, and Maltbie FCF net bag facilities tributary to Onondaga Creek, the Harbor Brook FCF net bag facility within Harbor Brook, and the Teall FCF combing screen facility tributary to Teall Brook. Onondaga County personnel, at a minimum, perform weekly inspections of the FCFs regardless of the weather that has occurred. After each wet-weather event, County personnel inspect each floatable control facility to evaluate system performance, identify problems, and clean and schedule net bag replacement, as warranted. During 2023, (17.7) tons of material was disposed of from the five FCFs.

The County has contracted services to operate a skimmer boat providing floatables debris collection and disposal in the Inner Harbor of Syracuse, along the mouth of Onondaga Creek, as well as the near-shore portions of Onondaga Lake within 1,000 feet of the mouth of Onondaga Creek, with an option for the skimmer boat service to Onondaga Lake shorelines east and west. In 2023, a total of 11.4 tons of debris was collected by the skimmer boat operation.

In addition, the County conducts green infrastructure maintenance which includes several scheduled and corrective work procedures related to the control of floatable debris. These include general trash clean up. In 2023, the County collected 360 bags (55-gallon bags) with approximately 98.0 cubic yards of trash from the completed green infrastructure projects.

For additional information on the County's floatables control activities, refer to the Floatables Control Summary Report, included in Appendix A: Combined Sewer Overflow Annual Report.

3. Focused Post Construction Compliance Monitoring Program

This section includes the following topics relating to the County's CSO Post Construction Compliance Monitoring Program (PCCM):

Section 3.1 - Regulatory Framework
- *PCCM (ACJ Fourth Stipulation)*
- *Focused PCCM (State Order on Consent)*

Section 3.2 - CSO Flow Metering Program
- *"Representative" CSOs*
- *SWMM Model Recalibration*

Section 3.3 - CSO Water Quality Monitoring
- *CSO Facility Influent Samples*
- *CSO Facility Overflow Samples*

Section 3.4 - CSO Tributary Water Quality Monitoring
- *Compliance Summary (2023)*
- *Trends and Patterns in Tributary Fecal Coliform Concentrations*
  - *Long-Term Annual Fecal Coliform Concentration Trends (1985-2023)*
  - *Wet-Dry & Upstream-Downstream 2023 Fecal Coliform Concentration Patterns*
- *Water Quality Data Review Status*
  - *Existing Water Quality Data*
  - *Additional Water Quality Data*

Section 3.5 - Use Attainability Analysis
- *UAA Methodology*
- *UAA Reports Schedule*

Section 3.6 - Public Notification
- Sewage Pollution Right to Know (SPRTK)

3.1 Regulatory Framework

3.1.1 PCCM (ACJ Fourth Stipulation)

In accordance with the 2009 ACJ Fourth Stipulation, the County developed a Post Construction Compliance Monitoring Program (PCCM), which was implemented from 2015 through 2018.

The goals of the PCCM sampling program were to monitor the water quality of the CSO discharges and the receiving waters during wet weather in order to:

1. Evaluate the effectiveness of the County's green and gray CSO controls
2. Assess whether AWQS are being met
3. Determine whether the remaining CSOs "cause" or "contribute" to violations of the AWQS

A total of 12 PCCM events were conducted (seven on Harbor Brook and five on Onondaga Creek). The monitoring targeted storms with rainfall intensities of at least 0.35 inches of rain per hour, as most of the operational CSOs trigger at a rainfall intensity of 0.3 inches per hour or less. Results of the PCCM sampling events indicated that in-stream AWQS violations of bacteria (fecal coliform) occurred during wet weather. Results from the PCCM sampling indicated that CSO discharges contributed importantly to elevated fecal coliform levels in Onondaga Creek and Harbor Brook during monitored wet weather events.

In addition to PPCM events, WEP completed two Recovery Time Monitoring (RTM) events on Harbor Brook and Onondaga Creek during 2018. The primary objective of the RTM was to document the time course of fecal coliform recovery following significant wet weather events.

Salient findings from the two RTM events completed on Harbor Brook and Onondaga Creek include:

- Estimated recovery times for the August 17-22 event were 72 hours for Onondaga Creek and 59 hours for Harbor Brook. However, fecal coliform concentrations did not return to levels consistent with the AWQS in either stream following this event.
- Estimated recovery times for the October 2-7 event were 81 hours for Onondaga Creek and 80 hours for Harbor Brook. These estimates were based on single sample results from both streams that indicated fecal coliform concentrations similar to the value of the AWQS (200 cfu/100 mL).

3.1.2 Focused PCCM (State Order on Consent)

In order to address the continuing violations of AWQS in the CSO receiving tributaries, a violation of Environmental Conservation Law (ECL) §17-0501 (General prohibition against pollution), the County entered into a legal agreement via an Order on Consent (Order) with the NYSDEC on March 16, 2021. The Order became effective October 8, 2021, following the termination of the ACJ, and required the County to implement a Focused PCCM. From 2019 through 2023, the County transitioned from the ACJ to the State Order on Consent and continued to implement a water quality monitoring program focused on the three CSO tributaries (Onondaga Creek, Harbor Brook, and Ley Creek) to support the remaining obligations of the ACJ.

Specific objectives of the Focused PCCM are to:

1. Support the Use Attainability Analyses (UAAs) for Fecal Coliform
2. Continue tracking of water quality improvements; and
3. Support the maintenance of the County's SWMM

3.2 CSO Flow Metering Program

The following section summarizes the status of the CSO Flow Metering Program implemented by the County to comply with regulatory requirements:

3.2.1 "Representative" CSOs:

- In accordance with the 2009 ACJ Fourth Stipulation, Paragraph 14I, Determination of Compliance, requirements, the purpose of the County's CSO discharge monitoring effort was to increase the accuracy of SWMM used for planning, design, and determination of compliance with the volume capture requirements. The County developed a "representative" CSO metering plan in 2011, separate from the CSO metering required by the Metro SPDES permit. The County installed flow monitoring devices at 13 "representative" CSOs and maintained these monitoring devices through December 31, 2018. The County updated SWMM annually using these flow data to verify, reconcile and recalibrate (as necessary) SWMM assumptions, model coefficients, and projections.

- With NYSDEC approval, the County removed four CSO monitoring devices on September 27, 2019, and one monitoring device on December 31, 2019, bringing the number of devices with flow metering data through 2022, to eight CSOs: 014, 018, 027, 044, 052, 060/077, 078, and 080. Of these, two CSOs (CSO 018 - Harbor Brook Constructed Wetlands Storage & Treatment Facility and CSO 080-Erie Boulevard Storage System) are required to be monitored for Metro SPDES compliance reporting purposes.

- In 2023, as per the NYSDEC's approved Interim Corrective Measures Plan (ICMP), representative CSOs could be removed at CSOs 014, 024, 052, 060 and 078.

3.2.2 SWMM Model Recalibration:

- As per the 2021 State Order on Consent, a CSO Metering Program, subject to NYSDEC review and approval, is required to be submitted annually. To represent projects or improvements completed in the previous calendar year, the metering data are to be used to support the continued ongoing calibration and maintenance of the County's SWMM. SWMM is required to be updated on an annual basis and a re-calibration plan is to be proposed when projects or other system improvements have occurred that necessitate re-calibration of SWMM.

- As proposed in the ICMP, the County's plan for collecting flowmeter data to support the SWMM model recalibration was not completed in 2023, due to delays in procuring a contract for flow monitoring services.

In 2024, a contract was executed with ADS Environmental Services for flow metering services, to support SWMM recalibration and is planned for the following combined sewersheds:

- **Harbor Brook CSOs:** This recalibration requires extensive metering using 36 total flowmeters or level sensors. Precipitation data recorded by the rain gauges at Metro and a newly installed gage at Lower Harbor Brook Storage Facility will be utilized for the recalibration.
- **CSOs 028 and 029:** Post-completion of the CSO 029 regulator modification project in 2022, a total of 10 meters or levels sensors are planned to support the SWMM recalibration of CSOs 028 and 029.
- **CSO 067:** Post-completion of the demolition of the Newell Street RTF project in 2024, a meter is planned to be installed to support the SWMM calibration of CSO 067.

Schematically, the meter types and locations are shown in Figure 3-1 and 3-2. Meter data will be checked and reviewed on a bi-weekly basis for data quality issues and to identify potential meter recalibration needs. A monthly in-person inspection, and recalibration of the meters is also planned. Should data collected from any of the meters appear inaccurate or not useable in the SWMM recalibration due to data quality issues, the County will report such findings to the NYSDEC in the 2024/2025 Annual Plan Report(s) required by the Order.

Table 3-1 provides a summary of the County's metering plan and includes:

- the ACJ existing "representative" meters (including SPDES-required meters) that will remain in place,
- the extensive metering planned to support the Harbor Brook combined sewershed and CSO 028 & 029 SWMM recalibration plan (Onondaga Creek), and
- SPDES-required metering to be reported to the NYSDEC per SPDES requirements.

Metering completed for the purposes of SWMM recalibration starting in 2024, will be reported to the NYSDEC in the 2024/2025 Annual Plan Report(s), as required by the Order.

Table 3-1 CSO Metering Plan Summary[1]

CSO Outfall	Proposed Action	Duration of Metering
ACJ Representative Meters		
014	Removed;-reinstalled to support Harbor Brook recalibration	1 year(2024)[2]
018	Remain; Metro SPDES required	Per Metro SPDES
027	Removed	N/A
044	Level Transducer installed under the project remains (data will not be reported)	N/A

CSO Outfall	Proposed Action	Duration of Metering
052	Removed, re-installed when CSO 052 regulator modifications were completed and used for Onondaga Creek NY-Alerts (data will not be reported)	N/A
060/077	Removed, re-installed for Midland/Colvin repair project	N/A
078	Removed	N/A
080	Remain; Metro SPDES required	Per Metro SPDES
Metro SPDES Required Metering		
04A	Remain	Per Metro SPDES
018	Remain	Per Metro SPDES
020	Remain	Per Metro SPDES
021	Remain	Per Metro SPDES
33A	Remain	Per Metro SPDES
066	Remain	Per Metro SPDES
067	Remain until Newell Street RTF demolition; re-install for PCCM	Per Metro SPDES
073	Remain	Per Metro SPDES
074	Remain	Per Metro SPDES
080	Remain	Per Metro SPDES
M01 and M02	Remain	Per Metro SPDES
Metering to Support the Harbor Brook Combined Sewershed Recalibration		
005	New Meters, 2 Flow Meters, 1 Level Sensor	1 year(2024)[2]
006	New Meters, 1 Flow Meter, 1 Level Sensor	1 year(2024)[2]
006A	New Meters, 1 Flow Meter, 2 Level Sensors	1 year(2024)[2]
007	New Meters, 2 Flow Meters, 1 Level Sensor	1 year(2024)[2]
009	New Meters, 2 Flow Meters, 2 Level Sensors	1 year(2024)[2]
010	New Meters, 4 Flow Meters	1 year(2024)[2]
011	New Meters, 2 Flow Meter, 2 Level Sensors	1 year(2024)[2]
014	Utilize Existing Flow Meter Plus 2 New Flow Meters	1 year(2024)[2]
015	New Meters, 2 Flow Meters, 1 Level Sensor	1 year(2024)[2]
017	New Meters, 2 Flow Meter, 1 Level Sensor	1 year(2024)[2]
HBIS	New Meters, 4 Flow Meters	1 year(2024)[2]
Metering to Support the Recalibration of CSO 028 and 029		
028	New Meters, 3 Flow Meters, 2 Level Sensors	1 year (2024)[2]
029	New Meters, 3 Flow Meters, 2 Level Sensors	1 year (2024)[2]
067	New meter; installed in MH-6	1 year (2025)

[1] Existing flow meters within the Onondaga Creek basin that are not required by the Metro SPDES Permit are proposed to be removed due to the anticipated changes to the CSS resulting from the I-81 project.
[2] If there is not sufficient rainfall or storms to perform the calibration in 2025, the metering to support the calibration would extend into 2025.

3.2.1. Metro Headworks Bypass Summary

To prevent damage to the treatment facility during extreme wet weather events, a portion of the Metro influent flow can bypass the headworks and discharge to Onondaga Lake. The Metro Headworks Bypass (01B) is a permitted discharge and is considered a CSO. Based on the long-term simulation results of the calibrated SWMM for the 1991 typical year rainfall conditions, there are no events that cause a wet weather bypass at the Metro headworks during the typical year (1991). This implies that the observed headworks bypasses are limited to storm events exceeding the largest event recorded in 1991. However, other circumstances can lead to headworks bypasses that are not related to the size of wet weather events. Construction and maintenance activities can temporarily reduce the plant capacity. Equipment failures and unplanned emergency maintenance activities can also lead to headworks bypasses.

One headworks bypass event occurred in 2023 during the disinfection season due to a plant-wide power outage. The summary of the event is included in Table 3-2.

Table 3-2. Summary of Metro Headworks Bypass Events (2023)

Total Rainfall (Inches)[1]	No. of Events[2]	No. During Disinfection Season	No. Due to Reduced Capacity	Total Bypass Volume (MG)	Event Duration (Hours)			Event Volume (MG)		
					Ave	Min	Max	Ave	Min	Max
42.8	1	1	1	8.52	1.4	1.4	1.4	8.52	8.52	8.52

3.3 CSO Water Quality Monitoring

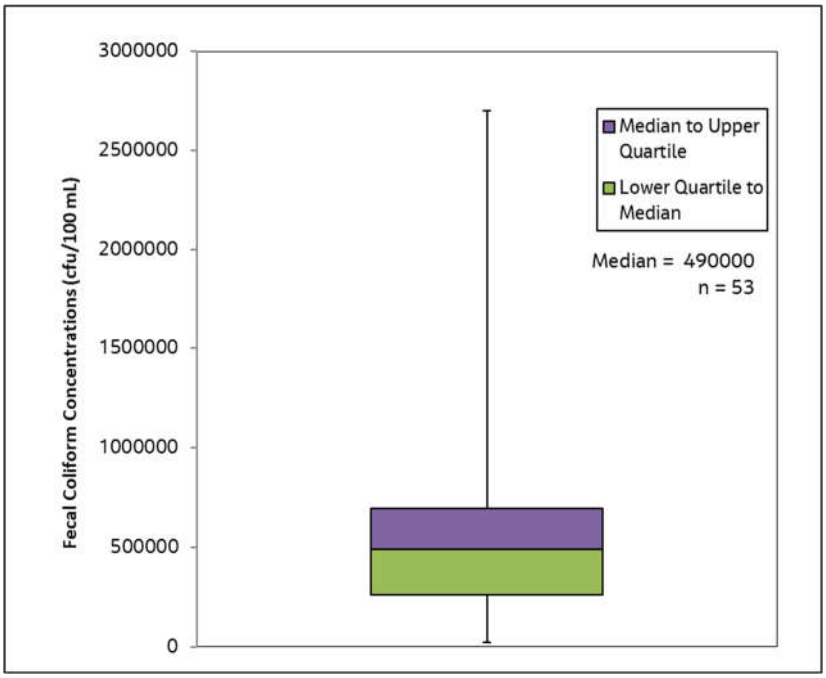
3.3.1 CSO Facility Influent Samples

To assess contributions of CSOs to in-stream water quality, water quality of CSOs (specifically fecal coliform) was characterized. The County's approach to characterizing CSO water quality entailed collection of samples from the influent chambers of multiple CSO storage and regional treatment facilities during wet weather. This approach was used due to concerns related to safe access to individual CSO outfalls during discharge for collection of grab fecal coliform samples during wet weather conditions. This approach averages fecal coliform concentrations of multiple CSOs and tends to truncate the range of CSO concentrations.

The median fecal coliform concentration of a total of 53 CSO facility influent samples collected during 2015 through 2019 from four of the County's CSO facilities[1] was **490,000 cfu/100 mL** (Figure 3-1). This value is considered generally representative of fecal coliform levels in the County's untreated CSO discharges on a system-wide volume-weighted basis. No additional samples from CSO facility influent chambers were collected since 2019.

[1] Clinton Storage Facility (SF), Lower Harbor Brook Storage Facility (SF), Midland Regional Treatment Facility (RTF), and Maltbie Floatables Control Facility (FCF)

Figure 3-1. CSO Facility Influent Fecal Coliform Concentrations (2015-2019)



The median fecal coliform concentration was used to determine fecal coliform estimated loads from CSOs during PCCM sampling events. Over the duration of the PCCM sampling events conducted in 2017, the product of CSO measured flow as available (or SWMM estimates) and a fecal coliform concentration of 460,000 cfu/100 mL (median value of 47 CSO facility influent samples collected during 2015-2017 from the Clinton SF, Lower Harbor Brook SF, Maltbie FCF, and Midland RTF) was used. These estimated CSO loads were compared to in-stream fecal coliform loads to evaluate contributions from CSO discharges. Linear interpolation was used to develop 15-minute fecal coliform concentration estimates for periods between measurements. 15-minute loads were calculated as the product of these concentrations/estimates and 15-minute flows from the appropriate USGS gauges (Refer to 2017 Ambient Monitoring Program (AMP) Annual Report, Appendix F-17 PCCM Event Summaries). Event mean concentrations (EMC) were calculated at in-stream locations as the total event load divided by the total event flow volume.

3.3.2 CSO Facility Overflow Samples

In addition to the influent chamber samples collected from multiple CSO facilities to represent fecal coliform levels of CSO discharges, monitoring of specific effluent overflow parameters (including fecal coliform) is required for each of the CSO facilities listed under the Metro SPDES Permit (Section XVI. APPENDIX A – Monitoring Requirements for CSO Treatment Facilities). The May 24, 2022, modified Metro SPDES Permit updated the seasonal effluent disinfection season. Effluent disinfection is now required from April 1 to October 31, which extends the disinfection season

duration in accordance with the SPDES permit by 16 days. The two CSO regional treatment facilities (Hiawatha and Midland) therefore require effluent disinfection from April 1 through October 31.

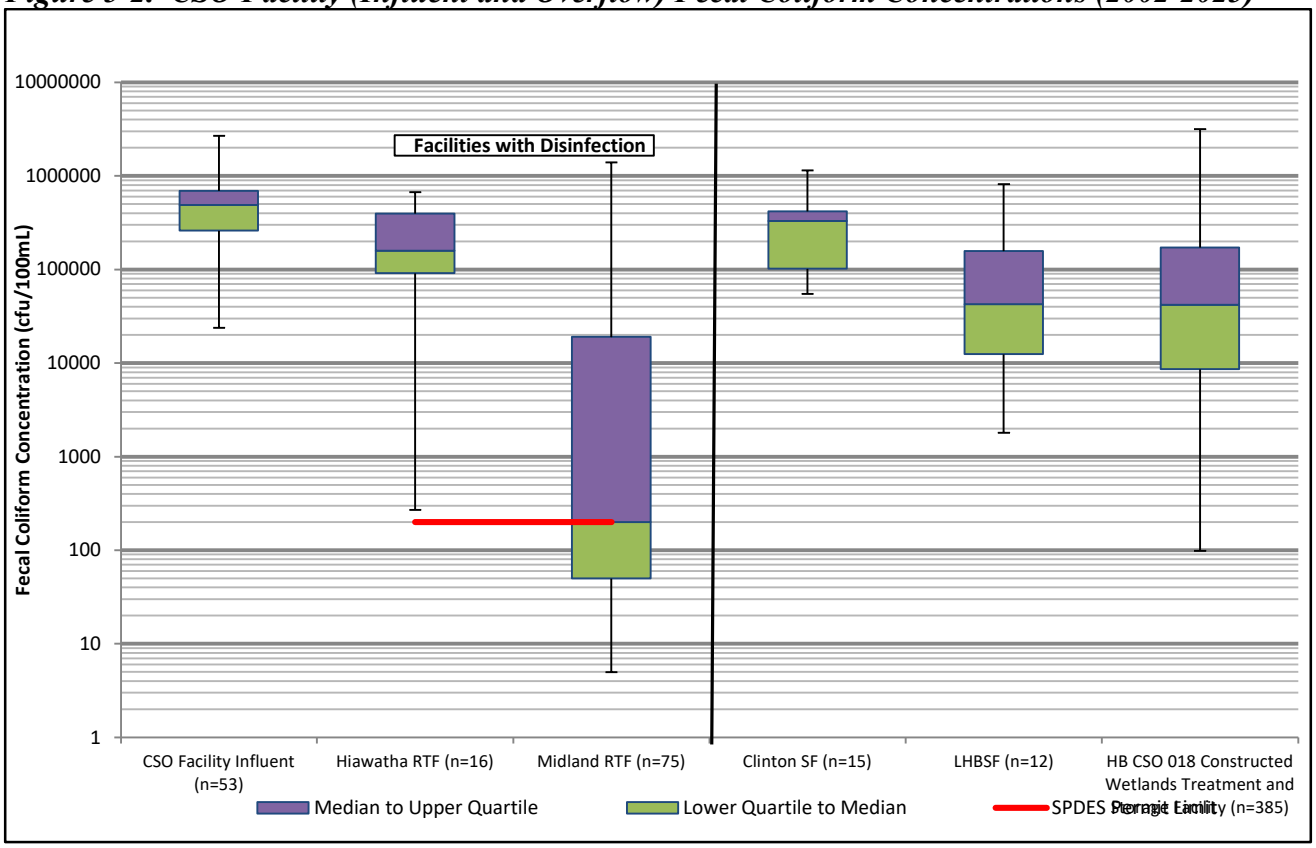
Figure 3-2 summarizes the available fecal coliform results (number of samples (n) and median) of the CSO treatment facility overflow samples, as reported in the CSO facility quarterly performance reports (QPRs). Results of samples collected from the influent chambers of CSO facilities are also included in this figure for reference. The SPDES permit specifies fecal coliform limits per event (Geometric Mean of 200 cfu/100 mL per Event) for the two (2) CSO effluent disinfection facilities from April 1 to October 31. Overflow "**monitoring only**" is required for fecal coliform for the Lower Harbor Brook SF, Clinton SF and the HB CSO 018 Constructed Wetlands Storage & Treatment Facility (from April 1 to October 31).

Overflow samples were collected from the following CSO facilities:

1) Hiawatha RTF (2002-2023)
2) Midland RTF (2009-2023)
3) Clinton SF (2015-2023)
4) Lower Harbor Brook SF (2015-2023) and
5) Harbor Brook CSO 018 Constructed Wetlands Storage & Treatment Facility (2015-2023)

The median fecal coliform concentration of a total of 503 CSO overflow samples collected from the five CSO facilities was **37,000 cfu/100 mL**.

Figure 3-2. CSO Facility (Influent and Overflow) Fecal Coliform Concentrations (2002-2023)



3.4 CSO Tributary Water Quality Monitoring

The objectives of the CSO Tributary Water Quality Monitoring Program include:

1) Supporting a continued compliance assessment of fecal coliform and additional parameters, as referenced in the NYS Section 303(d) Listing and the NYS Water Quality Standards and Guidance Values (NYSDEC TOGS 1.1.1).
2) Tracking long-term fecal coliform trends to continue evaluating the effectiveness of the additional infrastructure projects designed to further mitigate the impacts of the residual operational CSOs.

During 2023, sampling was conducted biweekly from January through December. To provide data for evaluating receiving water impacts and effectiveness of CSO controls and during dry weather, samples collected in 2023 captured the following conditions:

- Dry-weather events
- Wet-weather events during which CSO overflows did not occur
- Wet-weather larger events during which a CSO overflows occur

Sampling events were classified as "wet" when collected following at least 0.1 inches of rain in the preceding 48 hours, all other samples were classified as "dry". Several long-term sites of the County's tributary water quality monitoring program were retained and include locations upstream and downstream of CSOs and urban segments of the sub-watersheds (Figure 3-3):

Onondaga Creek:

1. Onondaga Creek at Tully Farms Road (upstream of Dorwin Avenue):
   Note: This sampling site was added in 2015 by WEP as a reference site. In 2021, samples were collected at the Onondaga Creek at Webster Road (located approximately 0.4 miles upstream of the Tully Farms Road location due to construction related bridge closure) as an alternate site from July 7, 2021, through September 8, 2021.
2. Onondaga Creek at Dorwin Avenue (upstream of CSOs)
3. Onondaga Creek at Kirkpatrick Street (downstream of CSOs)

Harbor Brook:

1. Harbor Brook at Velasko Road (upstream of CSOs)
2. Harbor Brook at Hiawatha Boulevard (downstream of CSOs)

Ley Creek:

1. Ley Creek at Thompson Road (upstream of CSOs)
   Note: This sampling site was added at NYSDEC's request in 2019 at a location upstream of the two Ley Creek CSOs (operational CSO 073 and abated CSO 074) to isolate non-CSO contributions to Ley Creek.
2. Ley Creek at Park Street (downstream of CSOs)

The following parameters were retained as part of the 2023 sampling program:

- Fecal Coliform
- Total Phosphorus
- Total Dissolved Solids
- Turbidity
- Ammonia-N (NH_3-N)
- Floatables

Ley Creek Sampling Location: Park St

Onondaga Creek Sampling Location: Kirkpatrick St

Ley Creek Sampling Location: Thompson Rd

Harbor Brook Sampling Location: Hiawatha Blvd

Harbor Brook Sampling Location: Velasko Rd

Onondaga Creek Sampling Location: Tully Farms Rd

Onondaga Creek Sampling Location: Webster Rd

Onondaga Creek Sampling Location: Dorwin Ave

Sampling locations 8 miles upstream of Dorwin Ave

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Figure 3-3
Sampling Locations

- Downstream of CSO Sample Location
- Upstream of CSO Sample Location
- Onondaga County Waterways
- Enclosed Portion of Harbor Brook
- CSO Boundary

Receiving Water

- Harbor Brook
- Ley Creek
- Onondaga Creek
- Separated CSOs

N

0 2,000 4,000

Feet

Jacobs

Revised 02/09/2023

3.4.1 Tributary Compliance Summary (2023)

This section includes results of the 2023 CSO tributary compliance assessment with the Water Quality Standards and Guidance Values (NYSDEC TOGS 1.1.1). Specific NYS ambient water quality standards used to assess the extent to which CSO abatement actions are successful, as originally referenced in the ACJ, include the following:

- Dissolved Oxygen: 6 NYCRR* Section 703.3
- Ammonia: 6 NYCRR Section 703.5
- Phosphorus: 6 NYCRR Section 703.2
- Nitrogen: 6 NYCRR Section 703.2
- Bacteria: 6 NYCRR Section 703.4
- Floatable Solids: 6 NYCRR Section 703.2
- Turbidity: 6 NYCRR Section 703.2

*NYCRR: New York Codes, Rules and Regulations

Table 3-3 includes a summary of the percent of 2023 observations in compliance with NYS Ambient Water Quality Standards from January through December, for the sampling stations in the CSO affected tributaries. The percentages in red font indicate that the compliance result is less than 100 percent. The 2023 tributary data indicate that the CSO tributaries were generally in compliance with AWQS for most monitored parameters. As in previous years, the primary exceptions include total dissolved solids (TDS) and fecal coliform bacteria (FC). The AWQS for fecal coliform bacteria is calculated as the geometric mean of a minimum of five observations per month; this value may not exceed 200 colony forming units (cfu) per 100 milliliters (mL).

Appendix B contains the 2023 Annual Water Quality Monitoring data (analytical and in-situ).

Table 3-3. Compliance Results for Onondaga Creek, Harbor Brook, and Ley Creek (2023)

Parameter	NYS AWQS Standard		2023 Compliance Results (n=number of samples)
	Numeric Standard	Narrative Standard	
Dissolved Oxygen 6 NYCRR Sec. 703.3	Instantaneous minimum of 4.0 milligrams per liter [mg/L])	-	OC @ Tully Farms (n=45):100 % OC @ Dorwin (n=45): 100% OC @ Kirkpatrick (n=45): 100% HB @ Velasko (n=45): 100% HB @ Hiawatha (n=45): 100% LC @ Thompson (n=45): 100% LC @ Park (n=44): 98%
pH 6 NYCRR Sec. 703.3	Shall not be less than 6.5 nor more than 8.5	-	OC @ Tully Farms (n=45): 100% OC @ Dorwin (n=45): 100% OC @ Kirkpatrick (n=45): 100% HB @ Velasko (n=45): 100% HB @ Hiawatha (n=45): 100% LC @ Thompson (n=45): 100% LC @ Park (n=45): 100%
Ammonia 6 NYCRR Sec. 703.5	Varies with pH and temperature	-	OC @ Tully Farms (n=24): 100% OC @ Dorwin (n=24): 100% OC @ Kirkpatrick (n=24):100% HB @ Velasko (n=24): 100% HB @ Hiawatha (n=24): 100% LC @ Thompson (n=24): 100% LC @ Park (n=24): 100%
Phosphorus and Nitrogen 6 NYCRR Sec. 703.2	-	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.	Compliance could not be assessed, as the NYSDEC's nutrient compliance criteria for flowing waters is currently pending.
Bacteria[1] 6 NYCRR Sec. 703.4	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200 colony forming units per 100 milliliters	-	OC @ Tully Farms (n=45): 29% OC @ Dorwin (n=45): 43% OC @ Kirkpatrick (n=45): 29% HB @ Velasko (n=45): 57% HB @ Hiawatha (n=45): 14% LC @ Thompson (n=45): 0% LC @ Park (n=45): 0%

Table 3-3. Compliance Results for Onondaga Creek, Harbor Brook, and Ley Creek (2023)

Parameter	NYS AWQS Standard		2023 Compliance Results (n=number of samples)
	Numeric Standard	Narrative Standard	
Floatable Solids in CSO Discharges[2] 6 NYCRR Sec. 703.2 (Oil and Floating Substances)	-	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.	No sanitary related floatables were observed during the 2023 tributary sampling events.
Turbidity 6 NYCRR Sec. 703.2	-	No increase that will cause a substantial visible contrast to natural conditions.	Turbidity caused by streambank erosion is listed as an impairment for Onondaga Creek in Part 3a of the 2018 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy for "*Waterbodies for which TMDL Development May be Deferred (Requiring Verification of Impairment).*"
Total Dissolved Solids (TDS)[3] 6 NYCRR Sec. 703.3	-	Shall be kept as low as possible to maintain the best usage of waters, but in no case, shall it exceed 500 mg/L.	OC @ Tully Farms (n=24): 62.5% OC @ Dorwin (n=24): 67% OC @ Kirkpatrick (n=24): 75% HB @ Velasko (n=24): 0% HB @ Hiawatha (n=24): 100% LC @ Thompson (n=24): 100% LC @ Park Street (n=24): 96%

[1] *Section §703.4 of the NYSDEC Water Quality Regulations provides the total and fecal coliform standards for classes B, C, D, SB, SC and I to be met during all periods: (1) when disinfection is required for SPDES permitted discharges directly into or affecting the best usage of the water; or (2) when the department determines it necessary to protect human health.*

[2] *These observations are intended to comply with the ACJ requirements to assess floatables and evaluate the effectiveness of the floatables controls.*

[3] *Contravention of the TDS standard is primarily associated with watershed hydrogeology, not anthropogenic effects. Compliance with the TDS standard was not among the goals of the remediation program.*

3.4.2 Compliance Trends, Fecal Coliform (2010-2023)

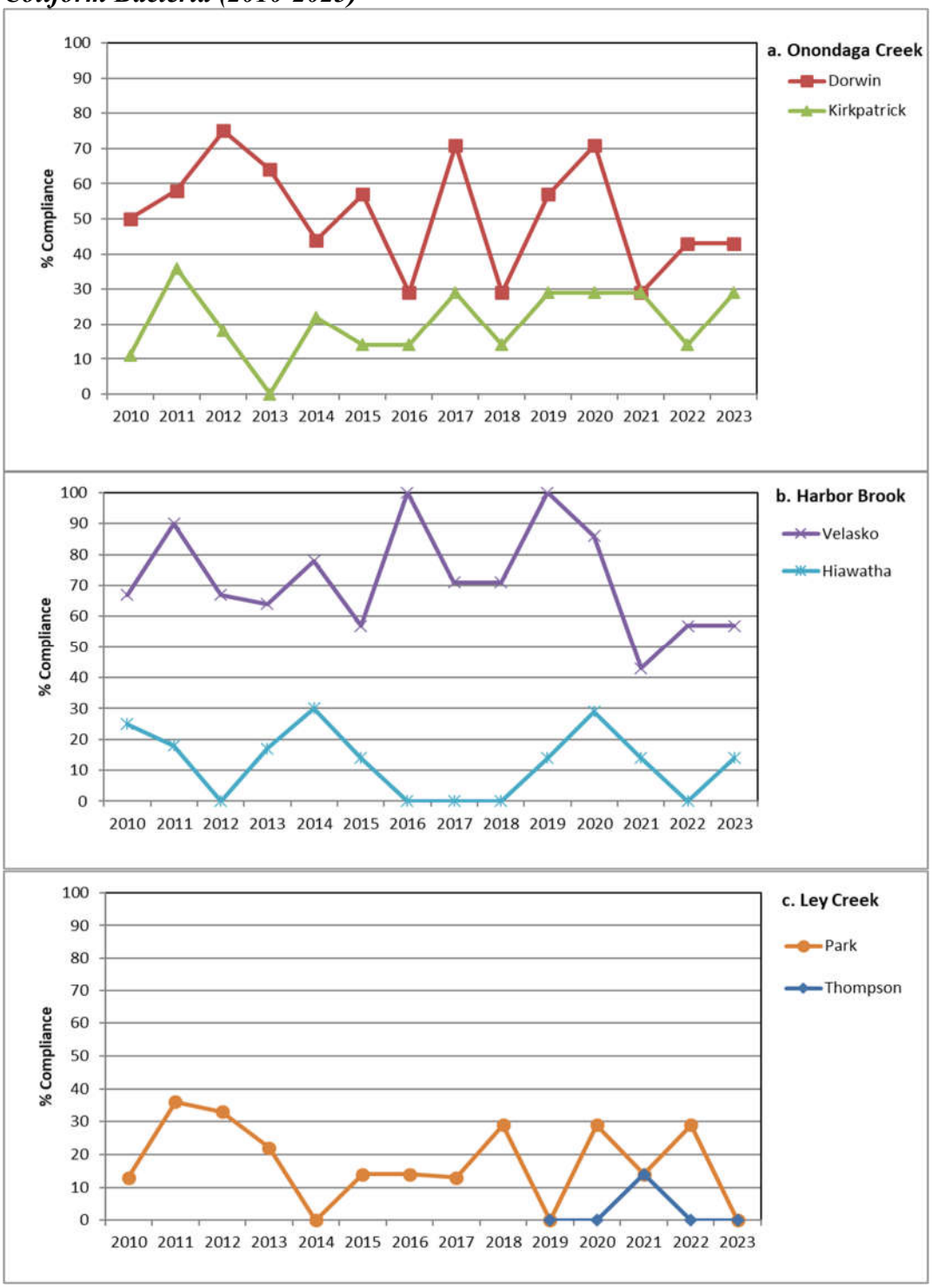
Assessment of Onondaga Lake tributaries with respect to the AWQS has been tracked annually since 2010, the first year that sampling was conducted with sufficient frequency to evaluate compliance status.

Five samples per month were collected at each of the sampling locations, regardless of wet or dry weather conditions, to support a compliance assessment of fecal coliform during the Metro SPDES permit disinfection season from April 1 to October 31.

The percentage of months in compliance with the AWQS for fecal coliform during 2010 through 2023 are plotted in Figure 3-4. General observations from these figures include:

- **Upstream vs Downstream Comparison**:
  Compliance on an annual basis was consistently higher at the upstream sampling sites (Onondaga Creek at Dorwin Avenue (Figure 3-4a) and Harbor Brook at Velasko Road (Figure 3-4b)) but not at the upstream Ley Creek at Thompson Road sampling site (Figure 3-4c).
- **Onondaga Creek** (Figure 3-4a):
  During 2010 through 2023, the percentage of months in compliance with the AWQS for fecal coliform ranged from 29-75 percent at Onondaga Creek at Dorwin Avenue compared to 0-36 percent at Onondaga Creek at Kirkpatrick Street.
- **Harbor Brook**: (Figure 3-4b):
  Compliance ranged from 43-100 percent at Harbor Brook at Velasko Road compared to 0-30 percent at Harbor Brook at Hiawatha Boulevard.
- **Ley Creek** (Figure 3-4c):
  Compliance at Ley Creek at Thompson ranged from 0-14 percent (for 2019 through 2023). Compliance at Ley Creek at Park Street ranged from 0-36 percent.

Figure 3-4. The Percentage of Months in Each Year in Compliance with the AWQS for Fecal Coliform Bacteria (2010-2023)



3.4.2.1 Trends and Patterns in Tributary Fecal Coliform Concentrations

In addition to reporting compliance with the AWQS, the County continues to track fecal coliform concentration trends to assess water quality improvements in the CSO tributaries from implementation of additional CSO abatement projects.

This section includes the following trends and patterns in fecal coliform concentrations in each of the three (3) CSO tributaries:

- Section 3.4.2.1.1 - Long-Term Concentration Trends (1985-2023)
- Section 3.4.2.1.2 - Wet-Dry & Upstream-Downstream Concentration Patterns

3.4.2.1.1 Long-Term Concentration Trends, Fecal Coliform (1985-2023)

Analysis were conducted using routine monitoring data collected under a variety of conditions, including both dry weather and wet weather conditions. High frequency data collected during storm events (e.g., post construction compliance monitoring, recovery time monitoring) was not included in the long-term trend analyses to avoid potential bias associated with the uneven temporal coverage. Averaging techniques were used to smooth the fecal coliform time series and highlight the underlying temporal patterns in monthly geometric means, annual geometric means, and five-year rolling averages for the long-term period (1985 to 2023). A moving average trendline is added to assist with the visual interpretation of these trends (Figures 3-5 through 3-7). Inter-annual variability in trends could result from differences in total annual rainfall volumes (wet year vs. dry year), intensity of rainfall and timing of sampling events. General observations from Figures 3-5 to 3-7 include:

Onondaga Creek:

- A generally consistent pattern has been observed in recent years at Onondaga Creek – Dorwin (Figure 3-5a).
- A stronger decreasing trend is observed at Onondaga Creek – Kirkpatrick (Figure 3-5b). The increase in monthly geomeans at Kirkpatrick Street sampling location observed in 2022 (>20000 cfu/100 mL) is likely related to high antecedent rainfall totals for two (2) sampling events captured on July 14 and August 9 following rain events with >0.5 inches of total rainfall volume.

Harbor Brook:

- Decreases in fecal coliform concentrations were achieved during the late 1980s at Harbor Brook both upstream and downstream of CSOs (Figure 3-6a and b).
- Significant changes in recent years are not observed at these sampling locations.

Ley Creek:

- No consistent patterns are observed in fecal coliform at Ley Creek downstream of CSOs in recent years (Figure 3-7).
- Limited data upstream of the CSOs (at Thompson Road) are included for comparison (from 2019 through 2022) which reflects concentrations are mostly comparable to or greater than concentrations at the Park Street sampling location (Figure 3-7).

Figure 3-5a. Fecal Coliform Concentrations in Onondaga Creek at Dorwin Avenue (1985-2023)

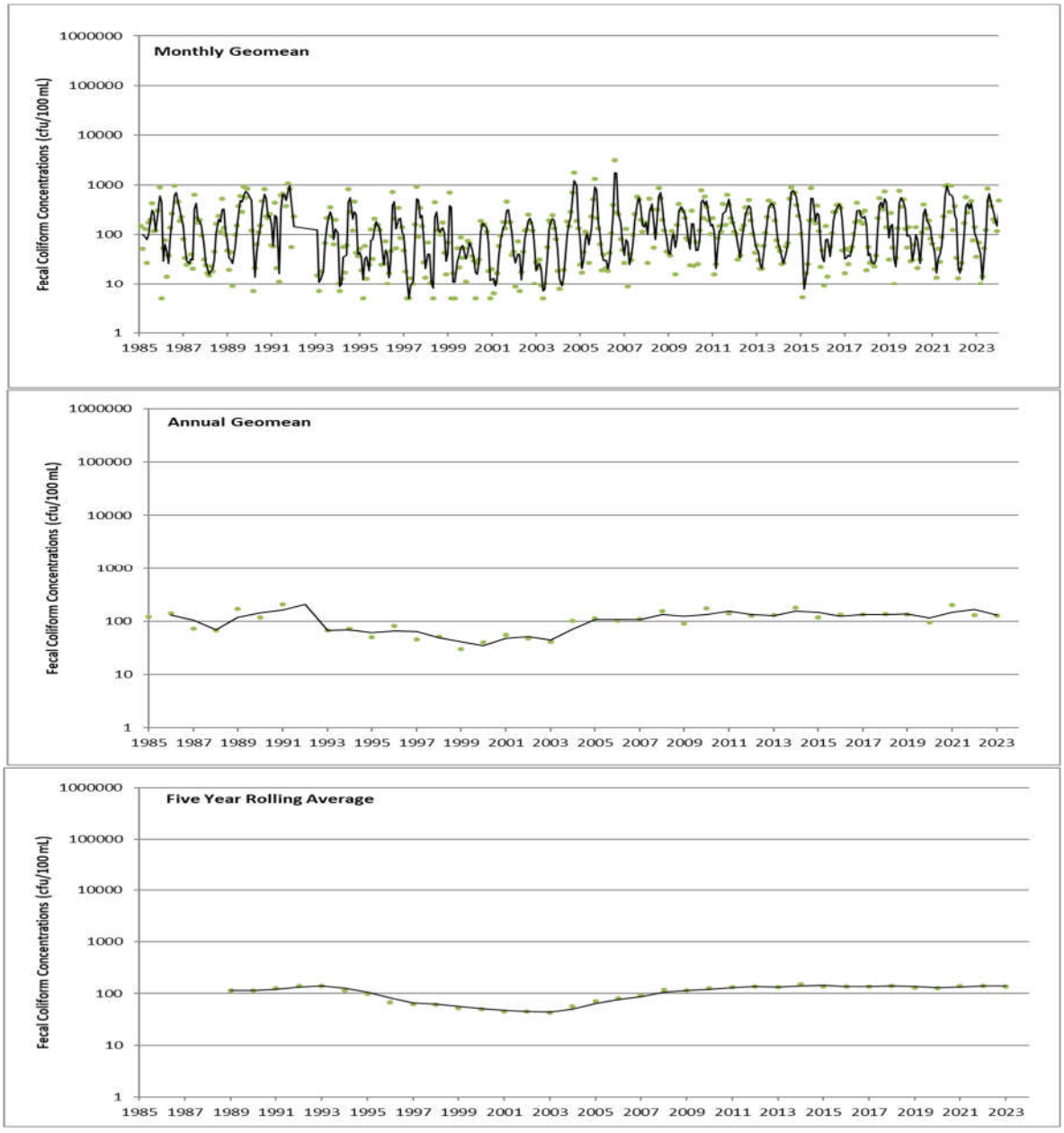


Figure 3-5b. Fecal Coliform Concentrations in Onondaga Creek - Kirkpatrick Street (1985-2023)

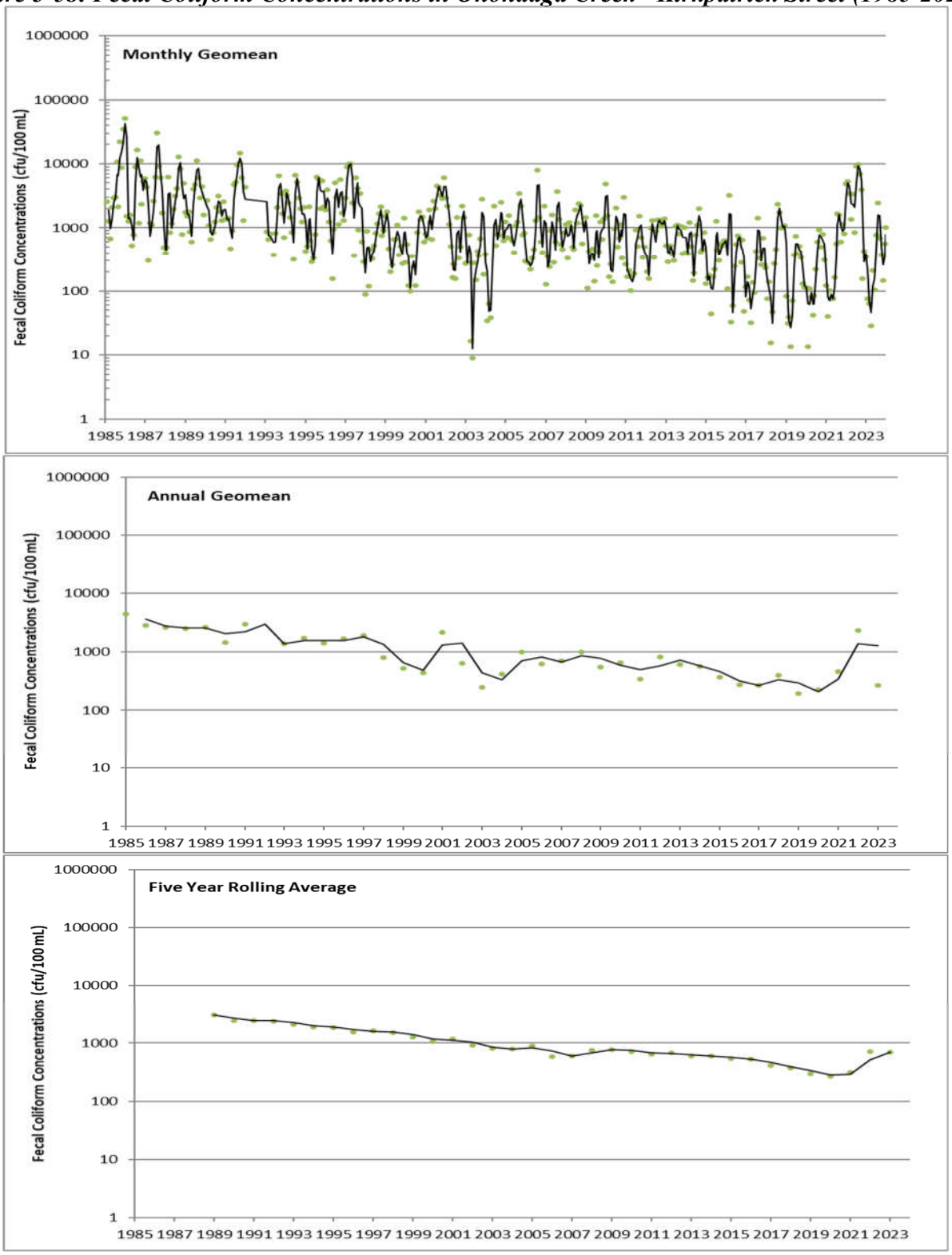


Figure 3-6a. Fecal Coliform Concentrations in Harbor Brook - Velasko Road (1985-2023)

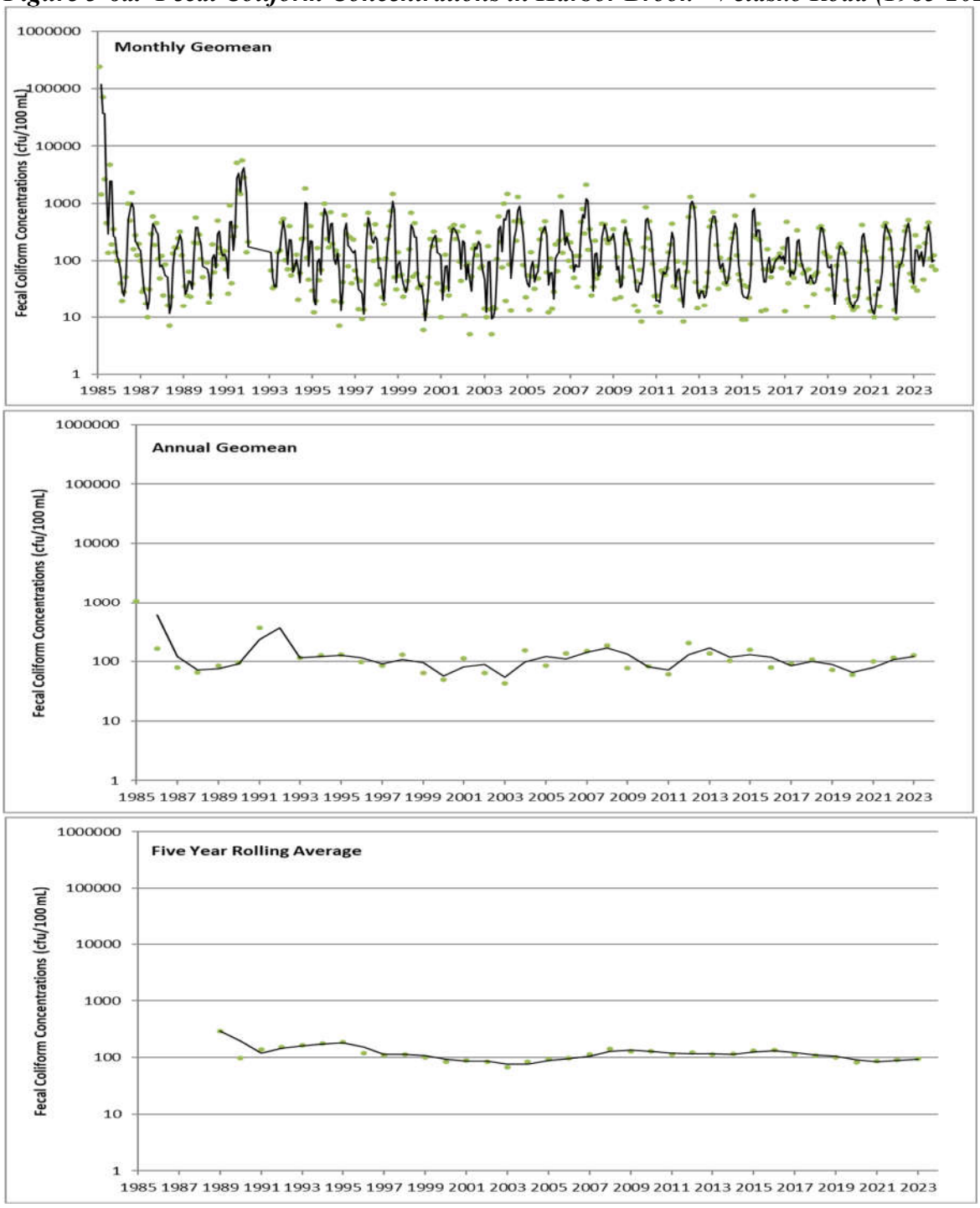
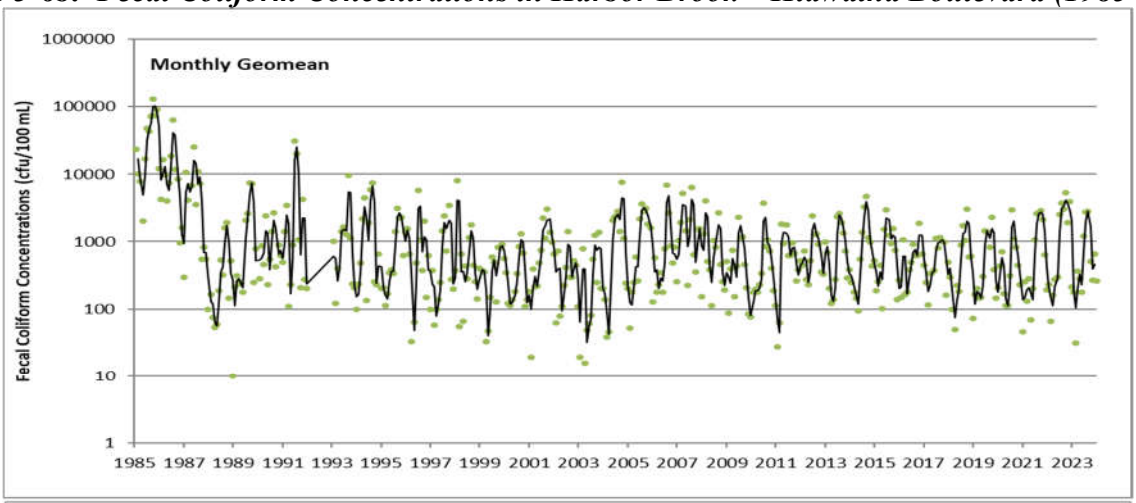
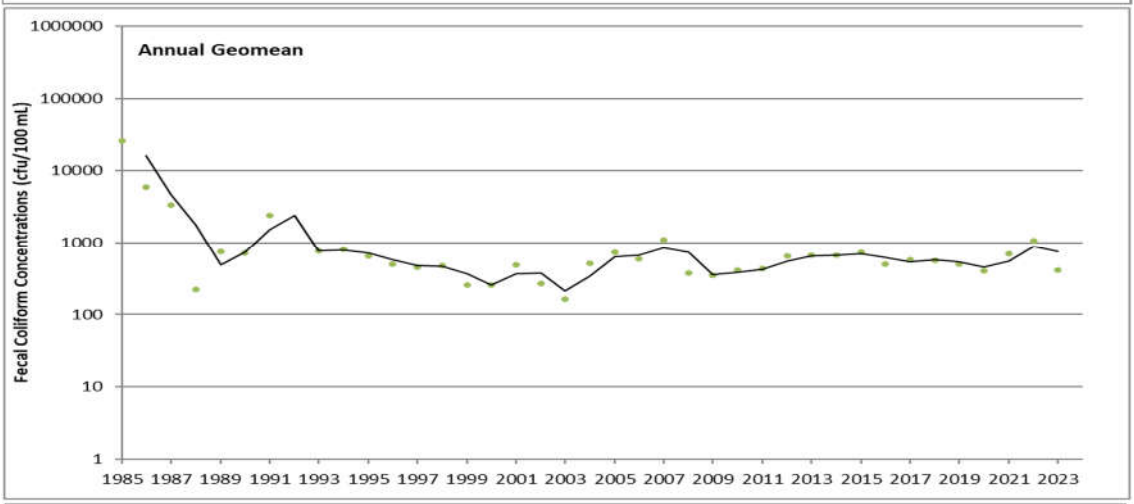


Figure 3-6b. Fecal Coliform Concentrations in Harbor Brook – Hiawatha Boulevard (1985-2023)





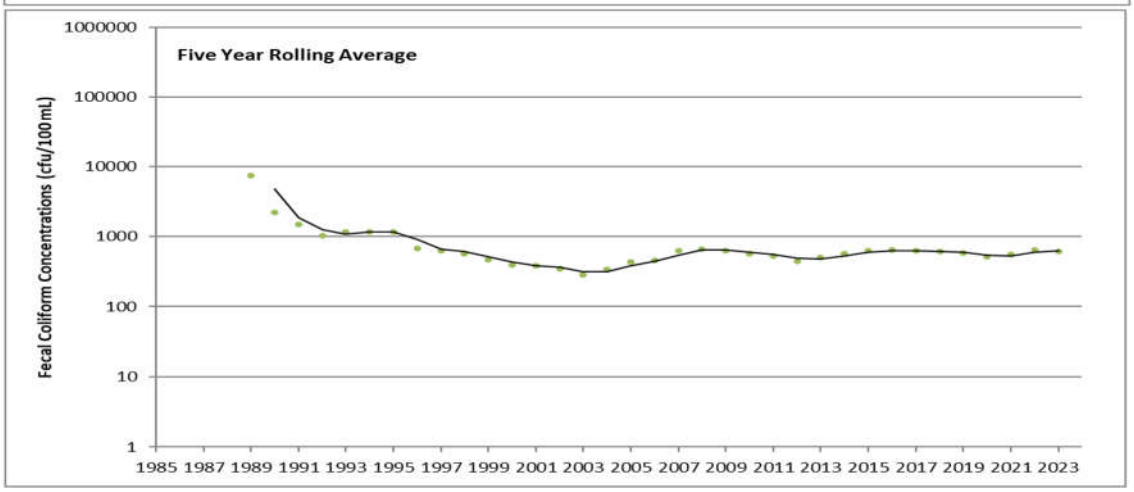
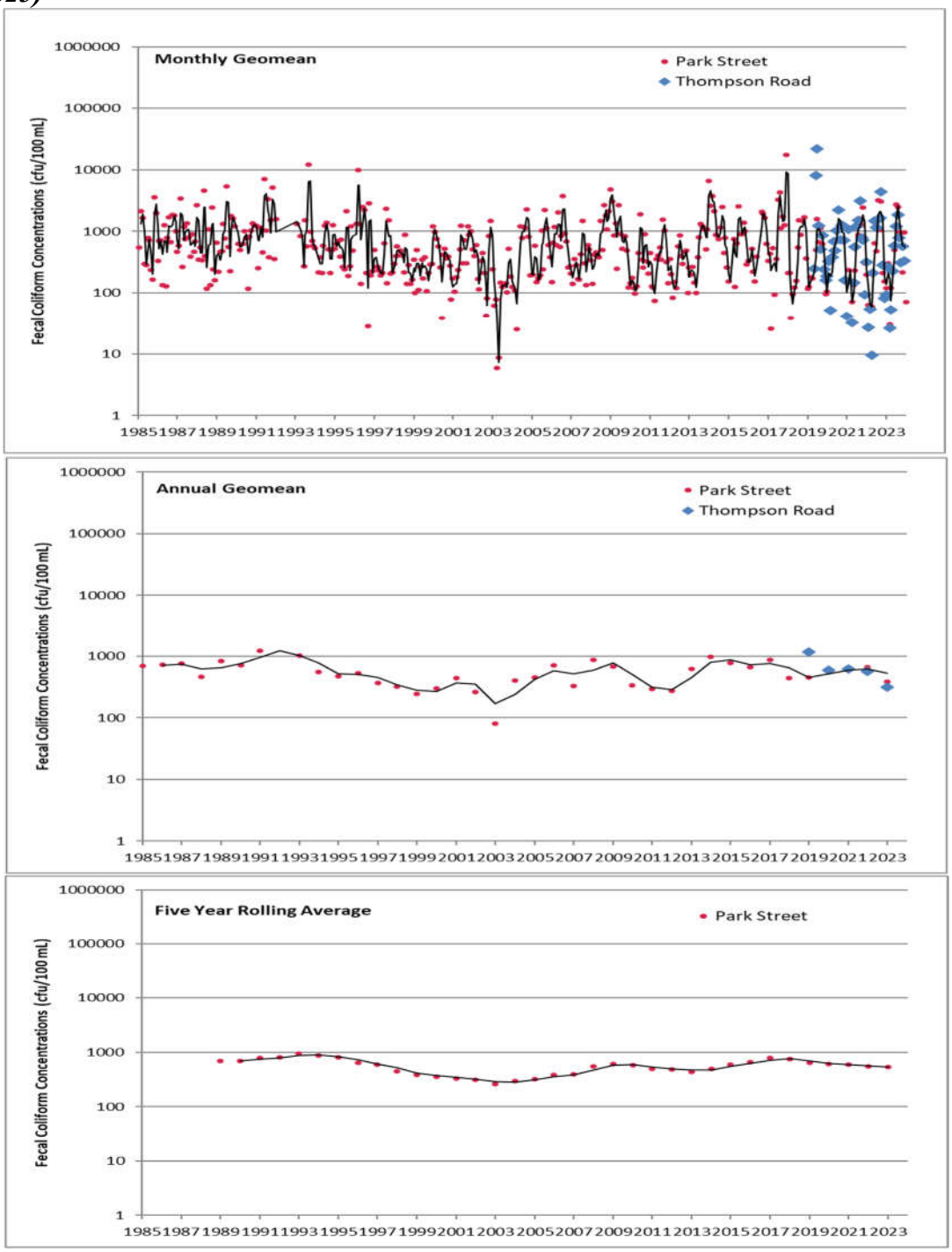
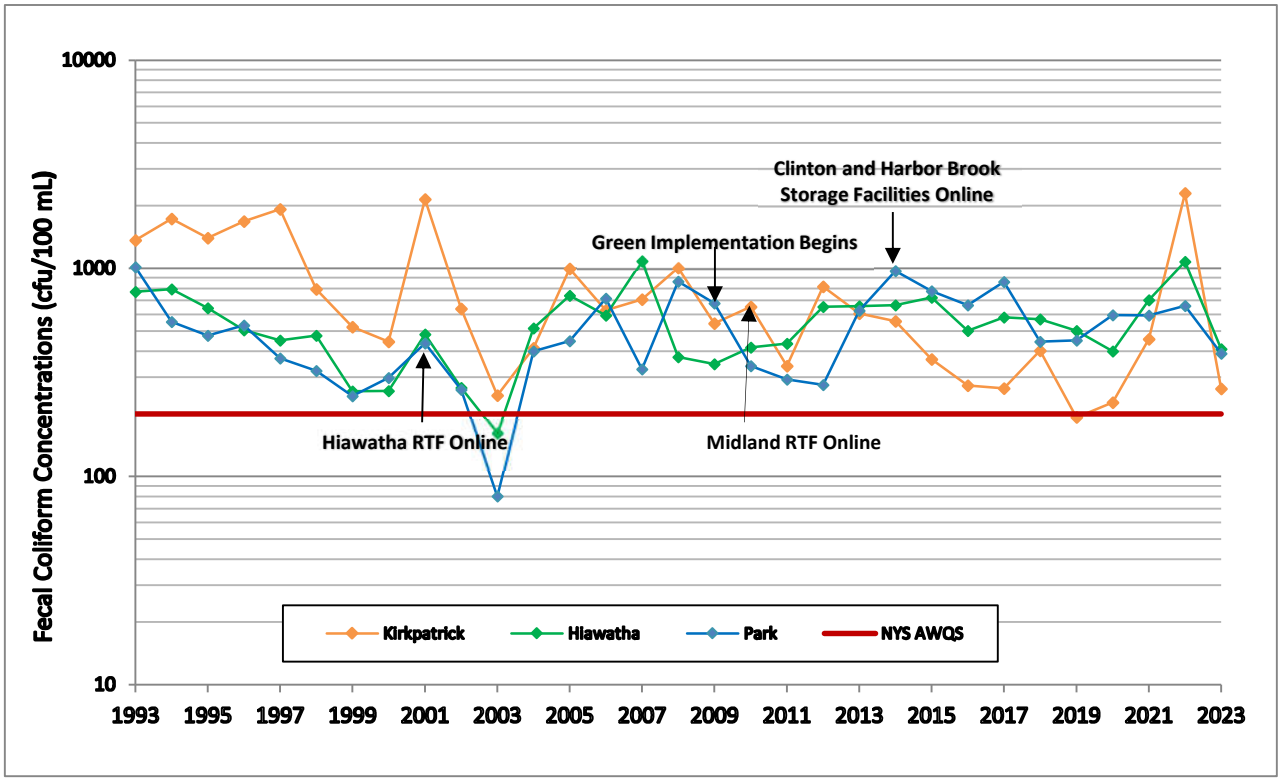


Figure 3-7. Fecal Coliform Concentrations in Ley Creek at Park Street and Thompson Road (1985-2023)



Annual fecal coliform geomean concentrations, from 1993 through 2023, at the downstream sampling locations for Onondaga Creek (Kirkpatrick Street), Harbor Brook (Hiawatha Boulevard), and Ley Creek (Park Street) are included in Figure 3-8. Data at these downstream locations represent the overall impacts of all CSOs. The major milestone years of the CSO abatement projects are indicated in this figure for reference. A downward trend in the fecal coliform geomean concentrations is apparent for Onondaga Creek at Kirkpatrick Street, with the exception of a dramatic increase evident in 2022. No apparent significant increasing or decreasing trend in the fecal coliform geomean concentrations is apparent for Harbor Brook at Hiawatha Boulevard and Ley Creek at Park Street.

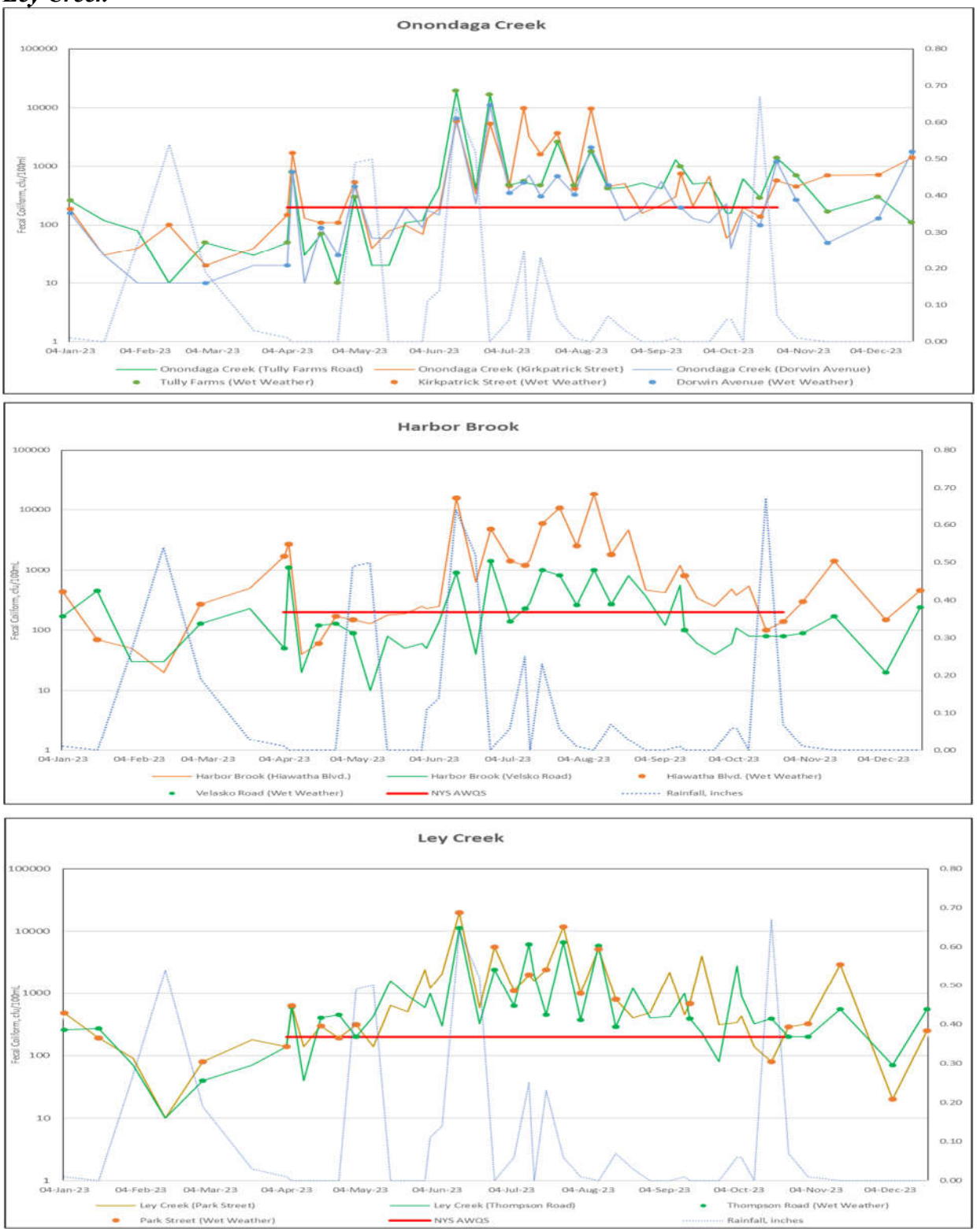
Figure 3-8. Annual Fecal Coliform Geomean Concentrations for Onondaga Creek, Harbor Brook, and Ley Creek (1993-2023)



3.4.2.1.2 Fecal Coliform Concentration Patterns (2023): Wet-Dry & Upstream-Downstream

Figure 3-9 shows a comparison of the 2023 fecal coliform concentrations in the three CSO-affected tributaries at the upstream and downstream sampling locations. A total of 45 fecal coliform samples were collected from January through December 2023, at each of the sampling sites. Samples are classified as "wet" when collected following at least 0.1 inches of rain in the preceding 48 hours; all other samples were classified as "dry". The NYS AWQS (based on a monthly geometric mean from a minimum of five examinations of 200 counts/100 mL) is included in the plots only for a numerical perspective, as it is not appropriate to compare a single sample result to the water quality standard. Across all sites, 51% of FCOLI samples were collected in 2023 during wet weather (i.e., at least 0.1 inches of rainfall in the preceding 48 hours).

Figure 3-9. 2023 Fecal Coliform Concentration Patterns for Onondaga Creek, Harbor Brook, and Ley Creek



General observations from these time series plots include:

- Seasonal Trends:
  Markedly higher FCOLI concentrations are observed during the warmer months of June-September at both upstream and downstream locations in Onondaga Creek, Harbor Brook, and Ley Creek. Fecal coliform bacteria experience increased mortality as environmental temperatures decrease, resulting in higher concentrations during periods of warmer weather. Higher correlation of Fecal coliform concentrations with rainfall events is observed during the summer months versus other times of the year.

- Wet-Dry Weather Concentrations:
  The 2023 data continue to document exceedances of the AWQS for Fecal Coliform in the tributaries, including the non-CSO affected streams, during both wet and dry weather. A study of pathogen indicators (fecal coliform bacteria) in Onondaga Creek was conducted by the Onondaga Environmental Institute (OEI) in 2007. Data analyses from this study, as well as routine monitoring conducted by Onondaga County as part of its Ambient Monitoring Program (AMP), indicated that sources were contributing bacteria to Onondaga Creek and Harbor Brook during periods of dry weather. Thus, precipitation-driven discharges of combined sewer overflows (CSOs) or stormwater outfalls did not account for the elevated levels of bacteria frequently observed. Onondaga Creek, Harbor Brook, and Ley Creek are subject to bacterial contributions from a variety of sources in addition to CSOs, including both rural and urban inputs. For example, the Microbial Trackdown Study (MTS), conducted by the Onondaga Environmental Institute (OEI) and the County identified and corrected (16) point sources of bacteria to Onondaga Creek, Harbor Brook, and Ley Creek. These corrections included repairs to illicit connections to storm sewers and CSOs, broken sewer lines, and failing septic systems.

- Upstream-Downstream Comparison:
  Comparable concentration patterns are generally observed for each of the upstream and downstream sampling sites for each of the three CSO tributaries. Fecal coliform concentrations at the Ley Creek upstream sample site (Thompson Road) were often equal to or exceeded concentrations at the downstream Park Street location. Compliance with the AWQS for fecal coliform was not attained during April-October at either site (refer to Table 3.3), indicating a potential major non-CSO source(s) of fecal coliform to Ley Creek likely exist upstream of CSOs.

3.4.3 Water Quality Data Review

Schedule B of the Order requires the County and NYSDEC to perform a water quality data review to support the preparation of the UAA Reports for the CSO tributaries.

3.4.3.1 Existing Water Quality Data:

As per the Order on Consent (Schedule B: Schedule of Deliverables), within one (1) year of the effective date of the Order (which was October 8, 2021) the NYSDEC "*...will complete its review of existing and relevant information, data, analyses and modeling pertaining to the physical, chemical, biological and economic qualities of Onondaga Lake, its tributaries, environs and surroundings ("existing data")*.

- In 2021, as requested by the NYSDEC, the County completed uploading 10-year water quality data for Onondaga Lake tributaries (2011 through 2020) to the WQX Web (Water Quality Exchange). WQX is an online tool which allows Network Partners to share ambient water quality data (physical, chemical, biological, habitat, index, and metrics data) with EPA and the public.

- In 2022, the 2021 annual tributary water quality data and the PWL information of each of the waterbody segments was uploaded to WQX.

- In response to NYSDEC's data solicitation request for the 2024 Integrated Report on New York State Water Quality, the County submitted it's 2021-2022 Onondaga Lake and Onondaga Lake Tributary data in September 2023. NYSDEC Division of Water is responsible for evaluating whether water quality and habitat conditions fully support each resource's designated best use. Those waterbodies with water quality and/or habitat conditions that do not fully support the designated uses are compiled on a biennial listing and given priority for assessment and action. Results of Onondaga County's monitoring program are among the primary data sets used to evaluate compliance with standards and use attainment. To be used by the NYSDEC for these water quality assessments, the data was accompanied by a (DUAR). A review of the Data Quality Objectives (DQO's) and Data Quality Indicators (DQI's) was conducted to assess the usability of data collected under the Quality Assurance Project Plan.

- In 2023, NYSDEC successfully completed developing scripts for water quality parameters to allow for automation of compliance assessments with AWQS and evaluation of impairments for the waterbody segments.

3.4.3.2 Additional Water Quality Data:

This task includes the determination of data gaps identified with the review of the existing data and/or the needs of the UAA reports. The Order specifies that the County will begin such data collection two years after the EDO (October 2023) and for completion within four years of the

EDO (October 2025). No additional water quality data requirements were determined in 2023. This assessment will be continued to support the data/information needs of the UAA reports referenced in Section 3.5.

3.5 Use Attainability Analysis (UAA)

As per the MOU between the NYSDEC and the County, the County is required to produce UAA Reports for each waterbody segment that has CSO outfalls, to identify what aquatic life, recreational, and aesthetic uses can be attained through implementation of the County LTCP, as revised. These UAA reports will identify existing uses, use impediments, and reasonably attainable uses based on modeling the impacts of implementing the County LTCP. The UAA Reports will also analyze, for each tributary, the applicability of the criteria set forth in 40 CFR § 131.10(g) for modifying AWQS for fecal coliform.

USEPA developed a UAA spreadsheet-based tool, intended to help states, authorized tribes, and territories establish or revise designated uses by addressing the steps and questions to be considered while conducting a UAA. In general, a UAA is required when revising designated uses related to protecting aquatic life, wildlife, and recreation in and on the water specified in Clean Water Act (CWA) section 101(a)(2).

3.5.1 UAA Methodology

Consistent with EPA guidance, the following steps outline the general approach in conducting a UAA:

Identify the affected waterbody and its characteristics:

- Describe the stressors limiting attainability of the designated use.
- Evaluate the "existing" use which entails assessing whether and when recreational activities occur in the CSO-impacted waterways (during "dry" and "high" flow conditions when recreation is not considered safe). Primary contact recreational activities include wading, swimming and kayaking.

Data Analysis:

- Assess attainability of meeting Fecal Coliform AWQS. If current standard is not attainable, what is the highest use attainable in the CSO section of the tributary?
- Determine other rural and urban sources within and upstream of the CSO area (MS4s, etc.).
- Evaluate compliance during dry weather conditions, when CSOs are not occurring.
- Evaluate compliance achieved at sampling locations upstream of all CSOs.
- Under 40 CFR 131.10(g) states may remove a designated use which is not an existing use, as defined in § 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible.

The six (6) UAA Factor(s) to be considered in such an analysis include the physical, chemical, biological, and economic use removal criteria described in EPA' s water quality standards regulation (40 CFR 131.10(g)(1)-(6)) include:

1. Naturally occurring pollutant concentrations prevent the attainment of the use; or
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

5. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
6. Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

3.5.2 UAA Reports Schedule:

In 2022, DEC drafted a Standard Operating Procedure (SOP) for developing UAAs. NYSDEC is awaiting USEPA guidance on this SOP, prior to proceeding with the next steps. It is anticipated that this SOP will serve as a guidance document to implementing UAA's for the communities in the State and as a tool to assess any additional data needs. Following EPA's approval of the SOP, the County and DEC will meet to assess additional data and information needs for developing the UAAs for each of the three CSO tributaries. The Order specifies that within four (4) years and six (6) months of the EDO (April 8, 2026), the County shall submit a revised LTCP, together with UAA Reports to the NYSDEC, for review and approval, so as to have an approved LTCP and UAA Reports within five (5) years of the EDO. On or prior to the end of the fifth (5^{th}) year from the EDO (October 8, 2026), UAA will be sent forthwith to USEPA for approval, following which the County can petition the NYSDEC for revision of applicable AWQS.

3.6 Public Notification:

NY-Alert is the electronic notification system that must be used to alert DEC, Department of Health and the public about sewage discharges, as required by Sewage Pollution Right to Know (SPRTK) law of 2012 (effective in 2013). Notifications of sewage discharges help the public avoid boating, fishing or swimming in waterbodies that may contain illness causing bacteria within two hours of discovery; and to notify municipalities and the general public within four hours if there is a possible threat to public health (refer to NY-Alert Notifier Manual for Reporting Sewage Discharges, NYSDEC https://www.dec.ny.gov/docs/water_pdf/alertmanual3.0.pdf).

This notification is also required for WEP to comply with the requirements of 6 NYCRR SPDES Permits Part 750-2.7 (for POTWs and POSSs Operating in Accordance with a SPDES Permit). Effective November 30, 2016, permittees are required to comply with the incident reporting to warn the public to not enter the CSO-impacted waterways following CSO events.

This notice provides the following details to the public about the CSO discharge event:

- Date/Time of Discharge - approximate date and time that the discharge started
- Location of Discharge - to the maximum level of specificity possible
- Duration of Discharge - estimation of expected duration of discharge
- Volume of Discharge - estimation of the volume of discharge
- Treated State of Discharge - Untreated, Primary Treatment with Disinfection, or Primary Treatment without Disinfection
- Reason(s) for Discharge - information about why the discharge occurred
- Description of Corrective Action(s) - Brief summary of the preventive or corrective actions taken to contain the discharge

Appendix A
2023 Combined Sewer Overflows Annual Report

Combined Sewer Overflow (CSO) Annual Report

version 1.11

(Submission #: HQ1-PY0J-A7T6C, version 2)

Details

Submitted	7/2/2024 (28 days ago) by Kelly O'Brien
Alternate Identifier	NY0027081
Submission ID	HQ1-PY0J-A7T6C
Status	Deemed Complete

Form Input

Permit Information

SPDES Number
NY0027081

DEC Region
7

Permittee Name
Onondaga County

Facility Name
Metroplitan Syracuse WWTP

Official Name
Shannon L. Harty, P.E.

Official Title
Commissioner

Official's Phone Number
315-435-2260

Official's Email Address
shannonharty@ongov.net

CSO Program Manager Name
Eric Schuler, P.E.

CSO Program Manager Title
Deputy Commissioner

CSO Program Manager Phone Number
315-435-2260

CSO Program Manager Email
ericschuler@ongov.net

Part I - CSO LTCP Information

GENERAL CSO PROGRAM INFORMATION

Use the following questions to provide current general information on the CSO Program

Number of CSO Outfalls in the permittee owned system
42

Number of CSO Events Occurring in Reporting Year
57

Total Volume of CSO Discharged in Reporting Year (MG)
191.90

CORRECTION REQUEST *(APPROVED)*
Please confirm

According to the CSO Outfall Information table, the total CSO volume has been reported as 191.9 MG. The actual total volume discharged in 2023 should be reported here. Please review the reported values in the CSO Outfall Information table and confirm the total annual CSO discharged.
Created on 4/8/2024 11:53 AM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 8:47 AM)
Response has been revised to reflect actual total volume discharged.

Percentage of Collection System, owned by the permittee, that is combined (%)
30.7

Approximate length (mi) of combined sewers in permittee-owned system
52.46

Population served by the permittee-owned system
148,620

Number of Publicly-Owned Sewer Systems (POSS) to the permittee-owned system
6

Number of Publicly-Owned Sewer Systems (POSS) to the Combined Sewer System
3

Number of Significant Industrial Users (SIU) connected to the CSS
29

Number of other, non-POSS satellite system connections
0

Long Term Control Plan (LTCP) Information

Was an LTCP Required?
Yes

CORRECTION REQUEST *(APPROVED)*
Please correct

The current Order on Consent requires a revised LTCP. Please correct this.
Created on 4/15/2024 10:23 AM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 8:54 AM)
Onondaga County is under a State Order of Consent R7-202110304-6. The Order of Consent requires a LTCP to be submitted within 4 years and six months of the EDO (10/8/21). Onondaga County is working under an Interim Corrective Measures Plan (ICMP) dated 9/16/22 and approved 9/27/22. Under the ICMP the County has a focused PCCM to support User Attainable Analysis (UAAs) and continuted maintenance of SWMM model.

Year the LTCP was Submitted
2026

What is the LTCP Approval Status?
Other: The LTCP is required to be submitted within 4 years and 6 months from the Order of Consent R7-202110304-6 (executed date 10/8/21).

What was/is the LTCP selected approach and/or criterion?
Demonstrative

Is the LTCP Implementation completed?
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.
Focused PCCM to support User Attainable Analysis (UAAs) and continued maintenance of SWMM model.

Post Construction Compliance Monitoring (PCCM)

What is the status of the PCCM Plan?
Approved

What is the status of the PCCM Sampling Program?
In Progress

Part II - CSO Outfall Information

CSO Outfall Information

Outfall Number	Latitude (Decimal)	Longitude (Decimal)	Receiving Water Name	Receiving Water Class	Number of Regulators Associated	Type of Regulator	Type of Treatment Provided	Number of Overflow Events - BASELINE	Number of Overflow Events - PREVIOUS YEAR	Number of Overflow Events - CURRENT YEAR	Annual CSO Volume (MG) - BASELINE	Annual CSO Volume (MG) - PREVIOUS YEAR	Annu CS Volu (MG CURR YEA
003	43.05555556	76.18527778	Harbor Brook	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
004	43.05361111	76.18166667	Harbor Brook	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
04A	43.05402778	76.18277778	Harbor Brook	C	1	Other: Overflow Flap	Other Wet Weather Facility	0	1	2	0	0.36	0.29
005	43.05305556	76.17722222	Harbor Brook	C	1	Fixed Weir	None	0	3	3	0	0.5	0.5
006	43.05194444	76.17638889	Harbor Brook	C	1	Fixed Weir	None	0	0	0	0	0	0
007	43.05194444	76.17388889	Harbor Brook	C	1	Fixed Weir	None	0	8	8	0	2.7	2.7
009	43.04638889	76.17583333	Harbor Brook	C	1	Fixed Weir	None	0	6	6	0	1.8	1.8
010	43.04583333	76.17250000	Harbor Brook	C	2	Fixed Weir	None	0	0	0	0	0	0
011	43.04277778	76.1730556	Harbor Brook	B	1	Fixed Weir	None	0	5	5	0	0.6	0.6
014	43.04277778	76.17472222	Harbor Brook	B	1	Fixed Weir	None	0	29	3	0	0.64	0.60
015	43.03888889	76.17722222	Harbor Brook	B	1	Fixed Weir	None	0	2	2	0	0.3	0.3
017	43.03666667	76.17972222	Harbor Brook	B	1	Fixed Weir	None	0	0	0	0	0	0
018	43.03611111	76.18277778	Harbor Brook	B	1	Fixed Weir	Overflow Retention / Settling	0	10	16	0	5.1	6.71
020	43.05472222	76.15722222	Onondaga Creek	C	1	Fixed Weir	Other: Netbags	0	16	16	0	21.1	21.1
021	43.05444444	76.15694444	Onondaga Creek	C	1	Fixed Weir	Other: Netbags	0	27	27	0	41.5	41.5
027	43.04861111	76.15777778	Onondaga Creek	C	1	Fixed Weir	None	0	35	18	0	13.1	17.5
028	43.04805556	76.15750000	Onondaga Creek	C	1	Fixed Weir	None	0	0	3	0	0.4	0.4
029	43.04805556	76.1575000	Onondaga Creek	C	1	Fixed Weir	None	0	18	5	0	0.8	0.8

Outfall Number	Latitude (Decimal)	Longitude (Decimal)	Receiving Water Name	Receiving Water Class	Number of Regulators Associated	Type of Regulator	Type of Treatment Provided	Number of Overflow Events - BASELINE	Number of Overflow Events - PREVIOUS YEAR	Number of Overflow Events - CURRENT YEAR	Annual CSO Volume (MG) - BASELINE	Annual CSO Volume (MG) - PREVIOUS YEAR	Annl CS Volu (MG CURR YEA
030	43.04722222	76.15750000	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
031	43.04694444	76.15777778	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
032	43.04583333	76.15777778	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
033	43.04444444	76.15527778	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
033A	43.04444444	76.15527778	Onondaga Creek	C	1	Other: Overflow Flaps	None	0	3	6	0	7.94	13.9
034	43.04361111	76.15472222	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
035	43.04361111	76.15472222	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
036	43.04250000	76.15500000	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
037	43.04222222	76.15500000	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
039	43.03666667	76.15527778	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
042	43.03305556	76.0580556	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0
044	43.03055556	76.15944444	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	1	0	0	0.018	0
052	43.02083333	76.15583333	Onondaga Creek	C	1	Fixed Weir	None	0	106	3	0	84.1	0.3
060M	43.02361111	76.15472222	Onondaga Creek	C	2	Fixed Weir	None	0	9	0	0	0.98	0
063A	43.05777778	76.18777778	Onondaga Creek	C	1	Fixed Weir	Other Wet Weather Facility	0	0	0	0	0	0

Outfall Number	Latitude (Decimal)	Longitude (Decimal)	Receiving Water Name	Receiving Water Class	Number of Regulators Associated	Type of Regulator	Type of Treatment Provided	Number of Overflow Events - BASELINE	Number of Overflow Events - PREVIOUS YEAR	Number of Overflow Events - CURRENT YEAR	Annual CSO Volume (MG) - BASELINE	Annual CSO Volume (MG) - PREVIOUS YEAR	Annu CS Volu (MG CURR YEA
066	43.05555556	76.16138889	Onondaga Creek	C	1	Fixed Weir	Other: Netbags	0	14	57	0	4.6	15.0
067	43.01611111	76.15777778	Onondaga Creek	C	1	Other: offset pipe	Other: Swirl Concentrator	0	8	18	0	0.14	0.30
071	43.05722222	76.16138889	Onondaga Creek	C	1	Fixed Weir	None	0	0	0	0	0	0
073	43.07833333	76.12361111	Teall Brook	C	1	Fixed Weir	Other: Copa Screen	0	34	44	0	8.6	10.0
074	43.07666667	76.17194444	Ley Creek	C	1	Fixed Weir	Settling & Disinfection	0	1	0	0	0.023	0
075	43.06472222	76.17222222	Onondaga Creek	C	1	Fixed Weir	None	0	0	0	0	0	0
076	43.01916667	76.15500000	Onondaga Creek	C	1	Fixed Weir	None	0	0	0	0	0	0
078	43.03555556	76.18861111	Harbor Brook	B	1	Fixed Weir	None	0	26	24	0	1.7	1.4
080	43.05083333	76.15833333	Onondaga Creek	C	1	Other: Gate; gate opens when setpoint reached	None	0	7	13	0	11.3	8.3
M01	43.03333334	76.15833333	Onondaga Creek	C	1	Fixed Weir	Screening, Settling, Disinfection	0	7	16	0	35.8	47.8
M02	43.03361111	76.15833333	Onondaga Creek	C	1	Other: Emergency OVerflow Flaps	None	0	2	0	0	2.68	0
06A	43.05194444	76.17638889	Harbor Brook	C	1	Fixed Weir	None	0	1	1	0	0.1	0.1

CORRECTION REQUEST ***(APPROVED)***

Please correct

The previous years' values for Outfalls 020, 021, 028, and 029 are incorrectly listed in the table. Please revise.
Created on 4/8/2024 12:59 PM by **Audra Rossignol**

1 COMMENT

Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 2:11 PM)
Revised

Closed CSO Outfall Information

Outfall Number	Latitude (Decimal)	Longitude (Decimal)	Receiving Water Name	Receiving Water Class	Approximate Year Outfall Closed	Cause / Reason for Closure
008	43.04916667	76.17472222	Harbor Brook	B	0	Sealed
012	NONE PROVIDED	NONE PROVIDED	Harbor Brook	B	0	Sealed
013	43.04166667	76.17444444	Harbor Brook	B	2011	Sewer Separation
016	43.03777778	76.17861111	Harbor Brook	B	2011	Sewer Separation
022	43.05305556	76.15805556	Onondaga Creek	C	2013	Sewer Separation
024	43.05027778	76.15805556	Onondaga Creek	C	2001	Sewer Separation
025	NONE PROVIDED	NONE PROVIDED	Onondaga Creek	C	0	Sewer Separation
040	43.03638889	76.15527778	Onondaga Creek	C	2005	Sewer Separation
045	43.03027778	76.16055556	Onondag Creek	C	2013	Sewer Separation
046A/B	43.02833333	76.16277778	Onondaga Creek	C	2005	Sewer Separation
047	43.02750000	76.15916667	Onondaga Creek	C	2006	Sewer Separation
048	43.02694444	76.15888889	Onondaga Creek	C	2006	Sewer Separation
049	NONE PROVIDED	NONE PROVIDED	Onondaga Creek	C	0	Sewer Separation
050	43.02388889	76.15527778	Onondaga Creek	C	2008	Sewer Separation
051	43.02305556	46.15527778	Onondaga Creek	C	2009	Sewer Separation
053	43.02000000	76.15555556	Onondaga Creek	C	2003	Sewer Separation
054	43.01916667	76.15472222	Onondaga Creek	C	2003	Sewer Separation
055	NONE PROVIDED	NONE PROVIDED	Onondaga Creek	C	0	Sewer Separation
056	NONE PROVIDED	NONE PROVIDED	Onondaga Creek	C	0	Sewer Separation
057	43.05305556	76.15805556	Onondaga Creek	C	1999	Sewer Separation
058	43.05111111	76.15833333	Onondaga Creek	C	0	Sewer Separation
059	43.05194444	76.15888889	Onondaga Creek	C	1999	Sewer Separation
061	43.02194444	76.155	Onondaga Creek	C	2016	Sewer Separation
062	NONE PROVIDED	NONE PROVIDED	Onondaga Creek	C	0	Other: Removed
065	43.038889	76.160278	Onondaga Creek	C	1999	Sealed

CSO Outfall Explanation
0 entered for baseline data in Table 1 as it is unknown. 0 entered for closure date in Table 2 if it is unknown. CSO 060M refers to permitted CSO 060/077.

The County's SWMM estimates 27 overflow events annually (updated 12/31/22). The County has 42 overflows (11-operational and 31-abated). The highest number of overflows was metered at CSO 066 with 57 overflow events in 2023.

Part III - Collection System Information

Baseline Information

If Baseline information is unknown, please use a best estimate, then characterize/describe in the narrative box below.

Baseline - Percentage (%) of combined sewers in the collection system owned by the permittee
0

Baseline - Approximate length (mi) of combined sewers owned by the permittee
0

Baseline - Number of CSO Outfalls owned by the permittee
72

Baseline - Number of CSO Events
0

Baseline - Annual CSO Volume discharged (MG)
982

CORRECTION REQUEST *(APPROVED)*
Please confirm

Please confirm where this value was originally reported (LTCP, SWMM model, etc.) as it is noted in the CSO Outfall Explanation above that baseline values are unknown. If this information is known, is the baseline volume from each outfall known or just a total baseline volume discharged?
Created on 4/8/2024 1:10 PM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 9:02 AM)
The baseline volume reported is from the Onondaga County, NY ACJ 4th Stipulation 2010 Annual Report Appendix A: SWMM Model Documentation Report (March 2011, Revised August 2011) Table 22. The baseline volume is the total baseline volume discharged. The baseline volume for each outfall is unknown.

Baseline - Population Served by the CSS
145,170

Baseline - Number of Satellite System Connections
0

Post-LTCP Implementation Information

If an LTCP has not yet been developed, or wasn't required, please input the current year information for each field.

Future - Percentage (%) of combined sewers in the collection system owned by the permittee
30.7

Future - Approximate length (mi) of combined sewers owned by the permittee
52.46

Future - Number of CSO Outfalls owned by the permittee
42

Future - Number of CSO Events
27

Future - Annual CSO Volume Discharged (MG)
108

Future - Population Served by the CSS
148,620

Future - Number of Satellite System Connections
3

Use the space below to provide any further relevant information on the collection system & to indicate if baseline information is unknown. 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.
Baseline refers to conditions prior to any abatement measures completed under the 1st stipulation of the ACJ (1998). If baseline conditions are unknown, entered 0. The County is currently governed by the ICMP and as such current values are being used for the Post-LTCP numbers.

The County has (3) publicly-owned systems that convey flow to combined system (Dewitt (T), City of Syracuse POSS, Onondaga(T)). The County has (6) publicly-owned sewer systems that convey flow to Metro but are not connected into the combined sewer system (Camillus Consolidated, Clay(T) Syracuse Metro WWTP Service area, Town of Salina-Salina POSS to Syracuse Metro, South Geddes and Part of North Geddes Sewer District, V of Solvay, and Camillus(V) POSS).

Part IV - CSO Control Implementation Information

Reporting Year Information

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.
Three (3) green infrastructure projects were completed in 2023.

The County also completed the CSO 052 Regulator Modification Project to reduce the frequency of CSO discharges and improve system hydraulics. Construction is also nearly complete on the Butternut Street Green Corridor Project with restoration work anticipated to be finished this spring.

Several I/I offset projects were completed within the combined sewershed to remove extraneous flows from the system.

Upcoming Year Information

Summarize significant LTCP and PCCM projects planned and milestones due for the upcoming year.
The County's PCCM plan includes flow monitoring on Harbor Brook CSOs in 2024-2025. The flow monitoring efforts will be used to calibrate the SWMM model.

Other projects anticipated to be constructed in 2024 include the CSO 066 Regulator Modification, CSO 067 Demolition, Lodi Street Green Street (020), Water Street, Fayette and Forman Ave Sewer Separations (027).

Part V - CSO Best Management Practices (BMPs)

Which CSO BMPs does your SPDES permit require?
1- CSO Maintenance / Inspection
2- Maximize Use of the Collection System for Storage
5- Wet Weather Operating Plan (WWOP)
3- Industrial Pretreatment
4- Maximize Flow to POTW
6- Prohibition of Dry Weather Overflows
7- Control of Floatables and Settleable Solids
9- Combined Sewer / Extension
11- Septage and Hauled Waste
13- Public Notification
14- Characterization and Monitoring
12- Control of Runoff
10- Connection Prohibitions
8- Combined Sewer System Replacement

BMP No. 1 CSO Maintenance Inspection

6 NYCRR 750-2.8(a)(2)
(EPA NMC No. 1: Proper Operation and Regular Maintenance)

Is there a written program for the maintenance and inspection of the CSS and CSOs?
Yes

What is the minimum frequency of dry-weather CSO inspections?
Weekly

Are inspections of CSOs/regulators conducted during or following wet weather events?
Yes

Do the inspection reports indicate visual inspection observations, observed or presumed flows, weather conditions, equipment condition, and any repair work recommended?
Yes

Are the inspection reports submitted to the DEC Regional Office?
Yes, with Monthly Operating Reports

Indicate which of the following additional components are included in the maintenance and inspection program:
Pump Stations
Sewer Manholes & Catch Basins
CSO Outfalls
CSO Controls (e.g. regulators, screening/storage/treatment facilities)
Sewer Pipes & Interceptors

Are there existing inter-municipal agreements which specify responsibilities for inspection, maintenance, and/or repair?
Yes

CORRECTION REQUEST *(APPROVED)*
Please confirm

The Department records indicate that the County has an IMA with each POSS, except with the City of Syracuse. Please clarify and confirm the number of IMAs. This should reflect all IMAs in the Metro service area.
Created on 4/8/2024 1:21 PM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 9:05 AM)

Onondaga County currently requires annual IMA contract renewals. The IMAs had not been fully executed in 2023 however, the IMAs had been honored regarding inspection, maintenance, and repairs. Onondaga County is working on executing contracts for multiple years to ensure IMA contracts do not expire and remain fully executed.

IMA Listing - Please indicate the community name and year of last IMA update.

Community Name	Year of most recent IMA Update
Town of Dewitt	2022
Town of Onondaga	2022
Town of Camillus	2022
Town of Clay	2022
Town of Salina	2022
Town of Geddes	2022
Village of Solvay	2022
Village of Camillus	2022

Is the collection system mapped using GIS?
Yes, portions of the system (only interceptors & sewer pipes)

Is the collection system monitored using a SCADA system or other flow monitoring system?
Yes, SCADA

In the past year, was progress made to install, upgrade, or expand monitoring with SCADA/Other system?
Yes

In the upcoming year, is installation, upgrade, or expansion of monitoring with SCADA/Other system planned?
Yes

Does the municipality have an asset management program that includes the collection system?
Yes, in place

Have any work efforts or problems in the past year resulted in changes in overflows? If yes, describe below in the narrative box.
Yes

CORRECTION REQUEST *(APPROVED)*
Please describe

Please describe in the narrative box below.
Created on 4/8/2024 1:23 PM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 9:07 AM)
Based on the County's SWMM model, the modifications completed at CSO 052 are anticipated to result in fewer overflows. Future Post Construction Compliance Monitoring is anticipated.

In the past year, was the inspection and maintenance program mostly:
Proactive (focusing on preventative maintenance to avoid problems)?

Use the space below to provide a narrative description of the following:

a) Lengths of sewer cleaned and inspected,
b) Number of manholes and catch basins cleaned and inspected,
c) Any repairs or replacements conducted in the CSS,

In 2023, 10,473 LF of combined sewers were cleaned and 10,871 LF were televised. The County sewer crews clean the siphons monthly. CSO manholes are inspected weekly. Outside of these inspections, 873 manholes were also inspected. In 2023, nine (9) manholes were repaired.

Use the space below to describe any large equipment purchases made in the reporting year or planned for the upcoming year (e.g. vacuum trucks, pumps, etc.) , as well as, any work efforts or problems in the past year that resulted in changes to the collection system maintenance and inspection program, and any 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).
A new CCTV camera and truck were purchased. Based on the SWMM model, the CSO 052 modification project anticipates a reduction in the number of overflows and improved hydaulics. Future post construction monitoring is anticipated.

CORRECTION REQUEST *(APPROVED)*
Pleas describe

Please describe any work efforts or problems in the past year resulted in changes in overflows.
Created on 4/8/2024 1:25 PM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 9:13 AM)
Revised to include CSO 052 project.

BMP No. 2 Maximize Use of the Collection System for Storage

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)

In the past year, was the collection system able to convey the required minimum flows to the treatment plant during ALL wet-weather events?
Yes

Has the hydraulic capacity of the collection system been evaluated?
Yes

When was the hydraulic capacity last evaluated?
2022

Have regulators and weirs ever been adjusted/modified to maximize storage?
Yes

In the past year, or the upcoming year, indicate if any of the following items have been changed or if changes are planned to improve use of the collection system for storage? If so, describe below in the narrative box.
Regulator or Weir Adjustment
Sewer Cleaning and Sediment Removal
FOG Program

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.).

The modifications to the regulator structure at CSO 052 were completed in 2024 to maximize storage in the collection system and reduce CSOs.

On-going sewer cleaning and siphon cleaning reduces sediment build-up and maintenance of the collection system capacity.

BMP No. 3 Industrial Pretreatment

6 NYCRR 750-2.7(f) and 2.9(a)(4)
(EPA NMC No. 3 & 7: Review and Modification of Pretreatment Requirements & Pollution Prevention Programs to Reduce Contaminants in CSOs)

Is there an approved pretreatment or mini-pretreatment program or acceptance of flow from non-domestic sources?
Yes, IPP or Mini-IPP

Is there an inventory of industrial or non-domestic dischargers?
Yes

Has the impact on CSOs from non-domestic users that discharge toxic pollutants been evaluated, and steps taken to minimize such impacts?
Yes

Does the pretreatment program consider CSOs in the calculation of local limits?
No

Are there any restrictions on industrial user discharges to the collection system during wet-weather events?
Yes

Are there any industrial discharges that could reach CSO outfalls?
Yes

Do industrial users upstream of CSOs discharge any bioaccumulative chemicals of concern (BCCs)?
No

Do any industrial users have a holding tank or equalization tank to store wastewater prior to discharge to the CSS?
Yes

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 in the narrative box.
No

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.

Syracuse University Chilled Water Plant holds all incoming water softener regeneration process during wet weather events.
SIUs are:
Anoplate Corporation, Aramark, Bitzer Scroll, Carr Street Station, Carrier Corporation, Century Linen and Uniform, Cooper Crouse-Hinds, Cruicible Industries, Eagle Metalcraft, Feldmeier Equipment, G.C. Hanford, Honeywell Int. WB 1-8 pH Adj. Facility, Honeywell International (Overflow), Honeywell Willis-Semet GWTP, Inficon, LOTTE Biologics, NexGen Power System, S.U. Chilled Water, S.U. Steam Station, Sandy's Bumper Mart, Solvents & Petroleum Service, Steri-Pharma, Syracuse Hancock Airport,Teamwork Coatings, Terrells Potato Chip Co, Ultra Dairy, Unifirst Corporation, Upstate Farms Dairy, and WestRock-Solvay

BMP No. 4 Maximize Flow to POTW

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)

What is the permit required minimum flow during wet weather events through the headworks (in MGD)?
168.40

What is the permit required minimum flow during wet weather events through primary treatment (in MGD)?
168.40

What is the permit required minimum flow during wet weather events through secondary treatment (in MGD)?
126.30

What is the permit required minimum flow during wet weather events through disinfection (in MGD)?
168.40

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?
No

In the past year, was the secondary treatment works able to pass the flows specified in the permit for all wet weather flows?
No

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?
No

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? If yes, describe below in the narrative box.
Yes

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? If yes, list below in the narrative box
Yes

In the past year, have any new problem areas been identified that restrict flow to the plant? If yes, list the locations below in the narrative box.
No

Use the space below to provide a narrative description of:

a) any physical modifications to the collection system which are completed or anticipated and will allow for more flow to reach the WWTP,
b) any areas of the collection system which need additional study to evaluate capacity or inflow issues,
c) any known problem areas that restrict flow to the WWTP, and
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).

The CSO 052 Regulator Modification Project was completed in 2023.

In 2023 the Richmond St, Sackett St, and Taylor St pump stations were evaluated and the 95% Basis of Design report has been completed. Construction is anticipated in 2024.

In 2024 the County will evaluate the Kirkpatrick Pump Station for rehabilitation.

In 2023, Metro was not able to pass 168.4 MGD through the Headworks during one wet weather event due to a power outage. Five secondary bypasses occurred at flows below 126.3 MGD due to tanks OOS.

BMP No. 5 Wet Weather Operating Plan

6 NYCRR 750-2.8(a)
(EPA NMC: None)

Does the plan identify the maximum flows through preliminary, primary, secondary treatment, tertiary, and disinfection units?
Yes

In the past year, did treatment of wet weather flows cause any effluent violations or destabilize treatment upon return to normal service? If yes, describe below in the narrative box.
Yes

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?
No, no changes

In the upcoming year, are changes to the WWOP expected? If so, describe below in the narrative box.
No

When was the WWOP last updated?
2019

When was the WWOP last submitted and approved by NYSDEC?
2019

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.

During 2023, there were four permit violations for secondary bypasses through Outfall 002 and six permit violations for tertiary bypasses through Outfall 01A. These violations included F. Coli and Chlorine Residual exceedances and invalid loading calculations due to a SCADA outage where flow was not able to be recorded. Details of these violations are included in the RNC attachments to the DMRs. At no time in 2023 was treatment destabilized due to wet weather conditions.

BMP No. 6 Prohibition of Dry Weather Overflows

6 NYCRR 750-2.7 and 2.8(b)(2)
(EPA NMC No. 5: Elimination of CSOs During Dry Weather)

In the past year, were there any dry weather overflows?
Yes

Were all dry weather overflows reported via NY-Alert, in accordance with 6 NYCRR 750-2.7?
Yes

Did dry weather overflows lead to improvement of procedures or equipment?
Yes

Has the likelihood of future dry weather overflows been eliminated? If not, describe why below in the narrative box.
No

Use the space below to provide a narrative description of the both the causes of any dry weather events that occurred in the reporting year and resulting changes or improvements 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.).

On 1/17/23-1/18/23 a temporary loss of power at the Habor Brook PS resulted in a SSO.
The County has been working on upgrading SCADA and alarms.

On 3/21-3/23/23 corrosion on the 42-inch Ley Creek force main caused an SSO. The County has been evaluating the force main and a rehabilitation project is in process.

On 12/18/23 a county owned sewer was blocked causing a manhole to surcharge at 4994 Velasko Road. A contractor attempted to install a new pipe and backfilled hole creating a blockage.

BMP No. 7 Control of Floatables and Settleable Solids

6 NYCRR 750-2.8(a)(4)
(EPA NMC No. 6: Control of Solid and Floatable Materials in CSOs)

In the past year, did any outfalls discharge floating solids, oil and grease, or solids of sewage origin?
No

CORRECTION REQUEST *(APPROVED)*
FOG

It should be noted that most CSO outfalls are located in downtown Syracuse which may lead to an increase in the discharge of floatables, oil and grease. Please confirm in the narrative if all CSO outfalls are inspected for floatables, oil and grease after discharging or if only floatable control facilities are inspected.
Created on 5/1/2024 1:47 PM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/18/2024 9:16 AM)
Onondaga County personnel perform weekly inspections of all of the CSO outfalls. Part of the weekly inspection includes inspections of the regulating manholes in the large diameter trunk sewers owned by Onondaga County. The weekly inspections of the outfalls are required under the SPDES permit and aid in monitoring for capacity and monitoring for oil and grease. The City of Syracuse owns and operates the remaining smaller diameter sewer collection system.

Indicate which of the following engineering controls or control measures, if any, have been implemented or will be implemented in the upcoming year?
Booming & Skimming of Open Waters
Screens
In-line Netting
Source controls (street cleaning, public education, household hazardous waste collection, solid waste collection, recycling, and/or composting of lawn/leaf/roadkill deer)
Catch basin hoods

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.

Floatable Control Facilities are inspected weekly and after an event. A Skimmer Boat is used to remove floatables with the Syracuse Inner Harbor and near the outlet of Onondaga Creek. Trash pickup is also included in the County's green infrastructure maintenance program.

BMP No. 8 Combined Sewer System Replacement

6 NYCRR 750-2.10(i)
(EPA NMC: None)

In the past year, were any combined sewers designed or constructed that were not approved by NYSDEC?
No

Are there any plans or current projects to separate combined sewers into sanitary & storm sewers?
Yes

Is there an approved engineering plan for the project(s)?
No

Were any cross-connections eliminated in the past year or planned for the upcoming year?
No

In the past year, how many miles of combined sewer were separated?
0.00

In the upcoming year, how many miles of combined sewer are scheduled to be separated?
0.40

Use the space below to provide a narrative description of how this BMP was implemented during the reporting year.

Sewer separation projects along Water Street, Fayette Street, and Forman Ave are in design and are anticipated to begin construction in 2024. The designs have been sent to NYSDEC for review and approval. The sewer separations will be tied back into the combined system until NYSDOT constructs the new I-81 storm sewer. At that point, the storm sewers would be connected and officially separated from the combined system.

BMP No. 9 Combined Sewer / Extension

6 NYCRR 750-2.10(i)
(EPA NMC: None)

In the past year, were any combined sewers extended?
No

Is any development planned upstream of a combined sewer in the near future?
No

If a plan contained a flow credit requiring removal of I/I, what was the requirement or ratio?
1:1

Use the space below to provide a narrative description of how this BMP was implemented during the reporting year.

The combined sewer system has not been extended. Upstream of the CSS within the Town of Onondaga, there are several new developments proposed that will increase the amount of flow sent to the CSS. The County requires a 1:1 offset for all new developments in this area.

BMP No. 10 Connection Prohibitions

6 NYCRR750-2.9(a)(5)
(EPA NMC: None)

Are new connections prohibited by NYSDEC?
No

In the upcoming year, is any work planned to either increase capacity or reduce hydraulic loading to the WWTP? If so, describe below in the narrative box.
No

BMP No. 11 Septage and Hauled Waste

6 NYCRR750-2.7(f) and 2.8(a)(1)
(EPA NMC: None)

Does the POTW accept septage or hauled waste?
Yes

In the past year, were there any discharges or releases of septage or hauled waste INTO the collection system upstream of a CSO?
No

Are there restrictions on when the POTW accepts hauled waste or septage?
Yes

Is there a dedicated location to discharge septage at the WWTP?
Yes

Does the facility have authorization from NYSDEC to accept hauled waste or septage at a location other than the WWTP?
No

Have there been, or will there be, any changes to the POTW's policy on septage and hauled waste?
Yes

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.

Wastehaulers are permitted by the Department to deliver wastestreams on their 364 permit with NYS. Haulers complete an invoice describing the waste delivered with other pertinent information. All waste is discharged at an off-load area at the head of the Metro WWTP. Hauled waste deliveries are suspended during front-end bypass events. The County requires analytical data for miscellaneous non-industrial wastestreams which has decreased the number of haulers disposing at Metro.

BMP No. 12 Control of Runoff

6 NYCRR750- 2.1(e)
(EPA NMC: None)

Is sediment in runoff from construction zones entering catch basins in the combined sewer system?
No

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?
Yes

Is there adequate communication between the local municipal department that enforces local stormwater codes and ordinances and the collection system staff regarding stormwater runoff?
Yes

Do the municipalities within the combined sewer system have adequate storm water pollution prevention programs to reduce pollutants in stormwater?
Yes

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 in the narrative box.
No

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.

Implementation of planned changes to BMPs are consistent with the Order on Consent Case number R7-202100304-6.

Onondaga County continues to evaluate opportunities for increasing capture of stormwater runoff in all CSO areas, implementing new projects and practices on a regular basis, with a focus on both volume reduction and pollutant removal.

CORRECTION REQUEST *(APPROVED)*

Please clarify

Please provide a narrative of how changes are being made to the control of runoff consistent with the order during the reporting year and for the upcoming year.
Created on 4/8/2024 2:08 PM by **Audra Rossignol**

1 COMMENT
Kelly O'Brien (kellyobrien@ongov.net) (6/21/2024 1:53 PM)
Revised

BMP No. 13 Public Notification

6 NYCRR 750-1.12
(EPA NMC No. 8: Public Notification)

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?
Yes

Are all CSO events in accordance with the SPDES permit reported via NY-Alert?
Yes

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.

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?
Yes

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?
No

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?
Yes

For all CSO communities within the Great Lakes Basin, a written PNP is required. Is your community within the Great Lakes Basin?
Yes

For communities with a PNP, when was the PNP last updated?
2023

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.

CSO outfall signs are publicly posted, routinely checked, and replaced as needed. Several CSOs discharge into the covered portion of Harbor Brook and the discharges are below grade. There is no signage at CSO #s 003, 005, 006, 006A, 007, 008, 009, 010, 011, and 013 for this reason.

BMP No. 14 Characterization and Monitoring

(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)

Has the combined sewer system been modeled for use in determining or estimating the frequency of overflows and identifying CSO impacts?
Yes

Was baseline sampling conducted as part of LTCP development?
Yes

Was any Post Construction Compliance Monitoring (PCCM) sampling conducted in the reporting year or planned for the upcoming year?
Yes

In what years does the SPDES permit, Order on Consent, or other enforcement mechanism require PCCM sampling to be conducted?
annual

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).

CSOs are metered as required by the Metro SPDES permit. All remaining CSOs are modeled using SWMM.

The CSO Interim Corrective Measures Plan includes an annual PCCM sampling plan. The County continues to monitor tributary sampling locations upstream and downstream of CSOs on Onondaga Creek and Harbor Brook. Flow metering will be conducted in 2024 for the CSOs on Harbor Brook to support calibration of SWMM.

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the certification form by clicking the link below. Complete, sign, scan, and upload the form.
Owner/Operator Certification Form (PDF)

Upload Owner/Operator Certification Form
Owner_Operator Certification_032524.pdf - 03/25/2024 01:16 PM
Comment
NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
3/25/2024 1:16 PM	Owner_Operator Certification_032524.pdf	Attachment	Kelly O'Brien

Status History

	User	Processing Status
6/14/2024 8:20:56 AM	Kelly O'Brien	Draft
7/2/2024 11:47:19 AM	Kelly O'Brien	Deemed Complete
7/2/2024 11:47:19 AM	Kelly O'Brien	Submitted
7/23/2024 3:09:28 PM	Audra Rossignol	In Review
7/23/2024 3:15:14 PM	Audra Rossignol	Deemed Complete

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Kelly O'Brien	7/2/2024 11:47:19 AM

Revisions

Revision	Revision Date	Revision By
Revision 1	2/26/2024 12:27 PM	Kelly O'Brien
Revision 2	6/14/2024 8:20 AM	Kelly O'Brien

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water
625 Broadway, Albany, New York 12233-3500
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www.dec.ny.gov

NYSDEC State Pollution Discharge Elimination System (SPDES) Combined Sewer Overflow Best Management Practices Annual Report

OWNER/OPERATOR CERTIFICATION

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 gathered and evaluated 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.

SHANNON HARTY		3/25/24
Name (please print or type)	Signature	Date

Appendix A1

Service Area Summary Report "City of Syracuse" (2023)

Service Area Summary Report

For overflows between: 1/1/23 *And* 12/31/23

For service area: *City of Syracuse*

Overflow ID	Type	Service Area / Municipality	Facility	Date Began	Date Ended	Duration (hours)	Volume Gallons	Receiving Water	Cause	POTW
622	SSO	City of Syracuse	884 State Fair Blvd (MH-36319)	01/17/2023	01/18/2023	2.00	1,200	None	Power from the Metro substation (Line 28) was disrupted due to a rodent resulting in a temporary loss of power from that feed. The loss of power to the Harbor Brook PS resulted in sewage backing up in the Harbor Brook TS.	Metropolitan Syracuse
623	SSO	City of Syracuse	Ley Creek Force Main	03/21/2023	03/23/2023	40.00	7,500	Onondaga Creek	Corrosion along a OCDWEP owned section of 42 inch steel pipe (Ley Creek Force Main) caused a small dime-sized hole in the bottom of the pipe.	Metropolitan Syracuse
626	SSO	City of Syracuse	884 State Fair Blvd (MH - 36319)	08/07/2023	08/09/2023	1.00	1,000,000	Onondaga Creek / Harbor Brook		Metropolitan Syracuse

Appendix B1

CSO Facility Performance Summary (2023)

CSO Facility Performance Summary (2023)

CSO Facility	Quarter	Estimated CSO Volume Retained (gallons)	Estimated Treated CSO Volume Discharged (gallons)	Estimated Untreated CSO Volume Discharged (gallons)
Clinton Storage Facility (CSF)-CSO 033A	First	8,947,398	0	0
	Second	25,098,114	0	4,560,000 [1]
	Third	32,304,316	0	8,640,000
	Fourth	8,767,440	0	720,000
Total (CSF)		75,117,268	0	13,920,000
Erie Boulevard Storage System (EBSS)- CSO 080	First	10,500,000	0	0
	Second	16,600,000	0	4343764 [1]
	Third	25,200,000	0	2,529,606
	Fourth	6,600,000	0	1,444,638
Total (EBSS)		58,900,000	0	8,318,008
Midland RTF-Main Outfall M01 and Emergency Bypass Outfall M02	First	13,626,400	518,000 [2]	0
	Second	24,166,400	27,676,000 [1]	0
	Third	28,409,200	7,844,000	998,000 [3]
	Fourth	9,766,000	10,804,000 [2]	0
Total (Midland RTF)		75,968,000	46,324,000	1,516,000
Hiawatha Regional Treatment Facility (CSO 074)	First	0	0	0
	Second	500,000	0 [1]	0 [1]
	Third	850,199	0	0
	Fourth	0	0	0
Total (Hiawatha RTF)		1,350,199	0	0
CSO 018 Pilot Constructed Wetlands Treatment Facility Main Outfall 018	First	300,000	10,000	0
	Second	234,000	3,390,000	0
	Third	5,210,000	1,580,000	0
	Fourth	291,000	1,730,000 [4]	0
Total (CSO 18 PCWTF)		6,035,000	6,710,000	0
Lower Harbor Brook Storage Facility (LHBSF)-CSO 04A	First	6,895,359	0	0
	Second	13,097,489	0	0 [1]
	Third	15,087,743	0	286,800
	Fourth	5,392,704	0	0
Total (LHBSF)		40,473,295	0	286,800
TOTAL		257,843,762	53,552,000	23,522,808

[1] County SCADA system was down from 6/23-6/28/24; during wet weather events discharge volume cannot be determined

[2] Outside disinfection season; chemical treatment was not required under SPDES permit.

[3] PLC M73 offline; PLC M73 controls disinfection system; disinfection system did not operate; discharge chemically untreated

[4] Effluent discharge is greater than incoming influent due to backflow from Harbor Brook

Appendix C1

Floatables Control Report (2023)

ONONDAGA COUNTY, DEPARTMENT OF WATER ENVIRONMENT PROTECTION

2023 FLOATABLE CONTROL SUMMARY

This report summarizes the efforts to address floatable material in the areas impacted by the combined sewer overflow (CSO) system within the Onondaga County Consolidated Sanitary District. Onondaga County currently operates five (5) floatable control facilities (FCF). These include the Burnet FCF, Butternut FCF, and Maltbie FCF net bag facilities tributary to Onondaga Creek, the Harbor Brook FCF net bag facility within Harbor Brook and the Teall FCF combing screen facility tributary to Teall Brook.

Onondaga County personnel, at a minimum, perform weekly inspections of the floatable control facilities (FCF) regardless of the weather that has occurred. After each wet-weather event, County personnel inspect each floatable control facility to evaluate system performance, identify problems, and clean and schedule net bag replacement, as warranted. When net bags reach approximately 30%-40% of capacity (or as otherwise needed), replacement is scheduled. Table 1 is a Floatable Control Facility Debris Disposal Summary and disposal amounts are combined for all the facilities. Table 2 contains information about the individual FCFs and the associated debris.

Table 1: 2023 Floatable Control Facility Debris Disposal Summary

Date of Disposal	Debris (tons)
1/9/23	1.55
2/14/23	1.48
4/21/23	2.73
5/19/23	1.04
6/21/23	2.17
8/1/23	2.84
8/31/23	1.62
12/16/23	3.03
12/26/23	1.25
Total	17.71

Table 2: 2018-2023 Floatable Control Facility Operation Comparison

Year	Burnet FCF		Butternut FCF		Maltbie FCF		Harbor Brook FCF	
	Net Bags Replaced (#)	Debris (tons)	Net Bags Replaced (#)	Debris (tons)	Net Bags Replaced (#)	Debris (tons)	Net Bags Replaced (#)	Debris (tons)
2018	84	8.51	120	12.65	30	3.19	24	2.60
2019	114	10.6	160	14.93	39	3.73	42	4.17
2020	72	7.23	96	9.49	33	3.03	27	2.97
2021	66	6.41	88	8.55	33	3.20	30	2.94
2022	54	5.46	72	7.28	24	2.46	24	2.37
2023	54	5.74	72	7.65	21	2.20	18	2.12

SKIMMER BOAT OPERATION

The County has contracted services to operate a skimmer boat providing floatables debris collection and disposal in the Inner Harbor of Syracuse, along the mouth of Onondaga Creek, as well as the near-shore portions of Onondaga Lake within 1,000 feet of the mouth of Onondaga Creek, with an option for the skimmer boat service to Onondaga Lake shorelines east and west. In 2023, a total of 11.44 tons of debris was collected by the skimmer boat operation. The quantity of debris collected after heavy prolonged rain events is greater than dry weather periods.

The debris collected typically consisted of the following elements: leaves, grass and brush, tree limbs and logs, plastic styrene food packaging, plastic containers, bottles, aluminum cans, playground equipment (balls, sneakers, etc.), pharmaceutical bottles, blister packs and syringes, sanitary items, construction barricades, pallets and lumber, and dead fish.

Table 3: 2023 Summary of Skimmer Boat Operation

Month	Operation Days
April	10
May	10
June	9
July	9
August	9
September	14
October	4
November	4
Total	**69**

Table 4: 2023 Summary of Skimmer Boat Debris Disposal

Date of Disposal	Debris (tons)
4/26/23	1.07
5/11/23	1.78
6/23/23	1.29
7/21/23	1.20
8/11/23	1.47
9/18/23	2.13
11/14/23	2.50
Total	**11.44**

GREEN INFRASTRUCTURE MAINTENANCE

In addition, the County conducts green infrastructure maintenance which includes several scheduled and corrective work procedures related to the control of floatable debris. These include general trash clean up, in 2023 the County collected 360 bags (55-gallon bags) approximately 98.0 Cubic Yards of trash from our green infrastructure projects.

Appendix B
2023 Water Quality Monitoring Data
(Electronic Only – File on Flash Drive)