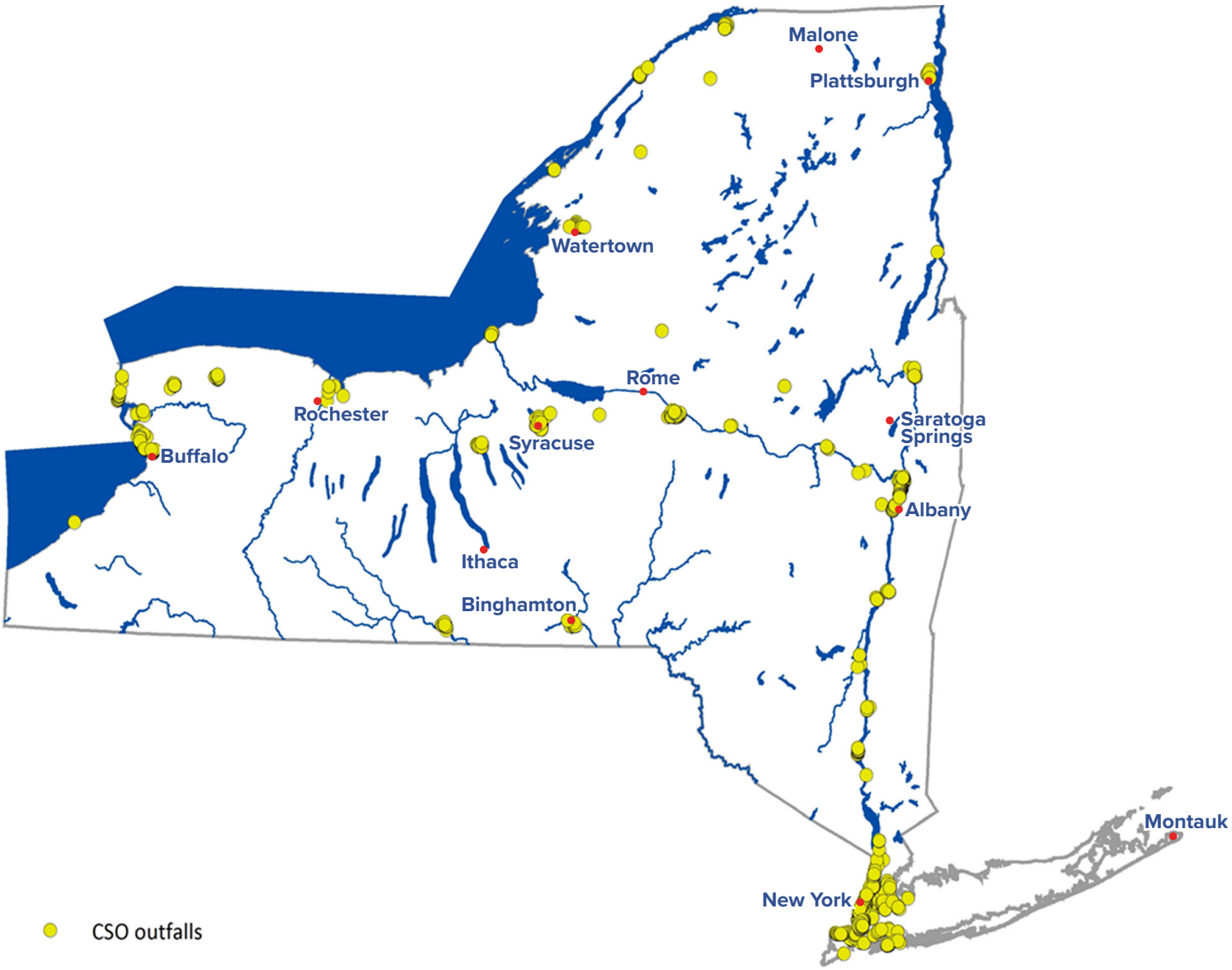
Department of
Environmental
Conservation

Combined Sewer Overflows

2021 ANNUAL REPORT

Kathy Hochul, Governor | Basil Seggos, Commissioner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Ithaca
Binghamton
Montauk
New York
CSO outfalls

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This report summarizes activities from the 2021 calendar year and is intended as a basic program-wide annual update, compiled following review of the Combined Sewer Overflow (CSO) Best Management Practice (BMP) Annual Report Forms submitted by CSO permittees. DEC welcomes your feedback regarding this report. Please provide comments or suggestions to CSOMail@dec.ny.gov under subject of Statewide CSO Annual Report Comments.

What Is a Combined Sewer Overflow?

Combined sewer systems (CSSs) collect and convey domestic sewage, industrial wastewater, and stormwater runoff to a publicly owned treatment works (POTW). CSSs are designed to transport all their wastewater to a POTW where it is treated and then discharged to a receiving waterbody. But during heavy storm or snowmelt events, the volume of stormwater mixed with wastewater in a CSS can exceed the capacity of the sewer system and/or treatment plant. Therefore, during those events, CSSs may overflow to nearby waterbodies via permitted outfalls, which may contain stormwater and untreated sewage and industrial waste, toxic materials, and debris. These overflows are called combined sewer overflows (CSOs). Discharges from CSO outfalls are point sources which are regulated under the federal Clean Water Act and controlled by National Pollution Discharge Elimination System (NPDES) permits. These types of discharges are prohibited during dry weather.

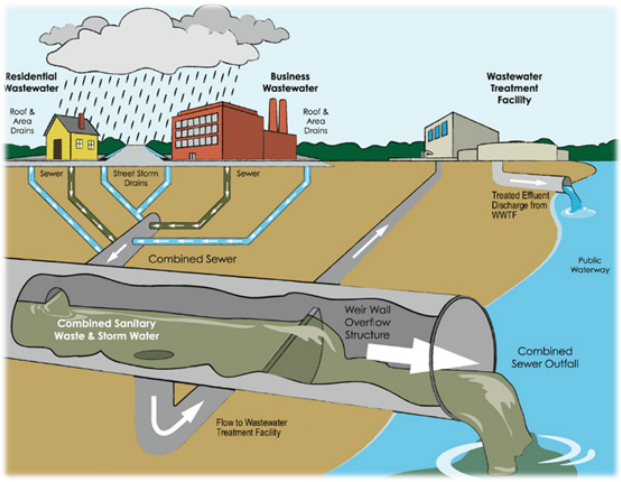

Figure 1 - Combined Sewer System

Challenges in Eliminating and Mitigating CSOs' Impact

Eliminating CSOs and reducing the frequency and volume of discharges may be difficult for a variety of reasons, both administrative and technical. The process of studying, planning, and eliminating CSOs is lengthy and could be very expensive.

A city or municipal authority typically owns the POTW and all the large system components, such as trunk lines and pump stations. Many of the sewer lines and smaller pump stations in the contributing satellite collection systems are owned by other municipalities. Although there may be few or no CSOs in the satellite systems, the flow from these systems contributes to discharges at CSOs that are owned by the city or municipal authority. Legally binding intermunicipal agreements (IMAs) between the POTW and the contributing satellite collection systems are usually necessary to facilitate the management of projects that reduce or eliminate CSOs. These IMAs often include allowable flow contributions, a fee structure, and the responsibilities for operation and maintenance of structures related to CSO control measures.

Making major technical or engineering changes to the collection system, outfalls, or treatment plant are also challenging. CSO control measures can include:

- Maximizing flow to the POTW by increasing pipe sizes and pumping capacities,
- Eliminating the physical CSO outfalls by proper sealing and abandonment,
- Increasing the size of the treatment plant to handle additional flow, or
- Completely separating the stormwater flows from the sewage by installing a separate storm sewer system.

Each of these options could be very costly, require substantial time and resources, and present unique technical or financial challenges.

Due to the time and effort required to eliminate CSOs, many CSO communities are required to develop a Long- Term Control Plan (LTCP) pursuant to the 1994 United States Environmental Protection Agency (EPA) CSO Control Policy. Workable solutions developed in an LTCP typically include a combination of options, such as upgrades to the treatment plant or pump stations; sewer separation; in-line storage systems, such as Swirl/Vortex concentrators or overflow retention facilities (ORFs);

reducing Infiltration and Inflow (I/I); and continuing the best management practices (BMPs) required in the facility's State Pollution Discharge Elimination System (SPDES) permit.

Measures of Success

As permittees continue to implement their approved LTCPs, they need to show improvements by developing and implementing a Post-Construction Compliance Monitoring (PCCM) Plan. Improvements can be through reductions in CSO volume discharge, pollutant discharge, or frequency of overflows. The EPA CSO Control Policy requires CSO permittees to report objective, measurable, and quantifiable "measures of success," which may include:

- End-of-pipe measures that show trends in the discharge of CSS flows to the receiving waterbody, such as reduction of pollutant loadings, the frequency of CSOs, and the duration of CSOs;
- Receiving-waterbody measures that show trends of the conditions in the waterbody to which the CSO occurs, such as trends in dissolved oxygen (DO) levels and sediment oxygen demand; and
- Ecological, human health, and use measures that show trends in conditions relating to the use of the waterbody; its effect on the health of the population that uses the waterbody; and the health of the organisms that reside in the waterbody, including beach closures, attainment of designated uses, habitat improvements, and fish consumption advisories.

To track progress of the LTCPs' implementation across the state, the New York State Department of Environmental Conservation (DEC) developed a CSO BMP Annual Report Form so that all CSO permittees can submit a uniform report that provides CSO LTCP implementation status. The CSO Report Form also provides the data needed to compile a statewide CSO LTCP Implementation Progress Report and to develop this annual report.

Overview of New York's CSO Program

CSSs are typically found in older cities, along large waterbodies that are navigable and support commercial traffic. Most of the CSO permittees in the United States are clustered in older industrial areas. As of 2015, the U.S. EPA[1] reported that 859 active NPDES permits for CSO discharges have been issued in 32 states, as well as the District of Columbia and Puerto Rico. Approximately 7% of these CSO permits are in New York State.

There are currently 43 communities in New York State that are permitted to own and operate a CSS with CSOs, many of which also own and operate a wastewater treatment plant (WWTP) or water pollution control plant (WPCP). Several other communities have eliminated or closed their CSO outfalls (pre- or post-LTCP), yet still have a CSS. In addition, five CSO permits have been issued to regional WWTPs, which do not own any traditional CSO outfalls within the tributary combined collection system. The metropolitan areas of New York City, Buffalo, Syracuse, and Albany own and operate 72% of the current 816 CSO outfalls in New York State, as shown in Figure 2. The New York City metropolitan area currently makes up about 49% of these outfalls. The "Albany Pool," which consists of the cities of Albany, Cohoes, Rensselaer, Troy, Watervliet, and the Village of Green Island, owns and operates 10% of the total CSO outfalls.

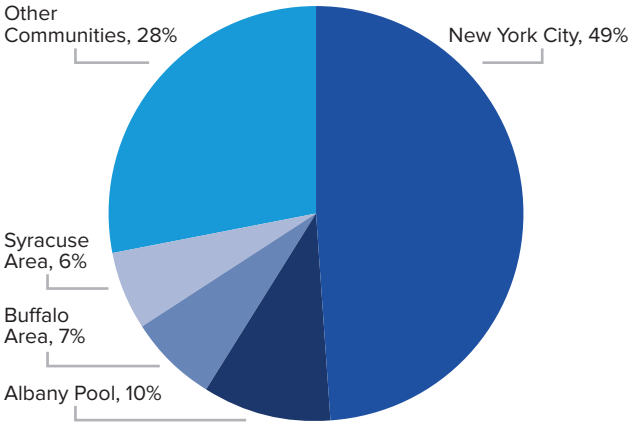

Figure 2 - CSO Outfalls — Allocation by Communities

DEC is authorized by the EPA to implement the requirements of the EPA CSO Control Policy[2] through the State's SPDES permitting process. DEC's CSO Abatement Strategy, as initially referenced in *Technical and Operational Guidance Series (TOGS) 1.6.3* and updated through subsequent agreements with EPA, includes 15 BMPs.[3] These BMPs, which are equivalent to the "Nine Minimum Control Measures" required under the EPA CSO Control Policy, include the following:

[1] Report to Congress – Combined Sewer Overflows to the Great Lakes Basin
[2] EPA CSO Control Policy: https://www.epa.gov/npdes/combined-sewer-overflows-csos
[3] NYS CSO BMPs: https://www.dec.ny.gov/chemical/48595.html

Table 1: DEC's CSO 15 Best Management Practices
1. CSO Maintenance/Inspection
2. Maximum Use of Collection System for Storage
3. Industrial Pretreatment
4. Maximize Flow to POTW
5. Wet Weather Operating Plan (WWOP)
6. Prohibition of Dry Weather Overflow
7. Control of Floatable and Settleable Solids
8. Combined Sewer System Replacement
9. Combined Sewer/Extension
10. Sewage Backups
11. Septage and Hauled Waste
12. Control of Run-off
13. Public Notification
14. Characterization and Monitoring
15. Annual Report

DEC required the implementation of the 15 BMPs as well as the development of the LTCPs[4] for all CSO permittees, with the exceptions of permittees listed in Tables 2 and 3 of this report. The BMPs are included in all SPDES permits. BMP 15 is the preparation of an annual report. In 2013, the DEC developed an annual report template to assist communities in the required reporting of their BMPs. This template also ensures that DEC receives information necessary to complete its annual reporting requirement to EPA. This annual report template continues to be revised for effective and efficient reporting of CSO program status, LTCP progress, and compliance with the CSO Control Policy.

CSO Abatement Strategy

In 1993, DEC had an inventory of over 1,300 CSO outfalls, which were listed in 75 CSO permits and located within 46 communities. One of the original 75 permits, the City of Salamanca, is located within the Seneca Indian Reservation; this NPDES permit and CSO program are now regulated by EPA. An additional facility was added in 2010, Target Hill WWTP, when DEC discovered the facility had a combined sewer system with three CSO outfalls. The SPDES permit was subsequently modified and CSO permit requirements added; the system has since been modified and only one CSO outfall remains.

As of the end of calendar year 2021, the total number of CSO outfalls is approximately 812, the number of CSO permits has decreased to 59, and the total number of LTCPs required was 47. The number of CSO outfalls is in constant flux, as LTCPs are implemented, and outfalls are either removed or added. The number of CSO permits has been reduced, as 16 of the original 75 CSO permits have completely separated their CSSs, have sealed off all the CSO outfalls, or never had CSO outfalls (See Table 2 in Section 3). These communities no longer have CSOs, therefore, CSO permit requirements were removed from their SPDES permits and no LTCPs were required. The number of required LTCPs is described in detail below.

CSO Outfalls Trend in NYS Since USEPA CSO Control Policy

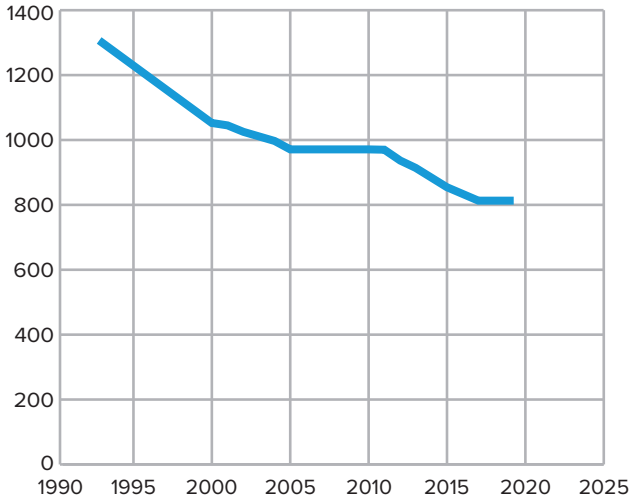

Figure 3 - CSO Outfalls Trend

This progress was mainly due to DEC's effort implementing the CSO abatement requirements in SPDES permits, as well as DEC's enforcement mechanisms. DEC believes the number of CSO SPDES permits and outfalls will continue to decrease as more approved LTCPs are implemented. All remaining CSO permits now contain the relevant CSO BMPs listed in DEC's *TOGS 1.6.3*.

Determining LTCPs Required

Over time, DEC has reduced the number of CSO permittees through verification of the system characteristics, implementation of the CSO BMPs, and implementation of the approved LTCPs. As stated previously, 47 LTCPs were required among all permittees. This was determined with the following considerations:

Twelve of the 75 CSO permittees did not need to develop an LTCP, since they separated their system or closed all CSO outfalls (See Table 2 in Section 3).

Five CSO permittees (Carthage/West Carthage, Potsdam, Saugerties, North Tonawanda, Boonville) did not have to submit a LTCP after the initial assessment of their CSS because their systems have less than 4 overflowevents annually or their systems are already capturing more than 85% of the annual average combined flow. In these

[4] US EPA Long Term Control Plan: http://www.dec.ny.gov/chemical/48595.html

situations, the remaining discharges are presumed to meet the water-quality requirements of the Clean Water Act (CWA); however, PCCM of the receiving waters was still required to demonstrate compliance with the applicable water quality standards (WQS).

Since the initial assessment was made, three of these communities (Carthage/West Carthage, Potsdam, Saugerties) have closed their CSO outfalls or separated their system and are no longer CSO permittees, while the other two CSO permittees (North Tonawanda, Boonville) continue to implement the CSO BMPs and monitor compliance with the CWA (See Table 4 in Section 5).

Five other CSO permits are for Regional WWTPs, with no associated CSO outfalls, but with SPDES permitted conditions, including any applicable CSO BMPs and a WWOP to maximize treatment of influent flows from the CSSs (See Table 3 in Section 4). These Regional WWTPs receive wastewater flows from one or more communities with CSSs and were not required to develop their own LTCP. Instead, these WWTPs were to partner with their tributary CSSs in developing and implementing tangible CSO reduction solutions.

Thirteen of the 53 remaining CSO permits are for the same permittee, New York City, covering their WWTPs with CSSs. Waterbody/Watershed Facility Plans, developed by New York City under a 2005 Order on Consent, identified the need to develop 12 LTCPs based on various receiving waterbodies to address CSOs associated with all 13 of their CSO permits.

In early 2021, NYC and DEC executed a NYC CSO Order on Consent modification that led to the redesignation of the Rockaway Wastewater Resource Recovery Facility (WRRF) collection system from a CSS to a Sanitary Sewer System (SSS). While the CSO Order modification initiated this redesignation, the 2022 SPDES Permit Renewal formally documented the removal and elimination of the previously identified CSO outfalls. Note that this redesignation does not change the number of LTCPs required but does reduce the number of CSO permits (to 59) and CSO outfalls (as stated previously).

The six Albany Pool communities partnered together (along with the three associated regional WWTPs) and in lieu of producing six LTCPs, produced a single holistic LTCP.

Therefore, the actual number of required LTCPs to be submitted and approved by DEC is 47. Forty-five of the 47 required LTCPs have been approved and are currently being implemented. DEC has been working with New York City to have their two remaining LTCPs approved as soon as possible (Citywide/Open Waters, submitted September 30, 2020; and Jamaica Bay, submitted July 2, 2018). Once a LTCP is approved, the implementation of the LTCP is memorialized in the appropriate CSO permit or an Order on Consent to ensure the compliance schedules to construct the additional CSO control measures are enforceable. The statuses of the remaining CSO LTCPs are summarized in Section 7 of this report.

Compliance Monitoring Strategy

The following are DEC strategies to ensure compliance with the EPA's CSO Control Policy:

The Clean Water Act, enacted in 1972, is the primary federal law governing water pollution control, including CSOs. In the late 1970s, federally funded construction grants for WWTPs peaked, and many POTWs were either constructed or upgraded to include secondary treatment.

The first step in CSO enforcement strategy is through the SPDES permit CSO BMPs. However, when all the measures in the BMPs are not sufficient to meet the WQS, permittees are required to develop an LTCP in accordance with the EPA's CSO Guidance for LTCPs (September 1995). Additionally, DEC may use other enforcement mechanisms to require compliance with the policy.

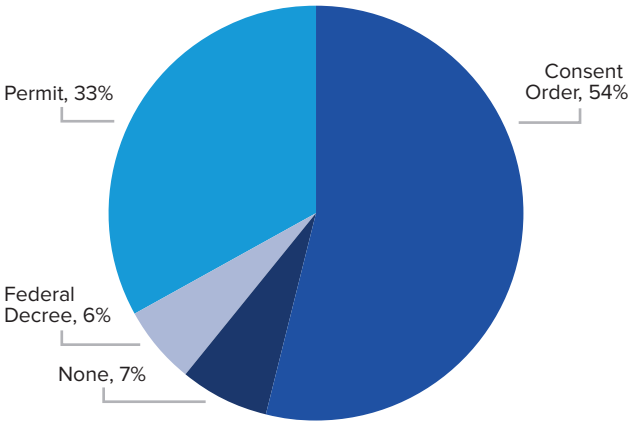

Figure 4 - Overall CSO Compliance Monitoring by Category

For the 2020 reporting year, DEC initiated additional efforts regarding the 2020 CSO BMP Annual Reports, seeking to improve this updated report. In addition to ensuring each BMP report was submitted complete and on time, DEC also thoroughly and expeditiously reviewed each submission and provided each permittee a formal comment and recommendation letter. These letters included questions related to engineering practices, maintenance, and inspections, and clarifications of the information provided. Common recommendations provided to permittees for the 2020 reporting year included a request to review/verify the number of CSO events reported, review and update older WWOP, and clarify minimum Annual Report requirements. For future years, DEC intends to continue to conduct additional quality assurance and control on BMP annual reporting.

Permit Requirements and Compliance Monitoring

DEC issues SPDES permits to communities and other legally responsible parties—such as water/sewer authorities—with CSO outfalls. The following requirements are included in SPDES permits or Orders on Consent to manage and reduce overflows:

1. All CSO outfall locations must be listed in the SPDES permit;
2. Relevant BMPs appropriate to the specific conditions of the CSS must be included in the SPDES permit;
3. Most CSO communities are required to develop a LTCP that is implemented through the SPDES permit or an Order on Consent. If the implementation is governed under a Consent Order, the compliance schedules are incorporated by reference into the SPDES permit; and
4. CSO permittees must continue the implementation of the applicable 15 CSO BMPs listed in their SPDES permits.

In addition, DEC uses the following tools to track compliance monitoring of CSO permittees and abatement activities:

1. DEC developed the Annual Report Form in 2013 to assist communities in reporting and to ensure that DEC receives information necessary to complete its annual reporting requirement to EPA.
2. DEC developed the CSO Inspection Form to assist staff in their annual compliance inspection. DEC staff use this form to assess compliance with CSO permit requirements and to get a complete picture of how the control facilities performed and are maintained.
3. The LTCP compliance schedules are tracked using the federal Integrated Compliance Information System (ICIS) data system, and any significant noncompliance of the approved LTCP is addressed through the Significant Non-Compliance Action Plan (SNAP) process.

CSO Mapping and Public Notifications

DEC has developed a CSO Google Map[5] showing the location of all CSOs. In 2019, DEC completed an update to all remaining CSO outfalls, including coordinates and receiving waters. In 2020, DEC completed incorporation of the updated map into the DEC public web-based environmental resource tool, DEC infoLocator[6]. DEC infoLocator includes several layers to keep the public informed about the CSO program and CSO abatement progress, and to help the public make decisions about boating, swimming, and recreating on waterbodies. The CSO layer will provide the public with directly related information for the affected receiving water(s) and classifications, the applicable SPDES permit, and a link to the most recent CSO BMP Annual Report submitted by the municipality.

Under the state's Sewage Pollution Right to Know Act of 2013 (SPRTK)[7], untreated and partially treated sewage discharges, which include CSOs, are required to be reported to DEC by POTWs and publicly owned sewer systems (POSSs) within two hours of discovery, and reported to the local health departments, the public, and adjoining municipalities within four hours of discovery. Partially treated discharges directly from a treatment plant that operates in accordance with a DEC-approved WWOP are exempt from reporting. It should be noted that many factors, including location, construction, system condition, tidal influence, etc., contribute to the difficulty in accurately monitoring the volume of discharge from CSO outfalls. Most CSO outfalls do not have real-time monitoring of discharge volume, and reported discharges are typically estimated or modeled. Section 7 provides more discussion on monitoring flow and discharge from CSO outfalls.

CSO communities, including those that discharge to the Great Lakes, are required to report overflow information using the NY-Alert system. The public can sign up to receive sewage spill notifications sent directly to their phones or emails by signing up for NY-Alert. In addition, recent sewage spill notifications are posted on the DEC website, including CSO reports. Information received from POTWs and POSSs is summarized on the Sewage Discharge Notifications[8] webpage. The information is available to the public and adjoining municipalities.

[5] Map of CSO Locations: http://www.dec.ny.gov/pubs/42978.html#cso
[6] DEC InfoLocator: https://www.dec.ny.gov/pubs/109457.html
[7] Sewage Pollution Right to Know Act: http://www.dec.ny.gov/chemical/90315.html
[8] Sewer Discharge Notifications Page: http://www.dec.ny.gov/chemical/101187.html

Reporting requirements under the SPRTK include:

a. The volume and treated state of the discharge,

b. The date and time of the discharge,

c. The expected duration of the discharge,

d. A brief description of the steps being taken to contain the discharge (except for wet weather CSO discharges),

e. The location of the discharge, with the maximum level of specificity possible, and

f. The reason for the discharge.

DEC prepares an annual report of the discharges reported under SPRTK. The annual discharge report includes the total number of discharges, the volume and duration of discharges, and the remedial responses, if any, that were taken. Since most CSO locations do not have monitoring, DEC has developed a reporting template that POTWs can use to direct the public to sewer system computer simulation models or other customized CSO notification tools. Due to lack of real-time flow monitoring at CSO outfalls, the volume of discharge from CSOs is often based on modeling or estimates based on knowledge of the CSO outfall and storm event.

On January 8, 2018, the EPA finalized the Public Notification Requirements for CSOs to the Great Lakes Basins ("the Rule"), which required municipalities with CSO discharges to the Great Lakes system to develop and implement a public notification plan (PNP). The PNP is required to outline how the CSO permittee will ensure the public receives adequate notification of CSO occurrences and CSO impacts, in addition to regulatory agencies. The Rule also requires the CSO permittee to place signs at CSO discharge points and potentially impacted public access areas; and to submit an annual notice summarizing all CSO discharges that occurred in the previous calendar year. At the time the Rule was finalized, there were 20 Great Lakes CSO Permittees in New York. However, three permittees (Potsdam (V), Clayton (V), and North Tonawanda (C)), were exempt from the development of a PNP. Potsdam (V) was already under construction that would seal the only CSO outfall, Clayton (V) had already closed its 3 CSO outfalls in 2015, and North Tonawanda (C) has not had a CSO event occur in 30-plus years.

The remaining Great Lakes CSO permittees are:

DEC Region	Permittee	SPDES #
6	Gouverneur (V) WWTF	NY0020117
6	Watertown (C) WPCP	NY0025984
6	Ogdensburg WWTP	NY0029831
6	Massena WWTP	NY0031194
6	Village of Boonville	NY0020494
7	Auburn (C) STP	NY0021903
7	Syracuse Metro WWTP	NY0027081
7	Oswego-West Side STP	NY0029106
7	Oswego-East Side STP	NY0029114
7	Canastota WPCF	NY0029807
8	Medina (V) WWTP	NY0021873
8	Monroe County (Frank E. Van Lare STP)	NY0028339
9	Niagara Falls WWTP	NY0026336
9	Lockport WWTP	NY0027057
9	Dunkirk WWTP	NY0027961
9	Bird Island WWTF (BSA)	NY0028410
9	North Tonawanda	NY0026280

DEC notified each Great Lakes CSO permittee in May 2018 and required submission of a PNP by August 2018, and implementation of the PNP and other Rule requirements by November 2018. As stated previously, DEC already requires reporting these CSO events to the NY-Alert system, which simultaneously informs the public and regulatory agencies. The signage and annual reporting requirements of the Rule have already been implemented by all CSO permittees statewide, in accordance with CSO BMP #13 and CSO BMP #15, both of which are requirements of the associated SPDES permits. Therefore, all Great Lakes CSO permittees in New York have complied with the requirements of the EPA's Public Notification Requirements for CSOs to the Great Lakes Basins rule.

Permittees That Have Separated Their CSS or Have Sealed Off or Never Had CSO Outfalls

Table 2: Permittees that have separated their CSS, have sealed off their CSO outfalls, or never had CSO outfalls		
Facility	**SPDES #**	**Notes**
Coxsackie (V)	NY0033545	The permittee entered a Consent Order with DEC requiring them to develop a work plan with a schedule to investigate and address I/I and determine whether the collection system is separate or combined by 8/21/2009. A sewer system investigation revealed that the Village of Coxsackie does not have a CSS. As a result, the three CSO outfalls were redesignated as Sanitary Sewer Overflow (SSO) outfalls. Subsequently, in a June 2013 revised Consent Order, DEC agreed to modify its permit to delete all references to CSOs and insert requirements pertaining to SSS. The modified permit was issued on 2/17/14 with SSO abatement requirements.
Erie County Sewer District #6	NY0022136	The system is now a separate sewer system; CSO outfalls have been sealed.
Holley (V)	NY0023256	There was only one CSO outfall associated with this permit. However, it was later discovered that this outfall was incorrectly designated a CSO outfall. The permit was modified to include SSO abatement requirements. Therefore, the Village of Holley is no longer a regulated CSO community.
Lewiston (T) (LMSIA)	NY0027766	There are no CSO outfalls associated with this facility because the collection systems have been separated. The Town of Lewiston has one Type 1 SSO, an emergency overflow at the WWTP influent lift station wet well, and one Type 2 SSO, an onsite ORF at the WWTP. No LTCP is required.
Lewiston Overflow Retention Facility	NY0024481	System is no longer a CSS. All flows are diverted to the WWTP or held at the ORF. Overflows from the ORF receive primary treatment. All CSO language has been removed from their SPDES permit.
Mechanicville (C)	NY0248941	The City of Mechanicville CSOs were eliminated. They have upgraded sewers and sewage pumping stations under a DEC Order on Consent and eliminated the CSOs. No LTCP was required in the permit.
Owasco (T)	NY0029297	All flows from Sewer District #1 and Sewer District #2 go to the Auburn STP for treatment. The Town of Owasco implemented a project to upgrade its sanitary sewer and high flow pumping station and install an equalization tank. The CSO outfalls were permanently capped and eliminated by 1/1/2003.
Owego (V)	NY0029262	All CSO outfalls have been cemented off and permanently closed.
Saratoga County	NY0029240	Saratoga County SD #1 indicated that there has never been a CSO outfall in their drainage area, so no further actions were taken.
Schenectady (C)	NY0020516	The permittee was originally required to submit an LTCP because it was believed they operated a CSS with two CSO outfalls. In reviewing an I/I report, DEC concluded that this is not a CSS. The “Alco Regulator” (CSO 002) is a SSO which discharges approximately 1 million gallons per year of dilute raw sewage to the Mohawk River. The other outfall believed to be a CSO outfall (CSO 006) was sealed on 5/9/2007. The City of Schenectady has entered a Consent Order with DEC to eliminate SSO discharges and no LTCP is required.
Tupper Lake (V)	NY0029939	The Village of Tupper Lake separated its sewer system as well as increased the system’s capacity through various projects since its LTCP was approved in 2007. They have also upgraded their pump stations (rebuilt manholes and increased pump capacity), which were the cause of all recent CSOs. Permit now includes SSO BMPs and I/I study requirements.
Wellsville WWTP	NY0020681	The system is now a separate sewer system; CSO outfalls have been sealed.

Table 2: Permittees that have separated their CSS, have sealed off their CSO outfalls, or never had CSO outfalls		
Facility	**SPDES #**	**Notes**
Carthage/West Carthage (V)	NY0025151	DEC confirmed that the Water St. Pump Station Bypass was permanently sealed sometime before 1995. The permit was modified to reflect this in 1998 when the outfall was removed from the permit. Since the villages of Carthage and West Carthage have no known overflows, CSO abatement is not required in this permit. The Village of West Carthage has 100% separate sewers, and the Village of Carthage has about 90% separate. Some I/I reduction work has been done over the years, and this, coupled with the significant reduction of flows to the WWTP following the closure of a major industry, has resulted in no hydraulic overloading of the facilities. As of 2019, the collection system remains 5% CSS and has no CSO outfalls.
Potsdam (V)	NY0020818	There was only one CSO outfall associated with this permit. Outfall 002 was used when plant flows exceeded 5.9 million gallons per day (MGD) into the treatment plant. This discharge combined with treated flows from Outfall 001 prior to discharge to the Raquette River. Because there had not been any observed overflows, the Village of Potsdam was not required to submit an LTCP. At the end of 2018, during an upgrade of the WWTP, the CSO diversion was blind-flanged and eliminated. The CSO outfall and CSO BMPs were subsequently removed from the SPDES permit; however, this collection system remains as 80% CSS.
Saugerties (V) (Dock St.)	NY0031208	At one time, Saugerties had three STPs, all Imhoff tanks (primary treatment only). When the main plant (on Dock St.) was upgraded in the 1970s, the other two (Ripley St., NY0033928, and East Bridge St., NY0033936) were replaced with pump stations, the two permits were deleted, and the treatment plants were converted to stormwater retention basins, with the outfalls retained in the permit for Dock St. as CSOs. DEC confirmed that they never discharged any CSOs, so they were deleted from the permit in 1994.
NYCDEP – Oakwood Beach WRRF	NY0026174	This facility is exempt from the NYC CSO program because it is not a CSS and thus has no CSO outfalls. Consistent with the other NYC WRRF permits, this facility requires several similar BMP conditions, including a WWOP.
NYCDEP – Rockaway WRRF	NY0026174	In early 2021, NYC and DEC executed a NYC CSO Order on Consent modification that led to the redesignation of the Rockaway collection system from a CSS to an SSS. Following an engineer's investigation, it was discovered that the previously identified CSO outfalls were Pump Station Emergency Bypasses, WRRF bypasses, or Municipal Separate Storm Sewer System (MS4) stormwater outfalls, or had been sufficiently closed or removed. While the CSO Order modification initiated this redesignation, it was formalized in the 2022 SPDES permit renewal with the elimination of the previously identified CSO outfalls. Consistent with the other NYC WRRF permits, this facility is still required to continue several similar BMP conditions, including a WWOP.

Permittees with No CSO Outfalls but with Wet Weather Operating Conditions

Table 3: Permittees with no CSO outfalls but with wet weather operating conditions to maximize flows from tributary CSS		
Facility	**SPDES #**	**Notes**
Albany North/ South WWTP	NY0026875/ NY0026867	There are no CSO outfalls in these WWTP permits. The permits are strictly for the Albany County-owned WWTPs. The facilities accept and treat wet weather flows from four CSO communities (Albany, Cohoes, Green Island, and Watervliet), which are permitted separately for their CSO contributions.
Binghamton-Johnson City	NY0024414	There are no CSO outfalls in this WWTP permit. The permit is strictly for the WWTP. Outfall 002, designated for plant bypass, has been cemented. The facility accepts and treats wet weather flows from both the Binghamton CSO and the Village of Johnson CSO systems. The plant underwent a rebuild following a wall collapse and flooding, which was completed in 2020. A viewport failure of the new Carbon-Nitrogen (CN) treatment units in February 2022 caused flooding at the plant and the facility is currently working on remediation and rebuild of the failed area.
Oneida County WPCP	NY0025780	There are no traditional CSO outfalls in this permit. The permit is strictly for the Oneida County-owned WPCP, which accepts and treats flows from one CSO community (Utica). In 2021, the WPCP completed construction of the final element of the Utica (C) LTCP—an expansion, including a new combined sewer influent treatment train with dedicated screening, grit removal, primary treatment, and a high-rate disinfection (HRD) system (chlorination/ dichlorination). The system operates under normal conditions and sends flows to secondary treatment. Under significant wet weather conditions, flows exceeding secondary treatment are sent to the HRD system and discharged to the receiving water, as a permitted CSO-related bypass.
Rensselaer County STP	NY0087971	There are no CSO outfalls in this permit. The permit is strictly for the Rensselaer County-owned WWTP. The facility accepts and treats wet weather flows from two CSO communities (Troy and Rensselaer), which are permitted separately for their CSO contributions.

Permittees Not Required to Develop a CSO LTCP

The following facilities are not required to develop an LTCP because they have infrequent CSO discharges and have met the Presumptive Approach under the CSO Control Policy.

Table 4: Permittees not required to develop a CSO LTCP

Facility	SPDES #	Notes
Boonville (V)	NY0020494	The Village of Boonville originally maintained 2 CSO outfalls, 002 and 003. Outfall 003 was eliminated on 10/2/2006. All wet weather flows under 2 MGD receive full secondary treatment. All wet weather flows in excess of 2 MGD are diverted to an overflow retention facility (ORF) after receiving preliminary screening and grit removal. The ORF provides equivalent primary treatment prior to discharge through Outfall 002. The Village is conducting replacement of the Mill Creek Interceptor and some minor associated separation projects, while also planning construction of UV disinfection at the WWTP. The Village is currently capturing and treating nearly 100% of the combined sewage flow during the average annual year. One CSO event occurred in both 2019 and 2020, consisting of 143,505 gallons and 1,500 gallons, respectively. Two CSO events occurred in 2021, consisting of 298,000 gallons total.
North Tonawanda (C)	NY0026280	The CSOs in the City of North Tonawanda typically had not activated for 30 years prior to 2021, therefore no LTCP was required. All combined sewers are directly tributary to the WWTP. The permittee had three CSOs, including an on-site ORF (full primary and disinfection), a WWTP headworks bypass, and a conventional manhole overflow at East Ave. Outfalls 01B (WWTP headworks bypass) and 010 (East Ave) are for emergency use only to protect the WWTP. Outfalls 01A and 01B are internal at the WWTP and blend with the WWTP effluent prior to discharge. The ORF discharges occasionally (one–two times per year on average, none in 2019 or 2020), while the other two CSOs have never been known to discharge. Three CSO events occurred in 2021, consisting of 24 million gallons (MG) total.

Permittees with Pending CSO LTCPs

Table 5: Permittees with pending CSO LTCPs

Permittee	DEC Region	LTCP Report		Notes
		Due Date	Date Submitted	
NYCDEP – Jamaica Bay & Tributaries	2	6/30/2018 (originally 6/30/2017)	6/30/2018	The LTCP was received timely. DEC's comments were provided to NYCDEP on 12/21/2018. NYCDEP provided a response to DEC comments on 3/1/2019 and indicated that supplemental documentation would be provided to address DEC comments, following additional evaluation and technical analysis. The LTCP Supplemental Documentation was provided on 8/14/2019. DEC provided additional comments on 10/11/2019. NYCDEP and DEC have continued to have technical meetings since that time. NYCDEP is expected to submit a supplemental LTCP to reflect the updated status, because of the COVID-19 pandemic, for the various components originally proposed. Detailed information about this project is available at https://www1.nyc.gov/site/dep/water/jamaica-bay.page.
NYCDEP Citywide (Open Water/ East River)	2	9/30/2020 (originally 12/31/2018)	9/30/2020	The LTCP was received timely. DEC Comments were provided to NYCDEP on 3/9/2021. NYCDEP and DEC continue to have technical meetings to discuss the details of the modeling and proposed projects. Detailed information about this project is available at https://www1.nyc.gov/site/dep/water/citywide-east-river-open-water.page

Status of New York State's CSO LTCP Implementation

This section describes the status of implementation of New York State-approved CSO LTCPs statewide. Subsection (a) describes the summary of the NYC CSO Abatement Program as well as the implementation status. Subsection (b) is a summary of the Albany Pool CSO Abatement Program followed by implementation status. Subsection (c) describes the status of CSO abatement for the rest of CSO permittees in New York State.

The reporting format for each permittee is consistent with the EPA requirements for information regarding collection systems, receiving water, LTCP, PCCM Plan, and implementation status.

Under Collection System, this report describes data from before and after LTCP for the number of outfalls, overflow events, percentage of sewer system that is combined, and the population served by a CSS. Any data that is currently not available is shown as "Not Available" or "NA." There are four possible ways for permittees to measure and report the number of overflow events:

1. **Modeling:** Because of the complex nature of CSSs, hydraulic conditions vary due to the intermittent and variable characteristics of CSO flows. Flow volumes and frequencies from larger municipalities like NYC, Albany Pool, Buffalo, and a few smaller municipalities were based on predicted overflows and events using mathematical models that were part of the approved LTCP.

2. **Visual observation:** Some municipalities use any observation of debris on overflow weirs as evidence of a CSO event. Others might use a pre-marked water level at an outfall as an indication of an overflow event.

1. **Metering:** Some municipalities might install flow meters in some representative outfalls.

2. **Calculated/Estimated:** For a less complex CSS with fewer outfalls, some municipalities might use a spreadsheet flow balance to estimate CSO volume discharges.

Consequently, due to rainfall variability and complexity of CSSs, CSO volume discharges and events in this report are considered estimates and may not fully represent the true number of CSO frequencies in New York State.

The receiving water information presents overall conditions based on the existing data in the Section 303(d) report.

New York City CSO Program

New York City, consisting of the boroughs of Manhattan, Queens, Bronx, Brooklyn, and Staten Island, has the largest number of CSO outfalls in New York State (See Figure 5). There are 14 WRRFs associated with the New York City municipal sewer system. The Oakwood Beach WRRF sewershed is not a CSS and has no CSO outfalls. In 2021, the Rockaway WRRF was redesignated as a SSS and is no longer considered a CSS/CSO permittee following issuance of the 2022 SPDES Permit Renewal. The other 12 wastewater treatment facilities contain 400 permitted CSO outfalls.

The New York City Department of Environmental Protection (NYCDEP) is required under a 2005 Order on Consent (C02-20000107-8) to reduce CSOs from its sewer system to improve the water quality of its surrounding waters, including Flushing Bay, Jamaica Bay, East River and its tributaries, Long Island Sound, and the Outer Harbor. The 2005 Consent Order required NYCDEP to develop Waterbody/Watershed Facility Plans, which were the initial phase of CSO planning, to construct various grey infrastructure projects, and to develop LTCPs that built upon the Waterbody/Watershed Facility Plans.

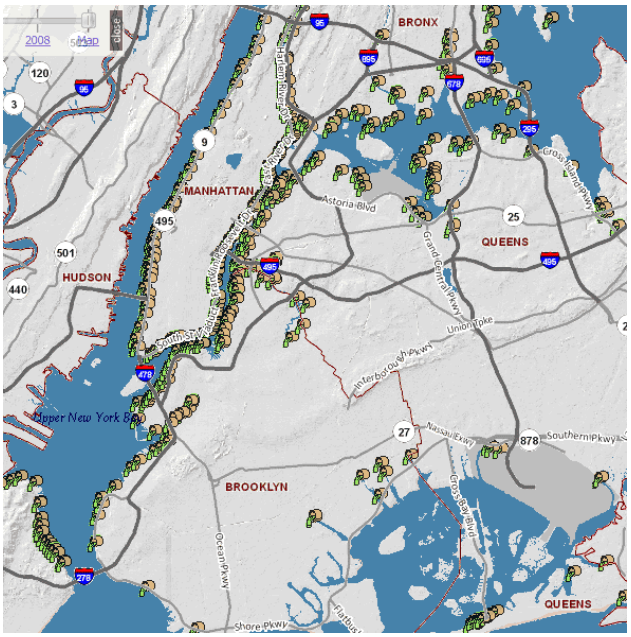

Figure 5 - NYC Map — CSO outfall locations

To date, LTCPs have been developed and approved by DEC for Alley Creek, Bronx River, Flushing Creek, Flushing Bay, Gowanus Canal, Hutchinson River, Paerdegat Basin, Westchester Creek, Coney Island Creek, and Newtown Creek. A summary of each approved LTCP can be found in Table 6 below.

The LTCP for Jamaica Bay and Tributaries was submit- ted on July 2, 2018, and the Citywide (East River/Open Water) LTCP was submitted on September 30, 2020. Both LTCPs are still under review by DEC.

Detailed information about the overall NYC CSO program is available at:

- https://www1.nyc.gov/site/dep/water/nyc-waterways.page
- https://www1.nyc.gov/site/dep/water/combined-sewer-overflows.page

Pre- and post-construction monitoring data are also available from the Harbor Survey at https://www1.nyc.gov/site/dep/water/harbor-water-quality.page. Annual CSO PCCM and CSO Retention Facility Overflow Summary Reports are available upon request.

Table 6 – Summary of NYCDEP-approved LTCPs

LTCP Name	LTCP Approval Date	Notes
Alley Creek	3/7/2017	LTCP recommends a disinfection facility (chlorination and dichlorination). Detailed information about the Alley Creek LTCP is available at https://www1.nyc.gov/site/dep/water/alley-creek.page.
Bronx River	3/7/2017	LTCP recommends relief interceptors for Outfalls HP-007 and HP-009, and floatables control at HP-011. Detailed information about the Bronx River LTCP is available at https://www1.nyc.gov/site/dep/water/bronx-river.page.
Flushing Bay	3/7/2017	LTCP recommends 25 MG CSO storage tunnel. Detailed information about the Flushing Bay LTCP is available at https://www1.nyc.gov/site/dep/water/flushing-bay.page.
Flushing Creek	3/7/2017	LTCP recommends disinfection (chlorination and dichlorination) of Flushing Tank overflows at TI-010, and screening, disinfection (chlorination and dichlorination) of TI–011 overflows. Detailed information about the Flushing Creek LTCP is available at https://www1.nyc.gov/site/dep/water/flushing-creek.page.
Gowanus Canal	3/29/17	LTCP recommends no further action. Detailed information about the Gowanus Canal LTCP is available at https://www1.nyc.gov/site/dep/water/gowanus-canal.page.
Hutchinson River	3/7/2017	LTCP recommends CSO Outfall HP-024 extension with seasonal disinfection and floatables control. Detailed information about the Hutchinson River LTCP is available at https://www1.nyc.gov/site/dep/water/hutchinson-river.page.
Paerdegat Basin	2/1/2007	LTCP recommended 50 MG CSO retention facility with in-line storage and floatables control. Project is complete. Detailed information about the Paerdegat Basin LTCP is available at https://www1.nyc.gov/site/dep/water/paerdegat-basin.page.
Westchester Creek	8/1/2018	LTCP recommends no further action. Detailed information about the Westchester Creek LTCP is available at https://www1.nyc.gov/site/dep/water/westchester-creek.page.
Coney Island Creek	4/4/2018	LTCP recommends no further action. Detailed information about the Coney Island Creek LTCP is available at https://www1.nyc.gov/site/dep/water/coney-island-creek.page.
Newtown Creek	6/27/2018	LTCP recommends a 26 MGD Borden Ave. Pump Station Expansion and 39 MG CSO Storage Tunnel. Detailed information about the Newtown Creek LTCP is available at https://www1.nyc.gov/site/dep/water/newtown-creek.page.

Facility Info: New York City DEP		SPDES Permit #: Varies		Plant Flow: Varies
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	404	408	400
	Percentage of collection system that is combined:	-	60	60
	Length of CSS (miles):	-	3,337	3,337
	Average annual CSO events:	38	TBD	21
	Average annual CSO volume (MG):	29,566	TBD	26,411
	Population served by collection system:	8,000,000	TBD	8,600,000
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Modeled/Metered
CSO Abatement Approach:	Demonstrative Approach
LTCP Info: *Dates approved, Issues, Approach, Status*	DEC has 10 approved LTCPs for Alley Creek, Bronx River, Gowanus Canal, Flushing Bay, Flushing Creek, Hutchinson River, Paerdegat Basin, Westchester Creek, Coney Island Creek, and Newtown Creek (See Table 6 for DEC approval dates). NYCDEP has two pending LTCPs for Jamaica Bay and Tributaries and Citywide/Open Waters (See Table 5). Additional Information on NYCDEP's LTCPs, including factsheets, LTCPs, approval status, and progress, can be found at https://www1.nyc.gov/site/dep/water/nyc-waterways.page.
PCCM:	NYCDEP has been conducting PCCM in various waterbodies including Alley Creek, Paerdegat Basin, Gowanus Canal, Flushing Creek, and Spring Creek, as required under its previously approved Waterbody Watershed Facility Plans. More information can be found at https://www1.nyc.gov/site/dep/water/harbor-water-quality.page.
Implementation Status:	Information regarding the implementation status of the NYCDEP LTCPs can be found at https://www1.nyc.gov/site/dep/water/nyc-waterways.page.

Albany Pool CSO Program

Six Capital Region communities known as the "Albany Pool"—the cities of Albany, Troy, Rensselaer, Cohoes, and Watervliet, and the Village of Green Island—have worked together and collectively developed a LTCP under a Consent Order with DEC. The Albany Pool area originally had 92 CSO outfalls, reduced to 85 as of 2021. The regional plan will address the CSOs discharging to the Hudson and Mohawk rivers and improve water quality in a way that is more cost-effective than if each municipality developed its own plan. These 6 communities, along with the Albany County and Rensselaer County sewer districts, will implement this 15-year plan with most of the improvement realized in the first 10 years.

The Albany Pool LTCP is a phased approach to control CSOs. When the LTCP is fully implemented, Albany Pool communities and the 2 sewer districts will capture 85% of the annual CSO volume and treat it for bacteria and sewage-related floatable waste.

This will improve the river's water quality and allow for recreational activities (swimming and fishing) to resume within hours instead of days after a typical rainstorm event. The LTCP implements a strategy to maximize the use of green infrastructure (GI) practices for additional CSO reduction over time.

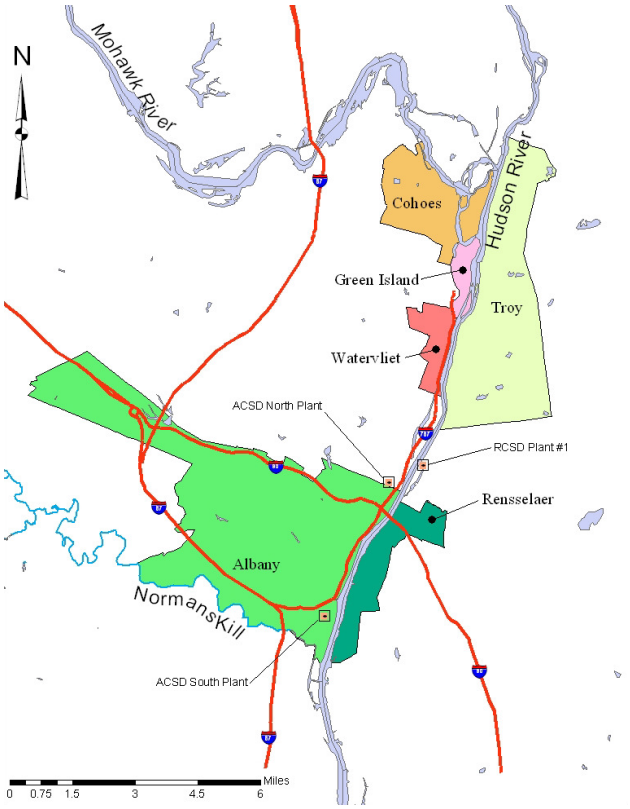

Figure 6 - Albany Pool Communities

Key elements of the LTCP include:

- Maximizing the flow of combined sewage from the Albany Pool communities to the Albany County (North and South) and Rensselaer County WWTPs, pump stations upgrades, sewer system improvements, and sizing the new bacterial disinfection systems in the county treatment plants to accommodate and treat more stormwater-related volume.
- Building and operating a new satellite treatment facility to disinfect CSO flow and control of sewage-related floatable waste at the largest CSO outfall in the system, located in Lincoln Park in the City of Albany.
- Implementing multiple projects to separate combined sewers (create separate lines for stormwater and sewage) and eliminate some existing CSOs.
- Adding facilities to control the discharge of floatable waste at major CSO outfalls in the City of Cohoes and at the Corning Preserve in the City of Albany.
- Implementing a long-term GI strategy to further reduce CSO releases above the 85% capture and treatment level. This strategy will maximize the use of GI in the Albany Pool communities, which will reduce CSOs over time. GI practices help control stormwater at its source, remove pollutants, and reduce the amount of runoff and waste that ends up in sewer systems and local waterbodies. Examples of GI practices are green roofs, pervious pavement, and rain gardens.

In 2019, the Rensselaer County Sewer District (RCSD) completed installation of several WWTP upgrades required under the LTCP, including primary pumps; primary clarifier chain and flights; grit transfer piping; and new cyclone de-gritters. RCSD authorized and completed an additional LTCP project, the Secondary System Capacity Evaluation, during 2020, which was approved by DEC in November 2020.

In 2020 and 2021, DEC issued a modification of the City of Albany SPDES permit and approved the plans and specifications for the Beaver Creek CSO Disinfection Facility. This major LTCP project will screen and disinfect 100 MGD of CSO flows that would otherwise be, or historically have been, discharged without any treatment. Construction of the facility broke ground in mid-2021 and is anticipated to be completed on time, by December 31, 2022, in accordance with the Order on Consent deadline.

Detailed information regarding the Albany Pool CSO program, including the approved LTCP report, implementation schedule, and Consent Order, is available on the Albany Pool's website, https://www.albanypoolcso.org/.

Pool-wide Summary				
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	92	86	87
	Percentage of collection system that is combined:	59	59	58
	Length of CSS (miles):	477	471	455.5
	Average annual CSO events:	275	224	221
	Average annual CSO volume (MG):	1,198	610	1,150
	Population served by collection system:	186,419	188,533	187,331

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach (85% capture)
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	In 2007, the communities of Albany, Troy, Cohoes, Rensselaer, Green Island, and Watervliet came together with support of the Albany County and Rensselaer County sewer districts to develop a regional approach to CSO controls, this regional approach was laid out in the LTCP. An Order on Consent was issued 1/10/2014 for the implementation of the final approved LTCP. More information regarding the Albany Pool LTCP can be found at https://www.albanypoolcso.org/.
PCCM: *Status*	The PCCM Plan was approved by DEC in 2015. The Albany Pool communities have collected the first two years of data in the receiving waters in accordance with the PCCM Plan. Additional information on the PCCM can be found at https://www.albanypoolcso.org/.

Facility Info: City of Albany		SPDES Permit #: NY0025747		Plant Flow: No WWTP
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	14	9	13
	Percentage of collection system that is combined:	55	55	55
	Length of CSS (miles):	251	251	251
	Average annual CSO events:	58	55	68
	Average annual CSO volume (MG):	739	394	685
	Population served by collection system:	97,856	99,040	99,000
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0002	C	Y	10
	Krum Kill	1311-0004	A	Y	1

Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Albany is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Aquatic Life, Recreation, Habitat/ Hydrology, and Aesthetics due to aesthetics (floatables) and pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0002.html. The segment of the Krum Kill receiving CSO discharges from the City of Albany is listed on the NYS 2018 303(d) as impaired for Aquatic Life due to unknown biological impacts of urban stormwater runoff and CSOs. Additional information for this segment of Krum Kill can be found at https://www.dec.ny.gov/data/WQP/PWL/1311-0004.html.
Reporting Year Accomplishments:	The City of Albany has five Floatables Control Facilities in the system (Orange St., Quackenbush Sq., Jackson/ Livingston St., Maiden Ln., and Steuben Ln.). Supervisory Control and Data Acquisition (SCADA) is utilized to monitor some CSS flows, utilizing 27 SmartCovers, 3 Flo-Dar meters, and 3 additional flow meters. All CSO signs were inspected in 2019 and tide gate installs/repairs were completed in 3 locations. In 2020, the City cleaned 275 catch basins and 70.22 miles of sewer, lined 11,567 linear feet (LF) and CCTV'd 40,281 LF of sewer. Stormwater modeling and flood mitigation studies were completed in areas prone to flooding. Construction of the Harriman Campus Pump Station was completed, which removed flows from the CSS and directed flows to the SSS. The Mereline Ave. GI project (porous pavement and sewer separating in Island Creek CSS) was completed, along with other SSO mitigation projects in the Arch St. relief sewer. The City cleaned over 360,000 feet of sewer and separated 0.07 miles of sewer as part of the Westerlo St. project. Construction of the Beaver Creek Disinfection Facility was started in early 2021 and is on schedule for completion at the end of 2022. The City also purchased new pumps for two pump stations (Woodville and Northern Blvd.) in 2021 and plans to continue upgrades at pump stations in 2022 (Marlborough Ct. and Northern Blvd.). The City will also continue design for the constructed wetland installation on Hackett Blvd.

Facility Info: City of Cohoes	SPDES Permit #: NY0031046	Plant Flow: No WWTP

		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	17	14	14
	Percentage of collection system that is combined:	100	100	100
	Length of CSS (miles):	62	54	54
	Average annual CSO events:	15	14	22
	Average annual CSO volume (MG):	-	-	13.13
	Population served by collection system:	16,193	16,193	16,193
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Mohawk River	1201-0085	C	N	13
	Hudson River	1101-0002	A	Y	1

Additional Waterbody Information:	The segment of the Mohawk River receiving CSO discharges from the City of Cohoes is stressed for Aquatic Life, Recreation, and Habitat/Hydrology due to ammonia, nutrients, pathogens, and silt/sediment pollutants caused by urban stormwater runoff. Additional information for this segment of Mohawk River can be found at https://www.dec.ny.gov/data/WQP/PWL/1201-0085.html. The segment of the Hudson River receiving CSO discharges from the City of Cohoes is identified as precluded for Fish Consumption due to PCBs caused by contaminated sediment. The segment is also threatened for Water Supply and stressed for Public Bathing, suspected to be due to pathogens from municipal sources (POTWs, CSOs, and MS4s). Additional information for this segment of the Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1101-0002.html.
Reporting Year Accomplishments:	The City owns the CSS, pump stations, and regulators, and as of 2021, maintains the regulators at "Little C," Garner St., N. Mohawk St., and Vliet St. A Continuous Deflection Separation (CDS) screening unit is installed at the N. Mohawk St. and Vliet St. regulators. In 2020, the City achieved 75% design of Project SSS-10 Columbia St. Phase 2 and received EPG funds for Project SSS-12 Vliet (engineering report submitted February 2021). The City also continued storm sewer buildout and completed separation of sewer at Sargent St. and GI at Canal Sq. In 2021, the City submitted the design for SSS-12 to DEC and began construction of SSS-10. SSS-10 is expected to be completed in 2022. The City cleaned and/or inspected approximately 2,000 LF of sewer, finished separations on River St., and purchased 4 new pumps for pump stations.

Facility Info: Village of Green Island		SPDES Permit #: NY0033031			Plant Flow: No WWTP
			Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:		3	3	3
	Percentage of collection system that is combined:		100	100	30
	Length of CSS (miles):		5	4	3.0
	Average annual CSO events:		41	35	0
	Average annual CSO volume (MG):		4.60	4.20	0
	Population served by collection system:		2,620	2,613	2,176
	Number of satellite system connections:		0	0	0
Measurement Type for CSO Volume Discharges:	Modeled				
CSO Abatement Approach:	Presumptive Approach				
	Receiving Waterbody	**PWL No.**	**Waterbody Classification**	**Impaired (Y/N)**	**No. of CSO Outfalls**
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0002	C	Y	3
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Albany is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Aquatic Life, Recreation, Habitat/ Hydrology, and Aesthetics due to aesthetics (floatables) and pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0002.html.				
Reporting Year Accomplishments:	The Village of Green Island completed a 0.5-mile sewer separation project in the fall of 2020 (Starbuck Island project). The Village anticipates conducting a feasibility study in 2022 for separation of a 1.0-mile stretch of sewer on George St. and assessing needs for improvements at Pump Station #1.				

Facility Info: City of Rensselaer	SPDES Permit #: NY0026026	Plant Flow: No WWTP

		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	8	7	6
	Percentage of collection system that is combined:	35.3	30	30
	Length of CSS (miles):	8	3.5	3.5
	Average annual CSO events:	52	45	37
	Average annual CSO volume (MG):	2.50	2.06	4.5
	Population served by collection system:	9,392	9,603	9,600
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0002	C	Y	6

Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Rensselaer is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Aquatic Life, Recreation, Habitat/ Hydrology, and Aesthetics due to aesthetics (floatables) and pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0002.html. The segment of the Mill Creek receiving CSO discharges from the City of Rensselaer has no use impairments. Additional information for this segment of Mill Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0246.html.
Reporting Year Accomplishments:	In June 2020, the City sealed (weir removed) and fully separated the sewer upstream of CSO 003B. As of 2020, the City has completed all 5-year Plan projects and 50% of the 10-year Capital Improvement Plan (CIP), including replacement of 18,600 LF of sewer and the addition of 14,400 LF of storm sewer. The City also inspected 2,700 LF of sewer with CCTV and completed a Green Infrastructure Grant Program (GIGP) Project on East St. that included porous pavement and bio-retention (June 2020). The City also reprioritized separations and upgrade projects from their CIP, including: 1. Close CSO 008/009 - Washington Ave. West (need to add Forbes Ave.), Central Ave., and Broadway North 2. Close CSO 002 - Rensselaer Ave. 3. Close CSO 03A - Second Ave., Mill Creek to Hudson River, Washington St./First Ave., and Third Ave. 4. Close CSO 007 - Fowler Ave. In 2021, the City surveyed 1,800 LF of sewer, purchased a portable Mainline Crawler CCTV unit, and received an Engineering Planning Grant (EPG) for an engineering study for closure of CSOs 002, 008, and 009 (to be conducted in 2022).

Facility Info: City of Troy		SPDES Permit #: NY0099309			Plant Flow: No WWTP
			Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:		48	46	46
	Percentage of collection system that is combined:		80	80	80
	Length of CSS (miles):		137	132	130
	Average annual CSO events:		65	65	70
	Average annual CSO volume (MG):		447	207	447
	Population served by collection system:		50,129	50,065	50,129
	Number of satellite system connections:		3	3	3
Measurement Type for CSO Volume Discharges:	Modeled				
CSO Abatement Approach:	Presumptive Approach				
	Receiving Waterbody	**PWL No.**	**Waterbody Classification**	**Impaired (Y/N)**	**No. of CSO Outfalls**
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0002	C	Y	46
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Troy is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Aquatic Life, Recreation, Habitat/ Hydrology, and Aesthetics due to aesthetics (floatables) and pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0002.html.				
Reporting Year Accomplishments:	The City is in the design process for the Polk St. stream separation project. Additional LTCP projects yet to be designed or constructed are the Van Buren St. stream separation and Cross St. Trunk Sewer Rehabilitation Phase II. In 2021, the City updated the IMA with Rensselaer County and cleaned 32,500 LF of sewer. The City anticipated beginning the Polk St. separation project in 2022.				

Facility Info: City of Watervliet		SPDES Permit #: NY0030899		Plant Flow: No WWTP
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	5	5	5
	Percentage of collection system that is combined:	100	100	100
	Length of CSS (miles):	14	14	14
	Average annual CSO events:	44	10	24
	Average annual CSO volume (MG):	4.80	2.20	0.118
	Population served by collection system:	10,254	10,233	10,233
	Number of satellite system connections:	2	2	2

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0002	C	Y	5

Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Watervliet is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Aquatic Life, Recreation, Habitat/ Hydrology, and Aesthetics due to aesthetics (floatables) and pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0002.html.
Reporting Year Accomplishments:	All City of Troy projects listed in the Albany Pool LTCP were completed in 2017, including increasing weir heights at multiple CSOs. The City cleaned 49 catch basins, 3 floatable control facilities, 39 tree pits, and 3 rain gardens in 2020. The City is also currently underway with a CSO separation project that is expected to be constructed over the next two years. Phase 1 of the project began in 2022 and Phase 2 is expected to be completed by December 2023. In 2021, the City cleaned or inspected 6,800 LF of sewer.

All Other CSO LTCPs

Table 7 – All other CSO LTCPs		
CSO Permittee Name	**SPDES #**	**No. of Outfalls**
Amsterdam (C)	NY0020290	3
Auburn (C)	NY0021903	6
Binghamton (C)	NY0024406	9
Buffalo Sewer Authority (BSA) - Bird Island WWTF	NY0028410	52
Canastota (V)	NY0029807	2
Catskill (V)	NY0020389	4
Chemung County (Chemung County - Elmira S.D.)	NY0035742	7
Clayton (V)	NY0027545	2
Dunkirk (C)	NY0027961	1
Glens Falls (C)	NY0029050	1
Gouverneur (V)	NY0020117	1
Hudson (C)	NY0022039	7
Johnson City (V)	NY0023981	2
Kingston (C)	NY0029351	4
Little Falls (C)	NY0022403	3
Lockport (C)	NY0027057	10
Massena (V)	NY0031194	10
Medina (V)	NY0021873	9
Monroe County (Frank E. Van Lare STP)	NY0028339	20
Newburgh (C)	NY0026310	13
Niagara Falls Water Board	NY0026336	6
Ogdensburg (C)	NY0029831	17
Onondaga County - Syracuse Metro WWTP	NY0027081	46
Oswego (C) - East Side	NY0029114	1
Oswego (C) - West Side	NY0029106	2
Plattsburgh (C)	NY0026018	11
Poughkeepsie (C)	NY0026255	5
Target Hill WWTP	NY0023761	1
Ticonderoga (T)	NY0036706	1
Utica (C)	NY0031429	35
Washington County	NY0183695	10
Waterford (T)	NY0029173	2
Watertown (C)	NY0025984	9
Westchester County – Yonkers	NY0026689	13
TOTAL		325

Facility Info: City of Amsterdam		SPDES Permit #: NY0020290		Plant Flow: 10.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	3	3	3
	Percentage of collection system that is combined:	17.7	10.6	10.6
	Length of CSS (miles):	12.5	7.6	7.6
	Average annual CSO events:	18	5	8
	Average annual CSO volume (MG):	NA	9.6	2.717
	Population served by collection system:	18,620	17,844	17,844
	Number of satellite system connections:	4	4	4

Measurement Type for CSO Volume Discharges:	Monitoring, which comprises recording and analyzing flow meter data from the City's three main pump stations, the Town of Amsterdam flow meter, the Village of Hagaman flow meter, and the Village of Fort Johnson weekly flow figures.
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Mohawk River	1201-0087	C	N	3

Facility Info: City of Amsterdam	SPDES Permit #: NY0020290	Plant Flow: 10.0 MGD
Additional Waterbody Information:	The segment of the Mohawk River receiving CSO discharges from the City of Amsterdam is stressed for Aquatic Life and Recreation due to suspected nutrient and silt sediment pollution, caused by agriculture and urban stormwater runoff. Additional information for this segment of Mohawk River can be found at https://www.dec.ny.gov/data/WQP/PWL/1201-0087.pdf. The LTCP identified Riverfront Park, which is located downstream of the West Side and South Side Pumping stations, as a sensitive area due to potential impact to boating and fishing activities.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 7/5/2007 for reducing CSO events to a level that meets the Presumptive Approach, which requires the City to reduce overflows to no more than six events per year. LTCP Findings and Recommendations: CSO investigations revealed several cross-connections between storm and sanitary sewers and inflow contributing from catch basins and neighboring municipalities. The CSO control recommendations include flow reduction and/or elimination through upgrading pumps, emergency generators, and controls at three pump stations; upgrading the WWTP to better handle wet weather flows; and addressing serious I/I issues due to cross-connections. Recommended Approach to Control CSO Discharges: The City plans to correct all LTCP findings and use the Presumptive Approach to control and monitor CSO events. Under this approach, the City intends to limit CSO events to no more than six events annually that do not receive minimum treatment. Additionally, the City intends to reduce and/or eliminate CSO discharges through sewer separation projects, pump station upgrades, emergency generator installation at the three pump stations, and WWTP upgrades to handle wet weather flows more effectively. The City also intends to address serious I/I issues due to cross-connections. The permittee also plans to eliminate CSO discharges to Riverfront Park, which was identified as a sensitive area, to increase boating and fishing opportunities in the park. Approved Controls Include: All recommended controls were approved.	
PCCM: *Status*	The City submitted a PCCM Plan to DEC on 8/21/2016. DEC approved the PCCM on 1/27/2017. PCCM was conducted in 2020, but due to the COVID-19 pandemic and the ongoing disinfection upgrade, sampling was continued through the 2021 recreational season.	
Implementation Status:	On 12/31/2017, the City of Amsterdam submitted a final CSO report stating it has completed all projects identified under the LTCP and is currently meeting EPA's Presumptive Approach CSO Control Policy, which requires "the elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the combined sewer system during precipitation events on a system-wide annual average basis." On 9/7/2019, CSO 003 at the South Side Pump Station was considered eliminated because all remaining combined-sewer upstream was allegedly previously separated. In May 2021, the City and DEC staff conducted a dye study within the SSPS sewershed to verify the status as an SSS. The study found that two catch basin cross-connections remain, and the system should still be considered combined. In 2021, the City completed projects with WWTP disinfection construction and equipment upgrades at both the South Side Pump Station and the West Side Pump Station. To date, all work required by the LTCP has been completed and recurring PCCM shall continue.	

Facility Info: City of Auburn		SPDES Permit #: NY0021903		Plant Flow: 12.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	35	6	6
	Percentage of collection system that is combined:	15	15	15
	Length of CSS (miles):	15	15	15
	Average annual CSO events:	NA	15	19
	Average annual CSO volume (MG):	NA	108	211.9
	Population served by collection system:	33,000	29,000	27,000
	Number of satellite system connections:	13	13	16

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hunter Brook (Cold Spring/ North Brook)	0701-0038	C	N	1
	Owasco Lake Outlet	0706-0001	C	N	5

Facility Info: City of Auburn	SPDES Permit #: NY0021903	Plant Flow: 12.0 MGD
Additional Waterbody Information:	The segment of the Hunter Brook receiving CSO discharges from the City of Auburn is stressed for Aquatic Life and Recreation due to nutrients caused by agriculture. Additional information for this segment of Hunter Brook can be found at https://www.dec.ny.gov/data/WQP/PWL/0701-0038.pdf. The segment of the Owasco Lake Outlet receiving CSO discharges from the City of Auburn is stressed for Aquatic Life and Recreation due to nutrients caused by CSOs, municipal discharges, urban stormwater runoff, and agriculture. Additional information for this segment of Owasco Lake Outlet can be found at https://www.dec.ny.gov/data/WQP/PWL/0706-0008.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The permittee entered into a Consent Order agreement with DEC in 1989, which detailed a schedule of milestones for corrective actions. The City selected a plan which, by way of collection system improvements and high-rate treatment at the WTTP, would ensure the CSO outfalls would only discharge at a maximum of four times per year. The LTCP was approved on 8/1/1995. LTCP Findings and Recommendations: An I/I study identified that some areas of the CSS needed improvements to reduce sewer surcharging. Additionally, upgrades at the confluence of North Interceptor and the WWTP influent sewers were identified. Recommended Approach to Control CSO Discharges: Recommended CSO abatement plans include a centralized high-rate treatment facility to be located at the treatment plant for floatables and settleable solids removal followed by chlorination/dichlorination capability, and a centralized storage facility to be located within the WWTP to store excess wet weather flows. The final CSO LTCP was approved on 8/1/1995. Approved Controls Include: Recommended controls were approved consistent with the Consent Order.	
PCCM: *Status*	No PCCM has been submitted. However, permittee continues to monitor CSO flow volume, frequency, and duration.	
Implementation Status:	The City has constructed new relief sewers, enforced its sewer use ordinance, converted old primary tanks for use as high-rate treatment, constructed a 6.5 MG CSO retention facility, installed 4 CSO swirl concentrators with chlorination/dichlorination capabilities, sealed and bulk-headed 31 CSO outfalls, and constructed 7 miles of relief sewers and interceptors. Other completed CSO projects include sanitary sewer upgrades to relieve surcharge of sewer during heavy rain and interceptor improvement at the confluence of WWTP influent lines and the interceptor. Furthermore, the City continues to implement the 15 CSO BMPs listed in its SPDES permit, which are designed to utilize scheduled Operations & Maintenance (O&M) procedures, employ the existing treatment facility and collection system to the maximum extent practicable, and minimize water quality impacts from CSOs. The fat, oil, and grease (FOG) program has been proactive in restaurant grease trap inspections and emulsifier flushing of sewer lines. The Industrial Pretreatment Program continues to permit, inspect, and monitor non-domestic dischargers, and in 2014, the road sweeper was replaced. In 2019, a full-time plumbing inspector was hired to coordinate the grease trap inspections. The maintenance cover was replaced for the swirl concentrator at CSO 029A for ease of access. In 2020, an expansion of the WWTP UV disinfection system was completed (now five MGD) and a CSO Engineering Study was completed. The CSO Engineering Study assessed existing CSO infrastructure and evaluated several improvement projects to upgrade existing CSO controls and continue sewer separation efforts. In 2021, sewer flow meters were replaced at the borders of the City and neighboring towns.	

Facility Info: City of Binghamton		SPDES Permit #: NY0024406		Plant Flow: No WWTP
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	26–45	8	9
	Percentage of collection system that is combined:	60	40	40
	Length of CSS (miles):	NA	11.4	445.93
	Average annual CSO events:	NA	NA	27
	Average annual CSO volume (MG):	NA	NA	475.66
	Population served by collection system:	49,000	47,380	47,380
	Number of satellite system connections:	NA	NA	7

Measurement Type for CSO Volume Discharges:	Flow meters are installed at five of the CSOs, 001–005. The remaining CSOs are operated by a manual sluice gate, normally closed. The permittee reported no discharge from the normally closed gate outfalls in 2021.
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Chenango River	0602-0033	B	Y	1
	Susquehanna River	0603-0002	A	Y	8

Facility Info: City of Binghamton	SPDES Permit #: NY0024406	Plant Flow: No WWTP
Additional Waterbody Information:	The segment of the Chenango River receiving CSO discharges from the City of Binghamton is impaired for Fish Consumption due to metals (mercury) caused by atmospheric deposition. This segment is not listed on the NYS 2018 303(d) because a TMDL (EPA's Northeast Mercury TMDL, 2007) has been developed to address atmospheric deposition of mercury in New York State waterbodies. Additionally, the segment of the Chenango River is also stressed for Aquatic Life and Recreation due to suspected nutrient pollution caused by agriculture, CSOs, and urban stormwater runoff. Additional information for this segment of Chenango River can be found at https://www.dec.ny.gov/data/WQP/PWL/0602-0033.html. The segment of the Susquehanna River receiving CSO discharges from the City of Binghamton is impaired for Recreation, Aquatic Life, and Fish Consumption. This segment is not listed on the NYS 2018 303(d). The Recreation and Aquatic Life-use impairments are caused by excess nutrients and low DO due to municipal contributions from the Binghamton-Johnson City WWTP. The Fish Consumption impairment is addressed through a TMDL (EPA's Northeast Mercury TMDL, 2007) which was developed to address atmospheric deposition of mercury in New York State waterbodies. Additional information for this segment of the Susquehanna River can be found at https://www.dec.ny.gov/data/WQP/PWL/0603-0002.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Phase I of the CSO LTCP was not required because the permittee was already meeting or exceeding the Presumptive Approach prior to EPA CSO Control Policy. On 2/29/1999, the permittee submitted a CSO monitoring/surveillance report that included recommendation for Presumptive Approach to CSO controls. The final version of this was approved on 10/13/2000. The engineering report for this was approved 3/13/2002. Construction of CSO improvement projects, which included floatable control facilities and improvements to Pennsylvania Ave., began on 3/1/2002. Construction of CSO improvement projects was completed 6/30/2003. By completing construction, the City of Binghamton can capture 85% of the wet weather flow, meeting the CSO Presumptive Approach. Phase II consists of the WWTP upgrades. The Binghamton-Johnson City WWTP was being reconstructed due to damage from extreme flooding caused by Tropical Storm Lee (2011). Construction was completed in 2020, however, as stated in Table 3, a treatment unit failure has led to continued need for plant upgrades. LTCP Findings and Recommendations: No LTCP development was required. Recommended Approach to Control CSO Discharges: In accordance with the preceding findings.
PCCM: *Status*	The PCCM Plan was approved on 3/1/2010. The SPDES permit has been modified to include a series of monitoring requirements to confirm controls effectiveness. Due to catastrophic structural failure of the WWTP resulting in knowingly poor water quality, PCCM was deferred in 2012 and 2017, but will resume in 2022.
Implementation Status:	To maximize flows to the treatment plant, the City of Binghamton continues to separate the combined system and continues to follow the CSO BMP's requirements in accordance with State and Federal policies. In 2019, 0.06 mile was separated between Rotary Ave. and Seminary Ave. In 2020, the City evaluated and upgraded the Glenwood St. and Bevier St. pump stations, while also completing 6 separation projects, totaling 0.78 mile, on Ely St., Robinson St., Hughes St., Riverside St., Bigelow St., and Home Ave.

Facility Info: Buffalo Sewer Authority (BSA) Bird Island WWTP		SPDES Permit #: NY0028410		Plant Flow: 180 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	65	52	52
	Percentage of collection system that is combined:	92	92	92
	Length of CSS (miles):	790	790	790
	Average annual CSO events:	85	9	35
	Average annual CSO volume (MG):	1,886	486	2601.01
	Population served by collection system:	292,648	261,310	278,349
	Number of satellite system connections:	7	7	7

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Black Rock Canal	0101-0025	C	Y	12
	Buffalo Harbor*	0104-0032	C	Y	4
	Buffalo River	0103-0001	C	Y	16
	Cazenovia Creek	0103-0009	B	N	11
	Cornelius Creek	0101-0032	-	-	1
	Niagara River	0101-0006	A-Special	Y	2
	Scajaquada Creek	0101-0033	C	Y	6
	*Includes Erie Basin and Erie Basin Slip				

Facility Info: Buffalo Sewer Authority (BSA) Bird Island WWTP	SPDES Permit #: NY0028410	Plant Flow: 180 MGD
Additional Waterbody Information:	The segment of the Black Rock Canal receiving CSO discharges from the BSA is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additional information for this segment of Black Rock Canal can be found at https://www.dec.ny.gov/data/WQP/PWL/0101-0025.pdf. The segment of the Buffalo Harbor (Lake Erie Shoreline) receiving CSO discharges from the BSA is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additional information for this segment of Buffalo Harbor can be found at https://www.dec.ny.gov/data/WQP/PWL/0104-0032.html. The segment of the Buffalo River receiving CSO discharges from the BSA is listed on the NYS 2018 303(d) as precluded for Fish Consumption due to PCBs caused by contaminated sediment. The segment is also stressed for Recreation due to low DO, pathogens, and silt/sediment caused by urban stormwater runoff. Additional information for this segment of Buffalo River can be found at https://www.dec.ny.gov/data/WQP/PWL/0103-0001.html. The segment of the Cazenovia Creek receiving CSO discharges from the BSA is stressed for Public Bathing and Recreation and threatened for Aquatic Life due to pathogens caused by other non-permitted sanitary discharges. Additional information for this segment of Cazenovia Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0103-0009.html. The segment of Cornelius Creek receiving CSO discharges from BSA is unassessed, and no water quality information exists. The segment of the Niagara River receiving CSO discharges from the BSA is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additional information for this segment of Niagara River can be found at https://www.dec.ny.gov/data/WQP/PWL/0101-0006.pdf. The segment of the Scajaquada Creek receiving CSO discharges from the BSA is listed on the NYS 2018 303(d) as precluded for Aquatic Life and impaired for Recreation due to aesthetics (floatables), low DO, nutrients, and pathogens, caused by other non-permitted sanitary discharges and urban stormwater runoff. Additional information for this segment of Scajaquada Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0101-0033.html
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	LTCP Findings and Recommendations: Findings showed exceedances of DO, fecal coliform bacteria, and dissolved zinc. Background fecal coliform bacteria counts were observed to exceed WQS at various receiving waterbody sampling locations included in the monitoring program. WQ analysis revealed that a uniform level of CSO control for all waterbodies receiving CSO discharges from BSA would be neither cost-effective nor necessary to meet WQS for each waterbody due to the extremely varied nature of the CSO receiving waterbodies. Recommended Approach to Control CSO Discharges: Proposed controls include weir modifications, real-time controls, GI, storage, treatment upgrades. The recommended plan will require all receiving waterbodies to meet or exceed the Presumptive Approach of four to six events per year, apart from the Niagara River (nine events per year). Additionally, the EPA order required BSA to submit a PCCM Plan, which was submitted in December 2015. More information regarding the LTCP can be found at https://buffalosewer.org/about/transparency/.
PCCM: *Status*	The BSA PCCM was approved on 3/1/2016.
Implementation Status:	The approved LTCP uses a balance of traditional gray infrastructure and innovative green solutions. The approved LTCP will have a probable project cost of $380 million and will be implemented over a 20-year period. The LTCP was approved in 2014 and is in the early stages of implementation with expected completion in March 2034. In 2019, the City of Buffalo continued several proactive sewer maintenance activities (cleaning and repair) and construction of several Real Time Control (RTC) and GI projects. A report on the recalibration of CSS model using a modified typical year was also submitted in 2019 and is currently under review by DEC and EPA. Several LTCP projects are underway to optimize regulator controls and design of other projects is either underway or was in 2020. In 2021, several LTCP projects were completed, including construction of Smith at Eagle RTC and Babcock Pumping Station RTC, Niagara Street Phase 3, and the commencement of Niagara Street Phase 4A. Several LTCP projects are ongoing, and the Authority recently submitted the Basis of Design Report (BODR) for Phase II WWTP Upgrades under the LTCP.

Facility Info: Village of Canastota		SPDES Permit #: NY0029807		Plant Flow: 2.00 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	2	2	2
	Percentage of collection system that is combined:	85	85	15
	Length of CSS (miles):	7.67	7.67	3.92
	Average annual CSO events:	3	2	3
	Average annual CSO volume (MG):	12.50	3.85	6.41
	Population served by collection system:	5,300	5,300	5,300
	Number of satellite system connections:	8	8	8

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Canastota Creek	0703-0002	C	Y	1
	Cowaselon Creek	1301-0246	C	N	1

Additional Waterbody Information:	The segment of the Canastota Creek receiving CSO discharges from the Village of Canastota is listed on the NYS 2018 303(d) as impaired for Aquatic Life and Recreation due to low DO and pathogens caused by CSOs. Additionally, the segment of the Canastota Creek is also stressed for Aesthetics due to floatables from CSOs. Additional information for this segment of Canastota Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0703-0002.html. The segment of the Cowaselon Creek receiving CSO discharges from the Village is stressed for Habitat/ Hydrology due to silt/sediment caused by habitat and hydrology modification. Additional information for this segment of Cowaselon Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0703-0093.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	LTCP was approved on 3/29/2007. LTCP Findings and Recommendations: On 2/13/2006, the Village of Canastota entered into an Order on Consent (Case # R7-20050412-23) with DEC for failing to bring CSOs within its sewer system into compliance with the EPA CSO Control Policy. Recommended Approach to Control CSO Discharges: CSO Controls include: increase pump station capacity from 2.0 MGD to 4.1 MGD, construct a 750,000-gallon retention basin at the pump station, install grit removal and an automated bar screen at the pump station to maintain capacity and eliminate flow restriction, increase primary treatment capacity at the WWTP to twice the permitted flow from 2.0 to 4.0 MGD, increase secondary treatment capacity at the WWTP to 1.5 times permitted flow from 2.0 MGD to 3.0 MGD, and increase capacity of the primary clarigesters to 4.1 MGD. Approved Controls Include: Approved controls include upgrade of WWTP headwork components to increase flows to the plant. Since the remaining discharges might still result in the exceedances of WQS, permittee will incorporate CSO controls with its obligations under the Chesapeake Bay Watershed Initiative (CBWI).
PCCM: *Status*	PCCM requirements are identified in the Village's SPDES Permit. Permittee continues to have few to no CSO events since completion of the LTCP projects and closure of the Order on Consent.
Implementation Status:	The Village constructed a new headworks facility including pumping capacity for 5.0 MGD influent transfer to the WWTP and a CSO storage tank with a 750,000-gallon capacity. The new headworks and storage system has been online since 2012. In 2019, there were five overflow events from CSO 002 and only three events in 2021. Accordingly, the new facility has effectively reduced the number of CSO's from 60-plus per year to less than 4–6 events annually as per the LTCP goals.

Facility Info: Village of Catskill		SPDES Permit #: NY0020389		Plant Flow: 1.55 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	25	0	4
	Percentage of collection system that is combined:	75	-	18
	Length of CSS (miles):	-	-	3.24
	Average annual CSO events:	25	0	7
	Average annual CSO volume (MG):	-	0	0.759
	Population served by collection system:	4,690	-	3,286
	Number of satellite system connections:	1	1	1

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Demonstrative Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Catskill Creek	1309-0010	C	Unassessed	4

Additional Waterbody Information:	The segment of the Catskill Creek receiving CSO discharges from the Village of Catskill is unassessed and thus not listed on the NYS 2018 303(d).
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The Village originally submitted an LTCP on 12/24/2012, which was determined to be incomplete. An Order on Consent executed 9/20/2016 required a revised approvable LTCP to be submitted within six months. The LTCP was submitted in April 2017 and, following significant discussion and comment from DEC, was ultimately approved on 9/12/2018. The primary goal of the LTCP will be to eliminate all CSO overflow events responsibly and fiscally by 12/31/2026. This will be achieved through projects including installation of tidal check valves, increasing weir heights/pipe, and sewer separation to a point where the Village can responsibly permanently seal off the CSO outfalls. The PCCM Plan was submitted and approved in 2019. Baseline sampling was conducted in 2019. PCCM sampling will be conducted annually for the next three years. Initial review of the baseline results indicates the presence of potential upstream sources and/or natural tidal stream conditions that may require a modification to the PCCM Plan in future years.
PCCM: *Status*	PCCM requirements are identified in the Village's SPDES Permit. Permittee reported that there have been no overflows since completion of the CSO and WPCP upgrades and closure of the Consent Order.
Implementation Status:	The Village has already completed several LTCP projects, including the raising of weir heights at the three CSOs with weirs (completed by mid-2020), raising the elevated pipe at CSO 007A, and installing tidal check valves at three CSOs. The Village also completed installation of the automatic mechanical bar screen at the WWTP headworks in 2020. Several additional LTCP projects, primarily sewer separations, will occur throughout the remainder of the LTCP implementation as the Village seeks to achieve full separation and elimination of the CSOs through 2026. In 2021, the Village CCTV'd the collection system and purchased three SmartCover flow meters for I/I monitoring.

Facility Info: Chemung County (Chemung County - Elmira S.D.)			SPDES Permit #: NY0035742		Plant Flow: 28.2 MGD
			Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:		10	10	7
	Percentage of collection system that is combined:		65	65	65
	Length of CSS (miles):		90	105	105
	Average annual CSO events:		80	-	19
	Average annual CSO volume (MG):		-	-	15
	Population served by collection system:		35,000	35,000	35,000
	Number of satellite system connections:		0	0	0
Measurement Type for CSO Volume Discharges:	Not available				
CSO Abatement Approach:	Presumptive Approach				
	Receiving Waterbody	**PWL No.**	**Waterbody Classification**	**Impaired (Y/N)**	**No. of CSO Outfalls**
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Chemung River	0501-0015	C	N	6
	Newtown Creek	0501-0003	C	N	1

Facility Info: Chemung County (Chemung County - Elmira S.D.)	SPDES Permit #: NY0035742	Plant Flow: 28.2 MGD
Additional Waterbody Information:	The segment of the Chemung River receiving CSO discharges from the Chemung-Elmira SD WWTP has no known impacts. Additional information for this segment of Chemung River can be found at https://www.dec.ny.gov/data/WQP/PWL/0501-0016.html. The segment of the Newtown Creek receiving CSO discharges from the Chemung-Elmira SD WWTP is stressed for Aquatic Life due to nutrients and unknown toxicity caused by urban stormwater runoff. Additional information for this segment of Newtown Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0501-0003.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	In May 2007, the County submitted a report titled Combined Sewer System Characterization and Modeling Report. Subsequently, on 11/13/2009, the County submitted the Phase I LTCP titled CSOs Long-Term Control Plan. The plan was approved on 4/17/2012. LTCP Findings and Recommendations: High coliform densities were discovered near CSO discharges in the Chemung River resulting in occasional exceedances of fecal coliform standards. After a series of reviews and resubmissions, DEC approved the LTCP report but asked the permittee to submit a plan that would integrate the ongoing CBWI projects with CSO abatement by 5/1/2013. DEC granted an extension request to submit the plan after the permittee has received a final permit that includes the permittee's obligations under the CBWI. Approved Controls Include: Upgrade of WWTP headwork components to increase flows to the plant. Since the remaining discharges might still result in the exceedances of WQS, permittee will incorporate CSO controls with its obligations under the CBWI. In accordance with the 2021 permit, the County was required to submit a revised LTCP that reflects the planned consolidation of the County SD#1 WWTP with the Elmira WWTP. The County submitted a LTCP addendum in March 2022, which is currently under review.
PCCM: *Status*	A Revised PCCM Plan is due June 1, 2024.
Implementation Status:	Permittee reported that the system currently captures 88% of the estimated annual average storm events. To maximize flows to treatment plant the permittee reported it has completed several repairs to the bar screens units at the treatment plant. The permittee replaced the bar racks on all three units and replaced the rake mechanism on two of the three screening units. Material cost for the repairs was approximately $75,000. The repairs now allow higher wet weather flows through the treatment plant. Additionally, the permittee also conducts routine street sweeping throughout the year. This practice reduces grit and garbage being discharged in a storm event. No major CSO work was conducted in 2019, however, planning is ongoing for a potential consolidation of the Elmira WWTP with the Chemung County SD#1 WWTP, which could result in improved treatment and sewer capacity conditions during wet weather events. Under current review of the collection system layout and existing permitted CSO outfalls, there are only seven actual CSO outfalls to waters of the State. However, this report will reflect the current status the SPDES permit, which identifies 10 outfalls (some are intermediate/internal locations). In 2020, an Engineering Planning Grant CSO Study was submitted that evaluated current and historic operations, hydraulic capacity, and alternatives for improvements to reduce CSO events.

Facility Info: Village of Clayton		SPDES Permit #: NY0027545		Plant Flow: 1.10 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	3	0	2
	Percentage of collection system that is combined:	100	20	20
	Length of CSS (miles):	9.50	9.50	9.50
	Average annual CSO events:	18	0	1
	Average annual CSO volume (MG):	1.33	0	0.146
	Population served by collection system:	2,021	2,021	2,718
	Number of satellite system connections:	0	1	1

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Saint Lawrence River	0901-0004	A-Special	Y	2

Additional Waterbody Information:	The segment of the Saint Lawrence River receiving CSO discharges from the Village of Clayton is listed on the NYS 2018 303(d) as impaired for Aquatic Life and Fish Consumption due to pesticides (mirex), PCBs, and priority organics (dioxin) caused by toxic/contaminated sediment. Additional information for this segment of Saint Lawrence River can be found at https://www.dec.ny.gov/data/WQP/PWL/0901-0004.pdf.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The final CSO LTCP was approved on 11/19/2012. LTCP Findings and Recommendations: Permittee concluded that CSO discharges were mostly due to infiltration during snowmelt and rainfall conditions, and during high groundwater table elevations. The LTCP shows that the permittee is achieving up to 95% wet weather volume capture or more, which meets or exceeds the Presumptive Approach under the EPA CSO Control Policy. Recommended Approach to Control CSO Discharges: Removal of excessive I/I; diversion of flow away from the Riverside Pump Station; increasing capacity to the existing pump stations; and diverting flows from the East Union St. Pump Station. Approved Controls Include: Recommended controls include removing or redirecting extraneous I/I sources, continuing flow monitoring and sewer inspection program to identify sources, and developing remedial measures to eliminate sources.
PCCM: *Status*	Not relevant. The Village of Clayton permanently closed its permitted CSOs in 2015. See below.
Implementation Status:	The Village of Clayton permanently closed its three permitted CSOs in 2015; however, wet weather events are still a concern and result in continued CSO discharges at two of the three locations (operators utilize a pump-around system to relieve wet well capacity and discharge to the same location as the capped CSO outfall pipes). Since the collection system is still combined and the CSO outfalls are still listed in the SPDES permit, DEC has allowed these infrequent discharges to occur on a temporary basis. The Village hired an engineering firm in spring 2018 to update its LTCP and develop a preliminary engineering report for completing recommended improvements in the Village's collection system and WWTP. Based on the engineering report, the Village is proceeding with an $11.2 million upgrade that will address the hydraulic loading at the WWTP and the CSOs in the collection system. Project completion is anticipated by December 2022. Following completion of this project, the CSO outfalls will no longer be listed in the SPDES permit and the relief pumping discharges will no longer be considered CSO events.

Facility Info: City of Dunkirk		SPDES Permit #: NY0027961		Plant Flow: 6.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	1	1	1
	Percentage of collection system that is combined:	50	45	45
	Length of CSS (miles):	NA	NA	20
	Average annual CSO events:	5	5	21
	Average annual CSO volume (MG):	27	30	57.6
	Population served by collection system:	12,900	12,400	12,400
	Number of satellite system connections:	1	1	2

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Lake Erie	0105-0009	B	Y	1

Additional Waterbody Information:	The segment of Lake Erie receiving CSO discharges from the City of Dunkirk is listed on NYS 2018 303(d) as impaired for Public Bathing, Fish Consumption, and Recreation due to PCBs and pathogens caused by other sanitary discharges, toxic/contaminated sediment, unknown sources, and urban stormwater runoff. Additional information for this segment of Lake Erie can be found at https://www.dec.ny.gov/data/WQP/PWL/0105-0009.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	LTCP Findings and Recommendations: The only permitted outfall serves both the WWTP and CSO discharges. During any significant storm event, when flows exceed the hydraulic capacity of the wet well, the City bypasses CSOs around the facility and combines the CSO flows with WWTP treated effluent via the outfall. The report concluded that CSO discharge reductions will be handled at the treatment plant through plant upgrades. The report also concluded that additional testing was needed to confirm the integrity of the Lake Shore Dr. and Lake Shore Blvd. collector pipes. Recommended Approach to Control CSO Discharges: The City is meeting the Presumptive Approach based on an average of 95.6% combined sewage being treated at the WWTP. Recommended plan includes plant upgrade, monitoring, and dye-testing of the remaining collection pipes. The result of the dye study was submitted on 5/28/2008. Approved Controls Include: Approved plan includes plant upgrade and submission of the result of a wet weather conveyance system certification every five years. In addition, there is a 2-MG storage capacity at the plant's wet well and interceptor line to capture wet weather flows.
PCCM: *Status*	A new PCCM Plan is to be developed, per the 2022 SPDES permit, by December 2022. Dunkirk follows EPA's guideline for the Presumptive Approach, under the criteria of the elimination or capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events, on a system-wide annual average basis. Dunkirk's SPDES permit requires monitoring CSO events which are reported on a monthly performance report, and additional monitoring of lake samples are recorded if lake conditions allow sampling.
Implementation Status:	Dunkirk is already in compliance with EPA's Presumptive Approach. In addition, Dunkirk continues to implement NY's 15 CSO BMPs (which correspond to EPA's 9 CSO BMPs) and conducts sewer separation whenever possible. In 2019, Dunkirk installed telemeters to monitor CSO flows from the wet well and secondary bypass flows. CSO events are pumped from the wet well and blended with the WWTP effluent. A corrective action plan was approved in 2019 due to WWTP settleable solids issues resulting from wet weather events. The City worked with two SIUs to replace sewer connections to the WWTP and improve pretreatment. Since 2020, the City is underway with upgrades to the WWTP blowers, aeration diffusers, and SCADA. Further, the City is also in design for pumping improvements (influent and CSO). The City plans to fully integrate all pumps (pump stations included) into the WWTP SCADA. No new separation projects were completed, but a new Overflow, Maintenance, and Inspection Program (OMIP) was submitted and approved in 2021.

Facility Info: City of Glens Falls		SPDES Permit #: NY0029050		Plant Flow: 9.5 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	1	1	1
	Percentage of collection system that is combined:	70	70	67.2
	Length of CSS (miles):	50	50	47.25
	Average annual CSO events:	29	6	20
	Average annual CSO volume (MG):	11.4	>6.0	2.94
	Population served by collection system:	14,000	16,000	14,600
	Number of satellite system connections:	3	4	3

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1101-0044	C	Y	1

Facility Info: City of Glens Falls	SPDES Permit #: NY0029050	Plant Flow: 9.5 MGD
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Glens Falls is listed on NYS 2018 303(d) as precluded for Fish Consumption due to PCBs caused by contaminated sediment. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1101-0044.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 1/29/2013 based on Presumptive Approach of 85% volume capture. LTCP Findings and Recommendations: Report indicated that sampling data did not show impacts of CSO discharges on the receiving water. Other findings showed cross-connections between combined sewers and storm sewers. Report recommended a phased approach to perform improvements at the WWTP and within the CSS. Phase 1 included modeling of infiltration into the collection system. Pipe hydraulics to be simulated using Stormwater Management Model (SWMM) dynamic wave solution model. The hydraulics of all principal control structures, including gates, weirs, and pumps, will be modeled. Recommendations included developing and implementing an asset management plan for long-term operations and maintenance of the CSS and WWTP, complete Geographic Information System (GIS) mapping of the entire CSS, cleaning and rehabilitating the CSS, installing a new regulator at CSO #002, installing screens for floatables control at CSO #002, and making upgrades to pretreatment and to 1 aeration tank to improve treatment through the WWTP. Recommended Approach to Control CSO Discharges: Recommended control is based on Presumptive Approach to continue to capture no less than 85% of CSO volume. Approved Controls Include: All recommendations and control options were approved.	
PCCM: *Status*	The PCCM plan was submitted in 2010. Monitoring has been conducted annually since 2018. The PCCM results have been rather inconclusive, given the infrequent occurrences, minimal volume of CSO discharged, and the relative size of the receiving water. Analysis has solely been desktop assessment of water quality. The SPDES permit was modified in 2022 to require the submission of an updated PCCM plan.	
Implementation Status:	To maximize the use of the collection system, the permittee reported that they will evaluate the collection system, which includes separation of stormwater from sanitary and the use of GI (rain gardens, and conversion to stormwater dry wells where practical as catch basins are maintained and replaced, etc.). To maximize flow to the treatment plant, period "bottlenecks" in the collection system were addressed as they were discovered, and improper sanitary connections were eliminated on Platt St. in a major improvement project over entire length of street. Removal and separation of storm flows from a SSS minimizes overflows and maximizes sanitary flow to the treatment plant. Permittee completed Phase I of the LTCP implementation schedule, the construction of Floatables Control and Aeration improvements for Outfall 02M in October 2015. Sewer system CCTV inspection and sewer separation and rehabilitation projects are ongoing. Phases 2 and 3 of the LTCP implementation schedule (i.e., increased primary capacity, additional sewer cleaning, and installation of 0.3 MG CSO storage tank) have been deferred awaiting WWTP performance, evaluation of improvements, and outstanding needs. In 2020, the City completed a sewer separation assessment for Maple St. and Walnut St. and the Henry St. Pump Station. Sewer separation for Dix Ave. began and improvements to the Thornberry Pump Station were completed; a portable generator was purchased and installed. In 2021, the City completed CCTV inspection and visual observation of sewers, moved forward with several separation projects, and completed a gravity sewer I/I study. The City also replaced a 90-year old force main from Henry St. Pump Station. Stormwater separation projects were completed for Dix Ave., Maple St., Walnut St., Oak St., and Hovey St. This removed 0.75 miles of combined sewer.	

Facility Info: Village of Gouverneur		SPDES Permit #: NY0020117		Plant Flow: 3.7 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	1	1	1
	Percentage of collection system that is combined:	60	60	60
	Length of CSS (miles):	20.2	20.2	20.2
	Average annual CSO events:	4	6	10
	Average annual CSO volume (MG):	0.200	0.342	4.655
	Population served by collection system:	3,949	3,949	3,949
	Number of satellite system connections:	1	1	1

Measurement Type for CSO Volume Discharges:	Outfall is metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Oswegatchie River	0905-0097	B	N	1

Facility Info: Village of Gouverneur	SPDES Permit #: NY0020117	Plant Flow: 3.7 MGD
Additional Waterbody Information:	The segment of the Oswegatchie River receiving CSO discharges from the Village of Gouverneur has no known use impairments. Additional information for this segment of Oswegatchie River can be found at https://www.dec.ny.gov/data/WQP/PWL/0905-0097.pdf.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 9/9/2015 based on Presumptive Approach. LTCP Findings and Recommendations: Modeling results show that river quality is significantly impacted during storm events; however, when upstream samples are compared with samples from locations downstream of CSOs, there is little or no significant impact to the water quality of the Oswegatchie River due to the CSO. Based on the information gathered through the Village's efforts, the following can be concluded: Water Quality Modeling shows that there are no measurable adverse effects to the water quality of the Oswegatchie River as a result of the permitted or unpermitted overflows; the Village's permitted CSO currently meets the requirements of the Presumptive Approach to CSO control; and current operation and maintenance activities will not eliminate the Village's unpermitted CSOs due to hydraulic constraints. Recommended Approach to Control CSO Discharges: Recommended approach is to continue to meet the Presumptive Approach, which includes a proper operation and maintenance program, sewer separation, replacement and rehabilitation of existing sewers, elimination of an unpermitted CSO outfall, and evaluation of new sewer connections impacts to CSO discharges. As for the unpermitted CSO outfall, a compliance plan has been included in the SPDES permit mandating the permittee to eliminate CSO discharges from this outfall by 5/1/2019. Approved Controls Include: All recommendations and control options were approved.	
PCCM: *Status*	The PCCM Report was submitted on 4/26/2018. The PCCM resulted in unsatisfactory yet inconclusive results due to the ongoing issues with SSOs. Due to the ongoing construction projects to mitigate these issues, a reassessment has not been requested until these projects are completed.	
Implementation Status:	The Village has implemented the capital improvement plan included in the LTCP. The highest priority capital improvement project identified for CSO abatement and CSO separation began at the end of August 2016 and was completed on 8/29/2018. The project was to diminish excess inflow and infiltration into the system. In addition, in 2017, the Village began the WWTF influent pumping station improvement projects. The project was to replace the existing submersible pumps that were online with above-ground pumps. The completed project now allows the pump stations to pump approximately 0.5 MGD more than the old pumping systems. The Village, starting in 2017, began an inflow and infiltration study. The Village also continues to follow its maintenance and inspection plan, which is minimizing the frequency and intensity of CSO events since its implementation. In 2021, the Village continued prioritizing construction to reduce and eliminate unpermitted manhole SSOs. In 2020, the Village completed a long-term I/I study, which is still pending approval by the NYS Environmental Facilities Corporation. By January 2022 the Village submitted plans and specifications for the Dorwin St. Phase II project, which were approved in May 2022; construction was expected to begin summer 2022.	

Facility Info: City of Hudson		SPDES Permit #: NY0022039			Plant Flow: 2.8 MGD
			Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:		9	6	6
	Percentage of collection system that is combined:		70	69	70
	Length of CSS (miles):		-	-	20
	Average annual CSO events:		15	13	35
	Average annual CSO volume (MG):		-	-	42.8
	Population served by collection system:		6,700	6,700	6,700
	Number of satellite system connections:		-	-	-
Measurement Type for CSO Volume Discharges:	Metered at Outfalls 02A, 02B, and 005. Outfalls 003 & 006 are monitored by tattletale flow detectors.				
CSO Abatement Approach:	Presumptive Approach				
	Receiving Waterbody	**PWL No.**	**Waterbody Classification**	**Impaired (Y/N)**	**No. of CSO Outfalls**
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0276	A	Y	5
	Underhill Pond	1301-0224	B	N	1

Facility Info: City of Hudson	SPDES Permit #: NY0022039	Plant Flow: 2.8 MGD
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Hudson is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs and metals (cadmium) caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Recreation due to pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0276.html The segment of Underhill Pond receiving CSO discharges from the City of Hudson is unassessed and no information related to water quality is available.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 4/13/2009 based on Presumptive Approach. LTCP Findings and Recommendations: Recommended plan included expansion of the primary treatment capacity of the sewage treatment plant on North Front St. to l6.9 MGD. The primary clarifiers of the treatment plant already have this capacity based on Ten States Standards. The plan also recommended expansion of the South Front St. Pump Station capacity to 3,500 gallons per minute (GPM). It is anticipated that the existing force main would be able to accommodate this additional flow; however, lining of a 16-inch diameter gravity sewer leading to the South Front St. Pump Station to increase its capacity to at least 3,500 GPM would be required. Approved Controls Include: Recommended plan was approved.	
PCCM: *Status*	The permittee has not submitted a PCCM Plan. However, the permittee claimed that only Outfalls 02A, 02B, and 005 currently have SCADA capability with 24-hour monitoring.	
Implementation Status:	The South Front St. Pump Station has been upgraded to convey up to 3,500 GPM to the WWTP, and improvements to the WWTP have been made to accommodate treatment of 16.9 MGD through the primary treatment process. The facility is further configured to direct 6.0 MGD to the secondary treatment process while any volumes over 6.0 MGD and up to 16.9 MGD are directed to a disinfection process and then discharged to the Hudson River. The upgrades to the facility were completed in 2011 and convey a minimum of 85% of the wet weather flow to the WWTP for primary treatment and disinfection prior to discharge, with the facility providing primary treatment and disinfection of all flows up to 16.9 MGD at the WWTP and capable of providing secondary treatment and solids handling for the first 6.0 MGD received at the WWTP. In the spring of 2018, the City of Hudson started construction of a project to incorporate GI within the CSO area. The City intends to replace catch basins with tree planters to reduce flow to the CSS by infiltration and separate the remainder into a dedicated storm line. The City is also currently separating 1,000 LF of combined sewer into separate storm and sanitary mains, with anticipated future phases to continue separation. In 2020, the City started construction to upgrade two pump stations (Power Ave. and Mill St.) that is anticipated to eliminate CSO events at Outfall 007. This project was completed in 2021, and the City replaced and upgraded pumps to convey additional flow to the WWTP and add a backup generator, Variable Frequency Drives (VFDs), and SCADA monitoring. In 2021, the City reapplied for additional grant funding for the large separation project. The City also increased the weir height at Cross St. and installed new storm lines on Front St. and State St.	

Facility Info: Village of Johnson City		SPDES Permit #: NY0023981			Plant Flow: N/A
			Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:		2	2	2
	Percentage of collection system that is combined:		30.0	6.7	6.7
	Length of CSS (miles):		18	4	4
	Average annual CSO events:		N/A	N/A	7
	Average annual CSO volume (MG):		N/A	N/A	29.175
	Population served by collection system:		15,535	15,174	15,174
	Number of satellite system connections:		7	7	7
Measurement Type for CSO Volume Discharges:	Metered				
CSO Abatement Approach:	Presumptive Approach				
	Receiving Waterbody	**PWL No.**	**Waterbody Classification**	**Impaired (Y/N)**	**No. of CSO Outfalls**
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Little Choconut Creek	0603-0017	C	N	1
	Susquehanna River	0603-0002	A	Y	1

Facility Info: Village of Johnson City	SPDES Permit #: NY0023981	Plant Flow: N/A
Additional Waterbody Information:	The segment of the Little Choconut Creek receiving CSO discharges from the Village of Johnson City is possibly stressed for Aquatic Life and Habitat/Hydrology. This assessment needs further verification. Additional information for this segment of Little Choconut Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0603-0017.html. The segment of the Susquehanna River receiving CSO discharges from the Village of Johnson City is impaired for Recreation, Aquatic Life, and Fish Consumption. This segment is not listed on the NYS 2018 303(d). The Recreation and Aquatic Life use impairments are caused by excess nutrients and low DO due to municipal contributions from the Binghamton-Johnson City WWTP. The Binghamton-Johnson City WTTP was reconstructed due to damage from extreme flooding caused by Tropical Storm Lee (2011). Construction was completed in 2020 and as a result, water quality is expected to be restored. The Fish Consumption impairment is addressed through a TMDL (EPA's Northeast Mercury TMDL, 2007) which was developed to address atmospheric deposition of mercury in New York State waterbodies. Additional information for this segment of the Susquehanna River can be found at https://www.dec.ny.gov/data/WQP/PWL/0603-0002.html
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The Village owns and maintains the CSS, trunk lines, and CSO facilities which are tributary to the Binghamton-Johnson City Joint WWTP. The Village entered a Consent Order (R7-0589-90-12) to address the CSO discharges from its systems. Subsequently, on 2/29/1999, the permittee submitted a CSO Monitoring/Surveillance Report which DEC approved. The engineering report for the CSO improvements (Floatable Control Facilities) was submitted on 5/10/2001 and approved 11/29/ 2001. Recommended Approach to Control CSO Discharges: Recommended controls include installation of flow meters to monitor sanitary sewage flows and to allow determination of the total flow from the Village to the Binghamton-Johnson City Joint Sewage Treatment Plant (BJCSTP), raising the top of overflow structure of JC CSO 001 to allow access during the annual high river stage, providing an access roadway to JC CSO 001 to allow access for maintenance of the CSO structure during annual high river stage, and replacing existing flap gates with new duckbill (elastomeric) valves to prevent river flow back into the SSS. Approved Controls Include: Proposed controls were approved.
PCCM: *Status*	The CSO-LTCP Post-Construction Monitoring Plan Final Report was completed February 2011. During 2010, water quality sampling occurred. The next round of sampling was scheduled for 2015. However, with the ongoing upgrades to the BJCSTP the next round of sampling will be performed the year after the upgrades are completed. After the 2011 flood, the CSO control facilities were reconstructed, and flow meters were installed in the channels that convey flows to BJCSTP and to the river. This allows for a calculation of percent of flow that is captured and conveyed to BJCSTP. Based on data from the flow meters, 98.7% of the flows were captured and conveyed to BJCSTP during 2017. Reassessment PCCM sampling was conducted in 2020 but was extended into 2021 to capture water quality data following completion of the BJCSTP construction.
Implementation Status:	On 10/1/2013, the Village adopted a Capacity, Management, Operations, and Maintenance Plan with one of the requirements being to perform internal CCTV inspections of 2% of the collection system or approximately 10,000 feet per year. In 2017, the Village inspected 10,339 feet of the collection system in 8 streets. In 2018, the Village replaced 562 feet of cracked and broken clay pipe with PVC pipe, which eliminated sources of infiltration. The Village also undertook a storm/sanitary sewer separation project on Grand Ave., between Willow St. and Cook St. This included disconnecting two roof leaders from the SSS. SUNY Binghamton performed a redevelopment project at 96 Corliss Ave., which included separating the site's storm sewer from the Village SSS and removing a portion of the Willow St. stormwater from the SSS. The roof leaders from the Johnson City Library were discovered to be connected to the SSS and were disconnected. The Village continues to perform internal inspections of the sanitary sewer lines prior to all street reconstruction and repaving projects to determine if pipes, manholes, and laterals require replacing. In 2020, additional separation was completed (approximately 0.2 acre), along with PipeLogix inspection of 9,951 LF of sewer, replacement of 300 LF of broken pipe, and continuation of work to locate and map the Village's collection system into the Village's Water Point Network Software. In 2021, the Village completed a storm/sanitary sewer separation project, resulting in the separation of approximately 0.13 miles of combined sewer. Approximately 9,798 LF of sewer were televised and over 1,000 LF of clay sewer were replaced. Since 2014, approximately 94,465 LF of pipe have been inspected.

Facility Info: City of Kingston	SPDES Permit #: NY0029351	Plant Flow: 6.8 MGD

		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	4	4	4
	Percentage of collection system that is combined:	35	35	60
	Length of CSS (miles):	28	28	28
	Average annual CSO events:	85	85	95
	Average annual CSO volume (MG):	29.07	144.9	183.9
	Population served by collection system:	28,000	28,000	24,000
	Number of satellite system connections:	1	1	2

Measurement Type for CSO Volume Discharges:	Modeled and each CSO metered with SmartCovers
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Rondout Creek	1306-0030	C	N	4

Additional Waterbody Information:	The segment of the Rondout Creek receiving CSO discharges from the City of Kingston is unassessed and no current water quality information is available.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Final CSO LTCP was approved on 11/23/2011 based on Presumptive Approach. LTCP Findings and Recommendations: Out of the 4 remaining CSO outfalls, study found out that the Hasbrouck CSO generates 92% of the CSO volume typically discharged. Recommended Approach to Control CSO Discharges: Recommended controls include upgrades of the Hasbrouck regulator and removal of I/I in the system. Upgrade the regulator to eliminate the need for daily maintenance in the prevention of dry weather overflows, provide direct measurement of CSO discharges, and modulate the dry weather discharge to maximize flow to the WWTF. Conduct PCCM to verify controls effectiveness. Storage tank is conditional based on PCCM results. Approved Controls Include: Recommended controls were approved.
PCCM: *Status*	Permittee reported that a SMART technology was installed at all CSO outfalls to measure time of day, flow volume and duration, and frequency of events. PCCM sampling was completed in the fall of 2014 and again in summer 2019. Permittee reported in each assessment that sampling results showed no WQS exceedances in the Rondout Creek. PCCM expected to be reassessed again in 2024.
Implementation Status:	For maximum use of collection system for storage, the City uses pump station wet wells; stores sewage within the sanitary sewerage collection system; regularly adjusts regulators and weirs; and regularly cleans and inspects collection system, removing flow restricting sediment and debris. To maximize flows to POTW, the City upgraded the CSO regulator to Old Hasbrouck Ave. by replacing the regulator controls consisting of a float and guide assembly to control influent flows, and anti-vortex fixed-plate orifice at the outlet, with an influent flow sensing regulator gate with WWTP influent channel flow level feedback. All CSO outfalls (except Outfall 007) use mechanical screening for the removal of solids and floatables. Additional in-line storage is available at the Wilbur Ave. Pretreatment Pump Station (approx. 192,000 gallons). Permittee estimates 96.4% capture in 2019 and 94.39% in 2020. In 2020, the City initiated design of Phase I of the Hasbrouck sewershed separation, which remained in design during 2021. The City issued a Request for Qualifications (RFQ) for Phase II in 2020 and was awarded in 2021, but has been put on hold due to funding issues with Environmental Facilities Corporation (EFC). A portion of the Broadway sewer corridor was smoke tested in 2021 and illegal roof drain connections were disconnected. Separation of three Midtown area combined streets are expected to begin construction in 2022.

Facility Info: City of Little Falls		SPDES Permit #: NY0022403		Plant Flow: 7.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	3	3	3
	Percentage of collection system that is combined:	30	30	30
	Length of CSS (miles):	20	20	20
	Average annual CSO events:	69	49	37
	Average annual CSO volume (MG):	24.8	2.04	0.79
	Population served by collection system:	5,200	5,000	4,900
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Mohawk River	1201-0091	C	Y	3

Additional Waterbody Information:	The segment of the Mohawk River receiving CSO discharges from the City of Little Falls is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additional information for this segment of Mohawk River can be found at https://www.dec.ny.gov/data/WQP/PWL/1201-0091.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	LTCP was approved on 11/23/2005. LTCP Findings and Recommendations: The LTCP concluded there were negligible effects of CSO discharges on receiving water background loadings. The plan met the Presumptive Approach based on the projected annual capture of over 99% of wet weather flows. The City implemented extensive sewer separation projects in the mid-1940s which reduced the CSS areas and ultimately reduced CSO volumes to the Mohawk River. Recommended Approach to Control CSO Discharges: Because there were no water quality issues due to the remaining CSO discharges, no additional controls were recommended. However, the plan recommended that the City should continue to monitor and maintain its sewer system in accordance with its current SPDES requirements. Continued focus on implementing and improving its BMP program should be made. Approved Controls Include: Continued implementing the CSO BMPs in the permit.
PCCM: *Status*	The PCCM Plan was approved 12/1/2014. Sampling and assessment are conducted annually for several pollutants, including Biochemical Oxygen D (BOD), Total Suspended Solids (TSS), nitrogen family, fecal coliform, and E. Coli. The 2019 PCCM results were submitted with the CSO BMP Annual Report in January 2020. The results show attainment with all pollutants, except pathogens. Due to a limited set of sampled events, it cannot be determined that CSO events are not contributing to pathogens in the receiving water, but they may not be the only source. Additional PCCM sampling was performed in 2021, consisting of two dry weather events and three wet weather events. Three CSO events were captured. Fecal coliform and suspended solids results appear to show significant increases during wet weather conditions, while all other sampled pollutants were minimal or non-detect. DEC recommended that the PCCM sampling period be expanded or adjusted to capture more CSO events.
Implementation Status:	The objectives of the EPA CSO Control Policy have been met by reducing overflows at the CSOs with the use of the collection system as storage during wet weather and achieving greater than 85% capture of wet weather flows. In 2006, the City attempted to further increase collection-system capacity by raising weir heights; however, this resulted in basement backups and the weir adjustments were reverted. The City has completed all approved projects from the LTCP and continues implementation of the CSO BMPs. In 2021, no combined sewer replacements or extensions occurred, however 50–100 manholes and approximately 40% of the interceptor sewer were assessed for vacuuming or cleaning.

Facility Info: City of Lockport		SPDES Permit #: NY0027057		Plant Flow: 22.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	30	12	10
	Percentage of collection system that is combined:	70	70	70
	Length of CSS (miles):	100	100	100
	Average annual CSO events:	72	26	17
	Average annual CSO volume (MG):	10.37	12.2	22.628
	Population served by collection system:	-	32,000	25,000
	Number of satellite system connections:	-	12	12

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Eighteen Mile Creek Tributary	0301-0058	D	N	5
	NYS Barge Canal	0102-0044	C	N	5

Facility Info: City of Lockport	SPDES Permit #: NY0027057	Plant Flow: 22.0 MGD
Additional Waterbody Information:	The segment of the Eighteen Mile Creek Tributary receiving CSO discharges from the City of Lockport is unassessed and no additional water quality information is available. The segment of the NYS Barge Canal receiving CSO discharges from the City of Lockport is unassessed and no additional water quality information is available.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The City of Lockport submitted a final CSO LTCP on 10/25/2011. DEC approved the final LTCP on 3/12/2012. LTCP Findings and Recommendations: The report concluded that CSO controls implemented by the City of Lockport since the year 2000 had effectively reduced CSOs and that the reduced volume and frequency of CSOs were not causing water quality violations. The City determined that about 99% of the wet weather flow was being captured, which supports the presumption that WQS are being met. Recommended Approach to Control CSO Discharges: The CSO controls implemented by the City include sewer separation, overflow weir modification, and sewer repair and replacement. The plan recommended continued implementation of the CSO BMPs. Approved Controls Include: DEC concurred with and approved the recommended approach.	
PCCM: *Status*	The PCCM Plan was submitted on 10/1/2010 and was approved on 3/11/2013. PCCM sampling was conducted in April and May of 2014 in accordance with the approved PCCM Plan. The monitoring results, summarized in a report to the DEC dated 6/10/2013, indicated attainment of the water quality goals.	
Implementation Status:	In 2017, the City continued to regularly inspect CSOs. The City purchased and installed automated meters for real-time monitoring in fall 2017 and is using NY-Alert to report overflow events. The City has performed video inspections and cleaning of more than 14,200 feet of the sewer collection system. Several holes and broken segments were found and repaired. Approximately 2,300 feet of sewer were cured-in-place piping (CIPP) lined in 2017. In 2018 the City implemented the storm sewer separation on High St., and further evaluated the sewer system using grant funds awarded in 2016 and 2017. In 2019, the City continued investigation of potential CSO adjustments and modifications, including raising of weirs at Outfalls 019 and 034. Ongoing collection-system monitoring for Outfalls 023 and 034 may lead to future closure. The City also spent $1.2M on WWTP and sewer rehab, inspections, and upgrades. Approximately 4,700 LF of sewer was televised and cleaned. In 2020, the City submitted a grant application for an I/I study (flow monitoring and CCTV). The City did receive funding for a separate project, for a study of Outfall 014, the most active CSO. This study was completed in 2021. The City also completed primary clarifier repairs in July 2020 and conducted CCTV inspection and clearing of 3,200 LF of sewer in 2020. In 2021, design was completed for the Gulf Interceptor diversion project that relocated and upsized an existing sewer line to increase conveyance of CSS flows. The City has applied for an Energy Efficiency grant to replace existing monitoring equipment and purchase additional monitors for the anticipated Gulf Interceptor project. In 2021, the City purchased new outfall meters and installed or replaced CSO outfalls signs for six CSO outfalls. In 2022, the City plans to separate 1.1 miles of sewer and complete installation of UV at the WWTP.	

Facility Info: Village of Massena		SPDES Permit #: NY0031194		Plant Flow: 13.5 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	-	14	10
	Percentage of collection system that is combined:	100	100	100
	Length of CSS (miles):	55.2	55.2	55.2
	Average annual CSO events:	-	5	0
	Average annual CSO volume (MG):	-	12.96	0
	Population served by collection system:	-	-	-
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Estimated, WWTP Bypass & ORF are metered/calculated
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Grasse River	0904-0008	B	N	4
	Grasse River	0904-0009	B	Y	2
	Raquette River	0903-0059	B	Y	4

Facility Info: Village of Massena	SPDES Permit #: NY0031194	Plant Flow: 13.5 MGD
Additional Waterbody Information:	The Village of Massena discharges to two separate segments of the Grasse River. The segment of the Grasse River (0904-0008) receiving CSO discharges from the Village of Massena is stressed for Aquatic Life and Recreation due to nutrients caused by agriculture. Additional information for this segment of Grasse River can be found at https://www.dec.ny.gov/data/WQP/PWL/0904-0008.html. The other segment of the Grasse River (0904-0009) receiving CSO discharges from the Village of Massena is listed on the NYS 2018 303(d) as precluded for Fish Consumption due to PCBs caused by contaminated sediment. Additional information for this segment of Grasse River can be found at https://www.dec.ny.gov/data/WQP/PWL/0904-0009.html. The segment of the Raquette River receiving CSO discharges from the Village of Massena is listed on the NYS 2018 303(d) as impaired for Public Bathing and Recreation due to pathogens caused by municipal contributions and on-site septic system. Additionally, the segment of the Raquette River is stressed for Fish Consumption and Aesthetics due to PCBs and nutrients caused by contaminated sediment and agricultural contributions. Additional information for this segment of Raquette River can be found at https://www.dec.ny.gov/data/WQP/PWL/0903-0059.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 2/3/2009 based on Presumptive Approach. LTCP Findings and Recommendations: The Village's CSS captures and conveys 98% of the combined sewage during the average annual precipitation year. The CSS, at the time of these findings, complied with the Presumptive Approach of the EPA's CSO Control Policy. However, the report recommended that if the Village extends sewers, and the assessment or determination indicates a potential for the additional sewage to substantially increase frequency or pollutant load, then the Village is obligated to offset the increased flows, pollutant loads, and minimize water quality impacts. Recommended Approach to Control CSO Discharges: The facility is currently meeting the Presumptive Approach by capturing and treating 98% of the combined sewage flow during the average annual year. Approved Controls Include: DEC approved the recommended approach.	
PCCM: *Status*	The permittee has submitted a PCCM Plan on 1/28/2011. PCCM sampling was done in 2010 and 2015. The conclusion of the plan was that Grasse and Raquette rivers are in compliance with WQS for fecal coliform bacteria. PCCM sampling was conducted in 2020; however, only two CSO events occurred, and neither were captured during the PCCM period (July–October). DEC recommended extending or adjusting the PCCM period in subsequent years to attempt to capture CSO events. Samples were collected upstream, downstream, and in between CSOs on each receiving water. The report infers the clear presence of other wet weather sources causing pollutant loads through the City.	
Implementation Status:	To maximize flows to the treatment plant, the permittee has completed several projects, including interceptor rehabilitation, a pump station upgrade, raising weirs, and sewer cleaning. These efforts plus a new ORF have increased peak flow to WWTP headworks capacity to nearly 10.4 MGD, and secondary treatment capacity to between 6.8– 9.5 MGD. The permittee also completed several sewer separations projects to reduce hydraulic loading on the SSS, including an increase to the size of the Route 37 sewer interceptor and pump station. The Village is planning to update the mapping of the CSS on GIS and make changes to the collection system. These changes will reduce bottlenecks and continue to remove cross-connections as they become available on other projects. In 2020, Outfalls 007 and 009 were both eliminated. The Village also changed the invert elevation of manhole 44AD to reduce the number of overflow events and the overflow monitoring method was updated with new permanently mounted units in each manhole. In 2020, the Village replaced or updated all CSO outfall signs. The Village also separated several catch basins from the SSS, resulting in a reduction of 2,400 LF of sewer no longer being combined. In 2021, the Village had a CSO capture rate of 100%. The Village continued removing catch basins connected to the SSS. Facility improvements are ongoing.	

Facility Info: Village of Medina		SPDES Permit #: NY0021873		Plant Flow: 4.5 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	-	-	9
	Percentage of collection system that is combined:	-	-	60
	Length of CSS (miles):	-	-	25
	Average annual CSO events:	-	-	0
	Average annual CSO volume (MG):	-	-	0
	Population served by collection system:	-	-	6,250
	Number of satellite system connections:	-	-	-

Measurement Type for CSO Volume Discharges:	Estimated
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Barge Canal	1301-0074	C	N	3
	Oak Orchard Creek	0301-0005	C	N	2
	Oak Orchard Creek	0301-0014	C	Y	4

Facility Info: Village of Medina	SPDES Permit #: NY0021873	Plant Flow: 4.5 MGD
Additional Waterbody Information:	The segment of the Barge Canal receiving CSO discharges from the Village of Medina is stressed for Recreation, Aquatic Life, and Fish Consumption due to unknown sources. Additional information for this segment of Barge Canal can be found at https://www.dec.ny.gov/data/WQP/PWL/0301-0074.pdf. The segment of Oak Orchard Creek (0301-0005) receiving CSO discharges from the Village of Medina is stressed for Recreation and Aquatic Life due to nutrients caused by CSOs, urban stormwater runoff, and agriculture. Additional information for this segment of Oak Orchard Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0301-0005.pdf. The segment of Oak Orchard Creek (0301-0014) receiving CSO discharges from the Village of Medina is impaired for Aquatic Life due to nutrients caused by agriculture, habitat alteration, and municipal discharges (all suspected). This segment is not listed on the 2018 NYS 303(d); however, it has been recommended to be included in the next 303(d) list. Additional information for this segment of Oak Orchard Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0301-0014.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 8/14/2007 based on Presumptive Approach. LTCP Findings and Recommendations: The Village of Medina indicated that by implementing the CSO BMPs, there have been fewer than four overflow events on annual average. Measures the Village has taken include inspection and maintenance of its permitted CSO locations, inspections for illegal connections to the sewer system, installation of SCADA controls at lift stations to control pumping during wet weather events to maximize storage capacity, reduction of infiltration and inflow into the sewer system, and other measures to eliminate CSO events throughout the collection system. Recommended Approach to Control CSO Discharges: The facility is currently meeting the Presumptive Approach by discharging less than four overflow events on an annual average. The selected controls are to continue with the current practices and reduce CSO discharges. Approved Controls Include: Recommended controls were approved.	
PCCM: *Status*	The permittee has not submitted a formal PCCM Plan to date. The 2021 permit required the development and submission of a PCCM Plan by 12/1/2021.	
Implementation Status:	The Village of Medina typically has no CSO events. There were no CSO events in 2018 or 2019. The last documented CSO event occurred during an extreme rain event in 2006, where 2.5 inches of rain fell in 10 hours. Therefore, the Village claims compliance with the Presumptive Approach criterion for less than four to six events per year. All LTCP projects have been completed, except for PCCM sampling. Since CSO events are infrequent, a modified requirement is being discussed to be included in the next review of the SPDES permit to verify attainment of the receiving water when CSO events occur. The Village is currently completing a significant WWTP upgrade, including new Rotating Biological Contactors (RBCs), the addition of UV disinfection, and the replacement of the bypass microscreens. DEC conducted a CSS/CSO inspection in 2021 and identified the need for replacement of CSO monitoring devices and potential modifications to these devices.	

Facility Info: Monroe County – Frank E. Van Lare STP		SPDES Permit #: NY0028339		Plant Flow: 135.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	-	20	20
	Percentage of collection system that is combined:	-	100	100
	Length of CSS (miles):	-	736	736
	Average annual CSO events:	-	3	11
	Average annual CSO volume (MG):	-	69	259.46
	Population served by collection system:	-	-	749,600
	Number of satellite system connections:	-	29	29

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Genesee River	0401-0001	B	Y	16
	Irondequoit Bay	0302-0001	B	Y	3
	Irondequoit Creek	0302-0024	B	N	1

Facility Info: Monroe County – Frank E. Van Lare STP	SPDES Permit #: NY0028339	Plant Flow: 135.0 MGD
Additional Waterbody Information:	The segment of the Genesee River receiving CSO discharges from the Monroe County – Frank E. Van Lare STP is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs and pesticides caused by toxic or contaminated sediment. Additional information for this segment of Genesee River can be found at https://www.dec.ny.gov/data/WQP/PWL/0401-0001.html. The segment of the Irondequoit Bay receiving CSO discharges from the Monroe County – Frank E. Van Lare STP is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs and pesticides caused by toxic/contaminated sediment. Additional information for this segment of Irondequoit Bay can be found at https://www.dec.ny.gov/data/WQP/PWL/0302-0001.html. The segment of Irondequoit Creek receiving CSO discharges from the Monroe County – Frank E. Van Lare STP is stressed for Fish Consumption, Recreation, and Aquatic Life due to nutrients caused by urban stormwater runoff. Additional information for this segment of Irondequoit Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0302-0024.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	No formal LTCP was developed. A deep rock tunnel system[9] was installed by the facility and began operation in the early 1990s before the EPA CSO Control Policy was developed. This tunnel system, with 175 MG of storage capacity, intercepts combined sewage via drop shafts from the surface collection system and stores the combined sewage until the WWTF can provide treatment.[10] LTCP Findings and Recommendations: Initial findings and recommendations are listed in a CSO Abatement Program document. However, the County began assessing CSO problems in 1972 by conducting a detailed review of the operation of both the overflow system and the 1968 Comprehensive Sewerage Study, which was commissioned by the county. Those reviews confirmed the problems were due to a CSS that conveys both stormwater and sanitary sewage in a single pipe that became overloaded. Overflow points were established in the system to relieve the overloaded condition during rainstorms to prevent sewage from backing up into homes. The report also indicated that most of these overflow points discharged untreated sewage to the Genesee River, in addition to overflows to Irondequoit Bay and the Barge Canal. Recommended Approach to Control CSO Discharges: Following a series of engineering studies, it was recommended to construct a storage/conveyance tunnel system, which was completed in 1975. The facility is currently meeting the Presumptive Approach by accepting and treating up to 97% of wet weather flows. Approved Controls Include: See the CSO Abatement Program website https://www.erdmananthony.com/Our-Projects/project/493.	
PCCM: *Status*	Monroe County reported that rain gauges are strategically located throughout the county and each gauge site has real-time communication using our Citect SCADA System. A PCCM program was implemented following completion of the CSO Abatement Program Tunnel and results were reported following 10 consecutive wet weather events. The results show that the receiving waters are in attainment. It is expected this is primarily due to the size of the receiving water and the ability for the tunnel to capture the "first flush" of flows during wet weather.	
Implementation Status:	The County has long since completed the projects in the approved LTCP, including significant tunnel storage. The County estimates that in 2019 it attained 99.4% capture. In 2019, there was only 1 CSO event from Outfall T003, while over 235,000 LF of main sewer was inspected and over 163,000 LF of sewer was cleaned. The County continues to investigate additional controls, including new floatables controls at additional structures, and upgrades or replacement of hydraulic lines, actuators, gates, and controls. In 2020, the County estimated 99.24% capture and only 4 events of discharge from the CSO tunnels. The County continues to optimize the in-line storage by raising weirs at system relief points and removing grit from grit chambers/CSO structures. The County cleaned 123,000 LF of sewer and 660 catch basins, repaired an addition 240 catch basins, and inspected 164,000 LF of sewer in 2020. In 2021, the County cleaned 174,636 LF and inspected 227,800 LF of sewer main. The County cleaned 763 catch basins, repaired 27 sewers and 248 catch basins. The gate actuator replacement at Culver Atlantic Control site and Malvern structure and hydraulic replacements at Front St. have been completed.	

[9] See https://www.monroecounty.gov/des-purewaters
[10] See Combined Sewer Abatement Program, Rochester NY, Volume 1 Abatement Analysis, EPA-600/2-79-031a, July 1979: http://goo.gl/Unpn48

Facility Info: City of Newburgh		SPDES Permit #: NY0026310		Plant Flow: 9.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	13	13	13
	Percentage of collection system that is combined:	67	<67	78.9
	Length of CSS (miles):	69	69	44.81
	Average annual CSO events:	47	-	44
	Average annual CSO volume (MG):	185	-	87.07
	Population served by collection system:	59,034	59,034	59,034
	Number of satellite system connections:	4	4	4

Measurement Type for CSO Volume Discharges:	Flow meter for CSO 001 & SmartCover monitors at all other CSOs
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0003	B	Y	12
	Quassaic Creek	1301-0079	C	N	1

Facility Info: City of Newburgh	SPDES Permit #: NY0026310	Plant Flow: 9.0 MGD
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Newburgh is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Recreation due to pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0003.pdf. The segment of the Quassaic Creek receiving CSO discharges from the City of Newburgh is stressed for Recreation and Aquatic Life due to pathogens and nutrients caused by CSOs and urban stormwater runoff. Additional information for this segment of the Quassaic Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0079.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The final LTCP was approved on 1/5/2016 based on Presumptive Approach of 85% volume capture. LTCP Findings and Recommendations: LTCP Report indicated that sampling data did not show impacts of CSO discharges on the receiving waters. Other findings showed cross-connections between combined sewers and storm sewers. LTCP Report recommendations are as follows: Sewer separation will be included in the vicinity of Liberty St. and Grand St. and along South Water St. between Washington St. and South Williams St. These projects will reduce combined sewage flows that contribute to CSO discharges from Regulators #8 and #6. Centralized treatment will consist of a new CSO deflection screen and tipping weir to regulate flows to the WPCP, retention of solids in the influent flow to the WPCP, and disinfection of the CSO with a new outfall to the Hudson River adjacent to the WPCP. Additionally, the existing integral grinders and screens located in the headworks of the WPCP will be replaced with new mechanical bar screens with half-inch spacing that are designed for CSO applications. Permittee believes the recommended alternatives will increase the conveyance system capacity to achieve at least 85% capture overall due to proposed upgrades adding 31 MGD of wet weather treatment capacity. Recommended Approach to Control CSO Discharges: The approved LTCP implements the work in a phased approach that focuses on improving the performance of the combined sewer system, conveyance capacity of the sewer, and treatment capacity of the plant. Most of the projects will be completed within 10 years. Once the LTCP is fully implemented, the City of Newburgh will be able to capture more than 85% of the CSO volume and treat it for bacteria and sewage-related floatable waste. Approved Controls Include: All recommendations and control options were approved, and the schedule is enforced, by Order on Consent R3-20100107-17.	
PCCM: *Status*	The City has an approved PCCM Plan outlined in the adopted LTCP. This PCCM will be implemented after completion of the phased projects listed in the CSO LTCP Schedule of Compliance.	
Implementation Status:	The City of Newburgh's LTCP includes a CSO Schedule of Compliance which outlines a phased program of infrastructure projects that will be implemented by the City. The program includes implementation of GI to mitigate CSOs, sewer separation, regulator upgrades, installation of new interceptor sewers, installation of a new HRD facility at the WWTP, and installation of new bar screens at the headworks of the WWTP. The final LTCP phase is expected to be completed by 12/31/2030. In 2019, the City replaced the outfall pipe from Regulator #10 to CSO Outfall 012, completed Regulator #2 upgrades (new WWTP influent flow meter), and developed plans for a WWTP headworks upgrade. In 2020, the City replaced all CSO outfall signs, continued SmartCover flow sensor upgrades, and began planning for future significant projects (relocation and reconstruction of North Interceptor, reconstruction of Dubois St. and Grand St., sewer separation of Water St., and installation of disinfection at the WWTP). The City also revised several City codes to allow for improved GI/streetscape projects and received approval for a relief sewer project to reduce CSOs. The City implemented an auto-notification website to alert industrial dischargers when a CSO event is occurring, for when SIUs are prohibited from discharging to the City system. In 2021, the City completed the plans/specs for the new drain outlet on Downing Pond project, the North Water St. separation project, and the North Interceptor Improvements project. The planning phase for the disinfection and floatables control facility was also completed. For 2022, the City plans to complete construction of Downing Pond outlet, begin construction for the North Water St. separation, and develop plans/specs for the disinfection and floatables control facility. The city purchased a new, larger vacuum truck in 2020 (estimated delivery 2022), which will allow for increased sewer cleanings.	

Facility Info: Niagara Falls Water Board		SPDES Permit #: NY0026336		Plant Flow: 48.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	8	6	6
	Percentage of collection system that is combined:	65	65	65
	Length of CSS (miles):	280	280	280
	Average annual CSO events:	69	-	44
	Average annual CSO volume (MG):	253	-	102.8
	Population served by collection system:	50,000	50,000	50,000
	Number of satellite system connections:	1	1	1

Measurement Type for CSO Volume Discharges:	Metered Outfalls 003 and 006. Other outfalls are inaccessible.
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Niagara River	0101-0006	A-Special	Y	6

Facility Info: Niagara Falls Water Board	SPDES Permit #: NY0026336	Plant Flow: 48.0 MGD
Additional Waterbody Information:	The segment of the Niagara River receiving CSO discharges from the Niagara Falls Water Board is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by toxic/contaminated sediment. Additional information for this segment of Niagara River can be found at https://www.dec.ny.gov/data/WQP/PWL/0101-0006.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was approved on 4/21/2008, based on the Presumptive Approach. LTCP Findings and Recommendations: Plan revealed that the existing flow capture of 88% exceeds the requirement under the Presumptive Approach. Recommended Approach to Control CSO Discharges: Recommended plan included continuation of CSO BMP implementation, especially weir adjustment at the Gorge Pump Station and Garfield Tunnel, and elimination of Bath and Walnut outfalls. Approved Controls Include: Removal of flow bottleneck near Outfall 005 by installing a new manhole next to Drop Shaft 3 to divert flow from the Walnut intercepting chamber and into the drop shaft; installing baffles along the approach channel in the Gorge Pump Station to capture floatables during overflow events; isolating Outfall 008 and diversion chamber from the CSS; modifying weirs in the structure to direct less stormwater flow to the Gorge interceptor; increasing stormwater flow to Outfall 010; installing of a new weir to decrease the volume of the water discharged via Outfall 011 during overflow events; and maximizing storage in the Garfield Tunnel.	
PCCM: *Status*	The PCCM Plan was submitted on 10/1/2010 and approved on 3/11/2013. Post-construction water quality monitoring demonstrating objective attainment was submitted on 6/10/2013. A reassessment was conducted in 2018, submitted on 02/04/2019, and showed that the receiving water was in attainment. It is expected that the Niagara River will continue to exhibit attainment due to its size and the relative volume of CSO discharges. PCCM monitoring continues in years ending in 3 and 8.	
Implementation Status:	All projects approved under the LTCP have been completed. To maximize the use of collection system for storage, the WWTF operations staff controls the wastewater treatment plant main pumps to maintain the influent level at a predefined range level in the main wet well. This maximizes conveyance to the treatment facility as well as maximizing the storage capacity of the interceptor to delay overflow to the Falls St. Tunnel (FST) at Regulator 6C for as long as possible during a wet weather event. Also, the permittee reported that several catch basin restrictors were installed in various parts of the CSS. These devices slow the rate at which street runoff enters the sewers by creating temporary storage within the catch basin and along adjacent curbs. In 2019, the Water Board reported several instances of dry weather overflows from the Gorge St. Pump Station, which are partially connected to ongoing SSO issues with bottlenecks and the need for additional wet well volume. In fall 2020, the Gorge St. Pump Station began rehabilitation to replace the 1992 pumps and upgrade support systems. As part of this rehabilitation, Outfall 003 flows from the Fall St. Tunnel were diverted to the Gorge St. Pump Station for discharge at Outfall 006.	

Facility Info: City of Ogdensburg	SPDES Permit #: NY0029831			Plant Flow: 6.5 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	18	17	17
	Percentage of collection system that is combined:	100	97	97
	Length of CSS (miles):	90	87	90
	Average annual CSO events:	42	<42	48
	Average annual CSO volume (MG):	-	-	31.38
	Population served by collection system:	10,937	10,937	10,064
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Observation of debris on weirs
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Oswegatchie River	0905-0110	B	N	9
	Saint Lawrence River	0901-0015	A-Special	Y	8

Additional Waterbody Information:	The segment of the Oswegatchie River receiving CSO discharges from the City of Ogdensburg has no known water quality impacts. Additional information for this segment of Oswegatchie River can be found at https://www.dec.ny.gov/data/WQP/PWL/0905-0110.pdf. The segment of the St. Lawrence River receiving CSO discharges from the City of Ogdensburg is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to pesticides (mirex), PCBs, and priority organics (dioxin), caused by toxic/contaminated sediment. Additional information for this segment of St. Lawrence River can be found at https://www.dec.ny.gov/data/WQP/PWL/0901-0015.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Final CSO LTCP was approved on 7/26/2012 based on Presumptive Approach. LTCP Findings and Recommendations: Initial findings indicated that the mean fecal coliform is slightly above WQS at the upstream location of St. Lawrence River which is likely due to CSO discharges. Plan showed that percent capture from CSO discharges to Oswegatchie River was 90%, and percent capture to St. Lawrence River was 75%. Recommended Approach to Control CSO Discharges: Recommended approach is to increase the capture rate to meet the Presumptive Approach for CSO requirements. This approach includes a combination of controls, including sewer separation along Paterson St.; GI projects; optimization of capture rate through weir modifications; hydraulic improvements; and installation of an 800,000-gallon storage facility for CSOs 001 and 002. Approved Controls Include: The recommended controls were approved following a revised LTCP that included a discussion on a PCCM plan.
PCCM: *Status*	The PCCM plan was required to be developed and submitted by 7/10/2020, following construction completion of the 0.8 MG CSO storage facility. This has been completed and the PCCM Plan is expected to be developed and implemented by 12/31/2022. PCCM sampling will occur following approval of the PCCM Plan.
Implementation Status:	The Paterson St. sewer separation project and various CSO modifications were completed in 2016. This work aligns with the approved July 2012 LTCP. An Order on Consent (R6-20170602-27) was executed in 2017 and amended in 2019, which extended the construction timeline of the storage facility. The 800,000-gallon CSO equalization tank has been constructed. The additional pump station within the collection system has also been constructed. Completion of all construction is due, in accordance with the Order, by 12/31/2022.

Facility Info: Onondaga County - Syracuse Metropolitan WWTP		SPDES Permit #: NY0027081		Plant Flow: 84.2 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	72	46	46
	Percentage of collection system that is combined:	99.5	88.5	34
	Length of CSS (miles):	-	-	160
	Average annual CSO events:	-	-	55
	Average annual CSO volume (MG):	-	-	341.6
	Population served by collection system:	147,346	145,170	148,620
	Number of satellite system connections:	-	-	3

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Harbor Brook	0702-0002	B	Y	6
	Harbor Brook	0702-0012	C	N	10
	Ley Creek	0702-0001	C	Y	2
	Onondaga Creek	0702-0023	C	Y	28

Facility Info: Onondaga County - Syracuse Metropolitan WWTP	SPDES Permit #: NY0027081	Plant Flow: 84.2 MGD
Additional Waterbody Information:	The segment of the Harbor Brook (0702-0002) receiving CSO discharges from Onondaga County is listed on the NYS 2018 303(d) as impaired for Public Bathing, Aquatic Life, and Recreation due to aesthetics (floatables), ammonia, nutrients (phosphorus), and pathogens, caused by CSOs, landfill/land disposal., and urban stormwater runoff. Additional information for this segment of Harbor Brook can be found at https://www.dec.ny.gov/data/WQP/PWL/0702-0002.html. The segment of the Harbor Brook (0702-0012) receiving CSO discharges from Onondaga County is unassessed and no further water quality information is available. Additional information for this segment of Harbor Brook can be found at https://www.dec.ny.gov/data/WQP/PWL/0702-0012.html. The segment of the Ley Creek receiving CSO discharges from Onondaga County is listed on the NYS 2018 303(d) as impaired for Public Bathing, Aquatic Life, and Recreation due to other organics (cyanide), aesthetics (floatables), ammonia, and priority organics, caused by CSOs, landfill/land disposal, and urban stormwater runoff. Additional information for this segment of Ley Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0702-0001.html. The segment of the Onondaga Creek receiving CSO discharges from Onondaga County is listed on the NYS 2018 303(d) as impaired for Aquatic Life and Recreation due to pathogens, nutrients (phosphorus), turbidity, silt/sediment, chloride/salts, and aesthetics (floatables), caused by CSOs, urban stormwater runoff, and streambank erosion. Additional information for this segment of Onondaga Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/0702-0023.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The detailed information about the Amended Consent Judgment (ACJ) and Onondaga County's progress on the CSO Abatement Program is available at http://www.ongov.net/wep/. The CSO Abatement Program was set forth in the 2009 ACJ. The ACJ specifies projects and sets milestone dates to complete each project. Also, the ACJ requires Onondaga County to conduct the Ambient Monitoring Program (AMP) to assess the water quality of Onondaga Lake and its tributaries (during both wet and dry weather). The results of these efforts will be used to validate the SWMM model and to ascertain percent capture of stormwater and CSO flows from green and gray technologies up to the design storm. The County and DEC negotiated an Order on Consent that supplanted the ACJ, now that the goals and requirements of the ACJ have been attained. Since the ACJ's AMP has shown that water quality is not being attained, even after significant percent capture, further work is necessary. As part of the Order on Consent Compliance Schedule, the County is required to submit and implement an approvable LTCP. Recommended Approach to Control CSO Discharges: As required by the ACJ, the quarterly reports were submitted and are available at: https://savetherain.us/str-reports/. Under the Order on Consent, the County will submit annual status reports. The County is in compliance with the Presumptive Approach for percent capture, however, water quality is not attained. New projects are to be proposed in the LTCP to be submitted under the Order on Consent. Approved Controls Include: ACJ projects have been completed and DEC is awaiting submission of an approvable LTCP.
PCCM: *Status*	Detailed information about the approved PCCM can be found at http://www.ongov.net/wep/. The AMP required by the ACJ has exhibited the water quality has not been attained in the CSO receiving waters during periods of wet weather. A formal PCCM Plan and recurring monitoring will be required as part of the LTCP.
Implementation Status:	Information regarding the implementation status of the LTCP can be found at http://www.ongov.net/wep/. As of 2019, the County estimates that 97.9% capture is being attained during the typical year and is therefore in compliance with the Presumptive Approach. A new LTCP was submitted on 10/11/2019 to DEC. After several discussions and comments, it was determined that additional time and data collection are necessary to provide a sufficient and approvable LTCP. The County and DEC executed a new Order on Consent in March 2021 that has taken over CSO enforcement, following satisfactory termination of the ACJ in October 2021. The Order requires several signification projects to be conducted over a five-year period, including additional ambient data collection, evaluation of existing CSO controls, and submission of a revised LTCP document. In 2021, the County contracted out two sewer lining projects. The first, on North Salina St. lining 6,200 LF of sewer, and the second, on West Kirkpatrick St. lining 1,300 LF. The regulator at CSO 075 was modified to reduce the frequency of CSO discharges and provide estimated backflow conditions from the Inner Harbor into the combined sewer. All three projects were funded in part via a New York State Empire State Development (ESD) Regional Council Economic Grant that the County obtained.

Facility Info: City of Oswego - East Side		SPDES Permit #: NY0029114		Plant Flow: 5.35 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	6	1	1
	Percentage of collection system that is combined:	Unknown	27	27
	Length of CSS (miles):	Unknown	12.15	12.15
	Average annual CSO events:	10	4	3
	Average annual CSO volume (MG):	Unknown	8.98	2.48
	Population served by collection system:	9,000	9,000	9,000
	Number of satellite system connections:	1	1	1

Measurement Type for CSO Volume Discharges:	Flows are calculated for 002
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Lake Ontario	0303-0017	A	Y	1

Additional Waterbody Information:	The segment of Lake Ontario receiving CSO discharges from the City of Oswego – East Side is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to pesticides (mirex), PCBs, and priority organics (dioxin) caused by toxic/contaminated sediment. Additional information for this segment of Lake Ontario can be found at https://www.dec.ny.gov/data/WQP/PWL/0303-0017.pdf.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The final CSO LTCP was approved on 1/26/2006 based on Presumptive Approach. LTCP Findings and Recommendations: An overflow retention facility already exists at the WWTP upstream of Outfall 003. As a result, the City's collection system was already capturing about 95% of CSO volume, exceeding the requirement under the EPA's Presumptive Approach. Recommended Approach to Control CSO Discharges: Although the permittee is already meeting the Presumptive Approach prior to developing LTCP, additional recommended controls include increasing the capacity at the existing storage tank, pump station upgrades, and an increase in headworks capacity. Approved Controls Include: All recommended controls.
PCCM: *Status*	The PCCM was submitted in September 2012 and was deemed incomplete by DEC in June 2013. A meeting was held with DEC and the permittee on 1/22/2016. PCCM was eventually approved on 3/7/2017.
Implementation Status:	The LTCP has been completed as of the end of 2016. The East Side Sanitary System is 70% separated and all sanitary wastewater is treated at the East Side Treatment Plant.

Facility Info: City of Oswego - West Side		SPDES Permit #: NY0029106		Plant Flow: 12.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	2	2	2
	Percentage of collection system that is combined:	33.4	25	16
	Length of CSS (miles):	15	11.25	8
	Average annual CSO events:	32	10	6
	Average annual CSO volume (MG):	44.60	21.90	9.38
	Population served by collection system:	16,350	16,350	16,350
	Number of satellite system connections:	2	2	2

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Oswego River	0701-0022	C	N	2

Facility Info: City of Oswego - West Side	SPDES Permit #: NY0029106	Plant Flow: 12.0 MGD
Additional Waterbody Information:	The segment of the Oswego River receiving CSO discharges from the City of Oswego – West Side has no known water quality impacts. Additional information for this segment of Oswego River can be found at https://www.dec.ny.gov/data/WQP/PWL/0701-0022.pdf.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The original LTCP plan was not approvable; subsequently, on 3/9/2010, the permittee entered a Consent Decree with the EPA requiring a series of CSO controls to bring the permittee into compliance with the EPA CSO Control Policy. LTCP Findings and Recommendations: Findings included unpermitted wet weather discharges in some parts of the collection system. Facility already has an Excess Flow Management Facility (EFMF) with 0.15 MG capacity. Recommended Approach to Control CSO Discharges: Control approach is presumptive. LTCP plan includes continuation to maintain the EFMF, disinfection, in-line storage, and other BMPs. Approved Controls Include: The Consent Decree mandated a series of controls, including development of a WWTP operation and maintenance program; Oswego Interceptor cleaning; disinfection at the EFMF; catch basin inflow elimination; Capacity Management, Operations, and Maintenance (CMOM); I/I reduction; and flow monitoring.	
PCCM: *Status*	Permittee submitted the PCCM Plan on 9/24/2012. Preliminary monitoring and testing were performed in 2006. Per Consent Decree, a PCCM Plan for follow-up sampling was submitted 11/1/2021. PCCM is scheduled to be complete in 2023.	
Implementation Status:	The LTCP is currently in progress. The Westside Sanitary System has completed 25% of a separation project along with completion of a 25% rehabilitation project. The City is currently working on submission of the CSO Control Report's second 25% plan. The EFMF upgrade has been completed, allowing up to 3.5 MGD to be pumped to the main plant. This project also included a 150,000-gallon capacity for wet weather storage and disinfection. Main plant wet weather capacity upgrade from 8 MGD to 12 MGD has been completed. Combined sewer separation second 25% Phase 2 was completed on 9/25/17. Combined sewer rehabilitation Section 25% Phase 2 was completed on 10/22/2018. Combined sewer separation third 25% Phase 3 and combined sewer rehabilitation third and fourth 25% Phase 3 was completed in 2021. In 2020, the City replaced slide gates to aeration tanks 5 and 6, which allows use of the tanks (0.3 MGD) for wet weather storage, as needed.	

Facility Info: City of Plattsburgh		SPDES Permit #: NY0026018		Plant Flow: 16.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	26	11	11
	Percentage of collection system that is combined:	79	79	79
	Length of CSS (miles):	45	45	45
	Average annual CSO events:	16	5	25
	Average annual CSO volume (MG):	5.49	4.20	4.2
	Population served by collection system:	18,823	18,823	19,750
	Number of satellite system connections:	1	1	1

Measurement Type for CSO Volume Discharges:	Modeled
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Cumberland Bay	1001-0001	B	Y	1
	Lake Champlain	1000-0002	A(T)	Y	1
	Saranac River	1003-0049	C(T)	N	9

Facility Info: City of Plattsburgh	SPDES Permit #: NY0026018	Plant Flow: 16.0 MGD
Additional Waterbody Information:	The segment of Cumberland Bay receiving CSO discharges from the City of Plattsburgh is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by toxic/contaminated sediment. Cumberland Bay is also impaired for Fish Consumption due to mercury caused by atmospheric deposition; however, it is not listed on the 303(d) because a TMDL exists for the pollutant causing the impairment. Additional information for this segment of Cumberland Bay can be found at https://www.dec.ny.gov/data/WQP/PWL/1001-0001.html. The segment of Lake Champlain receiving CSO discharges from the City of Plattsburgh is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs caused by toxic/contaminated sediment. Lake Champlain is also impaired for Fish Consumption due to mercury caused by atmospheric deposition; however, it is not listed on the 303(d) because a TMDL exists for the pollutant causing the impairment. Additional information for this segment of Lake Champlain can be found at https://www.dec.ny.gov/data/WQP/PWL/1000-0002.html. The segment of the Saranac River receiving CSO discharges from the City of Plattsburgh has no known water quality impacts. Additional information for this segment of Saranac River can be found at https://www.dec.ny.gov/data/WQP/PWL/1003-0049.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Final CSO LTCP was approved on 5/11/2011 based on Presumptive Approach. LTCP Findings and Recommendations: Baseline monitoring showed that the permittee was already capturing up to 97.9% of wet weather flows, exceeding the requirements of 85% capture under the Presumptive Approach. This was due to several corrective action projects, including elimination of discharges from manholes. Recommended Approach to Control CSO Discharges: Control approach includes the combination of regulator improvements at CSOs 002 and 007; raising manhole 723; sewer capacity upgrades; a new regulator on the domestic sewer at the Cumberland Ave. Pump Station (CAPS) and CSO 014; upgrade of the regulator pipe and cleaning, televising, and appropriate repair of the interceptor downstream of CSO 020; reactivation of CSO 025 and capacity upgrades to sewers throughout MacDonough Park; installation of a new influent meter at the WPCP; and provisions for connecting a portable generator at the U.S. Ave. Pump Station for CSO 029. Approved Controls Include: All recommended controls were approved.	
PCCM: *Status*	A PCCM Plan was submitted in 2014 which describes WQS and uses of receiving waters and summarizes the Sampling Program and Procedures for those receiving waters to meet the objectives of the EPA CSO Control Policy. The PCCM Plan was approved on 5/8/2017. Sampling is conducted annually, with results submitted for 2016–2019 thus far.	
Implementation Status:	The City is in compliance with the Presumptive Approach, with greater than 85% capture being achieved. The annual PCCM results appear to be exhibiting attainment of water quality. The final LTCP project to be completed is the Cumberland Ave. Pump Station, which is currently ongoing. This project involves reconstruction of the pump station and separation of industrial wastewater from sanitary wastewater tributary to the pump station and Outfall 014. City installed new CSO outfall signs in 2019 and five new remote CSO monitors (from 2019–2020), to accurately report CSO events and volumes. The City also submitted an application for Water Quality Improvement Project (WQIP) grant funds in 2019, and again in 2020, for hydraulic capacity improvements to the sewer tributary to Outfall 002 (the second-most active CSO), which will reduce CSO events and volume. In 2020, two dry weather events occurred at CSO 029, caused by FOG clogging the pump station inlet, which were both cleared within an hour. The City has since installed float balls in the wet well to inform the WWTP of flow status prior to overflow/dry weather discharge. The City completed the CAPS project (CSO 014 reconstruction) in 2021. The City is also working to improve the hydraulic capacity of the sewer near CSO 002 by the Cumberland Ave. Footbridge.	

Facility Info: City of Poughkeepsie		SPDES Permit #: NY0026255		Plant Flow: 14.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	6	6	5
	Percentage of collection system that is combined:	37	36.6	36.6
	Length of CSS (miles):	26.3	26	26
	Average annual CSO events:	181	134	75
	Average annual CSO volume (MG):	114.54	61	60.1
	Population served by collection system:	-	32,761	31,577
	Number of satellite system connections:	2	2	2

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0001	A	1	5

Facility Info: City of Poughkeepsie	SPDES Permit #: NY0026255	Plant Flow: 14.0 MGD
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the City of Poughkeepsie is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs and metals (cadmium) caused by toxic/contaminated sediment. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0001.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	This municipality meets the Presumptive Approach with greater than 93% wet weather volume captured. The Characterization, Monitoring, and Modeling Plan report was approved on 1/9/2008. Final CSO LTCP was approved on 3/12/2008. LTCP Findings and Recommendations: The initial findings in a 1983 report show that dry weather overflows frequently occur at the Pine St. Pump Station; summer period has the greatest potential impact on the receiving stream's best usage; and CSO discharges contribute an average of 330 pounds of biological oxygen demand per day and 0.42 million gallons per day to the Hudson River. Recommendation includes eliminating dry weather overflows through trunk tunnels at Pine and Columbia streets, rerouting basin flows from the pump station, and monitoring dry weather flow during peak periods at Fallkill Creek. Recommended Approach to Control CSO Discharges: The 2007 LTCP report concluded that sewer separation was the most effective CSO control. Therefore, the plan recommended sewer separation projects at Pine St. to reduce or eliminate CSO discharges, to continue implementation of CSO BMPs, to install flow meters at CSO outfalls, and to eliminate CSO discharges at Fallkill Creek, Riverview, and Albany St. Approved Controls Include: Recommended approach was approved.	
PCCM: *Status*	Permittee performed the first PCCM in 2011 and reassessed in 2016. The City of Poughkeepsie presently monitors and documents the local precipitation amounts with rain gauge and weather stations that are maintained at the POTW located at Kitridge Pl. The City conducted a 5 month continuous water sampling program on the Hudson River from June–October 2021. The next round of PCCM sampling is scheduled for 2026.	
Implementation Status:	The LTCP consists of several projects that are intended to reduce or eliminate CSOs over the next several years. The City of Poughkeepsie is on schedule with the implementation of the approved LTCP. The latest major LTCP milestone was the separation of combined sewer tributary to the Riverview CSO 007, which was completed in November 2020 with weir installation and is currently being verified with a year of flow monitoring, through November 2021. Following completion of construction, the City will permanently close and request to eliminate Outfall 007 from the permit. In 2019, the City televised 20,000 LF of sewer and inspected 346 manholes. In 2020, the City performed 691 manhole inspections, and cleaned 44 manholes and 62 sewer lines (16,000 LF sanitary and 1,000 LF combined sewer). Ongoing projects include rehabilitation of the Meyer Ave., Cedar Ave., and Pine St. Pump Stations. In September 2020, the City consultant completed an engineering report investigating the source of high sewer flows from 2018–2020, which included flow monitoring, groundwater metering devices, and 24,000 LF of sewer CCTV discovering many cracks, fractures, or large holes. In 2021, the City performed post-construction monitoring of the Riverview CSO separation, recording four overflow events. The project engineer stated that based on current understanding of the system, completion of the Liberty St. GIGP project would eliminate overflows. A permit application was submitted in November 2021 to modify the dates of the remaining LTCP milestones, which is still being developed. The City was awarded a $3.5M grant to line the 40-inch brick sewer that parallels the Fallkill Creek, and the City plans to actively seek funding options for the next LTCP milestone (separation of CSOs tributary to the Fallkill basin), due 7/1/2023.	

Facility Info: Target Hill WWTP		SPDES Permit #: NY0023761		Plant Flow: 2.06 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	1	-	1
	Percentage of collection system that is combined:	20	-	20
	Length of CSS (miles):	3.4	-	3.4
	Average annual CSO events:	2	-	0
	Average annual CSO volume (MG):	0.66	-	0
	Population served by collection system:	13,500	-	13,500
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Estimated
CSO Abatement Approach:	Unknown

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0003	B	Y	1

Facility Info: Target Hill WWTP	SPDES Permit #: NY0023761	Plant Flow: 2.06 MGD
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the Target Hill WWTP is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs and metals (cadmium) caused by toxic/contaminated sediment. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0003.pdf.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Final CSO LTCP was approved on 1/24/2012. LTCP Findings and Recommendations: CSO discharges were discovered when United States Military Academy (USMA) West Point was cited for unpermitted discharge of 66,000 gallons of untreated sewage to the Hudson River via a newly discovered CSS outfall during dry weather (3/13/2013), and for unpermitted discharge of 5,000 gallons of untreated sewage to the Sinclair Pond Brook (4/2/2013). This referral also includes violations of SPDES permit effluent requirements at the Target Hill WWTP and the Motor Pool Industrial Wastewater Treatment Plant (IWTP). Recommended Approach to Control CSO Discharges: Recommended controls include source control, sewer separation, CSO storage, and continued implementation of the 15 CSO BMPs in the permit. Others include MS4 program aimed at protection of the non-CSO stormwater conveyances and streams located throughout the post, and correction of any illicit discharges from the sanitary system into the storm system by tracking and redirecting the sanitary source. Approved Controls Include: The schedule of compliance includes Target Hill WWTP Process Improvement, South Dock PS Maintenance, SSO Response, and US Motor Pool Process Improvement. USMA West Point will submit engineering reports with proposed improvements and upgrades.	
PCCM: *Status*	PCCM Plan includes monitoring of I/I reduction at Thayer Rd. and Williams Rd.	
Implementation Status:	Permittee reported that it discovered one stormwater inflow to the SSS after cleaning of a storm drain line on Washington Rd. Permittee instituted a project in 2013 to remove roof drain inlets to the sanitary system from nine older, mostly barracks buildings. The first building to be addressed, Bartlett Hall, will result in approximately 11,000 feet of roof drains being redirected from the sanitary to the storm system. No CSO discharges occurred in the 2015 calendar year. Permittee indicated that monitoring of flows at the Target Hill headworks confirms that a recent relining project of the sanitary sewer trunk line in Tower Rd. was effective in reducing overall baseline flows. Permittee continues to maximize the use of collection system for storage through regular cleaning of the sanitary trunk lines and inspection and maintenance of pump stations. In 2018, the permittee discovered a new overflow location, in which a previously sealed separation of sanitary and storm sewers had failed. The permittee repaired the seal and eliminated the possibility of sewer/storm connection in the summer of 2019. A blockage was removed, and the sewer line was re-lined. The permittee continued inflow separation (primarily roof leaders) in 2019, as part of the barracks and academic building renovations. This work will continue through 2022. The permittee also plans to implement newly improved FOG program measures for the food service facilities to prohibit future blockage issues. In 2020, the facility was transferred from the U.S. Dept. of Army to American Water Military Services, LLC. In 2021, permittee began an I/I study, which included installation of flow monitors and a rain gauge; collection of flow data; lift station, manhole, and CCTV (64,000 LF) inspections; and smoke testing (72,000 LF). The study was completed mid-2022, along with an LTCP amendment for DEC review. A capital budget plan is being developed based on the findings. A new WWTP design was submitted in 2022 and is under review, which includes four equalization basins that will reduce the hydraulic loading on the plant during wet weather events.	

Facility Info: Town of Ticonderoga	SPDES Permit #: NY0036706			Plant Flow: 1.7 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	2	2	1
	Percentage of collection system that is combined:	85	83	83
	Length of CSS (miles):	20.1	19.7	19.7
	Average annual CSO events:	38	18	2
	Average annual CSO volume (MG):	71	63	0.0336
	Population served by collection system:	5,314	6,058	6,058
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Information not available
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	La Chute River	1006-0017	D	N	1

Additional Waterbody Information:	The segment of the La Chute River receiving CSO discharges from Ticonderoga S.D. #5 is stressed for Recreation and Aesthetics due to aesthetics (trash and debris) caused by urban stormwater runoff. Additional information for this segment of La Chute River can be found at https://www.dec.ny.gov/data/WQP/PWL/1006-0017.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Final CSO LTCP was approved on 12/31/2007. LTCP Findings and Recommendations: LTCP report shows that during wet weather events, and high intensity storms in particular, the additional stormwater runoff causes CSOs at several locations. Based on hydraulic modeling there appears to be no available capacity in the trunk sewer, extending from Manhole 75 to the wastewater treatment plant. This eliminates the potential for collection system storage prior to Outfall 002. No additional storage capacity exists in combined sewers extending up Amherst Ave. and Champlain Ave. The grade in these areas is significant enough to limit the surcharge area prior to overflow at intermediate locations along the line. The plan recommended the Presumptive Approach's Criterion #1 for Outfall 003 via sewer extension and sewer separations to alleviate CSO discharges. The plan also recommended Presumptive Approach's Criterion #3 for Outfall 002, using primary clarification available within the WWTP. Recommended Approach to Control CSO Discharges: The plan met the Presumptive Approach, and it requires the permittee to submit a schedule of compliance for design and construction and implementation of the selected CSO control methods and development of an operational plan and post-construction monitoring. Also, the completed controls must continue to meet the Presumptive Approach and WQS in the La Chute River. Approved Controls Include: Approved controls include implementation of CSO BMPs, such as floatables removal, hydraulic capacity modification, storage maximization, and sewer separation. The permittee will also embark on various capital improvements to increase WWTP secondary treatment capacity.

Facility Info: Town of Ticonderoga	SPDES Permit #: NY0036706	Plant Flow: 1.7 MGD
PCCM: *Status*	For Outfall 002 during the five-year reporting period from 2013 to 2017, the Town was in compliance with the LTCP Presumptive Approach Criterion #3. For Outfall 003, following construction of the new outfall structure, overflow events from 2014–2017 were in compliance with the LTCP (maximum of our events per year) and the SPDES permit (maximum of six events per year). The PCCM confirmed the LTCP is meeting the objectives of the EPA CSO Control Policy. Sampling was conducted again in 2020 and appears to indicate that other non-CSO sources may be contributing to pathogen pollutant loadings. However, the Town has not performed any additional tracking down or investigation of these sources	
Implementation Status:	Outfall 002 is located at the treatment facilities, which consists of a stormwater storage basin overflow when incoming volume exceeds both the secondary treatment capacity and available storage. Every storm event resulting in an overflow event at Outfall 002 is monitored along with the capture rate of the secondary process and recycle of stormwater captured demonstrating equivalent primary treatment. A capital improvement plan was developed to increase capture rates by expansion of the secondary process and making available existing storage for peak flow conditions. At CSO Outfall 002, all flows receive preliminary screening, grit removal, and some sedimentation in the stormwater basins prior to blending with the WWTP secondary effluent and passing through UV disinfection, then discharge through Outfall 001 to La Chute River. The UV disinfection, as well as a secondary clarifier expansion project, were completed in 2019. A few (5 in 2019) manhole surcharges still occur at CSO 003 (Manhole 75); however, the Town plans to fully separate the sewer upstream to eliminate discharges at this location, including the planned Portage Sewer Separation Project. In 2019 the Town also proposed the development of a new plan to evaluate the existing system, identify CSO LTCP implementation progress, determine the Town's compliance with the CSO Policy and water quality, and serve as an updated LTCP-level document for future projects. DEC has acknowledged and agreed with the concept of this approach. In 2020, the Town continued separation work as part of the Portage Project, to separate 1.3 miles of sewer and reduce wet weather flows up to 48 cubic feet per second (cfs). The Town also purchased vortex grit removal units for installation at LaChute Ln. for stormwater flow separated from the CSO 003 sewershed. The Town is also working with a consultant to track cleaning and repairs with a GIS-mapped system to better manage assets (two sewer mains were cleaned in 2020). As part of the modified SPDES permit, effective 8/1/2021, the compliance sampling point for the WWTP was relocated to a point after blending with their CSO Outfall 01A (formerly CSO 002). As a result, CSO Outfall 01A (002), will no longer be considered a CSO outfall, but rather a CSO-related bypass, which is allowable under the conditions of the SPDES permit. The CSO-related bypass receives the minimum treatment required, in accordance with the EPA CSO Control Policy, and is monitored, sampled, and limited by the WWTP Outfall 001 effluent limitations for protection of water quality. In 2021, the City completed the Portage stormwater projects. In 2021, 1,000 feet of sewer line, along with 6 manholes and catch basins, was cleaned and inspected. A GIS system was developed to allow for tracking and scheduling of facility maintenance, repair, replacement, cleanings, or sediment. The City is now planning on installation of storm sewer on Mt. Defiance Rd. The new plan described above is to be treated as a revised LTCP (included in 2021 permit to be due August 2023) and will likely include projects such as an inspection of the trunk main, inspection of areas to target next for separation, flow monitoring, drafting of updated LTCP, locating of laterals, and the planning of future collection system storm separation projects.	

Facility Info: City of Utica		SPDES Permit #: NY0031429		Plant Flow: Varies
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	82	34	35
	Percentage of collection system that is combined:	44	40	40
	Length of CSS (miles):	-	-	102.15
	Average annual CSO events:	-	-	26
	Average annual CSO volume (MG):	-	-	41.33
	Population served by collection system:	62,235	-	60,320
	Number of satellite system connections:	-	-	-

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Ballou/Nail Creek	1201-0203	C	Y	29
	Mohawk River	1201-0093	C	Y	6

Facility Info: City of Utica	SPDES Permit #: NY0031429	Plant Flow: Varies
Additional Waterbody Information:	The segment of the Ballou/Nail Creek receiving CSO discharges from the City of Utica is listed on the NYS 2018 303(d) as precluded for Aquatic Life and Recreation due to nutrients and low DO caused by CSOs. Additionally, Ballou/Nail Creek is listed as impaired for Habitat/Hydrology due to nutrients and low DO caused by habitat modification. Additional information for this segment of Ballou/Nail Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/1201-0203.html. The segment of the Mohawk River receiving CSO discharges from the City of Utica is listed on the NYS 2018 303(d) as precluded for Fish Consumption due to PCBs caused by toxic/contaminated sediment. Additionally, the Mohawk River is listed as impaired for Aquatic Life and Recreation due to aesthetics (odor and floatables) and pathogens caused by CSOs and landfill disposal. Additional information for this segment of Mohawk River can be found at https://www.dec.ny.gov/data/WQP/PWL/1201-0093.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The final LTCP was approved on 4/30/2014 based on Presumptive Approach. LTCP Findings and Recommendations: LTCP-related activities are required to be coordinated with Oneida County activities addressing a major SSO and treatment plant upgrades to address hydraulic overloading. Recommended Approach to Control CSO Discharges: LTCP plan proposes the Presumptive Approach with controls including capacity increase to Oneida County WWTP, GI, five sewer separation projects, remote treatment at two CSOs, and SSO abatements.	
PCCM: *Status*	The PCCM will be submitted and implemented after completed construction of CSO controls. The PCCM Plan was due February 2022, but is currently still in development. In 2014, the permittee installed three meters in accordance with SPDES permit requirements at Outfalls 076, 127, and 142. CSO 076 contributes 85% of total CSO flow.	
Implementation Status:	The LTCP initially required attainment of greater than 85% capture by 6/30/2022, but has been extended based on construction status. Construction of a remote treatment unit upstream of CSO 142 eliminated the CSO outfall and construction was completed in December 2020 (the outfall will be removed from the SPDES permit upon its next modification but has been accounted for in this Statewide Annual Report). Attainment of the Presumptive Approach goal is expected to be achieved following construction completion of the Oneida County WWTP expansion and addition of CSO HRD system. Construction of the HRD system began in 2018 and was completed by 12/31/2021. The WWTP expansion/HRD system provides separate headworks, grit removal, and primary treatment for CSS and SSS influent flows. Under normal conditions, the primary effluents will blend and receive secondary treatment and disinfection prior to discharge. During large wet weather events, when secondary capacity is reached, the primary effluent from the CSS side of the WWTP will be directed to a separate HRD system and then discharged through WWTP Outfall 003. Due to the COVID-19 pandemic, some 2020 planned projects were delayed, including the A9.1 project design and A9.2 GI project. In 2021 the City completed Phase II of the A9.2 GI and installed 1,600 square yards of permeable pavers, 700 square feet of infiltration area in rain gardens, and tree pits. The LTCP's A6 module of the work will commence in 2023 and take approximately 1 year to finish. Additionally, the Village plans to bore 900 LF of storm sewer under railroad tracks to remove storm flows from Railroad Interceptor.	

Facility Info: Washington County		SPDES Permit #: NY0183695		Plant Flow: Varies
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	11	11	10
	Percentage of collection system that is combined:	90	80	75
	Length of CSS (miles):	55	45	51.5
	Average annual CSO events:	150	77	64
	Average annual CSO volume (MG):	8.29	9.9	>5.46
	Population served by collection system:	15,000	14,000	14,000
	Number of satellite system connections:	2	2	2

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls

Facility Info: Washington County		SPDES Permit #: NY0183695			Plant Flow: Varies
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Bond Creek	1101-0085	C	N	1
	Hudson River	1101-0044	C	Y	10

Additional Waterbody Information:	The segment of Bond Creek receiving CSO discharges from Washington County Sewer District #2 has no known water quality impacts. Additional information for this segment of Bond Creek can be found at https://www.dec.ny.gov/data/WQP/PWL/1101-0085.pdf. The segment of Hudson River receiving CSO discharges from Washington County Sewer District #2 is listed on the NYS 2018 303(d) as precluded for Fish Consumption due to PCBs caused by toxic/ contaminated sediment. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1101-0044.html.
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	LTCP Findings and Recommendations: The permittee developed a phased approach to first achieve SPDES permit compliance, and then monitor and measure the benefits of those projects. After the assessment of the benefits, the permittee will then prioritize future projects. This municipality meets the Presumptive Approach with greater than 93% wet weather volume captured. The Characterization, Monitoring, and Modeling Plan report was approved on 1/9/2008. Recommended Approach to Control CSO Discharges: The permittee complies with the Presumptive Approach with an estimated 92.6% capture of wet weather flows. Recommended plan proposed system maintenance, SCADA monitoring, and WWTP improvements to capture and covey more wet weather flows to the WWTP treatment plant. Approved Controls Include: Recommended controls were approved.
PCCM: *Status*	PCCM has not been developed. Permittee planned to model the CSS to verify annual volume capture and verify compliance with the Presumptive Approach of the EPA CSO Control Policy. PCCM Plan will be expected nearer completion of the LTCP projects. The current milestone for PCCM Plan submission is December 31, 2023.
Implementation Status:	In 2019, the permittee identified a major trunk sewer in need of significant replacement/ rehabilitation, which could reduce discharges from CSOs 007 and 008. CSO volumes from 2019 were increased from the past several years, likely attributed to significant number of high-intensity storms. In 2020, the County began the separation of 1,600 LF of sewer and completed several small repairs and cleanings throughout the system. The County also began design of LTCP Phase III (WWTP headworks and grit removal upgrades and digester improvements). In 2021, approximately 1,600 LF of gravity sewer was upgraded along Feeder St. in Village of Hudson Falls. Storm sewer within the service area of the project was separated.

Facility Info: Town of Waterford		SPDES Permit #: NY0029173		Plant Flow: 1.5 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	2	2	2
	Percentage of collection system that is combined:	<10	<10	<10
	Length of CSS (miles):	<10	<10	<10
	Average annual CSO events:	40	4-6	0
	Average annual CSO volume (MG):	10	<0.1	0
	Population served by collection system:	10,400	10,400	10,400
	Number of satellite system connections:	0	0	0

Measurement Type for CSO Volume Discharges:	Metered
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Mohawk River	1201-0086	C	N	2

Facility Info: Town of Waterford	SPDES Permit #: NY0029173	Plant Flow: 1.5 MGD
Additional Waterbody Information:	The segment of the Mohawk River receiving CSO discharges from the Town of Waterford WWTP is unassessed and there is no water quality information available. Additional information for this segment of Mohawk River can be found at https://www.dec.ny.gov/data/WQP/PWL/1201-0086.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The Characterization, Monitoring, and Modeling Plan was approved on 7/5/2007 and the LTCP was approved on 4/20/2011. The LTCP indicates that between 94.1% and 100% of wet weather flows are captured. Therefore, the Town of Waterford meets the Presumptive Approach. LTCP Findings and Recommendations: The Town has completed various sewer separation projects since the 1990s to maximize flows to the treatment plant. Based on the existing projects, the report stated that the Town is currently providing treatment of greater than 92.7% of wet weather flows, with the predicted wet weather capture of 95% following additional CSO discharge reductions. Recommended Approach to Control CSO Discharges: The Town hopes to capture and treat up to 95% of wet weather flows, which exceeds the Presumptive Approach under the EPA CSO Control Policy. Proposed CSO controls include monitoring activities to document the operation and effectiveness of the new storage tanks at the plant. Inspection and monitoring of the Front St. Pump Station does not suggest a floatables issue exists at the overflow. Additional investigations indicate the largest source of inflow remaining to the CSS for the Front St. Pump Station is existing catch basins located along Broad St., within the NYSDOT right-of-way. Approved Controls Include: Recommended controls were approved on 4/20/2011.	
PCCM: *Status*	The Town submitted the PCCM Plan as part of the LTCP and was approved in 2011. The Town recently completed major upgrades to the CSS and has been working in collaboration with the Albany Pool Communities to provide data to characterize the current conditions in the receiving waters. The Town will continue to monitor wet weather flow conditions moving forward in an effort to optimize flow diversions and management of the system. Ambient sampling is conducted at three locations for fecal coliform during the recreational season each year. The sampling locations are purposely selected to be both upstream and downstream of Town contributions during wet weather. The SPDES permit was modified in 2022 to require PCCM sampling when CSO events occur.	
Implementation Status:	The Town's combined sewer system meets the objectives of the EPA CSO Control Policy under the Presumptive Approach. The Town has completed significant sewer separation since the 1990s. Based on metering data collected during the development of the Town's CSO LTCP, the Town's CSS has been characterized as capturing and treating greater than 95% of wet weather flows at the WWTP. Improvements to maximize flows to the WWTP were completed in 2014 and 2015, and the Town continues to see significant reductions in the frequency and volume of overflows. SPDES permit requires reassessment of compliance with the EPA CSO Control Policy every five years. Only two overflows were recorded in 2017, totaling less than 1,200 gallons, and no CSO events occurred in 2019. There were no notable projects from 2019 or 2020. The only event that occurred in 2020 was caused by Tropical Storm Isaias, which consisted of 4.48 inches of rain over 14 hours (equivalent to the 25-year storm level). The Town updated the written maintenance and inspection program in 2022 to align with current practices. No CSO events occurred in 2021; the Town upgraded several pump stations (full replacement of James Dr. and Murray Ave.), including upsizing of influent piping to ensure no backup issues.	

Facility Info: City of Watertown		SPDES Permit #: NY0025984		Plant Flow: 16.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	14	9	9
	Percentage of collection system that is combined:	16.5	11	11
	Length of CSS (miles):	58	37	37
	Average annual CSO events:	87	91	70
	Average annual CSO volume (MG):	-	12.9	12.93
	Population served by collection system:	-	-	27,000
	Number of satellite system connections:	-	-	-

Measurement Type for CSO Volume Discharges:	Metered at 2 CSOs only (001 and 004); Tilt devices used at other CSOs
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Black River	0801-0250	C	N	9

Facility Info: City of Watertown	SPDES Permit #: NY0025984	Plant Flow: 16.0 MGD
Additional Waterbody Information:	The segment of the Black River receiving CSO discharges from the City of Watertown has no known water quality impacts. Additional information for this segment of Black River can be found at https://www.dec.ny.gov/data/WQP/PWL/0801-0250.html.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	Final CSO LTCP was approved on 4/29/2011. The plan demonstrated that the City is meeting the Presumptive Approach by capturing up to 88% annual average of wet weather flows. LTCP Findings and Recommendations: The plan identified that inflow upstream of Outfall 001 is the main cause of impairment in the receiving stream. The City had also implemented a CSO elimination program that has been in place since 1986, which has resulted in several sewer separation projects that have reduced the combined portion of the sewer system by nearly 33%. Recommended Approach to Control CSO Discharges: The City's LTCP is based on the Presumptive Approach, with a calculated wet weather volume capture of 88% during an average precipitation year. Various control projects are listed in the City's 5-year plan, including reconstruction and separation of sewers affecting CSO Outfalls 007, 015, 016, 020, 021, and 024. Approved Controls Include: Recommended controls were approved.	
PCCM: *Status*	The City currently has permanent and continuous flow monitoring and recording for bypasses and the captured flows. Further, permanent and continuous flow monitoring also exists at the Western CSO Outfall 001 both immediately upstream of the CSO and on the overflow stream. The City also has a formal maintenance program comprising written Standard Operating Procedures (SOPs), preventative maintenance scheduling, work-order requests, and procedures for routine and non-routine maintenance.	
Implementation Status:	Permittee reported that volume capture has improved to 90.5%, more than predicted in the LTCP. Flow maximization to WWTP is achieved through effective use of collection system and the effective implementation of an industrial pretreatment program. In 2020, the City continued to investigate tying in continuous flow meters at CSO outfalls into the WWTP SCADA system. The City also replaced the digester transfer pump and continued with Phase 1B projects (modification of anaerobic digesters, gas scrubbing, and direct drive engine). No sewer separation was conducted in 2020. However, multiple manhole frames were reset or readjusted, 13,170 LF of sanitary sewer was televised, and 22,821 LF of sanitary sewer was cleaned. In 2021, the volume capture at Outfalls 001 and 004 were both 99.9%. Seven old brick manholes were replaced with pre-cast structures. The City cleaned Lift Station #1 at Ives Hill and installed a new storm sewer together with 8-foot SDR-35 piping. Much like in 2021, multiple manhole frames were reset along with multiple storm inlets, and 4,340.2 LF of sanitary sewer and 1,833.9 LF of storm system were cleaned.	

Facility Info: Westchester County - Yonkers		SPDES Permit #: NY0026689		Plant Flow: 92.0 MGD
		Before CSO BMP/LTCP Implementation	After CSO BMP/LTCP Implementation	Current
Collection System: *Current info on CSO outfalls, overflows, volume capture, CSS area, population served*	CSO outfalls:	13	13	13
	Percentage of collection system that is combined:	7.1	7.1	6
	Length of CSS (miles):	-	-	5.5
	Average annual CSO events:	-	11	9
	Average annual CSO volume (MG):	-	-	329.44
	Population served by collection system:	-	-	509,921
	Number of satellite system connections:	-	-	22

Measurement Type for CSO Volume Discharges:	Metered at two CSO outfalls
CSO Abatement Approach:	Presumptive Approach

	Receiving Waterbody	PWL No.	Waterbody Classification	Impaired (Y/N)	No. of CSO Outfalls
Receiving Water Info: *303(d), TMDL, Sensitive areas*	Hudson River	1301-0094	SB	Y	13

Facility Info: Westchester County - Yonkers	SPDES Permit #: NY0026689	Plant Flow: 92.0 MGD
Additional Waterbody Information:	The segment of the Hudson River receiving CSO discharges from the Yonkers Joint WWTP is listed on the NYS 2018 303(d) as impaired for Fish Consumption due to PCBs and metals (cadmium) caused by toxic/contaminated sediment. Additionally, the segment of the Hudson River is also stressed for Recreation due to pathogens caused by CSOs and urban stormwater runoff. Additional information for this segment of Hudson River can be found at https://www.dec.ny.gov/data/WQP/PWL/1301-0094.pdf.	
LTCP Info: *Dates submitted and approved, Issues, Approach, Status*	The LTCP was completed and constructed in five phases. The plan involved enlarging the South Yonkers Trunk Sewer; building relief sewers; raising regulator weirs to minimize the discharge of pollutants; and conveying the maximum amount of combined sewage to the treatment facilities at the North Yonkers Pump Station, the South Yonkers Screen House, and the Yonkers Joint WWTP. The LTCP construction was completed in 1995. The County is in the PCCM phase of the LTCP. LTCP Findings and Recommendations: The LTCP report concluded that over 90% of CSOs occur at 5 of the outfalls. Recommended Approach to Control CSO Discharges: The permittee used computer modeling to recommend a series of abatement controls, including sewer and regulator improvements and increased pumping capacity to route more flow to the treatment plant, construction of a CSO treatment facility at the North Yonkers Pump Station, and construction of a CSO treatment facility at the South Yonkers Screen House. The CSO treatment facilities at North Yonkers and South Yonkers consist of swirl concentrators for floatables removal and disinfection. Approved Controls Include: Treatment facilities at North Yonkers Pump Station, sewer and regulator improvements for North Yonkers Collection System, additional pumping station capacity at three main pumping stations, treatment facilities at South Yonkers Screen House, and sewer and regulator improvements. In 1990, the permittee entered a Consent Order with DEC to address raw sewage discharges at the South Yonkers Screen House Overflow Facility. The Order included an implementation schedule for both operational improvements and modifications to the internal structures of the pumping station.	
PCCM: *Status*	The permittee developed an initial PCCM Plan in 2007 to assess the impacts, if any, of their CSO facilities. The final report was completed by the County and approved by DEC on 9/22/2008. The sampling program is required to be performed once every five years in conjunction with their SPDES permit cycle. The PCCM Plan estimated that Yonkers WWTP and CSO treatment facilities are capturing and treating up to 98.1% of wet weather flows. Additionally, in 2014, the PCCM was performed to analyze bacteria and DO. The permittee concluded that water quality in the Hudson River was not impacted by CSO discharges from the Yonkers WWTP and CSO treatment facilities. Another reassessment was performed in 2019, submitted to DEC in March 2020, and provided similar results to 2007. Additional sampling was to be conducted in 2020; however, due to the COVID-19 pandemic, the sampling was deferred to 2022.	
Implementation Status:	In 2014, the County utilized an outside contractor to clean and televise approximately 4,500 LF of County-owned trunk sewers in the North, South, and Central Yonkers Sewer Districts. The County also performed internal inspection of the Saw Mill Trunk Sewer Tunnel and entrance sewer, totaling approximately 9,700 LF of sewer. In 2019, the County had 1 dry weather overflow, caused by a blockage, resulting in a discharge of 2,400 gallons at the Pier St. regulator. The line was subsequently jetted and cleared. An additional 744 LF of sewer was cleaned in 2019 in the South Yonkers sewer district. The County continued ongoing replacement of tide gates (per Order on Consent) and improvement of regulator access through 2019 and 2020, and completed replacement on 12/3/2020. The County also reported inspection and cleaning of 19,027 LF of County-owned sewers in 2020. In 2021, the County began design for upgrades to the Ludlow St. and Main St. pump stations, and continued design for the upgrade/rehab of the Alexander St. Influent Chambers and channels to the North Yonkers Pump Station. Additionally, 11,200 LF of sewer cleaning/inspection was performed outside of the CSO area (but within Yonkers Joint Sewer District). In 2022, the County planned to begin design for the Alexander St. Pump Station and complete the deferred PCCM sampling that was delayed due to Covid.	

Definition of Terms and Abbreviations

Best Management Practices (BMP) – In a wastewater context, BMPs consist of various technical or managerial strategies intended to address a specific problem or guide an activity while being efficient and cost-effective.

BOD5 – Five-day Biochemical Oxygen Demand

CCTV – Closed-Circuit Television

CBOD5 – Five-day Carbonaceous Biochemical Oxygen Demand

Clean Water Act (CWA) – The primary federal law governing water pollution control. Passed in 1972, this act relies upon the Federal Water Pollution Control Act amendments of 1972 for much of its authority.

Combined Sewer Overflow (CSO) – A discharge of untreated wastewater from a CSS at a point before the headworks of a publicly owned treatment works (POTW). CSOs generally occur during wet weather (rainfall or snowmelt) and combine a mixture of stormwater runoff and untreated sewage.

Combined Sewer System (CSS) – A sewer system which conveys sewage and stormwater through a single pipe system to a POTW wastewater treatment plant.

Compliance Schedule – A schedule of remedial measures included in a permit or legally enforceable action, with a sequence of interim requirements (e.g., actions, operations, or milestone events) leading to compliance with the CWA and regulations.

CSO Communities – Municipalities with SPDES permits to own and maintain CSSs.

CSO Event – An overflow event is one or more overflows from a CSS as the result of a precipitation event that does not receive the minimum CSO treatment requirements.

DO – Dissolved oxygen

Dry Weather Flow (DWF) – All flow in a sewer (includes sanitary flow and infiltration) except that caused directly by rainfall. Measured during a period of extended dry weather (7–14 days) and seasonally high groundwater.

ECL – Environmental Conservation Law: The body of law that established DEC and authorizes its programs, often abbreviated as ECL. The full text of New York's ECL is found on the New York State Legislative Information System.

Gray Infrastructure – Most commonly refers to conventional infrastructure: pipes, tanks, sewage collection systems, and drinking water systems. While not always grey in color, these infrastructure assets typically provide underlying support to a modern and economically developed society.

Green Infrastructure (GI) – Represents an approach to wet weather management that is cost-effective, sustainable, and environmentally friendly. This approach commonly involves the use of permeable pavement, rain barrels, or "green" roofs. Often these devices intend to divert stormwater runoff from a sanitary sewer, where it can cause an overflow and result in a public health or environmental situation.

Infiltration – Water other than sanitary wastewater that enters a sewer system from the ground through defective pipes, pipe joints, connections, or manholes.

Inflow – Water other than sanitary wastewater that enters a sewer system from sources such as roof leaders; cellar/foundation drains; yard drains; area drains; drains from springs and swampy areas; manhole covers; cross-connections between storm sewers and sanitary sewers; and catch basins. Inflow does not include infiltration.

Long Term Control Plan (LTCP) – A LTCP is a phased approach for control of CSOs that requires the permittee to develop and submit an approvable plan that will ultimately result in compliance with New York State WQS and Clean Water Act requirements.

Modeling – Modeling flows typically involves using hydrologic and hydraulic to estimate flows influent to the sewer system.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances that is:

- Owned or operated by a state, county, or other public body created by state law, having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes;
- Designed or used for collecting or conveying stormwater;
- Not a combined sewer; and
- Not part of a publicly owned treatment works.

National Pollutant Discharge Elimination System (NPDES) – The federal Clean Water Act authorized development of NPDES for implementing requirements for all discharges to surface waters of the United States (NPDES does not cover discharges to ground water). Under New York's ECL, DEC administers the state's program for meeting the requirements of NPDES.

Order on Consent – A legally binding agreement negotiated by DEC and a SPDES permittee, which addresses specific violations and includes provisions for a payable penalty. An Order on Consent may also include suspended and/or stipulated penalties, interim effluent limitations, and a compliance schedule for corrective action.

PCBs – Polychlorinated Biphenyls

Post-Construction Compliance Monitoring (PCCM) – A program adequate to verify compliance with WQS and protection of designated uses as well as to ascertain the effectiveness of CSO controls. The PCCM Program includes a plan that details the monitoring protocols to be followed; effluent and ambient monitoring; and reporting of sampling results.

Publicly Owned Treatment Works (POTW) – A municipal wastewater treatment facility owned by a state or municipality.

Sanitary Sewer Overflow (SSO) – The occasional, unintentional discharge of raw sewage from municipal sanitary sewers. These discharges can occur at sewage pump stations, manholes, or in home basements.

Sanitary Sewer System (SSS) – Pipelines or conduits, pumping stations, force mains, and all other constructions, devices, and appliances appurtenant thereto, used for conveying municipal sewage, industrial waste or other wastes, alone or in combination to a disposal system.

SCADA – Supervisory Control and Data Acquisition

Secondary Treatment – The technology-based requirement for direct discharging by a POTW. Secondary treatment consists of a combination of physical and biological processes typical for the treatment of pollutants in sewage.

Sewage Pollution Right to Know Act (SPRTKA) – This is a New York State law that that went into effect May 1, 2013. This law requires the reporting of untreated or partially treated sewage discharges, also known as bypasses, from POTWs. The law imposes new reporting requirements for POSSs and CSOs. The first phase of the SPRTKA provides a system for collecting reports of these discharges. The second phase, currently under development, will provide regulations to require POTWs and POSSs to directly notify the public of discharges of untreated or partially treated sewage.

State Pollutant Discharge Elimination System (SPDES) – The SPDES program goes beyond requirements of the federal NPDES program in that SPDES also regulates discharges to the groundwater of the state. The minimum threshold for applicability of SPDES to groundwater discharges is 1,000 gallons per day for sanitary wastewater, while discharges including any industrial wastewater have no minimum threshold. New York State Department of Health regulates discharges of less than 1,000 gallons per day, consisting of only sanitary wastewater.

Stormwater Pollution Prevention Plan (SWPPP) – This document, based on sound engineering practices, details erosion and sediment controls during construction and post-construction stormwater control practices.

STP – Sewage Treatment Plant

Total Maximum Daily Load (TMDL) – A calculation of the maximum amount of a pollutant or multiple pollutants that a waterbody can receive and still meet WQS.

Total Suspended Solids (TSS) – Listed as a conventional pollutant in the Clean Water Act of 1972, TSS is a measurement of solids that are visible or in suspension of a water sample. SPDES permits extensively require this analysis as an effective means to measure the quality of water discharged.

Water Quality Standard (WQS) – Such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in Part 700, et seq. of 6 NYCRR.

Wet Weather Flow – The highest daily flow during and immediately after a significant storm event. Includes sanitary flow, infiltration, and inflow.

Wet Weather Operating Plan – A document used by wastewater collection or treatment staff to provide guidance on operational changes to make during wet weather conditions. These changes allow for the highest degree of treatment when flows exceed design standards.

WI/PWL – Waterbody Inventory/Priority Waterbodies List

WPCP – Water Pollution Control Plant

WRRF – Wastewater Resource Recovery Facility

WWTF – Wastewater Treatment Facility

WWTP – Wastewater Treatment Plant

Additional definitions of terms and abbreviations:

Click here for additional terms and abbreviations

New York State Surface Waters Classifications (6 NYCRR Part 701)

Table 8 - New York State Surface Waters Classifications (6 NYCRR Part 701)	
Classification	**Usage**
Class AA-Special Fresh Surface Waters	**a.** The best usages of Class AA-S waters are: a source of water supply for drinking, culinary, or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival. **b.** These waters shall contain no floating solids, settleable solids, oil, sludge deposits, toxic wastes, deleterious substances, colored or other wastes, or heated liquids attributable to sewage, industrial wastes, or other wastes. **c.** There shall be no discharge or disposal of sewage, industrial wastes, or other wastes into these waters. **d.** These waters shall contain no phosphorus and nitrogen in amounts that will result in growths of algae, weeds, and slimes that will impair the waters for their best usages. **e.** There shall be no alteration to flow that will impair the waters for their best usages. **f.** There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions.
Class A-S Fresh Surface Waters	**a.** The best usages of Class A-S waters are: a source of water supply for drinking, culinary, or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival. **b.** This classification may be given to those international boundary waters that, if subjected to approved treatment equal to coagulation, sedimentation, filtration, and disinfection, with additional treatment if necessary to reduce naturally present impurities, meet or will meet New York State Department of Health drinking water standards and are or will be considered safe and satisfactory for drinking water purposes.
Class A-A Fresh Surface Waters	**a.** . The best usages of Class AA waters are: a source of water supply for drinking, culinary, or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival. **b.** This classification may be given to those waters that, if subjected to an approved disinfection treatment, with additional treatment if necessary to remove naturally present impurities, meet or will meet New York State Department of Health drinking water standards and are or will be considered safe and satisfactory for drinking water purposes.
Class A Fresh Surface Waters	**a.** The best usages of Class A waters are: a source of water supply for drinking, culinary, or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival. **b.** This classification may be given to those waters that, if subjected to approved treatment equal to coagulation, sedimentation, filtration, and disinfection, with additional treatment if necessary to reduce naturally present impurities, meet or will meet New York State Department of Health drinking water standards and are or will be considered safe and satisfactory for drinking water purposes.
Class B Fresh Surface Waters	The best usages of Class B waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.
Class C Fresh Surface Waters	The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
Class D Fresh Surface Water	The best usage of Class D waters is fishing. Due to such natural conditions as intermittency of flow, water conditions not conducive to propagation of game fishery, or stream bed conditions, the waters will not support fish propagation. These waters shall be suitable for fish, shellfish, and wildlife survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
Class SA Saline Surface Waters	The best usages of Class SA waters are shellfishing for market purposes, primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.
Class SB Saline Surface Waters	The best usages of Class SB waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Table 8 - New York State Surface Waters Classifications (6 NYCRR Part 701)	
Classification	**Usage**
Class SC Saline Surface Waters	The best usage of Class SC waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.
Class I Saline Surface Waters	The best usages of Class I waters are secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival.
Class SD Saline Surface Waters	The best usage of Class SD waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife survival. This classification may be given to those waters that, because of natural or man-made conditions, cannot meet the requirements for primary and secondary contact recreation and fish propagation.


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