New York State Department of Environmental Conservation
Combined Sewer Overflows (CSOs) Overview

General Description

The dataset represents the locations of combined sewer overflows (CSOs) in NYS. The data and location information was compiled from multiple sources:

- CSO permits
- CSO Best Management Practices (BMP) Annual Report
- CSO Long Term Control Plans (LTCP)

Combined sewer systems (CSS) are sewer systems that are designed to collect storm water runoff, domestic sewage, and industrial wastewater in the same pipe and bring it to the publicly owned treatment works (POTW) facilities. During rain events, when storm water enters the sewers, the capacity to treat the combined flows at the POTW may be exceeded and the excess water will be discharged directly to a waterbody (rivers, streams, estuaries, and coastal waters). A combined sewer overflow (CSO) event (discharge of sewage) from a combined sewer system is caused by snowmelt or storm water runoff. Combined sewers are found across New York State (NYS), except on Long Island. However, most CSOs are found in large cities. Most large municipal sewer systems in NYS consist of combined sewers in older downtown urban areas with separate sanitary and storm sewers serving outlying tributary suburban areas.
About ten percent of the CSOs in the United States are found in NYS. Each combined sewer system in NYS is required to have a State Pollutant Discharge Elimination System (SPDES) permit, which is issued by the NYS Department of Environmental Conservation (DEC). The number of CSO outfalls (locations where sewage discharge events occur) listed in the permits of POTWs has decreased due to CSO abatements completed by the permittees.

Best Management Practices

DEC enforces the CSO requirements under the Wet Weather Water Quality Act of 2000. DEC developed 15 Best Management Practices (BMPs); they are equivalent to (or more stringent than) the "Nine Minimum Control Measures" (NMCs) required under the USEPA National Combined Sewer Overflow policy, and require the control of CSO discharges from combined sewer systems. The EPA's policy is available at via the link to Combined Sewer Overflows CSO Control Policy available at http://water.epa.gov/polwaste/npdes/cso/index.cfm. The BMPs are technology-based controls, designed to implement operation and maintenance procedures, utilize the existing treatment facility and collection system to the maximum extent practicable, and implement sewer design, replacement and drainage planning, to maximize pollutant capture and minimize water quality impacts from combined sewer overflows. BMPs do not require major engineering studies or construction. The BMPs are included in all SPDES permits for combined sewer system facilities as applicable and implemented by the permittee.

Long Term Control Plans

Long Term Control Plans (LTCPs) are required under the Environmental Protection Agency's combined sewer overflow (CSO) Control Policy and part of DEC's CSO control strategy to reduce the frequency, duration, and intensity of CSO events. Municipalities with CSOs are required to have a State Pollutant Discharge Elimination System (SPDES) permit.

The permit requires implementation of best management practices (BMPs) to reduce and control overflows. DEC developed fifteen best management practices that are technology-based controls designed to maximize pollutant capture and minimize impact to water quality. If the best management practices are not enough to reduce CSO impacts to water quality, DEC requires CSO communities to develop and submit a Long Term Control Plan (LTCP).

Overview of the Long Term Control Plan approach
A Long Term Control Plan is a phased approach to control combined sewer overflows that will ultimately result in compliance with the NYS water quality standards and Clean Water Act requirements. The planning approach consists of three major steps: system characterization, development and evaluation of alternatives, and selection and implementation of the controls, as well as a post-construction monitoring plan.

The plan has two phases for control of CSO events:

Phase 1: The municipality must develop a comprehensive study of the combined sewer system and research alternatives for reducing CSO impacts to water quality. This includes involving the public during the development of the plan, characterization of the sewer system, and evaluation of one or more CSO control alternatives. After finishing the LTCP, a schedule of construction and/or completion is developed. This schedule outlines how the approved CSO control alternatives will be implemented.

Phase 2: Upon DEC approval of the plan, DEC will either use a consent order or other enforceable action or modify the SPDES permit to include a schedule of compliance for the design and construction, implementation of the approved CSO control methods, and development of an operational plan and post-construction monitoring.

Methodology

Data will be updated as CSO outfalls are eliminated, or new information on detection or monitoring is made available. In addition, through the Sewage Pollution Right to Know law as well as annual CSO Best Management Practice reports, new information on overflow frequency data can be obtained.
The dataset catalogs CSO outfall information, including the following:
- Municipality and facility information
- Total number of outfalls in permit
- NYS county and DEC region
- SPDES permit number
- Outfall number on permit
- Name of receiving waterbody
- Method system owner uses to detect overflows
- Time frame of overflow frequency data
- Number of overflows recorded for given time frame

Purpose

The dataset was created in response to the Sewage Pollution Right to Know law (SPRTK) which went into effect May 1, 2013. The law requires that CSO events be reported to DEC, Department of Health, and the general public within two and four hours of discovery. However, many communities with CSOs throughout NYS do not have the capability to detect and report CSO events in real-time. DEC created a Wet Weather Advisory web page which presents this dataset to the public. By doing so, DEC effectively

issues a standing advisory to the public about CSO discharges which reduces the burden of reporting CSO events from CSO communities.

Supplemental information

See DEC's CSO Wet Weather Advisory web page at http://www.dec.ny.gov/chemical/88736.html

Limitations

The accuracy of the location and data is based on the information provided by the permitted facilities. DEC staff researched each data source to get the most accurate location information for CSO outfalls. The result is a master list for location, overflow detection, and overflow frequency data.