CSO
LONG-TERM
CONTROL
FACTSHEET
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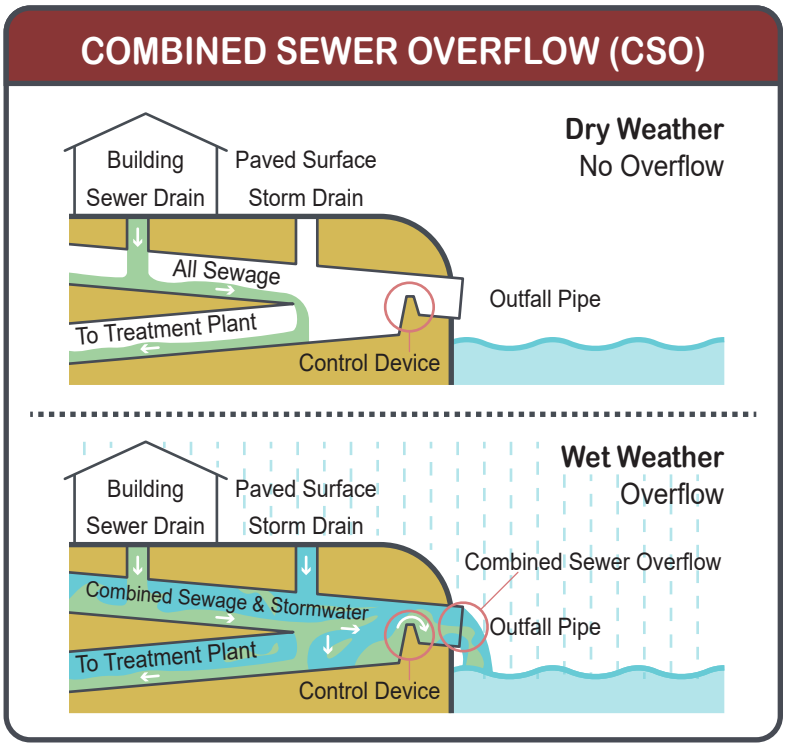
COMBINED SEWER OVERFLOW LONG-TERM CONTROL PLAN

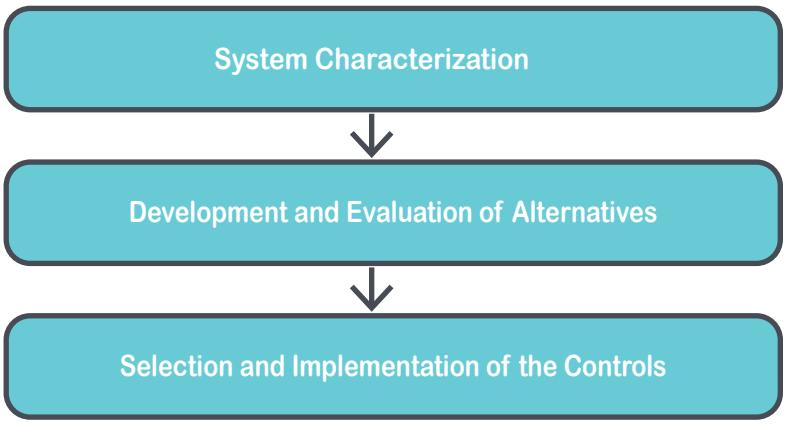
SYRACUSE AND ITS CSS

Like hundreds of other cities in the US, Syracuse has a combined sewer system (CSS) to convey rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, this CSS transports all of the wastewater to Metropolitan Syracuse Wastewater Treatment Plant (Metro), where it is treated and then discharged to Onondaga Lake. During periods of heavy rainfall or snowmelt, however, the wastewater volume in the combined sewer system can exceed the capacity of the system. The system will then overflow, by design, through dozens of outfalls into Onondaga Creek, Harbor Brook, and Ley Creek. These combined sewer overflows (CSOs), containing not only stormwater but also untreated sanitary sewer flows and industrial waste and debris, are a major water pollution concern for the CSO-receiving water, in this case, Onondaga Lake and the three CSO-receiving tributaries.



WHAT IS LTCP?

Per EPA CSO Control Policy, all communities with CSSs are expected to implement nine technology-based minimum control measures to control CSOs. In addition, a Long-Term Control Plan (LTCP) that integrates NMCs and identifies the appropriate CSO controls necessary to achieve waterbody-specific water quality standards (WQS) and the water quality goals of the Clean Water Act needs to be developed and implemented by most CSO communities. The overall LTCP planning approach consists of three major steps shown on the right.



The following nine elements need to be addressed through the LTCP development process:

1. Characterization, monitoring, and modeling activities as the basis for effective CSO controls
2. A public participation process in the decision-making
3. Sensitive areas as the highest priority

4. Evaluation of alternatives of controls to meet CWA requirements

5. Cost/performance considerations in selection of control alternatives

6. Operational plan revisions to include agreed-upon long-term CSO controls

7. Maximization of treatment at the existing POTW

8. An implementation schedule for CSO controls

9. A post-construction compliance monitoring program adequate to verify compliance

LTCP DEVELOPMENT UNDER ACJ

In Onondaga County, an LTCP has been over 2 decades in the making mostly under a judicial order, Amended Consent Judgment (ACJ, Factsheet 2), since 1998. ACJ required Onondaga County to capture 95% of the CSOs by the end of 2018 and to meet the water quality standards specified in the Metro's State Pollution Discharge Elimination System (SPDES) permit to protect designated uses (Factsheet 3) in receiving waters. Under ACJ, Onondaga County performed decades of close monitoring on CSO flows and on water quality in both receiving and ambient waters, and developed a well-calibrated hydraulic model, Stormwater Management Model (SWMM), to help the County better characterize its CSS. Based on the monitoring data and using SWMM as a tool, sewershed-specific CSO control measures were selected, developed, implemented and evaluated.

The measures are part of a holistic, balanced CSO control plan, featuring economically efficient and environmentally friendly green infrastructure practices, large capacity gray infrastructure projects, system enhancements and optimization, among others. The implementation was supported by extensive public outreach and education, intermunicipal collaboration and public-private partnerships. Upon ACJ's closure in 2021, over 98% CSOs from Onondaga County's CSS were being captured or treated, exceeding the ACJ requirement. However, after all these and nearly $700 million of overall spending, one of the primary water quality parameters, the fecal coliform bacteria count, is still out of compliance with the current water quality standards for the receiving tributaries, and the CSOs contribute to this violation.

LTCP DEVELOPMENT AFTER ACJ

A primary objective of the LTCP is to develop a range of CSO control measures sufficient to meet WQS and provide for attainment and protection of designated uses on CSO-impacted waters. Meanwhile, the CSO Control Policy recognizes the complexity and uniqueness of each water body, and recommends the review and revision, as appropriate, of water quality standards and their implementation procedures as an integral part of the LTCP development to reflect the site-specific wet weather impacts of CSOs.

In Onondaga County, the water quality standards for fecal coliform bacteria for the CSO-receiving tributaries are being reviewed through a 4-year Use Attainability Analysis process (UAA, Factsheet 3) under a new administrative state consent order between the County and NYS DEC. During this process, the CSO control is under the guidance of an Interim CSO Corrective Measure Plan approved by NYS DEC, while the performance of the implemented measures continues being monitored. Onondaga County will continue with the development of the final LTCP, taking into full consideration the CSO and non-CSO pollution, current WQS, and the social and economic implication of the LTCP to the community.

The County will identify key stakeholders and partners as liaison to help reach out to and engage key community members and general public during the LTCP development process.