

Combined Sewer Overflows (CSOs)

A combined sewer system collects and conveys municipal sewage, industrial wastewater and stormwater runoff in a single pipe. Combined sewer systems are designed to transport all wastewater to a treatment plant during dry weather and overflow when stormwater and/or snowmelt combined with wastewater exceeds the capacity of the conveyance system or treatment plant. Combined sewer systems are designed to overflow occasionally and discharge from an outfall to a waterbody. The event is referred to as a Combined Sewer Overflow (CSO). The overflow may contain untreated human and industrial waste and debris. The event may be a source of contamination for public beaches, shellfish harvest areas, drinking water intakes, and impaired waterbodies.

How are CSOs regulated?

The National Pollutant Discharge Elimination System (NPDES) permitting program authorizes and regulates discharges to surface waters from outfall pipes in compliance with the Clean Water Act (CWA). CWA requirements for CSOs are outlined in EPA's National CSO Control Policy (CSO Policy) as published in the Federal Register on April 19, 1994 (59 Fed. Reg. 18688). Objectives of the CSO Policy are compliance with technology-based requirements of the CWA and state water quality standards, as soon as practicable, in order to minimize water quality, aquatic biota and human health impacts from wet weather CSO discharges.

There are Nine Minimum Controls (NMCs) defined in the CSO Policy and required by the NPDES permit to facilitate these objectives. The NMCs are:

1. Proper operation and regular maintenance programs for the sewer system and CSOs.
2. Maximum use of the collection system for storage.
3. Review and modification of the pretreatment programs to assure CSO impacts are minimized.
4. Maximization of flow to the Publicly Owned Treatment Works (POTW) for treatment.
5. Prohibition of CSOs during dry weather.
6. Control of solid and floatable materials in CSOs.
7. Pollution prevention (i.e., contaminant reduction activities).
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.
9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Additional CSO control requirements include the development and implementation of a Long-Term CSO Control Plan (LTCP) to achieve full compliance with the CWA. The LTCP provides a framework for effective CSO control planning through the characterization, monitoring, modeling and the evaluation of abatement alternatives for developing a plan that meets water quality standards and protects the receiving water uses. Final implementation typically includes a phased approach and post construction monitoring.

Which New Hampshire communities have CSOs?

New Hampshire CSO communities include Berlin, Exeter, Manchester, Nashua and Portsmouth. Permittees continue to make progress in reducing and/or eliminating CSO discharges under the requirements of their NPDES permits and formal enforcement actions. Permits specific to a municipality are available on [EPA's website](#).

Where to obtain more information?

EPA's National Pollutant Discharge Elimination System (NPDES) [Combined Sewer Overflow Program](#) website describes the program. Municipal websites, typically associated with the public works department, are a resource for more information and the NHDES Wastewater Engineering Bureau may be reached at [\(603\) 271-1497](tel:6032711497).