

Post-Construction Compliance Monitoring

This fact sheet describes post-construction compliance monitoring (PCCM) for combined sewer overflow (CSO) permittees that have completed construction of the controls described in their long-term control plans (LTCPs). National Pollutant Discharge Elimination System (NPDES) permitting authorities and CSO permittees can use this information to assist in developing and evaluating PCCM programs.

Section 402(q) of the Clean Water Act (CWA) requires NPDES permits for discharges from combined sewers to “conform” to the 1994 CSO Control Policy. CSO permittees must implement LTCPs in accordance with the CSO Control Policy. As described by the CSO Control Policy, LTCPs should ultimately result in compliance with the requirements of the CWA.

A PCCM program is a required element of an LTCP. This program should be adequate to verify compliance with water quality standards (WQS), including protection of designated uses, and ascertain the effectiveness of CSO controls. It should include a plan approved by the NPDES permitting authority that details protocols for monitoring—for example, necessary effluent and receiving water monitoring and, where appropriate, other monitoring such as biological assessments, whole effluent toxicity testing, and sediment sampling.

LTCP Approach

To develop an LTCP to ultimately meet the requirements of the CWA, the CSO Control Policy lays out two alternative approaches to evaluate CSO controls: the presumption approach and the demonstration approach.

The presumption approach allows a permittee to select CSO controls based on a presumption that the controls will meet water-quality-based requirements of the CWA when certain performance-based criteria identified in the CSO Control Policy are achieved. The NPDES permitting authority should determine that such a presumption is reasonable considering the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas. Under the demonstration approach, the permittee should demonstrate that select CSO controls are adequate to meet water-quality-based requirements of the CWA.¹ Under either approach, once the selected controls have been constructed, the NPDES permitting authority should request data to assess whether WQS have been met and to verify the controls’ effectiveness. Based on this assessment, the permittee may need to work with their permitting authority to identify additional projects, activities, or actions that could lead to attainment of WQS.

¹ Under the demonstration approach, the CSO Control Policy provides that “[w]here WQS and designated uses are not met in part because of natural background conditions or pollution sources other than CSOs, a total maximum daily load, including a wasteload allocation and a load allocation, or other means should be used to apportion pollutant loads.”

Monitoring to Verify CSO Control Effectiveness

Permittees can verify the effectiveness of their CSO controls by comparing PCCM results to the baseline conditions identified from initial monitoring and system characterization. The permittee should verify whether they are achieving the performance standards identified in their LTCP and ultimately whether they are meeting WQS and protecting designated uses of the waterbody. Monitoring to verify the effectiveness of CSO controls can take several different forms, as described in the figure below.

Receiving Water Monitoring to Verify Compliance with WQS

Whether using the presumption approach or the demonstration approach, the ultimate requirements of the CWA and the CSO Control Policy are to meet WQS, including protection of the designated uses, of the receiving waters. Permittees will need to monitor receiving waters to show that their control programs are adequate to meet the water-quality-based requirements of the CWA, as described in the figure below. Receiving water monitoring should build on previous monitoring efforts carried out to characterize CSO impacts and the conditions of receiving waters. The permittee should work with the NPDES permitting authority to select the pollutants to monitor as part of their PCCM program.

Combined Sewer System Flow

- Show data and trends in the discharge of combined sewer system flows to the receiving waterbody, such as elimination of dry-weather overflows and flow from eliminated CSO outfalls; increased flow to the publicly owned treatment works treatment plant; and reduction in the frequency, volume, and duration of CSOs.

Receiving Water Quality

- Show data and trends of the conditions in the waterbody to which the CSO occurs, such as decreases in loadings of conventional and toxic pollutants in CSOs.

Ecological, Human Health, and Designated Use

- Show data and 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. These might include beach closures, attainment of designated uses, habitat improvements, and fish consumption advisories.

In addition, a permittee may have some site-specific objectives for its monitoring program. For example, a permittee that is considering sewer separation as a CSO control alternative may wish to assess the likely impacts of increased stormwater loads on receiving waters.

For Additional Information

Contacts

Names and telephone numbers for the U.S. EPA's Office of Wastewater Management (Headquarters), each EPA regional office, and state contacts are listed at <https://www.epa.gov/npdes/contact-us-combined-sewer-overflows-csos>

Your NPDES Permitting Authority

Most states and U.S. territories are authorized to administer the NPDES Program, except the following, for which EPA is the permitting authority:

- American Samoa
- District of Columbia
- Guam
- Indian Tribes
- Johnston Atoll
- Massachusetts
- Midway and Wake Islands
- New Hampshire
- New Mexico
- Northern Mariana Islands
- Puerto Rico
- Trust Territories

Additional Resources

- [EPA's CSO website](#)
 - [Combined Sewer Overflows: Guidance for Monitoring and Modeling](#)
 - [Post-Construction Compliance Monitoring Guidance](#)

Disclaimer: The statements in this document are intended solely as suggestions. This document is not intended, nor can it be relied on, to create any rights enforceable by any party in litigation with the United States. Long-term CSO control plans are site-specific in nature. EPA, state officials, and CSO permittees may decide to follow a suggestion provided in this document, or to act at variance with the suggestion, based on an analysis of site-specific circumstances.