

# Hazen



# CSO Supplemental Compliance Plan

City of Portsmouth, NH  
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## List of Acronyms

<b>Abbreviation</b>	<b>Definition</b>
CSO	Combined Sewer Overflow
CD	Consent Decree
CWA	Clean Water Act
I/I	Infiltration/Inflow
EPA	Environmental Protection Agency
LTCP	Long-Term Control Plan
WMP	Wastewater Master Plan
PCMP/R	Post-Construction Monitoring Plan/Report

## 1. Introduction

This Supplemental Compliance Plan is being submitted as part of part of the City of Portsmouth, New Hampshire Consent Decree 09-cv-283-PB. In accord with the Consent Decree, the City completed the identified sewer separation projects, the final identified project being completed in October 2014. Thereafter the City of Portsmouth conducted post construction monitoring which resulted in a plan and report (PCMP/R) which was submitted to EPA in November 2016.

The EPA, by letter to the City received on April 18, 2017, commented on the PCMP/R. This Supplemental Compliance Plan is part of that response to comments.

## 2. Ongoing and Identified Projects and Programs

The City has continued to implement projects that will improve the performance of the CSS and reduce CSOs since the completion of the scheduled projects set forth in the Consent Decree. Currently the projects listed below are in varying stages of planning and design and have sewer separation components. Sewer separation is one means for reducing events/volumes at CSOs 010A, 010B and 013:

- Fleet Street (Engineer Procurement Phase)
- Pleasant Street (at Court Street) (Design Phase)
- McDonough Phase 3B (Construction Phase)
- McDonough Phase 4 (Engineer Procurement Phase)
- Islington Street Phase 1 (Design Phase)
- Islington Street Phase 2 (Preliminary Design Complete – Implementation to Follow Phase 1)
- Maplewood Avenue (at Fairview Drive) (Design Phase)
- Union Street (Engineer Procurement Phase)

The scope of work and schedule for each of these projects is not finalized and is dependent on both further design as well as approval of the City Council through the appropriation of funds. That stated, the City continues to look for opportunities for improvements. In establishing next steps for CSO compliance as part of the LTCP update, the impact of recently completed and ongoing work will be taken into consideration.

In addition to potential sewer separation work, the City continues to evaluate inflow and infiltration (I/I) in the collection system, recognizing that removal of I/I will provide additional capacity for conveyance of CSS flows to the WWTF for treatment, resulting in a reduction in CSOs. Sewer System Evaluation Survey work is continuing, along with an update to the drain and sewer tributary area GIS-based mapping. The City continues to perform closed-circuit television inspections of its sewer system, and through an asset-based approach, invests in rehabilitation and/or replacement of deteriorated sewers each year. A dedicated GIS staff supports all of these efforts, and maintains the sewer and drainage infrastructure databases. The City has also begun to explore the development of a sump pump disconnection program and a service lateral upgrade program. All of these I/I efforts will be evaluated as a component of the LTCP update.

### 3. Water Quality Data Gathering and Analysis and LTCP Update

Water quality data gathering and analysis and a LTCP update is the next step in the adaptive long-term CSO control program. The City of Portsmouth intends to implement a scope of work consistent with the CSO Control Policy including the following:

- Water Quality Monitoring and Continue CSO Monitoring
- Collection System Modeling
- Receiving Water Body Modeling
- Consideration of Sensitive Areas
- Evaluation of Alternatives
- Review of Costs and Performance Considerations
- Operation and Maintenance Plan(s)
- Update of Nine Minimum Controls
- Project Implementation Schedule
- Post Construction Monitoring Plan

The LTCP update will also include public information and participation components throughout the program.

As required by the CSO Control Policy and the CWA, the LTCP update will be submitted to and approved by the NPDES Permitting Authority prior to implementation.

The first step in determining the additional controls needed for compliance is to establish post-construction baseline conditions. This includes the parameters outlined in the PCMP/R (rainfall, flows, CSO activations), as well as water quality monitoring data.

From January through June 2000, NHDES collected water quality samples from South Mill Pond and analyzed them for enterococcus bacteria. Four of the 25 samples collected during this period exceeded the single sample maximum of 104 colonies/100 ml and one of the 30-day geometric means exceeded the 35 colonies/100 ml threshold. As a result, the pond was assessed as not meeting its uses due to bacterial contamination. The updated LTCP would include sample collection and analysis during a similar time period to evaluate impacts of the system improvements to date and to guide future improvements.

A collection system model of the City's combined sewer collection system was updated and re-calibrated as documented in the November 2016 PCMP/R. This model, in addition to any other relevant modeling frameworks (e.g., water quality, etc.) will be utilized in the LTCP update as appropriate. The goals will be to:

- Evaluate impact of projects currently underway
- Identify and recommend an approach to achieve the CWA goals

The City will proceed with the procurement process for an engineering firm for the LTCP Update. In accordance with the Consent Decree requirements, the City will proceed with the LTCP Update based on the schedule provided in Section 4 of this Supplemental Compliance Plan.

#### 4. LTCP Update Schedule

<b>Task</b>	<b>Start Date</b>	<b>End Date</b>
<b>Project Initiation, Meetings, Administration</b>	<b>November 2017</b>	<b>September 2020</b>
<i>Kickoff meeting with City (internal)</i>		
<i>Public/external stakeholder meetings</i>		
<b>Data Gathering/Monitoring</b>	<b>January 2018</b>	<b>September 2018</b>
<i>Water quality monitoring</i>		
<i>Gather rainfall, system flows, CSO discharge, and stormwater data</i>		
<i>Compile collected data</i>		
<i>Progress meeting to review data</i>		
<b>Hydraulic Modeling</b>	<b>October 2018</b>	<b>October 2019</b>
<i>Establish baseline conditions/calibration</i>		
<i>Identify alternatives/run scenarios</i>		
<b>Receiving Water Modeling</b>	<b>October 2018</b>	<b>October 2019</b>
<i>Establish baselines conditions/calibration</i>		
<i>Run scenarios</i>		
<b>Develop LTCP Update</b>	<b>November 2019</b>	<b>September 2020</b>
<i>Evaluate Alternatives/Identify Recommended Approach</i>		
<i>Draft LTCP Update</i>		
<i>Stakeholder and Regulatory Review and Comment</i>		
<i>Revised LTCP Update</i>		