

JMEUC CSO Long Term Control Plan

The Joint Meeting of Essex and Union Counties (JMEUC) is working in collaboration with the City of Elizabeth (City) to prepare and implement a CSO Long Term Control Plan (LTCP). This plan is required to meet certain conditions of the New Jersey Pollutant Discharge Elimination System (NJPDES) permit actions issued by the New Jersey Department of Environmental Protection (NJDEP) individually to JMEUC and the City in 2015 to address combined sewer overflows (CSOs).

A draft of the plan was prepared and submitted to NJDEP on September 25, 2020. NJDEP provided their comments on the plan to JMEUC and the City of Elizabeth (City) on July 22, 2021. A revised report was submitted to NJDEP on September 16, 2021 and is available on the NJDEP CSO website at [CSO SIAR JointMeeting 20201001.pdf \(nj.gov\)](#). Comments from NJDEP on the revised report are currently pending.

Further information about the collaborative CSO Long Term Control Plan is available on the [City's website](#) at <https://www.elizabethnj.org/182/CSO> and additional background is provided below.

Background

The JMEUC owns and operates the Edward P. Decher Secondary Wastewater Treatment Facility (WWTF) in Elizabeth, New Jersey, which treats wastewater collected in a 65 square mile service area in northern New Jersey. The JMEUC service area has separate sewers that collect sanitary wastewater, with the exception of the City of Elizabeth, which has combined sewers that collect both sanitary wastewater and stormwater runoff. The City of Elizabeth owns the Elizabeth sewer system including the Trenton Avenue Pump Station, which pumps the city's wastewater to the JMEUC trunk sewer system, where it combines with the wastewater from the remaining portions of the service area and flows to the WWTF.

As is typical of combined sewer systems throughout the United States, the Elizabeth sewer system is designed to discharge excess flows that exceed the pumping, conveyance and treatment capacities of the system during wet weather. These discharges, known as combined sewer overflow (CSO), flow from the sewer outfalls into the adjacent waterways. The City of Elizabeth has 29 combined sewer outfalls, which discharge to the Elizabeth River, Arthur Kill and Newark Bay.

The JMEUC does not own, operate or control any CSO outfalls or control facilities. However, because the downstream portion of the JMEUC trunk sewer system receives and conveys wastewater from the City of Elizabeth's combined sewer system, and this wastewater is treated at the JMEUC WWTF, the JMEUC was issued a NJPDES CSO permit and is working collaboratively with the City to comply with its requirements.

Planning Strategy for CSO Control

The Long Term Control Plan strategy to address CSO discharges from the Elizabeth combined sewer system has evolved with maximization of flow capture from the system during wet weather for treatment at the JMEUC WWTF as the key element. This strategy will be implemented in a multi-phase approach, in which the initial phase will maximize the flow pumped from the existing City of Elizabeth Trenton Avenue Pump Station (TAPS), the second phase would involve upgrades to TAPS to further increase wet weather flow pumping rates, and a third phase would involve significant new pumping

capacity at or near the TAPS site together with expanded sewer capacity in Elizabeth to deliver significantly greater wet weather flow to the TAPS site for pumping to the JMEUC WWTF.

Early Implementation of CSO Controls

JMEUC and the City of Elizabeth immediately moved forward to complete the initial phase of the strategy described above. This entailed JMEUC and the City of Elizabeth working together to implement pump station control system improvements in order to cost effectively realize immediate water quality benefits. These improvements provide for a 53% increase in the peak pumping rate of combined sewer flows from the Elizabeth system to the JMEUC WWTF during wet weather. The improvements largely comprise new monitoring and pump controls and allow for a significant increase in combined sewer flows to be captured and treated very cost effectively.

Model simulations performed by JMEUC and the City demonstrate that this increased capture and treatment rate will provide for a roughly 20% reduction in CSO volume from the entire Elizabeth combined sewer system on an average annual basis. The Phase 1 improvements are complete and the system is successfully conveying the intended design flows to the JMEUC WWTF during wet weather conditions.

Additional Information

For more information about CSOs and the State of New Jersey's CSO program, the following resources are available.

Real time notification of CSO discharges. DEP requires that communities with CSOs notify the public when and where CSOs may be occurring as a result of wet weather. JMEUC is a Cooperating member of the NJ CSO Group, a consortium of 19 CSO permittees in New Jersey who have collectively developed a website to satisfy that requirement. This CSO notification system can be accessed at [NJ CSO Group - CSO Notification System \(hdrgateway.com\)](http://NJCSOGroup-CSONotificationSystem(hdrgateway.com)).

NJDEP's CSO program. NJDEP has created a website with extensive information about CSOs, the CSO permit process, submittals from the CSO permittees, community collaboration, stakeholder engagement, and other information. This information can be found at [NJDEP New Jersey Department of Environmental Protection, Division of Water Quality](http://NJDEPNewJerseyDepartmentofEnvironmentalProtection,DivisionofWaterQuality).