

CITY OF WATERBURY WATER POLLUTION CONTROL DEPARTMENT

Baseline

In the early 1870's, the City of Waterbury (City) initiated the construction of the City's first sewers. These "combined" sewers were designed to convey both untreated sewage and storm water directly to the Naugatuck and Mad Rivers. The discharge of raw sewage to the Mad River and Naugatuck River soon became offensive to City residents and the Main Carrier was constructed to collect flow and discharge it into the Naugatuck River at the City's southerly border. As urbanization, development and the population base increased, wet weather flows began to hydraulically overload the Main Carrier. In an effort to protect property and prevent injury, high-level combined sewer overflows (CSO's) were constructed to act as relief points for the surcharged Main Carrier.

As a result of increased environmental awareness and regulations, the City constructed a Water Pollution Control Facility (WPCF) in 1951 utilizing primary wastewater treatment to improve water quality in the Mad and Naugatuck Rivers. In the 1950's, the City installed "separated" storm and sanitary sewer systems to reduce wet weather flows to the WPCF. In 1972, the WPCF was upgraded to provide secondary wastewater treatment.

Strategy

In May of 2000, the City further upgraded and expanded the WPCF to route its remaining combined wastewater to the treatment plant, which required expansion of the plant. The expansion of the wastewater treatment plant cost approximately \$94 million. Over the years, the wastewater collection system has undergone an extensive separation program, but many inflow sources still exist in the portions of the Collection System. In the fall of 2001, the City completed and put into operation the Main Carrier Relief Sewer, which included the construction of a 54-inch diameter interceptor sewer. This resulted in the closing and elimination of ten CSO's.

Additional Collection System improvement projects were implemented in early 2003, with the award of the Inflow Reduction Program and the Cured-in-Place Pipe Lining Contract. This work included the reduction of inflow of stormwater into the Collection System through stormwater separation, manhole rehabilitation, and installation of additional sanitary sewer lines, as well as through cleaning, cured-in-place pipe lining and point repairs of selected sanitary sewer lines both construction projects were substantially completed by December 31, 2003.

Status

The City's present Collection System consists of 20 active Pump Stations, 5 flow metering stations, more than 320 miles of sewers and approximately 9,500 manholes. In 2009 the sewer and manhole rehabilitation and inflow source separation projects were developed into separate contracts that were bid to outside contractors. The cured in place lining project was completed in 2010 and an inflow stormwater separation project was completed on August 2011.

In August 2011, the Sanitary Sewer and Manhole Rehabilitation project was awarded to a contractor to test and seal approximately 59,000 linear feet of sewer, 160 linear feet of cured-in-place spot repair, and manhole rehabilitation.

Combined wastewater receives full primary and secondary treatment at the plant up to a flow of 53 million gallons per day (MGD). When wastewater flow to the WPCF exceeds 53 MGD during extreme wet-weather events, the excess combined wastewater receives primary treatment and seasonal disinfection prior to discharge at the current CSO remaining in Waterbury.