

PASSAIC RIVER WATER QUALITY – BETTER THAN YOU THINK

Charles Dujardin ⁽¹⁾ Sheldon Lipke ⁽²⁾ Bridget McKenna ⁽²⁾

⁽¹⁾HydroQual, Inc. 1200 MacArthur Blvd. Mahwah, NJ 07430 (p) 201-529-5151
cdujardin@hydroqual.com

⁽²⁾ Passaic Valley Sewerage Commissioners, 600 Wilson Ave., Newark, NJ 07105,
(p) 973-817-5876, slipke@pvsc.com, BMcKenna@pvsc.com

Bacteria levels in receiving waters are a primary concern for federal, state, and local agencies. The primary sources of bacteria are generally attributed to combined sewer overflows (CSO), stormwater, natural sources, and perhaps improper or illicit connections of sanitary sewers to storm systems. At the present time both State and Federal modeling projects are currently underway to assess water quality conditions, and CSO Long-Term Control Plans are being prepared by permittees in New Jersey for evaluation and possible abatement required by the State. In addition, the USEPA is conducting a NY/NJ Harbor Project to develop Total Maximum Daily Loads (TMDLs) of pathogen indicators to the Harbor. These projects may have significant implications regarding CSO control and remediation, and therefore could have significant financial implications to local municipal communities, as well as PVSC.

Presently, all NJ waters are classified according to its present use, with water quality bacteria standards associated with each classification. The bacteria indicators of concern are fecal coliform bacteria for secondary contact marine waters, enterococci bacteria for primary contact marine waters, and E. Coli for freshwaters.

The Passaic Valley Sewerage Commissioners (PVSC) and the New Jersey Harbor Discharges Group (NJHDG) have been conducting extensive long-term baseline water quality monitoring of the receiving waters that are impacted by CSO discharges currently covered under the General NJPDES Permit for Combined Sewer Systems and/or Individual NJPDES Permits. This monitoring data could be critical for establishing the level to which these receiving waters are being impacted by New Jersey CSO discharges. The PVSC/NJHDG fecal coliform data were collected at 33 stations in water bodies of New York and New Jersey. During the 2003 through 2006 sampling period, there were between one and five sampling events per month. Accordingly, a study was conducted for the assessment of the conditions of the lower Passaic River and Newark Bay with respect to bacteria and to assess the potential sources of bacteria

The data analysis evaluated existing water quality data with respect to existing standards for the lower Passaic River/Newark Bay. The lower Passaic River and Newark Bay have a SE3 classification with a fecal coliform geometric mean standard of 1500 No./100mL. The analysis demonstrates that the lower Passaic River and Newark Bay are in compliance with existing water quality standards.