

Water Quality Monitoring in the Interstate Environmental District

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Biographical Sketch of Author

Employed by the Commission for over 23 years, Peter Sattler is involved with all aspects of the ambient and effluent monitoring programs including all field logistics and operation of the IEC research vessel, R/V Natale Colosi. He is an active participant in a number of regional projects and workgroups including the Harbor Estuary Program and the Long Island Sound Study. He is active in the IEC public outreach and education activities, as well as being the Commission librarian and archivist. He holds a BS in chemical oceanography from the Florida Institute of Technology (1976), is an US Coast Guard certified captain since 1990 and has logged over 1,700 scuba dives throughout the western hemisphere.

Abstract

On October 27, 2000, the President of the United States signed the Bill containing the language that changed the name of this agency from the Interstate Sanitation Commission to the Interstate Environmental Commission (IEC). The new name more accurately reflects the Commission's mandates, mission and responsibilities that embrace a broad range of programs and activities that include air pollution, public involvement and education, and water quality — an area in which the Commission is a regulatory and enforcement agency.

Investigations of private and municipal facilities involve a six-hour sampling period and an inspection of processes, equipment, and plant records. Investigations of industrial facilities generally involve a 24-hour period or a full day's production. Analyses are performed for the parameters specified in the facilities' National Pollutant Discharge Elimination System (NPDES) permits which contain the Commission's requirements. The data generated from these investigations are used to determine compliance with IEC's Water Quality Regulations and with each facility's NPDES discharge permit.

The year 2003 marked the thirteenth consecutive summer season that the Commission conducted weekly sampling to document hypoxic (low dissolved oxygen) conditions in western Long Island Sound and the upper East River; this survey was performed aboard the IEC's research vessel, the R/V Natale Colosi. This monitoring is performed in support of the Long Island Sound Study and is conducted from July through mid-September in cooperation with several other agencies. During these summer surveys, additional samples are collected at the established 21-station sampling network, as well as in situ water quality data to support other cooperative studies.

In support of the NY-NJ Harbor Estuary Project (HEP), IEC completed a third year of ambient water quality monitoring for pathogens. In situ measurements are made at a network of 46 stations throughout the New York-New Jersey Harbor Complex for temperature and salinity in addition to collected aqueous samples for the subsequent analysis of four pathogens — fecal and total coliforms, fecal streptococcus and enterococcus — by the IEC laboratory. This very important data set represents information on interstate waterways, applications for state and interstate water quality assessments, model calibrations and TMDL development. During 2003, 16 stations were added in order to collect a nonexistent data set for pathogens on the Newark Bay Complex.

These ongoing year-round interstate programs represent collaborative efforts amongst governmental agencies (local, state, federal), the public and academia — a true success story. Ensuring QA/QC and disseminating data in a timely fashion on many levels allows for access to all stakeholders, and supports many important issues including regulatory compliance, modeling, nitrogen management, pathogen control and assessment (shellfishing and bathing beach quality) and immediate environmental conditions.