



Sediment Quality Assessment

Capabilities

Specialized Sediment Sampling Survey Equipment

Whole Sediment, Sediment Elutriate, Sediment Porewater Toxicity Testing

Sediment Tissue/Chemistry

Sediment Toxicity Identification Evaluation (TIE)

Bioaccumulation Testing

Benthic Community Assessment



Clients

Federal Agencies

State Agencies

Manufacturing Firms

Chemical Processing and Storage

Mining

Environmental Engineering Firms



Sediment quality assessments are frequently conducted to evaluate sediment quality impacts due to: contaminated groundwater venting into lakes and streams; industrial and municipal wastewater discharges; aerial deposition and fill placement within water bodies; and, sediment quality impacts due to chemical spills, runoff, confined animal feeding operations (CAFOs), and landfill leachate outbreaks. Due to its organic carbon content and other characteristics, sediment can act as a “sink” for metals, polynuclear aromatics (PAHs), polychlorinated biphenyls (PCBs), pesticides, herbicides, and volatile organic compounds (VOCs). Contaminated sediments can adversely impact surface water quality and aesthetics (e.g. sheens and odors) as well as benthic macroinvertebrate and fish populations.

GLEC’s experienced staff have conducted sediment quality assessments for industrial, RCRA Corrective Action, Superfund, and state monitored sites in Michigan, Ohio, and several other states. GLEC owns and operates a wide array of specialized sediment sampling equipment including Vibracore samplers and seven survey boats complemented by our capabilities in benthic community and chemical bioavailability assessments

GLEC operates one of the few aquatic toxicology laboratories in the U.S. that is fully equipped to perform acute and chronic toxicity evaluations of whole sediment, sediment elutriate, and sediment porewater, as well as sediment/tissue bioaccumulation testing and sediment Toxicity Identification Evaluations (TIEs). Our sediment toxicity assessment methods follow written standard operating procedures that follow the most recent ASTM and EPA guidelines, and we culture most of our test organisms in-house to ensure quality control. With respect to Michigan, GLEC conducts sediment quality assessments using Operational Memorandum Number 4, Attachment 3, Sediments dated August 2, 2006.

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