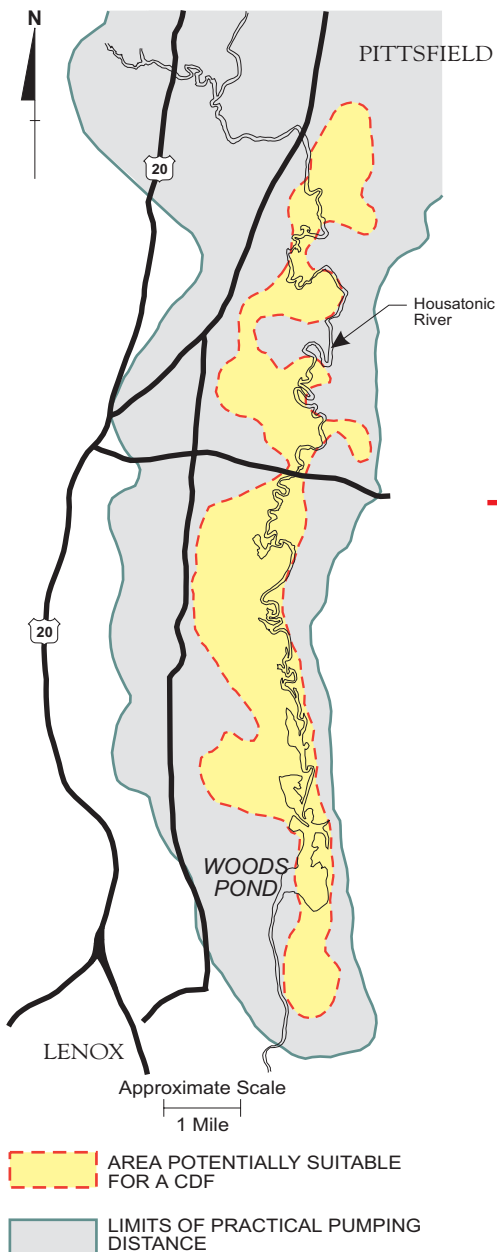


PCB-Impacted Sediment Site in Massachusetts



Location: Western Massachusetts

Site Issue: Lake and river sediment containing PCBs.

Solution: Study and testing of potential dredging and treatment technologies and preparation of a Preliminary Investigation of Corrective Measures document under the requirements of a RCRA Corrective Action Permit.

Client: Confidential

Total Cost: Confidential



Brief History

Polychlorinated biphenyls (PCBs) were used from the 1920's to 1970's in the manufacturer of transformers in Pittsfield, Massachusetts. Some of the PCBs ended up in sediments of a 26-acre lake adjacent to the manufacturing facility and the Housatonic River flowing south from Pittsfield. The river includes extensive backwaters, wetland areas, and old mill pond dams which act as sediment traps on the river. Regulatory agencies required the manufacturer to perform a RCRA facility investigation and corrective measures study for the manufacturing site, adjacent lake, and downstream river.

HE&C conducted an assessment of corrective measures for up to 1,000,000 yds.³ of PCB containing sediment in the 26-acre lake and the Housatonic River. The assessment included evaluation of sediment removal technologies, evaluation of in-situ sediment restoration technologies, preliminary siting of confined disposal facilities, evaluation of sediment treatment technologies, and the preliminary design of sediment capping and other non-removal sediment restoration options.

Primary Activities Performed by HEC Personnel

- Developed a work plan for assessment of sediment restoration options and performance of bench scale studies.
- Conducted a preliminary assessment of corrective measure technologies for PCB-impacted sediment.
- Designed and implemented in-depth studies and treatability testing on the following:
 - In-situ technologies, including armoring, in-situ bioremediation, and natural recovery.
 - Ex-situ treatment technologies, including thermal treatment, soil washing, hydrocyclone separation, and nucleophilic substitution.
 - Sediment removal techniques, including hydraulic cutterhead and horizontal auger dredging, pneumatic dredging, and river diversion/wet excavation.
 - Disposal techniques, including upland and in-water confined disposal facilities.
- Prepared a Preliminary Investigation of Corrective Measures document presenting the assessment and fulfilling RCRA Permit requirements.

