

Manistique River AOC Fish Tracking & Recovery

Manistique, Michigan



Combining telemetry data with fish tissue PCB data helps pinpoint target locations for remedial action in the Manistique River Area of Concern.

The Manistique River flows southwest through Schoolcraft County in Michigan's central Upper Peninsula. In the 19th and 20th centuries, the river was heavily used by the logging industry to move wood to downstream markets. In addition to waste from sawmills, paper mills, and other industries, the river developed high levels of PCB sediment contamination. Under the Great Lakes Water Quality Agreement of 1987, the Manistique River, along with its harbor at the mouth of the Lake Michigan, was named an Area of Concern (AOC). Sediment remediation took place between 1995 and 2000, and while fish tissue PCB concentrations declined, fish collected at the site continued to have elevated levels of PCBs. Sediment sampling at the site also indicated that PCB concentrations have declined over time, but some samples still exhibited relatively high concentrations of PCBs.

In order to inform future remedial action, the U.S. Army Corps of Engineers (USACE) wanted to identify specific areas responsible for driving PCB body burden. Because the contamination of these fish most likely occurred during feeding, it became important to understand where in the AOC the contaminated fish were spending time and what behaviors they were exhibiting there.

Biohabitats supported EA Engineering in this project which combined fish telemetry data with fish tissue PCB data to identify specific locations in Manistique Harbor where contaminated fish were acquiring elevated PCB body burdens, and thus where sediment PCBs are high.

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clockwise from top: Mapping to indicate total detections, monitor locations, and fish position solutions

