

Saginaw River (Michigan)

Watershed location and features:

- tributary to Saginaw Bay
- total watershed area is 8,595 square miles

Watershed characteristics:

- flat plain consisting of mostly agricultural and forested land

Soil erosion and sedimentation issues:

- agricultural practices impact the sediment loading
- large sediment load carried by Saginaw River
- Federal dredging costs exceed \$1 million per year

Contamination issues:

- Metals, nutrients, petroleum hydrocarbons, PCBs, DDT and other persistent organic compounds
- Sediment, stormwater quality and bacteria contamination
- Designated Great Lakes Area of Concern

Partners on tributary modeling:

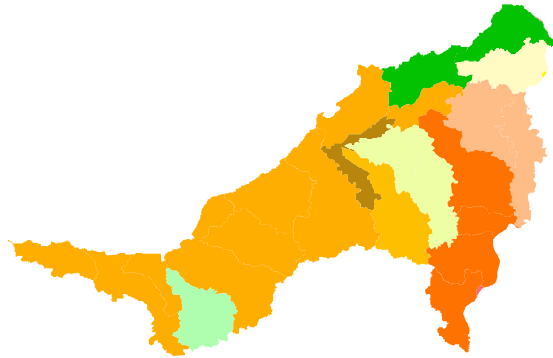
- Baird and Assoc., and Wade-Trim Inc.
- East Central Michigan Planning Development Region
- Institute of Water Research at Michigan State University
- EPA

Modeling approach:

- transport of sediment from Saginaw River into Saginaw Bay has been modeled with MIKE 21
- HEC-6 modeled erosion and deposition of sediment in the Saginaw River
- Sediment production models using AGNPS were developed to determine sediment loading

Status:

- Complete



Applications:

- sediment transport model will be utilized to provide information on methods to reduce costs of dredging on out navigation channel
- Effectiveness of sediment trap was examined to reduce dredging costs
- The benefit of improved agricultural practices (contour farming, no-till plowing, etc.) was examined with respect to sedimentation