



Michigan's
Nonpoint Source
Program

Federal Clean Water Act Section 319 Grant

Tracking code 2009-2012



Shiawassee Conservation District

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Mid-Shiawassee River Watershed Planning Project

July 1, 2009 through September 30, 2011

The Shiawassee River is 110 miles, flows in a northerly direction, and discharges into the Saginaw River. The Mid-Shiawassee River Watershed includes eight sub-watersheds located primarily in Shiawassee County, with portions extending into Genesee, Livingston, and Saginaw Counties. Land use is primarily agriculture with urban and natural areas spread throughout the 138,000-acres Watershed.

The goal of this project was to update the Mid-Shiawassee River Watershed Management Plan (WMP). The WMP describes the watershed, defines sources and causes of pollutants impairing designated uses, and makes recommendations for practices, educational strategies, monitoring, and sustainability actions. Targeted critical areas include water bodies that are listed on the State of Michigan Integrated Report due to impairments of Partial and Total Body Contact Recreation caused by the E. coli TMDL Holly Drain Sub-Watershed, and Other Indigenous Aquatic Life and Wildlife due to anthropogenic substrate and flow alterations in the Webb Creek and Jones Creek Sub-Watersheds. Recommendations from the WMP include repair failing on-site septic systems, inspection and pumping of septic tanks, and sampling/E. coli testing of surface water. Conservation practices are recommended in critical areas for nutrient, manure, and pastureland management and channel stability through construction of instream, upland, and wetland restoration practices. The WMP features an educational component, which includes Home-Farm-Crop-Livestock*A*Syst programs and emphasizes regular septic system inspections, septic tank pumping, drain field protection, septic system failure warning signs, and proper nutrient, manure and pastureland management techniques.

Watershed Inventory Activities

- 81.5 miles walked and 175 streams sites surveyed
- Literature and past survey report review
- Aerial map and High Impact Targeting (HIT) tool analysis
- Stream survey database and numeric photo library developed



Recommendations:

- 80 septic system replacements and 400 septic tank clean-outs
- 31 sites for manure management systems
- 16 sites for livestock management practices
- 73 miles of riparian ag and non-ag buffers
- 14,600 acres of ag conservation practices to reduce sheet erosion
- 180 gully stabilization sites on ag and non-ag lands
- 94 sites for in-stream practices to stabilize hydrology
- 490 acres for potential wetland restoration/protection
- 11,200 acres for nutrient and pest management
- Fertilizer and composting measures in residential areas
- Stormwater management and LID practices in urban areas

I&E Activities and Recommendations:

- Target homeowners with proper septic system care education
- Target producers with livestock and manure management education
- Target ag and non-ag areas with sedimentation effects on water quality through education
- Target urban areas with stormwater management education
- Target producers with nutrient and pest management education
- Target residential areas with proper lawn and garden care education
- Target ag and non-ag areas with riparian management education

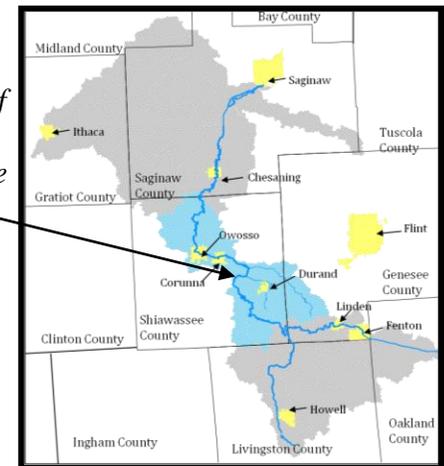


Grant Amount: \$ 100,000

Match Funds: \$ 15,840

Total Amount: \$ 115,840

*Location of
Mid-
Shiawassee
River
Watershed*



Partners involved:

- Natural Resources Conservation Service
- Michigan Department of Environmental Quality
- Michigan Department of Agriculture and Rural Development
- Shiawassee Drain Commission
- Shiawassee County Environmental Health Department



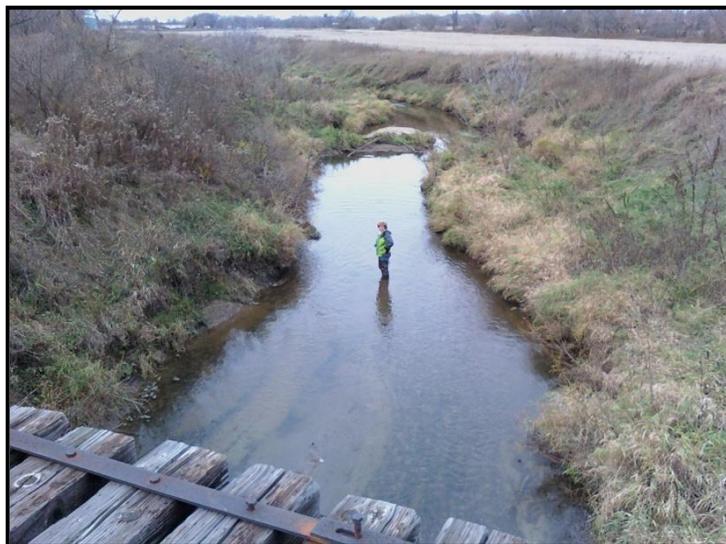
Stream Survey inventory data collection. 81.5 miles of stream were walked during this project.



Stream inventory site with nutrient loading.



Stream inventory site with stream bank erosion and organic debris dumping.



Stream inventory site with sedimentation.



Outreach concerning nonpoint source pollution was demonstrated with the Enviroscope® at the Shiawassee County Fair.



Water quality and nonpoint source pollution education was the theme of the Shiawassee conservation District Conservation Education Series at the YMCA Summer Camp Shiawassee.