Project History and Purpose

Sugar Creek is an agricultural drainage channel within the Maumee River Basin designated as a Great Lakes Area of Concern. Prior to construction of the two-stage reach on Sugar Creek the drainage channel was a traditional trapezoidal channel with extensive bank erosion causing sediment problems downstream. Sugar Creek drains a watershed consisting of row crops and pasture (87%), forest (12%), and water and wetlands (<1%). Watershed soils are Hydrologic Soil Group C. In an effort to stabilize Sugar Creek, reduce erosion and downstream sediment, and demonstrate the two-stage ditch design concept, the Ottawa River Coalition organized project partners, including the Allen County Soil and Water Conservation District and the Allen County Engineer’s Office, to implement the two-stage design. Funding for the project was obtained through the Great Lakes Commission–Soil Erosion and Sedimentation Task Force under the Great Lakes Basin for Soil Erosion and Sediment Control and through mitigation funding from the construction of an ethanol plant. Project engineering and design was completed by Malcolm Pirnie, Inc. from Columbus, Ohio. Implementation of the project has lead to reduced erosion and improved aquatic habitat.
Site Physical Characteristics

- Drainage Area: 5.1 square miles
- Channel Slope: 0.2%
- Project Length: 4,650 feet

Project Costs

- Earthwork cost: $76,120 ($16.37 per linear foot)
  - Mobilization: $0
  - Site preparation: $0
  - Soil excavation, hauling, disposal: $76,120
- Outlet protection and erosion control: $13,904 (tributary outlet relocation)
- Seed and seeding: $18,786
- Repairs: $0
- Engineering, survey, and inspection: $65,704 (Malcolm Pirnie, Inc.)

**Total cost:** $174,514

**Cost per linear foot:** $37.53

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