



Federal Clean Water Act Section 319 Grant

Tracking code 2004-0108



Sanilac Conservation District

Telephone: (810) 648-2116

Fax: (810) 648-4670

Email: joe.kautz@mi.nacdnet.net

Sanilac County Lakeshore Watershed Implementation

June 6, 2005 through September 30, 2008

A watershed inventory completed in 2003 indicated that the Sanilac County Lakeshore Watershed is impacted by failing septic systems, livestock access to streams, inadequate manure management, lack of riparian buffers, and conventional tillage farming practices. The watershed is 76% agriculture, 7% forested, 6% urban, 3% wetlands, and 8% other. This watershed is approximately 114,000 acres in size.

Pathogens and sediment were impairing the designated uses of total and partial body contact recreation and public water supplies. The goals of this project were to implement measures that would lead to restoration of these designated uses, decrease E .coli levels, and reduce sediment loads in the tributaries of Lake Huron. To meet these goals, this project: 1. Implemented cost share program for reduced tillage practices; 2. Corrected livestock access and manure management problems; 3. Promoted low impact development techniques; 4. Provided education programs for local government officials; and 5. Provided public outreach and education to increase the awareness of the health of the watershed.

Grant Amount: \$ 378,900

Match Funds: \$ 126,900

Total Amount: \$ 505,800

Best Management Practices:

- 1 Comprehensive nutrient management plan (NRCS approvable)
- 1 Livestock waste treatment strip
- 2 Livestock barn roof drainage systems
- 3 Livestock exclusion projects through Conservation Reserve Program
- 1 Silage bunker re-location
- 1 Conservation easement (25 acres)

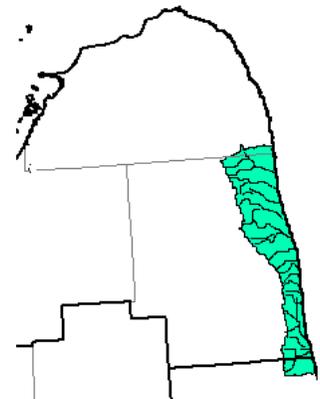
Annual Load Reductions:

- COD 18,766 lbs
- Sediment 496 tons
- Phosphorus 847 lbs
- Nitrogen 1857 lbs
- Ammonia 135 lbs
- Potassium 655 lbs



I&E Activities:

- 90 Home*A*Systs
- 25 Farm*A*Systs
- 4 district annual reports (county wide)
- 10,000 newsletters
- 2 MAEAP phase I meetings
- 2 LID tours and presentation
- 1 Watershed tour
- 15 public presentations
- 1 Rain garden
- 4 Reduced tillage test plots



Partners involved:

- Sanilac County Board of Comm.
- Sanilac County Road Comm.
- Sanilac County Groundwater Stewardship Program
- Sanilac County Health Dept
- St. Clair Conservation District
- St. Clair County Health Dept
- Village of Lexington
- Delaware, Lexington, Worth Twps.
- Michigan State University Extension
- Lakeshore Garden Club



The Lakeshore Garden Club volunteered to plant and be the care takers of the Tierney Park Rain Garden located in Lexington.



Pictured above is part of the pasture that is located on the Cherry Creek. These livestock have uncontrolled access to the creek's banks and valley (tree line). Cattle were tearing up the banks causing erosion, and defecating in the water. This pasture was $\frac{1}{2}$ mile long on both sides of the creek. This pasture is now enrolled in a conservation easement and is planted to trees.



Re-grading the Cherry Creek's valley to a 2% grade and building a retaining wall, allowed Calm Acres Dairy to utilize a 600' waste treatment strip that will filter storm water from two feed lots. Clean water was also diverted by the use of gutters on the roof of the barns. This practice was installed in conjunction with removing the livestock from the 35 acre valley and enrolling it into the CRP Marginal Pastureland Program.



Steve Alexander's Dairy Farm has a tributary of the Herron Creek cutting through the middle of the farmstead. As pictured above, Steve's Silage Bunker drains toward the creek. Steve uses this area as a pasture. Nutrients and pathogens are entering this creek from the silage and livestock.



Engineers designed a new silage bunker with an alley that spills into an existing manure pit. This bunker was designed to hold all of Steve's silage needs and eliminate illicit leachate runoff. Previously (not shown) he had a silage pile next to the creek that was not contained because the old bunker wasn't large enough. Steve is also working with the Conservation District and NRCS to enroll this land around the creek into the CRP Marginal Pastureland Program. This program will cost share new fencing and reseeding of the creeks banks to create a buffer around the creek.