Abatement of Agricultural Runoff Wayne County and Washtenaw County, MI

A publication of the Wayne County Rouge River National Wet Weather Demonstration Project
Information Date: December 2001

Objective

The Abatement of Agriculture Runoff project promoted wise land use decisions focusing on nutrient management based on soil capabilities and crop nutrient needs. This project also implemented conservation practices that provide water quality benefits in land use areas that are predominantly agriculture.

Owner
Wayne and Washtenaw County Conservation Districts

Location
Wayne and Washtenaw Counties

Dates
Start	July 1996
Complete	October 1998

Total Project Cost
$80,014

Demonstration Aspects

Soil erosion and sedimentation is a significant source of phosphorus, which results in eutrophication of surface water. Nutrient management based on soil capabilities and crop nutrient needs and conservation practices can provide water quality benefits by reducing sedimentation and soil erosion. The use of non-structural, low-tech management practices are less costly to operate and maintain than engineered structures.

Project Highlights

- The project has made more people aware of soil survey information and provided more access to soil information.
- The soil survey database is now available on the Conservation Service computer.
- Soil information, soil testing and consultations for landowners were provided.
- Filter strips were installed on one farm along the drain.
- Weather limited the time of the year that filter strips could be constructed.

Major Elements

The abatement of agricultural runoff project had four elements.

1. Conduct an information and education effort to inform landowners how they can protect surface and groundwater quality.
2. Conduct soil testing to guide fertilizer and manure use.
3. Agricultural conservation plan development assistance. Emphasis was on use of grass filter strips, riparian buffers, grassed waterways, livestock fencing along watercourses, manure management systems and others. Twenty-foot wide filter strips in rural areas provide excellent protection for streams. In urban areas buffer strips of 75 feet are needed to protect surface water.
4. Provide woodlot management and planning assistance.

Informational material used in this project included:

- Acre Fact Sheet Number Seventeen, Grass Waterways and Buffer Strips: Soil Saving Tools, Alliance for a Clean Rural Environment, P.O. Box 413708, Kansas City, Missouri, 64179.
- Technical Guide Section IV, USDA-SCS-MICH, Filter Strip and Riparian Buffer Strips.
- Riparian Filter Strips, Washtenaw County Soil Conservation District, 7203 Jackson Road, Ann Arbor, Michigan 48103
- Riparian Areas, Environmental Uniqueness, Functions and Values, NRCS/RCA Issue Brief 11, August 1996.
- Sampling Soils for Fertilizer and Lime Recommendations, AG Facts, Cooperative Extension Service, Michigan State University, Extension Bulletin E-498, April 1987.
- Sampling Turf for Soil Testing, Michigan State University, Department of Crop and Soil Sciences, Cooperative Extension Services, Feb. 1983.
- Fertilizing Home Lawns, G. T. Lyman & P.E. Rieke, Extension Service, Michigan State University
- Understanding the MSU Soil Test Report, Turf Maintenance Tips to Preserve Water Quality, Extension Service, Michigan State University.
- Five Tips for a Healthy Lawn, A Healthy River, and a Healthy Pocketbook, Huron River Watershed Council, and others.

Project Results

- A pilot area of the city was selected to apply the technology.
- 3.2 acres of filter strips were installed along drains. This would reduce phosphorous runoff by 14 pounds per year, nitrogen runoff by 8 pounds per year and sediment loss of 34 tons/year.
- 350 copies of the Soil Survey of Washtenaw County were reprinted, 180 color soil maps provided to municipalities.
- Six farmers developed conservation plans for 3,389 acres, 27 landowners were assisted in woodlot management for 409 acres of woodlots.
- Five landowners had their soil tested.
- A nutrient management fact sheet was developed.

To obtain further information on the Rouge Project, including documents, maps and general information, visit us at.

http://www.rougeriver.com

Acknowledgements

The Rouge River National Wet Weather Demonstration Project is funded, in part, by the United States Environmental Protection Agency Grant #XP995743-01, -02, -03, -04, -05, -06, -07, and #C995743-01