



Federal Clean Water Act
Section 319 Grant
 Tracking Code: 2005-0143



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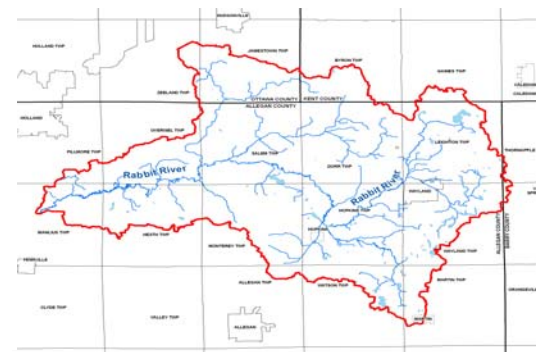
Rabbit River Watershed Implementation Project

March 6, 2006 - December 31, 2008

The Rabbit River Watershed Implementation Project was awarded to the Allegan County Drain Commissioner, who contracted Fishbeck, Thompson, Carr & Huber, Inc. to complete the project. The goals of the Rabbit River Watershed Implementation Project were to: 1) Update the Rabbit River Watershed Management Plan to meet the U.S. EPA's Nine Required Elements; 2) Complete a Watershed Assessment of River Stability and Sediment Supply (WARSSS) investigation; 3) Perform hydrologic analysis review to develop draft ordinances, and conduct a build-out analysis to predict change and impacts of increased impervious surfaces in the entire watershed; 4) Complete wetland restoration design, permits, and construction; 5) Facilitate the creation of a sustainable, locally-led process by continuing the Rabbit River Steering Committee, participating in the establishment of a Kalamazoo River watershed-wide organization, and holding public meetings; and 6) Develop an evaluation process of the project activities and results.

Grant Amount: \$186,022
Match Funds: \$126,128

Total Amount: \$312,150



Best Management Practices and Annual Load Reductions:

34 acres of wetland restoration
 Sediment: 18 tons/year
 Phosphorus: 52 pounds/year
 Nitrogen: 179 pounds/year



Recommendations from WARSSS:

- Encourage environmentally sensitive agricultural practices to reduce the potential for surface erosion and sediment delivery to streams.
- Limit livestock access to stream channels.
- Implement a monitoring plan to assess the impact of BMPs and overall stream stability.
- Adopt low impact development (LID) rules.

Results of Hydrologic Study

- Adopt LID-based development rules to improve the current conditions of the Rabbit River.
- Further reduce discharge to the Rabbit River through retention in the undeveloped areas, such as wetland restoration.
- Adopt LID-based storm water rules to eliminate the need for an artificially low release rate's subsequently large volumes for onsite detention of the 100-year storm.

Partners involved:

- Allegan Conservation District
- Allegan County
- Allegan County Road Commission
- City of Wayland
- Dorr, Hopkins, Monterey, and Salem Townships
- Ducks Unlimited
- Fishbeck, Thompson, Carr & Huber, Inc.
- Gun Lake Tribe
- Kalamazoo River Watershed Council
- Land Conservancy of West Michigan
- Michigan Department of Environmental Quality
- Michigan Department of Natural Resources
- Michigan State University Extension
- Penasee Globe
- South West Michigan Land Conservancy
- U.S. Fish and Wildlife Service

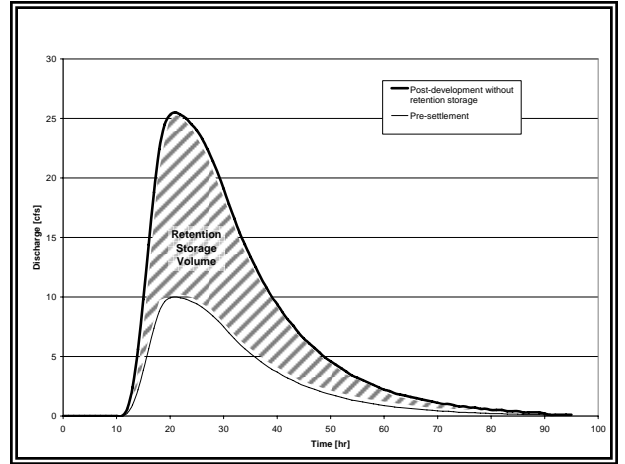
I&E Activities:

- Handouts to inform landowners of the intention and benefits of using WARSSS to guide future drain projects
- Steering Committee Meetings
- Public meetings
- Articles and meeting notices in the Grand Rapids Press and Penasee Globe
- Phone interview about project on WHTC radio station
- Kalamazoo River Watershed Council participation





8-13-08 Wetland Restoration on Vanderzwaag Property.



Retention storage for runoff volume control from the hydrologic modeling report.



Green Lake Creek - Reference Reach from WARSSS Rapid Resource Inventory for Sediment and Stability Consequence (RRISSC) phase.



Green Lake Creek - Impaired Reach from WARSSS RRISSC.