

Huron Conservation District Groundwater Recharge

Scope of Work

The purpose of this project is to utilize an innovative performance-based funding method to incentivize landowners in the Saginaw Bay Watershed to install practices that increase groundwater recharge and reduce non-point source pollution to surface water. The Huron Conservation District will manage this program and provide a technician to complete the following tasks over the next 4 years. The goal is to support the installation of at least 200 acres of drainage water management and approximately 700-1000 acres of other practices (including cover crops, no till, reduced till and buffer strips) to result in approximately 56 million gallons of groundwater recharge

Tasks:

1. The technician will learn how to use the Great Lakes Watershed Management System (GLWMS) and its groundwater recharge, nutrient and sediment calculators. Training will be provided by Ben Wickerham, the Saginaw Bay Watershed Conservation Innovation Assistant at The Conservancy's office in Lansing. Additional training may be provided by Michigan State University Institute of Water Research (MSU IWR).
2. Technician will work with IWR to resolve any issues and enhance usability of the GLWMS.
3. Technician will develop an annual outreach strategy to increase awareness about this funding opportunity. The target audiences would include landowners and other conservation districts throughout the Saginaw Bay Watershed with special emphasis on TNC's priority watersheds including Pigeon, Pinnebog, Cass, Shiawassee, Sebewaing, Kawkawlin and the Chippewa. The annual outreach plan should include a description of all outreach strategies (website posting, mailings, newspaper ads, radio interviews, newsletters, field events, door to door etc) and schedule for implementation.
4. Technician will execute activities (as described by the annual outreach strategy above) to recruit landowners into the program.
5. Technician will develop a method to track the results of recruiting efforts and the status of ongoing implementation projects. This method should record producer name, mailing address, email or phone number, field locations (GPS, addresses, township section and range and subwatershed (HUC-12 level), number of acres of each practice, crop type, estimated GW recharge in both ML and MG, contract period, dates of verification and dates and amounts of payments made to the landowner.
6. Technician will develop a program contract that will explain the terms and conditions, the payment rate and payment schedule, and the annual verification requirements. The contract should also include language to address the actions that would be taken to address non-compliance with contract requirements.

7. DRAINAGE WATER MANAGEMENT: For landowners interested in implementing drainage water management, the technician will assume that the groundwater replenishment benefit can be estimated at ~5% of annual precipitation which equates to approximately 0.165 million liters per year per acre in the Saginaw Bay Watershed (estimate provided by LimnoTech). The technician should keep records of implementation projects with results reported in both million liters and million gallons annually.
 - a. Producers should be offered enrollment into the groundwater recharge program on a first come, first serve basis until 200 acres are enrolled (contracted for 3 years). The groundwater replenishment will accrue annually (assuming proper management by the grower). Total estimated groundwater replenishment is 99 ML (or approximately 26 million gallons).
 - b. Producers will be offered funds to implement a DWM plan at a rate of \$6.90/acre annually plus a one-time payment of \$1,387 per water control structure (typically one water control structure for every 20 acres).
 - c. The technician will advise the landowner of discounted service rates offered by our partners Ecological Services Exchange and AgriDrain to develop the DWM plans and purchase water control structures at a discounted rate (although landowners will NOT be required to work with these entities).
8. OTHER PRACTICES: For landowners interested in implementing cover crops, filter strips, reduced tillage and/or no till, the technician will model the environmental benefits of each practice using the GLWMS. All implemented projects should be entered into GLWMS and saved within the system.
 - a. For each project, the technician will record the total groundwater recharge increase and the reduction of phosphorus and sediment loading in the tracking document.
 - b. Producers should be offered enrollment into the groundwater recharge program on a first come, first serve basis until 30 million gallons (MG) of groundwater recharge is achieved or funds are completed allocated, whichever comes first.
 - c. Producers will be offered a payment of \$0.00025/gal for tillage and cover crop practices and \$0.001/gal for filter strips.
9. Technician will execute a contract with each enrolled landowner and verify practice implementation annually and issue program payments in accordance with contract requirements.
10. Technician will submit quarterly progress reports and invoices to Mary Fales, Saginaw Bay Watershed Project Director, The Nature Conservancy. The progress reports and invoices can be submitted by email to mfales@tnc.org and should address progress against each of the above tasks, identify any challenges and provide a copy of the current tracking document.
11. Technician will communicate project updates monthly with Mary Fales (in person or via conference call).
12. Technician will be available to speak at area meetings about the project or host interested individuals for a tour of enrolled properties (with landowner's permission of course), as requested by the Nature Conservancy.