

Project Summaries for Agreement 2018

Fawn River Sediment and Phosphorus Reduction, *LaGrange County Soil and Water Conservation District*

Scale: Watershed

Grant Amount: \$138,000

State: Indiana

The Fawn River watershed is in northeast Indiana and is within the Lake Michigan basin. Water quality in the Fawn River is influenced predominately by livestock and unbuffered streambank farming practices. The Amish population is increasing in this region, resulting in increasing livestock operations that allow direct access to moving surface waters in the ditch system. Three years of monthly water quality testing data revealed that phosphorus and sediment loading is concentrated within the sub-watersheds that have high concentrations of livestock.

Starting in October 2018, implementation of BMPs that will address livestock related issues (e.g. livestock exclusion fencing, filter strips, and buffers) will begin with landowners already identified as willing to install BMPs on their property. BMPs will be installed on a cost-share basis with the grant covering 75% of the landowner's cost. In addition, LaGrange SWCD will conduct a variety of outreach activities including monthly one-on-one meetings with local Amish Bishops, which in the past has proven to be the most successful form of outreach.

Performance-Based Agricultural Conservation Project in the Gun River Watershed, *Allegan Conservation District*

Scale: Watershed

Grant Amount: \$180,000

State: Michigan

The Gun River watershed encompasses 73,272 acres of land that drain into the Kalamazoo River and Allegan Lake before flowing to Lake Michigan. The Gun River Watershed has been significantly altered, primarily due to agricultural development which is the biggest land use in the area (48%). The Gun River Watershed Management Plan states agricultural areas are the largest contributor of sediment and nutrients, with sediment listed as the highest priority impairment within the watershed. Cropland, gullies, and stream crossings were identified as the major sources of sediment.

To reduce sediment loading from agricultural sources, a performance-based program will be used to encourage the implementation of BMPs while providing an incentive for producers. Payments to producers will be based on estimates of how effective practices are at reducing sedimentation. This project proposes to enroll 1,500 acres (which equates to approximately 15 farmers) over the three-year project period, which will reduce sediment loading by an estimated 690 tons.

Trinity Creek Pollution Reduction Project in the Milwaukee River Watershed, Mequon Nature Preserve, Inc.

Scale: Site specific

Grant Amount: \$49,648

State: Wisconsin

Mequon Nature Preserve is in the Milwaukee River watershed, which drains into Lake Michigan. The Wisconsin Department of Natural Resources reports that the Milwaukee River watershed has not met the standards of the Clean Water Act (1972). This highly compromised watershed has been designated by the EPA as an AOC watershed due to high phosphate levels and excessive suspended sediments.

The proposed project area is a 7-acre agricultural parcel bisected by an eroded and channelized Trinity Creek, which is a tributary to the Milwaukee River. This project will effectively and permanently mitigate sediment and nutrient loading at the headwaters of Trinity Creek by installation of instream practices as well as restoring adjacent farm fields into natural areas. The project will make use of best management practices (BMPs) that have been used successfully on other sections on the property. BMPs for this project will include: 1) removal of agricultural drain tiles, 2) lengthen, dechannelize, and restore meanders to Trinity Creek to slow water velocity, encourage sediment deposition and create riparian wildlife habitat, 3) widen and decrease the angle of the banks along Trinity Creek to reduce storm surges, 4) add rock material and sediment traps to creek bed to encourage sediment deposition and create habitat for riparian species, and 5) plant native, local-genotype prairie, tree, and shrub species to mitigate soil erosion, absorb dissolved phosphorus and create wildlife habitat.

Sediment and Phosphorus Reduction in the Tiderishi Creek Watershed, Blanchard River Watershed Partnership

Scale: Watershed

Grant Amount: \$147,330

State: Ohio

The Tiderishi Creek watershed covers 12,297 acres and is located in northeast Ohio. Tiderishi Creek is a tributary of Ottawa Creek, which ultimately drains to western Lake Erie via the Maumee River. The 2009 Ohio TMDL Report lists the impairments for this watershed as sedimentation and total phosphorus among other impairments. Major contributors to these impairments are crop production with subsurface drainage and channelization.

In partnership with the Ohio Department of Natural Resources, Hancock Soil and Water Conservation District, and Natural Resource Conservation Service, this project will work with producers to apply for cost-share funds to install conservation practices, such as water control structures, cover crops, and phosphorus filters. After submission, applications will be scored and ranked. Ultimately, the BRWP will work to place practices in the Critical Areas identified in the approved Nonpoint Source Implementation Strategic (NPS-IS) Plan. Once applicants are chosen, qualifying producers will sign cost share agreements with the BRWP detailing their commitment to the project, dollar amount authorized, and the procedure for installing and requesting reimbursement for the work. Language in the agreements will stipulate exactly what is expected of the producer and the timeline for completion, as well as maintenance

activities the producer is expected to undertake to assure success of installed practices. This project will also remove bedload phosphorus from approximately 1,000 square feet of Tiderishi Creek.

Upper Buffalo Creek Sediment and Nutrient Reduction Project, Erie County Soil and Water Conservation District

Scale: Watershed

Grant Amount: \$163,700

State: New York

Activities for this project will focus on six priority sites in the Upper Buffalo Creek watershed, which ultimately drains to Lake Erie. The priority sites have been identified through the 2016 Joint Board stream inspection on Buffalo Creek as well as riparian/agricultural landowner technical assistance field visits. Streambank stabilization best management practices totaling approximately 1,800 linear feet will be installed along all six sites. In addition, approximately 950 feet of riparian buffers will be established along three sites on agricultural fields. Finally, the District in partnership with two of the agricultural operators, will include 100 acres of single species cover crop in the watershed to demonstrate the benefits and promote long-term use.

Western Fulton Phosphorus & Sediment Reduction (Brush, Deer, Flat & Stag), Fulton Soil and Water Conservation District

Scale: Watershed

Grant Amount: \$167,810

State: Ohio

The Brush Creek, Deer Creek, Stag Run, and Flat Run watersheds are in northwest Ohio and drain into the Tiffin River, which ultimately drains into western Lake Erie via the Maumee River. These watersheds were selected by SWCD technicians after recent observations confirming a strong need for erosion control. Flat Run and Brush Creek are characterized by flat to slightly rolling and poorly drained soils. Deer Creek and Stag Run are characterized by highly erodible, poorly drained land.

This project aims to educate producers and encourage them to adopt conservation practices that will reduce sediment and phosphorus runoff. Over the course of three years, the project plans to install 2,100 acres of cover crops, 10 erosion control structures, 15 acres of filter strips, 12 acres of grassed waterways and 5 water control structures. Grassed waterways will be targeted in Deer Creek and Stag Run on the highly erodible land. Cover crops will benefit the beach ridges that are concentrated in Brush Creek. Flat Run will be suitable for all conservation practices. Areas with clay soils will be targeted for the installation of filter strips and livestock producers will be encouraged to install water control structures.

Aspen Lane Ravine Restoration Project, Lake Michigan Watershed, *Village of Glencoe*

Size: Site specific

Grant Amount: \$50,000

State: Illinois

Cook County is a highly developed area with large runoff volumes and a lack of stormwater control. The Village of Glencoe has noticed increased ravine bank destabilization and erosion due to stormwater flows. Ravine stabilization will reduce the sediment and nutrients that make it to Lake Michigan and will provide structures to slow down the water to encourage settlement, infiltration, and filtration. Increased nutrients in runoff in this area are attributed to fertilizer runoff (from lawns and a nearby golf course), animal waste, and streambank erosion.

Restoration of the Aspen Lane Ravine includes the repair of the existing low-flow storm sewer pipe at the base of the ravine, since the pipe is currently inoperable and not functioning as designed. The Village plans to restore the pipe to working order and reinforce the channel with a mix of riffles, check dams/settling pools, and native vegetation. The project also includes the stabilization of eroded ravine slopes and the removal of invasive plant species. Steep slopes will be secured with modified brush layers and/or live fascines planted with native vegetation. Riffles or check dams will be used to slow water and encourage sedimentation settling. After completion of the project, the Village will be in a stronger position to encourage the use of best management practices for erosion control and advocate for “soft” solutions for the remainder of their ravine restoration projects.

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