

Great Lakes Basin Program GLRI Project

Making Conservation Work Saint Joseph River

Size: small scale

Grant Amount: \$22,863

Year awarded: 2012

Sponsor: DeKalb County Soil and Water Conservation District

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Submitted Project:

Size: smallscale

Budget: \$22,863

Savings: 7,500

Background

Sediment Sources

The project area and priority watersheds identified in this application are located in the Saint Joseph River Watershed. When joined with the Saint Mary's River in Fort Wayne, IN together they form the Maumee River, the largest tributary to Lake Erie in the Western Lake Erie Basin. The Maumee is also the largest contributor of sediment into the Port of Toledo located at the western end of the great lake.

In addition to the priority watersheds identified nearly all of DeKalb County lies within the Saint Joseph River watershed. DeKalb County contributes runoff from an estimated 135,150 cropland acres into the Western Lake Erie Basin. Sediment sources located within the project area are typical for watersheds rich in production agriculture: sheet erosion from farm fields, specifically those used for row crop production, concentrated flows from gully erosion, point source contributions from subsurface drainage connected to surface inlets in agriculture fields, and stream bank erosion as a result of high stream flows during significant storm events.

To address erosion from production agriculture the DeKalb SWCD and our partners have intensely promoted the use of cover crops over the past five years. During this time the lack of proper planting equipment has been a significant road block to experimenting with and/or the adoption of cover crops into crop production systems. Most producers have no-till drills but often they are not equipped with seeders for the planting of many varieties of cover crops. Additionally, the current trend is to move toward bean planters rather than drills, which also lack the versatility to plant cover crops. Many producers have been willing to experiment with cover crops using

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aerial and broadcast seeding methods; results have been mixed and less than persuasive for the long-term adoption of cover crops as part of their cropping system.

The DeKalb SWCD with the support of our partners, contractors, and producers proposes to purchase a 10ft no-till grain drill equipped with grass seeder(s) for the planting of cover crops. This width of drill would allow for the additional benefits of the seeding of waterways, filter strips, and experimentation of no-till crop production. The DeKalb SWCD would own the drill and maintain the drill with funds from rental fees.

Readiness to Implement Project

The DeKalb SWCD under the direction of the Board of Supervisors has been a leader in conservation in DeKalb County. The District has been successful in partnering with several agencies, businesses, and organizations for the implementation of its conservation efforts. Partners include but are not limited to: The Andersons, Purdue Extension, the Steuben County SWCD and other surrounding SWCDs, the DeKalb County Surveyor, NRCS, the St. Joe River Watershed Initiative, and The Nature Conservancy. This project continues our efforts to provide landowners and producers the educational, technical, and financial resources to get conservation on the land.

In 2006 with the support of our partners the DeKalb SWCD applied for and received a \$70,000 CWI grant for developing a technical employee position. This resulted in a permanent District Technician position available to assist with the implementation of the proposed project.

It should be noted that the planting of cover crops is a management strategy for crop production therefore no permits or easements are required to implement this project.

Over the past 5 years the DeKalb SWCD has applied for and received \$36,000 of Clean Water Indiana (CWI) funds for conservation education events and incentives for conservation practices such as filter strips and cover crops. These funds resulted in excess of 640 people attending educational events, the installation of 14.3 acres of filter strips, and 986 acres of cover crops.

For 2012 the DeKalb District, in cooperation with the Steuben County SWCD, applied for and received a 3-year, \$60,000 CWI grant to provide incentives for cover crops and the innovative blind inlet for the replacement of standpipes in the Upper Cedar Creek and Fish Creek watersheds. It is planned that these funds provide incentives for a minimum of 1500 acres of cover crops to be planted supporting the proposed project. Additionally funding sources that support the proposed project include two ongoing Lake and River Enhancement Projects and federal farm bill programs administered by NRCS and FSA.

Project Work Area

HUC: 041000030603 - Matson Ditch, Indiana

HUC: 041000030404 - Hiram Sweet Ditch, Indiana

Total Area: 21173

Agricultural Area: 17968

Forest Area: 1935

Urban Area: 1267

Priority Areas:

The DeKalb SWCD would propose making the drill available to producers in all of DeKalb County and those along the edges of boarding counties as well. Priority areas for this project for the next three years would mirror the two 10 digit HUC watersheds identified in our current CWI Grant: the Upper Cedar Creek Watershed (0410000306) and the Fish Creek Watershed (0410000304).

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The Upper Cedar Creek Watershed was selected in part because it is the location of the Conservation Effectiveness Assessment Project operated by the USDA- Agriculture Research Service where research on conservation practice effectiveness is underway. Additionally this 131 square mile watershed contains the headwaters to Cedar Creek, the largest tributary of the Saint Joseph River. The Cedar Creek Watershed Management Plan indicates that segments of the stream are listed on the IDEM 303(d) list for E. coli and other contaminants. Specifically the plan documents sediment, nutrient and pesticide pollution, and bacteria as the primary contributors to reduced water quality.

The Fish Creek Watershed was selected because it is located directly north of the Upper Cedar Creek Watershed. It drains a 110 square mile agricultural watershed, covering three counties, one in Ohio and two in Indiana (Steuben and DeKalb). The watershed begins in northeast Steuben and northwest Williams counties and stretches south into northeast DeKalb County and Williams County, north of Edgerton. It is among the top-ranked biodiversity sites in the Great Lakes Basin and harbors 31 species of mussels, including the rare, White Paw Pearly Mussel, and 42 species of fish. As a result, several site specific studies have been completed within the watershed, including one by TNC, which have identified excessive soil erosion, sedimentation, and subsequent nutrient pollution as resource concerns for Fish Creek.

Implementation Strategy

As described, this proposed project parallels the conservation work already underway by DeKalb County and our partners. While specifically promoting the use of cover crops we would continue our promotion of filter strips, conservation cover, waterways, adoption of no-till farming practices and hay land planting. All of which could be planted using the drill.

Also as indicated the priority areas for this proposal mirror the 10 digit Upper Cedar Creek and Fish Creek watersheds prioritized in an active, 3 year, \$60,000 Clean Water Indiana Grant that promotes the use of cover crops. This grant provides a \$20 per acre incentive for producers to experiment with cover crops on a maximum of 60 acres. Priority is given to those producers who choose to rotate cover crops in to their cropping system over the 3 year course of the grant. Having access to a drill for the planting of cover crops promotes participation with this grant.

Promotion and development of rental guidelines for use of the drill would begin as soon as word is received that our application was chosen for funding. Specifically, drill availability would be promoted on the DeKalb SWCD website, flyers would be developed and distributed to our partners, participants in past cover crop incentive programs would receive a direct mailing, and it would be promoted at educational events such as the 2012 Agronomy Field Day hosted by the Andersons and the 2012 Cover Crop Field Day hosted in conjunction with the Steuben county SWCD. Allen Haynes and Julie Knudson would take the lead on promotion of this project.

Technical Assistance

BMPs

Name: John Deere No-Till Drill

Type: Conservation Equipment

Acres: 500

Cost: 30000

Description:

We are reporting that this project will last one year; that is because we plan to purchase the drill in the first year. We are estimating that the life of the drill would be a minimum of 10 years. We also are estimating that the drill would be used on a minimum of 500 acres per year. Technical staff in the DeKalb Field Office has estimated the soil savings realized through the use of cover crops at 1.5 ton per acre per year. Given that we

are calculating the soil savings of the drill over the course of its lifetime to be a minimum of 7500 ton. Additionally it has been our experience that our incentive grants cause additional acres of cover crops to be planted as producers tend to plant whole fields rather than just partial fields; this would only add to the amount of soil savings that could be contributed to this project.

Start Date: October 2012

End Date: September 2012

Incentive Method: other grant funds

Incentive Rates: \$20 per acre

Total Soil Savings: 7500

Media Campaign

Kickoff:

As indicated, promotion for the drill available for rental would begin as soon as word is received our application has been approved. Because the October 1 start date is past the optimum time for planting cover crops we are proposing that the major Kick-off event be in coordination with both the DeKalb and Steuben County 2013 Annual meetings. These are scheduled for early to mid-March and draw a good crowd of conservation minded folks who not only would be interested in learning of the purchase but be great promoters as well. Additionally, these meetings draw media attention and would be an excellent time to announce the purchase to a wider audience with a related conservation education article.

Ongoing:

As indicated under our implementation strategy, the availability of the drill for rental would be promoted on the DeKalb SWCD website, flyers would be developed and distributed to our partners, participants in past cover crop incentive programs would receive a direct mailing, and it would be promoted at educational events such as the 2012 Agronomy Field Day hosted by the Andersons and the 2012 Cover Crop Field Day hosted in conjunction with the Steuben county SWCD. With this drill available, new funding sources along with continued funding for on-going grant projects with incentives for planting cover crops would be sought. This would continue the promotion of cover crops and other conservation practices that prevent sedimentation of the Great Lakes.

End:

We would expect the rental program for this drill to proceed for several years. Reports of its use and affect on conservation would be included in our annual report. This information could be tied to the results of the tillage transect that DeKalb County completes annually and the affects of conservation practices in the county, across its watersheds, and ultimately Lake Erie.

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