

Great Lakes Basin Program GLRI Project

Elkhart River Watershed Sediment Reduction Program

Size: watershed

Grant Amount: \$397,000

Year awarded: 2011

Sponsor: Elkhart River Restoration Association, Inc

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City: Goshen

State: IN

Zip: 46526

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Submitted Project:

Total Grant Amount Requested: \$397,000

(from budget developed below)

Match Amount

(not required but encouraged)

In-Kind: \$135,000

Cash : \$135,000

Total Project Soil Savings: 138,250 tons

(add the savings from the estimates given below for all the BMPs you have proposed to be installed)

Congressional District(s) project is located in: IN-3

(example format - MI-2)

For a list refer to: www.house.gov/writerep/.

II. Project Background

Sediment Sources

Briefly describe the sediment loading issues, including sediment sources, in your watershed and their relevance to sediment loadings to a Great Lake.

Approximately 74 percent of the Turkey Creek watershed acreage is used for agriculture. A great deal of effort has been focused on the agricultural fields draining to Turkey Creek by the respective county NRCS and SWCD personnel and a many agricultural producers are participating in some form of soil conservation measures including reduced tillage (rotational no-till and mulch till), grassed waterways, and filter strips. However, some producers have not implemented full conservation tillage measures (no till and cover crops)

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resulting in periods of significant erosion. The sediment from eroding fields, gullies, and embankments enters the waterway and travels down Turkey Creek, the Elkhart River, the St. Joseph River, and into Lake Michigan. Our goal is to reduce sediment erosion from these fields and within the stream themselves, by concentrating efforts on those agricultural fields adjacent to waterways and waterway stabilization using a variety of standard and innovative NRCS practices.

Name and location, including county (ies) of the watershed are you proposing to implement a sediment reduction project. Turkey Creek Watershed, (Elkhart, Noble, and Kosciusko County)

Watershed: enter the 8 or 12 digit USGS HUC code in which your watershed is located, as listed at www.glc.org/basin/reports/huc.pdf
04050001

U.S. Congressional District where project is located, as listed at: www.house.gov/writerep/.
3rd District

Project length (up to 4 years- recommended):
36 months

How many acres are in the watershed?
There are 117,147 acres in the Turkey Creek Watershed

How many acres are in?

- **Agriculture including pasture landuse:** 86,607
- **Forest including brushland landuse:** 12,321
- **Urban, suburban, industrial, commercial and rural residential landuse** 11,623
- **Open water and wetlands** 6,596

What are the general soil types in the watershed?

The dominant soil associations include the Wawasee-Crosier-Miami association, which are well drained sandy loams to somewhat poorly drained clay loams in upland areas; Houghton-Palms association, which are mucky, poorly drained soils in low areas adjacent to the lakes; Ormas-Kosciusko association, which are sandy and loamy, well drained soils; and the Sebewa-Gilford association, which are poorly and very poorly drained soils in depressions and along drainages in the upland areas. The soils contributing the most suspended solids to the waterways are the Miami clay loams and Morley silty clay loams on ridge tops and side slopes ranging from 6-25% and adjacent to incised streams.

Watershed Plan

Has a watershed plan been developed for this watershed or is it a part of a plan for a larger watershed? If yes, who developed the plan and when was it adopted?

A watershed management plan (WMP) was completed by the Elkhart River Restoration Association for the entire Elkhart River. That plan was developed by a broad steering committee which included landowners, conservationists, SWCDs, and other government officials. The Elkhart River Watershed Plan was adopted in 2008. A watershed plan was adopted in 2007 for Lake Wawasee which included approximately ¼ of the Turkey Creek Watershed. The Lake Wawasee WMP was developed by a steering committee that included Wawasee Area Conservancy Foundation (WACF) members, county officials, and other interested parties. The WACF has been pursuing the goals and objectives of this plan since its adoption. In addition, both Lake Wawasee and Dewart Lake have IDNR-Lake and River Enhancement Diagnostic and Feasibility Studies completed that identify and suggest numerous agriculturally related practices to reduce sediment in their respective watersheds.

Readiness to implement project

Describe your ability to readily implement conservation practices proposed in this project. Include each of the following:

What fund raising activities from other sources have you engaged in, including local public and private sources, to fund watershed projects? As part of this, list approved grants over \$25,000 received from other sources within the past three years. Include the Grantor's name and a brief description of the projects.

The Elkhart River Restoration Association, with assistance from the Elkhart County Soil and Water Conservation District, applied for and received a 39 month 319 grant of \$388,500 (\$518,000 including local match) from the Indiana Department of Environmental Management in November, 2006. The grant allowed ERRA and watershed stakeholders to develop a watershed management plan, and to begin the implementation of best management practices to reduce sediment and other pollutants entering the Elkhart River and its tributaries. In addition to the above mentioned grant, ERRA continues to grow its membership through a continuing education and marketing program, and also raises funds through an annual rain barrel auction held in conjunction with Goshen's June First Friday Event. Local artists paint rain barrels that are auctioned, with proceeds being split between the artist and the organization.

WACF obtained a \$45,000 grant from IDNR -Lake and River Enhancement program for the Village Lake Tributary restoration project in 2009. The grant was received by WACF to restore a portion of the Village Lake Tributary using riparian floodplain development and fencing. WACF obtained a \$30,000 grant from IDNR Lake and River Enhancement program in 2009 for the designing restoration measures along 1.25 miles of Dillon Creek. The grant was utilized to design two-stage ditches, grade stabilization and stream bank stabilization. The various projects identified are designed, permitted, and currently waiting for funds to implement.

Is there a state approved watershed plan (or one in development) that includes your designated implementation HUCs? If yes, does the watershed plan denote specific soil/sediment reduction BMPs and list implementation locations for those BMPs?

Yes- The ERRA WMP plan was state (IDEM) approved on March 6, 2008. In addition a WMP was developed by WACF for the Lake Wawasee watershed. Both plans list applicable BMPs, and the Lake Wawasee WMP lists specific BMPs and site locations for suggested work.

What other on-going conservation activities are taking place in the HUCs? Are there any existing projects being implemented such as a Section 319 project?

No 319 projects are currently active but the SWCD and NRCS office's continue to work with landowners under their respective Federal programs. The WACF has been utilizing other State programs to implement some Conservation BMPs as funds become available.

Is there an established watershed council or steering committee involved with the project? If yes, briefly describe the mission of the group. When was it established, how often does it meet, what is the average attendance at the meetings? If not, what is your plan for broad based community involvement in implementing the project?

The Elkhart River Restoration Association, Inc. was founded June 16, 1983 to study the needs of the Elkhart River and its watershed. As a not-for-profit corporation the association works with the Indiana Department of Environmental Management (IDEM), Indiana Department of Natural Resources (IDNR), the Army Corp. of Engineers, the Soil and Water Conservation District (SWCD), and local officials to improve the river. The ERRA directors meet quarterly, while the steering committee designated for this project will

meet as needed (generally monthly). The steering group will include in these meetings representatives from the lake association groups and an SWCD representative from each of the participating counties. The meetings are currently attended mainly by board members with a few interested individuals representing other groups in the watershed. To promote participation in the steering committee meetings and this project the ERRA will be hiring a part time individual to work with the media, update the website with a specific page addressing this project, and coordinate a least one public meeting per quarter to advertise the program and put landowners in contact with the right technical people for assisting them with implementing soil conservation measures.

What partnerships (outside of your organization) have you established to help implement this project? List your partners.

The following organizations have been contacted and support this application.

- 1) Indiana Department of Natural Resources, Lake and River Enhancement Program
- 2) USFWS – Partners for Wildlife small grants program
- 3) Elkhart County SWCD
- 4) LaGrange County SWCD
- 5) Kosciusko County SWCD
- 6) Friends of the St Joseph River
- 7) Wawasee Area Conservancy Foundation
- 8) St. Joseph River Basin Commission
- 9) Dewart Lake Protective Association

Watershed/ Project Work Area

*List up to three **12 digit USGS HUC codes** that comprise your watershed implementation area:*

Lake Wawasee: 04050011702
Village Lake-Turkey Creek: 040500011701
Waubee-Hammond Ditch: 040500011703.

- *Enter the total acres are in the selected HUCs: 34,552 acres*
- *Enter the number of acres in those HUCs that are in the following land uses:*
 - Agriculture including pasture landuse: 19,045 (55%)*
 - Forest including brushland landuse: 4505 (13%)*
 - Urban, suburban, industrial, commercial and rural residential landuse: 4012 (12%)*
 - The remaining 6,940 acres (20%) is open water and wetland*
- *Is your proposed area upstream from a significant dam? If so, explain why the reservoir is not acting as a sediment trap, especially for clay particles, and how your project is reducing sediment in the Great Lakes.*

The only major dam on the Elkhart River is the Goshen Dam that backs up approximately ½ mile of the Elkhart River downstream of the selected watersheds. The impoundment is almost completely filled with sediment (estimated 90% full) and offers very little in the way of entrapment as each rain event turns the river brown with sediment as it falls over the spillway. This sediment is reaching the St. Joseph River and continues to Lake Michigan over hydroelectric dams in Elkhart, IN; South Bend, IN; Buchanan, MI; and Berrien Springs, MI.

- *Describe the **Priority Areas** within the watershed where you are going to concentrate your efforts, list*

by geographic area or narrative description of specific conditions.

The priority areas are along Dillon Creek on the west side of Lake Wawasee and the agricultural land bordering Turkey Creek and its tributary ditches. Specifically we will be targeting farm practices adjacent to the waterways such as cattle grazing or those that have defined runoff that is contributing to unstable reaches of the stream including gullies and poor bank stability. The District Conservationist in Kosciusko County requested that Mr. Stanger (Technical Advisor) work with a number of landowners who have not fully converted to a no till system yet.

III. Implementation

Project start date will be October 1, 2011

Implementation Strategy

*Briefly describe the specific methodology(ies) you are going to use to implement the project. These can be traditional or creative nontraditional efforts. **While 100% cost-share is allowed it is not encouraged.** Include such items as:*

- *The types of BMPs you are planning to install i.e. tree planting, easements, conservation tillage, streambank stabilization, hay in rotation, sediment basins, buffers, other*
- *timeline for implementation*
- *priority areas identification process*
- *incentive methods*
- *equipment purchases*

The Best Management Practices to be installed within the three 12-digit watersheds are:

- 1) Stream Bank Stabilization including: bank barbs, bank deflectors, root wad revetments, rock toe protection, and reinforced earth (soil encapsulated lifts with brush layering).
- 2) Two-Stage Ditch Construction
- 3) Filter Strips and Buffer Strips
- 4) Tree Planting
- 5) Grassed Waterway Construction
- 6) WASCOP Construction
- 7) Grade Stabilization Structures including vortex rock weirs
- 8) Rock Chutes for Gully Stabilization
- 9) Fencing (for livestock exclusion and grazing rotation)
- 10) Watering Station Development/Heavy Use Area
- 11) Wetland Construction/Restoration
- 12) Conservation tillage (promoting no-till and cover crops)

The BMPs listed above will be implemented between grant award dates in fall of 2011 and late summer of 2014. Within the targeted watersheds, we have already identified and have landowner cooperation and regulatory approvals to install 18 grade stabilization structures, bank stabilization on 1,200 feet of stream channel, 1,300 feet of two-stage channel, 20 acres of tree and ground cover planting at 400 trees per acre, 4 gully stabilization structures using rock chutes, and livestock exclusion fencing along one mile of stream and lake shore.

Additional projects will be identified with priorities given to landowners who provide cash match or in-kind services to install the practice. The local watershed groups, WACF and Dewart Lake Protective Association (DLPA), will continue to identify and encourage landowners in the identified watersheds to participate in this program through mailings, personal contact, and referrals from other participants. It is expected that lake

associations downstream of the implemented practices will continue contributing in-kind labor and cash match to each project as implemented.

All Agricultural BMPs will be installed according to the NRCS Field Office Technical Guide specifications, and will be approved by NRCS Engineering staff when necessary. If cost share is available from existing farm bill programs, funding will come from those sources, and the landowner will be responsible for the required match. If NRCS staff determines the practice is needed to reduce erosion, and farm bill funding is not available, the grant will provide cost-share equal to that approved by the farm bill program that applies, and the landowner will be responsible for the required match.

Technical Assistance

Grant money can be used to pay for technical assistance. Briefly describe the technical assistance required to implement the project over a three year period. You will be required to provide in-kind office space, administrative support, computer and other equipment, general office supplies, and other items and services required to perform their job. This can be shown as match.

Our technical assistance will come primarily from Wayne Stanger, a retired NRCS District Conservationist. Mr. Stanger will consult with individual landowners on appropriate BMPs. He will draft the designs and guide the participants through the application and implementation phase of the project working closely with the SWCD and NRCS offices. It is expected that the NRCS will have to sign off on most if not all of the practices before they are implemented and Mr. Stanger will insure that the requirements for that office are met before installing a practice. Mr. Stanger will also be expected to inspect and certify to the ERRA steering committee that all practices supported by cost share under this grant have been installed as per the approved designs or standard specifications. Mr. Stanger has agreed to utilize his existing home office for all overhead expenses as part of his contracted fee.

BMPS - Fill out all that apply (A-E):

A. Agronomic/Cover-based Practices (BMPAs) installed by Landowners/Landusers with incentives paid for with this grant (ex. Cover Crops, conservation tillage, no-till.) If you have more than three BMPAs, copy and paste BMAP1 section and change the number as appropriate.

BMAP1

*Description: Conservation tillage implementation (no till or cover crop)
Check the quarters the task is to be started and completed:*

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete	X											X

*Number of acres/units of BMP to be installed during project: 1,000 acres
Incentive method: Cost Share and rates: equipment modification or rental rate
Expected soil savings from BMAP1: 50,000 total tons over the 10 yr life of the BMPs.*

BMAP2

*Description: Tree Planting
Check the quarters the task is to be started and completed:*

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete		X	X									

Number of acres/units of BMP to be installed during project: 80 acres

Incentive method: Cost Share

and rates: \$250/ac

Expected soil savings from BMPA1: 32,000 total tons over the 40 life of the BMPs.

BMPA3

Description: Filter Strip/Buffer Strip

Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete			X									X

Number of acres/units of BMP to be installed during project: 40 acres

Incentive method: Cost Share Rate: \$250/ac

Expected soil savings from BMPA2: 3,300 total tons over the 10 yr life of the BMPs.

BMPA4

Description: Wetland Construction/Restoration (This could also be an Engineering practice)

Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete		X										X

Number of acres/units of BMP to be installed during project: 30 acres

Incentive method: Cost Share

and rates: \$1,500/ac

Expected soil savings from BMPA3: 11,250 total tons over the 15 yr life of the BMPs.

B. Engineering Practices (BMPEs) installed by Landowners/Landusers with Financial Assistance provided for with this grant (ex. Grass Waterway, Streambank Stabilization.) If you have more than three BMPEs, copy and paste BMPE1 section and change the number as appropriate. All engineering practices must be approved by NRCS or an equivalent professional engineer.

BMPE1:

Description: Stream Bank Stabilization/two stage ditch

Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete	X											X

Number of acres/units of BMP to be installed during project: 2,500 feet

Incentive method Cost Share and rates: \$20.00/foot

Expected soil savings from BMPE1: 14,810 total tons over the 10 yr life of the BMPs.

BMPE2

Description: Grassed Waterway/WASCOB

Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete	X											X

Number of acres/units of BMP to be installed during project: 4 Wascobs/20 acres
 Incentive method: Cost Share
 and rates: \$2,800.00 per structure
 Expected soil savings from BMPE2: 4000 total tons over the life of the 10 yr BMPs.

BMPE3

Description: Grade Stabilization/Rock Chute Gully Stabilization
 Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete	X											X

Number of acres/units of BMP to be installed during project: 20 practices minimum
 Incentive method: Cost share
 and rates: \$2,800 per structure
 Expected soil savings from BMPE3: 9,600 total tons over the 10 yr life of the BMPs.

BMPE4

Description: Fencing
 Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete	X									X		

Number of acres/units of BMP to be installed during project: 10,000 feet
 Incentive method: Cost Share and rates: \$1.00 per foot
 Expected soil savings from BMPE4: 6030 total tons over the 10 yr life of the BMPs.

BMPE5

Description: Livestock Watering Station/Heavy Use Area
 Check the quarters the task is to be started and completed:

Quarter	1	2	3	4	5	6	7	8	9	10	11	12
Start/Complete				X								X

Number of acres/units of BMP to be installed during project: 2
 Incentive method: Cost share at 75%
 and rates: Maximum \$1,000.00 per watering system or \$0.75 per Sq Ft for heavy use area
 Expected soil savings from BMPE5: 7260 total tons over the life of the 10 yr BMPs.

C. Agronomic/Plant-based Practices installed by Landowners/Landusers with the use of equipment purchased by this grant for which you retain ownership (ex. No-till Planters or Drills, Residue Management machines and Residue Management Attachments and tools.) If you have more than two Equipments, copy and paste Equipment 1 section and change the number as appropriate.

There are no planned equipment purchases under this grant that will be retained by the ERRA

D. Alternate (ALT) Incentive Methods (ex. pay per ton/unit reduced/increased) List each unit separately (ex. Pay per ton of sediment reduced rather than pay for a particular BMP.) If you have more than one ALT, copy and paste the ALT1 section and change the number as appropriate.

There are no special or Alternate incentive payments proposed at this time.

E. Easements, purchased in part or whole with grant funds, over which you or your assigns retain ownership. If you have more than one type of Permanent Easement (EASP), or Temporary Easement (EAST) copy and paste the EASP1 or EAST1 section and change the number as appropriate.

None Expected

Note: The first quarter is from October 1, 2011 to December 31, 2011. A written contract will be required between you and the landusers/landowners to fund conservation practices with GLBP funds. The contract will include among other items, the type, number and location of each practice to be installed as well as the cost-share/incentive rate to be paid for each practice. (We will also use the signed contract as proof of commitment of funding for reimbursement of your expenses.)

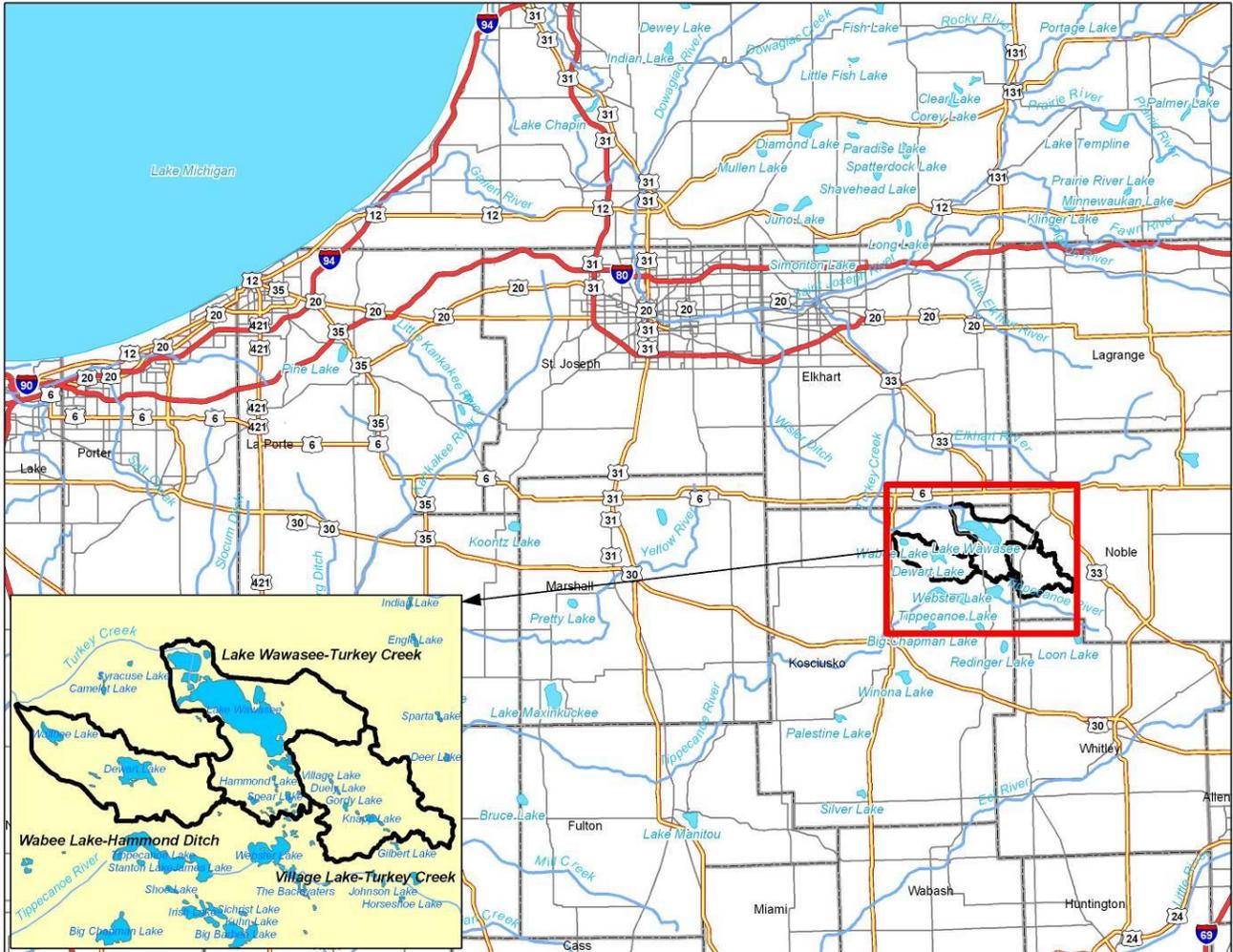
Media Campaign

1. You will be required to conduct a kickoff event in the first quarter of the project. You are specifically to invite, among others, all members of congress who have a portion of their district within your watershed project boundaries, the media and the chairperson of the Great Lakes Commission delegation from your state. Describe how and what you will do to meet this requirement.

The ERRA will announce the grant and two kickoff meetings on their website and in the newsletters of the two participating SWCDs. Congressman Stutzman from District 3 will be invited to both of these kickoff meetings. The meetings will tentatively be held at the WACF Education Center (Syracuse) in the Turkey Creek Watershed but additional meetings or alternate location may also be considered.

2. You are also required to establish an on-going outreach campaign. Describe your on-going outreach campaign strategy for the general public/media, landowners/landusers and elected officials.

The ERRA will be hiring a part-time outreach person using funds outside of this grant. This person's primary responsibility will be to manage the website, set up and conduct public outreach events, represent the ERRA at watershed events, and publish articles for SWCD and lake association newsletters in the targeted watersheds on the activities of the ERRA. The grant availability for cost-share programs will be announced and promoted through the SWCD Districts having jurisdiction over the targeted watersheds and in the represented lake association newsletters.



Three 12 digit watershed prioritized in this GLC application



The Goshen Pond Dam on the Elkhart River, Goshen, Indiana

This project was funded by the Great Lakes Restoration Initiative, and is maintained through the Great Lakes Basin Program for Soil Erosion and Sediment Control at the Great Lakes Commission.

