

Great Lakes Basin Program GLRI Project:

Promoting Sediment Reduction in the Upper Maumee Watershed

Size: watershed

Grant Amount: \$353,400

Year awarded: 2011

Sponsor: Allen County SWCD for the Upper Maumee River Watershed Partnership

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Submitted Project:

Total Grant Amount Requested:

(from budget developed below)

\$353,400

Match Amount

(not required but encouraged)

Cash & In-Kind: \$203,050

Total Project Soil Savings:

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

12,446

Congressional District(s) project is located in:

(example format - MI-2)

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

Indiana – 3rd District (Marlin Stutzman)

Ohio – 5th District (Bob Latta)

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.

In recent years water quality in the Great Lakes, specifically Lake Erie, has become a prime topic for the local, regional and national audiences. Headlines such as “Lake Erie Water Quality Worsening” (Monroe News,

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3/13/2010) and “Ohio's Lake Erie Beaches Ranked Among Worst in Nation for Water Quality for 3rd Straight Year” (Clev. Plain Dealer, 7/29/2009) have become commonplace across the region. While great strides have been made to combat sediment and phosphorus loading tied to sediment, the Maumee River is still not meeting water quality standards and algal blooms in Lake Erie are returning to levels that have not been documented in 30 years. The Western Lake Erie Basin Water Resources Protection Plan estimates that Lake Erie tourism exceeds \$7.4 billion annually. Additionally, Lake Erie ports generate an estimated \$1 billion annually and sport fishing brings in hundreds of millions annually. The health of Lake Erie and its tributaries is essential for the future environmental and economic success of the region.

The Western Lake Erie Basin (WLEB) watershed is the most heavily agricultural Great Lakes Watershed, with 71% of land under agricultural production. The 2002 Census of Agriculture estimated agriculture in the basin to be a \$1 billion dollar industry, making agriculture a critical player to the economic success of the WLEB. Due to the high percentage of cultivated crops, the watershed is also the largest contributor of suspended sediments to Lake Erie and soil loss and soil erosion are among the most important economic and water resource issues in the Lake Erie Basin (Myers, et. al, 2000). The Maumee River discharges more tons of suspended sediment per year than any other tributary to the Great Lakes (Baker, 1993).

The Upper Maumee River Watershed covers 250,664 acres in northeastern Indiana and northwest Ohio. Land cover in the watershed is predominately agriculture, with corn, soybean and wheat production comprising approximately 85% of the land use. Soils in the watershed are primarily clayey lacustrine sediments and illitic soils such as Paulding and Roselms. These level or nearly level soils are very poorly drained, although when systematically tilled these soils are productive for row crop agriculture.

Due to the abundance of row crop agriculture and the watersheds productive, yet highly erodible soils, the primary focus of the proposed project will be on targeting agricultural landowners and producers with the proposed BMP cost-share options. Row cropping under conventional methods has historically created widespread sheet, rill, and gully erosion. Furthermore, lack of land cover has increased surface runoff creating flashiness in the normally sluggish, low gradient streams. Due to the watersheds high clay content soils, clay particles become suspended in surface water and are quickly flushed downstream during rain events.

As soil is eroded from the uplands in the watershed and washed downstream, the sediment is deposited in drainage ditches, streams, rivers and ultimately Lake Erie. To manage this problem the U.S. Army Corps of Engineers dredges 850,000 cubic yards of sediment annually, at a yearly cost of \$2.2 million. Adoption of practices outlined in this proposal has the potential to hold sediment in the upper reaches and alleviate the downstream sediment issues facing Lake Erie and the Port of Toledo.

A lack of stream buffers and a riparian corridor are also common across the watershed as producers utilize every available acre for production. This problem is being exacerbated in today's agricultural economy as commodity prices continue to rise. One of the goals of the proposed project is to take critical areas that are in production and retire them from ag production. As sediment continues to impact Lake Erie, agriculture operations in the upper reaches of the Western Lake Erie Basin will be under the microscope.

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.*

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Watershed activities in the Upper Maumee Watershed are in the infancy stages at the current time. However, local SWCD's have been working hard to establish a stakeholder led watershed partnership. The following points will discuss funding that has been brought into the watershed to initiate the planning process of the project. At this time very little funding has been obtained to fund on the ground conservation efforts.

Maumee Valley Resource Conservation & Development (RC&D) / Natural Resources Conservation Service (NRCS) – The Defiance SWCD received a small grant from the Maumee Valley to spearhead the development of the Upper Maumee River Watershed Partnership.

Environmental Defense Fund (EDF) – EDF awarded the Defiance County SWCD \$28,000 to initiate watershed planning efforts in the Upper Maumee River Watershed. This grant funded 9 organizational meetings to initiate stakeholder interest and to begin identifying critical areas and concerns in the watershed. EDF also plays an active role in the Upper Maumee River Watershed through their work with the Maumee On-Farm Network (OFN). The goal of the Maumee On-Farm Network is to work in partnership with farmers and service providers to improve nutrient efficiency in ways that benefit the farmer's bottom line and water quality. While the primary goals of the OFN are related to nutrient management, a related OFN project in Indiana will include no-till and strip-till trials which may help to foster adoption of these sediment related practices.

Ohio Department of Natural Resources (ODNR) – The Defiance SWCD received a four year grant from ODNR for the purpose of hiring a full time watershed coordinator. The Upper Maumee Watershed Coordinator is responsible for organizing watershed planning, the development of a watershed action plan, conducting educational outreach, and implementing protection and restoration activities within the Upper Maumee River Watershed.

USEPA/IDEM 319 Grant – The Allen County (IN) SWCD has unofficially been awarded a grant to fund the development of a Watershed Management Plan (WMP) in Upper Maumee Basin. A signed contract is pending approval. The completion of an approved WMP will help to focus the Upper Maumee River Watershed Partnership on critical areas and concerns in the watershed.

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?

At this time the Upper Maumee River Watershed does not have an approved watershed plan. The Defiance County SWCD received a ODNR Watershed Coordinator Grant which has enabled the District to hire a Watershed Coordinator that is charged with developing a Watershed Management Plan for the Ohio portion of the Upper Maumee Watershed. In addition, the Allen County SWCD has recently been notified that they have awarded a USEPA/IDEM 319 grant to fund the development of a Watershed Management Plan for the Indiana portion of the watershed. The Districts into to work very close together through the leadership of the Upper Maumee River Watershed Partnership to develop a joint Watershed Management Plan that will be both Indiana as well as Ohio's WMP requirements.

From public input gathered at the Upper Maumee River Watershed Partnership's organizational meetings it has already become apparent that certain core BMPs need to be promoted to expand their adoption in order to have a meaningful impact on reducing soil erosion and sedimentation. Practices such as no-till, strip-till, the use of cover-crops and effect measures to reduce streambank destabilization will be of high priority.

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

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In addition to the recently funded ODNR Watershed Coordinator Project that is developing a WMP for the lower half of the Upper Maumee Watershed which is described above, there is a privately funded Maumee On-Farm Network project that has been underway for three years which primarily focuses on nutrient reduction efforts.

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 Upper Maumee River Watershed Partnership is a locally-led group of concerned citizens and organizations, lead by a Steering Committee, whose primary goal is the improvement of water quality throughout the Upper Maumee River Watershed and ultimately throughout the Western Lake Erie Basin. The Partnership was established in December, 2009 and holds regular meetings on a monthly basis. The Upper Maumee River Watershed Partnership Steering Committee is composed of a diverse representation of watershed stakeholders. Initial kickoff meetings in Ohio and Indiana were very well attended with approximately 50 landowners, producers, organizations and businesses represented. Attendance at current Steering Committee meetings averages approximately 15-25 stakeholders. As the group continues to move forward, the focus will be on six tasks set forth by the Steering Committee. These tasks include:

- Gathering local knowledge of watershed concerns.
- Water quality monitoring.
- Development of a Watershed Management Plan.
- Identifying sources of financial assistance.
- Education and outreach to local communities and organizations.
- Identification and implementation of conservation practices to improve stream quality.

In addition, events and other public outreach programs will be held to further communities' awareness of water quality in the Upper Maumee River Watershed. The Partnership is also continuing to identify and recruit additional stakeholders who wish to provide input on problems and opportunities within the watershed.

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

Upper Maumee River Watershed Partnership Partners	
Ohio	Indiana
Defiance SWCD	Allen SWCD
Paulding SWCD	Dekalb SWCD
Ohio EPA	ISDA
NRCS Ohio	NRCS Indiana
ODNR	IDNR
Ohio State Extension	Purdue Extension
Maumee River Basin Commission	
Friends of the Rivers	
Maumee River Grassroots Organization	
Allen County Partnership For Water Quality	
Western Lake Erie Basin Partnership	
Maumee River Basin Partnership of Local Governments	
The Nature Conservancy	
City of Fort Wayne Public Works	

Table 1. Upper Maumee River Watershed Partners

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Watershed/ Project Work Area

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

HUC Name	HUC #	Acres	Landuse		
			% Ag & Pasture	% Forest & Brushland	% Urban & Residential
Black Creek	041000050104	12,193	86.8%	5.8%	6.6%
Gordon Creek	041000050204	28,288	84.4%	5.4%	7.8%
Marie DeLarme	041000050203	31,360	86.3%	5.7%	5.1%

Table 2. Upper Maumee River Watershed HUC Data

Enter the total acres are in the selected HUCs: See Table above.

Enter the number of acres in those HUCs that are in the following land uses:

- Agriculture including pasture landuse: See Table above.
- Forest including brushland landuse: See Table above.
- Urban, suburban, industrial, commercial and rural residential landuse: See Table above.

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.

There are no significant dams in the proximity of the proposed project area.

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 proposed project will focus on three sub-watersheds of the Upper Maumee River (HUC 041000005). These watersheds were selected by the Upper Maumee River Watershed Partnership as critical areas where sediment reductions are both necessary and practical. Work in the 3 sub-watersheds will target Amish and English farmers in the following areas.

- Conventionally tilled agricultural fields adjacent to a stream or ditch
- Areas of significant erosion
- Unbuffered stream reaches
- Critical livestock operations

Other specific reasons for selecting the watersheds include:

Black Creek has a large Amish population and past history in 1970's Black Creek Project: Over \$700,000 was invested in land treatment practices through the Black Creek Project of which a significant amount was done on Amish farms. Several of the structural practices, such as WASCObS and Grassed Waterways, installed as a part of the Black Creek Project, are in need or repair or replacement. In addition, a significant increase in livestock production has occurred throughout the Black Creek Watershed increasing the demand placed on the cropland owned by the Amish for pasture, crop and hay production.

Gordon Creek and Marie DeLarme Watersheds are both characterized as having extensive row-crop agricultural production which is common throughout most of the Upper Maumee Watershed as well as the

Western Lake Erie Basin. What sets these sub-watersheds apart from others in the Upper Maumee Watershed is the presence a limited number of well respected producers that have adopted many of the agronomic practices that are the focus of this grant. Our rationale for selecting these watersheds is the desire to provide modest cost-share incentives to other producers that haven't yet adopted the practices but have shown curiosity and interest and only need a little "nudge" of encouragement to try the practices. Our goal is to grow BMP adoption outward from a nucleus of committed producers that will serve as examples to others of the long lasting benefits, both monetarily and environmentally, of the practices.

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 implementation strategy of the proposed project features a multi-faceted approach and is designed to target critical areas in the watershed for sediment reduction. The tasks associated with the implementation efforts of this project have been selected in a manner to work together to achieve the maximum benefit of the GLC funds and sediment reduction goals.

The proposed project will take into account the vast assortment of State and Federal cost- share programs aimed at improving water quality and reducing non-point source pollution in the Western Lake Erie Basin. In many cases, a landowner or producer would be better served to use an existing program, e.g. CRP and EQIP, and the Upper Maumee River Watershed Partnership staff will encourage them to do so. However, the proposed project aims to target BMP's on land not meeting the requirements (e.g. a cropping history) for other cost-share programs or for individuals not interested in entering into long term contracts required with Federal conservation programs. A good example of this is the Amish community. To the extent possible, existing funds such as USDA FSA and NRCS EQIP will be used primary for producers who are eligible and willing to accept the terms associated with those funds. This will also allow a greater number of producers in the watershed to receive funding.

The part-time technician hired for implementation of the project may promote other existing programs such as Section 319 and EQIP alongside the GLC funds based on individual producer needs, but will not participate in any planning, design, installation, or maintenance of BMPs paid for with cost-share dollars from agencies separate from the Great Lakes Commission.

The Upper Maumee River Watershed Partnership Steering Committee has developed four tasks to reduce sediment loading the Upper Maumee River Watershed. The tasks are described in detail below.

Task I. Agricultural Cost-Share Program and Bundling Option

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A cost-share program will be developed to provide financial assistance to producers who implement agricultural BMP's. Cost-share rates of 75% will be provided to interested producers who implement BMP's. Cost-share will be offered on the following BMP's listed in Table2.

Upper Maumee River Watershed Project Cost-Share BMP's		
Practice	Cost-share	Payment Cap
Equipment Modifications	75%	\$3000/\$4000*
Pasture / Hay Planting	75%	\$75/acre or \$3000
Cover Crops	75%	\$20/\$30 /acre** or \$3000
Stream Buffer / Filter Strip	75%	\$3000
Grassed Waterway	75%	\$3000
Two Stage Ditch	75%	\$7500
Livestock Exclusion Fencing	75%	\$3000
Alt. Water Supply System	75%	\$3000
Stream Crossing	75%	\$3000
Rotational Grazing	75%	\$3000
Controlled Drainage	75%	\$5000
WASCOB Systems	75%	\$5000
*A cap of \$4,000 will be used when producers are purchasing a 1-2 inch accuracy GPS system.		
**If the producer will harvest the cover crop for a forage, a rate of \$20/acre will be used.		

Table 3. Upper Maumee River Watershed Project Cost-Share BMP's

Task II. Bundling Option

As part of the cost-share program outlined in Task I, a bundling option will be available for producers who implement residue and tillage management, cover crops, stream buffers/ filter strips, and nutrient management. Producers implementing these practices will be eligible for a \$20/acre incentive. A payment cap of 200 acres or \$4000 will be adhered to. The goal of Task II is to entice producers to implement both sediment and nutrient management into their operation.

NOTE: While nutrient management is not a priority for the Great Lakes Commission, producers will be required to complete the NRCS nutrient management checklist to be eligible to receive the bundling incentive.

Task III. Strip-Till Tool Rental

Many producers in the watershed are keen on the idea of strip-till, but are not ready to make a large investment into the complete package of equipment needed to successfully implement a strip-till system. To allow producers to experiment with strip-till, the project will work with a local ag retailer or producer to provide a strip-till unit and RTK guidance equipped tractor to be available to producers in the watershed on a per acre rental basis. To offset the cost of the producer, GLC funds will be applied in order to limit producer cost to approximately \$10.00 per acre.

Task IV. Streambank Stabilization

A small amount of funding has been included to provide cost share funding for a streambank stabilization project(s). In the Upper Maumee Watershed there are numerous locations where the streambanks are failing and are greatly contributing to downstream sediment loading. Funding for streambank stabilization projects is limited for landowners due to the fact that most Federal cost-share sources do not deal with streambank issues. The goal of the proposed funding is to work with a landowner or landowners to stabilize a failing

streambank and to also act as a demonstration site where other landowners can visualize innovative ways to stabilize streambanks.

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.

To implement the aforementioned best management practices, we are proposing to add one Watershed Technician. The addition of this technician will provide a unique opportunity for a conservation professional to meet face to face with land owners and producers on the farm. The ideal candidate will have a good knowledge of the watershed, a strong agricultural background, the ability to connect with farmers, a working knowledge of BMP's, as well as a good reputation with the local Amish community. The Technician will work out of the Allen County Soil and Water Conservation District office in Fort Wayne, IN. Office space, equipment, and supplies will be provided by the SWCD. Day to day activities of the Technician will include:

- Work one-on-one with landowners to implement best management practices. The technician will oversee practices through all phases including developing cost-share contracts, planning, design, installation and maintenance.
- The technician will solicit participation in critical areas via mailings, phone calls, farmer meetings and field days.
- Work closely with the Upper Maumee River Watershed Partnership Steering Committee and the SWCD Board of Directors achieve sediment reduction goals in the Upper Maumee River Watershed.
- Maintain close working relationships with local SWCD's, USDA-NRCS, OSU and Purdue Extension, ODNR, IDNR, Ohio EPA IDEM, TNC and other federal, state, and local agencies.

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 BMPA1 section and change the number as appropriate.*

BMPA1 - Equipment Modifications (Level 1)

Description: Equipment modifications to allow producers to effectively implement conservation tillage on their farms.

- Planter attachments that allow producers to implement no-till, strip-till or high residue conservation tillage
- GPS systems
- Light bars
- Vertical tillage equipment attachments (i.e. coulters, rolling baskets, spring harrows)

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: 1,500 acres with 5 year commitment to continuous no-till

Incentive method and rates: 11 participants at 75% cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPA1 over the life of the BMPs during the GLC grant period: 5,330 tons reduced erosion, 2,014 tons reduced sediment load

BMPA2 - Equipment Modifications (RTK) for no-till or strip-till (Level 2)

Description: Assistance to producers who purchase a 1-2 inch accuracy GPS system.

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: 1,400 acres with 5 year commitment to continuous no-till

Incentive method and rates: 6 participants at 75% cost-share with a maximum cost-share payment of \$4000

Expected soil savings from BMPA2 over the life of the BMPs during the GLC grant period: 5,814 tons reduced erosion, 2,218 tons reduced sediment load

BMPA3 - Pasture/Hay Planting

Description: Assistance for pasture/hay planting in areas near unbuffered stream reaches to decrease soil erosion and nutrient and bacteria loading. Livestock may be rotationally grazed. However, the effectiveness of the hay or pasture to act as a filter strip cannot be altered.

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: 200 Acres

Incentive method and rates: 4 participants at \$75 per acre cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPA3 over the life of the BMPs during the GLC grant period: 1,445 tons reduced erosion, 943 tons reduced sediment load

BMPA4 – Cover Crops

Description: Assistance to producers who utilize cover crops to improve soil quality, reduce erosion, and increase soil water holding capacity.

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: 2000 Acres

Incentive method and rates: 16 participants at \$30 per acre cost-share with a maximum cost-share payment of \$3000. A payment of \$20 per acre will apply if cover crop is foraged

Expected soil savings from BMPA4 over the life of the BMPs during the GLC grant period: 14,496 tons reduced erosion, 547 tons reduced sediment load

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 – Stream Buffer/Filter Strip

Description: Assistance for producers to install stream buffers/filter strips to reduce sediment and nutrient loading.

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: 9.18 acres

Incentive method and rates: 2 participants at 75% cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPE1 over the life of the GLC grant: Stream buffer/filter strips do not address erosion soil savings, but will provide an estimated sediment load reduction of 30 tons

BMPE2 – Grassed Waterway

Description: Assistance to producers for the installation of grassed waterways to reduce soil erosion.

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: 2.6 acres

Incentive method and rates: 2 participants at 75% cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPE2 over the life of the GLC grant: Grass waterways do not address erosion soil savings, but will provide an estimated sediment load reduction of 435 tons

BMPE3 – Two Stage Ditch

Description: Assistance to producers to construct a two stage ditch to reduce sediment.

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: 2,640 feet

Incentive method and rates: 1 participant or site at 75% cost-share with a maximum cost-share payment of \$7500

Expected soil savings from BMPE3 over the life of the GLC grant: While two-stage ditch designs do not address cropland erosion soil savings, but will provide an estimated sediment load reduction of 50 tons per year per each ½ mile or 150 tons over the GLC grant period.

BMPE4 – Livestock Exclusion Fencing

Description: Assistance to producers to install fencing to exclude livestock from streams.

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: Estimated total length of 2 wire livestock exclusion fencing is 7,300 feet on an estimated 2 farms.

Incentive method and rates: 2 participants at 75% cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPE4 over the life of the BMP: Livestock exclusion fencing reduces streambank erosion but does not address cropland erosion soil savings, but will provide an estimated sediment load reduction of 1,306 tons over the three years of the GLC grant.

BMPE5 – Alternative Water Supply System

Description: Assistance to producers for the installation of an alternative water supply system.

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: An estimated 60 acres of cropland will be converted to pastures with capability of rotational grazing with an alternative underground watering system.

Incentive method and rates: 2 participants at 75% cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPE5 over the three year GLC grant is: 544 tons reduced erosion, 306 tons reduced sediment load

BMPE6 – Stream Crossing

Description: Assistance to producers for the installation of livestock stream crossings.

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: An estimated 3,658 feet of streambank will be protected

Incentive method and rates: 1 participant at 75% cost-share with a maximum cost-share payment of \$3000.

Expected soil savings from BMPE6 over the life of the BMP: Stream crossing do not reduce cropland erosion but will provide an estimated sediment load reduction of 653 tons.

BMPE7 – Rotational Grazing

Description: Assistance to producers to implement a rotational grazing system on their operation.

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: 840 acres.

Incentive method and rates: 5 participants at 75% cost-share with a maximum cost-share payment of \$3000

Expected soil savings from BMPE7 over the life of the grant: 324 tons reduced erosion, 131 tons reduced sediment load

BMPE8 – Controlled Drainage

Description: Assistance to producers to implement controlled drainage structures.

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 and rates: 1 participant at 75% cost-share with a maximum cost-share payment of \$5000

Expected soil savings from BMPE8 over the life of the BMP: 50 tons reduced erosion, 15 tons reduced sediment load

BMPE9 – WASCOD System

Description: Assistance to producers to implement a WASCOD system.

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 acres.

Incentive method and rates: 3 WASCOBs at 75% cost-share with a maximum cost-share payment of \$5000

Expected soil savings from BMPE9 over the life of the grant: WASCOBs do not address erosion soil savings, but will provide an estimated sediment load reduction of 450 tons

BMPE10 – Streambank Stabilization

Description: Assistance to producers for streambank stabilization to reduce bank erosion.

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 feet eroded bank

Incentive method and rates: 1 participant at 75% cost-share with a maximum cost-share payment of \$21,000.

Expected soil savings from BMPE10 over the life of the BMP: 450 tons reduced erosion otherwise directly discharging into a stream resulting in 450 tons reduced sediment load.

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.

Equipment1 – Strip-till Tool

Description: Many producers in the watershed are keen on the idea of strip-till, but are not ready to make a large investment into the complete package of equipment needed to successfully implement a strip-till system. To allow producers to try and experiment with strip-till, the project will work with a local ag retailer to provide a strip-till unit and RTK guidance equipped tractor to be available to producers in the watershed on a per acre rental basis.

Check the quarter 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 equipment will be used during project: 10 participants with a maximum of 200 acres each = 2000 acres total.

Incentive method and rates: To offset the cost of the producer, GLC funds will be applied at a rate of \$12.00 per acre in order to limit the producer’s rental cost to approximately \$10.00 per acre.

Expected soil savings from Equipment1 over the life of the grant: 10,098 tons reduced erosion, 3,248 tons reduced sediment load.

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.

ALT1 - Bundle Incentive

Description: A bundling option will be available for producers who implement residue and tillage management, cover crops, stream buffers/ filter strips through the GLC program. Producers qualifying for the Bundle Incentive will also be required to have an approved Nutrient Management Plan (not funded thru GLC or other federal program).

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: 8 participants with a maximum of 200 acres each = 1,600 acres total

Incentive method and rates: Producers implementing these practices will be eligible for a \$20 per acre incentive. A payment cap of 200 acres or \$4000 will be adhered to.

Expected soil savings from ALT1 over the life of the BMP: To qualify for the Bundle Incentive the producer will be participating in the Equipment Modification or Strip-till BMP along with the Cover Crop and Filter Strip BMPs therefore the soil erosion and soil saving calculations are included in those BMPs listed earlier.

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.

This project will not include easements.

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 Upper Maumee River Watershed Partnership will work with a key producer in the watershed to host an indoor winter meeting. The ideal host will be a large producer in the watershed who is implementing many of the proposed practices. The meeting will introduce the project and cost share opportunities to producers and landowners. The meeting will also be coupled with an Upper Maumee Watershed Partnership Steering Committee meeting in order to help attendee's better understand the mission of the Partnership. The project will also contact an influential member of the local government (i.e. Mayor, State Rep, or Congressman) to speak about the benefits of the project on conservation efforts in the area. All Congressional representatives for the project area along with local media, the chair of the Great Lakes Commission and other local officials will be invited to attend the kickoff event as well as the general public, particularly local landowners and producers.

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

1. *The general public/media*

Project activities and updates will be presented via quarterly newsletters and press releases to local media. Any project meetings or special events will be widely publicized through these two avenues to encourage the participation and involvement of the public and local media outlets.

2. *Landowners/landusers*

Landowners will be encouraged to participate in a variety of ways. A watershed technician will be employed to work with producers one on one and guide them through all phases of BMP implementation. An up to date and extensive newsletter mailing list will be developed for direct mailings to landowners and producers. Publications (brochures, press releases, newsletters, etc.) will be developed and submitted to local businesses, offices, and media outlets. A series of winter farmer meetings and summer field days will also be held to demonstrate practices and give producers the information needed to implement these practices. Furthermore, a cost share plan will be developed to offset a portion of the cost associated with implementing these innovative BMP's.

3. *Elected officials*

The newsletter mailing list will be expanded to include elected officials, government officials, and to any interested stakeholders. These individuals and agencies will also be invited to attend all farmer meetings and summer field days.