## Keeping It On the Land

Information for the soil erosion & sediment control community in the Great Lakes region Volume 8, Number 2 July 2006

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and the Great Lakes Basin Program for Soil Erosion and Sediment Control

### Special Issue: Announcing the 2006 Great Lakes Basin Program Projects



Sediment plumes on the Great Lakes, as seen by the Earth's orbit. Photo courtesy of NASA Visible Earth

This special issue of Keeping It On the Land details the 44 FY 2006 projects selected by a regional task force under a highly competitive grants program funded by the Great Lakes Basin Program for Soil Erosion and Sediment Control. This includes 26 small-scale projects (up to \$40,000 per project) and 18 large-scale projects (up to approximately \$75,000 per project).

Over \$1.9 million in grants were awarded this year under the program, which is a state-federal partnership involving the Great Lakes Commission, the U.S. Department of Agriculture-Natural Resources Conservation Service and the U.S. Environmental Protection Agency. The numbers on the centerfold map correspond to the project summaries.

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This quarterly publication is made possible through the Great Lakes Basin Program for Soil Erosion and Sediment Control.







#### Illinois

1. Soil Erosion and Sediment Control Project within Janes Ravine at Fort Sherdian Forest Preserve: \$75,000 Lake County Forest Preserve District, Grayslake, IL Contact: Jim Anderson, janderson@co.lake.il.us

An assessment of existing conditions at Janes Ravine identified severe down-cutting in the ravine, failure of side slopes, and large gully formations caused by the use of the ravine for on-site and offsite urban stormwater drainage as sources of excessive sediment inputs to Lake Michigan. The intent of this project is to preserve and restore the ecologically-sensitive ravines; improve stormwater drainage, eliminate erosion problems, and remove point source discharges to the ravines; stabilize side slopes by removing invasive woody species and seeding with native vegetation; and increase buffers around ravines by planting native trees and plants.

#### Indiana

2. Baugo Creek Streambank Stabilization Project: \$40,000 St. Joseph County Parks, South Bend, IN Contact: Evelyn Kirkwood, ekirkwood@comcast.net

Baugo Creek drains 49,581 acres of primarily agricultural land in southern Elkhart and St. Joseph counties, and is one of the greatest contributors of sediment to the St. Joseph River. Much of the sediment carried by Baugo Creek comes directly from the embankments of the creek itself. The overall goal of this project is to prevent further erosion from a 300-foot reach of the Baugo Creek embankment within Ferretie / Baugo Creek County Park through the design and implementation of bioengineered protection measures.

#### 3. Little Elkhart River Livestock Induced Sedimentation Demonstration Project: \$75,000

LaGrange County SWCD, LaGrange, IN Contact: Dona Hunter, dona.hunter@IN.nacdnet.net

Livestock access to the headwaters region of the Little Elkhart River is causing moderate to severe erosion along ditch/stream banks, which has severely impaired the biotic community throughout the system. The Indiana Department of Natural Resources categorizes the drainage as a cool to cold water system capable of supporting a cold-water fishery; however, due to heavy sedimentation the system cannot support these species. The primary goal of this project is to demonstrate the benefit of restricting livestock access to the drainage system through the establishment of two demonstration sites and data collection and monitoring over two years.

## 4. St. Marys and Maumee River Erosion and Sediment Control Project: \$75,000

Allen County Soil and Water Conservation District, Fort Wayne, IN Contact: Greg Lake, greg-lake@iaswcd.org

Sheet, rill, and gulley erosion resulting from the lack of cropland cover, the absence of stream buffers, and limited adoption of conservation tillage can be found throughout the entire project area. This causes loss of cropland productivity as well as increased sediment and associated contaminant loading in nearby streams, rivers, and the western basin of Lake Erie. Project goals include increasing the adoption of no-till corn production and the number of stream buffers, installing grass waterways in critical areas, planting cover crops and excluding livestock from open drains, and inventorying existing and proposed best management practices within the project area.

#### Other Programs Around the Basin

#### Michigan

Au Sable Restoration through the Grayling Stormwater Project (*MDEQ*)

Stormwater runoff—carrying sediment, oils, greases, trash, and other hazardous materials—currently discharges from city streets and parking lots directly into the Au Sable River. In Grayling and most other cities, the stormwater approach has historically involved disposing of runoff in the quickest manner possible, with little regard for its subsequent impact on natural resources. Where natural vegetation and soils once intercepted runoff, impervious surfaces (such as roads, parking lots, and buildings) now send runoff directly to the river. The natural filtering effect of the land is lost, and the river shows the symptoms.

Controlling water from rain events and snowmelt, close to where the rainfall actually lands on the ground, is the key concept behind efforts to eliminate the direct discharge of stormwater runoff from the land to the Au Sable River. Techniques called Best Management Practices will be used for treating what comes out of the end of drainage pipes. In addition to the traditional approach to the problem, Grayling has been selected by the Michigan Department of Environmental Quality (MDEQ) as a pilot project site to demonstrate Low Impact Development techniques for reducing stormwater runoff. The end-of-the-pipe treatment will still be needed in some areas, but the use of low impact, natural drainage should help address the problem at its source.

The basic principles behind natural drainage include maintaining natural vegetation wherever possible, intercepting rainfall with tree canopy, minimizing pavement where practical, disconnecting areas of

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#### "BMP" = Best Management Practices

#### Michigan

5. Averill Preserve L and B Drain Restoration: \$37,000 The Little Forks Conservancy, Midland, MI Contact: Elan Lipschitz, elipschitz@littleforks.org

Urbanization in the Saginaw Bay watershed and increased water flows have exacerbated a severely degraded county drain resulting in erosion, undercutting vegetation, and increasing sediment discharge to the Tittabawassee River. This erosion of soils has detrimental effects on fisheries habitat, reproduction, growth, and survival. Key goals of the project include replacing damaged subsurface tile with a channel that mimics a natural system, repairing eroded areas and stabilizing banks, aiding in storm water control of the surrounding urban area, and involving local stakeholders in the demonstration project. These activities will reduce sediment entering the Tittabawassee River by approximately 137 tons per year.

#### 6. Bear Creek Stream Bank Erosion Project: \$20,000

Conservation Resource Alliance, Traverse City, MI Contact: Chris Pierce, crachris@charterinternet.com

Bear Creek, a federally designated "Wild and Scenic" river and a "Blue Ribbon Trout Stream," has been plagued by a combination of severe erosion problems and improper land and recreational use. Excess sand from erosion degrades fish and wildlife habitat and water quality and is the single biggest threat/impairment to the fishery of Bear Creek. The primary goal of the project is to improve the water quality and fish and wildlife habitat of the Bear Creek watershed so that the river can continue to provide recreational, economical, and quality of life benefits. This will be accomplished through the restoration of a large eroding stream bank, stabilization best management practices, and the promotion of erosion control work.

#### 7. Better Backroads Guidebook: \$9,610

Huron Pines RC&D, Grayling, MI Contact: Kris Bruestle, kris@huronpines.org

The majority of secondary roads, or "backroads", in Northern Michigan are unpaved and contribute large amounts of road-gravel and sand into small tributaries and feeder streams during precipitation events. Excessive amounts of sediment entering tributary streams can result in a wider and shallower river channel, the destruction of fish and aquatic insect habitat, and the elevation of the river's water temperature. The purpose of this project is to update, reprint, and distribute copies of the Great Lakes Better Backroads Guidebook to resource managers and road commissions across the state, which details specific best management practices for protecting coldwater streams from the impacts of roads.

## 2006 Projects

**8. Indian Cemetery Streambank Stabilization Project: \$20,000** Ford River Township, Bark River, MI Contact: Thomas King, lostinwoods@isp360.net

The erosion of the banks of the Ford River has been a resource concern for the last century, causing sedimentation in the river and threatening a house, an Indian burial ground, and a historic cemetery. This erosion problem is exacerbated by spring melts when water levels are high and ice jams on the river erode the streambank. Damages downstream include excessive sedimentation to the river mouth and into Lake Michigan, which degrades the fisheries habitat. Primary goals of the project include reducing the amount of sediment entering the Ford River, protecting and stabilizing a historical cemetery and Native American burial ground at the top of the river bank, and protecting and stabilizing two nearby homesites.

## 9. Large Woody Debris Management for Sediment Control: \$27,000

Lenawee County Drain Commissioner, Adrian, MI Contact: Stephen May, steve.may@lenawee.mi.us

Two massive logjams across the entire width of the River Raisin are re-directing the river through a 25-foot high bluff on the inside of a tight bend. These logjams have been building up for several years, trapping sufficient material to force high flows into the banks. The river is "seeking" a more efficient path and is gradually carving a new channel behind the existing bluff, resulting in bank erosion impacts both upstream and downstream of the logjam. The existing and future loss of sediment and private land and the threat of catastrophic jam failure necessitate removal. This project will support future bank stabilization by performing a geomorphology assessment and developing a logjam removal plan.

#### 10. Little Manistee River Stream Crossing Project: \$39,000

Little Manistee Watershed Conservation Council, Irons, MI Contact: Mark Johnson, cramark@chartermi.net

The primary sources of sediment that contribute to the degradation of water quality in the Little Manistee River watershed are failing or poorly designed road crossings. Upon entering the stream, the sand sediments fill in deep pools, alter stream channel morphology, and negatively impact fish and wildlife habitat in one of Michigan's premier trout streams. These sediments also carry with them numerous contaminants including nutrients, salts, greases, and other chemicals from the roads. Goals for this project include a net reduction in sediment delivery from one eroding road stream crossing in the Little Manistee watershed and the implementation of stream crossing best management practices.

### 11. Rabbit River Watershed Project, Reducing Sedimentation through Education: \$5,758

Allegan Conservation District, Allegan, MI Contact: Shawn McKenney, shawn.mckenney@mi.nacdnet.net

Bio-surveys indicate that habitat and biological communities in the Rabbit River and its tributaries are significantly degraded due to excess sedimentation from livestock access and roadside, field, and streambank erosion. The Allegan Conservation District and the Rabbit River Watershed Project proposes to reduce this sedimentation by educating producers on the economic benefits of installing best management practices (BMPs) on their lands, providing physical examples of successful BMPs, and providing cost-share funds and technical assistance for producers to install BMPs.

#### 12. Salmon Trout River Watershed Erosion and Sediment Control Project: \$24,618

Central Lake Superior Watershed Partnership, Marquette, MI Contact: Carl Lindquist, carl@superiorwatersheds.org

The Salmon Trout River watershed has long been plagued by excess sediment from roadways and transportation-related issues. Sediment management in this watershed is critical in order to protect the last remaining population of naturally reproducing coaster brook trout (Salvelinus fontinalis) on the south shore of Lake Superior. This project will address sedimentation from runoff at two sites where sediments from upland sites is a known problem. Storm water diversions and detention areas will be built to keep transported sand in an upland area and out of the tributary streams.

#### 13. East Branch of the AuGres River Erosion and Sediment Control Project: \$72,188

Whitney Intercounty Drainage Board, Lansing, MI Contact: Dave Bergdolt, dbergdolt@wadetrim.com

Much of the natural stream morphology of the East Branch of the AuGres River has been severely altered by past dredging activities, resulting in a straight, wide channel with steep banks and severe streambank erosion. During recent decades significant damage has occurred, and continues to occur, to aquatic habitats and organisms within the River, which is a State designated trout stream. The purpose of this project is to identify high priority streambanks and areas suitable for floodplain restoration, implement stabilization measures, and reconnect historic floodplain areas.

#### 14. Galloway Creek Erosion and Sediment Control Project: \$75,000 Oakland University, Rochester, MI Contact: Terry Stollsteimer, stollste@oakland.edu

Oakland University (OU) has identified flooding, streambank erosion, and sediment concerns throughout its campus, including a recent blockage of a culvert caused by 8,000 cubic yards of sediment and debris, which led to serious flooding of a tributary of Galloway Creek. Excess runoff from one parking lot in particular has recently exacerbated a nearby slope failure creating a significant gully at the project site. This has contributed hundreds of tons of sediment to the stream and has also led to stream warming and loss of habitat and degradation of fish communities. OU will treat the stormwater runoff from the parking lot with an extended detention basin, pipe the runoff to the bottom of the ravine, and stabilize the severe gully to reduce sediment loadings to the Galloway Creek tributary.

#### 15. Macatawa Watershed Roadside Erosion and Sediment Control Project: \$75,000

Macatawa Area Coordinating Council/Macatawa Watershed Project, Holland, MI

Contact: Sherry Slocum, sherrys@macatawa.org

Excess sedimentation within the Macatawa River watershed occurs primarily from agricultural sources and roadside runoff from increased development. Research has shown that the watershed has a very high sedimentation rate - especially during rain events —which has resulted in habitat degradation, impaired recreational uses, and a decline in fisheries. Primary goals for this project are to reduce sedimentation and soil erosion at two demonstration sites using bioengineering techniques, and increase community outreach and education relating to water quality issues. A brochure outlining the project, best management practices, and soil erosion and sedimentation control benefits will also be created and distributed.

### 16. White River Erosion and Sediment Control Partnership Project: \$64,564

Oceana Conservation District, Shelby, MI Contact: Willidene Hutton, willidene.hutton@mi.nacdnet.net

Soil erosion and sedimentation is damaging spawning areas in the White River watershed and White Lake Area of Concern. This project will reduce damage to fish and wildlife habitat in these areas by reducing foot traffic and other human causes of erosion in three riparian recreational sites. Specifically, it will use geomorphologic information and soft-engineered best management practices (e.g., log revetments, critical area planting, live staking) to absorb river impacts rather than transfer them downstream.

#### Minnesota

#### 17. Preventing Damage to Wetlands Project: \$22,000

Logging Educational and Resource Center (LERC), Mountain Iron, MN Contact: Tink Birchem, tink@fmscoop.com

Road crossings over wetlands and streams during logging operations cause erosion and sedimentation in the Lake Superior watershed of Minnesota. This project will develop portable wetland/drainage crossings that can be adapted for any length of wetland/drainage crossing up to 200 feet. These crossings will be for in-woods logging equipment, not log trucks. At least 500 feet of wetland/drainage crossings and at least two drainage crossing structures will be built. A brochure on these crossing options will be developed and distributed and an in-woods workshop convened to demonstrate how these crossing options can be utilized.

#### 18. Skunk Creek Streambank Restoration Project: \$75,000

Lake County Soil & Water Conservation District, Two Harbors, MN Contact: Wayne Seidel, seide002@umn.edu

The primary water quality problem in Skunk Creek is sediment from severe streambank erosion caused by increased stormwater runoff. During this project, 203 feet of streambank will be stabilized with rock rip-rap and the upper slopes stabilized with grasses, trees and shrubs. Two news articles will be written on the projects to highlight the restoration effort. The project will also be featured on the 2007 Soil and Water Conservation District (SWCD) Area III Tour that will be hosted by Lake County SWCD.

#### New York

**19. Clear Creek Erosion and Sediment Control: \$40,000** Seneca Nation of Indians, Irving, NY

Contact: Brian Andrzejewski, briana@sni.org

Increased stream flow due to several storms has cut a new channel approximately 200 feet upstream of the Versailles Plank Road Bridge. The channel continues to headcut due to the easily erodible silty soil. The project will involve snag removal, reestablishing the oxbow, shaping the banks, and installing plantings to control high flows and to slow water flow through the downstream bridge.

#### 20. Exchange Street Culvert Erosion Control Project: \$35,875

Seneca Trail Resource Conservation and Development Council, Inc., Ellicottville, NY

Contact: JoAnn Kurtis, joann.kurtis@ny.usda.gov

The high velocity of the water that exits a culvert under Exchange Street is causing over 190 tons of soils to be lost from adjacent cropland. A stone-lined plunge pool will be installed and 80 feet of stream bank stabilization practices will be used, including grading, shaping, and revegetation. The plunge pool will be designed to protect the side slopes from the turbulence caused by the high velocities and will be constructed to allow fish passage to the upper reaches of the tributary, thus reducing the amounts of soil loss and improving potential fish habitat.

**21. Oatka Creek Stream Stabilization & Habitat Restoration: \$37,272** Wyoming County Soil and Water Conservation District, Warsaw, NY Contact: David Reckahn, dreckahn@localnet.com

All water around the project site (consisting of a 2,769-foot long section of the Oatka Creek in the town of Warsaw, NY) will be diverted

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### Around the Basin

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impervious surfaces to increase opportunities for infiltration, directing water to depression areas, and detaining water close to where it falls. The above principles are used in conjunction with one another to control stormwater at its source and thus reduce the quantity of runoff.

An example of the natural drainage approach is to direct water from the road into open swales within the road right of way. Vegetated swales help to slow stormwater runoff and convey it to rain gardens, where soil and plants can bio-remediate the problem. This and other Low Impact Development strategies are based on simple concepts that have been left out of most conventional developments in our rush to grow.

In the fall of 2005, measures were put in place to begin the process of achieving the reduction in pollution, including a combination of underground oil/grit separators to treat stormwater and small retention basins to infiltrate water into the ground. In 2006, these retention areas used to infiltrate polluted stormwater runoff will be planted with shrubs and perennial flowers, acting as "rain gardens" to help protect the Au Sable River. Once established, rain gardens can be a valuable landscape feature as well as a low maintenance method of reducing runoff. Used in combination with other treatment approaches, the city and its residents will have a first-ofits-kind project of which they can be proud.

Funding for the Grayling Stormwater Project has been provided through a Clean Michigan Initiative grant administered by MDEQ. Key project sponsors include the City of Grayling, Huron Pines Resource Conservation and Development Council, Trout Bum Bar-B-Q, Paul Young Chapter of Trout Unlimited, the Michigan Fly Fishing Club, and other conservation partners and area residents.

For additional conservation project information and to view the educational project video, visit *www.huronpines.org.* 







during construction to work in the streambed. Turbidity curtains will be used to capture any sediment leaving the site during construction. After construction, all disturbed areas will be seeded by the Soil and Water Conservation District hydroseeder. Additional straw mulch or erosion blankets will be used for steep slopes or if the site is too dry. Trees and shrubs will also be planted along the top of the streambank to create riparian protection.

## 22. Reducing Agricultural Soil Loss in the Oneida Lake Watershed: \$37,058

Madison County Soil and Water Conservation District, Hamilton, NY Contact: Michael Johnston, michael-johnston@ny.nacdnet.org

In the Oneida Lake watershed, row crops on sloping fields have been cited as the prime contributor of sediment to tributary streams and ultimately the lake itself. Erosion problems have grown as farms, fields, and tractors have become larger and slope lengths on fields have increased. During this project, a zone builder implement will be loaned to farmers to cut through compaction layers while preparing zones for planting. Two planting demonstrations and two harvest field days will also be organized. Soil and Water Conservation District and Extension personnel will conduct an information session and field trials for this new equipment and methodology.

#### 23. Black Creek Streambank Stabilization Project: \$60,285

Monroe County Soil and Water Conservation District, Rochester, NY Contact: Caroline Myers, caroline.myers@ny.nacdnet.net

In Black Creek, a tributary of Lake Ontario, severe streambank erosion is occurring near two roadways in the Town of Chili located in Monroe County. These sites are causing excessive sedimentation and pose a potential threat to the existence of sections of these roadways. These two sites will be stabilized by armoring the areas. A dewatering barrier will be constructed at both sites prior to construction to prevent an additional loss of 300 tons of soil during construction of the best management practice.

#### 24. Jillson Roadside Erosion Control Project: \$51,250

Seneca Trail Resource Conservation & Development Council, Inc., Ellicottville, NY Contact: JoAnn Kurtis, joann.kurtis@ny.usda.gov

One thousand three hundred thirty-five feet of steep, severely eroding ditch adjacent to Jillson Road is contributing to the sedimentation problems of Crow Creek, upstream of the Village of Attica's drinking water reservoir. A combination of vegetative and structural practices, such as rock dams, stone grade controls, and fiber mats will be installed during this project to slow velocities and



Before and after photos of a streambank restoration bioengineering project previously funded by the Great Lakes Basin Program

stabilize the bank. This technique of road ditch stabilization will be demonstrated to a minimum of 50 town, county, and state highway departments and Soil and Water Conservation District and conservation agency personnel in Wyoming and surrounding counties.

#### Ohio

#### 25. Education on No-till and Conservation Tillage: \$10,000

Conservation Tillage Conference, Columbus, OH

Contact: Randall Reeder, reeder.1@osu.edu

Since 1987, the Conservation Tillage Conference (CTC) has educated farmers and other practitioners on conservation tillage and new no-till technologies at the second largest no-till conference in the country. Annually, this amounts to 650 participants for a 2-day educational conference, with most of the work completed by nine volunteer board members. To continue the conference and expand its educational capabilities (e.g., speakers, internet resources), funding is needed to hire a part-time staff person dedicated to the conference.

#### 26. Enhancing Ohio's Lake Erie CREP Outreach Program: \$10,275

Ohio Dept. of Natural Resources Division of Soil & Water Conservation, Findlay, OH

Contact: Ed Crawford, ed.crawford@dnr.state.oh.us

Enhancing the Lake Erie CREP outreach would significantly reduce sediment pollution in Lake Erie. However, outreach efforts have been constrained by funding cuts and increasing workloads. With funding for this project, two regional meetings with local SWCD, FSA, and NRCS staff will be conducted and each of the 27 SWCDs will be encouraged to conduct two local meetings for county producers. SWCDs will provide three feature newsletters/ news articles on the revised CREP, and Ohio Farm Bureau will produce at least eight feature articles on the CREP program.



Photos courtesy of the Great Lakes Basin Program for Soil Erosion and Sediment Control and the Great Lakes Commission

27. Erie Rural Roadside Erosion & Sediment Control Demonstration: \$29,265

Erie Soil and Water Conservation District, Sandusky, OH Contact: LouAnn Hauch, lhauch@erie-county-ohio.net

Each township within Erie County has experienced increased growth rates over the last 14 years, resulting in 246 miles of township roadway and 143 miles of county roadway. However, road ditches are not being seeded and mulched after construction of drainage improvements. With funding for the project, an informational meeting/demonstration for seeding and mulching small drainage construction projects on rural roadways will be held with fifteen priority user groups invited. In addition, a straw mulcher will be purchased and the identified fifteen user groups will be offered the use of the machine on at least one mile of their ditch projects during the duration of the grant.

#### 28. Powers Brook Sediment Control Project: \$32,370

Summit County Soil and Water Conservation District, Cuyahoga Falls, OH Contact: David Ritter, dritter@summitswcd.org

Powers Brook, a tributary to the Cuyahoga River, has been negatively affected by excess sedimentation from stream bank erosion due to increased runoff rates from developed areas. This demonstration project will address the localized problem as well as provide a model for surrounding communities for addressing stormwater-related erosion problems at a local level. Specifically, a forebay area will be installed in a nearby retention pond to capture incoming sediment and reduce flow velocities during rainfall events, a bypass will be constructed and stabilized, wetland plant growth will be enhanced, and one workshop will be convened for Phase II communities in Summit and surrounding counties.

#### 29. Summit County Raingarden Initiative: \$8,160

Summit Soil and Water Conservation District, Cuyahoga Falls, OH Contact: Chicory Koren, ckoren@summitswcd.org

Research has shown that mimicking natural conditions is a better way to address stormwater issues. This often involves keeping and treating stormwater runoff close to the source (e.g., raingardens). This approach is diametrically opposed to many current ideas about stormwater management; thus, education on this issue is crucial. The Summit Soil and Water Conservation District will host five raingarden workshops at five separate locations throughout the county and will also host a raingarden website.

### Tymochtee Creek and Sandusky River Sediment Control Project: \$36,822

The Ohio State University Extension, Upper Sandusky, OH Contact: Chris Bruynis, bruynis.1@osu.edu

Tymchotee Creek and the Sandusky River are impacted by high sediment loads eroding from expanding swine farms and local agricultural practices. This project will demonstrate to swine farmers the effectiveness of planting grass winter cover crops after soybeans to prevent soil erosion. Grass cover crops will be planted on 40 acres of soybean stubble on each of seven swine farms, and two field days will be held to showcase the benefits of using grass winter cover crops. Information obtained will be published in the annual Ohio State University On-Farm Field Demonstration Plot Bulletin to show producers the economic benefit of using grass winter cover crops with swine manure.

#### 31. Erie – Huron Strip Tillage Project: \$74,868

Erie – Huron Soil and Water Conservation Districts, Norwalk, OH Contact: Cary Brickner, Cary.brickner@oh.nacdnet.net

Less than 20 percent of the corn produced in Ohio's Erie and Huron counties is grown using no-till practices due to poorly drained soils, cooler north temperatures, and compaction. During this project, key tasks include developing a brochure to showcase the benefits of strip-till technology, establishing an equipment buy-down program with a 50 percent cost share rate (up to \$5,000) to purchase eight strip-till rigs, and creating three test plots to compare different tillage methods. Information on the project will be distributed via a field day event, brochures, newsletters, and local newspapers.

### 32. Sugar Creek Stream Erosion and Sediment Control Project:\$75,000

Ottawa River Coalition, Lima, OH Contact: Beth Seibert, beth-seibert@oh.nacdnet.org

Sugar Creek is overwhelmed by excess sedimentation caused by severe bank erosion and the removal of riparian vegetation by agricultural activity. Funds from this project will be used to stabilize the stream channel and restore the riparian corridor along 3,000 feet of Sugar Creek. One field day event will be held to disseminate project results and educate local stakeholders on the benefits of two-stage ditches. At least two articles will be published and an informational webpage about the project will be created.

### 33. West Creek Stream Restoration and Erosion Control Project:\$70,500

West Creek Preservation Committee, Parma, OH Contact: Neal Hess, nhess@westcreek.org

West Creek is experiencing severe erosion along approximately 1,700 feet of the stream with a commercial development on the south and State Route 17 to the north. Along the road, the stream banks are steep, incised, and eroding. To the south, severe erosion is continuously threatening the integrity of the entire embankment. Bank stabilization and soil erosion protection during this project will utilize a mix of vegetation and other natural materials. Soil bio-engineering and vegetative cover will be used for bank protection, live crib walls may be required for areas with higher velocities and where banks are steeper, and root wads will be utilized in place of rock for bank protection and flow redirection.

#### Pennsylvania

34. Best Management Practice Information for PA Shoreline and Waterway Contractors: \$9,634 Pennsylvania Sea Grant, Erie, PA Contact: Marti Martz, mam60@psu.edu

The lakeshore, creeks, and other waterways and impoundments in the Lake Erie watershed are prone to erosion. These natural processes are accelerated by human activities, especially if the landowner or contractor is uninformed regarding BMPs and how their own activities can impact this ever-changing environment. Pennsylvania Sea Grant will facilitate two workshops on current erosion and sediment control BMP information to the professional contractors who work along the Lake Erie bluff and Erie County waterways.

### 35. Environmentally Sensitive Maintenance (ESM) for Dirt & Gravel Roads/Trails: \$67,979

The Pennsylvania State University, University Park, PA Contact: Kevin Abbey, kca1@psu.edu

Sedimentation is entering Mill Creek due to runoff from unpaved roads and trails at Erie County's Headwaters Park. During this project, gradebreaks and French mattresses will be installed on park access roads. A French Mattress is coarse stone (approximately 3 inches in size) wrapped in geo-textile fabric designed to convey water under a road or trail. Two existing fords across Mill Creek will also be stabilized, and three cross pipes will be installed to allow trail drainage, spring seeps, and seasonal surface flow to cross under trails in a secure location and outlet to a stable vegetative filter area.

**36. Penn State Behrend Erosion and Sediment Control: \$75,000** The Pennsylvania State University, University Park, PA Contact: David Skellie, dus18@psu.edu

Existing gully erosion and stream sedimentation has been caused by the failure of existing erosion controls at the outlet of three stormwater pipes on the campus of Penn State Erie. To address the erosion activity at the three locations, measures have been designed by Urban Engineers of Erie, Inc. that would enclose the water flow down the steepest slopes and the most unstable portions of its paths to the streambeds. Additionally, the designs provide energy dissipation structures, use of erosion control blankets, and significant renovation of the contours, slopes and vegetation (Eastern Red Cedar and Clover) that existed before the erosion started.

#### Wisconsin

37. Branch River Upper Watershed Hydrologic Improvement Projects: \$39,782

Friends of the Branch River, Inc., Whitelaw, WI Contact: John Roberts, john.roberts@datcp.state.wi.us

Seventy-two percent of the total mass (267 tons) of soil eroded per year from the primary channel of the Branch River comes from a 2.1 mile stretch of river in the middle of the watershed. This reach passes through a popular county park and a private farm field. The restoration plan for this project will restore approximately 4,000 feet of stream, roughly doubling the existing length of channel. The project involves two components: excavating new channels and filling in the existing channels; and a natural channel restoration featuring re-meandering.

**38. Faxon Creek Erosion Control: A Central Strategy: \$30,000** City of Superior Wastewater Division of Public Works, Superior, WI Contact: Diane Thompson, thompsond@ci.superior.wi.us

Severe water level peaks and flows are causing blocks of clay soil to slump off the banks and into Faxon Creek. During this project, the red clay banks in Central Park in the City of Superior will be stabilized by conducting two exotic vegetation removal

days using volunteers and students. The stream banks will then be reshaped to a bank slope of 2:1 and the exposed banks will be covered with erosion control mats and planted with native grass seed and secured with three rows of live and inert dogwood and willow stakes/fascines. Riprap will be placed on slopes where erosion cannot be controlled by vegetation as well as in-stream control structures to deflect water away from eroding stream banks. Information dissemination using brochures, demonstration sites, a workshop, and a website will help to educate residents about erosion problems within the City.

### 39. Forest Erosion and Sediment Control Education Project:\$29,740

Wisconsin Department of Natural Resources, Madison, WI Contact: Carmen Wagner, carmen.wagner@dnr.state.wi.us

Soil erosion and sedimentation increases with poorly maintained forest roads, rutted skid trails, and compacted forest soils. This project will support four regional training sessions, two conferences (the Spring 2007 and Fall 2007 Society of American Foresters (SAF) statewide meetings), and enable the distribution of an outreach module on preventing soil erosion and sedimentation caused by soil compaction and rutting during forestry activities.

#### 40. Little Green Lake Watershed Project: \$30,000

Green Lake County Land Conservation Dept, Green Lake, WI Contact: James A. Hebbe, jhebbe@co.green-lake.wi.us

The Little Green Lake watershed covers approximately 1,600 acres, with a large percentage of the watershed in agriculture production. Soil erosion and sediment delivery occur due to soil detachment and gully erosion through woodland areas. Project activities for this project include the installation of two water and sediment control basins. All practices will be designed by technical staff of the Green Lake County LCD according to USDA-NRCS technical standards.

### 41. Milwaukee County Soil Erosion Workshop and Certification for Builders: \$10,000

River Revitalization Foundation, Milwaukee, WI Contact: Kimberly Gleffe, kgleffe@riverrevitalizationfoundation.org

Due to rapid development in an already dense urban area, Milwaukee is experiencing loss of buffers along its rivers, resulting in an increase in streambank erosion and sediment loads. In addition, there is a disconnect between the soil erosion regulatory requirements of local and state agencies and the soil erosion caused by the builders they regulate. As a result of this project, a half-day workshop will be held to teach builders best management practices (BMPs) for soil erosion. A "BMP Certification" will be presented to developers for completion of our workshop that municipalities in Milwaukee County will accept and advertise to all developers.

## 42. Concordia Lake Michigan Erosion Abatement Project: \$75,000

Concordia University Wisconsin, Mequon, WI Contact: William Brose, bill.brose@cuw.edu

Bluff face erosion is degrading the nearshore lakebed in Lake Michigan near Concordia causing clouding of the water and smothering of the bottom dwelling organisms. A stone revetment will be built along the shoreline and a system will be created to capture groundwater runoff. The grade of slope will be changed to a more natural 2:1 ratio and a beach cell will be created to mitigate wave action erosion.

#### 43. Diversion and Treatment of First Flush Urban Stormwater Runoff and Bluff Stabilization: \$75,000

City of Ashland, Department of Public Works, Ashland, WI Contact: Christopher Bolt, cbolt@coawi.org

Runoff from the central district in Ashland releases untreated stormwater into Lake Superior resulting in failing bluff slopes along the shoreline, increased human health risks to the adjacent beaches, and concerns for the quality of the source of municipal drinking water. As a result of this project, it is anticipated that approximately 80 percent of the annual suspended sediment load to Lake Superior (300 tons/year) from the Ashland City Center will be removed. This will be done by collecting and treating runoff from up to 1 inch-1 hour rain events in naturally functioning bioretention cells.

44. Menomonee Valley Riverbank Stabilization Project: \$75,000 Menomonee Valley Partners, Inc., Milwaukee, WI Contact: Paul Boersma, PBoersma@HNTB.com

An erosion problem is occurring in the Menomonee Valley just west of downtown Milwaukee, between the 27th street and 35th street viaducts. It is being caused by a steep riverbank and lack of vegetation due to years of fill placement without vegetative restoration. The project will re-grade and stabilize the riverbank to reduce the amount of sediment that enters the Menomonee River to facilitate access to the Menomonee River for fishing, river gazing, and environmental education activities.

# Of Interest ...

If you have an item for the next quarter, please contact **Gary Overmier** at 734-971-9135 or *garyo@glc.org* 

#### Workshops and Conferences

#### July 11-12

Lake Erie Areas of Concern Summit Location: Tom Ridge Environmental Center, Erie, Penn. Contact: Matt Doss, 734-971-9135 E-mail: mdoss@glc.org Web: www.glc.org/aocsummits/lakeerie

#### August 11-13

NACD Summer Board Meeting Location: Columbus City Center Hyatt, Columbus, Ohio Contact: Krysta Harden, 202-547-6223 E-mail: krysta-harden@nacdnet.org

#### 28-31

Association of State Wetland Managers, Inc. International Symposium Wetlands 2006: Applying Scientific, Legal, and Management Tools for the Great Lakes and Beyond Location: Grand Traverse Resort, Traverse City, Michigan Contact: Jeanne Christie, 207-892-3399 E-mail: jeanne.christie@aswm.org Web: aswm.org/calendar/wetlands2006/wetlands2006.htm

#### September 12-13

U.S. EPA SWMM & PCSWMM Stormwater/Wastewater Modeling Workshop Location: Washington, D.C. Phone: 800-891-8447 E-mail: info@computationalhydraulics.com

#### 24-29

The Conservation Fund | Workshop: Conservation Planning Using the Green Infrastructure Approach Location: Shepherdstown, West Virginia Contact: Margarita Carey, 304-876-7924 E-mail: margarita\_carey@fws.gov

#### 24-28

14th National Non-point Source Monitoring Workshop: Measuring Project and Program Effectiveness Location: Minneapolis, Minnesota Contact: Greg Johnson, 651-296-6938 E-mail: gregory.johnson@pca.state.mn.us Web: ctic.purdue.edu/NPSWorkshop/NPSWorkshop.html

#### October 2-3

The Second Annual MiCorps Conference Location: Ralph A. MacMullan Conference Center, Higgins Lake, Michigan Contact: Matt Doss, 734-971-9135 E-mail: mdoss@glc.org Web: www.micorps.net/conference

#### 3-5

#### Great Lakes Commission

2006 Annual Meeting Location: Downtown Waterfront Holiday Inn and Suites, Duluth, Minnesota Web: www.glc.org/meeting

#### 23-26

### Center for Watershed Protection 2006 Watershed Institute

Location: Deer Creek Conference Center, Mt. Sterling, Ohio (near Columbus) Contact: Rebecca Winer, 410-461-8323 E-mail: rrw@cwp.org Web: www.cwp.org/calendar.htm#2006wi

#### Keeping It On the Land



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