

FFY2010 Project Summaries



Expected Results

All Section 319(h) subgrants awarded under the FFY10 grant cycle have only recently gone to contract and no progress updates are available. We will provide progress updates on all FFY10 projects during the next reporting period. Upon successful completion of these projects, the following environmental results are anticipated:

- Protect more than 48 acres of riparian and wetland areas through the acquisition of conservation easements.
- Restoring more than 27,395 linear feet of impaired streams using natural channel design methods and enhanced in-stream habitat features and restoring more than 29 acres of riparian forested areas.
- Removing 2 dams and 650 linear feet of streamside levee structures and daylighting 175 linear feet of culverted streams.
- Restoring more than 22 acres of wetland areas.
- Reclaiming 29 acres of abandoned mine land and installing more than 1,700 linear feet of limestone AMD treatment channels and more than 20,000 square feet of acid mine drainage passive wetland treatment systems.

- Reduce Nonpoint Source Pollutant Loadings by:
 - Nitrogen—551 pounds/year
 - Phosphorus—544 pounds/year
 - Sediment—694 tons/year



FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number #10(h) EPA-07
Project Completion December 2013

SubGrantee City of Fremont
323 Front Street
Fremont, OH 43420

Project Contact: Tim Warren
City of Fremont
323 Front Street
Fremont, OH 43420

Amount Recommended: \$ 400,000
Local Match: \$1,246,571

Project Title: Ballville Dam Removal, Sandusky River

Project Location: Sandusky County—Ballville Township
Watershed: Sandusky River

Project Summary: \$400,000 in federal section 319(h) Clean Water Act grant funding is recommended to assist with the removal of the 35-foot high by 420 feet wide Ballville Dam within the city of Fremont. Primary activities conducted in conjunction with the proposed section 319 funded project includes restoration of a severely degraded segment of the Sandusky State Scenic River. Using local matching funds, the city will remove the dam which currently impounds 22,000 linear feet of the river. Section 319 funding will be used to restore the 22,000 linear feet of the resulting free-flowing stream using natural channel design methods. This is a regionally significant project due to the declines that have been observed in the Sandusky River strain of the Lake Erie walleye population. Lake Erie Walleye account for tens of millions of dollars in economic value to the state of Ohio. Project partners include the city of Fremont, ODNR-Division of Wildlife, ODNR's Scenic Rivers Program, Bowling Green State University, the US Army Corps of Engineers, Sandusky River Watershed Coalition and others. The dam is scheduled for decommissioning by the end of 2012 with demolition scheduled to begin by July, 2011. Extensive engineering and design work is currently being completed by the city through funding obtained from sources such as ODNR and the USACOE.

Removal of the dam and completion of associated restoration activities will result in the elimination of a high magnitude cause of impairment of aquatic life-use goals for the Sandusky River. The removal of the Ballville Dam will allow the Sandusky River to reoccupy the original river channel. It is expected that the restored reach will be very similar to the bedrock/boulder/cobble riffle-pool sequences that can be found above the influence of the dam and downstream from the structure. The restored reach will see significant improvement in substrate type and quality; channel morphology and flow regime. Removal of the dam is

estimated to result in Qualitative Habitat Evaluation Index scores of approximately 74—exceeding the warmwater habitat standard for QHEI of 60.

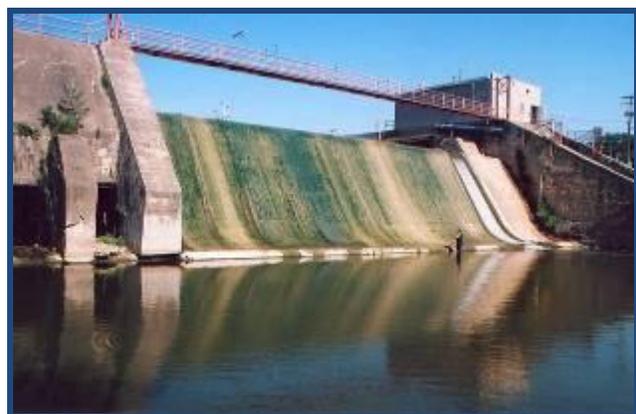
Public outreach efforts will be conducted in partnership with the Sandusky River Watershed Coalition, ODNR and others. Specific efforts will be targeted to city of Fremont residents, recreational boaters and the Lake Erie recreational, boating and sport fishing industries. Additionally, the US Army Corps of Engineers will organize and lead initial public meetings associated with this project starting as early as 2009.

The project site is within areas that are addressed by the Sandusky River TMDL and endorsed Sandusky River Watershed Action Plan. Removal of the dam and restoration of previously impaired reaches of the river are consistent with recommended actions in both of the above listed documents.

Project Deliverables:

- Project designs, engineering plans and all required Army Corps of Engineers and Ohio EPA permitting documents and materials.
- Removal of the 35-foot high by 420-foot wide Ballville Dam on the Sandusky River within the city limits of Fremont, Ohio.
- Restoration of 22,000 linear feet of stream using natural channel design principles, including stabilization of exposed streambank and renaturalization of the original river channel following removal of the dam.
- Project specific education and outreach activities including public meetings conducted by the US Army Corps of Engineers, news releases and publications focused on city residents, recreational boaters and sport fishing interests within the region.

Environmental Results: Successful completion of this project will result in the restoration of more than 22,000 linear feet of the Sandusky River, reconnection of important walleye and white bass spawning habitat for currently threatened populations, and removal of the Ballville Dam in Fremont, Ohio.





FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number #10(h) EPA-08

Project Completion June 2012

SubGrantee Geauga Park District

9160 Robinson Road
Chardon, OH 44024

Project Contact: Keith McClintock

Gauga Park District
9160 Robinson Road
Chardon, OH 44024

Amount Recommended: \$400,000

Local Match: \$425,000

Project Title: Chagrin River Headwaters Restoration and Protection Project

Project Location: Geauga County—Chester Township

Watershed: Chagrin River

Project Summary: \$400,000 in federal section 319(h) Clean Water Act grant funding is recommended to allow the Geauga Park District to partner with the Western Reserve Land Conservancy to restore the 212 acre former Orchard Hills golf course and including the restoration of 920 linear feet of Caves Creek which is a coldwater habitat tributary to the Chagrin State Scenic River. Additionally, three headwater streams on the project site will be restored through a combination of dam removal, stream daylighting, natural channel design and stream bank stabilization activities. A total of 1,625 linear feet of stream, 2 acres of wetlands and 2 acres of riparian corridor will be restored as a result of this project. Additionally, two dams will be removed on the project site, including one dam that is 16 feet in height. The project site will be owned by Geauga Park District and protected with a conservation easement held by the Western Reserve Land Conservancy.

In addition to restoration activities, the project proposes to protect an additional 40 acres of riparian areas containing approximately 2,000 linear feet of headwater streams with conservation easements acquired by the Western Reserve Land Conservancy.

The proposed projects will be accompanied by on-site educational activities, project-specific press releases and community wide media efforts including news releases.

The project sites are within areas that are addressed by both the Chagrin River Watershed Action Plan and approved TMDL. Implementation is consistent with restoration and habitat protection recommendations in both documents.

Project Deliverables:

- Restoration of 1,325 linear feet of coldwater habitat primary headwater tributaries to the Chagrin State Scenic River using natural channel design methods.
- Removal of two lowhead dams.
- The daylighting of 175 linear feet of currently culverted primary headwater habitat stream.
- Restoration of 2 acres of wetlands and permanent protection of 40 acres of high quality riparian areas with conservation easements.
- Restoration of 2 acres of riparian forested areas using plantings with native hardwood tree species.
- Project specific education and outreach activities including on-site educational programming, community wide news releases and project specific articles in the Metro Park newsletter.

Progress to Date:

- Removed two lowhead dams
- Restored 1,890 linear feet of coldwater habitat primary headwater tributaries to the Chagrin State Scenic River using natural channel design methods.
- Stabilized 690 linear feet of streambank.
- Restored 2.5 acres of riparian forested areas using native hardwood tree species.

Environmental Results: Successful completion of this project will result in the restoration and renaturalization of 210 acres of riparian areas, including the restoration of 1,325 linear feet of streams, 2 acres of wetlands, daylighting of 175 linear feet of stream, restoration of 2 acres of riparian forested areas and protection of high quality riparian areas with 40 acres of conservation easements. Additionally, the project will result in the pollutant load reductions listed below.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Nitrogen	508 pounds/year
Phosphorus	253 pounds/year
Sediment	253 tons/year







FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number #10(h) EPA-10
Project Completion June 2013

SubGrantee Lake Metroparks
11211 Spear Road
Concord Township, OH 44077

Project Contact: Vince Urbanski
Lake Metroparks
11211 Spear Road
Concord Township, OH 44077

Amount Recommended: \$349,584
Local Match: \$233,056

Project Title: Pleasant Valley Park Floodplain Restoration Project

Project Location: Lake County—City of Willoughby Hills
Watershed: Chagrin River

Project Summary: \$349,584 in federal section 319(h) Clean Water Act grant funding is recommended to re-establish a natural area within the floodplain of the Chagrin River by expanding and improving the riparian forest, re-forestation of the floodplain, and restoration of natural function and flow by removing an existing levee and restoring riparian wetland areas. At the project site, the Chagrin River is a state designated scenic river draining approximately 175 square miles. Restoration activities associated with this project include removal of 650 linear feet of existing earthen levee, invasive species control practices on approximately 11.4 acres, restoration of 3.9 acres of previously existing wetlands on the site, and riparian restoration plantings including 17 acres of native tree and shrub species. Additionally a 6-acre meadow site will be planted down gradient from the restored wetland outlet structure. Lake Metroparks will highlight this project to visiting public and in public programming as an example of floodplain, stream and wetland restoration.

The project site is within areas addressed by both the endorsed Chagrin River Watershed Action Plan and the Chagrin River TMDL. The project site is specifically identified in the watershed plan as a high priority restoration area. All proposed activities are consistent with the general recommendations within the Chagrin River TMDL.

Project Deliverables:

- Removal of 650 linear feet of existing earthen levee, thereby reconnecting the Chagrin River to its natural floodplain. Additionally, currently impervious areas will be removed and gravel and other materials either recycled on-site or removed for upland disposal.
- Restoration of 3.9 acres of previously existing wetland areas within the project site. Additionally, 6 acres of wet meadows areas will be restored in the area downstream of the wetland outlet structure.
- Riparian forest restoration including invasive species management activities on 11.4 acres and replanting native tree and shrub species on 17 acres.
- Project specific educational and outreach activities will be conducted by Lake Metroparks staff at no cost to the grant. Activities will include public programming, presentations at Chagrin Watershed Partners Board Meetings and other outreach.

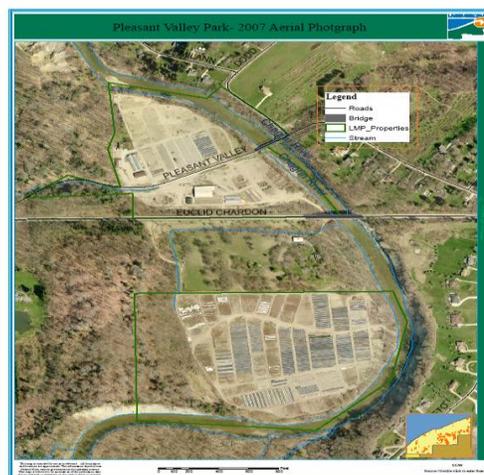
Environmental Results: Successful completion of this project will restore natural floodplain functions on 45 acres of riparian areas located along the mainstem of the Chagrin State Scenic River. 650 linear feet of existing earthen levees will be removed, and previously existing wetlands will be restored as well as invasive species management on more than 11 acres of riparian areas and reforestation of the floodplain areas with more than 17 acres of native tree and shrub plantings. Additionally, the project will result in the loading reductions listed below.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Nitrogen	150 pounds/year
Phosphorus	150 pounds/year
Sediment	300 tons/year

Progress to Date:

- Published request for proposals (RFP) and awarded contract for engineering and design of the floodplain restoration.





FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number #10(h) EPA-11
Project Completion June 2013

SubGrantee **Ohio University**
Office of Research & Sponsored Programs
105 Research and Technology Center
Athens, OH 45701

Project Contact: **Jen Bowman**
Ohio University
105 Research and Technology Center
Athens, OH 45701

Amount Recommended: **\$393,875**
Local Match: \$812,610

Project Title: **West Branch Raccoon Creek-Harble Griffith Road Acid Mine Drainage Project**

Project Location: Hocking County—Washington Township
Watershed: West Branch Raccoon Creek

Project Summary: \$393,875 in federal section 319(h) Clean Water Act grant funding is recommended to address acid mine drainage resulting from un-reclaimed pre-law surface coal mining activity in the headwater region of the West Branch of Raccoon Creek. West Branch is considered a priority for restoration by the Raccoon Creek Partnership and is specifically identified as a priority project in the Raccoon Creek Watershed Action Plan as well as the Upper Basin Raccoon Creek TMDL that was approved in 2002. The project will involve reclaiming approximately 29 acres of abandoned coal mine spoil to reduce acid mine drainage generation. Reclamation activities will consist of re-grading, selective handling and placement of the AMD generating spoil, re-soiling and establishing vegetation. Reclamation also will include the installation of 1,700 linear feet of open limestone channels as well as 20,000 square feet of passive wetland treatment areas. Additionally, two large surface impoundments containing more than 1.5 million gallons of highly acidic water will be drained and filled.

The project site is within area addressed by both the Raccoon Creek Watershed Action Plan as well as the Raccoon Creek approved TMDL. The project is being implemented consistent with recommendations in both the watershed plan as well as the approved TMDL.

Project Deliverables:

- Reclamation of 29 acres of abandoned coal mine spoil on two properties located within the headwater region of the West Branch of Raccoon Creek. Reclamation activities will consist of re-grading, selective placement and handling of AMD generating coal spoil materials, re-soiling and re-vegetating the project site.
- Elimination of two highly acidic surface impoundments currently containing more than 1.5 million gallons of highly acidic surface water. Impoundments will be drained, filled, regarded and planted.
- Installation of approximately 1,700 linear feet of open limestone AMD treatment channels and construction of a 20,000 square foot passive AMD treatment wetland area.
- Project specific educational and outreach activities will include the establishment and maintenance of a project specific website, development of a landowner mailing list and project updates, as well as pre and post construction project tours.

Progress to Date:

- Completed and Submitted a Quality Assurance Project Plan (QAPP)
- Conducted pre-construction chemical sampling at six sites.
- Distributed one newsletter.
- The construction of this project is scheduled for summer/fall 2011.

Environmental Results: Successful completion of this project will reclaim 29 acres of previously abandoned coal mine land, elimination of more than 1.5 million gallons of acid water and dramatically reduce acid mine drainage generation within the headwater region of the West Branch of Raccoon Creek. Additionally, the project will result in the loading reductions listed below.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Metals (aluminum and iron)	19,287 pounds/year
Acid	119,076 pounds/year



FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number	#10(h) EPA-14
Project Completion	May 2013
SubGrantee	City of Mason 6000 Mason Montgomery Road Mason, OH 45040
Project Contact:	Kathleen Wade-Dorman City of Mason 6000 Mason Montgomery Road Mason, OH 45040
Amount Requested:	\$264,400
Local Match:	\$123,265
Project Title:	Muddy Creek Stream and Riparian Restoration and Protection
Project Location:	Warren County-City of Mason
Watershed:	Muddy Creek—tributary to the Little Miami River

Project Summary: \$264,400 in federal section 319(h) Clean Water Act grant funding is requested to conduct restoration of two sites totaling 1,400 linear feet of Muddy Creek, a tributary to the Little Miami State and National Scenic River. The project will resolve existing bank erosion and habitat degradation problems within the stream using natural channel design principles. This project will expand upon approximately 7,000 linear feet of restoration in Muddy Creek that the city of Mason completed in 2009. Stream restoration work occur upstream and downstream of the locally funded project and will consist of cross vanes to direct flow away from steeply eroded stream banks, establishing a flood plain bench, removing invasive species and re-establishing native riparian plant communities. Successful completion will reduce sedimentation from severely eroding stream banks and improve riparian and stream functions

The project site will be protected in perpetuity as a result of a conservation easement that will be placed upon the 1.5 acre restoration project site. The project site is located within segments of the Little Miami River that are not covered by the approved TMDL or an endorsed watershed action plan; however, the project is consistent with the general restoration and habitat recommendations included in the Little Miami River TMDL.

Project Deliverables:

- Restoration of a total of 1,400 linear feet of stream at two sites in Muddy Creek using natural channel design and installation of in-stream habitat features such as cross-vane flow control structures, riffles, runs, pools and a meandering morphology.
- Rehabilitation and enhancement of 2,400 linear feet of riparian habitat through the elimination of non-native invasive species and restoration of the riparian habitat using native plant materials such as hardwood seedlings and shrubs. Total acreage to be enhanced will exceed 3 acres.
- Conduct a project specific public education and outreach program including the installation of project signs, an educational/interpretive sign, four project specific articles within the Warren County SWCD newsletter and the Mason Matters local newspaper. In addition, local school groups will be provided the opportunity to volunteer to participate in the invasive species removal activity associated with this project.

Project Results to Date:

- Published request for proposals.

Environmental Results: Successful completion of this project is expected to restore a 1,200 linear feet segment of Muddy Creek to warmwater habitat designated aquatic life use and reduce sediment and nutrient loadings to the stream caused by unstable and severely eroding stream banks throughout the project area.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Nitrogen	15 pounds/year
Phosphorus	7 pounds/year
Sediments	7 tons/year





FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number	#10(h) EPA-17
Project Completion	November, 2013
SubGrantee	City of Akron 166 South High Street, Room 701 Akron, OH 44308
Project Contact:	Brad Beckert, P.E. City of Akron 166 South High Street, Room 701 Akron, OH 44308
Amount Recommended:	\$400,000
Local Match:	\$1,937,500
Project Title:	Little Cuyahoga River Restoration—Phase 2
Project Location:	Summit County—City of Akron
Watershed:	Little Cuyahoga River—Trib. to the Cuyahoga River

Project Summary: \$400,000 in federal section 319(h) Clean Water Act grant funding is recommended for Phase 2 of the above project to restore 1,600 linear feet of the Little Cuyahoga River and to lower the Kelly Avenue dam by five feet in Akron, Ohio. More than 2,500 linear feet of the Little Cuyahoga is being restored using local and ARRA funding under Phase 1 of this project which will be completed during the fall of 2009 and spring 2010. Phase 2 will involve modifying the Kelly Avenue Dam which impounds the river and causes excess sedimentation, elevated water temperatures, and low dissolved oxygen levels. Following lowering of the dam, the former impoundment will be restored using natural channel design methods and include developing an appropriately sized channel, meandering pattern and functional floodplain. Removing the dam in its entirety is not a viable option due to upstream bridge structures and in-stream abutments. Successful completion of this project will also result in the restoration of 6 small riparian wetlands within the project site.

The proposed project will be accompanied by on-site educational activities, project-specific press releases, brochures and newsletter articles will be used to inform the public about the benefits and progress of this project.

The project site is within areas that are addressed by the Lower Cuyahoga River TMDL and Remedial Action Plan (RAP). Implementation of this project is consistent with restoration and habitat recommendations in both documents.

Project Deliverables:

- Lowering of the Kelly Ave. Dam by 5-feet reducing the dam impoundment from approximately ½ mile to 1,800 linear feet.
- Restoration using natural channel design methods of more than 1,570 linear feet of stream channel, including the restoration of more than 3,000 linear feet of riparian streambank areas and more than 8 acres of riparian forested areas using plantings of native hardwood and shrub species. Riparian forested corridors of 100 to 150 feet in width will be established and maintained.
- Restoration of 6 riparian wetlands encompassing approximately 1 acre.
- More than 8 acres of riparian areas will be permanently protected as a result of the placement of the project site under a conservation easement.
- Project specific education and outreach activities include the construction of a project site interpretive panel and the establishment of a project specific website.

Environmental Results: Successful completion of this project will result in the lowering of a dam by 5 feet and restoration of more than 1,570 linear feet of the Little Cuyahoga River. Additionally, 6 small pocket riparian wetlands will be restored, a riparian buffer measuring 100-150 feet in width will be established and maintained throughout the project site. More than 8 acres of riparian lands will be protected with a conservation easement. Additionally, successful completion of the project will result in the pollutant load reductions listed below.

Project Results to Date:

- Received Army Corps of Engineers permit.
- Design work nearing completion. Plan to advertise and bid project towards end of February 2011.
- Two articles on the Little Cuyahoga were published in the Akron Beacon Journal on November 12, 2010.
- Initiated process to acquire conservation easement on project site.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Nitrogen	9 pounds/year
Phosphorus	4 pounds/year
Sediment	4 tons/year



FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number	#10(h) EPA-18
Project Completion	November, 2013
SubGrantee	West Creek Preservation Committee 1440 Rockside Road, Suite 329 Parma, OH 44134
Project Contact:	David M. Lincheck West Creek Preservation Committee 1440 Rockside Road, Suite 329 Parma, OH 44134
Amount Recommended:	\$394,000
Local Match:	\$750,000
Project Title:	West Creek Confluence Restoration Project
Project Location:	Cuyahoga County
Watershed:	West Creek—Tributary to the Cuyahoga River

Project Summary: \$394,000 in federal section 319(h) Clean Water Act grant funding is recommended for the restoration of the 10-acre confluence of West Creek with the Cuyahoga River. A partnership comprised of the West Creek Preservation Committee, the city of Independence, Northeast Ohio Regional Sewer District and the Trust for Public Land have purchased the project site. Restoration activities to be completed under this project will result in the restoration of 8 acres of riparian wetlands, 1,100 linear feet of West Creek, two acres of vernal pools as well as the establishment of a functional floodplain and sustainable riparian habitat. Stream restoration work will be completed using natural channel design methods including log cribs, live branch layering, log weirs, live staking etc., and others. Riparian restoration will be completed by planting 7,000—10,000 native hardwood trees and shrubs.

The proposed project will be accompanied by on-site educational activities, project-specific press releases, brochures and newsletter articles will be used to inform the public about the benefits and progress of this project.

The project site is within areas that are addressed by the Lower Cuyahoga River TMDL and Remedial Action Plan (RAP). Implementation of this project is consistent with restoration and habitat recommendations in both documents.

Project Deliverables:

- Restoration of 1,100 linear feet of the West Creek using natural channel design methods including log cribs, live branch layering, log weirs, live staking etc., and others..
- Restoration of 8 acres of riparian wetlands and 2 acres of vernal pools.
- Restoration of riparian forested areas using plantings of 7,000-10,000 native tree seedlings and shrubs.
- Restoration of 2 acres of wetlands.
- Restoration of 2 acres of riparian forested areas using plantings with native hardwood tree species.
- Project specific education and outreach activities including on-site educational programming, community wide news releases and project specific brochures and articles in the West Creek Preservation Committee newsletter.

Progress to Date:

- Project is in design/build RFP stage. Anticipate construction commencement summer of 2011.
- Published one newsletter.
- Updated project website. For more information please visit: <http://www.westcreek.org/319.html>

Environmental Results: Successful completion of this project will result in the restoration and renaturalization of 1,110 linear feet of the West Creek confluence area, 8 acres of riparian wetlands, 2 acres of vernal pools and the planting of 7,000 to 10,000 native tree and shrub seedlings. Additionally, the project will result in the pollutant load reductions listed below.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Nitrogen	391 pounds/year
Phosphorus	195 pounds/year
Sediment	195 tons/year



FFY10 Section 319(h) Nonpoint Source Project Summary

Project Number #10(h) EPA-20

Est. Project Completion April 2013

SubGrantee **Mercer County Commissioners**
220 West Livingston Street #A-201
Celina, Ohio 45822

Project Contact: **Jared Ebbing, P.E.**
Mercer County Community Development Director

Amount Requested: **\$484,000**

Project Title: **A Water Quality “Treatment Train” Approach to Reducing Impacts from Nonpoint Source Runoff in the Prairie Creek Embayment of Grand Lake St. Marys**

Project Location: Franklin Township, Mercer County
Watershed: Grand Lake St. Marys

Project Summary: \$484,000 of §319 FY2010 grant funding is requested to install a series of practices (described below) to effectively reduce nutrient and sediment inputs into Grand Lake from the Prairie Creek watershed. The treatment train will be installed in Prairie Creek (alum dosing and bedload sediment collector), near shore along Prairie Creek (constructed and restored wetlands) and in the Prairie Creek lake embayment (isolation berm, floating wetlands and aeration). The treatment train is intended to reduce the loading to Grand Lake as a result of pulsed storm related runoff from the predominant agricultural landscape of the Prairie Creek watershed. These objectives are intended to reduce the nutrient loading to Grand Lake St. Marys and also reduce the incidence of blue-green algae (and likewise the microcystin toxin) in the lake.

Monitoring will occur in both Prairie Creek and the Lake embayment. Baseline and post implementation data is to be collected at this site to inform the adaptive Grand Lake /Wabash Watershed Action Plan as well as the Grand Lake Saint Marys TMDL. The results of this project can be used to help facilitate similar treatment train approaches in other Grand Lake St. Marys tributaries.

This project is one part of several initiatives being pursued to improve the health of Grand Lake by reducing blue-green algae blooms to increase recreational use of the lake

Project Deliverables:

- Construction of ten (10) acres of treatment wetlands
- Installation of one (1) bedload sediment collector
- Installation of one (1) Alum injection system
- Restoration of eight (8) acres of wetland including planting of wetland species
- Installation of one (1) lake aerator
- Installation of a one-acre floating wetland
- Creation of a one-acre native mussel reef
- Installation of 1800 foot embayment isolation berm.
- Public outreach including signage, fact sheets, press releases, an informational kiosk, tours.
- Public participation through two (2) planting days and two (2) harvest days for installation and maintenance of the floating wetlands

Project Results to Date:

- Published request for proposals. County will be awarding engineering contract soon so that work may commence in first quarter of 2011.

Environmental Results: Successful completion of this project is expected to reduce or eliminated blue-green algae and associated microcystin toxin in the Prairie Creek embayment installation site. Data collected will inform stakeholders the degree of unit effectiveness and whether or not unit operation should continue in the existing and/or other Grand Lake Saint Marys embayments.

NPS Load Reductions Resulting from Project

Pollutant	Estimated Loading Reduction
Nitrogen	2,767 pounds/year
Phosphorus	675 pounds/year
Sediment	287 tons/year

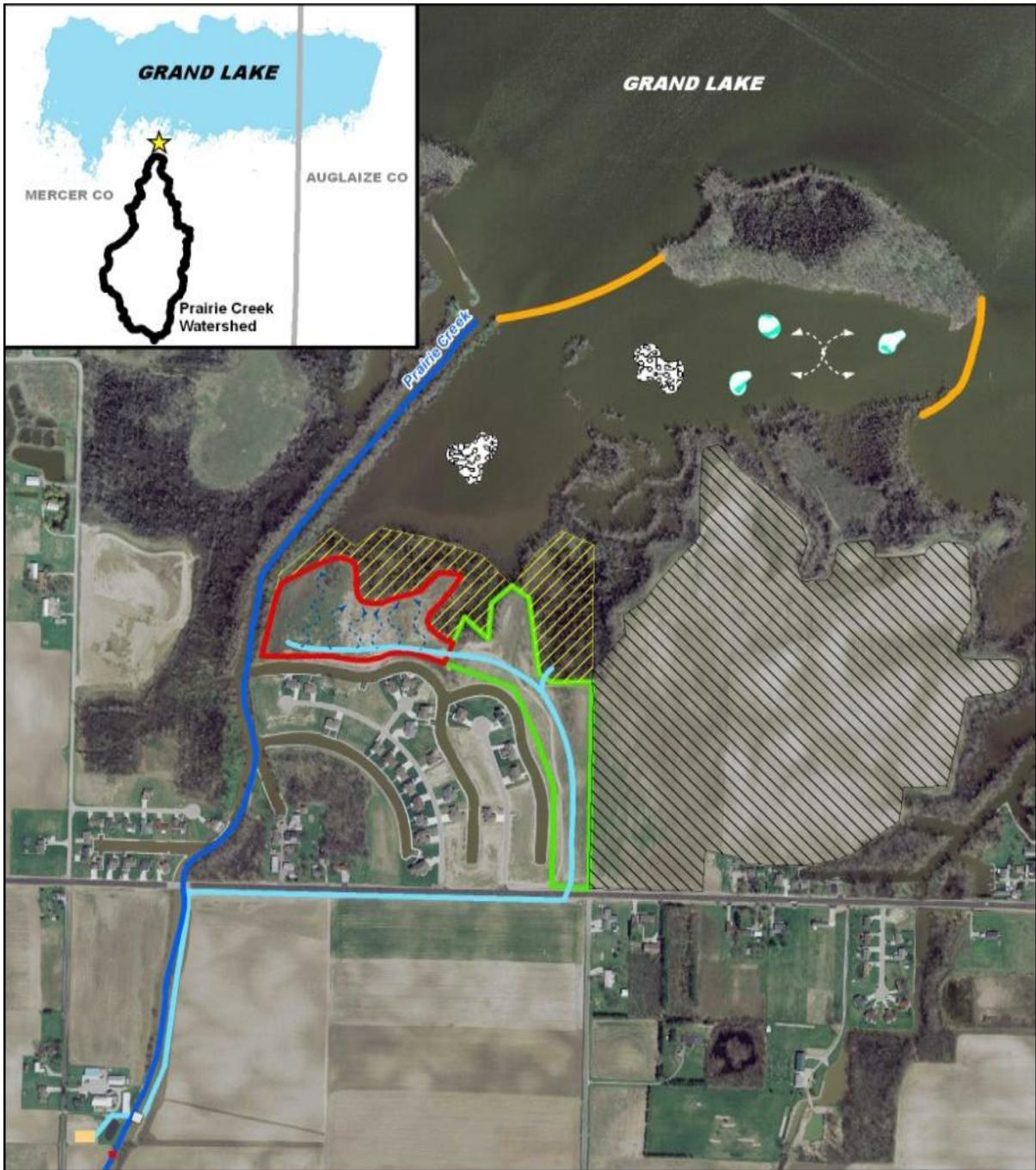


Figure 1. Project Overview

