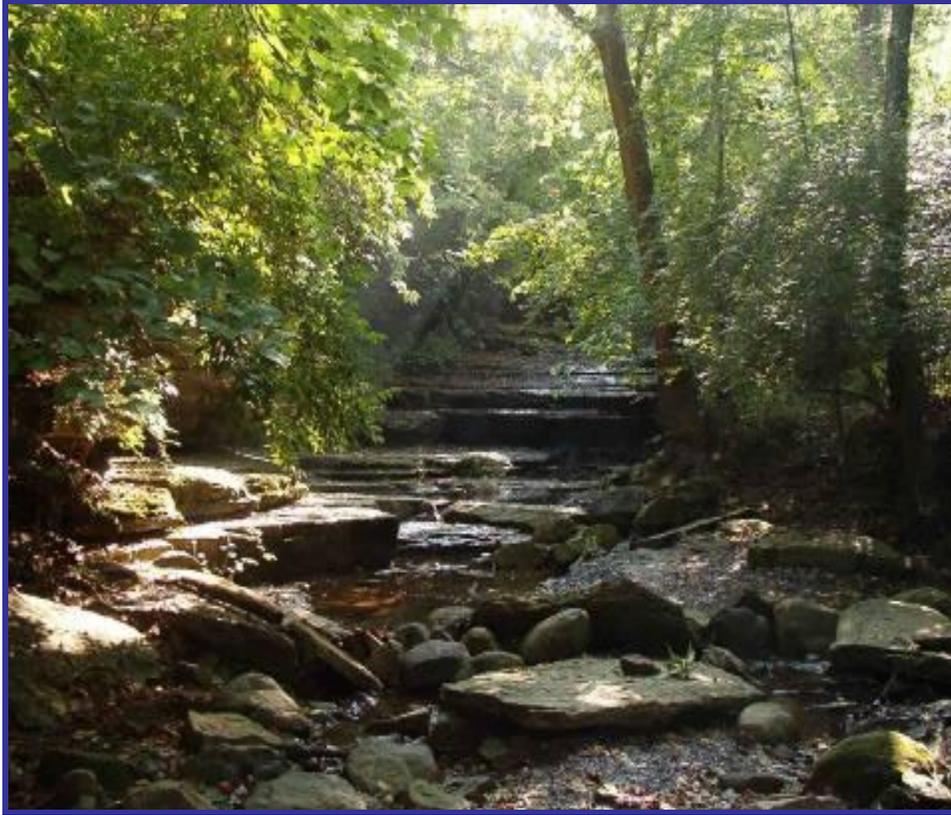


# FFY2006 Project Summaries



## Compilation of Results

The majority of Section 319(h) sub-grant projects funded under the FFY2006 grant cycle have been completed. Thus far, these projects have achieved the following:

- Successfully acquired conservation easements on 91.5 acres of riparian lands.
- Completed engineering designs and plans for 8 stream restoration projects.
- Using natural channel design methods restored 6,170 linear feet of streams.
- Stabilized 8,814 linear feet of severely eroding streambank.
- Removed or modified 3 lowhead dams.
- Modified 2,000 linear feet of levee along a state scenic river.
- Reconnected 4,140 linear feet of streams to their natural floodplain.
- Restored 3 acres of riparian wetlands.
- Planted 36 acres of native trees and grasses in riparian areas.
- Using cost-share, planted 303 acres of cover crops.
- Constructed 16 heavy use feeding pads in riparian areas.
- Using cost-share, installed 12,481.5 linear feet of livestock fencing.
- Conducted 7 public meetings.

- Reduced nonpoint source pollutant loadings by:
  - Nitrogen—136,363 pounds/year
  - Phosphorus—68,189 pounds/year
  - Sediment—69,522 tons/year



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-05  
**Project Completion** Grant Closed March 13, 2007

**SubGrantee** Honey Creek Watershed Association  
8787 Sullivan Road  
Tipp City, OH 45371

**Project Contact:** Nikki Reese  
Honey Creek Watershed Association  
8787 Sullivan Rd.  
Tipp City, OH 45371

**319 Funds Awarded:** \$349,128  
**Total Federal Expended:** \$14,638

**Project Title:** Stream/Riparian Restoration, Honey Creek; Riparian Restoration/Easement, West Fork Honey Creek

**Project Location:** Miami County

**Watershed:** Honey Creek

**Project Summary:** \$349,128 in federal Section 319(h) Clean Water Act grant funding was awarded to the Honey Creek Watershed Association to restore stream banks and riparian corridor on West Fork Honey Creek. A permanent conservation easement is also proposed to eliminate cattle access to the stream in a portion of the project area.

The project is located in areas of intensive row crop agriculture and in areas where cattle have unrestricted access to the stream. As a result, there are severe erosion problems, cut banks, and heavy algal growth resulting from manure and nutrient enrichment. Project implementation is consistent with the recommendations in the conditionally endorsed Honey Creek Watershed Action Plan.

**Project Results:** During the reporting period, one (1) project-specific education and outreach program was initiated. At the request of the local sponsor, this grant was closed on March 13, 2007. The project will be completed by the Miami County SWCD;

as a result, a new grant agreement was executed. See project summary for #06(h)EPA-06 for further details.



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-06  
**Project Completion** Grant Closed March 5, 2010

**SubGrantee** Miami County SWCD  
1330 North County Road 25A  
Troy, OH 45373

**Project Contact:** Leigh Ann Gerardi  
Miami County SWCD  
1330 North County Road 25A  
Troy, OH 45373

**Grant Amount:** \$231,192  
**Local Match:** \$154,128

**Project Title:** Honey Creek Streambank Stabilization & Restoration

**Project Location:** Miami County  
**Watershed:** Honey Creek

**Project Summary:** \$231,192 in federal Section 319(h) Clean Water Act grant funding was awarded to the Miami County SWCD to complete a streambank stabilization and restoration project on Honey Creek adjacent to the 198 acre Honey Creek Nature Preserve. The project site is located along river miles 0.0 to 1.0 on the outer edges of stream meanders where scour has created severe stream bank erosion. Except for the immediate project area and a 4.9 mile segment in the mixing zone of a WWTP, Honey Creek is in full attainment of exceptional Warmwater habitat aquatic life uses.

**Environmental Results:** Successful completion of this project resulted in the stabilization and restoration of 524 linear feet of severely eroding stream banks as well as the revegetation of 4 acres of surrounding riparian areas.

**Final Project Results:** The following activities were completed during the reporting period:

- Completed and submitted a Quality Assurance Project Plan.
- Completed pre-construction monitoring.
- Completed project plans and design documents. Submitted permitting documents to all appropriate regulatory agencies.
- Restored 524 linear feet of stream bank using bio-engineering methods and materials.
- Successfully established a project-specific website; for more information, visit [www.miamiswcd.org](http://www.miamiswcd.org).
- Developed and released 6 press releases.
- Completed a project display that was used at two local events.

- Conducted the 9<sup>th</sup> Annual Honey Creek Watershed Festival that was attended by more than 1,500 area residents.
- Completed and distributed 20 project-specific newsletter articles to watershed residents.
- Conducted two (2) public meetings and four (4) site tours.
- Restored 2 acres of riparian areas with native tree and prairie grass plantings.
- Conducted post-construction high flow chemical monitoring.
- Planted over 800 native trees to the existing riparian corridor and 2 acres of native prairie as a buffer area along side of the trees.

### NPS Load Reductions Resulting from Project

Pollutant	Load Reduction This Period	Estimated Load Reductions upon Project Completion
Nitrogen	75	75 pounds/year
Phosphorus	37	37 pounds/year
Sediment	37	37 tons/year

### Project #06(h)EPA-06 Miami County SWCD Honey Creek Watershed

The photo below shows the severely eroding stream bank on Honey Creek that was stabilized by activities completed under project #06(h)EPA-06. The project site following stabilization is at the right.



This project resulted in the stabilization of 524 linear feet of seriously eroding streambank along Honey Creek's mainstem.



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## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-08  
**Project Completion** Grant Closed December 2009

**SubGrantee** Little Beaver Creek Land Foundation  
P.O. Box 60  
East Liverpool, OH 44432

**Project Contact:** Lisa Butch  
Little Beaver Creek Land Foundation  
P.O. Box 60  
East Liverpool, OH 44432

**Grant Amount:** \$107,933  
**Total Federal Expended:** \$107,933

**Project Title:** Little Beaver Creek Equine Exclusion

**Project Location:** Columbiana County

**Watershed:** Little Beaver Creek

**Project Summary:** \$107,933 in federal Section 319(h) Clean Water Act grant funding was awarded to the Little Beaver Creek Land Foundation to implement cost-share activities to install stream-side livestock exclusion fencing, alternative watering systems, stream crossings and heavy use feeding pads within the watershed where horses and other livestock currently have unrestricted access to the stream. Areas where grant funded practices are installed will be protected with conservation easements.

Little Beaver Creek is one of only three nationally designated wild and scenic rivers in Ohio. Approximately 20 miles are designated as a wild river, and an additional 16 miles are designated as a state scenic river.

**Project Deliverables:** Successful completion of this project will result in the following:

- Complete water quality monitoring at 40 sites within the project areas. In addition, semi-annual bacteria, biological and habitat assessments will be completed at 20 additional sites within the watershed.
- Install 20,000 linear feet of livestock exclusion fencing located at least 30 feet from the stream bank to allow for renaturalization of the riparian zone.
- Install 20 heavy use feeding pads.
- Acquire permanent conservation easements on 5.1 acres of riparian corridor.
- Conduct project-specific public education and outreach activities.

**Environmental Results:** Successful completion of this project will result in the elimination of water quality problems and in-stream habitat degradation caused by unrestricted livestock access to the stream. Additionally the restoration of wooded corridor should improve physical habitat conditions within the project sites.

**Final Project Results:**

- Completed and submitted Quality Assurance Project Plan.
- Completed pre-construction water chemistry, biological and habitat assessments of five (5) project sites.
- Acquired 42.5 acres of permanent conservation easements.
- Conducted two (2) equine livestock environmental assurance program workshops.
- Installed 16 heavy use feed pads.
- Installed 14,872 linear feet of exclusion fencing.
- Installed one (1) stream crossing.
- Installed six (6) alternative watering systems.

**NPS Load Reductions Resulting from Project**

Pollutant	Load Reduction This Period	Cumulative Load Reductions to Date
Sediment	79 tons/year	742 tons/year



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-09  
**Project Completion** Grant Closed April 28, 2010

**SubGrantee** NEFCO  
180 East South Street  
Akron, OH 44311

**Project Contact:** Eric Akin  
NEFCO  
180 East South Street  
Akron, OH 44311

**Grant Amount:** \$248,250.00  
**Total Federal Funds Expended:** \$159,422.90  
**Local Match:** \$168,750.00

**Project Title:** Potter Creek Habitat Restoration

**Project Location:** Portage County  
**Watershed:** Middle Cuyahoga River

**Project Summary:** \$248,250 in federal Section 319(h) Clean Water Act grant funding was awarded to the Northeast Ohio Four County Regional Planning and Development Organization (NEFCO) to restore a channelized segment of Potter Creek using overwide ditch technology and design. In addition, the project will re-vegetate and acquire permanent riparian conservation easements along the project area converted to overwide channel. In-stream flow diversion structures will be installed at one of the sites to improve stream morphology and flow, as well as to improve aquatic habitat conditions within the stream.

The construction of the overwide ditch could not proceed due to permitting delays with the U.S. Army Corps of Engineers and local match issues.

However, this project was successful in re-vegetating and acquiring conservation easements in the riparian corridor along two (2) channelized segments of Potter Creek. In addition, in-stream structures were installed at one of the sites to naturalize the stream morphology and provide improved aquatic habitat.

**Environmental Results:** Successful completion of this project resulted in a total of 26.638 acres of wetlands and riparian habitat being permanently protected.

### Final Project Results:

- Completed and submitted a Quality Assurance Project Plan.

- Completed and distributed three (3) project brochures, four (4) fact sheets and one (1) newsletter.
- Completed project design.
- Established project-specific website.
- Completed appraisal for conservation easement.
- Acquired 27 acres of conservation easements.
- Completed wetland delineation report.
- Conducted two (2) workshops and one (1) project tour.
- Planted 4 acres of wetland species.
- Restored 2,000 linear feet of headwater riparian zone with native tree and shrub plantings.
- Installed in-stream structures at one of the sites to naturalize the stream morphology and provide improved aquatic habitat.



**For More Information:**  
[www.portageswcd.org](http://www.portageswcd.org)



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-10  
**Project Completion** Grant Closed December 2009

**SubGrantee** TMACOG  
P.O. Box 9508.  
Toledo, OH 43697-9508

**Project Contact:** Matt Horvat  
TMACOG  
P.O. Box 9508.  
Toledo, OH 43697-9508

**Grant Amount:** \$204,970  
**Total Federal Expended:** \$148,130

**Project Title:** Ottawa River Dam Removal & Stream Restoration

**Project Location:** Lucas County  
**Watershed:** Ottawa River

**Project Summary:** \$204,970 in federal Section 319(h) Clean Water Act grant funding was awarded to the Toledo Metropolitan Area Council of Governments (TMACOG) to complete stream restoration subsequent to the Secor Dam removal (to be implemented by the Ohio Department of Transportation using non-319 funds). The Secor Dam is approximately 55 feet wide, 8 feet tall and was installed in the 1920's to create an impoundment. The dam is adjacent to a 120 acre parcel of floodplain that has been reinforced with pilings and bulkheads by the city of Ottawa Hills. A feasibility study indicates that dam removal will not increase flood hazards, release contaminated sediments, or cause siltation problems.

Section 319 funds are provided to complete restoration of the stream channel and adjacent riparian areas following removal of the lowhead dam. Additionally, funds will be used by both the University of Toledo and Bowling Green State University to perform comprehensive environmental monitoring of the project site prior to and following completion of the project.

**Environmental Results:** Successful completion of this project will result in the removal of the Secor Road lowhead dam and restoration of approximately 1,000 linear feet of in-stream and riparian habitat. Following completion of the dam removal and restoration activities the project site will be permanently protected as park land through a deed restriction already in place.

## Final Project Results:

- Completed pre and post construction water chemistry, biological and habitat assessment activities both upstream and downstream of the project site. This site is being used by several high schools in the area for their water quality monitoring program. Completed and submitted sediment characterization report.
- Conducted public meetings and site tours.
- Conducted dam mitigation and site restoration workshop.
- Successfully removed the Secor Road lowhead dam.
- Completed restoration design documents.
- Stabilized 1,000 linear feet of stream banks downstream from dam removal site.
- Restored 1,000 linear feet of stream by restoring natural floodplain contour as well as installing in-stream riffles and pools.
- Restored 1,000 linear feet of riparian corridor with plantings of 500 native hardwoods and grasses.

Pollutant	Final Load Reductions
Nitrogen	170 pounds/year
Phosphorus	85 pounds/year
Sediment	85 tons/year



Removal of the Secor Road Dam in the Ottawa River was completed by the Ohio Department of Transportation (ODOT) in exchange for mitigation credit under Ohio's Section 401 permitting program. Section 319 grant funds awarded under provisions of project #06(h)EPA-10 are being used to complete stream channel and streambank restoration in and near the former dam pool. Removal of this dam restored fish migration patterns and natural flow conditions to more than 1,000 linear feet of the Ottawa River.

Project partners include ODOT, TMACOG, Bowling Green State University, University of Toledo and Ohio EPA.





## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-11  
**Project Completion** Grant Closed June 24, 2010

**SubGrantee** Muskingum County SWCD  
225 Underwood Street, Suite 100.  
Zanesville, OH 43071

**Project Contact:** **Kylene Wilson**  
Muskingum County SWCD  
225 Underwood Street, Suite 100.  
Zanesville, OH 43071

**Grant Amount:** \$96,625  
**Total Federal Expended:** \$45,702

**Project Title:** Salt Creek Watershed NPS Pollution Prevention

**Project Location:** Muskingum County

**Watershed:** Salt Creek

**Project Summary:** \$96,625 in federal Section 319(h) Clean Water Act grant funding was awarded to the Muskingum County SWCD to install agricultural BMPs to address livestock waste and sediment. Practices such as stream-side cattle exclusion fencing and off-stream livestock watering systems will be cost-shared with riparian agricultural producers. Unrestricted livestock access to streams in the watershed increases nutrient loadings and damages stream banks, denuding riparian vegetation. There are also areas of conventional tillage where nutrient and sediment run-off is adversely affecting water quality. In these areas, cost-share for practices such as cover crops will be made available to producers.

**Environmental Results:** This project will successfully protect approximately 10,091 linear feet of stream in which livestock currently have unrestricted access to the water. In addition to reducing nutrient loading to the stream, this will result in the re-naturalization of both in-stream habitat areas as well as the riparian zone.

### Project Results to Date:

- Completed and submitted a Quality Assurance Project Plan.
- Completed chemical monitoring at 20 sites. Conducted biological monitoring (fish and bugs) at one site.
- Conducted two informational meeting with agricultural producers.
- Using cost-share, successfully planted 303 acres of cover crops.
- Using cost-share, successfully installed 10,091 linear feet of exclusion fencing.
- Conducted one watershed family fun day.

- Published three newspaper articles, completed and distributed one brochure and one flyer, and obtained project coverage on three television spots, all to promote the implementation project.
- Using cost share, successfully installed 2 off stream watering systems.

### **Final NPS Load Reductions**

<b>Pollutant</b>	<b>Final Load Reductions</b>
Nitrogen	3,689 pounds/year
Phosphorus	3,723 pounds/year
Sediment	7,008 tons/year



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-17  
**Project Completion** Grant Closed June 2009

**SubGrantee** Village of New Albany  
99 West Main Street  
New Albany, OH 43054

**Project Contact:** William Dorman  
Village of New Albany  
99 West Main Street.  
New Albany, OH 43054

**Grant Amount:** \$23,622  
**Total Federal Expended:** \$15,748

**Project Title:** Restoration of Rose Run

**Project Location:** Franklin County  
**Watershed:** Big Walnut Creek

**Project Summary:** \$23,622 in federal Section 319(h) Clean Water Act grant funding was awarded to the Village of New Albany to remove a lowhead dam, abandoned bridge, pilings and other debris from Rose Run, a headwater tributary in the Big Walnut Creek watershed. During high flow conditions, the dam and associated bridge structure impede and impound flow so that the stream is severely silted in. The upstream stream bed elevation is 4 feet higher than downstream of the dam. A large 5 to 6 foot deep hole has developed on the west side of the dam due to scouring resulting from these flow impediments. Although removal of the dam is the primary objective of this project, there is a considerable amount of restoration work that will occur.

Rose Run is a 3.5 mile urban perennial stream with a drainage area of 2,800 acres. Rose Run flows into the Rocky Fork, one of two main tributaries to Big Walnut Creek. 2000 Ohio EPA water quality assessment data from a location less than a mile downstream of the project site shows non-attainment with Warmwater habitat aquatic life uses.

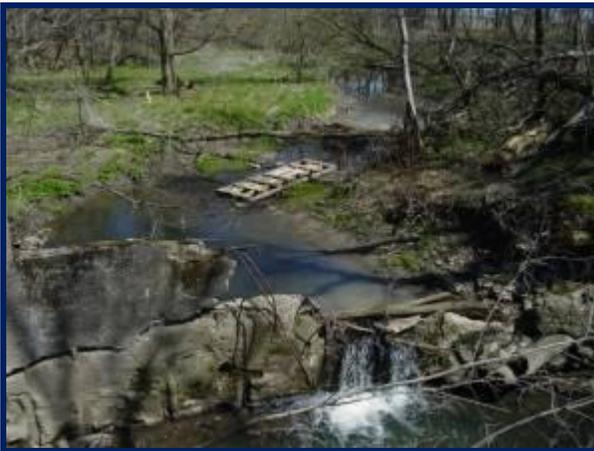
**Environmental Results:** This project resulted in the restoration of natural stream channel morphology and in-stream habitat conditions along 350 linear feet of this headwater stream.

## Final Project Results:

- Successfully completed and submitted a Quality Assurance Project Plan. Completed QHEI/HHEI assessments at 3 sites prior to and following restoration.
- Removed low-head dam structure on Rose Run and associated logging bridge structure.
- Restored 350 linear feet of floodplain, stream channel and riparian areas.
- Stabilized 200 linear feet of streambank using bio-engineering.
- Established and maintain a project-specific web-site. Also published a project-specific article in the village's newsletter.
- Completed construction and design documents in preparation for construction activities associated with the project.



**Rose Run Before and After Restoration**





## FFY06 Section 319(h) Nonpoint Source Project Summary

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<b>Project Number</b>	<b>#06(h) EPA-18</b>
<b>Project Completion</b>	<b>Grant Closed August 24, 2009</b>
<b>SubGrantee</b>	<b>Cuyahoga County Board of Health</b> 5550 Venture Drive Parma, OH 44130
<b>Project Contact:</b>	<b>Harry Stark</b> Cuyahoga County Board of Health 5550 Venture Drive Parma, OH 44130
<b>Grant Amount:</b>	<b>\$280,899</b>
<b>Local Match:</b>	<b>\$187,266</b>
<b>Project Title:</b>	<b>Restoration of Mill Creek at Highland Park</b>
<b>Project Location:</b>	Cuyahoga County
<b>Watershed:</b>	Mill Creek

**Project Summary:** \$280,899 in federal Section 319(h) Clean Water Act grant funding was awarded to the Cuyahoga County Board of Health to restore a headwater segment of Mill Creek running through the Highland Park Golf Course. The project site is owned and operated by the City of Cleveland. Within the project site, Mill Creek is a deeply incised urban stream with severely eroding banks, very little riparian cover and failing gabion baskets that are causing flow obstructions and severe erosion.

The 19 square mile Mill Creek is a sub-watershed of the Cuyahoga River in northeast Ohio. More than 1,000 linear feet of Mill Creek will be restored and renaturalized as a result of this project. In addition to in-stream restoration, riparian areas will be planted extensively using native hardwood trees, grasses and forbs.

**Project Deliverables:** Successful completion of this project will result in the following:

- Restoration of approximately 1,000 linear feet of urban headwater stream, including bio-engineered meanders and natural channel development within the stream bed.
- Restoration of natural flow by removing failing gabions and stabilizing severely eroding stream banks using root wads and other bio-engineered practices.
- Restoration of riparian zone along both sides of the creek by planting native hardwood trees, grasses and forbs in a 25-foot wide swath.
- Complete water chemistry and project appropriate macroinvertebrate and physical habitat assessments at five (5) sites within the project area prior and following restoration.

- Completion of project-specific public education and outreach activities including a stakeholder forum to provide input on the project conceptual design.

**Environmental Results:** This project will result in the restoration and protection of 1,000 linear feet of urbanized headwater habitat as well as re-vegetating a 25-foot wide zone along both sides of the restored segment of stream.

**Final Project Results:**

- Completed and submitted a Quality Assurance Project Plan.
- Completed water chemistry and bacterial sampling analysis at 5 sites within the project area to establish a baseline from which improvements may be measured against following project implementation.
- Completed volunteer macroinvertebrate monitoring at 5 sites within the project area. Due to storm sewer chemical issues, this component of the project was eliminated.
- Executed contract for successful completion of the project design(s), went to bid and selected a firm to complete the restoration project.
- Completed restoration of 1,500 linear feet of urban headwater stream.
- Conducted one field day for school-aged children, technical experts, project stakeholders and the general public.
- Stabilized 1000 linear feet of riparian zone with erosion control matting and plantings.
- Completed one (1) project brochure.

Pollutant	Final Total Load Reduction
Nitrogen	500 pounds/year
Phosphorus	255 pounds/year
Sediment	255 tons/year

**Project #06(h)EPA-18**  
Cuyahoga County Board of Health  
Mill Creek Watershed

The restoration of Mill Creek on the Highland Hills Municipal Golf Course (as depicted in various before and after photos below) provides an important demonstration of improved stream management practices that can and should be used by golf course managers throughout Ohio.







## FFY06 Section 319(h) Nonpoint Source Project Summary

**Project Number** #06(h) EPA-23  
**Project Completion** Grant Closed March 12, 2010

**Subgrantee** Five Rivers Metroparks  
1375 E. Siebenthaler Avenue  
Dayton, OH 45414

**Project Contact:** Joseph Zimmerman  
Five Rivers Metroparks  
1375 E. Siebenthaler Avenue  
Dayton, OH 45414

**Grant Amount:** \$224,000  
**Local Match:** \$153,400

**Project Title:** Phase 1, Stillwater Low Dam Modification, Stream Restoration and Wetland Enhancement

**Project Location:** Montgomery County  
**Watershed:** Stillwater River

**Project Summary:** \$224,000 in federal Section 319(h) Clean Water Act grant funding was awarded to Five Rivers Metroparks to complete the first of three phases of modifying an 8 foot high impounding dam on the Stillwater River. The existing dam is a 150 foot wide arch dam constructed during the 1920s for flood control. This first phase will involve notching the dam to lower impoundment levels by 3 feet, installing cross vanes and other grade control structures to prevent head-cutting and constructing a new inlet channel to Englewood Lakes (wetland areas). Approximately 7,000 linear feet of stream bank along the Stillwater River will be renaturalized and restored as a result of this project.



The project site is located near the outlet of the 673 square mile Stillwater watershed in southwest Ohio. All but the 1 mile segment immediately upstream from this dam of the Stillwater River mainstem are in attainment with exceptional Warmwater habitat aquatic life uses.

Phase 2 of this project is funded under project #06(h) EPA-35, and Phase 3 is funded under 08(h)E-16.

**Environmental Results:** This project will result in the full attainment of Exceptional Warmwater Habitat (EWH) aquatic life use within the Stillwater River mainstem. Additionally, nearly 88 acres of currently poorly functioning wetlands will be restored to more effectively assimilate nutrient loadings within the river.

**Final Project Results:**

- Completed and submitted a Quality Assurance Project Plan.
- Completed pre-construction water quality chemistry sampling biological (macroinvertebrate and fish) and habitat assessments at project site.
- Completed conceptual project design(s).
- Completed and submitted all environmental permitting documents required for the project including 404/401 permit applications.
- Developed and Installed 3 project-specific signs and one display board within the park area providing details about the project.
- Completed and distributed two project brochures and two fact sheets.
- Excavated 6,238 cubic yards of material. Material was used to fill the former inlet channel, as well as a side channel between a small island and the bank.
- Enhanced the aquatic/wetland habitat that comprises Englewood Lake and its surrounding shoreline by constructing a new inlet channel and a new outlet control structure.

**NPS Load Reductions Resulting from Project**

Pollutant	Final Load Reductions
Nitrogen	135,000 pounds/year
Phosphorus	67,500 pounds/year
Sediment	67,500 tons/year

**Project #06(h)EPA-23**  
**Five Rivers Metroparks**  
**Stillwater River Watershed**



**Englewood Lowhead Dam Modification Project**

Modification of the Englewood lowhead dam will be completed in three phases, consisting of “notching” the dam several times in order to stabilize accumulated sand and gravel behind the structure. Phase 1 was completed during the summer of 2008 when the dam was lowered three feet. Removing the influence of this structure on the Stillwater River is expected to restore nearly two miles of the river to full attainment of its Exceptional Warmwater Habitat (EWH) designated aquatic life use. The area of the dam pool is the only segment of the Stillwater in this area that is not attaining EWH. The dam has also been the site of several drownings during the past few years. Removing the influence of the dam will dramatically reduce dangerous hydraulics during high flow periods and result in significant improvements to public safety in this heavily visited park area.



Phase 2 and Phase 3 of this project will consist of further lowering of the dam as well as the installation of several cross vanes and grade control structures to reduce potential “head cutting” within the sediments accumulated in the former dam pool. Additionally, more than 88 acres of adjacent riparian wetland areas will also be enhanced as a result of flow controls and improvements that will result from this project.

Since it is located in a highly visible and heavily used park area, the project also includes an ambitious education outreach component incorporating project signage, media events and other educational tools. All three phases of the project will be completed by 2010.



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## FFY06 Section 319(h) Nonpoint Source Project Summary

**Project Number** #06(h) EPA-24  
**Project Completion** Grant Closed August 18, 2009

**Subgrantee** **Greene County Soil & Water Conservation**  
 1363 Burnett Drive  
 Xenia, OH 45385

**Project Contact:** **Don Leeds**  
 Greene County SWCD  
 1363 Burnett Drive  
 Xenia, OH 45385

**Grant Amount:** \$223,600  
**Local Match:** \$149,067

**Project Title:** **Little Beaver Creek Stream Restoration**

**Project Location:** Greene County  
**Watershed:** Little Miami River

**Project Summary:** \$223,600 in federal Section 319(h) Clean Water Act grant funding was awarded to Greene County Soil & Water Conservation District to complete in-stream habitat restoration and stream bank stabilization along 2,100 linear feet of Little Beaver Creek adjacent to a previously restored segment near Greene County Park District property.

The 28 square mile Little Beaver Creek watershed is located in a rapidly developing area south of Wright Patterson Air Force Base. Much of the stream has been previously modified by historic impacts and the stream is highly entrenched with significant flow modification. Riparian habitat conditions are generally good due to its proximity to county park property however several locations along the stream bank are artificially armored and severe erosion is resulting. Restoration work that will be completed by this project will help to restore sinuosity, improve riparian and in-stream habitat conditions and protect the stream from future impacts through a conservation easement.



This project will enhance a significant amount of restoration work in the area that will be completed using Water Resources Restoration Sponsor Program (WRRSP) funds.

**Project Deliverables:** Successful completion of this project will result in the following:

- Restoration of 2,100 linear feet of Little Beaver Creek that includes the installation grade control structures such as 5 J-Hook weirs, and 1 cross vane. Following restoration, the riparian area will be re-vegetated and protected with a conservation easement.
- Project will restore 8 acres of riparian zone through invasive species control and re-vegetating with herbaceous seed mix, native hardwoods and shrubs.
- Water chemistry and biological monitoring as well as physical habitat assessment (QHEI) will be completed at two monitoring sites within the project area prior to and following completion of restoration work.
- Project-specific public education and outreach activities will be completed to inform the public of the benefits of this project.

**Environmental Results:** This project resulted in the restoration and stabilization of more than 3400 linear feet of Little Beaver Creek. It is anticipated that successful completion of this project in conjunction with work being completed under the WRRSP program will result in this segment of Little Beaver Creek attaining its designated Warmwater habitat designated aquatic life use.

**Final Project Results:**

- Completed and submitted a Quality Assurance Project Plan.
- Completed conceptual project design(s) and overall watershed restoration plan.
- Completed all necessary permitting paperwork and submitted to appropriate regulatory agencies.
- Project went to bid for construction in mid-August.
- Prepared a project-specific website. Completed three updates as needed.
- Conducted the Little Miami Watershed Festival. Attendance estimated at 1,350.
- Completed all pre and post-construction monitoring.
- Commenced construction November, 2008. Stream restoration completed in 2009.
- Restored 3400 linear feet of exposed and eroding stream bank
- Installed 20 root wads to provide stream bank stabilization
- Installed 5J-Hooks and 1 cross vane
- Seeded all disturbed areas with herbaceous seed mix
- Permanently protected an 8 acre restoration site with conservation easement and environmental covenant.

**NPS Load Reductions Resulting from Project**

Pollutant	Total Load Reduction
Nitrogen	420 pounds/year
Phosphorus	210 pounds/year
Sediment	210 tons/year

**Project #06(h)EPA-24**  
**Greene County SWCD**  
**Little Miami River Watershed**

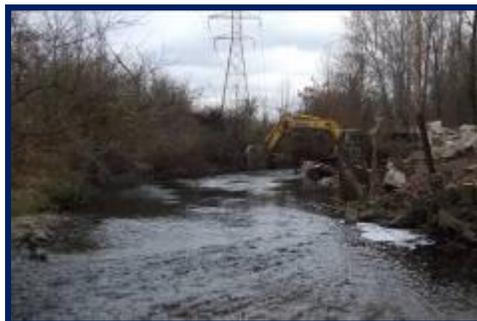


Illustrated above are cross-vanes during construction (left) and after construction (right). The flashy nature of storm water flows on Beaver Creek is more effectively managed with such grade controls.



Extensive work was completed using root wads, erosion blankets and stone to stabilize seriously eroding and slumping stream banks. Contouring of entrenched segments of the stream also restored a more natural flow regime to Little Beaver Creek while also improving in-stream habitat.

Bridge pilings (below left) were causing significant flow restrictions and were removed during this project (below right).



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## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-25  
**Project Completion** Grant Closed June 30, 2010

**SubGrantee** West Creek Preservation Committee  
P.O. Box 347113  
Parma, OH 44134

**Project Contact:** Derek Schafer  
West Creek Preservation Committee  
P.O. Box 347113  
Parma, OH 44134

**Grant Amount:** \$187,500  
**Local Match:** \$125,000

**Project Title:** West Creek Urban Stream Repair

**Project Location:** Cuyahoga County  
**Watershed:** West Creek

**Project Summary:** \$187,500 in federal Section 319(h) Clean Water Act grant funding was awarded to the West Creek Preservation Committee to complete stream restoration at 2 project sites that will extend restoration work completed by previously funded WRRSP projects. Both proposed restoration sites are located within heavily urbanized areas of the West Creek watershed. Stream reaches are very entrenched (stream banks 10-12 feet high) with significant portions of the toes of the banks currently stabilized with concrete slabs and covered with invasive plant species.

West Creek is a predominately bedrock stream draining approximately 9,000 acres, flowing 9 miles through heavily urbanized areas of Parma, Seven Hills, Independence, Brooklyn Heights and small portions of Cleveland. More than 600,000 northeastern Ohioans live within the watershed. Project sites are adjacent to stream segments in partial and non-attainment of designated Warmwater habitat aquatic life uses. The primary cause of impairment in the lower stream reaches is hydromodification.

**Environmental Results:** This project restored 1700 linear feet of urbanized stream including the enhancement of 200 linear feet of in-stream habitat using a variety of habitat improvement practices. Additionally, the 14-acre project sites will be protected with conservation easements.

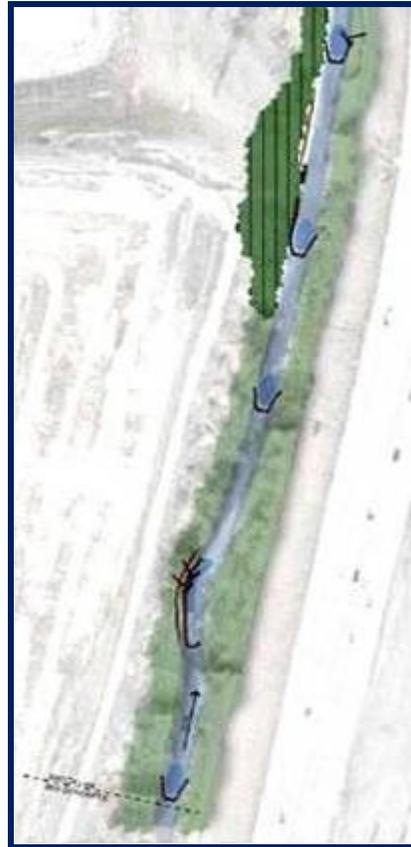
## Final Project Results:

- Completed and submitted a Quality Assurance Project Plan.
- Completed and distributed six editions of project newsletter with project-specific information and articles. Completed three updates of the project website. Completed project display board.
- Acquired conservation easements on 14 acres of riparian lands within project area.
- Completed pre-construction project monitoring at two sites within project area.
- Executed construction contract.
- Restored and stabilized 1700 linear feet of stream by re-grading and installing boulders at the bank toes.
- Installed and restored 1700 linear feet of in-stream habitat and 200 linear feet of enhanced meanders, a rock cross vane upstream and J-vans and root wads in existing pools where erosion was a concern.

### NPS Load Reductions Resulting from Project

Pollutant	Final Load Reduction
Nitrogen	185 pounds/year
Phosphorus	91 pounds/year
Sediment	95 tons/year

**Project #06(h)EPA-25**  
West Creek Preservation Committee  
Cuyahoga River Watershed



**West Creek Stream Restoration  
Design Principles**

- Restoration will embrace a natural channel design approach and will incorporate protective measures such as soil bioengineering systems, bank stabilization using native plant material as well as structural measures where appropriate.
- Restoration will prevent the loss of land or damage to land uses or other facilities within and adjacent to the stream corridor.
- Restoration will reduce offsite and/or downstream effects of sediment resulting from bank erosion.
- Restoration will improve or enhance the aesthetics and use of the West Creek corridor for passive recreation.
- Restoration will be designed to achieve the habitat and population objectives for targeted fish and wildlife species.
- Restoration will be designed to achieve the maintenance and operation objectives of the project sponsors and stakeholders.

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## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-27  
**Project Completion** Grant Closed June 30, 2010

**SubGrantee** City of Columbus, Dept. of Public Utilities  
910 Dublin Road  
Columbus, OH 43215

**Project Contact:** Michael Griffith  
City of Columbus, Dept. of Public Utilities  
910 Dublin Road  
Columbus, OH 43215

**Grant Amount:** \$416,060  
**Local Match:** \$332,325

**Project Title:** Lower Olentangy River Ecosystem Restoration  
**Project Location:** Franklin County  
**Watershed:** Lower Olentangy River

**Project Summary:** \$416,063 in federal Section 319(h) Clean Water Act grant funding was awarded to the City of Columbus to implement stream restoration following removal of the 5<sup>th</sup> Avenue Dam in the Lower Olentangy River, 2 miles upstream from the confluence with the Scioto River.

Due to the complexity of the project, multiple stakeholders, and delays encountered by the U.S. Army Corps of Engineers in completing the feasibility study, the dam has not yet been removed. However, following consultation with U.S. EPA, Section 319 funds have been reprogrammed to facilitate the site assessment and engineering that is needed for the project. Dam removal is anticipated to occur during fall 2011.

### Final Project Results:

- Completed and submitted a Quality Assurance Project Plan.
- Initiated water quality and monitoring data web site.
- Initiated production of a project-specific video for use in informing and educating the public on the benefits of the project.
- Completed one citizens' survey to capture community attitudes and knowledge of the river and the project.
- Produced aerial photos and maps.
- Initiated sediment assessment and vegetation assessment reports.



**Lower Olentangy River Ecosystem Restoration**



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-28  
**Project Completion** Grant Closed December 2009

**SubGrantee** Holden Arboretum  
9500 Sperry Road  
Kirtland, OH 44094

**Project Contact:** Roger Gettig  
The Holden Arboretum  
9500 Sperry Road  
Kirtland, OH 44094

**Grant Amount:** \$150,000  
**Total Federal Expended:** \$150,000

**Project Title:** Shadybrook Dam Removal and Stream Restoration

**Project Location:** Geauga County  
**Watershed:** Chagrin River

**Project Summary:** \$150,000 in federal Section 319(h) Clean Water Act grant funding was awarded to the Holden Arboretum to remove a failing lowhead dam and restore the associated stream channel to a natural and free-flowing condition. However, following further analysis it was determined that removing the dam would cause excessive damage to surrounding riparian areas. Not only would the mature trees that had established adjacent to the dam be destroyed, but the expense to remove, transport and dispose of the excess sediment was cost-prohibitive. The project was revised to reroute Shadybrook Creek around the dam. As a result, 740 linear feet of riparian area was restored with plantings of native vegetation. Several natural channel design features were incorporated as appropriate for stream gradient. These feature mimic natural conditions present upstream of the project. The project site is on Holden Arboretum property in the headwaters of a coldwater habitat unnamed tributary to the East Branch of the Chagrin River.

**Environmental Results:** Removal and/or modification of this dam and restoration of natural stream channel morphology in this segment will eliminate the only impairment in this headwater stream and result in the protection of coldwater habitat aquatic life uses as well as the elimination of a fish barrier to a population of endangered native Ohio brook trout.

### Project Results to Date:

- Completed pre-construction monitoring
- Published 2 newsletter articles highlighting project
- Prepared RFP for project design and build.

- Executed design-build contract.
- Propagated 5,000 native shrubs, trees and herbaceous plants for use on the project sites.
- Conducted one public open house to show off the project site
- Restored 740 linear feet of natural stream channel including reconnecting the stream with the active floodplain and riparian zones.
- Restored 3 acres of riparian area with native plants and trees

Pollutant	Total Load Reductions
Nitrogen	0 pounds/year
Phosphorus	0 pounds/year
Sediment	600 tons/year

**Project #06(h)EPA-28**  
Holden Arboretum  
East Branch Chagrin River Watershed



Natural stream functions were very poor near the old Baldwin lowhead dam site on this unnamed coldwater habitat tributary to the East Branch of the Chagrin River (above). Accumulated sediment levels made removal of the dam unwise—as a result the stream was restored to its natural state by rerouting flows around the dam structure and formerly impounded areas. Photos (above right and below) illustrate the improvements to this high quality tributary resulting from this project. Native species plantings were completed following these photos, however they were all grown from seed and provided by the Holden Arboretum as part of their matching contribution to the project.



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## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-29  
**Project Completion** GRANT CLOSED AT SPONSOR'S REQUEST

**SubGrantee** Champaign County Commissioners  
1512 South U.S. Highway 68  
Urbana, OH 43078

**Project Contact:** Jennifer Ganson  
Champaign County Commissioners  
1512 South U.S. Highway 68  
Urbana, OH 43078

**Grant Amount:** \$268,815  
**Local Match:** \$188,245

**Project Title:** Drinking Water Nitrate Reduction in the Mad River Aquifer

**Project Location:** Champaign County  
**Watershed:** Upper Mad River

**Project Summary:** \$268,815 in federal Section 319(h) Clean Water Act grant funding was awarded to the Champaign County Commissioners to reduce and prevent nitrate contamination in several public drinking water supplies. Several different approaches will be used, including the installation of various agricultural BMPs such as cover crops cost-shares and precision farming methods. In addition, preventative measures would be implemented by acquiring conservation easements on ground within the one and five-year time of travel zones around public well fields. The project also will enhance in-stream habitat conditions within 15,840 linear feet of previously channelized coldwater habitat stream.

Stream restoration efforts within the Mad River will expand upon previously successful habitat enhancements within the mainstem. The Mad River is one of only 3 streams within Ohio capable of supporting a year-round trout fishery. A TMDL report that is nearing completion identified the lack of suitable habitat and hydro-modification as two significant causes of impairment.

**Project Deliverables:** Successful completion of this project will result in the following:

- Completion of isotope and nitrate sampling of public and private wells throughout the one and five-year time of travel zones prior to and following installation of various cost-shared practices.
- All private drinking wells, home septic units and nitrate storage facilities will be located and plotted by GIS within the project areas.

- 625 acres of conservation easements will be acquired within the one and five-year time of travel zones in and around public water supply well fields.
- 1,666 acres of cover crops will be planted using cost-share funds within the project areas.
- More than 1,500 acres of precision farming will be implemented within the project areas.
- 2 acres of riparian areas will be planted using native hardwood tree seedlings.
- More than 15,000 linear feet of in-stream habitat enhancements will be installed, including footer logs, boulders and root wads. Rock vanes will also be installed to improve stream bank stability and 3 acres of riparian areas will be planted using native hardwood tree seedlings.

**Environmental Results:** This project will result in the reduction of nitrates in the one and five-year time of travel zones around public water supplies identified within the project area. The project will also restore and enhance more than 15,000 linear feet of in-stream habitat conditions within designated coldwater habitat in the Mad River mainstem.

**Project Results to Date:**

- Completed pre-implementation nitrate sampling at 19 public and private well sites to identify potential sources of nitrate contamination.
- Established project web-site.
- Obtained one opportunity for radio presentation on the project.
- Published 10 project-specific newspaper articles.

**NOTE:** Recent changes in personnel and fragmentation of project partners have stalled this project. Following a meeting conducted August 2007 with the Champaign County Commissioners this project will be terminated at the sponsor's request and funds will be reprogrammed by Ohio EPA pending approval by U.S. EPA Region 5.



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-31  
**Project Completion** Grant Closed February 5, 2010

**SubGrantee** Columbus & Franklin County Metro Parks  
1069 West Main Street  
Westerville, OH 43081-1181

**Project Contact:** John O' Meara  
Columbus & Franklin County Metro Parks  
1069 West Main Street  
Westerville, OH 43081-1181

**Grant Amount:** \$315,172    **Total Federal Expended:** \$225,426.84  
**Local Match:** \$210,114

**Project Title:** Pleasant Valley Quarry Habitat Restoration

**Project Location:** Franklin and Pickaway Counties  
**Watershed:** Lower Big Darby Creek

**Project Summary:** \$315,172 in federal Section 319(h) Clean Water Act grant funding was awarded to the Columbus & Franklin County Metro Parks to remove portions of an existing levee and to restore approximately 300 linear feet of stream channel and associated riparian forest. The project will also restore 2.75 acres of naturally occurring riparian wetlands. The project site is located along the main stem of the Big Darby Creek in central Ohio, a stream of exceptionally high quality with a rich and diverse biological community. The project site is located between river miles 25.21 and 24.0 and the stream is in full attainment of its designated exceptional Warmwater habitat aquatic life use, but is generally threatened by habitat alteration, hydro-modification, sediments, and excessive nutrients.

The project is consistent with recommendations in the U.S. EPA approved Big Darby Creek TMDL Report. The project will enhance ongoing efforts by the project sponsor to restore a 156 acre parcel formerly used as a quarry operation. The project site will be provided permanent protection as part of the Battelle-Darby Metro Park.

**Environmental Results:** This project resulted in the restoration of natural floodplain functions on 157 acres, restored 2.75 acres of naturally occurring riparian wetlands, planted 31.55 acres of riparian areas in trees and shrubs and restored 300 linear feet of in-stream and near stream habitat along a designated exceptional Warmwater habitat stream.

## Final Project Results:

- Completed and submitted a Quality Assurance Project Plan.
- Completed final project design and documents.
- Restored 2.75 acres of wetlands.
- Modified one levee thereby reconnecting more than 2,000 linear feet of floodplain with the Big Darby Creek, resulting in 157 acres of floodplain restrictions.
- Planted 25.05 acres of native species of trees and shrubs in riparian areas. Planted 2.75 acres of native wetland species.
- Conducted 1 public meeting to discuss project plans and design.
- Conducted QHEI sampling at 10 sites within the project site.
- Prepared and distributed one newsletter.
- Removed 31.5 acres of invasive species from riparian areas.

Pollutant	Final Load Reductions
Nitrogen	13 pounds/year
Phosphorus	11 pounds/year
Sediment	1 ton/year

**Project #06(h)EPA-31**  
**Franklin County Metroparks**  
**Big Darby Creek Watershed**



The aerial photo (right) illustrates the extent of dikes and levees that were built to accommodate previous limestone mining on the project site. In addition to modifying levees to reconnect Big Darby Creek to its natural floodplain, this project also restored natural flow and grade control structures in the small tributary in the above right photo.



The area today is a Columbus/Franklin County Metropark providing numerous recreational opportunities in addition to improved natural flow conditions in the Big Darby Creek State and National Scenic River.



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## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-33  
**Project Completion** Grant Closed June 2010

**SubGrantee** Ohio State University Research Foundation (OSURF)  
1960 Kenny Road  
Columbus, OH 43210-1016

**Project Contact:** Dr. Robert Mullen, John Rausch, and Clayton Dygart  
130 Williams Hall  
1680 Madison Avenue  
Wooster, OH 44691

**Grant Amount:** \$50,000  
**Local Match:** \$50,000

**Project Title:** Best Management Practices Evaluation: Manure Application Frozen/Snow Covered Ground

**Project Location:** Wayne  
**Watershed:** N/A

**Project Summary:** \$50,000 in federal Section 319(h) Clean Water Act grant funding was awarded to Ohio State University Research Foundation to (1) Quantify the chemical composition of overland runoff water associated with frozen and/or snow covered land when OH-NRCS Practice Standard 633 recommendations is followed; and (2) to quantify the chemical composition of overland runoff water associated with frozen and/or snow covered land following NRCS Practice Standard 633 without application of dairy manure. OH-USDA-NRCS partnered in this effort with a match of \$50,000.

**Environmental Results:** Findings from this research project will be used to inform State Technical Committee and OH-USDA-NRCS State Agronomist with regard to the adequacy of the Field Office Technical Guide for Waste Utilization (Standard 633).and State of Ohio permits and policies relating to manure application onto frozen and or snow covered ground.

### Final Project Results:

- Completed and submitted a Quality Assurance Project Plan.
- Developed 12 field test plots
- Conducted 48 soil samples, 96 moisture cores, 3 manure samples, 120 water quality samples.

- Presented information on results at three events, two years (2008 and 2009) at Manure Science Review and the Conservation Tillage Technology Conference (2009).
- Fact sheet is currently in process and will be published summer/fall 2010.
- Scientific publication will be submitted by December 2010.



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-35  
**Project Completion** Grant Closed July 21, 2010

**SubGrantee** Five Rivers MetroParks  
1375 E. Siebenthaler Avenue  
Dayton, OH 45414

**Project Contact:** Joseph Zimmerman  
Five Rivers MetroParks  
1375 E. Siebenthaler Avenue  
Dayton, OH 45414

**Grant Amount:** \$176,568  
**Local Match:** \$117,512

**Project Title:** Phase 2, Stillwater Low Dam Modification, Stream Restoration and Wetland Enhancement

**Project Location:** Montgomery County  
**Watershed:** Stillwater River

**Project Summary:** \$176,568 in federal Section 319(h) Clean Water Act grant funding was awarded to Five Rivers MetroParks to complete the second in three phases of modifying the 8 foot high impounding dam on the Stillwater River. The existing dam is a 150 foot wide arch dam constructed during the 1920s for flood control.

The project site is located near the outlet of the 673 square mile Stillwater watershed in southwest Ohio. 31.38 of the 32.38 miles of the Stillwater main-stem are in attainment with exceptional Warmwater habitat aquatic life uses. The only area of main-stem impairment is the 1-mile impounded by the above-referenced dam.

**Environmental Results:** This project will result in the full attainment of Exceptional Warmwater Habitat (EWH) aquatic life use within the Stillwater River mainstem. Additionally, nearly 88 acres of currently poorly functioning wetlands will be restored to more effectively assimilate nutrient loadings within the river.

### Final Project Results:

- Lowered the 8 foot impounding dam 2 feet allowing for monitoring of sediment transport from behind the dam and stabilization of exposed sediment;
- Excavated 8,262 cubic yards of material. Material was used to fill the former inlet channel, as well as a side channel between a small island and the bank.
- Installed 2 cross vane grade structures in Stillwater River upstream of dam;

- Restored 7,000 linear feet of lower Stillwater with plantings;
- Stabilized 7,000 linear feet of exposed stream banks.

### NPS Load Reductions Resulting from Project

Pollutant	Final Load Reductions
Nitrogen	135,000 pounds/year
Phosphorus	67,500 pounds/year
Sediment	67 tons year



## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-36  
**Project Completion** Grant Closed March 1, 2011

**SubGrantee** The River Institute  
P.O. Box 91298  
Delaware, OH 43015

**Project Contact:** Dan Binder, Executive Director  
The River Institute  
P.O. Box 91298  
Delaware, OH 43015

**Grant Amount:** \$280,523  
**Grant Funds Expended:** \$152,850  
**Local Match:** \$100,374

**Project Title:** Beetree Run Stream Restoration

**Project Location:** Defiance County  
**Watershed:** Beetree Run

**Project Summary:** \$280,523 in federal Section 319(h) Clean Water Act grant funding is awarded to The River Institute to restore a 2,770 linear foot segment of Beetree Run using natural channel design methods. Beetree Run is a 1.68 square mile headwater tributary to the lower Auglaize River in northwestern Ohio. It has historically been channelized for agricultural drainage and is currently on the schedule for county ditch maintenance. Completion of this project will restore Beetree Run to a natural functioning stream system.

The current QHEI score is poor (40) and is the result of a silt substrate (versus the natural sand and gravel substrates), long shallow pools, few and poorly defined riffles, narrow to no riparian vegetation, and sparse in-stream fish habitat and cover.

### Final Project Results:

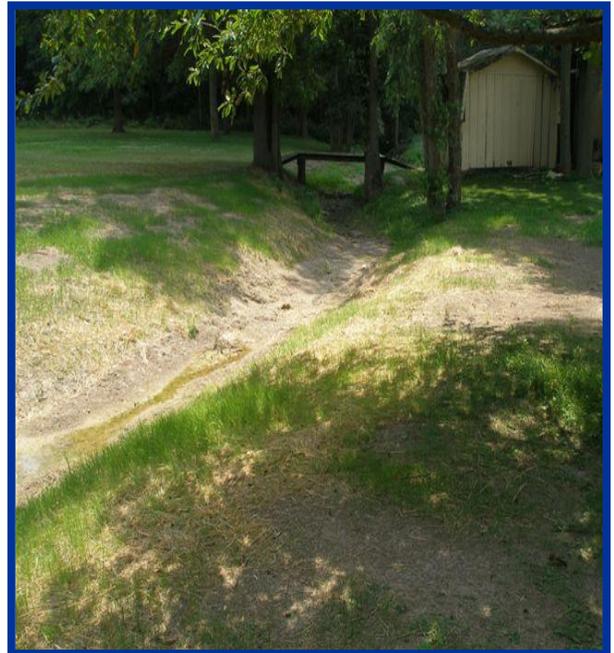
- Completed and submitted a Quality Assurance Project Plan.
- Completed field assessment and survey work.
- Developed project plans and design documents
- Executed design and construction contracts. Construction expected to commence Spring 2010.
- Completed and submitted all environmental permitting documents.
- Received NWP authorization October 2009.
- Conducted one public meeting.

- Planted 68 native trees and shrubs in riparian areas.
- Restored 2,770 linear feet of stream using natural channel design which resulted in the full restoration of the floodplain, installation and establishment of riffles and pools, and a meandering morphology.

**Environmental Results:** Successful completion of this project is expected to restore 15% of the total length of the Beetree Run watershed to attainment with Warmwater aquatic life uses and improve QHEI scores to 60 or better. Improved 2,770 linear feet of Beetree Run stream from a QHEI of 40 to a post construction QHEI of 50 immediately following restoration through the addition of riffles, limited sinuosity and plantings.

### NPS Load Reductions Resulting from Project

Pollutant	Final Load Reductions
Nitrogen	588 pounds/year
Phosphorus	294 pounds/year
Sediments	294 tons/year





## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-37  
**Project Completion** Grant Closed August 18, 2009

**SubGrantee** Cuyahoga County Board of Health  
5550 Venture Drive  
Parma, Ohio 44130

**Project Contact:** Harry Stark, RS, MPA  
Cuyahoga County Board of Health  
5550 Venture Drive  
Parma, Ohio 44130

**Grant Amount:** \$9,100  
**Local Match:** \$8,500

**Project Title:** Restoration of Mill Creek at the Highland Park Golf Course

**Project Location:** Cuyahoga County  
**Watershed:** Mill Creek

**Project Summary:** \$9,100 in federal Section 319(h) Clean Water Act grant funding is awarded to the Cuyahoga County Board of Health to design and install signage along the site of a stream restoration project that was completed under project 06(h) EPA-18. The interpretive signs will provide information on the restoration project and how such restoration efforts improve the overall health of the Mill Creek Watershed.

Under project 06(h) EPA-18 Cuyahoga County Health received funds to restore a headwater segment of Mill Creek running through the Highland Park Golf Course. Shortly after the restoration work was completed the area received minor flood damage. The money that was originally to be used for signage in project 06(h) EPA-18 was needed instead to make the necessary repairs to the damaged area.

**Environmental Benefits:** This project will improve the benefits derived from 06(h)EPA-18 by serving to enhance the project's value as a demonstration site. Public awareness of natural stream channel restoration efforts will be increased as a result of the installation of interpretive signs in this highly visible public area.

### Final Project Results:

- Installed 13 signs along the stream restoration project. The three (3) large signs have specific information regarding the project and the 10 small signs outline the riparian area to indicate "no mow" zones.

**Project #06(h)EPA-37  
Cuyahoga County Board of Health  
Mill Creek Watershed**





## FFY06 Section 319(h) Nonpoint Source Project Summary

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**Project Number** #06(h) EPA-38  
**Project Completion** March 31, 2011

**SubGrantee** Saint Marys Township  
10307 Schroeder Road  
Saint Marys, OH 45885

**Project Contact:** Ronald Sudman, Clerk

**Amount Requested:** \$90,540

**Project Title:** Sediment Collection in the Grand Lake Watershed

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

**Project Summary:** \$90,540 of \$319 FY2006 grant funding is requested to install a bed-load sediment collector in Barnes Creek upstream from Grand Lake Saint Marys. This installation is intended to reduce the nutrient and sediment loading to Grand Lake St. Marys and incidentally help to reduce blue-green algae (and likewise the microcystin toxin) in the lake. Using available monitoring data from Water Year 2009, it is estimated that the Sediment Collector will remove approximately 41.5 tons of sediment annually or approximately 10% of the annual sediment load entering Grand Lake from Barnes Creek.

Monitoring including determination of sediment quantity, sediment quality, and nutrient value will occur. This effort will be led by Wright State University – Lake Campus. The results of this project can be used to help determine whether it could cost effectively install additional sediment bed-load collection devices 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:

- Installation of one (1) bed-load sediment collector
- Public outreach including signage, locally maintained website, a fact sheet, a press release, an informational kiosk and a tour.

### Progress to Date:

- Sediment collector has been fabricated and delivered.
- Installed one project sign.

**Environmental Results:** Successful completion of this project is expected to facilitate a reduction in the nutrient load (especially phosphorus) that is contributing to the growth of blue-green algae and associated microcystin toxin in Grand Lake Saint Marys. 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
Sediments	41.5 tons/year

