

August 2012



Ohio EPA Program Summary
Nonpoint Source Program
FY12 Annual Report



Tributary to the Olentangy State Scenic River
Liberty Twp. Ohio
Photo by Russ Gibson

John Kasich, Governor
Mary Taylor, Lt. Governor
Scott Nally, Director

FY12 Nonpoint Source Management Program Division of Surface Water

Introduction: During FY12 Ohio EPA received \$4,759,000 in federal section 319(h) grant funds under provisions of US EPA Grant # C9-97550012 to implement components of Ohio's Nonpoint Source (NPS) Program. Ohio EPA's Division of Surface Water provides primary coordination and implementation of Ohio's NPS program in partnership with the Ohio Department of Natural Resources, Agriculture and others. The framework for Ohio's NPS program is the NPS Management Plan that was approved by US EPA on August 29, 2006 and as revised during 2009 and 2010. Provisions of the approved plan effectively guide Ohio's implementation of state and local nonpoint source management measures and activities through 2013. Ohio's approved NPS Management Plan is available for review on the internet at: <http://www.epa.state.oh.us/dsw/nps/NPSMP/index.html>. Ohio's NPS Management Plan is scheduled for update and revision in 2013.

Ohio's NPS Program supports implementation of several statewide water quality initiatives. These include the state's overall goal of having 100% of Ohio large river units and 80% of small watershed units in full attainment of their designated aquatic life use by 2020. In turn, these strategic priorities help to focus Ohio's NPS program by:

1. Aligning Section 319 grant resources directly to Ohio's water quality goals
2. Improving implementation of approved TMDL and watershed plans
3. Funding projects that eliminate impairments and restore impaired waters
4. Protecting high quality waters from NPS degradation.

Activities successfully implemented during FY12 to support and/or enhance Ohio EPA's Nonpoint Source Program include:

Grants Management & Administration: A critical component of Ohio's nonpoint source program is the effective management of more than \$3 million awarded each year by Ohio EPA to local implementers in section 319(h) subgrants. During this reporting period, Ohio's NPS Program staff administered state funded Surface Water Improvement Grant (SWIF) projects totaling more than \$3 million; 2 Great Lakes Restoration Initiative (GLRI) Grants; supplemental 319 grants for the Buckeye Lake Nutrient Reduction Project and the respective subgrants awarded under that project. All grant management activities are designed to insure compliance with federal grant guidelines and conditions as well as aligning all nonpoint source grant funding (regardless of source) with implementation of TMDLs, endorsed local watershed action plans and other watershed restoration activities such as Remedial Action Plans, Acid Mine Drainage Abatement and Treatment Plans (AMDAT). For example, SWIF grant funds are aligned to insure that implementation of Ohio's nonpoint source management program is having the maximum effect in reducing impairments to Ohio's streams from nonpoint source pollution.

Grants management and administrative activities conducted by Ohio EPA's Nonpoint Source Program during the reporting period 10/1/11 through 9/30/12 are highlighted by each type of grant and summarized on the following pages.

Section 319(h) Grants Management

The cornerstone of Ohio's Nonpoint Source Program is the section 319(h) Grants Program administered by the Ohio EPA-Division of Surface Water. During the reporting period, Ohio's Nonpoint Source Program grants staff was administering sub-grants awarded under provisions of section 319(h) grants extending over five grant cycles. Following is a listing of Ohio EPA's active section 319 grants:

- FY08 Federal Grant #C9975500008—Grant Closes 12/31/12
- FY09 Federal Grant #C9975500009—Grant Closes 06/30/13
- FFY10 Federal Grant #C9975500010—Grant Closes 06/30/14
- FY11 Federal Grant #C9975500011—Grant Closes 06/30/14
- FY12 Federal Grant #C9975500012—Grant Closes 10/15/16

Ohio EPA received an FY12 allocation of \$4,759,000 in federal section 319 grant funding. Of particular concern is that the FY12 allocation for Ohio represents a reduction of \$336,000 from FY11. **When compared to Ohio's FY10 allocation, the FY12 amount is slightly more than \$1 million LESS than FY10.** Continued budget reductions are detrimental to the ongoing work that Ohio EPA has engaged in to expand implementation and state funding to address nonpoint sources of pollution throughout the state. For example, while US EPA has been cutting funding to the section 319 program, Ohio EPA has increased state funding for nonpoint source projects by more than \$4 million in recent years with the creation of the Surface Water Improvement Fund. These increases in state support for NPS are the direct result of a healthy and vibrant state NPS program that is supported with section 319 funding. The federal base funds are critical to our ability to continue to leverage other sources of funding for nonpoint source project implementation. Any additional reduction will have significant impacts on Ohio EPA's NPS and TMDL programs as well as local implementation projects. For example, in FY12 Ohio EPA is forced to absorb the \$336,000 reduction on top of a \$770,000 reduction in base funding in FY11.



Grants training and information sessions are a staple in Ohio EPA's commitment to effective grants management and effective stewardship of federal funds. This photo is from an information meeting in Twinsburg, Ohio on 2/9/12. Nearly 70 people were in attendance.

Ohio nonpoint source base funds are also used by Ohio EPA to make subgrants to the Ohio Department of Natural Resources, Division of Soil & Water Resources to administer ODNR's base NPS program as well as support for the Watershed Coordinator Grants Program.

Despite additional cuts to base funding levels, Ohio EPA was able to maintain level staffing for the NPS Program area due in part to two retirements to district NPS program staff that were not replaced. As a result, central office NPS program staff completed the following grants management and administrative activities during the reporting period:

- Ohio EPA currently administers 64 active section 319 subgrants totaling more than \$13.8 million in federal section 319 grant funding. These section 319 subgrants span 5 grant cycles from FY08 through FY12.
 - Ohio EPA's NPS Program staff continues to close out subgrants in a timely and efficient manner. During the reporting period, 16 local subgrants were closed from 5 previous grant cycles. The following Section 319 subgrants were closed during the reporting period:
 - #07(h)EPA-15 River Institute-Clover Groff Stream Restoration (Latham Park)
 - #08(h)EPA-06 Bainbridge Township Trustees-Kenston Dam Removal
 - #08(h)EPA-15 Rural Action-Sunday Creek AMD Abatement Project
 - #08(h)EPA-16 Five Rivers Metroparks-Englewood Low Dam Removal
 - #08(h)EPA-19 Nature Conservancy-Big Darby Creek Headwaters Restoration
 - #08(h)EPA-22 Greene County Sanitary Engineer-Massie Creek Restoration
 - #08(h)EPA-33 Holmes County SWCD-Paint Creek Cover Crop Project
 - #08(h)EPA-34 City of Oxford-Lowhead Dam Removal Project (terminated)
 - Project N234 Ohio State Extension-National NPS Monitoring Workshop
 - #09(h)EPA-05 Ohio State Extension-Social Indicators & Watershed Academy
 - #09(h)EPA-11 Brown County SWCD-White Oak Creek Agricultural BMP Project
 - #09(h)EPA-16 City of Xenia-Little Miami River Streambank Stabilization Project
 - #09(h)EPA-17 City of New Albany-Stream Restoration Project
 - #10(h)EPA-02 ODNR-Core Program Grant
 - #10(h)EPA-03 ODNR-Watershed Coordinator Grant
 - #11(h)EPA-10 Village of Mayfield-Stormwater Demonstration Project
 - NPS Manager and Grants Administrator revised and updated the FY12 Section 319(h) Request for Proposals (RFP), grant application forms, program guidelines and grant review score sheets and criteria. The RFP was distributed on January 31, 2011 with applications due to Ohio EPA by 5/13/11. The RFP resulted in the receipt of 32 applications requesting more than \$6.8 million in FY12 section 319(h) grant funds. Grant applications were submitted and received from the following entities:
 - 14 local governments
 - 4 park districts
 - 7 non-profit organizations
 - 5 soil & water conservation districts
 - 2 state agencies and universities
- The revised FY12 section 319(h) RFP resulted in the submission of the following types of proposed projects:
- 1 agricultural project
 - 2 dam removal projects
 - 1 inland lake management project
 - 11 stormwater demonstrations
 - 14 stream restorations
 - 2 acid mine drainage abatement projects
 - 1 conservation easement projects
- Prepared and executed 14 FY12 Section 319(h) subgrant work plans, grant agreements and other supporting documents. All FY12 subgrant agreements have been fully

executed and project work is beginning to get underway. A listing of FY12 Section 319 grants awarded during the reporting period may be found in Table 1-1 below:

Table 1-1
 FY12 Section 319(h) Subgrants Grants
Subgrants Awarded during FFY 2012

Project Number	Project Sponsor	Type of Project	Total 319 Grant Amount Awarded
#12(h)EPA-03	Ohio State University Extension	Statewide Outreach	\$25,000
#12(h)EPA-10	City of Wadsworth	Stormwater Demonstration	\$134,280
#12(h)EPA-18	Greene County Park District	Stream Restoration	\$226,962
#12(h)EPA-19	City of Elyria	Stream Restoration	\$260,586
#12(h)EPA-20	City of New Franklin	Stormwater Demonstration	\$186,800
#12(h)EPA-22	TMACOG	Stream Restoration	\$80,471
#12 (h)EPA-23	The River Institute	Stream Restoration	\$214,306
#12(h)EPA-24	Huff Run Watershed Restoration Partnership	Acid Mine Drainage Abate	\$326,900
#12(h)EPA-25	Ohio Valley Conservation Coalition	Stream Restoration	\$318,336
#12(h)EPA-27	City of New Albany	Stormwater Demonstration	\$230,885
#12(h)EPA-28	Franklin County Metroparks	Stream Restoration	\$308,220
#12(h)EPA-33	Metroparks Serving Summit County	Stream Restoration	\$326,900
#12(h)EPA-36	Holden Arboretum	Stream Restoration	\$163,400
#12(h)EPA-WRRSP	City of Columbus	Stream Restoration	Match Only
TOTALS			\$2,803,046

- NPS grants administrator Martha Spurbeck and administrative assistant Jo Hodanbosi continue to be timely and thorough in maintaining section 319 subgrant funded project updates in the Grants Reporting and Tracking System (GRTS). Ohio’s mandatory elements exception reports continue to note very few (if any), missing elements in GRTS.
- All load reduction estimates have been calculated and updated in the federal Grants Tracking System (GRTS). *(Please refer to Tables 2-1 through 2-9 for respective load reduction updates).*
- Ohio EPA established a process for subgrant payments that closely aligns with federal guidelines. Subgrantees may request payments only after costs have been “invoiced and incurred”. This revision first implemented during 2010 is designed to transition subgrantees to a reimbursement process. To date this process has been received favorably from subgrantees. One important observation is that many current section 319(h) funded subgrantees are managing their grant as a straight reimbursement grant.

As a result, Ohio EPA's grants cash management and subgrant administration continues to improve from previous practices.

- During the reporting period, DSW Nonpoint Source Program staff processed 78 Section 319 grant payment requests; received, reviewed and processed 71 semi-annual technical reports; 156 quarterly fiscal reports and closed out 11 subgrants. All subgrantees are current with required reports as of this date.
- Prepared and executed 5 section supplemental 319(h) subgrant work plans, grant agreements and other supporting documents re-programming previously unspent FY09 and FY10 subgrant funding. These were projects submitted and scored with the FY12 application cycle that are shovel-ready. All of these projects were added following submittal and approval by Region 5 NPS program staff. These re-programmed projects include the following:
 - #09(h)EPA-25: City of Lebanon-Stormwater Demonstration
 - #09(h)EPA-26: Bath Township-Wetland Restoration
 - #09(h)EPA-27: Liberty Township-Stormwater Demonstration
 - #09(h)EPA-28: ODNR-Alum Creek State Park-Stormwater Demonstration
 - #10(h)EPA-21: City of Pickerington—Streambank Stabilization & Stream Restoration
- Ohio EPA's Public Involvement Center prepared and released section 319(h) subgrant announcements to local media outlets in an effort to expand community awareness of the projects that are being implemented. News releases were prepared and distributed to local and statewide media outlets for all awarded section 319(h) subgrants in May 2012.
- Conducted subgrant project update meetings and site visits with 22 local Section 319 subgrantees. Project update meetings and site visits are designed to insure that adequate progress is being made on grant funded projects and to provide any technical assistance that may be needed to support project implementation. It is during these visits where we may also work with subgrantees to make the necessary revisions to insure that projects will be completed in a timely manner.
 - #07(h)EPA-15: Rivers Institute Clover Groff Stream Restoration Project
 - #07(h)EPA-24: City of Delaware-Olentangy Tributary Daylighting & Restoration
 - #08(h)EPA-06: Bainbridge Township-Kenston Lake Dam Removal
 - #08(h)EPA-11: Cuyahoga County SWCD-East Br. Euclid Creek Dam Removal
 - #08(h)EPA-22: Greene County Sanitary Engineer-N. Fork Massie Creek Project
 - #08(h)EPA-29: Chagrin Falls IVEX Dam Removal Project
 - #08(h)EPA-35: Franklin County SWCD Waterman Farms
 - #09(h)EPA-11: Brown County SWCD-Sterling Run Project
 - #09(h)EPA-13: City of Marysville Town Run Restoration (reactivated)
 - #09(h)EPA-15: Mill Creek Watershed Partners Confluence Project
 - #09(h)EPA-16: City of Xenia Little Miami River Restoration Project
 - #09(h)EPA-18: ODNR-Parks & Recreation GLSM Fall Alum Demonstration
 - #09(h)EPA-20: University of Toledo-Ottawa River Stream Restoration
 - #09(h)EPA-23: ODNR-Parks & Recreation GLSM Spring Alum Demonstration
 - #09(h)EPA-27: Liberty Township-Liberty Park Stormwater Demonstration
 - #10(h)EPA-07: City of Fremont-Ballville Dam Removal and Stream Restoration
 - #10(h)EPA-14: City of Mason-Stream Restoration
 - #10(h)EPA-17: City of Akron-Little Cuyahoga River Stream Restoration

- #10(h)EPA-14: Summit County Metroparks-Furnace Run Restoration
 - #10(h)EPA-20: Mercer County Commissioners Prairie Creek Treatment Train
 - #11(h)EPA-07: Bath Township Trustees-Wetland Restoration
 - #11(h)EPA-10: Village of Mayfield Stormwater Demonstration Project
 - #11(h)EPA-18: City of Columbus-Fifth Avenue Dam Removal
 - #11(h)EPA-21: Toledo Botanical Garden-Dam Removal and Stream Restoration
- Provided technical assistance to 30 local governments, watershed groups and others, including:
 - City of Columbus
 - Buckeye Lake State Park
 - Buckeye Lake for Tomorrow
 - Greene County Parks District
 - Erie County Soil & Water Conservation District
 - Lorain County Soil & Water Conservation District
 - Ohio State University Extension
 - City of Lebanon
 - Buckeye Lake for Tomorrow
 - Liberty Township
 - Chagrin River Watershed Partners
 - Bath Township
 - ODNR-Division of Parks and Recreation
 - Buckeye Lake State Park
 - Grand Lake St. Marys State Park
 - Grand Lake St. Marys Restoration Commission
 - Franklin County Soil & Water Conservation District
 - Chadwick Arboretum-Ohio State University
 - City of Fremont
 - City of Toledo
 - City of Marysville
 - Knox County Engineer
 - City of Mount Vernon
 - ODNR-Scenic Rivers Program
 - Franklin County Metroparks
 - University of Toledo
 - Park Works Cleveland
 - Rural Action Organization-Southeast Ohio
 - Defiance County SWCD
 - Crawford County SWCD
 - WSOS Fremont, Ohio
 - ODNR-Division of Parks & Recreation
 - ODNR-Office of the Chief Engineer
 - Fairfield County SWCD
 - Continued to maintain a subgrant “Expenditure-to-Date” report for active grants that allows for effective subgrant fund management and helps to insure compliance with federal cash management requirements. We also are maintaining a “Grants Closed Out to Date” report that tracks similar information for grants that have been closed out.
 - Under the fourth year of a memorandum of agreement with the Ohio Department of Natural Resources Office of Internal Audits, auditors will be performing financial compliance reviews of 10 section 319 subgrantees during the upcoming year. We will be forwarding a new list of subgrantees to be audited during FFY13.

- Russ Gibson and Martha Spurbeck updated and issued the FY13 Section 319 Request for Proposals on 3/21/12. Applications were due 5/13/12 and resulted in the submission of 23 proposals requesting more than \$6.7 million in grant funding assistance. Based on projected allocations, this amount is more than double what Ohio EPA anticipates having available for subgrant projects. The review of these applications by NPS Program staff and others is ongoing.

2010 Surface Water Improvement (SWIF) Grants—Statewide Program

Ohio's Nonpoint Source Program is completing a highly successful first round of Surface Water Improvement Fund (SWIF) grants projects. The SWIF program enhances Ohio EPA's nonpoint source efforts by providing more than \$3 million in additional funding available for locally implemented nonpoint source, stream restoration and innovative stormwater management projects. During our first SWIF cycle in 2010, we received 132 applications from interested parties and implementers from around the state. More than \$20 million in grant funds were requested. 19 Statewide SWIF grants were awarded totaling nearly \$1 million for the following types of activities:

- 2 Stream restoration projects
- 2 Wetlands restoration projects
- 14 Stormwater projects
- 1 Green Roof project

During the reporting period, Ohio EPA NPS Program staff effectively managed the implementation and administration of active and ongoing 2010 statewide SWIF subgrants. Activities completed during the reporting period include:

- Implementation of SWIF funded projects is nearing completion with only three SWIF grant funded projects still open and active. Active projects still remaining include:
 - #10SWIF-066: The Wilds
 - #10SWIF-094: Chester Township
 - #10SWIF-145: Liberty Township
- During the reporting period, 319 Grants Administrator Martha Spurbeck and NPS Program Manager Russ Gibson completed site visits at the following FFY10 SWIF grant recipients:
 - #10SWIF-012: Bath Township Pervious Pavement Treatment Train
 - #10SWIF-145: Liberty Township Wildcat Run Stream Restoration
 - #10SWIF-148: City of Lancaster Deeds Wetland Restoration Project
 - #10SWIF-044: City of Dublin Green Roof Project
 - #10SWIF-111: Portage County Commissioners Stormwater Demonstration Project
 - #10SWIF-097: Portage County Park District Stream Restoration Project
 - #10SWIF-098: Concord Township Stormwater Demonstration Project
 - #10SWIF-094: Chester Township Stormwater Demonstration Project



Rain Gardens such as this one demonstrated at Liberty Park in central Ohio, are effective tools at passively treating roof runoff and other surface flows that can contribute to water quality problems. SWIF grants funded multiple rain gardens throughout Ohio.



Green Stormwater Demonstration Projects funded with SWIF Grants

The Surface Water Improvement Fund Grants provide Ohio's Nonpoint Source Program with vital funding for implementing innovative stormwater management demonstration projects such as these "treatment trains" being installed at the Chester Township Governmental Center and North Olmsted City Hall (right). These projects are important tools for informing residents and potential developers with alternatives to traditional stormwater management practices. Unmanaged stormwater is a significant cause of nonpoint source impairment in Ohio's urban and suburban streams.

subgrant payment requests, 26 semi-annual technical reports, 156 quarterly fiscal reports and final reports and payments for . Additionally, all Surface Water Improvement Fund project summaries were updated with data received from semi-annual progress reports. The Ohio EPA NPS website was updated with most recent implementation data received from subgrant project managers.

- Table 1-2 below identifies all statewide SWIF grants that were successfully completed and closed out during the reporting period.

Table 1-2
Ohio Environmental Protection Agency
STATE Surface Water Improvement (SWIF) Grants
Subgrants Closed Out during FFY 2012

Project Number	Project Sponsor	Total SWIF Amount Awarded	Total SWIF Expenditures	% Spent	Date Closed
#10SWIF-GLSM-53	City of Piqua	\$149,484	\$117,664	79%	12/20/11
#10SWIF-044	City of Dublin	\$50,560	\$50,560	100%	02/08/12
#10SWIF-062	Knox County	\$49,957	\$46,672	93.5%	07/12/12
#10SWIF-063	Granville Township	\$39,847	\$34,975	87.8%	08/22/12
#10SWIF-073	Tuscarawas County SWCD	\$6,255	\$5627	90%	06/04/12
#10SWIF-097	Portage County Park District	\$46,496	\$46,496	100%	07/18/12
#10SWIF-098	Concord Township	\$61,644	\$59,202	96%	08/31/12

Project Number	Project Sponsor	Total SWIF Amount Awarded	Total SWIF Expenditures	% Spent	Date Closed
#10SWIF-111	Portage County Commissioners	\$33,954	\$33,954	100%	04/04/12
#10SWIF-118	Mill Creek Metroparks	\$10,850	\$9,827	90.6%	07/03/12
#10SWIF-148	City of Lancaster	\$150,000	\$139,670	93.1%	07/06/12
#10SWIF-151	City of Eastlake	\$64,479	\$49,493	76.8%	06/13/12
#10SWIF-162	Athens County SWCD	\$7,710	\$4,796	62.2%	07/06/12
TOTALS		\$523,249	\$458,263	87.5%	



Surface Water Improvement Fund grants provide Ohio EPA with the opportunity to assist communities and other large land-holders such as park districts, to begin the transition from gray stormwater infrastructure to green stormwater practices such as this demonstration rain garden installed under project #10SWIF-118.

Following the success of the 2010 SWIF program, Ohio EPA released a second SWIF grant Request for Proposals on 1/23/12. In response, we received 55 applications requesting more than \$3.7 million for a variety of stream restoration, stormwater demonstration and other types of nonpoint source management projects. The SWIF guidelines and eligibility mirror Ohio's Section 319 program grants—as a result, NPS efforts in Ohio are nearly double what they would be if NPS implementation funding was limited to section 319 funds.

Activities associated with the FY2012 statewide SWIF grants application process completed during the reporting period were:

- FY12 Surface Water Improvement Fund grant information sessions were conducted by Grants Administrator Martha Spurbeck and NPS Program Manager Russ Gibson the following dates:
 - 2/09/12—Northeast District Office SWIF Presentation-68 participants
 - 2/19/12—Southwest District Office SWIF Presentation-10 participants
 - 2/23/12—Central District Office SWIF Presentation-12 participants
 - 2/24/12—Northwest District Office SWIF Presentation-22 participants
- NPS program staff prepared 16 FY12 statewide SWIF grant work plans, grant agreements and other supporting documents. The total SWIF funds awarded for these 16 projects totals more than \$1,028,189. Table 1-3 below lists the FY12 statewide SWIF recipients:

Table 1-3
Ohio Environmental Protection Agency
FY12 STATE Surface Water Improvement (SWIF) Grants

Project Number	Project Sponsor	Type of Project	Total SWIF Amount Awarded
#12SWIF-05	City of Springfield	Stormwater Demonstration	\$15,000
#12SWIF-06	Village of Boston Heights	Stormwater Demonstration	\$78,900
#12SWIF-09	Clermont County Park District	Wetland Restoration	\$85,800
#12SWIF-10	City of Cuyahoga Falls	Stream Restoration	\$89,887
#12SWIF-11	City of Greenville	Stormwater Demonstration	\$11,800
#12SWIF-12	City of Gahanna	Stormwater Demonstration	\$60,000
#12SWIF-16	City of Green	Wetlands Restoration	\$100,000
#12SWIF-24	Chardon Township	Stream Restoration	\$96,070
#12SWIF-25	City of Painesville	Stormwater Demonstration	\$63,600
#12SWIF-31	City of Willoughby Hills	Stormwater Demonstration	\$80,750
#12SWIF-36	Cincinnati Park Board	Stormwater Demonstration	\$72,000
#12SWIF-37	Perkins Township	Stormwater Demonstration	\$88,480
#12SWIF-39	City of Forest Park	Stream Restoration	\$49,157
#12SWIF-42	Hamilton County Park District	Stormwater Demonstration	\$42,515
#12SWIF-48	Village of Kirtland Hills	Stormwater Demonstration	\$50,000
#12SWIF-50	Village of Fairport Harbor	Stormwater Demonstration	\$44,200
TOTALS			\$1,028,159

2010 GLRI /SWIF Grants—Cuyahoga County

Ohio EPA's Nonpoint Source Program staff was successful in obtaining a 2010 grant from US EPA's Great Lakes Program Office under provisions of the Great Lakes Restoration Initiative. Using \$1.5 million in Surface Water Improvement Fund money as a matching share, Ohio's GLRI grant for 2010 was \$1 million in federal funding. Funds were for stormwater demonstration projects and other nonpoint source management activities within Cuyahoga County in northeast Ohio. 13 projects were able to be funded with subgrants with an aggregate total exceeding \$1.6 million.



Surface Water Improvement Fund (SWIF) grants are excellent tools to help local governments solve water quality problems caused by nonpoint source pollution. This previously severely eroded stream bank on the Chagrin State Scenic River in the village of Hunting Valley was stabilized using funding under project #10GLRI-CUY-068.

Vegetated "rip-rap" and other bioengineering methods will reduce sediment and nutrient loadings to the Chagrin River as well as prevent further degradation of the riparian area.

During the reporting period Ohio EPA continued to implement provisions of federal grant number #GL-00E00395 and continued to monitor, manage and administer subgrants awarded under this grant. Detailed project summaries for all FY10 Cuyahoga County being implemented under provisions of this grant are available at <http://www.epa.state.oh.us/dsw/nps/swif.aspx> and fact sheets for completed GLRI-SWIF projects are included in later sections of this report.

Other FY10 GLRI-SWIF project specific activities conducted by NPS Program staff during the reporting period include:

- Ohio EPA continued to successfully administer subgrant agreements that were awarded under this grant during previous reporting periods. Currently there are six (6) subgrants that are active. To date, nine projects (9) have been completed and closed out, including four projects that were closed out during this reporting period. Table 1-3 below lists those FY10 GLRI-SWIF subgrants that were closed.
- Prepared and executed one additional FY2010 SWIF GLRI Cuyahoga County grant work plan, grant agreement and other supporting documents necessary to re-program previously unspent FY10 SWIF grant funds. Ohio NPS Program Staff terminated Project #10GLRI-CUY-075 the Land Studio (formerly ParkWorks) due to lack of progress. The unspent funds from this project were re-programmed to city of North Olmsted to enhance stormwater demonstration practices that they are implementing on city facilities.

- The third semi-annual report for GL-00E00395 was completed and submitted to US EPA on 4/15/12. All necessary data updates were completed in the GLNPO-GLAS database by Grants Administrator Martha Spurbeck.
- NPS Program Staff completed site visits with the following subgrant recipients during the reporting period. These site visits included:
 - Village of Hunting Valley #10GLRI-CUY-068
 - ParkWorks #10GLRI-CUY075 (Project terminated by OEPA)
 - Cleveland Metroparks Zoo #10SWIF-CUY-061
 - Village of Gates Mills #10WIF-CUY-067
 - City of Cleveland Heights #10SWIF-CUY-102
 - City of Mayfield Heights #10SWIF-CUY-034
 - City of Seven Hills #10SWIF-CUY-083
 - City of Broadview Heights #10SWIF-CUY-027
 - City of North Olmsted #10GLRI-CUY-173
 - Village of Glenwillow #10GLRI-CUY-082



This large vegetated bioswale at the Cleveland Metroparks Zoo will passively treat stormwater runoff from a very large impervious parking area. This feature demonstrates that green infrastructure can be effective and attractive. This project was completed by Cleveland Metroparks under GLRI-SWIF project #10SWIF-CUY-061.

Table 1-4
Ohio Environmental Protection Agency
Cuyahoga County SWIF-GLRI Grants
Subgrants Closed Out during FFY 2012
Grants closed out through 07/18/12

Project Number	Project Sponsor	Total SWIF Amount Awarded	Total SWIF Expenditures	% Spent	Date Closed
#10GLRI-CUY-039	City of Cleveland	\$260,157	\$260,157	100%	06/20/11
#10SWIF-CUY-083	City of Seven Hills	\$256,530	\$250,173	97.5%	09/30/11
#10SWIF-CUY-049	City of North Olmsted	\$196,028	\$196,028	100%	07/05/12
#10SWIF-CUY-061	Cleveland Metroparks	\$181,000	\$181,000	100%	08/23/12
#10SWIF-CUY-102	City of Cleveland Heights	\$238,726	\$231,583	97%	05/15/12
TOTALS		\$1,100,925	\$1,055,605	95.8%	

- FY10 GLRI-SWIF project summaries have been updated to include most recent information provided in semi-annual progress reports. Where applicable, photographs have been included to update and document progress.
- On 10/5/11 Ohio EPA's NPS Program hosted Region 5 Water Director Tinka Hyde, Assistant Director Tim Henry, and National NPS Expert Tom Davenport for tours of completed GLRI-SWIF innovative stormwater demonstration projects. Host sponsor communities included the city of Cleveland Heights, Mayfield Heights, Seven Hills and North Olmsted.
- On 2/27/12 Ohio EPA's NPS Program hosted a green stormwater BMP tour with staff from the Ohio State Parks, ODNR Chief Engineer's Office, and representatives from the Buckeye Lake for Tomorrow nonprofit organization. We visited GLRI-SWIF project sites in Glenwillow, Mayfield Heights, Cleveland Heights as well as a FY10 Section 319 project site in the village of Mayfield. We also visited a statewide SWIF project site at Bath Township in Summit County. Participants were enthusiastic and local hosts were highly effective at conveying their project's attributes and challenges. Amy Holtshouse Brennan from the Chagrin River Watershed Partners served as a most enthusiastic and helpful local tour guide.
- All required updates to the GLAS database system were completed by Ohio EPA grants staff. As of our most recent entry all project files within GLAS are complete and up to date.



Region 5 Water Director Tinka Hyde, North Olmsted Mayor Kevin Kennedy and Ohio EPA Surface Water Chief George Elmaraghy discuss features of the project completed under GLRI-SWIF grant #10SWIF-CUY-049.

In response to the highly successful FY10 GLRI-SWIF Cuyahoga County projects, Ohio EPA released a Cuyahoga County SWIF Request for Proposal (RFP) on 1/09/12. Applications were

due on 3/31/12 and in response to this RFP Ohio EPA received 23 project proposals requesting more than \$2.9 million in grant assistance. Ohio EPA currently has about \$1.4 million in Surface Water Improvement Funds available for Cuyahoga County project grants. However, we have again applied for FY12 GLRI funds to enhance this program as we did in FY10. We are currently awaiting the results of the FY12 GLRI process. If we are successful in obtaining FY12 GLRI funding, then Ohio EPA will be able to provide grant funding assistance to projects listed in Table 1-4 below:

Table 1-4
Ohio Environmental Protection Agency
FY12 RECOMMENDED Cuyahoga County GLRI-SWIF Grant Projects
(Assumes receipt of an FY12 GLRI Grant)

Project Number	Project Sponsor	Type of Project	Total GLRI- SWIF Amount Recommended
#12SWIF-CUY-02	City of South Euclid	Stormwater Demonstration	\$166,015
#12SWIF-CUY-03	Orange Village	Stormwater Demonstration	\$162,270
#12SWIF-CUY-07	Moreland Hills	Stream Restoration	\$144,500
#12SWIF-CUY-08	Cleveland Metroparks	Stormwater Demonstration	\$85,000
#12SWIF-CUY-09	City of Parma	Stormwater Demonstration	\$149,164
#12SWIF-CUY-16	City of Lakewood	Stormwater Demonstration	\$150,000
#12SWIF-CUY-17	Olmsted Township	Stormwater Demonstration	\$45,807
#12SWIF-CUY-18	Village of Pepper Pike	Stormwater Demonstration	\$84,354
#12SWIF-CUY-19	City of Independence	Stormwater Demonstration	\$72,850
#12SWIF-CUY-20	Village of Brooklyn Heights	Stormwater Demonstration	\$84,300
#12SWIF-CUY-22	City of Westlake	Stormwater Demonstration	\$200,000
#12SWIF-CUY-23	Chagrin Falls	Stormwater Demonstration	\$73,000
#12GLRI-CUY-06	Ursulines College	Stream Restoration	\$100,810
#12GLRI-CUY-10	City of Euclid	Stormwater Demonstration	\$122,000
#12GLRI-CUY-11	Village of Glenwillow	Stormwater Demonstration	\$53,358
#12GLRI-CUY-14	City of Rocky River	Stormwater Demonstration	\$170,354
#12GLRI-CUY-21	City of Richmond Heights	Stormwater Demonstration	\$187,500
TOTALS			\$2,051,282

- NPS Program Manager prepared an FY12 GLRI-SWIF application for Cuyahoga County GLRI-SWIF project. This application was prepared following receipt of applications for the FY12 Cuyahoga County GLRI-SWIF project and submitted to US EPA GLNPO through the Grants.gov website on 05/23/12.
- Russ Gibson also prepared an FY12 GLRI-SWIF application for a special Lucas County Stormwater Demonstration Project. This project was prepared following receipt of project concept proposals and submitted to the US EPA GLNPO through the Grants.gov website on

5/23/12. Should we be successful with this grant, we will be implementing a project similar to the Cuyahoga County GLRI-SWIF in Toledo and throughout the general Lucas county area.

- Russ Gibson and Martha Spurbeck conducted a Cuyahoga GLRI-SWIF Information Session at the Ohio EPA Northeast District Office in Twinsburg Ohio on 2/9/12. 68 participants from a number of local municipalities, park districts and others attended.
- Revised and prepared application review administrative and technical criteria for reviewing and scoring the Cuyahoga SWIF applications. Of the 23 proposals, we are able to provide grant funding for 17 of the applicants (if we are successful receiving FY12 GLRI funding) or 12 applicants if we are not successful with FY12 GLRI funding.
- Prepared seventeen 2012 Cuyahoga County GLRI-SWIF grant work plans, grant agreements and other supporting documents with project funding totaling \$2,051,282.



Innovation, information and affordable solutions characterize the stormwater demonstration projects funded under provisions of the FY10 Cuyahoga County GLRI-SWIF Grant Project. From left to right above: bio-retention rain garden in Gates Mills, educational sign in Broadview Heights and pervious pavers and bio-retention areas at North Olmsted City Hall. The photo below features the city of Mayfield Heights City Service Center Rain Garden.



FY11 GLRI-Lake Erie Nutrient Reduction Project

Ohio EPA's Nonpoint Source Program submitted an application and received an FY11 Great Lakes Restoration Initiative Grant to implement the Lake Erie Nutrient Reduction Demonstration Project within the HUC12 Loss Creek subwatershed within the Sandusky River basin. This project effectively demonstrates the value of targeting limited funding into highly concentrated land areas to produce measurable reductions in nitrogen, phosphorus and sediment loadings to streams in agricultural areas. This project is a fully collaborative initiative between Ohio EPA-Nonpoint Source Program, Crawford County Soil & Water Conservation District, the Sandusky Watershed Coalition, Ohio State Extension and local NRCS staff.



Loss Creek is a small tributary to the Sandusky River within Crawford County, OH.

The foundation of this project lies within the completion of whole farm conservation plans on approximately 10 farms within the project area. In an deviation from traditional NRCS-type agricultural programs, this project will reward farmers who implement nutrient reduction practices by providing incentive payments for actual measured reductions in nitrogen and phosphorus in their soils. Ohio State University Extension will also be participating by conducting social indicator surveys to measure changes in farmers' attitudes and behaviors resulting from participation in this project.

During the reporting period the following activities were completed:

- Ohio EPA's Ecological Assessment Unit completed baseline monitoring within the HUC12 Loss Creek subwatershed. This monitoring included examination of physical and biological conditions within the project area including assessments of macro-invertebrates, fish and physical habitat conditions.
- Members of Ohio EPA's northwest district office in Bowling Green completed water chemistry monitoring within the project area.
- Reviewed submitted subgrant work plans from Crawford SWCD, Sandusky Watershed Coalition and Ohio State Extension and prepared and executed subgrant agreements including budgets, deliverables and final approved work plans. All subgrants proposed under this project have been fully executed and implementation is underway.
- Martha Spurbeck received and processed 3 payment requests, 6 quarterly fiscal reports and 3 semi-annual technical reports.



Mike Hall from the Crawford County Soil & Water Conservation District talks with the media following the first nutrient reduction field day conducted as part of the Lake Erie Nutrient Reduction Demonstration Project.

- Rick Wilson, Russ Gibson and Martha Spurbeck met with project partners from Crawford SWCD, OSU Extension and Sandusky Watershed Coalition to go through grant reporting and administrative requirements and to identify and coordinate “steps forward” for kicking the project off.
- Russ Gibson and Rick Wilson met with Mike Hall from Crawford County SWCD on 10/3/11 to follow up with concerns that were conveyed by Region 5 with the original “incentive payment” proposal that Mr. Hall submitted. Following discussion, a revised approach was proposed that was agreeable to Region 5, Ohio EPA and Crawford SWCD.
- Rick Wilson participated with OSU Extension in a planning session for developing the social indicator component of this project. Extension is taking lead on this and is building on the survey work that was completed previously in other sections of the Sandusky River watershed. The surveys being developed currently focus on farmer attitudes prior to and following the completion of Whole Farm Conservation Plans.
- Preliminary cost-share and BMP sign-up information from Crawford County SWCD indicates that following:
 - 4 Producers have enrolled in drainage water management BMPs for 170 acres
 - 4 Producers have committed to plant 642 acres of cover crops this fall
 - 8 producers will complete resource management plans on 1667 acres
- The first FY11 GLRI Loss Creek Nutrient Reduction Demonstration Project semi-annual technical report was completed and submitted to Region 5 in January 2012.
- The second FY11 GLRI Loss Creek Nutrient Reduction Demonstration Project semi-annual technical report was completed and submitted to Region 5 in July 2012.

FY11 Buckeye Lake Nutrient Reduction Demonstration Project

Buckeye Lake was constructed as one of five Ohio canal feeder lakes in the 1800’s. Buckeye Lake is a heavily used recreational lake with Buckeye Lake State Park experiencing more than 500,000 visitors per year. The lake is quite shallow, averaging only 6 feet and is exhibiting signs of advanced eutrophication. Symptoms regularly observed in the lake include turbidity, high chlorophyll a levels (>80 µg/L) and large swings in dissolved oxygen levels during the summer.

The Buckeye Lake Nutrient Reduction Project is a critical component of Ohio’s statewide nutrient reduction efforts serving as an important demonstration of dealing with nutrient related issues in the state’s inland lakes which serve as depositories for nutrients flowing from the landscape in tributary streams.



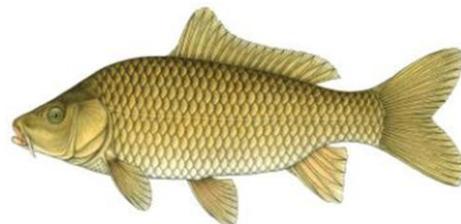
Ohio EPA NPS Program Manager Russ Gibson addresses the audience at the first of two public meetings that are being conducted to inform area residents on the water quality improvement activities that are taking place with this project.

- Ohio EPA NPS program staff continues to work very closely with the Ohio Department of Natural Resources-Division of Parks & Recreation, and representatives from the Buckeye Lake for Tomorrow group to monitor conditions at Buckeye Lake as part of a special initiative funded by US EPA and Ohio EPA. The Buckeye Lake Nutrient Reduction Project is specifically designed to reduce nutrient inputs flowing into Buckeye Lake and to help reduce the likelihood of harmful algae blooms in the future.



NPS staff Rick Wilson and DSW Modeling Unit staff deployed two YSI Sondes Units to provide up-to-the-minute water conditions at Buckeye Lake as part of the Buckeye Lake Nutrient Reduction Project.

- NPS Program Manager Russ Gibson and Martha Spurbeck, Grants Administrator conducted a project kick-off site visit on 10/19/11 and provided technical assistance on visits conducted with representatives of Buckeye Lake for Tomorrow on 1/27/12, and on 2/28/12.
- On 5/3/12 Ohio EPA's NPS Program and Public Involvement Center assisted with and participated in a project information meeting designed to introduce the participating entities and project details to area citizens, legislators and others. NPS Program Manager Russ Gibson made a presentation outlining Ohio EPA's participation. Other speakers included Hal Harper, Manager of Buckeye Lake State Park, Jonathan Ferbrache of the Fairfield County SWCD, the president of Buckeye Lake for Tomorrow and Merv Bartholow, Lake Coordinator. Approximately 40 citizens attended this meeting including two or three elected officials.
- The first draft of the Buckeye Lake Watershed Nutrient Reduction Plan has been submitted to Ohio EPA for review and comment. Following review by OEPA suggestions were provided to clarify and improve the viability of the plan moving forward. The next step will involve review and comment from other stakeholders. The second revised draft is anticipated to be submitted by December 30, 2012.
- On 5/14/12 a special bio-remediation demonstration project was conducted in Thornport Harbor, located at the east end of Buckeye Lake. This project involved the introduction of microbes into the sediment and water column. Effectiveness monitoring of this demonstration was completed by Ohio EPA Nonpoint Source Program and Central District Office staff. Preliminary results suggest that the formula that was applied to the demonstration area was not effective in reducing phosphorus or blue-green algae concentrations. A report is being prepared by Rick Wilson summarizing the findings.
- During the weekend of 6/8/12 the 2nd annual Buckeye Lake Carp Fest was held. This project has proven to be a very well received fun way that individuals may become involved in reducing nutrients in Buckeye Lake. This year more than 250 participants removed 2800 pounds of carp. The largest fish removed was nearly 21 pounds and the largest creel was more than 200 pounds. In the two years this event has been conducted, more than 5000 pounds of carp have been harvested from Buckeye Lake.



- The Buckeye Lake for Tomorrow website was updated to include pages specific to the Nutrient Reduction Project. Subheadings on the site include the following:
 - In-Lake Monitoring
 - Tributary Monitoring
 - Community Outreach
 - Demonstration Projects
 - Implementation Plans

For additional details please see www.BuckeyeLakeforTomorrow.org.

- One lakefront homeowner's workshop was conducted with the Cranberry Bay Homeowners Association on 5/19/12. The workshop was a follow up to the 5/3/12 public meeting in which additional questions were addressed and Merv Bartholow was able to promote the lakefront homeowners rain barrel workshop that is scheduled for 8/29/12 with this group.
- A project specific newspaper insert was created and published in the Buckeye Lake Beacon. More than 15,000 copies were distributed to residents within the Buckeye Lake area.
- 5,000 copies of a project-specific trifold brochure have been printed for distribution to interested citizens. The brochure was produced with the assistance of BLT Board members, ODNR personnel and Ohio EPA NPS Program staff.
- On 2/29/12 Merv Bartholow, Hal Harper and Scott Fletcher from the ODNR State Parks as well as a representative of ODNR's Office of the Chief Engineer attended a green stormwater field day with Ohio EPA NPS Program staff. Five different communities were visited in which multiple examples of green stormwater BMPs such as rain gardens, bioswales and pervious pavement were being demonstrated. This field day was organized by Ohio EPA NPS Program staff as a technical service and assistance to the Buckeye Lake State Park personnel who will be having stormwater demonstration practices installed at the park during 2012 and/or 2013.
- Fairfield SWCD has also scheduled the first and second rain barrel workshops targeted at lakefront homeowners. It was decided very early on that engaging all segments of the Buckeye Lake "community" was critical to the project's success. As a result, we decided to develop a rain barrel cost-share component of the project that will enable homeowners to purchase a high quality rain barrel kit for about \$20. The first workshop is scheduled for 8/29/12 and has about 20 homeowners registered. The second workshop will be scheduled soon.

- Buckeye Lake Coordinator Merv Bartholow continues to work very closely with area residents, Ohio EPA, the Ohio State Parks Staff and Fairfield SWCD to insure successful implementation of the Buckeye Lake Nutrient Project. His addition as staff to Buckeye Lake for Tomorrow is proving to be valuable to the success of the project.

Drought conditions throughout much of Ohio during the summer of 2012 made for low water flows and an expedited completion of the tile outlet mapping work that Fairfield SWCD is performing under a subgrant awarded by Ohio EPA.



- Under provisions of Fairfield SWCD project # Buck11-03, members of the SWCD staff completed geo-locating drain tile outlets in the Feeder Creek leading into Buckeye Lake. This component of the Buckeye Lake Nutrient Reduction project is designed to better understand contributors to the lake inflows and will be useful in mapping outlets for future reference.



Water quality monitoring being provided by Jeff Bohne and water quality staff from Ohio EPA's Central District Office and others plays a vital role in better understanding the conditions influencing water quality in Buckeye Lake.

Ohio EPA's Healthy Rivers Initiative

Ohio's nonpoint source management program focuses most activities on restoring impaired waters and reducing the impacts of nonpoint source pollution on surface water quality. However, it has long been acknowledged that restoring impaired waters accomplishes little if it is done at the expense of allowing high quality waters to decline. As a result, Ohio continues to work ambitiously with land conservancies, nonprofit organizations such as the Nature Conservancy and ODNR's Natural Areas and Scenic Rivers to help protect high quality rivers and streams.



Ohio's healthy rivers initiative focuses on protecting Ohio's highest quality streams. In addition to statutory protections such as through Ohio's Scenic Rivers Law, protection of high quality riparian areas through fee simple land purchase and the acquisition of conservation easements are commonly used tools in Ohio's Healthy Rivers toolbox.

Ohio's healthy rivers initiative dates back to 1968 when Ohio enacted the nation's first state scenic rivers law. Since then, many of Ohio's highest quality rivers receive regulatory protection under Ohio's Scenic Rivers Law, Chapter 1517 of the Ohio Revised Code. Although regulatory authorities are limited, the state scenic rivers law imposes requirements on all public funded projects within 1,000 feet of a state designated river. Rivers that are designated state wild, scenic and/or recreational rivers under Chapter 1517 include:

- Big and Little Darby Creeks
- Olentangy River
- Kokosing River
- Mohican River
- Ashtabula River
- Chagrin River
- Conneaut Creek
- Grand River
- Little Beaver Creek
- Upper Cuyahoga River
- Maumee River
- Sandusky River
- Little Miami River
- Stillwater River/Greenville Creek

Further protection of Ohio's healthy waters is achieved through a strategic allocation of several sources of funding, including setting aside more than 50% of the annual allocation from the Water Resources Restoration Sponsorship Program (WRRSP) for activities such as fee simple acquisition of high quality riparian and wetland areas. This amounts to \$7.5 million annually that

is awarded statewide for land acquisition along high quality waters. Additionally, Ohio EPA has awarded more than \$2.2 million in section 319 sub-grants for the acquisition of conservation easements along high quality waters. Since 2005, more than 2,600 acres of riparian lands and 55 acres of high quality wetlands have been protected in perpetuity by conservation easements acquired with section 319 subgrant funds. Following are several highlighted high quality streams and examples of projects that were implemented:

Chagrin State Scenic River



The Chagrin Scenic River is a high quality river flowing through the glaciated portions of northeast Ohio.

The Chagrin River watershed is located in northeast Ohio, flowing through Portage, Geauga, Cuyahoga, and Lake Counties on its way to Lake Erie. Like most of northeast Ohio, the Chagrin River was shaped by glacial activity thousands of years ago. The resulting soils and geologic deposits contribute to the high quality and varied habitats within the watershed. The 267-square mile watershed is characterized by low rounded hills, scattered end moraines, kettles, and areas of wetlands. More than 70 miles of the stream have been designated as a state scenic river under section 1517 of the Ohio Revised Code. The Chagrin River Total Maximum Daily Load Study was completed and approved in 2007. A state endorsed locally developed watershed action plan was completed and endorsed in 2010.

Stream impacts are generally noted in the tributary streams, while the main stem is in attainment for the most part. The watershed is experiencing significant development pressure as Cleveland's population migrates to outlying suburbs through which the Chagrin flows. It is unique as a scenic river in that the majority of the Chagrin River flows within municipal and other corporation limits. Actions recommended to help reduce these and other water quality problems include storm water management, protection and restoration of riparian and headwater areas, evaluating dams for removal, improving home sewage systems and point source control.

Local stream protection and preservation activities are led by the Chagrin River Watershed Partners and the Western Reserve Land Conservancy. The Chagrin River Watershed Partners (CRWP) is a local non-profit organization representing a coalition of 37 member communities covering nearly 99% of the watershed areas. Member communities pay annual dues to CRWP which represents approximately 30% of CRWP's annual operating budget. The remainder of funding is derived from state, federal and foundation grant funding. CRWP sponsored and/or sanctioned project completed and/or underway within the watershed include:

1. **Stormwater Management Projects:** CRWP has successfully assisted member communities with Ohio EPA Section 319, Surface Water Improvement Fund (SWIF) and Water Resources Restoration Sponsorship Program (WRSSP) grants to implement various projects. Details may be found on CRWP's website at: <http://crwp.org/Projects/Projects.htm>

- Eastlake Service Department Bio-retention Demonstration Project
- Mayfield Heights City Green Stormwater Demonstration Project
- Mayfield Village-Wiley Park Stormwater Demonstration Project
- Chester Township Hall Stormwater Demonstration Project
- Gates Mills Municipal Center and Service Department Stormwater Project

These projects combined resulted in the installation of nearly 12,000 square feet of bio-retention areas, 14,000 square feet of permeable pavement, and more than 2,400 square feet of rain gardens within the Chagrin River watershed.



Managing stormwater runoff with BMPs such as the pervious pavers and bio-retention system is crucial in watersheds such as the Chagrin River where most of the length of the river is flowing through incorporated areas. This project was completed in Mayfield Village under the provisions of section 319-funded project #11(h)EPA-10.

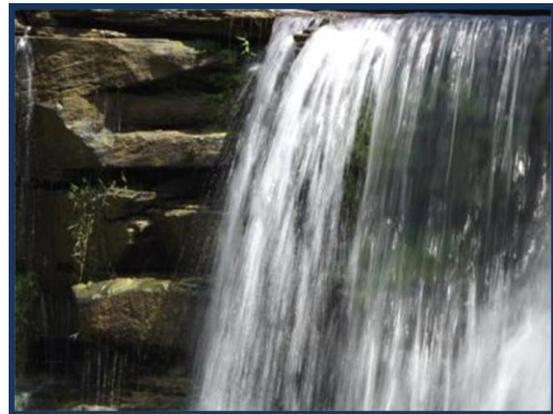
2. **Stream, Wetland and Floodplain Restoration and Protection:** In addition to advancing low impact development and green stormwater infrastructure, CRWP has been a leading advocate of restoration activities within the Chagrin watershed. Projects that have been implemented to protect and/or restore the high quality of the watershed include:

- Kenston Lake Dam Modification and Stream Restoration-Restored 1635 linear feet of coldwater habitat stream and floodplain as well as ¼ acre of wetland areas under provisions of section 319-funded project #08(h)EPA-06..
- Village of Hunting Valley Streambank Stabilization Project-Stabilized 250 linear feet of severely eroding streambank using vegetated “rip-rap” under provisions of project #10SWIF-CUY-068.
- Village of Chagrin Falls Lower IVEX Dam Modification and Stream Restoration-project will be complete December 2012 under provisions of section 319-funded project #08(h)EPA- 29. The project restores more than 2200 linear feet of stream, 10 acres of riparian areas and lowers the existing dam by 10.4 feet. The project also acquired conservation easements on 10 acres.

- Lake Metroparks Pleasant Valley Nursery Riparian Restoration Project-This project will restore nearly 4 acres of riparian wetlands as well as 11 acres of riparian forests along the mainstem of the Chagrin River under the provisions of section 319-funded project #10(h)EPA-10.
- City of Aurora Harmon Homestead Stream Restoration-Under provisions of section 319-funded project #11(h)EPA-14 this project will restore more than 3,100 linear feet of stream, 2.5 acres of wetlands, 17 acres of riparian and wetland buffer and preserve more than 100 acres under conservation easements.
- City of Solon Sulphur Springs Restoration and Assessment Project: Funded in part by a grant from the US Fish and Wildlife Service, CRWP is partnering with Cleveland Metroparks and Trout Unlimited to restore 400 linear feet of stream and riparian corridor impacted by impoundments. This project has been selected as one of Ohio's featured projects for America's Great Outdoors Initiative.

Previous land protection projects completed within the Chagrin watershed using section 319 funding included the acquisition of conservation easements on more than 1400 acres of riparian and headwater areas by the Chagrin Land Conservancy (since renamed Western Reserve Land Conservancy).

The Chagrin River Watershed Partners continue to identify and pursue additional funding to complete additional stream restoration projects. For example, CRWP is currently working with the city of Aurora on a Water Resources Restoration Sponsorship Program project to preserve 186 acres along the Chagrin River and to remove one lowhead dam, restore 7,200 linear feet of stream and protect important corridor along the river within the old Aurora County Club property.



High quality areas of the Chagrin River watershed have been protected using conservation easements acquired with grant funds or as landowner donations.



The IVEX dam site greened up within a few months of notching and lowering of the dam structure. Most of this area was previously impounded by the dam.



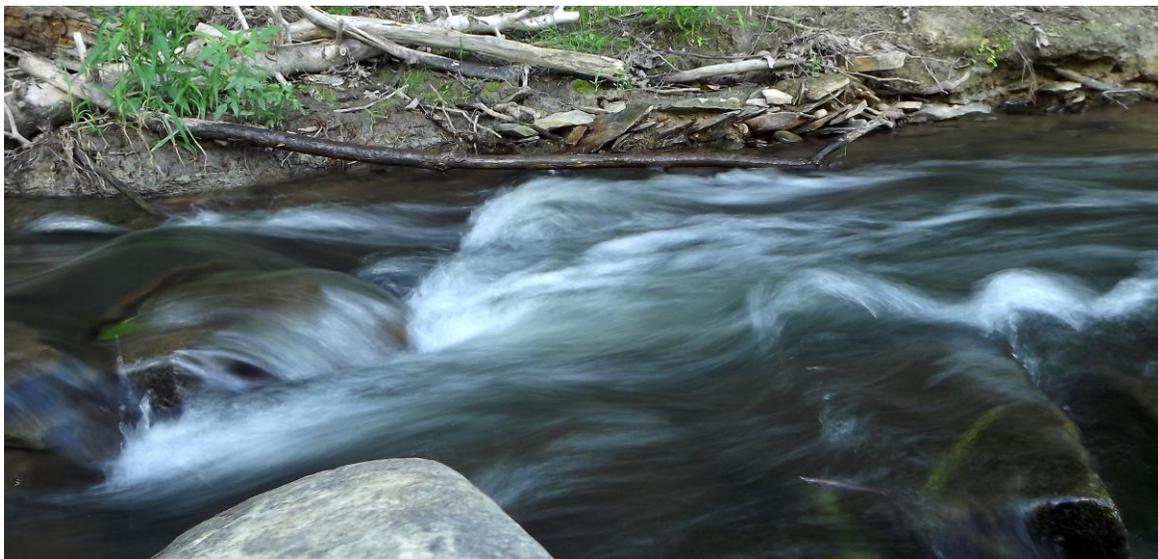
Upper reaches of the IVEX Dam pool restored following notching and lowering of the IVEX dam by about ten feet. The project was completed using FY08 Section 319 grant funds.

Watershed Education, Information & Outreach

An important tool for protecting high quality rivers and streams



The Chagrin River Watershed Partners are also very important sources of education, community outreach and technical assistance in the watershed. Left, Executive Director Amy Brennan provides information to representatives of Ohio State Parks at City Hall in Mayfield Heights. Above right, Region 5 US EPA Water Director Tinka Hyde and Ohio EPA Surface Water Chief Elmaraghy listen to details about the project from the city's engineering consultant. When balanced with effective implementation properly, education and outreach plays an important role in preserving and protecting high quality streams in Ohio. **(Below)** Riffles where a lake used to be. Mission accomplished.



Big Darby Creek



Big Darby Creek is one of the Nature Conservancy’s “Last Great Eight Places” in the United States. Upper reaches of Big Darby Creek were channelized to facilitate highway construction in the 1960’s and 1970’s. The Nature Conservancy has restored more than two miles of previously channelized segments of the Upper Big Darby headwaters under provisions of section 319-funded projects #07(h)EPA-09 and #08(h)EPA-19 segments of which are pictured above.

The Big Darby Creek watershed covers 555 square miles of Central Ohio just west of the Columbus metropolitan area. Big Darby Creek originates in Logan County and flows more than 80 miles before joining the Scioto River near Circleville, Ohio. The creek is one of the highest quality surface waters in Ohio and has been designated both a state and national scenic river. The Darby watershed contains some of the most biologically diverse streams of their size in the Midwest. It also provides critical habitat for several state and federally threatened and/or endangered species.

Many of the streams comprising the Darby watershed are high quality and meeting attainment of their designated aquatic life uses based on monitoring that was completed in association with Big Darby Creek TMDL that was completed in 2005. However the upper reaches of Big Darby do not meet standards due to nonpoint source causes of impairment such as nutrient enrichment, hydromodification and habitat alteration. Among the most visible threat to the watershed is conversion of farm land to suburban and commercial land uses through poorly planned growth patterns in unincorporated areas.

Several important implementation actions have occurred that are restoring impaired areas of the upper Big Darby watershed, as well as protecting the existing high quality reaches found in lower areas of the watershed. Following are summaries of ongoing and/or completed

restoration and water quality protection actions that have occurred within the Big Darby Creek watershed with the assistance of grants from Ohio EPA and section 319:

1. Stormwater Management Projects: When not managed properly, stormwater runoff in the Big Darby Creek watershed may carry large quantities of sediment, nutrients and other nonpoint source pollutants. In rapidly developing watersheds such as the Darby inadequately managed runoff may be particularly problematic. Within the Big Darby watershed there are two primary actions underway that are designed to protect the high quality of the streams in the watershed from stormwater runoff. These are:

- Big Darby Creek General Construction Stormwater Permit—Ohio EPA developed and issued this stream specific general stormwater permit in September, 2006. The permit includes several stringent requirements such as required construction setbacks from the stream, updated BMPs for sediment control, infiltration requirements and very strong mitigation requirements.
- Darby Accord Land Use Plan—the Darby Accord is a multi-governmental vision of land development within the Darby Creek watershed. The Accord has very specific goals to preserve, protect and improve (when possible) the Big Darby Creek’s unique and fragile ecosystem. The Darby Accord identifies the following strategies that must be in place for development activity to occur:
 - Riparian buffers must be in place
 - Stormwater management planning must have occurred
 - Conservation development restrictions are in place
 - Adequate public facilities exist or are planned to support any development

2. Habitat Protection and Restoration Projects: The Darby Creek TMDL identifies the loss of habitat as a high magnitude cause of nonpoint source impairment. This is especially true in the upper reaches of the Big Darby Creek where extensive reaches of the headwaters have been channelized to facilitate drainage and previous highway construction. Recent efforts to undo the damage and to acquire and protect large tracts of land with the Darby Creek corridor have been undertaken in recent years by the Ohio Chapter of the Nature Conservancy and the Columbus/Franklin County Metroparks System. Specifically, the following are examples of the types of activities supported with section 319 and other funding to protect and restore the habitat and water quality within the Darby Creek:



This aerial view shows the initial excavation of the restored stream channel for the Upper Big Darby Headwaters as it will flow across land owned by the Ohio Chapter of the Nature Conservancy. Restoration work on the former Fifth Third Bank property is being completed under provisions of section 319 project #07(h)EPA-08 and #08(h)EPA-19.

- Fifth Third Bank Property Acquisition: The Nature Conservancy received nearly \$2 million in Water Resources Restoration Sponsorship (WRRSP) from Ohio EPA to acquire 266 acres of riparian

land and to help restore more than 6,000 linear feet of Big Darby Creek in Logan County. This property was acquired during 2006.

- Upper Big Darby Creek Headwaters Stream Restoration Project #07(h)EPA-08: \$500,000 in FY07 section 319 grant funding was awarded to the Ohio Chapter of the Nature Conservancy to restore 3,622 linear feet of headwater areas of the Big Darby Creek in Logan County. The project site is located between river miles 81.4 and 80.8 on the former Fifth Third Bank property acquired by TNC in 2006. This project will restore the stream to Exceptional Warmwater Habitat as well as restoring 3.5 acres of riparian wetlands and more than 14 acres of riparian habitat. This project was completed in 2010.
- Big Darby Headwaters Stream and Wetland Restoration Project #08(h)EPA-19: \$464,259 in FY08 Section 319 grant funding was awarded to the Ohio Chapter of the Nature Conservancy to restore an additional 2,600 linear feet of Big Darby Creek and to increase the size of existing wetlands from 0.27 acres to 1.7 acres. Additional meanders, riffle complexes and other in-stream habitat features will be added to this previously channelized segment of Big Darby. Restoration is expected to result in full attainment of the headwaters Exceptional Warmwater Habitat designated aquatic life use.



Darby Creek is known for its diverse darter populations, including pollution intolerant species such as the above Blue breasted Darter. Restoration of ditches in the Darby watershed such as Clover Groff below is a critical tool to protect and improve the Darby Creek ecosystem.



Franklin County Metroparks Naturalist Mac Albin provides a mussel identification lesson to a group from various state and federal water quality agencies. Darby Creek's value as an outdoor learning center cannot be overstated.

- Pleasant Valley Quarry Habitat Restoration Project #06(h)EPA-31: \$315,172 in FY06 Section 319 grant funds were awarded to the Columbus/Franklin County Metroparks to remove portions of an existing levee along the Big Darby Creek and to restore approximately 300 linear feet of stream channel and associated riparian forest. The project will also restore nearly 3 acres of previously existing wetland areas. The project site is between river miles 25.21 and 24.0 in an area where the stream is generally threatened by habitat alteration and hydromodification.
- Clover Groff Stream Restoration Project #07(h)EPA-15: \$332,400 in FY07 section 319 grant funds were awarded to the River Institute to restore more than 1,800 linear feet of Clover Groff Run, currently a channelized ditch that flows into the Hellbranch Run and eventually into Big Darby Creek. The project will result in the restoration of 2,600 linear feet of sinuous channel, adding nearly 800 linear feet in length to the previously channelized stream.
- Clover Groff Stream Restoration Franks Park to Roberts Rd. Project #08(h)EPA-19: \$200,000 in FY08 Section 319 grant funding was awarded to the city of Columbus Recreation and Parks Department to assist with the restoration of more than 11,000 linear feet of the previously channelized Clover Groff Run. Clover Groff Run is an 8-mile long channelized tributary to the Big Darby Creek. Restoration activities are occurring on more than 4 miles, or more than 50% of this previously severely impacted stream.



Protecting Healthy Waters such as the Big Darby Creek shown above has long been a critical component of Ohio's Nonpoint Source Management Program. Ohio was the first state in the nation to enact a Scenic Rivers Law in 1968.

Olentangy River



Despite flowing through multiple municipalities such as the cities of Delaware, Worthington and Columbus, the Olentangy River in central Ohio retains its biological diversity and excellent water quality. However, rapid conversion of farm land to suburban and residential uses continues to threaten the river with excessive sediments and nutrients. Historic alterations to habitat have been eliminated in upper reaches as a result of concerted to remove lowhead dams and other alterations identified in the Olentangy River TMDL.

The Olentangy River flows through central Ohio from the city of Galion southward 93 miles to its confluence with the Scioto River in downtown Columbus. The watershed drains 543 square miles in six different counties. Above the city of Delaware, the watershed is mostly agricultural with several small communities interspersed along the way. Below Delaware Dam to the Franklin county line the watershed is experiencing a rapid transition from agricultural to residential land uses. As the river flows through Columbus' northern suburbs the river is predominately urban. Approximately 22 miles of the Olentangy River between the cities of Delaware and Worthington, the river is a designated state scenic river with protections under Section 1517 of the Ohio Revised Code.

The Olentangy watershed is home to 54 species of fish including the state threatened Bluebreast and Spotted Darters, a variety of mussel species, including the state threatened Purple Wateryback, as well as an impressive assemblage of breeding bird populations and other wildlife.

The Olentangy River within the city of Delaware was impaired due to lowhead dam structures, failing home septic systems and increased agricultural and urban stormwater runoff. Lowhead dams were barriers to fish migration and contributed to degraded water quality with their impounded pools. Failing home septic systems were contributing nutrients and elevated stormwater flows were contributing silt and sediment to the river.

Ohio EPA completed a Total Maximum Daily Load Study (TMDL) on the Olentangy River and found that the river was either partially attaining or not attaining its warmwater habitat designated aquatic life use in and around the city of Delaware. The highest magnitude causes of impairment include hydromodification by lowhead dams; nutrients from failing home sewage treatment systems (HSTS); and, sediment resulting from stormwater and agricultural runoff. The TMDL recommended that lowhead dam structures be removed, failing HSTS systems be repaired or replaced, and that agricultural and stormwater runoff be better managed. Additionally, due to rapid residential development being observed in the area, it was recommended in the TMDL that riparian buffers should be protected.



Daylighting of culverted headwater streams such as this site completed under #07(h)EPA-24 by the city of Delaware is an important tool for improving the quality of stormwater flowing into the Olentangy River.

Numerous activities have been implemented by multiple project partners within the Olentangy watershed. The city of Delaware, Delaware County Health Department, Preservation Parks of Delaware County, Ohio's Scenic Rivers Program, Liberty Township, ODNR's Division of Soil & Water Resources, Ohio Dept. of Transportation, and Ohio EPA were all partners critical to the success of protecting and restoring this important water resource. Examples of projects that are complete and/or underway are listed below:

- 1. Dam Removal Projects:** A total of 7 lowhead dam structures were located within and/or near the city of Delaware in the Olentangy River. All have been identified as causes of impairment and were recommended to be removed in both the Olentangy River Watershed Action Plan as well as the Olentangy TMDL. Since 2004 5 of the 7 structures have been removed and the remaining 2 structures have been scheduled for removal and funding has been obtained to facilitate completion of those projects. Upon successful removal of the remaining two small structures, more than 26 miles of this section of the Olentangy River will be free-flowing for the first time in more than 100 years.
 - Dennison Dam Removal Project—this structure was located downstream from the city of Delaware in a stretch of the river that flows through Liberty Township Ohio. The dam was removed in 2004 by the ODNR-Civilian Conservation Corps using Scenic River license plate funding. Total costs for the project were \$40,000.
 - River Street Dam—River Street dam was removed during 2006 by the city of Delaware as mitigation under Ohio's Scenic Rivers law for stream impacts resulting from the expansion of the city's wastewater treatment plant. Total costs for this project were approximately \$40,000 and were paid using city of Delaware funds.

- Central Avenue Dam—US EPA provided a \$100,000 grant to Ohio EPA during 2006 to facilitate the removal of the central Avenue Dam within the heart of the city of Delaware, Ohio. This dam was successfully removed in 2008 under provisions of subgrant #05(h)L-662 awarded to the city of Delaware by Ohio EPA's Nonpoint Source Program.



Based on monitoring and water quality sampling conducted by Ohio EPA's Ecological Assessment Unit, the site of the former Central Avenue Dam within the city limits of Delaware Ohio now boast macroinvertebrate scores in the top 3% of sites in the state. More than three miles of previously non-attaining sites are now in full attainment thanks to the projects that have been implemented in and around the Olentangy River..

- Panhandle Road Dam—The Ohio Department of Transportation removed the Panhandle Road Dam in August, 2010 as mitigation for impacts they could not avoid on a nearby highway project. Removal of this dam was critical to improve habitat conditions for a recently discovered population of state endangered Purple Wartyback shellfish that reside downstream from this site.
- US Route 23 Dam—This small structure currently is more of an aesthetic issue than one that is causing any kind of impairment. It's deteriorated condition and small size is such that it is not creating any kind of impoundment and/or barrier to fish passage. However, Ohio EPA provided funding to the city of Delaware under provisions of project #10SWIF-SEP-01 to facilitate removal of this structure during 2012 or 2013. Delays have been encountered due to difficulties obtaining rights of entry from an adjacent landowner.
- Stratford Road Dam—Another small structure, the Stratford Road dam is scheduled to be removed by the city of Delaware under provisions of project #10SWIF-SEP-01 using Ohio EPA funds. The project is currently stalled while rights of entry issues are

worked out between the city of Delaware, Delaware County Fair Board and adjacent landowners.

- 2. Home Septic Replacement:** The relatively swift transition of land use in areas of the Olentangy River watershed have contributed to ongoing difficulties with on-site home septic systems failing and discharging into small tributaries and in some case, the mainstem itself. Issues related to failing home septic have been identified and called out in both the endorsed watershed action plan and the approved TMDL study. Under provisions of section 319 grant project #05(h)EPA-07, the Delaware County General Health District embarked upon an initiative to inspect and evaluate all discharging HSTS systems within the Olentangy River watershed. Owners of systems found to be failing were ordered to repair or replace the failing systems.

This project was conducted over a three period and resulted in nearly 4,000 HSTS inspections. Using both cost share funding provided in the grant to Delaware County Health Department and private homeowner funding, 126 failing home discharging systems were either repaired or replaced throughout the watershed. The project was completed in 2008 and resulted in nitrogen load reductions of 5,436 pounds/year and phosphorus reductions of 2,068 pounds/year.

- 3. Olentangy River Special Construction Stormwater Permit:** Water quality Issues related to stormwater runoff are the third highest magnitude cause of impairment within the Olentangy watershed. No doubt, much of this is attributable to the high rates in which agricultural lands are being converted to residential and/or commercial land use. Ohio EPA implemented the special Olentangy River Construction Stormwater Permit requiring more stringent stormwater controls for general construction activities. The permit also identifies robust mitigation requirements for related activities.

The Olentangy Special Permit was final in April, 2009 and requires among other things, mandatory stream setbacks and enhanced mitigation as well as requiring implementation of many of the recommendations of the Olentangy TMDL. To date, the permit is serving as an effective tool for managing development and construction activities within the watershed.

- 4. Protection of High Quality Habitat:** Land conservation and preservation initiatives within the Olentangy watershed have been ongoing for the past decade as residential development pressures have stressed water quality within the watershed. For example, as a designated state scenic river, Ohio DNR's Scenic Rivers Program holds many acres of conservation easements within the 22 mile segment of stream that is protected under Chapter 1517 of the Ohio Revised Code.

Ohio EPA has also been instrumental in protecting two extremely important land parcels in recent years using the agency's Water Resources Restoration Sponsorship Program (WRRSP). These parcels are Camp Lazarus, a Boy Scouts of America property located south of Delaware, Ohio and the Big Run Preserve which is located near the border of Franklin and Delaware Counties.



Permanently protecting high quality waters is a critical component of Ohio's Nonpoint Source Management Strategy. Preventing the degradation of high quality streams is as important as restoring impaired waters. High quality habitat along the Olentangy River is actively being purchased and/or protected with conservation easements in Ohio's Scenic Rivers Program, local park districts and OEPA.



- Camp Lazarus Conservation Easement Acquisition: Ohio EPA's WRRSP Program provided nearly \$2.4 million to the Preservation Parks of Delaware County to acquire conservation easements on 175 acres of very high quality riparian and tributary areas on Camp Lazarus. The camp was seriously threatened with a sale to a housing developer. EPA's funding of the easement allows the area to remain in its high quality state—the project was completed in 2006 and effectively protects the high quality riparian areas and direct tributaries to the Olentangy River. The waterfalls shown in the lower left photo (above) are located on the tributary that is being protected.
- Big Run Preserve Acquisition: Nearly \$4 million was provided by Ohio EPA's WRRSP Program to acquire fee simple 60 acres of high quality habitat within the Big Run subwatershed. Big Run is a direct tributary to the Olentangy State Scenic River in southern Delaware County. This parcel was scheduled to be converted to a housing development at the time of acquisition in 2006. More than 8500 linear feet of important headwater and tributary streams are protected as a result of this acquisition.

5. **Scioto River Conservation Enhancement Program (CREP):** Agricultural runoff from areas upstream from the city of Delaware has also been identified as a significant contributor to nonpoint source causes of impairment within the Olentangy river. The Scioto River Conservation Reserve Enhancement Program (CREP) is enrolling up to 70,000 acres of vulnerable riparian corridor and marginal farmlands into 15-year conservation set-asides under this program administered by the USDA-Farm Service Agency (FSA). The Olentangy River is included in the Scioto River CREP area. To date, nearly 20% of all of the acres currently enrolled in the CREP are within the Olentangy watershed.

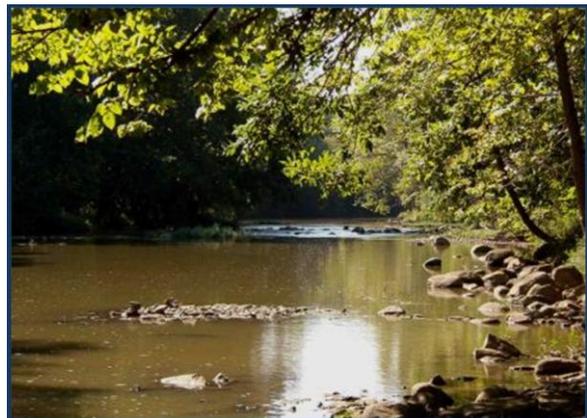
Status of Recommend Actions: Sign-ups for the Scioto CREP within the Olentangy watershed have been very vigorous. More than 12,300 acres have been enrolled in the Scioto CREP within the Olentangy watershed. Following is a county-by-county listing of CREP sign-ups in and upstream from the city of Delaware:

- Marion County—8,865 acres
- Morrow County—1,289 acres
- Delaware County—464 acres
- Crawford County—346 acres

Successful CREP sign-ups and participation by the agricultural community within the Olentangy watersheds is a direct reflection on the work of the various local soil & water conservation districts in the watershed, ODNr's Division of Soil & Water Resources and the Olentangy River watershed coordinator.

6. **Monitoring Activities within the Olentangy River:** Comprehensive monitoring and bio-assessment of the Olentangy River was completed in 2005 by Ohio EPA's Ecological Assessment Unit (EAU). IN 2009 a three-mile segment of the river flowing through the city of Delaware was assessed. The study was undertaken to assess conditions in the river upstream and downstream from three lowhead dams following their removal. Results thus far have been impressive with the following observations evident:

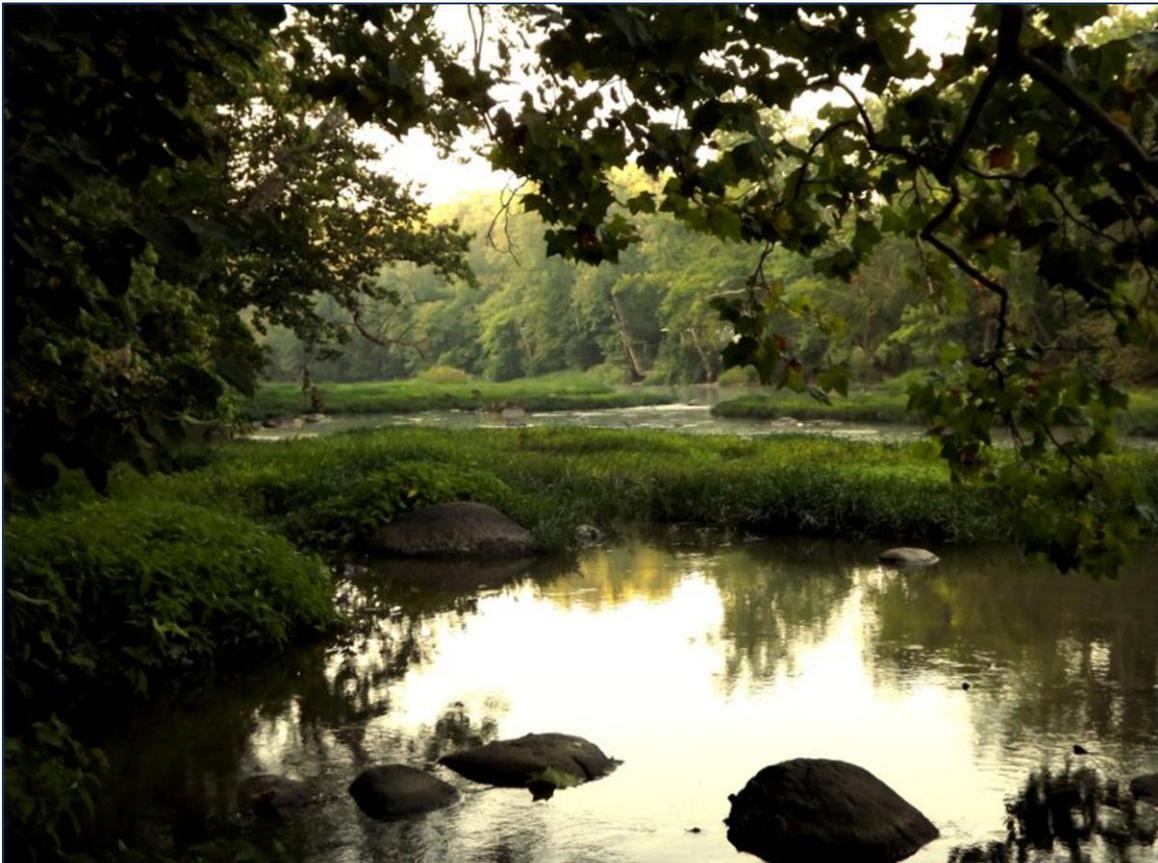
- Prior to removal of the River Street Dam the fish community within its dam pool included no pollution intolerant fish species. Following removal of the dam, EAU found 5 species of pollution intolerant fish species including the black redhorse, silver shiner, stonecat madtom, brindled madtom and banded darter. IBI scores improved from 34 in 2005 to 46 in 2009. 16 different species of fish were collected at this site in 2005; 23 species were collected in 2009.



The view downstream of the former Panhandle Road lowhead dam. This structure was removed by the Ohio Department of Transportation in 2010.

- Similar results were found at the site of the Central Avenue dam within the city of Delaware. In 2005 only one pollution intolerant species was found—in 2009 five intolerant species were found including black redhorse, silver shiner, stonecat madtom, brindled madtom and banded darter. Species diversity increased from 21 species in 2005 to 28 species of fish in 2009.
- Macroinvertebrate communities also showed significant improvement at both sites. The Invertebrate Community Index increased from a score of 32 in 2005 to an ICI of 52 in 2009. Species diversity increased from 54 to 94 with pollution intolerant species growing from 15 to 42.

A well-designed assessment of water quality problems through the TMDL and watershed planning processes combined with state, local and federal commitment to implement well-reasoned recommendations has paid dramatic dividends on the Olentangy River. Likewise, a recognition and commitment to protect high quality streams throughout Ohio began as far back as 1968 when Ohio became the first state in the country to establish a state scenic river program. Today there are 14 state designated wild and scenic rivers that are protected under provisions of Chapter 1517 of the Ohio Revised Code. Additionally, there are a number high quality streams in Ohio where locally based watershed groups and other organizations are working to protect and where necessary restore high quality conditions. For example since 2001 conservation easements have been acquired on more than 2500 acres of high quality streams using Section 319 grant funding administered by Ohio EPA's NPS Program.



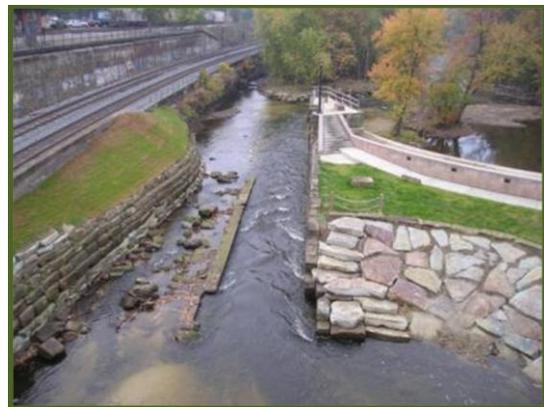
Ohio EPA's Urban Rivers Initiative

Ohio has a very ambitious urban rivers component to the state's nonpoint source management program. Virtually every major city was settled along a river—and decades of hydromodification, destruction of riparian corridors and bulk-heading of river banks have left a number of our urban streams impaired. Fortunately, passage of the Clean Water Act and installation of upgraded waste water treatment systems have solved some of the water quality problems of the 1960's and 1970's – and conditions in many of Ohio's urban streams such as the Lower Cuyahoga River have improved dramatically in recent years.



Middle Cuyahoga River

Easily the most dramatic transformation of an urban stream in Ohio has been the Middle Cuyahoga River as it flows through the cities of Kent, Munroe Falls and other populated areas of Portage and Summit counties. More than 13 miles of the river were previously in non-attainment of the warmwater habitat designated aquatic life use. As a result of dam removal and stream restoration projects that were funded in part by section 319 grant projects #03(h)EPA-07; #02(h)EPA-14 and #05(h)EPA-27, this stretch of the Middle Cuyahoga River is now in full attainment of warmwater habitat. More than \$1 million in section 319 subgrant funding and nearly \$6 million in funding from Ohio EPA's WRRSP Program was awarded to complete these important urban stream restoration projects.



The restoration of the Middle Cuyahoga River in the city of Kent as a result of modifying the Kent Dam is one of Ohio EPA's most notable successes under its Urban Rivers Program.

In addition to removing the dams in the cities of Kent and Munroe Falls, officials in the city of Cuyahoga Falls are also working in collaboration with Ohio EPA's Northeast Ohio District Office water quality staff to develop plans to remove two lowhead dam structures in the river within the city. Removal of these structures would extend free-flowing conditions and contribute to considerable water quality improvements in the area.

A third dam, the Gorge Dam—largest structure on the Middle Cuyahoga River is also recommended for removal. This structure is more than 70-feet high and impounds approximately two miles of the river. First Energy Corporation (the dam's owner) and Ohio EPA's NEDO staff are engaged in serious discussion to remove this structure as well. Extensive sediment sampling was completed with funding assistance from US EPA, and funding is not a significant limitation. However, the regulatory complexity of a project this large has and will continue to cause delay in removing this structure.



Restoration of the Middle Cuyahoga River at the city of Munroe Falls has been dramatic and rapid – the photo above depicts the former dam pool less than 12 months after removing the Munroe Falls Dam,

Baseline monitoring was completed for this segment of the river during the 2004 and 2005 monitoring seasons and occurred prior to the removal of these two dams and restoration of the sites. Post project monitoring was completed in 2007 and 2008. A report on this assessment is available at www.epa.oh.us/dsw/documents/MiddleCuyahoga2007final-amended-2.pdf. Results identify that macroinvertebrate communities have improved dramatically. All sites are attaining the established aquatic macroinvertebrate ICI index criterion and one site in the former Munroe Falls dam pool exceeded the exceptional criterion.

Fish community scores within the former Kent dam pool are in attainment of the warmwater habitat (WWH) aquatic life use designation of the river while fish scores in the Munroe Falls dam

pool were not yet meeting designated uses in 2008. Follow up sampling will be completed with a high likelihood that the full HUC-12 segment containing these sites will be restored to full attainment of warmwater habitat aquatic life use.

Mill Creek – Ohio River tributary

In 1997 American Rivers declared Mill Creek as “the most endangered urban river in North America”. Two hundred years of neglect, patchwork urban development among 37 political subdivisions and influences of more than 400,000 watershed residents have taken a toll on the creek. However, the 166-square mile watershed is poised for a comeback—two centuries of urbanization have not diminished the value and importance of this stream as a regional asset.

The Mill Creek Watershed Council of Communities is one of several organizations in the watershed working to improve both water quality and habitat conditions within Mill Creek. The Council was formed in 1995 when representatives from 17 political jurisdictions met on the banks of the Mill Creek and signed a unique and historic intergovernmental agreement to save the creek and its watershed. Since its formation, the Council has forged vital partnerships among communities, businesses, policy makers and local residents, and a squadron of enthusiastic volunteers. Dozens of projects including stream restoration and wetland construction projects, and innovative stormwater and green demonstration projects within the watershed have been completed. These collaborative efforts deliver improved water quality within the creek, enhanced habitat for fish and wildlife, recreational opportunities and an improved quality of life for watershed residents and for greater Cincinnati as a whole.



Reconnecting Mill Creek to restored floodplain wetlands like this 19-acre site in West Chester Township is one critical action that watershed managers can take to improve habitat and water quality in such an urban stream as Mill Creek. Ongoing efforts to restore this stream will continue to contribute to improvements in the watershed.

Two significant section 319 grant-funded projects have recently been completed in the Mill Creek watershed. The first was funded under provisions of project #05(h)EPA-09 and resulted in the restoration of 19 acres of floodplain and 1,900 linear feet of riparian corridor adjacent to upper Mill Creek in Butler County. This project was funded with more than \$498,000 in section 319 grant funds which were matched by more than \$450,000 in local in-kind services which included protecting 48 acres of riparian areas with conservation easements donated by West Chester Township. This project was completed in May 2009 behind the West Chester Township Service Center and is an excellent demonstration of more effective and environmentally friendly alternatives to traditional stormwater retention and detention ponds.

The results are a series of bio-retention areas that reduce downstream flooding, improve water quality, replenish groundwater, and provide important wildlife habitat in and near a highly urban stream such as Mill Creek.

The second significant section 319-funded project within the Mill Creek watershed is the Mill Creek Confluence Project. This project brought together a unique group of public and private partners to restore more than 4,300 linear feet of degraded stream channel and more than 5 acres of wetlands at the confluence of the East Fork and mainstem of Mill Creek. Under provisions of section 319 project #09(h)EPA-15 and using additional funding from OEPA's WRRSP Program, this \$2.2 million project transformed a once vacant industrial site into an urban oasis with high quality habitat for aquatic and wetland species alike. Dubbed Twin Creek Preserve, this restored natural system improves quality and reduces flooding in the Mill Creek. It is also the largest native arboretum in the Mill Creek watershed, and a new recreational amenity for the City of Sharonville that boasts a 0.5 mile loop trail where residents of all ages can enjoy fish, birds, butterflies, wildflowers, and the natural beauty of the Mill Creek.



This project restored over 4,300 linear feet of stream channel and connected the East Fork and main stem Mill Creek to a 5.3-acre wetland that provides flood storage and filters pollutants. This project was funded using a combination of FY09 Section 319 grant funds as well as funding from Ohio EPA's WRRSP Program.

Restoration work is just one part of the Council's overall strategy to restore Mill Creek. A foundation of the efforts underway in the watershed revolves around education and outreach, community involvement, local government engagement and enhancing volunteer opportunities. For example, the "Mill Creek Yacht Club", a group of canoeists who volunteer for clean ups of Mill Creek have made more than 78 float trips on Mill Creek, covering 26 of the 28 miles by canoe. They have hauled truckloads of trash from the water, floated in rain, sleet and snow and attracted media cover and public awareness from more than a dozen media outlets.

Examples of some of the other activities that have been implemented in the watershed include:

- Beaver Run Creek Walk and Cleanup: The of Springdale hosted a cleanup and creek walk on Beaver Run, a tributary to Mill Creek. More than 50 volunteers participated.

- Floating Wetland Volunteer Planting: 16 participants helped plant a floating wetland just north of the Twin Creek Preserve in Sharonville, Ohio.
- Twin Creek Wetland Plantings: On February 25, 2012 the Council hosted volunteers at Twin Creek Preserve to plant native willow and dogwood stakes inside the newly constructed wetland area. This was a great opportunity to see the completed stream restoration and wetland creation project in Sharonville.
- Lunch and Learn at Twin Creeks Preserve: More than 100 guests participated in this event that was staged while the wetland and stream restoration projects were under construction.
- Mill Creek Watershed Council Rain Garden Initiative: The Council has partnered with several local communities and organizations to install rain gardens and bioswales over the past few years. A listing of some of the participants include:
 - Winton Woods Elementary School Land Laboratory
 - Miami University Hamilton Branch
 - Forest Park Rain Gardens
 - Hilltop Elementary School
 - Elmwood Place Square
 - City of Springdale
 - Cincinnati Zoo and Botanical Center
 - Coney Island Rain Garden



Areas such as the Twin Creeks Preserve that were once industrial wastelands are now serving as valuable urban habitat for butterflies, birds and other animals.

For more information please visit the Mill Creek Watershed Council of Communities website at www.millcreekwatershed.or/rain-gardens.

Euclid Creek – Lake Erie tributary

Euclid Creek is a highly urbanized tributary to Lake Erie that flows directly through urban and suburban areas of Cuyahoga and Lake Counties. The watershed is small, draining 23 square miles of urban and suburban areas with more than 43 miles of stream length. Within the Euclid Creek watershed more than 68,000 people reside. It is a high gradient stream, dropping nearly 700 feet in elevation along its length and flows over bedrock shale constrained by steep valley walls. The creek flows into Lake Erie at Wildwood State Park on Cleveland's east side and is a part of the coastal landscape along the Ohio shoreline.

Euclid Creek does not currently meet Ohio EPA's standards for aquatic life. Fish populations appear to be more impacted than macroinvertebrates. Fish communities found above the dam near East 185th Street are mostly pollution intolerant minnows. Below the dam additional fish species were found including steelhead trout and smallmouth and largemouth bass. Macroinvertebrate communities have improved to a point where they generally meet Ohio EPA standards.

Major water quality issues with Euclid Creek include nutrient enrichment, flashy stormwater flows that increase streambank erosion and ongoing discharges from combined sewer overflows. Euclid Creek has both a state endorsed Watershed Action Plan (WAP) and a Total Maximum Daily Load Study (TMDL). Watershed partners include the Euclid Creek Watershed Council, Friends of Euclid Creek and the Cuyahoga County Soil & Water Conservation District. A full-time watershed coordinator is employed by the Cuyahoga County SWCD and is funded in part with section 319 funds awarded through Ohio's Watershed Coordinator Program.

Recent activities that have been conducted to improve water quality and habitat conditions within this highly urban stream include:

- Euclid Creek Rain Garden Demonstration Program: Using a grant from the Lake Erie Commission and operational funding from the Northeast Ohio Sewer District, a rain garden demonstration program was implemented. 11 demonstration rain gardens have been installed totaling more than 4,500 square feet.
- Euclid Creek Homeowner Rain Barrel Program: More than 1000 watershed residents have attended rain barrel workshops conducted by the Euclid Creek watershed coordinator. As a result, more than 750 rain barrels have been installed throughout the watershed.
- Highland Heights Land Protection Project: More than a quarter million dollars has been used to acquire 12.5 acres of conservation easements to protect endangered plant habitat, primary headwater streams and wetlands in the Euclid Creek watershed.



In addition to important stream restoration work such as the East Branch Dam Removal Project, education and outreach also plays a critical role in improving conditions in Euclid Creek.

- **East Branch Dam Removal:** Using funds from a variety of sources including a section 319 grant from Ohio EPA, the East Branch Lowhead Dam was removed and 700 linear feet of stream channel and natural flow were restored. In addition more than an acre of riparian area was restored as well as more than 3 acres protected under provisions of a donated conservation easement.
- **Lacustrine Refuge and Wetland Restoration Project:** Under provisions of a Great Lakes Restoration Initiative (GLRI) grant, more than 3 acres of wetlands and more than 1100 linear feet of stream channel will be restored near the mouth of Euclid Creek in the Wildwood State Park area.



This stormwater demonstration project at the Mayfield Heights City Hall relied on consultation with the Euclid Creek Watershed Coordinator as well as input from the Chagrin River watershed partners. This is but one of many examples of collaborations among watershed partners in the Euclid Creek watershed.

Other projects that are planned and/or in the process of being funded include removal of the Mayfair lowhead dam on the East Branch of Euclid Creek, restoration of fish passage in the mainstem with restoration and/or removal of the Main Branch spillway located near East 185th Street in Cleveland, as well as major stormwater retrofits at Mayfield High School, and the Highland Heights Community Park. Moving forward, the future for Euclid Creek looks bright as more and more water quality and stream restoration projects come on line throughout the watershed.

TMDL Development and Watershed Assessment: A significant component of Ohio EPA's Nonpoint Source Program activities is the ongoing assessment of watersheds throughout the state and the completion of Total Maximum Daily Load (TMDL) studies. The TMDL process identifies science-based recommendations for addressing identified water quality impairments caused by both point-source and nonpoint sources of pollution. TMDL activities completed during the reporting period include:

- Continue to improve alignment of nonpoint source program activities with TMDL studies and state endorsed 9-element watershed action plans.
- Ohio EPA TMDL staff continues to use the "master universe of deliverables and units of measurement" in all TMDL reports. This master deliverable list uses many of the same deliverables and units of measure as are used in Ohio's section 319 grants program and provides increased consistency and improved implementation tracking efforts. This "implementation" aspect of the lower Maumee River and Lake Erie tributaries TMDL (awaiting U.S. EPA approval) will form the basis for a U.S. EPA headquarters-funded reasonable assurance project that seeks to better define what an "implementation-ready TMDL" would require.
- Providing critical Ohio EPA central office and district staff resources for the completion of TMDL studies.
 - During FY12, Ohio EPA submitted TMDLs for review and approval in 5 project areas covering 98 12-digit HUC watershed units. TMDLs were submitted and approved (or

at Region 5 and expected to be approved) by U.S. EPA for the upper Great Miami River, lower Grand River, Tributaries to the lower Maumee River and Lake Erie, Moxahala River and Paint Creek watersheds. The lower Grand project included an innovative flow regime TMDL, the first of its kind in Ohio. Recommendations included reducing the effects of hydrologic alteration and pollutants from urban runoff and storm water by installing best management practices that retain or infiltrate storm water on-site at construction and post-construction locations. Since this cause of impairment is widespread across Ohio, this project should provide analysis tools that can be applied elsewhere.

- New TMDL initiatives commenced in 54 12-digit HUC watershed units and 3 large river units in 5 project areas during the reporting period. New assessment areas for 2012 include the following:
 - Black River
 - Maumee River (mainstem)
 - East Fork Little Miami River
 - Stillwater Creek (Tuscarawas basin)
 - Mill Creek (Scioto River)

This set of assessment areas continues the full-scale revisits to watersheds that already have a TMDL (Black and Stillwater) and the completion of TMDL-era assessments on another of Ohio's major watersheds, the Little Miami River. Data are being collected in a tributary to the lower Muskingum River to assist a local watershed action plan effort; these data will be rolled into an Ohio EPA watershed study planned for 2013.

- Participated in the U.S. EPA Headquarters TMDL Visioning exercise, *which seeks to harvest the experiences gained in doing TMDLs over the past decade and recast the program to improve environmental outcomes.*¹ The six elements proposed include protecting healthy waters, prioritizing TMDLs for the most impaired waters, considering alternatives to TMDLs, assessing both healthy and impaired waters on a site-specific basis, engaging the public in the TMDL planning process, and integrating with other Clean Water Act and Safe Drinking Water Act programs.
- As part of an agency-wide restructuring of Ohio EPA's web presence, the TMDL pages were reorganized to a major-watershed format, replacing the alphabetical project order of the old pages. This should help the public find related projects more easily. The pages also include an "implementation" tab for each project where we can report on post-TMDL projects and progress. This is another way to highlight program integration, the value of 319-funded projects, and their relationship to improving water quality. The new web page may be found at: <http://epa.ohio.gov/dsw/tmdl/index.aspx>.

¹ Trink's words, not mine. ☺

Agricultural Assistance: Ohio EPA has significantly enhanced our technical capabilities with respect to meaningful technical assistance and leadership in the nonpoint source arena to the agricultural community and other agencies dealing with agricultural water quality issues. Following are several initiatives that were undertaken during the FY12 reporting period:

- NPS Program staff routinely attends and participates on the USDA-NRCS State Technical Committee. During the reporting period, Ohio EPA attended all four (4) quarterly meetings of the committee. Additionally, Rick Wilson participated in several STC sub-committees, including a committee to revise Ohio's NRCS Office Technical Standard 590 (Nutrient Management).
- Rick Wilson continues to serve as Ohio EPA's representative on the Boards of the Ohio Certified Crop Advisors (CCA) and Ohio Certified Professional Soil Scientists.
- NPS program staff participated in the review and selection of watershed coordinator grant applications with ODNR's Division of Soil & Water Resources.
- Ohio EPA NPS and Modeling Unit staff continued to support NPS efforts on Grand Lake St. Marys by installing and maintaining remote monitoring equipment (YSI Sondes Units) on the lake. Additionally, field level and chemical parameter sampling continued in support of the alum treatments and other water quality activities on Grand Lake.
- Rick Wilson represented Ohio EPA at the annual Great Lakes Protection Fund workshop held at Heidelberg University. More than 40 local agricultural leaders, researchers, and government employees frankly discussed issues and shared data and information on issues related to water quality in northwest Ohio, especially the Maumee and Sandusky River watersheds.
- Mr. Wilson participated on a panel discussion during the all Ohio Chapter of the Soil and Water Conservation Winter Meeting which looked at reducing soluble phosphorus in surface water. Presentations from USDA-ARS in Ohio provided data that showed losses of soluble and total P from tile drainage systems are significant. USDA-ARS phosphorus expert Dr. Andrew Sharpley presented on two topics at this meeting, and also confirmed tile transport of phosphorus as an important issue to address.
- Ohio EPA's Nonpoint Source Program Manager and staff developed a draft framework of recommendations for inclusion into future versions of Ohio's Nonpoint Source Management Plan. Following is a summary of messaging that Ohio Program staff will be consistently used when discussing agricultural water quality issues:
 - Increase conservation planning
 - Install effective hydraulic buffers
 - Focus BMPs on critical areas



Installation of automated water quality monitoring systems at Grand Lake and at Buckeye Lake was a team effort among Ohio State Parks staff, Ohio EPA and Yellow Springs Instruments.

- Reestablish 3-zone riparian areas
- Eliminate application of manure on frozen or snow-covered ground
- Control sub-surface drainage discharges
- Install upland or in-field hydraulic buffers
- Eliminate manure application at rates that provide more than 1 year of benefit
- Plant cover crops as part of long term conservation crop rotation
- Use alum to bind soluble phosphorus prior to application

Although we do not expect these recommendations to be widely adopted by Ohio's agricultural community, we believe strongly that the message is responsible, necessary, and provides a clear path forward for reducing the impacts of non-point source pollution from agricultural lands. Grant funding as well as outreach activities will be aligned to support these initiatives when dealing with agricultural projects.\

- Participated in the Conservation-in-Action Tour sponsored by the Conservation Technology Information Center (CTIC). Tour visiting farm operations and related facilities in northwestern Ohio. Participating farmers shared with attendees the actions that farm producers take to protect soil and water resources.
- Provided ongoing technical and field support to the Buckeye Lake Nutrient Reduction Demonstration Project that is being implemented with a supplemental FY11 Section 319 grant. Activities included the installation of water quality monitoring meters (YSI Sondes) that provided real-time data concerning water quality in Buckeye Lake. To follow this data, please visit www.livelakedata.com.
- Rick Wilson conducted ongoing monitoring of the Lambda bio-remediation demonstration project that was conducted in an embayment of Buckeye Lake, where a consortium of microbes was used in an attempt to improve water quality. Monitoring was ongoing for 7 weeks including baseline sample collection. Rick will be preparing a report on the results in the near future. Additionally, Rick gave a post-project presentation on the Lambda project to the Buckeye Lake for Tomorrow Board of Directors.
- Mr. Wilson is serving as the NPS Program representative on the Phase II of the Ohio Lake Erie Phosphorus Task Force. He has attended three meetings of the P Task Force thus far. This group is operating under provisions of an FY10 GLRI grant to Ohio EPA. The Ohio Lake Erie Commission is serving as facilitator of these efforts.
- Ohio EPA Nonpoint Source program management and staff provided comments on the "Nutrient Reduction Strategy Framework for Ohio Waters" dated 11/15/12.
- NPS Program management and staff participated and provided comments to the Director's Agricultural Nutrients and Water Quality Working Group. The Directors report was completed 3/15/12.

Education and Outreach: An expanding component of Ohio's NPS Management Program involves effectively communicating activities that are underway to address NPS impairments within Ohio's watersheds. Outreach activities are also designed to provide Ohioans with information about actions that can be undertaken to help solve NPS impairments. Educational and Outreach activities completed during the reporting period include:

FY12 Presentation Highlights



NPS Program Manager Russ Gibson making a presentation to members of the Buckeye Lake community during a public meeting conducted as part of the Buckeye Lake Nutrient Reduction Demonstration Project.



Nearly 70 people attended the Surface Water Improvement Grants Program public information session in Ohio EPA's northeast district office in Twinsburg, Ohio.



High quality interpretive signs provide an enduring way to keep the public informed about the importance and value of locally implemented projects.



Mayfield Heights Mayor Costabile presents an overview of the city's green stormwater projects to a group from Ohio's State Parks, EPA and others. Peer to peer information exchanges are very important ways for helping others to try new ways to address NPS pollution.



Project Field Days, peer-to-peer presentations, talks to large conference groups and small workshop participants are all very important ways that nonpoint source program messages may be enhanced. Activities such as project specific field days are also important to allow implementers the opportunity to "show off" their work to others. Project outreach isn't about small trinkets to give away ... rather it is a very important tool for helping to train others on the kinds of projects that are needed to seriously address NPS problems.

During the reporting period, NPS program staff made numerous presentations about Ohio's NPS Program and other NPS related topics. Following is a summary of the presentations made during the FY12 reporting period:

- **SWIF Grants Information Sessions:** Martha Spurbeck and Russ Gibson conducted four FY12 SWIF Grants information sessions throughout Ohio to help inform potential SWIF grant applicants of the procedures, preferences and other guidelines for SWIF funding. These sessions are very positive and comfortable venues for applicants to have their application questions answered. More than 100 people attended these sessions this year. Sessions were conducted as follows:
 - 02/09/12: Northeast Ohio SWIF Grants Information Session: 70 participants.
 - 02/21/12: Southwest Ohio SWIF Grants Information Session: 9 participants.
 - 02/23/12: Central Ohio SWIF Grants Information Session: 8 participants.
 - 02/24/12: Northwest Ohio SWIF Grants Information Session: 22 participants.
- 02/21/12: Urban Point Source and Nonpoint Source Nutrient Workgroup: As part of Director Nally's Nutrient Reduction Initiative Rick Wilson delivered a presentation to the Urban Point Source and NPS workgroup summarizing the findings of the Phosphorus Task Force as it related to urban point sources.
- 02/27/12: Ohio State Parks Stormwater Demonstration Tour: Representatives from Ohio's State Parks, ODNR's Office of the Chief Engineer, Buckeye Lake for Tomorrow and Ohio EPA's NPS program staff were hosted by Amy Brennan of the Chagrin River Watershed Partners for a daylong green stormwater field day. Five different communities were visited in which multiple example of green stormwater BMPs such as rain gardens, bioswales, and pervious pavement were being demonstrated. This field was organized by Ohio EPA's NPS program as a technical service to the Buckeye Lake State Park personnel who will be having stormwater demonstration practices installed at the park during 2013. Amy Brennan served as our "tour guide" and was a passionate advocate for more effective stormwater management practices.
- 04/05/12: Ohio Water Environment Association Annual Conference: During this presentation, Russ Gibson focused on the Surface Water Improvement Fund Program and how it can serve as a valuable tool for advancing innovative stormwater practices in Ohio's municipalities and counties. This presentation was delivered to the whole conference and was attended by approximately 110 people.
- 04/18/12: Ohio Environmental Health Association Annual Conference: Russ Gibson delivered a presentation on Grand Lake St. Marys to attendees of the annual conference sponsored by the Ohio Environmental Health Association in Worthington Ohio. More than 40 participants attended the presentation.



Ohio State park management and engineering staff visited five communities in northeast Ohio to see active demonstrations of green stormwater management practices. State parks in Ohio have hundreds of small pave parking lots that are primed for retrofitting with green practices.

- 04/26/12: Ohio EPA-Division of Surface Water Spring Water Quality Retreat: NPS Manager Russ Gibson presented a PowerPoint presentation updating Division of Surface Water staff on the status of the Surface Water Improvement Fund program and results from the 32 local implementation projects that were implemented during 2010 and 2011. This retreat was attended by 55 people from Ohio EPA's water programs.
- 05/13/12: Buckeye Lake Nutrient Reduction Demonstration Project Public Meeting: This public meeting was conducted by the Buckeye Lake for Tomorrow Board under the provisions of the Buckeye Lake Nutrient Reduction Demonstration Project. Mr. Gibson provided closing remarks and an overview of how this project is designed to bring Buckeye Lake landowners together to find ways to reduce nutrient inputs into the lake. The meeting was well attended with more than 50 people in attendance.
- 06/27/12: RARE Grand Lake St. Marys Project Update Workshop: Gibson delivered an overview and update on the state's activities within the Grand Lake St. Marys watershed. This presentation was designed to help researchers operating under the provisions of this project to better understand actions that could potentially impact their research. Approximately 20 people were in attendance.
- 07/19/12: Buckeye Lake for Tomorrow Board Meeting: Rick Wilson provided an update on the findings from the Lambda Bioremediation Demonstration Project that was conducted on Buckeye Lake's Thornport Harbor during the summer of 2012. About 12 participants heard this presentation.
- 08/14/12: Missouri DNR Section 319 Program Assistance Workshop: In response to a request from the Missouri Department of Natural Resources, Russ Gibson traveled to Jefferson City with Tom Davenport of US EPA Region 5 and delivered a two and a half day workshop designed to encourage and assist with revisions to their section 319 program. A variety of topics were discussed and the early results are encouraging that improvements will occur.



Tom Davenport from Region 5 US EPA discusses the importance of building and maintaining a positive and productive relationship with Regional NPS Program staff. Region 7 US EPA staff was in attendance and shared Tom's message. This workshop generated great discussion on the challenges of managing effective Section 319 programs.



Using a combination of lecture, open discussion and small group break-out assignments Russ Gibson and Tom Davenport worked to help facilitate process improvements in Missouri's NPS program. In this photo Missouri program staff work together with members of Region 7 US EPA to develop a revised program goal for Missouri's Section 319 Program.



Downtown Jefferson City, Missouri at the start of a warm summer day.

Special Events and/or Meetings

Ohio EPA either hosted or participated in several special events and/or meetings during the FY11 reporting period. Following is a list of these events with summaries and/or highlights of each:

09/27/11: Conservation Program Delivery Task Force: Required under provisions of the state of Ohio's fiscal year 12 budget statutes, ODNR's Division of Soil & Water Resources convened this task force to make recommendations for improving district office streamlining and efficiencies. Russ Gibson was asked to serve on this task force as an advisory member with no voting rights. Approximately 45 people attended this meeting.

10/12/11: Agricultural Nutrient Workgroup Meeting: This group was convened by the directors of Agriculture, Natural Resources, and Environmental Protection Agency in response to issues related to harmful algal blooms in Lake Erie during the summer of 2011. Approximately 75 participants attended this session, including NPS Program Manager Russ Gibson and Agricultural Specialist Rick Wilson.

10/13/11: Conservation Program Delivery Task Force Meeting: Continued discussions from the September 27th meeting. Reviewed findings of a "user survey" that was conducted asking folks what the SWCD's could best provide etc.

12/1/11: Conservation Program Delivery Task Force Meeting: Discussions concerning the potential for local SWCD's to share services etc. continued. During this meeting task force members also discussed potential funding scenarios etc. This was the last meeting prior to the final report being released. The report from the Task Force can be found at:

<http://www.dnr.state.oh.us/portals/12/swcds/taskforce/2011-12-30%20SWCD%20Task%20Force%20Report.pdf>.

12/5/11: Agricultural Nutrient Workgroup Meeting The second meeting of the Agricultural Nutrient Reduction Workgroup involved more in detail discussion of causes and sources of nutrients washing into surface waters. Approximately 75 were in attendance.

12/19/11: Agricultural Nutrient Workgroup Meeting: The third meeting of this group was conducted to distill the list of potential recommendations to a more manageable level. Approximately 75 people participated in this meeting.

01/23/12: Stormwater Monitoring and Research Coordination Meeting: This meeting was sponsored by the ODNR-Division of Soil & Water Resources and appeared to be an attempt to get a better handle on organizations who are engaged in water quality monitoring for green stormwater best management practices. Approximately 25 participants from academia, governmental entities and nonprofit organizations attended.

02/13/12: USDA-NRCS National Water Quality Initiative (Findlay, OH): Russ Gibson attended this meeting in which Ohio NRCS personnel were facilitating discussion related to the National Water Quality Initiative that was rolled out from NRCS Headquarters for FY12. Approximately 45 local governmental representatives, agricultural community representatives, state agencies and nonprofit organizations such as The Nature Conservancy and Environmental Defense Fund were in attendance.

03/15/12: Ohio Watershed Coordinator Orientation: NPS Program Manager Russ Gibson delivered a presentation to the Ohio Watershed Coordinators employed under grants awarded by the ODNR-Division of Soil and Water Resources. Mr. Gibson's presentation was titled "Watershed Communications 101" – a primer for communicating issues related to water quality and watersheds. Approximately 45 participants attended this presentation.

04/12/12: Meeting with ODNR Scenic Rivers and Mt. Vernon and Knox County Engineers: Russ Gibson attended this meeting in which alternatives for dealing with a severe streambank erosion problem within a city park in Mount Vernon, Ohio. Extended lengths of the Kokosing State Scenic River flow directly through the city and have been degraded over time due to hydromodification or in the case of this particular site, in-stream mining that occurred until the 1970's. A beneficial discussion ensued with scenic rivers staff and the city and county agreeing to pursue funding to develop a corridor management plan within the city.

05/16/12: Meeting with US EPA Office of Research and Development: This meeting was conducted at US EPA ORD's request to discuss potential ways in which the Cincinnati Lab could be of assistance to Ohio EPA. Rick Wilson, Scott Jacob and Russ Gibson participated.

06/13/12: Agricultural Forum: Sponsored by Ohio State Extension, the Ag Forum is a quarterly gathering of the departments of Agriculture, Natural Resources, NRCS, and Ohio EPA as well as Ohio State University Extension and the Farm Service Agency to discuss issues of mutual concern. Meetings are held at the Ohio Farm Bureau offices-who are also participants on this group

08/02/12: GLSM Implementation Tracking Meeting with Tetrattech and USEPA: Meeting was conducted at Tetrattech's Cleveland office to discuss the implementation tracking system that TT was working on for Ohio EPA under contract to Region 5. It was mutually determined that moving forward was not a productive endeavor so the project was scrapped and TT assistance will be focused on GLSM in other ways.

Summary

Ohio EPA's NPS Program is an important piece of Ohio's strategy to address the impacts of nonpoint source pollution in the state's rivers and streams. Providing leadership and direction, the program is committed to continuous quality improvement and effectively incorporating lessons learned to improve the restoration of impaired waters and the successful elimination of impairments caused by nonpoint source pollutants, regardless of source.

Listing of Tables

The following pages are a series of data tables that were referenced in previous narrative. Please refer to the following:

- Table 1-1: Subgrants Closed Out during FY12
- Table 1-2: FFY2003 Subgrant Recipients
- Table 1-3: FFY2004 Subgrant Recipients
- Table 1-4: FFY2005 Subgrant Recipients
- Table 1-5: FFY2006 Subgrant Recipients
- Table 1-6: FFY2007 Subgrant Recipients
- Table 1-7: FFY2008 Subgrant Recipients
- Table 1-8: FFY2009 Subgrant Recipients
- Table 1-9: FFY2010 Subgrant Recipients
- Table 1-10: FFY2011 Subgrant Recipients
- Table 1-11: FY2012 Subgrant Recipients

- Table 2-1: Annual Pollutant Loads Reductions by Project Year since FFY2001
- Table 2-2: FFY2001 Final Nonpoint Source Pollution Load Reductions
- Table 2-3: FFY2002 Final Nonpoint Source Pollution Load Reductions
- Table 2-4: FFY2003 Final Nonpoint Source Pollution Load Reductions
- Table 2-5: FFY2004 Final Nonpoint Source Pollution Load Reductions
- Table 2-6: FFY2005 Nonpoint Source Pollution Load Reductions
- Table 2-7: FFY2006 Nonpoint Source Pollution Load Reductions
- Table 2-8: FFY2007 Nonpoint Source Pollution Load Reductions
- Table 2-9: FFY2008 Nonpoint Source Pollution Load Reductions
- Table 2-10: FFY2009 Nonpoint Source Pollution Load Reductions
- Table 2-11: FFY2010 Nonpoint Source Pollution Load Reductions
- Table 2-12: FFY2011 Nonpoint Source Pollution Load Reductions
- Table 2-13: FY2012 Nonpoint Source Pollution Load Reductions

- Table 3-1: Total Maximum Daily Load Studies Status
- Table 3-2: State Fully Endorsed Watershed Action Plan Status
- Table 3-3: State Conditionally Endorsed Watershed Action Plan Status

Table 1-1
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
Subgrants Closed Out during FFY 2012
Grants closed out through 07/16/12

Project Number	Project Sponsor	Total Federal Awarded	Total Federal Expenditures	% Spent	Date Closed
#07(h)EPA-15	River Institute	\$332,400	\$327,545	98.5%	10/12/11
#08(h)EPA-06	Bainbridge Township Trustees	\$294,900	\$294,900	100%	01/04/12
#08(h)EPA-15	Rural Action-Sunday Creek	\$225,980	\$225,980	100%	06/04/12
#08(h)EPA-16	Five Rivers Metroparks	\$499,980	\$472,162	94.4%	06/20/12
#08(h)EPA-19	The Nature Conservancy Big Darby	\$464,259	\$404,166	87.1%	02/14/12
#08(h)EPA-22	Greene County Sanitary Engineer	\$382,700	\$382,192	99.9%	10/25/11
#08(h)EPA-33	Holmes County Soil & Water District	\$114,963	\$95,055	82.7%	02/06/12
#08(h)EPA-34	City of Oxford	\$24,150	\$0	0.0%	12/14/11
#N234	Ohio State University Extension	\$54,720	\$54,469	99.5%	07/13/12
#09(h)EPA-05	Ohio State University Extension	\$100,000	\$98,820	98.8%	12/23/11
#09(h)EPA-11	Brown County Soil & Water Conservation	\$280,347	\$82,186	29.3%	07/05/12
#09(h)EPA-16	City of Xenia	\$341,100	\$183,918	53.9%	06/11/12
#09(h)EPA-17	Village of New Albany Stream Restoration	\$101,742	\$101,142	99%	08/30/12
#11(h)EPA-10	Mayfield Village	\$184,429	\$161,396	87.5%	08/03/12
TOTALS		\$3,401,670	\$2,883,931	84.7%	

Table 1-2
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2003 Subgrant Recipients

Federal Grant #C997550003
Grant Closed 06/30/08

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#03(h)EPA-04	Darke County Health Department	Stillwater River	HSTS Replacement	\$ 775,478
#03(h)EPA-05	Cuyahoga County Health Department	Rocky River	HSTS Replacement	\$ 624,085
#03(h)EPA-06	Little Beaver Creek Land Foundation	Little Beaver Creek	Watershed Planning	\$ 100,000
#03(h)EPA-07	City of Kent	Cuyahoga River	Dam Removal/Modification	\$ 500,000
#03(h)EPA-08	Crossroads RC&D	Huff Run	Acid Mine Drainage Abatement	\$1,000,000
#03(h)EPA-09	Vinton County SWCD	Raccoon Creek	Acid Mine Drainage Abatement	\$ 764,521
#03(h)EPA-10	Friends of Big Walnut Creek	Big Walnut Creek	Watershed Planning	\$ 100,000
#03(h)EPA-11	Ohio State University	Olentangy River	TMDL Development	\$ 104,974
#03(h)EPA-12	Ohio University-ILGARD	Hocking River	TMDL Development	\$ 130,000
#03(h)EPA-13	U.S. Geological Survey	Mad River	TMDL Development	\$ 85,000
#03(h)EPA-15	NOACA	Rocky River	Watershed Planning	\$ 30,000
Total Federal 319(h) Implementation Funds Awarded				\$4,214,058

Table 1-3
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2004 Subgrant Recipients

Federal Grant # C997550004
Grant Closed 06/30/09

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#04(h)EPA-03	Rural Action, Inc.	Sunday Creek	Acid Mine Drainage Abatement	\$ 750,000
#04(h)EPA-04	Village of Spring Valley	Little Miami River	Source Water Protection Plan	\$ 10,000
#04(h)EPA-05	Village of Wilshire Hills	Tuscarawas River	Source Water Protection Plan	\$ 20,000
#04(h)EPA-06	Clermont County SWCD	East Fork Little Miami River	Stream Restoration	\$ 334,970
#04(h)EPA-07	Washington/Noble Joint SWCD	Duck Creek	Agricultural BMPs	\$ 122,753
#04(h)EPA-08	Ohio Valley RC&D	White Oak Creek	Agricultural BMPs	\$ 230,254
#04(h)EPA-09	Rural Action, Inc.	Monday Creek	Acid Mine Drainage Abatement	\$ 621,660
#04(h)EPA-11	Ohio University-ILGARD	Raccoon Creek	Acid Mine Drainage Abatement	\$ 750,000
#04(h)EPA-12	WSOS Community Action	Sandusky River	HSTS Replacement	\$ 999,926
Total Federal 319(h) Implementation Funds Awarded				\$3,839,563

Table 1-4
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2005 Subgrant Recipients

Federal Grant # C997550005
Grant Closed 09/30/09

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#05(h)EPA-05	ODNR-Natural Areas	Kokosing River	Watershed Planning	\$ 284,000
#05(h)EPA-06	Franklin County Metroparks	Big Darby Creek	Levee Removal/Modification	\$ 230,000
#05(h)EPA-07	Delaware County Health Dept.	Olentangy River	HSTS Replacement	\$ 110,977
#05(h)EPA-08	Mahoning County SWCD	Mill Creek-Mahoning River	Stream Restoration-Easements	\$ 392,600
#05(h)EPA-09	OKI Regional Council of Govs	Mill Creek-Ohio River	Conservation Easements	\$ 498,010
#05(h)EPA-10	Western Reserve Land Conservancy	Chagrin River	HSTS Replacement	\$ 400,000
#05(h)EPA-11	Miami County Health Dept.	Stillwater River	Dam Removal	\$ 125,000
#05(h)EPA-12	Friends of Alum Creek	Alum Creek	HSTS Replacement	\$ 305,700
#05(h)EPA-13	Highland County SWCD	East Fork Little Miami River	HSTS Replacement	\$ 233,367
#05(h)EPA-14	TMACOG	Portage River	Source Water Protection Plan	\$ 389,138
#05(h)EPA-15	City of Findlay	Blanchard River	Source Water Protection Plan	\$ 50,000
#05(h)EPA-16	Fairfield County Commissioners	Hocking River	Source Water Protection Plan	\$ 51,000
#05(h)EPA-17	Western Water Company	Little Miami River	Source Water Protection Plan	\$ 12,000
#05(h)EPA-18	Greene County	Little Miami River	Source Water Protection Plan	\$ 18,071
#05(h)EPA-19	Village of Wapakoneta	Auglaize River	Source Water Protection Plan	\$ 10,000
#05(h)EPA-20	Village of West Jefferson	Big Darby Creek	Source Water Protection Plan	\$ 12,000
#05(h)EPA-21	OKI Regional Council of Govs	Mill Creek-Ohio River	Source Water Protection Plan	\$ 69,000
#05(h)EPA-23	City of Ashland	Mohican River	Source Water Protection Plan	\$ 13,200
#05(h)EPA-24	Village of Orrville	Tuscarawas River	Source Water Protection Plan	\$ 20,000
#05(h)EPA-26	The River Institute	Cuyahoga River	Stream Restoration	\$ 166,822
#05(h)EPA-27	Summit County	Cuyahoga River	Stream Restoration	\$ 100,000
Total Federal 319(h) Implementation Funds Awarded				\$3,490,885

Table 1-5
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2006 Subgrant Recipients

Federal Grant # C997550006
Grant Closes 09/30/10

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#06(h)EPA-06	Miami County SWCD	Honey Creek	Stream Restoration	\$ 231,192
#06(h)EPA-08	Little Beaver Creek Land Foundation	Little Beaver Creek	Agricultural BMPs	\$ 107,933
#06(h)EPA-09	NEFCO	Cuyahoga River	Overwide Ditch Conversion	\$ 248,250
#06(h)EPA-10	TMACOG	Ottawa River	Stream Restoration	\$ 204,970
#06(h)EPA-11	Muskingum County SWCD	Salt Creek	Agricultural BMPs	\$ 96,625
#06(h)EPA-17	Village of New Albany	Big Walnut Creek	Dam Removal	\$ 23,622
#06(h)EPA-18	Cuyahoga County Health Dept.	Mill Creek	Stream Restoration	\$ 280,899
#06(h)EPA-23	Five Rivers Metroparks	Stillwater River	Dam Removal/Modification	\$ 224,000
#06(h)EPA-24	Greene County SWCD	Little Miami River	Stream Restoration	\$ 223,600
#06(h)EPA-25	West Creek Preservation Committee	West Creek	Stream Restoration	\$ 187,500
#06(h)EPA-27	City of Columbus	Olentangy River	Stream Restoration	\$ 416,063
#06(h)EPA-28	Holden Arboretum	Chagrin River	Stream Restoration	\$ 150,000
#06(h)EPA-29	Champaign County Commissioners	Mad River	Source Water Protection	\$ 268,815
#06(h)EPA-31	Franklin County Metroparks	Big Darby Creek	Levee Removal/Modification	\$ 315,172
#06(h)EPA-34	Village of Ottawa	Blanchard River	Source Water Protection Plan	\$ 19,970
#06(h)EPA-35	Five Rivers Metroparks	Stillwater River	Dam Removal/Modification	\$ 176,568
#06(h)EPA-36	River Institute-Beetree Run	Maumee River	Stream Restoration	\$ 280,523
#06(h)EPA-37	Cuyahoga County Board of Health	Mill Creek	Education & Outreach (Signs)	\$ 9,100
#06(h)EPA-38	St. Marys Township	Grand Lake St. Marys	Sediment Collection/Dredging	\$ 90,540
Total Federal 319(h) Implementation Funds Awarded				\$3,555,342

Table 1-6
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2007 Subgrant Recipients

Federal Grant # C997550007
Grant Closed 06/30/12

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#07(h)EPA-06	Greene County Sanitary Engineer	Massie Creek	Stream & Wetland Restoration	\$ 410,755
#07(h)EPA-08	Nature Conservancy	Big Darby Creek	Stream Restoration	\$ 500,000
#07(h)EPA-09	Ohio University-ILGARD	Raccoon Creek	Acid Mine Drainage Abatement	\$ 312,478
#07(h)EPA-10	Three Valley Conservation Trust	Indian Creek	Conservation Easements	\$ 250,000
#07(h)EPA-13	The River Institute	Bath Creek	Stream Restoration	\$ 181,600
#07(h)EPA-14	Scioto River Federation	Powerderlick Run	Stream Restoration	\$ 443,700
#07(h)EPA-15	The River Institute	Clover Groff	Stream Restoration	\$ 332,400
#07(h)EPA-16	Rural Action, Inc.	Monday Creek	Acid Mine Drainage Abatement	\$ 156,666
#07(h)EPA-18	Western Reserve Land Conservancy	Rocky River	Conservation Easements	\$ 292,000
#07(h)EPA-21	Friends of the Lower Muskingum	Muskingum River	Source Water Protection	\$ 138,779
#07(h)EPA-23	Warren County SWCD	Little Miami	Streambank Stabilization	\$ 125,000
#07(h)EPA-24	City of Delaware	Olentangy	Stream Restoration	\$330,000
Total Federal 319(h) Implementation Funds Awarded				\$3,473,378

Table 1-7
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2008 Subgrant Recipients

Federal Grant # C997550008
Grant Closes 06/30/13

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#08(h)EPA-06	Bainbridge Township Trustees	Chagrin River	Dam Modification	\$ 294,900
#08(h)EPA-11	Cuyahoga County SWCD	Euclid River	Dam Removal	\$ 235,428
#08(h)EPA-12	Lake County Stormwater Mgmt.	Chagrin River	Stream Restoration	\$ 235,625
#08(h)EPA-15	Rural Action, Inc.	Sunday Creek	Acid Mine Drainage Abatement	\$ 225,398
#08(h)EPA-16	Five Rivers Metroparks	Stillwater River	Dam Removal & Restoration	\$ 499,980
#08(h)EPA-17	Rural Action, Inc.	Huff Run	Acid Mine Drainage Abatement	\$ 159,572
#08(h)EPA-18	Columbus Recreation & Parks	Clover Groff-Big Darby Creek	Stream Restoration	\$ 200,000
#08(h)EPA-19	Nature Conservancy	Big Darby Creek	Stream Restoration	\$ 464,259
#08(h)EPA-22	Greene County Sanitary Engineer	Little Miami-Massie Creek	Stream Restoration	\$ 382,700
#08(h)EPA-26	The River Institute	Merritt Ditch-Maumee River	Stream Restoration	\$ 207,723
#08(h)EPA-29	Village of Chagrin Falls	Chagrin River	Dam Removal	\$ 400,800
#08(h)EPA-30	Ohio State University Extension	Statewide	National NPS Conference	\$ 54,720
#08(h)EPA-31	Ohio State University	Statewide	Monitoring Protocol Tools	\$ 66,960
#08(h)EPA-32	Ohio State University	Statewide	Nutrient Assimilative Modeling	\$ 50,000
#08(h)EPA-33	Holmes County SWCD	Paint Creek	Agricultural BMP Project	\$ 114,963
#08(h)EPA-34	City of Oxford	Four Mile	Dam Removal	Grant terminated
#08(h)EPA-35	Franklin SWCD	Olentangy River	Agricultural BMP Projects	\$ 194,016
Total Federal 319(h) Implementation Funds Awarded				\$3,811,194

Table 1-8
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2009 Subgrant Recipients

Federal Grant # C997550009
Grant Closes 06/30/13

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#09(h)EPA-07	Cuyahoga County Board of Health	Tinker's Creek	Stream Restoration	\$ 329,208
#09(h)EPA-10	Washington County SWCD	Wolf Creek	Agricultural BMPs	\$ 0
#09(h)EPA-11	Brown County SWCD	White Oak Creek	Agricultural BMPs	\$ 98,466
#09(h)EPA-12	Mercer County SWCD	Grand Lake St. Marys	HSTS Replacement/Repair	\$ 191,650
#09(h)EPA-13	City of Marysville	Mill Creek	Stream Restoration	\$ 322,434
#09(h)EPA-14	Metroparks Serving Summit County	Cuyahoga River	Stream Restoration	\$ 249,984
#09(h)EPA-15	Mill Creek Watershed Partners	Mill Creek-Ohio River	Stream & Wetland Restoration	\$ 317,420
#09(h)EPA-16	City of Xenia	Little Miami River	Stream Restoration	\$ 238,500
#09(h)EPA-17	Village of New Albany	Big Walnut Creek	Stream Restoration	\$ 101,742
#09(h)EPA-18	ODNR/Parks & Recreation	Grand Lake St. Marys	Inland Lake Management	\$ 250,000
#09(h)EPA-19	City of Reynoldsburg	Blacklick Creek	Wetlands Restoration	\$ 137,010
#09(h)EPA-20	University of Toledo	Ottawa River	Stream Restoration	\$235,197
#09(h)EPA-21	The Olander Park District	Tenmile Creek	Stream Restoration	\$185,112
#09(h)EPA-22	Mill Creek Metroparks	Mill Creek-Mahoning R.	Stormwater Demonstration	\$55,353
#09(h)EPA-23	ODNR/Parks & Recreation	Grand Lake St. Marys	Inland Lake Management	\$100,000
#09(h)EPA-25	City of Lebanon	Little Miami River	Stormwater Demonstration	\$60,000
#09(h)EPA-26	Bath Township	Cuyahoga River	Wetland Restoration	\$29,071
#09(h)EPA-27	Liberty Township	Olentangy River	Stormwater Demonstration	\$123,910
#09(h)EPA-28	ODNR-Division of Parks & Recreation	Alum Creek	Stormwater Demonstration	\$47,157
Total Federal 319(h) Implementation Funds Awarded				\$3,072,214

Table 1-9
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2010 Subgrant Recipients

Federal Grant #C9975500010
Grant Closes 06/30/14

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#10(h)EPA-07	City of Fremont	Sandusky River	Stream Restoration/Dam Removal	\$ 400,000
#10(h)EPA-08	Geauga County Park District	Chagrin River	Stream Restoration/Dam Removal	\$ 400,000
#10(h)EPA-10	Lake County Metroparks	Chagrin River	Stream Restoration/Dam Removal	\$ 349,584
#10(h)EPA-11	Ohio University-ILGARD	W. Branch Raccoon Creek	Acid Mine Drainage Abatement	\$ 393,875
#10(h)EPA-14	City of Mason	Muddy Creek	Stream Restoration	\$ 258,000
#10(h)EPA-17	City of Akron	Cuyahoga River	Stream Restoration/Dam Removal	\$ 400,000
#10(h)EPA-18	West Creek Preservation Committee	West Creek	Stream & Wetland Restoration	\$ 394,000
#10(h)EPA-20	Mercer County Commissioners	Grand Lake St. Marys	Inland Lake Management	\$ 484,000
#10(h)EPA-21	City of Pickerington	Walnut Creek	Streambank Stabilization	\$139,537
Total Federal 319(h) Implementation Funds Awarded				\$3,218,996

Table 1-10
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2011 Subgrant Recipients

Federal Grant #C9975500011
Grant Closes 06/30/16

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#11(h)EPA-07	Bath Township Trustees	Yellow Creek	Wetlands and Floodplain Restoration	\$57,078
#11(h)EPA-09	City of Springdale	Mill Creek	Streambank Restoration	\$362,920
#11(h)EPA-10	Village of Mayfield	Chagrin River	Stormwater Demonstration	\$184,429
#11(h)EPA-11	Ursulines of Brown County	Little Miami River	Dam Removal and Stream Restoration	\$367,805
#11(h)EPA-12	Toledo Division of Environmental Services	Maumee River	Stormwater Demonstration	\$98,420
#11(h)EPA-14	City of Aurora	Chagrin River	Stream Restoration	\$478,075
#11 (h)EPA-18	Columbus Public Utilities Division	Olentangy River	Stream Restoration	\$500,000
#11(h)EPA-20	Westerville Parks & Recreation	Alum Creek	Wetlands Restoration & Stormwater BMP	\$131,328
#11(h)EPA-21	Toledo Botanical Garden	Maumee River	Dam Removal and Stream Restoration	\$500,000
#11(h)EPA-31	Medina County Park District	Chippewa Lake	Stream Restoration	\$169,000
#11(h)EPA-47	Cuyahoga County SWCD	Rocky River	Dam Removal and Stream Restoration	Match Only
Total Federal 319(h) Implementation Funds Awarded				\$2,849,055

Grant # BUCK-11
Grant Closes 6/30/14

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#Buck 11-01	ODNR-Division of Parks & Recreation	Buckeye Lake	Stormwater Demonstration	\$100,000
#Buck 11-02	Buckeye Lake for Tomorrow	Buckeye Lake	Watershed Planning & Public Outreach	\$80,000
#Buck 11-03	Fairfield County Soil & Water Conservation	Buckeye Lake	Agricultural BMPs and Stormwater Demo	\$56,253
Total Federal 319(h) Implementation Funds Awarded				\$236,253

Table 1-10
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
FFY 2012 Subgrant Recipients

Federal Grant #C9975500012
Grant Closes 10/15/16

Project Number	Project Sponsor	Watershed	Type of Project	Grant Amount
#12(h)EPA-03	Ohio State University Extension	Statewide	Public Outreach and Social Indicators	\$25,000
#12(h)EPA-10	City of Wadsworth	Rocky River	Stormwater Demonstration Project	\$134,280
#12(h)EPA-18	Greene County Park District	Little Miami River	Stream Restoration	\$226,962
#12(h)EPA-19	City of Elyria	Black River	Stream Restoration	\$260,586
#12(h)EPA-20	City of New Franklin	Tuscarawas River	Stormwater Demonstration Project	\$186,600
#12(h)EPA-22	TMACOG	Swan Creek	Stream Restoration	\$80,741
#12 (h)EPA-23	The River Institute	Bokes Creek	Stream Restoration	\$214,306
#12(h)EPA-24	Huff Run Watershed Restoration Partnership	Huff Run	Acid Mine Drainage Abatement	\$326,900
#12(h)EPA-25	Ohio Valley Conservation Coalition	Salt Creek	Streambank Restoration	\$318,336
#12(h)EPA-27	City of New Albany	Big Walnut Creek	Stream Restoration	\$230,885
#12(h)EPA-28	Franklin County Metroparks	Blacklick Creek	Streambank Stabilization	\$308,220
#12(h)EPA-33	Metroparks Serving Summit County	Cuyahoga River	Stream Restoration	\$326,900
#12(h)EPA-36	Holden Arboretum	Chagrin River	Stream Restoration	\$163,450
#12(h)EPA-WRRSP	City of Columbus	Olentangy River	Dam Removal and Stream Restoration	Match Only
Total Federal 319(h) Implementation Funds Awarded				\$2,803,166

Table 2-1
Ohio Environmental Protection Agency
NPS Pollution LOAD REDUCTIONS
Annual Load Reductions-by Project Year since FFY2001*

Project Year	Nitrogen (lbs./year)	Phosphorus (lbs./year)	Sediment (tons/year)	HSTS* (gallons/day)
FFY 2001	294,422	133,404	106,899	66,520
FFY 2002	184,095	52,667	30,195	19,320
FFY 2003	19,771	7,488	50	164,150
FFY 2004	19,866	5,130	1,039	62,235
FFY 2005	17,676	6,993	1,237	129,960
FFY 2006	140,597	73,892	77,543	0
FFY 2007	5,057	2,580	2,425	0
FFY 2008	6,984	4,225	3,274	0
FFY 2009	8,092	5,315	2,588	0
FFY 2010	5,513	2,229	1,849	0
FFY 2011	4,510	2,024	1,903	0
FFY 2012 est.	6,127	4,392	2,771	0
TOTAL	712,710	300,339	231,773	442,185

*All load reductions are updated and current through project semi-annual technical reports received through 7/28/11. FFY2001, FFY2002, FFY2003, FFY2004, FFY2005, FFY2006 and FFY2007 load reductions are FINAL for those grant cycles. Final reports have been received for all sub-grant projects for those cycles.

Table 2-2
FINAL – 03/03/08
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2001 Projects

Federal Grant #C997550001
Grant Closed 12/31/06

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#01(h)EPA-16	Rivers Unlimited	85	43	597	0
#01(h)EPA-19	Paint Creek Joint SWCD	228,314	106,678	91,593	4,680
#01(h)EPA-20	Ohio Valley RC&D	15,826	5,995	0	24,120
#01(h)EPA-22	Scioto River Federation	7,956	2,652	1,326	0
#01(h)EPA-24	Miami County Health Department	1,471	557	0	23,800
#01(h)EPA-25	Seneca County Health Department	959	361	0	7,920
#01(h)EPA-28	Paint Creek Joint SWCD	31,696	13,058	9,715	0
#01(h)EPA-29	Paint Creek Joint SWCD	8,114	4,060	3,668	6,000
		294,422	133,404	106,899	66,520

Table 2-3
FINAL UPDATED – 09/20/11
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2002 Projects

Federal Grant #C997550002
Grant Closed 12/31/06

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#02(h)EPA-06	Huron County SWCD	1,792	855	4	15,720
#02(h)EPA-07	Rural Action, Inc.	433	164	0	3,600
#02(h)EPA-08	Seneca County SWCD	56,792	29,113	19,166	0
#02(h)EPA-11	OSU Extension Service	48,909	5,185	518	0
#02(h)EPA-12	Ducks Unlimited	37,322	6,533	36	0
#02(h)EPA-13	Greene County SWCD	22,017	10,493	10,451	0
#02(H)EPA-14	Summit County Department of Environmental Services	13,797	0	0	0
#02(h)EPA-15	Mill Creek Inc.	3,033	324	20	0
		184,095	52,667	30,195	19,320

Table 2-4
FINAL – 03/03/08
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2003 Projects

Federal Grant #C997550003
Grant Closed 06/30/08

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#03(h)EPA-04	Darke County Health Department	17,748	6,722	0	147,350
#03(h)EPA-05	Cuyahoga County Health Department	2,023	766	0	16,800
#03(h)EPA-07	City of Kent	0	0	50	0
		19,771	7,488	50	164,150

Table 2-5
FINAL UPDATED – 09/20/11
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2004 Projects

Federal Grant #C997550004
Grant Closed 06/30/09

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#04(h)EPA-06	Clermont County SWCD	797	362	250	2,250
#04(h)EPA-07	Washington County SWCD	0	0	48	0
#04(h)EPA-08	Ohio Valley RC&D	12,825	2,403	741	7,920
#04(h)EPA-12	WSOS Community Action Organization	6,244	2,365	0	51,840
		19,866	5,130	1,039	62,235

Table 2-6
Updated FINAL – 09/20/11
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2005 Projects

Federal Grant #C997550005
Grant Closed 09/30/09

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#05(h)EPA-06	Franklin County Metroparks	0	0	1,680	0
#05(h)EPA-07	Delaware County Health Department	10,060	3,810	0	87,120
#05(h)EPA-08	Mahoning County SWCD	40	21	21	0
#05(h)EPA-11	Miami County Health Department	867	328	0	7,200
#05(H)epa-09	OKI Council of Governments-Mill Creek Watershed Project	40	21	210	
#05(h)EPA-12	Friends of Alum Creek & Tributaries	0	0	126	0
#05(h)EPA-13	Highland County SWCD	1,040	394	0	8,640
#05(h)EPA-14	TMACOG	3,253	1,231	0	27,000
#05(h)EPA-26	The River Institute	1,186	593	516	0
#05(h)EPA-27	Summit County	1,190	595	595	0
		17,676	6,993	3,148	129,960

Table 2-7
UPDATED FINAL-09/20/11
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2006 Projects

Federal Grant #C997550006
Grant Closed 10/31/11

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#06(h)EPA-06	Miami County SWCD	75	37	37	0
#06(h)EPA-08	Little Beaver Creek	0	0	742	0
#06(h)EPA-09	NEFCO-Potter Creek	0	0	0	0
#06(h)EPA-10	TMACOG	170	85	85	0
#06(h)EPA-11	Muskingum SWCD	3,689	3,723	7,008	0
#06(h)EPA-18	Cuyahoga County Health Department	600	255	255	0
#06(h)EPA-23	Five Rivers Metroparks	135,000	67,500	67,500	0
#06(h)EPA-24	Greene County SWCD	420	210	210	0
#06(h)EPA-25	West Creek Preservation	185	91	95	0
#06(h)EPA-28	Holden Arboretum	0	0	600	0
#06(h)EPA-31	Franklin County Metroparks	13	11	1	0
#06(h)EPA-33	The Ohio State University	0	0	0	0
#06(h)EPA-35	Five Rivers Metroparks	68	1,350	675	0
#06(h)EPA-36	The Rivers Institute-Bee Tree Run	294	588	294	0
#06(h)EPA-37	Cuyahoga County Board of Health	0	0	0	0
#06(h)EPA-38	St. Marys Township	83	42	41	0
		140,597	73,892	77,543	0

Table 2-8
UPDATED FINAL – 07/11/12
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2007 Projects

Federal Grant #C997550007
Grant Closed 06/30/12

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#07(h)EPA-06	Greene County Sanitary Engineer	1,589	838	657	0
#07(h)EPA-08	The Nature Conservancy	1,480	738	738	0
#07(h)EPA-13	The River Institute-Bath Township	230	114	114	0
#07(h)EPA-14	Scioto River Federation	0	0	0	0
#07(h)EPA-15	The River Institute-Clover Groff	394	196	196	0
#07(h)EPA-23	Warren County Soil & Water Conservation District	68	46	92	0
#07(h)EPA-24	City of Delaware	1,296	648	628	0
		5,057	2,580	2,425	0

Table 2-9
Updated – 07/12/12
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2008 Projects

Federal Grant #C997550008
Grant Closes 12/31/12

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#08(h)EPA-06	Bainbridge Township Trustees	556	278	278	0
#08(h)EPA-11	Cuyahoga County SWCD	178	89	89	0
#08(h)EPA-12	Lake County Storm Water	100	50	50	0
#08(h)EPA-15	Rural Action, Inc.	0	0	0	0
#08(h)EPA-16	Five Rivers Metroparks	135	67	67	0
#08(h)EPA-17	Rural Action, Inc.	0	0	0	0
#08(h)EPA-18	Columbus Recreation & Parks	553	277	276	0
#08(h)EPA-19	The Nature Conservancy	293	146	146	0
#08(h)EPA-22	Greene County Sanitary Engineer	1,412	734	583	0
#08(h)EPA-26	The River Institute	496	248	248	0
#08(h)EPA-29	Village of Chagrin Falls	935	468	468	0
#08(h)EPA-33	Holmes County Soil & Water Conservation District	3,600	1,800	1,040	0
#08(h)EPA-34	City of Oxford	15	8	8	0
#08(h)EPA-35	Franklin County Soil & Water Conservation District	122	60	21	0
		6,984	4,225	3,274	0

Table 2-10
Updated – 07/12/12
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2009 Projects

Federal Grant #C997550009
Grant Closes 06/30/13

Project Number	Project Sponsor	Cumulative Load Reductions to Date			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#09(h)EPA-07	Cuyahoga County Board of Health	340	170	170	0
#09(h)EPA-10	Washington County SWCD (GRANT TERMINATED)	0	0	0	0
#09(h)EPA-11	Brown County SWCD	568	294	294	0
#09(h)EPA-12	Mercer County SWCD	173	65	0	0
#09(h)EPA-13	City of Marysville (GRANT TERMINATED)	0	0	0	0
#09(h)EPA-14	Summit County Metroparks	472	402	804	0
#09(h)EPA-15	Mill Creek Partners	2,550	500	300	0
#09(h)EPA-16	City of Xenia	2,550	500	300	0
#09(h)EPA-17	Village of New Albany	58	29	25	0
#09(h)EPA-18	ODNR/Parks & Recreation	0	1,500	0	0
#09(h) EPA-19	City of Reynoldsburg	685	349	207	0
#09(h)EPA-20	University of Toledo	0	0	80	0
#09(h)EPA-21	The Olander Park District	300	125	53	0
#09(h)EPA-22	Mill Creek Park District	2	0	240	0
#09(h)EPA-23	ODNR/Parks & Recreation	0	1,259	0	0
#09(h)EPA-24	Grand Lake St. Marys Restoration CIC	0	0	0	0
#09(h)EPA-25	City of Lebanon	15	1	0.5	0
#09(h)EPA-26	Bath Township	230	114	114	0
#09(h)EPA-27	Liberty Township	134	4	0	0
#09(h)EPA-28	Ohio Dept. of Natural Resources-Alum Creek	15	3	1	0
		8,092	5,315	2,588	0

Table 2-11
Updated – 07/12/12
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2010 Projects

Federal Grant #C997550010
Grant Closes 06/30/14

Project Number	Project Sponsor	ESTIMATED Load Reductions Expected			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#10(h)EPA-07	City of Fremont	1,190	595	595	0
#10(h)EPA-08	Geauga County Park District	306	253	253	0
#10(h)EPA-10	Lake County Metroparks	150	150	300	0
#10(h)EPA-11	Ohio University	0	0	0	0
#10(h)EPA-14	City of Mason	15	7	7	0
#10(h)EPA-17	City of Akron	8.66	4.33	4.33	0
#10(h)EPA-18	West Creek Preservation Committee	391	195.5	195.5	0
#10(h)EPA-20	Mercer County Commissioners	2,767	675	287.5	0
#10(h)EPA-21	City of Reynoldsburg	685	349	207	0
		5,513	2,229	1,849	0

Table 2-12
UPDATED –07/12/12
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FFY2011 Projects

Federal Grant #C997550010
Grant Closes 06/30/14

Project Number	Project Sponsor	ESTIMATED Load Reductions Expected			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#11(h)EPA-07	Bath Township Trustees	230	114	114	0
#11(h)EPA-09	City of Springdale	211	105	105	0
#11(h)EPA-10	Mayfield Village	1	0	1	0
#11(h)EPA-11	Ursulines of Brown County	0	0	0	0
#11(h)EPA-12	Toledo Division of Environmental Services	52	6	0	0
#11(h)EPA-14	City of Aurora	475	138	138	0
#11(h)EPA-18	Columbus Public Utilities Department	0	0	0	0
#11(h)EPA-20	Westerville Parks and Recreation	64	23	7	0
#11(h)EPA-21	Toledo Botanical Garden	2,677	1,338	1,338	0
#11(h)EPA-31	Medina County Park District	500	300	200	0
#11(h)EPA-47	Cuyahoga County Soil & Water Conservation District	0	0	0	0
		4,510	2,024	1,903	0

Table 2-12
UPDATED – 07/12/12
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
NPS Pollution LOAD REDUCTIONS
FY12 Projects - Estimated

Federal Grant #C997550012
Grant Closes 06/30/16

Project Number	Project Sponsor	ESTIMATED Load Reductions Expected			
		Nitrogen (lbs/year)	Phosphorus (lbs/year)	Sediment (tons/year)	Home Sewage Treated (gallons/day)
#12(h)EPA-10	City of Wadsworth	19	1	1	0
#12(h)EPA-18	Greene County Park District	2,043	1,086	705	0
#12(h)EPA-19	City of Elyria	1,965	980	1,115	0
#12(h)EPA-20	City of New Franklin	38.5	15	3	0
#12(h)EPA-22	TMACOG	510	255	300	0
#12 (h)EPA-23	The River Institute	320	160	160	0
#12(h)EPA-24	Huff Run Watershed Restoration Partnership	361	1,478	58	0
#12(h)EPA-25	Ohio Valley Conservation Coalition	284	142	167	0
#12(h)EPA-27	City of New Albany	73	22	6	0
#12(h)EPA-28	Franklin County Metroparks	229	114	114	0
#12(h)EPA-33	Metroparks Serving Summit County	243	118	118	0
#12(h)EPA-36	Holden Arboretum	42	21	24	0
		6,127.5	4,392	2,771	0

Table 3.1
Ohio Environmental Protection Agency
Total Maximum Daily Load (TMDL) Status

Updated through 08/01/12

Cuyahoga River—Approved 2000
Rocky River—Approved 2001
Little Miami River—Approved 2002
Bokes Creek—Approved 2003
Sugar Creek—Approved 2003
Raccoon Creek—Approved 2003
Mill Creek (Scioto Basin)—Approved 2003
East Fork Duck Creek—Approved 2003
Cuyahoga River (Tinker’s Creek)—Approved 2003
Stillwater River—Approved 2004
Auglaize River—Approved 2004
Sandusky River—Approved 2004
Mill Creek—Approved 2005
Lake Erie Tributaries (below Huron to above Vermillion River)—Approved 2005
Monday Creek—Approved 2005
Big Walnut Creek—Approved 2005
Lake Erie Tributaries (east of Cuyahoga to west of Grand River)—Approved 2005
West Branch Huron River—Approved 2005
Little Beaver Creek—Approved 2005
Sunday Creek—Approved 2006
Big Darby Creek—Approved 2006
Toussaint Creek—Approved 2006
Wakatomika Creek—Approved 2006
Sugar Creek—Approved 2007
Chagrin River—Approved 2007
Olentangy River—Approved 2007
Beaver Creek & Grand Lake St. Mary’s—Approved 2007
Leading Creek—Approved 2008
Black River—Approved 2008
Nimishillen Creek—Approved 2008
Powell Creek—Approved 2008
Blanchard River—Approved 2009
Salt Creek—Approved 2009
Tuscarawas River—Approved 2009
Stillwater River (revised)—Approved 2009
Hocking River—Approved 2009
Swan Creek—Approved 2010
Mad River—Approved 2010
White Oak Creek—Approved 2010
Twin Creek—Approved 2010
Yellow Creek—Approved 2010
Walnut Creek—Approved 2010
Salt Creek—Approved 2011
Lower Little Miami River—Approved 2011
Lower Grand River – Approved 2012
Upper Great Miami River – Approved 2012
Portage River – Approved 2011
Upper Mahoning River – Approved 2011
Scioto Brush Creek – Approved 2011

Table 3.2
Ohio Environmental Protection Agency
State Fully Endorsed Watershed Plans
Updated through 08/01/12

Lower East Fork—Little Miami River
Todd's Fork—Little Miami River
White Oak Creek
Kokosing River
Lower Alum Creek
Lower Muskingum River
Leading Creek
Duck Creek
Wolf Creek
Lower Olentangy River
Upper Olentangy River
Huff Run
Grand Lake St. Mary's
Salt Creek
Upper Mill Creek—Ohio River Tributary
Bokes Creek
Stillwater River
Federal Valley
Sandusky River—Honey Creek
Paint Creek
Euclid Creek
Rocky River
Chagrin River
Mill Creek—Mahoning River Tributary
Honey Creek
West Creek
Upper and Lower Big Walnut Creek
East Fork Little Miami River—Lake Tributaries
Lower Mad River
Monday Creek
Nimishillen River
Sandusky River (Tiffin)
Upper Scioto River
Raccoon Creek Headwaters
Mill Creek—Upper Scioto River Tributary
Blacklick Creek
Bokes Creek
East Fork Little Miami River Headwaters
Indian lake
Tinkers Creek
Rocky Fork
Old Woman Creek
Middle East Fork-Little Miami River
Outlet/Lye Creek-Blanchard River Watershed
Little Beaver Creek
Black River
Portage River
Sunday Creek

Table 3.3
Ohio Environmental Protection Agency
Section 319(h) Clean Water Act Grants
State Conditionally Endorsed Watershed Plans
Conditionally endorsed plans do not meet all 9-required elements
Updated through 08/20/11

East Fork Little Miami River
Sunday Creek
Raccoon Creek
Lower Maumee River
Headwaters Sugar Creek
Duck & Otter Creeks
Little Beaver Creek
Lower Grand River
Twin Creek
Mentor Marsh
Upper Mad River

