Final Report  
USEPA-Great Lakes Restoration Initiative Project

Grant or IA Number: GL-00E01137-1  
State Grant #: CUYA12  
Project Title: Cuyahoga County Surface Water Improvement Fund Grants Program  
Reporting Period: July 1, 2012-June 30, 2016  
Principal Investigator: Russell Gibson, Ohio Environmental Protection Agency

Building upon the success of joining GLRI and SWIF grant funding in 2010, Ohio EPA applied for and received an FY12 Great Lakes Restoration Initiative Grant #GL-00E01137 in the amount of $996,902 to implement 18 additional local stormwater demonstration and nonpoint source management projects in Cuyahoga County, Ohio. An additional $1.3 million in state SWIF funds were provided to increase the project total to more than $2.2 million.

This project enhanced nonpoint source pollution management, stream and wetland restoration and innovative storm water management and green infrastructure demonstrations in Lake Erie tributaries in the targeted geographic area of Cuyahoga County, Ohio. The grant funds accelerated local implementation of approved TMDL and 9 element watershed action plans.

Ohio EPA successfully administered 18 subgrant agreements. The table below lists the subgrants awarded under this project and the amount of funds that were spent on each project:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Subgrant Sponsor/Recipient</th>
<th>Amount Awarded</th>
<th>Amount Spent</th>
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<td>12GLRI-CUY-06</td>
<td>Ursuline College</td>
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<td>Cleveland Metroparks Nature Center</td>
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Cuyahoga County is Ohio’s most populous county with more than 1.2 million residents with an aging stormwater infrastructure and highly modified urban tributaries to Lake Erie. The Cuyahoga County GLRI-SWIF grants program provides Ohio communities and local park districts with important financial assistance for stream and wetland restoration projects as well as green infrastructure retrofits.

Fact sheets for all subgrant-funded projects are included in later sections of this report. This project has resulted in the implementation and demonstration of multiple innovative stormwater BMP’s, wetland and stream bank stabilization methods installed by the project sponsors. The resulting surge in public and leadership awareness of the value of these practices has been considerable. The table below provides the FY12 GLRI-SWIF Project Locations.
Ohio EPA staff completed site visits with each of the 18 GLRI/SWIF subgrantees.

On September 16, 2014 the Chagrin River Watershed Partners (CRWP) presented the following projects to public officials attending the CRWP Board of Trustees meeting: Orange Village 12 SWIF-CUY-03, Chagrin Falls 12 SWIF-CUY-23 and Ursuline College 12SWIF-CUY-GLRI-06. This meeting targets the public as well as communities within the Chagrin River watershed. Approximately 40 people attended representing 26 communities and park districts.

On November 19, 2014 the City of South Euclid project 12SWIF-CUY-02 was included on the Cuyahoga River Project Tour. The project tour focused on green infrastructure, “city style” and provided participants a sample of various green infrastructure projects in South Euclid and Cleveland on redeveloped and existing development sites.

This project has realized considerable success. Subgrantees performing under this GLRI grant successfully completed the following:

- Installed 70,687 square feet of permeable pavement at 11 demonstration sites
- Installed 3,745 square feet of biofiltration islands
- Restored 2,677 linear feet of floodplain
- Restored 675 linear feet of stream channel
- Restored 490 linear feet of streambank
- Restored 2.2 acres of riparian corridor
- Installed 11,985 square feet of bioretention cells
- Installed 8 treatment train systems
- Installed 8,759 square feet of vegetated infiltration areas
- Installed 1 pretreatment cell
- Installed 1 acre of wetland
- Planted 1.2 acres of native grasses
- Installed 10,400 square feet of community rain gardens
- Installed 4 storm water tree boxes

The resulting surge in public and leadership awareness of the value of these practices has been considerable.
South Euclid Municipal Complex Stormwater Demonstration Project

Project Sponsor
City of South Euclid
Surface Water Improvement Fund
$166,015

Local Project Contact
Michael Love
City of South Euclid
1349 South Green Road
South Euclid, Ohio 44121

Environmental Results
Installed 8,502 square feet of permeable pavement
Installed 318 square feet of native plantings/landscaping in place of unnecessary concrete
Conducted project specific public outreach/education

Ohio EPA
Division of Surface Water Nonpoint Source Program
614-644-2020
Orange Village Service Facility-Parking Lot Retrofit Project

**Project Sponsor**
Orange Village Surface Water Improvement
$162,270 SWIF Funds

**Local Project Contact**
Brian Mader
Orange Village
4600 Lander Road
Orange Village, OH 44022

**Environmental Results**
Installed 8,838 square feet of permeable pavement.
Installed 445 square feet of bio-filtration islands.
Conducted project specific public outreach/education.

Division of Surface Water Nonpoint Source Program
614-644-2020
12SWIF-CUY-07

Forest Ridge Preserve
Headwater Stream
Restoration

**Project Sponsor**
Village of Moreland Hills
Surface Water Improvement
$144,500 SWIF Funds

**Local Project Contact**
Jeffrey J. Filarski, P.E.
Village of Moreland Hills
4350 SOM Center Road
Moreland Hills, OH 44022

**Environmental Results**
Restored 490 linear feet of floodplain by removing 170 linear feet of culvert pipe and excavating at least 3 times the bankfull channel width.

Restored 490 linear feet of stream channel by removing 170 linear feet of culvert pipe.

Restored 490 linear feet of streambank by recontouring or regarding.

Restored 1 acre of riparian corridor with shrubs/trees

Conducted project specific public outreach/education.

**Ohio EPA**
Division of Surface Water
Nonpoint Source Program
614-644-2020
12SWIF-CUY-08

North Chagrin Nature Center Parking Lot Retrofit

**Project Sponsor**
Cleveland Metroparks
Surface Water Improvement
$85,000 SWIF Funds
$34,024 Match

**Local Project Contact**
John Cardell
Cleveland Metroparks
4101 Fulton Parkway
Cleveland, Ohio 44144

**Environmental Results**
Installed 5,500 square feet of bio-retention cells.
Installed three passive treatment train systems.
Installed 10,400 square feet of community rain garden.
Installed 6,150 square feet of vegetated infiltration areas.
Conducted project specific public outreach/education.
Fern Hill Stormwater Treatment Wetland

**Project Sponsor**
City of Parma
Surface Water Improvement Fund
$149,164

**Local Project Contact**
Shelley Cullins
City of Parma
6611 Ridge Road
Parma, OH 44129

**Environmental Results**
Installed one passive treatment train system, including pretreatment forebay and permanent settling basin
Constructed a pretreatment cell
Installed approximately 1 acre of wetland
Planted approximately 300 woody plants and 7,100 herbaceous plants
Conducted project specific public outreach and education
12SWIF-CUY-16

Lakewood Green Parking Lots

**Project Sponsor**
City of Lakewood
Surface Water Improvement
$150,000 SWIF Funds

**Local Project Contact**
Joe Beno
City of Lakewood
12650 Detroit Avenue
Lakewood, OH 44107

**Environmental Results**
Installed 14,694 square feet of permeable pavement.
Installed 850 square feet of bioretention areas.
Installed 12 trees to provide shade in order to decrease temperature of surrounding pavement and absorb water.

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Division of Surface Water
Nonpoint Source Program
614-644-2020
Pepper Pike City Hall Parking Lot Retrofit

**Project Sponsor**
City of Pepper Pike
Surface Water Improvement
$84,354 SWIF Funds

**Local Project Contact**
Donald Sheehy
City of Pepper Pike
28000 Shaker Blvd.
Pepper Pike, Ohio 44124

**Environmental Results**
- Installed 4,113 square feet of pervious pavers.
- Installed 315 square feet of bioretention cell.
- Installed 450 square feet of vegetated infiltration swale.
- Installed one passive treatment train system.

Division of Surface Water Nonpoint Source Program
614-644-2020
Dalepoint Road
Cul-de-sac Retrofit

**Project Sponsor**
City of Independence
Surface Water Improvement
$72,850 SWIF Funds

**Local Project Contact**
Gregory Kurtz, Mayor
City of Independence
6800 Brecksville Road
Independence, Ohio 44131

**Environmental Results**
Installed 3,700 square feet of pervious pavers.
Installed 300 square feet of bioretention area.
Installed one passive treatment train system.
12SWIF-CUY-20

Brooklyn Heights
Village Hall Parking
Lot Retrofit

Project Sponsor
Village of Brooklyn Heights
Surface Water
Improvement Fund
$84,330

Local Project Contact
Michael Procuk, Mayor
Village of Brooklyn Heights
345 Tuxedo Avenue
Brooklyn Heights, Ohio 44131

Environmental Results
Installed 4,900 square feet of porous asphalt.

Constructed 840 square feet infiltrating, dry-enhanced swale.

Installed one passive treatment train.

OhioEPA
Division of Surface Water
Nonpoint Source Program
614-644-2020
12SWIF-CUY-22

Cahoon & Columbia Creek Floodplain Wetland Restoration

Project Sponsor
City of Westlake
Surface Water Improvement
$200,000 SWIF Funds

Local Project Contact
Robert P. Kelly, P.E.
City of Westlake
27700 Hilliard Blvd.
Westlake, OH 44145

Environmental Results
Stabilized/restored 1,807 linear feet of floodplain to natural flow using bio-engineering.
Installed two grade structures.
Planted 1.2 acres of native grasses.
Restored 1.2 acres of riparian corridor with woody riparian vegetation.

Ohio EPA
Division of Surface Water Nonpoint Source Program
12SWIF-CUY-23

Solon Road Surface Water Improvements

**Project Sponsor**  
Village of Chagrin Falls  
Surface Water Improvement  
$73,000 SWIF Funds

**Local Project Contact**  
Benjamin Himes  
Village of Chagrin Falls  
21 West Washington Street  
Chagrin Falls, Ohio 44022

**Environmental Results**

Installed 600 square feet of biofiltration islands (bioretention cell) along Solon Road.

Installed 319 square yards of vegetated infiltration swales (infiltration trench) along the west side of Solon Road.

Installed 500 linear feet of vegetated side slope swales in conjunction with infiltration trench.

Installed 400 square yards of permeable concrete along the east side of Solon Road.
12SWIF-CUY-GLRI-06

Stream Rehabilitation & Bioretention Cell Creation

Project Sponsor
Ursuline College
2012 GLRI Funds $134,654

Local Project Contact
June Gracyk
Ursuline College
2550 Lander Road
Pepper Pike, OH 44124

Environmental Results
Restored 380 linear feet of floodplain.
Restored 185 linear feet of stream channel.
Planted native grasses, trees, shrubs and live stakes in riparian area.
Installed 2,800 square feet of bioretention cell.

Ohio EPA
Division of Surface Water
Nonpoint Source Program
614-644-2020
Shore Cultural Centre Parking Lot Retrofit-Stormwater Demonstration Project

Project Sponsor
City of Euclid
2012 GLRI Funds $117,862

Local Project Contact
Lee Bock
City of Euclid
585 East 222nd Street
Euclid, Ohio 44123

Environmental Results
Installed 6,000 square feet of permeable pavement
Installed 400 square feet of bio-filtration islands.
Installed 1,000 square feet of vegetative infiltration areas.
Glenwillow Village Hall Parking Lot Improvements

**Project Sponsor**
Village of Glenwillow
2012 GLRI Funds $53,358

**Local Project Contact**
Michael Henry
Village of Glenwillow
22999 Forbes Road B
Cleveland, Ohio 44146-5667

**Environmental Results**
Installed 2,800 square feet of porous asphalt
Constructed 720 square feet infiltrating, dry-enhanced swale.
Installed one passive treatment train.
12SWIF-CUY-GLRI-12

Tremont Montessori School Parking Lot & Jefferson Avenue Green Infrastructure Retrofit

**Project Sponsor**
City of Cleveland
2012 GLRI Funds $180,843

**Local Project Contact**
Kathy Bodnar
City of Cleveland
601 Lakeside Avenue
Cleveland, OH 44114

**Environmental Results**
Installed 1,500 square feet of permeable pavement
Constructed 1,500 square of bioretention basin
Conducted project specific public outreach and education

Division of Surface Water Nonpoint Source Program
Rocky River City Hall Green Infrastructure Demonstration Project

Project Sponsor
City of Rocky River
2012 GLRI Funds $160,284

Local Project Contact
Jan Thomas
City of Rocky River
21012 Hilliard Blvd.
Rocky River, Ohio 44116

Environmental Results
Installed 2,150 square feet of permeable pavement
Installed four stormwater tree boxes
Greenwood Farm-Rain Garden-Bioretention-Porous Pavement

**Project Sponsor**
City of Richmond Heights
2012 GLRI Funds $186,352

**Local Project Contact**
Leland Courtney
City of Richmond Heights
26789 Highland Road
Richmond Heights, OH 44143

**Environmental Results**
- Installed 4,970 square feet of aggregate drains/filters
- Installed 13,090 square feet of permeable pavement
- Installed 2,300 square feet of bio-filtration islands