FY2012 Great Lakes Restoration Initiative Grant Workplan
Ohio EPA—Division of Surface Water

Catalog of Federal Domestic Assistance Number: 66.469 CFDA: Great Lakes Program

RFP Number: #EPA-R5-GL2012-1
Focus Area: Nearshore Health and Nonpoint Source Pollution
GLRI Program: Watershed Remediation (GLRI # I.C.2)

Project Title: **Cuyahoga County Surface Water Improvement Grants Program**

Submitted by: Ohio Environmental Protection Agency, Division of Surface Water

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DUNS Number: 809172372
Type of Organization: State Agency

GLRI Federal Funding Requested:	**$ 996,903**
State Matching Funds Provided:	**$1,417,290**
Local Matching Funds Provided:	**$ 439,547**
TOTAL PROJECT COSTS:	**$2,853,740**

Project Duration Period: July 1, 2012 through September 30, 2014

Project Description: This project expands upon previous projects to enhance local government adoption and understanding of green stormwater practices, as well as stream and wetland restoration demonstrations in the targeted area of Cuyahoga County. This project proposes to leverage $996,903 in GLRI funding with $1.41 million in state Surface Water Improvement Fund (SWIF) grant funds and $439,457 in local matching funds and services to accelerate local implementation of recommended actions within approved TMDL studies and 9 element watershed plans in multiple watersheds in the target area.

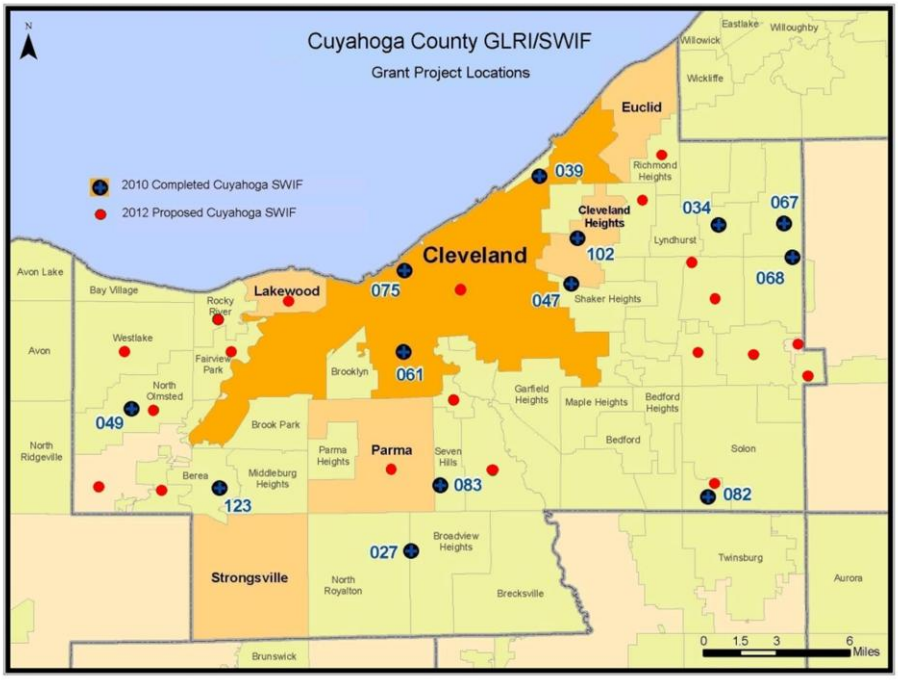
Project Locations: This project will be implemented in multiple HUC units and mailing zip codes within Cuyahoga County, Ohio. Following is a listing of the communities and the Lake Erie tributary watersheds in which project activities will be implemented. The list is in order of the applicant's scores during our subgrant review process. You will also find the watershed planning status for each of the watershed for which projects are proposed:

City of Westlake-Rocky River (Endorsed Plan)
Village of Moreland Hills-Chagrin River (TMDL & Endorsed Plan)
Olmsted Township-Rocky River (Endorsed Plan)
City of Independence-Cuyahoga River (TMDL)

City of Pepper Pike-Chagrin River (TMDL & Endorsed Plan)
Orange Village-Chagrin River (TMDL & Endorsed Plan)
City of South Euclid-Euclid Creek (TMDL & Endorsed Plan)
Village of Brooklyn Heights-Cuyahoga River (TMDL)
City of Parma-Big Creek (TMDL)
City of Lakewood-Rocky River (Endorsed Plan)
Cleveland Metroparks-Chagrin River (TMDL & Endorsed Plan)
Village of Chagrin Falls-Chagrin River (TMDL & Endorsed Plan)
Ursulines College-Chagrin River (TMDL & Endorsed Plan)
Village of Glenwillow—Tinker's Creek (TMDL)
City of Richmond Heights-Euclid Creek (TMDL & Endorsed Plan)
City of Rocky River—Rocky River (Endorsed Plan)
City of North Olmsted-Rocky River (Endorsed Plan)
City of Euclid-Euclid Creek (TMDL & Endorsed Plan)

The map below shows project sites under the proposed FY12 Cuyahoga County GLRI-SWIF project. It also shows sites completed using FY10 GLRI-SWIF funds.

Map 1-1
Cuyahoga County GLRI-SWIF Project Sites
FY10 Completed Project Sites and FY12 Proposed Sites



Timeline: Ohio EPA released a Request for Projects on 01/09/12 soliciting stream restoration, nonpoint source management and innovative stormwater demonstration projects in Cuyahoga County, Ohio. Projects and applicants were carefully screened for general eligibility and underwent thorough administrative, technical and environmental reviews. All recommended subgrant projects will be under sub-grant agreements with Ohio EPA within 45 days of notification from US EPA that this proposal has been selected for FY12 GLRI funding. Grant-

funded projects will be completed within 12-18 months. We anticipate the implementation period to commence July 1, 2012 and be complete no later than September 30, 2014.

Problem Statement and Project Summary and Approach: Like many older communities in the Lake Erie basin, existing stormwater infrastructure in Cuyahoga County consists of storm sewers, retention ponds, combined sewer overflows and other traditional and at times, detrimental practices. Communities within the county are at important decision points as they contemplate remedies for their aging stormwater infrastructure. A key objective of this project is to successfully build upon the highly successful demonstrations of cost-effective "green" alternatives that were completed in Cuyahoga County as part of a FY10 GLRI-SWIF grant project. That project is enhanced by this proposed set of projects that are designed to influence local decision by demonstrating green alternatives to retrofitting traditional stormwater infrastructure with rain gardens, vegetated bioswales, porous curbs, wetland treatment areas, infiltration areas, pervious pavement and other innovative practices. Several locally proposed projects will also restore impaired segments of urban streams within the Cuyahoga County area. Successfully completing all of these projects will result in a reduction of nonpoint source pollutant loadings (such as phosphorus, nitrogen and sediment) into several direct tributaries to the central basin of Lake Erie, including the Cuyahoga, Rocky River and Chagrin Rivers.

The project will accelerate the adoption of restoration and green infrastructure installation as recommended in the Rocky River, Euclid Creek and Chagrin River watershed action plans as well as the approved TMDL's for Rocky River, Euclid Creek, Chagrin and the lower Cuyahoga Rivers. This project also builds upon the interest and momentum generated by stormwater modeling that is being completed by Tetratech under contract to US EPA within the Chagrin Creek sub-watershed using the SUSTAIN stormwater model. This project enhances stormwater BMP modeling that is currently being completed by a coalition of organizations led by the Chagrin River Watershed Partners in the Lake Erie basin.

Deliverables: Ohio EPA uses a standardized "universe of deliverables" to ensure consistent project reporting, tracking and enhanced accountability by subgrantees. Projects selected will result in the direct implementation of on-the-ground NPS and stormwater management measures. GLRI funding will not be used for planning and/or general research types of activities. The **clear emphasis** is on making physical improvements and demonstrating cost-effective alternatives to traditional stormwater management practices. Deliverables associated with this project will consist of stream segments restored, stormwater best management practices installed and project-specific outreach products such as signs, kiosks etc.

Results -- Outputs and Outcomes: The Cuyahoga County Stormwater Demonstration Project will expand the use of innovative and green stormwater practices within multiple jurisdictions throughout Cuyahoga County. Successful implementation of this project will directly result in the following outputs:

- More than 21,000 square feet of Vegetated Bioswales
- 12 Bio-retention Cells
- More than 2,000 square feet of Community Rain Gardens
- 10 Pervious Pavement and Pavers Demonstration Sites
- 2 Rainwater Harvesting System Demonstrations
- Nearly 2,500 linear feet of stream restored
- 1 acre of riparian habitat restored
- 2 Wetlands Restored

These practices will reduce the volume of stormwater entering streams throughout the project areas directly and improve groundwater recharge and reduce nonpoint source pollutants in stormwater runoff in the project areas. A very important outcome of these demonstration projects has already begun by virtue of requesting project proposals. Decision-makers within Cuyahoga County are becoming more aware of cost-effective alternatives to traditional stormwater management practices as a result of the previously completed FY10 GLRI-SWIF projects. Moving forward in FY12, all grant funded projects will be required to include project specific education and outreach activities for each practice to enhance the public's recognition and awareness of these types of practices. As these demonstrations are installed, we expect a similar surge in interest and application of innovative and green practices that we observed in Cuyahoga County following implementation of the FY10 GLRI-SWIF project.

Finally, load reductions for nitrogen, phosphorus and sediment will be measured and/or determined for each installed practice. These will be reported to US EPA in the GLAS or other respective information management system.

Collaboration, Partnerships and Overarching Plans: Ohio EPA will collaborate with multiple local government entities, the Cuyahoga County Metroparks, the Ohio EPA Northeast District Office staff and other water quality partners to insure that each of the locally funded subgrant projects are successfully completed. Ohio EPA also works very closely with local watershed coordinators and others engaged in nonpoint source management activities within Cuyahoga County and throughout the Lake Erie basin. The Cuyahoga County Stormwater Demonstration Project will maintain and enhance such collaboration. Throughout the life of this project, Ohio EPA will emphasize, support and encourage these ongoing watershed networks.

This project will accelerate implementation of recommended stormwater management actions in TMDL studies, state endorsed watershed action plans, and the Cuyahoga River Remedial Action Plan (RAP) within the suburban and urban watersheds of Cuyahoga County. This project will also support local stormwater initiatives such as the SUSTAIN modeling that is being completed by Tetratech within the Chagrin River watershed.

This project is consistent with NPS recommendations in the state of Ohio's Nonpoint Source Management Plan (2006), the conditionally approved Ohio Coastal Nonpoint Source Management Plan and general recommendations within the Lake Erie LAMP and the Lake Erie Restoration & Protection Plan. These respective documents may be found at the following web sites:

Lake Erie LAMP: http://www.epa.state.oh.us/dsw/ohiolamp/index
Ohio NPS Management Plan: http://wwwapp.epa.ohio.gov/dsw/nps/NPSMP/index.html
Coastal NPS Plan: www.dnr.state.oh.us/Portals/12/programs/coastalnonpoint/cnpcp/finalcnpcp.pdf
Lake Erie Restoration Plan: http://lakeerie.ohio.gov/Portals/0/Reports/2008LEPRplan.pdf
Cuyahoga Remedial Action Plan: www.cuyahogariverrap.org

Local subgrant funded projects under this grant are also being implemented consistent with recommendations in the endorsed watershed action plans for Euclid Creek, Chagrin River and the Rocky River and Tinker's Creek. Please see subgrant project write-ups for specific references in their respective watershed action plans.

As a state agency member of the Ohio Lake Erie Commission, we are committed to participating in planning and reporting meetings as necessary, sharing our project results, and assisting in reviewing outreach materials. The products of such coordination will benefit our future work to better manage Lake Erie and its associated resources.

Sub-Granting: More than 93% of all GLRI and State and local matching funds provided for this project will be sub-granted by Ohio EPA to local entities who are implementing water quality and innovative stormwater management projects and practices. All subgrants will be awarded and administered by Ohio EPA using systems and processes consistent with those in place under Ohio's section 319 program. All subgrantees are required to execute a GLRI/SWIF subgrant agreement with Ohio EPA that will include all requisite federal assurances and state of Ohio grant requirements. Subgrant funds will be administered consistent with federal cost principles and all applicable uniform administrative requirements. Subgrant agreements will remain in effect for a period of two years from their date of execution.

Subgrant recipients were selected following the issuance of a Request for Proposals issued by Ohio EPA on 01/09/12. In response to this RFP, 23 applications were received from local governments, park districts, nonprofit organizations and others throughout Cuyahoga County. Applications were reviewed using a competitive process and recommended subgrant recipients identified following this competitive process. A total of 18 applicants are recommended for subgrant funding under this project. (A complete listing and summary of each recommended project is included in latter sections of this workplan).

Local Cuyahoga County SWIF/GLRI Projects

Locally implemented subgrant funded projects represent the most vital component of the Cuyahoga County GLRI/SWIF project. As indicated, Ohio EPA solicited project summaries in a Request for Proposals that was issued on 01/09/12 with applications due to Ohio EPA on 3/31/12. In response, we received 23 project proposals from local governments, park districts and others within Cuyahoga County. Recommended projects are listed in the order of review scores, with the highest scoring projects listed first. Recommended FY12 Cuyahoga County GLRI-SWIF projects are summarized below:

- **City of Westlake – Calhoun and Columbia Creek Wetland Restoration:** This project proposes to restore 1807 linear feet of stream using bio-engineering techniques at two locations. In addition the proposal includes restoration of 1.2 acres of flood plain along the same length by planting native grasses, shrubs, trees and live stakes along the reconfigured tributaries. In addition to various outreach activities under the "Go Green for Westlake, for the World" program, permanent interpretive signage is proposed to be installed at each project site. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $200,000.

  Implementation of this project is consistent with stormwater management recommendations on page 17 of the endorsed watershed action plan that identifies stormwater management is of "critical concern" in 5 of the 13 subwatershed in the Rocky River drainage. Stormwater management is of priority concern in the 8 other subwatersheds. Additional parking area retrofit recommendations are included on page I-9 in the appendices to the endorsed plan.

- **Moreland Hills – Forest Ridge Preserve Headwater Stream Restoration:** This project proposes to daylight 170 feet of culverted headwater tributary in the Chagrin River watershed, restoring 490 lineal feet of the headwater tributary using principals of natural channel design, and planting approximately 1 acre of the stream corridor with native trees and shrubs. Educational outreach will include signage at the project site, along with news articles and tours. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $144,500.

Implementation of this project is consistent with stormwater management recommendations on pages 108 through 111 of the approved Chagrin River TMDL and recommendations included on pages 93-99 in the state endorsed Chagrin River Watershed Action Plan.

- **Olmsted Township – Olmsted Township Demonstration Project:** This proposal includes installation of One (1) wetland/irrigation pond to collect runoff from a vacant 33 acre field. The field is due to be transformed into a community garden for the disabled. The runoff volume will be stored and reused on the crops. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $45,807.

  Implementation of this project is consistent with stormwater management recommendations on page 17 of the endorsed watershed action plan that identifies stormwater management is of "critical concern" in 5 of the 13 subwatershed in the Rocky River drainage. Stormwater management is of priority concern in the 8 other subwatersheds. Additional parking area retrofit recommendations are included on page I-9 in the appendices to the endorsed plan.

- **City of Independence – Dalepoint Road Cul-de-sac Retrofit:** This proposed project is designed to retrofit 3700 ft^2 of existing asphalt with 3700 ft^2 of porous concrete pavement to infiltrate runoff from approximately 11,000 ft2 of pavement. Removal of two (2) storm sewer inlets will ensure runoff flows across the porous pavement. Runoff volume that is not infiltrated will be directed to a 300 ft^2 bio-retention cell which is proposed to be located within the city right-of- way. The city expects an additional benefit of the project will be reduction in de-icing salt usage. In addition to various outreach activities, educational signage is proposed to be installed at the project site. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $72,850.

  Implementation of this project is consistent with stormwater management recommendations on page 90 of the approved Lower Cuyahoga River TMDL

- **City of Pepper Pike – City Hall Parking Lot Retrofit:** This project proposes to retrofit a 13,113 ft^2 parking lot through the installation of 4113 ft^2 of permeable pavers, which will also receive runoff from 9000 ft^2 of reconditioned pavement. Additionally, a 450 ft^2 vegetated bio-swale is proposed to store and intercept snow and melt-water; and another 315 ft^2 bio-retention cell is proposed to receive flow in excess of infiltration capacities of the paver system and edge-of-lot retention swale. Educational signage is proposed as part of this highly visible project. The city intends to use this site as a tangible example of green storm water infrastructure for developers and others. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $84,354.

  Implementation of this project is consistent with stormwater management recommendations on pages 108 through 111 of the approved Chagrin River TMDL and recommendations included on pages 93-99 in the state endorsed Chagrin River Watershed Action Plan.

- **Village of Orange - Orange Village Service Facility Parking Lot Retrofit:** This project would remove 12,568 ft^2 of impervious surfaces and replace it with 9,240 ft^2 of pervious pavement and three (3) bio-retention cells (600 ft^2) which would be configured to convey stormwater through a "treatment train" prior to any release to village storm water system. Approximately 6,450 ft^2 of green space will be restored as a result of this project. With project so near recycling drop-off and Village Hall, there would be many opportunities to display (via project signage) and promote the installed storm water practices. This project

will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $162,270. The village will be contributing $87,430 in local match.

Implementation of this project is consistent with stormwater management recommendations on pages 108 through 111 of the approved Chagrin River TMDL and recommendations included on pages 93-99 in the state endorsed Chagrin River Watershed Action Plan.

- **City of South Euclid - Municipal Complex Stormwater Demonstration:** This demonstration project at the city's Municipal Complex proposes reconstruct the parking lot, walkways, and entrance by installing 8500 ft^2 of pervious brick pavers and by removing 318 ft^2 of impermeable surfaces and replacing it with vegetation. Educational signage is also proposed to be provided. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $166,015. The city will contribute an additional $8,000 in local funds for this project.

  Implementation of this project is consistent with stormwater management recommendations on pages 41 and 42 of the approved Euclid Creek TMDL and recommendations included on pages 121, and 133 through 135 in the state endorsed Euclid Creek Watershed Action Plan.

- **Village of Brooklyn Heights – Village Hall Parking Lot Retrofit:** This proposed project is designed to treat storm water runoff from 20,000 ft^2 of existing impervious pavement with 4000 ft^2 of porous asphalt pavement to treat runoff from the remaining 16,000ft^2 of asphalt. Additionally, an 840 ft^2 dry enhanced swale (12-18" deep) is proposed to intercept snow-pile melt water and to store and treat runoff that exceeds infiltration capacity of the porous pavement system. Educational signage is proposed as part of this highly visible project. The city intends to use this site as a tangible example of green storm water infrastructure for developers and others. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $84,330.

  Implementation of this project is consistent with stormwater management recommendations on page 90 of the approved Lower Cuyahoga River TMDL

- **City of Parma - Fern Hill Storm water Treatment Wetland:** This project proposes to install a 0.77 acre urban storm water treatment wetland. This wetland will intercept and treat runoff from a 50 acre residential watershed (that is 30% impervious). The wetland cell will be designed to dissipate incoming flow and to allow for routine maintenance. An informational kiosk is proposed to be erected at the wetland site in addition to various other outreach offerings. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $149,164.

  Implementation of this project is consistent with stormwater management recommendations on page 90 of the approved Lower Cuyahoga River TMDL

- **City of Lakewood – Green Parking Lots:** This project proposes to make green storm water improvements to two (2) adjacent municipal parking lots in the downtown of Lakewood. These improvements include installation of 20-foot wide strips of permeable pavers (totaling 14,265 ft^2), planting eight (8)shade trees, and 850 ft^2 of bio-retention areas. Parking lot runoff is proposed to flow through curb cuts into these depressions where the water will infiltrate. These bio-retention areas will be planted with shrubs. Educational signage is proposed to be installed at each lot. The estimated cost of this project is $416,987. This project will be funded using Ohio Surface Water Improvement Funds (SWIF)

as state match in the amount of $150,000 as well as local matching funds in the amount of $266,987.

Implementation of this project is consistent with stormwater management recommendations on page 17 of the endorsed watershed action plan that identifies stormwater management is of "critical concern" in 5 of the 13 subwatershed in the Rocky River drainage. Stormwater management is of priority concern in the 8 other subwatersheds. Additional parking area retrofit recommendations are included on page I-9 in the appendices to the endorsed plan.

- **Cleveland Metroparks - North Chagrin Parking Lot Retrofit:** This project proposes to capture and passively treat approximately 3 acres of parking lot and driveway runoff at the North Chagrin Nature Center into 5,500 ft^2 of bio-filtration islands, a 10,400 ft^2 rain garden, and a 6,150 ft^2 vegetated infiltration area. This project would protect a headwater tributary of the Chagrin from documented biological impairment that is likely due to high-volume runoff from the existing parking lot. Project appropriate educational signage and outreach material is also proposed as part of this project. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $85,000.

  Implementation of this project is consistent with stormwater management recommendations on pages 108 through 111 of the approved Chagrin River TMDL and recommendations included on pages 93-99 in the state endorsed Chagrin River Watershed Action Plan.

- **Village of Chagrin Falls – Solon Road Surface Water Improvements**: This project proposes to install innovative infiltration/filter trenches within the road right-of-way to store, filter and infiltrate roadway runoff prior to discharge to the Chagrin River (which runs adjacent to the road). The 400 foot long trench (with vegetated side slopes and underlain with sub-grade filter medium) are proposed to be designed to outlet into deeper infiltration basins (totaling 200 ft^2) in areas along the roadside trenches. A 600 ft^2 bio-retention cell is proposed to be installed at the end of the trench. In addition to various outreach activities, an educational kiosk is proposed to be installed at the project site. This project will be funded using Ohio Surface Water Improvement Funds (SWIF) as state match in the amount of $73,000.

  Implementation of this project is consistent with stormwater management recommendations on pages 108 through 111 of the approved Chagrin River TMDL and recommendations included on pages 93-99 in the state endorsed Chagrin River Watershed Action Plan.

- **Ursuline College – Stream Rehabilitation & Bio-retention Cell Creation**: This project proposes the installation of 2,232 ft^2 of bio-retention to treat storm water runoff from 0.58 acres of parking lot surface along with 4200 ft^2 of landscaping to enhance infiltration in and around the bio-retention cell. Floodplain access will be restored along 380 lineal feet of the headwater tributary by the removal of spoil piles. In addition 0.87 acres of wooded riparian corridor is will be re-established and 100 lineal feet of eroded stream bank will be re-vegetated. Educational signage will be visible too all walking between the parking lot and main campus buildings. If we are successful with this GLRI grant application, this project will be funded with $100,810 in FY12 GLRI funding.

  Implementation of this project is consistent with stormwater management recommendations on pages 108 through 111 of the approved Chagrin River TMDL and recommendations included on pages 93-99 in the state endorsed Chagrin River Watershed Action Plan.

- **Village of Glenwillow - Glenwillow Village Hall Parking Lot Improvements:** This proposed innovative storm water retrofit will provide 2000 ft^2 of porous asphalt to infiltrate runoff from a 7,600 ft^2 parking lot. In addition a 720 ft^2 (6' X 120') infiltration swale is proposed to provide additional detention and treatment of runoff and snow (and snow-melt water). Educational signage about the project and the benefits of parking lot retrofits will be installed and accessible to all pedestrians at the project site. This is in addition to various other outreach offerings. If we are successful with this GLRI grant application, this project will be funded with $53,358 in FY12 GLRI funding.

  Implementation of this project is consistent with stormwater management recommendations on pages 89-90 of the approved Cuyahoga TMDL.

- **City of Richmond Heights – Greenwood Farm Stormwater Demonstration Project:** This proposed project requests fund to install 23,500 ft^2 of porous pavement for a driveway that serves the Greenwood farm parking lot. The under-drain outlet from the porous pavement is proposed to be directed to 3,000 ft^2 of bio-retention area. The proposed bio-retention would also serve to infiltrate and treat the contribution of water from the downspouts from the barn and main house at this location. Education signs and a bio-retention display are also proposed as outreach item in this proposal. If we are successful with this GLRI grant application, this project will be funded with $187,500 in FY12 GLRI funding.

  Implementation of this project is consistent with stormwater management recommendations on pages 41 and 42 of the approved Euclid Creek TMDL and recommendations included on pages 121, and 133 through 135 in the state endorsed Euclid Creek Watershed Action Plan.

- **City of Rocky River – City Hall Green Infrastructure Demonstration:** This proposed project retrofits a 0.2 acre parking lot with an innovative "forested parking lot," which incorporates 1800 ft^2 of pervious pavement and four (4) tree pits (bio-swales) in the middle of the lot to infiltrate and treat parking lot runoff. Additionally, 500 ft^2 of pervious pavement is proposed to be installed on another nearby lot near each of three (3) existing catch basins. Permanent on-site interpretive signage and other outreach items are included in the proposal. If we are successful with this GLRI grant application, this project will be funded with $170,354 in FY12 GLRI funding.

  Implementation of this project is consistent with stormwater management recommendations on page 17 of the endorsed watershed action plan that identifies stormwater management is of "critical concern" in 5 of the 13 subwatershed in the Rocky River drainage. Stormwater management is of priority concern in the 8 other subwatersheds. Additional parking area retrofit recommendations are included on page I-9 in the appendices to the endorsed plan.

- **City of North Olmsted – Community Park Permeable Pavement & Rain Garden Demonstration:** This project proposes to install 9,520 ft^2 of permeable pavers in the parking lot of the community park along with a 350 ft^2 rain garden bordering the parking lot. The new pavers and rain garden are designed to be placed where they will intercept the majority of runoff from the existing 0.5 acre impermeable parking lot. A permanent educational display is proposed to be installed at the project site in this popular recreational park. If we are successful with this GLRI grant application, this project will be funded with $196,500 in FY12 GLRI funding. North Olmsted will also contribute $35,645 to complete this project.

  Implementation of this project is consistent with stormwater management recommendations on page 17 of the endorsed watershed action plan that identifies stormwater management is

of "critical concern" in 5 of the 13 subwatershed in the Rocky River drainage. Stormwater management is of priority concern in the 8 other subwatersheds. Additional parking area retrofit recommendations are included on page I-9 in the appendices to the endorsed plan.

- **City Euclid – Shore Cultural Center Parking Lot Retrofit:** This storm water demonstration project proposes a treatment train approach to capture runoff from approximately one (1) acre of impermeable parking lot. The proposal includes the installation of 6000 ft^2 of permeable pavement, 400 ft^2 of bio-filtration islands, and 1000 ft^2 of infiltration area. Informative signage that explains the selected stormwater management techniques will be provided at the demonstration site. Additionally, project fact sheets will be generated and educational tours will be arranged for those engineers and public officials interested in green infrastructure. If we are successful with this GLRI grant application, this project will be funded with $122,000 in FY12 GLRI funding.

  Implementation of this project is consistent with stormwater management recommendations on pages 41 and 42 of the approved Euclid Creek TMDL and recommendations included on pages 121, and 133 through 135 in the state endorsed Euclid Creek Watershed Action Plan.

Grant Management & Administration: Grants project management and administration activities will be conducted by nonpoint source program and fiscal staff within Ohio EPA's Division of Surface Water to insure the alignment of GLRI/SWIF funding with federal and state of Ohio grant guidelines. Grants management and administration activities shall include:

- Preparing sub-grantee work plans, grant agreements and other documents necessary to insure efficient, effective and appropriate use of GLRI/SWIF grant funds. We anticipate awarding 18 subgrants under this project.
- Providing technical assistance to Cuyahoga County GLRI/SWIF subgrantees to insure that GLRI/SWIF grant funded water quality improvement projects are implemented effectively and successfully.
- Conducting at least one grant compliance site visit with each subgrantee to insure project effectiveness and timeliness. Additional site visits will be conducted as needed to insure compliance with US EPA and Ohio EPA grant guidelines, subgrant agreements and other requirements.
- Maintaining all necessary updates to project files in the GLAS grant management and project tracking database system(s).
- Preparing and submitting all required fiscal, technical and progress reports to US EPA as required in our GLRI workplan and grant agreement.
- Conducting formal grant compliance reviews (audits) with at least two (2) GLRI/SWIF subgrantees annually under a memorandum of understanding with ODNR's Office of Internal Audits. These reviews will determine that:
  - Subgrantee quarterly fiscal reports (and final report, when applicable) are complete.
  - Expenditures are appropriate and satisfactorily documented.
  - Payments were made properly and effective cash management safeguards are in place.

  Following completion of these formal compliance audits, ODNR's Internal Auditors provide Ohio EPA with a complete audit report, and when necessary final audit findings and corrective action plans.

- Calculating and reporting load reduction estimates, when applicable, for all GLRI/SWIF subgrant projects and entering such data in GLRI specified grant management and/or project tracking database systems.
- Preparing an annual Cuyahoga County GLRI/SWIF Program Report that complies with US EPA requirements. This report will also be included in Ohio EPA's Annual NPS Program Report.

Project Effectiveness Monitoring and Federal Grant Compliance: All selected subgrantees will be required to attend GLRI-SWIF grants training that will be conducted by Ohio EPA's Nonpoint Source Management staff. This training provides grant management responsibilities, procedures and expectations. Ongoing project effectiveness monitoring will be conducted by Ohio EPA through annual project site visits with all subgrantees. Technical assistance and additional site visits will be conducted (as needed) to insure that each subgrant funded project is making satisfactory progress and conforms to all federal grant requirements. Prior to closing out a subgrant, a final site visit will be conducted by Ohio EPA NPS Program staff to insure that all installations are suitable, appropriate and consistent with the sub grantee's approved workplan.

Environmental Monitoring: Monitoring of stormwater demonstration projects is an important activity that is receiving increasing attention in Ohio. Several stormwater monitoring initiatives are underway in northeast Ohio by a group chaired by the Chagrin River Watershed Partners operating under a NOAA grant to monitor effectiveness of a number of green stormwater BMPs in the Lake Erie basin. Ohio EPA will support this project and the research being conducted by others by requiring that all stormwater demonstration projects installed under the Cuyahoga County GLRI-SWIF Project incorporate the capability to monitor the inflow and outflows from grant funded practices, where applicable.

Ohio EPA will also support monitoring the effectiveness of these projects by using our dedicated Section 319 monitoring crew where appropriate to conduct pre and post project water quality monitoring where appropriate. Water quality monitoring will be specifically tailored (as appropriate) to each project so that the respective environmental benefits will be accurately measured. Where feasible, all stormwater demonstration projects will be designed to have the capacity to have parameters such as stormwater flow reductions, NPS pollutant load reductions, and water chemistry monitored following installation. All such monitoring will be completed by Ohio EPA staff (or selected contractor) using Ohio EPA's standard operating procedures manual and is consistent with Ohio EPA's approved Quality Assurance Project Plan (QAPP). Monitoring is provided to this project as an in-kind service. No GLRI funding will be used for monitoring activities.

Community-Based Focus and Environmental Justice: This project recognizes and improves adverse economic and environmental conditions within Cuyahoga County, Ohio. Cuyahoga County is Ohio's most populous county with a population of 1,280,122. Since 1980, the county has experienced a nearly 25% decline in population. There are more than 570,000 households within the county's 38 cities, 19 villages, and 3 townships. The racial makeup of the county is 67% Caucasian, 27.5% African-American, 3.5% Hispanic and 1.5% Asian and others. The city of Cleveland (the county's largest city) was especially hard hit by the recent economic downturn—there are more than 28,000 homes in the city that have been foreclosed and/or abandoned. More than 13% of the households in Cuyahoga County are below the national poverty line, with nearly 20% of those under age 18 living beneath the poverty level.

Aging and crumbling stormwater infrastructure, poorly maintained public facilities and numerous rundown vacant homes resulting from aging and foreclosures plague large areas of the city of Cleveland and other parts in the project area. This project will provide important financial and technical assistance to neighborhoods and communities enabling them to upgrade stormwater management practices while demonstrating cost-effective and aesthetically pleasing alternatives to traditional storm sewers.

Programmatic Capability and Past Performance: Ohio EPA routinely receives four to eight federally funded assistance agreements each year from US EPA. These agreements help support Ohio's water pollution control, nonpoint source, and water quality monitoring and assessment programs. This proposal is similar in size and scope to several of the assistance grants that Ohio has administered recently. For example, we are nearing completion of the Ohio EPA FY10 GLRI grant awarded for similar projects that were implemented in Cuyahoga County in northeast Ohio. We have a history of successfully completing projects on time, on budget and meeting all reporting requirements. US EPA's annual evaluations of Ohio EPA's water programs are consistently very positive.

This particular project will be managed by Ohio EPA's Nonpoint Source Program and is administered by the Ohio EPA—Division of Surface Water. Since FFY2001, we have successfully administered sub grants for more than 145 locally implemented watershed projects totaling more than $35 million in federal section 319 funding and $3.5 million in state Surface Water Improvement funds. We maintain a vigorous subgrant oversight protocol resulting in an exceptional level of accountability, efficiency and accomplishment. Ohio EPA contracting methods were improved in 2005 with the development and implementation of a standardized universe of "grant" deliverables. This system has resulted in much improved communication of expectations and greatly enhanced project reporting. This process is also the framework for the Surface Water Improvement Grants described in this proposal.

Ohio EPA's Annual NPS Program Report (and other 319-required reports) has been submitted on-time every year since 2005 when the current program management team was put in place. Ohio's annual program report is a very comprehensive compilation of extensive data and information designed to meet US EPA reporting requirements, but also to serve as an important management and evaluation tool for Ohio EPA's program management team. The information contained in the report is also used extensively to update and enhance Ohio EPA's NPS website, providing time-sensitive progress updates for all of our Section 319 funded subgrant projects. Ohio's report is submitted in full color and includes an abundance of information such as load reductions by project as well as numerous project site photos illustrating before-and-after conditions. We will produce a similar document each year for the SWIF/GLRI project that is outlined in this proposal. (Please see the FY11 Cuyahoga County GLRI/SWIF Annual Report on Ohio EPA's Division of Surface Water website for an example).

In FY10, Ohio EPA's Nonpoint Source Program received a Great Lakes Restoration Initiative Grant #GL-00E00395-0 to implement phase 1 of the Cuyahoga GLRI-SWIF Project. During FY11, we received grant number GL-00E00836-0 to implement the Lake Erie Nutrient Reduction Demonstration Project. Performance and progress on each of these grants has been very favorable. Additional US EPA grants administered by Ohio EPA's Nonpoint Source Program staff include Section 319(h) grants including Grant #C997550009; #C997550010 and #C997550011. We consistently receive favorable assessments by US EPA of our management of Section 319(h) and other grants such as the FY10 and FY11 GLRI grants.

Principal Program Staff & Qualifications: Ohio EPA's NPS program staff will be managing the SWIF/GLRI project. The principal program personnel responsible for implementing this project are:

- **Russell Gibson, NPS Program Manager**—Mr. Gibson has managed Ohio EPA's NPS and Section 319 Programs since 2005. Previously, he worked for more than 20 years with Ohio's Department of Natural Resources in a variety of positions including manager of permitting, hydrology & bonding for Mineral resources; northwest Ohio scenic rivers coordinator; community grants administrator for the Division of Recycling and as a preserve manager and park ranger. Mr. Gibson has a bachelor's degree in Natural Resources Management from Ohio State University as well as extensive graduate coursework in Public Administration. He has extensive experience in program development and evaluation, strategic planning and organizational design and has completed four federal grants training courses offered by Management Concepts, Inc., including "Awarding & Monitoring Sub-awards under Federal Grants" and "Federal Cost Principles".

- **Martha Spurbeck, Grants Administrator**—Ms. Spurbeck is the grants administrator for Ohio's NPS and Section 319 programs since 2000 and will be the primary responsible party for administering SWIF/GLRI subgrants. She has a bachelor's degree in Business Management from Ohio University and has completed four federal grants training courses offered through Management Concepts, including "Awarding & Monitoring Sub-awards under Federal Grants" and "Federal Cost Principles".

- **Jeff DeShon, Ecological Assessment Manager**—Mr. DeShon will supervise and organize the environmental assessment component of this project. Jeff is the manager of Ohio EPA's Ecological Assessment Section and supervises the assessment and biological surveys conducted in all of Ohio's surface waters. He has a Masters degree in Biology and more than 30 years' experience organizing, conducting and managing environmental assessments. Jeff has served as manager of the EAU Section since 2000.

Ohio EPA routinely accesses engineers, technical NPS program specialists, staff within our stormwater program (e.g. stormwater staff assisted with project reviews for this project), permitting and regulatory staff as well as financial personnel within the division of surface water. We anticipate that additional support to this project will be provided by those listed above as well as stormwater management specialists within the Ohio Department of Natural Resources and within the Cuyahoga County Soil & Water Conservation District.

Job Creation: The Cuyahoga County Stormwater Demonstration Project will sustain and/or expand engineering and environmental consulting positions as well as construction contractors within the northeast Ohio. Local proposed projects will use GLRI grant funds mostly to contract with Ohio-based engineering, environmental and construction companies to design and install green stormwater best management practices. In addition to providing needed contracting opportunities, this project will also expand and enhance local technical capacity for designing and implementing green stormwater projects into the future. The project also will provide or sustain jobs in the printing business as a result of the required project-specific education and outreach activities.

Funding and Project Budget:

As indicated below, more than 93% of total project funding (GLRI, State and Local) will be used for local subgrant **on-the-ground project implementation**. Ohio EPA will support 18 locally

implemented stormwater demonstration projects with a combination of GLRI grant funds and state Surface Water Improvement Grant funds. Although we required no local match of subgrant applicants, applicants are providing $439,547 to help support the completion of the proposed projects. A modest amount of requested GLRI funding will be used by Ohio EPA to administer the subgrant monitoring, oversight and reporting process for funded subgrant projects. Audit and monitoring activities are being provided by Ohio EPA at no cost to the GLRI grant. SWIF grant guidelines are crafted to minimize local administrative and management costs. As indicated previously, this project is funding primarily on-the-ground improvements and demonstrations of innovative stormwater management throughout Cuyahoga County, Ohio.

Table 1.2
FY12 Cuyahoga GLRI-SWIF Project Budget Worksheet

Sponsor	Project	Federal	State Match	Local Match	Total
Westlake	Cahoon & Columbia Wetland Restoration	$0	$200,000	$0	$200,000
Moreland Hills	Forest Ridge Stream Restoration	$0	$144,500	$0	$144,500
Olmsted Twp.	Green Stormwater Demonstration Project	$0	$45,807	$41,485	$87,292
Independence	Cul-de-sac Stormwater Retrofit	$0	$72,850	$0	$72,850
Pepper Pike	City Hall Parking Lot Retrofit	$0	$84,354	$0	$84,354
Orange Village	Village Service Center Parking Retrofit	$0	$162,270	$87,430	$249,700
South Euclid	Municipal Stormwater Demonstration	$0	$166,015	$8,000	$174,015
Brooklyn Hts.	Village Hall Parking Stormwater Retrofit	$0	$84,330	$0	$84,330
Parma	Fern Hill Stormwater Wetland Treatment	$0	$149,164	$0	$149,164
Lakewood	Green Parking Area Retrofit	$0	$150,000	$266,987	$416,987
Cleve Metroparks	North Chagrin Stormwater Demonstration	$0	$85,000	$0	$85,000
Chagrin Falls	Solon Road Surface Water Improvements	$0	$73,000	$0	$73,000
Ursulines College	Stream Rehabilitation and Bio-Swale	$100,810	$0	$0	$100,810
Glenwillow	Village Hall Parking Demonstration	$53,358	$0	$0	$53,358
Richmond Hts.	Greenwood Farm Stormwater Demo	$187,500	$0	$0	$187,500
Rocky River	City Hall Stormwater Demonstration	$170,354	$0	$0	$170,354
North Olmsted	Pervious Pavement & Rain Gardens	$196,500	$0	$35,645	$232,145
Euclid	Shore Cultural Center Parking Retrofit	$122,000	$0	$0	$122,000
	PROJECT TOTAL	**$830,522**	**$1,417,290**	**$439,547**	**$2,687,359**
Ohio EPA	Grant and Subgrant Admin and Oversight	**$166,381**	**$0**	**$0**	**$166,381**
	APPLICATION TOTAL	**$996,903**	**$1,417,290**	**$439,547**	**$2,853,740**

See attached 424A and Object Class Budget Detail for more details.

Education/Outreach: Subgrantees receiving funding under the Cuyahoga County GLRI/SWIF project are required to include a locally conducted project-specific outreach component, including activities such as issuing local news releases, media events, project signs, brochure and/or fact sheet development, public site visits, tours and other activities designed to improve the public's awareness of the importance of watershed management and specific benefits of each project.

In addition, statewide outreach efforts will be robust and include working closely with Ohio EPA's Public Involvement Center to prepare and release project specific news releases at the time of funding, organizing and implementing coordinated project media events and the preparation of a full color GLRI/SWIF annual program report consistent with US EPA program and accountability requirements.

The photos included below are indicative of the types of outreach and educational materials that will be developed in association with this project: