

**Ohio Environmental Protection Agency**  
**WATER QUALITY IMPROVEMENT GRANTS**  
**LAKE ERIE WATERSHED**

The following summaries describe projects that are recommended funding in the Lake Erie Watershed. These projects have been identified during the course of the review as having met all federal and state eligibility requirements and having the highest potential for water quality improvements within the Lake Erie watershed:

**City of South Euclid:** Funding is recommended so the City of South Euclid can reconstruct portions of the rear parking lot and the rear entranceway of the Municipal Complex using permeable pavement. This project is within the Lake Erie Watershed (Euclid Creek). Approximately 8,175 square feet of permeable pavement will be installed, and native water-absorbing plantings native plantings/landscaping and potted planters will be included.

**City of Vermilion:** Funding is recommended for the City of Vermilion to install approximately 6,731 square feet of pervious pavement at all the parking stalls where hydrocarbons exist due to vehicle parking over time, rainwater washing oils and greases off of vehicles parked and from vehicles passing through the entrance and exit areas. The City's plans include design considerations to reseal existing impervious asphalt areas to direct surface flow into the pervious sections and therefore reduce the potential surface runoff from the entire impervious site.

**Village of Orwell:** Funding is recommended for the Village of Orwell to partner with the Grand Valley School District (GVSD) to collect and use water run-off from the GVSD sports field for irrigating the sports field by installing one rainwater harvesting/reuse system. The project will demonstrate the ability to reduce water run-off and to minimize fertilizers, herbicides and insecticides entering the Upper Grand River, and ultimately flowing into Lake Erie. It will also reduce water usage during high usage months in the summer. This project will reduce water run-off by approximately 90% during key summer watering months.

**Village of Richfield:** Funding is recommended for the Village of Richfield's project to stabilize the uncontrolled sheet flow and eliminate impacts to the adjacent creeks and tributaries leading to Furnace Run and the Cuyahoga River and Lake Erie. This project will include construction of approximately 4,581 square feet of bio-filtration islands along with approximately 4,953 square feet of permeable pavement to filter, detain, and control the untreated storm water to eliminate soil erosion and sedimentation problems downstream.

**City of Fairview Park:** Funding is recommended for the City of Fairview Park to restore approximately 170 linear feet of eroding streambank, restore approximately 125

linear feet of flood plain, and to plant 200 native trees and shrubs over 1/3 acre of riparian area along Coe Creek which is within the Lake Erie Watershed.

**Metroparks of the Toledo Area:** Funding is recommended to assist the Metroparks in developing a state-of-the-art interpretive stormwater treatment system to collect and filter runoff from the bridge and adjacent park impervious surfaces through a 5-part treatment process by connecting the stormwater wetlands (to be funded under this grant), with a new inland deep-water (>3 feet) cove allowing for the discharge of the treated stormwater into the Maumee River (Lake Erie Watershed). Metroparks will construct one (1) acre stormwater treatment wetlands and will install one (1) water filtration system consisting of filtration planters and lower wetland channel.

**Olander Park System:** Funding is recommended for Olander Park System to restore approximately 2,450 feet of floodplain, reconnect approximately 1,400 linear feet of stream to natural floodplain, and restore approximately 1,400 linear feet of streambank by re-contouring or re-grading in order to reconnect the channels with the floodplain and convert 40 acres of agricultural land to riparian and prairie habitats to reduce nutrient loads entering streams, protect water quality, and improve fish and wildlife habitat. This project will complement other stream and riparian habitat restoration projects that were recently completed downstream on Kimball and Comstock Ditches within the Lake Erie Watershed.

**City of Macedonia:** Funding is recommended to assist the City of Macedonia with the installation of approximately 1,439 square feet of permeable pavement, approximately 2,000 square feet of large community rain garden demonstrations, and approximately 1,100 square feet of vegetated infiltration areas in order to reduce stormwater runoff into Indian Creek which is a tributary stream to Brandywine Creek within the Lake Erie Watershed.

**City of Bay Village:** Funding is recommended so the City of Bay Village for a stormwater demonstration project located within the Lake Erie Watershed. The City will remove approximately 2,950 square feet of impervious surface and replace it with approximately 3,850 square feet of permeable pavement, and will install approximately 3,595 square feet of bio-filtration. The project will include several stormwater features to help to reduce runoff and nonpoint pollution, reduce aquatic life impacts in Lake Erie, and educate citizens and visitors to Bay Village about viable, sustainable stormwater management alternatives.

**Mayfield Village:** Funding is recommended for Mayfield Village to treat stormwater runoff from approximately 20,000 square feet of existing impervious asphalt parking lot at the Mayfield Village Civic Center by installing approximately 7,100 square feet of permeable pavement. Currently, the parking lot discharges untreated stormwater runoff into Beecher's Brook, a tributary to the Chagrin River, which is within the Lake Erie Watershed.

**City of Sandusky:** Funding is recommended for the City of Sandusky to remove existing impervious pavement and install approximately 9,576 square feet of pervious concrete at the Jackson Street parking lot. The Jackson Street parking lot is City-owned and is approximately 16,993 square feet. Successful completion of this project will reduce urban runoff pollutants such as hydrocarbons from motor vehicles and runoff volume which can contribute to localized flooding, combined sewer overflow discharges directly to Sandusky Bay within the Lake Erie Watershed.

**City of Hudson:** Funding is recommended for the City of Hudson to remove and replace approximately 3,720 square feet of existing concrete sidewalk with a new permeable brick pavement to help reduce and treat stormwater runoff and will collect rooftop drainage for irrigation use for new street trees and planters (installation of a rainwater harvesting/reuse system). Current stormwater runoff from site is untreated and runs overland to the storm sewer collection system within the roadway before being routed to a culvert which connects with a tributary of Brandywine Creek which connects to the Lower Cuyahoga River within the Lake Erie Watershed.

**Black Swamp Conservancy:** Funding is recommended for the Black Creek Conservancy to fully restore an unnamed tributary to Marie DeLarme Creek, a high quality tributary to the Maumee State Scenic River, within the Lake Erie Watershed, to a condition as close to its Great Black Swamp, pre-agricultural state, as possible. This will involve reconnecting approximately 10 acres of wetland to the stream, reconstruction and restoration of approximately 20 acres of wetland, removal and treatment of approximately 10 acres of invasive species, removal of drainage tile in approximately 20 acres, and reforestation of approximately 30 acres of floodplain and riparian zone.

**Cuyahoga Soil & Water Conservation District:** Funding is recommended for the Cuyahoga SWCD for this project which will result in maintaining the existing coldwater community in the unnamed tributary of the Rocky River/East Branch within the Lake Erie Watershed. This project will prevent further degradation of this high-value aquatic resource as a result of stabilizing the channel headcut to eliminate the excess 4.5 tons/year of sediment it generates by installing one grade structure, planting approximately 2 acres of native grasses and approximately 2 acres of trees, shrubs and/or live stakes in the riparian areas. The stormwater management improvements will likewise work to treat runoff from the stable and its surrounding pastures and reduce peak runoff flow from the site, and includes construction of approximately 0.1 acre stormwater treatment wetland and installation of approximately 230 linear feet of vegetated swale.

**City of Cleveland Heights:** Funding is recommended for the City of Cleveland Heights to install approximately 1,910 square feet of permeable pavement and construct approximately 4,180 square feet of bio-filtration islands in order to direct stormwater into the bioswales, which will result in the added benefit of the water being filtered by the plants, special soil and rocks before entering Dugway Brook which is within the Lake Erie Watershed. The large bioswales will improve water quality by enhancing infiltration of the first flush of stormwater runoff and filtering the large storm flows they convey.

**Madison Village:** Funding is recommended for Madison Village to install approximately 2,500 square feet of bioretention (5 cells partially extending outside the sidewalk area and 11 cells installed within the current sidewalk and curb area), and plant approximately 17 trees on the north side of Main Street in the central business block of the Village where currently only impervious asphalt and concrete surfaces exist in order to treat stormwater runoff in an area which currently has no stormwater treatment or detention. Drainage from the headwaters of Arcola Creek meet at a constricted point as Arcola Creek flows through the Village center, causing frequent and recurring flooding of Village roads and businesses. The downstream channel is resizing as a result of stormwater volume and velocity, contributing nutrients, and causing erosion and sedimentation in Arcola Creek, a direct tributary to Lake Erie.

**Cuyahoga County Department of Public Works:** Funding is recommended for the Cuyahoga County Department of Public Works to cleanse localized stormwater runoff through natural features, excavation of a new wetland, incorporation of bioswales, cleanup of contaminated soils, removal of non-native species, and incorporation of native plantings and natural landscaping that will improve water quality and support a wildlife habitat. The project site is currently vacant land within the Lake Erie Watershed decimated by years of industrial abuse with uncontrolled stormwater runoff and invasive species; after completion of the project it will become a clean, safe and educational environment for visitors. The County will construct approximately 450 cubic feet of bio-filtration islands, construct approximately 1 acre of stormwater treatment wetland, install approximately 4,500 square yards of slope protection, and install one LS erosion control measure.

**Medina County Park District:** Funding is recommended for the Medina County Park District to protect an unnamed tributary to the West Branch Rocky River within the Lake Erie Watershed from excess sediment and flashy flows. The County will construct an approximately 0.67 acre stormwater treatment wetlands at the Princess Ledges Nature Preserve. A rock check dam/diversion structure will be constructed in the channel to direct flow to the wetland. The County will convert the remaining roadside ditch into a bioswale by installing approximately 625 lineal feet of vegetated swale with additional rock check dams to slow flows that overflow the diversion check dam. The County will also install approximately 2.3 acres of wetland buffer which will be reforested utilizing volunteers, who will install approximately 200 plants.

**City of Defiance:** Funding is recommended for the City of Defiance to improve the Diehl Park area, which is known for less than ideal drainage conditions including standing water throughout much of the park area, primarily due to clay soil conditions, minimal storm sewer infrastructure and prevalence of surface drainage swales, and impacts the Buckskin Creek-Tiffin River in the Lake Erie Watershed. The use of green infrastructure is well suited to demonstrate the advantages of bioretention as an alternative to grey infrastructure. The City will install approximately 10,000 square feet of large community rain garden demonstrations, approximately 2,600 square feet of vegetated infiltration areas and approximately 1,600 square feet of silva cells.

**Madison Township:** Funding is recommended for Madison Township to retrofit its existing Administration Building parking lot with permeable pavers and bioretention. Currently the 15,000 square foot parking lot is sloped so untreated stormwater runoff enters two existing catch basins and is piped to McKinley Creek, a tributary to Lake Erie. Madison Township plans to treat stormwater from the entire parking area by installing approximately 2,500 square feet of permeable pavement and an approximately 1,500 square foot bioretention cell, and eliminating at least 800 square feet of impervious surface area.

**Painesville Township:** Funding is recommended for Painesville Township to modify an existing parking lot at Fire Station #3 located at 550 Hardy Road to expand public parking accessibility and provide stormwater treatment of the existing and new parking area. The current parking lot is located in front of the Fire Station and cannot adequately provide the amount of parking spaces needed for Township residents and guests that visit the Fire Station. Painesville Township will install approximately 1,500 square feet of permeable pavement to treat stormwater runoff, thus reducing the impact to the Red Creek-Grand River in the Lake Erie Watershed.

**Village of Woodmere:** Funding is recommended for the Village of Woodmere to install approximately 770 square feet of permeable pavement and one rainwater harvesting/reuse system (an underground cistern) to filter, capture and store stormwater. The project is located in the headwaters of Wiley Creek, a coldwater habitat tributary to the State Scenic Chagrin River in the Lake Erie Watershed.

**City of Mentor:** Funding is recommended for the City of Mentor to retrofit an existing asphalt parking lot at the Wildwood Cultural Center by installing approximately 4,800 square feet of permeable pavers and approximately 2,200 square feet of bioretention to treat stormwater runoff and demonstrate the benefits of infiltrative stormwater practices. The current parking lot has no stormwater treatment or detention. Uncontrolled stormwater runoff from the parking lot is causing soil erosion north of the parking lot and is contributing sediment and excessive stormwater to the Marsh Creek watershed, a direct tributary to Lake Erie. This project will include retrofit of existing impervious asphalt parking lot with one passive “treatment train,” three bays of permeable pavers and excavation of eroded areas north of the parking lot to create pretreatment zones and a bioretention cell that manage parking lot runoff and drainage from the pavers.