

CHAGRIN RIVER WATERSHED PARTNERS

# Chagrin River Watershed Partners BMP Monitoring

Erie, Cuyahoga, & Lake Counties, Ohio



*The identification of scientifically proven innovative stormwater management systems will lead to greater protection and enhancement of water quality within the rapidly developing Chagrin River watershed and ultimately, Lake Erie.*

The Chagrin River watershed, which drains approximately 267 square miles to Lake Erie in north-east Ohio, has experienced significant development pressure as Cleveland’s population migrates out from urban core to outlying suburbs. The Chagrin River Watershed Partners, Inc. (CRWP) is a collaboration of cities, villages, townships, counties, and park districts working on innovative solutions to flooding, erosion, and water quality problems to minimize the impacts of development in the watershed.

To help CRWP develop science-based tools and practices to minimize the impact of

stormwater on Ohio’s coastal communities and Lake Erie, Biohabitats and the North Carolina State University (NCSU) partnered to characterize and evaluate the performance of six innovative stormwater best management practices (BMPs). This project is a collaboration of CRWP, Old Woman Creek National Estuarine Research Reserve, Ohio Department of Natural Resources Divisions of Soil and Water Resources, Erie Soil and Water Conservation District, and the Consensus Building Institute. These organizations comprise the project team, however a larger “Collaborative Learning Group” that represents all

facets of the stormwater profession is integrally involved in this project.

Over the course of two years, Biohabitats and NCSU are monitoring six BMPs for hydrologic and hydraulic performance. The BMPs include bioretention, pervious pavement, enhanced swales, grass filter strips, and dry detention basins retrofitted to provide additional infiltration. This involves designing and retrofitting the BMPs, per CRWP specifications, to accommodate hydrologic monitoring equipment.

Biohabitats and NCSU will combine the monitoring data with data sets from similar monitoring activities to model the performance of Low Impact Development (LID)

BMPs and their effectiveness in reducing peak discharges and runoff volumes. Biohabitats and NCSU are also documenting the costs of BMP design, construction, and maintenance. Based on these results, the project team and collaborative learning group will translate the results into user friendly design tools for stormwater professionals, make recommendations regarding design guidance and stormwater regulations, and develop credits and incentives to encourage the use of the most effective systems.

### SERVICES

- Inventory & Assessments
- Planning
- Green Infrastructure
- Design
- Public Outreach
- Project Management

*conservation planning*  
*ecological restoration*  
***regenerative design***



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