



Applying knowledge to improve water quality

Great Lakes
Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

Summer 2007

Stormwater Best Management Practices Database



National Theme: Watershed Management

Project Description

In spring 2007, the Great Lakes Regional Water Program Stormwater Initiative launched a project to develop a system of web-based tools that will increase the capacity of local communities, regulatory agencies, and others to collect, store, view, query, manipulate, analyze, and mine spatially referenced data on stormwater best management practices. The Best Management Practices (BMP) Database Project will proceed in two different stages, each having specific, but related goals:

- Phase I- develop and deliver a database of innovative stormwater BMP's
- Phase II - design a system of tools and procedures that local entities (e.g. municipalities, watershed groups, etc.) can use to create comprehensive inventories of stormwater BMP's

Phase I: Database of Innovative BMPs

Phase I of this project will focus on creating a database of sound, and not-so-sound, stormwater BMPs in the region. This resource will help local-level stormwater managers learn more about innovative stormwater BMP's, their benefits and their potential pitfalls. BMP project sites will be represented in the database as points defined by geographic coordinates and each point will have descriptive data and one or more hyperlinks associated with it. Hyperlinks will direct the user to a website with project information or a PDF document describing the BMP application. We anticipate that providing access to this type of information and real-world examples will increase stormwater managers awareness of innovative stormwater BMP's and enhance adoption of best practices.

Phase II: Comprehensive BMP Inventory

The BMP Database Project Phase II will develop tools to help local communities create comprehensive inventories of stormwater BMP's. This information will help a community track stormwater BMPs to ensure that they are maintained and working properly. The system could be used by communities to document stormwater management activities as required in their National Pollution Discharge Elimination System (NPDES) permit and by regulators to evaluate compliance with the Pollution Prevention/Good Housekeeping minimum measures in the permit.

The Great Lakes Regional Water Program addresses water quality research, education and outreach/extension efforts common to the six state in USEPA Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. The Great Lakes Regional Leadership Team (GLRWLT) guides the program and coordinates multi-state programming decisions.

The Great Lakes Regional Stormwater Initiative is a partnership of the GLRWLT and the Ohio Department of Natural Resources. Their goals are to assess the needs of local stormwater managers and to evaluate the effectiveness of current extension efforts in delivering stormwater education and programming and in identifying opportunities for multi-state cooperation.

PROJECT CONTACTS

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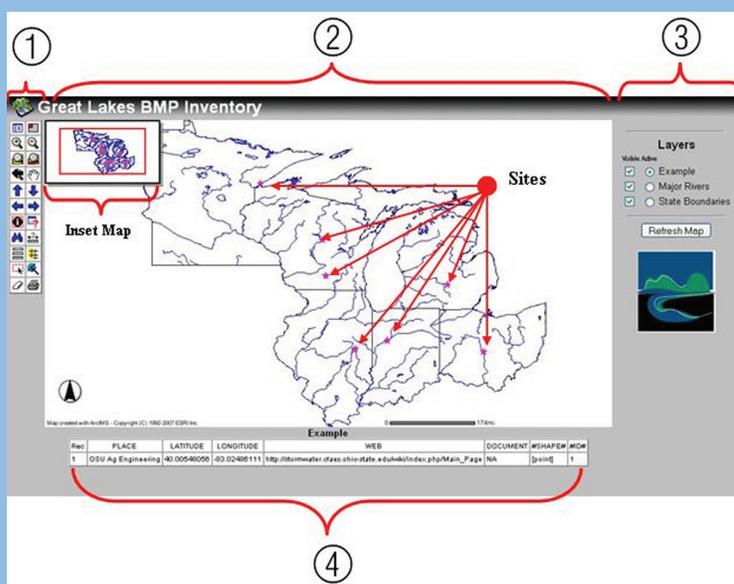
PROJECT PARTNERS

Great Lakes Regional Water Program
Stormwater Initiative
Ohio Department of Natural Resources

The Comprehensive BMP Inventory will be designed for communities to use at the local scale (e.g. city, county, watershed, etc.); however, since a corresponding data set will be collected by each participating community, and the data can be combined for analysis at the state or regional levels. This type of functionality will benefit state and regional programs that need to meet federal reporting requirements and will provide valuable information to policy makers.

Interactive Mapping Service

To deliver information from the BMP Database to users, a web-based interactive mapping service has been set up. An example screen shot of the BMP mapping service appears in Figure 1, along with a description of the system components. The mapping service allows users to query and access information simply and intuitively via the internet, eliminates the need for expensive, specialized GIS software, and requires little technical skill to operate.



- 1 *Toolbar* - provides GIS functions and capabilities to the user. Several common tools are provided in the current example including zoom and pan functions for maneuvering throughout the map area, measurement tools (e.g. distance, area), and various tools to query the database.
- 2 *Map area* - spatial data displayed graphically. An inset map with the current (red rectangle) of the map area is included in the upper left corner.
- 3 *Map legend* - allows the user to turn data layers "on" and "off" and make layers active. In this application the "example" data layer is active.
- 4 *Tool usage area* - displays text needed to interact with the GIS software. In this instance, the user used the identify tool (1) to select a location (a single pink star) on the "Example" data layer.

Figure 1. A screen shot of the web-based interactive mapping tool. Numbers and brackets were added by the author.

For more information about the Great Lakes Regional Water Program, please contact:

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For more information on the BMP Database, please visit

http://stormwater.cfaes.ohio-state.edu/wiki/index.php/BMP_Database

To view the interactive map website, please visit

<http://agnatres.ag.ohio-state.edu/website/GLBMPI>



www.uwex.edu/ces/regionalwaterquality