Introduction

With support from an Illinois Sustainable Technology Center (ISTC) Sponsored Research Program grant, the Center for Neighborhood Technology (CNT) and Hey & Associates of Chicago monitored and documented the performance of stormwater best management practices (BMPs) in the Chicago area during 2009 and 2010. There were three components to the project:

- Conducting real-time monitoring on a bioswale and two sections of permeable concrete,
- Performing infiltration testing for 15 rain gardens – three of which were used for additional synthetic drawdown testing, and
- Developing and implementing an inventory of green infrastructure features throughout the six-county Chicago Region.

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Green Infrastructure Database

CNT initiated the Green Infrastructure Site Survey in February 2010 in the six-county Chicago region. By January 2011, they had compiled a total of 276 sites, including 76 rain gardens, 56 native landscapes, 32 permeable pavement BMPs, and 28 bioswales. After evaluating most of the sites with visual surveys, 82 sites were confirmed green infrastructures and were selected for the initial Green Infrastructure Site Map. CNT continues to collect information and confirm the location of green infrastructures in the Chicago area.

This inventory database is accessible to the public at http://greenmapping.org. To see the map of the 82 sites, go to the website above and select “Interactive Map” and then “Green Infrastructure Demonstration Sites.” Clicking on a specific site allows the user to see the address of the site, a brief description (including a website link when available), and a photograph of most sites.

Permeable Pavement

Permeable pavement can be a good method of infiltrating stormwater from a parking lot or alleyway. It can be utilized with confidence if it is placed so that it surrounds existing drainage structures and if there is a maintenance program to prevent clogging.

Rain Garden

Rain gardens can be used as an attractive means of infiltrating stormwater from a roof or other impermeable surfaces such as parking lots or streets. Because soil conditions vary greatly throughout the Chicago region, and often vary substantially within a single rain garden, rain gardens need to be designed with consideration to the varying conditions to be effective.

Bioswale

A bioswale is another engineering solution for allowing stormwater infiltration from large impervious surfaces. The permeability of the underlying soils is the limiting factor to its performance. However, if there are existing drainage structures to serve as a backup system, bioswales can be very successful.

About CNT

The Center for Neighborhood Technology (CNT) is an award-winning innovations laboratory for urban sustainability. CNT works in four areas: transportation and community development; water; energy; and climate. More information about CNT is available at www.cnt.org.