



# Managing Wet Weather with Green Infrastructure

## a periodic update on activities

Volume 2009, Issue 6

December 2009

One year ago last month [1050 K Street](#) opened its doors in the heart of Washington DC, demonstrating the potential for green infrastructure to mimic natural systems even in the densest of cities. 1050 K Street is a LEED® Gold-certified office building located on the site of a former parking lot. The building owners not only averted further stormwater impacts by siting their building in a developed area, but mitigated existing stormwater impacts by including a suite of green infrastructure practices in the building design. Two tiers of green roofs retain rainwater falling on the rooftop, while three bio-retention cells located in the building plaza retain and treat runoff from adjacent impervious areas. A 5,000 gallon cistern beneath the building complements these features by storing any stormwater that cannot be retained. The man-made water cycle is completed by drawing all irrigation water from the cistern, reducing building water consumption and maintaining cistern storage capacity. 1050 K Street's suite of green infrastructure practices provides not only stormwater benefits, but urban oases for the tenants and passers-by, and a competitive advantage for the building owners. The building opened with a pre-lease occupancy rate of ~61% (remarkable considering the state of the economy), and interest in the retail spaces remains robust.



Photo: Chris Moore, Washington, DC

In October of 2009, EPA opened an experimental parking lot at its Edison, NJ laboratory to research the performance of permeable pavements. Three types of pavement were installed—porous asphalt, porous concrete, and interlocking concrete blocks. Researchers will monitor an extensive set of environmental parameters, including not only runoff quantity and quality, but urban heat island mitigation as well. The site will be monitored for at least ten years. In opening this experimental lot, EPA positions itself as a leader in the reinvention of our transportation infrastructure.

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For more information on managing wet weather with green infrastructure see the website at: [www.epa.gov/greeninfrastructure](http://www.epa.gov/greeninfrastructure). To be added to an e-mail distribution list for future issues of this bulletin, or if you have items of interest to be considered for inclusion in future issues, send an e-mail request to [mittman.tamara@epa.gov](mailto:mittman.tamara@epa.gov).

The [Sustainable Sites Initiative](#) released its [Guidelines and Performance Benchmarks](#) for sustainable site design in November 2009. The Guidelines are the product of four years of development and public feedback, and are intended to promote sustainable land practices (defined as practices that preserve ecosystem functions such as site hydrology) by providing a comprehensive set of performance criteria. These criteria are integrated into a rating system that “scores” the sustainability of site design, construction, and maintenance. The Sustainable Sites Initiative is now calling for [pilot projects](#) to test and refine the rating system. Future iterations of the LEED® Green Building Rating System are expected to include the Sustainable Sites Guidelines and Performance Benchmarks.



On December 1, 2009, representatives of Tempe, Arizona accepted the award for Smart Growth and Green Building for the [Tempe Transportation Center](#) at the [National Award for Smart Growth Achievement](#). The Tempe project integrates Smart Growth, green infrastructure, and water and energy conservation to create a vibrant and sustainable community center adapted to the Sonoran Desert environment. Built on the site of a former parking lot, the Center features a green roof, stormwater and greywater harvesting, and waterless urinals, among other design innovations. The green roof is planted with low water-use plants adapted to the arid climate, and collects and filters rainwater for storage and reuse.

## Partner Features

The [Low Impact Development Center](#) recently launched its [Green Streets Website](#) to highlight successful Green Streets programs throughout the nation. “Green Streets” apply innovative designs and technologies to manage stormwater at its source, while providing environmental, social, and economic benefits for residents, businesses, and passers-by. The website will offer case studies, technical guidance, and policy updates to promote the implementation of more ecologically sensitive street designs.

## Upcoming Forums & Events

PUT A LID ON IT: Overcoming Technical and Policy Challenges of LID. January 20, 2010. Minnetonka, MN. [Link](#)

Baltimore Green Infrastructure Workshop. January 22, 2010. Baltimore, MD. [Link](#)

Beyond the Basics: Green Infrastructure for Clean Water. February 18, 2010. Woodridge, IL.

MillionTreesNYC, Green Infrastructure, and Urban Ecology: A Research Symposium. March 5-6, 2010. New York, NY. *Now accepting abstracts.* [Link](#)

Strategic Conservation Planning Using the Green Infrastructure Approach. March 8-12, 2010. Shepherdstown, WV. [Link](#)

2010 International Low Impact Development Conference: Redefining Water in the City. April 11-14, 2010. San Francisco, CA. [Link](#)

2010 Ohio Stormwater Conference. June 10–11, 2010. Sandusky, OH. [Link](#)

2010 Green Remediation International Conference. June 15-17, 2010. Amherst, MA. [Link](#)

StormCon: The North American Surface Water Quality Conference and Exposition. August 1–5, 2010. San Antonio, TX. [Link](#)

*The following boot camps offered by Green Roofs for Healthy Cities introduce participants to the principles and practice of green roof design*

January 28–31, 2010. Toronto. [Link](#)

March 25–28, 2010. New York, NY. [Link](#)

April 15–18, 2010. Austin, TX. [Link](#)

*The following seminars offered by ASCE provide technical training on the design, construction, and assessment of site-scale Green Infrastructure practices* [Link](#)

## New Publications

[Re-Imagining a More Sustainable Cleveland.](#) Kent State University. December 2008.

[The Economics of Ecosystems and Biodiversity - Summary: Responding to the Value of Nature.](#) UN Environment Programme. November 2009.