



Capitol Region
Council of Governments

CRCOG News

Green Transportation Infrastructure

Special Report

May 2012

Serving 30 Communities in Connecticut's Capital Region

241 Main Street 4th Floor

Hartford CT 06016 www.crcog.org

What is Green Infrastructure?



Stormwater planter boxes line a downtown street in Portland, OR

Photo courtesy of City of Portland



Traditional and porous asphalt parking lot at UConn, Storrs

Photo courtesy of CT DEEP

Green Infrastructure, also known as Low Impact Development (LID), is a method of managing stormwater in a manner that similar to the natural, pre-development hydrology. As our cities and towns have grown, more and more hardscape surfaces such as streets and parking lots, impenetrable by rainwater, have been introduced. As a result, a large network of pipes and stormwater conveyance systems, retention ponds, and other costly mechanisms became necessary to handle the large amount of rainfall that could no longer absorb directly

into the ground. Green Infrastructure on the other hand, enables the ability to enhance and expand the built environment while also allowing natural stormwater management to occur.

There are a wide range of transportation related Green Infrastructure tools, including:

- Permeable Pavements
- Planter Boxes
- Rain Gardens
- Infiltration Swales
- Street Trees
- Bioretention Areas

These items may be used individually or in combination to design green streets, green parking lots, and green communities.

From

Grey

to

Green

- Requires significant municipal conveyance systems to dispose of rainwater
- Motor oil, toxins, heavy metals, pathogens, and sediment pollute receiving water bodies
- High peak runoff rates and velocities resulting in flood conditions and erosion
- In combined sewer systems, stormwater is treated as sewage, an unnecessary expense. In the event of a major storm event, untreated sewage is released into our water bodies

- Provides natural stormwater management while supporting the infrastructure needs of our growing populations
- Improves air and water quality and recharges groundwater resources
- Mitigates flood risk and protects the natural environment
- Builds Sustainable Communities while creating green spaces for people to enjoy

Green Capitols Project



In 2010 the State of Connecticut partnered with the Metropolitan District Commission (MDC) to install a variety of green infrastructure elements on the State Capitol grounds. This demonstration project was funded by the United States Environmental Protection Agency (design) and the Connecticut Department of Energy and Environmental Protection (construction). MDC served as the administrator and project manager.

Components of this project include a green roof, pervious concrete, porous asphalt, permeable pavers, three rain gardens, and a rainwater harvesting system. As one of the first state LID projects, the installation was used as an opportunity to begin developing best practices.

Construction was completed over a year ago and the maintenance manager has reported that all components have been functioning well.



Map of Green Capitols Project, Courtesy of CTDEEP

Did You Know?

- Streets shaded by trees require 40% fewer resurfacing applications as unshaded streets
Center for Urban Research
- Road salt application can be reduced up to 75% with the use of permeable pavements
UNH Stormwater Center
- Pervious pavement can infiltrate as much as 80-100% of the rain that falls on a site
US EPA and LID Center

Creating a Sustainable Capitol Region

Working Together for a Vibrant Future



Bringing green infrastructure into our transportation network is one component of CRCOG's Sustainable Capitol Region Initiative endorsed by the CRCOG Policy Board in September 2009. Sustainable Capitol Region seeks to tie together work that is already being done within the CRCOG Policy and Planning, Transportation, and Public Safety and Homeland Security Departments to create more sustainable communities, and to position the agency to take advantage of federal programs that support sustainable community development and preservation activities and climate change goals. Sustainable Capitol Region is a framework for developing

and supporting integrated regional approaches to planning, projects and investments that will promote vibrant, healthy communities, protect natural resources and open spaces, create equitable access to opportunities and establish an economically competitive Capitol Region to serve all of our residents today and in the future.

For more information on the Sustainable Capitol Region Initiative, contact Emily Moos at emoos@crcog.org.

Hole-in-the-Wall Outdoor Stormwater Classroom



Hole –in-the-Wall Parking Lot – a green infrastructure demonstration project in East Lyme, CT
Photo courtesy of Town of East Lyme

The Town of East Lyme has created an Outdoor Stormwater Classroom at the Hole-in-the-Wall parking lot located in downtown Niantic adjacent to the Long Island Sound. The parking lot serves as one of two main entrances to the Niantic Bay Boardwalk, Hole-in-the-Wall Beach, and local town beaches.

The Outdoor Stormwater Classroom showcases the latest technologies and techniques utilized to treat and reduce stormwater runoff before discharging into the Long Island Sound. The parking lot includes a number of pervious pavements with varying components (e.g., crushed stone, rubber tires, recycled

plastic), detention basins, a rain garden, a tree box, and a stormwater monitoring system.

In addition to treating 23 acres

of stormwater, the goal of the Outdoor Stormwater Classroom is to educate all people about the importance of keeping stormwater clean.

For more information, visit <http://www.eltownhall.com/hole-in-the-wall>

In June 2011 East Lyme's Town Engineer, Bill Scheer, made a brief presentation on the Classroom's green technologies to CRCOG's Transportation Committee.

Join us on June 13th, 2012 for CRCOG's "Green Infrastructure Field Trip" which will include a tour of the Outdoor Stormwater Classroom.

Join CRCOG's

Green Infrastructure Field Trip

June 13, 2012

Tour begins at 11 AM

Including:

- Tour of East Lyme's Outdoor Stormwater Classroom
- Lunch
- A discussion on the latest green infrastructure technologies

Contact Rob Aloise for more information at raloise@crcog.org.

Is your town interested in “going green”?

Whether you would like to create green streets or install green roofs, we'd like to hear from you! We are looking for champions to bring green projects to the Capitol Region.



Permeable parking at West Farms Mall,
Farmington
Photo courtesy of CT DEEP



MDC Headquarters in Hartford has plans to “green” their facility

Do you know of “green” projects in the Region?

CRCOG is creating a Green Clearinghouse for the Capitol Region. We'd like to showcase successes and share best practices among our member towns. Let us know if you have completed or are planning any projects that strengthen our Sustainable Capitol Region.

What can we do to help?

CRCOG staff are here to provide assistance to your green infrastructure efforts. Are you interested in research on these materials? Do you want general information on the array of green infrastructure tools? Do you need sample specifications? Let us know and we will be happy to help you out.

CRCOG Green Infrastructure Contact

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