

GREEN CAPITOLS PROJECT

In July 2009 a two-day conference at the State Legislative Office Building for technical, regulatory, planning and design professionals was conducted on managing wet weather with green infrastructure. This conference was sponsored by the EPA, DEP and MDC. In 2009 the EPA started to provide design and technical assistance to State-Municipal partnerships to implement wet weather management projects using green infrastructure approaches on Capitol Grounds. Mary Rickel Pelletier, participated in the conference and was instrumental in getting the EPA on board with supporting a project at Connecticut's capitol. Jenny Molloy, lead contact at EPA for the Green Capitols Projects provided the assistance of Kevin Perry from Nevue Ngan Associates in Portland, Oregon to come up with conceptual drawings and ideas for retrofits at our State Capitol in Hartford during the late summer of 2009. From there the CT DEP partnered with the Metropolitan District Commission to develop the project further.

The Green Capitol project is a demonstration to highlight green infrastructure retrofits. Green infrastructure can be a cost effective, environmentally preferable alternative to conventional stormwater conveyance and treatment structures. Green infrastructure limits the amount of stormwater runoff entering our collection systems and improves water quality. In the City of Hartford the MDC's Combined Sewer separation project can be influenced by green retrofits to reduce the pipe sizes of its separation system. The project will reduce the stormwater runoff from the Capitol grounds entering the combined sewer system in Hartford along Capitol Avenue and Trinity Street, which have street flooding issues.

The intent for the Green Capitols project is to serve as a statewide model for low impact development and green infrastructure solutions to be implemented by developers, municipalities, and homeowners. The designs were cognizant of low-cost and ease of implementation. Municipalities and homeowners can see these green infrastructure installations and implement them into their own projects and properties; as did the MDC two weeks ago by utilizing the rain garden design for a community project they did in Wethersfield, Connecticut.

An expectation for this project is to educate and inform the public in hopes that municipal planning authorities reevaluate codes and ordinances to allow green infrastructure. Often local policies pose the barrier to facilitating "green" infrastructure. A movement forward would be to implement these retrofits into municipal and residential properties and make possible "green" in codes and ordinances of local authorities.

Funding is being provided by the Clean Water Fund at a 50% grant and 2% loan. The FY09 Amended Priority List in effective April 2009 allotted \$500,000 for the project. Once the project was under design and estimated costs were evaluated, the allotment was increased to \$1M in the FY 10-11 priority list. The MDC has taken on the construction administration and financial responsibility of the project. They placed the project out for bid this past June. Bids opened on July 8, 2010. The contractor selected to implement the project is Laydon Industries of New Haven. Construction activities will commence mid-August with 120 days for construction completion.

The Green Capitols project will highlight several retrofits; a green roof, rain gardens, rain harvesting, and porous surfaces. The green roof will be located at ground level over a former generator room pad. Green roofs captures rainwater for evapotranspiration, delays and lessens runoff into the storm systems, can reduce heating and cooling costs, and can provide ecological value to urban areas. Rain gardens on either side of the driveway entrance on Capital Avenue will demonstrate a residential application while another rain garden along the driveway to the front of the Capitol building will demonstrate a street retrofit for urban application. This rain garden could easily spark interest for creating bump outs or bio-swales for urban parking lots or streetscapes. The rain gardens collect runoff from streets and parking lots and biologically treat rainwater runoff. Our design at the Capitol will provide treatment for the first flush of a rain event. Rain gardens also reduce the need for “grey” infrastructure, conventional pipe structures, and provide ecological and aesthetic value to urban areas. The rain harvesting demonstration will consist of installing a cistern to capture the rainwater from the building’s roof leaders and utilize the rainwater for irrigation on capitol grounds. The cistern will be installed below ground on the side of the capitol building. This system will utilize roof-top rainwater to reduce irrigation costs. Rain Harvesting is performed on the residential scale by the use of rain barrels. Several porous surfaces will be demonstrated at the Capitol grounds by installation of pervious asphalt parking area, porous concrete sidewalks, and pavers for walkways. Porous walking and parking areas reduce stormwater runoff, recharges groundwater, and eliminates ponding. Parking area paving will be located on the backside of the Capitol building facing Bushnell Park and walkways will be along the areas where the cistern and rain gardens will be located.

Key people to mention and thank:

Mary Rickel Pelletier has been a steward in campaigning for the need for green infrastructure in local CSO projects and local redevelopment.

Jenny Malloy, EPA lead for these demonstration projects.

Kevin Perry, Nevue Ngan Associates (Portland, Oregon) did conceptual drawings and concepts for retrofits at the capitol grounds.

John Kissida, CDM was the consultant hired by MDC to complete design the project.

Eric Connery has coordinated the approval of the project with the Historic Counsel and governing bodies. He also allowed for site access and utilization of capital police during project.

Louise Guarnaccia, MDC Project Controls Manager put the project out to bid and convinced MDC Board to partner on the project and take on the financial responsibilities of the project (design, construction oversight and management, bonding, etc).

DEP Management: Paul Stacey and Betsey Wingfield for supporting the project.