

Promoting Green Infrastructure in the Hudson River Watershed

HRWA initiates an outreach to build support for green infrastructure

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Many efforts to protect the Hudson River watershed are currently underway. Successful efforts require taking a holistic look at the problems affecting the watershed and implementing creative interdisciplinary solutions. That's where green

infrastructure comes into play. The term "green infrastructure" is broad and has many meanings. Of particular interest to watershed wonks, is the use of green infrastructure to manage wet weather, such as stormwater runoff.

On the federal and state government level, there has been a shift toward using these softer green infrastructure techniques rather than traditional hard engineering approaches. In fact, President Obama and the 111th Congress supported this policy when they passed the federal stimulus bill, or the American Recovery and Reinvestment Act of 2009 (ARRA). Under ARRA, twenty-percent (20%) of stimulus funds allocated to each state's revolving fund program must be set aside for green infrastructure projects. In NY, that means that approximately \$103 million is available for green infrastructure projects related to water and wastewater projects.

This spring, New York announced the Green Innovation Grant Program (GIGP), estimated to provide \$35 million for green infrastructure projects. HRWA, with support from the NYS DEC Hudson River Estuary Program and the New England Interstate Water Pollution Control Commission, have reached out to all of our stakeholders to make sure that green infrastructure funds go toward projects in the Hudson Valley.

What are Green Wet Weather Management Practices?

Green wet weather infrastructure includes a variety of practices, at various scales, that manage and treat stormwater and that maintain and restore natural hydrology by infiltrating, capturing and reusing stormwater; or by enhancing evapotranspiration. Here are a few examples of these practices:

Green Streets Projects

A Green Streets Program is a combination of green infrastructure practices in transportation rights-of-way, which can be applied to new development, redevelopment or retrofits. A Green Streets project can be as simple as a retrofit or it can be more comprehensive and include stormwater street planters between the sidewalk and the curb, stormwater curb extensions that transform the curb lane into a landscaped area, or rain gardens implemented on a neighborhood or community-wide scale.

Wet Weather Management Systems for Parking Areas and Other Impervious Surfaces

Focused on parking areas or other impervious areas, these practices mimic natural hydrology and reduce effective imperviousness of the site.



Porous Pavement

Porous pavement is a permeable pavement surface with an underlying stone reservoir that temporarily stores surface runoff before it infiltrates into the subsoil. Porous pavement is ideal

for low traffic or overflow parking areas.

Bioretention

Bioretention areas, such as rain gardens, are engineered landscaping features designed to treat stormwater runoff, which can be installed in parking lot islands and landscaped buffer areas.

Surface runoff is directed into landscaped areas and is filtered and infiltrated through the mulch and soil in the system.



Green Roofs

Green roofs are designed to support plants and mitigate effects on water quality by filtering, absorbing, and detaining rainfall. They can be added to existing structures as a thin vegetated sheath, or can be more intensive with trees, walkways, and larger vegetation.

Constructed Wetlands

Constructed wetland systems are engineered marshes designed to manage stormwater and achieve pollutant removal.

Hydromodification to Establish or Restore Riparian Lands

Establishing or restoring riparian buffers, floodplains, wetlands and other natural features through revegetation programs promotes natural treatment and infiltration of stormwater.

Downspout Disconnection

Disconnecting downspouts, or roof leaders, diverts stormwater from combined sewers and storm sewers and redirects stormwater to a rainwater capture system, rain garden, rain barrel, or other green infrastructure practice.

This new shift in policy, backed by funding, presents an opportunity for Hudson Valley communities to implement programs that can protect our water resources, by using natural systems and by implementing practices to help or replace gray infrastructure to reduce sewer overflows, storm water runoff and the urban heat-island effect, as well as increase the beauty and livability of neighborhoods and cities.

