

GREEN INFRASTRUCTURE

IN ONONDAGA COUNTY AND BEYOND

With strong political support and avid community involvement, the City of Syracuse and surrounding Onondaga County have become a hub for green infrastructure (GI). The Environmental Finance Center at Syracuse University (EFC) is actively supporting the community in these efforts. This edition of our quarterly newsletter features some of the GI projects that the EFC is currently implementing.

ONONDAGA COUNTY ADDRESSES STORMWATER CHALLENGES WITH GI

Onondaga County in New York State is the first municipality in the country to be mandated by consent decree to use GI to address its combined sewer overflow (CSO) problems.

In January 1998, NYS Department of Environmental Conservation (DEC), Atlantic States Legal Foundation (ASLF) and Onondaga County's Department of Water Environment Protection (WEP) entered into an amended consent judgment (ACJ) which resolved the claims by NYS DEC and ASLF that WEP had violated the federal Clean Water Act (CWA) and the NYS Environmental Conservation Law, article 17. The ACJ was subsequently amended by orders entered on May 1, 1998, December 2006 and April 2008.

In November 2009, Onondaga County submitted a proposal to amend the ACJ in order to include green infrastructure (GI) projects that will reduce the frequency and volume of CSOs. The new consent order will use a combination of traditional gray solutions—which include storage facilities and pipes—and green solutions that include natural systems to capture storm water and prevent run-off. The new agreement replaces plans to build large regional treatment facilities across the city, which were met with much public resistance, particularly because of environmental justice concerns due to the location of planned facilities. This ACJ now requires GI to be used to meet CWA compliance standards.

CH2MHill, the engineering firm for Onondaga County, has worked with the City and County to develop a GI implementation plan that runs through 2018. Syracuse and the surrounding areas are doing GI on a larger scale than any other city. Some of the preliminary components of the GI plan have already been implemented and positive results are being realized in nearby Onondaga Lake. The GI plans include a commitment to capture 95% total annual volume by 2018. The GI plan also stresses demonstration projects, monitoring and data collection sites, incentive programs and regulatory mandates, community education and outreach, and collaboration between City and County executives. By 2018, Syracuse will be ahead of Portland, Philadelphia, and Seattle in terms of GI coverage.

GREEN INNOVATION GRANT PROGRAM

The Green Innovation Grant Program (GIGP) is a new program created by New York State Environmental Facilities Corporation (NYSEFC), first implemented as part of the American Recovery and Reinvestment Act's 20% Green Project Reserve. The NYSEFC created GIGP to encourage innovative water infrastructure projects. The program was so popular that NYSEFC has committed to continue to fund it at \$15M this year. With support from EPA's CWSRF program, the EFC team has been evaluating the GIGP to determine the efficacy and equitability of the grant process. The final report will help NYSEFC enhance its program and serve as a lessons-learned document for other CWSRF programs.

ENVIRONMENTAL FINANCE CENTER COLLABORATION WITH WEP

In summer 2010, the Environmental Finance Center (EFC) at Syracuse University was awarded a \$400,000 grant to support the "Save The Rain" campaign and execute a public education and outreach program that will create awareness of green infrastructure techniques, explain the need to implement them and incentivize and assist in implementing green infrastructure at the neighborhood level. Together with project partners SUNY College of Environmental Science and Forestry, Onondaga Environmental Institute, Baltimore Woods, Onondaga Earth Corps, Partnership for Onondaga Creek and Southside Interfaith, EFC will begin work for this project in fall 2010.

Save the Rain...

A few highlighted examples of the EFC's scope of work for Onondaga County's "Save the Rain" campaign include:

Community Survey: The EFC team will work with the Onondaga Earth Corps (OEC), a group of neighborhood youth environmental educators, to survey residents on their level of understanding to gauge an appropriate outreach strategy. This strategy will include working with the youth in the construction of demonstration projects, workshops, attending public meetings, and working with community leaders to spread the word.

Green Street Design Charette: This process will include community members in the visioning and decision-making process as plans are created to implement a neighborhood-planned and approved green street. This process can then be replicated in other neighborhoods.

Green Infrastructure Community Workshop: This workshop will focus on designing and implementing GI projects in the community and will be built upon an "Introduction to GI" seminar, and will include hands-on training for design and implementation of residential GI. Residential GI projects will be installed or maintained during each workshop through assistance by workshop participants. After attending this workshop, participants will be empowered with the skills to act as stewards of their neighborhoods.

Rain Barrel Workshops: Workshops will provide a wide swath of the City with exposure to a very simple GI best

management practice and lead participants to increased awareness, acceptance and implementation of GI. Participants at the workshops will learn proper installation techniques, maintenance and the role of rain barrels in reducing combined sewage overflows.

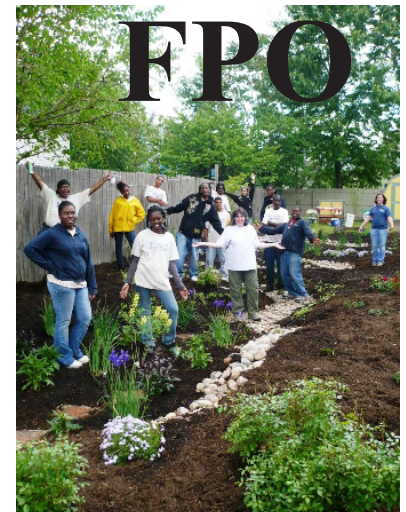


Green Infrastructure For Youth: Project staff will work with the OEC to develop a series of workshops on the benefits of different kinds of GI—including trees, rain gardens, rain barrels, green roofs and pervious pavement. The participants will use and develop games, skits, role-plays, and hands-on opportunities to increase awareness about GI and instill an appreciation for the role young people play in reducing pollution.

Green Infrastructure For Landscape Professionals: Project staff will work with the Central New York Nursery and Landscape Association to develop a workshop for their members that includes a refresher on stormwater management principles, GI options, examples of local projects, and strategies for marketing GI to their customers.

Overview of Pervious Products: The project team will design a series of formal and hands-on workshops on the various pervious products available on the market, targeted to contractors, engineers and landscape professionals. The first session will provide an overview of the products, their uses and specifications, and installation guidelines. Additional sessions will provide hands-on training in installation and maintenance.

Nature in the City: Baltimore Woods will provide classroom and outdoor instruction to most of the third grade classrooms in the City of Syracuse. They will adapt their third grade water curriculum to include GI, with lessons titled, "Traveling Water Drop," "Stream Exploration," and "Clean Water Matters."



ESF in the High School: Educational programming on green infrastructure and stormwater management will be developed and delivered to “ESF in the High School” classes, which take place in all Syracuse City high schools. Additionally, green infrastructure topics will be infused into teacher development offered at SUNY ESF twice during the project duration.

Demonstration Projects: In order to truly achieve community buy-in and show how beneficial GI can be, not only in stormwater management but also in neighborhood beautification, open space, heat island effect, and more, the project team will work with community members to plan, design and install 1-2 demonstration projects such as the one project staff were involved in at 515 Tully Street on Syracuse’s Near Westside. This site was almost entirely impervious and now includes rainbarrels, rain gardens, permeable pavement and a green roof.



GREEN INFRASTRUCTURE DEVELOPMENT IN THE NEAR WESTSIDE



The Near Westside neighborhood of Syracuse serves as an appropriate site for GI development and investment because of its location within the Clinton Sewershed and need of revitalization. Immediate projects include designs for

vegetated bioswales and native trees to line Marcellus Street. This is the northernmost street in the neighborhood and acts as the gateway into the Near Westside. The Syracuse Center of Excellence will work with the SUNY ESF Outreach team to develop a Green Infrastructure Training Program in the neighborhood. In addition, part of this year’s first-year orientation at Syracuse University will focus on sustainability. Students will participate in charettes, including one on green infrastructure, which will include a fieldtrip to the Near Westside for tree planting.

RAIN GARDEN DEMONSTRATION PROJECTS

With support through the USDA Rural Development Technical Assistance Training grant, EFC built two rain gardens last summer in the City of Oswego and the Village of Fairhaven. The projects reduce stormwater runoff into local tributaries to Lake Ontario as well as serve as demonstration projects to encourage and instruct local residents to build rain gardens.

RECENT EFC EVENTS

Asset Management Tools Training

July 15, 2010

Center for Regional Excellence • Salamanca, NY

This event was a continuation of the Asset Management 101 training held on June 15. It provided an in-depth exploration of computer-based tools including EPA’s CUPSS as well as EFC’s Financial Dashboard and other tools and resources

Building Networks For Sustainability A Technical Assistance Partnership Forum

September 28, 2010

Oncenter • Syracuse, NY

This Technical Assistance Partnership Forum (TAPF) was part of the 10th Annual Syracuse Center of Excellence Symposium on Environmental and Energy Systems. The theme of the 2010 SyracuseCoE Symposium was “Restoring Sustainable, Healthy Communities.” Plenaries, seminars, and panel discussions explored ways in which professionals working in three sectors—research, industry, and the community—are creating scalable innovations to address human and environmental well-being.

UPCOMING EVENTS

Smart Management for Small Communities: Practical Resources for Governance

October 6-7, 2010 • Ellicottville, NY

This conference will address the needs of municipal leaders and provide technical assistance, funding updates and practical skill-building sessions. Attendees will hear from state and federal agency representatives on funding opportunities, discuss infrastructure project development and participate in concurrent break-out sessions including asset management, drinking water and wastewater management, and sustainable community planning. Attendees include mayors, supervisors, clerks, board members, superintendents; public works, planning and zoning officials; wastewater and drinking water operators; engineers and consultants. Program details are available at the EFC website.

Green Infrastructure: Growing GI in New York State

November 17-18, 2010 • Syracuse, NY

Together with SUNY ESF, EFC is hosting this two-day conference with presentations from the EPA, researchers, county, state and community leaders to discuss green infrastructure at the federal, state and local levels.



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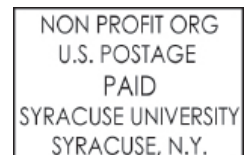
Farms, Folks, and Funding: Cultivating Leadership Through Research and Practice

December 2, 2010 • Canandaigua, NY

This one-day conference will focus on local agricultural best management practices, looking closely at water quality as it pertains to agriculture and municipal systems. Ranging from everyday human actions to long-term infrastructure issues, workshops and research sessions will discuss how changing behavior and technology aids local agricultural processes; in particular addressing water quality for food sources, drinking water sources, waste management, and the water cycle. Presentation topics will include:

- Municipal water system implications
- On-site wastewater management
- Composting
- Organic farming
- Agricultural BMPs
- Nutrient management
- Local food distribution
- Software supporting agriculture/water quality
- Organizing around waterbodies
- Downstream innovations
- Agricultural water reuse

To view the Call for Abstracts, or to suggest workshops, please visit the EFC website or contact Khris Dodson at 315-443-8818.



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