

BACKGROUND

Development and urbanization has transformed natural and pristine land surfaces into hard “impervious” landscape features, such as parking lots, sidewalks, rooftops and roadways. This change generates a significant increase in stormwater runoff, leading to increased flooding as well as erosion and water quality degradation of headwater streams. Urban runoff also flushes pollutants from land surfaces, such as nutrients, sediment, trash, and metals, and deposits these in downstream areas impacting water quality and potentially public health.

The traditional way to address stormwater-driven pollution and excess runoff volumes and rates has been through urban drainage systems to efficiently collect and convey runoff from developed areas. In many instances, these systems discharge runoff directly into receiving waters without any treatment, while in other instances, runoff is sent to “best management practices” that treat pollutants primarily through sedimentation (as in a stormwater pond) or through highly-engineered products. This conventional or “gray”, approach, dominated urban drainage and stormwater management until relatively recently. In the late 1990’s, forward-thinking experts, stormwater practitioners and communities began implementing Low Impact Development (LID) – now referred to “green stormwater infrastructure” (GSI) and nature-based practices, to not only treat urban runoff, but also to attempt restoration of hydrologic balance that mimics pristine conditions. GSI uses natural processes and materials to filter/treat urban runoff, as well as reduce runoff volumes by capturing and retaining runoff at or near the site level, with added benefits.

TOPICS COVERED

- Choosing appropriate stormwater management practices (BMPs)/technologies
- Benefits of low impact development (LID) and green infrastructure
- Design and performance
- Limitations to conventional stormwater management
- Low impact development
- Bioretention and rain gardens
- Porous asphalt
- Pervious concrete
- Permeable interlocking concrete pavements
- Gravel wetlands
- Subsurface infiltration and filtration
- Tree filters
- Next generation innovative stormwater technologies
- Cost & financing of Low Impact Development/GI

UNIQUE TRAINING OPPORTUNITY

WHEN: March 25, 2020
10:30 am – 3:00 pm

WHERE: Kearny Point
78 John Miller Way
Kearny, NJ



LEARNING OBJECTIVES

You'll be able to:

Choose appropriate stormwater best management practices (BMPs) for your project, including porous asphalt, gravel wetlands, subsurface infiltration, and managing shallow groundwater.

Comply with environmental protection regulations (MS4s and CSOs). Analyze next generation innovative stormwater technologies, including mechanical treatment and biological treatment systems.

Consider the upfront capital costs and long-term costs of low impact development and green infrastructure.



GREEN STORMWATER INFRASTRUCTURE PRINCIPLES & ENGINEERING DESIGN

MUNICIPAL STORMWATER TRAINING WORKSHOP

Hosted by Hugo Neu and the National Municipal Stormwater Alliance

HUGO NEU

nmsa

Continuing education credits by NMSA and WEF



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Smart Infrastructure. Strong communities.

PURPOSE

To address the need and interests in training and education on the technical and non-technical aspects of GSI practices, Hugo Neu and the National Municipal Stormwater Alliance have teamed to host a one-day event at Kearny Point. While the information shared will include a generalized view of GSI, there will be a particular focus on New Jersey dynamics and issues. The training will be highly interactive. For instance, participants will be asked to provide a case study from their jurisdiction that is a candidate for a GSI project(s) such as that of a “green street” parking lot or local park, enhanced for greater, greener stormwater management, which will be used as a case study. Participants will be broken into small groups to work on case studies and then tasked with sharing design strategies and anticipated implementation constraints/limitations. After gaining knowledge throughout the training, participants will be tasked with revisiting case study designs to make revised designs. The goal of this interaction will be for each jurisdiction to leave the training with a concept design for a location within their jurisdiction that incorporates GSI.

PRESENTERS

Dominique Lueckenhoff serves as the Senior Vice President of Corporate Affairs & Sustainability at Hugo Neu Corporation. Reporting to the Chair and CEO, she leads the company's global efforts in corporate sustainability, environmental policy, public and community affairs, and green business growth and investment. Ms. Lueckenhoff also serves on the faculty of Virginia Tech's Center for Leadership in Global Sustainability and as Chair of the National Council for Public Private Partnerships' Water Institute, a forum supporting high-performance, public-private partnerships in the water sector. Recognized as a national leader and expert in green infrastructure and sustainable communities, Ms. Lueckenhoff has over 25 years of award-winning program development and management experience across multiple USEPA programs protecting the nation's air, water, and land. Prior to joining Hugo Neu, Ms. Lueckenhoff served as Senior Advisor to the EPA Region 3 Administrator where she developed and led initiatives related to innovative public private partnerships, next generation technologies and alternative market-based approaches to achieving "faster, cheaper, greener" environmental improvements and resilient, sustainable communities. Ms. Lueckenhoff also served as Acting Director of the EPA Region 3 Water Protection Division, directing administration and management of all division activities. She has an MS degree in Microbiology & Biophysics as a National Science Foundation Fellow.

Dr. Seth Brown, P.E. is the Principal and Founder of Storm and Stream Solutions, LLC, a consulting firm providing a range of services from policy and alternative project delivery analysis in the stormwater sector to facilitation and training services focused on stormwater topics. He was the Director of Stormwater Programs at the Water Environment Federation from 2010-2015 and is currently the Executive Director of the National Municipal Stormwater Alliance, which is a 501.c.3 representing stormwater-focused organizations in 15 states across 8 of the 10 U.S. EPA regions. Seth has a Ph.D. in civil engineering from George Mason University with a research focus on socio-economic modeling of incentive-based investments of green stormwater infrastructure on private properties. He co-leads a graduate course in Innovative Water Partnerships at Virginia Tech and is a licensed professional engineer in the state of Maryland.

Dr. Robert M. Roseen, P.E. is Principal and Owner, Waterstone Engineering, PLLC Dr. Roseen is a recognized industry leader in green infrastructure and urban watershed renewal, and he is the recipient of an Environmental Merit Award by the US Environmental Protection Agency Region 1. Dr. Roseen consults nationally and locally on stormwater management and planning and currently leads one of the first-in-the-nation integrated planning efforts in coastal New Hampshire. He directed the University of New Hampshire Stormwater Center for 10 years and is deeply versed in the practice, policy, and planning of stormwater management. Dr. Roseen has 20 years of experience in the investigation, design, testing, and implementation of innovative approaches to stormwater management. His broad area of expertise includes water resources engineering, stormwater management, low-impact development (LID) design, porous pavements, nutrient and TMDL studies, stream restoration, and erosion and sediment control. Dr. Roseen has led the technical analysis of numerous studies examining land use and climate change impacts upon municipal flooding. He has participated in many significant and award winning green infrastructure projects.

Scott Gorneau, P.E. is National Manager of Stormwater Solutions ACF – Convergent Water Technologies Alliance As national manager of stormwater solutions for the ACF-CWT Alliance, Mr. Gorneau is responsible for managing accounts seeking to grow their businesses by offering innovative green infrastructure/low impact stormwater solutions that enable new applications and raise the bar on performance, cost effectiveness and verification. Mr. Gorneau previously served as regional vice president for FABCO Industries where he was responsible for engineering design, specification and installation of manufactured storm water management systems. He earned a BS degree in Biological Systems Engineering and an MS degree in Agricultural and Biological Systems Engineering from the University of Nebraska-Lincoln which provided the necessary knowledge for him to launch his career into the technical sales and specified engineered products industry. He spent the subsequent time since graduation gaining experience and expanding his knowledge of the industry on a wide variety of civil and environmental engineering design projects for private and public sector clients. Mr. Gorneau is a registered professional engineer in Maine and New Hampshire, and a Maine certified stormwater inspector. He has been a member of the American Society of Civil Engineers (ASCE) since 1999, serving as section president in 2014.

ABOUT NMSA

National Municipal Stormwater Alliance (NMSA) was formed in 2017 and is a not-for-profit organization representing approximately 3,000 Municipal Separate Storm Sewer System (MS4) permittees located and over 7000 engineers within 15 states across 8 EPA regions. NMSA's vision is to support MS4 permittees across the country, enabling them to develop efficient and effective stormwater programs. NMSA serves as a voice for MS4 communities, advocating for science-based policies and better understanding of local stormwater management programs.

REGISTRATION

Registrant Information

Name: _____
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
Occupation: _____
Email: _____
Phone: _____
Municipality; POTW; and/or Community Served: _____

GREEN STORMWATER INFRASTRUCTURE PRINCIPLES & ENGINEERING DESIGN TRAINING

Kearny Point, NJ – March 25, 2020

How to Register

Register by providing info above online at dblueckenhoff@hugoneu.com no later than **March 18, 2020.**