

Water Research Webinar Series

Green Infrastructure: Ecosystem Benefits and Applications



Wednesday, May 18 from 2:00 to 3:00 pm ET

Optional Q&A session
from 3:00 to 3:15 pm ET

A certificate of
attendance will
be offered for
this webinar

Registration: us02web.zoom.us/webinar/register/WN_NecM4fmBSuWQWqgpFHU29w

Presentation 1: Monitoring Green Infrastructure Applications (*Michael Borst and Thomas O'Connor*)

Bioinfiltration is one form of green infrastructure that incorporates plants in water quality treatment and is of interest because of its potential to retrofit existing urban surface drainage (i.e., curb and gutter) for both Municipal Separate Storm Sewer Systems (MS4s) and Combined Sewer Systems. EPA researchers are monitoring bioinfiltration to better understand the mechanisms that capture and treat stormwater runoff and the conditions for optimal performance. Presenters will discuss (1) a project that is using embedded instrumentation to measure the water movement into, through, and out of a bioinfiltration system and (2) a long-term study that is monitoring bioinfiltration planting media and plant growth.

Presentation 2: Leveraging Ancillary Benefits from Urban Greenspace (*Matthew Hopton*)

Changes in population growth, urban development, and climate have increased the occurrence of stormwater related problems. While green infrastructure is often proposed as a tool to help manage stormwater in urban areas, other types of greenspace can serve the same function and should be included in stormwater management plans. In addition, research indicates that several other benefits and ecosystem services come from urban greenspace. EPA researchers developed a framework to leverage these social, economic, and environmental benefits while managing stormwater. Using St. Louis Missouri as a case study, this presentation will demonstrate how to apply the framework in a directed manner to provide benefits equitably to generally underserved communities.

About the Presenters



Michael Borst

Michael is an engineer in EPA's Office of Research and Development (ORD), Center for Environmental Solutions and Emergency Response (CESER). With community partners, he undertakes field-scale research investigating the mechanisms influencing the performance of stormwater control measures.



**Thomas O'Connor,
P.E., BCEE**

Thomas is an environmental engineer with EPA/ORD/CESER. He has conducted research on a variety of stormwater best management practices, low impact development and green infrastructure.



Matthew Hopton, Ph.D.

Matt is an ecologist and supervisory biologist in EPA/ORD/CESER. He oversees the Stormwater Management Branch in the Water Infrastructure Division and conducts research on a variety of topics centered around urban and landscape ecology, including ecosystem services, sustainability, and resilience.