

STORMWATER INNOVATION EXPO 2021



RHODE ISLAND
GREEN INFRASTRUCTURE COALITION



WELCOME

Sara Churgin, Eastern Rhode Island Conservation District, emcee
Terry Gray, Acting Director, Rhode Island Department of Environmental Management
Brian Byrnes, Deputy Superintendent of Parks and Recreation, City of Providence

PROVIDENCE STORMWATER INNOVATION CENTER: ELEMENT 29

Video presentation

WORKSHOP: MUNICIPAL STORMWATER CHALLENGES

Alyse Oziolor, Principal Planner, Town of Westerly
Craig Hochman, Chief Engineer, City of Providence
Jen West, Coastal Training Program Coordinator, Narragansett Bay Research Reserve

WORKSHOP: MR. POTATO HEAD AND TREE TRENCH—WHAT COULD THEY POSSIBLY HAVE IN COMMON?

Ellen Biegert, Horsley Witten Group
Brian Kuchar, Horsley Witten Group

PROVIDENCE STORMWATER INNOVATION CENTER

Video presentation

STORMWATER EXPO DAY TWO PREVIEW

Mike Everhart, EJ Prescott, Inc.

CLOSING REMARKS

Sara Churgin, Eastern Rhode Island Conservation District, emcee

MUNICIPAL STORMWATER CHALLENGES

Westerly is a Town with many valuable water resources (coastal waters, salt ponds, inland wetlands, and a Wild and Scenic river), but those resources, along with the Town's infrastructure, are threatened by inadequate stormwater management. The Town is working with a number of public and private partners to attack stormwater in the Town, beginning with a demonstration project in Downtown Westerly that will display the multi-functional benefits of green infrastructure, revitalize a portion of downtown in need of some greening, and help property owners incorporate these techniques in their site designs.

Providence is a city with many infrastructure and funding challenges. Chief among them, is the lack of stormwater funding, and a dedicated funding source for its sanitary and combined sewer system. Through our most recent efforts, we've determined that the path to sustainable stormwater funding cannot be a standalone effort but must be considered along with the sanitary/combined sewer system.

Presenters:

Alyse Y. Oziolor is the Principal Planner for the Town of Westerly. Alyse brings a diverse background in environmental science, ecology, and environmental regulation to municipal planning. With a Bachelor's Degree in Environmental Studies from Gettysburg College and a Master's Degree in Biology from Baylor University, Alyse has research experience spanning topics including nutrient loading effects on salmon populations in Alaskan headwater streams, deforestation effects on turtle habitat use in Pennsylvania hardwood forests, macroinvertebrate diversity in Maine mudflats, sea turtle diving and nesting behavior on Florida beaches, and improved methods for trapping invasive cane toads in Australia. Alyse brings to Westerly and planning 5 years of experience as an environmental consultant in three states (Texas, California, and Connecticut), identifying and evaluating natural resources, assessing impacts of land use development on such resources, and navigating the environmental regulatory process to implement projects. Alyse is now using her diverse background in environmental science and land use development to advocate for smart growth and create harmony between the developed and natural environments in the Town of Westerly. Alyse is driven to make Westerly a resilient and sustainable community within which anyone can live, work, and thrive.

Craig Hochman is the City Engineer for the Providence Department of Public Works and is responsible for public infrastructure management and capital improvements of roads, sidewalks, bridges, sewers, dams, and other unique assets. Additionally, he reviews land development projects and manages the activities of the Engineering Division. He is a graduate of the University of Rhode Island and is a licensed Civil Engineer in the State of Rhode Island.

MR. POTATO HEAD AND TREE TRENCH: WHAT COULD THEY POSSIBLY HAVE IN COMMON?

Similar to Rhode Island's own Mr. Potato Head, the tree trench is made up of many interchangeable parts which can come in different forms and provide different functions. The design of a tree trench can often take on a mix and match approach that is dependent on the existing conditions, project goals and site context. For this session we will introduce you to the *Tree Trench Options Guide*, which has been developed in collaboration with the Providence Stormwater Innovation Center. It takes a non technical approach to assist any person or agency with understanding the different types and components of a tree trench as well as help them select the best design, or “Mr. Tree Trench”, for a specific project.

Presenters:

Brian Kuchar, P.E., R.L.A., LEED AP, is an Associate Principal at the Horsley Witten Group. He is a registered landscape architect as well as a professional engineer with over 22 years of experience in environmental design. His passion for the preservation and protection of the natural environment provides the foundation for his design approach.

Ellen Biegert, R.L.A., is a registered Landscape Architect at the Horsley Witten Group with over eight years of experience in the field. She designs to integrate open space and green infrastructure into neighborhood and built context to create green networks for the surrounding communities, natural systems, and local wildlife.



RHODE ISLAND
GREEN INFRASTRUCTURE
COALITION

Aquidneck Island Planning Commission

Aquidneck Land Trust

Audubon Society of Rhode Island

BETA Group, Inc.

Birchwood Designs

Blackstone Parks Conservancy

Blackstone River Coalition

Blackstone Valley Tourism Council

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City of Newport

City of Providence

Clean Ocean Access

Clean Water Fund

Conservation Law Foundation

Eastern RI Conservation District

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Groundwork Rhode Island

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Landscape Design

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The Point Association of Newport

Providence College

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FOCALPOINT HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM

PRODUCT ACCEPTANCE UPDATE: FOCALPOINT CERTIFIED BY RI DEM



- The FocalPoint High Performance Modular Biofiltration has been certified by Rhode Island Department of Environmental Management (RI DEM) as a Pretreatment Device, Retrofit Device and Water Quality BMP.
- FocalPoint is an ultra-efficient, modular biofiltration system that treats and drains large volumes of stormwater runoff in a small footprint (up to 90% smaller than traditional bioretention systems) to meet post-construction stormwater treatment requirements. The system removes pollutants from stormwater runoff through the physical, chemical and biological mechanisms of its soil, plant and microbe complex.
- Due to the small footprint (only 192 SF of FocalPoint per acre), the system can be installed along the edge of a roadway behind curb lines, in landscaped stormwater basins and in urban green infrastructure streetscapes.
- The system is approved for the following pollutant removals when designed at 100 inches per hour: 85% TSS, 60% Pathogens, 30% Phosphorus for freshwater discharges and 30% Total Nitrogen for tidal water discharges.
- The system must be designed to incorporate a PRETX or Rain Guardian Device for pretreatment to dissipate energy and store sediment and debris prior to entering the biofilter area.

Please contact Lee Jones QSM or Loren Joyce PE for more information:

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leland.jones@ferguson.com
(508) 745-7052

LOREN JOYCE PE
loren.joyce@ferguson.com
(207) 272-9743

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From project vision to implementation, BETA provides integrated engineering services that improve the communities where we live and work.

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Orange Flood Control is a Women-Owned Business (WBE) flood mitigation company for consulting, device sales, installation, maintenance, service and training.





Sustainable Stormwater Management Systems

Rhode Island Based

StormTree is a RI-based company providing green infrastructure solutions by combining trees with stormwater runoff reduction and pollutant removal. Our systems serve the dual function of providing healthy and thriving trees, coupled with stormwater management for streetscape revitalization and land use development projects.

We have collaborated with the Woonasquatucket & Northern RI River Watershed Councils, RIDOT, and the Providence Parks Department, on grant funded, as well as commercial projects.



South St Landing, Providence



Wexford Innovation Ctr. Providence



HUD, Cranston



NRICD, Scituate



TETRA TECH

Tetra Tech is a global leader in sustainable engineering and environmental solutions.

Our Team:

With more than 600 professionals in the Northeast, Tetra Tech helps communities plan for a changing climate and design resilient infrastructure for a sustainable future.

We Offer Expertise In:



Stormwater Management



Green Infrastructure and Low Impact Design



Local, State and Federal Permitting



Watershed Protection Plans



Wetland Mitigation and Habitat Restoration



Climate Resiliency Planning

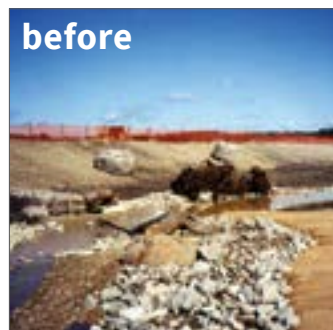
Representative Projects:



Tetra Tech is advancing climate resiliency projects for the NY Governor's Office of Storm Recovery that focus on Green Infrastructure and flood reduction.



Tetra Tech is delivering on-call stormwater planning, permitting, design and compliance services to both RIDOT and MassDOT.



Tetra Tech recently celebrated the 20th anniversary of the “daylighting” of the Neponset River. We relocated and restored approximately 3,000 LF of the river, as part of the development of Gillette Stadium. The project area was brought back to life with extensive and varied plantings, and the runoff from the massive parking lots continues to be properly controlled and treated.



 Ed Ionata, Senior Vice President, Infrastructure Northeast

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WOONASQUATUCKET RIVER
WATERSHED COUNCIL



Green Jobs. Better Communities with Green Infrastructure



Nature is at work here!

We're creating a healthy community! This site uses nature to clean dirty stormwater and reduce flooding.

www.greeninfrastructureri.org



Clean

The rain garden removes smudges, dirt and other pollutants from the rain water before it enters the Woonasquatucket River.



Protect

Absorbs rain and reduces flooding.



Economy

This land is protected and used by local residents and businesses. Green space increases property values for everyone.



San Souci Connector Rain Gardens

This site used to be a big parking lot, but it was changed to be better for people and wildlife. All the dirty water from the parking lot used to wash straight into the river.

This path and garden now create a walkway that also cleans water, leading from Olneyville Square to the Woonasquatucket River. The brick around the walkway and the garden collect and filter dirty rain water that washes off the parking lot, making the river **cleaner** and Olneyville **greener**.

Cool

Removes hard surfaces that hold heat. Adds plants and trees that provide shade for people and wildlife.



Wellness

Provides cleaner air and places to rest outside, connecting people to nature in the city.



Habitat

Attracts and feeds animals like butterflies, bees and birds. Butterflies and bees are really important to local farmers who provide fresh food.

