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Organization Name:



About the Organization:

The [RI Green Infrastructure Coalition](#)'s 37 members advocate, construct, and support infiltrating and naturally treating storm water. They foster implementation of green infrastructure in urban communities to improve the environment and create local jobs.

Location:

Multiple Locations

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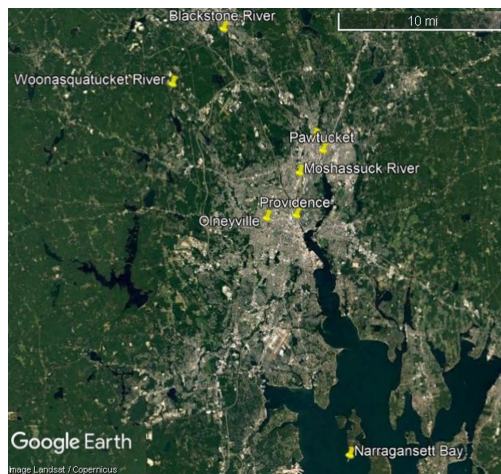
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Green Infrastructure to Decrease Stormwater Flooding, Enhance Water Quality, and Promote Equity

Rhode Island Watersheds and Water Quality

Although Rhode Island (RI) is the smallest state in the Union, it has nearly 400 miles of coastline, with several prominent tributary rivers – like the Woonasquatucket, Blackstone, Moshassuck, and Providence Rivers – flowing into Narragansett Bay. The cities of Providence, Pawtucket, and Central Falls sit at the head of the bay making the area heavily influenced by development, impermeable surfaces, stormwater runoff, and combined sewer overflows (CSOs). In addition, the cities are vulnerable to the impacts of a changing climate, including increased precipitation, high heat days, and sea level rise. During rain events or coastal flooding, CSOs and runoff pollution pose a risk to public health by degrading water quality in urban watersheds and the Narragansett Bay. Prior to 2008, CSOs in the district released around 2.2 billion gallons of untreated water and bacteria into the bay and its tributaries.

New treatment facilities and a system of tunnels – built because of the Narragansett Bay Commission's [CSO Abatement Plan](#) – now remove about half of the CSO volume discharging into waterways. Because of the projects, there have been improvements to water quality. However, parts of Narragansett Bay and many tributary rivers still do not meet water quality standards for bacteria. To further combat the impacts of CSOs, stormwater runoff, and pollution in urban watersheds, local organizations and businesses formed the [RI Green Infrastructure Coalition](#) (GIC) in 2014. The Coalition is made up of nearly 40 local businesses, non-profits, and government offices in the Providence-Metro and Newport-Aquidneck Island areas. They are forming partnerships and using green infrastructure to decrease stormwater flooding, address climate change impacts, enhance water quality, and promote equity in urban watersheds. Additionally, the State of RI amended the [Green Buildings Act](#) in 2017 to include green landscape design for public buildings.



Narragansett Bay is surrounded by highly urbanized areas (left); in 2010, a park in Olneyville flooded after heavy rain (above). Photo: WRWC



Students from D'Abate Elementary School work with the Woonasquatucket River Watershed Council and Groundwork RI to install a rain garden (top); signage is provided to explain how nature is at work (bottom). Photos: WRWC

Green Infrastructure and Equity

Green infrastructure not only provides a solution to stormwater flooding, climate-related threats, and poor water quality but also has the potential to provide education, jobs, and healthy environments to vulnerable communities. In order to build on work that they were already doing as well as incorporate equity into the framework of the GIC, two of the partner organizations – [Groundwork RI](#) and the [Woonasquatucket River Watershed Council](#) (WRWC) – worked together over the past year with support from the [Urban Flooding and Equity for Vulnerable Communities Collaborative](#).

Both Groundwork RI and the WRWC have experience working with vulnerable communities in the Providence area. Olneyville is a high-poverty, majority people of color neighborhood in Providence within the Woonasquatucket Watershed that is prone to flooding; Providence, and neighboring cities Central Falls and Pawtucket are all former industrial cities that suffer from heat island effects and lack of tree cover. Through the GIC's program – Nature at Work – Groundwork RI, the WRWC and teams of paid community work crews and job training participants completed several green infrastructure projects in these areas that include:

- creating a rain garden at D'Abate Elementary School in the Olneyville neighborhood;
- completing a water diversion project along Pleasant Valley Parkway in Providence;
- removing pavement and planting trees in pits with curb cuts along [Dexter Street](#) in Providence's West End neighborhood; and
- depaving a parking lot and planting fruit trees at the Armory Animal Hospital in Providence.

Partnerships with the RI Department of Transportation and the RI Infrastructure Bank are also opening opportunities for more large-scale projects that can have significant impacts on water quality. More information about projects can be found on the GIC [projects page](#) and organization news is shared in the [Nature at Work Newsletter](#).

While implementing the projects is important, educating the community to support and maintain them is also a priority of the Green Infrastructure Coalition. To involve community members, Groundwork RI and the WRWC built on their already established programs – [GroundCorp](#), [Green Team](#) and [River Rangers](#) – to provide a Green Infrastructure training to adult community members. Over the past 2 years, about 50 people were trained through this programming. Green Infrastructure Coalition members also helped to organize a green infrastructure [maintenance training](#) with the Providence Parks Department, highlighting the importance to sustain the functionality and longevity of the projects as well as the aesthetic value for the communities.

To inform the public at large, the Coalition is active on several fronts. Website and social media platforms regularly include projects, volunteer opportunities, calls for advocacy, and educational videos. Green infrastructure tours are provided for decision-makers and community members, highlighting both easy to implement and larger-scale green infrastructure projects that can be done at home or in their neighborhoods to collect stormwater runoff. The GIC also includes Nature at Work signage at project sites to explain how and why green infrastructure helps to create a healthy community.

Because Leaders from Groundwork RI and the WRWC already have programs and work with underserved communities in the Providence metro area, they are in a good position to bring mindfulness of equity to the GIC. As implementation of green infrastructure expands, there are growing concerns of unintended consequences, such as rising cost of living and displacement of low-income communities. The partners established an Equity Workgroup within the GIC, in which members are gathering ideas, forming strategies, and raising awareness of opportunities in and threats to these neighborhoods.



Community members participate in Groundwork RI's workforce training (top) and the GI Coalition's maintenance training with Providence Parks (bottom). Photos: Groundwork RI (top) and GIC (bottom)



Members of Groundwork RI's adult job training programs (left and center) and youth Green Team (right) work on de-paving, planting trees, and maintaining projects in Providence neighborhoods. Photos: Groundwork RI

The Equity Workgroup has reached out to the Racial and Environmental Justice Committee for the City of Providence to establish a partnership. Members are also engaged in efforts to bring green infrastructure and climate change resiliency conversations to less traditional environmental partners such as social service agencies and schools to reach a wider cross-section of community residents. WRWC, Groundwork RI, and other Coalition members are seeking funding to make these partnerships a reality, strengthen their relationships within communities, and ensure people of color led efforts receive funding.

Building Resilient Communities

RI is working to build more resilient communities. From action at the local level to the state level, putting the environment at the forefront of development sets the stage for preserving water resources and preventing stormwater flooding. The GIC works on all these levels to advocate, plan and implement green infrastructure in areas around the Narragansett Bay. Groundwork RI and the WRWC are also working to further these initiatives in vulnerable communities and provide a framework for others to be mindful of equity in green infrastructure design. Through education, training programs, and green infrastructure project implementation they are creating pathways for communities to grow and thrive along with nature.

Further Resources

[Green Infrastructure in Providence](#), [Groundwork RI changing landscapes and lives](#), [Lessons in Water Cycling](#), [Nature at Work Community Voice](#), [Nature at Work Green Infrastructure Tour](#)

The Kresge Foundation: Civic Engagement for Clean Water and Healthy Communities

The [Kresge Foundation Environment Program](#) provides opportunities for cities to advance climate resilience while focusing on equity and solutions to climate-related impacts. As part of a 3-year Kresge Foundation grant, [River Network](#) and [Groundwork USA](#) created two cohort projects to engage communities: (1) The Urban Flooding and Equity for Vulnerable Communities Collaborative, and (2) The Safe and Affordable Drinking Water Peer Learning Cohort.

The first project, the [Urban Flooding and Equity for Vulnerable Communities Collaborative](#) is an offshoot of the Urban Waters Learning Network that ran from March 2017 to May 2018. The Collaborative includes organizations from five communities – in Colorado, Georgia, New Mexico, Oregon, and Rhode Island – working at the intersection of climate change, water resources, and equity. In each area, Collaborative members are catalyzing the level of civic engagement needed to address the impacts of localized urban flooding and advocating for solutions that reduce flood risk to the most vulnerable residents in their communities.

The second project – the [Safe and Affordable Drinking Water Peer Learning Cohort](#) – is funded by both the Kresge Foundation and the [Charles Stewart Mott Foundation](#). Work began in April 2018 and will run until May 2019. Different participants and locations will be represented in this cohort that aims to advance safe and affordable drinking water priorities in their communities.



For more information about the Learning Network, visit www.UrbanWatersLearningNetwork.org
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