

GREEN INFRASTRUCTURE IN ACTION: ULSTER COUNTY DEMONSTRATION PROJECTS



What is green infrastructure? Green infrastructure is an approach to managing storm water that mimics the natural water cycle by keeping water where it falls, using plants, soil, and landscape design to absorb, filter and disperse storm water. Green infrastructure can be found at multiple sites throughout Ulster County.

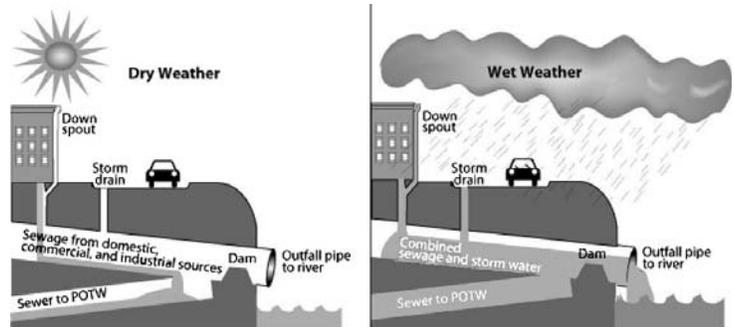
Why do we need green infrastructure?

Flooding occurs when rainfall or snowmelt overwhelms storm water infrastructure. In cities, impervious surfaces (those that do not absorb water), such as roofs and pavement, increase the likelihood of flooding. *Runoff* is water that runs from the surface of the land into bodies of water rather than evaporating or being absorbed into groundwater. Runoff often collects pollutants as it flows. Impervious surfaces increase runoff and runoff pollution.

Combined Sewer Overflow

In Kingston and many older cities, portions of the storm water and sewage systems are combined. This means that storm water and sewage flow through the same pipes to reach the sewage treatment plant. When rainfall or snowmelt causes the combined systems to overflow, both storm water and untreated sewage is discharged into the Rondout Creek.

-Image from US EPA



Benefits of green infrastructure Green infrastructure helps to prevent flooding, runoff pollution, and combined sewer overflow by absorbing and filtering storm water through the ground, minimizing the amount of water that floods the streets or enters the sewer system. The natural elements such as flowers, shrubs, and trees are beautiful and serve as habitats for local insects and birds.

Types of green infrastructure Green infrastructure includes a variety of practices such as rain gardens, green roofs and walls, pervious pavement, and bioretention areas.

See the reverse of this pamphlet for examples of green infrastructure in Ulster County.

**SUSTAINABLE
ULSTER COUNTY**

— COUNTY EXECUTIVE MICHAEL P. HEIN —

GREENER BY DESIGN



Bioretention Areas– UC Office Building Complex

Bioretention areas are depressed areas in the landscape that collect and filter storm water. The trees, shrubs, and grasses planted in these areas must be able to survive both flooding and drought. Native perennials such as milkweed, mountain mint, coneflower, and beebalm are well suited for this and require minimal maintenance. This bioretention area is at the Ulster County Office Complex. It was designed to collect runoff from the adjacent parking lot and prevent flooding on Pearl Street.

Pervious Pavement– STRIVE Project at KCSU

Pervious means “allowing water to pass through.” Pervious pavement absorbs storm water through pores in the surface, preventing flooding and runoff, capturing pollutants, and filtering water. Permeable pavement often looks just like regular black-top or sidewalk stones...until it rains! This picture shows pervious and impervious pavement at the Kingston Campus of SUNY Ulster. It is clear that water is pooling on the impervious pavement while the pervious pavement is dry.



Green Walls– STRIVE Project at KCSU

Green walls are walls that are made of living plants. Green walls absorb heat from the sun, naturally cooling buildings, clean the air, and absorb rain water. The Kingston Center of SUNY Ulster uses a green wall to conceal a maintenance area, creating a more visually pleasing campus. This green wall was planted with hardy perennials. On the North West wall is shade-loving heuchera. On the South East wall, is cat-mint , a native perennial that attracts pollinators, as well as a mix of drought-resistant, sun-loving sedum.

Rain Gardens– UC Department of the Environment

Rain gardens are smaller bioretention areas that collect and filter storm water. They can be built in residential areas to collect water from roofs and gutters. Rain gardens enhance the landscape with native plants and provide habitat for wildlife. This rain garden at the Ulster County Department of the Environment serves as a demonstration site for Kingston residents, as the Department is housed in an older home, similar to many other homes in Kingston.

