

Green Infrastructure

Using Nature to Manage Stormwater

Why Green Infrastructure?

It rains in Columbus about 140 days per year. Managing all that rain water is the function of our storm sewers. This sewer system includes a series of curb inlets and underground pipes, known as gray infrastructure, that drains untreated rain water and any trash or pollutants it picks up along its path directly into our streams and rivers.

Rain gardens and porous pavement, known as green infrastructure, are rapidly becoming an important part of the storm sewer system in Columbus. Rain water is routed through the green infrastructure, filtering through layers of stone, soil and plants before draining into the pipes that empty into our rivers. This natural filtering process slows the release of stormwater and keeps pollutants and trash out of the system, which protects our rivers and streams.



Site Visit:

The City's design team first visits potential sites on City owned property to determine the best locations for green infrastructure. Locations may include parks or right-of-ways, such as curb lawns, on residential streets. The team will especially want to know where existing underground storm sewers are, since the green infrastructure will connect to those sewers.



Survey:

After a general location is selected, the team surveys the site to check for potential obstacles, such as underground utilities, and may need to take soil samples. Once satisfied with the location, the design team prepares detailed construction plans.



Construction:

The rain garden site is excavated and the subsurface is prepared by adding layers of stone and soil designed to filter stormwater. Plants and mulch make up the top layer of rain gardens. For porous pavement, the subsurface is prepared in much the same way, except the top layer is porous concrete. Both allow water to soak into the layers beneath it.



Operation and Maintenance:

The City of Columbus is responsible for maintaining its green infrastructure. This includes periodic inspection, removing litter and weeds on a regular basis and pruning, trimming or replacing plants as needed.

**BLUE
PRINT**
COLUMBUS
Clean streams.
Strong neighborhoods.

THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

FAQ

Why is the City building green infrastructure in my neighborhood?

In Columbus, there are sanitary sewers and storm sewers. Sanitary sewers take waste water from your house to a waste water treatment facility. Storm sewers take rain water from streets and driveways to a nearby river or stream. When rain gets into sanitary sewers through cracks and joints in the pipes, untreated sewage diluted by the rain water can overflow into our rivers or back up into basements.

Blueprint Columbus will stop the rain water from getting into sanitary sewers and will direct it to the green infrastructure, which will capture stormwater that might otherwise flood roadways. Blueprint Columbus will be implemented in neighborhoods where a large amount of rain water gets into sanitary sewers.

What is a right-of-way?

The right-of-way is the area in your yard along a street or alley that is owned by the City of Columbus. If there is a sidewalk along the street, the right-of-way usually includes the sidewalk and may extend several more feet into the yard.

What is porous pavement?

Porous pavement can be concrete or blacktop designed so that rain water seeps into it instead of just running across the surface. Pollutants carried by rain water runoff are filtered out by layers of gravel beneath the surface and the stormwater slowly releases into the underground drain that connects to the storm sewer.

Where will the green infrastructure be located?

City contractors will install green infrastructure on City property in neighborhoods, including in the right of way. Rain gardens are constructed below street level, allowing rain water to easily flow in and filter slowly to the sewers underneath.

What if I don't want green infrastructure in the right-of-way in front of my house?

There will be public meetings in your area so you can learn the location of the proposed green infrastructure and provide feedback to City staff. The design team will take all concerns into consideration. However, in some instances other locations may not be possible.

Will the rain gardens attract mosquitoes?

No, rain gardens are designed to drain in 48 hours or less. Mosquitoes require a minimum of 72 hours in standing water for larvae to develop.

Will the green infrastructure prevent parking on the street or walking on the sidewalk?

Green infrastructure will not interfere with sidewalks. Design guidelines include a 2 ½ foot buffer area between the curb and the edge of a rain garden. Parking spaces may be replaced by a bump out to assist in traffic calming if it is determined that this benefits the neighborhood.

Who removes litter and maintains the plants in the rain garden?

The City of Columbus is responsible for maintaining all parts of our storm sewer system including the new rain gardens and porous pavement. Litter and weeds will be removed on a regular basis and plants will be pruned, trimmed or replaced as needed.

Will the green infrastructure fix street flooding?

Green infrastructure is designed to manage stormwater and may improve local drainage issues. However, the green infrastructure is not designed to solve all street flooding issues.

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