Overview

Green City, Clean Waters promotes the use of green stormwater infrastructure throughout the city. These green tools use plants, trees and stone to filter store and manage stormwater in a smart and cost-effective way.

How do These Green Tools Work?

When it rains, stormwater runs off streets and sidewalks into a green stormwater infrastructure (GSI) tool. Water soaks into a stone bed below ground where it is absorbed by plant roots and released through transpiration. Some of the water evaporates from the surface and excess water is slowly released back into the sewer system. Storing water in these GSI systems significantly reduce pollutants entering our creeks and rivers.

What are the Benefits?

- Improves water quality by reducing combined sewer overflows*
- Improves the health of our stream banks and aquatic life
- Enhances the beauty of our streets and neighborhoods
- Promotes a safer and healthier community
- Reduce the urban heat island effect (city's temperature)
- Improves air quality

*Combined sewer overflows occur during heavy rainstorms when treatment plants can't clean all the water running through the system so polluted stormwater and sanitary waste overflow into local rivers.

Stormwater Tree Trenches

A stormwater tree trench is a system of trees connected by an underground infiltration structure. On the surface, a stormwater tree trench looks similar to a series of street tree pits. However, under the sidewalk a perforated pipe distributes water throughout the trench.

Ben Franklin Parkway, Center City

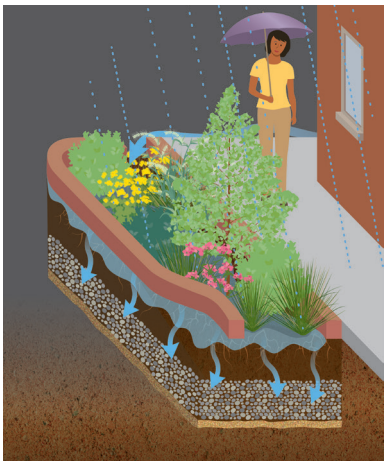
Stormwater Trees

Stormwater trees look like typical street trees, but they have a deep stone pit to help manage stormwater. While a tree trench has multiple trees in one trench, stormwater trees are planted individually.

Sepviva Street, North Philadelphia

Stormwater Bump-outs

A stormwater bump-out is a landscaped extension of the curb that protrudes into the street at an intersection. A bump-out has a layer of stone that is topped with soil and plants to capture stormwater runoff. In addition to managing stormwater, bump-outs can calm traffic and make intersections safer for pedestrians.

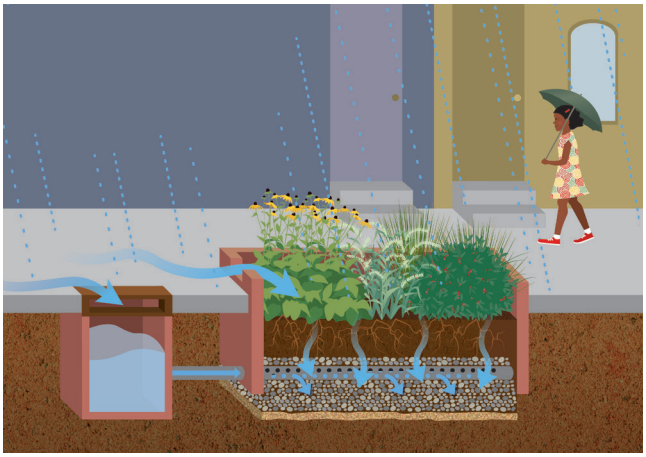


Queen Lane, East Falls

3rd Street, Northern Liberties

Stormwater Planters

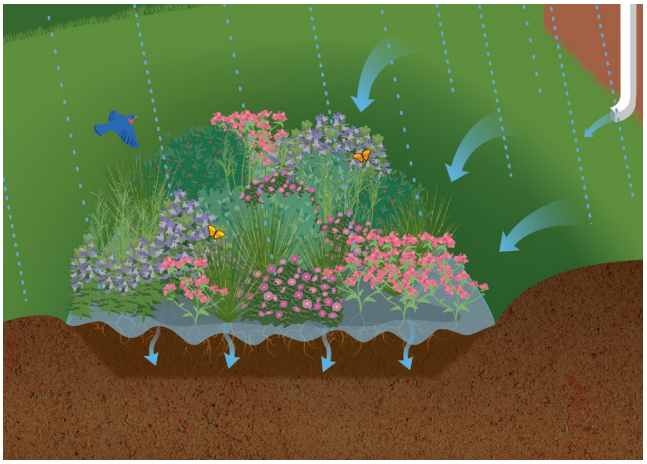
Stormwater planters mange stormwater runoff from the street and sidewalk. They sit below the sidewalk and are filled with vegetation, soil and stone. A stormwater inlet collects water from the street and directs it into the planter where plant roots soak can it up. The planter also has small openings to catch stormwater following from the sidewalk.



Philadelphia Navy Yard

Rain Gardens

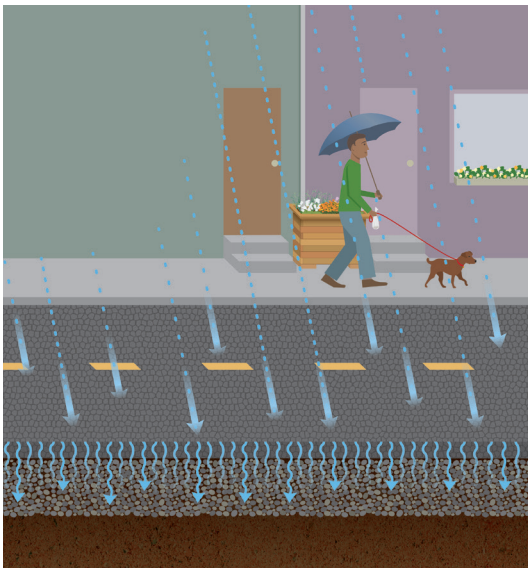
A rain garden is a planted shallow depression designed to catch and filter stormwater runoff from a downspout or nearby paved surface. The plant species are selected for their ability to thrive in extremely wet and dry weather. Rain gardens filter pollutants, replenish groundwater and provide habitat for animals. They are one of the simplest and effective ways to manage stormwater.



Eadom Street, Northeast Philadelphia

Permeable Materials

Special materials, such as porous asphalt or concrete, and permeable pavers or rubber playgrounds, allow water to pass through their surfaces into the stone and ground below. These materials slow, redirect and filter water through the soil instead of overwhelming sewers. They can be used in streets, around homes or in schoolyards.



Percy Street, Bella Vista