

GREEN INFRASTRUCTURE – WHAT YOU NEED TO KNOW

What is Green Infrastructure?

Green infrastructure or “GI” is a cost-effective, long-lasting approach to managing stormwater runoff. Instead of moving water to the nearest river or stream using pipes (this method is referred to as “grey infrastructure”), green infrastructure uses soil, plants, and trees to manage and filter stormwater where it falls, before it enters the sewer.

What’s the problem with stormwater?

As Pittsburgh urbanized, green spaces were replaced by streets, sidewalks, parking lots, and roofs. These impermeable surfaces prevent stormwater from absorbing into the earth as it should. Storm drains, otherwise known as “catch basins,” can catch some of this water and drain it out into local waterways, however, that water carries trash, bacteria, heavy metals, and other pollutants.

How does it work?

GI uses specific vegetation, soils, and other elements to replace some of the engineered processes currently being used for stormwater management. These are strategically located on a property to maximize stormwater collection.

What are some examples of GI?

Rain Gardens: These are shallow, planted basins in an unpaved space that collect and filter stormwater runoff. They not only absorb water into the ground, but allows for “evapotranspiration,” or the evaporation of water from plants.

Bioswales: Bioswales are vegetated depressions that are often placed between streets and sidewalks to slow, absorb, and filter stormwater.

Permeable Pavement: These spaces absorb, filter, or store rainwater directly where it falls. They can be installed as entire parking lots or sidewalks and can be made of pervious concrete, porous asphalt, or permeable interlocking pavers. These pavements are particularly effective in the winter months where flooding and icing occurs

Green Roofs: This is the process in a roof of large, industrial roof spaces are covered with growing media and plants to allow for absorption and evapotranspiration. A Carnegie Mellon University study found that green roofs also indirectly reduce the cooling demands of a building during summer months.



Rainwater Harvesting or “Cisterns”: This method simply collects and stores rainwater for later use. These can be installed adjacent to a home or business with a connection between the collection tank and a downspout.

How is PWSA using GI?

PWSA GI initiatives started with the installation of a rain garden in front of the Water Treatment Plant in 2014. Since, a GI Grant Program was established that has awarded \$500,000 to community groups and property owners to implement 30 GI projects throughout the City. PWSA is also conducting a city-wide analysis to determine the best locations for green infrastructure projects.

How can I implement GI on my property?

- Connecting a rain barrel to your downspout is an easy way to manage stormwater and decreases the need for tap water when watering plants.
- Planting trees beautifies your property, cleans the air, saves energy, and stores water after a storm.
- Check out the [Homeowner’s Guide to Stormwater under the “What We Do” tab of our website](#) for more tips.

Any customer who needs additional information should call Katherine Camp, Green Infrastructure Program Manager, at 412.255.8800 ext. 2656 or email at KCamp@pgh2o.com or visit www.pgh2o.com/going-green