# What Is Green Infrastructure? What Are The Benefits?

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The rain that runs off of our homes, streets, parking lots, and businesses can pollute our waterways. Heavy rains can cause flooding. Green infrastructure is a way to collect and clean rainwater where it falls. Using plants and soil, green infrastructure projects reduce the amount of rainwater entering 'grey' water infrastructure (e.g., storm sewers, pipes). This can help reduce flooding. Green infrastructure projects can also help to clean and conserve water, and provide recreational and other benefits to the community.

Infrastructure includes roads, bridges, airports, hospitals, sewers, water supplies, communication lines and other structures. Traditional or 'grey' water infrastructure includes sewers, pipes, and treatment plants.

## There are different types of green infrastructure that can be built. Some examples include:

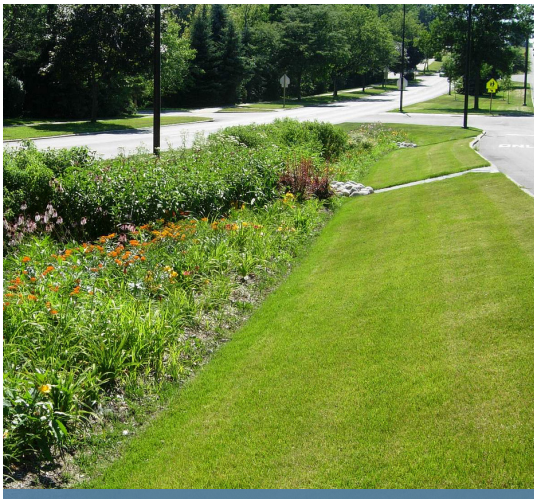
- **Green roofs** – These are roofs covered in plants and soil. Rainwater collects in the soil and then the plants release water back into the air.
- **Rain barrels** – Rain barrels or other storage containers collect and store rainwater from roofs. In some places rainwater can be stored and used later.
- **Bioswales** – These are planted areas near streets and parking lots that slow and clean runoff.
- **Rain gardens** – These are gardens that hold rainwater. Soil, plants, and flowers store and then release the water back into the air.
- **Permeable pavements** – This is a type of pavement that allows water to flow into the ground. It can be used in sidewalks, driveways, and parking lots.
- **Trees and Conserving Land** – Trees catch rainwater in leaves and branches. Wetlands and forests store water and provide recreational opportunities for people and spaces for local wildlife.

An example of Green Roof

Sergio Ruiz, "Green Roofs of the Civic Center" (from flickr), licensed under CC BY 2.0. Cropped from original.

An example of a Rain Barrel

Roger Mommaerts, "rain barrel 021" (from flickr), licensed under CC BY-SA 2.0. Cropped from original.



An example of a Bioswale

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Center for Neighborhood Technology, "Stormwater Management in Hinsdale, IL" (from flickr), licensed under CC BY-SA 2.0. Cropped from original.

An example of a Bioswale

## There are lots of benefits of green infrastructure. Some of these benefits include:

- **Clean Water and Less Flooding** – Green infrastructure projects can reduce flooding and water pollution by slowing and cleaning rainwater.
- **Clean Air** – Green infrastructure can reduce air pollution and air temperature.
- **Better Use of Public Money** – Green Infrastructure projects can be cheaper than 'grey' structures. Green infrastructure can help to reduce the damage from a natural disaster.
- **Prepare for Climate Change** – Green infrastructure projects can reduce flooding, help with drought, and reduce air temperature. Green infrastructure can also reduce the amount of energy a building uses.
- **Conservation** – Green infrastructure projects can provide spaces for local wildlife. Cleaner water can improve the health of fish and other animals that live in the water.
- **Other Community Benefits** – Green infrastructure can help improve community health, provide space for recreation, and bring investment in new projects for low-income areas.

An example of a Rain Garden

Aaron Volkening, "2014_10_10_WestConcApron_LookS_a" (from flickr), licensed under CC-BY 2.0. Cropped from original.

An example of a Bioswale

Center for Neighborhood Technology, "Downer Place, Aurora, IL" (from flickr), licensed under CC BY-SA 2.0. Cropped from original.

An example of Permeable Pavement

Center for Neighborhood Technology, "permeable pavers" (from flickr), licensed under CC BY-SA 2.0. Cropped from original.

For more information on Green Infrastructure see the United States Environmental Protection Agency's webpage at **https://www.epa.gov/green-infrastructure**.

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