

Roadside Guide to Clean Water: Rain Gardens

The adaptability of rain gardens makes it possible to fit them on urban and suburban sites where green space is limited.

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Photo by Andy Yench

Rain Gardens at a Glance

Rain gardens are shallowly depressed garden areas, usually less than 12 inches deep, planted with a mix of native plants, including flowers, grasses, shrubs, and trees. Most rain gardens are small, covering less than 500 square feet. They can be shaped like rectangles, ovals, crescents, and more. Some are long and narrow, while others are short and wide. Their adaptability makes it possible to fit them on urban and suburban sites where green space is limited. Home rain gardens typically collect stormwater from downspouts, driveways, and patios. City rain gardens receive runoff from streets, sidewalks, and parking lots. Urban rain gardens might also be called "bioretention practices" or "stormwater bumpouts."

How Rain Gardens Work

Rain gardens are sometimes described as being "bowl shaped" because they are lower in elevation than the surrounding land. This shape allows stormwater to naturally flow down into them instead of into a nearby storm drain. Despite their name, rain gardens usually don't hold standing water for more than a day or so after it rains. They are meant to have porous soil that acts like a sponge and soaks water in quickly. Rain gardens capture stormwater runoff before it flows into storm drains, which in turn reduces flash flooding, protects streambanks from erosion, and recharges groundwater. Rain gardens are usually planted with native plants that further enhance the garden's ability to trap sediment, remove water pollutants, and provide habitat for songbirds, insect pollinators, and other wildlife.

Community Benefits of Rain Gardens

- **Stormwater:** Reduces stormwater runoff
- **Groundwater:** Recharges groundwater
- **Climate Change:** Promotes climate change resiliency
- **Flooding:** Mitigates flooding
- **Landscape:** Beautifies the landscape
- **Pollution:** Reduces pollution
- **Habitat:** Provides wildlife habitat

You can expect to find rain gardens in **urban** and **suburban** settings.

How to Recognize Rain Gardens



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/c7e2d9768629436fbc37c606e76c70d6/r/a/raingardenandstreet1-jpg.jpg)

Stormwater is sometimes directed to rain gardens from the street or sidewalks. Photo by Andy Yench



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/d457ceeb18cf469b87d556b74ed476cc/s/h/shrubsandmulch-jpg.jpg)

Rain gardens are bowl shaped so that they can hold water during storms. Deep-rooted vegetation and the right soil mix encourage water infiltration.

Photo by Andy Yench



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/19b2421972a4481ea27f238a08010f56/i/n/inlet-jpg.jpg)

Stormwater is sometimes carried to rain gardens by way of buried pipes or similar underground structures. Photo by Andy Yench



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/95c0c7f3ca4a4203975a6b63942178f0/r/a/raingardenbefore-jpg.jpg)

Rain gardens are often built in areas that naturally collect stormwater runoff, as illustrated by this rain garden under construction. Photo by Jodi Sulpizio



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/65750e0407fa4f8b9480872476cf5aec/r/a/raingardenafter-jpg.jpg)

Finished rain gardens do not hold permanent water and blend in as landscape features. Photo by Jodi Sulpizio



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/932dba94ac354efcac65f2f867a91a30/c/o/cornercurbcut-jpg.jpg)

Stormwater can also enter rain gardens through cuts made in a street curb. Grated storm drains may be installed as a safety feature to manage overflow and prevent flooding during storms. Photo by Kristen Kyler

Rain gardens and rain barrels are two of the most common water management practices used by homeowners. Learn more about rain barrels at "[Rain Barrels in the Home Garden](https://extension.psu.edu/rain-barrels-in-the-home-garden)(<https://extension.psu.edu/rain-barrels-in-the-home-garden>)."



(https://extension.psu.edu/media/wysiwyg/extensions/catalog_product/8f09ac5d3dff40c7a59fdb8b3cd69307/r/a/rainbarrelhighresolutioncreditpendi.jpg.jpg)

Photo by Diane Oleson

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