

RAIN GARDENS

Your personal contribution to cleaner water

Homeowners in many parts of the country are catching on to rain gardens – landscaped areas planted to wild flowers and other native vegetation that soak up rain water, mainly from the roof of a house or other building. The rain garden fills with a few inches of water after a storm and the water slowly filters into the ground rather than running off to a storm drain. Compared to a conventional patch of lawn, a rain garden allows about 30% more water to soak into the ground.

Why are rain gardens important? As cities and suburbs grow and replace forests and agricultural land, increased stormwater runoff from impervious surfaces becomes a problem. Stormwater runoff from developed areas increases flooding; carries pollutants from streets, parking lots and even lawns into local streams and lakes; and leads to costly municipal improvements in stormwater treatment structures.

By reducing stormwater runoff, rain gardens can be a valuable part of changing these trends. While an individual rain garden may seem like a small thing, collectively they produce substantial neighborhood and community environmental benefits. Rain gardens work for us in several ways:

- ✦ Increasing the amount of water that filters into the ground, which recharges local and regional aquifers;
- ✦ Helping protect communities from flooding and drainage problems;
- ✦ Helping protect streams and lakes from pollutants carried by urban stormwater – lawn fertilizers and pesticides, oil and other fluids that leak from cars, and numerous harmful substances that wash off roofs and paved areas;
- ✦ Enhancing the beauty of yards and neighborhoods;
- ✦ Providing valuable habitat for birds, butterflies and many beneficial insects.

Who should use this manual?

This manual provides homeowners and landscape professionals with the information needed to design and build rain gardens on residential lots. Guidelines presented in this manual can also be used to treat roof runoff at commercial and institutional sites. However, the manual should not be used to design rain gardens for parking lots, busy streets and other heavily used paved areas where stormwater would require pretreatment before entering a rain garden.

Frequently asked questions

Does a rain garden form a pond?

No. The rain water will soak in so the rain garden is dry between rainfalls. (Note: some rain gardens can be designed to include a permanent pond, but that type of rain garden is not addressed in this publication).

Are they a breeding ground for mosquitoes?

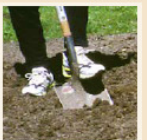
No. Mosquitoes need 7 to 12 days to lay and hatch eggs, and standing water in the rain garden will last for a few hours after most storms. Mosquitoes are more likely to lay eggs in bird baths, storm sewers, and lawns than in a sunny rain garden. Also rain gardens attract dragonflies, which eat mosquitoes!

Do they require a lot of maintenance?

Rain gardens can be maintained with little effort after the plants are established. Some weeding and watering will be needed in the first two years, and perhaps some thinning in later years as the plants mature.

Is a rain garden expensive?

It doesn't have to be. A family and a few friends can provide the labor. The main cost will be purchasing the plants, and even this cost can be minimized by using some native plants that might already exist in the yard or in a neighbor's yard.



Tips for designing an attractive rain garden

While rain gardens are a highly functional way to help protect water quality, they are also gardens and should be an attractive part of your yard and neighborhood. Think of the rain garden in the context of your home's overall landscape design. Here are a few tips:

When choosing native plants for the garden, it is important to consider the height of each plant, bloom time and color, and its overall texture. Use plants that bloom at different times to create a long flowering season. Mix heights, shapes, and textures to give the garden depth and dimension. This will keep the rain garden looking interesting even when few wildflowers are in bloom.

When laying plants out, randomly clump individual species in groups of 3 to 7 plants to provide a bolder statement of color. Make sure to repeat these individual groupings to create repetition and cohesion in a planting. This will provide a more traditional formal look to the planting.

Try incorporating a diverse mixture of sedges, rushes, and grasses with your flowering species (forbs). This creates necessary root competition that will allow plants to follow their normal growth patterns and not outgrow or out-compete other species. In natural areas, a diversity of plant types not only adds beauty but also create a thick underground root matrix that keeps the entire plant community in balance. In fact, 80% of the plant mass in native prairie communities is underground. Once the rain garden has matured and your sedges, rushes and grasses have established a deep, thick root system, there will be less change in species location from year to year, and weeds will naturally decline.

Finally, consider enhancing the rain garden by using local or existing stone, ornamental fences, trails, garden benches, or additional wildflower plantings. This will help give the new garden an intentional and cohesive look and provide a feeling of neatness that the neighbors will appreciate.



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Special Rain Garden Locations



In addition to conventional lawns, there are other locations where rain gardens can be created. A rectangular-shaped rain garden (above) was located in a narrow sideyard between two homes. A new rain garden (below), now helps control runoff that would flow into a parking lot.

