What Is a Rain Garden?

Rain gardens are beautiful natural landscape features that require less maintenance and fewer chemicals than lawns. Rain gardens capture runoff from impervious areas such as roofs and driveways and allow it to seep slowly into the ground. Most importantly, rain gardens help preserve nearby streams and lakes by reducing the amount of runoff and filtering pollutants.

Why Plant a Rain Garden?

Rain gardens provide for the natural infiltration of rainwater into the soil. This helps to filter out pollutants including fertilizer, pesticides, oil, heavy metals and other chemicals that are carried with the rainwater that washes off your lawn, rooftop and driveway. Rain gardens also reduce peak storm flows, helping to prevent stream bank erosion and lowering the risk for local flooding. By collecting and using rainwater that would otherwise run off your yard, rain gardens allow you to have an attractive landscape with less watering.

How Do Rain Gardens Work?

A rain garden receives runoff water from roofs or other impervious (hard) surfaces such as driveways. The rain garden holds the water on the landscape so that it can be taken in by plants and soak into the ground instead of flowing into a street and down a storm drain or drainage ditch. The plants, mulch and soil in a rain garden combine natural physical, biological and chemical processes to remove pollutants from runoff. Many pollutants will be filtered out and break down in the soil over time.

Water should stand in a rain garden no longer than 24 hours after the rain stops. Mosquitoes cannot complete their breeding cycle in this length of time, so a rain garden should not increase mosquito populations.

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Rain gardens are best located in natural depressions (low lying areas where water flows naturally). They should be sited at least 10 feet from a house or building. While they should not be next to building foundations, rain gardens near impervious surfaces such as driveways, patios and sidewalks help capture the runoff from these areas.

Sites with steep slopes (an elevation change of more than 12 feet down per 100 feet of length in may not be suitable for rain gardens. Further, if you have a septic system, avoid planting a rain garden over the top of the drainfield. It is recommended that a landscape professional be consulted if you plan to build a rain garden larger than 300 square feet.

Where Are The Best Places to Locate Rain Gardens?

- Rain gardens are not appropriate where the seasonal high water table is within 24 inches of the soil surface because the water table will prevent infiltration.
- Rain gardens should not be placed over a septic system.
- Rain gardens should not be located next to building foundations.

How To Create a Rain Garden

1. Locate a site for a rain garden in a natural depression in the landscape.
2. Determine the size and shape of the rain garden.
   - To calculate the size, consider the area draining to a rain garden, including the roof area or impervious area that drains to the rain garden and the area of land between the downspout and the area of land surface of infiltrating the soil of the garden. Larger the roof or impervious area, the larger the area for infiltration into the soil.
   - An effective rain garden depends on water infiltrating into the soil of the garden. Soils with a lot of clay will infiltrate water very slowly, so the size of a rain garden in clay soils should be 60 percent of the total drainage area. Sandy soils infiltrate water more quickly, so a rain garden in a sandy location does not need to be as large. For sandy soils, the rain garden size should be about 20 percent of the area draining to it. Loamy soils can be sized somewhere between 20 and 60 percent, keeping in mind that the slower the infiltration, the larger the area should be. It is important to know your soil before you start a rain garden project. To test the infiltration of your soil, dig a hole 6 in. in deep in the area that the rain garden will be located. Fill the hole with water. Observe how long it takes for the water to move (infiltrate) into the soil. If any water stays in the hole for 12 hours or longer, then the soil is not suitable for a rain garden.
   - If you determine that your rain garden area needs to be greater than 300 square feet and you wish to plan the site without outside assistance, choose the drainage area between two or more rain gardens, and build each so you can easily manage them both.

3. Once the rain garden is laid out, you can start digging.
   - Begin by removing soil in the rain garden so that the deepest part is about 8-10 inches deep.
   - The bottom of the rain garden should be as level as possible so some minor grading may be necessary.

4. Mix organic matter into the soil within the rain garden by spreading 2-4 inches of compost over the area and mixing the organic matter in with the existing soil.
   - If the soil is acidic (has a low pH), add lime to neutralize the pH of the soil. Contact a local University of Georgia Cooperative Extension Service office for a soil sampling test by calling 700-238-7274 or go online to www.ces.uga.edu.

5. A rain garden should be curvy in shape and is best situated with the longest length perpendicular to the slope of the land.
   - Use rope to lay out the boundary of the rain garden.

6. Establish a grass or groundcover border along the upper edge of the rain garden to slow the runoff water as it enters the rain garden, and do the same over the berm to stabilize it as a border of the rain garden.

7. Select and plant drought tolerant, well-tolerant and hardy plants. A mix of ornamental grasses, shrubs and self-seeding perennials are good choices. See chart of plants.

8. Once plants are in place, cover the garden with a 3” layer of mulch. Lighter mulches such as pine bark and straw will float in water and may be washed away to the edges of the rain garden. Better mulch choices for a rain garden are more dense materials such as pine straw, wood chips or shredded wood.

9. To maintain your rain garden, remove weeds on a regular basis as the landscape plants grow, and replenish mulch as needed.

10. Rain gardens should be relatively low maintenance if the correct plants are chosen.

10. IMPORTANT NOTE: Plan on providing an “overflow” path for water to take if the rain garden fills and more rain comes. This path should be stabilized with a hardy grass or groundcover.

What Plants Should You Use?

Finding plants for your rain garden is not difficult. Many well-suited plants are available at your nearest landscaping supply store. Here are some suggested plants (common and scientific names):

**Trees**

- Bald Cypress
- Black Gum
- Crape Myrtle
- Fringetree
- Green Ash
- Oakleaf Hydrangea
- Rose of Sharon
- Summersweet Clethra
- Wax Myrtle
- American Beautyberry
- Bottlebrush Buckeye
- Buttonbush
- Common Waxberry/Winterberry Holly
- Inkberry
- Oakleaf Hydrangea
- Rose of Sharon
- Summersweet Clethra
- Wax Myrtle

**Shrubs**

- Callicarpa americana
- Aesculus parviflora
- Cephalanthus occidentalis
- Exochorda macrantha
- Box gloxina
- Baccharis pilularis
- Hibiscus syriacus
- Clethra alnifolia
- Itea virginica
- Myrica cerifera

**Perennials, Grasses and Groundcovers**

- Black-eyed Susan
- Blue Lobelia
- Broadleaf Liatris/Indian Woodslats
- Brookmeadow
- Cardinal Flower
- Cinnamon Fern
- Clubbed Beronia
- Golden Raincoat
- Goldenrod
- Ironweed
- Joe-Pye Weed
- Liatris
- Narrowleaf Drummond
- New England Aster
- Red Columbine
- Royal Fern
- St. John’s Wort
- Scarlet Rosemallow/Swamp Hibiscus
- Swamp Milkweed
- Swamp Sunflower
- Switchgrass
- Wild Ginger
- Yelllow Stargrass

An additional list of plants suitable for rain gardens can be obtained through the University of Georgia Cooperative Extension Service. The bulletin, called “A Compilation of Low-Maintenance Plants for Georgia Landscapes” (H-91-009), lists both native and non-native plants that are drought and moisture tolerant. The bulletin can be found at a local extension office or online at www.ces.uga.edu.

For help in finding a location to purchase native plants, go to the Georgia Native Plant Society’s website at www.gnps.org.