Rain Gardening in the Home Landscape

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The Lowcountry is defined by meandering tidal creeks and rivers, vast salt marshes, majestic cypress tupelo swamps, and gorgeous beaches. As residents of this special place, we play a role in protecting these shared natural resources for current and future generations. Actions that we take on land directly impact our precious local waterways. When rain falls on impervious surfaces, such as rooftops, driveways, and compacted lawns, the rainfall is unable to infiltrate, or soak into the ground, and becomes stormwater runoff. As stormwater runoff moves across the landscape, it picks up pollutants we leave behind, such as pet waste, excess fertilizers, litter, oil, and gasoline, and carries these materials downstream. Stormwater flows into a nearby waterway untreated; as a result, stormwater runoff pollution is considered the leading threat to water quality of the surface waters in the United States.

Home gardeners can help protect water resources by installing a rain garden. Rain gardens are designed to mimic the natural water cycle by capturing water that flows off of impervious surfaces and allowing this water to infiltrate the ground. Rain gardens not only manage stormwater runoff but can also assist residents with flooding and erosion issues, add beauty to the home landscape, and provide habitat for pollinators and songbirds.

Rain Garden Design

The term "rain garden" is really a misnomer as rain gardens are dry more often times than wet. Rain gardens are designed for infiltration, providing a place for stormwater runoff to soak into the soil. Rain gardens are not mosquito breeding grounds. Rain gardens typically drain in under 24 hours, while mosquitoes require seven to 10 days of standing water to lay and hatch eggs.

A percolation (perc) test will help determine if a rain garden is appropriate for your yard. Dig a "perc" hole six inches deep by six inches wide and fill it with water. Observe and note how many inches have drained each hour. If the water has drained from the hole in under 24 hours, then the soil conditions are good for a rain garden. If it takes more than 24 hours to drain, then the location is not a good place for a rain garden; instead, consider a bog garden or backyard wetland.

Rain gardens are typically installed to capture runoff from rooftops, lawns, or driveways. Rain gardens should be placed at least 10 feet from the foundation of the home and at least 25 feet from septic system drain fields. Always call #811 in South Carolina before digging to avoid hitting buried cables or pipes. Water can be directed toward a rain garden using gutters and downspouts or by placing the rain garden in an area that receives overland flow.

The size of a rain garden depends on three considerations: available space, total area of impervious surface that the rain garden will be capturing, and existing soil type. When performing the perc test in sandy, quick-draining soils, the water will drain in less than six hours. In these conditions, the rain garden should be approximately 20 percent of the impervious area that is directed towards the rain garden (Note: Likely only a section of your roof drains toward rain garden). When performing the perc test in slow-draining soils, the water may not drain until closer to 24 hours. In these conditions, the rain garden should be at least 30–50 percent of the impervious area.