Reduce Nonpoint Source Pollution

in Louisiana Waters

Rain Gardens

Rain gardens are an attractive way to protect water quality and increase the groundwater supply. A rain garden is a shallow depression designed to collect rain from impervious surfaces such as roofs, streets, patios and driveways. The plants in the rain garden slow the flow of water, which allows pollutants to settle out and the water to infiltrate the ground. Nutrients in the water also can be used by the plants instead of continuing to flow away.

Rain gardens vary in size and depth. They can be installed in the corner of the lawn, along the edges of roads or in natural drain areas of a lawn. The size and design of the rain garden depend on the size of the area that drains to it and the type of soil in the garden. The bowl of the rain garden ranges from 3 to 6 inches deep. The depth varies according to the rate at which the water sinks into the soil. If the site holds water, make the depression shallow to reduce the water volume trapped there. If water soaks quickly into the soil, however, make the garden deeper to increase its storage capacity.

Whatever the depth of your garden, be sure to keep the bottom level so that water spreads out. To minimize digging or to capture runoff from several parts of your lot, you might want to take advantage of low-lying areas in the yard that naturally collect water. Placing plants in such spots will help dry out those areas and attractively transform muddy messes.

It is essential that your rain garden be at least 10 to 15 feet away from the foundations of the house and "down slope" so the water won't simply drain back onto the foundation or crawl space! Avoid having a rain garden very close to large trees because the water can rot the tree roots.

You can use existing low areas in the yard, follow a natural contour or design a rain garden in a new or redone landscape. Size it to handle all the runoff from the hard surfaces. You can increase the volume by digging down 18 to 24 inches and filling the area with several layers of materials. Start with a gravel base, followed by a layer of coarse sand, then a layer of compost and topsoil, and finally a deep layer of mulch. If you are going to excavate, be sure you know where the gas, electricity and phone lines are buried!

A rain garden can be a beautiful landscape feature rather than just a dent in the ground that sometimes fills with water. Select plants that have deep roots that will help with soil retention and allow the water to drain away slowly. Neatly trimmed shrubs, a crisp edge of lawn, stone edging and other devices can be used to keep garden edges neat and visually appealing.

Not every plant can survive in a rain garden, but it is possible to design themed rain gardens such as evergreen rain gardens or butterfly rain gardens. Varieties of native species plants that are both wet- and dry-tolerant are best suited. Daylilies seem to do well as part of a rain garden, and plants that grow naturally in your area are more likely to attract butterflies and birds. Native plants vary depending on the area in which you live. Some examples for southern Louisiana include Carolina jessamine, Dahoon holly, Sweet bay, Southern wax myrtle, Dwarf palmetto, Louisiana iris, giant coneflower and maidenhair fern.

Mulch is an important component of the rain garden. It helps provide a distinctive look, keeps the weeds controlled and acts as a sponge to capture metals, oils and grease. As the mulch decays, bacteria and plant roots break down the pollutants.

A rain garden can be both a delightful landscape feature and an environmentally responsible project.

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