

Rain Garden Conservation

when it rains it blooms



Natural Gardener

By Michele Worden

A gardener is a steward of the earth. One of our most important responsibilities as stewards is to protect our delicate watersheds. Probably the single greatest thing home gardeners can do to promote clean water is to control storm water runoff from their property. A rain garden is the perfect tool to manage storm water and at the same time enhance your landscape with native plants. A rain garden is a native, perennial garden planted in a bowl-shaped depression, rather than on a mound as in conventional landscape design. The depression is designed to collect and absorb rainwater and storm water runoff from impervious surfaces such as roofs, decks, driveways and other paving.

It's important to manage rain water coming off of hard surfaces because it goes directly into the water supply without the natural filtering that comes when rain is slowly reintroduced to the water supply by percolating through sand and soil. The well-designed rain garden collects and filters all storm water generated on a property. This minimizes the overflow of storm water that runs into our municipal waste treatment systems, storm drains, or directly into lakes and streams.

Both residential and business properties have successfully installed rain gardens. In fact, whole communities have successfully implemented rain garden programs to reduce their overloaded storm water and sewage problems. But the satisfaction of good stewardship is not the only benefit of a rain garden.

Rain gardens can be a beautiful addition to your landscape. A rain garden is designed with native plants that naturally fit their setting. Because they are native plants, they are more pest tolerant and well suited to climate changes, making established rain gardens relatively low maintenance.

There are seven steps to creating a rain garden, and only a few of them require dirty hands.

Assess the site. Look at the existing drainage patterns on your property to

determine the correct placement of the rain garden. Rain gardens should be at the bottom of a down slope at least 10 feet away from building foundations. Look for low spots that are soggy after it rains. For sloping yards, create a scallop out of the hillside for a rain garden. In any landscape cut channels to drain water to the site of the garden.

Evaluate the soil. Sandy soil drains well but clay soils retain water. If a 8x8 inch hole drains more slowly than one inch of water per hour, the soil needs to be replaced. An ideal soil mixture is 50-60% sand, 20-30% topsoil, 20-30% compost. The most successful garden projects always begin with a soil test for pH and fertility. Soil sample kits are available at MSU Extension offices for about \$10.

Size the garden. Determine the storm water generation area on the property by adding the total square footage of all roof surfaces and paved areas. Rain gardens should be 20-30% (in sandy soils) to 60% (in clay soils) of storm water generation area. Rain gardens for single family homes are typically from 150 to 400 square feet. However, any size rain garden will reduce runoff.

Prepare the site. Define the borders using a hose or nontoxic sport field paint. Double-dig the soil to a depth of two feet. Grade the garden to be a wide shallow depression that gently dips toward the center. Different depths will become different planting zones, based on the moisture tolerance of your plant selection.



Select plants. Native plants are best adapted to soil and climate conditions and will require little maintenance. Best of all, native plants have deep roots which promote absorption of water into ground. For very wet conditions, shrubs such as red-osier dogwood (*Cornus stolonifera*), Ninebark (*Physcarpus opulifolius*), or Michigan Holly (*Ilex verticillata*) will do well. Wildflowers that thrive in wet soil include: Great Blue Lobelia (*Lobelia siphilitica*), Blue Flag Iris (*Iris versicolor*) and Swamp Milkweed (*Asclepias incarnate*).

Install plants. Pay attention to spacing to make sure you allow room for future growth. Plant taller plants in the center of the bed and shorter ones toward the edges.

Mulch, water and weed regularly until established. Even native plants will require water until their roots become established (1-2 years). Gardens of native plants require lower maintenance, but not a lack of maintenance. Applying a mulch of hardwood chips helps retain water and prevent undesirable plants from taking root and crowding out the natives. Select a heavier mulch because it won't float away when the rain garden fills with water.

A rain garden can turn an unsightly, soggy part of your yard into a sensual treat with fragrant seasons of colorful blooms and clouds of butterflies.

There are extensive resources available on the web, and a quick search will reveal one here at home. Rain Gardens of West Michigan (www.raingardens.org) has helped the Grand Rapids community establish a successful rain garden program. On their website there are links for native plants as well as garden designs and full plant lists for various growing conditions. 🏡

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Photo courtesy of the City of Maplewood, MN