

Rain Gardens

We have been experiencing a prevalence of heavy rain downpours due to our warming world. Since 2014 The National Climate Assessment Report states that unpredictable weather patterns across the country are changing, notably in terms of the frequency of very heavy rainfall events. Our area has seen a 37% increase in heavy rainfall events.

Many of us might have shallow depressions in our landscape or specific areas where the collection of rainfall persists for 24-72 hours after a storm. These areas can be planted with native plant materials that replicate the natural function of a wet meadow. Water collection areas in the lawn usually cause the turf grass to remain soggy and then dry out over time. Our dense, sticky, clay soil that is easily compacted holds water and impedes oxygen creating a more impenetrable condition.

Native plant material filters out pollutants and helps reduce flooding by growing an extensive robust deep reaching root systems that absorbs the puddling rain water in 24-72 hours. The surface may dry out in hot weather but the sub soil usually remains moist. To test the soil filtration rate, dig a hole the size of a common bucket, and pour a full bucket of water into the hole. The water should drain in 24-48 hours, depending on conditions. If the water stays longer, amend the soil with sand and compost. A rain garden should be placed at least 10 feet from an established foundation. A mostly sunny to sunny area out from under the tree canopy is the best location. The choice of plants can be selected as part of an existing border or a stand-alone location. When a new area is considered in the lawn, a kidney shape is most attractive.

Plant selection can be shrubs, flowering perennials, grasses, and even groundcovers. To plan a rain garden, select an area where rain water

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collects after a storm. It can be in the middle of the lawn, at the outlet of a downspout, or anywhere water collects.

Prepare the area by removing any existing vegetation, especially damaged and diseased turf grass. Remove the top few inches of depleted top soil as well. In an existing bed remove plants that prefer drier conditions. Condition the soil with amendments working them into the soil about six inches deep. Remember you are working with soil not dirt, and expect to see organic life forms such as worms in the planting area.

Selection of native plants is the choice of the home gardener.

Placement of each depends on mature height and spread, bloom color and shape. Plants can be selected from mail order catalogues which are usually sold as 3" plugs or local independent garden centers that feature 1 gallon growing pots.

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Sneezeweed is a good source of nectar, although some bees and beetles enjoy its large pollen.

In siting your rain garden, keep it at least 10 feet away from the house, and avoid any slope greater than 12 percent. Do not place a rain garden over a septic system or near a ponding area. To prevent the growth of mosquitos, the rain garden must be able to drain within 48 hours.

Native plants work well for rain gardens, but they are not always easy to find locally. Look now for sales of native plants being scheduled in your area.

Native plants you may find of interest for your rain garden are listed here. The common name is followed by the scientific name for each plant.

FORBS (prairie ecotype)

Blue Vervain (*Verbena hastata*)
Golden Alexanders (*Zizia aurea*)
Joe Pye Weed (*Eupatorium maculatum*)
New England Aster (*Aster novae-angliae*)
Prairie Blazing Star (*Liatris pycnostachya*)
Queen of the Prairie (*Filipendula rubra*)
Sneezeweed (*Helenium autumnale*)
Stiff Goldenrod (*Solidago rigida*)
Turtlehead (*Chelone glabra*)
Wild Bergamot (*Monarda fistulosa*)

FORBS (savanna ecotype)

Blue Flag Iris (*Iris virginica shrevei*)
Cardinal Flower (*Lobelia cardinalis*)

Great Blue Lobelia (*Lobelia siphilitica*)
Spiderwort (*Tradescantia ohiensis*)
Sweet Black-Eyed Susan (*Rudbeckia subtomentosa*)

FORBS (woodland ecotype)

False Solomon's Seal (*Smilacina racemosa*)

SHRUBS (prairie ecotype)

Black Chokeberry (*Aronia melanocarpa*)
Buttonbush (*Cephalanthus occidentalis*)
Red Chokeberry (*Aronia arbutifolia*)

FERNS (woodland ecotype)

Regal Fern (*Osmunda regalis*)
Sensitive Fern (*Onoclea sensibilis*)

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University of Illinois Extension

- Recommended plant selections **Rainscaping Education Program:** Offers training on rain garden planning and maintenance. Visit go.illinois.edu/RainscapingEducation and check with your local Extension office about upcoming programs.
- **Red Oak Rain Garden:** Visit RedOakRainGarden.org for tips and inspiration.
 - Brochure Series: Explore a number of native plant garden guides that utilize Red Oak Rain Garden plant species, planting techniques, and lessons learned at go.illinois.edu/RORGResources
- **Illinois Groundwork Plant Finder:** Use our filterable tool to identify plants that will work for your rain garden at go.illinois.edu/PlantFinder