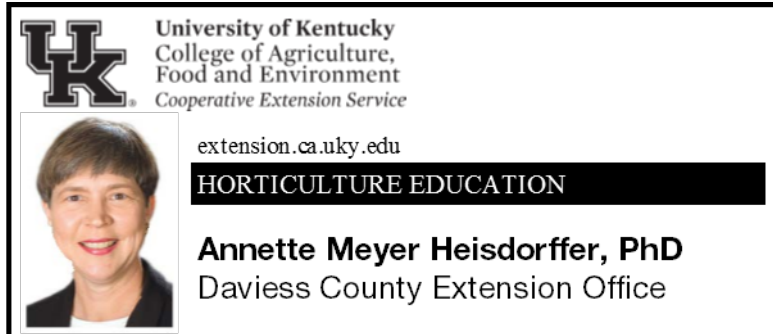


# MESSENGER-INQUIRER



July 8, 2023

## Rain Garden Deals with Excess Water

A rain garden is a beautiful way to manage excess water from heavy rains. It benefits the environment by keeping water on the property, allowing it to soak in rather than flooding and washing oil, pet waste, and dirt into nearby streams, storm drains, or lakes. A beautiful rain garden captures water and improves water quality for the community.

A unique feature of a rain garden is that it is a temporary catchment that avoids the attraction and development of mosquitos. If the rain garden is working properly, mosquitoes will not be an issue. It is designed to drain water in at least three days. This is fast enough to prevent the mosquitoes from completing their life cycle.

A main feature of a rain garden is a shallow 6- to 9-inch deep depression. This holds the stormwater allowing it to infiltrate into the soil rather than move. The rain garden shape and style depend on personal preference and existing landscape. It can be designed as a formal garden with straight lines and symmetrical plantings or as an informal garden with sweeping lines and asymmetrical plantings. The garden may be integrated into or alongside existing

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flowerbeds or stand alone. If possible, position your garden with the long axis perpendicular to the slope so that your garden captures as much water as possible.

The major components of a rain garden include the inflow area, basin or bowl, berm, if required, weir, and overflow area. Think of the berm and weir as a dam and spillway. The berm helps to retain the stormwater providing more time for the water to absorb into the soil. The berm also serves as a location for the excavated soil.

For the average residential lot, impervious surfaces total around 2400 sq. ft. To promote water quality, the goal is to capture 25% of a precipitation event within the rain garden. The size of a typical residential rain garden from a usual lot would be about 60 sq. ft., which could be 6 x 10 feet. The cost to build this yourself could be \$2 - \$5 per square foot depending on size, complexity of the drainage and overflow system, and type of plants used.

Another cost included is the 2-3 inches of shredded hardwood mulch placed on the basin floor of the garden after the plants are installed to keep weeds out.

When selecting a site, consider impervious surfaces, where the water drains from gutters, and where the water drains on your property. Do not install a rain garden within 10 feet of your home or other structure, within 25 feet of a septic tank, or within 10 feet of a wellhead, and avoid areas uphill of these structures. Also, avoid installing the rain garden within the drip line of trees.

Before making a final decision for the location of a rain garden, conduct a percolation test. Dig three holes within the area of interest 12 inches deep. Fill the holes with water and let them drain completely. Refill the holes again and determine the time it takes for the holes to drain. If the water is gone in less than 12 hours, then it drains too quickly. For a standard rain

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garden, the water should drain within 12 to 36 hours. If the site takes more than 36 hours to drain, then it is recommended to consider an alternative location. Otherwise, the area will need to be modified to include subsurface drainage, which increases installation time and cost.

A location with full sun is best, but with proper plant selection, partial sun locations work as well. While there are a variety of plants suitable for rain gardens, consider how these plants will coordinate with the existing landscape.

Plants selected for a rain garden must tolerate periods of wet and dry conditions. Also, consider the amount of light the plants will receive. Ferns that grow in part sun are: marginal wood fern - *Dryopteris intermedia*, sensitive fern - *Onoclea sensibilis*, and cinnamon fern - *Osmunda cinnamomea*

Herbaceous perennials that grow in full sun and part shade include New England aster - *Aster novae-angliae*, pink coreopsis - *Coreopsis rosea*, blueflag iris - *Iris versicolor*, cardinal flower - *lobelia cardinalis*, purple coneflower - *Echinacea purpurea*, and black-eyed Susan - *Rudbeckia hirta*.

Herbaceous perennials that grow in full sun include white indigo - *Baptisia alba*, daylily - *Hemerocallis hybrids*, dense blazing star - *Liatris spicata*, moss pinks - *Phlox subulata*, and autumn Fire Sedum – *Sedum ‘Autumn Fire’*.

Grasses, rushes, and sedges add interest to a rain garden. Those that grow in full sun or part shade include sweetflag - *Acorus gramineus*, big bluestem - *Andropogon gerandii*, corkscrew rush - *Juncus effusus ‘Spiralis’*, and switchgrass - *Panicum virgatum*.

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For more information on building, maintaining, and planting a rain garden, contact the Daviess County Cooperative Extension Service at 270-685-8480 or [annette.heisdorffer@uky.edu](mailto:annette.heisdorffer@uky.edu). A detailed *Residential Rain Garden* publication, by UK Extension Specialists Ashley Osborne, Dr. Brad Lee, and Dr. Rick Durham, that includes worksheets for designing a rain garden is available on the web <http://www2.ca.uky.edu/agc/pubs/HENV/HENV205/HENV205.pdf> or at a Cooperative Extension Service Office.

## Annette's Tip:

Before digging in your yard, call 811 in Kentucky. Place the call at least 3 days before planning to excavate. This process will keep you safe, prevent costly repairs, and it is the law.

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