

# Bring on the Butterflies!

A rain garden has many benefits, including that it:

- Significantly filters and reduces runoff before it enters local waterways and groundwater
- Decreases drainage problems and localized flooding
- Conserves water and reduces pollution
- Attracts birds, bees, and butterflies
- Recharges the groundwater supply
- Is a Best Management Practice (BMP) to improve Lexington's water quality



Rain gardens not only look beautiful, but create a habitat for local wildlife, such as butterflies, insects, and birds.

Left: Purple Stem Aster (*Aster puniceus*)

Above: Turk's-cap Lily (*Lilium superbum*)  
Courtesy of Thomas G. Barnes  
University of Kentucky, © 2006

## Rain Garden Myths

- A rain garden is **not** a pond or wetland, as it only holds water for 1 – 2 days after a rainfall event
- A rain garden is **not** a breeding ground for mosquitoes, which need 7 – 12 days in standing water to reproduce.
- A rain garden is **not** expensive to construct. It only costs \$8 – \$12 per square foot and is an excellent method for capturing and filtering stormwater runoff from your yard.

## Rain Gardens: A mosquito trap!

Rain gardens only contain standing water for 1– 2 days, whereas the mosquito reproduction cycle takes 7 – 12 days to complete. As water filters into the ground and the rain garden dries up, any mosquito eggs are destroyed before they ever have a chance to mature into larvae. Also, rain gardens attract dragonflies, which eat mosquitoes!

Additional sources of information can be found on the web ...

### Mt. Airy Rain Catchers:

[www.mtairyraincatchers.org](http://www.mtairyraincatchers.org)

### Rain Gardens of West Michigan:

[www.raingardens.org](http://www.raingardens.org)  
[www.raingardens.org/docs/bioretenion\\_tools.pdf](http://www.raingardens.org/docs/bioretenion_tools.pdf)

### 10,000 Rain Gardens:

[www.rainkc.com](http://www.rainkc.com)

### Wisconsin Department of Natural Resources:

[www.dnr.state.wi.us/org/water/wm/nps/rg/links.htm](http://www.dnr.state.wi.us/org/water/wm/nps/rg/links.htm)

### Rain Garden Network:

[www.raingardennetwork.com](http://www.raingardennetwork.com)

### U.S. EPA Homeowner's GreeScapes:

[www.epa.gov/epaoswer/non-hw/green/owners.htm](http://www.epa.gov/epaoswer/non-hw/green/owners.htm)

### Shooting Star Nursery:

<http://shootingstarnursery.com>

### Rain Garden Design Templates:

[www.lowimpactdevelopment.org/raingarden\\_design/templates.htm](http://www.lowimpactdevelopment.org/raingarden_design/templates.htm)

### Mill Creek Watershed Council:

[www.millcreekwatershed.org/howto.pdf](http://www.millcreekwatershed.org/howto.pdf)

Includes details on rain garden dimensional calculations



Courtesy of [www.gutterworks.com](http://www.gutterworks.com)

## Rain Barrels

For more water conservation opportunities, research the use of rain barrels in your yard.

Refer to:

<http://rainbarrelguide.com>  
[www.kentuckypride.com](http://www.kentuckypride.com)



The Lexington-Fayette Urban County Government  
Department of Environmental Quality

LexCall 3•1•1  
(or 859-425-2255)

or visit our website:  
[www.lfucg.com/environmental/](http://www.lfucg.com/environmental/)

Follow the links to "Stormwater"

Lexington Fayette Urban County Government

# Rain Gardens

A Best Management Practice to:

Reduce Stormwater Runoff

Improve Water Quality

Enhance Lexington's Landscape

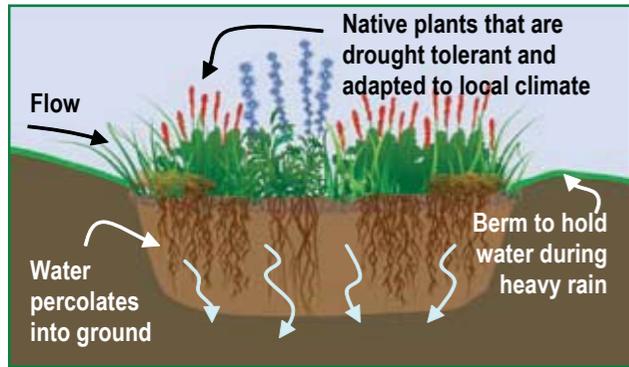


Shown in picture:  
Black-Eyed Susans (*Rudbeckia hirta*)  
Courtesy of S. Cutler

Courtesy of CDP Engineers

# What is a Rain Garden?

- A garden planted as a shallow depression that captures and treats rainwater runoff
- A natural process that improves water quality by filtering pollutants and reducing the amount of stormwater runoff.
- A visual improvement for Lexington, creating attractive landscapes with a variety of native plants



Courtesy of Tetra Tech

Construct your rain garden at least 10 feet from the base of your house to prevent water from seeping into the foundation!

## The journey of a raindrop

During a rain event, water is collected by impervious surfaces such as rooftops, patios, driveways, and parking lots. This turns into stormwater runoff, which gathers pollutants and flows untreated into storm sewers and open ditches, eventually entering Lexington's creeks, streams, and reservoirs.

A rain garden captures this runoff before it enters these systems. The water easily infiltrates into the soil because of the deep roots of the native plants, allowing for pollutant filtration and groundwater recharge.

Have a calculator & a green thumb?

Refer to the back of this brochure for more information on methods to calculate rain garden dimensions specific for your yard's needs.

Other methods are as simple as digging a hole and filling it with water or grabbing some soil and giving it a squeeze.



The average home is 2500 ft<sup>2</sup> and generates 1600 gallons of runoff during a single 1" rainfall event!

Minimum of one percent slope to rain garden.



The middle of the rain garden will hold water during a heavy downpour, so that runoff can gradually soak into the ground.

Courtesy of Tetra Tech

## Finding the Natural Fit



Courtesy of Tetra Tech

To find the most logical place for your rain garden, keep these pointers in mind:

- Note the existing drainage pattern of your yard.
- Find an area downslope from downspouts or impervious surfaces, such as driveways, where you can dig a shallow depression.
- Avoid locations directly under tree cover or those prone to standing water.
- Sunny or partly sunny areas are best for rain gardens, but shaded locations are also possible.
- Make sure your rain garden is at least **10 feet** from your house to prevent water from seeping into the foundation.
- Rain gardens should not be placed over or near the drain field of a septic system.
- Consider where the water will enter the garden and where it might overflow. Prevent excess runoff from going to a neighbor's property!

Rainwater can be collected from your rooftop, yard, and driveway by building a rain garden in a gently sloped area where the water naturally drains.

## from the Rooftop . . .

- If catching rainwater from a downspout, use creative ways, such as a river rock open channel, to direct water towards the rain garden.
- Grade the rain garden flat to spread the water over a large area.
- Add a berm on the downslope contour of the landscape to encourage rainwater to collect and infiltrate into the ground.
- Consider including a spillway, or notch, in the berm to provide an overflow path for water during larger rainfall events.

. . . to the Rain Garden!

## Bluegrass pride

Native plant species are recommended for rain gardens for their extensive root systems and tolerance to local weather conditions. Their deep root structures loosen the soil and help more water infiltrate the ground. These native plants are adapted to Lexington's local climate, which make them more suited for rain gardens than non-native species. A variety of native flowers, ferns, grasses, sedges, and shrubs can be used to customize the look of your rain garden. If possible, buy locally to support the Lexington community!

## Sizing for Success

Rain gardens are designed to capture water from a 1" rainfall event and allow it to soak into the ground in 1-2 days. Not all soil types have equal drainage capabilities, but you can still make them work for rain gardens. Rainwater collected in a rain garden should drain 1-2 days after the rain stops to avoid the possibility of creating a habitat for mosquitoes.

Assuming average conditions for Lexington's soil type and amount of impervious area, a rain garden should be dug approximately 8" deep and have dimensions of 8' x 10' to collect water captured from a single downspout. To capture runoff generated from an entire yard, rain gardens should be dug 8" deep, with one or more rain gardens totaling dimensions of 12' x 26'.



Black-Eyed Susan  
*Rudbeckia hirta*



Spiked Blazing Star  
*Liatris spicata*



Cardinal Flower  
*Lobelia cardinalis*

Courtesy of S. Cutler

Courtesy of Thomas G. Barnes  
University of Kentucky, © 2006

For an extensive list of native plants to use in your rain garden, refer to:

[www.naturepreserves.ky.gov](http://www.naturepreserves.ky.gov)  
<http://shootingstarnursery.com>