

Quick Guide to Planning and Installing Rain Gardens

1 Assessment

Items to consider in assessing:

- Call Ohio Utilities Protection Service (OUPS) before digging: 8-1-1 or 800-362-2764. It's the law!
- Rain garden should be located no closer than 10-20 ft. to foundation of buildings, and away from septic systems.
- Avoid areas that already have poor drainage or standing water—locate garden to capture contributing source(s).
- Consider an outlet—if it overflows, where will it flow?
- Avoid digging too close to large trees to prevent damaging root systems.
- Getting water to the rain garden—can “daylight” a downspout in the yard, use a dry streambed for above ground flow, or create garden just off of a hard (“impervious”) surface like a driveway or parking lot.

Local rain garden resource:

Clermont SWCD

<http://www.clermontswcd.org/raingardens.aspx>

Phone: 513-732-7075

Cincinnati Rain Garden Alliance—<http://cincyrain.org>

2 Soils and Sizing

Follow these steps to determine your soil conditions & garden size:



- Dig a test hole 8" deep in the area of garden. Fill hole with water and let drain. After hole drains, fill again with water. Check after 24 hrs. Measure how far down water has drained. This depth (in.), will be the depth of your rain garden. Water should infiltrate at least 1/4 in./hr.
- Measure roof area (L x W) or area of hard surface leading to the garden. This is the drainage area.
- Divide drainage area by depth of the test hole findings. This will be the total size of the garden. (This calculation is for 1" rainfall (in 24 hrs.) and allows for more poorly drained soils to have a larger rain garden size.)
- Example: 240 sq ft drainage area/6" test hole = 40 sq ft garden. Rule of thumb: size of drainage area/garden = 5:1 for well drained soils, 2 or 3:1 for less well drained soils.

3 Excavation

- Determine the shape of the rain garden. Shape is less important than the size or plants used, but it is an opportunity to be creative or match the current landscaping plan on the property.
- Outline the garden shape with a rope, paint or flags.
- Dig down 2" below the depth found from the test hole.
- Till or loosen the top few inches of the soil that is left to help offset compaction.
- Add 2-4" of compost and till into garden to replace nutrients lost from removal of topsoil and assist in infiltration.
- Grade the garden evenly across—the bed should be flat—to allow water to spread throughout.
- Slope of the sides should gentle (3:1 or flatter).
- Consider using a type of edging to help prevent grass from spreading in—metal, plastic, or stone.

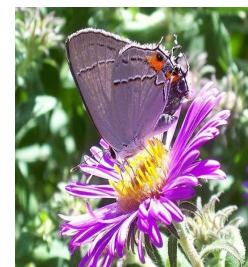


4 Plants and Mulch

- Consider using native perennials, shrubs, or trees in the rain garden. They are suited to our climate, soils, and pollinators.
- Avoid using annuals, bulbs, or seeds. They will add more maintenance to this practice.
- Determine if your garden is full sun, part shade/sun, or full shade—choose appropriate plants.
- Choose plants that will vary in bloom time so color and nectar sources can be available through most of the growing season.
- Choose a variety of colors of blooms, unless your theme or preference is few colors or even one color.
- Locate plants in the rain garden according to their tolerance of water. The most water-tolerant plants should be where water enters the garden. More drought-tolerant plants can be placed on the sides or back of the garden.
- Mulch rain garden with a 2" layer of double-shredded hardwood mulch.

Useful plant selection website:

<http://www.plantplaces.com>



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Maintenance

Maintenance is almost like any other garden bed:

- Water: Even if native plants are used, the new plants will need some help getting established. Water weekly or more often if there's a dry spell or extreme heat during the first growing season.
- Mulch: Maintain a 2" layer of mulch. Less mulch will be needed over time as the plants grow and fill in.
- Weeds: Watch for weeds. Monthly or bi-monthly weeding is usually all that's needed.
- Leaves: As leaves fall from nearby trees, clear leaves from where the water enters the garden. Be sure that leaves don't build up in this area, preventing water from entering the rain garden.
- To maintain manicured garden look, remove seed heads from plants in fall before they disperse.

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Helpful Tips and Items to Consider

- Have a plan for soil that is excavated —use as a berm, in low spots, or take to yard waste drop off locations.
- Have a plan for getting water to the garden—divert downspout to enter directly in the garden, or create a dry streambed as a channel to move water from the downspout to the rain garden.
- Disconnect the downspout AFTER the rain garden is prepared.
- Consider mowing practices and width of mower around the garden to allow enough space.
- Avoid planting in soils that are too wet or too dry.
- Rain gardens can be created on slopes, although this will probably require a retention wall to be built. Consulting a professional landscaper to help can be very valuable if logistics are uncertain.
- Overflow in times of extra heavy rain should not be overlooked. Avoid having excess water drain to neighbor's property or other inappropriate areas. Nearby vegetated areas or even the rest of the downspout that is underground can serve as overflow locations.
- Hooking up a rain barrel to a downspout and having its overflow be directed into the rain garden can help obtain some rain water for watering vegetable or other gardens.
- Using stones or cobbles at the downspout entry point or at other unexpected water entry points can prevent gullies and erosion. To prevent excessive sediment entering garden, build small stilling basin at entry point.



Curb cut capturing street runoff



Downspout waterfall flowing to garden



Trees, shrubs, flowers, groundcovers all work



Using catch basin as garden overflow



Rain garden capturing sidewalk runoff



Installing underdrain with standpipe overflow