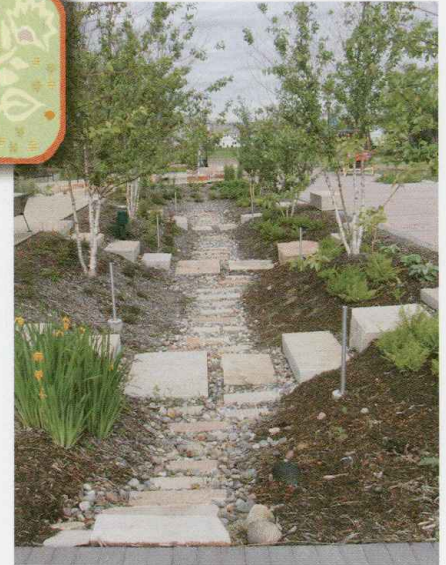


Design Tips

- First and foremost, this is a garden for your yard. So, pick attractive plants that you like.
- Most of the plants listed like full sun to partial shade. Rain gardens can also work in shady areas, but need a little more careful plant selection.
- A rain garden is designed to dry out between storm events. It is not a wetland intended to hold permanent water. Plants that like average to moist conditions typically do well. If you choose plants that prefer wet to saturated conditions, you may need to water them during the summer.
- Start small, see what works, and expand your garden the next year.
- Use rock walls, arbors, or other borders to help define the boundaries of the garden.



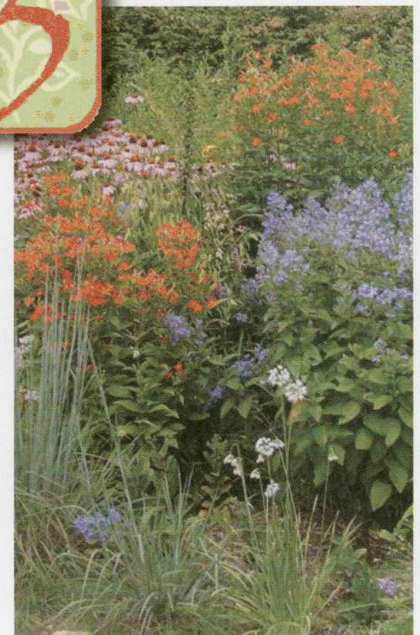
Testing Your Soil And Sizing The Garden

- The size of the garden is not terribly important. If you have plenty of room, try to size the garden to hold an inch of rain from the area that drains to it. That might be something like an 8 x 10-foot garden to catch the rain from a downspout at the corner of a typical house. If you don't have that much space, design them to fit your landscape.
- Most rain gardens are about 4 to 8 inches deep. Try to pick a depth that will let the water soak into the soil within 24 hours. To do this, dig a hole in the garden area (8" wide and 8" deep), fill it with water and measure how fast the water soaks into the soil. This may take a number of hours. For example, if the water level goes down 1 inch in four hours, the soil will percolate about 6 inches in 24 hours, so you would make your garden 6 inches deep.
- If the garden only holds water for a day, mosquitoes can't grow in it.



Plant Selection

- Consider planting native wildflowers, grasses, and shrubs. Many have very deep roots that do a good job of breaking up clay soils and increasing infiltration each year.
- If available, "plugs" are an economical plant selection. Plugs are young plants in containers about 2 inches in diameter by 5 inches deep. They establish faster than seeds, and are less expensive than large potted plants.
- Pick 6 or 8 plant species to try first. Group the same plants together in clumps of at least three plants to create mounds of color. Plant grasses between the clumps of wildflowers. This helps prop up the flowers when they get tall.
- Locate plants in the garden based on how much water they will tolerate. Place plants that like wetter conditions in the lowest part of the garden. Put plants that like drier conditions around the edges.
- When picking plants, also consider how tall and wide the plants will get when they mature. Space them accordingly. Place taller plants in the center of the garden.
- The attached plant list contains native plants. We like the native species because they thrive in our local conditions, have deep root systems, and many tolerate both spring rains and summer droughts. But you don't have to be limited to this list. If you like cultivated varieties, choose plants that like average to moist conditions.



Finding The Right Location For Your Rain Garden

- 1. Locate rain gardens near downspouts, driveways, or other low points that collect water in your yard.
- 2. Pick a location where you can dig a shallow depression of the depth and shape you want. You may need to dig it out in the center, and build a small dam on the downhill side of the garden to help hold the water.
- 3. Consider where the water will enter the garden, and where it will drain out when it overflows. Try to make sure it does not drain in an unwanted direction such as towards the neighbor's favorite sitting spot.
- 4. Do not locate the garden on top of septic tank leach fields or over utility lines. Call the local utility clearance service to identify buried utility lines before digging.
- 5. Try to locate the rain garden 10 feet, or more, from your house to keep water away from your foundation.



Preparing The Garden Bed

- 1. Outline the shape of the garden, remove the existing sod, and dig out the garden to the size and depth you want.
- 2. If you have clay or compacted soils, over-dig the garden about 12 inches, remove some soil and replace it with sand and compost. Till that into the native soil to break it up.
- 3. Grade the garden so that water will spread out over a large flat area.
- 4. After the garden bed is prepared, fill it with water to make sure it will infiltrate the water within 24 hours, and drains in the direction you want when it overflows.
- 5. If most of the plants you choose do not like very wet or saturated conditions, cut a "notch" in the downhill side of the garden berm so that water does not fill up the garden for the first year. This helps the plants get established. Mature plants can tolerate more water than seedlings. After the first growing season, you can fill in the notch and let the garden hold more water.

Care The First Year

- 1. Water your plants regularly until they are established.
- 2. Mulch the garden with shredded hardwood mulch. Weed the garden regularly.
- 3. Arrange rocks in a decorative fashion where water enters the garden to act as a "splash block," help break up the water flow, and prevent big storms from washing out the garden.
- 4. Each spring, prune dead vegetation, prune plants that get too large, weed the garden, and touch up the mulch. Then weed and care for the garden similar to any other garden.
- 5. Clean sand and sediment from the garden if washoff from a driveway or road begins to cover the plants where the water enters the garden.
- 6. Watch the plants and don't be afraid to move them to another location in the garden if they need more or less water.



Plant List

(Plants recommended for Ohio and Kentucky)

Plant	Sun/Shade	Moisture*	Color	Height	Bloom Period
Flowers					
New York Aster <i>Aster novi-beigii</i>	 	wet to moist	violet	1 - 4 ft.	Aug - Oct
Cardinal Flower <i>Lobelia cardinalis</i>	 	wet to moist	red	2 - 4 ft.	July - Sept
Great Blue Lobelia <i>Lobelia siphilitica</i>	 	wet to moist	blue	2 - 4 ft.	Aug - Sept
Marsh Milkweed <i>Asclepias incarnata</i>	 	wet to moist	pink	4 - 5 ft.	July - Aug
Butterfly Milkweed <i>Asclepias tuberosa</i>	 	moist to dry	orange	1 - 3 ft.	June - Aug
Marsh Blazing Star <i>Liatris spicata</i>	 	wet to moist	purple	3 - 6 ft.	July - Sept
Ohio Spiderwort <i>Tradescantia ohioensis</i>	 	moist to dry	blue	2 - 4 ft.	May - July
Purple Coneflower <i>Echinacea purpurea</i>	 	moist to dry	purple	2 - 4 ft.	June - Aug
Wild Geranium <i>Geranium maculatum</i>	 	moist	pink	1 - 2 ft.	April - May
Celandine Poppy <i>Stylophorum diphyllum</i>		moist	yellow	1 - 2 ft.	April - May
Culver's Root <i>Veronicastrum virginicum</i>	 	moist to average	white	3 - 6 ft.	June - Aug
Daylilies <i>Hemerocalis spp.</i>	 	moist to dry	various	1 - 3 ft.	May - Aug
Turtlehead <i>Chelone glabra</i>		average to wet	cream	3 - 4 ft.	July - Sept
Grasses & Sedges					
Fox Sedge <i>Carex vulpinoidea</i>	 	saturated to wet	green leaves, brown in fall	2 - 3 ft.	May - July
Soft Rush <i>Juncus effusus</i>		saturated to wet	green leaves,	2 - 4 ft.	June - Aug
Little Bluestem <i>Schizachyrium scoparium</i>	 	average to dry	blue-green, bronze in fall	2 - 4 ft.	Aug
Prairie Dropseed <i>Sporobolus heterolepis</i>	 	average to dry	green leaves, copper in fall	1 1/2 - 2 ft.	Aug - Oct
Shrubs					
Red-twigged Dogwood <i>Cornus sericea</i>	 	wet to dry	white flower, red bark	6 - 12 ft.	May - June
Blueberries, high bush var. <i>Cornus sericea</i>	 	moist	red fall foliage	4 - 6 ft.	June - Aug Fruit
Black Chokeberry <i>Aronia melanocarpa</i>	 	moist to dry	white flowers red fall foliage	3 - 6 ft.	May

Sun/Shade Key:



Full Sun



Partial Shade



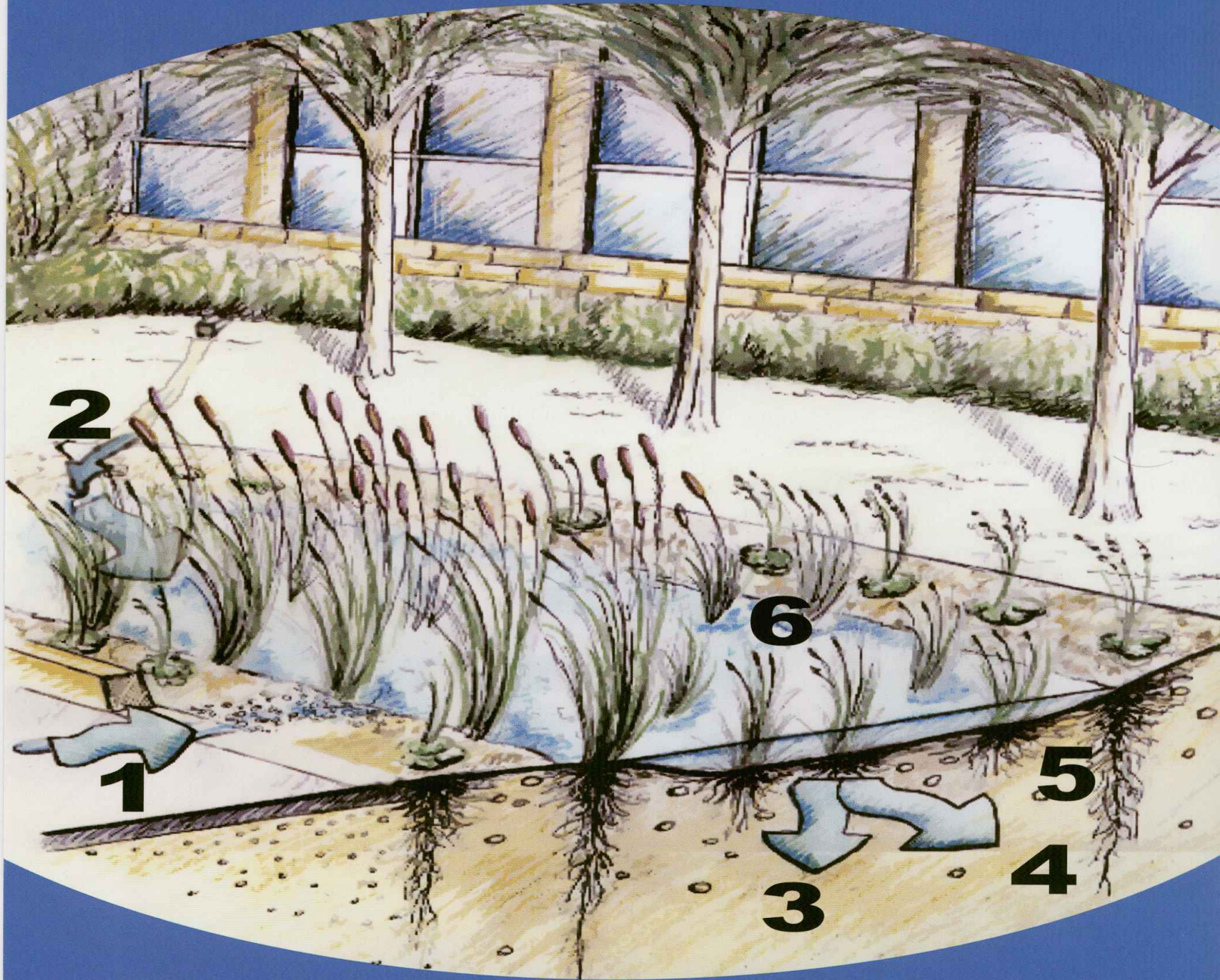
Full Shade

*Moisture: Locate plants that like wet to moist conditions in the lowest part of the garden, average to dry conditions on the sides, and dry conditions on the top

Rain gardens are gardens planted in low spots, designed to catch rainwater from downspouts, sidewalks, driveways, or parking lots. Many beautiful plants thrive in rain gardens and can be used to enhance your yard. Rain gardens:

- Soak up rain where it falls
- Reduce rainwater runoff

- Reduce erosion and remove pollutants
- Create attractive landscaping



Typical rain garden collecting rainwater from a driveway (1) and a roof downspout (2). Water is absorbed by plants, infiltrated into the ground (3), and slowed before it discharges across the yard (4).

Deep, dense roots of native plants (5) help break up heavy soils and increase infiltration. Typical rain gardens are 4 to 8 inches deep (6).

Plant Key:

- 1) Blazing Star, 2) Fox Sedge, 3) Daylily, 4) Purple Coneflower, 5) Little Bluestem, 6) Butterfly Weed, 7) Aromatic Aster, 8) Yellow Coneflower, 9) Cardinal Flower, 10) Black Eyed Susan, 11) Marsh Milkweed, 12) Soft Rush, 13) Great Blue Lobelia, 14) Blueberry

URS



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