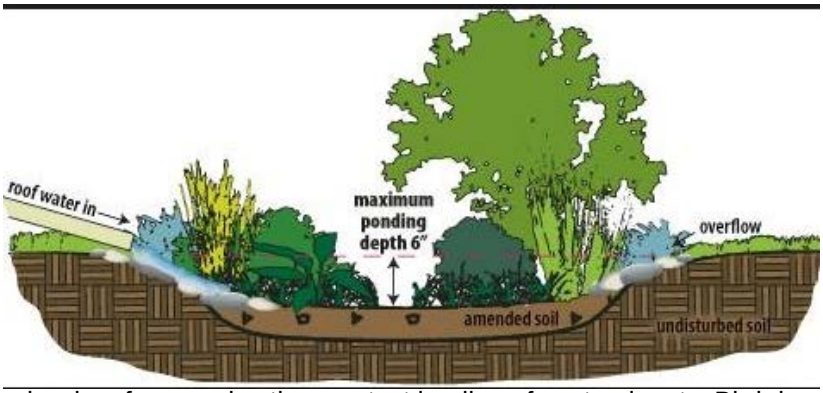

Plant a Rain Garden
For Beauty, For Water Quality, For Wildlife

Rain gardens are designed to allow stormwater running off hard surfaces to infiltrate into the soil. There are many benefits and a few patterns to observe in their construction.

The first quarter-inch of precipitation running off of a hard surface carries the greatest loading of contaminants. Bird droppings and dust from roofs; road salt, soil, oil and automotive fluids from driveways and other pollutants are washed off in that first flush of stormwater. Infiltrating runoff water into the ground where plant roots and soil filter out contaminants promotes clean water reaching our streams and lakes.

Constructing a Rain Garden

Step 1: Determine the Best Location
Where does gravity take runoff water? Go with the flow. A level area is best, although a berm can be constructed to make a level garden. Stay at least 10 feet away from a foundation. Avoid utilities and septic systems. A sunny or partly shaded location works best.

Step 2: Check the Soils
Soil types vary in how quickly they absorb water. Dig a hole 8 inches wide, 12 inches deep and fill with water. If it takes more than an hour for the water to drop an inch, the soil will need amendment. Adding ample compost and sand will help. Soils compacted by heavy construction equipment must be dug up and loosened to a depth of two feet or replaced with a mix of 50-60% sand, 20-30-% compost and 20-30% topsoil.

Step 3: Determine the Size
Recommendations vary, but a simple rule of thumb is to multiply the square feet of impervious area by the soil factor to find the size of the garden:

Sq. ft. of roof X soil factor = size of garden
Soil Factors: (Sand = .20) (Loam = .40) (Clay = .60)

Different parts of the roof may drain to different downspouts. Estimate only the amount of roof that will drain into the rain garden. Any size rain garden is helpful and the first ¼ inch of precipitation is the most important to catch.

Step 4: Design the layout
The garden should be on a fairly level surface. If the site is not level, a berm should be created on the downhill side so runoff can be held within the garden. A six inch depression near the center will allow water to pool and promote infiltration. Determine how runoff water will reach the garden either above or below ground level.

Step 5: Choose the Plants
Native, non-invasive species that tolerate wet roots for a few days and are tolerant of dry spells are suitable for rain gardens. Examples include Joe Pye, New York fern, button bush, New England aster, native grasses, etc. Many lists are available from websites, DEC, SWCD and Cooperative Extension. The site of your garden will influence plant choice. Plants near the deeper part of the garden area will have longer periods of wet soil.

Step 6: Plant, Water, Mulch, Maintain
Install plants according to nursery instructions. Water as needed for the first year or two. Two inches of mulch will protect young plants and lessen weeding needed until plants grow to fill in the area. Native plants do not need fertilizer or pesticides.

Step 7: Accept compliments and feel good about managing stormwater on your own home site... and don't worry about mosquitoes breeding in these gardens. The water soaks away in less time than it takes for insects to hatch. Butterflies, bees, humming birds, small amphibians and other birds will enjoy visiting your garden.

Support Your Local Pollinators

The past few years have seen a sharp decline in the numbers of butterflies, honey bees and bumble bees that grace our landscapes and pollinate our crops. The reasons for the decline are the subject of much scientific research and debate. Among topics being investigated are pesticides and other chemicals suspected of being harmful to the insects.

Loss of habitat is one cause that everyone agrees upon as a prime culprit in the loss of pollinators. We can do something about that.

Like all animals, insects have specific needs at different stages of their lives. It is well known that Monarch butterflies must lay their eggs on milkweed for the caterpillars to feed upon when they hatch. As pastures have been converted to farm fields, milkweed has become harder for butterfiles to find; and unfortunately, milkweed is highly suseptible to glyphosate herbicides. Roadside ditches are routinely sprayed or mowed. Planting a butterfly garden with milkweed and other native species provides a lifeline to Monarchs. A rain garden is a perfect place to plant milkweed.

Providing pollinator-friendly gardens can help many species:

1. Plant native flowers. Native birds and insects are adapted to these species and the plants are adapted to native soils and climate. Fertilizer and pesticides are not needed.

2. Plant a variety of flowers that will bloom from early spring until fall to provide food throughout the year. A variety of sizes, colors and shapes will attract a variety of pollinators. Avoid hybrid or "doubled" flowers as they often lose pollen, scent and nectar in the process.

3. Include plants for caterpillars (as noted above) to support all of the life stages. A little online research will tell you which plants to choose – or consult Cooperative Extension or Soil &Water Conservation District.

4. Cluster plants so the insects or birds can find abundant food with little time spent searching.

5. Leave some bare ground or use a shallow birdbath filled with soil, sprinkled lightly with sea salt and kept moist to provide minerals and water for the insects.

6. Build or buy a bee house for native bees such as bumblebees, mason bees or leaf cutter bees. These insects are efficient pollinators, and although they don't provide honey, they rarely (bumblebees) or never (mason and leaf cutter bees) sting.

7. Avoid using pesticides if at all possible. If you want butterflies, you must not poison the caterpillars!

8. Pollination is performed by many species of bees, butterflies, beetles, moths, bats, and birds. Welcome them all.