

RAIN GARDENS

When it rains on our increasingly developed land, runoff and associated pollutants negatively impact our waterways. The native forests and other natural habitats that hold soil in place and filter storm water have been removed over the years replaced by housing and communities. Impervious surfaces such as asphalt and concrete walkways and compacted lawns prevent water from percolating through the ground, unlike the natural ecosystems, which allowed rain to filter through soils, roots, and plants in our forests, meadows, and wetlands. A constructed rain garden can act as a living sponge to take up that first inch of rain that carries much of the pollutants washed from hardscapes of impervious surfaces. A rain garden is easy to make and can be a beautiful addition to the home landscape. It will hold and filter storm water on site, and cut the volume of water that is lost as well as trap pollutants that otherwise make their way into our streams and rivers.

The Rain Garden and its Benefits

A rain garden is a low-maintenance garden approximately six inches below the surface on level or slightly sloping ground. It can either dry quickly within hours of a rain event or be more marsh-like, holding water for several days. Rain gardens are not comparable to retention ponds that act as water storage basins without plants.

A rain garden can be filled with facultative native plants, plants that tolerate both wet and dry conditions. This type of plant is generally deeply rooted so can take flooding water but succeed in drier periods as well. Natives are beneficial as these plants support our ecosystems. Because rain gardens don't need synthetic chemicals to survive they will save money and make your yard a healthier place.

Rain gardens can be beautifully planted with perennials, grasses, shrubs and trees.

What about mosquitoes?

If properly designed, rain gardens do not attract mosquitoes. Mosquito eggs need 7 to 12 days in water to hatch, but rain gardens drain within six to 24 hours.

Rain Garden Tips

1. Check flow and drainage

Soils with good drainage are a must. After a rainfall, check water flow from your house to see where the water easily percolates. As a test, dig a hole 6 to 8 inches deep and fill the hole with water; it should drain within a day (24 hours).

2. Placement

Avoid creating a rain garden over a septic field—it could overwhelm the drainage system—or where water already collects, which probably indicates poor drainage.

Do not disturb established trees.

Locate the rain garden in the vicinity of the home's downspout but at least 10 feet down slope from the foundation. If you have several downspouts, it may be possible to make one large rain garden, although you will need long extensions. Or, you can create multiple rain gardens for multiple spouts.

3. Overflow

If your rain garden isn't large enough to handle the runoff from your downspout, allow it to overflow onto your lawn; however, don't let it overflow onto your neighbor's property.

4. Design and Construction

Consult a landscape professional for rain garden design as field conditions influence storm water management: see below

<http://www.artfulrainwaterdesign.net>

Penn State University Landscape Architecture

www.larch.psu.edu/stormwatermanagement

5. List of Facultative Plants for Wet/dry Conditions

Clethra alnifolia (summersweet)

Ilex glabra (inkberry)

Ilex verticillata (winterberry holly)

Lindera benzoin (spicebush)

Myrica pennsylvanicum (bayberry)

Sambus Canadensis (elderberry)

Vaccinium corymbosum (highbush blueberry)

Viburnum acerifolium (mapleleaf viburnum)

Viburnum dentatum (arrowwood viburnum)

Aquilegia novae-belgii (New York aster)

Lilium superbum (Turk's cap lily)

Iris versicolor (blue flag iris)

Lobelia siphilitica (great lobelia)

Vernonia noveboracensis (New York Ironweed)

Onoclea sensibilis (sensitive fern)

Osmunda cinnamomea (cinnamon fern)

Juncus effusus (soft rush)

6. Care of plants

For the first two years as the new plants are established, and especially during summer droughts, you will need to water weekly and deeply. Weeding and mulching will be necessary until your garden is established.

To learn more about rain gardens, visit the web sites below:

Westchester Native Plant Center

<http://www.nativeplantcenter.org/Rain%20Garden%20Fact%20Sheet.pdf>

The Native Plant Society of New Jersey

[http://www.npsnj.org/references/NPSNJ%20Rain%20Garden%20Manual%20\(Pages%201-24\).pdf](http://www.npsnj.org/references/NPSNJ%20Rain%20Garden%20Manual%20(Pages%201-24).pdf)

University of Rhode Island

<http://www.uri.edu/ce/healthylandscapes/raingarden.htm>

University of Connecticut Cooperative Extension System

<http://www.sustainability.uconn.edu/pdf/raingardenbroch.pdf>

Suggested reading

Native Plants of the Northeast: A Guide for Gardening & Conservation, by Donald J. Leopold, 2005

A Guide to Native Plants of the New York City Region, by Margaret B. Gargiullo, 2007