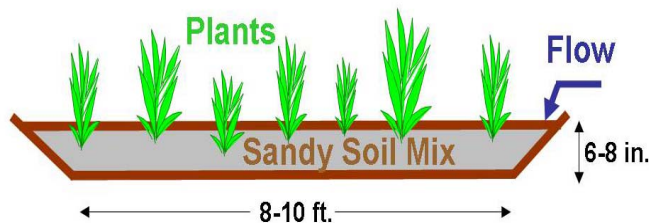


# Rain Gardens: An Attractive and Easy Way to Protect Our Water Resources

## General Rain Garden Requirements

- (1) A *suitable* area located *between* the rainwater source and its destination — either a depressed area in your yard or where water flows naturally— and is at least 10 feet from the home and at least 25 feet from a septic tank leach field.
- (2) *Materials*:
  - a. an *appropriate soil-mix* (50-60% sand, 20-30% top soil, and 20-30% compost). Check your native soil first by getting a soil test from your Extension office!
  - b. *native plants* (a hardy mix of grasses, small shrubs, and self-seeding perennials are good choices, especially those that are both wet- and drought-tolerant)
  - c. a *dense-material mulch* that won't float away,
- (3) *Earth-moving tools* (or shovels and help) to excavate the depth, and a tilling machine to amend and fluff the soil.
- (4) A desire and willingness *to manage your runoff (stormwater) and protect water quality*.

More elaborate designs may include the addition of underground corrugated pipes to convey rooftop runoff from downspouts to the rain garden. Additionally, you can add a rain barrel to your downspout which would collect the water that you could re-use for irrigation (saving you money)!



## How to Build a Rain Garden

The size for the rain garden area depends on the size of the area to be drained and the ability of the soil to drain surface water. A rule of thumb is that the rain garden area should be approximately 20% of the drainage area (including rooftops, driveways, and other impervious surfaces) in well-drained, sandy soils, and between 20-60% of the drainage area in more poorly drained, loamy soils. It's also important to select a location with a seasonally high water table depth no shallower than 18 inches to ensure proper drainage. The excavated area should be 6-8 inches deep, and the area should be typically 8-10 ft. wide in the direction of stormwater flow. Perforated irrigation pipe can be used to spread water flow into the garden. And be sure not to plant too many plants — they will grow and fill the space!



# Rain Gardens

## An Attractive and Easy Way to Protect Our Water Resources



A rain garden is an appealing landscape feature that can easily be installed by the homeowner to manage their property's runoff and protect the quality of our streams, lakes, wetlands, and oceans. A rain garden typically receives runoff water from roofs and other impervious (hard) surfaces such as driveways and sidewalks. The rain garden holds water on the landscape so that it can infiltrate (drain) into the ground and be used by plants instead of flowing into a street and down a storm drain or drainage ditch.

For more information, contact your **County  
Clemson Extension Office**  
[www.clemson.edu/extension/counties1.htm](http://www.clemson.edu/extension/counties1.htm)

or

Download a **FREE** Rain Garden Manual produced  
by Clemson University at  
[www.clemson.edu/carolinaclear](http://www.clemson.edu/carolinaclear).

Digging out the rain garden location...



Preparing the rain garden soil...



Plant, mulch, and enjoy your success!



## Plant List for Rain Gardens (including blooming months)

### LARGE TREES (over 30' tall)

#### Deciduous

Red Maple - *Acer rubrum* - Feb-Mar  
 River Birch - *Betula nigra* - Mar-Apr  
 Green Ash - *Fraxinus pennsylvanic* - Apr  
 Black Gum - *Nyssa sylvatica*  
 Willow Oak - *Quercus phellos*  
 Willows - *Salix* species - Mar-Apr  
 Bald Cypress - *Taxodium distichum*  
 Pond Cypress - *Taxodium ascendens*

#### Evergreen

Southern Magnolia - *Magnolia grandiflora* - May-Jun  
 Longleaf Pine - *Pinus palustris* - Apr  
 Swamp Laurel Oak - *Quercus laurifolia*

### SMALL TREES (under 30' tall)

#### Deciduous

Red Buckeye - *Aesculus pavia* - Apr-May  
 Ironwood - *Carpinus caroliniana*  
 Redbud - *Cercis canadensis* - Mar-Apr  
 Fringe Tree - *Chionanthus virginicus* - Jul-Sept  
 Hawthorn - *Crataegus marshalli* - Apr-May

#### Evergreen

Dahoon Holly - *Ilex cassine*  
 American Holly - *Ilex opaca*  
 Red Cedar - *Juniperus virginiana*  
 Sweet Bay - *Magnolia virginiana* - Apr-Jul  
 Wild Olive - *Osmanthus americanus* - Apr-May  
 Red Bay - *Persea borbonia*

### ORNAMENTAL GRASSES

River Oats - *Chasmanthium latifolium*  
 Muhly Grass - *Muhlenbergia capillaries*  
 Sweetgrass - *Muhlenbergia filipes* - Oct-Nov  
 Switch Grass - *Panicum virgatum* - Jun-Oct

### SEDGES AND RUSHES

Lurid Sedge - *Carex lurida*  
 Fringed Sedge - *Carex crinita*  
 Southern Waxy Sedge - *Carex glaucescens*

White-topped Sedge - *Rhynchospora latifolia*  
 Woolgrass - *Scirpus cyperinus*

### SHRUBS

#### Deciduous

Beautyberry - *Callicarpa americana* - Jun-Jul  
 Sweet Shrub - *Calycanthus floridus* - Apr-May  
 Buttonbush - *Cephalanthus occidentalis* - Jun-Aug  
 Pepperbush - *Clethra alnifolia* - Sept-Oct  
 Witch Alder - *Fothergilla gardenia* - Sept-Oct  
 Winterberry - *Ilex verticillata*  
 Swamp Rose - *Rosa palustris* - May-Jul  
 Possumhaw - *Viburnum nudum* - Mar-Apr

#### Evergreen

Inkberry - *Ilex glabra*  
 Yaupon - *Ilex vomitoria*  
 Anise Shrub - *Illicium parviflorum*  
 Coastal Leucothoe - *Leucothoe axillaries* - Mar-May  
 Wax Myrtle - *Myrica cerifera*  
 Dwarf Palmetto - *Sabal minor*

### PERENNIALS

Blue Star - *Amsonia tabernaemontana* - Mar-Apr  
 Red Milkweed - *Asclepias rubra* - Jun-Jul  
 Climbing Aster - *Aster carolinianus* - Sept-Oct  
 False Indigo - *Baptisia* species - Apr-Sept  
 Tickseed - *Coreopsis angustifolia* - Aug-Oct  
 Joe Pye Weed - *Eupatorium fistulosum* - Jul-Oct  
 Swamp Sunflower - *Helianthus angustifolius* - Jul - frost  
 Swamp Mallow - *Hibiscus moscheutos* - May-Sept  
 Blue Flag Iris - *Iris virginica* - Apr-May  
 Seashore Mallow - *Kosteletskya virginica* - Jun-Oct  
 Blazing Star - *Liatris spicata* - Sept-Oct  
 Cardinal Flower - *Lobelia cardinalis* - Jul-Oct  
 Carolina Phlox - *Phlox carolina* - May-Jul  
 Black-eyed Susan - *Rudbeckia fulgida* - Aug-Oct  
 Goldenrod - *Solidago rugosa* - Aug-Nov  
 Ironweed - *Vernonia novaboracensis* - Jul-Sept  
 Verbena - *Verbena canadensis* - Mar-May

### FERNS

Southern Lady Fern - *Athyrium apelenoides*  
 Cinnamon Fern - *Osmunda cinnamomea*  
 Royal Fern - *Osmunda regalis*  
 Marsh Fern - *Thelypteris palustris* - Jun-Sept