A rain garden is a landscaped area specially designed to collect rainfall and storm-water runoff. The plants and soil in the rain garden clean pollutants from the water as it seeps into the ground and evaporates back into the atmosphere. For a rain garden to work, plants must be selected, installed, and maintained properly.

**Plant Selection**

- Choose plants tolerant of both occasional flooding as well as dry periods.
- Choose noninvasive plants that are adapted to the local environment.
- Choose a mixture of species. A good rule of thumb is one plant species for every 10 to 20 square feet. For example – a 140-square-foot garden would have 7 to 14 different plant species.
- Choose plants for vertical layering – a mix of tall-, medium-, and low-growing species.

**Plant Installation**

- Install plants in their proper moisture zones (see Fig. 1).
- Plant shrubs and perennials in groups of three to five of the same species. Trees can be planted in groups or individually.
- Plant taller and larger plants in the center or at one end of the garden, depending on the views.
- Plant shorter plants where they can be seen easily, around the garden edges, in front of larger plants, or underneath taller plants.
• Space and plant perennials so that their canopies will grow together and cover the ground to minimize weeds.
• Space and plant trees and shrubs according to their mature size. For example – beautyberry shrubs, that grow to six feet wide, should be planted three feet apart.
• Planting outside and around the rain garden area helps the garden blend into the overall landscape.
• More information can be found in *Tree and Shrub Planting Guidelines*, Virginia Cooperative Extension publication 430-295.

**Maintenance**

• Add two to four inches of organic mulch to the entire newly planted rain garden. Do not cover the crowns of the perennials. Replenish mulch in the fall as needed.
• Avoid fine cut or lighter weight mulches as they tend to float in wet conditions.
• Prune any dead, diseased, or damaged plants as soon as the problem is noticed. More information on pruning woody plants can be found in Virginia Cooperative Extension publications 430-455 through 430-462 (see References).
• Prune the foliage of perennials when they die back for the winter and ornamental grasses before new growth begins in the spring.
• Remove or spot treat weeds as necessary.
• Water the garden during its establishment and extended dry periods. One inch of water per week is recommended.

**Plant Lists**

Trees, shrubs, and perennials are listed with both their common and *scientific* names. Ask at local garden centers for specific cultivars, varieties, and size at maturity.

**Trees**

Use trees only in rain gardens larger than 150 square feet.

- Alder
- Arborvitae
- Atlantic White Cedar
- Austrian Pine
- Bald Cypress
- Black Gum
- Carolina Silverbell
- Common Persimmon
- Dawn Redwood
- Downy Serviceberry
- Eastern Redbud
- Eastern Red Cedar
- Green Ash
- Hackberry
- Hornbeam
- Japanese Cryptomeria
- Japanese Zelkova
- Katsura Tree
- Lacebark Elm
- Lobolly Pine
- Planetrees (Sycamores)
- Red Maple
- River Birch
- Swamp White Oak
- Sweetbay Magnolia
- Sweetgum
- Water Oak
- Weeping Willow

- Alnus serrulata (glutinosa)
- Thuja occidentalis
- Chamaecyparis thyoides
- Pinus nigra
- Taxodium distichum
- Nyssa sylvatica
- Halesia tetraptera
- Diospyros virginicus
- Metasequoia glyptostroboides
- Amelanchier arborea
- Cercis canadensis
- Juniperus virginiana
- Fraxinus pennsylvanica
- Celtis occidentalis
- Carpinus caroliniana
- Cryptomeria japonica
- Zelkova serrata
- Cercidiphyllum japonicum
- Ulmus parvifolia
- Pinus taeda
- Platanus spp.
- Acer rubrum
- Betula nigra
- Quercus bicolor
- Magnolia virginiana
- Liquidambar styraciflua
- Quercus nigra
- Salix babylonica/alba

- Willow Oak
- Witch Hazel
- Yaupon Holly

- Quercus phellos
- Hamamelis virginiana
- Ilex vomitoria

**Shrubs**

- American Beautyberry
- Anise
- Arrowwood
- Bottlebrush Buckeye
- Buttonbush
- Carolina Allspice
- Chokeberry
- Cranberrybushes
- Devilwood
- Dogwoods
- Elderberry
- False Indigo
- Fetterbush
- Groundsel Bush
- Highbush Blueberry
- Inkberry
- Leucothoes
- Oakleaf Hydrangea
- Possumhaw
- Rose of Sharon
- Shadblow Serviceberry
- Spicebush
- Steeplebush
- Summersweet Clethra
- Swamp Azalea

- Callicarpa americana
- Illicium parvifolium
- Viburnum dentatum
- Aesculus parviflora
- Cephalanthus occidentalis
- Calycanthus floridus
- Aronia arbutifolia
- Viburnum opulus/trilobum
- Osmanthus americana
- Cornus amomum/racemosam/serrata
- Sambucus canadensis
- Amorpha fruticosa
- Leucothoe racemosa
- Baccharis halimifolia
- Vaccinium corymbosum
- Ilex glabra
- Leucothoe axillaris/fontanesiana
- Hydrangea quercifolia
- Ilex decidua
- Hibiscus syriacus
- Amelanchier canadensis
- Lindera benzoin
- Spiraea tomentosa
- Clethra alnifolia
- Rhododendron viscosum
Swamp Rose
Virginia Sweetspire
Wax Myrtles
Willows
Winterberry

**Perennials**
Arrowhead
Asters
Beardtongue
Beebalm
Blackeyed Susan
Blue Lobelia
Bluestar
Calla Lily
Canna Lily
Cardinal Flower
Crinum Lily
Daylilies
Gingers
Goldenrod
Hardy Begonia
Hibiscus
Ironweed
Irices

Joe-Pye Weed
Leopard Plant
Liatris
Lilyturf
Lizard Tail
Lungwort
Marsh Marigold
Monkey Flower
Obedient Plant
Pickerelweed
Plantain Lily
Primroses
Rain Lilies

Rosa palustris
Itea virginica
Myrica cerifera/pennsylvanica
Salix caprea/discolor/matsudana
sachalinensis/purpurea
Ilex verticillata
Sagittaria latifola
Aster spp.
Penstemon digitalis
Monarda didyma
Rudbeckia hirta
Lobelia siphilitica
Amsonia tabernaemontana
Zantedeschia spp.
Canna spp.
Lobelia cardinalis
Crinum spp.
Hemerocallis spp.
Hedychium spp.
Solidago flexicaulis
Begonia grandis
Hibiscus coccineus/moscheutos
Vernonia noveboracensis
Iris lousiana/pseudacorus/versicolor/virginica
Eupatorium spp.
Ligularia tussilaginea
Liatris spicata
Liriope muscari
Saururus cernuus
Pulmonaria spp.
Caltha palustris
Mimulus ringens
Physostegia virginiana
Pontederia cordata
Hosta spp.
Primula spp.
Zephyranthes spp.

Red Columbine
Siberian Bugloss
Spiderwort
Strawberry Begonia
Swamp Milkweed
Swamp Sunflower
Turtleheads
Virginia Bluebells
Wild Ginger
Windflowers

**Ferns**
Christmas Fern
Cinnamon Fern
Holly Fern
Japanese Painted Fern
Lady Fern
Royal Fern
Tassel Fern
Wood Ferns

Polystichum acrostichoides
Osmunda cinnamomea
Cyrtomium falcatum
Athyrium nipponicum
Athyrium felix-femina
Osmunda regalis
Polystichum braunii
Dryopteris spp.

**Grasses and Grass-like**
Broom Sedge
Feather Reed Grass
Foxtail Grass
Rushes
Sedges
Sweetflag
Switchgrass

Andropogon virginicus
Calamagrostis acutiflora
Alopecurus pratensis
Juncus spp.
Carex spp.
Acorus spp.
Panicum virgatum

**Groundcovers**
Bugleweed
Foamflower
Green and Gold
Lilyturf
Mazus
Plumbago
St. Johnswort

Ajuga spp.
Tiarella cordifolia
Chrysogonum virginianum
Liriope spicata
Mazus reptans
Ceratostigma plumbaginoides
Hypericum calycinum
References

Rain Gardens, A Landscape Tool to Improve Water Quality; Virginia Department of Forestry Publication VDOF 000127, http://www.dof.virginia.gov/


Rain Gardens of West Michigan, http://www.raingardens.org/Index.php


Editorial Contributors

Barry Fox, Extension Specialist, Virginia State University
Adria Bordas, Virginia Cooperative Extension Agent Fairfax County
Karen Carter, Virginia Cooperative Extension Agent Henrico County
JoAnne Gordon, Horticulturist, City of Norfolk