

## Urban Water-Quality Management

# Rain Garden Plants

*Mike Andruczyk, Extension Agent, Chesapeake*

*Lynnette Swanson, Extension Agent, Norfolk*

*Laurie Fox, Horticulture Associate, Hampton Roads Agricultural Research and Extension Center*

*Susan French, Extension Agent, Virginia Beach*

*Traci Gilland, Extension Agent, Portsmouth*

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.

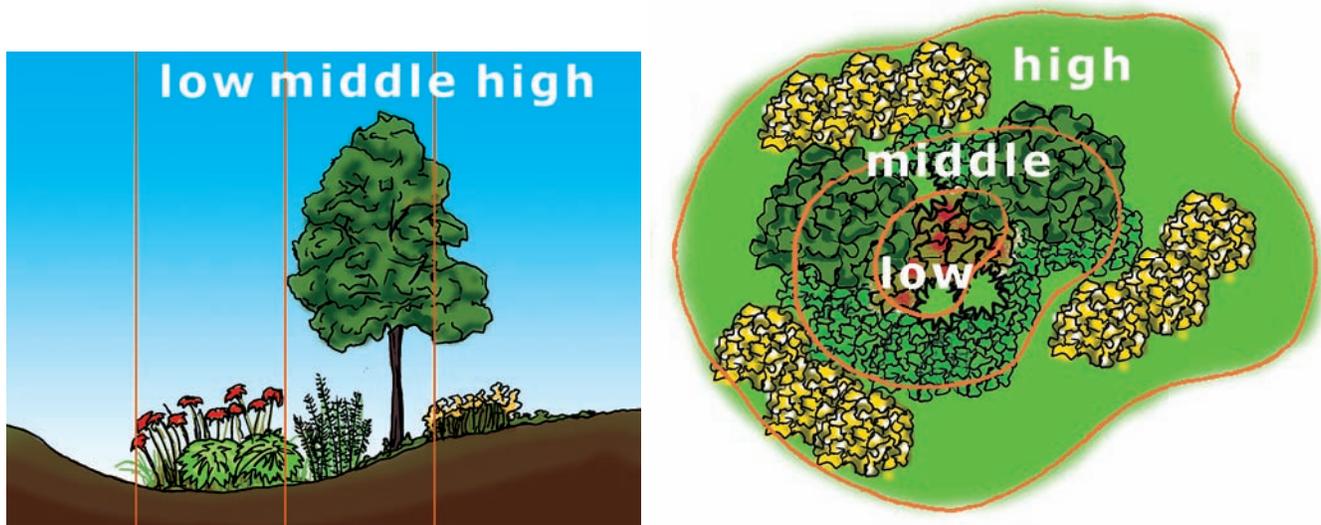


Figure 1. Rain Garden

- 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	<i>Alnus serrulata (glutinosa)</i>
Arborvitae	<i>Thuja occidentalis</i>
Atlantic White Cedar	<i>Chamaecyparis thyoides</i>
Austrian Pine	<i>Pinus nigra</i>
Bald Cypress	<i>Taxodium distichum</i>
Black Gum	<i>Nyssa sylvatica</i>
Carolina Silverbell	<i>Halesia tetraptera</i>
Common Persimmon	<i>Diospyros virginicus</i>
Dawn Redwood	<i>Metasequoia glyptostroboides</i>
Downy Serviceberry	<i>Amelanchier arborea</i>
Eastern Redbud	<i>Cercis canadensis</i>
Eastern Red Cedar	<i>Juniperus virginiana</i>
Green Ash	<i>Fraxinus pennsylvanica</i>
Hackberry	<i>Celtis occidentalis</i>
Hornbeam	<i>Carpinus caroliniana</i>
Japanese Cryptomeria	<i>Cryptomeria japonica</i>
Japanese Zelkova	<i>Zelkova serrata</i>
Katsura Tree	<i>Cercidiphyllum japonicum</i>
Lacebark Elm	<i>Ulmus parvifolia</i>
Loblolly Pine	<i>Pinus taeda</i>
Planetrees (Sycamores)	<i>Platanus</i> spp.
Red Maple	<i>Acer rubrum</i>
River Birch	<i>Betula nigra</i>
Swamp White Oak	<i>Quercus bicolor</i>
Sweetbay Magnolia	<i>Magnolia virginiana</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Water Oak	<i>Quercus nigra</i>
Weeping Willow	<i>Salix babylonica/alba</i>

Willow Oak  
Witch Hazel  
Yaupon Holly

*Quercus phellos*  
*Hamamelis virginiana*  
*Ilex vomitoria*

### Shrubs

American Beautyberry	<i>Callicarpa americana</i>
Anise	<i>Illicium parvifolium</i>
Arrowwood	<i>Viburnum dentatum</i>
Bottlebrush Buckeye	<i>Aesculus parviflora</i>
Buttonbush	<i>Cephalanthus occidentalis</i>
Carolina Allspice	<i>Calycanthus floridus</i>
Chokeberry	<i>Aronia arbutifolia</i>
Cranberrybushes	<i>Viburnum opulus/trilobum</i>
Devilwood	<i>Osmanthus americana</i>
Dogwoods	<i>Cornus amomum/racemosam/sericea</i>
Elderberry	<i>Sambucus canadensis</i>
False Indigo	<i>Amorpha fruticosa</i>
Fetterbush	<i>Leucothoe racemosa</i>
Groundsel Bush	<i>Baccharis halimifolia</i>
Highbush Blueberry	<i>Vaccinium corymbosum</i>
Inkberry	<i>Ilex glabra</i>
Leucothoes	<i>Leucothoe axillaris/fontanesiana</i>
Oakleaf Hydrangea	<i>Hydrangea quercifolia</i>
Possumhaw	<i>Ilex decidua</i>
Rose of Sharon	<i>Hibiscus syriacus</i>
Shadblow Serviceberry	<i>Amelanchier canadensis</i>
Spicebush	<i>Lindera benzoin</i>
Steeplebush	<i>Spiraea tomentosa</i>
Summersweet Clethra	<i>Clethra alnifolia</i>
Swamp Azalea	<i>Rhododendron viscosum</i>

Swamp Rose  
Virginia Sweetspire  
Wax Myrtles  
Willows  
  
Winterberry

*Rosa palustris*  
*Itea virginica*  
*Myrica cerifera/pennsylvanicum*  
*Salix caprea/dicolor/matsudana*  
*sachalinensis/purpurea*  
*Ilex verticillata*

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

*Aquilegia canadensis*  
*Brunnera macrophylla*  
*Tradescantia* spp.  
*Saxifraga stolonifera*  
*Asclepias incarnata*  
*Helianthus angustifolius*  
*Chelone lyonii/obliqua*  
*Mertensia virginica*  
*Asarum canadense*  
*Anemone*

## 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  
Irises

*Sagittaria latifolia*  
*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*  
*Physotegia virginiana*  
*Pontederia cordata*  
*Hosta* spp.  
*Primula* spp.  
*Zephyranthes* spp.

## 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*

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

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## 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