

Urban Water-Quality Management Rain Garden Plants

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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.

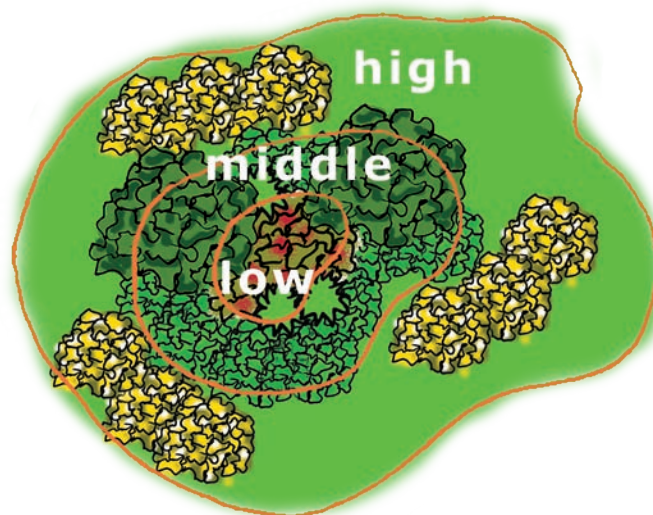
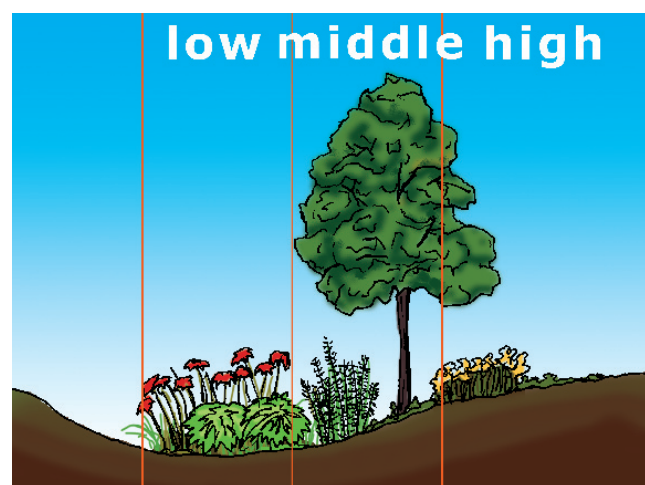


Figure 1. Rain Garden

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- 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

References

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A Guide to Successful Pruning, Shrub Pruning Calendar, Virginia Cooperative Extension publication 430-462, <http://pubs.ext.vt.edu/430-462/>

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